New Site??

IF SO:

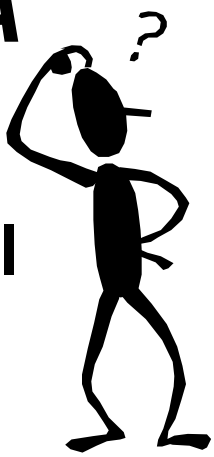
- **PLEASE SEND MAP(S)**
- **MARK MONITORING SITE(S) WITH AN "X" ON THE MAP**
- **IF DATA IS SUBMITTED WITHOUT A MAP, IT WILL DELAY THE ENTRY OF THAT DATA INTO THE VOLUNTEER WATER QUALITY MONITORING DATABASE**

Refer to Chapter 2, "Site Selection & Identification," in your Introductory VWQM training notebook for instructions on what information to put on the site map.

Refer to Chapter 3, "Stream Discharge," in your Introductory VWQM training notebook for clarification regarding listing "Trained Data Submitters" on your data sheets.

www.mostreamteam.org

NEED MORE DATA SHEETS?



Just let us know and we'll get some in the mail to you right away!

Call the Stream Team Voice Mail: 1-800-781-1989

OR

Send us an e-mail: streamteam@mdc.mo.gov

OR

Download them off the Stream Team Web site:

http://www.mostreamteam.org

You'll find them under "Stream Team Forms."

VISUAL SURVEY DATA SHEET

Please check the box next to the "Site #" ***if this is a new site and please be sure to attach a map.*** (PLEASE PRINT)

☐ Site # _____ Stream _____ County _____

Site Location _____

Date _____ Time (military time) _____ Rainfall (inches in last 7 days) _____ Water Temp. (°C) _____

Trained Data Submitter (responsible volunteer) _____ Stream Team Number _____

Trained Participants _____

***1. Floodplain land use** industrial _____% commercial _____% residential _____%
pasture/hayfields _____% row crops _____% woods _____%
other (specify) _____%

***2. Riparian cover** trees _____% grasses or weeds _____% bare ground _____%
parking lots/streets _____% buildings _____%
other (specify) _____%

***3. Streambank conditions** trees _____% grasses or weeds _____% bare ground _____%
bedrock _____% pavement/riprap _____%
other (specify) _____%

***4. Bed composition of riffle (or, if alternative habitat, check box ❑)** silt or mud _____%
sand _____% gravel _____% cobble (2-10") _____% boulder (>10") _____% bedrock _____%

5. Percent embeddedness of cobble substrate = _____ + _____ + _____ + _____ + _____ = _____ / 5 = ____%
❑Cobble substrate not present at site

6. Signs of human use _____

_____

7. Algae
What percent of stream bottom is covered by visible algae? _____%
Of the algae observed what percentage is:
(a) close-growing _____% + (b) filamentous (strands over 2" long) _____% = 100 %
(The sum of 7a and 7b should equal 100%)

8. Water Color (describe) _____

9. Water Odor (describe) _____

10. Weather Conditions (cloud cover) _____

11. Comments _____

_____

_____

12. Fish Present (Please mark) **Yes** ❑ or ❑**No**

***Items 1 thru 4 must total 100%**

PLEASE KEEP A COPY AND SEND ORIGINAL DATA TO: Stream Team Coordinator
Water Protection Program
Department of Natural Resources
P.O. Box 176
Jefferson City, MO 65102-0176

Water Quality Volunteer

VISUAL STREAM SURVEY SHEET INSTRUCTIONS

The purpose of the visual survey is to determine if there are any obvious water pollution problems on the stream and to characterize the riparian environment though which the steam flows. If thoroughly done, the watershed map should provide good guidance on which segment of your stream should be concentrated on in your visual survey. This data sheet has been developed to help you collect information during the visual survey of your 300-foot monitoring site. You are encouraged to fill out all of the data sheet items and any additional notes you feel help describe the stream and riparian corridor.

Data Sheet Items

Site Number. You must designate this number. It becomes very important if you choose to monitor more than one site. Number your sites as you chronologically choose them.
Stream and County. List the name of the stream as it appears on your map (e.g., a USGS topographic map). Locating your site on a map also ensures you record the appropriate county.
Site Description. This refers to a verbal description. Verbally describe where you are on the stream using street or highway names, bridges, approximate distances from landmarks, etc. Please be consistent and use the same verbal description for the same site (e.g., 100 feet upstream of Hwy. P bridge).
Date and **Time.** Please use military time (e.g., 2:00 p.m. is 1400, or 2:45 p.m. is 1445).
Rainfall. Enter the amount of rainfall received in inches in the past 7 days
Water Temperature. 0° - 34° C ***is within the normal range***
Be sure to read water temperature while the thermometer is submerged and shaded.
Trained Data Submitter. List the name of the person assuming responsibility for these data.
Stream Team Number. Enter your Stream Team number.
Trained Participants. List the names of other volunteers trained at VWQM classes.

1. **Flood Plain Use.** List the dominant land uses adjoining the stream. Bluff to bluff, estimate the percentage.
2. **Riparian Cover.** For the purposes of this data sheet, the riparian zone is the area extending back from the top of each streambank for a distance of 100 feet. Estimate the percentage of this area that is covered by the various categories listed.
3. **Streambank Conditions.** The streambank is the area of the land that rises from the streambed and reaches a crest. Such crests are more noticeable when looking at the outside bend of a stream meander. Estimate the percentage of the area of the streambank that is covered by the categories listed.
4. **Bed Composition of Riffle.** A riffle is an area of shallow, rapid flowing water within a stream. If at least one of your habitats sampled is a riffle, estimate the percentage of streambed with in the riffle that is covered by the various sized sediments listed. If you do not have a riffle, check the box and describe alternative habitat substrate.
5. **Percent Embeddedness of Cobble Substrate.** Estimate the percentage (0-100%) of the surface area of the cobble substrate embedded in the sediment or sand. Randomly pick up five rocks between 2”-10” in size from the riffle and estimate the percentage each rock is embedded. Sum the 5 percentages and divide by 5. If cobble is not present, then place a check in the box. Be sure not to choose rocks from areas where you will be sampling macroinvertebrates.
6. **Signs of Human Use.** This is the area long the stream (e.g., pull-offs or dirt roads for cars, footpaths, food and drink containers, campfires, fishing equipment, etc...).
7. **Algae.** Estimate the percentage of the stream bottom covered by visible algae. Of the total algal cover, what percent is: (a) close-growing? (b) filamentous? Remember that (a) + (b) should total 100%.
8. **Water Color.** Collect a sample of water using a clear plastic container and describe the water’s color (e.g., clear, brown, green, milky, oily sheen, etc...).
9. **Water Odor.** Take a whiff from your plastic container. If any odor is present, please describe (e.g., sewage odor, chemical odor, petroleum odor, rotten egg odor, musty odor, organic odor, no perceptible odor, etc...).
10. **Weather Conditions.** Please describe the cloud cover (e.g., sunny, partly cloudy, etc...).
11. **Comments.** List anything else not covered on the data sheet such as pipes, drainage ditches, and any changes in conditions since the last survey.
12. **Fish Present.** Mark “Yes” or “No”

VISUAL SURVEY DATA SHEET

Please check the box next to the "Site #" ***if this is a new site and please be sure to attach a map.*** (PLEASE PRINT)

☐ Site # _____ Stream _____ County _____

Site Location _____

Date _____ Time (military time) _____ Rainfall (inches in last 7 days) _____ Water Temp. (°C) _____

Trained Data Submitter (responsible volunteer) _____ Stream Team Number _____

Trained Participants _____

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other (specify) _____%

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sand _____% gravel _____% cobble (2-10") _____% boulder (>10") _____% bedrock _____%

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❑Cobble substrate not present at site

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(The sum of 7a and 7b should equal 100%)

8. Water Color (describe) _____

9. Water Odor (describe) _____

10. Weather Conditions (cloud cover) _____

11. Comments _____

_____

_____

12. Fish Present (Please mark) **Yes** ❑ or ❑**No**

***Items 1 thru 4 must total 100%**

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Water Protection Program
Department of Natural Resources
P.O. Box 176
Jefferson City, MO 65102-0176

Water Quality Volunteer

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12. **Fish Present.** Mark “Yes” or “No”

VISUAL SURVEY DATA SHEET

Please check the box next to the "Site #" ***if this is a new site and please be sure to attach a map.*** (PLEASE PRINT)

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Site Location _____

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10. Weather Conditions (cloud cover) _____

11. Comments _____

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Jefferson City, MO 65102-0176

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10. **Weather Conditions.** Please describe the cloud cover (e.g., sunny, partly cloudy, etc...).
11. **Comments.** List anything else not covered on the data sheet such as pipes, drainage ditches, and any changes in conditions since the last survey.
12. **Fish Present.** Mark “Yes” or “No”

MACROINVERTEBRATE DATA SHEET

Please check the box next to the "Site #" ***if this is a new site and please be sure to attach a map.*** (PLEASE PRINT)

☐ Site # _____ Stream _____ County _____

Site Location _____

Date _____ Time (military time) _____ Rainfall (inches in last 7 days) _____ Water Temp. (°C) _____

Trained Data Submitter (responsible volunteer) _____ Stream Team Number _____

Trained Participants _____

Invertebrate Type	***Net Set #1***	***Net Set #2***	***Net Set #3***	***Score***
Habitat type →				*After entering the* ***number(#) of organisms collected****, circle the number below for every type of organism collected. Add the numbers circled and record the totals as your Water Quality Rating.*
Net Type *(circle type)* →	*Kick Net* **or** *D-Net*	*Kick Net* **or** *D-Net*	*Kick Net* **or** *D-Net*	
Time Spent Picking (Minutes picking x number of people picking)	min. picking _____ × # people _____ = total min. _____	min. picking _____ × # people _____ = total min. _____	min. picking _____ × # people _____ = total min. _____	
Sensitive	**# of Organisms**	**# of Organisms**	**# of Organisms**	**Circle Types Present**
Caddisfly Larvae				3
Hellgrammites				3
Mayfly Nymphs				3
Gilled Snails (right)				3
Riffle Beetles				3
Stonefly Nymphs				3
Water Penny Larvae				3
Somewhat Tolerant	**# of Organisms**	**# of Organisms**	**# of Organisms**	**Circle Types Present**
Other Beetle Larvae				2
Clams/Mussels				2
Crane Fly Larvae				2
Crayfish				2
Dragonfly Nymphs				2
Damselfly Nymphs				2
Scuds				2
Sowbugs				2
Fishfly Larvae				2
Alderfly Larvae				2
Watersnipe Fly				2
Tolerant	**# of Organisms**	**# of Organisms**	**# of Organisms**	**Circle Types Present**
Aquatic Worms				1
Black Fly Larvae				1
Leeches				1
Midge Larvae				1
Pouch Snails (left)				1
Other Snails (flat)				1
< 12 = Poor	12-17 = Fair	18-23 = Good	>23 = Excellent	**Water Quality Rating** ____

Comments (mention any changes from your usual readings) _____

_____

_____

Fish Present (Please Mark) **Yes**❑ or **No**❑

Instructions for Biological Monitoring

- Collect three net sets of invertebrates from three different microhabitats. This ensures a more complete picture of what lives in your stream and more accurately reflects health. Adequate sampling can be achieved by one person with a D-frame net, but you may need two people if you use a kick net.
- If possible, take all three net sets from different areas within a stable riffle. Microhabitats to sample include differences in: rock size, flow, leaf packs and emergent vegetation.
- Be sure to note which type of net you use to sample: kick net OR D-frame net.
- Always work in an upstream direction so that sampling activities do not disturb portions of the riffle to be sampled later.
- If, and only if, you do not have enough riffle habitat with in your 300 ft. sampling site to collect three net sets, you may also want to sample alternative microhabitats.
    - Prioritize sampling of habitat types as follows:
        - Riffle
        - Root mat
        - Snags
        - Non-flow
    - Whatever you decide to sample at your site (e.g., two riffle net sets and one root mat), always sample those same three microhabitats at the site every time you sample there and list the habitat type for each sample. This will ensure that the data you collect remains consistent over time.

Sampling Streams With Riffles

Sampling may require two people, one to hold the net and the other to dislodge invertebrates from the substrate.

1. **Place** the net in the riffle facing upstream, and tilt it enough to provide a "pocket."
2. **Ensure the bottom of the net** is on the stream bottom leaving no room between the net and the substrate (prevents organisms from washing under the net.)
3. **Rub all large stones** in the 3-foot by 3-foot (3'x3') area immediately upstream of the net to dislodge invertebrates and wash them into the net.
4. **Dance** and **Kick** with your feet in the 3'x3' area until you have disturbed all the substrate 3 inches to 6 inches deep to dislodge the invertebrates into the net.

Streams Without Riffles (or without riffles large enough for 3 net sets)

Sample Collection from Root Mats - Adequate sampling requires two people

1. Have one person place the side of the kick net against the bank on the downstream side of the root mat.
2. Make sure that the net is anchored to the stream bed.
3. The other person will then kick the root mat **in a swirling motion** with one foot to create a circular current in order to dislodge the invertebrates from the root mat. The circular motion of the sampler's foot will drive the invertebrates into the net, even if there is no current.

Sample Collection from Snags - Adequate sampling requires two people.

1. Have one person hold the net horizontal position about 6-12 inches under the water.
2. The 2nd volunteer will remove the snag from the water. When removing the snag from the water pull the snag out of the water quickly. If the snag is removed too slowly, the invertebrates may swim off.
3. Brush the snag down with a brush above the net to dislodge invertebrates.
4. Sample approximately 3-5 snags for one net set.

Sample non-flow areas in the same manner as a riffle, collecting three separate samples. However, the sampler will need to use a swirling motion with the foot to create a current to move debris into the net. Although this habitat can be sampled using a kick net, it is easier with a D-frame net. If using a D-frame net, you'll need to disturb the substrate and sweep the net in a circular motion over the disturbed substrate to collect the organisms. Be sure to run two passes with the D-frame net to equal one net set.

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Jefferson City, MO 65102-0176

Water Quality Volunteer

MACROINVERTEBRATE DATA SHEET

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☐ Site # _____ Stream _____ County _____

Site Location _____

Date _____ Time (military time) _____ Rainfall (inches in last 7 days) _____ Water Temp. (°C) _____

Trained Data Submitter (responsible volunteer) _____ Stream Team Number _____

Trained Participants _____

Invertebrate Type	***Net Set #1***	***Net Set #2***	***Net Set #3***	***Score***
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1. **Place** the net in the riffle facing upstream, and tilt it enough to provide a "pocket."
2. **Ensure the bottom of the net** is on the stream bottom leaving no room between the net and the substrate (prevents organisms from washing under the net.)
3. **Rub all large stones** in the 3-foot by 3-foot (3'x3') area immediately upstream of the net to dislodge invertebrates and wash them into the net.
4. **Dance** and **Kick** with your feet in the 3'x3' area until you have disturbed all the substrate 3 inches to 6 inches deep to dislodge the invertebrates into the net.

Streams Without Riffles (or without riffles large enough for 3 net sets)

Sample Collection from Root Mats - Adequate sampling requires two people

1. Have one person place the side of the kick net against the bank on the downstream side of the root mat.
2. Make sure that the net is anchored to the stream bed.
3. The other person will then kick the root mat **in a swirling motion** with one foot to create a circular current in order to dislodge the invertebrates from the root mat. The circular motion of the sampler's foot will drive the invertebrates into the net, even if there is no current.

Sample Collection from Snags - Adequate sampling requires two people.

1. Have one person hold the net horizontal position about 6-12 inches under the water.
2. The 2nd volunteer will remove the snag from the water. When removing the snag from the water pull the snag out of the water quickly. If the snag is removed too slowly, the invertebrates may swim off.
3. Brush the snag down with a brush above the net to dislodge invertebrates.
4. Sample approximately 3-5 snags for one net set.

Sample non-flow areas in the same manner as a riffle, collecting three separate samples. However, the sampler will need to use a swirling motion with the foot to create a current to move debris into the net. Although this habitat can be sampled using a kick net, it is easier with a D-frame net. If using a D-frame net, you'll need to disturb the substrate and sweep the net in a circular motion over the disturbed substrate to collect the organisms. Be sure to run two passes with the D-frame net to equal one net set.

PLEASE KEEP A COPY AND SEND ORIGINAL DATA TO:

Stream Team Coordinator/Water Protection Program
Department of Natural Resources
P.O. Box 176
Jefferson City, MO 65102-0176

Water Quality Volunteer

MACROINVERTEBRATE DATA SHEET

Please check the box next to the "Site #" ***if this is a new site and please be sure to attach a map.*** (PLEASE PRINT)

☐ Site # _____ Stream _____ County _____

Site Location _____

Date _____ Time (military time) _____ Rainfall (inches in last 7 days) _____ Water Temp. (°C) _____

Trained Data Submitter (responsible volunteer) _____ Stream Team Number _____

Trained Participants _____

Invertebrate Type	***Net Set #1***	***Net Set #2***	***Net Set #3***	***Score***
Habitat type →				*After entering the* ***number(#) of organisms collected****, circle the number below for every type of organism collected. Add the numbers circled and record the totals as your Water Quality Rating.*
Net Type *(circle type)* →	*Kick Net* **or** *D-Net*	*Kick Net* **or** *D-Net*	*Kick Net* **or** *D-Net*	
Time Spent Picking (Minutes picking x number of people picking)	min. picking _____ × # people _____ = total min. _____	min. picking _____ × # people _____ = total min. _____	min. picking _____ × # people _____ = total min. _____	
Sensitive	**# of Organisms**	**# of Organisms**	**# of Organisms**	**Circle Types Present**
Caddisfly Larvae				3
Hellgrammites				3
Mayfly Nymphs				3
Gilled Snails (right)				3
Riffle Beetles				3
Stonefly Nymphs				3
Water Penny Larvae				3
Somewhat Tolerant	**# of Organisms**	**# of Organisms**	**# of Organisms**	**Circle Types Present**
Other Beetle Larvae				2
Clams/Mussels				2
Crane Fly Larvae				2
Crayfish				2
Dragonfly Nymphs				2
Damselfly Nymphs				2
Scuds				2
Sowbugs				2
Fishfly Larvae				2
Alderfly Larvae				2
Watersnipe Fly				2
Tolerant	**# of Organisms**	**# of Organisms**	**# of Organisms**	**Circle Types Present**
Aquatic Worms				1
Black Fly Larvae				1
Leeches				1
Midge Larvae				1
Pouch Snails (left)				1
Other Snails (flat)				1
< 12 = Poor	12-17 = Fair	18-23 = Good	>23 = Excellent	**Water Quality Rating** ____

Comments (mention any changes from your usual readings) _____

_____

_____

Fish Present (Please Mark) **Yes**❑ or **No**❑

Instructions for Biological Monitoring

- Collect three net sets of invertebrates from three different microhabitats. This ensures a more complete picture of what lives in your stream and more accurately reflects health. Adequate sampling can be achieved by one person with a D-frame net, but you may need two people if you use a kick net.
- If possible, take all three net sets from different areas within a stable riffle. Microhabitats to sample include differences in: rock size, flow, leaf packs and emergent vegetation.
- Be sure to note which type of net you use to sample: kick net OR D-frame net.
- Always work in an upstream direction so that sampling activities do not disturb portions of the riffle to be sampled later.
- If, and only if, you do not have enough riffle habitat with in your 300 ft. sampling site to collect three net sets, you may also want to sample alternative microhabitats.
    - Prioritize sampling of habitat types as follows:
        - Riffle
        - Root mat
        - Snags
        - Non-flow
    - Whatever you decide to sample at your site (e.g., two riffle net sets and one root mat), always sample those same three microhabitats at the site every time you sample there and list the habitat type for each sample. This will ensure that the data you collect remains consistent over time.

Sampling Streams With Riffles

Sampling may require two people, one to hold the net and the other to dislodge invertebrates from the substrate.

1. **Place** the net in the riffle facing upstream, and tilt it enough to provide a "pocket."
2. **Ensure the bottom of the net** is on the stream bottom leaving no room between the net and the substrate (prevents organisms from washing under the net.)
3. **Rub all large stones** in the 3-foot by 3-foot (3'x3') area immediately upstream of the net to dislodge invertebrates and wash them into the net.
4. **Dance** and **Kick** with your feet in the 3'x3' area until you have disturbed all the substrate 3 inches to 6 inches deep to dislodge the invertebrates into the net.

Streams Without Riffles (or without riffles large enough for 3 net sets)

Sample Collection from Root Mats - Adequate sampling requires two people

1. Have one person place the side of the kick net against the bank on the downstream side of the root mat.
2. Make sure that the net is anchored to the stream bed.
3. The other person will then kick the root mat **in a swirling motion** with one foot to create a circular current in order to dislodge the invertebrates from the root mat. The circular motion of the sampler's foot will drive the invertebrates into the net, even if there is no current.

Sample Collection from Snags - Adequate sampling requires two people.

1. Have one person hold the net horizontal position about 6-12 inches under the water.
2. The 2nd volunteer will remove the snag from the water. When removing the snag from the water pull the snag out of the water quickly. If the snag is removed too slowly, the invertebrates may swim off.
3. Brush the snag down with a brush above the net to dislodge invertebrates.
4. Sample approximately 3-5 snags for one net set.

Sample non-flow areas in the same manner as a riffle, collecting three separate samples. However, the sampler will need to use a swirling motion with the foot to create a current to move debris into the net. Although this habitat can be sampled using a kick net, it is easier with a D-frame net. If using a D-frame net, you'll need to disturb the substrate and sweep the net in a circular motion over the disturbed substrate to collect the organisms. Be sure to run two passes with the D-frame net to equal one net set.

PLEASE KEEP A COPY AND SEND ORIGINAL DATA TO:

Stream Team Coordinator/Water Protection Program
Department of Natural Resources
P.O. Box 176
Jefferson City, MO 65102-0176

Water Quality Volunteer

WATER CHEMISTRY DATA SHEET

Please check the box next to the "Site #" ***if this is a new site and please be sure to attach a map.*** (PLEASE PRINT)

☐ Site # _____ Stream _____ County _____

Site Location _____

Date _____ Time (military time) _____ Rainfall (inches in last 7 days) _____ Water Temp. (°C) _____

Trained Data Submitter (responsible volunteer) _____ Stream Team Number _____

Trained Participants _____

	Kit Type Used: (Please circle)	Calibration and/or Expiration Date		Measurement
Weather Conditions (cloud cover)				
NO_3 - N (mg/L) - Nitrate please circle kit type used →	LaMotte - NCR Hach - NI-11 Hach - Pocket Colorimeter	**Mixed Acid Expiration Date:**		
		Nitrate Reducing Reagent Expiration Date:		
Air Temperature (°C)				
Water Temperature (°C)				
Dissolved O_2 (mg/L)		**DO #1 Expiration Date:**		
		DO #2 Expiration Date:		
		DO #3 Expiration Date:		
		Sodium Thiosulfate Expiration Date:		
Dissolved O_2 % Saturation				
pH		**Date Calibrated:**		
		pH 7.0 Solution Expiration Date:		
		pH 10.0 Solution Expiration Date:		
Conductivity (µS/cm)		**Date Calibrated:**		
		Sodium Chloride Standard Expiration Date:		
Turbidity (NTU)				
Chlorides (mg/L)	High Range Chlorides Low Range Chlorides			
Hardness (mg/L)				
Alkalinity (mg/L)				
PO_4 (mg/L) please circle kit type used →	Hach - Pocket Colorimeter Hach - AccuVac			
NH_3 - N (mg/L) - Ammonia please circle kit type used →	Hach - NI-8 Hach Cube, Ammonia Hach - Pocket Colorimeter Hach - AccuVac			
Other Parameter (list)	Write in kit type and model #			

Comments (mention any changes from your usual readings) _____

_____

_____

Fish Present (Please Mark) **Yes** ❑ or **No**❑

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Department of Natural Resources
PO Box 176
Jefferson City, MO 65102-0176

Water Quality Volunteer

Acceptable Ranges for Chemical Parameters

Certain water quality measurements usually tend to fall within a well-defined range. Values outside this range are due to unusual water quality conditions or analyst error. **If any of your water quality measurements fall outside the following range it may be unusual for that stream, so please make two more measurements of that water quality parameter and report all three measurements on the data sheet.**

Nitrate (NO_3-N) Nitrogen

1. ***An unusual reading for most streams is one greater than 2mg/L. If the sampling site is less than 2 miles downstream of a wastewater treatment plant discharge, and unusual reading would be one greater than 10 mg/L.***
2. The nitrate reducing agent (white powder in brown bottle) has a short shelf life. Be sure to check the expiration date on the label. If the reagent is expired, or becomes clumpy or gray, do not use and call for a replacement.
3. ***Containerize all nitrate waste separately in a heavy walled container and label it nitrate waste***. Do ***NOT*** mix with any other chemical waste.

Water Temperature 0° - 34° C ***is within the normal range***

Be sure to read water temperature while the thermometer is submerged and shaded.

Dissolved Oxygen 5-15 mg/L ***is within the normal range***

Trouble shooting procedure for an unusual DO reading:

1. Check the dates on the packaged chemicals. If outdated, don't use. Please call 1-800-781-1989 (Stream Team voicemail) to request replacement chemicals or visit our website www.mostreamteam.org/datasheets.asp.
2. If chemicals are not outdated, repeat the procedure with the following considerations:

- Be sure to rinse all glassware 3 times in the stream water prior to collecting another sample.
- It's critical that no air bubbles are in the bottle in steps 2 and 3. If there are, discard the sample and start over.

HINT: Over fill the bottle in step #1 prior to dropping the stopper in place.

- If the second result is not within 1 mg/L of the first result, repeat the procedure a third time and report all three readings on your Water Chemistry Data Sheet.

Dissolved Oxygen % Saturation

Use your water temperature and dissolved oxygen reading and determine % saturation using the pink chart in your notebook.

pH 6.5 - 9.0 Standard units ***is within the normal range.***

1. Always perform a two-point calibration of the pH meter to 7.0 with the yellow "Buffer solution, pH $\pm$ 0.02," and 10.0 with the blue "Buffer solution, pH $\pm$ 0.02" prior to each sampling event (***preferably within 12 hours***). Before calibrating, you may want to soak the meter (no deeper than the cap line) over night in the buffer solution or tap water to ensure the bulb is hydrated.
2. To calibrate, turn the meter on using the button on top. Submerge the meter up to the cap line in the calibration solution and adjust the screw labeled pH 7 on the back of the meter with a screw driver until the pH pen reads 7.0. Do not re-use calibration solutions. Since it is a salt solution you may pour it on the ground or down the drain. Store the meter with a damp piece of paper towel in the cap.

Conductivity

1. Always calibrate the conductivity meter with the Sodium Chloride Standard Solution prior to each sampling event (***preferably within 12 hours***). It should be calibrated to read 1000 µS/cm ± 10 µS/cm. Do not re-use calibration solution. Since it is a salt you may pour it on the ground or down the drain.
2. After calibration, turn the meter off, rinse the bottom of the meter and dry the probes. The meter's probes should be stored dry.

Turbidity

When analyzing water for turbidity, be sure to read the sample immediately. If the turbidity tube is full and you can distinguish the black and white pattern on the bottom, enter < 10 NTUs.

Ammonia (NH_3 - N)

An unusual reading for most streams is one greater than 2 mg/L. If the sampling site is less than 2 miles downstream of a wastewater treatment plant discharge, an unusual reading would be one greater than 3 mg/L.

Do not use any of the multipliers mentioned at the end of the directions found in the chemical kits. Don't feel bad about using up all the chemicals in your kit. Please notify us if you need more.

***Remember to containerize your nitrate waste in a heavy walled container separately from your other chemical waste.**

WATER CHEMISTRY DATA SHEET

Please check the box next to the "Site #" ***if this is a new site and please be sure to attach a map.*** (PLEASE PRINT)

☐ Site # _____ Stream _____ County _____

Site Location _____

Date _____ Time (military time) _____ Rainfall (inches in last 7 days) _____ Water Temp. (°C) _____

Trained Data Submitter (responsible volunteer) _____ Stream Team Number _____

Trained Participants _____

	Kit Type Used: (Please circle)	Calibration and/or Expiration Date		Measurement
Weather Conditions (cloud cover)				
NO_3 - N (mg/L) - Nitrate please circle kit type used →	LaMotte - NCR Hach - NI-11 Hach - Pocket Colorimeter	**Mixed Acid Expiration Date:**		
		Nitrate Reducing Reagent Expiration Date:		
Air Temperature (°C)				
Water Temperature (°C)				
Dissolved O_2 (mg/L)		**DO #1 Expiration Date:**		
		DO #2 Expiration Date:		
		DO #3 Expiration Date:		
		Sodium Thiosulfate Expiration Date:		
Dissolved O_2 % Saturation				
pH		**Date Calibrated:**		
		pH 7.0 Solution Expiration Date:		
		pH 10.0 Solution Expiration Date:		
Conductivity (µS/cm)		**Date Calibrated:**		
		Sodium Chloride Standard Expiration Date:		
Turbidity (NTU)				
Chlorides (mg/L)	High Range Chlorides Low Range Chlorides			
Hardness (mg/L)				
Alkalinity (mg/L)				
PO_4 (mg/L) please circle kit type used →	Hach - Pocket Colorimeter Hach - AccuVac			
NH_3 - N (mg/L) - Ammonia please circle kit type used →	Hach - NI-8 Hach Cube, Ammonia Hach - Pocket Colorimeter Hach - AccuVac			
Other Parameter (list)	Write in kit type and model #			

Comments (mention any changes from your usual readings) _____

_____

_____

Fish Present (Please Mark) **Yes** ❑ or **No**❑

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Department of Natural Resources
PO Box 176
Jefferson City, MO 65102-0176

Water Quality Volunteer

Acceptable Ranges for Chemical Parameters

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Nitrate (NO_3-N) Nitrogen

1. ***An unusual reading for most streams is one greater than 2mg/L. If the sampling site is less than 2 miles downstream of a wastewater treatment plant discharge, and unusual reading would be one greater than 10 mg/L.***
2. The nitrate reducing agent (white powder in brown bottle) has a short shelf life. Be sure to check the expiration date on the label. If the reagent is expired, or becomes clumpy or gray, do not use and call for a replacement.
3. ***Containerize all nitrate waste separately in a heavy walled container and label it nitrate waste***. Do ***NOT*** mix with any other chemical waste.

Water Temperature 0° - 34° C ***is within the normal range***

Be sure to read water temperature while the thermometer is submerged and shaded.

Dissolved Oxygen 5-15 mg/L ***is within the normal range***

Trouble shooting procedure for an unusual DO reading:

1. Check the dates on the packaged chemicals. If outdated, don't use. Please call 1-800-781-1989 (Stream Team voicemail) to request replacement chemicals or visit our website www.mostreamteam.org/datasheets.asp.
2. If chemicals are not outdated, repeat the procedure with the following considerations:

- Be sure to rinse all glassware 3 times in the stream water prior to collecting another sample.
- It's critical that no air bubbles are in the bottle in steps 2 and 3. If there are, discard the sample and start over.

HINT: Over fill the bottle in step #1 prior to dropping the stopper in place.

- If the second result is not within 1 mg/L of the first result, repeat the procedure a third time and report all three readings on your Water Chemistry Data Sheet.

Dissolved Oxygen % Saturation

Use your water temperature and dissolved oxygen reading and determine % saturation using the pink chart in your notebook.

pH 6.5 - 9.0 Standard units ***is within the normal range.***

1. Always perform a two-point calibration of the pH meter to 7.0 with the yellow "Buffer solution, pH $\pm$ 0.02," and 10.0 with the blue "Buffer solution, pH $\pm$ 0.02" prior to each sampling event (***preferably within 12 hours***). Before calibrating, you may want to soak the meter (no deeper than the cap line) over night in the buffer solution or tap water to ensure the bulb is hydrated.
2. To calibrate, turn the meter on using the button on top. Submerge the meter up to the cap line in the calibration solution and adjust the screw labeled pH 7 on the back of the meter with a screw driver until the pH pen reads 7.0. Do not re-use calibration solutions. Since it is a salt solution you may pour it on the ground or down the drain. Store the meter with a damp piece of paper towel in the cap.

Conductivity

1. Always calibrate the conductivity meter with the Sodium Chloride Standard Solution prior to each sampling event (***preferably within 12 hours***). It should be calibrated to read 1000 µS/cm ± 10 µS/cm. Do not re-use calibration solution. Since it is a salt you may pour it on the ground or down the drain.
2. After calibration, turn the meter off, rinse the bottom of the meter and dry the probes. The meter's probes should be stored dry.

Turbidity

When analyzing water for turbidity, be sure to read the sample immediately. If the turbidity tube is full and you can distinguish the black and white pattern on the bottom, enter < 10 NTUs.

Ammonia (NH_3 - N)

An unusual reading for most streams is one greater than 2 mg/L. If the sampling site is less than 2 miles downstream of a wastewater treatment plant discharge, an unusual reading would be one greater than 3 mg/L.

Do not use any of the multipliers mentioned at the end of the directions found in the chemical kits. Don't feel bad about using up all the chemicals in your kit. Please notify us if you need more.

***Remember to containerize your nitrate waste in a heavy walled container separately from your other chemical waste.**

WATER CHEMISTRY DATA SHEET

Please check the box next to the "Site #" ***if this is a new site and please be sure to attach a map.*** (PLEASE PRINT)

☐ Site # _____ Stream _____ County _____

Site Location _____

Date _____ Time (military time) _____ Rainfall (inches in last 7 days) _____ Water Temp. (°C) _____

Trained Data Submitter (responsible volunteer) _____ Stream Team Number _____

Trained Participants _____

	Kit Type Used: (Please circle)	Calibration and/or Expiration Date		Measurement
Weather Conditions (cloud cover)				
NO_3 - N (mg/L) - Nitrate please circle kit type used →	LaMotte - NCR Hach - NI-11 Hach - Pocket Colorimeter	**Mixed Acid Expiration Date:**		
		Nitrate Reducing Reagent Expiration Date:		
Air Temperature (°C)				
Water Temperature (°C)				
Dissolved O_2 (mg/L)		**DO #1 Expiration Date:**		
		DO #2 Expiration Date:		
		DO #3 Expiration Date:		
		Sodium Thiosulfate Expiration Date:		
Dissolved O_2 % Saturation				
pH		**Date Calibrated:**		
		pH 7.0 Solution Expiration Date:		
		pH 10.0 Solution Expiration Date:		
Conductivity (µS/cm)		**Date Calibrated:**		
		Sodium Chloride Standard Expiration Date:		
Turbidity (NTU)				
Chlorides (mg/L)	High Range Chlorides Low Range Chlorides			
Hardness (mg/L)				
Alkalinity (mg/L)				
PO_4 (mg/L) please circle kit type used →	Hach - Pocket Colorimeter Hach - AccuVac			
NH_3 - N (mg/L) - Ammonia please circle kit type used →	Hach - NI-8 Hach Cube, Ammonia Hach - Pocket Colorimeter Hach - AccuVac			
Other Parameter (list)	Write in kit type and model #			

Comments (mention any changes from your usual readings) _____

_____

_____

Fish Present (Please Mark) **Yes** ❑ or **No**❑

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Department of Natural Resources
PO Box 176
Jefferson City, MO 65102-0176

Water Quality Volunteer

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2. The nitrate reducing agent (white powder in brown bottle) has a short shelf life. Be sure to check the expiration date on the label. If the reagent is expired, or becomes clumpy or gray, do not use and call for a replacement.
3. ***Containerize all nitrate waste separately in a heavy walled container and label it nitrate waste***. Do ***NOT*** mix with any other chemical waste.

Water Temperature 0° - 34° C ***is within the normal range***

Be sure to read water temperature while the thermometer is submerged and shaded.

Dissolved Oxygen 5-15 mg/L ***is within the normal range***

Trouble shooting procedure for an unusual DO reading:

1. Check the dates on the packaged chemicals. If outdated, don't use. Please call 1-800-781-1989 (Stream Team voicemail) to request replacement chemicals or visit our website www.mostreamteam.org/datasheets.asp.
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- It's critical that no air bubbles are in the bottle in steps 2 and 3. If there are, discard the sample and start over.

HINT: Over fill the bottle in step #1 prior to dropping the stopper in place.

- If the second result is not within 1 mg/L of the first result, repeat the procedure a third time and report all three readings on your Water Chemistry Data Sheet.

Dissolved Oxygen % Saturation

Use your water temperature and dissolved oxygen reading and determine % saturation using the pink chart in your notebook.

pH 6.5 - 9.0 Standard units ***is within the normal range.***

1. Always perform a two-point calibration of the pH meter to 7.0 with the yellow "Buffer solution, pH $\pm$ 0.02," and 10.0 with the blue "Buffer solution, pH $\pm$ 0.02" prior to each sampling event (***preferably within 12 hours***). Before calibrating, you may want to soak the meter (no deeper than the cap line) over night in the buffer solution or tap water to ensure the bulb is hydrated.
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Conductivity

1. Always calibrate the conductivity meter with the Sodium Chloride Standard Solution prior to each sampling event (***preferably within 12 hours***). It should be calibrated to read 1000 µS/cm ± 10 µS/cm. Do not re-use calibration solution. Since it is a salt you may pour it on the ground or down the drain.
2. After calibration, turn the meter off, rinse the bottom of the meter and dry the probes. The meter's probes should be stored dry.

Turbidity

When analyzing water for turbidity, be sure to read the sample immediately. If the turbidity tube is full and you can distinguish the black and white pattern on the bottom, enter < 10 NTUs.

Ammonia (NH_3 - N)

An unusual reading for most streams is one greater than 2 mg/L. If the sampling site is less than 2 miles downstream of a wastewater treatment plant discharge, an unusual reading would be one greater than 3 mg/L.

Do not use any of the multipliers mentioned at the end of the directions found in the chemical kits. Don't feel bad about using up all the chemicals in your kit. Please notify us if you need more.

***Remember to containerize your nitrate waste in a heavy walled container separately from your other chemical waste.**

STREAM DISCHARGE DATA SHEET

Please check the box next to the "Site #" ***if this is a new site and please be sure to attach a map.*** (PLEASE PRINT)

☐ Site # _____ Stream _____ County _____

Site Location _____

Date _____ Time (military time) _____ Rainfall (inches in last 7 days) _____ Water Temp. (°C) _____

Trained Data Submitter (responsible volunteer) _____ Stream Team Number _____

Trained Participants _____

Instructions for Calculation of Stream Discharge (Flow)

Select a section of stream that is relatively straight, free from large objects such as logs or large boulders, with a noticeable current, and with a depth as uniform as possible. Stretch the tape measure provided by the program across the stream. The "0" point should be anchored at the wetted edge of the stream. The end of the tape measure should be anchored at the opposite end so that it is taut and even with the other wetted edge.

☐ Stream Width (Feet)

Step 1: Determine stream cross-sectional area. The first step in determining cross-sectional area is to measure and calculate the average stream depth. In the table below, record the depth measurements at one-foot intervals along the tape measure you have stretched across the stream. The depth must be measured in **tenths of a foot** (e.g. 1.7 feet equals one foot and seven tenths). **DO NOT MEASURE DEPTH IN INCHES.**

Record Depth at 1-Foot Intervals

Interval Number	Depth in Feet	Interval Number	Depth in Feet	Interval Number	Depth in Feet
1		11		21	
2		12		22	
3		13		23	
4		14		24	
5		15		25	
6		16		26	
7		17		27	
8		18		28	
9		19		29	
10		20		30	
Sum		Sum		Sum	

The average depth is calculated by dividing the sum of the depth measurements by the number of intervals at which measurments were taken.

☐ Sum of Depths (Feet) ÷ ☐ Number of Intervals = ☐ Average Depth (Feet)

The final step in calculating the cross-sectional area is to muliply the average depth (in feet) by the stream width (in feet) at the point where the tape measure is stretched across the stream.

☐ Average Depths (Feet) x ☐ Stream Width (Feet) = ☐ Cross Sectional Area (Feet)²

Step 2: Determine the average velocity for the stream. **For a stream less than ten feet in width,** select three points in the stream approximately equal distances apart for velocity measurements. **For streams greater than ten feet in width,** no fewer than four velocity measurements should be taken at approximately equal distances across the stream. For example, if the stream were eight feet wide, then velocity measurements would be taken at approximately two foot intervals across the stream in order to derive three measurements. If the stream were sixteen feet across, then velocity measurements would be taken at approximately three foot intervals across the stream in order to derive four measurements. This method of measuring the stream velocity will insure that velocity measurements are recorded for the slow and fast portions of the stream.

Once you have determined the number of velocity float trials you need to complete, measure the water's surface velocity in the following manner. Select two points located equal distance upstream and downstream from the tape measure you have stretched across the stream. Determine the distance between these two points and record this value (in feet) in the **Distance Box** on the back of this page. Count the number of seconds it takes a mutually buoyant object (such as a wiffle practice golf ball) to float this distance. Record this time (in seconds) in the table on the back of this page for each float trial you complete

Water Quality Volunteer

Velocity Float Trials	
Trial Number	Time (Seconds)
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
Sum	

Distance Box

Distance Floated (in Feet)

The next step in calculating the surface velocity is to determine the average float time. Average float time is equal to the sum of the float times (in seconds) divided by the number of float trials.

	÷		=	
Sum of Float Times (Seconds)		Number of Trials		Average Float Time (Seconds)

The final step is to divide the distance floated (from the **Distance Box** at top) by the average float time.

	÷		=	
Distance Floated (Feet)		Average Float Time (Seconds)		Average Surface Velocity (Feet per Second)

Water in the stream does not all travel at he same speed. Water near the bottom travels slower than water at the surface because of friction (or drag) on the stream bottom. When calculating stream discharge, the water's velocity for the entire depth (surface to bottom) needs to be determined. Therefore, you must multiply the average **surface** velocity (from above) by a correction factor to make it represent the water velocity of the **entire stream depth.**

Choose the correction factor that best describes the bottom of your stream and multiply it by the average surface velocity to calculate the corrected average stream velocity.

Stream Bottom Type: Rough, loose rocks or coarse gravel: **correction value = 0.8**
Smooth, mud, sand, or hard pan rock: **correction value = 0.9**

	x		=	
Correction Value		Average Surface Velocity (Feet per Second)		Corrected Average Stream Velocity (Feet per Second)

Step 3: Calculate the stream discharge. Multiply the cross-sectional area (Feet)² from **Step 1** by the corrected average stream velocity (Feet/Second) from **Step 2.**

	x		=	
Cross-Sectional Area (Feet)²		Corrected Average Stream Velocity (Feet per Second)		Stream Discharge (Feet)³ per Second or Cubic Feet per Second (CFS)

Comments (mention any changes from your usual readings) _____

_____

Fish Present (Please Mark) **Yes** ❑ or **No**❑

PLEASE KEEP A COPY AND SEND ORIGINAL DATA TO: Stream Team Coordinator
Water Protection Program
Department of Natural Resources
PO Box 176
Jefferson City, MO 65102-0176

Water Quality Volunteer

STREAM DISCHARGE DATA SHEET

Please check the box next to the "Site #" ***if this is a new site and please be sure to attach a map.*** (PLEASE PRINT)

☐ Site # _____ Stream _____ County _____

Site Location _____

Date _____ Time (military time) _____ Rainfall (inches in last 7 days) _____ Water Temp. (°C) _____

Trained Data Submitter (responsible volunteer) _____ Stream Team Number _____

Trained Participants _____

Instructions for Calculation of Stream Discharge (Flow)

Select a section of stream that is relatively straight, free from large objects such as logs or large boulders, with a noticeable current, and with a depth as uniform as possible. Stretch the tape measure provided by the program across the stream. The "0" point should be anchored at the wetted edge of the stream. The end of the tape measure should be anchored at the opposite end so that it is taut and even with the other wetted edge.

☐ Stream Width (Feet)

Step 1: Determine stream cross-sectional area. The first step in determining cross-sectional area is to measure and calculate the average stream depth. In the table below, record the depth measurements at one-foot intervals along the tape measure you have stretched across the stream. The depth must be measured in **tenths of a foot** (e.g. 1.7 feet equals one foot and seven tenths). **DO NOT MEASURE DEPTH IN INCHES.**

Record Depth at 1-Foot Intervals

Interval Number	Depth in Feet	Interval Number	Depth in Feet	Interval Number	Depth in Feet
1		11		21	
2		12		22	
3		13		23	
4		14		24	
5		15		25	
6		16		26	
7		17		27	
8		18		28	
9		19		29	
10		20		30	
Sum		Sum		Sum	

The average depth is calculated by dividing the sum of the depth measurements by the number of intervals at which measurments were taken.

☐ Sum of Depths (Feet) ÷ ☐ Number of Intervals = ☐ Average Depth (Feet)

The final step in calculating the cross-sectional area is to muliply the average depth (in feet) by the stream width (in feet) at the point where the tape measure is stretched across the stream.

☐ Average Depths (Feet) x ☐ Stream Width (Feet) = ☐ Cross Sectional Area (Feet)²

Step 2: Determine the average velocity for the stream. **For a stream less than ten feet in width,** select three points in the stream approximately equal distances apart for velocity measurements. **For streams greater than ten feet in width,** no fewer than four velocity measurements should be taken at approximately equal distances across the stream. For example, if the stream were eight feet wide, then velocity measurements would be taken at approximately two foot intervals across the stream in order to derive three measurements. If the stream were sixteen feet across, then velocity measurements would be taken at approximately three foot intervals across the stream in order to derive four measurements. This method of measuring the stream velocity will insure that velocity measurements are recorded for the slow and fast portions of the stream.

Once you have determined the number of velocity float trials you need to complete, measure the water's surface velocity in the following manner. Select two points located equal distance upstream and downstream from the tape measure you have stretched across the stream. Determine the distance between these two points and record this value (in feet) in the **Distance Box** on the back of this page. Count the number of seconds it takes a mutually buoyant object (such as a wiffle practice golf ball) to float this distance. Record this time (in seconds) in the table on the back of this page for each float trial you complete

Water Quality Volunteer

Velocity Float Trials	
Trial Number	Time (Seconds)
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
Sum	

Distance Box

Distance Floated (in Feet)

The next step in calculating the surface velocity is to determine the average float time. Average float time is equal to the sum of the float times (in seconds) divided by the number of float trials.

	÷		=	
Sum of Float Times (Seconds)		Number of Trials		Average Float Time (Seconds)

The final step is to divide the distance floated (from the **Distance Box** at top) by the average float time.

	÷		=	
Distance Floated (Feet)		Average Float Time (Seconds)		Average Surface Velocity (Feet per Second)

Water in the stream does not all travel at he same speed. Water near the bottom travels slower than water at the surface because of friction (or drag) on the stream bottom. When calculating stream discharge, the water's velocity for the entire depth (surface to bottom) needs to be determined. Therefore, you must multiply the average **surface** velocity (from above) by a correction factor to make it represent the water velocity of the **entire stream depth.**

Choose the correction factor that best describes the bottom of your stream and multiply it by the average surface velocity to calculate the corrected average stream velocity.

Stream Bottom Type: Rough, loose rocks or coarse gravel: **correction value = 0.8**
Smooth, mud, sand, or hard pan rock: **correction value = 0.9**

	x		=	
Correction Value		Average Surface Velocity (Feet per Second)		Corrected Average Stream Velocity (Feet per Second)

Step 3: Calculate the stream discharge. Multiply the cross-sectional area (Feet)² from **Step 1** by the corrected average stream velocity (Feet/Second) from **Step 2.**

	x		=	
Cross-Sectional Area (Feet)²		Corrected Average Stream Velocity (Feet per Second)		Stream Discharge (Feet)³ per Second or Cubic Feet per Second (CFS)

Comments (mention any changes from your usual readings) _____

_____

Fish Present (Please Mark) **Yes** ❑ or **No**❑

PLEASE KEEP A COPY AND SEND ORIGINAL DATA TO: Stream Team Coordinator
Water Protection Program
Department of Natural Resources
PO Box 176
Jefferson City, MO 65102-0176

Water Quality Volunteer

STREAM DISCHARGE DATA SHEET

Please check the box next to the "Site #" ***if this is a new site and please be sure to attach a map.*** (PLEASE PRINT)

☐ Site # _____ Stream _____ County _____

Site Location _____

Date _____ Time (military time) _____ Rainfall (inches in last 7 days) _____ Water Temp. (°C) _____

Trained Data Submitter (responsible volunteer) _____ Stream Team Number _____

Trained Participants _____

Instructions for Calculation of Stream Discharge (Flow)

Select a section of stream that is relatively straight, free from large objects such as logs or large boulders, with a noticeable current, and with a depth as uniform as possible. Stretch the tape measure provided by the program across the stream. The "0" point should be anchored at the wetted edge of the stream. The end of the tape measure should be anchored at the opposite end so that it is taut and even with the other wetted edge.

☐ Stream Width (Feet)

Step 1: Determine stream cross-sectional area. The first step in determining cross-sectional area is to measure and calculate the average stream depth. In the table below, record the depth measurements at one-foot intervals along the tape measure you have stretched across the stream. The depth must be measured in **tenths of a foot** (e.g. 1.7 feet equals one foot and seven tenths). **DO NOT MEASURE DEPTH IN INCHES.**

Record Depth at 1-Foot Intervals

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6		16		26	
7		17		27	
8		18		28	
9		19		29	
10		20		30	
Sum		Sum		Sum	

The average depth is calculated by dividing the sum of the depth measurements by the number of intervals at which measurments were taken.

☐ Sum of Depths (Feet) ÷ ☐ Number of Intervals = ☐ Average Depth (Feet)

The final step in calculating the cross-sectional area is to muliply the average depth (in feet) by the stream width (in feet) at the point where the tape measure is stretched across the stream.

☐ Average Depths (Feet) x ☐ Stream Width (Feet) = ☐ Cross Sectional Area (Feet)²

Step 2: Determine the average velocity for the stream. **For a stream less than ten feet in width,** select three points in the stream approximately equal distances apart for velocity measurements. **For streams greater than ten feet in width,** no fewer than four velocity measurements should be taken at approximately equal distances across the stream. For example, if the stream were eight feet wide, then velocity measurements would be taken at approximately two foot intervals across the stream in order to derive three measurements. If the stream were sixteen feet across, then velocity measurements would be taken at approximately three foot intervals across the stream in order to derive four measurements. This method of measuring the stream velocity will insure that velocity measurements are recorded for the slow and fast portions of the stream.

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Water Quality Volunteer

Velocity Float Trials	
Trial Number	Time (Seconds)
1	
2	
3	
4	
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10	
Sum	

Distance Box

Distance Floated (in Feet)

The next step in calculating the surface velocity is to determine the average float time. Average float time is equal to the sum of the float times (in seconds) divided by the number of float trials.

	÷		=	
Sum of Float Times (Seconds)		Number of Trials		Average Float Time (Seconds)

The final step is to divide the distance floated (from the **Distance Box** at top) by the average float time.

	÷		=	
Distance Floated (Feet)		Average Float Time (Seconds)		Average Surface Velocity (Feet per Second)

Water in the stream does not all travel at he same speed. Water near the bottom travels slower than water at the surface because of friction (or drag) on the stream bottom. When calculating stream discharge, the water's velocity for the entire depth (surface to bottom) needs to be determined. Therefore, you must multiply the average **surface** velocity (from above) by a correction factor to make it represent the water velocity of the **entire stream depth.**

Choose the correction factor that best describes the bottom of your stream and multiply it by the average surface velocity to calculate the corrected average stream velocity.

Stream Bottom Type: Rough, loose rocks or coarse gravel: **correction value = 0.8**
Smooth, mud, sand, or hard pan rock: **correction value = 0.9**

	x		=	
Correction Value		Average Surface Velocity (Feet per Second)		Corrected Average Stream Velocity (Feet per Second)

Step 3: Calculate the stream discharge. Multiply the cross-sectional area (Feet)² from **Step 1** by the corrected average stream velocity (Feet/Second) from **Step 2.**

	x		=	
Cross-Sectional Area (Feet)²		Corrected Average Stream Velocity (Feet per Second)		Stream Discharge (Feet)³ per Second or Cubic Feet per Second (CFS)

Comments (mention any changes from your usual readings) _____

_____

Fish Present (Please Mark) **Yes** ❑ or **No**❑

PLEASE KEEP A COPY AND SEND ORIGINAL DATA TO: Stream Team Coordinator
Water Protection Program
Department of Natural Resources
PO Box 176
Jefferson City, MO 65102-0176

Water Quality Volunteer

SITE SELECTION DATA SHEET

Please check the box next to the "Site #" *if this is a new site and please be sure to attach a map.* (PLEASE PRINT)

☐ Site # _____ Stream _____ County _____

Site Location _____

Date _____ Time (military time) _____ Rainfall (inches in last 7 days) _____ Water Temp. (°C) _____

Trained Data Submitter (responsible volunteer) _____ Stream Team Number _____

Trained Participants _____

Weather Conditions: ☐ Clear ☐ Cloudy ☐ Partly Cloudy ☐ Rain

Other: _____

Temperature:

Air Temperature (°C) _____ Water Temperature (°C) _____

Water Appearance: ☐ Clear ☐ Brown ☐ Milky ☐ Oily

Other: _____

Water Odor: ☐ Rotten ☐ Musty ☐ Fishy ☐ Chlorine ☐ None

Other: _____

Habitat: (Check all that apply)

☐ Pool ☐ Root Wads ☐ Undercut Banks

☐ Riffle ☐ Logs or Stumps ☐ Rock Ledges

☐ Run ☐ Aquatic Vegetation ☐ Log Piles

☐ Backwater ☐ Large Boulders ☐ Artificial Objects

Other: _____

Riparian Cover: Stream is ...

☐ Fully Exposed (0-25% of stream is shaded from the sun)

☐ Partially Exposed (25-50%)

☐ Partially Shaded (50-75%)

☐ Fully Shaded (75-100%)

Streambank Vegetation: ☐ Trees ☐ Shrubs ☐ Grasses/Weeds ☐ Root Mats

(Check all that apply) ☐ Bare Ground Other: _____

Algae:

Is the algae located: ☐ In Spots ☐ Everywhere ☐ Absent

Is the algae: ☐ Close-Growing (< 2") ☐ Filamentous (> 2")

Other: _____

Stream Bed: (Rank each substrate 0-5 with 5 being most prevalent.)

Silt/Mud	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Sand	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Gravel	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Cobble	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Boulder	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Bedrock	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

Aquatic Organisms: ☐ Fish ☐ Invertebrates

Other: _____

Land Use in the Watershed: (Check all that apply)

☐ Pasture/Grazing Land ☐ Cropland ☐ Woods ☐ Park

☐ Homes ☐ Factories ☐ Stores ☐ Confined Animal Feeding Operation (CAFO)

Other: _____

SITE SELECTION DATA SHEET INSTRUCTIONS

This data sheet has been developed to help you to become familiar with your 300-foot monitoring site and to identify it to program staff. Fill out all of the data sheet items and any additional notes you feel help describe the stream and riparian corridor. Return this data sheet, a map with your site clearly marked, as well as the Stream Discharge data sheet to the address below to receive your biological monitoring equipment.

Data Sheet Items

Site Number. You must designate this number. It becomes very important if you choose to monitor more than one site. Number your sites as you chronologically choose them.

Stream and County. List the name of the stream as it appears on your map (e.g., a USGS topographic map). Locating your site on a map also ensures you record the appropriate county.

Site Description. This refers to a verbal description. Verbally describe where you are on the stream using street or highway names, bridges, approximate distances from landmarks, etc. Please be consistent and use the same verbal description for the same site (e.g., 100 feet upstream of Hwy. P bridge).

Date and **Time.** Please use military time (e.g., 2:00 p.m. is 1400, or 2:45 p.m. is 1445).

Rainfall (inches in last 7 days). Record the amount of rain that fell with in the watershed in the past week.

Water Temperature. 0° - 34° C ***is within the normal range.***
Be sure to read water temperature while the thermometer is submerged and shaded.

Trained Data Submitter. List the name of the person assuming responsibility for these data.

Stream Team Number. Enter your Stream Team number.

Trained Participants. List the names of other volunteers trained at VWQM classes.

Weather Conditions. Please describe the cloud cover (e.g., sunny, partly cloudy, etc...).

Temperature. Measure the air temperature before measuring the water temperature. Read the water temperature while the thermometer is in the water to guarantee an exact reading.

Water Appearance. Collect a sample of water using a clear plastic container and describe the water's color (e.g., clear, brown, green, milky, oily sheen, etc...).

Water Odor. Take a whiff from your plastic container. If any odor is present, please describe (e.g., sewage odor, chemical odor, petroleum odor, rotten egg odor, musty odor, organic odor, no perceptible odor, etc...).

Habitat. Indicate what habitat types are present for aquatic life within your monitoring site.

Riparian Cover. For the purpose of this data sheet the riparian one is the area extending back from the top of each stream bank for a distance of 100 feet. Estimate the percentage of this area that is covered by vegetation.

Streambank Vegetation. Indicate what types of vegetation are present along the banks and in the riparian area at your monitoring site.

Algae. Indicate where on the stream bottom algae is located and if it is filamentous or close-growing.

Stream Bed. Rank the various sized sediments listed 0-5 with 5 being the substrate that is most prevalent and covers the most of the stream bed, rank a substrate 0 if it appears to be not present.

Aquatic Organisms. Check the box if there are fish or aquatic invertebrates present. You may also note any other aquatic vertebrates you see.

Land Use in the Watershed. Indicate the dominant land uses within your stream's watershed.

Comments _____

_____

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Water Protection Program
Department of Natural Resources
P.O. Box 176
Jefferson City, MO 65102-0176

Water Quality Volunteer

SITE SELECTION DATA SHEET

Please check the box next to the "Site #" *if this is a new site and please be sure to attach a map.* (PLEASE PRINT)

☐ Site # _____ Stream _____ County _____

Site Location _____

Date _____ Time (military time) _____ Rainfall (inches in last 7 days) _____ Water Temp. (°C) _____

Trained Data Submitter (responsible volunteer) _____ Stream Team Number _____

Trained Participants _____

Weather Conditions: ☐ Clear ☐ Cloudy ☐ Partly Cloudy ☐ Rain

Other: _____

Temperature:

Air Temperature (°C) _____ Water Temperature (°C) _____

Water Appearance: ☐ Clear ☐ Brown ☐ Milky ☐ Oily

Other: _____

Water Odor: ☐ Rotten ☐ Musty ☐ Fishy ☐ Chlorine ☐ None

Other: _____

Habitat: (Check all that apply)

☐ Pool ☐ Root Wads ☐ Undercut Banks

☐ Riffle ☐ Logs or Stumps ☐ Rock Ledges

☐ Run ☐ Aquatic Vegetation ☐ Log Piles

☐ Backwater ☐ Large Boulders ☐ Artificial Objects

Other: _____

Riparian Cover: Stream is ...

☐ Fully Exposed (0-25% of stream is shaded from the sun)

☐ Partially Exposed (25-50%)

☐ Partially Shaded (50-75%)

☐ Fully Shaded (75-100%)

Streambank Vegetation: ☐ Trees ☐ Shrubs ☐ Grasses/Weeds ☐ Root Mats

(Check all that apply) ☐ Bare Ground Other: _____

Algae:

Is the algae located: ☐ In Spots ☐ Everywhere ☐ Absent

Is the algae: ☐ Close-Growing (< 2") ☐ Filamentous (> 2")

Other: _____

Stream Bed: (Rank each substrate 0-5 with 5 being most prevalent.)

Silt/Mud	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Sand	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Gravel	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Cobble	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Boulder	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
Bedrock	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

Aquatic Organisms: ☐ Fish ☐ Invertebrates

Other: _____

Land Use in the Watershed: (Check all that apply)

☐ Pasture/Grazing Land ☐ Cropland ☐ Woods ☐ Park

☐ Homes ☐ Factories ☐ Stores ☐ Confined Animal Feeding Operation (CAFO)

Other: _____

SITE SELECTION DATA SHEET INSTRUCTIONS

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Date and **Time.** Please use military time (e.g., 2:00 p.m. is 1400, or 2:45 p.m. is 1445).

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Water Temperature. 0° - 34° C ***is within the normal range.***
Be sure to read water temperature while the thermometer is submerged and shaded.

Trained Data Submitter. List the name of the person assuming responsibility for these data.

Stream Team Number. Enter your Stream Team number.

Trained Participants. List the names of other volunteers trained at VWQM classes.

Weather Conditions. Please describe the cloud cover (e.g., sunny, partly cloudy, etc...).

Temperature. Measure the air temperature before measuring the water temperature. Read the water temperature while the thermometer is in the water to guarantee an exact reading.

Water Appearance. Collect a sample of water using a clear plastic container and describe the water's color (e.g., clear, brown, green, milky, oily sheen, etc...).

Water Odor. Take a whiff from your plastic container. If any odor is present, please describe (e.g., sewage odor, chemical odor, petroleum odor, rotten egg odor, musty odor, organic odor, no perceptible odor, etc...).

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Comments _____

_____

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Water Protection Program
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Water Quality Volunteer

SITE SELECTION DATA SHEET

Please check the box next to the "Site #" *if this is a new site and please be sure to attach a map.* (PLEASE PRINT)

☐ Site # _____ Stream _____ County _____

Site Location _____

Date _____ Time (military time) _____ Rainfall (inches in last 7 days) _____ Water Temp. (°C) _____

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Other: _____

Temperature:

Air Temperature (ºC) _____ Water Temperature (ºC) _____

Water Appearance: ❑ Clear ❑ Brown ❑ Milky ❑ Oily

Other: _____

Water Odor: ❑ Rotten ❑ Musty ❑ Fishy ❑ Chlorine ❑ None

Other: _____

Habitat: (Check all that apply)

❑ Pool	❑ Root Wads	❑ Undercut Banks
❑ Riffle	❑ Logs or Stumps	❑ Rock Ledges
❑ Run	❑ Aquatic Vegetation	❑ Log Piles
❑ Backwater	❑ Large Boulders	❑ Artificial Objects

Other: _____

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- ❑ Fully Exposed (0-25% of stream is shaded from the sun)
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Streambank Vegetation: ❑ Trees ❑ Shrubs ❑ Grasses/Weeds ❑ Root Mats

(Check all that apply) ❑ Bare Ground Other: _____

Algae:

Is the algae located: ❑ In Spots ❑ Everywhere ❑ Absent

Is the algae: ❑ Close-Growing (< 2") ❑ Filamentous (> 2")

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Stream Bed: (Rank each substrate 0-5 with 5 being most prevalent.)

Silt/Mud	❑ 0	❑ 1	❑ 2	❑ 3	❑ 4	❑ 5
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Cobble	❑ 0	❑ 1	❑ 2	❑ 3	❑ 4	❑ 5
Boulder	❑ 0	❑ 1	❑ 2	❑ 3	❑ 4	❑ 5
Bedrock	❑ 0	❑ 1	❑ 2	❑ 3	❑ 4	❑ 5

Aquatic Organisms: ❑ Fish ❑ Invertebrates

Other: _____

Land Use in the Watershed: (Check all that apply)

❑ Pasture/Grazing Land	❑ Cropland	❑ Woods	❑ Park
❑ Homes	❑ Factories	❑ Stores	❑ Confined Animal Feeding Operation (CAFO)

Other: _____

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This data sheet has been developed to help you to become familiar with your 300-foot monitoring site and to identify it to program staff. Fill out all of the data sheet items and any additional notes you feel help describe the stream and riparian corridor. Return this data sheet, a map with your site clearly marked, as well as the Stream Discharge data sheet to the address below to receive your biological monitoring equipment.

Data Sheet Items

Site Number. You must designate this number. It becomes very important if you choose to monitor more than one site. Number your sites as you chronologically choose them.

Stream and County. List the name of the stream as it appears on your map (e.g., a USGS topographic map). Locating your site on a map also ensures you record the appropriate county.

Site Description. This refers to a verbal description. Verbally describe where you are on the stream using street or highway names, bridges, approximate distances from landmarks, etc. Please be consistent and use the same verbal description for the same site (e.g., 100 feet upstream of Hwy. P bridge).

Date and **Time.** Please use military time (e.g., 2:00 p.m. is 1400, or 2:45 p.m. is 1445).

Rainfall (inches in last 7 days). Record the amount of rain that fell with in the watershed in the past week.

Water Temperature. 0° - 34° C ***is within the normal range.***
Be sure to read water temperature while the thermometer is submerged and shaded.

Trained Data Submitter. List the name of the person assuming responsibility for these data.

Stream Team Number. Enter your Stream Team number.

Trained Participants. List the names of other volunteers trained at VWQM classes.

Weather Conditions. Please describe the cloud cover (e.g., sunny, partly cloudy, etc...).

Temperature. Measure the air temperature before measuring the water temperature. Read the water temperature while the thermometer is in the water to guarantee an exact reading.

Water Appearance. Collect a sample of water using a clear plastic container and describe the water's color (e.g., clear, brown, green, milky, oily sheen, etc...).

Water Odor. Take a whiff from your plastic container. If any odor is present, please describe (e.g., sewage odor, chemical odor, petroleum odor, rotten egg odor, musty odor, organic odor, no perceptible odor, etc...).

Habitat. Indicate what habitat types are present for aquatic life within your monitoring site.

Riparian Cover. For the purpose of this data sheet the riparian one is the area extending back from the top of each stream bank for a distance of 100 feet. Estimate the percentage of this area that is covered by vegetation.

Streambank Vegetation. Indicate what types of vegetation are present along the banks and in the riparian area at your monitoring site.

Algae. Indicate where on the stream bottom algae is located and if it is filamentous or close-growing.

Stream Bed. Rank the various sized sediments listed 0-5 with 5 being the substrate that is most prevalent and covers the most of the stream bed, rank a substrate 0 if it appears to be not present.

Aquatic Organisms. Check the box if there are fish or aquatic invertebrates present. You may also note any other aquatic vertebrates you see.

Land Use in the Watershed. Indicate the dominant land uses within your stream's watershed.

Comments _____

_____

PLEASE KEEP A COPY AND SEND ORIGINAL DATA TO: Stream Team Coordinator
Water Protection Program
Department of Natural Resources
P.O. Box 176
Jefferson City, MO 65102-0176

Water Quality Volunteer

ACTIVITY PRIZE DRAWING

Activity Prize items will change every three months.

If you would like to be included in our "Activity Prize Drawing," please check box at right and attach a list of participant names. Please print clearly. The more activities you submit, the better your chances! New prizes will be drawn every three months.	☐ Activity Prize
	or
Attention teachers and youth group leaders: For a youth group prize, please check the box at right, but you do not need to include a participant list for group prizes. New prizes will be available and drawn every three months.	☐ Youth group prize

THANK YOU ITEMS

You may request these free items in any combination.

ITEM:	Number requested:
Bandannas (Stream Team)	
Bookmarks (dragonfly)	
Bookmarks (spring peeper)	
Bumper Stickers (Quality Water, 3 1/2" x 9 1/4")	
Buttons (Stream Team mini-buttons 1 1/2" pins)	
Carabiners (Stream Team Key Chain)	
Colorbook (Stream Team Most Wanted, Grades 4-6)	
Colorbook (Stream Team Superstars, Grades K-3)	
Koozies (Stream Team)	
Mood Cups (Stream Team, 17 oz. plastic)	
Patches (Stream Team, 3" round, embroidered)	
Pencils (Get Into Missouri Streams, blue sparkle)	
Post-it Notes (Stream Team, 3" x 4")	
Scratch Pads (Stream Team, 5 1/2" x 8")	
Stickers (Get Into Missouri Streams, 3" round)	
Stickers (I Love Missouri Streams, 3" round)	
T-Shirts (Stream Team, adult sizes only)	S____ M____ L____ XL____ XXL____

Please allow up to three weeks for delivery. Thanks!

ACTIVITY SUPPLIES

These free supplies are available for your activities.

ITEM:	Number requested:
First Aid Kits (limited availability)	
Litter Pickup Bags (green mesh 24" x 36") for larger trash	
Litter Pickup Bags (red mesh 14" x 26")	
Work Gloves (adult size)	
Work Gloves (youth size)	

Missouri Stream Team Activity Report

This report can be turned in after only 1 activity.
Stay active -- you make a difference for Missouri streams!

Stream Team Identification:

Please help us save on shipping costs; ship to your office or school if possible!

Team Number:_____

Team Name:_____

Reporter Name:_____

Business/School: (if applicable)_____

Shipping Address: (no PO Box please)_____

Please check one:
Commercial ☐
Residential ☐

City, State, Zip:_____

Home Phone: (_____)_____-_____ Work Phone: (_____)_____-_____

Updated E-mail:_____

Contact Person for Team:_____

Is there a change in Contact Person? Yes No
Is there a change in Contact Person address? Yes No

If yes, new address:_____

_____

Please provide details about your activities on the reverse side.

Mail this Activity Report to:
MISSOURI STREAM TEAM
PO BOX 180
JEFFERSON CITY MO 65102-0180

We welcome your activity photos. Be aware they may be published in our news-letter or annual report. Thank you!

For more information, contact us at:
Phone: 1-800-781-1989 (voice mail)
E-mail: streamteam@mdc.mo.gov
Website: www.mostreamteam.org
Fax: 573/526-0990

6/19/2012

Stream Team Activity Report

Stream Team Activity 1

Type of activity: (see code list at right)_____

Activity date: _____

Stream name: _____

Activity county: _____

Activity basin: _____

Miles of river covered: _____

Number of volunteers involved: _____

Hours spent on project: _____

Measurement : Please list number of monitoring trips, bags of trash collected, letters written, trees planted, events held, etc. See code list at right.

_____

Location Description: Please provide a detailed location for your activity. (Example: 100 yds. upstream from Hwy. 63 bridge.) Include township, range, and section if possible. A good source for maps can be found at www.usgs.gov.

_____

_____

_____

_____

_____

Project Description: Please include as much information as you can about your activity. Include facts about the project not covered above. (Example: "Held 4th Annual litter pickup and picnic at Dry Fork Creek.") _____

_____

_____

_____

Stream Team Activity 2

Type of activity: (see code list at right) _____

Activity date: _____

Stream name: _____

Activity county: _____

Activity basin: _____

Miles of river covered: _____

Number of volunteers involved: _____

Hours spent on project: _____

Measurement : Please list number of monitoring trips, bags of trash collected, letters written, trees planted, events held, etc. See code list at right.

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Location Description: Please provide a detailed location for your activity. (Example: 100 yds. upstream from Hwy. 63 bridge.) Include township, range, and section if possible. A good source for maps can be found at www.usgs.gov.

_____

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Project Description: Please include as much information as you can about your activity. Include facts about the project not covered above. (Example: "Held 4th Annual litter pickup and picnic at Dry Fork Creek.") _____

_____

_____

_____

Stream Team Activity 3

Type of activity: (see code list at right)_____

Activity date: _____

Stream name: _____

Activity county: _____

Activity basin: _____

Miles of river covered: _____

Number of volunteers involved: _____

Hours spent on project: _____

Measurement : Please list number of monitoring trips, bags of trash collected, letters written, trees planted, events held, etc. See code list at right.

_____

Location Description: Please provide a detailed location for your activity. (Example: 100 yds. upstream from Hwy. 63 bridge.) Include township, range, and section if possible. A good source for maps can be found at www.usgs.gov.

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Project Description: Please include as much information as you can about your activity. Include facts about the project not covered above. (Example: "Held 4th Annual litter pickup and picnic at Dry Fork Creek.") _____

_____

_____

_____

Stream Team Activity code List

Activity	Code	Measurement
Litter pickup	LPU	Number of litter bags
Water quality monitoring	WQM	Number of trips
Pre-activity planning	PLN	Number of events
Stream Team meeting	MTG	Number of attendees
Stream workshop attended	WKS	Number of attendees
Education project	EDU	Number of events
Letter written on stream issue	LET	Number of letters
Article written for newspaper, etc	ART	Number of articles
Media contact/interview	MED	Number of interviews
Tree planting	PLT	Number of trees
Presentation to groups	PRE	Number of presentations
ST display at school, fair, etc.	DIS	Number of events
ST Inventory Guide submitted	INV	Number of inventories
GPS Reading	TRP	Number of trips
Zebra mussel monitoring form	ZEB	Number of trips
Storm drain stenciling	SDS	Number of drains stenciled
Monofilament recycling project	MRP	Weight of line recycled
Streambank stabilization project	SSP	Number of events
Habitat improvement	HAI	Number of projects
Advocacy on stream issue	ADV	Number of hours
Photo Point Monitoring	PPM	Number of photos
Greenway development	GRE	Number of projects
Recruited new Team/members	REC	Number of people recruited
Stream Team mentoring	MEN	Team mentored & hours
Stream Access Maintenance	SAM	Number of litter bags/events
Adopt-An-Access project	AAA	Number of litter bags/hours
Forestkeepers monitoring	FOR	Number of events
ST Association activity	ASC	Number of hours
Award received	AWA	Number of awards
Grant applied/received	GRT	Number of projects
Watershed mapping	WAT	Number of trips
Assisted MDC fish stocking	FIS	Number of events
Other: please describe	OTH	Number of Projects

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	or
Attention teachers and youth group leaders: For a youth group prize, please check the box at right, but you do not need to include a participant list for group prizes. New prizes will be available and drawn every three months.	☐ Youth group prize

THANK YOU ITEMS

You may request these free items in any combination.

ITEM:	Number requested:
Bandannas (Stream Team)	
Bookmarks (dragonfly)	
Bookmarks (spring peeper)	
Bumper Stickers (Quality Water, 3 1/2" x 9 1/4")	
Buttons (Stream Team mini-buttons 1 1/2" pins)	
Carabiners (Stream Team Key Chain)	
Colorbook (Stream Team Most Wanted, Grades 4-6)	
Colorbook (Stream Team Superstars, Grades K-3)	
Koozies (Stream Team)	
Mood Cups (Stream Team, 17 oz. plastic)	
Patches (Stream Team, 3" round, embroidered)	
Pencils (Get Into Missouri Streams, blue sparkle)	
Post-it Notes (Stream Team, 3" x 4")	
Scratch Pads (Stream Team, 5 1/2" x 8")	
Stickers (Get Into Missouri Streams, 3" round)	
Stickers (I Love Missouri Streams, 3" round)	
T-Shirts (Stream Team, adult sizes only)	S____ M____ L____ XL____ XXL____

Please allow up to three weeks for delivery. Thanks!

ACTIVITY SUPPLIES

These free supplies are available for your activities.

ITEM:	Number requested:
First Aid Kits (limited availability)	
Litter Pickup Bags (green mesh 24" x 36") for larger trash	
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Work Gloves (adult size)	
Work Gloves (youth size)	

Missouri Stream Team Activity Report

This report can be turned in after only 1 activity.
Stay active -- you make a difference for Missouri streams!

Stream Team Identification:

Please help us save on shipping costs; ship to your office or school if possible!

Team Number:_____

Team Name:_____

Reporter Name:_____

Business/School: (if applicable)_____

Shipping Address: (no PO Box please)_____

Please check one:
Commercial ☐
Residential ☐

City, State, Zip:_____

Home Phone: (_____)_____-_____ Work Phone: (_____)_____-_____

Updated E-mail:_____

Contact Person for Team:_____

Is there a change in Contact Person? Yes No
Is there a change in Contact Person address? Yes No

If yes, new address:_____

_____

Please provide details about your activities on the reverse side.

Mail this Activity Report to:
MISSOURI STREAM TEAM
PO BOX 180
JEFFERSON CITY MO 65102-0180

We welcome your activity photos. Be aware they may be published in our news-letter or annual report. Thank you!

For more information, contact us at:
Phone: 1-800-781-1989 (voice mail)
E-mail: streamteam@mdc.mo.gov
Website: www.mostreamteam.org
Fax: 573/526-0990

6/19/2012

Stream Team Activity Report

Stream Team Activity 1

Type of activity: (see code list at right)_____

Activity date: _____

Stream name: _____

Activity county: _____

Activity basin: _____

Miles of river covered: _____

Number of volunteers involved: _____

Hours spent on project: _____

Measurement : Please list number of monitoring trips, bags of trash collected, letters written, trees planted, events held, etc. See code list at right.

_____

Location Description: Please provide a detailed location for your activity. (Example: 100 yds. upstream from Hwy. 63 bridge.) Include township, range, and section if possible. A good source for maps can be found at www.usgs.gov.

_____

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Project Description: Please include as much information as you can about your activity. Include facts about the project not covered above. (Example: "Held 4th Annual litter pickup and picnic at Dry Fork Creek.") _____

_____

_____

_____

Stream Team Activity 2

Type of activity: (see code list at right) _____

Activity date: _____

Stream name: _____

Activity county: _____

Activity basin: _____

Miles of river covered: _____

Number of volunteers involved: _____

Hours spent on project: _____

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_____

_____

_____

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Type of activity: (see code list at right)_____

Activity date: _____

Stream name: _____

Activity county: _____

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Other: please describe	OTH	Number of Projects

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This report can be turned in after only 1 activity.
Stay active -- you make a difference for Missouri streams!

Stream Team Identification:

Please help us save on shipping costs; ship to your office or school if possible!

Team Number:_____

Team Name:_____

Reporter Name:_____

Business/School: (if applicable)_____

Shipping Address: (no PO Box please)_____

Please check one:
Commercial ☐
Residential ☐

City, State, Zip:_____

Home Phone: (_____)_____-_____ Work Phone: (_____)_____-_____

Updated E-mail:_____

Contact Person for Team:_____

Is there a change in Contact Person? Yes No
Is there a change in Contact Person address? Yes No

If yes, new address:_____

_____

Please provide details about your activities on the reverse side.

Mail this Activity Report to:
MISSOURI STREAM TEAM
PO BOX 180
JEFFERSON CITY MO 65102-0180

We welcome your activity photos. Be aware they may be published in our news-letter or annual report. Thank you!

For more information, contact us at:
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6/19/2012

Stream Team Activity Report

Stream Team Activity 1

Type of activity: (see code list at right)_____

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Stream name: _____

Activity county: _____

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Number of volunteers involved: _____

Hours spent on project: _____

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Location Description: Please provide a detailed location for your activity. (Example: 100 yds. upstream from Hwy. 63 bridge.) Include township, range, and section if possible. A good source for maps can be found at www.usgs.gov.

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Project Description: Please include as much information as you can about your activity. Include facts about the project not covered above. (Example: "Held 4th Annual litter pickup and picnic at Dry Fork Creek.") _____

_____

_____

_____

Stream Team Activity 2

Type of activity: (see code list at right) _____

Activity date: _____

Stream name: _____

Activity county: _____

Activity basin: _____

Miles of river covered: _____

Number of volunteers involved: _____

Hours spent on project: _____

Measurement : Please list number of monitoring trips, bags of trash collected, letters written, trees planted, events held, etc. See code list at right.

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Stream Team Activity 3

Type of activity: (see code list at right)_____

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