



Qualitative Habitat Evaluation Index and Use Assessment Field Sheet

QHEI Score: 58.75

Stream & Location: Doan Brook at Lee Road
Seth Hothorn

RM: 6.70 **Date:** 06/16/14

River Code: - - **STORET #:** - - -

Scorers Full Name & Affiliation: Northeast Ohio Regional Sewer District

Lat./ Long.: 41.4838 181.5643
(NAD 83 - decimal)

Office verified location

1] SUBSTRATE Check **ONLY** Two substrate **TYPE BOXES**, estimate % or note every type present

Check **ONE** (Or 2 & average)

BEST TYPES		POOL RIFFLE	OTHER TYPES		POOL RIFFLE	ORIGIN	QUALITY	Substrate 14 Maximum 20
<input type="checkbox"/> BLDR/SLABS [10]	<input checked="" type="checkbox"/> BOULDER [9]	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input type="checkbox"/> HARDPAN [4]	<input type="checkbox"/> DETRITUS [3]	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> LIMESTONE [1]	<input checked="" type="checkbox"/> HEAVY [-2]	
<input checked="" type="checkbox"/> COBBLE [8]	<input type="checkbox"/> GRAVEL [7]	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input type="checkbox"/> MUCK [2]	<input type="checkbox"/> SILT [2]	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input type="checkbox"/> TILLS [1]	<input checked="" type="checkbox"/> MODERATE [-1]	
<input type="checkbox"/> SAND [6]	<input type="checkbox"/> BEDROCK [5]	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input type="checkbox"/> ARTIFICIAL [0]			<input type="checkbox"/> WETLANDS [0]	<input type="checkbox"/> NORMAL [0]	
						<input type="checkbox"/> HARDPAN [0]	<input type="checkbox"/> FREE [1]	
						<input type="checkbox"/> SANDSTONE [0]	<input checked="" type="checkbox"/> EXTENSIVE [-2]	
						<input type="checkbox"/> RIP/RAP [0]	<input checked="" type="checkbox"/> MODERATE [-1]	
						<input type="checkbox"/> LACUSTURINE [0]	<input type="checkbox"/> NORMAL [0]	
						<input type="checkbox"/> SHALE [-1]	<input type="checkbox"/> NONE [1]	
						<input type="checkbox"/> COAL FINES [-2]		

NUMBER OF BEST TYPES: 4 or more [2] 3 or less [0] (Score natural substrates; ignore sludge from point-sources)

Comments

2] INSTREAM COVER Indicate presence 0 to 3: 0-Absent, 1-Very small amounts or if more common of marginal quality; 2-Moderate amounts, but not of highest quality or in small amounts of highest quality; 3-Highest quality in moderate or greater amounts (e.g., very large boulders in deep or fast water, large diameter log that is stable, well developed rootwad in deep / fast water, or deep, well-defined, functional pools)

AMOUNT

Check **ONE** (Or 2 & average)

<input checked="" type="checkbox"/> UNDERCUT BANKS [1]	<input type="checkbox"/> POOLS > 70cm [2]	<input type="checkbox"/> OXBOWS, BACKWATERS [1]	<input type="checkbox"/> EXTENSIVE >75% [11]
<input type="checkbox"/> OVERHANGING VEGETATION [1]	<input type="checkbox"/> ROOTWADS [1]	<input type="checkbox"/> AQUATIC MACROPHYTES [1]	<input checked="" type="checkbox"/> MODERATE 25-75% [7]
<input type="checkbox"/> SHALLOWS (IN SLOW WATER) [1]	<input type="checkbox"/> BOULDERS [1]	<input type="checkbox"/> LOGS OR WOODY DEBRIS [1]	<input type="checkbox"/> SPARSE 5-<25% [3]
<input type="checkbox"/> ROOTMATS [1]			<input type="checkbox"/> NEARLY ABSENT <5% [1]

Comments

Cover
Maximum 20 14

3] CHANNEL MORPHOLOGY Check **ONE** in each category (Or 2 & average)

SINUOSITY	DEVELOPMENT	CHANNELIZATION	STABILITY
<input checked="" type="checkbox"/> HIGH [4]	<input type="checkbox"/> EXCELLENT [7]	<input checked="" type="checkbox"/> NONE [6]	<input checked="" type="checkbox"/> HIGH [3]
<input checked="" type="checkbox"/> MODERATE [3]	<input type="checkbox"/> GOOD [5]	<input type="checkbox"/> RECOVERED [4]	<input type="checkbox"/> MODERATE [2]
<input type="checkbox"/> LOW [2]	<input checked="" type="checkbox"/> FAIR [3]	<input type="checkbox"/> RECOVERING [3]	<input type="checkbox"/> LOW [1]
<input type="checkbox"/> NONE [1]	<input type="checkbox"/> POOR [1]	<input type="checkbox"/> REGENT OR NO RECOVERY [1]	

Comments

Channel
Maximum 20 15.5

4] BANK EROSION AND RIPARIAN ZONE Check **ONE** in each category for **EACH BANK** (Or 2 per bank & average)

River right looking downstream

EROSION	RIPARIAN WIDTH	FLOOD PLAIN QUALITY	CONSERVATION TILLAGE
<input checked="" type="checkbox"/> NONE / LITTLE [3]	<input type="checkbox"/> WIDE > 50m [4]	<input type="checkbox"/> FOREST, SWAMP [3]	<input type="checkbox"/> URBAN OR INDUSTRIAL [0]
<input type="checkbox"/> MODERATE [2]	<input type="checkbox"/> MODERATE 10-50m [3]	<input type="checkbox"/> SHRUB OR OLD FIELD [2]	<input type="checkbox"/> MINING / CONSTRUCTION [0]
<input checked="" type="checkbox"/> HEAVY / SEVERE [1]	<input type="checkbox"/> NARROW 5-10m [2]	<input checked="" type="checkbox"/> RESIDENTIAL, PARK, NEW FIELD [1]	
	<input type="checkbox"/> VERY NARROW < 5m [1]	<input type="checkbox"/> FENCED PASTURE [1]	
	<input type="checkbox"/> NONE [0]	<input type="checkbox"/> OPEN PASTURE, ROWCROP [0]	

Comments

Riparian
Maximum 10 3.25

5] POOL / GLIDE AND RIFFLE / RUN QUALITY

MAXIMUM DEPTH

Check **ONE** (ONLY!)

> 1m [8]

0.7-<1m [4]

0.4-<0.7m [2]

0.2-<0.4m [1]

< 0.2m [0]

CHANNEL WIDTH

Check **ONE** (Or 2 & average)

POOL WIDTH > RIFFLE WIDTH [2]

POOL WIDTH = RIFFLE WIDTH [1]

POOL WIDTH < RIFFLE WIDTH [0]

CURRENT VELOCITY

Check **ALL** that apply

TORRENTIAL [-1]

VERY FAST [1]

FAST [1]

MODERATE [1]

SLOW [1]

INTERSTITIAL [-1]

INTERMITTENT [-2]

EDDIES [1]

Indicate for reach - pools and riffles.

Recreation Potential

Primary Contact

Secondary Contact

(circle one and comment on back)

Comments

Pool / Current
Maximum 12 8

Indicate for functional riffles; Best areas must be large enough to support a population of riffle-obligate species:

Check **ONE** (Or 2 & average)

NO RIFFLE [metric=0]

RIFFLE DEPTH	RUN DEPTH	RIFFLE / RUN SUBSTRATE	RIFFLE / RUN EMBEDDEDNESS
<input type="checkbox"/> BEST AREAS > 10cm [2]	<input type="checkbox"/> MAXIMUM > 50cm [2]	<input checked="" type="checkbox"/> STABLE (e.g., Cobble, Boulder) [2]	<input type="checkbox"/> NONE [2]
<input type="checkbox"/> BEST AREAS 5-10cm [1]	<input checked="" type="checkbox"/> MAXIMUM < 50cm [1]	<input type="checkbox"/> MOD. STABLE (e.g., Large Gravel) [1]	<input type="checkbox"/> LOW [1]
<input type="checkbox"/> BEST AREAS < 5cm [metric=0]		<input type="checkbox"/> UNSTABLE (e.g., Fine Gravel, Sand) [0]	<input type="checkbox"/> MODERATE [0]

Comments

Riffle / Run
Maximum 8 0

6] GRADIENT (56.20 ft/mi)
DRAINAGE AREA (1.20 mi²)

VERY LOW - LOW [2-4]

MODERATE [6-10]

HIGH - VERY HIGH [10-6]

%POOL: %GLIDE:

%RUN: %RIFFLE:

Gradient
Maximum 10 4

Stream & Location: Dean Brook, South Branch US of Attleboro Road RM: 1.4 Date: 07/17/14

Seth Hothem, Mario Meaney Scorers Full Name & Affiliation: Northeast Ohio Regional Sewer District

River Code: STORET #: Lat./Long.: 41.4744 81.5595 Office verified location

1] SUBSTRATE Check ONLY Two substrate TYPE BOXES; estimate % or note every type present

Substrate assessment table with categories: BEST TYPES, OTHER TYPES, POOL RIFFLE, ORIGIN, QUALITY. Includes checkboxes for various substrate types and a 'Substrate' score box containing 13.5.

2] INSTREAM COVER Indicate presence 0 to 3: 0-Absent; 1-Very small amounts or if more common of marginal quality; 2-Moderate amounts, but not of highest quality or in small amounts of highest quality; 3-Highest quality in moderate or greater amounts

Instream Cover assessment table with categories: UNDERCUT BANKS, OVERHANGING VEGETATION, SHALLOWS, ROOTMATS, POOLS, ROOTWADS, BOULDERS, LOGS OR WOODY DEBRIS, OXBOWS, AQUATIC MACROPHYTES, AXES. Includes a 'Cover' score box containing 14.

3] CHANNEL MORPHOLOGY Check ONE in each category (Or 2 & average)

Channel Morphology assessment table with categories: SINUOSITY, DEVELOPMENT, CHANNELIZATION, STABILITY. Includes a 'Channel' score box containing 13.

4] BANK EROSION AND RIPARIAN ZONE Check ONE in each category for EACH BANK (Or 2 per bank & average)

Bank Erosion and Riparian Zone assessment table with categories: EROSION, RIPARIAN WIDTH, FLOOD PLAIN QUALITY, CONSERVATION TILLAGE, URBAN OR INDUSTRIAL, MINING / CONSTRUCTION. Includes a 'Riparian' score box containing 6.

5] POOL / GLIDE AND RIFFLE / RUN QUALITY

Pool / Glide and Riffle / Run Quality assessment table with categories: MAXIMUM DEPTH, CHANNEL WIDTH, CURRENT VELOCITY, Recreation Potential. Includes a 'Pool / Current' score box containing 8.

Indicate for functional riffles; Best areas must be large enough to support a population of riffle-obligate species: Check ONE (Or 2 & average).

Riffle / Run Quality assessment table with categories: RIFFLE DEPTH, RUN DEPTH, RIFFLE / RUN SUBSTRATE, RIFFLE / RUN EMBEDDEDNESS. Includes a 'Riffle / Run' score box containing 3.

6] GRADIENT (43.0 ft/ml) DRAINAGE AREA (3.4 ml2) %POOL: %GLIDE: %RUN: %RIFFLE: Includes a 'Gradient' score box containing 4.

Handwritten notes: 601st year, 61.5

Comment RE: Reach consistency/ Is reach typical of stream?, Recreation/ Observed - Inferred, Other/ Sampling observations, Concerns, Access directions, etc.

AJ SAMPLED REACH

Check ALL that apply

METHOD

- BOAT
- WADE
- L. LINE
- OTHER

DISTANCE

- 0.5 Km
- 0.2 Km
- 0.15 Km
- 0.12 Km
- OTHER

CLARITY

- 1st --sample pass-- 2nd
- < 20 cm
- 20-40 cm
- 40-70 cm
- > 70 cm/ CTB
- SECCHI DEPTH

meters

CANOPY

- > 85%- OPEN
- 55%-<85%
- 30%-<55%
- 10%-<30%
- <10%- CLOSED

CJ RECREATION

AREA DEPTH POOL: >100ftz >3ft

BJ AESTHETICS

- NUISANCE ALGAE
- INVASIVE MACROPHYTES
- EXCESS TURBIDITY
- DISCOLORATION
- FOAM/ SCUM
- OIL SHEEN
- TRASH/ LITTER
- NUISANCE ODOR
- SLUDGE DEPOSITS
- CSOs/SSOs/OUTFALLS

DJ MAINTENANCE

- PUBLIC / PRIVATE / BOTH / NA
- ACTIVE / HISTORIC / BOTH / NA
- YOUNG-SUCCESSION-OLD
- SPRAY / SNAG / REMOVED
- MODIFIED / DIPPED OUT / NA
- LEVEED / ONE SIDED
- RELOCATED / CUTOFFS
- MOVING-BEDLOAD-STABLE
- ARMoured / SLUMPS
- ISLANDS / SCoured
- IMPOUNDED / DESICCATED
- FLOOD CONTROL / DRAINAGE

EJ ISSUES

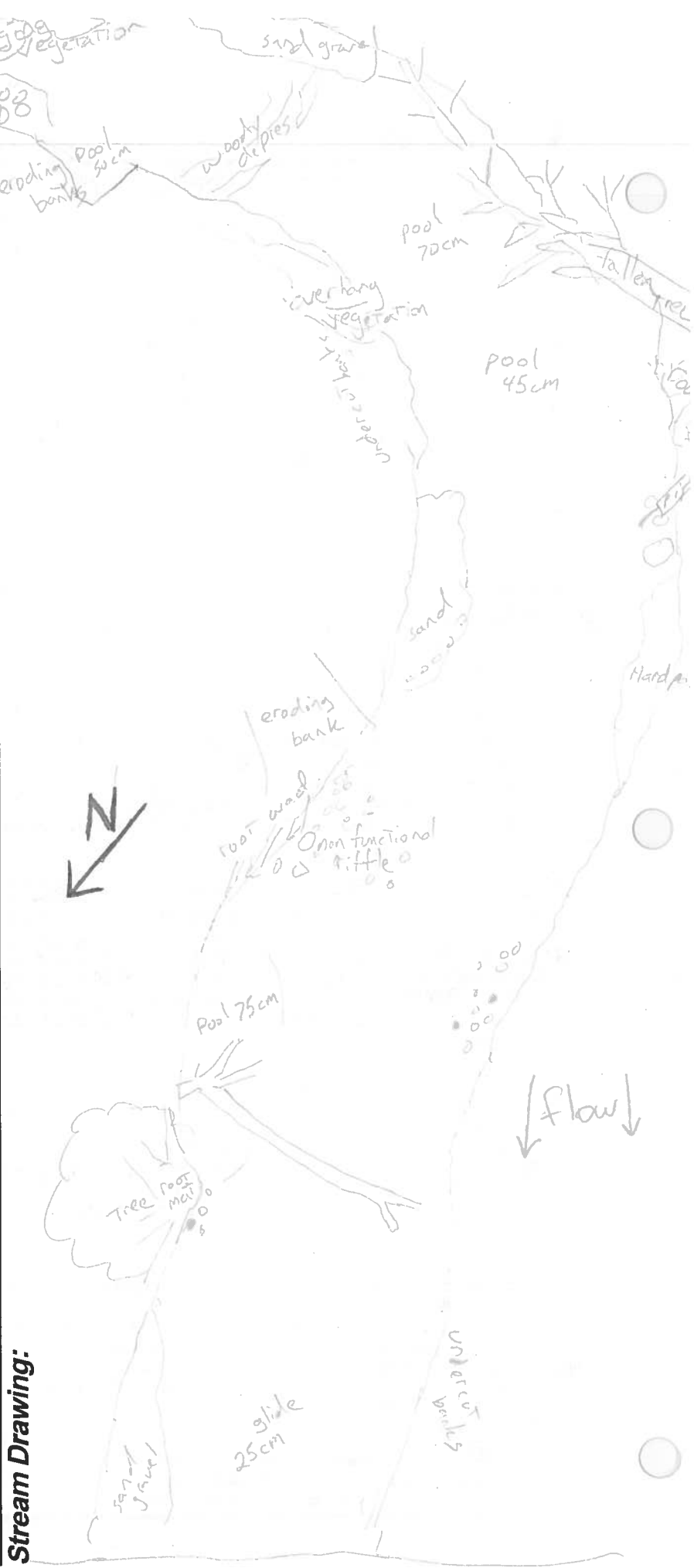
- WWTP / CSO / NPDES / INDUSTRY HARDENED / URBAN / DIRT & GRIME
- CONTAMINATED / LANDFILL
- BMPs-CONSTRUCTION-SEDIMENT LOGGING / IRRIGATION / COOLING
- BANK / EROSION / SURFACE FALSE BANK / MANURE / LAGOON
- WASH H₂O / TILE / H₂O TABLE
- ACID / MINE / QUARRY / FLOW
- NATURAL / WETLAND / STAGNANT
- PARK / GOLF / LAWN / HOME
- ATMOSPHERE / DATA PAUCITY

FJ MEASUREMENTS

- \bar{x} width
- \bar{x} depth
- max. depth
- \bar{x} bankfull width
- bankfull \bar{x} depth
- W/D ratio
- bankfull max. depth
- floodprone \bar{x}^2 width
- entrench. ratio

Legacy Tree:

Stream Drawing:



Stream & Location: Donna Brook OS of St. Clair Avenue

RM: 0.75 Date: 02/17/14

Seth Hothem Mario Meaney

Scorers Full Name & Affiliation: Northeast Ohio Regional Sewer District

River Code: STORET #:

Lat./ Long.: 41.5336 +81.6298

Office verified location

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Check ONE (Or 2 & average)

Substrate assessment grid with categories: BEST TYPES, OTHER TYPES, POOL RIFFLE, ORIGIN, QUALITY. Includes checkboxes for BLDR/SLABS, BOULDER, COBBLE, GRAVEL, SAND, BEDROCK, etc.

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Comments

Channel Maximum 20

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Comments

Riparian Maximum 10

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Pool / Glide and Riffle / Run Quality assessment grid with categories: MAXIMUM DEPTH, CHANNEL WIDTH, CURRENT VELOCITY.

Comments

Recreation Potential Primary Contact Secondary Contact

Pool / Current Maximum 12

Indicate for functional riffles; Best areas must be large enough to support a population of riffle-obligate species:

Riffle / Run assessment grid with categories: RIFFLE DEPTH, RUN DEPTH, RIFFLE / RUN SUBSTRATE, RIFFLE / RUN EMBEDDEDNESS.

Comments

Riffle / Run Maximum 8

6] GRADIENT (13.9 ft/ml) DRAINAGE AREA (9.1 ml^2)

%POOL: %GLIDE: %RUN: %RIFFLE:

Gradient Maximum 10

last year 61 62

AJ SAMPLED REACH

Check ALL that apply

METHOD

- BOAT
 - WADE
 - L. LINE
 - OTHER
- DISTANCE**
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 - 0.2 Km
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 - UP
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Stream Drawing:

