

Stream & Location: Cuyahoga River, US Racksde Rd

RM: 13.15 Date: 06/23/22

JUSTIN TELEP

Scorers Full Name & Affiliation: Northeast Ohio Regional Sewer District

River Code: 19-001-000 STORET #: 502020 Lat./Long.: 41.3929 781.6295

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, POOL RIFFLE, OTHER TYPES, POOL RIFFLE, ORIGIN, QUALITY. Includes handwritten scores and a circled '14.5' maximum score.

Comments: 13 + 2 + 1 + 0 - 1.5

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.

AMOUNT Check ONE (Or 2 & average)

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

Comments: 7 + 17

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

Channel Morphology assessment grid with categories: SINUOSITY, DEVELOPMENT, CHANNELIZATION, STABILITY. Includes handwritten notes and a circled '15' maximum score.

Comments: Riffles w/ small, embedded substrate. River Right armored w/ boulder

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, CONSERVATION TILLAGE, URBAN OR INDUSTRIAL, MINING / CONSTRUCTION. Includes handwritten scores and a circled '6.5' maximum score.

Comments: 2.5 + 3 + 1

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 handwritten scores and a circled '12' maximum score.

Comments: 6 + 2 + 4

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

Riffle assessment grid with categories: RIFFLE DEPTH, RUN DEPTH, RIFFLE / RUN SUBSTRATE, RIFFLE / RUN EMBEDDEDNESS. Includes handwritten scores and a circled '3.5' maximum score.

Comments: 2 + 2 + 0 - 0.5

6] GRADIENT DRAINAGE AREA assessment grid with categories: GRADIENT, DRAINAGE AREA, %POOL, %GLIDE, %RUN, %RIFFLE. Includes handwritten scores and a circled '10' maximum score.

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

- 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

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
- ARMORED / SLUMPS
- ISLANDS / SCOURED
- IMPOUNDED / DESICCATED
- FLOOD CONTROL / DRAINAGE

EJ ISSUES

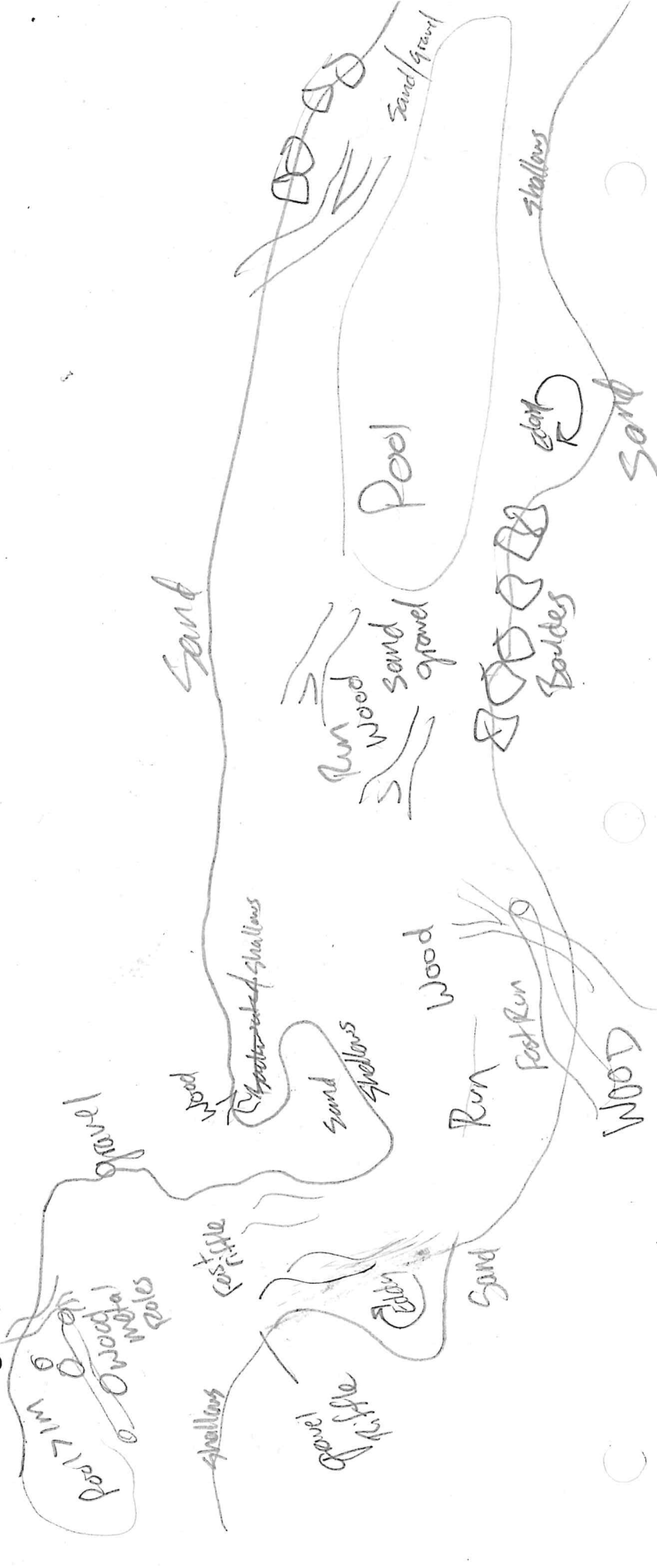
- WWTP / CSO / NPDES / INDUSTRY
- HARDENED / URBAN / DIRT&GRIME
- CONTAMINATED / LANDFILL
- BMPs-CONSTRUCTION-SEDIMENT
- LOGGING / IRRIGATION / COOLING
- BANK / EROSION / SURFACE
- FALSE BANK / MANURE / LAGOON
- WASH H₂O / TILE / H₂O TABLE
- ACID / MINE / QUARRY / FLOW
- NATURAL / WETLAND / STAGNANT
- 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 x² width
- entrench. ratio
- Legacy Tree:

Comment RE: Reach consistency/ is reach typical of stream? Recreation/ Observed - Inferred, Other/ Sampling observations, Concerns, Access directions, etc.
Mid/upper zone shifted from RL to RR @ old bridge piling. unstable substrate (sand/gravel) throughout this section.

Stream Drawing: FLOW →



Stream & Location: Cuyahoga River, DS Mill Creek RM: 11.30 Date: 6/23/22
Mark Matteson

River Code: 19-001-000 STORET #: F01510 Lat./Long.: 41.4179 -81.6446
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, POOL RIFFLE, OTHER TYPES, ORIGIN, QUALITY. Includes handwritten calculations: 13+2+0.5=2.5 and a circled score of 13.5.

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. Includes handwritten calculations: 3+4+4.5=2.5 and a circled score of 14.

3) CHANNEL MORPHOLOGY Check ONE in each category (Or 2 & average). Includes categories: SINUOSITY, DEVELOPMENT, CHANNELIZATION, STABILITY. Includes handwritten calculations: 3+4+4.5=2.5 and a circled score of 14.

4) BANK EROSION AND RIPARIAN ZONE Check ONE in each category for EACH BANK. Includes categories: EROSION, RIPARIAN WIDTH, FLOOD PLAIN QUALITY, CONSERVATION TILLAGE, URBAN OR INDUSTRIAL, MINING. Includes handwritten calculations: 2.5+2.5+0 and a circled score of 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 calculations: 6+2+4 and a circled score of 12.

Indicate for functional riffles; Best areas must be large enough to support a population of riffle-obligate species. Includes categories: RIFFLE DEPTH, RUN DEPTH, RIFFLE / RUN SUBSTRATE, RIFFLE / RUN EMBEDDEDNESS. Includes handwritten calculations: 2+2+1.5+0 and a circled score of 5.5.

6) GRADIENT (4.77 ft/mi) DRAINAGE AREA (730 mi^2). Includes categories: GRADIENT, DRAINAGE AREA, %POOL, %GLIDE, %RUN, %RIFFLE. Includes a circled score 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**
- 1st --sample pass-- 2nd
 - < 20 cm
 - 20-<40 cm
 - 40-70 cm
 - > 70 cm/CTB
 - SECCI DEPTH
- meters**
- CANOPY**
- > 85%- OPEN
 - 55%-<85%
 - 30%-<55%
 - 10%-<30%
 - <10%- CLOSED

- CJ RECREATION** AREA DEPTH
- POOL: >100ft² >3ft

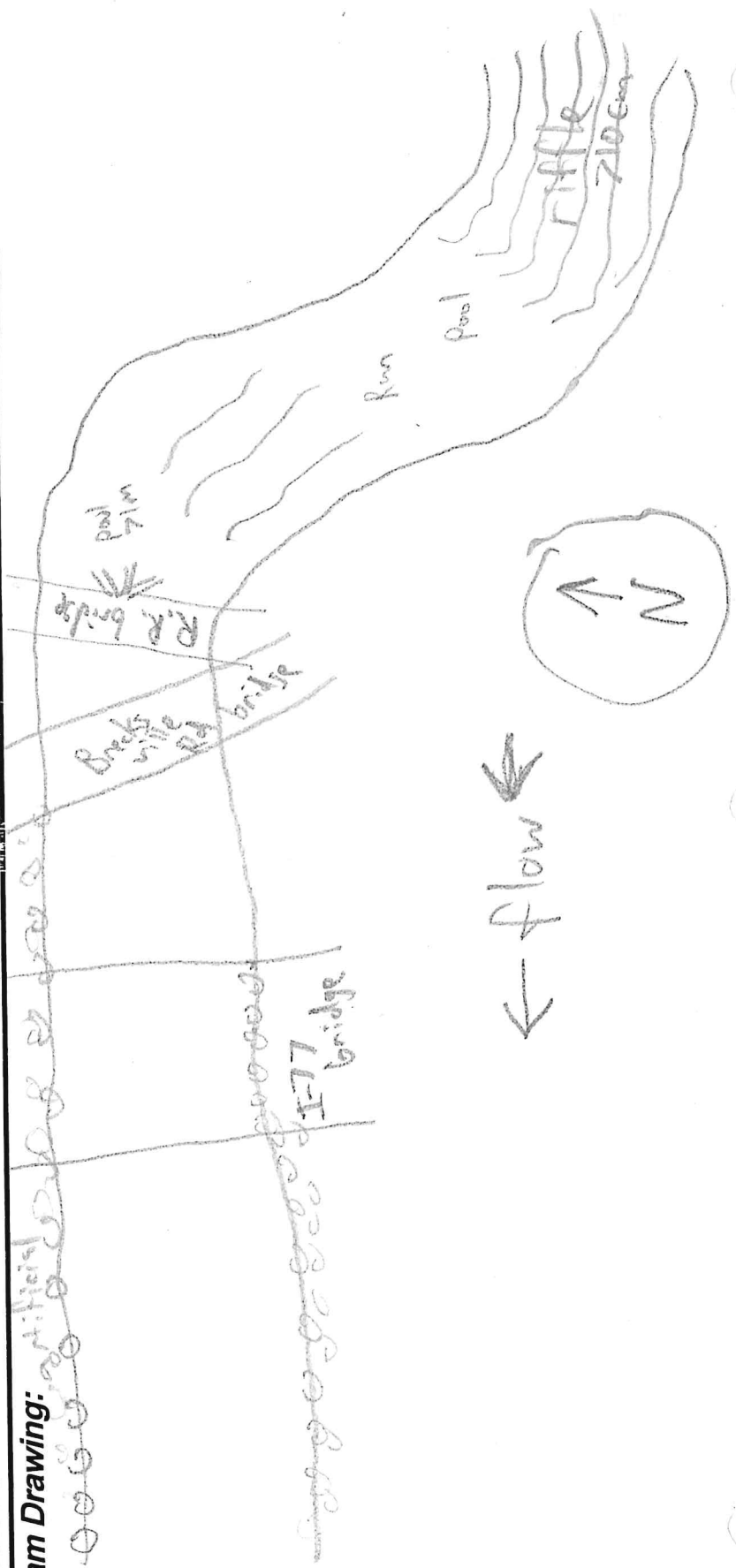
- BJAESTHETICS**
- NUISANCE ALGAE
 - INVASIVE MACROPHYTES
 - EXCESS TURBIDITY
 - DISCOLORATION
 - FOAM/ SCUM
 - OIL SHEEN
 - TRASH / LITTER
 - NUISANCE ODOR
 - SLUDGE DEPOSITS
 - CSOs/SSOs/OUTFALLS

- DJ MAINTENANCE**
- PUBLIC / PRIVATE / BOTH / NA
 - ACTIVE / HISTORIC / BOTH / NA
 - YOUNG-SUCCESSION-OLD
 - SPRAY / SNAG / REMOVED
 - MODIFIED / DIPPED CUT / NA
 - LEVEED / ONE SIDED
 - RELOCATED / CUTOFFS
 - MOVING-BEDLOAD-STABLE
 - ARMoured / SLUMPS
 - ISLANDS / SCoured
 - IMPOUND / 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
 - Legacy Tree:

Stream Drawing:



Stream & Location: Cuyahoga River, US southern WWTP RHWARDS RM: 10.75 Date: 06/24/22

River Code: 19-001-000 STORET #: POLA 25 Lat./Long.: 41.4196181, 6547 Office verified location

1) SUBSTRATE Check ONLY Two substrate TYPE BOXES; estimate % or note every type present. Check ONE (Or 2 & average). Includes categories: BEST TYPES, OTHER TYPES, ORIGIN, and QUALITY. Includes a 'Substrate' box with value 14.5 and 'Maximum 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: UNDERCUT BANKS, OVERHANGING VEGETATION, SHALLOWS, ROOTMATS, POOLS, ROOTWADS, BOULDERS, OXBOWS, BACKWATERS, AQUATIC MACROPHYTES, LOGS OR WOODY DEBRIS. Includes an 'Amount' box with value 16 and 'Maximum 20'.

3) CHANNEL MORPHOLOGY Check ONE in each category (Or 2 & average). Includes categories: SINUOSITY, DEVELOPMENT, CHANNELIZATION, STABILITY. Includes a 'Channel' box with value 15 and 'Maximum 20'.

4) BANK EROSION AND RIPARIAN ZONE Check ONE in each category for EACH BANK (Or 2 per bank & average). River right looking downstream. Includes categories: EROSION, RIPARIAN WIDTH, FLOOD PLAIN QUALITY. Includes a 'Riparian' box with value 5.25 and 'Maximum 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 12 and 'Maximum 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 6 and 'Maximum 8'.

6) GRADIENT (1.75 ft/mi) DRAINAGE AREA (743 m2). Includes categories: VERY LOW - LOW, MODERATE, HIGH - VERY HIGH. Includes boxes for %POOL, %GLIDE, %RUN, %RIFFLE. Includes a 'Gradient' box with value 10 and '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/CTB
 - SECCHI DEPTH

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
- ARMORED / SLUMPS
- ISLANDS / SCOURED
- IMPOUNDED / DESICCATED
- FLOOD CONTROL / DRAINAGE

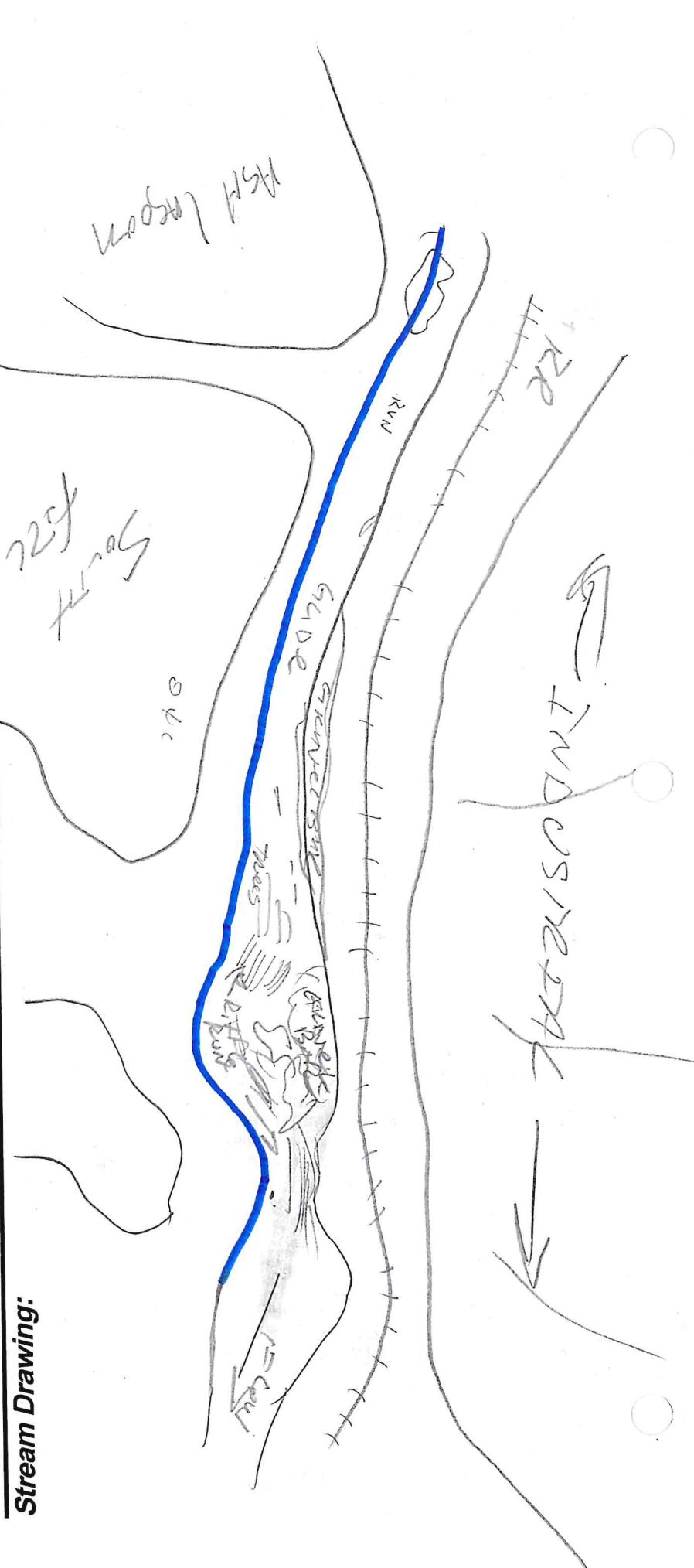
EJ ISSUES

- 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

- \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} width
- entrench. ratio
- Legacy Tree:

Stream Drawing:



Stream & Location: Cuyahoga River DS Southby WWTP

RM: 10.10 Date: 06/24/22

RHOADES

Scorers Full Name & Affiliation: Northeast Ohio Regional Sewer District

River Code: 19-001-000 STORET #: F99002 Lat./Long.: 41.4242 -81.6638

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 checked="" type="checkbox"/> POOL	<input type="checkbox"/> HARDPAN [4]	<input type="checkbox"/> POOL	<input type="checkbox"/> LIMESTONE [1]	<input type="checkbox"/> HEAVY [-2]	<input type="checkbox"/> MODERATE [-1]	Substrate 15.5 Maximum 20
<input type="checkbox"/> BOULDER [9]	<input checked="" type="checkbox"/> RIFFLE	<input type="checkbox"/> DETRITUS [3]	<input type="checkbox"/> RIFFLE	<input checked="" type="checkbox"/> TILLS [1]	<input type="checkbox"/> MODERATE [-1]	<input type="checkbox"/> NORMAL [0]	
<input type="checkbox"/> COBBLE [8]	<input checked="" type="checkbox"/> RIFFLE	<input type="checkbox"/> MUCK [2]	<input type="checkbox"/> RIFFLE	<input type="checkbox"/> WETLANDS [0]	<input type="checkbox"/> FREE [1]	<input type="checkbox"/> EXTENSIVE [-2]	
<input checked="" type="checkbox"/> GRAVEL [7]	<input checked="" type="checkbox"/> RIFFLE	<input type="checkbox"/> SILT [2]	<input checked="" type="checkbox"/> RIFFLE	<input type="checkbox"/> HARDPAN [0]	<input type="checkbox"/> MODERATE [-1]	<input type="checkbox"/> NORMAL [0]	
<input checked="" type="checkbox"/> SAND [6]	<input checked="" type="checkbox"/> RIFFLE	<input type="checkbox"/> ARTIFICIAL [0]	<input checked="" type="checkbox"/> RIFFLE	<input type="checkbox"/> SANDSTONE [0]	<input type="checkbox"/> MODERATE [-1]	<input type="checkbox"/> NONE [1]	
<input type="checkbox"/> BEDROCK [5]	<input type="checkbox"/> RIFFLE			<input type="checkbox"/> RIP/RAP [0]	<input type="checkbox"/> MODERATE [-1]	<input type="checkbox"/> NONE [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

Check ONE (Or 2 & average)

<u>0</u> UNDERCUT BANKS [1]	<u>3</u> POOLS > 70cm [2]	<u> </u> OXBOWS, BACKWATERS [1]	<input type="checkbox"/> EXTENSIVE >75% [11]
<u>0</u> OVERHANGING VEGETATION [1]	<u>2</u> ROOTWADS [1]	<u> </u> AQUATIC MACROPHYTES [1]	<input checked="" type="checkbox"/> MODERATE 25-75% [7]
<u>2</u> SHALLOWS (IN SLOW WATER) [1]	<u>2</u> BOULDERS [1]	<u>3</u> LOGS OR WOODY DEBRIS [1]	<input checked="" type="checkbox"/> SPARSE 5-<25% [3]
<u>3</u> ROOTMATS [1]			<input type="checkbox"/> NEARLY ABSENT <5% [1]

Comments

Cover
Maximum
20
12

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 checked="" type="checkbox"/> NONE [6]	<input checked="" 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 checked="" type="checkbox"/> LOW [2]	<input checked="" 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
14

4) BANK EROSION AND RIPARIAN ZONE

Check ONE in each category for EACH BANK (Or 2 per bank & average)

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

Indicate predominant land use(s) past 100m riparian.

Comments

Riparian
Maximum
10
5.5

5) POOL / GLIDE AND RIFFLE / RUN QUALITY

MAXIMUM DEPTH	CHANNEL WIDTH	CURRENT VELOCITY
Check ONE (ONLY!)	Check ONE (Or 2 & average)	Check ALL that apply
<input checked="" type="checkbox"/> > 1m [6]	<input checked="" 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 checked="" type="checkbox"/> SLOW [1]
<input type="checkbox"/> 0.4-<0.7m [2]	<input type="checkbox"/> POOL WIDTH < RIFFLE WIDTH [0]	<input type="checkbox"/> VERY FAST [1]
<input type="checkbox"/> 0.2-<0.4m [1]		<input type="checkbox"/> FAST [1]
<input type="checkbox"/> < 0.2m [0]		<input checked="" type="checkbox"/> MODERATE [1]
		<input checked="" type="checkbox"/> EDDIES [1]

Indicate for reach - pools and riffles.

Comments

Recreation Potential
Primary Contact
Secondary Contact
(circle one and comment on back)

Pool /
Current
Maximum
12
11

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

NO RIFFLE [metric=0]

RIFFLE DEPTH	RUN DEPTH	RIFFLE / RUN SUBSTRATE	RIFFLE / RUN EMBEDDEDNESS
<input checked="" type="checkbox"/> BEST AREAS > 10cm [2]	<input checked="" 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 checked="" 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
8
5.5

6) GRADIENT (0.9 ft/mi) VERY LOW - LOW [2-4]

DRAINAGE AREA (744 mi²) MODERATE [6-10]

HIGH - VERY HIGH [10-6]

%POOL: %GLIDE:

%RUN: %RIFFLE:

Gradient
Maximum
10
8

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

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
- ARMORED / 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

CJ RECREATION

AREA DEPTH

- >100ft²
- >3ft

Stream Drawing:



Stream & Location: Cuyahoga River - US Big Creek

RM: 8.6 Date: 06/24/22

Hothem

Scorer's Full Name & Affiliation: Northeast Ohio Regional Sewer District

River Code: 19-001-000 STORET #: 200025 Lat./Long.: 41.4381 181.668

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. and a circled score of 13.5.

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

AMOUNT

Check ONE (Or 2 & average)

Instream Cover assessment table with categories: UNDERCUT BANKS, OVERHANGING VEGETATION, SHALLOWS, ROOTMATS, POOLS, OXBOWS, BACKWATERS, ROOTWADS, AQUATIC MACROPHYTES, LOGS OR WOODY DEBRIS. Includes a circled score of 12.

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

Channel Morphology assessment table with categories: SINUOSITY, DEVELOPMENT, CHANNELIZATION, STABILITY. Includes checkboxes for HIGH, MODERATE, LOW, NONE, EXCELLENT, GOOD, FAIR, POOR, etc.

Channel Maximum 20 16.5

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

River right looking downstream

Bank Erosion and Riparian Zone assessment table with categories: EROSION, RIPARIAN WIDTH, FLOOD PLAIN QUALITY, CONSERVATION TILLAGE, URBAN OR INDUSTRIAL, MINING / CONSTRUCTION. Includes checkboxes for NONE, MODERATE, HEAVY, etc.

Riparian Maximum 10 6.75

5] POOL / GLIDE AND RIFFLE / RUN QUALITY

MAXIMUM DEPTH

CHANNEL WIDTH

CURRENT VELOCITY

Check ONE (ONLY)

Check ONE (Or 2 & average)

Check ALL that apply

Pool/Glide and Riffle/Run Quality assessment table with checkboxes for depth, width, and velocity categories.

Recreation Potential Primary Contact Secondary Contact

Pool / Current Maximum 12 11

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 assessment table with categories: RIFFLE DEPTH, RUN DEPTH, RIFFLE / RUN SUBSTRATE, RIFFLE / RUN EMBEDDEDNESS. Includes checkboxes for BEST AREAS, MAXIMUM, STABLE, MOD. STABLE, UNSTABLE, etc.

Riffle / Run Maximum 8 4

6] GRADIENT (2.03 ft/mi) DRAINAGE AREA (745 mi2) VERY LOW - LOW, MODERATE, HIGH - VERY HIGH

%POOL, %GLIDE, %RUN, %RIFFLE

Gradient Maximum 10 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

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

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

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:

