



# Qualitative Habitat Evaluation Index and Use Assessment Field Sheet

**QHEI Score:** 59.75

**Stream & Location:** Stickney Creek Upstream of Ridge Road **RM:** 1.15 **Date:** 06/19/17

**Scorers Full Name & Affiliation:** Seth Hothem, Kelsey Amidon Northeast Ohio Regional Sewer District

**River Code:** - - **STORET #:** - - - - **Lat./ Long.:** 41.4334 81.7351 (NAD 83 - decimal) **Office verified location**

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

<b>BEST TYPES</b>		<b>POOL RIFFLE</b>		<b>OTHER TYPES</b>		<b>POOL RIFFLE</b>		<b>ORIGIN</b>		<b>QUALITY</b>		<b>Substrate</b> <span style="border: 1px solid black; border-radius: 15px; padding: 5px; font-size: 24px;">15</span> Maximum 20
<input type="checkbox"/> BLDG /SLABS [10]	<input checked="" type="checkbox"/> POOL	<input checked="" type="checkbox"/> RIFFLE	<input type="checkbox"/>	<input type="checkbox"/> HARDPAN [4]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> LIMESTONE [1]	<input type="checkbox"/>	<input type="checkbox"/> HEAVY [-2]	<input type="checkbox"/>	
<input type="checkbox"/> BOULDER [9]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> DETRITUS [3]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> TILLS [1]	<input type="checkbox"/>	<input type="checkbox"/> MODERATE [-1]	<input type="checkbox"/>	
<input type="checkbox"/> COBBLE [8]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> MUCK [2]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> WETLANDS [0]	<input type="checkbox"/>	<input type="checkbox"/> NORMAL [0]	<input type="checkbox"/>	
<input type="checkbox"/> GRAVEL [7]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> SILT [2]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> HARDPAN [0]	<input type="checkbox"/>	<input type="checkbox"/> FREE [1]	<input type="checkbox"/>	
<input type="checkbox"/> SAND [6]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> ARTIFICIAL [0]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> SANDSTONE [0]	<input type="checkbox"/>	<input type="checkbox"/> EXTENSIVE [-2]	<input type="checkbox"/>	
<input type="checkbox"/> BEDROCK [5]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<small>(Score natural substrates; ignore sludge from point-sources)</small>				<input type="checkbox"/> RIP/RAP [0]	<input type="checkbox"/>	<input type="checkbox"/> MODERATE [-1]	<input type="checkbox"/>	
<b>NUMBER OF BEST TYPES:</b> <input type="checkbox"/> 4 or more [2]		<input type="checkbox"/> 3 or less [0]		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/> LACUSTURINE [0]	<input type="checkbox"/>	<input type="checkbox"/> NORMAL [0]	<input type="checkbox"/>	
<b>Comments</b>								<input type="checkbox"/> SHALE [-1]	<input type="checkbox"/>	<input type="checkbox"/> NONE [1]	<input type="checkbox"/>	
								<input type="checkbox"/> COAL FINES [-2]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

**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.)

<u>1</u> UNDERCUT BANKS [1]	<u>1</u> POOLS > 70cm [2]	<u>1</u> OXBOWS, BACKWATERS [1]	<input type="checkbox"/>	<b>AMOUNT</b>
<u>1</u> OVERHANGING VEGETATION [1]	<u>1</u> ROOTWADS [1]	<u>1</u> AQUATIC MACROPHYTES [1]	<input type="checkbox"/>	Check ONE (Or 2 & average)
<u>1</u> SHALLOWS (IN SLOW WATER) [1]	<u>1</u> BOULDERS [1]	<u>1</u> LOGS OR WOODY DEBRIS [1]	<input type="checkbox"/>	<input type="checkbox"/> EXTENSIVE >75% [11]
<u>2</u> ROOTMATS [1]			<input type="checkbox"/>	<input type="checkbox"/> MODERATE 25-75% [7]
			<input type="checkbox"/>	<input type="checkbox"/> SPARSE 5-<25% [3]
			<input type="checkbox"/>	<input type="checkbox"/> NEARLY ABSENT <5% [1]
<b>Comments</b>				<b>Cover</b> Maximum 20 <span style="border: 1px solid black; border-radius: 15px; padding: 2px;">12</span>

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

<b>SINUOSITY</b>	<b>DEVELOPMENT</b>	<b>CHANNELIZATION</b>	<b>STABILITY</b>	<b>Channel</b> Maximum 20 <span style="border: 1px solid black; border-radius: 15px; padding: 2px;">14</span>
<input 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]	
<input type="checkbox"/> NONE [1]	<input type="checkbox"/> POOR [1]	<input type="checkbox"/> RECENT OR NO RECOVERY [1]		
<b>Comments</b>				

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

<b>EROSION</b>	<b>RIPARIAN WIDTH</b>	<b>FLOOD PLAIN QUALITY</b>	<b>CONSERVATION TILLAGE</b>
<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 type="checkbox"/> HEAVY / SEVERE [1]	<input type="checkbox"/> NARROW 5-10m [2]	<input 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]	
<b>Comments</b>			<b>Riparian</b> Maximum 10 <span style="border: 1px solid black; border-radius: 15px; padding: 2px;">3.25</span>

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

<b>MAXIMUM DEPTH</b>	<b>CHANNEL WIDTH</b>	<b>CURRENT VELOCITY</b>	<b>Recreation Potential</b> <b>Primary Contact</b> <b>Secondary Contact</b> <small>(circle one and comment on back)</small>
Check ONE (ONLY!)	Check ONE (Or 2 & average)	Check ALL that apply	
<input type="checkbox"/> > 1m [6]	<input type="checkbox"/> POOL WIDTH > RIFFLE WIDTH [2]	<input type="checkbox"/> TORRENTIAL [-1]	<b>Pool / Current</b> Maximum 12 <span style="border: 1px solid black; border-radius: 15px; padding: 2px;">7</span>
<input type="checkbox"/> 0.7-<1m [4]	<input type="checkbox"/> POOL WIDTH = RIFFLE WIDTH [1]	<input type="checkbox"/> VERY FAST [1]	
<input checked="" type="checkbox"/> 0.4-<0.7m [2]	<input type="checkbox"/> POOL WIDTH < RIFFLE WIDTH [0]	<input type="checkbox"/> FAST [1]	
<input type="checkbox"/> 0.2-<0.4m [1]		<input type="checkbox"/> MODERATE [1]	
<input type="checkbox"/> < 0.2m [0]		<input type="checkbox"/> INTERSTITIAL [-1]	
<b>Comments</b>		<input type="checkbox"/> INTERMITTENT [-2]	
		<input type="checkbox"/> EDDIES [1]	

Indicate for functional riffles; Best areas must be large enough to support a population of riffle-obligate species:  NO RIFFLE [metric=0]

<b>RIFFLE DEPTH</b>	<b>RUN DEPTH</b>	<b>RIFFLE / RUN SUBSTRATE</b>	<b>RIFFLE / RUN EMBEDDEDNESS</b>
<input type="checkbox"/> BEST AREAS > 10cm [2]	<input type="checkbox"/> MAXIMUM > 50cm [2]	<input type="checkbox"/> STABLE (e.g., Cobble, Boulder) [2]	<input type="checkbox"/> NONE [2]
<input checked="" 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]
<b>Comments</b>			<b>Riffle / Run</b> Maximum 8 <span style="border: 1px solid black; border-radius: 15px; padding: 2px;">4.5</span>

**6) GRADIENT** (41.67 ft/mi)  VERY LOW - LOW [2-4]  MODERATE [6-10]  HIGH - VERY HIGH [10-6]

**DRAINAGE AREA** (3.15 m<sup>2</sup>)

% POOL:  % GLIDE:

% RUN:  % RIFFLE:

**Gradient**  
Maximum 10 4

\* Gradient above upper bound of "Very High" classification

