

## Chemical and Flow Monitoring Data Sheet

Sample Site: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Sample Site Location: \_\_\_\_\_ Latitude: \_\_\_\_\_ Longitude: \_\_\_\_\_

Monitor's Name: \_\_\_\_\_

\*\*\*\*\*  
 Circle the description that best matches your observation:

**Weather & Precipitation:**    Clear    Cloudy    Partly Cloudy    Fog/Haze  
    Rain    Drizzle    Intermittent Rain    Snow

**Precipitation last 48 hours:**    None    Trace    Light    Moderate    Heavy

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Parameter	Units	Replicate 1	Replicate 2	Average
Conductivity	μS/cm			
Total Dissolved Solids	mg/L			

**DISCHARGE:** Determine the discharge by using a flow meter (if available) or other methods such as the **FLOAT METHOD** or **VELOCITY HEAD ROD (VHR)**. Discharge should always be measured from a **RUN**. The more measurements collected the more accurate your discharge results will be. To convert inches into feet divide by 12. For example, if your depth measurement was 6-inches the result in feet would be 0.5. Indicate the method and use the tables to record your results.

Discharge method used

Water Level








Float

VHR

Flow meter

Low

Normal

High

Dry

Channel width \_\_\_\_\_ feet

Tape positions (ft)	Depth (ft)	Velocity (ft/sec)	VHR (Rise-inches)	Float (sec)	Discharge (cfs)
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
Totals/Averages					

Cross Sectional Area (CSA) \_\_\_\_\_ ft<sup>2</sup>  
 (CSA = Average Depth x Width)

**Discharge = CSA x Velocity**

= \_\_\_\_\_ x \_\_\_\_\_  
 = \_\_\_\_\_ cfs (ft<sup>3</sup>/sec)

If you use a float record your distance below and the number of seconds it took to travel the distance in the column indicated. **Float distance** (feet) \_\_\_\_\_

**VHR rises and velocities**

Rise (R)	Velocity	Rise (R)	Velocity
¼	1.2	3 ¼	4.2
½	1.6	3 ½	4.3
¾	2.0	3 ¾	4.5
1	2.3	4	4.6
1 ¼	2.6	4 ¼	4.8
1 ½	2.8	4 ½	4.9
1 ¾	3.1	4 ¾	5.0
2	3.3	5	5.2
2 ¼	3.5	5 ¼	5.3
2 ½	3.7	5 ½	5.4
2 ¾	3.8	5 ¾	5.5
3	4.0	6	5.7

**LAND USE:** Indicate the land uses that you believe may be having an impact on your stream station. Use the letters **(S)** streamside, **(M)** within ¼ mile and **(W)** somewhere in the watershed, to indicate the approximate location of the disturbance and the numbers **(1)** slight, **(2)** moderate or **(3)** high, to represent the level of disturbance.

Active construction		Pastureland		Single-family residences		
Mountaintop mining		Cropland		Sub-urban developments		
Deep mining		Intensive feedlots		Parking lots, strip-malls etc.		
Abandoned mining		Unpaved Roads		Paved Roads		
Logging		Trash dumps		Bridges		
Oil and gas wells		Landfills		Other (describe)		
Recreation (parks, trails etc.)		Industrial areas				

Pipes?  Yes  No

Describe the types of pipes observed and indicate if there is any discharge from the pipes. Also describe the colors and odors of the discharge, and provide any other land-use comments.

**PHOTOGRAPH AND SKETCH THE STUDY AREA:** Use the space below to draw your study reach. Indicate the direction of flow, sample locations and important features of the reach. Photographs are an excellent method for tracking changes, especially changes related to the condition of the habitat. Choose at least two locations from which to take your photos and submit your photos with your survey data sheet.

# Visual Assessment

Data sheets provided here are modified from Dickinson College ALLARM Program. ALLARM has recently created a Marcellous volunteer monitoring protocol for PA.

## Observations for Gas Related Earth Disturbances

### Streams:

- Visual evidence of sediment entering stream, pond, wetland, or other body of water
  - Sediment plume
  - Discolored water
  - Increased sediment deposition on the stream bottom

### Access Roads:

- Mud/sediment/drainage from access road travels to main road
- Mud/sediment/drainage from access road enters road ditch
- Access road not stabilized with clean gravel
- Access road crosses stream and drainage from road empties directly into stream
- Access road banks are not stabilized (no mulch, seeding, vegetation, etc.)

### Drill Pad, Storage Pond, and Stages Areas:

- Earth has been disturbed to edge of water body and there are no controls to stop or filter runoff
- Clean water enters the site from uphill with no diversion ditch
- Outlets of sediment control structures go directly into a water body without filtering or cleaning runoff
- Outlets of sediment control structures are not stabilized (no mulch, seeding, vegetation, etc.)

## Observations for Spills and Discharges

### Streams:

- Unusual order in the water
- Discolored water (such as an oily film on the water surface)
- Persistent foam and/or bubbles (where there isn't normal agitation)
- Dead fish and/or other organisms are in the water or along the bank

## Observations for Gas Migration or Leakage

### Streams:

- Gas bubbling to surface
- Unusual order (due to mercaptan compounds)

**Submit your data to the address below:**

Additional comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

WVDEP, Save Our Streams Program  
601 5<sup>th</sup> Street, SE  
Charleston, WV 25304  
<http://www.dep.wv.gov/sos>