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ATTACHMENT 3C

DETERMINATION OF EXISTING USE DOCUMENTATION



Primary Headwater Habitat Evaluation Form

20

HHEI Score (sum of metrics 1, 2, 3) :

SITE NAME/LOCATION **Hopedale North Railyard**

SITE NUMBER **Stream 5** RIVER BASIN **Upper Ohio** DRAINAGE AREA (mi²) **0.10**

LENGTH OF STREAM REACH (ft) **200** LAT. **40.34150** LONG. **-80.93670** RIVER CODE **n/a** RIVER MILE **n/a**

DATE **10/16/14** SCORER **SB** COMMENTS **Impacted by grazing cattle**

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

STREAM CHANNEL MODIFICATIONS: NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERY

1. **SUBSTRATE** (Estimate percent of every type of substrate present. Check *ONLY* two predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.

TYPE	PERCENT	TYPE	PERCENT
<input type="checkbox"/> <input type="checkbox"/> BLDR SLABS [16 pts]	<input type="checkbox"/> 0%	<input checked="" type="checkbox"/> <input type="checkbox"/> SILT [3 pt]	<input type="checkbox"/> 65%
<input type="checkbox"/> <input type="checkbox"/> BOULDER (>256 mm) [16 pts]	<input type="checkbox"/> 0%	<input type="checkbox"/> <input checked="" type="checkbox"/> LEAF PACK/WOODY DEBRIS [3 pts]	<input type="checkbox"/> 20%
<input type="checkbox"/> <input type="checkbox"/> BEDROCK [16 pt]	<input type="checkbox"/> 0%	<input type="checkbox"/> <input type="checkbox"/> FINE DETRITUS [3 pts]	<input type="checkbox"/> 0%
<input type="checkbox"/> <input type="checkbox"/> COBBLE (65-256 mm) [12 pts]	<input type="checkbox"/> 5%	<input type="checkbox"/> <input type="checkbox"/> CLAY or HARDPAN [0 pt]	<input type="checkbox"/> 0%
<input type="checkbox"/> <input type="checkbox"/> GRAVEL (2-64 mm) [9 pts]	<input type="checkbox"/> 10%	<input type="checkbox"/> <input type="checkbox"/> MUCK [0 pts]	<input type="checkbox"/> 0%
<input type="checkbox"/> <input type="checkbox"/> SAND (<2 mm) [6 pts]	<input type="checkbox"/> 0%	<input type="checkbox"/> <input type="checkbox"/> ARTIFICIAL [3 pts]	<input type="checkbox"/> 0%

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock **5.00%** (A)

Substrate Percentage Check **100%** (B)

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: **6**

TOTAL NUMBER OF SUBSTRATE TYPES: **4**

HHEI Metric Points

Substrate Max = 40

10

A + B

2. **Maximum Pool Depth** (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check *ONLY* one box):

<input type="checkbox"/> > 30 centimeters [20 pts]	<input type="checkbox"/> > 5 cm - 10 cm [15 pts]
<input type="checkbox"/> > 22.5 - 30 cm [30 pts]	<input checked="" type="checkbox"/> < 5 cm [5 pts]
<input type="checkbox"/> > 10 - 22.5 cm [25 pts]	<input type="checkbox"/> NO WATER OR MOIST CHANNEL [0 pts]

COMMENTS _____ MAXIMUM POOL DEPTH (centimeters): **2**

Pool Depth Max = 30

5

3. **BANK FULL WIDTH** (Measured as the average of 3-4 measurements) (Check *ONLY* one box):

<input type="checkbox"/> > 4.0 meters (> 13') [30 pts]	<input type="checkbox"/> > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]
<input type="checkbox"/> > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]	<input checked="" type="checkbox"/> ≤ 1.0 m (≤ 3' 3") [5 pts]
<input type="checkbox"/> > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	

COMMENTS _____ AVERAGE BANKFULL WIDTH (meters): **0.76**

Bankfull Width Max=30

5

This information must also be completed

RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆

RIPARIAN WIDTH		FLOODPLAIN QUALITY			
L	R	L	R		
<input checked="" type="checkbox"/>	<input type="checkbox"/> (Per Bank)	<input type="checkbox"/>	<input type="checkbox"/> (Most Predominant per Bank)	<input type="checkbox"/>	<input type="checkbox"/> Conservation Tillage
<input type="checkbox"/>	<input checked="" type="checkbox"/> Wide >10m	<input checked="" type="checkbox"/>	<input type="checkbox"/> Mature Forest, Wetland	<input type="checkbox"/>	<input type="checkbox"/> Urban or Industrial
<input type="checkbox"/>	<input type="checkbox"/> Moderate 5-10m	<input type="checkbox"/>	<input type="checkbox"/> Immature Forest, Shrub or Old Field	<input type="checkbox"/>	<input checked="" type="checkbox"/> Open Pasture, Row Crop
<input type="checkbox"/>	<input type="checkbox"/> Narrow <5m	<input type="checkbox"/>	<input type="checkbox"/> Residential, Park, New Field	<input type="checkbox"/>	<input type="checkbox"/> Mining or Construction
<input type="checkbox"/>	<input type="checkbox"/> None	<input type="checkbox"/>	<input type="checkbox"/> Fenced Pasture		

COMMENTS _____

FLOW REGIME (At Time of Evaluation) (Check *ONLY* one box):

<input checked="" type="checkbox"/> Stream Flowing	<input type="checkbox"/> Moist Channel, isolated pools, no flow (Intermittent)
<input type="checkbox"/> Subsurface flow with isolated pools (Interstitial)	<input type="checkbox"/> Dry channel, no water (Ephemeral)

COMMENTS Perennial in lower section

SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check *ONLY* one box):

<input type="checkbox"/> None	<input checked="" type="checkbox"/> 1.0	<input type="checkbox"/> 2.0	<input type="checkbox"/> 3.0
<input type="checkbox"/> 0.5	<input type="checkbox"/> 1.5	<input type="checkbox"/> 2.5	<input type="checkbox"/> >3

STREAM GRADIENT ESTIMATE

Flat (0.5 ft/100 ft) Flat to Moderate Moderate (2 ft/100 ft) Moderate to Severe Severe (10 ft/100 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):

QHEI PERFORMED? - Yes No QHEI Score (If Yes, Attach Completed QHEI Form)

DOWNSTREAM DESIGNATED USE(S)

<input type="checkbox"/> WWH Name:	<input type="text"/>	Distance from Evaluated Stream	<input type="text"/>
<input type="checkbox"/> CWH Name:	<input type="text"/>	Distance from Evaluated Stream	<input type="text"/>
<input type="checkbox"/> EWH Name:	<input type="text"/>	Distance from Evaluated Stream	<input type="text"/>

MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION

USGS Quadrangle Name: NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Township / City:

MISCELLANEOUS

Base Flow Conditions? (Y/N): Date of last precipitation: Quantity:
Photograph Information:
Elevated Turbidity? (Y/N): Canopy (% open):
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.) Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:

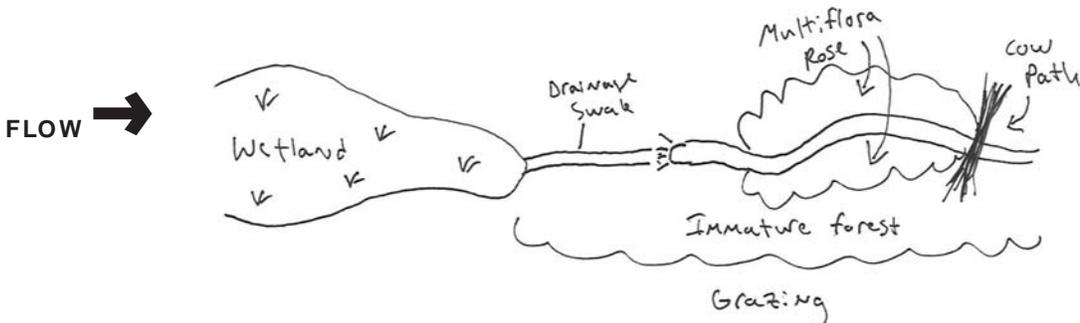
Additional comments/description of pollution impacts:

BIOTIC EVALUATION

Performed? (Y/N): (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)
Fish Observed? (Y/N) Voucher? (Y/N) Salamanders Observed? (Y/N) Voucher? (Y/N)
Frogs or Tadpoles Observed? (Y/N) Voucher? (Y/N) Aquatic Macroinvertebrates Observed? (Y/N) Voucher? (Y/N)
Comments Regarding Biology:

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location



SITE NAME/LOCATION **Hopedale North Railyard**

SITE NUMBER **Stream 6** RIVER BASIN **Upper Ohio** DRAINAGE AREA (mi²) **0.05**

LENGTH OF STREAM REACH (ft) **200** LAT. **40.34180** LONG. **-80.93650** RIVER CODE **n/a** RIVER MILE **n/a**

DATE **10/16/14** SCORER **SB** COMMENTS **Impacted by strip mining activities**

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PWH Streams" for Instructions

STREAM CHANNEL MODIFICATIONS: NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERY

1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.

TYPE	PERCENT	TYPE	PERCENT
<input type="checkbox"/> <input type="checkbox"/> BLDR SLABS [16 pts]	0%	<input checked="" type="checkbox"/> <input type="checkbox"/> SILT [3 pt]	70%
<input type="checkbox"/> <input type="checkbox"/> BOULDER (>256 mm) [16 pts]	0%	<input type="checkbox"/> <input checked="" type="checkbox"/> LEAF PACK/WOODY DEBRIS [3 pts]	20%
<input type="checkbox"/> <input type="checkbox"/> BEDROCK [16 pt]	0%	<input type="checkbox"/> <input type="checkbox"/> FINE DETRITUS [3 pts]	0%
<input type="checkbox"/> <input type="checkbox"/> COBBLE (65-256 mm) [12 pts]	10%	<input type="checkbox"/> <input type="checkbox"/> CLAY or HARDPAN [0 pt]	0%
<input type="checkbox"/> <input type="checkbox"/> GRAVEL (2-64 mm) [9 pts]	0%	<input type="checkbox"/> <input type="checkbox"/> MUCK [0 pts]	0%
<input type="checkbox"/> <input type="checkbox"/> SAND (<2 mm) [6 pts]	0%	<input type="checkbox"/> <input type="checkbox"/> ARTIFICIAL [3 pts]	0%

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock **10.00%** (A)

Substrate Percentage Check **100%** (B)

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 6 **TOTAL NUMBER OF SUBSTRATE TYPES: 3**

2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):

<input type="checkbox"/> > 30 centimeters [20 pts]	<input type="checkbox"/> > 5 cm - 10 cm [15 pts]
<input type="checkbox"/> > 22.5 - 30 cm [30 pts]	<input checked="" type="checkbox"/> < 5 cm [5 pts]
<input type="checkbox"/> > 10 - 22.5 cm [25 pts]	<input type="checkbox"/> NO WATER OR MOIST CHANNEL [0 pts]

COMMENTS _____ **MAXIMUM POOL DEPTH (centimeters): 2**

3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):

<input type="checkbox"/> > 4.0 meters (> 13') [30 pts]	<input type="checkbox"/> > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]
<input type="checkbox"/> > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]	<input checked="" type="checkbox"/> ≤ 1.0 m (≤ 3' 3") [5 pts]
<input type="checkbox"/> > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	

COMMENTS _____ **AVERAGE BANKFULL WIDTH (meters): 0.61**

HHEI Metric Points

Substrate Max = 40

9

A + B

Pool Depth Max = 30

5

Bankfull Width Max=30

5

This information must also be completed

RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆

RIPARIAN WIDTH		FLOODPLAIN QUALITY			
L	R	L	R		
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> (Per Bank) Wide >10m	<input type="checkbox"/>	<input type="checkbox"/> (Most Predominant per Bank) Mature Forest, Wetland	<input type="checkbox"/>	<input type="checkbox"/> Conservation Tillage
<input type="checkbox"/>	<input type="checkbox"/> Moderate 5-10m	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> Immature Forest, Shrub or Old Field	<input type="checkbox"/>	<input type="checkbox"/> Urban or Industrial
<input type="checkbox"/>	<input type="checkbox"/> Narrow <5m	<input type="checkbox"/>	<input type="checkbox"/> Residential, Park, New Field	<input type="checkbox"/>	<input type="checkbox"/> Open Pasture, Row Crop
<input type="checkbox"/>	<input type="checkbox"/> None	<input type="checkbox"/>	<input type="checkbox"/> Fenced Pasture	<input type="checkbox"/>	<input type="checkbox"/> Mining or Construction

COMMENTS _____

FLOW REGIME (At Time of Evaluation) (Check ONLY one box):

<input type="checkbox"/> Stream Flowing	<input checked="" type="checkbox"/> Moist Channel, isolated pools, no flow (Intermittent)
<input type="checkbox"/> Subsurface flow with isolated pools (Interstitial)	<input type="checkbox"/> Dry channel, no water (Ephemeral)

COMMENTS Ephemeral

SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):

<input type="checkbox"/> None	<input checked="" type="checkbox"/> 1.0	<input type="checkbox"/> 2.0	<input type="checkbox"/> 3.0
<input type="checkbox"/> 0.5	<input type="checkbox"/> 1.5	<input type="checkbox"/> 2.5	<input type="checkbox"/> >3

STREAM GRADIENT ESTIMATE

Flat (0.5 ft/100 ft) Flat to Moderate Moderate (2 ft/100 ft) Moderate to Severe Severe (10 ft/100 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):

QHEI PERFORMED? - Yes No QHEI Score (If Yes, Attach Completed QHEI Form)

DOWNSTREAM DESIGNATED USE(S)

<input type="checkbox"/> WWH Name: <input type="text"/>	Distance from Evaluated Stream <input type="text"/>
<input type="checkbox"/> CWH Name: <input type="text"/>	Distance from Evaluated Stream <input type="text"/>
<input type="checkbox"/> EWH Name: <input type="text"/>	Distance from Evaluated Stream <input type="text"/>

MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION

USGS Quadrangle Name: NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Township / City:

MISCELLANEOUS

Base Flow Conditions? (Y/N): Date of last precipitation: Quantity:
Photograph Information:
Elevated Turbidity? (Y/N): Canopy (% open):
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.) Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:

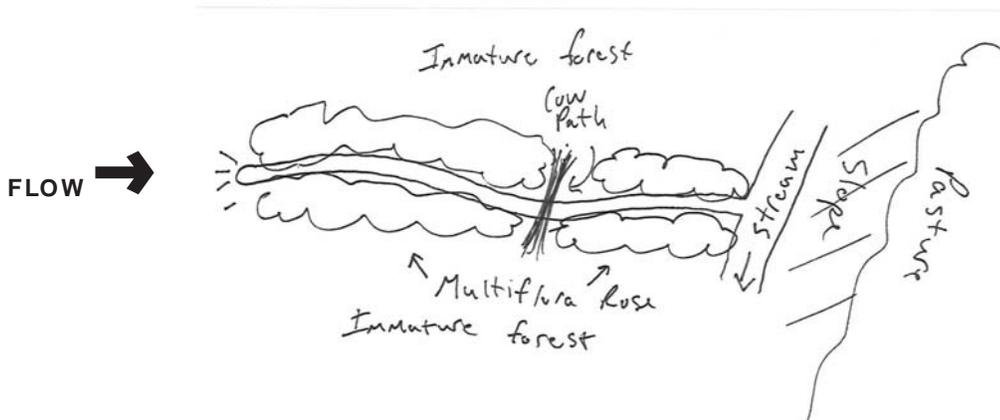
Additional comments/description of pollution impacts:

BIOTIC EVALUATION

Performed? (Y/N): (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)
Fish Observed? (Y/N) Voucher? (Y/N) Salamanders Observed? (Y/N) Voucher? (Y/N)
Frogs or Tadpoles Observed? (Y/N) Voucher? (Y/N) Aquatic Macroinvertebrates Observed? (Y/N) Voucher? (Y/N)
Comments Regarding Biology:

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location





Primary Headwater Habitat Evaluation Form

40

HHEI Score (sum of metrics 1, 2, 3) :

SITE NAME/LOCATION **Hopedale North Railyard**

SITE NUMBER **Stream 7** RIVER BASIN **Upper Ohio** DRAINAGE AREA (mi²) **0.11**

LENGTH OF STREAM REACH (ft) **200** LAT. **40.34450** LONG. **-80.93070** RIVER CODE **n/a** RIVER MILE **n/a**

DATE **10/16/14** SCORER **SB** COMMENTS

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

STREAM CHANNEL MODIFICATIONS: NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERY

1. **SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.**

TYPE	PERCENT	TYPE	PERCENT
<input type="checkbox"/> <input type="checkbox"/> BLDR SLABS [16 pts]	<input type="checkbox"/> 0%	<input type="checkbox"/> <input checked="" type="checkbox"/> SILT [3 pt]	<input type="checkbox"/> 30%
<input type="checkbox"/> <input type="checkbox"/> BOULDER (>256 mm) [16 pts]	<input type="checkbox"/> 0%	<input type="checkbox"/> <input type="checkbox"/> LEAF PACK/WOODY DEBRIS [3 pts]	<input type="checkbox"/> 10%
<input type="checkbox"/> <input type="checkbox"/> BEDROCK [16 pt]	<input type="checkbox"/> 0%	<input type="checkbox"/> <input type="checkbox"/> FINE DETRITUS [3 pts]	<input type="checkbox"/> 0%
<input checked="" type="checkbox"/> <input type="checkbox"/> COBBLE (65-256 mm) [12 pts]	<input type="checkbox"/> 30%	<input type="checkbox"/> <input type="checkbox"/> CLAY or HARDPAN [0 pt]	<input type="checkbox"/> 10%
<input type="checkbox"/> <input type="checkbox"/> GRAVEL (2-64 mm) [9 pts]	<input type="checkbox"/> 20%	<input type="checkbox"/> <input type="checkbox"/> MUCK [0 pts]	<input type="checkbox"/> 0%
<input type="checkbox"/> <input type="checkbox"/> SAND (<2 mm) [6 pts]	<input type="checkbox"/> 0%	<input type="checkbox"/> <input type="checkbox"/> ARTIFICIAL [3 pts]	<input type="checkbox"/> 0%

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock **30.00%** (A)

Substrate Percentage Check **100%** (B)

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: **15**

TOTAL NUMBER OF SUBSTRATE TYPES: **5**

HHEI Metric Points

Substrate Max = 40

20

A + B

2. **Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):**

<input type="checkbox"/> > 30 centimeters [20 pts]	<input type="checkbox"/> > 5 cm - 10 cm [15 pts]
<input type="checkbox"/> > 22.5 - 30 cm [30 pts]	<input checked="" type="checkbox"/> < 5 cm [5 pts]
<input type="checkbox"/> > 10 - 22.5 cm [25 pts]	<input type="checkbox"/> NO WATER OR MOIST CHANNEL [0 pts]

COMMENTS _____ MAXIMUM POOL DEPTH (centimeters): **4**

Pool Depth Max = 30

5

3. **BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):**

<input type="checkbox"/> > 4.0 meters (> 13') [30 pts]	<input checked="" type="checkbox"/> > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]
<input type="checkbox"/> > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]	<input type="checkbox"/> ≤ 1.0 m (≤ 3' 3") [5 pts]
<input type="checkbox"/> > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	

COMMENTS _____ AVERAGE BANKFULL WIDTH (meters): **1.37**

Bankfull Width Max=30

15

This information must also be completed

RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆

RIPARIAN WIDTH		FLOODPLAIN QUALITY	
L	R	L	R
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(Per Bank)	Wide >10m	(Most Predominant per Bank)	Mature Forest, Wetland
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Moderate	5-10m	Immature Forest, Shrub or Old Field	Urban or Industrial
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Narrow	<5m	Residential, Park, New Field	Open Pasture, Row Crop
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
None		Fenced Pasture	Mining or Construction

COMMENTS _____

FLOW REGIME (At Time of Evaluation) (Check ONLY one box):

<input checked="" type="checkbox"/> Stream Flowing	<input type="checkbox"/> Moist Channel, isolated pools, no flow (Intermittent)
<input type="checkbox"/> Subsurface flow with isolated pools (Interstitial)	<input type="checkbox"/> Dry channel, no water (Ephemeral)

COMMENTS Perennial

SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):

<input type="checkbox"/> None	<input type="checkbox"/> 1.0	<input type="checkbox"/> 2.0	<input type="checkbox"/> 3.0
<input type="checkbox"/> 0.5	<input checked="" type="checkbox"/> 1.5	<input type="checkbox"/> 2.5	<input type="checkbox"/> >3

STREAM GRADIENT ESTIMATE

Flat (0.5 ft/100 ft) Flat to Moderate Moderate (2 ft/100 ft) Moderate to Severe Severe (10 ft/100 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):

QHEI PERFORMED? - Yes No QHEI Score (If Yes, Attach Completed QHEI Form)

DOWNSTREAM DESIGNATED USE(S)

<input type="checkbox"/> WWH Name:	<input type="text"/>	Distance from Evaluated Stream	<input type="text"/>
<input type="checkbox"/> CWH Name:	<input type="text"/>	Distance from Evaluated Stream	<input type="text"/>
<input type="checkbox"/> EWH Name:	<input type="text"/>	Distance from Evaluated Stream	<input type="text"/>

MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION

USGS Quadrangle Name: NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Township / City:

MISCELLANEOUS

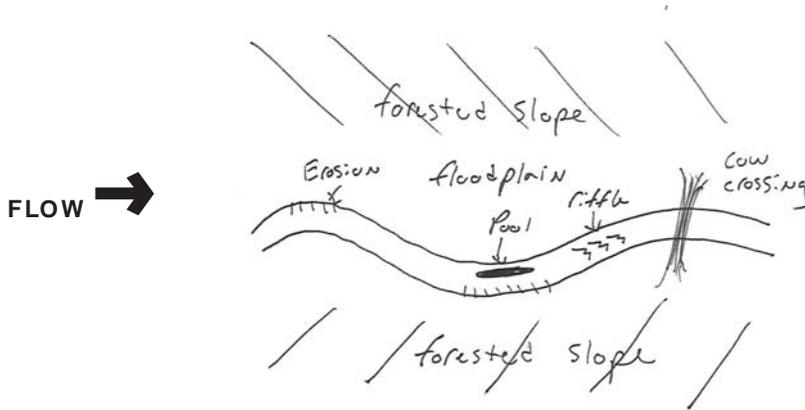
Base Flow Conditions? (Y/N): Date of last precipitation: Quantity:
Photograph Information:
Elevated Turbidity? (Y/N): Canopy (% open):
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.) Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:
Additional comments/description of pollution impacts:

BIOTIC EVALUATION

Performed? (Y/N): (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)
Fish Observed? (Y/N) Voucher? (Y/N) Salamanders Observed? (Y/N) Voucher? (Y/N)
Frogs or Tadpoles Observed? (Y/N) Voucher? (Y/N) Aquatic Macroinvertebrates Observed? (Y/N) Voucher? (Y/N)
Comments Regarding Biology:

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location



SITE NAME/LOCATION **Hopedale North Railyard**

SITE NUMBER **Stream 8** RIVER BASIN **Upper Ohio** DRAINAGE AREA (mi²) **0.05**

LENGTH OF STREAM REACH (ft) **200** LAT. **40.34420** LONG. **-80.93460** RIVER CODE **n/a** RIVER MILE **n/a**

DATE **10/16/14** SCORER **SB** COMMENTS _____

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PWH Streams" for Instructions

STREAM CHANNEL MODIFICATIONS: NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERY

1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.)

TYPE	PERCENT	TYPE	PERCENT
<input type="checkbox"/> <input type="checkbox"/> BLDR SLABS [16 pts]	0%	<input checked="" type="checkbox"/> <input type="checkbox"/> SILT [3 pt]	70%
<input type="checkbox"/> <input type="checkbox"/> BOULDER (>256 mm) [16 pts]	0%	<input type="checkbox"/> <input checked="" type="checkbox"/> LEAF PACK/WOODY DEBRIS [3 pts]	20%
<input type="checkbox"/> <input type="checkbox"/> BEDROCK [16 pt]	0%	<input type="checkbox"/> <input type="checkbox"/> FINE DETRITUS [3 pts]	0%
<input type="checkbox"/> <input type="checkbox"/> COBBLE (65-256 mm) [12 pts]	0%	<input type="checkbox"/> <input type="checkbox"/> CLAY or HARDPAN [0 pt]	0%
<input type="checkbox"/> <input type="checkbox"/> GRAVEL (2-64 mm) [9 pts]	10%	<input type="checkbox"/> <input type="checkbox"/> MUCK [0 pts]	0%
<input type="checkbox"/> <input type="checkbox"/> SAND (<2 mm) [6 pts]	0%	<input type="checkbox"/> <input type="checkbox"/> ARTIFICIAL [3 pts]	0%

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock **0.00%** (A) Substrate Percentage Check **100%** (B)

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 6 **TOTAL NUMBER OF SUBSTRATE TYPES: 3**

2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):

<input type="checkbox"/> > 30 centimeters [20 pts]	<input type="checkbox"/> > 5 cm - 10 cm [15 pts]
<input type="checkbox"/> > 22.5 - 30 cm [30 pts]	<input checked="" type="checkbox"/> < 5 cm [5 pts]
<input type="checkbox"/> > 10 - 22.5 cm [25 pts]	<input type="checkbox"/> NO WATER OR MOIST CHANNEL [0 pts]

COMMENTS _____ **MAXIMUM POOL DEPTH (centimeters): 2**

3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):

<input type="checkbox"/> > 4.0 meters (> 13') [30 pts]	<input type="checkbox"/> > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]
<input type="checkbox"/> > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]	<input checked="" type="checkbox"/> ≤ 1.0 m (≤ 3' 3") [5 pts]
<input type="checkbox"/> > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	

COMMENTS _____ **AVERAGE BANKFULL WIDTH (meters): 0.61**

HHEI Metric Points

Substrate Max = 40

9

A + B

Pool Depth Max = 30

5

Bankfull Width Max=30

5

This information must also be completed

RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆

RIPARIAN WIDTH		FLOODPLAIN QUALITY	
L	R	L	R
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(Per Bank)		(Most Predominant per Bank)	
Wide >10m		Mature Forest, Wetland	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Immature Forest, Shrub or Old Field	<input type="checkbox"/>
Moderate 5-10m		Residential, Park, New Field	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Fenced Pasture	<input type="checkbox"/>
Narrow <5m		Conservation Tillage	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Urban or Industrial	<input type="checkbox"/>
None		Open Pasture, Row Crop	<input checked="" type="checkbox"/>
		Mining or Construction	<input type="checkbox"/>

COMMENTS _____

FLOW REGIME (At Time of Evaluation) (Check ONLY one box):

<input checked="" type="checkbox"/> Stream Flowing	<input type="checkbox"/> Moist Channel, isolated pools, no flow (Intermittent)
<input type="checkbox"/> Subsurface flow with isolated pools (Interstitial)	<input type="checkbox"/> Dry channel, no water (Ephemeral)

COMMENTS Ephemeral

SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):

<input type="checkbox"/> None	<input type="checkbox"/> 1.0	<input type="checkbox"/> 2.0	<input type="checkbox"/> 3.0
<input type="checkbox"/> 0.5	<input checked="" type="checkbox"/> 1.5	<input type="checkbox"/> 2.5	<input type="checkbox"/> >3

STREAM GRADIENT ESTIMATE

Flat (0.5 ft/100 ft) Flat to Moderate Moderate (2 ft/100 ft) Moderate to Severe Severe (10 ft/100 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):

QHEI PERFORMED? - Yes No QHEI Score (If Yes, Attach Completed QHEI Form)

DOWNSTREAM DESIGNATED USE(S)

<input type="checkbox"/> WWH Name:	<input type="text"/>	Distance from Evaluated Stream	<input type="text"/>
<input type="checkbox"/> CWH Name:	<input type="text"/>	Distance from Evaluated Stream	<input type="text"/>
<input type="checkbox"/> EWH Name:	<input type="text"/>	Distance from Evaluated Stream	<input type="text"/>

MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION

USGS Quadrangle Name: NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Township / City:

MISCELLANEOUS

Base Flow Conditions? (Y/N): Date of last precipitation: Quantity:
Photograph Information:
Elevated Turbidity? (Y/N): Canopy (% open):
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.) Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:

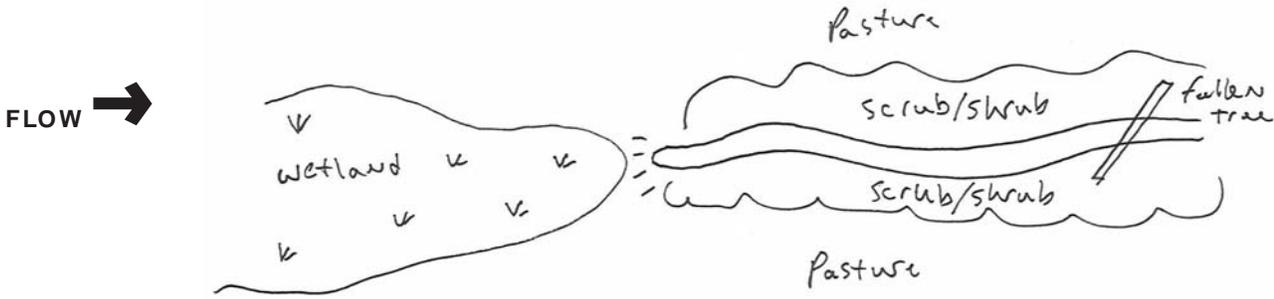
Additional comments/description of pollution impacts:

BIOTIC EVALUATION

Performed? (Y/N): (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)
Fish Observed? (Y/N) Voucher? (Y/N) Salamanders Observed? (Y/N) Voucher? (Y/N)
Frogs or Tadpoles Observed? (Y/N) Voucher? (Y/N) Aquatic Macroinvertebrates Observed? (Y/N) Voucher? (Y/N)
Comments Regarding Biology:

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location



Site ID: **Hopedale North Rail Yard- Stream 8**

Date: **04/23/15**

Investigator(s): **Steve Bailey**

3. Macroinvertebrate Scoring Sheet:

THE HEADWATER MACROINVERTEBRATE FIELD EVALUATION INDEX (HMFEI) SCORING SHEET

NOTE: Record the number of observed taxa for each group. Indicate Abundance of Each Taxa Above each White Box.
 Only multiply # of taxa by HMFEI points for EPT taxa! Record HMFEI Scoring Value Points Within each Box.
 For EPT taxa, also indicate the different taxa present.

Key: V = Very Abundant (> 50); A = Abundant (10 -50); C = Common (3 -9); R = Rare (< 3)

Sessile Animals (Porifera , Cnidaria, Bryozoa) (HMFEI pts = 1) No. taxa: <input type="text" value="0"/> <input type="text" value="NA"/>	Crayfish (Decapoda) No. taxa: <input type="text" value="1"/> (HMFEI pts = 2) <input type="text" value="2"/> <input type="text" value="R"/>	Fishfly Larvae (Corydalidae) No. taxa: <input type="text" value="1"/> (HMFEI pts = 3) <input type="text" value="3"/> <input type="text" value="R"/>
Aquatic Worms (Turbellaria, Hirudinea , Oligochaeta) (HMFEI pts = 1) <input type="text" value="NA"/> <input type="text" value="0"/>	Dragonfly Nymphs (Anisoptera) No. taxa: <input type="text" value="0"/> (HMFEI pts = 2) <input type="text" value="0"/> <input type="text" value="NA"/>	Water Penny Beetles (Psephenidae) No. taxa: <input type="text" value="0"/> (HMFEI pts = 3) <input type="text" value="0"/> <input type="text" value="NA"/>
Sow Bugs (Isopoda) No. taxa: <input type="text" value="1"/> (HMFEI pts = 1) <input type="text" value="1"/> <input type="text" value="R"/>	Riffle Beetles (Dryopidae , Elmidae, Ptilodactylidae) (HMFEI pts = 2) No. taxa: <input type="text" value="0"/> <input type="text" value="NA"/>	Crane-fly Larvae (Tipulidae) No. taxa: <input type="text" value="1"/> (HMFEI pts = 3) <input type="text" value="3"/> <input type="text" value="R"/>
Scuds (Amphipoda) (HMFEI pts = 1) No. taxa: <input type="text" value="1"/> <input type="text" value="A"/>	Larvae of other Flies (enter name in comments) (Diptera): No. taxa: <input type="text" value="1"/> (HMFEI pts = 1) <input type="text" value="C"/> <input type="text" value="1"/>	EPT TAXA* Total No. EPT Taxa = <input type="text" value="4"/>
Water Mites (Hydracarina) (HMFEI pts = 1) No. taxa: <input type="text" value="0"/> <input type="text" value="NA"/>	Midges (Chironomidae) (HMFEI pts = 1) No. taxa: <input type="text" value="0"/> <input type="text" value="NA"/>	Mayfly Nymphs (Ephemeroptera) Taxa Present: <input type="text" value="1"/> HMFEI pts = <input type="text" value="C"/> <input type="text" value="3"/> No. Taxa (x) 3]
Damselfly Nymphs (Zygoptera) No. taxa: <input type="text" value="0"/> (HMFEI pts = 1) <input type="text" value="NA"/>	Snails (Gastropoda) No. taxa: <input type="text" value="0"/> (HMFEI pts = 1) <input type="text" value="NA"/>	
Alderfly Larvae (Sialidae) (HMFEI pts = 1) No. taxa: <input type="text" value="1"/> <input type="text" value="R"/>	Clams (Bivalvia) (HMFEI pts = 1) No. taxa: <input type="text" value="0"/> <input type="text" value="NA"/>	Stonefly Nymphs (Plecoptera) Taxa Present: <input type="text" value="1"/> HMFEI pts = <input type="text" value="C"/> <input type="text" value="3"/> No. Taxa (x) 3]
Other Beetles (Coleoptera) No. taxa: <input type="text" value="0"/> (HMFEI pts = 1) <input type="text" value="NA"/>	Other Taxa : <input type="text"/>	
Other Taxa: <input type="text"/>	Other Taxa: <input type="text"/>	Caddisfly Larvae (Trichoptera) Taxa Present: <input type="text" value="2"/> HMFEI pts = <input type="text" value="R"/> <input type="text" value="6"/> No. Taxa (x) 3]
Other Taxa: <input type="text"/>	Other Taxa: <input type="text"/>	

*Note: EPT identification based upon Family or Genus level of taxonomy

Notes on Macroinvertebrates: (Predominant Organisms; Other Common Organisms; Diversity Estimate)

Diptera- Ptychopteridae; Ephemeroptera- Leptophlebiidae
Plecoptera- Nemouridae
Trichoptera- Limnephilidae, Rhyacophilidae

Final HMFEI Calculated Score (Sum of All White Box Scores) =

24

IF Final HMFEI Score is > 19, Then CLASS III PWH STREAM
 IF Final HMFEI Score is 7 to 19, Then CLASS II PWH STREAM
 IF Final HMFEI Score is < 7, Then CLASS I PWH STREAM

SITE NAME/LOCATION **Hopedale North Railyard**

SITE NUMBER **Stream 9** RIVER BASIN **Upper Ohio** DRAINAGE AREA (mi²) **0.05**

LENGTH OF STREAM REACH (ft) **200** LAT. **40.34420** LONG. **-80.93500** RIVER CODE **n/a** RIVER MILE **n/a**

DATE **10/16/14** SCORER **SB** COMMENTS

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PWH Streams" for Instructions

STREAM CHANNEL MODIFICATIONS: NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERY

1. SUBSTRATE (Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.

TYPE	PERCENT	TYPE	PERCENT
<input type="checkbox"/> <input type="checkbox"/> BLDR SLABS [16 pts]	<input type="text" value="0%"/>	<input checked="" type="checkbox"/> <input type="checkbox"/> SILT [3 pt]	<input type="text" value="90%"/>
<input type="checkbox"/> <input type="checkbox"/> BOULDER (>256 mm) [16 pts]	<input type="text" value="0%"/>	<input type="checkbox"/> <input checked="" type="checkbox"/> LEAF PACK/WOODY DEBRIS [3 pts]	<input type="text" value="10%"/>
<input type="checkbox"/> <input type="checkbox"/> BEDROCK [16 pt]	<input type="text" value="0%"/>	<input type="checkbox"/> <input type="checkbox"/> FINE DETRITUS [3 pts]	<input type="text" value="0%"/>
<input type="checkbox"/> <input type="checkbox"/> COBBLE (65-256 mm) [12 pts]	<input type="text" value="0%"/>	<input type="checkbox"/> <input type="checkbox"/> CLAY or HARDPAN [0 pt]	<input type="text" value="0%"/>
<input type="checkbox"/> <input type="checkbox"/> GRAVEL (2-64 mm) [9 pts]	<input type="text" value="0%"/>	<input type="checkbox"/> <input type="checkbox"/> MUCK [0 pts]	<input type="text" value="0%"/>
<input type="checkbox"/> <input type="checkbox"/> SAND (<2 mm) [6 pts]	<input type="text" value="0%"/>	<input type="checkbox"/> <input type="checkbox"/> ARTIFICIAL [3 pts]	<input type="text" value="0%"/>

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock **0.00%** (A)

Substrate Percentage Check **100%** (B)

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: **6**

TOTAL NUMBER OF SUBSTRATE TYPES: **2**

HHEI Metric Points

Substrate Max = 40

8

A + B

2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):

<input type="checkbox"/> > 30 centimeters [20 pts]	<input type="checkbox"/> > 5 cm - 10 cm [15 pts]
<input type="checkbox"/> > 22.5 - 30 cm [30 pts]	<input checked="" type="checkbox"/> < 5 cm [5 pts]
<input type="checkbox"/> > 10 - 22.5 cm [25 pts]	<input type="checkbox"/> NO WATER OR MOIST CHANNEL [0 pts]

COMMENTS _____ MAXIMUM POOL DEPTH (centimeters): **2**

Pool Depth Max = 30

5

3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):

<input type="checkbox"/> > 4.0 meters (> 13') [30 pts]	<input type="checkbox"/> > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]
<input type="checkbox"/> > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]	<input checked="" type="checkbox"/> ≤ 1.0 m (≤ 3' 3") [5 pts]
<input type="checkbox"/> > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	

COMMENTS _____ AVERAGE BANKFULL WIDTH (meters): **0.45**

Bankfull Width Max=30

5

This information must also be completed

RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream ☆

RIPARIAN WIDTH		FLOODPLAIN QUALITY	
L	R	L	R
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(Per Bank)		(Most Predominant per Bank)	
Wide >10m		Mature Forest, Wetland	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Immature Forest, Shrub or Old Field	<input type="checkbox"/>
Moderate 5-10m		Residential, Park, New Field	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Fenced Pasture	<input type="checkbox"/>
Narrow <5m		Conservation Tillage	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Urban or Industrial	<input type="checkbox"/>
None		Open Pasture, Row Crop	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	Mining or Construction	<input type="checkbox"/>

COMMENTS _____

FLOW REGIME (At Time of Evaluation) (Check ONLY one box):

<input checked="" type="checkbox"/> Stream Flowing	<input type="checkbox"/> Moist Channel, isolated pools, no flow (Intermittent)
<input type="checkbox"/> Subsurface flow with isolated pools (Interstitial)	<input type="checkbox"/> Dry channel, no water (Ephemeral)

COMMENTS Perennial

SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):

<input type="checkbox"/> None	<input type="checkbox"/> 1.0	<input type="checkbox"/> 2.0	<input type="checkbox"/> 3.0
<input checked="" type="checkbox"/> 0.5	<input type="checkbox"/> 1.5	<input type="checkbox"/> 2.5	<input type="checkbox"/> >3

STREAM GRADIENT ESTIMATE

Flat (0.5 ft/100 ft) Flat to Moderate Moderate (2 ft/100 ft) Moderate to Severe Severe (10 ft/100 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):

QHEI PERFORMED? - Yes No QHEI Score (If Yes, Attach Completed QHEI Form)

DOWNSTREAM DESIGNATED USE(S)

<input type="checkbox"/> WWH Name:	<input type="text"/>	Distance from Evaluated Stream	<input type="text"/>
<input type="checkbox"/> CWH Name:	<input type="text"/>	Distance from Evaluated Stream	<input type="text"/>
<input type="checkbox"/> EWH Name:	<input type="text"/>	Distance from Evaluated Stream	<input type="text"/>

MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION

USGS Quadrangle Name: NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Township / City:

MISCELLANEOUS

Base Flow Conditions? (Y/N): Date of last precipitation: Quantity:
Photograph Information:
Elevated Turbidity? (Y/N): Canopy (% open):
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. and attach results) Lab Number:
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.) Conductivity (µmhos/cm)
Is the sampling reach representative of the stream (Y/N) If not, please explain:

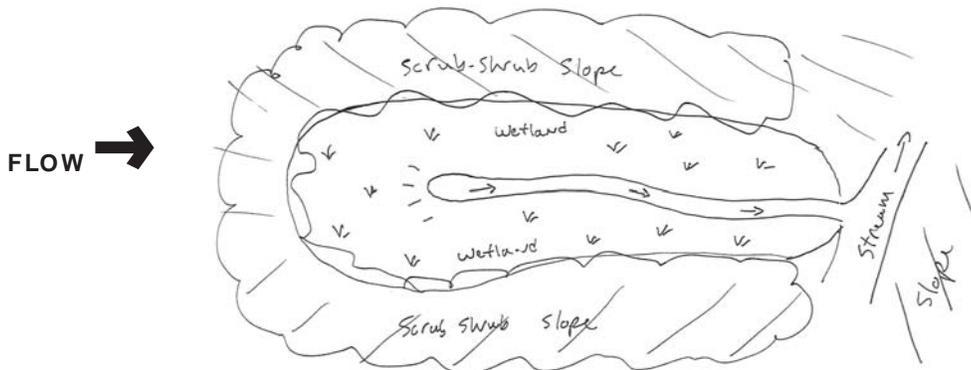
Additional comments/description of pollution impacts:

BIOTIC EVALUATION

Performed? (Y/N): (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)
Fish Observed? (Y/N) Voucher? (Y/N) Salamanders Observed? (Y/N) Voucher? (Y/N)
Frogs or Tadpoles Observed? (Y/N) Voucher? (Y/N) Aquatic Macroinvertebrates Observed? (Y/N) Voucher? (Y/N)
Comments Regarding Biology:

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location



Site ID: **Hopedale North Rail Yard- Stream 9**

Date: 04/23/15

Investigator(s): **Steve Bailey**

3. Macroinvertebrate Scoring Sheet:

THE HEADWATER MACROINVERTEBRATE FIELD EVALUATION INDEX (HMFEI) SCORING SHEET

NOTE: Record the number of observed taxa for each group. Indicate Abundance of Each Taxa Above each White Box.
 Only multiply # of taxa by HMFEI points for EPT taxa! Record HMFEI Scoring Value Points Within each Box.
 For EPT taxa, also indicate the different taxa present.

Key: V = Very Abundant (> 50); A = Abundant (10 -50); C = Common (3 -9); R = Rare (< 3)

Sessile Animals (Porifera , Cnidaria , Bryozoa) (HMFEI pts = 1) No. taxa: <input type="text" value="0"/> <input type="text" value="NA"/>	Crayfish (Decapoda) No. taxa: <input type="text" value="0"/> <input type="text" value="NA"/>	Fishfly Larvae (Corydalidae) (HMFEI pts = 3) No. taxa: <input type="text" value="0"/> <input type="text" value="NA"/>
Aquatic Worms (Turbellaria , Hirudinea , Oligochaeta) (HMFEI pts = 1) No. taxa: <input type="text" value="0"/> <input type="text" value="NA"/>	Dragonfly Nymphs (Anisoptera) (HMFEI pts = 2) No. taxa: <input type="text" value="0"/> <input type="text" value="NA"/>	Water Penny Beetles (Psephenidae) (HMFEI pts = 3) No. taxa: <input type="text" value="0"/> <input type="text" value="NA"/>
Sow Bugs (Isopoda) (HMFEI pts = 1) No. taxa: <input type="text" value="0"/> <input type="text" value="NA"/>	Riffle Beetles (Dryopidae , Elmidae , Ptilodactylidae) (HMFEI pts = 2) No. taxa: <input type="text" value="0"/> <input type="text" value="NA"/>	Crane-fly Larvae (Tipulidae) (HMFEI pts = 3) No. taxa: <input type="text" value="1"/> <input type="text" value="C"/> <input type="text" value="3"/>
Scuds (Amphipoda) (HMFEI pts = 1) No. taxa: <input type="text" value="1"/> <input type="text" value="A"/>	Larvae of other Flies (enter name in comments) (Diptera) (HMFEI pts = 1) No. taxa: <input type="text" value="0"/> <input type="text" value="NA"/>	EPT TAXA* Total No. EPT Taxa = <input type="text" value="1"/>
Water Mites (Hydracarina) (HMFEI pts = 1) No. taxa: <input type="text" value="0"/> <input type="text" value="NA"/>	Midges (Chironomidae) (HMFEI pts = 1) No. taxa: <input type="text" value="0"/> <input type="text" value="NA"/>	Mayfly Nymphs (Ephemeroptera) Taxa Present: <input type="text" value="0"/> HMFEI pts = <input type="text" value="0"/> <input type="text" value="NA"/> No. Taxa (x) 3] <input type="text" value="0"/>
Damselfly Nymphs (Zygoptera) (HMFEI pts = 1) No. taxa: <input type="text" value="0"/> <input type="text" value="NA"/>	Snails (Gastropoda) (HMFEI pts = 1) No. taxa: <input type="text" value="0"/> <input type="text" value="NA"/>	
Alderfly Larvae (Sialidae) (HMFEI pts = 1) No. taxa: <input type="text" value="0"/> <input type="text" value="NA"/>	Clams (Bivalvia) (HMFEI pts = 1) No. taxa: <input type="text" value="0"/> <input type="text" value="NA"/>	Stonefly Nymphs (Plecoptera) Taxa Present: <input type="text" value="1"/> HMFEI pts = <input type="text" value="3"/> <input type="text" value="R"/> No. Taxa (x) 3] <input type="text" value="3"/>
Other Beetles (Coleoptera) (HMFEI pts = 1) No. taxa: <input type="text" value="0"/> <input type="text" value="NA"/>	Other Taxa : <input type="text"/>	
Other Taxa: <input type="text"/>	Other Taxa: <input type="text"/>	Caddisfly Larvae (Trichoptera) Taxa Present: <input type="text" value="0"/> HMFEI pts = <input type="text" value="0"/> <input type="text" value="NA"/> No. Taxa (x) 3] <input type="text" value="0"/>
Other Taxa: <input type="text"/>	Other Taxa: <input type="text"/>	

*Note: EPT identification based upon Family or Genus level of taxonomy

Notes on Macroinvertebrates: (Predominant Organisms; Other Common Organisms; Diversity Estimate)

Plecoptera- Nemouridae

Final HMFEI Calculated Score (Sum of All White Box Scores) =

7

IF Final HMFEI Score is > 19, Then CLASS III PWH STREAM
 IF Final HMFEI Score is 7 to 19, Then CLASS II PWH STREAM
 IF Final HMFEI Score is < 7, Then CLASS I PWH STREAM