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Qualitative Habitat Evaluation Index and Use Assessment Field Sheet

QHEI Score: 73.5

06/16/06

7111	iles Red. RM: 8 30 Date: 9 / 2/15
	rs Full Name & Affiliation: Northeast Ohio Regional Sewer District
River Code: STORET #:	Lat./Long.:41.43.5 181.5442 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 POO	ORIGIN QUALITY
☐ BLDR /SLABS [10] ☐ ☐ HARDPAN [4] ☐ ☐ BOULDER [9] ☐ ☐ ☐ DETRITUS [3] ☐	LIMESTONE [1] HEAVY [-2] TILLS [1] SILT MODERATE [-1] Substrate
□ (GRAVEL [7]	☐ WEILANDS [0] WORMAL [0] INDICATE OF THE PROPERTY OF T
SAND [6] ARTIFICIAL [0]	SANDSTONE [0] ODE DESTENSIVE [-2]
□ BEDROCK [5] (Score natural substration UMBER OF BEST TYPES: \$\vec{\pi}\$ 4 or more [2] sludge from points	ates; ignore RIP/RAP [0] Maximum nt-sources) LACUSTURINE [0] NORMAL [0] 20
NUMBER OF BEST TYPES: 4 or more [2] studge from poir Comments	SHALE [-1] NONE [1]
	☐ COAL FINES [-2]
2] INSTREAM COVER Indicate presence 0 to 3: 0-Absent; 1-Ver	y small amounts or if more common of marginal AMOUNT ighest quality or in small amounts of highest
quality: 3-Highest quality in moderate or greater amounts, but not or quality: 3-Highest quality in moderate or greater amounts (e.g., very la diameter log that is stable, well developed rootwad in deep / fast wate	rge boulders in deep or fast water, large Check ONE (Or 2 & average)
OVERHANGING VEGETATION [1] ROOTWADS [1] SHALLOWS (IN SLOW WATER) [1] BOULDERS [1]	AQUATIC MACROPHYTES [1] SPARSE 5-<25% [3] LOGS OR WOODY DEBRIS [1] NEARLY ABSENT <5% [1]
ROOTMATS [1]	Cover
Comments	Maximum 20
23 CHANNEL MODELLOLOCY Check ONE in each actorson /O	The state of the s
3] CHANNEL MORPHOLOGY Check ONE in each category (O SINUOSITY DEVELOPMENT CHANNELIZATION CHANNEL	
☐ HIGH [4] ☐ EXCELLENT [7] 👪 NONE [6]	☐ HIGH [3]
MODERATE [3] GOOD [5] RECOVERED [4] LOW [2] FAIR [3] RECOVERING [3]	Ø MODERATE [2] □ LOW [1]
□ NONE [1] □ POOR [1] □ RECENT OR NO REC	COVERY [1] Channel
Comments	Maximum 20
4] BANK EROSION AND RIPARIAN ZONE Check ONE in	each category for EACH BANK (Or 2 per bank & average)
River right looking downstream RIPARIAN WIDTH	
	FLOOD PLAIN QUALITY L. R.
EROSION	FOREST, SWAMP [3] \Box CONSERVATION TILLAGE [1]
□ NONE / LITTLE [3] □ MODERATE 10-50m [3] □ □ S MODERATE [2] □ MODERATE [2] □ NARROW 5-10m [2] □ □ F	FOREST, SWAMP [3] GONSERVATION TILLAGE [1] SHRUB OR OLD FIELD [2] URBAN OR INDUSTRIAL [0] RESIDENTIAL, PARK, NEW FIELD [1] GONSTRUCTION [0]
☐ NONE / LITTLE [3] ☐ MODERATE 10-50m [3] ☐ S ☐ MODERATE [2] ☐ MODERATE 10-50m [2] ☐ F ☐ HEAVY / SEVERE [1] ☐ VERY NARROW < 5m [1] ☐ ☐ F	FOREST, SWAMP [3] SHRUB OR OLD FIELD [2] RESIDENTIAL, PARK, NEW FIELD [1] FENCED PASTURE [1] CONSERVATION TILLAGE [1] WINDUSTRIAL [0] Indicate predominant land use(s)
☐ NONE / LITTLE [3] ☐ MODERATE 10-50m [3] ☐ S ☐ MODERATE [2] ☐ NARROW 5-10m [2] ☐ F ☐ HEAVY / SEVERE [1] ☐ VERY NARROW < 5m [1] ☐ ☐ F	FOREST, SWAMP [3] SHRUB OR OLD FIELD [2] RESIDENTIAL, PARK, NEW FIELD [1] PENCED PASTURE [1] DPEN PASTURE, ROWCROP [0] CONSERVATION TILLAGE [1] URBAN OR INDUSTRIAL [0] Indicate predominant land use(s) past 100m riparian Maximum 3.5
NONE / LITTLE [3]	FOREST, SWAMP [3] SHRUB OR OLD FIELD [2] RESIDENTIAL, PARK, NEW FIELD [1] FIENCED PASTURE [1] DPEN PASTURE, ROWCROP [0] CONSERVATION TILLAGE [1] URBAN OR INDUSTRIAL [0] Indicate predominant land use(s) past 100m riparian Riparian
NONE / LITTLE [3]	FOREST, SWAMP [3] SHRUB OR OLD FIELD [2] RESIDENTIAL, PARK, NEW FIELD [1] PENCED PASTURE [1] DPEN PASTURE, ROWCROP [0] CONSERVATION TILLAGE [1] URBAN OR INDUSTRIAL [0] Indicate predominant land use(s) past 100m riparian Maximum 3.5
NONE / LITTLE [3] MODERATE 10-50m [3] S MODERATE [2] MODERATE 10-50m [3] S MODERATE [2] MODERATE 10-50m [3] S MODERATE [2] MODERATE 10-50m [3] S MODERATE 10	CURRENT VELOCITY Check ALL that apply CONSERVATION TILLAGE [1] MINING / CONSTRUCTION [0] MINING / CONSTRUCTION [0] Indicate predominant land use(s) past 100m nparian Riparian Maximum 10 Recreation Potential Primary Contact
ONNE / LITTLE [3] OMODERATE 10-50m [3] OS MODERATE [2] ON NARROW 5-10m [2] OS MARROW 5-10m [3] OS MARROW 5	CURRENT VELOCITY Check ALL that apply TORRENTIAL [-1] SHOW [1] CONSERVATION TILLAGE [1] CURBAN OR INDUSTRIAL [0] MINING / CONSTRUCTION [0] Indicate predominant land use(s) past 100m nparian Riparian Maximum 10 Recreation Potential Primary Contact Secondary Contact
NONE / LITTLE [3]	CURRENT VELOCITY Check ALL that apply TORRENTIAL [-1] Check That apply That applies That apply That applies
NONE / LITTLE [3]	CURRENT VELOCITY Check ALL that apply TORRENTIAL [-1] SHOW [1] CHECK ALL that apply TORRENTIAL [-1] FAST [1] INTERNITIAL [-1] MODERATE [1] INTERNITIAL [-1] Indicate predominant land use(s) past 100m riparian Riparian Maximum 10 Recreation Potential Primary Contact Secondary Contact [circle one and comment on back) Indicate predominant land use(s) past 100m riparian Recreation Potential Primary Contact (circle one and comment on back) Indicate for reach - pools and riffles Current
NONE / LITTLE [3]	CURRENT VELOCITY Check ALL that apply TORRENTIAL [-1] TORRENTI
NONE / LITTLE [3] MODERATE 10-50m [3] S MODERATE [2] MODERATE [2] MODERATE 10-50m [3] S MODERATE [2] MODERATE 10-50m [3] S MODERATE 10	CURRENT VELOCITY Check ALL that apply TORRENTIAL [-1] VERY FAST [1] INTERNITIAL [-1] INDUSTRIAL [-1] INTERNITIAL [-1] INTERNI
NONE / LITTLE [3] MODERATE 10-50m [3] S MODERATE [2] MODERATE [2] MARROW 5-10m [2] S MARROW 5-10m [2]	CURRENT VELOCITY Check ALL that apply TORRENTIAL [-1] SLOW [1] VERY FAST [1] INTERSTITIAL [-1] MODERATE [1] INTERSTITIAL [-1] MODERATE [1] EDDIES [1] Indicate predominant land use(s) past 100m riparian Riparian Maximum 10 Recreation Potential Primary Contact Secondary Contact (circle one and comment on back) Iarge enough to support a population (Or 2 & average).
NONE / LITTLE [3] MODERATE 10-50m [3] S MODERATE [2] MODERATE [2] MARROW 5-10m [2] S MARROW 5-10m [2]	CURRENT VELOCITY Check ALL that apply TORRENTIAL [-1] SLOW [1] VERY FAST [1] INTERSTITIAL [-1] MODERATE [1] INTERSTITIAL [-1] MODERATE [1] Construct Moderate predominant land use(s) past 100m riparian Riparian Maximum 10 Recreation Potential Primary Contact Secondary Contact (circle one and comment on back) Indicate predominant land use(s) past 100m riparian Riparian Maximum 10 Recreation Potential Primary Contact Secondary Contact Current Maximum 12 Indicate for reach - pools and riffles Indicate for reach - pools and riffles Recreation Potential Primary Contact Secondary Contact Current Maximum 12 Iarge enough to support a population (Or 2 & average). / RUN SUBSTRATE RIFFLE / RUN EMBEDDEDNESS
NONE / LITTLE [3] MODERATE 10-50m [3] S MODERATE [2] MODERATE [2] MARROW 5-10m [2] S MARROW 5-10m [2] MARROW 5-	CURRENT VELOCITY Check ALL that apply TORENTIAL [-1] SLOW [1] VERY FAST [1] INTERSTITIAL [-1] MODERATE [1] INTERSTITIAL [-1] MODERATE [1] INTERSTITIAL [-1] MODERATE [1] INTERSTITIAL [-1] Indicate for reach - pools and riffles Iarge enough to support a population (Or 2 & average). / RUN SUBSTRATE RIFFLE / RUN EMBEDDEDNESS e.g., Cobble, Boulder) [2] MINING / CONSTRUCTION TILLAGE [1] WINDUSTRIAL [0] Indicate predominant land use(s) past 100m riparian Riparian Riparian Riparian Riparian Riparian Current Primary Contact Secondary Contact (circle one and comment on back) Current Maximum 12 Current Maximum 12
NONE / LITTLE [3]	CURRENT VELOCITY Check ALL that apply TORRENTIAL [-1] SLOW [1] FAST [1] INTERNITIAL [-1] FAST [1] INTERNITIAL [-1] Indicate for reach - pools and riffles Indicate for reach - pools and riffles CONSERVATION TILLAGE [1] Indicate predominant land use(s) past 100m riparian Riparian Maximum 10 Recreation Potential Primary Contact Secondary Contact Secondary Contact Icircle one and comment on back) Pool/ Current Maximum 12 Iarge enough to support a population (Or 2 & average) / RUN SUBSTRATE RIFFLE / RUN EMBEDDEDNESS e.g., Cobble, Boulder) [2] BLE (e.g., Large Gravel) [1] E (e.g., Large Gravel Sand) [0] CONSERVATION TILLAGE [1] URBAN OR INDUSTRIAL [0] Indicate predominant land use(s) Riparian Recreation Potential Primary Contact Secondary Contact Secondar
NONE / LITTLE [3]	CURRENT VELOCITY Check ALL that apply TORENTIAL [-1] SLOW [1] VERY FAST [1] INTERSTITIAL [-1] MODERATE [1] INTERSTITIAL [-1] MODERATE [1] INTERSTITIAL [-1] MODERATE [1] INTERSTITIAL [-1] Indicate for reach - pools and riffles Iarge enough to support a population (Or 2 & average). / RUN SUBSTRATE RIFFLE / RUN EMBEDDEDNESS e.g., Cobble, Boulder) [2] MINING / CONSTRUCTION TILLAGE [1] WINDUSTRIAL [0] Indicate predominant land use(s) past 100m riparian Riparian Riparian Riparian Riparian Riparian Current Primary Contact Secondary Contact (circle one and comment on back) Current Maximum 12 Current Maximum 12
NONE / LITTLE [3]	CURRENT VELOCITY Check ALL that apply TORRENTIAL [-1] SLOW [1] VERY FAST [1] INTERMITTENT [-2] MODERATE [1] DIDIES [1] Indicate for reach - pools and niffles CONSERVATION TILLAGE [1] Indicate predominant land use(s) past 100m niparian Riparian Maximum 10 Recreation Potential Primary Contact Secondary Contact Current Maximum 12 Recreation Potential Primary Contact Secondary Contact Current Maximum 12 Recreation Potential Primary Contact Secondary Contact Current Maximum 12 Recreation Potential Primary Contact Secondary Contact Current Maximum 12 Recreation Potential Primary Contact Secondary Contact Current Maximum 12 Recreation Potential Primary Contact Secondary Contact Current Maximum 12 Recreation Potential Primary Contact Secondary Contact Current Maximum 12 Recreation Potential Primary Contact Secondary Contact Current Maximum 12 Recreation Potential Primary Contact Secondary Contact Secondary Contact Current Maximum 12 Recreation Potential Primary Contact Secondary Conta

Stream	AJ SAMPU Check to the Check METHOD BOAT WADE L.LINE OTHER 0.5 Km 0.2 Km 0.15 Km 0.15 Km 0.17 Km 0.17 Km 0.17 Km 0.17 Km 0.18 Km 0.1
Combile Reflex border Reflex border Reflex	That apply STAGE STAGE 1st-sample pass-2nd HIGH DUP NORMAL DRY CLARITY tsample pass-2nd A0-70 cm 1stcom/ CTB SECCHI DEPTH 1ss sample pass-2nd CJ RECRE CJ RECRE
Flow Flow	BJ AESTHETICS BJ NUISANCE ALGAE INVASIVE MACROPHYTES DISCOLORATION FOAM / SCUM TRASH / LITTER NUISANCE ODOR NUISANCE ODOR TRASH / LITTER SLUDGE DEPOSITS CSOs/SSOs/OUTFALLS MOUNG-BEDLOAD-ST/AREA DEPTH POOL: NOBSTED / CROWN LEVEED / ONE SIDE RELOCATED / CUTOF MOVING-BEDLOAD-ST/ARMOURED / SCUURE IMPOUNDED / DESICCA FLOOD CONTROL / DRAI
region 110m Sand	
word grassy	Circle some & COMMENT
Magos marca sind	Circle some & COMMENT NA Circle some & COMMENT NA Circle some & COMMENT NA Circle some & COMMENT D D D D D D D D D D D D D
Gulvert	FJ MEASUREMENTS x width x depth max. depth bankfull width bankfull max. depth W/ID ratio bankfull max. depth floodprone x² width entrench. ratio Legacy Tree:

ChieFA

Qualitative Habitat Evaluation Index and Use Assessment Field Sheet

QHEI Score: 71.5

Strea	ım & Location.	11711	POLEN	Ds of	Endle	<u> </u>	RM	2.75 Date	07/24/15
iR L	HADES !	Much	CA COL		orers Ful	I Namo & Affil		ast Ohio Regional	
River	r Code: -		STORET			t./ Long.:u	.445118		Office verified location
	JBSTRATE Che	ck <i>ONLY</i> Tw			(NAI) 83 - decimal °)4			iocadon —
.854	BEST TYPES	mate % or no	ote every type pr	esent	POOL RIF	ORIG	Check ONE (O	r 2 & average) QUA	LITY
	BLDR /SLABS [10 BOULDER [9] COBBLE [9] GRAVEL [7] SAND [6] BEDROCK [6] BER OF BEST ments	TYPES:		IDPAN [4] RITUS [3] CK [2] [2] TFIGIAL [0]	uhstrates: ig	# LIMESTO # TILLS [1] WETLANI HARDPAI SANDSTO	NE [1] DS [0] N [0] DNE [0] ONE [0] JRINE [0]	HEAVY MODER MODER FREE EXTEN: MODER NONE	[-2] ATE [-1] Substrate 1. [0] J
			· · · · · ·		4.4				
qualit diame	STREAM COV ty; 3-Highest quality eter log that is stab UNDERGUT BAN OVERHANGING V SHALLOWS (IN S ROOTMATS [1]	quality; y in moderati le, well deve KS [1] /EGETATIO	2-Moderate amo e or greater amo loped rootwad in Pi N [1] P	unts, but no unts (e.a. v	of of highest ery large bo water, or de cm [2]	quality of in small uiders in deep or f eep, well-defined, f OXBOWS, BAI AQUATIC MAG	amounts of night ast water, large unctional pools.	Check ONE (EXTENSIV MODERAT SPARSE 5	OUNT Or 2 & average) E >75% [11] E 25-75% [7] <25% [3] BSENT <5% [1] Cover Maximum 20
31 Ch	HANNEL MORF	PHOLOGY	Check ONE in	each cateor	ny IOr 2 & s	verage)		<u></u> <u>-</u>	
SIN HIGH		EVELOPM EXCELLEN GOOD [5] FAIR [3] POOR [1]	IENT CH	ANNELIZ IE [6] OVERED [OVERING	ZATION IJ	STABII 歯 HIGH [MODEI LOW [1	3] RATE [2]		Channel Maximum 20
41 B	ANK EROSION	I AND RIP	PARIAN ZON	E Check Of	NE in each o	ategory for EACH	BANK (Or 2 per	bank & average)	
	er right looking downst		RIPARIAN WI		_R F	LOOD PLAIN	QUALITY L	R	
88	EROSION NONE / LITTLE [3 MODERATE [2] HEAVY / SEVERE		IDE > 50m [4] IODERATE 10-5 ARROW 5-10m ERY NARROW ONE [0]	[2]	SHRUI RESID FENCE	ST, SWAMP [3] B OR OLD FIELD ENTIAL, PARK, NE ED PASTURE [1] PASTURE, ROWO	W FIELD [4] Line	URBAN OR II	land use(s) Riparian Maximum
		ND DIEE	E / D/IN O//	A ((T) (1			10
- MA Ch [] [] []	OOL / GLIDE A AXIMUM DEPT neck ONE (ONLY!) > 1m [6] 0.7<1m [4] 0.4<0.7m [2] 0.2<0.4m [1] <0.2m [0]	H Chi	CHANNEL Weck ONE (Or 2 & WIDTH > RIFFL. WIDTH < RIFFL.	'IDTH average) EWIDTH [2 EWIDTH [1	TORI		apply LOW [1] NTERSTITIAL [- NTERMITTENT DDIES [1]	Primar Seconda (circle one and	Pool / Current Maximum 12
i.	ndicate for fun	ctional ri	ffles: Best a	reas mus	t be larg	e enough to s	upport a por	oulation	
R BE: BE:	of riffle-obligat IFFLE DEPTH STAREAS > 10cm STAREAS 5-10cm STAREAS < 5cm [metric]	e species R [2] MA [1] MA	: UN DEPTH XIMUM > 50cm	Check RIF [2] D STAI [1] MOD	ONE (<i>Or 2</i> F LE / RU BLE (e.g., 0). STABL E (& average). N SUBSTRATI Cobble, Boulder) [e.g., Large Grave ., Fine Gravel, Sar	E RIFFLE / 2] (1) [1]	RUN EMBEDI NONE [2] LOW [1] MODERATE [0] EXTENSIVE [-1]	Riffle /
6] <i>Gi</i>	RADIENT ((6)	(ft/ml)	VERY LOW -	LOW [2-4]		%POOL:(LIDE:	Gradient
	RAINAGE ARE		MODERATE HIGH-VERY	[6-10]		%RUN: (%RIF	\succ	Meximum 10

Coverson sing	Stream Drawing:	AJ SAMPLE EACH Check Abflat apply METHOD STAGE BOAT 1st-sample pass- 2nd WADE UP
	# E	BJ AESTHETICS BJ AESTHETICS NUISANCE ALGAE INVASIVE MACROPHYTES EXCESS TURBIDITY DISCOLORATION FOAM / SCUM COLUMN INTERNAM / SCUM COLUMN COL
	MARCY SCEEN	NAGE OF NAGE O
THE STATE OF THE S	J. and Jehr	Circle some & COMMENT
	12/20 12/20 20272W	Circle some & COMMENT WATTP / CSO / NPDES / INDUSTRY HARDENED / URBAN / DIRT&GRIME CONTAMINATED / LANDFILL BMPs-CONSTRUCTION-SEDIMENT LOGGING / IRRIGATION / COOLING BANK / EROSION / SURFACE FALSE BANK / MANURE / LAGOON WASH H ₂ 0 / TILE / H ₂ 0 TABLE ACID / MINE / QUARRY / FLOW NATURAL / WETLAND / STAGNANT PARK / GOLF / LAWN / HOME ATMOSPHERE / DATA PAUCITY E MEA. Twidth Twi
Bo Rock	124/15 J. RIGARIE	SUREN SUREN SUREN SI depth ill width ill width in max. de max. de me x² wid n. ratio

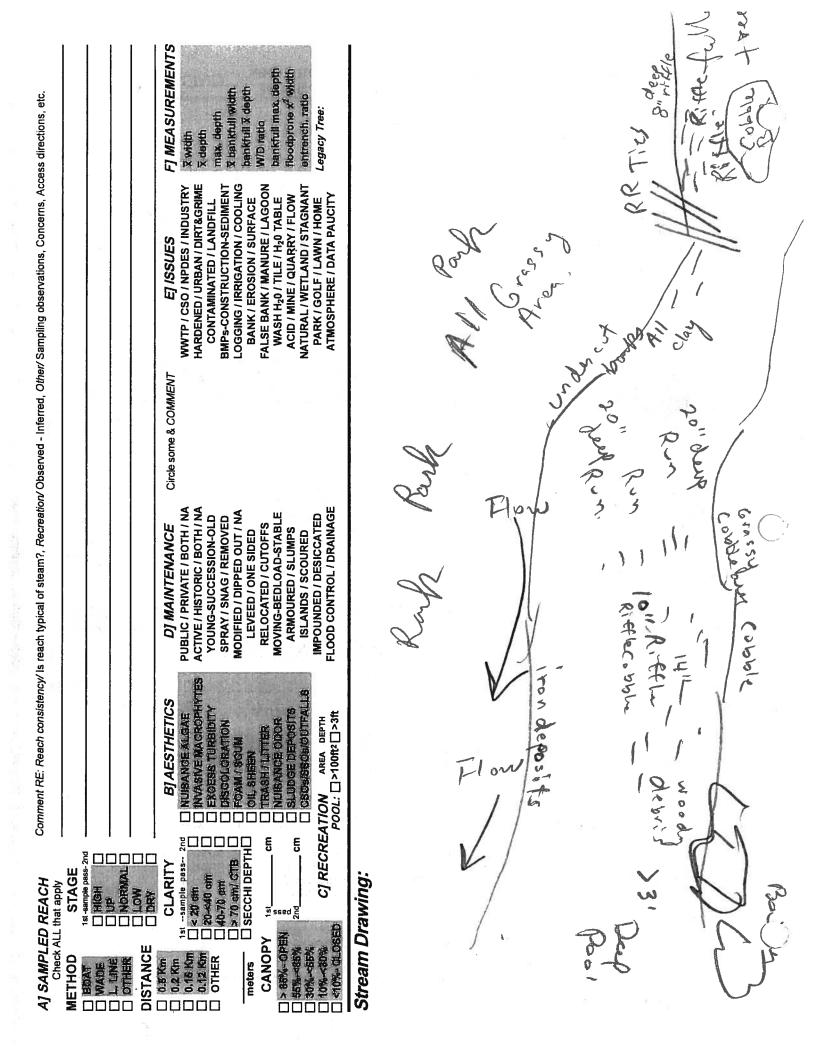
ChieFPA

Qualitative Habitat Evaluation Index and Use Assessment Field Sheet

QHEI Score:

ſ	15.	15	
	100		IJ

Stream & Location: M\\	Creek Us of L	James Road Trib. RN	1:_6.7º Date: 7 24 5
Zabloty	Scorers F	ull Name & Affiliation: North	east Ohio Regional Sewer District
River Code:		Lat./Long.:41 - 4248 /	
1] SUBSTRATE Check ONLY Two		Check ONE (C	
BEST TYPES POOL RIFF	OTHER TYPES	OBIOIN	QUALITY
BLDR /SLABS [10] BOULDER [9] GOBBLE [8]	☐ ☐ HARDPAN [4]	LIMESTONE [1]	HEAVY [-2] Substrate [-1] Substrate T NORMAL [0] T G G G G G G G G G
SAND [6]	SILT [2] ARTIFICIAL [0] (Score natural substrates;	SANDSTONE [0] SDD	EQ. DENTENSIVE [2]
NUMBER OF BEST TYPES:	4 or more [2] sludge from point-so	urces) LAGUSTURINE [0]	Maximum 20
Comments	3 or less [0]	☐ SHALE [-1] ☐ COAL FINES [-2]	LI NONE [1]
2] INSTREAM COVER Indicate I	presence 0 to 3: 0-Absent; 1-Very sm	all amounts or if more common of m	arginal AMOUNT
quality; 3-Highest quality in moderate diameter log that is stable, well development of the control of the cont	-Moderate amounts, but not of highe or greater amounts (e.g., very large loped rootwad in deep / fast water, orPOCLS > 70cm [Z]/ ROOTWADS [1]	st quality or in small amounts of high boulders in deep or fast water, large	Check ONE (Or 2 & average) EXTENSIVE >75% [11] MODERATE 25-75% [7] SPARSE 5-25% [3] NEARLY ABSENT <5% [1]
Comments			Maximum 16
3] CHANNEL MORPHOLOGY		average)	
SINUOSITY DEVELOPME HIGH [4]		STABILITY	
☐ MODERATE [3] ☐ GOOD [5] ☐ LOW [2] ☐ FAIR [3] ☐ POOR [1] ☐ Comments	RECOVERED [4] RECOVERING [3] RECENT OR NO RECOV	MODERATE 221	Channel 12.
4] BANK EROSION AND RIPA		category for EACH BANK (Or 2 per FLOOD PLAIN QUALITY	bank & average)
L R EROSION	L K	ST, SWAMP [8]	R CONSERVATION TILLAGE [1]
MODERATE [2] 🗋 🗆 NA	RROW 5-10m [2] 💮 🗍 RESI	JB OR OLD FIELD CO DENTIAL, PARK, NEW FIELD (1) EED PASTURE (1)	URBAN OR INDUSTRIAL (0) MINING / CONSTRUCTION (0)
Comments Comments	NE (0) OPE		dicate predominant land use(s) st 100m riparian. Riparian Maximum 10
5] POOL / GLIDE AND RIFFLE MAXIMUM DEPTH C	F/RUN QUALITY HANNEL WIDTH	CURRENT VELOCITY	Recreation Potential
	k ONE (Or 2 & average)	Check ALL that apply	Primary Contact
0 > 1m [6]	WOTH > RIFFLE WIDTH [2] TOR	rrential [-1]	Secondary Contact (circle one and comment on back)
□ 0.2<0.4m [1] □ < 0.2m [0] Comments	ом Об	TENT DERATE MI DEPOSES MI dicate for reach - pools and riffles.	Pool / Current Maximum 12
	les; Best areas must be larg		
of riffle-obligate species: RIFFLE DEPTH RU	Check ONE (Or 2	A T 1730	RUN EMBEDDEDNESS
BEST AREAS > 10cm [2] MAXI	MUM > 50cm [2] STABLE (e.g.,	Cobble, Boulder) [2]	□ NONE (2)
BEST AREAS 5-10cm [1] MAXI BEST AREAS < 5cm [metric=0] Comments	MUM < 50cm [1] MOD, STÄBLE (e.		MODERATE [0] Riffle / Run EXTENSIVE [-1] Maximum 8
6] GRADIENT () (βl ft/mi)	VERY LOW - LOW [2-4]	%POOL:() %GL	IDE: Gradient @
DRAINAGE AREA	MODERATE [6-10] HIGH - VERY HIGH [10-6]	%RUN: %RIF	
CDA 4E20			06/46/06





Qualitative Habitat Evaluation Index and Use Assessment Field Sheet

QHEI	Score:	70,25

	Stream & Location: Mill Cr @ Conel Rd RM: 0.12 Date: 08/05/15
}	Jonathan Braver (Seth Nothern) Scorers Full Name & Affiliation: Northeast Ohio Regional Sewer District
	River Code: STORET #: Lat./Long.: 4 1 . 4 1 79 /81 . 638 S Office verified location
	1] SUBSTRATE Check ONLY Two substrate TYPE BOXES; estimate % or note every type present BEST TYPES POOL RIFFLE OTHER TYPES POOL RIFFLE Ulimestone [1] HEAVY [-2] HEAVY
	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. O UNDERCUT BANKS [1] POOLS > 70cm [2] O OXBOWS, BACKWATERS [1] MODERATE 25-75% [7] O OVERHANGING VEGETATION [1] O ROOTWADS [1] AQUATIC MACROPHYTES [1] SPARSE 5-<25% [3] I SHALLOWS (IN SLOW WATER) [1] BOULDERS [1] LOGS OR WOODY DEBRIS [1] NEARLY ABSENT <5% [1] O ROOTMATS [1] Comments
	3] CHANNEL MORPHOLOGY Check ONE in each category (Or 2 & average)
	SINUOSITY DEVELOPMENT CHANNELIZATION STABILITY HIGH [4] EXCELLENT [7] NONE [6] HIGH [3] MODERATE [3] GOOD [5] RECOVERED [4] MODERATE [2] B LOW [2] FAIR [3] RECOVERING [3] LOW [1] NONE [1] POOR [1] RECENT OR NO RECOVERY [1] Channel Maximum 20 Comments Maximum 20 14
	4] BANK EROSION AND RIPARIAN ZONE Check ONE in each category for EACH BANK (Or 2 per bank & average)
	River right looking downstream RIPARIAN WIDTH FLOOD PLAIN QUALITY CONSERVATION TILLAGE [1] CON
	5] POOL / GLIDE AND RIFFLE / RUN QUALITY MAXIMUM DEPTH CHANNEL WIDTH Check ONE (ONLY!) Check ONE (ONLY!) Check ONE (Or 2 & average) TORRENTIAL [-1] SLOW [1] Out-<0.7m [4] POOL WIDTH = RIFFLE WIDTH [2] Out-<0.7m [2] POOL WIDTH < RIFFLE WIDTH [2] Out-<0.7m [2] POOL WIDTH < RIFFLE WIDTH [2] Out-<0.7m [2] POOL WIDTH < RIFFLE WIDTH [2] Indicate for reach - pools and riffles.
	Indicate for functional riffles; Best areas must be large enough to support a population of riffle-obligate species: Check ONE (Or 2 & average). RIFFLE DEPTH RUN DEPTH RIFFLE / RUN SUBSTRATE RIFFLE / RUN EMBEDDEDNESS
`	■ BEST AREAS > 10cm [2]
)	[metric=0]
	6] GRADIENT (10.20 ft/mi)

A] SAMPLED REACH Check ALL that apply	Comment RE: Reach consistency/ I	s reach typical of steam?, Recreation	n/ Observed - Inferred, Other	/ Sampling observations, C
METHOD STAGE □ BOAT 1st-sample pass-2nd				
WADE HIGH D				
OTHER NORMAL				
DISTANCE	☐ 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	Circle some & COMMENT	E] ISSUES WWTP / CSO / NPDES / HARDENED / URBAN / D CONTAMINATED / L BMPs-CONSTRUCTION LOGGING / IRRIGATION BANK / EROSION / S FALSE BANK / MANURE WASH H ₂ 0 / TILE / H ₂ ACID / MINE / QUARR NATURAL / WETLAND / PARK / GOLF / LAWN
☐ <10%- CLOSED	POOL: □>100ft²□>3ft	FLOOD CONTROL / DRAINAGE		ATMOSPHERE / DATA
Stream Drawing:	The state of the s	Market ford	Open Field	
A Second	2 Destile	rooded		
Sorr Sorr	Canal P.	Grass		