

Stream & Location: Cuyahoga River Downstream of Tinker Creek RM: 16.2 Date: 09/23/88

Scorers Full Name & Affiliation: J.T. Banner Grad: 85 Northeast Ohio Regional Sewer District Office verified location

River Code: STORET #: Lat/Long: 41.3678 181.6129

1] SUBSTRATE Check ONLY Two substrate TYPE BOXES, estimate % or note every type present. Check ONE (Or 2 & average) ORIGIN QUALITY. Includes categories like BEST TYPES, OTHER TYPES, POOL RIFFLE, LIMESTONE, TILLS, WETLANDS, etc.

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 like UNDERCUT BANKS, OVERHANGING VEGETATION, SHALLOWS, etc.

3] CHANNEL MORPHOLOGY Check ONE in each category (Or 2 & average) SINUOSITY DEVELOPMENT CHANNELIZATION STABILITY. Includes categories like HIGH, MODERATE, LOW, EXCELLENT, GOOD, FAIR, POOR, etc.

4] BANK EROSION AND RIPARIAN ZONE Check ONE in each category for EACH BANK (Or 2 per bank & average) RIPARIAN WIDTH FLOOD PLAIN QUALITY. Includes categories like EROSION, WIDE, MODERATE, NARROW, etc.

5] POOL / GLIDE AND RIFFLE / RUN QUALITY MAXIMUM DEPTH CHANNEL WIDTH CURRENT VELOCITY. Includes categories like > 1m, 0.7-1m, etc.

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.

6] GRADIENT (3.45 ft/mi) DRAINAGE AREA (696 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

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
- 20-40 cm
- 40-70 cm
- > 70 cm/OTB
- SECCHI DEPTH

meters

CANOPY

- > 85% OPEN
- 65% - 85%
- 30% - 65%
- 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
- 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

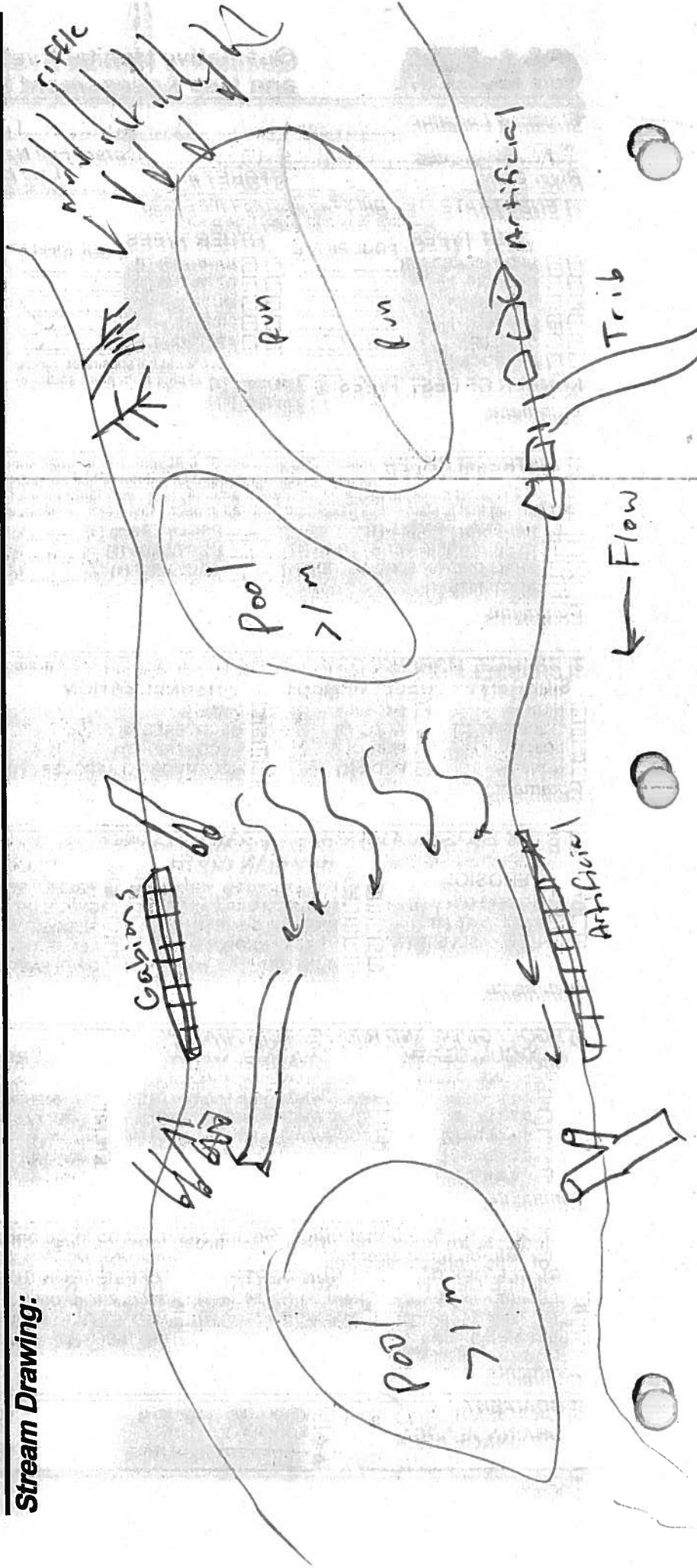
- WWTP / CSO / NPDES / INDUSTRY
- HARDENED / URBAN / DIRT&GRIME
- CONTAMINATED / LANDFILL
- BMPs-CONSTRUCTION-SEDIMENT
- LOGGING / IRRIGATION / COOLING
- BANK / EROSION / SURFACE
- FALSE BANK / MANURE / LAGOON
- WASH H₂O / TILE / H₂O TABLE
- ACID / MINE / QUARRY / FLOW
- NATURAL / WETLAND / STAGNANT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

Legacy Tree:

Stream Drawing:



Stream & Location: Cuyahoga River Upstream of Mill Creek RM: 11.95 Date: 08/03/18

Brauer Scorers Full Name & Affiliation: Northeast Ohio Regional Sewer District
River Code: STORET #: Lat./ Long.: 41.4123 181.6364 Office verified location

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

Form for Substrate assessment including categories: BEST TYPES, OTHER TYPES, POOL RIFFLE, ORIGIN, and QUALITY. Includes checkboxes for various substrate types and a score box for Substrate (14).

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

Form for Instream Cover assessment including categories: UNDERCUT BANKS, OVERHANGING VEGETATION, SHALLOWS, ROOTMATS, POOLS, ROOTWADS, BOULDERS, OXBOWS, BACKWATERS, AQUATIC MACROPHYTES, LOGS OR WOODY DEBRIS. Includes checkboxes and a score box for Cover (13).

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

Form for Channel Morphology assessment including categories: SINUOSITY, DEVELOPMENT, CHANNELIZATION, and STABILITY. Includes checkboxes and a score box for Channel (11.5).

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

Form for Bank Erosion and Riparian Zone assessment including categories: EROSION, RIPARIAN WIDTH, FLOOD PLAIN QUALITY, and CONSERVATION TILLAGE. Includes checkboxes and a score box for Riparian (6.5).

5] POOL / GLIDE AND RIFFLE / RUN QUALITY

Form for Pool / Glide and Riffle / Run Quality assessment including categories: MAXIMUM DEPTH, CHANNEL WIDTH, CURRENT VELOCITY, and Recreation Potential. Includes checkboxes and a score box for Pool / Current (12).

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

Form for Riffle / Run Quality assessment including categories: RIFFLE DEPTH, RUN DEPTH, RIFFLE / RUN SUBSTRATE, and RIFFLE / RUN EMBEDDEDNESS. Includes checkboxes and a score box for Riffle / Run (5.5).

Form for Gradient and Drainage Area assessment including categories: GRADIENT and DRAINAGE AREA. Includes checkboxes and a score box for Gradient (10).

Stream & Location: Cuyahoga River D.S. of Mill Creek RM: 1130 Date: 08/03/18
Francisco River Scorers Full Name & Affiliation: Northeast Ohio Regional Sewer District
River Code: - STORET #: - Lat./ Long.: 41.4179 181.6946 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		ORIGIN		QUALITY	
<input type="checkbox"/> BLDR / SLABS [10]	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> HARDPAN [4]	<input type="checkbox"/>	<input type="checkbox"/> LIMESTONE [1]	<input type="checkbox"/>	<input type="checkbox"/> SILT	<input type="checkbox"/>	<input type="checkbox"/> HEAVY [-2]	Substrate 16 Maximum 20
<input type="checkbox"/> BOULDER [9]	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> DETRITUS [3]	<input type="checkbox"/>	<input type="checkbox"/> TILLS [1]	<input type="checkbox"/>	<input type="checkbox"/> EMBEDDEDNESS	<input type="checkbox"/>	<input type="checkbox"/> MODERATE [-1]	
<input type="checkbox"/> COBBLE [8]	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> MUCK [2]	<input type="checkbox"/>	<input type="checkbox"/> WETLANDS [0]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> NORMAL [0]	
<input type="checkbox"/> GRAVEL [7]	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> SILT [2]	<input checked="" type="checkbox"/>	<input type="checkbox"/> HARDPAN [0]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> FREE [1]	
<input type="checkbox"/> SAND [6]	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> ARTIFICIAL [0]	<input checked="" type="checkbox"/>	<input type="checkbox"/> SANDSTONE [0]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> EXTENSIVE [-2]	
<input type="checkbox"/> BEDROCK [5]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/> RIP/RAP [0]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> MODERATE [-1]	

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 (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	
<input type="checkbox"/> UNDERCUT BANKS [1]	<input checked="" type="checkbox"/> 3	<input type="checkbox"/> EXTENSIVE >75% [1]	<input type="checkbox"/>
<input type="checkbox"/> OVERHANGING VEGETATION [1]	<input checked="" type="checkbox"/> 3	<input type="checkbox"/> MODERATE 25-75% [1]	<input type="checkbox"/>
<input type="checkbox"/> SHALLOWS (IN SLOW WATER) [1]	<input checked="" type="checkbox"/> 2	<input type="checkbox"/> SPARSE 5-25% [3]	<input type="checkbox"/>
<input type="checkbox"/> ROOTMATS [1]	<input checked="" type="checkbox"/> 2	<input type="checkbox"/> NEARLY ABSENT <5% [1]	<input type="checkbox"/>
<input type="checkbox"/> POOLS > 70cm [2]	<input type="checkbox"/> 0		
<input type="checkbox"/> ROOTWADS [1]	<input type="checkbox"/> 0		
<input type="checkbox"/> BOULDERS [1]	<input type="checkbox"/> 1		
<input type="checkbox"/> OXBOWS, BACKWATERS [1]	<input type="checkbox"/>		
<input type="checkbox"/> AQUATIC MACROPHYTES [1]	<input type="checkbox"/>		
<input type="checkbox"/> LOGS OR WOODY DEBRIS [1]	<input type="checkbox"/>		

Comments: _____

Cover
Maximum 12 20

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"/> REGENT OR NO RECOVERY [1]	

Comments: _____

Channel
Maximum 14 20

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		CONSERVATION TILLAGE	
<input type="checkbox"/> NONE / LITTLE [3]	<input checked="" type="checkbox"/>	<input type="checkbox"/> WIDE > 50m [4]	<input type="checkbox"/>	<input type="checkbox"/> FOREST, SWAMP [3]	<input type="checkbox"/>	<input type="checkbox"/> CONSERVATION TILLAGE [1]	<input type="checkbox"/>
<input type="checkbox"/> MODERATE [2]	<input checked="" type="checkbox"/>	<input type="checkbox"/> MODERATE 10-50m [3]	<input type="checkbox"/>	<input type="checkbox"/> SHRUB OR OLD FIELD [2]	<input type="checkbox"/>	<input type="checkbox"/> URBAN OR INDUSTRIAL [0]	<input type="checkbox"/>
<input type="checkbox"/> HEAVY / SEVERE [1]	<input checked="" type="checkbox"/>	<input type="checkbox"/> NARROW 5-10m [2]	<input type="checkbox"/>	<input type="checkbox"/> RESIDENTIAL, PARK, NEW FIELD [1]	<input type="checkbox"/>	<input type="checkbox"/> MINING / CONSTRUCTION [0]	<input type="checkbox"/>
		<input type="checkbox"/> VERY NARROW < 5m [1]	<input type="checkbox"/>	<input type="checkbox"/> FENCED PASTURE [1]			
		<input type="checkbox"/> NONE [0]	<input type="checkbox"/>	<input type="checkbox"/> OPEN PASTURE, ROWCROP [0]			

Comments: _____

Riparian
Maximum 525 10

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)
<input type="checkbox"/> > 1m [6]	<input checked="" type="checkbox"/>	<input type="checkbox"/> POOL WIDTH > RIFFLE WIDTH [2]	<input type="checkbox"/>	<input type="checkbox"/> TORRENTIAL [-1]	<input type="checkbox"/> SLOW [1]	
<input type="checkbox"/> 0.7-1m [4]	<input checked="" type="checkbox"/>	<input type="checkbox"/> POOL WIDTH = RIFFLE WIDTH [1]	<input type="checkbox"/>	<input type="checkbox"/> VERY FAST [1]	<input type="checkbox"/> INTERSTITIAL [-1]	
<input type="checkbox"/> 0.4-0.7m [2]	<input checked="" type="checkbox"/>	<input type="checkbox"/> POOL WIDTH < RIFFLE WIDTH [0]	<input type="checkbox"/>	<input type="checkbox"/> FAST [1]	<input type="checkbox"/> INTERMITTENT [-2]	
<input type="checkbox"/> 0.2-0.4m [1]	<input checked="" type="checkbox"/>			<input type="checkbox"/> MODERATE [1]	<input type="checkbox"/> EDDIES [1]	
<input type="checkbox"/> < 0.2m [0]	<input checked="" type="checkbox"/>					

Comments: _____

Pool / Current
Maximum 12 12

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
<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]

Comments: _____

Riffle / Run
Maximum 6 8

6) GRADIENT (4.77 ft/mi)	<input type="checkbox"/> VERY LOW - LOW [2-4]	% POOL: <input type="text"/>	% GLIDE: <input type="text"/>	Gradient Maximum 10 10
DRAINAGE AREA (730 mi ²)	<input type="checkbox"/> MODERATE [6-10]	% RUN: <input type="text"/>	% RIFFLE: <input type="text"/>	

Stream & Location: Cuyahoga River Upstream of Southerly WWTC effluent RM: 10.75 Date: 02/16/18

RHOADES Scorers Full Name & Affiliation: Northeast Ohio Regional Sewer District

River Code: STORET #: Lat./ Long.: 41.4196 181.0547 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 a 'Substrate' box with value 15.5 and a 'Maximum' of 20.

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: UNDERGUT BANKS, OVERHANGING VEGETATION, SHALLOWS, ROOTMATS, POOLS, ROOTWADS, BOULDERS, OXBOWS, AQUATIC MACROPHYTES, LOGS OR WOODY DEBRIS. Includes a 'Cover' box with value 13 and a 'Maximum' of 20.

3] CHANNEL MORPHOLOGY Check ONE in each category (Or 2 & average). Includes categories: SINUOSITY, DEVELOPMENT, CHANNELIZATION, and STABILITY. Includes a 'Channel' box with value 14.5 and a 'Maximum' of 20.

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, and CONSERVATION TILLAGE. Includes a 'Riparian' box with value 6 and a 'Maximum' of 10.

5] POOL / GLIDE AND RIFFLE / RUN QUALITY MAXIMUM DEPTH, CHANNEL WIDTH, CURRENT VELOCITY. Includes a 'Recreation Potential' box with 'Primary Contact' and 'Secondary Contact' options. Includes a 'Pool / Current' box with value 11 and a 'Maximum' of 12.

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 a 'Riffle / Run' box with value 5.5 and a 'Maximum' of 8. Also includes a 'Gradient' box with value 10 and a 'Maximum' of 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/ GIB.
- SECCHI DEPTH

meters

CANOPY

- > 85% - OPEN
- 85% - 89%
- 80% - 85%
- 40% - 80%
- < 10% - CLOSED

CJ RECREATION

AREA DEPTH
POOL: > 100r? > 3ft

BJ AESTHETICS

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

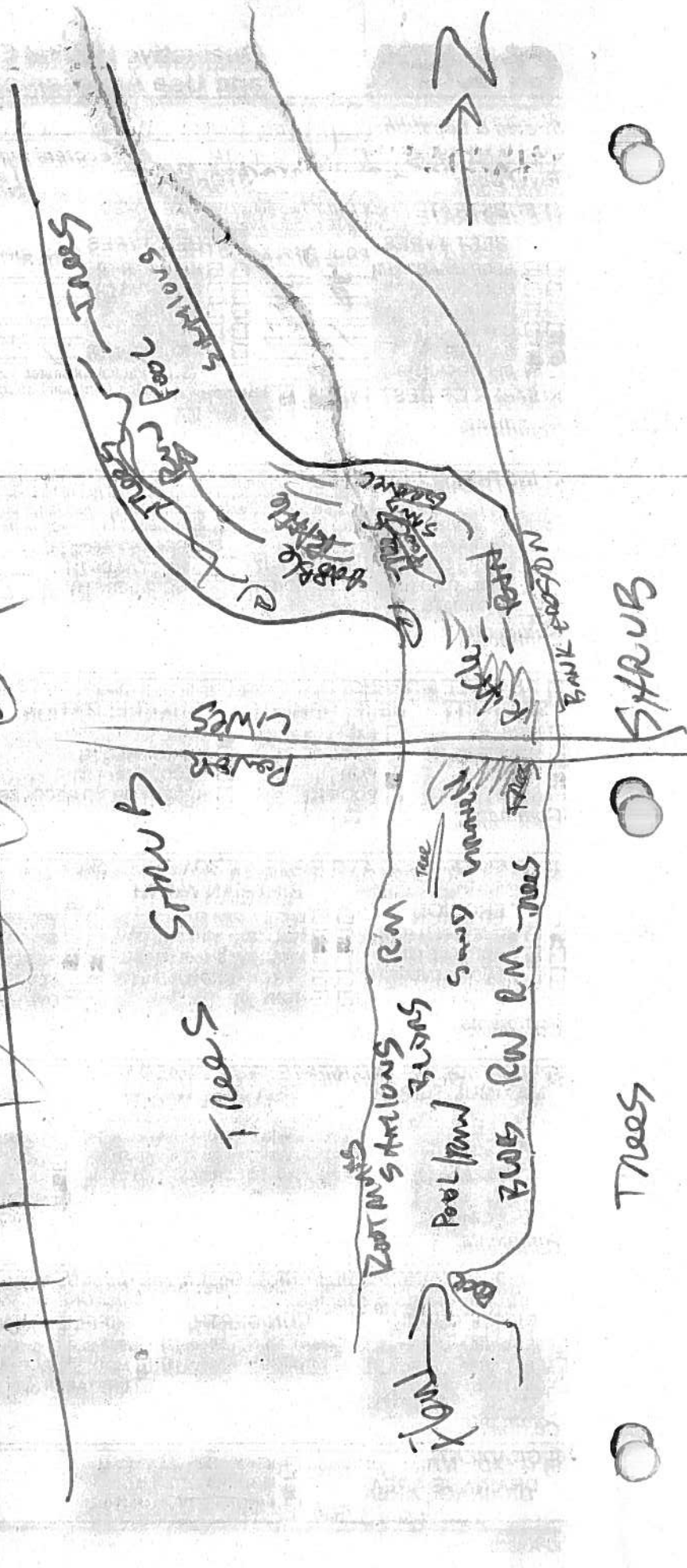
- WWTP / CSO / NPDES / INDUSTRY HARDENED / URBAN / DIRT & GRIME
- CONTAMINATED / LANDFILL
- BMPs-CONSTRUCTION-SEDIMENT LOGGING / IRRIGATION / COOLING
- BANK / EROSION / SURFACE FALSE BANK / MANURE / LAGOON
- WASH H₂O / TILE / H₂O TABLE
- ACID / MINE / QUARRY / FLOW
- NATURAL / WETLAND / STAGNANT
- PARK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

FJ MEASUREMENTS

- width
- depth
- max. depth
- bankfull width
- bankfull depth
- W/D ratio
- bankfull max. depth
- flood-prone % width
- entrench. ratio

Legacy Tree:

Stream Drawing:



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

- 1st - sample pass - 2nd
- < 20 cm
 - 20 - 40 cm
 - 40 - 70 cm
 - > 70 cm / OTB

- 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 / OTB

- CANOPY**
- > 85% - OPEN
 - 66% - 85%
 - 30% - 65%
 - 10% - 30%
 - < 10% - CLOSED

- SECCHI DEPTH**
- 1st _____ cm
 - 2nd _____ cm

- CJ RECREATION**
- AREA DEPTH
 - POOL: > 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

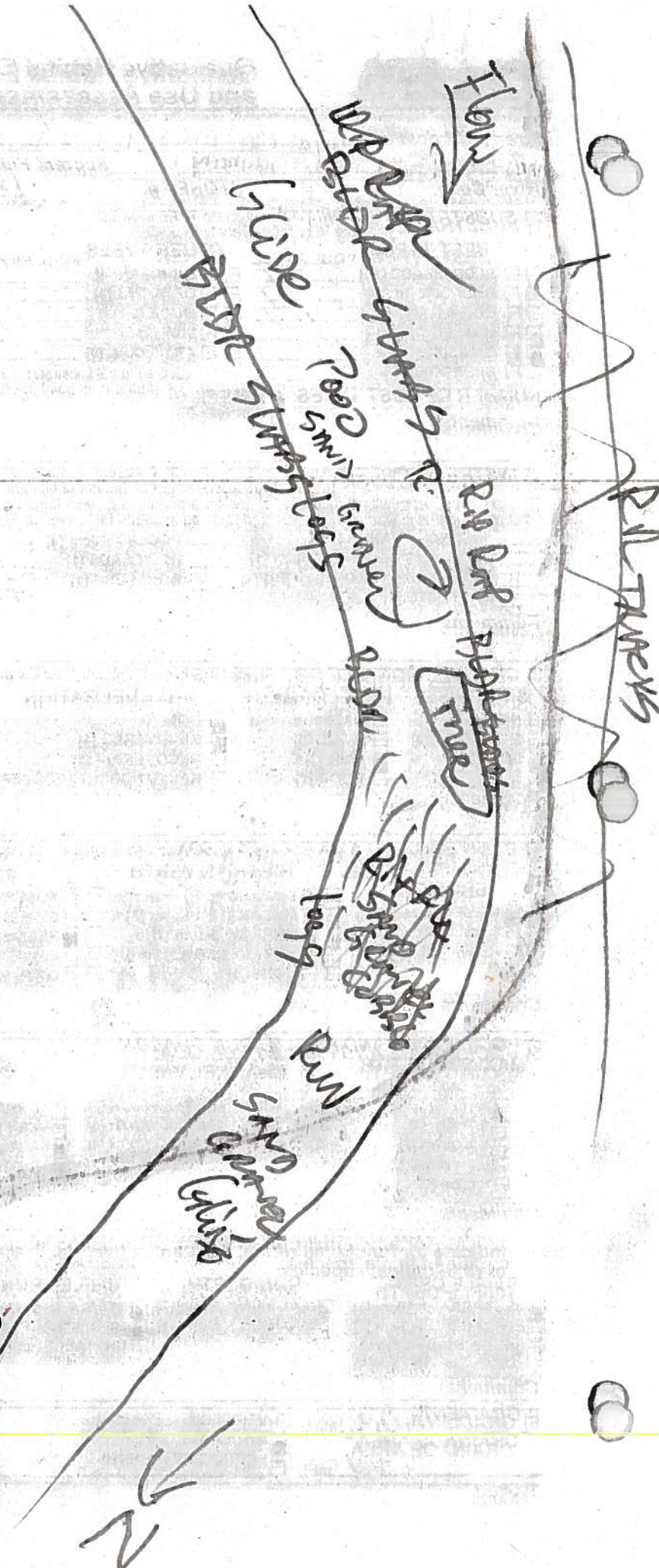
- WWTP / CSO / NPDES / INDUSTRY
- HARDENED / URBAN / DIRT & GRIME
- CONTAMINATED / LANDFILL
- BMPs-CONSTRUCTION-SEDIMENT
- LOGGING / IRRIGATION / COOLING
- BANK / EROSION / SURFACE
- FALSE BANK / MANURE / LAGOON
- WASH H₂O / TILE / H₂O TABLE
- ACID / MINE / QUARRY / FLOW
- NATURAL / WETLAND / STAGNANT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

FJ MEASUREMENTS

- width
- depth
- max. depth
- bankfull width
- bankfull depth
- W/D ratio
- bankfull max. depth
- floodprote. width
- entrench. ratio

Legacy Tree:

Stream Drawing:



Stream & Location: Cuyahoga River Ust. of Big Creek RM: 08.60 Date: 07/16/18

Seth Holtzer Scorers Full Name & Affiliation: Northeast Ohio Regional Sewer District

River Code: - STORET #: - Lat./ Long.: 41.4381 181.0680 Office verified location

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

<p>BEST TYPES</p> <input type="checkbox"/> BLDG / SLABS [10] <input type="checkbox"/> BOULDER [9] <input type="checkbox"/> GOBBLE [8] <input checked="" type="checkbox"/> GRAVEL [7] <input type="checkbox"/> SAND [6] <input type="checkbox"/> BEDROCK [5]	<p>POOL RIFFLE</p> <table border="0"> <tr><td><input checked="" type="checkbox"/></td><td><input type="checkbox"/></td></tr> <tr><td><input checked="" type="checkbox"/></td><td><input checked="" type="checkbox"/></td></tr> <tr><td><input checked="" type="checkbox"/></td><td><input checked="" type="checkbox"/></td></tr> </table>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>OTHER TYPES</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>POOL RIFFLE</p> <table border="0"> <tr><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr> <tr><td><input checked="" type="checkbox"/></td><td><input checked="" type="checkbox"/></td></tr> </table>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>ORIGIN</p> <input type="checkbox"/> LIMESTONE [1] <input checked="" type="checkbox"/> TILLS [1] <input type="checkbox"/> WETLANDS [0] <input type="checkbox"/> HARDPAN [0] <input type="checkbox"/> SANDSTONE [0] <input type="checkbox"/> RIP/RAP [0] <input type="checkbox"/> LAGUSTURINE [0] <input type="checkbox"/> SHALE [-1] <input type="checkbox"/> COAL FINES [-2]	<p>QUALITY</p> <input type="checkbox"/> HEAVY [-2] <input checked="" type="checkbox"/> MODERATE [-1] <input type="checkbox"/> NORMAL [0] <input type="checkbox"/> FREE [1] <input type="checkbox"/> EXTENSIVE [-2] <input type="checkbox"/> MODERATE [-1] <input type="checkbox"/> NORMAL [0] <input type="checkbox"/> NONE [1]	<p>Substrate</p> <div style="border: 1px solid black; border-radius: 50%; width: 40px; height: 40px; display: flex; align-items: center; justify-content: center; margin: 5px;"> 14.5 </div> <p>Maximum 20</p>
<input checked="" type="checkbox"/>	<input type="checkbox"/>															
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>															
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>															
<input type="checkbox"/>	<input type="checkbox"/>															
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>															

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 (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>UNDERGRASS BANKS [1] <input type="checkbox"/></p> <p>OVERHANGING VEGETATION [1] <input type="checkbox"/></p> <p>SHALLOWS (IN SLOW WATER) [1] <input type="checkbox"/></p> <p>ROOTMATS [1] <input type="checkbox"/></p>	<p>POOLS > 70cm [2] <input type="checkbox"/></p> <p>ROOTWADS [1] <input type="checkbox"/></p> <p>BOULDERS [1] <input type="checkbox"/></p>	<p>OXBOWS, BACKWATERS [1] <input type="checkbox"/></p> <p>AQUATIC MACROPHYTES [1] <input type="checkbox"/></p> <p>LOGS OR WOODY DEBRIS [1] <input type="checkbox"/></p>	<p>AMOUNT</p> <p>Check ONE (Or 2 & 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>Cover</p> <div style="border: 1px solid black; border-radius: 50%; width: 40px; height: 40px; display: flex; align-items: center; justify-content: center; margin: 5px;"> 15 </div> <p>Maximum 20</p>
---	--	--	---	--

Comments

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

<p>SINUOSITY</p> <input type="checkbox"/> HIGH [4] <input type="checkbox"/> MODERATE [3] <input type="checkbox"/> LOW [2] <input type="checkbox"/> NONE [1]	<p>DEVELOPMENT</p> <input type="checkbox"/> EXCELLENT [7] <input type="checkbox"/> GOOD [5] <input type="checkbox"/> FAIR [3] <input type="checkbox"/> POOR [1]	<p>CHANNELIZATION</p> <input type="checkbox"/> NONE [5] <input type="checkbox"/> RECOVERED [4] <input type="checkbox"/> RECOVERING [3] <input type="checkbox"/> REGENT OR NO RECOVERY [1]	<p>STABILITY</p> <input type="checkbox"/> HIGH [3] <input type="checkbox"/> MODERATE [2] <input type="checkbox"/> LOW [1]	<p>Channel</p> <div style="border: 1px solid black; border-radius: 50%; width: 40px; height: 40px; display: flex; align-items: center; justify-content: center; margin: 5px;"> 15 </div> <p>Maximum 20</p>
---	---	---	--	--

Comments

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

<p>EROSION</p> <input type="checkbox"/> NONE / LITTLE [3] <input type="checkbox"/> MODERATE [2] <input type="checkbox"/> HEAVY / SEVERE [1]	<p>RIPARIAN WIDTH</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>FLOOD PLAIN QUALITY</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>CONSERVATION TILLAGE [1] <input type="checkbox"/></p> <p>URBAN OR INDUSTRIAL [0] <input type="checkbox"/></p> <p>MINING / CONSTRUCTION [0] <input type="checkbox"/></p>	<p>Riparian</p> <div style="border: 1px solid black; border-radius: 50%; width: 40px; height: 40px; display: flex; align-items: center; justify-content: center; margin: 5px;"> 7 </div> <p>Maximum 10</p>
--	---	---	---	--

Comments

5] POOL / GLIDE AND RIFFLE / RUN QUALITY

<p>MAXIMUM DEPTH</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>CHANNEL WIDTH</p> <p>Check ONE (Or 2 & average)</p> <input type="checkbox"/> POOL WIDTH > RIFFLE WIDTH [2] <input type="checkbox"/> POOL WIDTH = RIFFLE WIDTH [1] <input type="checkbox"/> POOL WIDTH < RIFFLE WIDTH [0]	<p>CURRENT VELOCITY</p> <p>Check ALL that apply</p> <input type="checkbox"/> TORRENTIAL [-1] <input type="checkbox"/> VERY FAST [1] <input checked="" type="checkbox"/> FAST [1] <input checked="" type="checkbox"/> MODERATE [1] <input type="checkbox"/> SLOW [1] <input type="checkbox"/> INTERSTITIAL [-1] <input type="checkbox"/> INTERMITTENT [-2] <input type="checkbox"/> EDDIES [1]	<p>Recreation Potential</p> <div style="border: 1px solid black; border-radius: 50%; width: 40px; height: 40px; display: flex; align-items: center; justify-content: center; margin: 5px;"> 12 </div> <p>Maximum 12</p>
--	--	---	---

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>RIFFLE DEPTH</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>RUN DEPTH</p> <input type="checkbox"/> MAXIMUM > 50cm [2] <input type="checkbox"/> MAXIMUM < 50cm [1]	<p>RIFFLE / RUN SUBSTRATE</p> <input type="checkbox"/> STABLE (e.g., Gobble, Boulder) [2] <input type="checkbox"/> MOD. STABLE (e.g., Large Gravel) [1] <input type="checkbox"/> UNSTABLE (e.g., Fine Gravel, Sand) [0]	<p>RIFFLE / RUN EMBEDDEDNESS</p> <input type="checkbox"/> NONE [2] <input type="checkbox"/> LOW [1] <input checked="" type="checkbox"/> MODERATE [0] <input type="checkbox"/> EXTENSIVE [-1]	<p>Riffle / Run</p> <div style="border: 1px solid black; border-radius: 50%; width: 40px; height: 40px; display: flex; align-items: center; justify-content: center; margin: 5px;"> 5.5 </div> <p>Maximum 8</p>
--	--	--	--	---

Comments 2 Riffles, 1 cobble, 1 gravel

6] GRADIENT (2.03 ft/m) VERY LOW - LOW [2-4] MODERATE [6-10] HIGH - VERY HIGH [10-6]

DRAINAGE AREA (745 m²)

% 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
 - WALK
 - OTHER
- STAGE**
- HIGH
 - UP
 - NORMAL
 - LOW
 - DRY
- DISTANCE**
- 0.6 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/B
- SECCHI DEPTH**
- _____ cm
 - _____ cm

CANOPY

- > 85% - OPEN
- 65% - 85%
- 30% - 65%
- 10% - 30%
- < 10% - CLOSED

CJ RECREATION

AREA DEPTH POOL: >100r? >3ft

BJ AESTHETICS

- NUISANCE ALGAE
- INVASIVE MACROPHYTES
- EXCESS TURBIDITY
- DISCOLORATION
- FOAM / SCUM
- OIL / GREASE
- TRASH / LITTER
- NUISANCE ODOR
- SLUDGE DEPOSITS
- CSO / SSO / 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

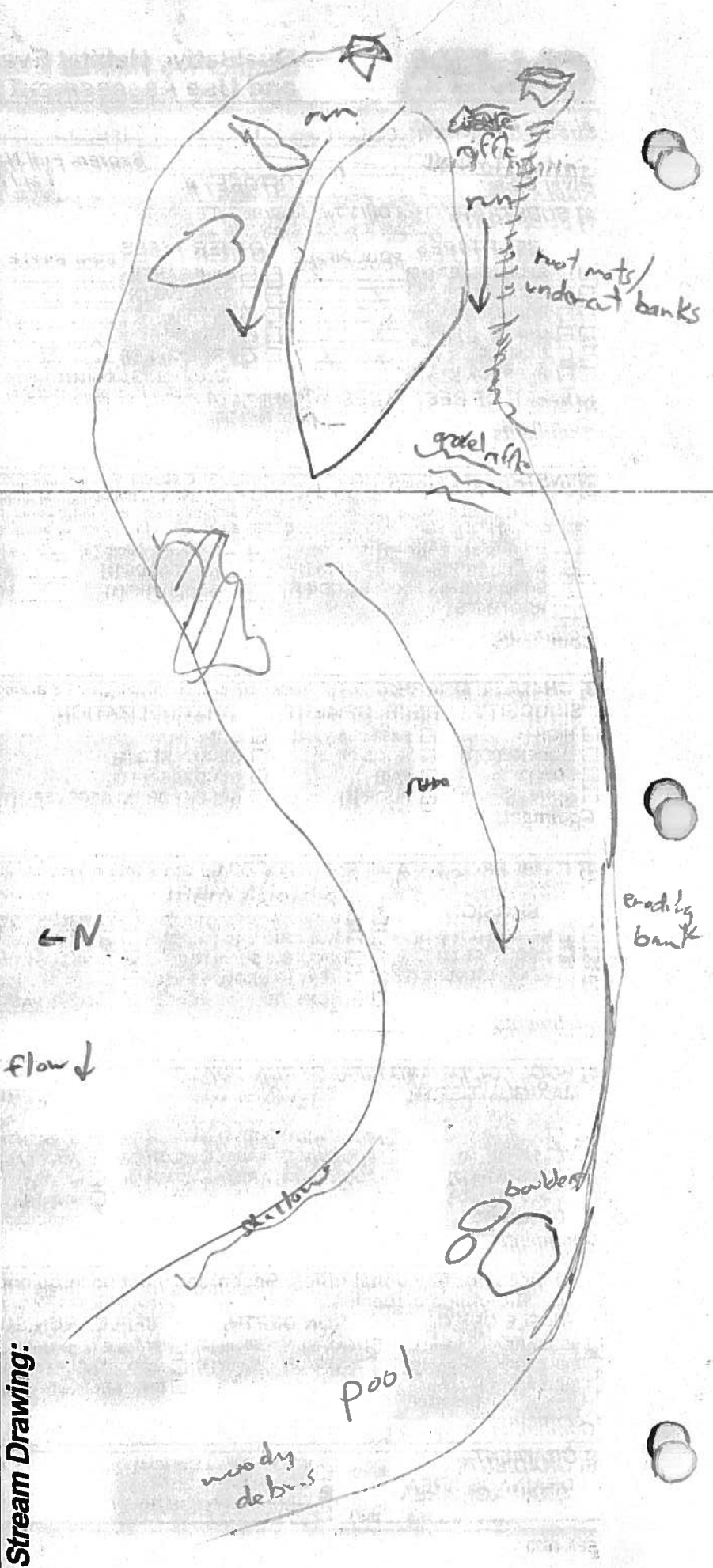
- WWTP / CSO / NPDES / INDUSTRY
- HARDENED / URBAN / DIRT & GRIME
- CONTAMINATED / LANDFILL
- BMPs-CONSTRUCTION-SEDIMENT
- LOGGING / IRRIGATION / COOLING
- BANK / EROSION / SURFACE
- FALSE BANK / MANURE / LAGOON
- WASH: H₂O / TILE / H₂O TABLE
- ACID / MINE / QUARRY / FLOW
- NATURAL / WETLAND / STAGNANT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

FJ MEASUREMENTS

- width
- depth
- max. depth
- bankfull width
- bankfull depth
- W/D ratio
- bankfull max. depth
- flood-prone % width
- entrench. ratio

Legacy Tree:

Stream Drawing:



Stream & Location: Cuyahoga River Dst. of Big Creek **RM:** 07.00 **Date:** 7/19/18

DA: Sochalety **Scorers Full Name & Affiliation:** Northeast Ohio Regional Sewer District

River Code: - **STORET #:** - **Lat./ Long.:** 41.4497 18.085 **Office verified location**

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

<p>BEST TYPES</p> <p><input type="checkbox"/> BDR / SLABS [10]</p> <p><input type="checkbox"/> BOULDER [9]</p> <p><input type="checkbox"/> COBBLE [8]</p> <p><input type="checkbox"/> GRAVEL [7]</p> <p><input checked="" type="checkbox"/> SAND [6]</p> <p><input type="checkbox"/> BEDROCK [5]</p>	<p>POOL RIFFLE</p> <p><input checked="" type="checkbox"/> <input type="checkbox"/></p> <p><input checked="" type="checkbox"/> <input type="checkbox"/></p> <p><input checked="" type="checkbox"/> <input type="checkbox"/></p> <p><input type="checkbox"/> <input type="checkbox"/></p>	<p>OTHER TYPES</p> <p><input type="checkbox"/> HARDPAN [4]</p> <p><input type="checkbox"/> DETRITUS [3]</p> <p><input type="checkbox"/> MUCK [2]</p> <p><input type="checkbox"/> SILT [2]</p> <p><input type="checkbox"/> ARTIFICIAL [0]</p>	<p>POOL RIFFLE</p> <p><input type="checkbox"/> <input type="checkbox"/></p> <p><input type="checkbox"/> <input checked="" type="checkbox"/></p> <p><input checked="" type="checkbox"/> <input type="checkbox"/></p>	<p>ORIGIN</p> <p><input type="checkbox"/> LIMESTONE [1]</p> <p><input checked="" type="checkbox"/> TILLS [1]</p> <p><input type="checkbox"/> WETLANDS [0]</p> <p><input type="checkbox"/> HARDPAN [0]</p> <p><input type="checkbox"/> SANDSTONE [0]</p> <p><input type="checkbox"/> RIP/RAP [0]</p> <p><input type="checkbox"/> LAGUSTURINE [0]</p> <p><input type="checkbox"/> SHALE [-1]</p> <p><input type="checkbox"/> COAL FINES [-2]</p>	<p>QUALITY</p> <p><input checked="" type="checkbox"/> HEAVY [-2]</p> <p><input type="checkbox"/> MODERATE [-1]</p> <p><input type="checkbox"/> NORMAL [0]</p> <p><input type="checkbox"/> FREE [1]</p> <p><input checked="" type="checkbox"/> EXTENSIVE [-2]</p> <p><input type="checkbox"/> MODERATE [-1]</p> <p><input type="checkbox"/> NORMAL [0]</p> <p><input type="checkbox"/> NONE [1]</p>
---	--	---	--	---	---

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

Comments: 12 2 -4

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><input checked="" type="checkbox"/> UNDERCUT BANKS [4]</p> <p><input type="checkbox"/> OVERHANGING VEGETATION [1]</p> <p><input type="checkbox"/> SHALLOWS (IN SLOW WATER) [1]</p> <p><input checked="" type="checkbox"/> ROOTMATS [1]</p>	<p><input checked="" type="checkbox"/> POOLS > 70cm [2]</p> <p><input type="checkbox"/> ROOTWADS [1]</p> <p><input type="checkbox"/> BOULDERS [1]</p>	<p><input checked="" type="checkbox"/> OXBOWS, BACKWATERS [1]</p> <p><input type="checkbox"/> AQUATIC MACROPHYTES [1]</p> <p><input type="checkbox"/> LOGS OR WOODY DEBRIS [1]</p>	<p>AMOUNT</p> <p><input type="checkbox"/> EXTENSIVE >75% [11]</p> <p><input type="checkbox"/> MODERATE 25-75% [7]</p> <p><input type="checkbox"/> SPARSE 5-<25% [3]</p> <p><input type="checkbox"/> NEARLY ABSENT <5% [1]</p>
---	--	--	---

Comments: 1 4 1 3

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

<p>SINUOSITY</p> <p><input type="checkbox"/> HIGH [4]</p> <p><input type="checkbox"/> MODERATE [3]</p> <p><input checked="" type="checkbox"/> LOW [2]</p> <p><input type="checkbox"/> NONE [1]</p>	<p>DEVELOPMENT</p> <p><input type="checkbox"/> EXCELLENT [7]</p> <p><input type="checkbox"/> GOOD [5]</p> <p><input type="checkbox"/> FAIR [3]</p> <p><input type="checkbox"/> POOR [1]</p>	<p>CHANNELIZATION</p> <p><input checked="" type="checkbox"/> NONE [6]</p> <p><input type="checkbox"/> RECOVERED [4]</p> <p><input type="checkbox"/> RECOVERING [3]</p> <p><input type="checkbox"/> RECENT OR NO RECOVERY [1]</p>	<p>STABILITY</p> <p><input type="checkbox"/> HIGH [3]</p> <p><input type="checkbox"/> MODERATE [2]</p> <p><input type="checkbox"/> LOW [1]</p>
---	--	---	---

Comments: 1.5 1 (2.5) 5 (9.5) 2. (9.5)

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

<p>EROSION</p> <p><input checked="" type="checkbox"/> NONE / LITTLE [3]</p> <p><input type="checkbox"/> MODERATE [2]</p> <p><input type="checkbox"/> HEAVY / SEVERE [1]</p>	<p>RIPARIAN WIDTH</p> <p><input type="checkbox"/> WIDE > 50m [4]</p> <p><input type="checkbox"/> MODERATE 10-50m [3]</p> <p><input type="checkbox"/> NARROW 5-10m [2]</p> <p><input type="checkbox"/> VERY NARROW < 5m [1]</p> <p><input type="checkbox"/> NONE [0]</p>	<p>FLOOD PLAIN QUALITY</p> <p><input type="checkbox"/> FOREST, SWAMP [3]</p> <p><input type="checkbox"/> SHRUB OR OLD FIELD [2]</p> <p><input type="checkbox"/> RESIDENTIAL, PARK, NEW FIELD [1]</p> <p><input type="checkbox"/> FENCED PASTURE [1]</p> <p><input type="checkbox"/> OPEN PASTURE, ROWCROP [0]</p>	<p>CONSERVATION TILLAGE [1]</p> <p><input type="checkbox"/> URBAN OR INDUSTRIAL [0]</p> <p><input type="checkbox"/> MINING / CONSTRUCTION [0]</p>
--	--	--	--

Comments: 3 3 0.75

5] POOL / GLIDE AND RIFFLE / RUN QUALITY

<p>MAXIMUM DEPTH</p> <p>Check ONE (ONLY)</p> <p><input checked="" type="checkbox"/> > 1m [6]</p> <p><input type="checkbox"/> 0.7-1m [4]</p> <p><input type="checkbox"/> 0.4-0.7m [2]</p> <p><input type="checkbox"/> 0.2-0.4m [1]</p> <p><input type="checkbox"/> < 0.2m [0]</p>	<p>CHANNEL WIDTH</p> <p>Check ONE (Or 2 & average)</p> <p><input type="checkbox"/> POOL WIDTH > RIFFLE WIDTH [2]</p> <p><input type="checkbox"/> POOL WIDTH = RIFFLE WIDTH [1]</p> <p><input type="checkbox"/> POOL WIDTH < RIFFLE WIDTH [0]</p>	<p>CURRENT VELOCITY</p> <p>Check ALL that apply</p> <p><input type="checkbox"/> TORRENTIAL [-1]</p> <p><input type="checkbox"/> VERY FAST [1]</p> <p><input type="checkbox"/> FAST [1]</p> <p><input checked="" type="checkbox"/> MODERATE [1]</p> <p><input type="checkbox"/> SLOW [1]</p> <p><input type="checkbox"/> INTERSTITIAL [-1]</p> <p><input type="checkbox"/> INTERMITTENT [-2]</p> <p><input type="checkbox"/> EDDIES [1]</p>	<p>Recreation Potential</p> <p>Primary Contact</p> <p>Secondary Contact</p> <p>(circle one and comment on back)</p>
---	---	---	--

Comments: 6 1 2

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>RIFFLE DEPTH</p> <p><input type="checkbox"/> BEST AREAS > 10cm [2]</p> <p><input type="checkbox"/> BEST AREAS 5-10cm [1]</p> <p><input type="checkbox"/> BEST AREAS < 5cm [metric=0]</p>	<p>RUN DEPTH</p> <p><input type="checkbox"/> MAXIMUM > 50cm [2]</p> <p><input type="checkbox"/> MAXIMUM < 50cm [1]</p>	<p>RIFFLE / RUN SUBSTRATE</p> <p><input type="checkbox"/> STABLE (e.g., Cobble, Boulder) [2]</p> <p><input type="checkbox"/> MOD. STABLE (e.g., Large Gravel) [1]</p> <p><input type="checkbox"/> UNSTABLE (e.g., Fine Gravel, Sand) [0]</p>	<p>RIFFLE / RUN EMBEDDEDNESS</p> <p><input type="checkbox"/> NONE [2]</p> <p><input type="checkbox"/> LOW [1]</p> <p><input type="checkbox"/> MODERATE [0]</p> <p><input type="checkbox"/> EXTENSIVE [-1]</p>
--	---	---	--

Comments: 0

6] GRADIENT (2.03 ft/mi) VERY LOW - LOW [2-4] MODERATE [6-10] HIGH - VERY HIGH [10-5]

DRAINAGE AREA (786.0 mi²)

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

Comments: 10

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

A) SAMPLED REACH

Check ALL that apply

METHOD

- BOAT
 - WADE
 - L. LINE
 - OTHER
- STAGE**
- 1st -sample pass--
 - HIGH
 - UP
 - NORMAL
 - LOW
 - DRY

DISTANCE

- 0.5 Km
- 0.2 Km
- 0.15 Km
- 0.12 Km
- OTHER

CLARITY

- 1st -sample pass--
- < 20 cm
- 20-40 cm
- 40-70 cm
- > 70 cm/GTB
- SECCHI DEPTH

CANOPY

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

C) RECREATION

AREA DEPTH
POOL: >100ft² >3ft

B) AESTHETICS

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

D) J 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

E) 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

F) MEASUREMENTS

- width
- depth
- max. depth
- bankfull width
- bankfull depth
- W/D ratio
- bankfull max. depth
- floodprone x² width
- entrench. ratio

Legacy Tree:

Stream Drawing:

