

# Stream Inventory - Watershed Assessment

Stream Walkers: Eric Akin & Chapman Owusu-Sekyere Station: 1 Date: 06-09-04  
Stream Name: Middle Branch - Nimishillen Creek Water level:  high  avg.  low  
Weather conditions: Partly Cloudy, warm Last rain event 6-5-04  
Air temp. 80°F Water temp. 76°F  
Inventoried stream section, River Mile 17.11 to River Mile 17.12  
Descriptive location (use roads etc.) Reifsnnyder Park – under Rte.62 bridge

### Water surface appearance:

- Scum
- Foamy
- Muddy
- Milky
- Clear
- Colored sheen (oily)
- Brownish
- Other, \_\_\_\_\_

### Stream bed coating:

- Algae coated
- Orange to red
- Yellowish
- Black
- Brown
- None
- Silt coated, depth of deposits \_\_\_\_\_
- Other, \_\_\_\_\_

### Odor:

- Rotten Egg
- Musky
- Sewage
- Chlorine
- None
- Other, \_\_\_\_\_

### Habitat:

- Pools
- Rock ledges - Rip Rap
- Log piles
- Weed beds
- Undercut banks
- Wetlands
- Backwaters
- Large boulders
- Riffles
- Tree roots
- Logs or woody debris
- Man-made objects

Maximum Stream Depth 3.5 ft Average Stream Width 40 ft

### Stream shading: Stream is -

- Fully exposed (0-24% of stream is shaded from the sun)
- Fully shaded (75-100%)
- Partially exposed (25-49%)
- Partially shaded (50-74%)

### Streambank vegetation:

Trees (%) 5 Plants (%) 10 Bare soil (%) 5 Grass (%) 45

Shrubs(%) 35 Root mats (%) - Other (%) -

Approximate width of vegetation: Left bank 100+ ft Right bank 50 ft

Is grass mowed down to the water's edge?  Yes  No

### Land uses along stream section:

1. Farming:  Pasture/Grazing Land  Crops  Woods  Other (explain) \_\_\_\_\_
2. Urban areas:  Homes  Light manufacturing  Heavy manufacturing  
 Retail/Comm.  Construction sites  Parking lots
3. Other (explain) Behind Park Farm's chicken plant

Outfalls:

1. Are there any discharge pipes?  No  Yes      Location: 2 on the left bank, 1 downstream on the right bank

2. Types of pipes:  Sewage treatment      1 on the right bank down stream of site 3  
 Storm water runoff - culvert  
 Industrial (type) \_\_\_\_\_  
 Drainage tile outlets  
 Unknown  
 Other \_\_\_\_\_

3. Description of odor associated with discharge pipes: None

4. Condition of streambank at outlet site \_\_\_\_\_

Stream channel alterations:     Dredging     Channelization     Fill     None  
 Other (explain) Likely channelized in the past

Structures or barriers in the stream:  
 Dams     Bridges     Islands     Waterfalls     Log jams     Sediment/sandbars  
 Other (explain) Natural rock check dam under the bridge

Litter in and around stream:     No     Yes      Location: Scattered

Paper and small trash \_\_\_\_\_     Cans and bottles \_\_\_\_\_  
 Tires, carts, etc. \_\_\_\_\_     Other TV set-by the island

Verbal Site Description: Give visual description of stream, substrate, banks, riparian zone and adjacent land areas. Indicate what you think are current or potential threats to your stream's health. Are photographs of current or potential threats available?  
 Yes     No

The site is downstream of the newly constructed wetland at Reifsynder Park. Algae and weed growth on the stream bed. The Creek section upstream of the sites is slow moving and very heavily silted. Several pipes (storm water) from surrounding neighborhoods and businesses discharge into this section. Grass is not being mowed to the water's edge - there is a 3 to 5 foot buffer being left.

## STREAM QUALITY ASSESSMENT FORM

STATION 1 STREAM Nimishillen Creek - Middle Branch SAMPLE # 1  
 LOCATION Reifsyder Park about 100 yds. downstream of the Route 62 bridge.  
 COUNTY Stark TOWNSHIP/CITY Plain DATE 6/9/2004 TIME 1:30 PM  
 GROUP OR INDIVIDUALS Eric Akin & Chapman Owusu-Sekyere NO. OF PARTICIPANTS 2

DESCRIBE WATER CONDITIONS (COLOR, ODOR, BEDGROWTHS, SURFACE SCUM, ETC.)  
  
 Substrate surface is algae coated. Weeds growing.  
 No odors. Water is murkey. Sampled on the east side of the small island.

HACH KIT RESULTS (if used)  
AND OTHER OBSERVATIONS

Sediments stick = 34"

USE BACK OF FORM IF NECESSARY

WIDTH OF RIFFLE <u>41ft</u>	BED COMPOSITION OF RIFFLE (%)		
WATER DEPTH <u>5"</u>	SILT <input type="text" value="30"/>	GRAVEL (1/4" - 2") <input type="text" value="10"/>	
WATER TEMP. (°F) <u>76°F</u>	COBBLES (2" - 10") <input type="text" value="50"/>	BOULDERS (>10") <input type="text" value="5"/>	
	SAND <input type="text" value="5"/>		

<b>MACROINVERTEBRATE TALLY</b>	ESTIMATED COUNT LETTER CODE	A = 1 TO 9 B = 10 TO 99 C = 100 or more
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GROUP 1 TAXA	LETTER CODE	GROUP 2 TAXA	LETTER CODE	GROUP 3 TAXA	LETTER CODE
WATER PENNY LARVAE		DAMSELFLY NYMPHS		BLACKFLY LARVAE	A
MAYFLY NYMPHS		DRAGONFLY NYMPHS		AQUATIC WORMS	A
STONEFLY NYMPHS	A	CRANE FLY LARVAE		MIDGE LARVAE	C
DOBSONFLY LARVAE	A	BEETLE LARVAE	A	POUCH SNAILS	
CADDISFLY LARVAE	C	CRAYFISH		LEECHES	
RIFFLE BEETLE ADULT		SCUDS	A	PLANARIA	A
OTHER SNAILS		CLAMS	A		
		SOWBUGS	A		
NUMBER OF TAXA (times)	3	NUMBER OF TAXA (times)	4	NUMBER OF TAXA (times)	4
INDEX VALUE 3	9	INDEX VALUE 2	8	INDEX VALUE 1	4

CUMULATIVE INDEX VALUE

STREAM QUALITY ASSESSMENT

EXCELLENT (>22)

GOOD (17-22)

FAIR (11-16)

POOR (<11)

## STREAM QUALITY ASSESSMENT FORM

STATION	1	STREAM	Nimishillen Creek Middle Branch	SAMPLE #	2
LOCATION	Reifsyder Park about 100 yds downstream of the Route 62 bridge.				
COUNTY	Stark	TOWNSHIP/CITY	Plain	DATE	6/9/2004
GROUP OR INDIVIDUALS	Eric Akin and Chapman Owusu-Sekyere			TIME	1:30 PM
				NO. OF PARTICIPANTS	2
DESCRIBE WATER CONDITIONS (COLOR, ODOR, BEDGROWTHS, SURFACE SCUM, ETC.)				HACH KIT RESULTS (if used) AND OTHER OBSERVATIONS	
Substrate surface is algae coated. Weeds growing. No odors. Water is murkey. Sampled on the west side of the small island.				Sediments stick = 35"	
USE BACK OF FORM IF NECESSARY					

WIDTH OF RIFFLE	41ft	BED COMPOSITION OF RIFFLE (%)			
WATER DEPTH	10"	SILT	<input type="text" value="10"/>	GRAVEL (1/4" - 2")	<input type="text" value="20"/>
WATER TEMP. (°F)	77°F	COBBLES (2" - 10")	<input type="text" value="50"/>	BOULDERS (>10")	<input type="text" value="15"/>
		SAND	<input type="text" value="5"/>		

<b>MACROINVERTEBRATE TALLY</b>	ESTIMATED COUNT LETTER CODE
	A = 1 TO 9 B = 10 TO 99 C = 100 or more

GROUP 1 TAXA	LETTER CODE	GROUP 2 TAXA	LETTER CODE	GROUP 3 TAXA	LETTER CODE
WATER PENNY LARVAE		DAMSELFLY NYMPHS		BLACKFLY LARVAE	B
MAYFLY NYMPHS		DRAGONFLY NYMPHS		AQUATIC WORMS	B
STONEFLY NYMPHS		CRANE FLY LARVAE		MIDGE LARVAE	C
DOBSONFLY LARVAE		BEETLE LARVAE	A	POUCH SNAILS	
CADDISFLY LARVAE	C	CRAYFISH	A	LEECHES	
RIFFLE BEETLE ADULT	A	SCUDS	A	PLANARIA	A
OTHER SNAILS		CLAMS	B		
		SOWBUGS	A		
NUMBER OF TAXA (times)	2	NUMBER OF TAXA (times)	5	NUMBER OF TAXA (times)	4
INDEX VALUE 3	6	INDEX VALUE 2	10	INDEX VALUE 1	4

CUMULATIVE INDEX VALUE <input style="width: 100px; height: 20px;" type="text" value="20"/>	STREAM QUALITY ASSESSMENT EXCELLENT (>22) <input style="width: 40px; height: 20px;" type="text"/> GOOD (17-22) <input checked="" style="width: 40px; height: 20px;" type="text"/> X FAIR (11-16) <input style="width: 40px; height: 20px;" type="text"/> POOR (<11) <input style="width: 40px; height: 20px;" type="text"/>
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## STREAM QUALITY ASSESSMENT FORM

STATION 1 STREAM Nimishillen Creek - Middle Branch SAMPLE # 3  
 LOCATION Reifsyder Park under Route 62 bridge  
 COUNTY Stark TOWNSHIP/CITY Plain DATE 6/9/2004 TIME 2:10 PM  
 GROUP OR INDIVIDUALS Eric Akin and Chapman Owusu-Sekyere NO. OF PARTICIPANTS 2

DESCRIBE WATER CONDITIONS (COLOR, ODOR, BEDGROWTHS, SURFACE SCUM, ETC.)

Sampling under the bridge. No algae coating on the rocks.  
 Area is shaded. Less silt than the previous two sites.

HACH KIT RESULTS (if used)  
 AND OTHER OBSERVATIONS

Sediments stick = 34"

USE BACK OF FORM IF NECESSARY

WIDTH OF RIFFLE <u>38ft</u>	BED COMPOSITION OF RIFFLE (%)		
WATER DEPTH <u>15"</u>	SILT <input type="text" value="--"/>	GRAVEL (1/4" - 2") <input type="text" value="25"/>	
WATER TEMP. (°F) <u>77°F</u>	COBBLES (2" - 10") <input type="text" value="30"/>	BOULDERS (>10") <input type="text" value="40"/>	
	SAND <input type="text" value="5"/>		

### MACROINVERTEBRATE TALLY

ESTIMATED COUNT LETTER CODE  
 A = 1 TO 9  
 B = 10 TO 99  
 C = 100 or more

GROUP 1 TAXA	LETTER CODE	GROUP 2 TAXA	LETTER CODE	GROUP 3 TAXA	LETTER CODE
WATER PENNY LARVAE		DAMSELFLY NYMPHS		BLACKFLY LARVAE	A
MAYFLY NYMPHS	A	DRAGONFLY NYMPHS		AQUATIC WORMS	
STONEFLY NYMPHS		CRANE FLY LARVAE		MIDGE LARVAE	B
DOBSONFLY LARVAE		BEETLE LARVAE	A	POUCH SNAILS	
CADDISFLY LARVAE	B	CRAYFISH		LEECHES	
RIFFLE BEETLE ADULT		SCUDS		PLANARIA	
OTHER SNAILS	A	CLAMS	B		
		SOWBUGS			
NUMBER OF TAXA (times)	3	NUMBER OF TAXA (times)	2	NUMBER OF TAXA (times)	2
INDEX VALUE 3	9	INDEX VALUE 2	4	INDEX VALUE 1	2

CUMULATIVE INDEX VALUE

### STREAM QUALITY ASSESSMENT

EXCELLENT (>22)

GOOD (17-22)

FAIR (11-16)

POOR (<11)

# Stream Inventory - Watershed Assessment

Stream Walkers: Eric Akin and Frank Boateng Station: 2 Date: 09-02-04

Stream Name: East Branch Nimishillen Creek Water level:  high  avg.  low

Weather conditions: sunny Last rain event 08/29/04

Air temp. 64°F Water temp. 63°F

Inventoried stream section, River Mile 15.21 to River Mile 15.22

Descriptive location (use roads etc.) Cook Park at Mahoning Road

## Water surface appearance:

- Scum
- Foamy
- Muddy
- Milky
- Clear
- Colored sheen (oily)
- Brownish (slightly)
- Other, \_\_\_\_\_

## Stream bed coating:

- Algae coated
- Orange to red
- Yellowish
- Black
- Brown
- None
- Silt coated, depth of deposits \_\_\_\_\_
- Other, \_\_\_\_\_

## Odor:

- Rotten Egg
- Musky
- Sewage
- Chlorine
- None
- Other, \_\_\_\_\_

## Habitat:

- Pools
- Rock ledges
- Log piles
- Weed beds
- Undercut banks
- Wetlands
- Backwaters
- Large boulders
- Riffles
- Tree roots
- Logs or woody debris
- Man-made objects

Maximum Stream Depth \_\_\_\_\_ Average Stream Width \_\_\_\_\_

## Stream shading: Stream is -

- Fully exposed (0-24% of stream is shaded from the sun)
- Fully shaded (75-100%)
- Partially exposed (25-49%)
- Partially shaded (50-74%)

## Streambank vegetation:

Trees (%) \_\_\_\_\_ Plants (%) 30 Bare soil (%) \_\_\_\_\_ Grass (%) 20

Shrubs (%) 50 Root mats (%) \_\_\_\_\_ Other (%) \_\_\_\_\_

Approximate width of vegetation: Left bank 15' Right bank 10'

Is grass mowed down to the water's edge?  Yes  No

## Land uses along stream section:

1. Farming:  Pasture/Grazing Land  Crops  Woods  Other (explain) \_\_\_\_\_
2. Urban areas:  Homes  Light manufacturing  Heavy manufacturing  
 Retail/Comm.  Construction sites  Parking lots
3. Other (explain) Cook Park baseball field—Industrial site 50' from stream—just upstream of bridge (right bank)

Outfalls:

1. Are there any discharge pipes?  No  Yes      Location: \_\_\_\_\_

2. Types of pipes:      Sewage \_\_\_\_\_

treatment

Storm water runoff \_\_\_\_\_

Industrial (type) \_\_\_\_\_

Drainage tile outlets \_\_\_\_\_

Unknown \_\_\_\_\_

Other \_\_\_\_\_

3. Description of odor associated with \_\_\_\_\_

Stream channel alterations:     Dredging     Channelization     Fill     None

Other (explain) \_\_\_\_\_

Structures or barriers in the stream:

Dams     Bridges     Islands     Waterfalls     Log jams     Sediment/sandbars (gravel/cobble)

Other (explain) \_\_\_\_\_

Litter in and around stream:     No     Yes      Location: \_\_\_\_\_

Paper and small trash      \_\_\_\_\_ %       Cans and bottles      \_\_\_\_\_ %

Tires, carts, etc.      \_\_\_\_\_ %       Other    Metal sheet \_\_\_\_\_

Verbal Site Description: Give visual description of stream, substrate, banks, riparian zone and adjacent land areas. Indicate what you think are current or potential threats to your stream's health. Are photographs of current or potential threats available?

Yes     No

Site has virtually no riparian vegetation, no canopy cover. Good riffle areas. Large gravel/cobble islands. Factories in close proximity to stream.

## STREAM QUALITY ASSESSMENT FORM

STATION 2 STREAM East Branch Nimishillen Creek SAMPLE # A  
 LOCATION Cook Park at Mahoning Road  
 COUNTY Stark TOWNSHIP/CITY Canton DATE 9/2/2004 TIME 8:45 a.m.  
 GROUP OR INDIVIDUALS Claude Custer and Nick Lautzenheiser NO. OF PARTICIPANTS 2

DESCRIBE WATER CONDITIONS (COLOR, ODOR, BEDGROWTHS, SURFACE SCUM, ETC.)	HACH KIT RESULTS (if used) AND OTHER OBSERVATIONS  sediment stick = 34"
<b>USE BACK OF FORM IF NECESSARY</b>	

WIDTH OF RIFFLE <u>54'</u>	BED COMPOSITION OF RIFFLE (%)		
WATER DEPTH <u>5"</u>	SILT <input style="width: 30px;" type="text" value="5"/>	GRAVEL (1/4" - 2") <input style="width: 30px;" type="text" value="50"/>	
WATER TEMP. (°F) <u>63°</u>	COBBLES (2" - 10") <input style="width: 30px;" type="text" value="40"/>	BOULDERS (>10") <input style="width: 30px;" type="text"/>	
	SAND <input style="width: 30px;" type="text" value="5"/>		

<b>MACROINVERTEBRATE TALLY</b>	ESTIMATED COUNT LETTER CODE	A = 1 TO 9 B = 10 TO 99 C = 100 or more
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GROUP 1 TAXA	LETTER CODE	GROUP 2 TAXA	LETTER CODE	GROUP 3 TAXA	LETTER CODE
WATER PENNY LARVAE		DAMSELFLY NYMPHS		BLACKFLY LARVAE	
MAYFLY NYMPHS	A	DRAGONFLY NYMPHS		AQUATIC WORMS	
STONEFLY NYMPHS		CRANE FLY LARVAE		MIDGE LARVAE	B
DOBSONFLY LARVAE		BEETLE LARVAE	A	POUCH SNAILS	
CADDISFLY LARVAE	A	CRAYFISH		LEECHES	
RIFFLE BEETLE ADULT		SCUDS		PLANARIA	
OTHER SNAILS		CLAMS			
		SOWBUGS			
NUMBER OF TAXA (times)	2	NUMBER OF TAXA (times)	1	NUMBER OF TAXA (times)	1
INDEX VALUE 3	6	INDEX VALUE 2	2	INDEX VALUE 1	1

CUMULATIVE INDEX VALUE <input style="width: 100px; text-align: center;" type="text" value="9"/>	STREAM QUALITY ASSESSMENT EXCELLENT (>22) <input style="width: 30px;" type="text"/> GOOD (17-22) <input style="width: 30px;" type="text"/> FAIR (11-16) <input style="width: 30px;" type="text"/> POOR (<11) <input checked="" style="width: 30px;" type="text"/>
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## STREAM QUALITY ASSESSMENT FORM

STATION 2 STREAM East Branch Nimishillen Creek SAMPLE # B  
 LOCATION Cook Park at Mahoning Road  
 COUNTY Stark TOWNSHIP/CITY Canton DATE 9/2/2004 TIME 9:30 a.m.  
 GROUP OR INDIVIDUALS Claude Custer and Nick Lautzenheiser NO. OF PARTICIPANTS 2

DESCRIBE WATER CONDITIONS (COLOR, ODOR, BEDGROWTHS, SURFACE SCUM, ETC.)

HACH KIT RESULTS (if used) AND OTHER OBSERVATIONS

sediment stick = 34"

USE BACK OF FORM IF NECESSARY

WIDTH OF RIFFLE <u>60'</u>	BED COMPOSITION OF RIFFLE (%)		
WATER DEPTH <u>4"</u>	SILT <input type="text" value="5"/>	GRAVEL (1/4" - 2") <input type="text" value="70"/>	
WATER TEMP. (°F) <u>63°</u>	COBBLES (2" - 10") <input type="text" value="20"/>	BOULDERS (>10") <input type="text"/>	
	SAND <input type="text" value="5"/>		

### MACROINVERTEBRATE TALLY

ESTIMATED COUNT LETTER CODE  
 A = 1 TO 9  
 B = 10 TO 99  
 C = 100 or more

GROUP 1 TAXA	LETTER CODE	GROUP 2 TAXA	LETTER CODE	GROUP 3 TAXA	LETTER CODE
WATER PENNY LARVAE		DAMSELFLY NYMPHS		BLACKFLY LARVAE	A
MAYFLY NYMPHS		DRAGONFLY NYMPHS		AQUATIC WORMS	
STONEFLY NYMPHS		CRANE FLY LARVAE		MIDGE LARVAE	B
DOBSONFLY LARVAE		BEETLE LARVAE		POUCH SNAILS	
CADDISFLY LARVAE	A	CRAYFISH	A	LEECHES	
RIFFLE BEETLE ADULT	A	SCUDS		PLANERIA	
OTHER SNAILS		CLAMS			
		SOWBUGS			
NUMBER OF TAXA (times)	2	NUMBER OF TAXA (times)	1	NUMBER OF TAXA (times)	2
INDEX VALUE 3	6	INDEX VALUE 2	2	INDEX VALUE 1	2

CUMULATIVE INDEX VALUE

### STREAM QUALITY ASSESSMENT

EXCELLENT (>22)

GOOD (17-22)

FAIR (11-16)

POOR (<11)

## STREAM QUALITY ASSESSMENT FORM

STATION 2 STREAM East Branch Nimishillen Creek SAMPLE # C  
 LOCATION Cook Park at Mahoning Road  
 COUNTY Stark TOWNSHIP/CITY Canton DATE 9/2/2004 TIME 9:45 a.m.  
 GROUP OR INDIVIDUALS Claude Custer and Nick Lautzenheiser NO. OF PARTICIPANTS 2

DESCRIBE WATER CONDITIONS (COLOR, ODOR, BEDGROWTHS, SURFACE SCUM, ETC.)  <p style="text-align: center;">mostly clear water, only slightly brown</p>	HACH KIT RESULTS (if used) AND OTHER OBSERVATIONS  sediment stick = 34"
USE BACK OF FORM IF NECESSARY	

WIDTH OF RIFFLE <u>34'</u>  WATER DEPTH <u>5"</u>  WATER TEMP. (°F) <u>63°</u>	BED COMPOSITION OF RIFFLE (%)  SILT <input type="text" value="5"/> GRAVEL (1/4" - 2") <input type="text" value="30"/> COBBLES (2" - 10") <input type="text" value="60"/> SAND <input type="text" value="5"/> BOULDERS (>10") <input type="text"/>
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<b>MACROINVERTEBRATE TALLY</b>	ESTIMATED COUNT LETTER CODE A = 1 TO 9 B = 10 TO 99 C = 100 or more
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GROUP 1 TAXA	LETTER CODE	GROUP 2 TAXA	LETTER CODE	GROUP 3 TAXA	LETTER CODE
WATER PENNY LARVAE		DAMSELFLY NYMPHS		BLACKFLY LARVAE	A
MAYFLY NYMPHS		DRAGONFLY NYMPHS		AQUATIC WORMS	
STONEFLY NYMPHS		CRANE FLY LARVAE		MIDGE LARVAE	B
DOBSONFLY LARVAE		BEETLE LARVAE		POUCH SNAILS	
CADDISFLY LARVAE	A	CRAYFISH		LEECHES	
RIFFLE BEETLE ADULT		SCUDS		PLANARIA	
OTHER SNAILS	A	CLAMS			
		SOWBUGS			
NUMBER OF TAXA (times)	2	NUMBER OF TAXA (times)	0	NUMBER OF TAXA (times)	2
INDEX VALUE 3	6	INDEX VALUE 2	0	INDEX VALUE 1	2

CUMULATIVE INDEX VALUE <input style="width: 100px; text-align: center;" type="text" value="8"/>	STREAM QUALITY ASSESSMENT EXCELLENT (>22) <input type="text"/> GOOD (17-22) <input type="text"/> FAIR (11-16) <input type="text"/> POOR (<11) <input checked="" type="text"/>
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# Stream Inventory - Watershed Assessment

Stream Walkers: Claude Custer and Eric Akin Station: 3 Date: 8-18-04  
Stream Name: West Branch Nimishillen Creek Water level:  high  avg.  low  
Weather conditions: partly cloudy Last rain event 8/18/04  
Air temp. 75°F Water temp. 67°F  
Inventoried stream section, River Mile 14.45 to River Mile 14.46  
Descriptive location (use roads etc.) Monument Park at 12th St., SE of Timken Mercy Medical Ceter

## Water surface appearance:

- Scum
- Foamy
- Muddy
- Milky
- Clear
- Colored sheen (oily)
- Brownish
- Other, \_\_\_\_\_

## Stream bed coating:

- Algae coated
- Orange to red
- Yellowish
- Black
- Brown
- None
- Silt coated, depth of deposits \_\_\_\_\_
- Other, \_\_\_\_\_

## Odor:

- Rotten Egg
- Musky
- Sewage
- Chlorine
- None
- Other, \_\_\_\_\_

## Habitat:

- Pools
- Rock ledges
- Log piles
- Weed beds
- Undercut banks
- Wetlands
- Backwaters
- Large boulders
- Riffles
- Tree roots
- Logs or woody debris
- Man-made objects

Maximum Stream Depth 6" Average Stream Width 40'

## Stream shading: Stream is -

- Fully exposed (0-24% of stream is shaded from the sun)
- Fully shaded (75-100%)
- Partially exposed (25-49%)
- Partially shaded (50-74%)

## Streambank vegetation:

Trees (%) 5 Plants (%) \_\_\_\_\_ Bare soil (%) \_\_\_\_\_ Grass (%) 90  
Shrubs (%) 5 Root mats (%) \_\_\_\_\_ Other (%) \_\_\_\_\_  
Approximate width of vegetation: Left bank 100' Right bank 50'  
Is grass mowed down to the water's edge?  Yes  No

## Land uses along stream section:

1. Farming:  Pasture/Grazing Land  Crops  Woods  Other (explain) \_\_\_\_\_
2. Urban areas:  Homes  Light manufacturing  Heavy manufacturing  
 Retail/Comm.  Construction sites  Parking lots
3. Other (explain) Recreation, park

Outfalls:

1. Are there any discharge pipes?  No  Yes      Location: under bridge downstream

2. Types of pipes:      Sewage

2. Types of pipes: \_\_\_\_\_

\_\_\_\_\_

Storm water runoff \_\_\_\_\_

Industrial (type) \_\_\_\_\_

Drainage tile outlets \_\_\_\_\_

Unknown \_\_\_\_\_

Other      none

3. Description of odor associated with pools

Stream channel alterations:       Dredging     Channelization     Fill       None

Other (explain) \_\_\_\_\_

Structures or barriers in the stream:

Dams     Bridges     Islands     Waterfalls     Log jams     Sediment/sandbars

Other (explain) walls

Litter in and around stream:     No     Yes      Location: Along the stream

Paper and small trash    1%       Cans and bottles    1%

Tires, carts, etc.    %       Other \_\_\_\_\_

Verbal Site Description: Give visual description of stream, substrate, banks, riparian zone and adjacent land areas. Indicate what you think are current or potential threats to your stream's health. Are photographs of current or potential threats available?

Yes     No

Stream is bordered on both banks by city park. Geese are common. Stream bank is falling in. Structures include bridge, road crossing, storm water, walls, and shore abatements. Lot of people recreating in and around the stream. Threats to stream come from cars and trucks passing overhead and along access roads. Geese also present a pollution threat.

## STREAM QUALITY ASSESSMENT FORM

STATION 3 STREAM West Branch Nimishillen Creek SAMPLE # A  
 LOCATION Monument Park at 12th Street downstream of bridge  
 COUNTY Stark TOWNSHIP/CITY Canton DATE 8/18/2004 TIME 1:15 p.m.  
 GROUP OR INDIVIDUALS Eric Akin and Claude Custer NO. OF PARTICIPANTS 2

DESCRIBE WATER CONDITIONS (COLOR, ODOR, BEDGROWTHS, SURFACE SCUM, ETC.)  
  
 Clear water, brown algae on substrate, no odor or surface scum.

HACH KIT RESULTS (if used) AND OTHER OBSERVATIONS  
  
 34"

USE BACK OF FORM IF NECESSARY

WIDTH OF RIFFLE <u>42'</u> WATER DEPTH <u>3"</u> WATER TEMP. (°F) <u>67°</u>	BED COMPOSITION OF RIFFLE (%) SILT <input type="text" value="5"/> GRAVEL (1/4" - 2") <input type="text" value="50"/> COBBLES (2" - 10") <input type="text" value="35"/> SAND <input type="text" value="10"/> BOULDERS (>10") <input type="text"/>
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<b>MACROINVERTEBRATE TALLY</b>	ESTIMATED A = 1 TO 9 COUNT B = 10 TO 99 LETTER CODE C = 100 or more
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GROUP 1 TAXA	LETTER CODE	GROUP 2 TAXA	LETTER CODE	GROUP 3 TAXA	LETTER CODE
WATER PENNY LARVAE		DAMSELFLY NYMPHS		BLACKFLY LARVAE	A
MAYFLY NYMPHS	A	DRAGONFLY NYMPHS		AQUATIC WORMS	A
STONEFLY NYMPHS		CRANE FLY LARVAE		MIDGE LARVAE	B
DOBSONFLY LARVAE		BEETLE LARVAE		POUCH SNAILS	A
CADDISFLY LARVAE	C	CRAYFISH	A	LEECHES	A
RIFFLE BEETLE ADULT		SCUDS			
OTHER SNAILS	A	CLAMS	A		
		SOWBUGS	A		
NUMBER OF TAXA (times)	3	NUMBER OF TAXA (times)	3	NUMBER OF TAXA (times)	5
INDEX VALUE 3	9	INDEX VALUE 2	6	INDEX VALUE 1	5

CUMULATIVE INDEX VALUE <input style="width: 100px; text-align: center;" type="text" value="20"/>	STREAM QUALITY ASSESSMENT EXCELLENT (>22) <input type="text"/> GOOD (17-22) <input checked="" type="text" value="X"/> FAIR (11-16) <input type="text"/> POOR (<11) <input type="text"/>
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## STREAM QUALITY ASSESSMENT FORM

STATION 3 STREAM West Branch Nimishillen Creek SAMPLE # B  
 LOCATION Monument Park at 12th St. just upstream of bridge  
 COUNTY Stark TOWNSHIP/CITY Canton DATE 8/18/2004 TIME 1:50 p.m.  
 GROUP OR INDIVIDUALS Eric Akin and Claude Custer NO. OF PARTICIPANTS 2

DESCRIBE WATER CONDITIONS (COLOR, ODOR, BEDGROWTHS, SURFACE SCUM, ETC.)  
  
 Clear water, brown algae on substrate, no odor or surface scum.

HACH KIT RESULTS (if used) AND OTHER OBSERVATIONS  
  
 36+

USE BACK OF FORM IF NECESSARY

WIDTH OF RIFFLE <u>42.5'</u> WATER DEPTH <u>5"</u> WATER TEMP. (°F) <u>67°</u>	BED COMPOSITION OF RIFFLE (%) SILT <input type="checkbox"/> GRAVEL (1/4" - 2") <input type="checkbox"/> COBBLES (2" - 10") <input type="checkbox"/> SAND <input type="checkbox"/> BOULDERS (>10") <input type="checkbox"/>
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<b>MACROINVERTEBRATE TALLY</b>	ESTIMATED COUNT LETTER CODE A = 1 TO 9 B = 10 TO 99 C = 100 or more
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GROUP 1 TAXA	LETTER CODE	GROUP 2 TAXA	LETTER CODE	GROUP 3 TAXA	LETTER CODE
WATER PENNY LARVAE		DAMSELFLY NYMPHS		BLACKFLY LARVAE	A
MAYFLY NYMPHS	A	DRAGONFLY NYMPHS		AQUATIC WORMS	B
STONEFLY NYMPHS		CRANE FLY LARVAE		MIDGE LARVAE	B
DOBSONFLY LARVAE		BEETLE LARVAE	A	POUCH SNAILS	A
CADDISFLY LARVAE	C	CRAYFISH	A	LEECHES	
RIFFLE BEETLE ADULT	A	SCUDS			
OTHER SNAILS	A	CLAMS	A		
		SOWBUGS			
NUMBER OF TAXA (times)	4	NUMBER OF TAXA (times)	3	NUMBER OF TAXA (times)	4
INDEX VALUE 3	12	INDEX VALUE 2	6	INDEX VALUE 1	4

CUMULATIVE INDEX VALUE <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">22</div>	STREAM QUALITY ASSESSMENT EXCELLENT (>22) <input checked="" type="checkbox"/> X GOOD (17-22) <input type="checkbox"/> FAIR (11-16) <input type="checkbox"/> POOR (<11) <input type="checkbox"/>
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## STREAM QUALITY ASSESSMENT FORM

STATION	3	STREAM	West Branch Nimishillen Creek	SAMPLE #	C
LOCATION	Monument Park at 12th St. upstream from bridge				
COUNTY	Stark	TOWNSHIP/CITY	Canton	DATE	8/18/2004
GROUP OR INDIVIDUALS	Eric Akin and Claude Custer			NO. OF PARTICIPANTS	2
DESCRIBE WATER CONDITIONS (COLOR, ODOR, BEDGROWTHS, SURFACE SCUM, ETC.)				HACH KIT RESULTS (if used) AND OTHER OBSERVATIONS	
Clear water, brown algae on substrate, no odor or surface scum.				36+	
USE BACK OF FORM IF NECESSARY					

WIDTH OF RIFFLE	40'	BED COMPOSITION OF RIFFLE (%)			
WATER DEPTH	7"	SILT	<input type="checkbox"/>	GRAVEL (1/4" - 2")	<input type="checkbox"/>
WATER TEMP. (°F)	67°	COBBLES (2" - 10")	<input type="checkbox"/>	BOULDERS (>10")	<input type="checkbox"/>
		SAND	<input type="checkbox"/>		

<b>MACROINVERTEBRATE TALLY</b>	ESTIMATED COUNT LETTER CODE
	A = 1 TO 9 B = 10 TO 99 C = 100 or more

GROUP 1 TAXA	LETTER CODE	GROUP 2 TAXA	LETTER CODE	GROUP 3 TAXA	LETTER CODE
WATER PENNY LARVAE	A	DAMSELFLY NYMPHS		BLACKFLY LARVAE	
MAYFLY NYMPHS	A	DRAGONFLY NYMPHS		AQUATIC WORMS	A
STONEFLY NYMPHS		CRANE FLY LARVAE		MIDGE LARVAE	B
DOBSONFLY LARVAE		BEETLE LARVAE	A	POUCH SNAILS	
CADDISFLY LARVAE	C	CRAYFISH	A	LEECHES	
RIFFLE BEETLE ADULT	A	SCUDS		PLANARIA	A
OTHER SNAILS	A	CLAMS			
		SOWBUGS	A		
NUMBER OF TAXA (times)	5	NUMBER OF TAXA (times)	3	NUMBER OF TAXA (times)	3
INDEX VALUE 3	15	INDEX VALUE 2	6	INDEX VALUE 1	3

CUMULATIVE INDEX VALUE	STREAM QUALITY ASSESSMENT			
24	EXCELLENT (>22)	<input checked="" type="checkbox"/>	GOOD (17-22)	<input type="checkbox"/>
	FAIR (11-16)	<input type="checkbox"/>	POOR (<11)	<input type="checkbox"/>

# Stream Inventory - Watershed Assessment

Stream Walkers: Eric Akin and Nick Lautzenheiser Station: 4 Date: 9-15-04  
Stream Name: Main stem Nimishillen Creek Water level:  high  avg.  low  
Weather conditions: \_\_\_\_\_ Last rain event 9/9/042  
Air temp. 76°F Water temp. 66°F  
Inventoried stream section, River Mile 13.14 to River Mile 13.15  
Descriptive location (use roads etc.) Cherry Road and Sherrick Roads at Jackson Park

## Water surface appearance:

- Scum
- Foamy
- Muddy
- Milky
- Clear
- Colored sheen (oily)
- Brownish
- Other, \_\_\_\_\_

## Stream bed coating:

- Algae coated
- Orange to red
- Yellowish
- Black
- Brown
- None
- Silt coated, depth of deposits \_\_\_\_\_
- Other, \_\_\_\_\_

## Odor:

- Rotten Egg
- Musky
- Sewage
- Chlorine
- None
- Other, \_\_\_\_\_

## Habitat:

- Pools
- Rock ledges
- Log piles
- Weed beds
- Undercut banks
- Wetlands
- Backwaters
- Large boulders
- Riffles
- Tree roots
- Logs or woody debris
- Man-made objects

Maximum Stream Depth 5' Average Stream Width 55'

## Stream shading: Stream is -

- Fully exposed (0-24% of stream is shaded from the sun)
- Fully shaded (75-100%)
- Partially exposed (25-49%)
- Partially shaded (50-74%)

## Streambank vegetation:

Trees (%) 25 Plants (%) 25 Bare soil (%) \_\_\_\_\_ Grass (%) 25  
Shrubs(%) 25 Root mats (%) \_\_\_\_\_ Other (%) \_\_\_\_\_  
Approximate width of vegetation: Left bank 50' Right bank 5'  
Is grass mowed down to the water's edge?  Yes  No

## Land uses along stream section:

1. Farming:  Pasture/Grazing Land  Crops  Woods  Other (explain) \_\_\_\_\_
2. Urban areas:  Homes  Light manufacturing  Heavy manufacturing  
 Retail/Comm.  Construction sites  Parking lots
3. Other (explain) Jackson Park (right bank)

Outfalls:

1. Are there any discharge pipes?  No  Yes      Location: 1—right bank 100 yards downstream from bridge

2. Types of pipes:      Sewage      2—both banks downstream of bridge

treatment

Storm water runoff \_\_\_\_\_

Industrial (type) \_\_\_\_\_

Drainage tile outlets

Unknown \_\_\_\_\_

Other      none

3. Description of odor associated with      ok

Stream channel alterations:       Dredging       Channelization       Fill       None

Other (explain)      Likely channelized in the past

Structures or barriers in the stream:

Dams       Bridges       Islands       Waterfalls       Log jams       Sediment/sandbars

Other (explain) \_\_\_\_\_

Litter in and around stream:       No       Yes      Location:      In stream

Paper and small trash      \_\_\_\_\_ %       Cans and bottles      \_\_\_\_\_ %

Tires, carts, etc.      \_\_\_\_\_ %       Other      drum

Verbal Site Description: Give visual description of stream, substrate, banks, riparian zone and adjacent land areas. Indicate what you think are current or potential threats to your stream's health. Are photographs of current or potential threats available?

Yes       No

Clear water substrate primarily cobble except for Sample A location where it had bedrock. Left (south) bank is mature trees and shrubs. Right bank is dark land with grass.

Threats: storm water runoff, dumping from park, trailer park directly downstream, industry upstream.

## STREAM QUALITY ASSESSMENT FORM

STATION 4 STREAM Main stem Nimishillen Creek SAMPLE # A  
 LOCATION Cherry and Sherrick Roads downstream from bridge ~100 yards  
 COUNTY Stark TOWNSHIP/CITY Canton DATE 9/15/2004 TIME 1:15 p.m.  
 GROUP OR INDIVIDUALS Eric Akin and Nick Lautzenheiser NO. OF PARTICIPANTS 2

DESCRIBE WATER CONDITIONS (COLOR, ODOR, BEDGROWTHS, SURFACE SCUM, ETC.)  
  
 Very clear water, no odor. Algae coating on the rocks.  
 Some foam on the surface.

HACH KIT RESULTS (if used) AND OTHER OBSERVATIONS  
  
 36+

USE BACK OF FORM IF NECESSARY

WIDTH OF RIFFLE <u>55'</u>  WATER DEPTH <u>9"</u>  WATER TEMP. (°F) <u>66°</u>	BED COMPOSITION OF RIFFLE (%)  SILT <input type="checkbox"/> GRAVEL (1/4" - 2") <input type="checkbox" value="20"/> COBBLES (2" - 10") <input type="checkbox" value="40"/> SAND <input type="checkbox" value="15"/> BOULDERS (>10") <input type="checkbox" value="25"/>
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<b>MACROINVERTEBRATE TALLY</b>	ESTIMATED A = 1 TO 9 COUNT B = 10 TO 99 LETTER CODE C = 100 or more
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GROUP 1 TAXA	LETTER CODE	GROUP 2 TAXA	LETTER CODE	GROUP 3 TAXA	LETTER CODE
WATER PENNY LARVAE		DAMSELFLY NYMPHS		BLACKFLY LARVAE	A
MAYFLY NYMPHS		DRAGONFLY NYMPHS		AQUATIC WORMS	B
STONEFLY NYMPHS		CRANE FLY LARVAE		MIDGE LARVAE	B
DOBSONFLY LARVAE		BEETLE LARVAE		POUCH SNAILS	
CADDISFLY LARVAE	B	CRAYFISH	A	LEECHES	
RIFFLE BEETLE ADULT	A	SCUDS		PLANARIA	
OTHER SNAILS	A	CLAMS			
		SOWBUGS			
NUMBER OF TAXA (times)	3	NUMBER OF TAXA (times)	1	NUMBER OF TAXA (times)	3
INDEX VALUE 3	9	INDEX VALUE 2	2	INDEX VALUE 1	3

CUMULATIVE INDEX VALUE <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">14</div>	STREAM QUALITY ASSESSMENT EXCELLENT (>22) <input type="checkbox"/> GOOD (17-22) <input type="checkbox"/> FAIR (11-16) <input checked="" type="checkbox"/> POOR (<11) <input type="checkbox"/>
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## STREAM QUALITY ASSESSMENT FORM

STATION 4 STREAM Main stem Nimishillen Creek SAMPLE # B  
 LOCATION Cherry and Sherrick Roads at Jackson Park  
 COUNTY Stark TOWNSHIP/CITY Canton DATE 9/15/2004 TIME \_\_\_\_\_  
 GROUP OR INDIVIDUALS Eric Akin and Nick Lautzenheiser NO. OF PARTICIPANTS 2

DESCRIBE WATER CONDITIONS (COLOR, ODOR, BEDGROWTHS, SURFACE SCUM, ETC.)

Very clear water, no odor. Algae coating on the rocks.  
Some foam on the surface.

HACH KIT RESULTS (if used) AND OTHER OBSERVATIONS

36+

USE BACK OF FORM IF NECESSARY

WIDTH OF RIFFLE <u>61'</u> WATER DEPTH <u>8"</u> WATER TEMP. (°F) <u>66°</u>	BED COMPOSITION OF RIFFLE (%) SILT <input type="text" value="5"/> GRAVEL (1/4" - 2") <input type="text" value="35"/> COBBLES (2" - 10") <input type="text" value="35"/> SAND <input type="text" value="25"/> BOULDERS (>10") <input type="text"/>
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### MACROINVERTEBRATE TALLY

ESTIMATED COUNT LETTER CODE  
 A = 1 TO 9  
 B = 10 TO 99  
 C = 100 or more

GROUP 1 TAXA	LETTER CODE	GROUP 2 TAXA	LETTER CODE	GROUP 3 TAXA	LETTER CODE
WATER PENNY LARVAE		DAMSELFLY NYMPHS		BLACKFLY LARVAE	A
MAYFLY NYMPHS	A	DRAGONFLY NYMPHS		AQUATIC WORMS	A
STONEFLY NYMPHS		CRANE FLY LARVAE		MIDGE LARVAE	B
DOBSONFLY LARVAE		BEETLE LARVAE	A	POUCH SNAILS	A
CADDISFLY LARVAE	C	CRAYFISH	A	LEECHES	A
RIFFLE BEETLE ADULT	A	SCUDS		PLANARIA	A
OTHER SNAILS		CLAMS	A		
		SOWBUGS			
NUMBER OF TAXA (times)	3	NUMBER OF TAXA (times)	3	NUMBER OF TAXA (times)	6
INDEX VALUE 3	9	INDEX VALUE 2	6	INDEX VALUE 1	6

CUMULATIVE INDEX VALUE

### STREAM QUALITY ASSESSMENT

EXCELLENT (>22)

GOOD (17-22)

FAIR (11-16)

POOR (<11)



# Stream Inventory - Watershed Assessment

Stream Walkers: Claude Custer and Nick Lautzenheiser Station: 5 Date: 9-2-04  
Stream Name: West Branch Nimishillen Creek Water level:  high  avg.  low  
Weather conditions: sunny Last rain event 8/29/04  
Air temp. 75°F Water temp. 64°F  
Inventoried stream section, River Mile to 12.26 River Mile 12.27  
Descriptive location (use roads etc.) Between R.R. bridge and Market St. bridge

## Water surface appearance:

- Scum  
 Foamy  
 Muddy  
 Milky  
 Clear  
 Colored sheen (oily)  
 Brownish  
 Other, \_\_\_\_\_

## Stream bed coating:

- Algae coated  
 Orange to red  
 Yellowish  
 Black  
 Brown  
 None  
 Silt coated, depth of deposits \_\_\_\_\_  
 Other, \_\_\_\_\_

## Odor:

- Rotten Egg  
 Musky  
 Sewage  
 Chlorine  
 None  
 Other, \_\_\_\_\_

## Habitat:

- Pools  Undercut banks  Riffles  
 Rock ledges  Wetlands  Tree roots  
 Log piles  Backwaters  Logs or woody debris  
 Weed beds  Large boulders  Man-made objects

Maximum Stream Depth 3' Average Stream Width 48'

## Stream shading: Stream is -

- Fully exposed (0-24% of stream is shaded from the sun)  Partially exposed (25-49%)  
 Fully shaded (75-100%)  Partially shaded (50-74%)

## Streambank vegetation:

Trees (%) 25 Plants (%) 40 Bare soil (%) \_\_\_\_\_ Grass (%) \_\_\_\_\_

Shrubs(%) 35 Root mats (%) \_\_\_\_\_ Other (%) \_\_\_\_\_

Approximate width of vegetation: Left bank 25' Right bank 25'

Is grass mowed down to the water's edge?  Yes  No

## Land uses along stream section:

1. Farming:  Pasture/Grazing Land  Crops  Woods  Other (explain) \_\_\_\_\_  
2. Urban areas:  Homes  Light manufacturing  Heavy manufacturing  
 Retail/Comm.  Construction sites  Parking lots  
3. Other (explain) Large factory upstream, light manufacturing and commercial land use adjacent to both stream banks.

Outfalls:

1. Are there any discharge pipes?  No  Yes      Location: Market Ave. bridge
2. Types of pipes:  Sewage treatment  
 Storm water runoff  
 Industrial (type) \_\_\_\_\_  
 Drainage tile outlets  
 Unknown  
 Other \_\_\_\_\_
3. Description of odor associated with discharge pipes: none
4. Condition of streambank at outlet site \_\_\_\_\_

Stream channel alterations:       Dredging     Channelization     Fill     None  
 Other (explain) \_\_\_\_\_

Structures or barriers in the stream:  
 Dams     Bridges     Islands     Waterfalls     Log jams     Sediment/sandbars  
 Other (explain) \_\_\_\_\_

Litter in and around stream:     No     Yes      Location: \_\_\_\_\_

Paper and small trash \_\_\_\_\_%    Cans  and bottles \_\_\_\_\_%  
 Tires, carts, etc. \_\_\_\_\_%    Other  Glass, paper, rags

Verbal Site Description: Give visual description of stream, substrate, banks, riparian zone and adjacent land areas. Indicate what you think are current or potential threats to your stream's health. Are photographs of current or potential threats available?

Yes     No

Urban surroundings, multiple bridges  
Manufacturing and light industry in vicinity  
Not significant riparian vegetation  
Virtually no canopy cover

## STREAM QUALITY ASSESSMENT FORM

STATION 5 STREAM West Branch SAMPLE # A  
 LOCATION Cleveland Ave and Market St. - (south of Market between bridge and RR bridge)  
 COUNTY Stark TOWNSHIP/CITY Canton DATE 9/2/2004 TIME 12:20 p.m.  
 GROUP OR INDIVIDUALS Nick Lautzenheiser and Claude Custer NO. OF PARTICIPANTS 2

DESCRIBE WATER CONDITIONS (COLOR, ODOR, BEDGROWTHS, SURFACE SCUM, ETC.)

HACH KIT RESULTS (if used) AND OTHER OBSERVATIONS  
  
36+

USE BACK OF FORM IF NECESSARY

WIDTH OF RIFFLE <u>34'</u> WATER DEPTH <u>8"</u> WATER TEMP. (°F) <u>64°</u>	BED COMPOSITION OF RIFFLE (%) SILT <span style="border: 1px solid black; padding: 2px;">10</span> GRAVEL (1/4" - 2") <span style="border: 1px solid black; padding: 2px;">25</span> COBBLES (2" - 10") <span style="border: 1px solid black; padding: 2px;">40</span> SAND <span style="border: 1px solid black; padding: 2px;">5</span> BOULDERS (>10") <span style="border: 1px solid black; padding: 2px;">20</span>
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<b>MACROINVERTEBRATE TALLY</b>	ESTIMATED A = 1 TO 9 COUNT B = 10 TO 99 LETTER CODE C = 100 or more
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GROUP 1 TAXA	LETTER CODE	GROUP 2 TAXA	LETTER CODE	GROUP 3 TAXA	LETTER CODE
WATER PENNY LARVAE		DAMSELFLY NYMPHS		BLACKFLY LARVAE	
MAYFLY NYMPHS		DRAGONFLY NYMPHS		AQUATIC WORMS	B
STONEFLY NYMPHS		CRANE FLY LARVAE		MIDGE LARVAE	B
DOBSONFLY LARVAE		BEETLE LARVAE		POUCH SNAILS	A
CADDISFLY LARVAE	B	CRAYFISH		LEECHES	
RIFFLE BEETLE ADULT		SCUDS		PLANARIA	
OTHER SNAILS	A	CLAMS	A		
		SOWBUGS	A		
NUMBER OF TAXA (times)	2	NUMBER OF TAXA (times)	2	NUMBER OF TAXA (times)	3
INDEX VALUE 3	6	INDEX VALUE 2	4	INDEX VALUE 1	3

CUMULATIVE INDEX VALUE <span style="border: 1px solid black; padding: 5px; display: inline-block;">13</span>	STREAM QUALITY ASSESSMENT EXCELLENT (>22) <span style="border: 1px solid black; padding: 2px 10px;"> </span> GOOD (17-22) <span style="border: 1px solid black; padding: 2px 10px;"> </span> FAIR (11-16) <span style="border: 1px solid black; padding: 2px 10px;">X</span> POOR (<11) <span style="border: 1px solid black; padding: 2px 10px;"> </span>
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## STREAM QUALITY ASSESSMENT FORM

STATION 5 STREAM West Branch SAMPLE # B  
 LOCATION Cleveland Ave and Market St. - (south of Market between bridge and RR bridge)  
 COUNTY Stark TOWNSHIP/CITY Canton DATE 9/2/2004 TIME 1:00 p.m.  
 GROUP OR INDIVIDUALS Claude Custer and Nick Lautzenheiser NO. OF PARTICIPANTS 2

DESCRIBE WATER CONDITIONS (COLOR, ODOR, BEDGROWTHS, SURFACE SCUM, ETC.)

HACH KIT RESULTS (if used) AND OTHER OBSERVATIONS  
  
36+

USE BACK OF FORM IF NECESSARY

WIDTH OF RIFFLE <u>35'</u> WATER DEPTH <u>4"</u> WATER TEMP. (°F) <u>64°</u>	BED COMPOSITION OF RIFFLE (%) SILT <input type="text" value="10"/> GRAVEL (1/4" - 2") <input type="text" value="30"/> COBBLES (2" - 10") <input type="text" value="50"/> SAND <input type="text" value="5"/> BOULDERS (>10") <input type="text" value="5"/>
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<b>MACROINVERTEBRATE TALLY</b>	ESTIMATED COUNT LETTER CODE A = 1 TO 9 B = 10 TO 99 C = 100 or more
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GROUP 1 TAXA	LETTER CODE	GROUP 2 TAXA	LETTER CODE	GROUP 3 TAXA	LETTER CODE
WATER PENNY LARVAE		DAMSELFLY NYMPHS		BLACKFLY LARVAE	
MAYFLY NYMPHS		DRAGONFLY NYMPHS		AQUATIC WORMS	B
STONEFLY NYMPHS		CRANE FLY LARVAE	A	MIDGE LARVAE	B
DOBSONFLY LARVAE		BEETLE LARVAE		POUCH SNAILS	
CADDISFLY LARVAE	A	CRAYFISH		LEECHES	
RIFFLE BEETLE ADULT		SCUDS		PLANARIA	
OTHER SNAILS	A	CLAMS	A		
		SOWBUGS			
NUMBER OF TAXA (times)	2	NUMBER OF TAXA (times)	2	NUMBER OF TAXA (times)	2
INDEX VALUE 3	6	INDEX VALUE 2	4	INDEX VALUE 1	2

CUMULATIVE INDEX VALUE <input style="width: 100px; height: 20px;" type="text" value="12"/>	STREAM QUALITY ASSESSMENT EXCELLENT (>22) <input type="text"/> GOOD (17-22) <input type="text"/> FAIR (11-16) <input checked="" type="checkbox"/> POOR (<11) <input type="text"/>
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## STREAM QUALITY ASSESSMENT FORM

STATION 5 STREAM West Branch SAMPLE # C  
 LOCATION Cleveland Ave and Market St. - south of Market between bridge and RR bridge)  
 COUNTY Stark TOWNSHIP/CITY Canton DATE 9/2/2004 TIME 1:30 p.m.  
 GROUP OR INDIVIDUALS Claude Custer and Nick Lautzenheiser NO. OF PARTICIPANTS 2

DESCRIBE WATER CONDITIONS (COLOR, ODOR, BEDGROWTHS, SURFACE SCUM, ETC.)

Musky smell, algae coated and significant algal growth.

HACH KIT RESULTS (if used) AND OTHER OBSERVATIONS

36+

USE BACK OF FORM IF NECESSARY

WIDTH OF RIFFLE <u>59'</u>	BED COMPOSITION OF RIFFLE (%)		
WATER DEPTH <u>5"</u>	SILT <input type="text" value="10"/>	GRAVEL (1/4" - 2") <input type="text" value="50"/>	
WATER TEMP. (°F) <u>64°</u>	COBBLES (2" - 10") <input type="text" value="35"/>	BOULDERS (>10") <input type="text"/>	
	SAND <input type="text" value="5"/>		

### MACROINVERTEBRATE TALLY

ESTIMATED COUNT LETTER CODE  
 A = 1 TO 9  
 B = 10 TO 99  
 C = 100 or more

GROUP 1 TAXA	LETTER CODE	GROUP 2 TAXA	LETTER CODE	GROUP 3 TAXA	LETTER CODE
WATER PENNY LARVAE		DAMSELFLY NYMPHS		BLACKFLY LARVAE	
MAYFLY NYMPHS		DRAGONFLY NYMPHS		AQUATIC WORMS	B
STONEFLY NYMPHS		CRANE FLY LARVAE		MIDGE LARVAE	B
DOBSONFLY LARVAE		BEETLE LARVAE		POUCH SNAILS	
CADDISFLY LARVAE	B	CRAYFISH		LEECHES	
RIFFLE BEETLE ADULT	A	SCUDS		PLANARIA	
OTHER SNAILS		CLAMS	A		
		SOWBUGS			
NUMBER OF TAXA (times)	2	NUMBER OF TAXA (times)	1	NUMBER OF TAXA (times)	2
INDEX VALUE 3	6	INDEX VALUE 2	2	INDEX VALUE 1	2

CUMULATIVE INDEX VALUE

### STREAM QUALITY ASSESSMENT

EXCELLENT (>22)   
 GOOD (17-22)   
 FAIR (11-16)   
 POOR (<11)

# Stream Inventory - Watershed Assessment

Stream Walkers: Eric Akin and Nick Lautzenheiser Station: 6 Date: 9-15-04  
Stream Name: Hurford Run Water level:  high  avg.  low  
Weather conditions: Clear and sunny Last rain event 9/9/04  
Air temp. 65°F Water temp. 70°F  
Inventoried stream section, River Mile 12.61 to River Mile 12.62  
Descriptive location (use roads etc.) Harrison Ave., north of Shepler-Church Ave

### Water surface appearance:

- Scum
- Foamy
- Muddy
- Milky
- Clear
- Colored sheen (oily)
- Brownish
- Other, \_\_\_\_\_

### Stream bed coating:

- Algae coated
- Orange to red
- Yellowish
- Black
- Brown
- None
- Silt coated, depth of deposits dusting
- Other, \_\_\_\_\_

### Odor:

- Rotten Egg
- Musky
- Sewage
- Chlorine
- None
- Other, \_\_\_\_\_

### Habitat:

- Pools
- Rock ledges
- Log piles
- Weed beds
- Undercut banks
- Wetlands
- Backwaters
- Large boulders
- Riffles
- Tree roots
- Logs or woody debris
- Man-made objects

Maximum Stream Depth 3' Average Stream Width 14'

### Stream shading: Stream is -

- Fully exposed (0-24% of stream is shaded from the sun)
- Partially exposed (25-49%)
- Fully shaded (75-100%)
- Partially shaded (50-74%)

### Streambank vegetation:

Trees (%) 5 Plants (%) 30 Bare soil (%) 5 Grass (%) 10  
Shrubs(%) 50 Root mats (%) \_\_\_\_\_ Other (%) \_\_\_\_\_  
Approximate width of vegetation: Left bank 10' Right bank 10'  
Is grass mowed down to the water's edge?  Yes  No

### Land uses along stream section:

1. Farming:  Pasture/Grazing Land  Crops  Woods  Other (explain) \_\_\_\_\_
2. Urban areas:  Homes  Light manufacturing  Heavy manufacturing  
 Retail/Comm.  Construction sites  Parking lots
3. Other (explain) In Timken Steel Complex

Outfalls:

1. Are there any discharge pipes?  No  Yes      Location: \_\_\_\_\_

2. Types of pipes:      Sewage \_\_\_\_\_

treatment

Storm water runoff \_\_\_\_\_

Industrial (type) \_\_\_\_\_

Drainage tile outlets \_\_\_\_\_

Unknown \_\_\_\_\_

Other \_\_\_\_\_

3. Description of odor associated with \_\_\_\_\_

Stream channel alterations:       Dredging     Channelization     Fill     None

Other (explain) \_\_\_\_\_

Structures or barriers in the stream:

Dams     Bridges     Islands     Waterfalls     Log jams     Sediment/sandbars

Other (explain) \_\_\_\_\_

Litter in and around stream:     No     Yes      Location: \_\_\_\_\_

Paper and small trash \_\_\_\_\_%

Cans and bottles \_\_\_\_\_%

Tires, carts, etc. \_\_\_\_\_%

Other \_\_\_\_\_

Verbal Site Description: Give visual description of stream, substrate, banks, riparian zone and adjacent land areas. Indicate what you think are current or potential threats to your stream's health. Are photographs of current or potential threats available?

Yes     No

The substrate mainly consists of cobble with some gravel. Although the banks appear stable, there isn't much of a buffer (~10'). Steel storage area to the south of railroad and Timken to the north.

Potential Threats: Timken discharge, runoff from road, railroad and steel storage area.

## STREAM QUALITY ASSESSMENT FORM

STATION 6 STREAM Hurford Run SAMPLE # A  
 LOCATION Harrison Ave. bridge, north of Shepler-Church Ave.  
 COUNTY Stark TOWNSHIP/CITY Canton DATE 9/15/2004 TIME 8:00 a.m.  
 GROUP OR INDIVIDUALS Eric Akin and Nick Lautzenheiser NO. OF PARTICIPANTS 2

DESCRIBE WATER CONDITIONS (COLOR, ODOR, BEDGROWTHS, SURFACE SCUM, ETC.)  
  
 Clear water, some algae growth, bubbles on the surface warm water.

HACH KIT RESULTS (if used) AND OTHER OBSERVATIONS  
  
 36+

USE BACK OF FORM IF NECESSARY

WIDTH OF RIFFLE <u>14'</u> WATER DEPTH <u>8"</u> WATER TEMP. (°F) <u>70°</u>	BED COMPOSITION OF RIFFLE (%) SILT <input type="checkbox"/> GRAVEL (1/4" - 2") <input type="checkbox" value="20"/> COBBLES (2" - 10") <input type="checkbox" value="40"/> SAND <input type="checkbox" value="10"/> BOULDERS (>10") <input type="checkbox" value="30"/>
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<b>MACROINVERTEBRATE TALLY</b>	ESTIMATED A = 1 TO 9 COUNT B = 10 TO 99 LETTER CODE C = 100 or more
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GROUP 1 TAXA	LETTER CODE	GROUP 2 TAXA	LETTER CODE	GROUP 3 TAXA	LETTER CODE
WATER PENNY LARVAE		DAMSELFLY NYMPHS		BLACKFLY LARVAE	B
MAYFLY NYMPHS		DRAGONFLY NYMPHS	A	AQUATIC WORMS	A
STONEFLY NYMPHS		CRANE FLY LARVAE	B	MIDGE LARVAE	A
DOBSONFLY LARVAE		BEETLE LARVAE	A	POUCH SNAILS	A
CADDISFLY LARVAE	B	CRAYFISH		LEECHES	
RIFFLE BEETLE ADULT	A	SCUDS		PLANARIA	A
OTHER SNAILS		CLAMS	A		
		SOWBUGS			
NUMBER OF TAXA (times)	2	NUMBER OF TAXA (times)	4	NUMBER OF TAXA (times)	5
INDEX VALUE 3	6	INDEX VALUE 2	8	INDEX VALUE 1	5

CUMULATIVE INDEX VALUE <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">19</div>	STREAM QUALITY ASSESSMENT EXCELLENT (>22) <input type="checkbox"/> GOOD (17-22) <input checked="" type="checkbox"/> X FAIR (11-16) <input type="checkbox"/> POOR (<11) <input type="checkbox"/>
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## STREAM QUALITY ASSESSMENT FORM

STATION 6 STREAM Hurford Run SAMPLE # B  
 LOCATION Harrison Ave. north of Shepler Church Ave - just downstream of bridge  
 COUNTY Stark TOWNSHIP/CITY Canton DATE 9/15/2004 TIME 8:45 a.m.  
 GROUP OR INDIVIDUALS Eric Akin and Nick Lautzenheiser NO. OF PARTICIPANTS 2

DESCRIBE WATER CONDITIONS (COLOR, ODOR, BEDGROWTHS, SURFACE SCUM, ETC.)  <p style="text-align: center;">Clear water, some algae growth, bubbles on the surface warm water.</p>	HACH KIT RESULTS (if used) AND OTHER OBSERVATIONS  <p style="text-align: center;">36+</p>
USE BACK OF FORM IF NECESSARY	

WIDTH OF RIFFLE <u>13'</u>  WATER DEPTH <u>6"</u>  WATER TEMP. (°F) <u>70°</u>	BED COMPOSITION OF RIFFLE (%)  SILT <input type="text" value="5"/> GRAVEL (1/4" - 2") <input type="text" value="5"/> COBBLES (2" - 10") <input type="text" value="65"/> SAND <input type="text" value="20"/> BOULDERS (>10") <input type="text" value="5"/>
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<b>MACROINVERTEBRATE TALLY</b>	ESTIMATED COUNT LETTER CODE A = 1 TO 9 B = 10 TO 99 C = 100 or more
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GROUP 1 TAXA	LETTER CODE	GROUP 2 TAXA	LETTER CODE	GROUP 3 TAXA	LETTER CODE
WATER PENNY LARVAE		DAMSELFLY NYMPHS		BLACKFLY LARVAE	B
MAYFLY NYMPHS		DRAGONFLY NYMPHS	A	AQUATIC WORMS	B
STONEFLY NYMPHS		CRANE FLY LARVAE	B	MIDGE LARVAE	B
DOBSONFLY LARVAE		BEETLE LARVAE	A	POUCH SNAILS	A
CADDISFLY LARVAE	B	CRAYFISH		LEECHES	A
RIFFLE BEETLE ADULT	A	SCUDS		PLANARIA	A
OTHER SNAILS	A	CLAMS	A		
		SOWBUGS			
NUMBER OF TAXA (times)	3	NUMBER OF TAXA (times)	4	NUMBER OF TAXA (times)	6
INDEX VALUE 3	9	INDEX VALUE 2	8	INDEX VALUE 1	6

CUMULATIVE INDEX VALUE <input style="width: 100px; text-align: center;" type="text" value="23"/>	STREAM QUALITY ASSESSMENT EXCELLENT (>22) <input checked="" type="checkbox"/> X      GOOD (17-22) <input type="checkbox"/> FAIR (11-16) <input type="checkbox"/> POOR (<11) <input type="checkbox"/>
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## STREAM QUALITY ASSESSMENT FORM

STATION 6 STREAM Hurford Run SAMPLE # C  
 LOCATION Harrison Ave. north of Shepler Church Ave - downstream of bridge  
 COUNTY Stark TOWNSHIP/CITY Canton DATE 9/15/2004 TIME 9:30 a.m.  
 GROUP OR INDIVIDUALS Eric Akin and Nick Lautzenheiser NO. OF PARTICIPANTS 2

DESCRIBE WATER CONDITIONS (COLOR, ODOR, BEDGROWTHS, SURFACE SCUM, ETC.)  
  
 Clear water, some algae growth, bubbles on the surface warm water. Asphalt chunks in sampling area.

HACH KIT RESULTS (if used) AND OTHER OBSERVATIONS  
  
 36+

USE BACK OF FORM IF NECESSARY

WIDTH OF RIFFLE <u>13'</u> WATER DEPTH <u>4"</u> WATER TEMP. (°F) <u>70°</u>	BED COMPOSITION OF RIFFLE (%) SILT <input type="text" value="10"/> GRAVEL (1/4" - 2") <input type="text" value="10"/> COBBLES (2" - 10") <input type="text" value="50"/> SAND <input type="text" value="10"/> BOULDERS (>10") <input type="text" value="20"/>
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<b>MACROINVERTEBRATE TALLY</b>	ESTIMATED A = 1 TO 9 COUNT B = 10 TO 99 LETTER CODE C = 100 or more
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GROUP 1 TAXA	LETTER CODE	GROUP 2 TAXA	LETTER CODE	GROUP 3 TAXA	LETTER CODE
WATER PENNY LARVAE		DAMSELFLY NYMPHS		BLACKFLY LARVAE	C
MAYFLY NYMPHS		DRAGONFLY NYMPHS	A	AQUATIC WORMS	
STONEFLY NYMPHS		CRANE FLY LARVAE	B	MIDGE LARVAE	B
DOBSONFLY LARVAE		BEETLE LARVAE	A	POUCH SNAILS	
CADDISFLY LARVAE	B	CRAYFISH		LEECHES	
RIFFLE BEETLE ADULT	A	SCUDS		PLANARIA	B
OTHER SNAILS	A	CLAMS	A		
		SOWBUGS	A		
NUMBER OF TAXA (times)	3	NUMBER OF TAXA (times)	5	NUMBER OF TAXA (times)	3
INDEX VALUE 3	9	INDEX VALUE 2	10	INDEX VALUE 1	3

CUMULATIVE INDEX VALUE <input style="width: 100px; height: 20px;" type="text" value="22"/>	STREAM QUALITY ASSESSMENT EXCELLENT (>22) <input style="width: 40px; height: 20px;" type="text"/> GOOD (17-22) <input checked="" type="text" value="X"/> FAIR (11-16) <input style="width: 40px; height: 20px;" type="text"/> POOR (<11) <input style="width: 40px; height: 20px;" type="text"/>
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# Stream Inventory - Watershed Assessment

Stream Walkers: Eric Akin and Nick Lautzenheiser Station: 7 Date: 7-30-04  
Stream Name: Hurford Run Water level:  high  avg.  low  
Weather conditions: cloudy Last rain event 7/5/04  
Air temp. 75°F Water temp.     °F  
Inventoried stream section, River Mile 12.05 to River Mile 12.06  
Descriptive location (use roads etc.) Bolivar and I-77 West of intersection of Bolivar and Timken Place

## Water surface appearance:

- Scum
- Foamy
- Muddy
- Milky
- Clear
- Colored sheen (oily)
- Brownish
- Other, \_\_\_\_\_

## Stream bed coating:

- Algae coated
- Orange to red
- Yellowish
- Black
- Brown
- None
- Silt coated, depth of deposits \_\_\_\_\_
- Other, \_\_\_\_\_

## Odor:

- Rotten Egg
- Musky
- Sewage
- Chlorine
- None
- Other, \_\_\_\_\_

## Habitat:

- Pools
- Rock ledges
- Log piles
- Weed beds
- Undercut banks
- Wetlands
- Backwaters
- Large boulders
- Riffles
- Tree roots
- Logs or woody debris
- Man-made objects

Maximum Stream Depth 18" Average Stream Width 23'

## Stream shading: Stream is -

- Fully exposed (0-24% of stream is shaded from the sun)
- Partially exposed (25-49%)
- Fully shaded (75-100%)
- Partially shaded (50-74%)

## Streambank vegetation:

Trees (%) 25 Plants (%) 30 Bare soil (%) 5 Grass (%) 10

Shrubs(%) 30 Root mats (%) \_\_\_\_\_ Other (%) \_\_\_\_\_

Approximate width of vegetation: Left bank 40' Right bank 25'

Is grass mowed down to the water's edge?  Yes  No

## Land uses along stream section:

1. Farming:  Pasture/Grazing Land  Crops  Woods  Other (explain) \_\_\_\_\_
2. Urban areas:  Homes  Light manufacturing  Heavy manufacturing  
 Retail/Comm.  Construction sites  Parking lots
3. Other (explain) Exit ramp from I-77

Outfalls:

1. Are there any discharge pipes?  No  Yes      Location: left bank—upstream from bridge storm water

2. Types of pipes:      Sewage      Right bank downstream of bridge unknown

treatment

Storm water runoff

Industrial (type)

Drainage tile outlets

Unknown \_\_\_\_\_

Other      No dry

3. Description of odor associated with      ok

Stream channel alterations:       Dredging       Channelization       Fill       None

Other (explain)      Likely channelized and moved for highway

Structures or barriers in the stream:

Dams       Bridges       Islands       Waterfalls       Log jams       Sediment/sandbars

Other (explain)      Chimney piece/bricks

Litter in and around stream:       No       Yes      Location: \_\_\_\_\_

Paper and small trash      \_\_\_\_\_ %       Cans and bottles      \_\_\_\_\_ %

Tires, carts, etc.      \_\_\_\_\_ %       Other      \_\_\_\_\_

Verbal Site Description: Give visual description of stream, substrate, banks, riparian zone and adjacent land areas. Indicate what you think are current or potential threats to your stream's health. Are photographs of current or potential threats available?

Yes       No

Bridge is leaking at the seams—salt contamination in the winter possible  
Rocks have slippery green algae. Dominate substrate is brick. Litter along the banks. Downstream from Timken and beverage company.

Threats: storm water runoff, industrial discharge, salt from roads, and spills from the highway.

## STREAM QUALITY ASSESSMENT FORM

STATION 7 STREAM Hurford Run SAMPLE # A  
 LOCATION Bolivar I-77~100 feet downstream of Bolivar bridge  
 COUNTY Stark TOWNSHIP/CITY Canton DATE 7/30/2004 TIME 12:15 p.m.  
 GROUP OR INDIVIDUALS Eric Akin and Nick Lautzenheiser NO. OF PARTICIPANTS 2

DESCRIBE WATER CONDITIONS (COLOR, ODOR, BEDGROWTHS, SURFACE SCUM, ETC.)  
  
 Clear water, musky smell, foam on the water. Bricks in the stream bed.

HACH KIT RESULTS (if used) AND OTHER OBSERVATIONS  
  
 36+

USE BACK OF FORM IF NECESSARY

WIDTH OF RIFFLE <u>24'</u> WATER DEPTH <u>6"</u> WATER TEMP. (°F) <u>23°C</u>	BED COMPOSITION OF RIFFLE (%)  SILT <input type="text" value="5"/> GRAVEL (1/4" - 2") <input type="text" value="20"/> COBBLES (2" - 10") <input type="text" value="15"/> SAND <input type="text" value="10"/> BOULDERS (>10") <input type="text" value="40"/>
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<b>MACROINVERTEBRATE TALLY</b>	ESTIMATED A = 1 TO 9 COUNT B = 10 TO 99 LETTER CODE C = 100 or more
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GROUP 1 TAXA	LETTER CODE	GROUP 2 TAXA	LETTER CODE	GROUP 3 TAXA	LETTER CODE
WATER PENNY LARVAE		DAMSELFLY NYMPHS		BLACKFLY LARVAE	B
MAYFLY NYMPHS		DRAGONFLY NYMPHS		AQUATIC WORMS	
STONEFLY NYMPHS		CRANE FLY LARVAE	A	MIDGE LARVAE	B
DOBSONFLY LARVAE		BEETLE LARVAE		POUCH SNAILS	A
CADDISFLY LARVAE	B	CRAYFISH		LEECHES	
RIFFLE BEETLE ADULT	A	SCUDS		PLANARIA	
OTHER SNAILS	A	CLAMS	A		
		SOWBUGS	A		
NUMBER OF TAXA (times)	3	NUMBER OF TAXA (times)	3	NUMBER OF TAXA (times)	3
INDEX VALUE 3	9	INDEX VALUE 2	6	INDEX VALUE 1	3

CUMULATIVE INDEX VALUE <input style="width: 100px; height: 20px;" type="text" value="18"/>	STREAM QUALITY ASSESSMENT EXCELLENT (>22) <input type="text"/> GOOD (17-22) <input checked="" type="text" value="X"/> FAIR (11-16) <input type="text"/> POOR (<11) <input type="text"/>
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## STREAM QUALITY ASSESSMENT FORM

STATION 7 STREAM Hurford Run SAMPLE # B  
 LOCATION Bolivar I-77~50 feet downstream of Bolivar bridge  
 COUNTY Stark TOWNSHIP/CITY Canton DATE 7/30/2004 TIME 1:00 p.m.  
 GROUP OR INDIVIDUALS Eric Akin and Nick Lautzenheiser NO. OF PARTICIPANTS 2

DESCRIBE WATER CONDITIONS (COLOR, ODOR, BEDGROWTHS, SURFACE SCUM, ETC.)  
  
 Clear water, musky smell, foam on the water. Bricks in the stream bed.

HACH KIT RESULTS (if used) AND OTHER OBSERVATIONS  
  
 36+

USE BACK OF FORM IF NECESSARY

WIDTH OF RIFFLE <u>22'</u>  WATER DEPTH <u>8"</u>  WATER TEMP. (°F) <u>73.4°</u>	BED COMPOSITION OF RIFFLE (%)  SILT <input type="text" value="5"/> GRAVEL (1/4" - 2") <input type="text" value="35"/> COBBLES (2" - 10") <input type="text" value="30"/> SAND <input type="text" value="10"/> BOULDERS (>10") <input type="text" value="20"/>
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<b>MACROINVERTEBRATE TALLY</b>	ESTIMATED A = 1 TO 9 COUNT B = 10 TO 99 LETTER CODE C = 100 or more
--------------------------------	---

GROUP 1 TAXA	LETTER CODE	GROUP 2 TAXA	LETTER CODE	GROUP 3 TAXA	LETTER CODE
WATER PENNY LARVAE		DAMSELFLY NYMPHS		BLACKFLY LARVAE	B
MAYFLY NYMPHS		DRAGONFLY NYMPHS		AQUATIC WORMS	
STONEFLY NYMPHS		CRANE FLY LARVAE	A	MIDGE LARVAE	B
DOBSONFLY LARVAE		BEETLE LARVAE	A	POUCH SNAILS	A
CADDISFLY LARVAE	B	CRAYFISH		LEECHES	
RIFFLE BEETLE ADULT		SCUDS		PLANARIA	A
OTHER SNAILS	A	CLAMS			
		SOWBUGS			
NUMBER OF TAXA (times)	2	NUMBER OF TAXA (times)	2	NUMBER OF TAXA (times)	4
INDEX VALUE 3	6	INDEX VALUE 2	4	INDEX VALUE 1	4

CUMULATIVE INDEX VALUE <input style="width: 100px; text-align: center;" type="text" value="14"/>	STREAM QUALITY ASSESSMENT EXCELLENT (>22) <input type="text"/> GOOD (17-22) <input type="text"/> FAIR (11-16) <input checked="" type="checkbox"/> <input type="text"/> POOR (<11) <input type="text"/>
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## STREAM QUALITY ASSESSMENT FORM

STATION 7 STREAM Hurford Run SAMPLE # 3  
 LOCATION Bolivar I-77~50 feet downstream of Bolivar bridge  
 COUNTY Stark TOWNSHIP/CITY Canton DATE 7/30/2004 TIME 2:20 p.m.  
 GROUP OR INDIVIDUALS Eric Akin and Nick Lautzenheiser NO. OF PARTICIPANTS 2

DESCRIBE WATER CONDITIONS (COLOR, ODOR, BEDGROWTHS, SURFACE SCUM, ETC.)  
  
 Clear water, musky smell, foam on the water. Several bricks line the stream bed.

HACH KIT RESULTS (if used) AND OTHER OBSERVATIONS

36+

USE BACK OF FORM IF NECESSARY

WIDTH OF RIFFLE <u>24'</u>	BED COMPOSITION OF RIFFLE (%)		
WATER DEPTH <u>10"</u>	SILT <input type="checkbox"/>	GRAVEL (1/4" - 2") <input type="checkbox"/>	<input type="checkbox"/>
WATER TEMP. (°F) <u>73.4°</u>	COBBLES (2" - 10") <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	SAND <input type="checkbox"/>	BOULDERS (>10") <input type="checkbox"/>	<input type="checkbox"/>

<b>MACROINVERTEBRATE TALLY</b>	ESTIMATED COUNT LETTER CODE	A = 1 TO 9 B = 10 TO 99 C = 100 or more
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GROUP 1 TAXA	LETTER CODE	GROUP 2 TAXA	LETTER CODE	GROUP 3 TAXA	LETTER CODE
WATER PENNY LARVAE		DAMSELFLY NYMPHS		BLACKFLY LARVAE	B
MAYFLY NYMPHS		DRAGONFLY NYMPHS		AQUATIC WORMS	A
STONEFLY NYMPHS		CRANE FLY LARVAE		MIDGE LARVAE	B
DOBSONFLY LARVAE		BEETLE LARVAE		POUCH SNAILS	
CADDISFLY LARVAE	B	CRAYFISH		LEECHES	A
RIFFLE BEETLE ADULT	A	SCUDS		PLANARIA	A
OTHER SNAILS		CLAMS	A		
		SOWBUGS	A		
NUMBER OF TAXA (times)	2	NUMBER OF TAXA (times)	2	NUMBER OF TAXA (times)	5
INDEX VALUE 3	6	INDEX VALUE 2	4	INDEX VALUE 1	5

CUMULATIVE INDEX VALUE <input style="width: 100px; height: 20px;" type="text" value="15"/>	STREAM QUALITY ASSESSMENT	
	EXCELLENT (>22) <input style="width: 50px; height: 20px;" type="checkbox"/>	GOOD (17-22) <input style="width: 50px; height: 20px;" type="checkbox"/>
	FAIR (11-16) <input checked="" style="width: 50px; height: 20px;" type="checkbox"/>	POOR (<11) <input style="width: 50px; height: 20px;" type="checkbox"/>

# Stream Inventory - Watershed Assessment

Stream Walkers: Eric Akin, Claude Custer and Pam Feagler Station: 8 Date: 7-29-04  
Stream Name: Sherrick Run Water level:  high  avg.  low  
Weather conditions: Partly sunny Last rain event 7/25/04  
Air temp. 78°F Water temp. 60.9°F  
Inventoried stream section, River Mile 11.44 to River Mile 11.45  
Descriptive location (use roads etc.) Allen Road Bridge downstream

## Water surface appearance:

- Scum  
 Foamy  
 Muddy  
 Milky  
 Clear  
 Colored sheen (oily)  
 Brownish  
 Other, \_\_\_\_\_

## Stream bed coating:

- Algae coated  
 Orange to red  
 Yellowish  
 Black  
 Brown  
 None  
 Silt coated, depth of deposits dusting  
 Other, \_\_\_\_\_

## Odor:

- Rotten Egg  
 Musky  
 Sewage  
 Chlorine  
 None  
 Other, \_\_\_\_\_

## Habitat:

- Pools  Undercut banks  Riffles  
 Rock ledges  Wetlands  Tree roots  
 Log piles  Backwaters  Logs or woody debris  
 Weed beds  Large boulders  Man-made objects

Maximum Stream Depth 4' Average Stream Width 15'

## Stream shading: Stream is -

- Fully exposed (0-24% of stream is shaded from the sun)  Partially exposed (25-49%)  
 Fully shaded (75-100%)  Partially shaded (50-74%)

## Streambank vegetation:

Trees (%) 70 Plants (%) 5 Bare soil (%) \_\_\_\_\_ Grass (%) \_\_\_\_\_

Shrubs(%) 20 Root mats (%) 5 Other (%) \_\_\_\_\_

Approximate width of vegetation: Left bank 100' Right bank 20'

Is grass mowed down to the water's edge?  Yes  No

## Land uses along stream section:

1. Farming:  Pasture/Grazing Land  Crops  Woods  Other (explain) \_\_\_\_\_  
2. Urban areas:  Homes  Light manufacturing  Heavy manufacturing  
 Retail/Comm.  Construction sites  Parking lots  
3. Other (explain) Next to Thurman Munson stadium recreational

Outfalls:

1. Are there any discharge pipes?  No  Yes      Location: right bank—upstream of bridge

2. Types of pipes:      Sewage      2 discharge pipes

treatment

Storm water runoff \_\_\_\_\_

Industrial (type) \_\_\_\_\_

Drainage tile outlets \_\_\_\_\_

Unknown \_\_\_\_\_

Other none

3. Description of odor associated with Good concrete

Stream channel alterations:       Dredging       Channelization       Fill       None

Other (explain) \_\_\_\_\_

Structures or barriers in the stream:

Dams       Bridges       Islands       Waterfalls       Log jams       Sediment/sandbars

Other (explain) \_\_\_\_\_

Litter in and around stream:  No  Yes      Location: In the trees

Paper and small trash \_\_\_\_\_%

Cans and bottles \_\_\_\_\_%

Tires, carts, etc. \_\_\_\_\_%

Other \_\_\_\_\_

Verbal Site Description: Give visual description of stream, substrate, banks, riparian zone and adjacent land areas. Indicate what you think are current or potential threats to your stream's health. Are photographs of current or potential threats available?

Yes       No

Pollution potential: urban runoff, storm water runoff

Substrate is a good mix of gravel and cobble. Riparian zone is primarily trees and shrubs and provides good shading.

Storm water discharge pipe furthest upstream (hidden by brush) was discharging a significant amount of water despite the lack of rain over the last few days and may need to be investigated if the discharge persists.

## STREAM QUALITY ASSESSMENT FORM

STATION 8 STREAM Sherrick Run SAMPLE # A  
 LOCATION Allen Road bridge ~150 ft. downstream of bridge  
 COUNTY Stark TOWNSHIP/CITY Canton DATE 7/29/2004 TIME 9:10 a.m.  
 GROUP OR INDIVIDUALS Eric Akin, Claude Custer, and Pam Feagler NO. OF PARTICIPANTS 3

DESCRIBE WATER CONDITIONS (COLOR, ODOR, BEDGROWTHS, SURFACE SCUM, ETC.)

Water is clear, algae on cobbles, no odor.

HACH KIT RESULTS (if used) AND OTHER OBSERVATIONS

>36

USE BACK OF FORM IF NECESSARY

WIDTH OF RIFFLE <u>25'</u>	BED COMPOSITION OF RIFFLE (%)		
WATER DEPTH <u>5"</u>	SILT <input style="width: 30px;" type="text" value="5"/>	GRAVEL (1/4" - 2") <input style="width: 30px;" type="text" value="45"/>	
WATER TEMP. (°F) <u>60.8°</u>	COBBLES (2" - 10") <input style="width: 30px;" type="text" value="35"/>	BOULDERS (>10") <input style="width: 30px;" type="text" value="5"/>	
	SAND <input style="width: 30px;" type="text" value="10"/>		

### MACROINVERTEBRATE TALLY

ESTIMATED COUNT LETTER CODE  
 A = 1 TO 9  
 B = 10 TO 99  
 C = 100 or more

GROUP 1 TAXA	LETTER CODE	GROUP 2 TAXA	LETTER CODE	GROUP 3 TAXA	LETTER CODE
WATER PENNY LARVAE		DAMSELFLY NYMPHS		BLACKFLY LARVAE	B
MAYFLY NYMPHS		DRAGONFLY NYMPHS		AQUATIC WORMS	A
STONEFLY NYMPHS		CRANE FLY LARVAE		MIDGE LARVAE	B
DOBSONFLY LARVAE		BEETLE LARVAE		POUCH SNAILS	
CADDISFLY LARVAE	C	CRAYFISH		LEECHES	
RIFFLE BEETLE ADULT		SCUDS			
OTHER SNAILS		CLAMS			
		SOWBUGS			
NUMBER OF TAXA (times)	1	NUMBER OF TAXA (times)	0	NUMBER OF TAXA (times)	3
INDEX VALUE 3	3	INDEX VALUE 2	0	INDEX VALUE 1	3

CUMULATIVE INDEX VALUE

6

### STREAM QUALITY ASSESSMENT

EXCELLENT (>22)	<input style="width: 30px;" type="text"/>	GOOD (17-22)	<input style="width: 30px;" type="text"/>
FAIR (11-16)	<input style="width: 30px;" type="text"/>	POOR (<11)	<input checked="" style="width: 30px;" type="text" value="X"/>

## STREAM QUALITY ASSESSMENT FORM

STATION 8 STREAM Sherrick Run SAMPLE # B  
 LOCATION Allen Road: ~50 ft. downstream of the bridge  
 COUNTY Stark TOWNSHIP/CITY Canton DATE 7/29/2004 TIME 10:05 a.m.  
 GROUP OR INDIVIDUALS Eric Akin, Claude Custer, and Pam Feagler NO. OF PARTICIPANTS 3

DESCRIBE WATER CONDITIONS (COLOR, ODOR, BEDGROWTHS, SURFACE SCUM, ETC.)  <p style="text-align: center;">No odors, green and brown algae on the rocks.</p>	HACH KIT RESULTS (if used) AND OTHER OBSERVATIONS  <p style="text-align: center;">36+</p>
USE BACK OF FORM IF NECESSARY	

WIDTH OF RIFFLE <u>14'</u>  WATER DEPTH <u>5"</u>  WATER TEMP. (°F) <u>60.8°</u>	BED COMPOSITION OF RIFFLE (%)  SILT <input type="checkbox"/> GRAVEL (1/4" - 2") <input type="checkbox" value="10"/> COBBLES (2" - 10") <input type="checkbox" value="85"/> SAND <input type="checkbox" value="5"/> BOULDERS (>10") <input type="checkbox"/>
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<b>MACROINVERTEBRATE TALLY</b>	ESTIMATED COUNT LETTER CODE A = 1 TO 9 B = 10 TO 99 C = 100 or more
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GROUP 1 TAXA	LETTER CODE	GROUP 2 TAXA	LETTER CODE	GROUP 3 TAXA	LETTER CODE
WATER PENNY LARVAE		DAMSELFLY NYMPHS		BLACKFLY LARVAE	A
MAYFLY NYMPHS		DRAGONFLY NYMPHS		AQUATIC WORMS	A
STONEFLY NYMPHS		CRANE FLY LARVAE		MIDGE LARVAE	B
DOBSONFLY LARVAE		BEETLE LARVAE	A	POUCH SNAILS	
CADDISFLY LARVAE	B	CRAYFISH	A	LEECHES	
RIFFLE BEETLE ADULT		SCUDS			
OTHER SNAILS		CLAMS			
		SOWBUGS			
NUMBER OF TAXA (times)	1	NUMBER OF TAXA (times)	2	NUMBER OF TAXA (times)	3
INDEX VALUE 3	3	INDEX VALUE 2	4	INDEX VALUE 1	3

CUMULATIVE INDEX VALUE <input style="width: 100px;" type="text" value="10"/>	STREAM QUALITY ASSESSMENT EXCELLENT (>22) <input type="checkbox"/> GOOD (17-22) <input type="checkbox"/> FAIR (11-16) <input type="checkbox"/> POOR (<11) <input checked="" type="checkbox"/>
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## STREAM QUALITY ASSESSMENT FORM

STATION 8 STREAM Sherrick Run SAMPLE # C  
 LOCATION Thurman Munson Stadium - Allen Road  
 COUNTY Stark TOWNSHIP/CITY Canton DATE 7/29/2004 TIME 11:00 a.m.  
 GROUP OR INDIVIDUALS Eric Akin, Claude Custer, Pam Feagler NO. OF PARTICIPANTS 3

DESCRIBE WATER CONDITIONS (COLOR, ODOR, BEDGROWTHS, SURFACE SCUM, ETC.)  
  
 No odors, green and brown algae on the rocks. More sand and gravel than at site B. Caught a sculpin minnow.

HACH KIT RESULTS (if used) AND OTHER OBSERVATIONS  
  
 36+

USE BACK OF FORM IF NECESSARY

WIDTH OF RIFFLE <u>27.5'</u>  WATER DEPTH <u>3"</u>  WATER TEMP. (°F) <u>60.8°</u>	BED COMPOSITION OF RIFFLE (%)  SILT <input type="text" value="5"/> GRAVEL (1/4" - 2") <input type="text" value="70"/> COBBLES (2" - 10") <input type="text" value="15"/> SAND <input type="text" value="10"/> BOULDERS (>10") <input type="text"/>
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<b>MACROINVERTEBRATE TALLY</b>	ESTIMATED COUNT LETTER CODE      A = 1 TO 9 B = 10 TO 99 C = 100 or more
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GROUP 1 TAXA	LETTER CODE	GROUP 2 TAXA	LETTER CODE	GROUP 3 TAXA	LETTER CODE
WATER PENNY LARVAE		DAMSELFLY NYMPHS		BLACKFLY LARVAE	B
MAYFLY NYMPHS		DRAGONFLY NYMPHS		AQUATIC WORMS	
STONEFLY NYMPHS		CRANE FLY LARVAE		MIDGE LARVAE	B
DOBSONFLY LARVAE		BEETLE LARVAE		POUCH SNAILS	
CADDISFLY LARVAE	B	CRAYFISH	A	LEECHES	
RIFFLE BEETLE ADULT		SCUDS			
OTHER SNAILS		CLAMS			
		SOWBUGS			
NUMBER OF TAXA (times)	1	NUMBER OF TAXA (times)	1	NUMBER OF TAXA (times)	2
INDEX VALUE 3	3	INDEX VALUE 2	2	INDEX VALUE 1	2

CUMULATIVE INDEX VALUE <input style="width: 100px; height: 20px;" type="text" value="7"/>	STREAM QUALITY ASSESSMENT EXCELLENT (>22) <input type="text"/> GOOD (17-22) <input type="text"/> FAIR (11-16) <input type="text"/> POOR (<11) <input checked="" type="text"/>
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# Stream Inventory - Watershed Assessment

Stream Walkers: Eric Akin and Nick Lautzenheiser Station: 9 Date: 7-30-04  
Stream Name: Sherrick Run Water level:  high  avg.  low  
Weather conditions: cloudy Last rain event 7/25/04  
Air temp. 75°F Water temp. 53.6°F  
Inventoried stream section, River Mile 12.26 to River Mile 12.77  
Descriptive location (use roads etc.) Central Ave upstream of bridge (also called Cherry Ave.)

## Water surface appearance:

- Scum
- Foamy
- Muddy
- Milky
- Clear
- Colored sheen (oily)
- Brownish
- Other, \_\_\_\_\_

## Stream bed coating:

- Algae coated
- Orange to red
- Yellowish
- Black
- Brown
- None
- Silt coated, depth of deposits \_\_\_\_\_
- Other, \_\_\_\_\_

## Odor:

- Rotten Egg
- Musky
- Sewage
- Chlorine
- None
- Other, \_\_\_\_\_

## Habitat:

- Pools
- Undercut banks
- Riffles
- Rock ledges
- Wetlands
- Tree roots
- Log piles
- Backwaters
- Logs or woody debris
- Weed beds
- Large boulders
- Man-made objects

Maximum Stream Depth 12" Average Stream Width 17'

## Stream shading: Stream is -

- Fully exposed (0-24% of stream is shaded from the sun)
- Partially exposed (25-49%)
- Fully shaded (75-100%)
- Partially shaded (50-74%)

## Streambank vegetation:

Trees (%) 60 Plants (%) 30 Bare soil (%) 10 Grass (%) \_\_\_\_\_  
Shrubs(%) \_\_\_\_\_ Root mats (%) \_\_\_\_\_ Other (%) \_\_\_\_\_  
Approximate width of vegetation: Left bank 50' Right bank 100'+  
Is grass mowed down to the water's edge?  Yes  No

## Land uses along stream section:

1. Farming:  Pasture/Grazing Land  Crops  Woods  Other (explain)
2. Urban areas:  Homes  Light manufacturing  Heavy manufacturing  
 Retail/Comm.  Construction sites  Parking lots
3. Other (explain) Envirite company to the south

Outfalls:

1. Are there any discharge pipes?  No  Yes

Location: Right bank downstream of the bridge

2. Types of pipes:  Sewage treatment

Storm water runoff

Industrial (type) \_\_\_\_\_

Drainage tile outlets \_\_\_\_\_

Unknown

Other \_\_\_\_\_

3. Description of odor associated with discharge pipes: None—dry

4. Condition of streambank at outlet site Concrete has been patched

Stream channel alterations:

Dredging

Channelization

Fill

None

Other (explain)

Likely channelized in the past

Structures or barriers in the stream:

Dams

Bridges

Islands

Waterfalls

Log jams

Sediment/sandbars

Other (explain) \_\_\_\_\_

Litter in and around stream:  No  Yes

Location: scattered

Paper and small trash

\_\_\_\_\_ %

Cans and bottles

\_\_\_\_\_ %

Tires, carts, etc.

\_\_\_\_\_ %

Other \_\_\_\_\_

Verbal Site Description: Give visual description of stream, substrate, banks, riparian zone and adjacent land areas. Indicate what you think are current or potential threats to your stream's health. Are photographs of current or potential threats available?

Yes

No

Steep bank to the south. Not connected to the flood plain. Instream and riparian habitat is excellent. There is a slight orange coating to the streambed. Downstream of Adler Trucking and abandoned mine land.

## STREAM QUALITY ASSESSMENT FORM

STATION 9 STREAM Sherrick Run SAMPLE # A  
 LOCATION Cherry Ave/Central Ave upstream of bridge  
 COUNTY Stark TOWNSHIP/CITY Canton DATE 7/30/2004 TIME 9:30 a.m.  
 GROUP OR INDIVIDUALS Eric Akin and Nick Lautzenheiser NO. OF PARTICIPANTS 2

DESCRIBE WATER CONDITIONS (COLOR, ODOR, BEDGROWTHS, SURFACE SCUM, ETC.)

A little cloudy, orange coating, no odors, oily sheen along rocks.

HACH KIT RESULTS (if used) AND OTHER OBSERVATIONS

31"

USE BACK OF FORM IF NECESSARY

WIDTH OF RIFFLE <u>9'4"</u>	BED COMPOSITION OF RIFFLE (%)		
WATER DEPTH <u>6"</u>	SILT <input type="text" value="5"/>	GRAVEL (1/4" - 2") <input type="text" value="40"/>	
WATER TEMP. (°F) <u>53.6°</u>	COBBLES (2" - 10") <input type="text" value="25"/>	BOULDERS (>10") <input type="text" value="10"/>	
	SAND <input type="text" value="20"/>		

### MACROINVERTEBRATE TALLY

ESTIMATED COUNT LETTER CODE  
 A = 1 TO 9  
 B = 10 TO 99  
 C = 100 or more

GROUP 1 TAXA	LETTER CODE	GROUP 2 TAXA	LETTER CODE	GROUP 3 TAXA	LETTER CODE
WATER PENNY LARVAE		DAMSELFLY NYMPHS		BLACKFLY LARVAE	
MAYFLY NYMPHS		DRAGONFLY NYMPHS		AQUATIC WORMS	A
STONEFLY NYMPHS		CRANE FLY LARVAE		MIDGE LARVAE	
DOBSONFLY LARVAE		BEETLE LARVAE		POUCH SNAILS	
CADDISFLY LARVAE	B	CRAYFISH		LEECHES	
RIFFLE BEETLE ADULT	A	SCUDS		CATEPILLAR LARVAE	B
OTHER SNAILS		CLAMS			
		SOWBUGS			
NUMBER OF TAXA (times)	2	NUMBER OF TAXA (times)	0	NUMBER OF TAXA (times)	2
INDEX VALUE 3	6	INDEX VALUE 2	0	INDEX VALUE 1	2

CUMULATIVE INDEX VALUE

### STREAM QUALITY ASSESSMENT

EXCELLENT (>22)

GOOD (17-22)

FAIR (11-16)

POOR (<11)

## STREAM QUALITY ASSESSMENT FORM

STATION 9 STREAM Sherrick Run SAMPLE # B  
 LOCATION Cherry Ave/Central Ave upstream of bridge  
 COUNTY Stark TOWNSHIP/CITY Canton DATE 7/30/2004 TIME 10:00 a.m.  
 GROUP OR INDIVIDUALS Eric Akin and Nick Lautzenheiser NO. OF PARTICIPANTS 2

DESCRIBE WATER CONDITIONS (COLOR, ODOR, BEDGROWTHS, SURFACE SCUM, ETC.)  
  
 A little cloudy, orange coating, no odors, oily sheen along rocks.

HACH KIT RESULTS (if used) AND OTHER OBSERVATIONS  
  
 34.5

USE BACK OF FORM IF NECESSARY

WIDTH OF RIFFLE <u>27'</u>  WATER DEPTH <u>4"</u>  WATER TEMP. (°F) <u>53.6°</u>	BED COMPOSITION OF RIFFLE (%)  SILT <input type="checkbox"/> GRAVEL (1/4" - 2") <input type="checkbox" value="40"/> COBBLES (2" - 10") <input type="checkbox" value="35"/> SAND <input type="checkbox" value="15"/> BOULDERS (>10") <input type="checkbox" value="10"/>
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<b>MACROINVERTEBRATE TALLY</b>	ESTIMATED A = 1 TO 9 COUNT B = 10 TO 99 LETTER CODE C = 100 or more
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GROUP 1 TAXA	LETTER CODE	GROUP 2 TAXA	LETTER CODE	GROUP 3 TAXA	LETTER CODE
WATER PENNY LARVAE		DAMSELFLY NYMPHS		BLACKFLY LARVAE	A
MAYFLY NYMPHS		DRAGONFLY NYMPHS		AQUATIC WORMS	A
STONEFLY NYMPHS		CRANE FLY LARVAE	A	MIDGE LARVAE	
DOBSONFLY LARVAE		BEETLE LARVAE		POUCH SNAILS	
CADDISFLY LARVAE	B	CRAYFISH		LEECHES	
RIFFLE BEETLE ADULT		SCUDS		CATEPILLAR LARVAE	A
OTHER SNAILS		CLAMS			
		SOWBUGS			
NUMBER OF TAXA (times)	1	NUMBER OF TAXA (times)	1	NUMBER OF TAXA (times)	3
INDEX VALUE 3	3	INDEX VALUE 2	2	INDEX VALUE 1	3

CUMULATIVE INDEX VALUE <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">8</div>	STREAM QUALITY ASSESSMENT EXCELLENT (>22) <input type="checkbox"/> GOOD (17-22) <input type="checkbox"/> FAIR (11-16) <input type="checkbox"/> POOR (<11) <input checked="" type="checkbox"/>
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## STREAM QUALITY ASSESSMENT FORM

STATION 9 STREAM Sherrick Run SAMPLE # C  
 LOCATION Cherry Ave/Central Ave upstream of bridge  
 COUNTY Stark TOWNSHIP/CITY Canton DATE 7/30/2004 TIME 11:15 a.m.  
 GROUP OR INDIVIDUALS Eric Akin and Nick Lautzenheiser NO. OF PARTICIPANTS 2

DESCRIBE WATER CONDITIONS (COLOR, ODOR, BEDGROWTHS, SURFACE SCUM, ETC.)  <p style="text-align: center;">A little cloudy, orange coating, no odors, oily sheen along rocks.</p>	HACH KIT RESULTS (if used) AND OTHER OBSERVATIONS  <p style="text-align: center;">34.5</p>
USE BACK OF FORM IF NECESSARY	

WIDTH OF RIFFLE <u>27'</u>  WATER DEPTH <u>4"</u>  WATER TEMP. (°F) <u>53.6°</u>	BED COMPOSITION OF RIFFLE (%)  SILT <input type="checkbox"/> GRAVEL (1/4" - 2") <input type="checkbox" value="35"/> COBBLES (2" - 10") <input type="checkbox" value="45"/> SAND <input type="checkbox" value="15"/> BOULDERS (>10") <input type="checkbox" value="5"/>
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<b>MACROINVERTEBRATE TALLY</b>	ESTIMATED COUNT LETTER CODE A = 1 TO 9 B = 10 TO 99 C = 100 or more
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GROUP 1 TAXA	LETTER CODE	GROUP 2 TAXA	LETTER CODE	GROUP 3 TAXA	LETTER CODE
WATER PENNY LARVAE		DAMSELFLY NYMPHS		BLACKFLY LARVAE	A
MAYFLY NYMPHS		DRAGONFLY NYMPHS		AQUATIC WORMS	
STONEFLY NYMPHS		CRANE FLY LARVAE	A	MIDGE LARVAE	A
DOBSONFLY LARVAE		BEETLE LARVAE		POUCH SNAILS	
CADDISFLY LARVAE	B	CRAYFISH		LEECHES	
RIFFLE BEETLE ADULT	A	SCUDS			
OTHER SNAILS		CLAMS			
		SOWBUGS			
NUMBER OF TAXA (times)	2	NUMBER OF TAXA (times)	1	NUMBER OF TAXA (times)	2
INDEX VALUE 3	6	INDEX VALUE 2	2	INDEX VALUE 1	2

CUMULATIVE INDEX VALUE <div style="border: 1px solid black; width: 100px; text-align: center; padding: 2px;">10</div>	STREAM QUALITY ASSESSMENT EXCELLENT (>22) <input type="checkbox"/> GOOD (17-22) <input type="checkbox"/> FAIR (11-16) <input type="checkbox"/> POOR (<11) <input checked="" type="checkbox"/>
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# Stream Inventory - Watershed Assessment

Stream Walkers: Eric Akin, Claude Custer, and Pam Feagler Station: 10 Date: 7-29-04  
Stream Name: Sherrick Run Water level:  high  avg.  low  
Weather conditions: \_\_\_\_\_ Last rain event 7/25/04  
Air temp. 80°F Water temp. 63°F  
Inventoried stream section, River Mile 13.53 to River Mile 13.54  
Descriptive location (use roads etc.) Moore Road just south of Sherrick Dr.

### Water surface appearance:

- Scum
- Foamy
- Muddy
- Milky
- Clear
- Colored sheen (oily)
- Brownish
- Other, \_\_\_\_\_

### Stream bed coating:

- Algae coated
- Orange to red
- Yellowish
- Black
- Brown
- None
- Silt coated, depth of deposits \_\_\_\_\_
- Other, \_\_\_\_\_

### Odor:

- Rotten Egg
- Musky
- Sewage
- Chlorine
- None
- Other, \_\_\_\_\_

### Habitat:

- Pools
- Rock ledges
- Log piles
- Weed beds
- Undercut banks
- Wetlands
- Backwaters
- Large boulders
- Riffles
- Tree roots
- Logs or woody debris
- Man-made objects

Maximum Stream Depth 3' Average Stream Width 16'

### Stream shading: Stream is -

- Fully exposed (0-24% of stream is shaded from the sun)
- Fully shaded (75-100%)
- Partially exposed (25-49%)
- Partially shaded (50-74%)

### Streambank vegetation:

Trees (%) 50 Plants (%) 5 Bare soil (%) \_\_\_\_\_ Grass (%) \_\_\_\_\_  
Shrubs(%) 45 Root mats (%) \_\_\_\_\_ Other (%) \_\_\_\_\_  
Approximate width of vegetation: Left bank 75' Right bank 20'  
Is grass mowed down to the water's edge?  Yes  No

### Land uses along stream section:

1. Farming:  Pasture/Grazing Land  Crops  Woods  Other (explain) abandoned strip mine C&D and cement fill
2. Urban areas:  Homes  Light manufacturing  Heavy manufacturing  
 Retail/Comm.  Construction sites  Parking lots
3. Other (explain) Dump sites

Outfalls:

1. Are there any discharge pipes?  No  Yes      Location: Not any obvious
2. Types of pipes:  Sewage treatment  
 Storm water runoff  
 Industrial (type) \_\_\_\_\_  
 Drainage tile outlets  
 Unknown  
 Other Acid mine drain upstream
3. Description of odor associated with discharge pipes: orange
4. Condition of streambank at outlet site unknown

Stream channel alterations:       Dredging     Channelization     Fill     None  
 Other (explain) Cement debris on shore

Structures or barriers in the stream:  
 Dams     Bridges     Islands     Waterfalls     Log jams     Sediment/sandbars  
 Other (explain) \_\_\_\_\_

Litter in and around stream:     No     Yes      Location: Along the road

Paper and small trash \_\_\_\_\_%     Cans and bottles 1%  
 Tires, carts, etc. \_\_\_\_\_%     Other Sink, metal, bed spring

Verbal Site Description: Give visual description of stream, substrate, banks, riparian zone and adjacent land areas. Indicate what you think are current or potential threats to your stream's health. Are photographs of current or potential threats available?

Yes     No

Old strip mine, old access road, (C&D pile at the end of the road downstream of site)

Stream banks are thick with trees and shrubs

Orange coating on top of rock and black oil-like substance under the rocks in the substrate. Possible result of mine drainage  
Potential threats include mine runoff, Alder Trucking upstream, construction debris landfill in flood plain, litter, industrial and storm water runoff.

## STREAM QUALITY ASSESSMENT FORM

STATION 10 STREAM Sherrick Run SAMPLE # A  
 LOCATION Moore Road Bridge downstream ~100 feet downstream  
 COUNTY Stark TOWNSHIP/CITY Canton DATE 7/29/2004 TIME 12:30 p.m.  
 GROUP OR INDIVIDUALS Eric Akin, Claude Custer, and Pam Feagler NO. OF PARTICIPANTS 3

DESCRIBE WATER CONDITIONS (COLOR, ODOR, BEDGROWTHS, SURFACE SCUM, ETC.)  
  
 Orange deposition on rocks. Musky smell. No algae present.

HACH KIT RESULTS (if used) AND OTHER OBSERVATIONS  
  
 22.5"

USE BACK OF FORM IF NECESSARY

WIDTH OF RIFFLE <u>14'8"</u>	BED COMPOSITION OF RIFFLE (%)		
WATER DEPTH <u>6"</u>	SILT <input type="checkbox"/>	GRAVEL (1/4" - 2") <input type="checkbox"/>	<u>15</u>
WATER TEMP. (°F) <u>17°</u>	COBBLES (2" - 10") <input type="checkbox"/>		<u>60</u>
	SAND <input type="checkbox"/>	BOULDERS (>10") <input type="checkbox"/>	<u>15</u>

<b>MACROINVERTEBRATE TALLY</b>	ESTIMATED COUNT LETTER CODE	A = 1 TO 9 B = 10 TO 99 C = 100 or more
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GROUP 1 TAXA	LETTER CODE	GROUP 2 TAXA	LETTER CODE	GROUP 3 TAXA	LETTER CODE
WATER PENNY LARVAE		DAMSELFLY NYMPHS		BLACKFLY LARVAE	
MAYFLY NYMPHS		DRAGONFLY NYMPHS		AQUATIC WORMS	
STONEFLY NYMPHS		CRANE FLY LARVAE		MIDGE LARVAE	A
DOBSONFLY LARVAE		BEETLE LARVAE		POUCH SNAILS	
CADDISFLY LARVAE	B	CRAYFISH		LEECHES	
RIFFLE BEETLE ADULT		SCUDS			
OTHER SNAILS		CLAMS			
		SOWBUGS			
NUMBER OF TAXA (times)	1	NUMBER OF TAXA (times)	0	NUMBER OF TAXA (times)	1
INDEX VALUE 3	3	INDEX VALUE 2	0	INDEX VALUE 1	1

CUMULATIVE INDEX VALUE

STREAM QUALITY ASSESSMENT

EXCELLENT (>22) <input type="checkbox"/>	GOOD (17-22) <input type="checkbox"/>
FAIR (11-16) <input type="checkbox"/>	POOR (<11) <input checked="" type="checkbox"/>

## STREAM QUALITY ASSESSMENT FORM

STATION 10 STREAM Sherrick Run SAMPLE # B  
 LOCATION Moore Road Bridge  
 COUNTY Stark TOWNSHIP/CITY Canton DATE 7/29/2004 TIME 1:15 p.m.  
 GROUP OR INDIVIDUALS Eric Akin, Claude Custer, and Pam Feagler NO. OF PARTICIPANTS 3

DESCRIBE WATER CONDITIONS (COLOR, ODOR, BEDGROWTHS, SURFACE SCUM, ETC.)  
  
 Musky smell, orange coating, no algae present.

HACH KIT RESULTS (if used) AND OTHER OBSERVATIONS  
  
 24"

USE BACK OF FORM IF NECESSARY

WIDTH OF RIFFLE <u>17'</u>	BED COMPOSITION OF RIFFLE (%)		
WATER DEPTH <u>5"</u>	SILT <input type="checkbox"/>	GRAVEL (1/4" - 2") <input type="checkbox"/>	<input type="checkbox"/>
WATER TEMP. (°F) <u>63°</u>	COBBLES (2" - 10") <input type="checkbox"/>	<input type="checkbox"/>	20
	SAND <input type="checkbox"/>	BOULDERS (>10") <input type="checkbox"/>	<input type="checkbox"/>

<b>MACROINVERTEBRATE TALLY</b>	ESTIMATED COUNT LETTER CODE	A = 1 TO 9 B = 10 TO 99 C = 100 or more
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GROUP 1 TAXA	LETTER CODE	GROUP 2 TAXA	LETTER CODE	GROUP 3 TAXA	LETTER CODE
WATER PENNY LARVAE		DAMSELFLY NYMPHS		BLACKFLY LARVAE	
MAYFLY NYMPHS		DRAGONFLY NYMPHS		AQUATIC WORMS	
STONEFLY NYMPHS		CRANE FLY LARVAE		MIDGE LARVAE	A
DOBSONFLY LARVAE		BEETLE LARVAE		POUCH SNAILS	
CADDISFLY LARVAE	B	CRAYFISH		LEECHES	
RIFFLE BEETLE ADULT		SCUDS			
OTHER SNAILS		CLAMS			
		SOWBUGS			
NUMBER OF TAXA (times)	1	NUMBER OF TAXA (times)	0	NUMBER OF TAXA (times)	1
INDEX VALUE 3	3	INDEX VALUE 2	0	INDEX VALUE 1	1

CUMULATIVE INDEX VALUE <input style="width: 100px; height: 20px; text-align: center;" type="text" value="4"/>	STREAM QUALITY ASSESSMENT			
	EXCELLENT (>22)	<input type="checkbox"/>	GOOD (17-22)	<input type="checkbox"/>
	FAIR (11-16)	<input type="checkbox"/>	POOR (<11)	<input checked="" type="checkbox"/>

## STREAM QUALITY ASSESSMENT FORM

STATION 10 STREAM Sherrick Run SAMPLE # C  
 LOCATION Moore Road  
 COUNTY Stark TOWNSHIP/CITY Canton DATE 7/29/2004 TIME 2:07 p.m.  
 GROUP OR INDIVIDUALS Eric Akin, Claude Custer, and Pam Feagler NO. OF PARTICIPANTS 3

DESCRIBE WATER CONDITIONS (COLOR, ODOR, BEDGROWTHS, SURFACE SCUM, ETC.)

Musky smell, orange coat, oily sheen on shore, noticed a few iron seeps.

HACH KIT RESULTS (if used) AND OTHER OBSERVATIONS

23"

USE BACK OF FORM IF NECESSARY

WIDTH OF RIFFLE <u>18'</u>	BED COMPOSITION OF RIFFLE (%)		
WATER DEPTH <u>6"</u>	SILT <input type="checkbox"/>	GRAVEL (1/4" - 2") <input type="checkbox"/>	<u>15</u>
WATER TEMP. (°F) <u>63°</u>	COBBLES (2" - 10") <input type="checkbox"/>		<u>35</u>
	SAND <input type="checkbox"/>	BOULDERS (>10") <input type="checkbox"/>	<u>40</u>
	<input type="checkbox"/>		<u>10</u>

### MACROINVERTEBRATE TALLY

ESTIMATED COUNT LETTER CODE  
 A = 1 TO 9  
 B = 10 TO 99  
 C = 100 or more

GROUP 1 TAXA	LETTER CODE	GROUP 2 TAXA	LETTER CODE	GROUP 3 TAXA	LETTER CODE
WATER PENNY LARVAE		DAMSELFLY NYMPHS		BLACKFLY LARVAE	
MAYFLY NYMPHS		DRAGONFLY NYMPHS		AQUATIC WORMS	
STONEFLY NYMPHS		CRANE FLY LARVAE		MIDGE LARVAE	A
DOBSONFLY LARVAE		BEETLE LARVAE		POUCH SNAILS	
CADDISFLY LARVAE	B	CRAYFISH		LEECHES	
RIFFLE BEETLE ADULT		SCUDS			
OTHER SNAILS		CLAMS			
		SOWBUGS			
NUMBER OF TAXA (times)	1	NUMBER OF TAXA (times)	0	NUMBER OF TAXA (times)	1
INDEX VALUE 3	3	INDEX VALUE 2	0	INDEX VALUE 1	1

CUMULATIVE INDEX VALUE

### STREAM QUALITY ASSESSMENT

EXCELLENT (>22)

GOOD (17-22)

FAIR (11-16)

POOR (<11)

# Stream Inventory - Watershed Assessment

Stream Walkers: Eric Akin and Nick Lautzenheiser Station: 11 Date: 8-6-04  
Stream Name: East Branch of Nimishillen Creek Water level:  high  avg.  low  
Weather conditions: partly cloudy Last rain event 8-6-04 light  
Air temp. 62°F Water temp. 63°F  
Inventoried stream section, River Mile 18.61 to River Mile 18.62  
Descriptive location (use roads etc.) Broadway Road Bridge south of Mahoning Road—250' upstream of bridge

## Water surface appearance:

- Scum
- Foamy
- Muddy
- Milky
- Clear
- Colored sheen (oily)
- Brownish
- Other, \_\_\_\_\_

## Stream bed coating:

- Algae coated
- Orange to red
- Yellowish
- Black
- Brown
- None
- Silt coated, depth of deposits \_\_\_\_\_
- Other, \_\_\_\_\_

## Odor:

- Rotten Egg
- Musky
- Sewage
- Chlorine
- None
- Other, \_\_\_\_\_

## Habitat:

- Pools
- Rock ledges
- Log piles
- Weed beds
- Undercut banks
- Wetlands
- Backwaters
- Large boulders
- Riffles
- Tree roots
- Logs or woody debris
- Man-made objects

Maximum Stream Depth 4' Average Stream Width 30'

## Stream shading: Stream is -

- Fully exposed (0-24% of stream is shaded from the sun)
- Fully shaded (75-100%)
- Partially exposed (25-49%)
- Partially shaded (50-74%)

## Streambank vegetation:

Trees (%) 15 Plants (%) 15 Bare soil (%) 10 Grass (%) \_\_\_\_\_  
Shrubs(%) 60 Root mats (%) \_\_\_\_\_ Other (%) \_\_\_\_\_  
Approximate width of vegetation: Left bank 100'+ Right bank 50'  
Is grass mowed down to the water's edge?  Yes  No

## Land uses along stream section:

1. Farming:  Pasture/Grazing Land  Crops  Woods  Other (explain) \_\_\_\_\_
2. Urban areas:  Homes  Light manufacturing  Heavy manufacturing  
 Retail/Comm.  Construction sites  Parking lots
3. Other (explain) Rail/freight yards

Outfalls:

1. Are there any discharge pipes?  No  Yes

Location: Left bank downstream –culvert

2. Types of pipes:  Sewage treatment

Storm water runoff

Industrial (type) \_\_\_\_\_

Drainage tile outlets \_\_\_\_\_

Unknown

Other \_\_\_\_\_

3. Description of odor associated with discharge pipes: \_\_\_\_\_

4. Condition of streambank at outlet site Stream bank eroded at outlet

Stream channel alterations:

Dredging

Channelization

Fill

None

Other (explain) \_\_\_\_\_

Structures or barriers in the stream:

Dams

Bridges

Islands

Waterfalls

Log jams

Sediment/sandbars

Other (explain) \_\_\_\_\_

Litter in and around stream:  No  Yes

Location: Light (not significant)

Paper and small trash \_\_\_\_\_%

Cans and bottles \_\_\_\_\_%

Tires, carts, etc. \_\_\_\_\_%

Other \_\_\_\_\_

Verbal Site Description: Give visual description of stream, substrate, banks, riparian zone and adjacent land areas. Indicate what you think are current or potential threats to your stream's health. Are photographs of current or potential threats available?

Yes  No

Area was severely flooded in July 2003 and May 2004. Sign of erosion along the banks. Substrate is a mix of cobble and gravel. Riparian zone mainly trees and shrubs good shading.

Threats: Railroad yard to the east spill potential, Broadway Road excavating company downstream. Storm water runoff/flooding.

## STREAM QUALITY ASSESSMENT FORM

STATION 11 STREAM E. Branch - Nimishillen Creek SAMPLE # A  
 LOCATION Broadway Rd. south of Mahoning Rd. upstream of bridge~250'  
 COUNTY Stark TOWNSHIP/CITY Nimishillen DATE 8/6/2004 TIME 1:00 p.m.  
 GROUP OR INDIVIDUALS Eric Akin and Nick Lautzenheiser NO. OF PARTICIPANTS 2

DESCRIBE WATER CONDITIONS (COLOR, ODOR, BEDGROWTHS, SURFACE SCUM, ETC.)  
  
 Milky water, no odor, brown and green algae on substrate, some foam on water surface.

HACH KIT RESULTS (if used) AND OTHER OBSERVATIONS  
  
 36"

USE BACK OF FORM IF NECESSARY

WIDTH OF RIFFLE <u>30.5'</u>  WATER DEPTH <u>6"</u>  WATER TEMP. (°F) <u>63°</u>	BED COMPOSITION OF RIFFLE (%)  SILT <input type="text" value="5"/> GRAVEL (1/4" - 2") <input type="text" value="35"/> COBBLES (2" - 10") <input type="text" value="35"/> SAND <input type="text" value="10"/> BOULDERS (>10") <input type="text" value="15"/>
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<b>MACROINVERTEBRATE TALLY</b>	ESTIMATED COUNT LETTER CODE A = 1 TO 9 B = 10 TO 99 C = 100 or more
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GROUP 1 TAXA	LETTER CODE	GROUP 2 TAXA	LETTER CODE	GROUP 3 TAXA	LETTER CODE
WATER PENNY LARVAE		DAMSELFLY NYMPHS		BLACKFLY LARVAE	A
MAYFLY NYMPHS	B	DRAGONFLY NYMPHS		AQUATIC WORMS	A
STONEFLY NYMPHS		CRANE FLY LARVAE	A	MIDGE LARVAE	B
DOBSONFLY LARVAE		BEETLE LARVAE		POUCH SNAILS	
CADDISFLY LARVAE	C	CRAYFISH	A	LEECHES	
RIFFLE BEETLE ADULT		SCUDS		PLANARIA	A
OTHER SNAILS		CLAMS			
		SOWBUGS			
NUMBER OF TAXA (times)	2	NUMBER OF TAXA (times)	2	NUMBER OF TAXA (times)	4
INDEX VALUE 3	6	INDEX VALUE 2	4	INDEX VALUE 1	4

CUMULATIVE INDEX VALUE <input style="width: 100px; text-align: center;" type="text" value="14"/>	STREAM QUALITY ASSESSMENT EXCELLENT (>22) <input type="text"/> GOOD (17-22) <input type="text"/> FAIR (11-16) <input checked="" type="checkbox"/> POOR (<11) <input type="text"/>
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## STREAM QUALITY ASSESSMENT FORM

STATION 11 STREAM E. Branch - Nimishillen Creek SAMPLE # B  
 LOCATION Broadway St. south of Mahoning Road ~250" upstream of bridge  
 COUNTY Stark TOWNSHIP/CITY Nimishillen DATE 8/6/2004 TIME 1:45 p.m.  
 GROUP OR INDIVIDUALS Eric Akin and Nick Lautzenheiser NO. OF PARTICIPANTS 2

DESCRIBE WATER CONDITIONS (COLOR, ODOR, BEDGROWTHS, SURFACE SCUM, ETC.)  
  
 Milky water, no odor, brown and green algae on substrate, some foam on water surface.

HACH KIT RESULTS (if used) AND OTHER OBSERVATIONS  
  
 36"

USE BACK OF FORM IF NECESSARY

WIDTH OF RIFFLE <u>30'</u>  WATER DEPTH <u>5.5"</u>  WATER TEMP. (°F) <u>63°</u>	BED COMPOSITION OF RIFFLE (%)  SILT <input type="checkbox"/> GRAVEL (1/4" - 2") <input type="checkbox" value="35"/> COBBLES (2" - 10") <input type="checkbox" value="40"/> SAND <input type="checkbox" value="15"/> BOULDERS (>10") <input type="checkbox" value="10"/>
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<b>MACROINVERTEBRATE TALLY</b>	ESTIMATED A = 1 TO 9 COUNT B = 10 TO 99 LETTER CODE C = 100 or more
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GROUP 1 TAXA	LETTER CODE	GROUP 2 TAXA	LETTER CODE	GROUP 3 TAXA	LETTER CODE
WATER PENNY LARVAE		DAMSELFLY NYMPHS		BLACKFLY LARVAE	A
MAYFLY NYMPHS	B	DRAGONFLY NYMPHS		AQUATIC WORMS	
STONEFLY NYMPHS		CRANE FLY LARVAE		MIDGE LARVAE	B
DOBSONFLY LARVAE		BEETLE LARVAE	A	POUCH SNAILS	
CADDISFLY LARVAE	C	CRAYFISH	A	LEECHES	
RIFFLE BEETLE ADULT	A	SCUDS		PLANARIA	A
OTHER SNAILS		CLAMS	A		
		SOWBUGS			
NUMBER OF TAXA (times)	3	NUMBER OF TAXA (times)	3	NUMBER OF TAXA (times)	3
INDEX VALUE 3	9	INDEX VALUE 2	6	INDEX VALUE 1	3

CUMULATIVE INDEX VALUE <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">18</div>	STREAM QUALITY ASSESSMENT EXCELLENT (>22) <input checked="" type="checkbox"/> X GOOD (17-22) <input checked="" type="checkbox"/> X FAIR (11-16) <input type="checkbox"/> POOR (<11) <input type="checkbox"/>
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## STREAM QUALITY ASSESSMENT FORM

STATION 11 STREAM E. Branch - Nimishillen Creek SAMPLE # C  
 LOCATION Broadway St. south of Mahoning Rd. ~250' upstream of bridge  
 COUNTY Stark TOWNSHIP/CITY Nimishillen DATE 8/6/2004 TIME 2:30 p.m.  
 GROUP OR INDIVIDUALS Eric Akin and Nick Lautzenheiser NO. OF PARTICIPANTS 2

DESCRIBE WATER CONDITIONS (COLOR, ODOR, BEDGROWTHS, SURFACE SCUM, ETC.)  
  
 Milky water, no odor, brown and green algae on substrate, some foam on water surface. About 20' upstream of first two samples.

HACH KIT RESULTS (if used) AND OTHER OBSERVATIONS  
  
 36"

USE BACK OF FORM IF NECESSARY

WIDTH OF RIFFLE <u>31'</u>	BED COMPOSITION OF RIFFLE (%)		
WATER DEPTH <u>4"</u>	SILT <input type="checkbox"/>	GRAVEL (1/4" - 2") <input type="checkbox"/>	<input type="checkbox"/>
WATER TEMP. (°F) <u>63°</u>	COBBLES (2" - 10") <input type="checkbox"/>	BOULDERS (>10") <input type="checkbox"/>	<input type="checkbox"/>
	SAND <input type="checkbox"/>		

<b>MACROINVERTEBRATE TALLY</b>	ESTIMATED COUNT LETTER CODE	A = 1 TO 9 B = 10 TO 99 C = 100 or more
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GROUP 1 TAXA	LETTER CODE	GROUP 2 TAXA	LETTER CODE	GROUP 3 TAXA	LETTER CODE
WATER PENNY LARVAE		DAMSELFLY NYMPHS		BLACKFLY LARVAE	A
MAYFLY NYMPHS	A	DRAGONFLY NYMPHS		AQUATIC WORMS	
STONEFLY NYMPHS		CRANE FLY LARVAE		MIDGE LARVAE	B
DOBSONFLY LARVAE		BEETLE LARVAE	A	POUCH SNAILS	
CADDISFLY LARVAE	B	CRAYFISH		LEECHES	
RIFFLE BEETLE ADULT	A	SCUDS		PLANARIA	
OTHER SNAILS		CLAMS			
		SOWBUGS			
NUMBER OF TAXA (times)	3	NUMBER OF TAXA (times)	1	NUMBER OF TAXA (times)	2
INDEX VALUE 3	9	INDEX VALUE 2	2	INDEX VALUE 1	2

CUMULATIVE INDEX VALUE <input style="width: 100px; height: 20px;" type="text" value="13"/>	STREAM QUALITY ASSESSMENT			
	EXCELLENT (>22)	<input type="checkbox"/>	GOOD (17-22)	<input type="checkbox"/>
	FAIR (11-16)	<input checked="" type="checkbox"/>	POOR (<11)	<input type="checkbox"/>

# Stream Inventory - Watershed Assessment

Stream Walkers: Eric Akin, Nick Lautzenheiser and Pam Feagler Station: 12 Date: 8-12-04  
Stream Name: Mainstem Nimishillen Creek Water level:  high  avg.  low  
Weather conditions: \_\_\_\_\_ Last rain event 8/4/04  
Air temp. 68°F Water temp. \_\_\_\_\_ °C  
Inventoried stream section, River Mile 8.97 to River Mile 8.98  
Descriptive location (use roads etc.) Baum Road under Bridge

## Water surface appearance:

- Scum
- Foamy
- Muddy
- Milky
- Clear
- Colored sheen (oily)
- Brownish
- Other, \_\_\_\_\_

## Stream bed coating:

- Algae coated
- Orange to red
- Yellowish
- Black
- Brown
- None
- Silt coated, depth of deposits \_\_\_\_\_
- Other, \_\_\_\_\_

## Odor:

- Rotten Egg
- Musky (slightly)
- Sewage
- Chlorine
- None
- Other, \_\_\_\_\_

## Habitat:

- Pools
- Rock ledges
- Log piles
- Weed beds
- Undercut banks
- Wetlands
- Backwaters
- Large boulders
- Riffles
- Tree roots
- Logs or woody debris
- Man-made objects (misc. trash and debris)

Maximum Stream Depth 3.5' Average Stream Width 50'

## Stream shading: Stream is -

- Fully exposed (0-24% of stream is shaded from the sun)
- Partially exposed (25-49%)
- Fully shaded (75-100%)
- Partially shaded (50-74%)

## Streambank vegetation:

Trees (%) 60 Plants (%) 15 Bare soil (%) 5 Grass (%) \_\_\_\_\_

Shrubs(%) 20 Root mats (%) \_\_\_\_\_ Other (%) \_\_\_\_\_

Approximate width of vegetation: Left bank 50'+ Right bank 40'

Is grass mowed down to the water's edge?  Yes  No (just around bridge)

## Land uses along stream section:

1. Farming:  Pasture/Grazing Land  Crops  Woods  Other (explain) \_\_\_\_\_
2. Urban areas:  Homes  Light manufacturing  Heavy manufacturing  
 Retail/Comm.  Construction sites  Parking lots
3. Other (explain) Japanese knot weed invading the bank area

Outfalls:

1. Are there any discharge pipes?  No  Yes      Location: 1—Left bank downstream side of bridge, 1— right side

2. Types of pipes:      Sewage treatment      Downstream of bridge, 1—upstream right side of bridge

Storm water runoff

Industrial (type) \_\_\_\_\_

Drainage tile outlets \_\_\_\_\_

Unknown

Other \_\_\_\_\_

3. Description of odor associated with discharge pipes: No odor

4. Condition of streambank at outlet site Eroded, exposed

Stream channel alterations:       Dredging       Channelization       Fill       None

Other (explain) \_\_\_\_\_

Structures or barriers in the stream:

Dams       Bridges       Islands       Waterfalls       Log jams       Sediment/sandbars

Other (explain) Stone paving blocks

Litter in and around stream:  No  Yes      Location: Instream and along bank

Paper and small trash \_\_\_\_\_%

Cans and bottles \_\_\_\_\_%

Tires, carts, etc. \_\_\_\_\_%

Other      Trash transported via flood waters

Verbal Site Description: Give visual description of stream, substrate, banks, riparian zone and adjacent land areas. Indicate what you think are current or potential threats to your stream's health. Are photographs of current or potential threats available?

Yes       No

Threats: storm discharge-private, WPCC upstream, filling in of floodplain

Good riparian zone vegetation mix of tree/shrubs. Visual signs of flooding under bridge. Foam on surface. Banks in good shape. Adjacent land is primarily residential.

## STREAM QUALITY ASSESSMENT FORM

STATION 12 STREAM Mainstem Branch - Nimishillen Creek SAMPLE # A  
 LOCATION Baum Road west of Central Ave. under bridge  
 COUNTY Stark TOWNSHIP/CITY Canton Twp. DATE 8/12/2004 TIME 9:40 a.m.  
 GROUP OR INDIVIDUALS Eric Akin, Nick Lautzenheiser, and Pam Feagler NO. OF PARTICIPANTS 3

DESCRIBE WATER CONDITIONS (COLOR, ODOR, BEDGROWTHS, SURFACE SCUM, ETC.)  
  
 Algae growth on rocks, foamy surface, brownish-green algae, milky appearance, slightly musky odor.

HACH KIT RESULTS (if used) AND OTHER OBSERVATIONS  
  
 36"

USE BACK OF FORM IF NECESSARY

WIDTH OF RIFFLE <u>51.5'</u>	BED COMPOSITION OF RIFFLE (%)		
WATER DEPTH <u>4"</u>	SILT <input type="checkbox"/>	GRAVEL (1/4" - 2") <input type="checkbox"/>	<u>15</u>
WATER TEMP. (°F) _____	COBBLES (2" - 10") <input type="checkbox"/>		<u>35</u>
	SAND <input type="checkbox"/>	BOULDERS (>10") <input type="checkbox"/>	<u>45</u>

<b>MACROINVERTEBRATE TALLY</b>	ESTIMATED COUNT LETTER CODE	A = 1 TO 9 B = 10 TO 99 C = 100 or more
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GROUP 1 TAXA	LETTER CODE	GROUP 2 TAXA	LETTER CODE	GROUP 3 TAXA	LETTER CODE
WATER PENNY LARVAE		DAMSELFLY NYMPHS		BLACKFLY LARVAE	
MAYFLY NYMPHS		DRAGONFLY NYMPHS		AQUATIC WORMS	A
STONEFLY NYMPHS		CRANE FLY LARVAE	A	MIDGE LARVAE	B
DOBSONFLY LARVAE		BEETLE LARVAE		POUCH SNAILS	
CADDISFLY LARVAE	C	CRAYFISH	A	LEECHES	
RIFFLE BEETLE ADULT	A	SCUDS		PLANARIA	A
OTHER SNAILS		CLAMS	A		
		SOWBUGS	A		
NUMBER OF TAXA (times)	2	NUMBER OF TAXA (times)	4	NUMBER OF TAXA (times)	3
INDEX VALUE 3	6	INDEX VALUE 2	8	INDEX VALUE 1	3

CUMULATIVE INDEX VALUE <div style="border: 1px solid black; padding: 5px; width: 100px; margin: 0 auto;">17</div>	STREAM QUALITY ASSESSMENT			
	EXCELLENT (>22)	<input type="checkbox"/>	GOOD (17-22)	<input checked="" type="checkbox"/>
	FAIR (11-16)	<input type="checkbox"/>	POOR (<11)	<input type="checkbox"/>

## STREAM QUALITY ASSESSMENT FORM

STATION 12 STREAM Mainstem Branch - Nimishillen Creek SAMPLE # B  
 LOCATION Baum Road west of Central Ave. about 75' upstream of bridge  
 COUNTY Stark TOWNSHIP/CITY Canton Twp. DATE 8/12/2004 TIME 9:10 a.m.  
 GROUP OR INDIVIDUALS Eric Akin, Nick Lautzenheiser, and Pam Feagler NO. OF PARTICIPANTS 3

DESCRIBE WATER CONDITIONS (COLOR, ODOR, BEDGROWTHS, SURFACE SCUM, ETC.)  
  
 Algae growth on rocks, foamy surface, brownish-green algae, milky appearance, slightly musky odor.

HACH KIT RESULTS (if used) AND OTHER OBSERVATIONS

36"

USE BACK OF FORM IF NECESSARY

WIDTH OF RIFFLE <u>69.5'</u>	BED COMPOSITION OF RIFFLE (%)		
WATER DEPTH <u>8"</u>	SILT <input type="text" value="5"/>	GRAVEL (1/4" - 2") <input type="text" value="35"/>	
WATER TEMP. (°F) _____	COBBLES (2" - 10") <input type="text" value="60"/>	BOULDERS (>10") <input type="text"/>	
	SAND <input type="text"/>		

<b>MACROINVERTEBRATE TALLY</b>	ESTIMATED COUNT LETTER CODE	A = 1 TO 9 B = 10 TO 99 C = 100 or more
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GROUP 1 TAXA	LETTER CODE	GROUP 2 TAXA	LETTER CODE	GROUP 3 TAXA	LETTER CODE
WATER PENNY LARVAE		DAMSELFLY NYMPHS		BLACKFLY LARVAE	A
MAYFLY NYMPHS		DRAGONFLY NYMPHS		AQUATIC WORMS	A
STONEFLY NYMPHS		CRANE FLY LARVAE		MIDGE LARVAE	B
DOBSONFLY LARVAE		BEETLE LARVAE	A	POUCH SNAILS	A
CADDISFLY LARVAE	C	CRAYFISH	A	LEECHES	
RIFFLE BEETLE ADULT	A	SCUDS			
OTHER SNAILS		CLAMS	A		
		SOWBUGS			
NUMBER OF TAXA (times)	2	NUMBER OF TAXA (times)	3	NUMBER OF TAXA (times)	4
INDEX VALUE 3	6	INDEX VALUE 2	6	INDEX VALUE 1	4

CUMULATIVE INDEX VALUE <input type="text" value="16"/>	STREAM QUALITY ASSESSMENT		
	EXCELLENT (>22) <input type="text"/>	GOOD (17-22) <input type="text"/>	
	FAIR (11-16) <input checked="" type="checkbox"/>	POOR (<11) <input type="text"/>	

## STREAM QUALITY ASSESSMENT FORM

STATION	12	STREAM	Mainstem Branch - Nimishillen Creek	SAMPLE #	C
LOCATION	Baum Road west of Central Ave. ~100' upstream of bridge				
COUNTY	Stark	TOWNSHIP/CITY	Canton Twp.	DATE	8/12/2004
GROUP OR INDIVIDUALS	Eric Akin and Nick Lautzenheiser			NO. OF PARTICIPANTS	2
DESCRIBE WATER CONDITIONS (COLOR, ODOR, BEDGROWTHS, SURFACE SCUM, ETC.)				HACH KIT RESULTS (if used) AND OTHER OBSERVATIONS	
Algae growth on rocks, foamy surface, brownish-green algae, milky appearance, slightly musky odor. More gravel than samples A & B.				36"	
USE BACK OF FORM IF NECESSARY					

WIDTH OF RIFFLE	53'	BED COMPOSITION OF RIFFLE (%)			
WATER DEPTH	7"	SILT	<input type="text" value="10"/>	GRAVEL (1/4" - 2")	<input type="text" value="50"/>
WATER TEMP. (°F)	_____	COBBLES (2" - 10")	<input type="text" value="30"/>	BOULDERS (>10")	<input type="text" value=""/>
		SAND	<input type="text" value="10"/>		

<b>MACROINVERTEBRATE TALLY</b>	ESTIMATED COUNT LETTER CODE A = 1 TO 9 B = 10 TO 99 C = 100 or more
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GROUP 1 TAXA	LETTER CODE	GROUP 2 TAXA	LETTER CODE	GROUP 3 TAXA	LETTER CODE
WATER PENNY LARVAE		DAMSELFLY NYMPHS		BLACKFLY LARVAE	
MAYFLY NYMPHS		DRAGONFLY NYMPHS		AQUATIC WORMS	A
STONEFLY NYMPHS		CRANE FLY LARVAE		MIDGE LARVAE	C
DOBSONFLY LARVAE		BEETLE LARVAE		POUCH SNAILS	
CADDISFLY LARVAE	C	CRAYFISH		LEECHES	
RIFFLE BEETLE ADULT		SCUDS		PLANARIA	A
OTHER SNAILS		CLAMS	A		
		SOWBUGS	A		
NUMBER OF TAXA (times)	1	NUMBER OF TAXA (times)	2	NUMBER OF TAXA (times)	3
INDEX VALUE 3	3	INDEX VALUE 2	4	INDEX VALUE 1	3

CUMULATIVE INDEX VALUE <input style="width: 100px; text-align: center;" type="text" value="10"/>	STREAM QUALITY ASSESSMENT EXCELLENT (>22) <input type="text" value=""/> GOOD (17-22) <input type="text" value=""/> FAIR (11-16) <input type="text" value=""/> POOR (<11) <input checked="" type="text" value="X"/>
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# Stream Inventory - Watershed Assessment

Stream Walkers: Eric Akin and Nick Lautzenheiser Station: 13 Date: 9-15-04  
Stream Name: West Branch—Nimishillen Creek Water level:  high  avg.  low  
Weather conditions: \_\_\_\_\_ Last rain event 9/9/04  
Air temp. 76°F Water temp. 64°F  
Inventoried stream section, River Mile 12.84 to River Mile 12.85  
Descriptive location (use roads etc.) Navarre Road Bridge

### Water surface appearance:

- Scum
- Foamy
- Muddy
- Milky
- Clear
- Colored sheen (oily)
- Brownish
- Other, \_\_\_\_\_

### Stream bed coating:

- Algae coated
- Orange to red
- Yellowish
- Black
- Brown
- None
- Silt coated, depth of deposits \_\_\_\_\_
- Other, \_\_\_\_\_

### Odor:

- Rotten Egg
- Musky
- Sewage
- Chlorine
- None
- Other, \_\_\_\_\_

### Habitat:

- Pools
- Rock ledges
- Log piles
- Weed beds
- Undercut banks
- Wetlands
- Backwaters
- Large boulders
- Riffles
- Tree roots
- Logs or woody debris
- Man-made objects

Maximum Stream Depth 2.5' Average Stream Width 45'

### Stream shading: Stream is -

- Fully exposed (0-24% of stream is shaded from the sun)
- Fully shaded (75-100%)
- Partially exposed (25-49%)
- Partially shaded (50-74%)

### Streambank vegetation:

Trees (%) \_\_\_\_\_ Plants (%) \_\_\_\_\_ Bare soil (%) 80 Grass (%) 10  
Shrubs(%) \_\_\_\_\_ Root mats (%) \_\_\_\_\_ Other (%) 10  
Approximate width of vegetation: Left bank 15' Right bank 10'  
Is grass mowed down to the water's edge?  Yes  No

### Land uses along stream section:

1. Farming:  Pasture/Grazing Land  Crops  Woods  Other (explain) \_\_\_\_\_
2. Urban areas:  Homes  Light manufacturing  Heavy manufacturing  
 Retail/Comm.  Construction sites  Parking lots
3. Other (explain) Highway ~ 20 yards to the west of creek and downstream of the site.

Outfalls:

1. Are there any discharge pipes?  No  Yes      Location: Downstream side of bridge, both sides of the bridge
2. Types of  pipes:      Sewage treatment \_\_\_\_\_  
 Storm water runoff \_\_\_\_\_  
 Industrial (type) \_\_\_\_\_  
 Drainage tile outlets \_\_\_\_\_  
 Unknown \_\_\_\_\_  
 Other \_\_\_\_\_
3. Description of odor associated with discharge pipes: none
4. Condition of streambank at outlet site Rip-rap surrounding the outlet on the left bank

Stream channel alterations:       Dredging     Channelization     Fill     None  
 Other (explain) \_\_\_\_\_

Structures or barriers in the stream:  
 Dams     Bridges     Islands     Waterfalls     Log jams     Sediment/sandbars  
 Other (explain) Bricks and concrete

Litter in and around stream:     No     Yes      Location: Along the banks

Paper and small trash \_\_\_\_\_%       Cans and bottles \_\_\_\_\_%  
 Tires, carts, etc. \_\_\_\_\_%       Other Bricks and concrete

Verbal Site Description: Give visual description of stream, substrate, banks, riparian zone and adjacent land areas. Indicate what you think are current or potential threats to your stream's health. Are photographs of current or potential threats available?

Yes     No

The creek is wide and shallow at this location. Orangish ground water seeps along the west bank. Substrate is primarily cobble. There is no riparian vegetation and consists of soil, bricks, gravel and concrete. Appears to be some fill activity by the Navarre Street bridge. Concrete bank on left side of the stream downstream from bridge. Newly constructed highway retaining wall near the right bank-riparian vegetation removed during construction.

Potential threats: highway construction, fill, storm water runoff, acid mine-like ground water.

## STREAM QUALITY ASSESSMENT FORM

STATION 13 STREAM West Branch - Nimishillen Creek SAMPLE # A  
 LOCATION Navarre Road  
 COUNTY Stark TOWNSHIP/CITY Canton Twp. DATE 9/15/2004 TIME 10:30 a.m.  
 GROUP OR INDIVIDUALS Eric Akin and Nick Lautzenheiser NO. OF PARTICIPANTS 2

DESCRIBE WATER CONDITIONS (COLOR, ODOR, BEDGROWTHS, SURFACE SCUM, ETC.)  Clear water-a little milky, some algae on the substrate, highway construction directly to the west, a retaining wall has been built and removed some riparian vegetation, flowing springs along west bank-orange.	HACH KIT RESULTS (if used) AND OTHER OBSERVATIONS  36"
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USE BACK OF FORM IF NECESSARY

WIDTH OF RIFFLE <u>54.5'</u>  WATER DEPTH <u>6"</u>  WATER TEMP. (°F) <u>64°</u>	BED COMPOSITION OF RIFFLE (%)  SILT <input type="checkbox"/> GRAVEL (1/4" - 2") <input type="checkbox" value="40"/> COBBLES (2" - 10") <input type="checkbox" value="30"/> SAND <input type="checkbox" value="30"/> BOULDERS (>10") <input type="checkbox"/>
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<b>MACROINVERTEBRATE TALLY</b>	ESTIMATED COUNT LETTER CODE A = 1 TO 9 B = 10 TO 99 C = 100 or more
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GROUP 1 TAXA	LETTER CODE	GROUP 2 TAXA	LETTER CODE	GROUP 3 TAXA	LETTER CODE
WATER PENNY LARVAE		DAMSELFLY NYMPHS		BLACKFLY LARVAE	
MAYFLY NYMPHS		DRAGONFLY NYMPHS		AQUATIC WORMS	A
STONEFLY NYMPHS		CRANE FLY LARVAE		MIDGE LARVAE	B
DOBSONFLY LARVAE		BEETLE LARVAE	A	POUCH SNAILS	A
CADDISFLY LARVAE	B	CRAYFISH		LEECHES	A
RIFFLE BEETLE ADULT		SCUDS			
OTHER SNAILS		CLAMS	C		
		SOWBUGS	A		
NUMBER OF TAXA (times)	1	NUMBER OF TAXA (times)	3	NUMBER OF TAXA (times)	4
INDEX VALUE 3	3	INDEX VALUE 2	6	INDEX VALUE 1	4

CUMULATIVE INDEX VALUE <div style="border: 1px solid black; width: 100px; text-align: center; margin: 5px auto;">13</div>	STREAM QUALITY ASSESSMENT EXCELLENT (>22) <input type="checkbox"/> GOOD (17-22) <input type="checkbox"/> FAIR (11-16) <input checked="" type="checkbox"/> POOR (<11) <input type="checkbox"/>
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## STREAM QUALITY ASSESSMENT FORM

STATION 13 STREAM West Branch - Nimishillen Creek SAMPLE # B  
 LOCATION Navarre Road below east bridge area  
 COUNTY Stark TOWNSHIP/CITY Canton Twp. DATE 9/15/2004 TIME 11:15 a.m.  
 GROUP OR INDIVIDUALS Eric Akin and Nick Lautzenheiser NO. OF PARTICIPANTS 2

DESCRIBE WATER CONDITIONS (COLOR, ODOR, BEDGROWTHS, SURFACE SCUM, ETC.)  
  
 Clear water-a little milky, some algae on the substrate, highway construction directly to the west, a retaining wall has been built and removed some riparian vegetation, flowing springs along west bank-orange.

HACH KIT RESULTS (if used) AND OTHER OBSERVATIONS

36"

USE BACK OF FORM IF NECESSARY

WIDTH OF RIFFLE <u>41.5'</u>	BED COMPOSITION OF RIFFLE (%)		
WATER DEPTH <u>6"</u>	SILT <input type="checkbox"/>	GRAVEL (1/4" - 2") <input type="checkbox"/>	<input type="checkbox"/>
WATER TEMP. (°F) <u>64°</u>	COBBLES (2" - 10") <input type="checkbox"/>	<input type="checkbox"/>	40
	SAND <input type="checkbox"/>	BOULDERS (>10") <input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	20

<b>MACROINVERTEBRATE TALLY</b>	ESTIMATED COUNT LETTER CODE	A = 1 TO 9 B = 10 TO 99 C = 100 or more
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GROUP 1 TAXA	LETTER CODE	GROUP 2 TAXA	LETTER CODE	GROUP 3 TAXA	LETTER CODE
WATER PENNY LARVAE		DAMSELFLY NYMPHS		BLACKFLY LARVAE	
MAYFLY NYMPHS		DRAGONFLY NYMPHS		AQUATIC WORMS	A
STONEFLY NYMPHS		CRANE FLY LARVAE		MIDGE LARVAE	CODE
DOBSONFLY LARVAE		BEETLE LARVAE		POUCH SNAILS	A
CADDISFLY LARVAE	C	CRAYFISH		LEECHES	A
RIFFLE BEETLE ADULT	A	SCUDS		PLANARIA	
OTHER SNAILS	A	CLAMS	A		
		SOWBUGS			
NUMBER OF TAXA (times)	3	NUMBER OF TAXA (times)	1	NUMBER OF TAXA (times)	4
INDEX VALUE 3	9	INDEX VALUE 2	2	INDEX VALUE 1	4

CUMULATIVE INDEX VALUE <input style="width: 60px; text-align: center;" type="text" value="15"/>	EXCELLENT (>22) <input type="checkbox"/>	GOOD (17-22) <input type="checkbox"/>
	FAIR (11-16) <input checked="" type="checkbox"/>	POOR (<11) <input type="checkbox"/>

## STREAM QUALITY ASSESSMENT FORM

STATION 13 STREAM West Branch - Nimishillen Creek SAMPLE # C  
 LOCATION Navarre Road  
 COUNTY Stark TOWNSHIP/CITY Canton Twp. DATE 9/15/2004 TIME 11:45 a.m.  
 GROUP OR INDIVIDUALS Eric Akin and Nick Lautzenheiser NO. OF PARTICIPANTS 2

DESCRIBE WATER CONDITIONS (COLOR, ODOR, BEDGROWTHS, SURFACE SCUM, ETC.)  Clear water-a little milky, some algae on the substrate, highway construction directly to the west, a retaining wall has been built and removed some riparian vegetation, flowing springs along west bank-orange.	HACH KIT RESULTS (if used) AND OTHER OBSERVATIONS  34"+
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USE BACK OF FORM IF NECESSARY

WIDTH OF RIFFLE <u>50'</u>  WATER DEPTH <u>7"</u>  WATER TEMP. (°F) <u>64°</u>	BED COMPOSITION OF RIFFLE (%)  SILT <input type="checkbox"/> GRAVEL (1/4" - 2") <input type="checkbox" value="30"/> COBBLES (2" - 10") <input type="checkbox" value="50"/> SAND <input type="checkbox" value="10"/> BOULDERS (>10") <input type="checkbox" value="10"/>
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<b>MACROINVERTEBRATE TALLY</b>	ESTIMATED COUNT LETTER CODE A = 1 TO 9 B = 10 TO 99 C = 100 or more
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GROUP 1 TAXA	LETTER CODE	GROUP 2 TAXA	LETTER CODE	GROUP 3 TAXA	LETTER CODE
WATER PENNY LARVAE		DAMSELFLY NYMPHS		BLACKFLY LARVAE	
MAYFLY NYMPHS		DRAGONFLY NYMPHS		AQUATIC WORMS	A
STONEFLY NYMPHS		CRANE FLY LARVAE		MIDGE LARVAE	C
DOBSONFLY LARVAE		BEETLE LARVAE	A	POUCH SNAILS	A
CADDISFLY LARVAE	C	CRAYFISH	A	LEECHES	A
RIFFLE BEETLE ADULT	A	SCUDS		PLANARIA	A
OTHER SNAILS	A	CLAMS	A		
		SOWBUGS			
NUMBER OF TAXA (times)	3	NUMBER OF TAXA (times)	3	NUMBER OF TAXA (times)	5
INDEX VALUE 3	9	INDEX VALUE 2	6	INDEX VALUE 1	5

CUMULATIVE INDEX VALUE <div style="border: 1px solid black; width: 100px; text-align: center; margin: 5px auto;">20</div>	STREAM QUALITY ASSESSMENT EXCELLENT (>22) <input type="checkbox"/> GOOD (17-22) <input checked="" type="checkbox"/> X FAIR (11-16) <input type="checkbox"/> POOR (<11) <input type="checkbox"/>
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# Stream Inventory - Watershed Assessment

Stream Walkers: Eric Akin and Claude Custer Station: 14 Date: 8-18-04  
Stream Name: West Branch—Nimishillen Creek Water level:  high  avg.  low  
Weather conditions: Partly sunny Last rain event 8-18-04 trace  
Air temp. 70°F Water temp. 63°F  
Inventoried stream section, River Mile 18.52 to River Mile 18.53  
Descriptive location (use roads etc.) Everhard Road, East of Whipple Road—Downstream of Bridge

## Water surface appearance:

- Scum
- Foamy
- Muddy
- Milky
- Clear
- Colored sheen (oily)
- Brownish
- Other, \_\_\_\_\_

## Stream bed coating:

- Algae coated
- Orange to red
- Yellowish
- Black
- Brown
- None
- Silt coated, depth of deposits dusting
- Other, \_\_\_\_\_

## Odor:

- Rotten Egg
- Musky
- Sewage
- Chlorine
- None
- Other, \_\_\_\_\_

## Habitat:

- Pools
- Rock ledges
- Log piles
- Weed beds
- Undercut banks
- Wetlands
- Backwaters
- Large boulders
- Riffles
- Tree roots
- Logs or woody debris
- Man-made objects

Maximum Stream Depth 15' Average Stream Width 20'

## Stream shading: Stream is -

- Fully exposed (0-24% of stream is shaded from the sun)
- Fully shaded (75-100%)
- Partially exposed (25-49%)
- Partially shaded (50-74%)

## Streambank vegetation:

Trees (%) 50 Plants (%) 10 Bare soil (%) 15 Grass (%) \_\_\_\_\_  
Shrubs(%) 15 Root mats (%) 10 Other (%) \_\_\_\_\_  
Approximate width of vegetation: Left bank 30' Right bank 50'  
Is grass mowed down to the water's edge?  Yes  No

## Land uses along stream section:

1. Farming:  Pasture/Grazing Land  Crops  Woods  Other (explain) \_\_\_\_\_
2. Urban areas:  Homes  Light manufacturing  Heavy manufacturing  
 Retail/Comm.  Construction sites  Parking lots
3. Other (explain) Railroad track to the west.

Outfalls:

1. Are there any discharge pipes?  No  Yes      Location: 2 by the bridge

2. Types of pipes:      Sewage

treatment

Storm water runoff \_\_\_\_\_

Industrial (type) \_\_\_\_\_

Drainage tile outlets \_\_\_\_\_

Unknown \_\_\_\_\_

Other      none

3. Description of odor associated with      ok

Stream channel alterations:       Dredging     Channelization     Fill     None

Other (explain) \_\_\_\_\_

Structures or barriers in the stream:

Dams     Bridges     Islands     Waterfalls     Log jams     Sediment/sandbars

Other (explain) \_\_\_\_\_

Litter in and around stream:     No     Yes      Location: In the creek

Paper and small trash    \_\_\_\_\_ %       Cans and bottles    \_\_\_\_\_ %

Tires, carts, etc.    \_\_\_\_\_ %       Other    \_\_\_\_\_

Verbal Site Description: Give visual description of stream, substrate, banks, riparian zone and adjacent land areas. Indicate what you think are current or potential threats to your stream's health. Are photographs of current or potential threats available?

Yes     No

Varied substrate: site A all gravel, site B more cobble and site C boulders.

Nice riparian zone, but deeply entrenched. Appears to be down cutting. Bare soil along the banks.

Threats: storm water runoff, rail road, industrial park upstream, Belden Village mall area, wellfield and airport upstream.

## STREAM QUALITY ASSESSMENT FORM

STATION 14 STREAM West Branch - Nimishillen Creek SAMPLE # A  
 LOCATION Everhard Road - East of Whipple Ave. ~40 yards downstream  
 COUNTY Stark TOWNSHIP/CITY N. Canton DATE 8/18/2004 TIME 10:15 a.m.  
 GROUP OR INDIVIDUALS Eric Akin and Claude Custer NO. OF PARTICIPANTS 2

DESCRIBE WATER CONDITIONS (COLOR, ODOR, BEDGROWTHS, SURFACE SCUM, ETC.)  
  
 Clear water, no surface scum, creek very entrenched, good riparian cover.

HACH KIT RESULTS (if used) AND OTHER OBSERVATIONS  
  
 36"

USE BACK OF FORM IF NECESSARY

WIDTH OF RIFFLE <u>20'</u>  WATER DEPTH <u>5"</u>  WATER TEMP. (°F) <u>63°</u>	BED COMPOSITION OF RIFFLE (%)  SILT <input type="text" value="5"/> GRAVEL (1/4" - 2") <input type="text" value="75"/> COBBLES (2" - 10") <input type="text" value="5"/> SAND <input type="text" value="15"/> BOULDERS (>10") <input type="text"/>
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<b>MACROINVERTEBRATE TALLY</b>	ESTIMATED A = 1 TO 9 COUNT B = 10 TO 99 LETTER CODE C = 100 or more
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GROUP 1 TAXA	LETTER CODE	GROUP 2 TAXA	LETTER CODE	GROUP 3 TAXA	LETTER CODE
WATER PENNY LARVAE		DAMSELFLY NYMPHS		BLACKFLY LARVAE	A
MAYFLY NYMPHS		DRAGONFLY NYMPHS		AQUATIC WORMS	A
STONEFLY NYMPHS		CRANE FLY LARVAE		MIDGE LARVAE	B
DOBSONFLY LARVAE		BEETLE LARVAE	A	POUCH SNAILS	A
CADDISFLY LARVAE	B	CRAYFISH		LEECHES	
RIFFLE BEETLE ADULT		SCUDS		PLANARIA	
OTHER SNAILS		CLAMS	B		
		SOWBUGS			
NUMBER OF TAXA (times)	1	NUMBER OF TAXA (times)	2	NUMBER OF TAXA (times)	4
INDEX VALUE 3	3	INDEX VALUE 2	4	INDEX VALUE 1	4

CUMULATIVE INDEX VALUE <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">11</div>	STREAM QUALITY ASSESSMENT EXCELLENT (>22) <input checked="" type="checkbox"/> GOOD (17-22) <input type="checkbox"/> FAIR (11-16) <input checked="" type="checkbox"/> POOR (<11) <input type="checkbox"/>
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## STREAM QUALITY ASSESSMENT FORM

STATION 14 STREAM West Branch - Nimishillen Creek SAMPLE # B  
 LOCATION Everhard Road, East of Whipple Ave. ~50 yds. Downstream of bridge  
 COUNTY Stark TOWNSHIP/CITY N. Canton DATE 8/18/2004 TIME 11:00 a.m.  
 GROUP OR INDIVIDUALS Eric Akin and Claude Custer NO. OF PARTICIPANTS 2

DESCRIBE WATER CONDITIONS (COLOR, ODOR, BEDGROWTHS, SURFACE SCUM, ETC.)  
  
 Clear water, no surface scum, creek very entrenched, good riparian cover, more cobble, grass clippings were dumped.

HACH KIT RESULTS (if used) AND OTHER OBSERVATIONS  
  
 36"

USE BACK OF FORM IF NECESSARY

WIDTH OF RIFFLE <u>27'</u>  WATER DEPTH <u>4"</u>  WATER TEMP. (°F) <u>63°</u>	BED COMPOSITION OF RIFFLE (%)  SILT <input type="text" value="5"/> GRAVEL (1/4" - 2") <input type="text" value="60"/> COBBLES (2" - 10") <input type="text" value="20"/> SAND <input type="text" value="15"/> BOULDERS (>10") <input type="text"/>
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<b>MACROINVERTEBRATE TALLY</b>	ESTIMATED A = 1 TO 9 COUNT B = 10 TO 99 LETTER CODE C = 100 or more
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GROUP 1 TAXA	LETTER CODE	GROUP 2 TAXA	LETTER CODE	GROUP 3 TAXA	LETTER CODE
WATER PENNY LARVAE		DAMSELFLY NYMPHS		BLACKFLY LARVAE	B
MAYFLY NYMPHS	B	DRAGONFLY NYMPHS		AQUATIC WORMS	A
STONEFLY NYMPHS		CRANE FLY LARVAE		MIDGE LARVAE	B
DOBSONFLY LARVAE		BEETLE LARVAE		POUCH SNAILS	B
CADDISFLY LARVAE	C	CRAYFISH		LEECHES	
RIFFLE BEETLE ADULT	B	SCUDS		PLANARIA	A
OTHER SNAILS	A	CLAMS	A		
		SOWBUGS	A		
NUMBER OF TAXA (times)	4	NUMBER OF TAXA (times)	2	NUMBER OF TAXA (times)	5
INDEX VALUE 3	12	INDEX VALUE 2	4	INDEX VALUE 1	5

CUMULATIVE INDEX VALUE <input style="width: 100px; height: 20px;" type="text" value="21"/>	STREAM QUALITY ASSESSMENT EXCELLENT (>22) <input type="text"/> GOOD (17-22) <input checked="" type="text" value="X"/> FAIR (11-16) <input type="text"/> POOR (<11) <input type="text"/>
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## STREAM QUALITY ASSESSMENT FORM

STATION 14 STREAM West Branch - Nimishillen Creek SAMPLE # C  
 LOCATION Everhard Rd - E. of Whipple ~10 yds. downstream of bridge  
 COUNTY Stark TOWNSHIP/CITY N. Canton DATE 8/18/2004 TIME 11:30 a.m.  
 GROUP OR INDIVIDUALS Eric Akin and Claude Custer NO. OF PARTICIPANTS 2

DESCRIBE WATER CONDITIONS (COLOR, ODOR, BEDGROWTHS, SURFACE SCUM, ETC.)  
  
 Clear water, no surface scum, creek very entrenched, good riparian cover, more boulders than sites A&B.

HACH KIT RESULTS (if used) AND OTHER OBSERVATIONS  
  
 36"

USE BACK OF FORM IF NECESSARY

WIDTH OF RIFFLE <u>15.5'</u> WATER DEPTH <u>6"</u> WATER TEMP. (°F) <u>63°</u>	BED COMPOSITION OF RIFFLE (%) SILT <input type="text" value="5"/> GRAVEL (1/4" - 2") <input type="text" value="25"/> COBBLES (2" - 10") <input type="text" value="45"/> SAND <input type="text" value="10"/> BOULDERS (>10") <input type="text" value="15"/>
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<b>MACROINVERTEBRATE TALLY</b>	ESTIMATED A = 1 TO 9 COUNT B = 10 TO 99 LETTER CODE C = 100 or more
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GROUP 1 TAXA	LETTER CODE	GROUP 2 TAXA	LETTER CODE	GROUP 3 TAXA	LETTER CODE
WATER PENNY LARVAE		DAMSELFLY NYMPHS		BLACKFLY LARVAE	A
MAYFLY NYMPHS	A	DRAGONFLY NYMPHS		AQUATIC WORMS	A
STONEFLY NYMPHS		CRANE FLY LARVAE		MIDGE LARVAE	B
DOBSONFLY LARVAE		BEETLE LARVAE		POUCH SNAILS	
CADDISFLY LARVAE	B	CRAYFISH	A	LEECHES	B
RIFFLE BEETLE ADULT	A	SCUDS		PLANARIA	
OTHER SNAILS	A	CLAMS	A		
		SOWBUGS			
NUMBER OF TAXA (times)	4	NUMBER OF TAXA (times)	2	NUMBER OF TAXA (times)	4
INDEX VALUE 3	12	INDEX VALUE 2	4	INDEX VALUE 1	4

CUMULATIVE INDEX VALUE <input style="width: 100px; height: 20px;" type="text" value="20"/>	STREAM QUALITY ASSESSMENT EXCELLENT (>22) <input type="text"/> GOOD (17-22) <input checked="" type="text" value="X"/> FAIR (11-16) <input type="text"/> POOR (<11) <input type="text"/>
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# Stream Inventory - Watershed Assessment

Stream Walkers: Eric Akin and Nick Lautzenheiser Station: 15 Date: 8-6-04  
Stream Name: Trib. to Eest Branch—Nimishillen Creek Water level:  high  avg.  low  
Weather conditions: \_\_\_\_\_ Last rain event 8-6-04 trace  
Air temp. 57°F Water temp. 58°F  
Inventoried stream section, River Mile 17.14 to River Mile 17.15  
Descriptive location (use roads etc.) Georgetown and Trump Roads

## Water surface appearance:

- Scum
- Foamy
- Muddy
- Milky
- Clear
- Colored sheen (oily)
- Brownish
- Other, \_\_\_\_\_

## Stream bed coating:

- Algae coated
- Orange to red
- Yellowish
- Black
- Brown
- None
- Silt coated, depth of deposits \_\_\_\_\_
- Other, \_\_\_\_\_

## Odor:

- Rotten Egg
- Musky
- Sewage
- Chlorine
- None
- Other, \_\_\_\_\_

## Habitat:

- Pools
- Rock ledges
- Log piles
- Weed beds
- Undercut banks
- Wetlands
- Backwaters
- Large boulders
- Riffles
- Tree roots
- Logs or woody debris
- Man-made objects

Maximum Stream Depth 2.5' Average Stream Width 4'

## Stream shading: Stream is -

- Fully exposed (0-24% of stream is shaded from the sun)
- Partially exposed (25-49%)
- Fully shaded (75-100%)
- Partially shaded (50-74%)

## Streambank vegetation:

Trees (%) 10 Plants (%) 10 Bare soil (%) 5 Grass (%) \_\_\_\_\_

Shrubs(%) 70 Root mats (%) \_\_\_\_\_ Other (%) \_\_\_\_\_

Approximate width of vegetation: Left bank 25' Right bank 15'

Is grass mowed down to the water's edge?  Yes  No

## Land uses along stream section:

1. Farming:  Pasture/Grazing Land  Crops  Woods  Other (explain) \_\_\_\_\_
2. Urban areas:  Homes  Light manufacturing  Heavy manufacturing  
 Retail/Comm.  Construction sites  Parking lots
3. Other (explain) Gravel fill area/slag fill

Outfalls:

1. Are there any discharge pipes?  No  Yes      Location: N. drainage pipe—nearly submerged

2. Types of pipes:      Sewage \_\_\_\_\_

treatment

Storm water runoff \_\_\_\_\_

Industrial (type) \_\_\_\_\_

Drainage tile outlets \_\_\_\_\_

Unknown \_\_\_\_\_

Other \_\_\_\_\_

3. Description of odor associated with Upstream side of culvert-in bad condition bent culvert

Stream channel alterations:       Dredging     Channelization     Fill     None

Other (explain) Likely channelized in past

Structures or barriers in the stream:

Dams     Bridges     Islands     Waterfalls     Log jams     Sediment/sandbars/gravel bar

Other (explain) \_\_\_\_\_

Litter in and around stream:     No     Yes      Location: \_\_\_\_\_

Paper and small trash \_\_\_\_\_%

Cans and bottles \_\_\_\_\_%

Tires, carts, etc. \_\_\_\_\_%

Other      Garage owner-upstream residents have failing systems

Verbal Site Description: Give visual description of stream, substrate, banks, riparian zone and adjacent land areas. Indicate what you think are current or potential threats to your stream's health. Are photographs of current or potential threats available?

Yes     No

This area has been hit twice with flooding over the last two years (July 2003, May 2004)

Area below culvert filling in with gravel. Gravel bars in stream. Riparian vegetation upstream of culvert is a tree/shrub mix—growing back nicely. Riparian vegetation below culvert on right bank has been removed. Adjacent land uses: homes, mechanics garage, closed restaurant, and gravel pit/slag pit.

Potential threats: dumping from garage, fill from gravel pit, storm water/flooding.

## STREAM QUALITY ASSESSMENT FORM

STATION 15 STREAM Trib. to the East Branch SAMPLE # A  
 LOCATION Intersection of Trump and Georgetown - 50 feet downstream of bridge  
 COUNTY Stark TOWNSHIP/CITY Canton Twp. DATE 8/6/2004 TIME 9:15 a.m.  
 GROUP OR INDIVIDUALS Eric Akin and Nick Lautzenheiser NO. OF PARTICIPANTS 2

DESCRIBE WATER CONDITIONS (COLOR, ODOR, BEDGROWTHS, SURFACE SCUM, ETC.)  
  
 Clear water, green and brown algae on stream bed, areas has been filled in likely from the gravel pit/slag to the north. Larged sediment bars in creek.

HACH KIT RESULTS (if used) AND OTHER OBSERVATIONS  
  
 36"

USE BACK OF FORM IF NECESSARY

WIDTH OF RIFFLE <u>25'</u>  WATER DEPTH <u>2"</u>  WATER TEMP. (°F) <u>58°</u>	BED COMPOSITION OF RIFFLE (%)  SILT <input style="width: 40px;" type="text" value="25"/> GRAVEL (1/4" - 2") <input style="width: 40px;" type="text" value="50"/> COBBLES (2" - 10") <input style="width: 40px;" type="text" value="10"/> SAND <input style="width: 40px;" type="text" value="15"/> BOULDERS (>10") <input style="width: 40px;" type="text"/>
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<b>MACROINVERTEBRATE TALLY</b>	ESTIMATED A = 1 TO 9 COUNT B = 10 TO 99 LETTER CODE C = 100 or more
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GROUP 1 TAXA	LETTER CODE	GROUP 2 TAXA	LETTER CODE	GROUP 3 TAXA	LETTER CODE
WATER PENNY LARVAE		DAMSELFLY NYMPHS	A	BLACKFLY LARVAE	A
MAYFLY NYMPHS		DRAGONFLY NYMPHS	A	AQUATIC WORMS	A
STONEFLY NYMPHS		CRANE FLY LARVAE	A	MIDGE LARVAE	A
DOBSONFLY LARVAE		BEETLE LARVAE		POUCH SNAILS	
CADDISFLY LARVAE	C	CRAYFISH	A	LEECHES	
RIFFLE BEETLE ADULT	B	SCUDS		PLANARIA	
OTHER SNAILS		CLAMS			
		SOWBUGS	B		
NUMBER OF TAXA (times)	2	NUMBER OF TAXA (times)	5	NUMBER OF TAXA (times)	3
INDEX VALUE 3	6	INDEX VALUE 2	10	INDEX VALUE 1	3

CUMULATIVE INDEX VALUE <input style="width: 60px; text-align: center;" type="text" value="19"/>	STREAM QUALITY ASSESSMENT EXCELLENT (>22) <input style="width: 40px;" type="text"/> GOOD (17-22) <input checked="" type="text" value="X"/> FAIR (11-16) <input style="width: 40px;" type="text"/> POOR (<11) <input style="width: 40px;" type="text"/>
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## STREAM QUALITY ASSESSMENT FORM

STATION 15 STREAM East Branch - Trib. SAMPLE # B  
 LOCATION Intersection of Trump and Georgetown - first riffle downstream from bridge  
 COUNTY Stark TOWNSHIP/CITY Canton Twp. DATE 8/6/2004 TIME 12:30 p.m.  
 GROUP OR INDIVIDUALS Eric Akin and Nick Lautzenheiser NO. OF PARTICIPANTS 2

DESCRIBE WATER CONDITIONS (COLOR, ODOR, BEDGROWTHS, SURFACE SCUM, ETC.)  
  
 Clear water, green and brown algae on stream bed, areas has been filled in likely from the gravel pit/slag to the north. Larged sediment bars in creek.

HACH KIT RESULTS (if used) AND OTHER OBSERVATIONS  
  
 36"

USE BACK OF FORM IF NECESSARY

WIDTH OF RIFFLE <u>4'</u>  WATER DEPTH <u>3"</u>  WATER TEMP. (°F) <u>58°</u>	BED COMPOSITION OF RIFFLE (%)  SILT <span style="border: 1px solid black; padding: 2px;">15</span> GRAVEL (1/4" - 2") <span style="border: 1px solid black; padding: 2px;">50</span> COBBLES (2" - 10") <span style="border: 1px solid black; padding: 2px;">10</span> SAND <span style="border: 1px solid black; padding: 2px;">20</span> BOULDERS (>10") <span style="border: 1px solid black; padding: 2px;">5</span>
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<b>MACROINVERTEBRATE TALLY</b>	ESTIMATED COUNT LETTER CODE A = 1 TO 9 B = 10 TO 99 C = 100 or more
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GROUP 1 TAXA	LETTER CODE	GROUP 2 TAXA	LETTER CODE	GROUP 3 TAXA	LETTER CODE
WATER PENNY LARVAE		DAMSELFLY NYMPHS		BLACKFLY LARVAE	A
MAYFLY NYMPHS		DRAGONFLY NYMPHS		AQUATIC WORMS	
STONEFLY NYMPHS		CRANE FLY LARVAE		MIDGE LARVAE	C
DOBSONFLY LARVAE		BEETLE LARVAE		POUCH SNAILS	
CADDISFLY LARVAE	C	CRAYFISH	A	LEECHES	
RIFFLE BEETLE ADULT	A	SCUDS		PLANARIA	
OTHER SNAILS		CLAMS			
		SOWBUGS	A		
NUMBER OF TAXA (times)	2	NUMBER OF TAXA (times)	2	NUMBER OF TAXA (times)	2
INDEX VALUE 3	6	INDEX VALUE 2	4	INDEX VALUE 1	2

CUMULATIVE INDEX VALUE <span style="border: 1px solid black; padding: 5px; display: inline-block;">12</span>	STREAM QUALITY ASSESSMENT EXCELLENT (>22) <span style="border: 1px solid black; padding: 2px 10px;"> </span> GOOD (17-22) <span style="border: 1px solid black; padding: 2px 10px;"> </span> FAIR (11-16) <span style="border: 1px solid black; padding: 2px 10px;">X</span> POOR (<11) <span style="border: 1px solid black; padding: 2px 10px;"> </span>
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## STREAM QUALITY ASSESSMENT FORM

STATION 15 STREAM East Branch - Trib. SAMPLE # C  
 LOCATION Intersection of Trump and Georgetown - upstream of bridge ~50'  
 COUNTY Stark TOWNSHIP/CITY Canton Twp. DATE 8/6/2004 TIME 10:45 a.m.  
 GROUP OR INDIVIDUALS Eric Akin and Nick Lautzenheiser NO. OF PARTICIPANTS 2

DESCRIBE WATER CONDITIONS (COLOR, ODOR, BEDGROWTHS, SURFACE SCUM, ETC.)  
  
 Clear water, no odor, green and brown algae growth, better riparian habitat, no fill.

HACH KIT RESULTS (if used) AND OTHER OBSERVATIONS  
  
 36"

USE BACK OF FORM IF NECESSARY

WIDTH OF RIFFLE <u>5'</u> WATER DEPTH <u>3"</u> WATER TEMP. (°F) <u>15°C</u>	BED COMPOSITION OF RIFFLE (%) SILT <input type="text" value="5"/> GRAVEL (1/4" - 2") <input type="text" value="30"/> COBBLES (2" - 10") <input type="text" value="30"/> SAND <input type="text" value="25"/> BOULDERS (>10") <input type="text" value="10"/>
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<b>MACROINVERTEBRATE TALLY</b>	ESTIMATED COUNT LETTER CODE A = 1 TO 9 B = 10 TO 99 C = 100 or more
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GROUP 1 TAXA	LETTER CODE	GROUP 2 TAXA	LETTER CODE	GROUP 3 TAXA	LETTER CODE
WATER PENNY LARVAE		DAMSELFLY NYMPHS		BLACKFLY LARVAE	
MAYFLY NYMPHS		DRAGONFLY NYMPHS		AQUATIC WORMS	B
STONEFLY NYMPHS		CRANE FLY LARVAE		MIDGE LARVAE	B
DOBSONFLY LARVAE		BEETLE LARVAE		POUCH SNAILS	A
CADDISFLY LARVAE	C	CRAYFISH	A	LEECHES	
RIFFLE BEETLE ADULT	A	SCUDS		PLANARIA	
OTHER SNAILS		CLAMS	A		
		SOWBUGS	A		
NUMBER OF TAXA (times)	2	NUMBER OF TAXA (times)	3	NUMBER OF TAXA (times)	3
INDEX VALUE 3	6	INDEX VALUE 2	6	INDEX VALUE 1	3

CUMULATIVE INDEX VALUE <input style="width: 100px; text-align: center;" type="text" value="15"/>	STREAM QUALITY ASSESSMENT EXCELLENT (>22) <input type="text"/> GOOD (17-22) <input type="text"/> FAIR (11-16) <input checked="" type="checkbox"/> POOR (<11) <input type="text"/>
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# Stream Inventory - Watershed Assessment

Stream Walkers: Eric Akin, Nick Lautzenheiser, and Pam Feagler Station: 16 Date: 8-12-04  
Stream Name: Hurford Run Trib. Water level:  high  avg.  low  
Weather conditions: \_\_\_\_\_ Last rain event 8/4/04  
Air temp. 70°F Water temp. 63°F  
Inventoried stream section, River Mile 14.03 to River Mile 14.04  
Descriptive location (use roads etc.) Sherman Church Road just west of I-77

## Water surface appearance:

- Scum
- Foamy
- Muddy
- Milky
- Clear
- Colored sheen (oily)
- Brownish
- Other, \_\_\_\_\_

## Stream bed coating:

- Algae coated
- Orange to red
- Yellowish
- Black
- Brown
- None
- Silt coated, depth of deposits \_\_\_\_\_
- Other, \_\_\_\_\_

## Odor:

- Rotten Egg
- Musky (slightly)
- Sewage
- Chlorine
- None
- Other, \_\_\_\_\_

## Habitat:

- Pools
- Undercut banks
- Riffles
- Rock ledges
- Wetlands
- Tree roots
- Log piles
- Backwaters
- Logs or woody debris
- Weed beds
- Large boulders
- Man-made objects

Maximum Stream Depth 2.5' Average Stream Width 14'

## Stream shading: Stream is—downstream—more exposed (power lines)

- Fully exposed (0-24% of stream is shaded from the sun)
- Partially exposed (25-49%)
- Fully shaded (75-100%)
- Partially shaded (50-74%)

## Streambank vegetation:

Trees (%) 20 Plants (%) 35 Bare soil (%) 10 Grass (%) \_\_\_\_\_

Shrubs(%) 35 Root mats (%) \_\_\_\_\_ Other (%) \_\_\_\_\_

Approximate width of vegetation: Left bank 100'+ Right bank 100'+ downstream of bridge

Is grass mowed down to the water's edge?  Yes  No

## Land uses along stream section:

1. Farming:  Pasture/Grazing Land  Crops  Woods  Other (explain) \_\_\_\_\_
2. Urban areas:  Homes  Light manufacturing  Heavy manufacturing  
 Retail/Comm.  Construction sites  Parking lots
3. Other (explain) \_\_\_\_\_



## STREAM QUALITY ASSESSMENT FORM

STATION 16 STREAM Hurford Run Tributary SAMPLE # A  
 LOCATION Shepler Church Road - west of I-77 ~75' downstream of bridge  
 COUNTY Stark TOWNSHIP/CITY Canton DATE 8/12/2004 TIME 2:00 p.m.  
 GROUP OR INDIVIDUALS Eric Akin and Nick Lautzenheiser NO. OF PARTICIPANTS 2

DESCRIBE WATER CONDITIONS (COLOR, ODOR, BEDGROWTHS, SURFACE SCUM, ETC.)

No odor (slightly musky), no algae growth on rocks.

HACH KIT RESULTS (if used) AND OTHER OBSERVATIONS

30"

USE BACK OF FORM IF NECESSARY

WIDTH OF RIFFLE <u>11'</u>	BED COMPOSITION OF RIFFLE (%)		
WATER DEPTH <u>2"</u>	SILT <input type="text" value="5"/>	GRAVEL (1/4" - 2") <input type="text" value="40"/>	
WATER TEMP. (°F) <u>63°</u>	COBBLES (2" - 10") <input type="text" value="40"/>	BOULDERS (>10") <input type="text"/>	
	SAND <input type="text" value="15"/>		

### MACROINVERTEBRATE TALLY

ESTIMATED COUNT LETTER CODE  
 A = 1 TO 9  
 B = 10 TO 99  
 C = 100 or more

GROUP 1 TAXA	LETTER CODE	GROUP 2 TAXA	LETTER CODE	GROUP 3 TAXA	LETTER CODE
WATER PENNY LARVAE		DAMSELFLY NYMPHS		BLACKFLY LARVAE	A
MAYFLY NYMPHS	B	DRAGONFLY NYMPHS		AQUATIC WORMS	A
STONEFLY NYMPHS		CRANE FLY LARVAE		MIDGE LARVAE	C
DOBSONFLY LARVAE		BEETLE LARVAE		POUCH SNAILS	
CADDISFLY LARVAE	C	CRAYFISH		LEECHES	A
RIFFLE BEETLE ADULT	A	SCUDS		PLANARIA	
OTHER SNAILS		CLAMS	A		
		SOWBUGS			
NUMBER OF TAXA (times)	3	NUMBER OF TAXA (times)	1	NUMBER OF TAXA (times)	4
INDEX VALUE 3	9	INDEX VALUE 2	2	INDEX VALUE 1	4

CUMULATIVE INDEX VALUE

### STREAM QUALITY ASSESSMENT

EXCELLENT (>22)

GOOD (17-22)

FAIR (11-16)

POOR (<11)

## STREAM QUALITY ASSESSMENT FORM

STATION 16 STREAM Hurford Run Tributary SAMPLE # B  
 LOCATION Shepler Church Road - west of I-77 - downstream of bridge - 50'  
 COUNTY Stark TOWNSHIP/CITY Canton DATE 8/12/2004 TIME 2:20 p.m.  
 GROUP OR INDIVIDUALS Eric Akin, Nick Lautzenheiser, and Pam Feagler NO. OF PARTICIPANTS 3

DESCRIBE WATER CONDITIONS (COLOR, ODOR, BEDGROWTHS, SURFACE SCUM, ETC.)

Clear water, no algae growth or odors.

HACH KIT RESULTS (if used) AND OTHER OBSERVATIONS

34"

USE BACK OF FORM IF NECESSARY

WIDTH OF RIFFLE <u>8.5'</u>	BED COMPOSITION OF RIFFLE (%)		
WATER DEPTH <u>2"</u>	SILT <input type="text" value="5"/>	GRAVEL (1/4" - 2") <input type="text" value="65"/>	
WATER TEMP. (°F) <u>63°</u>	COBBLES (2" - 10") <input type="text" value="10"/>	BOULDERS (>10") <input type="text"/>	
	SAND <input type="text" value="20"/>		

### MACROINVERTEBRATE TALLY

ESTIMATED COUNT LETTER CODE  
 A = 1 TO 9  
 B = 10 TO 99  
 C = 100 or more

GROUP 1 TAXA	LETTER CODE	GROUP 2 TAXA	LETTER CODE	GROUP 3 TAXA	LETTER CODE
WATER PENNY LARVAE		DAMSELFLY NYMPHS		BLACKFLY LARVAE	A
MAYFLY NYMPHS	B	DRAGONFLY NYMPHS		AQUATIC WORMS	A
STONEFLY NYMPHS		CRANE FLY LARVAE		MIDGE LARVAE	C
DOBSONFLY LARVAE		BEETLE LARVAE	B	POUCH SNAILS	
CADDISFLY LARVAE	C	CRAYFISH		LEECHES	
RIFFLE BEETLE ADULT	A	SCUDS		PLANARIA	
OTHER SNAILS		CLAMS	A		
		SOWBUGS			
NUMBER OF TAXA (times)	3	NUMBER OF TAXA (times)	2	NUMBER OF TAXA (times)	3
INDEX VALUE 3	9	INDEX VALUE 2	4	INDEX VALUE 1	3

CUMULATIVE INDEX VALUE

### STREAM QUALITY ASSESSMENT

EXCELLENT (>22)

GOOD (17-22)

FAIR (11-16)

POOR (<11)

## STREAM QUALITY ASSESSMENT FORM

STATION 16 STREAM Hurford Run Tributary SAMPLE # C  
 LOCATION Shepler Church Road - west of I-77 under bridge  
 COUNTY Stark TOWNSHIP/CITY Canton DATE 8/12/2004 TIME 2:40 p.m.  
 GROUP OR INDIVIDUALS Eric Akin, Nick Lautzenheiser, and Pam Feagle NO. OF PARTICIPANTS 2

DESCRIBE WATER CONDITIONS (COLOR, ODOR, BEDGROWTHS, SURFACE SCUM, ETC.)  
  
 Clear water, no algae, no odor.

HACH KIT RESULTS (if used) AND OTHER OBSERVATIONS  
  
 36"+

USE BACK OF FORM IF NECESSARY

WIDTH OF RIFFLE <u>20'</u>  WATER DEPTH <u>3"</u>  WATER TEMP. (°F) <u>63°</u>	BED COMPOSITION OF RIFFLE (%)  SILT <input type="text" value="10"/> GRAVEL (1/4" - 2") <input type="text" value="30"/> COBBLES (2" - 10") <input type="text" value="50"/> SAND <input type="text" value="5"/> BOULDERS (>10") <input type="text" value="5"/>
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<b>MACROINVERTEBRATE TALLY</b>	ESTIMATED COUNT LETTER CODE A = 1 TO 9 B = 10 TO 99 C = 100 or more
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GROUP 1 TAXA	LETTER CODE	GROUP 2 TAXA	LETTER CODE	GROUP 3 TAXA	LETTER CODE
WATER PENNY LARVAE		DAMSELFLY NYMPHS		BLACKFLY LARVAE	A
MAYFLY NYMPHS	A	DRAGONFLY NYMPHS	A	AQUATIC WORMS	A
STONEFLY NYMPHS		CRANE FLY LARVAE		MIDGE LARVAE	C
DOBSONFLY LARVAE		BEETLE LARVAE	B	POUCH SNAILS	A
CADDISFLY LARVAE	C	CRAYFISH	A	LEECHES	
RIFFLE BEETLE ADULT	A	SCUDS			
OTHER SNAILS		CLAMS	B		
		SOWBUGS	A		
NUMBER OF TAXA (times)	3	NUMBER OF TAXA (times)	5	NUMBER OF TAXA (times)	4
INDEX VALUE 3	9	INDEX VALUE 2	10	INDEX VALUE 1	4

CUMULATIVE INDEX VALUE <input style="width: 100px; height: 20px;" type="text" value="23"/>	STREAM QUALITY ASSESSMENT EXCELLENT (>22) <input checked="" type="checkbox"/> X GOOD (17-22) <input type="checkbox"/> FAIR (11-16) <input type="checkbox"/> POOR (<11) <input type="checkbox"/>
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# Stream Inventory - Watershed Assessment

Stream Walkers: Eric Akin and Nick Lautzenheiser Station: 17 Date: 10-1-04  
Stream Name: Sherrick Run - Station 17 Water level:  high  avg.  low  
Weather conditions: Sunny and Warm Last rain event 9/24/04  
Air temp. 72°F Water temp. 55°F  
Inventoried stream section, River Mile 14.10 to River Mile 14.20  
Descriptive location (use roads etc.) Upstream of Route 43 and the Acid Mine Drainage Discharge Pipe

## Water surface appearance:

- Scum
- Foamy
- Muddy
- Milky
- Clear
- Colored sheen (oily)
- Brownish
- Other, \_\_\_\_\_

## Stream bed coating:

- Algae coated
- Orange to red
- Yellowish
- Black
- Brown
- None
- Silt coated, depth of deposits < 1"
- Other, \_\_\_\_\_

## Odor:

- Rotten Egg
- Musky (slightly)
- Sewage
- Chlorine
- None
- Other, \_\_\_\_\_

## Habitat:

- Pools
- Rock ledges
- Log piles
- Weed beds
- Undercut banks
- Wetlands
- Backwaters
- Large boulders
- Riffles
- Tree roots
- Logs or woody debris
- Man-made objects

Maximum Stream Depth 3' Average Stream Width 10'

## Stream shading: Stream is—downstream—more exposed (power lines)

- Fully exposed (0-24% of stream is shaded from the sun)
- Fully shaded (75-100%)
- Partially exposed (25-49%)
- Partially shaded (50-74%)

## Streambank vegetation:

Trees (%) 35 Plants (%) 30 Bare soil (%) 15 Grass (%) 5  
Shrubs (%) 10 Root mats (%) 5 Other (%) \_\_\_\_\_  
Approximate width of vegetation: Left bank 50' Right bank 100'+  
Is grass mowed down to the water's edge?  Yes  No

## Land uses along stream section:

1. Farming:  Pasture/Grazing Land  Crops  Woods  Other (explain) \_\_\_\_\_
2. Urban areas:  Homes  Light manufacturing  Heavy manufacturing  
 Retail/Comm.  Construction sites  Parking lots
3. Other (explain) Trucking Company downstream and along the right bank

Outfalls:

1. Are there any discharge pipes?  No  Yes      Location: Left bank downstream of sites

2. Types of pipes:  Sewage treatment  
 Storm water runoff  
 Industrial (type) \_\_\_\_\_  
 Drainage tile outlets  
 Unknown  
 Other Acid Mine Drainage Pipe

3. Description of odor associated with discharge pipes: none

4. Condition of streambank at outlet site Bad - pipe is broken and has a orange coating on it

Stream channel alterations:       Dredging     Channelization     Fill     None

Other (explain) \_\_\_\_\_

Structures or barriers in the stream:

Dams     Bridges     Islands     Waterfalls     Log jams     Sediment/sandbars

Other (explain) \_\_\_\_\_

Litter in and around stream:  No  Yes      Location: In the creek

Paper and small trash \_\_\_\_\_ %       Cans and bottles \_\_\_\_\_ %

Tires, carts, etc. \_\_\_\_\_ %       Other \_\_\_\_\_

Verbal Site Description: Give visual description of stream, substrate, banks, riparian zone and adjacent land areas. Indicate what you think are current or potential threats to your stream's health. Are photographs of current or potential threats available?

Yes     No

Located upstream of Route 43 bridge near a trucking company. Good riparian vegetation. Orange coating on substrate even above the AMD outlet. Likely other mine discharge points upstream of sampling locations. Stream banks eroded in some areas. 3.5 ft. to reach the floodplain.

Threats: AMD, trucking company, houses along the left bank, failing HSTS, stream bank erosion, log jams upstream.

## STREAM QUALITY ASSESSMENT FORM

STATION 17 STREAM Sherrick Run SAMPLE # A  
 LOCATION Upstream of Route 43 and the Acid Mine Drainage Discharge  
 COUNTY Stark TOWNSHIP/CITY Canton DATE 10/1/2004 TIME 1:30 p.m.  
 GROUP OR INDIVIDUALS Eric Akin and Nick Lautzenheiser NO. OF PARTICIPANTS 2

DESCRIBE WATER CONDITIONS (COLOR, ODOR, BEDGROWTHS, SURFACE SCUM, ETC.)  
  
 Clear water. Some silt covering the substrate. Above the acid mine drainage discharge pipe. Black coating underneath rocks

HACH KIT RESULTS (if used) AND OTHER OBSERVATIONS  
  
 sediment stick = 36"+

USE BACK OF FORM IF NECESSARY

WIDTH OF RIFFLE <u>17 ft.</u>	BED COMPOSITION OF RIFFLE (%)		
WATER DEPTH <u>4"</u>	SILT <input type="text" value="20"/>	GRAVEL (1/4" - 2") <input type="text" value="40"/>	
WATER TEMP. (°F) <u>55°</u>	COBBLES (2" - 10") <input type="text" value="10"/>	BOULDERS (>10") <input type="text" value="--"/>	
	SAND <input type="text" value="30"/>		

<b>MACROINVERTEBRATE TALLY</b>	ESTIMATED COUNT LETTER CODE	A = 1 TO 9 B = 10 TO 99 C = 100 or more
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GROUP 1 TAXA	LETTER CODE	GROUP 2 TAXA	LETTER CODE	GROUP 3 TAXA	LETTER CODE
WATER PENNY LARVAE		DAMSELFLY NYMPHS		BLACKFLY LARVAE	
MAYFLY NYMPHS		DRAGONFLY NYMPHS		AQUATIC WORMS	
STONEFLY NYMPHS		CRANE FLY LARVAE		MIDGE LARVAE	A
DOBSONFLY LARVAE		BEETLE LARVAE	A	POUCH SNAILS	
CADDISFLY LARVAE	C	CRAYFISH	A	LEECHES	
RIFFLE BEETLE ADULT		SCUDS			
OTHER SNAILS		CLAMS			
		SOWBUGS			
NUMBER OF TAXA (times)	1	NUMBER OF TAXA (times)	2	NUMBER OF TAXA (times)	1
INDEX VALUE 3	3	INDEX VALUE 2	6	INDEX VALUE 1	1

CUMULATIVE INDEX VALUE <input type="text" value="10"/>	STREAM QUALITY ASSESSMENT			
	EXCELLENT (>22) <input type="text"/>	GOOD (17-22) <input type="text"/>	FAIR (11-16) <input type="text"/>	POOR (<11) <input checked="" type="text" value="X"/>

## STREAM QUALITY ASSESSMENT FORM

STATION 17 STREAM Sherrick Run SAMPLE # B  
 LOCATION Upstream of Route 43 and the Acid Mine Drainage Discharge  
 COUNTY Stark TOWNSHIP/CITY Canton DATE 10/1/2004 TIME 2:10 p.m.  
 GROUP OR INDIVIDUALS Eric Akin and Nick Lautzenheiser NO. OF PARTICIPANTS 2

DESCRIBE WATER CONDITIONS (COLOR, ODOR, BEDGROWTHS, SURFACE SCUM, ETC.)

See Sample A

HACH KIT RESULTS (if used) AND OTHER OBSERVATIONS

sediment stick = 36"+

USE BACK OF FORM IF NECESSARY

WIDTH OF RIFFLE <u>17 ft.</u>	BED COMPOSITION OF RIFFLE (%)		
WATER DEPTH <u>5"</u>	SILT <input type="text" value="25"/>	GRAVEL (1/4" - 2") <input type="text" value="30"/>	
WATER TEMP. (°F) <u>55°</u>	COBBLES (2" - 10") <input type="text" value="10"/>	BOULDERS (>10") <input type="text" value="--"/>	
	SAND <input type="text" value="35"/>		

<b>MACROINVERTEBRATE TALLY</b>	ESTIMATED COUNT LETTER CODE	A = 1 TO 9 B = 10 TO 99 C = 100 or more
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GROUP 1 TAXA	LETTER CODE	GROUP 2 TAXA	LETTER CODE	GROUP 3 TAXA	LETTER CODE
WATER PENNY LARVAE		DAMSELFLY NYMPHS		BLACKFLY LARVAE	
MAYFLY NYMPHS		DRAGONFLY NYMPHS		AQUATIC WORMS	
STONEFLY NYMPHS		CRANE FLY LARVAE		MIDGE LARVAE	A
DOBSONFLY LARVAE		BEETLE LARVAE		POUCH SNAILS	
CADDISFLY LARVAE	B	CRAYFISH		LEECHES	
RIFFLE BEETLE ADULT		SCUDS			
OTHER SNAILS		CLAMS			
		SOWBUGS			
NUMBER OF TAXA (times)	1	NUMBER OF TAXA (times)	0	NUMBER OF TAXA (times)	1
INDEX VALUE 3	3	INDEX VALUE 2	0	INDEX VALUE 1	1

CUMULATIVE INDEX VALUE

STREAM QUALITY ASSESSMENT

EXCELLENT (>22)

GOOD (17-22)

FAIR (11-16)

POOR (<11)

## STREAM QUALITY ASSESSMENT FORM

STATION 17 STREAM Sherrick Run SAMPLE # C  
 LOCATION Upstream of Route 43 and the Acid Mine Drainage Discharge  
 COUNTY Stark TOWNSHIP/CITY Canton DATE 10/1/2004 TIME 2:45 p.m.  
 GROUP OR INDIVIDUALS Eric Akin and Nick Lautzenheiser NO. OF PARTICIPANTS 2

DESCRIBE WATER CONDITIONS (COLOR, ODOR, BEDGROWTHS, SURFACE SCUM, ETC.)  See Sample A	HACH KIT RESULTS (if used) AND OTHER OBSERVATIONS  sediment stick = 36"+
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USE BACK OF FORM IF NECESSARY

WIDTH OF RIFFLE <u>8 ft.</u>  WATER DEPTH <u>3"</u>  WATER TEMP. (°F) <u>55°</u>	BED COMPOSITION OF RIFFLE (%)  SILT <input type="text" value="10"/> GRAVEL (1/4" - 2") <input type="text" value="50"/> COBBLES (2" - 10") <input type="text" value="20"/> SAND <input type="text" value="15"/> BOULDERS (>10") <input type="text" value="5"/>
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<b>MACROINVERTEBRATE TALLY</b>	ESTIMATED COUNT LETTER CODE A = 1 TO 9 B = 10 TO 99 C = 100 or more
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GROUP 1 TAXA	LETTER CODE	GROUP 2 TAXA	LETTER CODE	GROUP 3 TAXA	LETTER CODE
WATER PENNY LARVAE		DAMSELFLY NYMPHS		BLACKFLY LARVAE	
MAYFLY NYMPHS		DRAGONFLY NYMPHS		AQUATIC WORMS	
STONEFLY NYMPHS		CRANE FLY LARVAE	A	MIDGE LARVAE	A
DOBSONFLY LARVAE		BEETLE LARVAE	B	POUCH SNAILS	
CADDISFLY LARVAE	C	CRAYFISH	A	LEECHES	
RIFFLE BEETLE ADULT	A	SCUDS			
OTHER SNAILS		CLAMS			
		SOWBUGS			
NUMBER OF TAXA (times)	2	NUMBER OF TAXA (times)	3	NUMBER OF TAXA (times)	1
INDEX VALUE 3	6	INDEX VALUE 2	6	INDEX VALUE 1	1

CUMULATIVE INDEX VALUE <input style="width: 100px; text-align: center;" type="text" value="13"/>	STREAM QUALITY ASSESSMENT EXCELLENT (>22) <input type="text"/> GOOD (17-22) <input type="text"/> FAIR (11-16) <input checked="" type="checkbox"/> <input type="text"/> POOR (<11) <input type="text"/>
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