



Qualitative Habitat Evaluation Index and Use Assessment Field Sheet

QHEI Score: 69.5

Stream & Location: Doan Brook (Lee Road)

RM: 06.70 Date: 6/24/16

Matteson

Scorers Full Name & Affiliation: Northeast Ohio Regional Sewer District

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

Lat./ Long.: 41.4838 181.5643

Office verified location

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

Check ONE (Or 2 & average)

BEST TYPES		OTHER TYPES		ORIGIN		QUALITY	
<input type="checkbox"/> BLDG / SLABS [10]	<input checked="" type="checkbox"/> POOL	<input checked="" type="checkbox"/> RIFFLE	<input type="checkbox"/> HARDPAN [4]	<input type="checkbox"/> LIMESTONE [1]	<input type="checkbox"/> SILT	<input type="checkbox"/> HEAVY [-2]	Substrate 4.5 Maximum 20
<input type="checkbox"/> BOULDER [9]	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> DETRITUS [3]	<input type="checkbox"/> TILLS [1]	<input type="checkbox"/>	<input type="checkbox"/> MODERATE [-1]	
<input type="checkbox"/> COBBLE [8]	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> MUCK [2]	<input type="checkbox"/> WETLANDS [0]	<input type="checkbox"/>	<input type="checkbox"/> NORMAL [0]	
<input type="checkbox"/> GRAVEL [7]	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> SILT [2]	<input type="checkbox"/> HARDPAN [0]	<input type="checkbox"/>	<input type="checkbox"/> FREE [1]	
<input type="checkbox"/> SAND [6]	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> ARTIFICIAL [0]	<input type="checkbox"/> SANDSTONE [0]	<input type="checkbox"/>	<input type="checkbox"/> EXTENSIVE [-2]	
<input type="checkbox"/> BEDROCK [5]	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/> RIP/RAP [0]	<input type="checkbox"/>	<input type="checkbox"/> MODERATE [-1]	
(Score natural substrates; ignore)				<input type="checkbox"/> LACUSTURINE [0]	<input type="checkbox"/>	<input type="checkbox"/> NORMAL [0]	
				<input type="checkbox"/> SHALE [-1]	<input type="checkbox"/>	<input type="checkbox"/> NONE [1]	

NUMBER OF BEST TYPES: 4 or more [2] 3 or less [0]

Comments: 7+7 + 2 + 1 + (-1) + (-1.5)

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 (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]	Cover Maximum 20 14
<input checked="" type="checkbox"/> OVERHANGING VEGETATION [1]	<input type="checkbox"/> ROOTWADS [1]	<input type="checkbox"/> AQUATIC MACROPHYTES [1]	
<input checked="" type="checkbox"/> SHALLOWS (IN SLOW WATER) [1]	<input type="checkbox"/> BOULDERS [1]	<input type="checkbox"/> LOGS OR WOODY DEBRIS [1]	
<input type="checkbox"/> ROOTMATS [1]			

Comments: 7+7

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

SINUOSITY	DEVELOPMENT	CHANNELIZATION	STABILITY	Channel Maximum 20 16
<input checked="" type="checkbox"/> HIGH [4]	<input type="checkbox"/> EXCELLENT [7]	<input type="checkbox"/> NONE [6]	<input type="checkbox"/> HIGH [3]	
<input 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 type="checkbox"/> FAIR [3]	<input type="checkbox"/> RECOVERING [3]	<input type="checkbox"/> LOW [1]	

Comments: 4+4+6+2

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

EROSION	RIPARIAN WIDTH	FLOOD PLAIN QUALITY	Riparian Maximum 10 7
<input type="checkbox"/> NONE / LITTLE [3]	<input type="checkbox"/> WIDE > 50m [4]	<input type="checkbox"/> FOREST, SWAMP [3]	
<input type="checkbox"/> MODERATE [2]	<input type="checkbox"/> MODERATE 10-50m [3]	<input type="checkbox"/> SHRUB OR OLD FIELD [2]	
<input type="checkbox"/> HEAVY / SEVERE [1]	<input type="checkbox"/> NARROW 5-10m [2]	<input type="checkbox"/> RESIDENTIAL, PARK, NEW FIELD [1]	

Comments: 2+3+2

5] **POOL / GLIDE AND RIFFLE / RUN QUALITY**

MAXIMUM DEPTH	CHANNEL WIDTH	CURRENT VELOCITY	Recreation Potential Primary Contact Secondary Contact (circle one and comment on back)
Check ONE (ONLY)	Check ONE (Or 2 & average)	Check ALL that apply	
<input type="checkbox"/> > 1m [6]	<input checked="" type="checkbox"/> POOL WIDTH > RIFFLE WIDTH [2]	<input type="checkbox"/> TORRENTIAL [-1]	
<input type="checkbox"/> 0.7-1m [4]	<input type="checkbox"/> POOL WIDTH = RIFFLE WIDTH [1]	<input type="checkbox"/> SLOW [1]	

Comments: 2+2+1+1

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

RIFFLE DEPTH	RUN DEPTH	RIFFLE / RUN SUBSTRATE	RIFFLE / RUN EMBEDDEDNESS	Riffle / Run Maximum 8 4
<input checked="" 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 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: 2+1+1.5+(-0.5)

6] **GRADIENT** (56.20 ft/mi) VERY LOW - LOW [2-4] MODERATE [6-10] HIGH - VERY HIGH [10-6]

DRAINAGE AREA (1.20 mi²)

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

Gradient Maximum 10 8

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

STAGE

- 1st -sample pass-- 2nd
- HIGH
- UP
- NORMAL
- LOW
- DRY

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

BJ AESTHETICS

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

CJ RECREATION

- AREA DEPTH
- POOL: >100ft >3ft

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

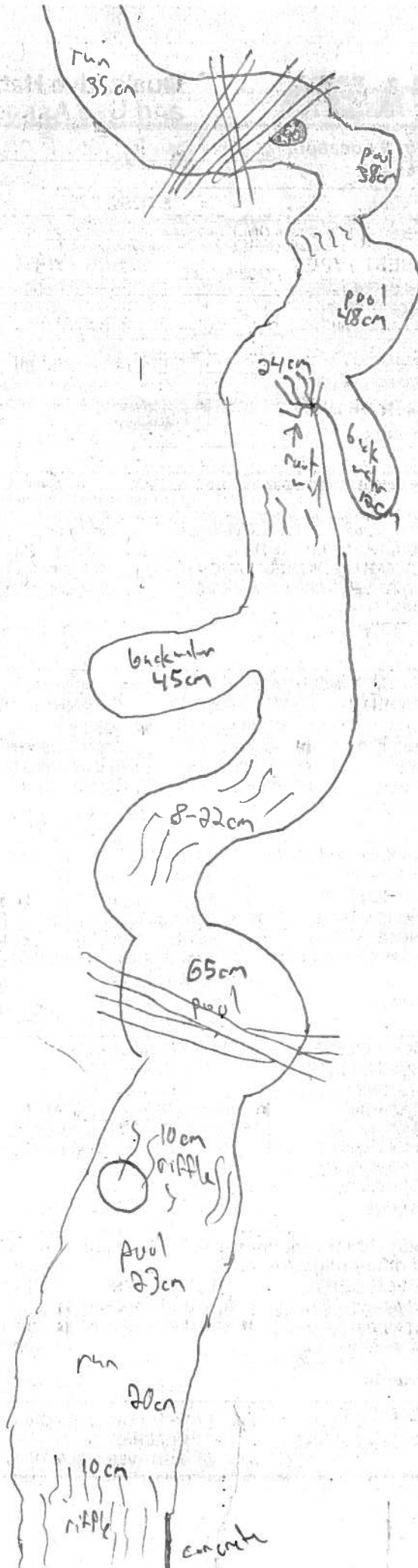
- WWTP / CSO / NPDES / INDUSTRY
- HARDENED / URBAN / DIRT&GRIME
- CONTAMINATED / LANDFILL
- BMPs-CONSTRUCTION-SEDIMENT
- LOGGING / IRRIGATION / COOLING
- BANK / EROSION / SURFACE
- FALSE BANK / MANURE / LAGOON
- WASH H₂O / TILE / H₂O TABLE
- ACID / MINE / QUARRY / FLOW
- NATURAL / WETLAND / STAGNANT
- 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
- entranch. ratio

Legacy Tree:

Stream Drawing:



Stream & Location: Dean Brook

RM: 0.75 Date: 06/16/16

Scorers Full Name & Affiliation: K. Amidon Northeast Ohio Regional Sewer District

River Code: STORET #: Lat./ Long.: 41.5330 181.6296 Office verified location

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

Substrate assessment form with categories: BEST TYPES, OTHER TYPES, ORIGIN, QUALITY, and NUMBER OF BEST TYPES. Includes checkboxes for various substrate types and a handwritten score of 15.

Comments: sand/boulder/cobble all about even amounts.

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.

Instream Cover assessment form with categories: UNDERCUT BANKS, OVERHANGING VEGETATION, SHALLOWS, ROOTMATS, POOLS, ROOTWADS, BOULDERS, OXBOWS, BACKWATERS, AQUATIC MACROPHYTES, LOGS OR WOODY DEBRIS, and AMOUNT. Includes checkboxes and a handwritten score of 10.

Comments

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

Channel Morphology assessment form with categories: SINUOSITY, DEVELOPMENT, CHANNELIZATION, and STABILITY. Includes checkboxes and a handwritten score of 0.

Comments

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 form with categories: EROSION, RIPARIAN WIDTH, FLOOD PLAIN QUALITY, and CONSERVATION TILLAGE. Includes checkboxes and a handwritten score of 7.

Comments

5] POOL / GLIDE AND RIFFLE / RUN QUALITY

Pool / Glide and Riffle / Run Quality assessment form with categories: MAXIMUM DEPTH, CHANNEL WIDTH, CURRENT VELOCITY, and TORRENTIAL/FAST/MODERATE. Includes checkboxes and a handwritten score of 9.

Comments

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

Riffle / Run Quality assessment form with categories: RIFFLE DEPTH, RUN DEPTH, RIFFLE / RUN SUBSTRATE, and RIFFLE / RUN EMBEDDEDNESS. Includes checkboxes and a handwritten score of 0.

Comments

Gradient and Drainage Area assessment form with categories: GRADIENT and DRAINAGE AREA. Includes checkboxes and a handwritten score of 8.

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
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FJ MEASUREMENTS

- width
- depth
- max. depth
- bankfull width
- bankfull x depth
- W/D ratio
- bankfull max. depth
- floodprone x² width
- entrench. ratio

Legacy Tree:

Stream Drawing:

