

Stream & Location: Enclid Creek - East Branch RM: 0.00 Date: 09/21/09

River Code: - STORET #: Lat./Long.: /8 Scorers Full Name & Affiliation: Northeast Ohio Regional Sewer District

Office verified location

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

Substrate assessment grid with categories: BEST TYPES, OTHER TYPES, POOL RIFFLE, ORIGIN, SILT, BEDDEDNESS, QUALITY. Includes checkboxes for various substrate types and a score box for 3.5.

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.

Instream Cover assessment grid with categories: UNDERCUT BANKS, OVERHANGING VEGETATION, SHALLOWS, ROOTMATS, POOLS, ROOTWADS, BOULDERS, OXBOWS, AQUATIC MACROPHYTES, LOGS OR WOODY DEBRIS. Includes checkboxes and a score box for 14.

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

Channel Morphology assessment grid with categories: SINUOSITY, DEVELOPMENT, CHANNELIZATION, STABILITY. Includes checkboxes and a score box for 15.

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 grid with categories: EROSION, RIPARIAN WIDTH, FLOOD PLAIN QUALITY. Includes checkboxes and a score box for 7.5.

5] POOL / GLIDE AND RIFFLE / RUN QUALITY

Pool / Glide and Riffle / Run Quality assessment grid with categories: MAXIMUM DEPTH, CHANNEL WIDTH, CURRENT VELOCITY, Recreation Potential. Includes checkboxes and a score box for 12.

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 / Run Quality assessment grid with categories: RIFFLE DEPTH, RUN DEPTH, RIFFLE / RUN SUBSTRATE, RIFFLE / RUN EMBEDDEDNESS. Includes checkboxes and a score box for 4.

6] GRADIENT (24.39 ft/mi) DRAINAGE AREA (17.5 mi^2) %POOL: %GLIDE: %RUN: %RIFFLE: Gradient Maximum 10

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

STAGE

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

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: >100ft² >3ft

BJAESTHETICS

- 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

Circle some & COMMENT

EJ ISSUES

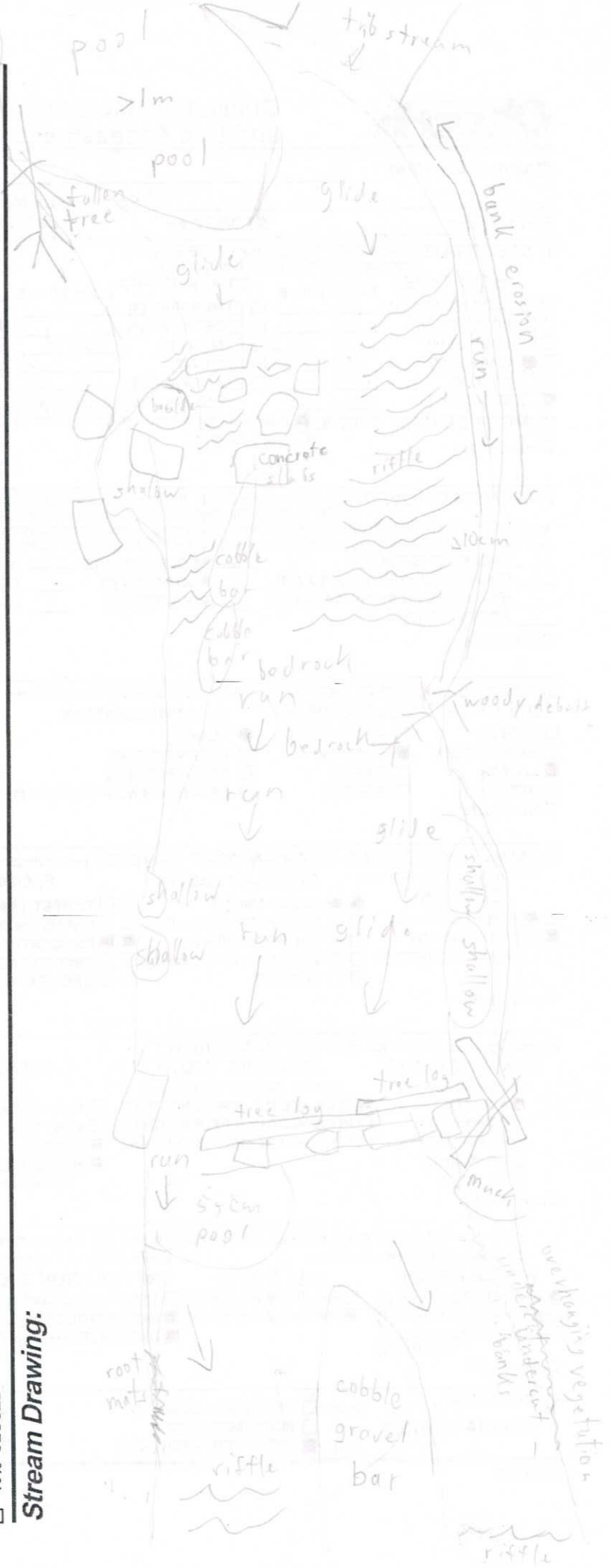
- WWTP / CSO / NPDES / INDUSTRY
- HARDENED / URBAN / DIRT&GRIME
- CONTAMINATED / LANDFILL
- BMPs-CONSTRUCTION-SEDIMENT
- LOGGING / IRRIGATION / COOLING
- BANK / EROSION / SURFACE
- FALSE BANK / MANURE / LAGOON
- WASH H₂O / TILE / H₂O TABLE
- ACID / MINE / QUARRY / FLOW
- NATURAL / WETLAND / STAGNANT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



Fair 43 to 54

Stream & Location: Evered Creek, East Branch, Dam

RM: 0.13 Date: 09/21/09

Holsum, Maich River, NNAA pattern

Scorers Full Name & Affiliation: Northeast Ohio Regional Sewer District

River Code: - - -

STORET #: - - -

Lat./Long.: - - -

18

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"/> BLDR /SLABS [10] | <input type="checkbox"/> POOL RIFFLE | <input type="checkbox"/> HARDPAN [4] | <input type="checkbox"/> POOL RIFFLE | <input type="checkbox"/> LIMESTONE [1] | <input type="checkbox"/> SILT | <input type="checkbox"/> HEAVY [-2] | Substrate 13.5 Maximum 20 |
| <input type="checkbox"/> BOULDER [9] | <input type="checkbox"/> | <input type="checkbox"/> DETRITUS [3] | <input type="checkbox"/> | <input type="checkbox"/> TILLS [1] | <input type="checkbox"/> | <input type="checkbox"/> MODERATE [-1] | |
| <input type="checkbox"/> COBBLE [8] | <input type="checkbox"/> | <input type="checkbox"/> MUCK [2] | <input type="checkbox"/> | <input type="checkbox"/> WETLANDS [0] | <input type="checkbox"/> | <input type="checkbox"/> NORMAL [0] | |
| <input type="checkbox"/> GRAVEL [7] | <input type="checkbox"/> | <input type="checkbox"/> SILT [2] | <input type="checkbox"/> | <input type="checkbox"/> HARDPAN [0] | <input type="checkbox"/> | <input type="checkbox"/> FREE [1] | |
| <input type="checkbox"/> SAND [6] | <input type="checkbox"/> | <input type="checkbox"/> ARTIFICIAL [0] | <input type="checkbox"/> | <input type="checkbox"/> SANDSTONE [0] | <input type="checkbox"/> | <input type="checkbox"/> EXTENSIVE [-2] | |
| <input type="checkbox"/> BEDROCK [5] | <input type="checkbox"/> | | | <input type="checkbox"/> RIP/RAP [0] | <input type="checkbox"/> | <input type="checkbox"/> MODERATE [-1] | |

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 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 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 10

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

| | | | |
|---------------------------------------|----------------------------------------|----------------------------------------------------|---------------------------------------|
| SINUOSITY | DEVELOPMENT | CHANNELIZATION | STABILITY |
| <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] | |

Comments

Channel
Maximum
20 5.5

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 |
| <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] |
| | <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] |
| | | <input type="checkbox"/> CONSERVATION TILLAGE [1] |
| | | <input type="checkbox"/> URBAN OR INDUSTRIAL [0] |
| | | <input type="checkbox"/> MINING / CONSTRUCTION [0] |

Comments

Indicate predominant land use(s) past 100m riparian.
Riparian
Maximum
10 6

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 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

Pool / Current
Maximum
12 6

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 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] |
| | | | <input type="checkbox"/> EXTENSIVE [-1] |

Comments

Riffle / Run
Maximum
8 3.5

6] **GRADIENT** (0.1 ft/mi) VERY LOW - LOW [2-4] %POOL: %GLIDE:

DRAINAGE AREA (12.5 mi²) MODERATE [6-10] %RUN: %RIFFLE:

HIGH - VERY HIGH [10-6] Gradient
Maximum
10 2

Stream & Location: Euclid Creek East Branch Upper A Dam RM: 0.25 Date: 9/21/09

Scorers Full Name & Affiliation: Northeast Ohio Regional Sewer District

River Code: STORET #: Lat./Long.: 18 Office verified location

1] SUBSTRATE Check ONLY Two substrate TYPE BOXES; estimate % or note every type present. Includes categories: BEST TYPES, OTHER TYPES, POOL RIFFLE, ORIGIN, and QUALITY. Includes handwritten scores and a 'Substrate' box with '13'.

2] INSTREAM COVER Indicate presence 0 to 3: 0-Absent; 1-Very small amounts... Includes categories: UNDERCUT BANKS, OVERHANGING VEGETATION, SHALLOWS, ROOTMATS, POOLS, ROOTWADS, BOULDERS, OXBOWS, AQUATIC MACROPHYTES, LOGS OR WOODY DEBRIS. Includes handwritten scores and a 'Cover' box with '13'.

3] CHANNEL MORPHOLOGY Check ONE in each category (Or 2 & average). Includes categories: SINUOSITY, DEVELOPMENT, CHANNELIZATION, STABILITY. Includes handwritten scores and a 'Channel' box with '13.5'.

4] BANK EROSION AND RIPARIAN ZONE Check ONE in each category for EACH BANK (Or 2 per bank & average). Includes categories: EROSION, RIPARIAN WIDTH, FLOOD PLAIN QUALITY. Includes handwritten scores and a 'Riparian' box with '7.25'.

5] POOL / GLIDE AND RIFFLE / RUN QUALITY Includes categories: MAXIMUM DEPTH, CHANNEL WIDTH, CURRENT VELOCITY, Recreation Potential. Includes handwritten scores and a 'Pool / Current' box with '6'.

Indicate for functional riffles; Best areas must be large enough to support a population of riffle-obligate species: Check ONE (Or 2 & average). Includes categories: RIFFLE DEPTH, RUN DEPTH, RIFFLE / RUN SUBSTRATE, RIFFLE / RUN EMBEDDEDNESS. Includes handwritten scores and a 'Riffle / Run' box with '5.5'.

6] GRADIENT (33.33 ft/mi) DRAINAGE AREA (12.5 mi^2) Includes categories: VERY LOW - LOW, MODERATE, HIGH - VERY HIGH. Includes handwritten scores and a 'Gradient' box with '4'.

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

CANOPY

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

STAGE

- HIGH
- UP
- NORMAL
- LOW
- DRY

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
- > 100ft²
- > 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
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- 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:

