

Stream & Location: NINE-MILE CREEK IIS OF LAKESHORE BLVD RM: 0.40 Date: 10/29/13

J. RHOADES / M. MATTESON Scorers Full Name & Affiliation: Northeast Ohio Regional Sewer District

River Code: STORET #: Lat./ Long.: 41.5574 181.5991 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, POOL RIFFLE, ORIGIN, QUALITY. Includes checkboxes for BLDR/SLABS, BOULDER, COBBLE, GRAVEL, SAND, BEDROCK, etc. and a score box for 15.

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 form with categories: UNDERCUT BANKS, OVERHANGING VEGETATION, SHALLOWS, ROOTMATS, POOLS > 70cm, ROOTWADS, BOULDERS, OXBOWS, BACKWATERS, AQUATIC MACROPHYTES, LOGS OR WOODY DEBRIS. Includes a score box for 16.

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

Channel Morphology assessment form with categories: SINUOSITY, DEVELOPMENT, CHANNELIZATION, STABILITY. Includes checkboxes for HIGH, MODERATE, LOW, NONE. Includes a score box for 12.5.

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. Includes checkboxes for NONE, MODERATE, HEAVY/SEVERE, etc. Includes a score box for 9.

5] POOL / GLIDE AND RIFFLE / RUN QUALITY

Pool / Glide and Riffle / Run Quality assessment form with categories: MAXIMUM DEPTH, CHANNEL WIDTH, CURRENT VELOCITY. Includes checkboxes for > 1m, 0.7-1m, etc. Includes a score box for 10.

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 Embeddedness assessment form with categories: RIFFLE DEPTH, RUN DEPTH, RIFFLE / RUN SUBSTRATE, RIFFLE / RUN EMBEDDEDNESS. Includes checkboxes for BEST AREAS > 10cm, etc. Includes a score box for 4.

6] GRADIENT (10.46 ft/mi) DRAINAGE AREA (11.80 mi^2) %POOL: %GLIDE: %RUN: %RIFFLE: Gradient Maximum 10

Stream & Location: NINE-MILE CREEK NEAR PAK S. of BOLIVIA RM: 577 Date: 10/29/13

J. RITWADES / M. MATTESON Scorers Full Name & Affiliation: Northeast Ohio Regional Sewer District

River Code: STORET #: Lat./ Long.: 41.5429 181.5552 Office verified location

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

Substrate section with categories: BEST TYPES, OTHER TYPES, POOL RIFFLE, ORIGIN, QUALITY. Includes checkboxes for BLD, BOULDER, COBBLE, GRAVEL, SAND, BEDROCK, etc.

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

Instream Cover section with categories: UNDERCUT BANKS, OVERHANGING VEGETATION, SHALLOWS, ROOTMATS, POOLS, ROOTWADS, BOULDERS, OXBOWS, AQUATIC MACROPHYTES, LOGS OR WOODY DEBRIS.

Comments

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

Channel Morphology section with categories: SINUOSITY, DEVELOPMENT, CHANNELIZATION, STABILITY. Includes checkboxes for HIGH, MODERATE, LOW, NONE.

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 section with categories: EROSION, RIPARIAN WIDTH, FLOOD PLAIN QUALITY. Includes checkboxes for NONE, MODERATE, HEAVY, etc.

Comments

5) POOL / GLIDE AND RIFFLE / RUN QUALITY

Pool/Glide and Riffle/Run Quality section with categories: MAXIMUM DEPTH, CHANNEL WIDTH, CURRENT VELOCITY. Includes checkboxes for depth and velocity ranges.

Comments

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 section with categories: RIFFLE DEPTH, RUN DEPTH, RIFFLE / RUN SUBSTRATE, RIFFLE / RUN EMBEDDEDNESS. Includes checkboxes for riffle characteristics.

Comments

6) GRADIENT (47.10 ft/mi) DRAINAGE AREA (3.1 m2) %POOL: %GLIDE: %RUN: %RIFFLE: Gradient Maximum 10

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
- SECCI DEPTH

CANOPY

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

CJ RECREATION

POOL: >100ft? >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 / SCAURED
- IMPOUNDED / DESICCATED
- FLOOD CONTROL / DRAINAGE

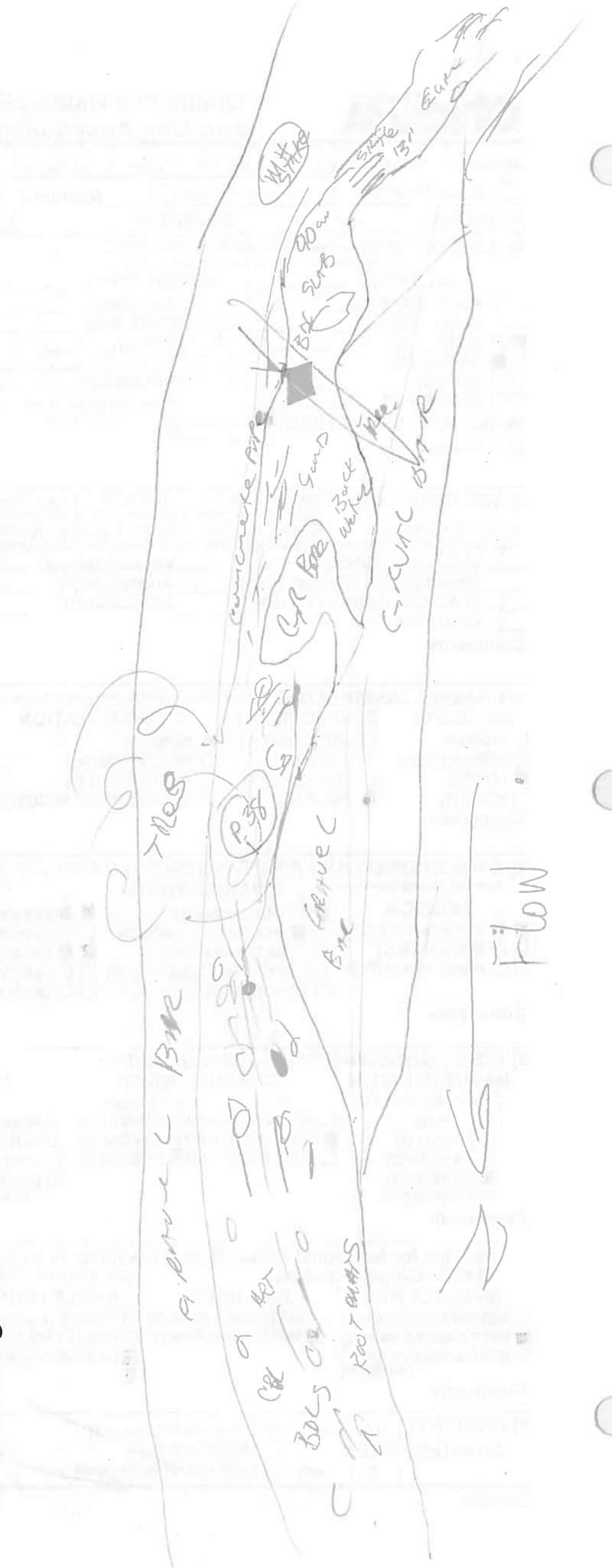
EJ ISSUES

- 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

Stream Drawing:



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

Stream & Location: NINE-MILE CREEK, SOUTH OF BELVIDER RM: SITE 10 Date: 10/29/13

J. RHOADES / M. MATTESON Scorers Full Name & Affiliation: Northeast Ohio Regional Sewer District

River Code: - STORET #: Lat./Long.: 41.5457 181.5523 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, POOL RIFFLE, ORIGIN, QUALITY. Includes checkboxes for BLDR/SLABS, BOULDER, COBBLE, GRAVEL, SAND, BEDROCK, etc. and a score box for 15.

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 > 70cm, ROOTWADS, BOULDERS, OXBOWS, BACKWATERS, AQUATIC MACROPHYTES, LOGS OR WOODY DEBRIS. Includes checkboxes and a score box for 8.

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

Channel Morphology assessment form with categories: SINUOSITY, DEVELOPMENT, CHANNELIZATION, STABILITY. Includes checkboxes for HIGH, MODERATE, LOW, NONE and a score box for 11.

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, CONSERVATION TILLAGE, URBAN OR INDUSTRIAL, MINING / CONSTRUCTION. Includes checkboxes and a score box for 9.

5] POOL / GLIDE AND RIFFLE / RUN QUALITY

Pool / Glide and Riffle / Run Quality assessment form with categories: MAXIMUM DEPTH, CHANNEL WIDTH, CURRENT VELOCITY, Recreation Potential. Includes checkboxes and a score box for 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 form with categories: RIFFLE DEPTH, RUN DEPTH, RIFFLE / RUN SUBSTRATE, RIFFLE / RUN EMBEDDEDNESS. Includes checkboxes and a score box for 3.5.

6] GRADIENT (66.70 ft/mi) DRAINAGE AREA (0.7 mi^2) %POOL: %GLIDE: %RUN: %RIFFLE: Gradient Maximum 10. Includes a score box for 4.

AJ SAMPLED REACH

Check ALL that apply

METHOD

- BOAT
 - WADE
 - L. LINE
 - OTHER
- STAGE**
- 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
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CANOPY

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

CJ RECREATION

AREA DEPTH
POOL: > 100ft² > 3ft

BJ AESTHETICS

- NUISANCE ALGAE
- INVASIVE MACROPHYTES
- EXCESS TURBIDITY
- DISCOLORATION
- FOAM / SCUM
- OIL SHEEN
- TRASH / LITTER
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- SLUDGE DEPOSITS
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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
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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:

