Reach S-QR30 (Pipeline ROW) Perennial Spread C Braxton County, West Virginia

Data	Included
Photos	\checkmark
SWVM Form	\checkmark
FCI Calculator and HGM Form	N/A – Perennial stream (not shadeable)
RBP Physical Characteristics Form	\checkmark
Water Quality Data	\checkmark
RBP Habitat Form	\checkmark
RBP Benthic Form	\checkmark
Benthic Identification Sheet	N/A – Low flow
Wolman Pebble Count	\checkmark
Reference Reach Software Pebble Count Data	\checkmark
Longitudinal Profile and Cross Sections	\checkmark

Spread C Stream S-QR30 (Pipeline ROW) Braxton County



Photo Type: DS, US View Location, Orientation, Photographer Initials: Downstream Edge of ROW, Upstream View, DH, HK Lat: 38.80794 Long: -80.535715



Photo Type: DS, DS View Location, Orientation, Photographer Initials: Downstream Edge of ROW, Downstream View, DH, HK Lat: 38.80794 Long: -80.535715

Spread C Stream S-QR30 (Pipeline ROW) Braxton County



Photo Type: US View at Center Location, Orientation, Photographer Initials: Center ROW, Upstream View, DH, HK Lat: 38.80794 Long: -80.535715



Photo Type: DS View at Center Location, Orientation, Photographer Initials: ROW Center, Downstream View, DH, HK Lat: 38.80794 Long: -80.535715

Spread C Stream S-QR30 (Pipeline ROW) Braxton County



Photo Type: US, US View Location, Orientation, Photographer Initials: Upstream Edge of ROW, Upstream View, DH, HK Lat: 38.80794 Long: -80.535715



Photo Type: US, DS View Location, Orientation, Photographer Initials: Upstream Edge of ROW, Downstream View, DH, HK Lat: 38.80794 Long: -80.535715

Spread C Stream S-QR30 (Pipeline ROW) Braxton County



Photo Type: Riffle, DS View Location, Orientation, Photographer Initials: Upstream of Riffle, Downstream View, DH, HK Lat: 38.80794 Long: -80.535715



Photo Type: Riffle, US View Location, Orientation, Photographer Initials: Downstream of Riffle, Upstream View, DH, HK Lat: 38.80794 Long: -80.535715

Spread C Stream S-QR30 (Pipeline ROW) Braxton County



Photo Type: Pool, DS View Location, Orientation, Photographer Initials: Upstream of Pool, Downstream View, DH, HK Lat: 38.80794 Long: -80.535715

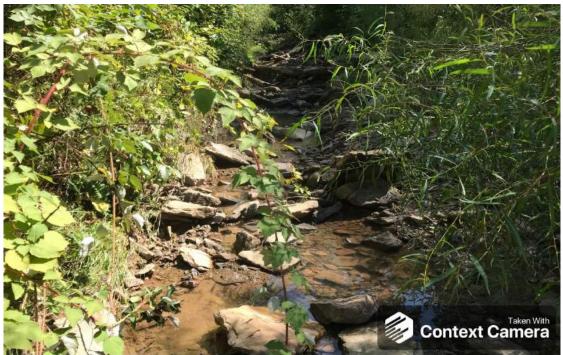


Photo Type: Pool, US View Location, Orientation, Photographer Initials: Downstream of Pool, Upstream View, DH, HK Lat: 38.80794 Long: -80.535715

West Virginia Stream and Wetland Valuation Metric (SWVM) Version 2.1, September 2017

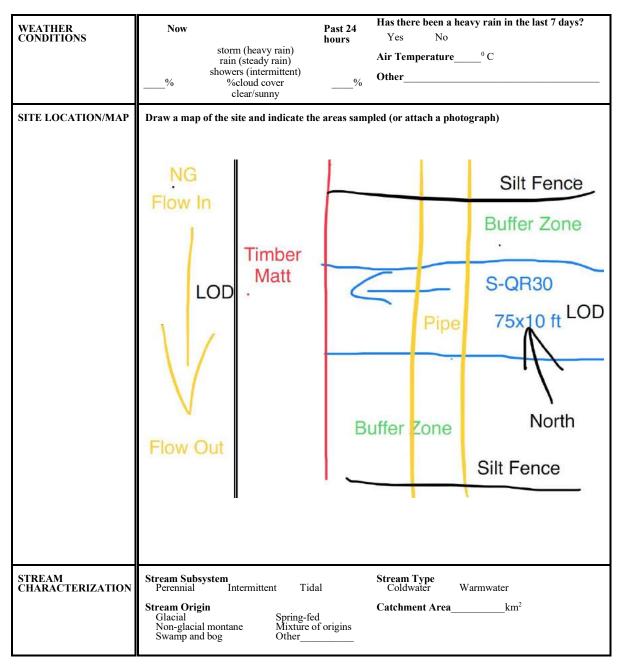
USACE FILE NO./ Project Name: (v2.1, Sept 2015)	Mountai	n Valley Pipeline	IMPACT COORDINATES: (in Decimal Degrees)	Lat.	38.80794	Lon.	-80.535715	WEATHER:	10% Cloud Cover	DATE:	9/4/2021
IMPACT STREAM/SITE ID AND (watershed size (acreage), unalter		S-I	QR30			MITIGATION STREAM CLASS./SITE ID AND SITE DESCRIPTION: (watershed size (acreage), unaltered or impairments)				Comments:	
STREAM IMPACT LENGTH:	79 FORM OF MITIGATION:	RESTORATION (Levels I-III)	MIT COORDINATES: (in Decimal Degrees)	Lat.		Lon.		PRECIPITATION PAST 48 HRS:		Mitigation Length:	
Column No. 1- Impact Existing Cond	dition (Debit)	Column No. 2- Mitigation Existing C	condition - Baseline (Credit)		Column No. 3- Mitigation P Post Completion	rojected at Five on (Credit)	Years	Column No. 4- Mitigation Proj Post Completion (ected at Ten Years Credit)	Column No. 5- Mitigation Project	ed at Maturity (Credit)
Stream Classification:	Perennial	Stream Classification:			Stream Classification:		0	Stream Classification:	0	Stream Classification:	0
Percent Stream Channel Slope	5	Percent Stream Channel SI	оре		Percent Stream Channel S	lope	0	Percent Stream Channel SI	ope 0	Percent Stream Channel St	lope 0
HGM Score (attach data fo	orms):	HGM Score (attach	data forms):		HGM Score (attacl	n data forms):		HGM Score (attach da	ata forms):	HGM Score (attach d	ata forms):
	Average		Average				Average		Average		Average
Hydrology Biogeochemical Cycling Habitat	0	Hydrology Biogeochemical Cycling Habitat	0		Hydrology Biogeochemical Cycling Habitat		0	Hydrology Biogeochemical Cycling Habitat	0	Hydrology Biogeochemical Cycling Habitat	•
PART I - Physical, Chemical and Biolog	gical Indicators	PART I - Physical, Chemical an	d Biological Indicators		PART I - Physical, Chemical a	nd Biological I	ndicators	PART I - Physical, Chemical and	Biological Indicators	PART I - Physical, Chemical and	Biological Indicators
Point S	Scale Range Site Score		Points Scale Range Site Score			Points Scale Ran	e Site Score		Points Scale Range Site Score		Points Scale Range Site Score
HYSICAL INDICATOR (Applies to all streams classifi	lications)	PHYSICAL INDICATOR (Applies to all streams	classifications)		PHYSICAL INDICATOR (Applies to all stream	s classifications)		PHYSICAL INDICATOR (Applies to all streams	classifications)	PHYSICAL INDICATOR (Applies to all streams	classifications)
ub-Total HEMICAL INDICATOR (Applies to Intermittent and P	20 20 11 20 0 0.1 20 20 0 0.1 20 18 18 18 19 18 18 0.0 18 0.0 19 0.885	USEPA RBP (Low Gradient Data Sheet) 1. Epifanual Substrate/Available Cover 2. Pool Substrate Characterization 3. Pool Variabustrate/Available 4. Sediment Deposition 5. Charartel Fore Status 5. Charartel Sinuscelly 7. Charartel Sinuscelly 8. Bank Subhirt (LB & RB) 10. Reparts Vesteritiva Zone Wridth (LB & RB) 10. Reparts Vesteritiva Zone Wridth (LB & RB) Total RBP Score Sub-Total CHEMICAL INDICATOR (Applies to Intermittern			USEPA RRB (High Gradient Data Sheet) E Enfland Stortal-Vallable Cover 2. Embeddedness 4. Sediment Decosition 5. Okanowi Free Status 5. Okanowi Free Status 7. Freegenery of Priffles (or bends) 8. Bends Stabilly (H. 84 RB) 9. Vegetarbe Protection (E. 8 RB) 10. Repair Vegetarbe Zore Widh (E. 8 RB) 17. dll RBP Score Sub-Total CHEMICAL INDICATOR (Applies to Memnitle		0 0 0 2/reams)	USEPA RBP (High Oraclent Data Sheet) 1. Enformation Substratin/Available Cover 2. Embeddedness 3. Velocity/ Uoph Regime 4. Sadment Deposition 5. Charoff free Status 6. Entry (Status) 4. English (Status) 5. Engli		USEPA RBP (High Gradient Data Sheet) 1: Epifurual Substrate/Available Cover 2: Entheddefiness 3: Velocity Dept Regime 4: Sedament Deposition 5: Chranel Free Status 5: Chranel Free Status 5: Chranel Free Status 6: Research (Reg Status) 8: Ress Status) (LB & RB) 10: Regaritive Protection (LB & RB) 10: Regaritive Status) 10: Regaritive Status 10: Regaritive Status 10	
VDEP Water Quality Indicators (General) vecific Conductivity <=09 - 00 points	00 0-1 7.4 30 7.8 1	WDDEP Water Quality Indicators (General) Specific Conductivity pH DO Sub-Total BIOLOGICAL INDICATOR (Applies to Intermite	0.99 5.90 10.30 0.1 0.1		WDEP Water Quality Indicators (Genera Specific Conductivity PH DO Sub-Total BIOLOGICAL INDICATOR (Applies to Inter	0-90 5-90 10-30	0	WVDEP Water Quality Indicators (General Specific Conductivity pH DO Sub-Total BIOLOGICAL INDICATOR (Apolies to Interm	0-90 5-90 10-30 0	WUDEP Water Quality Indicators (General Specific Conductivity pH DO Sub-Total BIOLOGICAL INDICATOR (Applies to Interm	0.40 0.90 0.1 0.1 0 0
V Stream Condition Index (WVSCI)		WV Stream Condition Index (WVSCI)	,		WV Stream Condition Index (WVSCI)			WV Stream Condition Index (WVSCI)		WV Stream Condition Index (WVSCI)	
0 0-10	00 0-1 0	Sub-Total	0-100 0-1 O		Sub-Total	0-100 0-	0	Sub-Total	0-100 0-1 0	Sub-Total	0-100 0-1 0
PART II - Index and Unit Sc	core	PART II - Index and	Unit Score		PART II - Index an	d Unit Score		PART II - Index and U	Init Score	PART II - Index and U	Init Score
Index Lin	ear Feet Unit Score	Index	Linear Feet Unit Score		Index	Linear Fee	t Unit Score	Index	Linear Feet Unit Score	Index	Linear Feet Unit Scor

0.943

74.4575

PHYSICAL CHARACTERIZATION/WATER QUALITY FIELD DATA SHEET (FRONT)

STREAM NAME	LOCATION					
STATION # RIVERMILE	STREAM CLASS	STREAM CLASS				
LAT LONG	RIVER BASIN					
STORET #	AGENCY					
INVESTIGATORS						
FORM COMPLETED BY	DATE REASON FOR SURVEY					



PHYSICAL CHARACTERIZATION/WATER QUALITY FIELD DATA SHEET (BACK)

WATERSHED FEATURES RIPARIAN VEGETATION (18 meter buffer)	Predominant Surrounding Landuse Local Watershed NPS Pollution Forest Commercial Field/Pasture Industrial Agricultural Other Residential Other Indicate the dominant type and record the dominant species present Herbaceous Trees Shrubs Grasses Dominant species present Herbaceous
INSTREAM FEATURES	Dominant species present
LARGE WOODY	LWDm ²
DEBRIS	Density of LWDm ² /km ² (LWD/ reach area)
AQUATIC	Indicate the dominant type and record the dominant species present
VEGETATION	Rooted emergent Rooted submergent Rooted floating Free floating Floating Algae Attached Algae Booted floating Free floating Free floating Dominant species present
WATER QUALITY (DS, US)	Temperature0 C Water Odors Normal/None Sewage Specific Conductance Petroleum Fishy Chemical Other Dissolved Oxygen Water Surface Oils Slick Sheen None Globs Flecks pH Turbidity (if not measured) Clear Slightly turbid Turbid Turbid Turbid Opaque Turbid
SEDIMENT/	Odors
SUBSTRATE	Normal Sewage Petroleum Deposits Chemical Anaerobic None Sludge Sawdust Paper fiber Sand Other Other Epoking at stones which are not deeply embedded are the undersides black in color? How are the undersides black in color?

INC	ORGANIC SUBSTRATE (should add up to			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)							
Substrate Diameter Type		% Composition in Sampling Reach	Substrate Type	Characteristic % Composition Sampling Arc							
Bedrock			Detritus	sticks, wood, coarse plant							
Boulder	> 256 mm (10")			materials (CPOM)							
Cobble	64-256 mm (2.5"-10")		Muck-Mud	black, very fine organic							
Gravel	2-64 mm (0.1"-2.5")			(FPOM)							
Sand	0.06-2mm (gritty)		Marl	grey, shell fragments							
Silt	0.004-0.06 mm										
Clay	< 0.004 mm (slick)										

HABITAT ASSESSMENT FIELD DATA SHEET - HG - USE ON ALL STREAMS (FRONT)

STREAM NAME	LOCATION					
STATION # RIVERMILE	STREAM CLASS					
LAT LONG	RIVER BASIN					
STORET #	AGENCY					
INVESTIGATORS						
FORM COMPLETED BY	DATE TIME AM PM	REASON FOR SURVEY				

	Habitat		Condition	ı Category					
	Parameter	Optimal	Suboptimal	Marginal	Poor				
	1. Epifaunal Substrate/ Available Cover	Greater than 70% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble or other stable habitat and at stage to allow full colonization potential (i.e., logs/snags that are <u>not</u> new fall and <u>not</u> transient).	40-70% mix of stable habitat; well-suited for full colonization potential; adequate habitat for maintenance of populations; presence of additional substrate in the form of newfall, but not yet prepared for colonization (may rate at high end of scale).	20-40% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.	Less than 20% stable habitat; lack of habitat is obvious; substrate unstable or lacking.				
	SCORE	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0				
n sampling reach	2. Embeddedness	Gravel, cobble, and boulder particles are 0- 25% surrounded by fine sediment. Layering of cobble provides diversity of niche space.	Gravel, cobble, and boulder particles are 25- 50% surrounded by fine sediment.	Gravel, cobble, and boulder particles are 50- 75% surrounded by fine sediment.	Gravel, cobble, and boulder particles are more than 75% surrounded by fine sediment.				
ted i	SCORE	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0				
Parameters to be evaluated in sampling reach	3. Velocity/Depth Regime	All four velocity/depth regimes present (slow- deep, slow-shallow, fast- deep, fast-shallow). (Slow is < 0.3 m/s, deep is > 0.5 m.)	Only 3 of the 4 regimes present (if fast-shallow is missing, score lower than if missing other regimes).	Only 2 of the 4 habitat regimes present (if fast- shallow or slow-shallow are missing, score low).	Dominated by 1 velocity/ depth regime (usually slow-deep).				
uram	SCORE	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0				
P	4. Sediment Deposition	Little or no enlargement of islands or point bars and less than 5% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from gravel, sand or fine sediment; 5-30% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, sand or fine sediment on old and new bars; 30-50% of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of fine material, increased bar development; more than 50% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.				
	SCORE	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0				
	5. Channel Flow Status	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills >75% of the available channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the available channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.				
	SCORE	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0				

Rapid Bioassessment Protocols For Use in Streams and Wadeable Rivers: Periphyton, Benthic Macroinvertebrates, and Fish, Second Edition - Form 2

HABITAT ASSESSMENT FIELD DATA SHEET—HIGH GRADIENT STREAMS (BACK)

Habitat		Condition	ı Category	
Parameter	Optimal	Suboptimal	Marginal	Poor
6. Channel Alteration	Channelization or dredging absent or minimal; stream with normal pattern.	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e., dredging, (greater than past 20 yr) may be present, but recent channelization is not present.	Channelization may be extensive; embankments or shoring structures present on both banks; and 40 to 80% of stream reach channelized and disrupted.	Banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed entirely.
SCORE	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
7. Frequency of Riffles (or bends)	Occurrence of riffles relatively frequent; ratio of distance between riffles divided by width of the stream <7:1 (generally 5 to 7); variety of habitat is key. In streams where riffles are continuous, placement of boulders or other large, natural obstruction is important.	Occurrence of riffles infrequent; distance between riffles divided by the width of the stream is between 7 to 15.	Occasional riffle or bend; bottom contours provide some habitat; distance between riffles divided by the width of the stream is between 15 to 25.	Generally all flat water or shallow riffles; poor habitat; distance between riffles divided by the width of the stream is a ratio of >25.
SCORE	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
 SCORE 8. Bank Stability (score each bank) Note: determine left or right side by facing downstream. SCORE (LB) SCORE (RB) 9. Vegetative Protection (score each bank) 	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. <5% of bank affected.	Moderately stable; infrequent, small areas of erosion mostly healed over. 5-30% of bank in reach has areas of erosion.	Moderately unstable; 30- 60% of bank in reach has areas of erosion; high erosion potential during floods.	Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; obvious bank sloughing; 60-100% of bank has erosional scars.
SCORE (LB)	Left Bank 10 9	8 7 6	5 4 3	2 1 0
SCORE (RB)	Right Bank 10 9	8 7 6	5 4 3	2 1 0
9. Vegetative Protection (score each bank)	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or nonwoody macrophytes; vegetative disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally.	70-90% of the streambank surfaces covered by native vegetation, but one class of plants is not well- represented; disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining.	50-70% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one- half of the potential plant stubble height remaining.	Less than 50% of the streambank surfaces covered by vegetation; disruption of streambank vegetation is very high; vegetation has been removed to 5 centimeters or less in average stubble height.
SCORE (LB)	Left Bank 10 9	8 7 6	5 4 3	2 1 0
SCORE (RB)	Right Bank 10 9	8 7 6	5 4 3	2 1 0
10. Riparian Vegetative Zone Width (score each bank riparian zone)	Width of riparian zone >18 meters; human activities (i.e., parking lots, roadbeds, clear-cuts, lawns, or crops) have not impacted zone.	Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.	Width of riparian zone 6- 12 meters; human activities have impacted zone a great deal.	Width of riparian zone <6 meters: little or no riparian vegetation due to human activities.
SCORE (LB)	Left Bank 10 9	8 7 6	5 4 3	2 1 0
SCORE(RB)	Right Bank 10 9	8 7 6	5 4 3	2 1 0

Total Score _____

BENTHIC MACROINVERTEBRATE FIELD DATA SHEET

STREAM NAME		LOCATION				
STATION #	_ RIVERMILE	STREAM CLASS				
LAT	LONG	RIVER BASIN				
STORET #		AGENCY				
INVESTIGATORS			LOT NUMBER			
FORM COMPLETED	BY	DATE TIME	REASON FOR SURVEY			
HABITAT TYPES	Indicate the percentage of each habitat type present Cobble% Snags% Vegetated Banks% Sand% Submerged Macrophytes% Other ()%					
SAMPLE COLLECTION	Indicate the number of jab	lected? wading fi ps/kicks taken in each habitat ty lags Vegetated B	anks Sand			
GENERAL COMMENTS						

QUALITATIVE LISTING OF AQUATIC BIOTA

Indicate estimated abundance: 0 = Absent/Not Observed, 1 = Rare, 2 = Common, 3= Abundant, 4 = Dominant

Periphyton	0	1	2	3	4	Slimes	0	1	2	3	4
Filamentous Algae	0	1	2	3	4	Macroinvertebrates	0	1	2	3	4
Macrophytes	0	1	2	3	4	Fish	0	1	2	3	4

FIELD OBSERVATIONS OF MACROBENTHOS

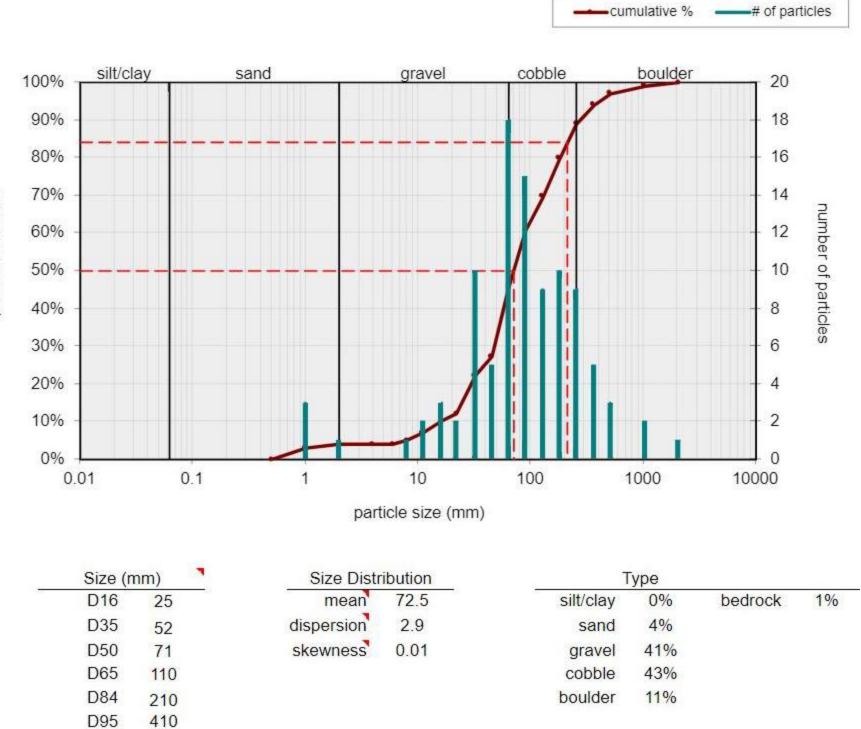
Indicate estimated abundance: 0 = Absent/Not Observed, 1 = Rare (1-3 organisms), 2 = Common (3-9 organisms), 3= Abundant (>10 organisms), 4 = Dominant (>50 organisms)

Porifera	0	1	2	3	4	Anisoptera	0	1	2	3	4	Chironomidae	0	1	2	3	4
Hydrozoa	0	1	2	3	4	Zygoptera	0	1	2	3	4	Ephemeroptera	0	1	2	3	4
Platyhelminthes	0	1	2	3	4	Hemiptera	0	1	2	3	4	Trichoptera	0	1	2	3	4
Turbellaria	0	1	2	3	4	Coleoptera	0	1	2	3	4	Other	0	1	2	3	4
Hirudinea	0	1	2	3	4	Lepidoptera	0	1	2	3	4						
Oligochaeta	0	1	2	3	4	Sialidae	0	1	2	3	4						
Isopoda	0	1	2	3	4	Corydalidae	0	1	2	3	4						
Amphipoda	0	1	2	3	4	Tipulidae	0	1	2	3	4						
Decapoda	0	1	2	3	4	Empididae	0	1	2	3	4						
Gastropoda	0	1	2	3	4	Simuliidae	0	1	2	3	4						
Bivalvia	0	1	2	3	4	Tabinidae	0	1	2	3	4						
						Culcidae	0	1	2	3	4						

WOLMAN PEBBLE COUNT FORM

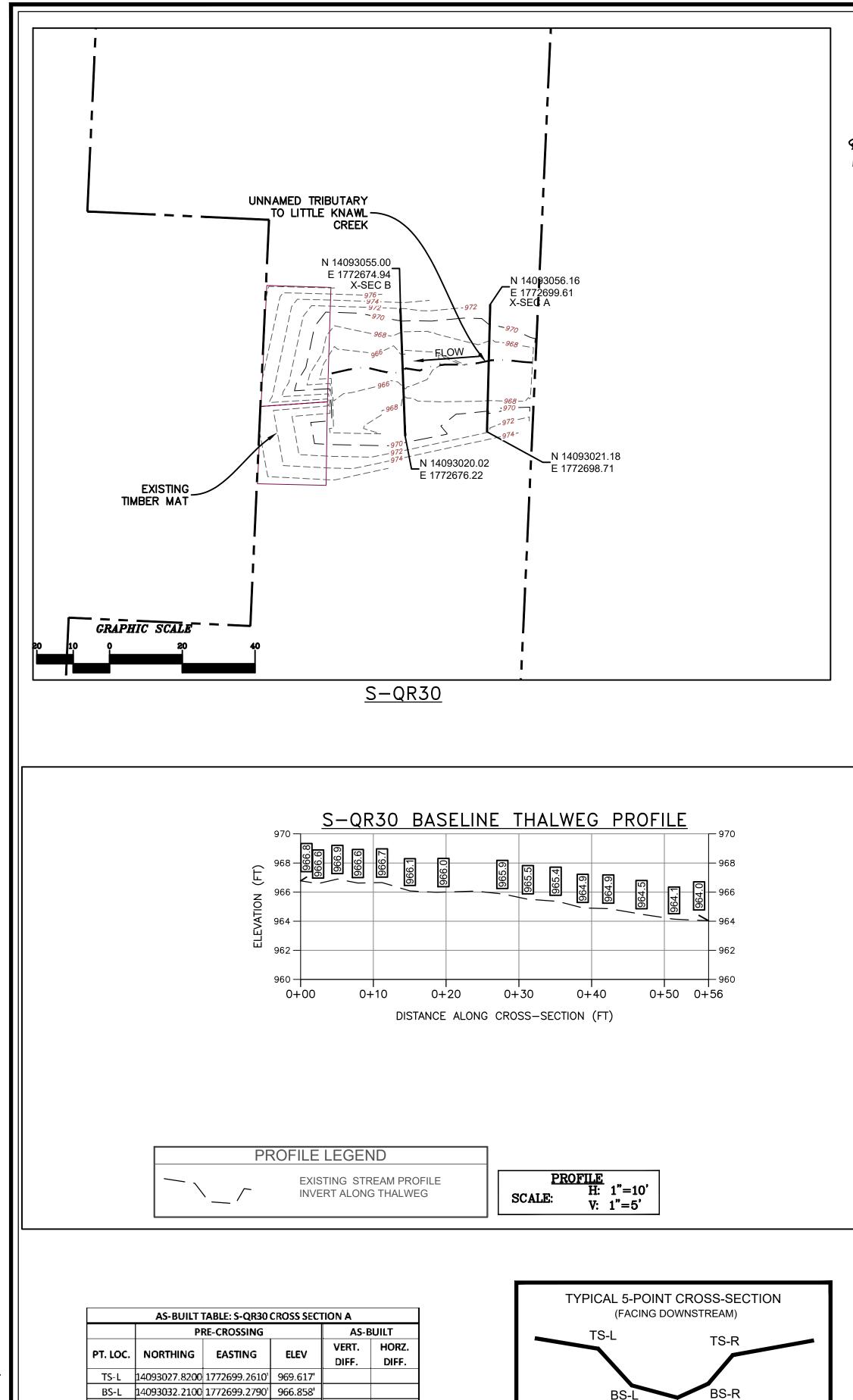
County:	Braxton	Stream ID:	S-QR30
Stream Name:	UNT to Little Knawl Creek		
HUC Code:		Basin:	
Survey Date:	9/4/2021		
Surveyors:	AJE, PEL	Impact Reach:	22.86 m
Type:	Bankfull Channel		

T 1	DADTICI		LE COUNT	D (1)	m (• "	T (A (a/ ~
Inches	PARTICLE	Millimeters		Particle Count	Total #	Item %	% Cun
	Silt/Clay	< .062	S/C	▲ ▼	0	0.00	0.00
	Very Fine	.062125		• •	0	0.00	0.00
	Fine	.12525		▲ ▼	0	0.00	0.00
	Medium	.255	S A N D	▲ ▼	0	0.00	0.00
	Coarse	.50-1.0	_	•	3	3.00	3.00
.0408	Very Coarse	1.0-2		• •	1	1.00	4.00
.0816	Very Fine	2 -4	GRAVEL	•	0	0.00	4.00
.1622	Fine	4 -5.7		▲	0	0.00	4.00
.2231	Fine	5.7 - 8		•	1	1.00	5.00
.3144	Medium	8 -11.3		•	2	2.00	7.00
.4463	Medium	11.3 - 16		- -	3	3.00	10.00
.6389	Coarse	16 -22.6		•	2	2.00	12.00
.89 - 1.26	Coarse	22.6 - 32		- -	10	10.00	22.00
1.26 - 1.77	Vry Coarse	32 - 45		- -	5	5.00	27.00
1.77 -2.5	Vry Coarse	45 - 64		- -	18	18.00	45.00
2.5 - 3.5	Small	64 - 90	COBBLE	- -	15	15.00	60.00
3.5 - 5.0	Small	90 - 128		•	9	9.00	69.00
5.0 - 7.1	Large	128 - 180		- -	10	10.00	79.00
7.1 - 10.1	Large	180 - 256		•	9	9.00	88.00
10.1 - 14.3	Small	256 - 362	BOULDER	• •	5	5.00	93.00
14.3 - 20	Small	362 - 512		- -	3	3.00	96.00
20 - 40	Medium	512 - 1024		•	2	2.00	98.00
40 - 80	Large	1024 -2048			1	1.00	99.00
80 - 160	Vry Large	2048 -4096		▲	0	0.00	99.00
	Bedrock		BDRK	▲	1	1.00	100.0
				Totals:	100		



Bankfull Channel Pebble Count, S-QR30, UNT to Little Knawl Creek

percent finer than



THW

TS: TOP OF SLOPE

BS: BOTTOM OF SLOPE

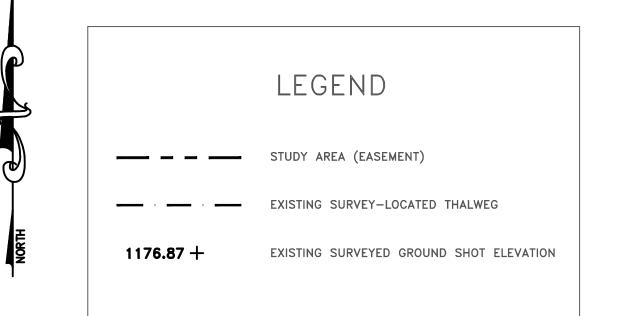
THW: THALWEG (INVERT)



THW [14093040.8200] 1772699.9350' 966.657'

BS-R 14093042.9600 1772700.1140' 966.876'

TS-R 14093048.0300 1772700.9190' 968.995'



SURVEY NOTES:

- 1. THIS MAP HAS BEEN ORIENTED TO NAD 1983 UTM ZONE 17N, AND VERTICALLY TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88), USING REAL TIME DGPS. FIELD LOCATIONS WERE COMPLETED ON SEPTEMBER 4, 2021.
- 2. EASEMENT LINES SHOWN ON PLAN VIEW WERE PROVIDED BY MOUNTAIN VALLEY PIPELINE.
- 3. SURVEY POINTS FOR CROSS SECTIONS AND THALWEG PROFILES COLLECTED IN 2021 HAVE BEEN USED IN COMBINATION WITH SURVEY POINTS COLLECTED PREVIOUSLY IN 2020 IN ORDER TO GENERATE THE PRE-CROSSING SURFACE SHOWN IN PLAN. DUE TO NATURAL EROSIONAL STREAM PROCESSES THAT CAN OCCUR OVER TIME, MINOR ADJUSTMENTS TO THE PROFILE ALIGNMENTS MAY HAVE BEEN REQUIRED IN ORDER TO GENERATE A CLEAN PRE-CROSSING SURFACE.
- 4. ALL SECTION VIEWS SHOWN LEFT TO RIGHT FACING DOWNSTREAM.
- 5. POST-CROSSING SURVEY INFORMATION SHOWN IN RED. DATA PENDING.
- 6. POST-CROSSING SURVEY POINTS FOR CROSS SECTIONS AND THALWEG ARE PROJECTED ONTO PRE-CROSSING SECTION AND PROFILE VIEWS FOR COMPARISON.

