

Stream & Location: Rocky River Dst of Cedar Point Road RM: 1.85 Date: 7/27/19

River Code: 13-001-000 STORET #: T01W19 Lat./ Long.: 41.4082 181.8852

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. Includes categories: BEST TYPES, OTHER TYPES, ORIGIN, and QUALITY. Includes handwritten calculation: 13+2+0+0.5+0.

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. Includes categories: UNDERCUT BANKS, OVERHANGING VEGETATION, SHALLOWS, ROOTMATS, POOLS, ROOTWADS, BOULDERS, OXBOWS, AQUATIC MACROPHYTES, LOGS OR WOODY DEBRIS. Includes handwritten calculation: 6+5.

3] CHANNEL MORPHOLOGY Check ONE in each category (Or 2 & average). Includes categories: SINUOSITY, DEVELOPMENT, CHANNELIZATION, STABILITY. Includes handwritten calculation: 2+5+6+3.

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, CONSERVATION TILLAGE, URBAN OR INDUSTRIAL, MINING / CONSTRUCTION. Includes handwritten calculation: 3+3.5+2.5.

5] POOL / GLIDE AND RIFFLE / RUN QUALITY MAXIMUM DEPTH, CHANNEL WIDTH, CURRENT VELOCITY. Includes categories: MAXIMUM DEPTH, CHANNEL WIDTH, CURRENT VELOCITY, Recreation Potential. Includes handwritten calculation: 6+2+3.

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. Includes handwritten calculation: 2+2+2+1.5.

6] GRADIENT (7.35 ft/mi) DRAINAGE AREA (267 mi^2). Includes categories: GRADIENT, DRAINAGE AREA, % POOL, % GLIDE, % RUN, % RIFFLE. Includes handwritten calculation: 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

**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**

- < 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:  >100ft<sup>2</sup>  >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
- ARMOURD / SLUMPS
- ISLANDS / SCOURED
- IMPOUNDED / DESICCATED
- FLOOD CONTROL / DRAINAGE

**EJ ISSUES**

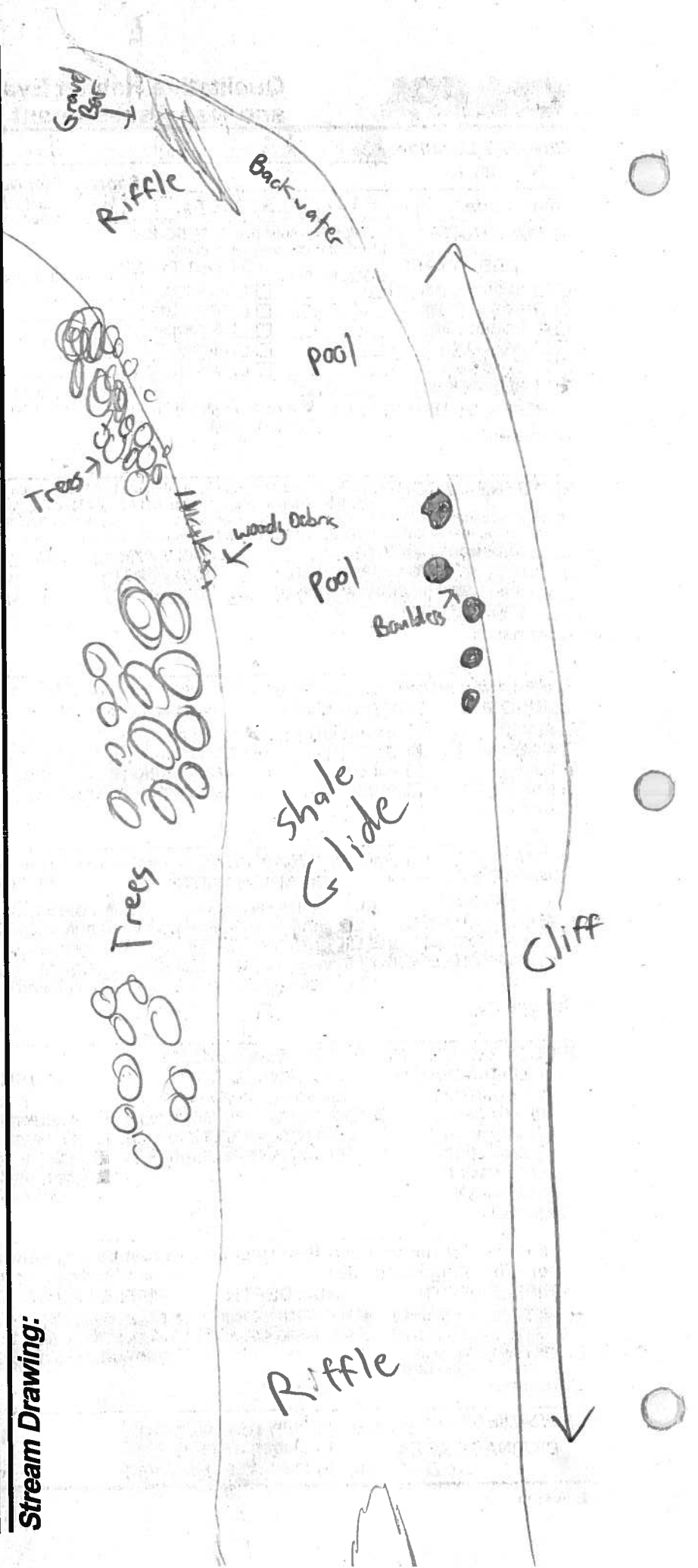
- WWTP / CSO / NPDES / INDUSTRY
- HARDENED / URBAN / DIRT&GRIME
- CONTAMINATED / LANDFILL
- BMPs-CONSTRUCTION-SEDIMENT
- LOGGING / IRRIGATION / COOLING
- BANK / EROSION / SURFACE
- FALSE BANK / MANURE / LAGOON
- WASH H<sub>2</sub>O / TILE / H<sub>2</sub>O TABLE
- ACID / MINE / QUARRY / FLOW
- NATURAL / WETLAND / STAGNANT
- PARK / GOLF / LAWN / HOME
- ATMOSPHERE / DATA PAUCITY

**FJ MEASUREMENTS**

- width
- depth
- max. depth
- bankfull width
- bankfull x depth
- W/D ratio
- bankfull max. depth
- floodprone x<sup>2</sup> width
- entrench. ratio

Legacy Tree:

**Stream Drawing:**



Stream & Location: Rocky River Dst of Abram Creek RM: 10.20 Date: 8/30/19

Eric Soehnle Scorers Full Name & Affiliation: Northeast Ohio Regional Sewer District

River Code: 13-001-000 STORET #: T01W15 Lat./ Long. 41.4176 81.8596 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, QUALITY. Includes checkboxes for BLDR/SLABS, BOULDER, COBBLE, GRAVEL, SAND, BEDROCK, etc.

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

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 assessment grid 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 assessment grid with categories: SINUOSITY, DEVELOPMENT, CHANNELIZATION, STABILITY.

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 grid with categories: EROSION, RIPARIAN WIDTH, FLOOD PLAIN QUALITY.

Comments

5] POOL / GLIDE AND RIFFLE / RUN QUALITY

Pool/Glide and Riffle/Run Quality assessment grid with categories: MAXIMUM DEPTH, CHANNEL WIDTH, CURRENT VELOCITY.

Comments

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

Riffle/Run Quality assessment grid with categories: RIFFLE DEPTH, RUN DEPTH, RIFFLE / RUN SUBSTRATE, RIFFLE / RUN EMBEDDEDNESS.

Comments

6] GRADIENT (8.47 ft/mi) DRAINAGE AREA (280 mi^2)

Gradient assessment grid with categories: % POOL, % GLIDE, % RUN, % RIFFLE.

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

**CJ RECREATION**

- AREA DEPTH
- POOL:  > 100R²  > 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 / SCoured
- IMPOUNDED / DESICCATED
- FLOOD CONTROL / DRAINAGE

**EJ ISSUES**

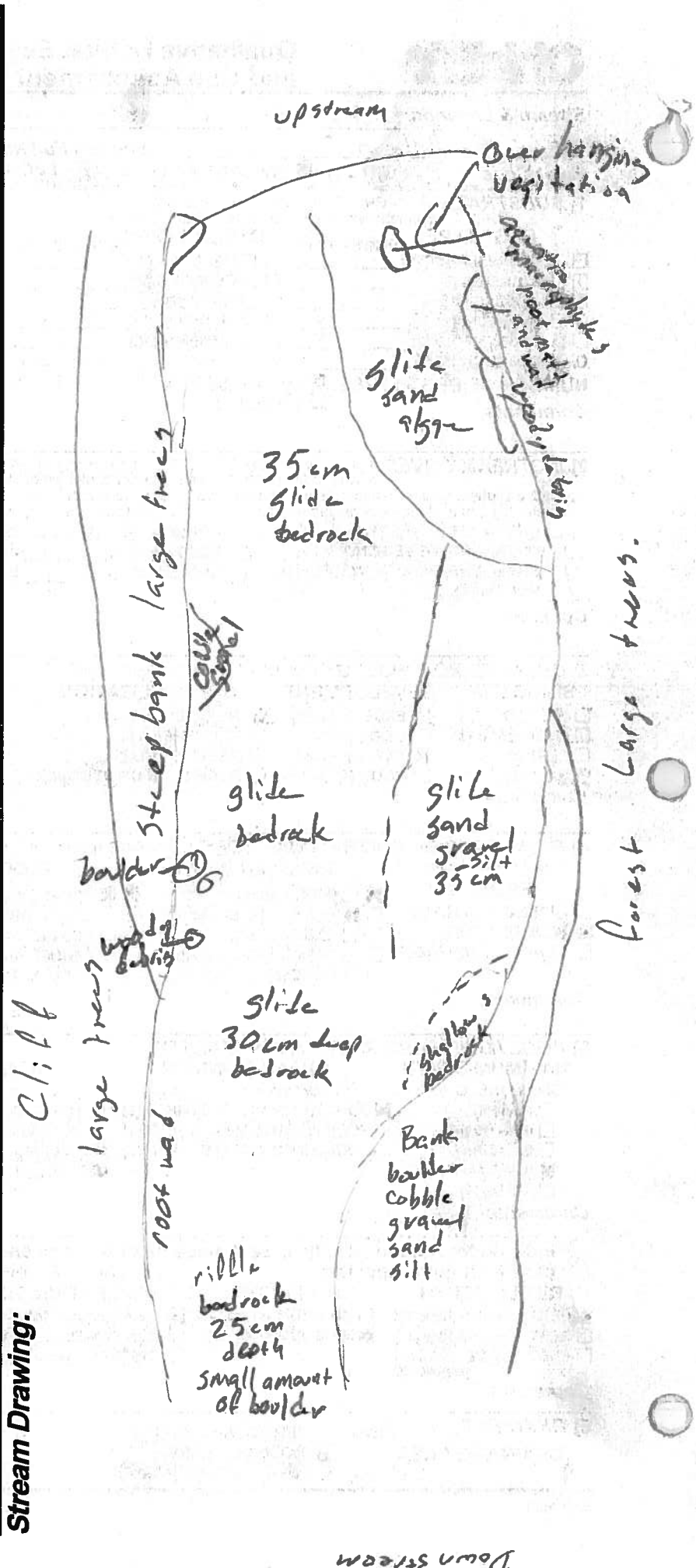
- WWTP / CSO / NPDES / INDUSTRY
- HARDENED / URBAN / DIRT & GRIME
- CONTAMINATED / LANDFILL
- BMPs-CONSTRUCTION-SEDIMENT
- LOGGING / IRRIGATION / COOLING
- BANK / EROSION / SURFACE
- FALSE BANK / MANURE / LAGOON
- WASH H<sub>2</sub>O / TILE / H<sub>2</sub>O TABLE
- ACID / MINE / QUARRY / FLOW
- NATURAL / WETLAND / STAGNANT
- PARK / GOLF / LAWN / HOME
- ATMOSPHERE / DATA PAUCITY

**FJ MEASUREMENTS**

- width
- depth
- max. depth
- bankfull width
- bankfull x depth
- W/D ratio
- bankfull max. depth
- floodprone x<sup>2</sup> width
- entrench. ratio

Legacy Tree:

**Stream Drawing:**





Stream & Location: Rocky River Ust of Puritas

RM: 8.30 Date: 08/28/19

Eric Soehlen

Scorers Full Name & Affiliation: Northeast Ohio Regional Sewer District

River Code: 13-001-000 STORET #: 501810 Lat./Long.: 41.4354 181.3436

Office verified location

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

Check ONE (Or 2 & average)

Substrate assessment table with categories: BEST TYPES, OTHER TYPES, ORIGIN, QUALITY. Includes checkboxes for BLDR/SLABS, BOULDER, COBBLE, GRAVEL, SAND, BEDROCK, etc.

Comments 13

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

AMOUNT Check ONE (Or 2 & average)

Instream Cover assessment table with categories: UNDERCUT BANKS, OVERHANGING VEGETATION, SHALLOWS, ROOTMATS, POOLS > 70cm, ROOTWADS, BOULDERS, OXBOWS, BACKWATERS, AQUATIC MACROPHYTES, LOGS OR WOODY DEBRIS.

Comments 1

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

Channel Morphology assessment table with categories: SINUOSITY, DEVELOPMENT, CHANNELIZATION, STABILITY.

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 table with categories: EROSION, RIPARIAN WIDTH, FLOOD PLAIN QUALITY.

Comments 2

5] POOL / GLIDE AND RIFFLE / RUN QUALITY

Pool/Glide and Riffle/Run Quality assessment table with categories: MAXIMUM DEPTH, CHANNEL WIDTH, CURRENT VELOCITY.

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 table with categories: RIFFLE DEPTH, RUN DEPTH, RIFFLE / RUN SUBSTRATE, RIFFLE / RUN EMBEDDEDNESS.

6] GRADIENT (6.13 ft/mi) DRAINAGE AREA (282 m²) Assessment table with categories: GRADIENT, DRAINAGE AREA, %POOL, %GLIDE, %RUN, %RIFFLE.

**AJ SAMPLED REACH**

Check ALL that apply

- METHOD**
- BOAT
  - WADE
  - L. LINE
  - OTHER

- STAGE**
- HIGH
  - UP
  - NORMAL
  - LOW
  - DRY

1st-sample pass-2nd

- DISTANCE**
- 0.5 Km
  - 0.2 Km
  - 0.15 Km
  - 0.12 Km
  - OTHER

- CLARITY**
- < 20 cm
  - 20-40 cm
  - 40-70 cm
  - > 70 cm/ CTB
  - SECCHI DEPTH

- 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

**EJ ISSUES**

Circle some & COMMENT

- WWTP / CSO / NPDES / INDUSTRY
- HARDENED / URBAN / DIRT&GRIME
- CONTAMINATED / LANDFILL
- BMPs-CONSTRUCTION-SEDIMENT
- LOGGING / IRRIGATION / COOLING
- BANK / EROSION / SURFACE
- FALSE BANK / MANURE / LAGOON
- WASH H<sub>2</sub>O / TILE / H<sub>2</sub>O TABLE
- ACID / MINE / QUARRY / FLOW
- NATURAL / WETLAND / STAGNANT
- PARK / GOLF / LAWN / HOME
- ATMOSPHERE / DATA PAUCITY

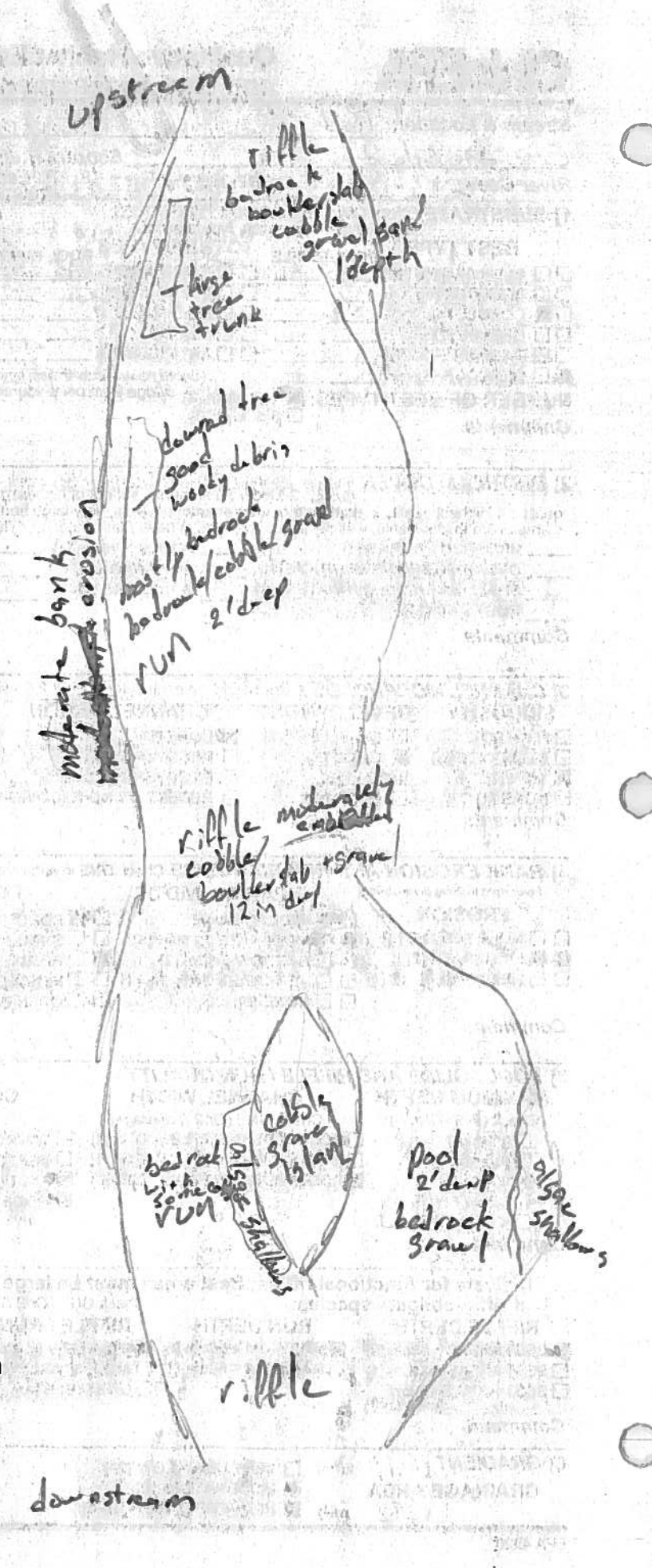
- FJ MEASUREMENTS**
- width
  - depth
  - max. depth
  - bankfull width
  - bankfull x depth
  - W/D ratio
  - bankfull max. depth
  - floodprone x<sup>2</sup> width
  - entrench. ratio

- CJ RECREATION**
- AREA DEPTH
  - POOL:  >100ft<sup>2</sup>  >3ft

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

- LEGACY TREE:**
- width
  - depth
  - max. depth
  - bankfull width
  - bankfull x depth
  - W/D ratio
  - bankfull max. depth
  - floodprone x<sup>2</sup> width
  - entrench. ratio

**Stream Drawing:**





Stream & Location: Rocky River Near Tyler Barn RM: 4.80 Date: 8/2/19

Matteson

Scorers Full Name & Affiliation: Northeast Ohio Regional Sewer District

River Code: 13-001-000 STORE #: T01W07 Lat./Long.: 41.4644 81.8211 Office verified location

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

Check ONE (Or 2 & average)

Substrate assessment grid with categories: BEST TYPES, OTHER TYPES, ORIGIN, and QUALITY. Includes handwritten scores and a 'Substrate' box with value 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.

AMOUNT

Check ONE (Or 2 & average)

Instream Cover assessment grid with categories: UNDERCUT BANKS, OVERHANGING VEGETATION, SHALLOWS, ROOTMATS, POOLS, ROOTWADS, BOULDERS, OXBOWS, BACKWATERS, AQUATIC MACROPHYTES, LOGS OR WOODY DEBRIS. Includes handwritten scores and a 'Cover' box with value 13.

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

Channel Morphology assessment grid with categories: SINUOSITY, DEVELOPMENT, CHANNELIZATION, STABILITY. Includes handwritten scores and a 'Channel' box with value 14.5.

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 grid with categories: EROSION, RIPARIAN WIDTH, FLOOD PLAIN QUALITY. Includes handwritten scores and a 'Riparian' box with value 8.5.

5) POOL / GLIDE AND RIFFLE / RUN QUALITY

Pool / Glide and Riffle / Run Quality assessment grid with categories: MAXIMUM DEPTH, CHANNEL WIDTH, CURRENT VELOCITY. Includes handwritten scores and a 'Pool / Current' box with value 11.

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

Riffle / Run Quality assessment grid with categories: RIFFLE DEPTH, RUN DEPTH, RIFFLE / RUN SUBSTRATE, RIFFLE / RUN EMBEDDEDNESS. Includes handwritten scores and a 'Riffle / Run' box with value 7.

6) GRADIENT (7.46 ft/mi) DRAINAGE AREA (289 m^2) Assessment grid with categories: GRADIENT, DRAINAGE AREA. Includes handwritten scores and a 'Gradient' box with value 10.

**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/ C/T/B
- SECHI DEPTH

meters

**CANOPY**

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

**CJ RECREATION**

- AREA DEPTH
- >100ft<sup>2</sup>
- >3ft

**BJ AESTHETICS**

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

**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
- ARMOURD / SLUMPS
- ISLANDS / SCOURED
- IMPOUNDED / DESICCATED
- FLOOD CONTROL / DRAINAGE

**EJ ISSUES**

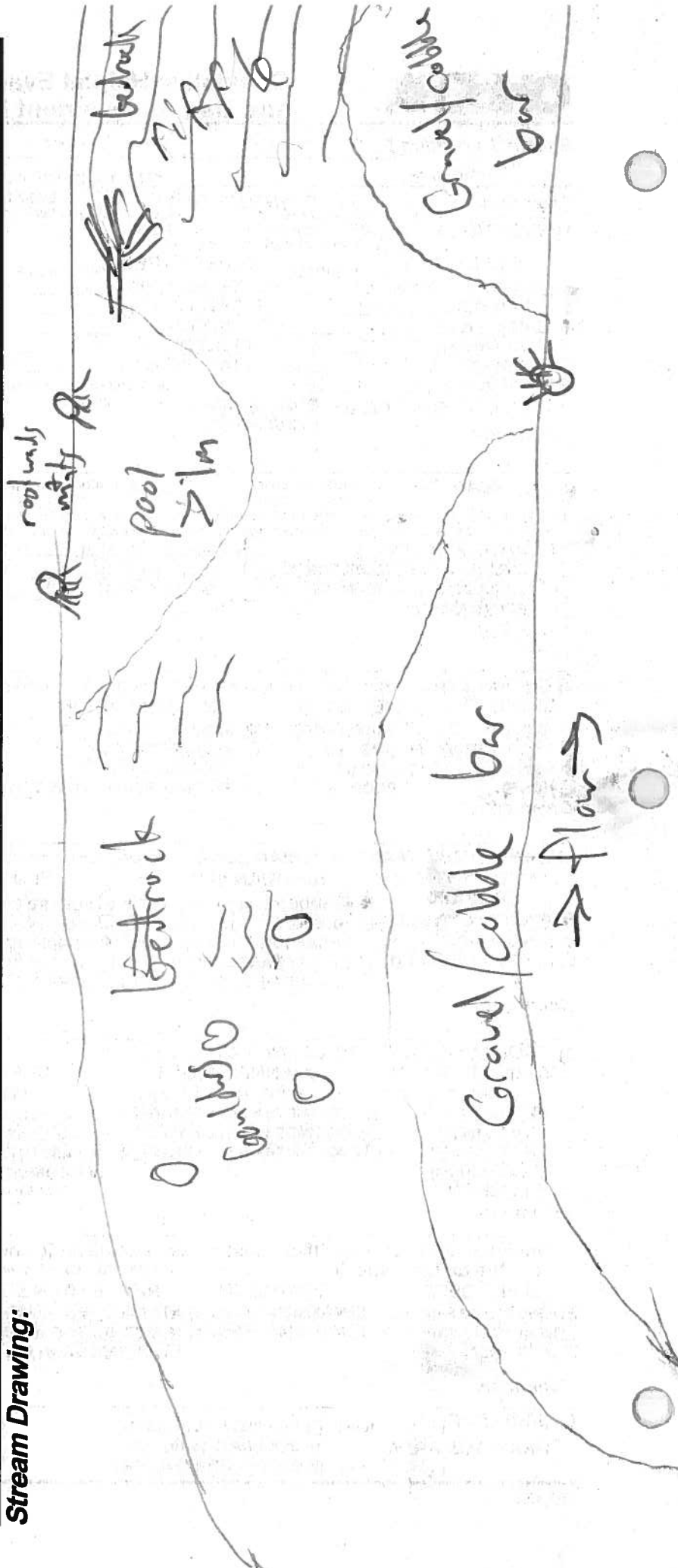
- WWTP / CSO / NPDES / INDUSTRY
- HARDENED / URBAN / DIRT&GRIME
- CONTAMINATED / LANDFILL
- BMPs-CONSTRUCTION-SEDIMENT
- LOGGING / IRRIGATION / COOLING
- BANK / EROSION / SURFACE
- FALSE BANK / MANURE / LAGOON
- WASH H<sub>2</sub>O / TILE / H<sub>2</sub>O TABLE
- ACID / MINE / QUARRY / FLOW
- NATURAL / 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:**





**Stream & Location:** Rocky River Ust of Hilliard Boulevard RM: 250 Date: 8/28/19

**Scorers Full Name & Affiliation:** Hothorn Boesinger Northeast Ohio Regional Sewer District  
**River Code:** 13-001-000 **STORET #:** 101W04 **Lat./Long.:** 41.471281 -82.3985 **Office verified location**

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

<p><b>BEST TYPES</b></p> <input type="checkbox"/> BLDG / SLABS [10] <input type="checkbox"/> BOULDER [9] <input type="checkbox"/> COBBLE [8] <input type="checkbox"/> GRAVEL [7] <input type="checkbox"/> SAND [6] <input type="checkbox"/> BEDROCK [5]	<p><b>POOL RIFFLE</b></p> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<p><b>OTHER TYPES</b></p> <input type="checkbox"/> HARDPAN [4] <input type="checkbox"/> DETRITUS [3] <input type="checkbox"/> MUCK [2] <input type="checkbox"/> SILT [2] <input type="checkbox"/> ARTIFICIAL [0]	<p><b>POOL RIFFLE</b></p> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<p><b>ORIGIN</b></p> <input type="checkbox"/> LIMESTONE [1] <input type="checkbox"/> TILLS [1] <input type="checkbox"/> WETLANDS [0] <input type="checkbox"/> HARDPAN [0] <input type="checkbox"/> SANDSTONE [0] <input type="checkbox"/> RIPRAP [0] <input type="checkbox"/> LAGUSTURINE [0] <input type="checkbox"/> SHALE [1-1] <input type="checkbox"/> COAL FINES [1-2]	<p><b>QUALITY</b></p> <input type="checkbox"/> HEAVY [1-2] <input type="checkbox"/> MODERATE [1-1] <input type="checkbox"/> NORMAL [0] <input type="checkbox"/> FREE [1] <input type="checkbox"/> EXTENSIVE [1-2] <input type="checkbox"/> MODERATE [1-1] <input type="checkbox"/> NORMAL [0] <input type="checkbox"/> NONE [1]	<p><b>SILT</b></p> <p><b>EMBEDDEDNESS</b></p>	<p><b>Substrate</b></p> <div style="border: 1px solid black; border-radius: 15px; padding: 5px; display: inline-block;">75.5</div> Maximum 20
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**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.)

<p><b>UNDERCUT BANKS</b> [1]</p> <p><b>OVERHANGING VEGETATION</b> [1]</p> <p><b>SHALLOWING (IN SLOW WATER)</b> [1]</p> <p><b>ROOTMATS</b> [1]</p>	<p><b>POOLS &gt; 70cm</b> [2]</p> <p><b>ROOTWADS</b> [1]</p> <p><b>BOULDERS</b> [1]</p>	<p><b>OXBOWS, BACKWATERS</b> [1]</p> <p><b>AQUATIC MACROPHYTES</b> [1]</p> <p><b>LOGS OR WOODY DEBRIS</b> [1]</p>	<p><b>AMOUNT</b></p> <p>Check ONE (Or 2 &amp; average)</p> <input type="checkbox"/> EXTENSIVE >75% [11] <input type="checkbox"/> MODERATE 25-75% [7] <input type="checkbox"/> SPARSE 5-<25% [3] <input type="checkbox"/> NEARLY ABSENT <5% [1]	<p><b>Cover</b></p> <div style="border: 1px solid black; border-radius: 15px; padding: 5px; display: inline-block;">9</div> Maximum 20
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**Comments**

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

<p><b>SINUOSITY</b></p> <input type="checkbox"/> HIGH [4] <input type="checkbox"/> MODERATE [3] <input checked="" type="checkbox"/> LOW [2] <input checked="" type="checkbox"/> NONE [1]	<p><b>DEVELOPMENT</b></p> <input type="checkbox"/> EXCELLENT [7] <input type="checkbox"/> GOOD [5] <input type="checkbox"/> FAIR [3] <input type="checkbox"/> POOR [1]	<p><b>CHANNELIZATION</b></p> <input type="checkbox"/> NONE [5] <input type="checkbox"/> RECOVERED [4] <input type="checkbox"/> RECOVERING [3] <input type="checkbox"/> RECENT OR NO RECOVERY [1]	<p><b>STABILITY</b></p> <input checked="" type="checkbox"/> HIGH [3] <input type="checkbox"/> MODERATE [2] <input type="checkbox"/> LOW [1]	<p><b>Channel</b></p> <div style="border: 1px solid black; border-radius: 15px; padding: 5px; display: inline-block;">16.5</div> Maximum 20
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**Comments**

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

<p><b>EROSION</b></p> <input checked="" type="checkbox"/> NONE / LITTLE [3] <input type="checkbox"/> MODERATE [2] <input type="checkbox"/> HEAVY / SEVERE [1]	<p><b>RIPARIAN WIDTH</b></p> <input type="checkbox"/> WIDE > 50m [4] <input type="checkbox"/> MODERATE 10-50m [3] <input type="checkbox"/> NARROW 5-10m [2] <input type="checkbox"/> VERY NARROW < 5m [1] <input type="checkbox"/> NONE [0]	<p><b>FLOOD PLAIN QUALITY</b></p> <input type="checkbox"/> FOREST, SWAMP [3] <input type="checkbox"/> SHRUB OR OLD FIELD [2] <input type="checkbox"/> RESIDENTIAL, PARK, NEW FIELD [1] <input type="checkbox"/> FENCED PASTURE [1] <input type="checkbox"/> OPEN PASTURE, ROWCROP [0]	<p><b>CONSERVATION TILLAGE</b> [1]                  URBAN OR INDUSTRIAL [0]                  MINING / CONSTRUCTION [0]</p> <p>Indicate predominant land use(s) past 100m riparian.</p>	<p><b>Riparian</b></p> <div style="border: 1px solid black; border-radius: 15px; padding: 5px; display: inline-block;">7.5</div> Maximum 10
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**Comments**

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

<p><b>MAXIMUM DEPTH</b></p> <p>Check ONE (ONLY)</p> <input checked="" type="checkbox"/> > 1m [6] <input type="checkbox"/> 0.7-<1m [4] <input type="checkbox"/> 0.4-<0.7m [2] <input type="checkbox"/> 0.2-<0.4m [1] <input type="checkbox"/> < 0.2m [0]	<p><b>CHANNEL WIDTH</b></p> <p>Check ONE (Or 2 &amp; average)</p> <input type="checkbox"/> POOL WIDTH > RIFFLE WIDTH [2] <input type="checkbox"/> POOL WIDTH = RIFFLE WIDTH [1] <input checked="" type="checkbox"/> POOL WIDTH < RIFFLE WIDTH [0]	<p><b>CURRENT VELOCITY</b></p> <p>Check ALL that apply</p> <input type="checkbox"/> TORRENTIAL [1-1] <input type="checkbox"/> VERY FAST [1] <input checked="" type="checkbox"/> FAST [1] <input checked="" type="checkbox"/> MODERATE [1]	<p><b>Recreation Potential</b></p> <div style="border: 1px solid black; border-radius: 15px; padding: 5px; display: inline-block;">Primary Contact</div> Secondary Contact (circle one and comment on back)	<p><b>Pool / Current</b></p> <div style="border: 1px solid black; border-radius: 15px; padding: 5px; display: inline-block;">9</div> Maximum 12
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**Comments**

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]

<p><b>RIFFLE DEPTH</b></p> <input checked="" type="checkbox"/> BEST AREAS > 10cm [2] <input type="checkbox"/> BEST AREAS 5-10cm [1] <input type="checkbox"/> BEST AREAS < 5cm [metric=0]	<p><b>RUN DEPTH</b></p> <input checked="" type="checkbox"/> MAXIMUM > 50cm [2] <input type="checkbox"/> MAXIMUM < 50cm [1]	<p><b>RIFFLE / RUN SUBSTRATE</b></p> <input checked="" type="checkbox"/> STABLE (e.g., Schble, Boulder) [2] <input type="checkbox"/> MOD. STABLE (e.g., Large Gravel) [1] <input type="checkbox"/> UNSTABLE (e.g., Fine Gravel, Sand) [0]	<p><b>RIFFLE / RUN EMBEDDEDNESS</b></p> <input type="checkbox"/> NONE [2] <input type="checkbox"/> LOW [1] <input checked="" type="checkbox"/> MODERATE [0] <input type="checkbox"/> EXTENSIVE [1-1]	<p><b>Riffle / Run</b></p> <div style="border: 1px solid black; border-radius: 15px; padding: 5px; display: inline-block;">6</div> Maximum 8
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**Comments**

**6] GRADIENT** ( 8.77 ft/mi)  VERY LOW - LOW [2-4]  MODERATE [6-10]  HIGH - VERY HIGH [10-6]

**DRAINAGE AREA** ( 292 mi<sup>2</sup>)

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

**Gradient**

10

  
 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

**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 g/m  20-40 g/m  40-70 g/m  > 70 g/m / GIB

SECCHI DEPTH

1st \_\_\_\_\_ cm

2nd \_\_\_\_\_ cm

**CANOPY**

> 85% - OPEN

65% - 85%

30% - 65%

10% - 30%

< 10% - CLOSED

**CJ RECREATION**

AREA DEPTH

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 / SCLOURED

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 H<sub>2</sub>O / TILE / H<sub>2</sub>O TABLE

ACID / MINE / QUARRY / FLOW

NATURAL / WETLAND / STAGNANT

PARK / GOLF / LAWN / HOME

ATMOSPHERE / DATA PAUCITY

**FJ MEASUREMENTS**

width

depth

max depth

bankfull width

bankfull depth

W/D ratio

bankfull max depth

floodprone width

entrench. ratio

Legacy Tree:

**Stream Drawing:**

