Technical Memorandum 3-1

Aquatic Macroinvertebrates Upstream of Englebright Reservoir

Attachment 3-1D

Scanned Field Data Sheets

Yuba River Development Project FERC Project No. 2246

April 2013

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	110/00/00/00/00/00/00/00/00/00/00/00/00/	MP Stream I			n Fo	m <u>FUL</u>	<u>L VERSIC</u>	<u>N</u> R	evision Date: Februa	ary 9 th , 2011	
	R	EACH DOCL	MENTATIC	N	6.	Standard Reach L Alternate Re	ength (wetteo ach Length (d width ≤ 10 m) wetted width >	= 150 m Distance betw 10 m) = 250 m Distance	een transects =	15 m
	Proje	ct Name: 🚿	ICWA				Date: 👩		/ 2014 Z Sample Collection	010	5
	Strea	m Name: N	YUB.	Ą			Site Name	e/ Description	N.YUBA AB		R
	Site C	ode: YC	BM1-	l		-	Crew Mer	nbers: C.VE	ENCCI IN ASH	ENFELTER	۰.
	Latitu	de (actual – de	cimal degree	es): 🔕 6	60	285	datum: NAD83		¥ .		
	Longi	tude (actual – o	decimal degi	rees): 💅	43	359441	other:	GPS Device	: GARMIN	60	
		IBIENT WATER	QUALITY N	EASUREME	NTS		nd silica are tion date req		REAC	H LENGTH	
	Ter (Deg		pH.	7.4	1	Alkalinity (mg/L)	Turbid (ntu)		Actual Length (see reach length gu	(m)	CO
			cal. date				cal. date		at top of form		20
	Disso O ² (m		Specific Conduct (uS			Salinity. (ppt) —	Silic: (mg/L		Explanation:	10m	
	cal. date		cal. date		ca da		cal. date	· .		IUm	
	1 st me	DISCHARGE easurement = 1			ream)		che	ck if discha (expl	rge measurements ain in field notes sec	not possible	, 🗆
		ELOCITY ARE				5.40	Trans (m):	sect Width ≤∠O	BUOYANT OBJECT	METHOD (use	ONLY if
		Distance from Left Bank (an)	Depth (gen)	Velocity (ft/sec)		Distance from Left Bank (cm)	Depth	Velocity	Velocity area me	ethod not possibl	e) Float 3
	1	ى	0	0	11		(cm) D	(ft/sec) ি	Distance (m)		i loar o
200	2	Í	٢,	151	12	- 11	0	0	Float Time (sec)		
15.1	3	2	,6	2.13	13	- 12	0	0		Cross Section	
1,124	4 5		1,2	2.05	14 15	(2) 13	14.	.5	width (m) Upper depth(cm) Section		Lower Section
,34	6		16	,68	10	(.132)15	0	0 166-	Width Depth 1-	$ \land $	
,69	7	6	12	,45	17	(142)16	17	172	Depth 2		
~	8	<u> </u>	0	0	18	,212), 7	,4	,53	Depth 3		
122	9	4	12	, 66	19	(.38) 1 8	15	.76	Depth 4		
	10	<u> </u>	0	0	20	_19	0	0	Depth 5		
	Εv	vidence of rec	ent rainfall (899 A.	A 12.5	IELD CONDITIO				>10% flox	N.
						pstream (<500		NO	X minimal	increase	
		Flacher of m	es in feach			pstream (<500		NO	<u>χ</u> <1 year	< 5 years	
		Dominant lar	nduse/ land	cover in are	a sur	rounding reach	•	Agriculture Urban/	Forest Suburb/Town	X Rangelan Other	d
	ADDI	IONAL COBBL	.E 1	2	3	4 5	6	Industrial 7 8	9″ 10	11 12	40
		BEDDEDNESS MEASURES	0	5	0	15 10		30 40		50 40	13 30
	forms i	over from transe f needed to attai	n	15	16	17 18	19	20 21		24 25	
	m	et count of 25; easure in %)	25		5	0 10	20				
	N	OTE - 51	ite sta	rted.	05 n	1 D5 0	FGPS	point	to fit site	Into Page	1 of 26
		WEN AL	JILAINAN	Nadija	· ; l	n=1 1 1	703	Jamples	1 · · · ·		

FULL VERSION

Revision Date: February 9th, 2011

Site Code:			Date:	11	2011						
SLOPE	and BE	ARING FO	DRM (tran	nsect b	ased - fo	or Full I	рнав	only)		AUTOLEVI CLINOMET HANDLEVI	ER 🛛
	cord porcer	MAIN	SEGMENT isect distance	in each se	ament	(rec	ord perce	SUPPLEMEI nt of inter-trar	nsect distance	e in each se	gment
Starting Transect Star	tia rod irements	Cm %	Segments ar	Bearing (0°-359°)	Percent of Total Length (%)	Stadia	if sı a rod	Slope or Elevation Difference	Segments an Segment Length (m)	re used) Bearing (0°-359°)	Percent of Total Length (%)
К											
J		5	25		10				e		
I		2			· /~						
H		3									
G houlde	docking)	,					1 5 8 8 8 8 8 8				
F		5					k k 8 8 8				
E	2						4 1 1 5 7				
D		2					1				
C		<u> </u>									
В							, , , , , , ,				
Α		(1 1 1 1				
additional calculation area											
	Additio		AT CHARAC					High Grad	lient	Low G Po	radient
Paramete Epifaunal Subs	fr	Greater than 7 avorable for epif and fish cove	imal 0% of substrate aunal colonization r (50% for low-	on 40-70% 50% f	Suboptim	nabitat (30- streams);	30% ir	Marginal mix of stable hat low-gradient str	eams); (Less than 20%	stable habitat dient streams);
Cover		gradient str submerged logs cobble or othe	eams); mix of , undercut banks er stable habitat	s,	suited for full col potential			e frequently distr removed		substrate unsta	
Score:		Little or no enla or point bars an	18 17 1 rgement of island Id less than 5% c	ls So of forma	14 13 me new increas ation, mostly fro	m gravel,	10 Moderate sand, or	deposition of ne	ew gravel, H	eavy deposits increased bar	of fine material,
Sediment Depo	sition	the bottom affe deposition (<20	cted by sedimen 1% in low-gradier ams)	t sand, o nt the bo	or fine sediment ottom affected (ow-gradient stre	20-50% in ams)	50% of 80% i	the bottom affec n low-gradient st	ted (50 - reams)	changing frequient low-gradient	ently (>80% in ht streams)
Score:	1.		18 17 1 or dredging abse	Som int (e.g., b	(14) 13 le channelization pridge abutment	s); evidence		9 8 7 lization may be e nents or shoring	xtensive: ce	Banks shored ement; Over 80	with gabian or)% of the stream
Channel Alter		or minimal; str	ream with normal attern	l of par ma	st channelization by be present bu annelization not	n (> 20yrs) it recent present	present of s	on both banks; 4 tream reach disn	IO to 80%	nstream habita or remov	ed and disrupted it greatly altered ed entirely
Score:	2	20 19	18 17 1	16) 15	14 13	12 11	10	98	765	43	2 1 0

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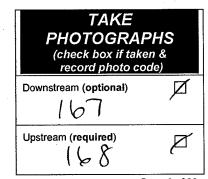
SWAMP Stream Habitat C	Characterization Form	FULL VERSION	Revisi	on Date: February 9 th , 2011
Site Code:	Site Name: NYR	abv MYR		Date:// 2011
Wetted Width (m): $ S $	Bankfull Width (m): 25	Bankfull Height (m):	3m	Transect A

						Transect Su	bstrates			
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	CPOM	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickness Codes 0 = No microalgae present, Feels rough, not slimy,
Left Bank	0	64	(03	0	Ô A	2	P A D	PAD	P \land D	1 = Present but not visible, Feels slimy,
Left Center	4.5	70	BLD	~	р 🕢	2	• A D	P 🔕 D	P 🔗 D	2 = Present and visible but <1mm, Rubbing fingers on surface produces a
Center	9	55	BLD		P A	V	(P) A D	PAD	P 🕢 D	brownish tint on them, scraping leaves visible trail.
Right Center	13.5	66	BLD	\sim	PА	2	PAD	P AD	P 🔊 D	3 = 1-5mm; 4 = 5-20mm;
Right Bank	17.5	24	305		Р (А)	2	P A D	P \Lambda D	POD	5 = >20mm; UD = Cannot determine if microalgae present,
						t measures of th ect measuremen	e median axis of ts preferred}	each particle or	one of the size	substrate too small or covered with silt (formerly Z code) D = Dry, not assessed

RIPARIAN VEGETATION (facing downstream)		Spar	se (<	%) :10%) (10-4)		3 = Н 4 = V						INSTREAM HABITAT COMPLEXITY	2 = 3 =	Spa Mot Hea		(10-4 (40-7	10%) 10%) 75%)		DENSIOMET READINGS (0 count covered	-17)
Vegetation Class		Lef	t Ba	nk			Rigi	ht B	ank			Filamentous Algae	0	(1) 2	.3	4		Center	0
Upper	Can	עמכ	(>5)	m hiq	h)							Aquatic Macrophytes/ Emergent Vegetation	6) 1	2	3	4		Left	
		Ô	<u>.</u>		. r		-	<u> </u>					\sim		15	â		-	Center Upstream	0
Trees and saplings >5 m high	0	U	2	3 4	1	0	(1)	2	3	4	1	Boulders	0	1	(2)) 3	4		opsilealli	
Lower C	anop	y (0.	5 m	-5 m ł	ligh	1)	Ž					Woody Debris >0.3 m	ဨ	1	2	3	4	4	Center	0
All vegetation 0.5 m to 5 m	0	n	2	3 4	\$	Ó	(1)	2	3	4		Woody Debris <0.3 m	0	1	2	3	4		Right Center	
Groun	d Cov	ver (<0.5	m hig	jh)		~~					Undercut Banks	Ø	1	2	3	4		Downstream	\square
Woody shrubs & saplings <0.5 m	0	6	2	3 4	4	0	0	2	3	4		Overhang. Vegetation	0	1	2	3	4		Optional	
Herbs/ grasses	0	1	2	3 4	4	0	1	2	3	4		Live Tree Roots	\bigcirc	1	2	3	4		Left Bank	
Barren, bare soil/ duff	0	1	2	3	٩ آ	0	1	2	3	(4)		Artificial Structures	0	1	2	3	4	1	Right Bank	X
				· · · ·	J					\sim			\sim							

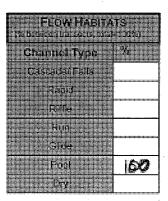
HUMAN INFLUENCE (circle only the closest to wetted channel)	B = 0 C = B P = >	10m+<:	Bank 50m fr	& 10m f om Char es or No		nnel;				
		Left	Bank	_	Chan	nel	I	Right	Banl	<u>د</u>
Walls/ Rip-rap/ Dams	Р	C	В	0	Y (N	(6)	В	Ċ	Р
Buildings	P	С	В	p	Y	N	Q	В	С	Р
Pavement/ Cleared Lot	Р	С	В	þ			ģ	В	С	Ρ
Road/ Railroad	Р	С	В	d	Y	N	Q	В	С	Ρ
Pipes (Inlet/ Outlet)	P	С	В	d	Y	N	0	В	С	Ρ
Landfill/ Trash	P	С	В	ø	Y	N	0	В	С	Р
Park/ Lawn	P	С	В	þ			ø	В	С	Р
Row Crop	P	С	В	þ		1	þ	В	С	Ρ
Pasture/ Range	Р	С	В	þ			0	В	С	Р
Logging Operations	Р	С	В	ģ			0	В	С	Ρ
Mining Activity	Р	С	В		Y	Ņ	0	В	С	Р
Vegetation Management	P	С	В	þ			0	В	С	Р
Bridges/ Abutments	Р	С	В	q	Y	N	Ø	В	С	Р
Orchards/ Vineyards	Р	С	В	0		'	d	В	С	Р

(score zone	5m upstream a	STABILITY nd 5m downstrean ull - wetted width)	n of transect
			Δ
Left Bank	eroded	vuinerable	/ stable
Right Bank	eroded	vulnerable	stable
1			



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SWAMP	Stream H	labitat C	Charact	erization	Form	FULL \	<u>/ERSION</u>	Revisio	n Date: Febru	ıary 9 th , 2011
		nter-7	Trans	ect: AE	3	1	Wetted Width (n	1): 18		
					In	ter-Transect	Substrates			
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed	СРОМ	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickness Codes 0 = No microalgae present,
Left Bank	.5	208	BUD	-	Р 🄊	S	<i>P</i> ⊗ □	P B D	P AD	 Feels rough, not slimy; 1 = Present but not visible, Feels slimy;
Left Center	4.5	210			РА	N	PAD	PD	PAD	2 = Present and visible but <1mm; Rubbing fingers on surface produces a
Center	9	180			РА		PAD	PAD	PAD	brownish fint on them, scraping leaves visible trail.
Right Center	13,5	72	朝夕	Sector Sector	РА		PAD	P A D	PAD	3 = 1-5mm; 4 = 5-20mm; 5 = >20mm;
Right Bank	2005	16658	OB	90	P 🔊	+	PAD	FAD	PAD	UD = Cannot determine if microalgae present,
						t measures of th ict measuremen		each particle or o	one of the size	substrate too small or covered with silt (formerly Z code), D = Dry, not assessed



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SWAMP Stream Habitat	Characterization Form FULL	VERSION Revisio	on Date: February 9 th , 2011
Site Code:	Site Name: NTK abov N	NTR	Date:// 2011
Wetted Width (m):	Bankfull Width (m): 23 Bank	kfull Height (m):	Transect B
	Transect Su	ibstrates	
Position from Depth	mm/ % Microalgae	Magraelage Magraelage	Microalgae Thickness Macrophytes Codes

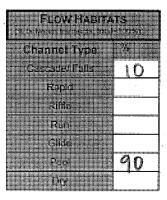
Position	from LB (m)	(cm)	size	Cobble Embed.	CPOM	Thickness Code	Attached	Unattached	Macrophytes	0 = No microalgae present. Feels rough, not slimy:
Left Bank	15	37	65	v	P Ø	3	(P)A D	P A D	P A D	1 = Present but not visible, Feels slimy;
Left Center	4,5	91	HJ		РА		PAD	PAD	PAD	2 = Present and visible but <1mm; Rubbing fingers on surface produces a
Center	9	89	BUD	terreterre.	P A		PAD	PAD	PAD	brownish tint on them, scraping leaves visible trail
Right Center	13.5	180	Bis	CALL DE LA CALLER	РА		PAD	PAD	PAD	3 = 1-5mm; 4 = 5-20mm;
Right Bank	17.5	205	360	-	РА		PAD	PAD	PAD	5 = >20mm; UD = Cannot determine if microalgae present,
	Note: Sub class cate	strate size gories liste	es can be ed on the	recorded eit supplements	her as direc al page (dire	t measures of th ect measuremen	ne median axis of hts preferred)	each particle or	one of the size	substrate too small or covered with silt (formerly Z code) D = Dry, not assessed

RIPARIAN VEGETATION (facing downstream)	1 =	Abse Span Mode	se (<	10%)	3 = H 4 = V(INSTREAM HABITAT COMPLEXITY	1= 2= 3=	Hea	rse Ierate	(40-75	0%) 0%) 5%)		DENSIOMET READINGS (0 count covered	-17)
Vegetation Class		Lef	: Ba	nk.			Rig	nt B	ank			Filamentous Algae	\odot) 1	2	3	4		Center	~
Upper	r Can	ору	(>5)	m hi	gh)							Aquatic Macrophytes/ Emergent Vegetation	Ø	1	2	3	4		Left Center	0
Trees and saplings >5 m high	0	1	2	3	4	0	1	2	3	4	1	Boulders	0	1	2	(3)	4]	Upstream	0
Lower C	anop	y (0.	5 m	-5 m	hig	n)				•		Woody Debris >0.3 m	Ó	1	2	3	4		Center	0
All vegetation 0.5 m to 5 m	6) 1	2	3	4	0	1	2	3	4		Woody Debris <0.3 m	Õ) 1	2	3	4		Right Center	
Groun	d Co	ver (<0.5	m t	nigh)							Undercut Banks	0	1	2	3	4		Downstream	0
Woody shrubs & saplings <0.5 m	0	$\overline{\mathbb{O}}$	2	3	4	0	1	2	3	4		Overhang. Vegetation	Õ) 1	2	3	4		Optional Left Bank	
Herbs/ grasses	0	1	2	3	4	0	1	2	3	4		Live Tree Roots	0	1	2	3	4			-
Barren, bare soil/ duff	0	1	2	3	Θ	0	1	2	3 ((\underline{A})	1_	Artificial Structures	Ø	1	2	3	4	1	Right Bank	

HUMAN INFLUENCE (circle only the closest to wetted channel)	B = 0 C = B P = >1	0m+<	;	n Chai		inel;				
		Left I	Bank	^	Chan	nel	F	Right	Banl	¢
Walls/ Rip-rap/ Dams	P	С	в (9	Υ(Ņ	0	В	С	Р
Buildings	P	С	В	ρ	Y	Ņ	Ō	В	С	Ρ
Pavement/ Cleared Lot	Р	С	В	þ			þ	В	С	Р
Road/ Railroad	Р	С	В	þ	Y	N	þ	В	С	Ρ
Pipes (Inlet/ Outlet)	Р	С	В	þ	Y	Ν	Q	В	С	Р
Landfill/ Trash	Р	С	В	þ	Y	Ν	d	В	С	Р
Park/ Lawn	P	С	В	Ö			0	В	С	Р
Row Crop	P	С	В	ò			0	В	С	Ρ
Pasture/ Range	Р	С	В	ģ			0	В	С	Р
Logging Operations	P	С	В	đ			0	В	С	Ρ
Mining Activity	P	С	В	¢	Y	Ņ	d	В	С	Р
Vegetation Management	P	С	В	þ			0	В	С	Р
Bridges/ Abutments	Р	С	В	ģ	Y	Ŋ	0	В	С	Р
Orchards/ Vineyards	Р	С	В	¢			0	В	С	Р

Right Bank	eroded	vulnerable	stable
Left Bank	eroded	vulnerable	stable
	between bank	üll - wetted width)	\sim
(score zone	5m upstream a	nd 5m downstream	n of transect
	BANK S	STABILITY	

SWAMP	Stream H	labitat (Charact	erization	Form	FULL V	ERSION	Revisio	n Date: Febri	uary 9 th , 2011
		nter-7	Frans	ect: BC		١	Netted Width (n	n): 🗸		
		-			In	ter-Transect	Substrates			and a second
Position	Dist from LB (m)	Depth (cm)	mm/ sîze class	% Cobble Embed	CPOM	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickness Codes 0 = No microalgae present,
Left Bank	5	16	603	0	Р 🆄	2	P 🚫 D	PAD	PAD	 Feels rough, not slimy; 1 = Present but not visible, Feels slimy;
Left Center	2	24	BD	<u> </u>	РА	2	DA D	P DD	PAD	2 = Present and visible but <1mm; Rubbing fingers on surface produces a
Center	4	51	致又		РА	2	DA D	P AD	ΡΑΟ	brownish tint on them, scraping leaves visible trail
Right Center	k	10	BID	(РА	2	P ØD	P AD	PAD	3 = 1-5mm; 4 = 5-20mm;
Right Bank	7.5	3	103	(0	РА	2	P 🚱 D	P AD	PAD	5 = >20mm; UD = Cannot determine if microalgae present,
	Note: Sub class cate	strate size gories liste	s can be d on the	recorded eith supplementa	ier as direc Il page (dire	t measures of th of measuremen	e median axis of ts preferred)	each particle or o	one of the size	substrate too small or covered with silt (formerly Z code), D = Dry, not assessed



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FULL VERSION

Revision Date: February 9th, 2011

Site Code:	Site Name: NYP	abu MYR	Date:// 2011
Wetted Width (m):	Bankfull Width (m): 22	Bankfull Height (m): 1-5	Transect C

						Transect Su	bstrates			
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	CPOM	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickness Codes 0 = No microalgae present, Feels rough, not slimy:
Left Bank	15	40	GB	30	PA	3	₽ Ø∕D	P 🚯 D	р Ю D	1 = Present but not visible, Feels slimy; 2 = Present and visible but
Left Center	2.5	91	BD	~	ØA	ŕ	P A D	PAD	PAD	<1mm; Rubbing fingers on surface produces a
Center	5	72	603	lo	Р 🚱		I Ø A D	PAD	PAD	brownish tint on them, scraping leaves visible trail.
Right Center	7.5	66	BUD		P D		ØA D	PAD	PAD	3 = 1-5mm; 4 = 5-20mm;
Right Bank	9.5	36	Co B	40	Р 🕑	J	©A D	PA D	PAD	5 = >20mm; UD = Cannot determine if microalgae present,
						t measures of th ct measuremen		each particle or	one of the size	substrate too small or covered with silt (formerly Z code). D = Dry, not assessed

RIPARIAN VEGETATION (facing downstream)		3 = Heavy (40-75%) 4 = Very Heavy (>75%)	Instream Habitat Complexity	0 = Absent (0%) 1 = Sparse (<10%) 2 = Moderate (10-40%) 3 = Heavy (40-75%) 4 = Very Heavy (>75%)	DENSIOMETER READINGS (0-17) count covered dots
Vegetation Class	Left Bank	Right Bank	Filamentous Algae	0 1 2 3 4	Center
Upner	Canopy (>5 m high)		Aquatic Macrophytes/	0 1 2 3 4	Left O
		6	Emergent Vegetation		Center
Trees and saplings >5 m high	0 1 2 3 4	0/1 2 3 4	Boulders	0 1 2 3 4	Upstream
Lower C	anopy (0.5 m-5 m high		Woody Debris >0.3 m	0 1 2 3 4	Center Right
All vegetation 0.5 m to 5 m	071234	071234	Woody Debris <0.3 m	0 1 2 3 4	Center
Groun	d Cover (<0.5 m high)	V	Undercut Banks	0 1 2 3 4	Downstream
Woody shrubs & saplings <0.5 m	(i) 1 2 3 4	(b) 1 2 3 4	Overhang. Vegetation	0 1 2 3 4	Optional
Herbs/ grasses	0 1 2 3 4	0 1 2 3 4	Live Tree Roots	0 1 2 3 4	Left Bank
Barren, bare soil/ duff	0 1 2 3 (3	0 1 2 3 4	Artificial Structures	0 1 2 3 4	Right Bank

HUMAN INFLUENCE (circle only the closest to wetted channel)	B = 0 C = Be P = >1	0m+<	Bank 50m fre	& 10m fi om Char es or No						
		Left I	Bank		Channel		F	Right	Banl	٢
Walls/ Rip-rap/ Dams	P	С	В	(0)	YN	1	0	В	С	Р
Buildings	Р	С	В	9	YN	Τ	ρ	В	С	Р
Pavement/ Cleared Lot	Р	С	В	¢			þ	В	С	Р
Road/ Railroad	Р	С	В	q	ΥN	Τ	0	В	С	Ъ
Pipes (Inlet/ Outlet)	Р	С	В	ġ	YN		0	В	С	Ρ
Landfill/ Trash	P	С	В	ģ	YN		þ	В	С	Ρ
Park/ Lawn	Р	С	В	ģ			þ	В	С	Ρ
Row Crop	Р	С	В	ģ			þ	В	С	Р
Pasture/ Range	Р	С	В	ģ			þ	В	С	Ρ
Logging Operations	Р	С	В	d			þ	В	С	Р
Mining Activity	P	С	В	d	YN		þ	В	С	Р
Vegetation Management	P	С	В	4			þ	В	С	Р
Bridges/ Abutments	P	С	В	đ	YN		þ	В	С	Ρ
Orchards/ Vineyards	P	С	В	¢.			¢	В	С	Р

reteration to a t			
	3		
		أمحم مناطبة	
BUNNE BARL APPRIAT		الممر مانامات	
Right Bank eroded	vuinarable	Stable_	
Right Bank ercoed			

FULL VERSION

Revision Date: February 9th, 2011

	I	nter-7	Frans	ect: CI)	The second s	Wetted Width (n	n): 12		
					In	ter-Transec	t Substrates			L'and
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	CPOM	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickness Codes 0 = No microalgae present.
Left Bank	5	9	COB	0	P 🔗	3	DA D	P 🔊 D	Р Ø D	Feels rough, not slimy; 1 = Present but not visible, Feels slimy;
Left Center	3	57	BLD		P 🐼	3	(P) A D	P 🗿 D	PAD	2 = Present and visible but <1mm; Rubbing fingers on surface produces a
Center	6	0	Biz	-	₽Ø	0	P 🖗 D	P AD	P 🏠 D	brownish tint on them, scraping leaves visible- trail
Right Center	9	11.	GED	Ð	P 🔗	3	P 🔊 D	P 🔊 D	P 🅢 D	3 = 1-5mm; 4 = 5-20mm;
Right Bank	11.5	0	20		Р 🖉	0	P 🔊 D	PJD	POD	5 = >20mm; UD = Cannot determine if microalgae present.
	Note: Sub class cate	strate size gories liste	s can be d on the	recorded eith supplementa	ier as direct I page (dire	measures of th ct measuremen	ne median axis of nts preferred)	each particle or	one of the size	substrate too small or covered with silt (formeny Z code). D = Dry, not assessed

	fiowf		15 19751 -
÷ Ch	innel T	rpe 🕴	2
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	Parto.		
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	tina.		
	Enst		80
	Cry		

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ite Code:				Site Name:	NYR	- abu 1			Date:	_/ / 2011
Vetted Wid	th (m):	2		Bankfull Wid	ith (m):	5 Ban	kfull Height (m):	3	Trai	nsect D
			-			Transect Si	ubstrates			
Position	Dist from LB (m)	Depth (cm)	mm/ size	% Cobble Embed.	CPOM	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickness Codes 0 = No microalgae presen Eeels rough, not slimy;
Left Bank	15 (m)	18	CB	10	PA	3	P 🕢 D	P 🗿 D	P 🙆 D	1 = Present but not visible Feels slimy;
Left Center	3	49	CB	30	P 🔊	2	PA)D	P O D	P 🔕 D	2 = Present and visible bu <1mm, Rubbing fingers on surface produces a
Center	6	15	BLD		(P) A	3	P D	P 🖉 D	P 💋 D	brownish tint on them, scraping leaves visible trail.
Right Center	9	0	BUT	,	ØА	2	P Ø D	POD	P (A) D	3 = 1-5mm; 4 = 5-20mm; 5 = >20mm;
Right Bank	11.5	12	COB		P 🔊	D	P 🖉 D	P 🔊 D	P 🕢 D	UD = Cannot determine if microalgae present.
	Note: Sut class cate	ostrate siz egories list	es can be ed on the	recorded eit supplement	her as direct al page (dire	measures of t act measureme	he median axis o nts preferred)	each particle or	one of the size	substrate too small or covered with silt (formerly Z code).
										D = Dry, not assessed
	N VEGET	Constraints of the second	1 = Spa	ent (0%) rse (<10%) lerate (10-40	4 = Very	y (40-75%) Heavy (>75%)	Нав	REAM 1= 2= ITAT 3=	Absent (0%) Sparse (<10%) Moderate (10-40%) Heavy (40-75%) Very Heavy (>75%)	DENSIOMETER READINGS (0-1 count covered do
Vege	tation Cla	iss	Le	ft Bank	Rig	ht Bank	Filamentou			Center Left
		Upper	Canopy	r (>5 m high			Aquatic Ma Emergent \	/egetation	~ ~	Center
Trees and	saplings >5		(0)1	234).5 m-5 m h	$\left(\begin{array}{c} 0 \end{array} \right)$	234	Boulders Woody Del	0 0.0 mis >0.3 m	1 2 (3)	Upstream Center
All veget	ation 0.5 m			2 3 4		234	·····	oris <0.3 m 0	① 2 3 4	Right Center
			U	(<0.5 m hig			Undercut	Banks 🕖	1 2 3 4	Downstream
Woody	shrubs & sa	plings	0 1	2 3 4	10 1	2 3 4	Overhang.	Vegetation 0	1 2 3 4	Optional

HUMAN INFLUENCE (circle only the closest to wetted channel) C = Between Bank & 10m from Channel; P = >10m+<50m from Channel; Channel (record Yes or No) Left Bank Channel Right Bank	Woody shrubs & saplings <0.5 m	0	0	2	3	4	Ø	1	2	3	4		Overha	ng. Vegetation
Barteri, bare solir outin01200101111HUMAN INFLUENCE (circle only the closest to wetted channel) $D = Not Present;$ $B = C n Bank & 10m from Channel;C = Between Bank & 10m from Channel;ChannelP = C B ank;C = B con C responseChannelRight Bank$	Herbs/ grasses	0	1	2	3	4	0	1	2	3	4		Live Tre	e Roots
HUMAN INFLUENCE (circle only the closest to wetted channel) B = On Bank, 3 10m from Channel; P = >10m + 50m from Channel; Channel (record Yes or No) Right Bank Left Walls/ Rip-rap/ Dams P C B Y N O B C P Buildings P C B Y N O B C P Road/ Rairoad P C B Y N D B C P Park/ Lawn P C B Y N D B C P Park/ Lawn P C B Y N D B C P Patri/ Lawn P C B Y N D B C P Pasture/ Range P C B Y N D B C P Landfill/ Trash P C B Q D B C P Pasture/ Range P C B Q B C P Logging Operat	Barren, bare soil/ duff	0	1	2	3	Ð	0	1	2	3	Ø		Artificia	I Structures
Walls/ Rip-rap/ Dams P C B Q Y N O B C P Buildings P C B Ø Y N O B C P Buildings P C B Ø Y N O B C P Pavement/ Cleared Lot P C B Ø Y N D B C P Road/ Rairoad P C B Q Y N D B C P Pipes (inlet/ Outlet) P C B Q Y N D B C P Landfill/ Trash P C B Q Y N D B C P Park/ Lawn P C B Q D B C P Pasture/ Range P C B Q B C P Logging Operations P C B Q B C <th>(circle only the closest to</th> <th>B = (C = l P = 2</th> <th>Dn Bai Betwei 10m+</th> <th>nk; en Ba <50m</th> <th>fror</th> <th>n Chai</th> <th>nnel;</th> <th>ianne</th> <th>ł;</th> <th></th> <th></th> <th></th> <th></th> <th>(sc</th>	(circle only the closest to	B = (C = l P = 2	Dn Bai Betwei 10m+	nk; en Ba <50m	fror	n Chai	nnel;	ianne	ł;					(sc
Reliance P C B Ø Y N O B C P Buildings P C B Ø Y N O B C P Pavement/ Cleared Lot P C B Ø Y N O B C P Road/ Railroad P C B Q Y N D B C P Pipes (inlet/ Outlet) P C B Q Y N D B C P Park/ Lawn P C B Q Y N D B C P Park/ Lawn P C B Q D B C P Park/ Lawn P C B Q D B C P Row Crop P C B Q D B C P Logging Operations P C B Q N Q B C			Lef	t Bai	nk	0	Cha	anne	1	~	Right	Bar	k	Left
BuildingsICBIII<	Walls/ Rip-rap/ Dams	P	С	E	3 (S	·Υ	N		()			-	Right
Parkement Cleared LOC P C B Q Y N D B C P Road/ Railroad P C B Q Y N D B C P Pipes (inlet/ Outlet) P C B Q Y N D B C P Landfill/ Trash P C B Q Y N D B C P Park/ Lawn P C B Q Y N D B C P Row Crop P C B Q D B C P Pasture/ Range P C B Q D B C P Logging Operations P C B Q B C P Mining Activity P C B Q V Q B C P Vegetation Management P C B Q V Q B C <	Buildings	P	С	E	3	Ø	Y	Ņ		Ý	В			
Production P C B Q Y N D B C P Pipes (inlet/ Outlet) P C B Q Y N D B C P Landfill/ Trash P C B Q Y N D B C P Park/ Lawn P C B Q Y N D B C P Park/ Lawn P C B Q Y N D B C P Park/ Lawn P C B Q D B C P Pasture/ Range P C B Q D B C P Logging Operations P C B Q N Q B C P Mining Activity P C B Q Y N Q B C P Bridges/ Abutments P C B Q Y N	Pavement/ Cleared Lot	P	С	E	3	ø				þ		_		
Landfill/ Trash P C B Q Y N Q B C P Park/Lawn P C B Q Y N Q B C P Park/Lawn P C B Q D B C P Row Crop P C B Q D B C P Pasture/ Range P C B Q B C P Logging Operations P C B Q B C P Mining Activity P C B Q V Q B C P Vegetation Management P C B Q Y N Q B C P Bridges/ Abutments P C B Q Y N Q B C P	Road/ Railroad	P	С	E	3	¢	Y	Ŋ		þ	В	С	Р	
Park/Lawn P C B Q P C P Pasture/ Range P C B Q D B C P Pasture/ Range P C B Q D B C P Logging Operations P C B Q D B C P Mining Activity P C B Q Y N Q B C P Vegetation Management P C B Q Y N Q B C P Bridges/ Abutments P C B Q Y N Q B C P	Pipes (Inlet/ Outlet)	P	С	E	3	9	Y	N		þ	В	С	Р	
Row CropPCBQDBCPPasture/ RangePCBQDBCPLogging OperationsPCBQDBCPMining ActivityPCBQYNQBCPVegetation ManagementPCBDYNQBCPBridges/ AbutmentsPCBDYNQBCP	Landfill/ Trash	P	С	E	3	ø	Y	Ņ		þ	В	С	P	
Pasture/ Range P C B Q B C P Logging Operations P C B Q B C P Mining Activity P C B Q N Q B C P Vegetation Management P C B Q V N Q B C P Bridges/ Abutments P C B Q Y N Q B C P	Park/ Lawn	P	С	E	3	¢				þ	В		-	
Logging Operations P C B P O B C P Mining Activity P C B Q N Q B C P Vegetation Management P C B P C B C P Bridges/ Abutments P C B P V N C B C P	Row Crop	P	С	E	3	¢				þ	В	_		ļ
Mining Activity P C B Q Y N Q B C P Vegetation Management P C B D V N C B C P Bridges/ Abutments P C B D Y N C B C P	Pasture/ Range	P	С	E	3	ø				þ	В			
Vegetation Management P C B P Bridges/ Abutments P C B C P	Logging Operations	P	С	; E	3	þ				<u> </u>	В			
Bridges/ Abutments P C B P Y N C B C P	Mining Activity	P	C	; [3	þ	Y	Ņ		4				
Dinges Additioned	Vegetation Management	P	C	; [3	þ					В	_		-
Orchards/ Vineyards P C B 0 B C P	Bridges/ Abutments	P	C	; [В	þ	Y	<u> </u>		d	В	С		
	Orchards/ Vineyards	P	C	;	B	¢				¢	В	С	P	

Right Bank	eroded	vulnerable	stable
Left Bank	eroded	vulnerable	stable
(score zone	5m upstream a	STABILITY and 5m downstream full - wetted width)	of transect

Left Bank

Right Bank

3 4

2 3 4

2 1 D

() 1

P 1

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FULL VERSION

Revision Date: February 9th, 2011

	Ι	nter-	Frans	ect: DI	3		Netted Width (n	n): / D	· · · ·	
				and the second second	In	ter-Transect	Substrates			
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed,	CPOM.	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickness Codes 0 = No microalgae present.
Left Bank	.5	78	CoB	30	PA	2	P 🔊 D	P 🖗 D	'P 🔊 D	 Feels rough; not slimy; 1 = Present but not visible, Feels slimy;
Left Center	2.5	32	BUD		Р 🖉	2	P ØD	P 🔊 D	P 🐴 D	2 = Present and visible but <1mm; Rubbing fingers on surface produces a
Center	5	0	BLD		Р	0	P 👌 D	. P 👌 D	P 🔊 D	brownish tint on them, scraping leaves visible
Right Center	7.5	Ō	BUD		Р 🚯	0	P 🔕 D	P 🕢 D	P \land D	trail. 3 = 1-5mm; 4 = 5-20mm;
Right Bank	9.5	18	KOB	Ø	P A	2	P 🔊 D	P A D	PDD	5 = >20mm; UD = Cannot determine if microalgae present,
	Note: Sub class cate	strate size gories liste	is can be ed on the	recorded eith supplementa	ier as direc Il page (dire	measures of the ct measurement	e median axis of is preferred)	each particle or o	one of the size	substrate too small or covered with silt (formerly Z code). D = Dry, not assessed

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SWAMP Stream Habitat Cl	naracterization Form	FULL VERSION	Revisi	ion Date: February 9 th , 2011
Site Code:	Site Name: NYR	2 abu MYR		Date:// 2011
Wetted Width (m):	Bankfull Width (m):	Bankfull Height (m):	2	Transect E

	-					Transect Su	bstrates			
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	CPOM	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickness Codes 0 = No microalgae present Feels rough, not slimy;
Left Bank	15	29	6)	<u> </u>	₽ Ă	3	P A D	PØ D	P 🙆 D	1 = Present but not visible, Feels slimy;
Left Center	2	81	COB	20	P 🔊	3	DA D.	P 🚯 D	P 🔊 D	2 = Present and visible bu <1mm: Rubbing fingers on surface produces a
Center	4	118	COB	60	P Ø	3	(PA D	P 🛈 D	P 🔗 D	brownish tint on them, scraping leaves visible trail.
Right Center	ų	122	BLD		P A	2	P A D	P A D	P Ø D	3 = 1-5mm; 4 = 5-20mm;
Right Bank	7.5	153	G	-	P (A)	2	P 🔊 D	P 👌 D	P G D	5 = >20mm; UD = Cannot determine if microalgae present,
12.	Note: Sub class cate	strate size gories liste	s can be ed on the	recorded eit supplement	ner as direc al page (dire	t measures of the	e median axis ol its preferred)	each particle or	one of the size	substrate too small or covered with silt (formerly Z code) D = Dry, not assessed

RIPARIAN VEGETATION (facing downstream)	1 =	Abse Span Mode	se (<	10%	C. 634644620	4 = ∖			-75% y (>7:			INSTREAM HABITAT COMPLEXITY	2 = 3 =	Spar Mod Heav	se erate (40-75	0%) 0%) 5%)		DENSIOMET READINGS (0 count covered	-17)
Vegetation Class		Lef	t Ba	nk	÷.,		Rig	ht E	Bank			Filamentous Algae	0/	1	2	3	4	II	Center	2
Upper	Can	юру	(>5	m hi	igh)							Aquatic Macrophytes/ Emergent Vegetation	0	1	2	3	4		Left Center	0
Trees and saplings >5 m high	16) 1	2	3	4	6) 1	2	3	4	1	Boulders	0	1	$\textcircled{\baselinet}{2}$	3	4		Upstream	0
Lower C	anor	oy (0.	5 m	-5 m	higi	n)						Woody Debris >0.3 m	Ø	1	2	3	4		Center Right	1
All vegetation 0.5 m to 5 m	${\mathcal O}$	1	2	3	4	0	1	2	3	4		Woody Debris <0.3 m	l@	1	2	3	4		Center	6
Groun	d Co	ver (<0.5	mł	nigh)							Undercut Banks	6	1	2	3	4		Downstream	
Woody shrubs & saplings <0.5 m	0	0	2	3	4	0	Ð	2	3	4		Overhang. Vegetation	0	1	2	3	4		Optional Left Bank	
Herbs/ grasses	0	6	2	3	4	0	1	Ø	3	4		Live Tree Roots	Ø) 1	2	3	4			
Barren, bare soil/ duff	0	1	2	3	(4)	0	1	2	3	Ø		Artificial Structures	B	1	2	3	4		Right Bank	

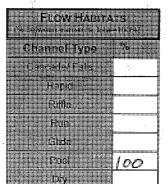
v

HUMAN INFLUENCE (circle only the closest to wetted channel)	B = O C = B P = >1	0m+<5	; Bank 50m fre	& 10m fi om Char es or No		nnel;				
		Left I	Bank		Char	inel	I	Right	Banl	<u>د</u>
Walls/ Rip-rap/ Dams	P	С	В	0	Y	ß	0	В	С	Р
Buildings	P	С	В	ρ	Y	N	P	В	С	Р
Pavement/ Cleared Lot	Р	С	В	þ		1	þ	В	С	Р
Road/ Railroad	Р	С	В	þ	Y	N	þ	В	С	Ρ
Pipes (Inlet/ Outlet)	Р	С	В	þ	Y	N	þ	В	С	Р
Landfill/ Trash	Р	С	В	þ	Y	N	þ	В	С	Р
Park/Lawn	Р	С	В	þ			þ	В	С	Р
Row Crop	Р	С	В	þ			þ	В	С	Р
Pasture/ Range	Р	С	В	ģ			þ	В	С	Р
Logging Operations	Р	С	В	ģ			þ	В	С	Р
Mining Activity	P	С	В	ģ	Y	N	Q	В	С	Р
Vegetation Management	P	С	В	q	-		d	В	С	Р
Bridges/ Abutments	P	С	В	d	Y	Ņ	d	В	С	Р
Orchards/ Vineyards	Р	С	В	Ő		1	0	В	С	Р

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(seare some)		

Revision Date: February 9th, 2011

		[nter-]	Frans	sect: El	7	N	Netted Width (m	n): 20		
					In	ter-Transect	Substrates	-		
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	CPOM	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickness Codes 0 = No microalgae present
Left Bank	.5	200	BUD		Р 🖉	2	P 🔊 D	P 🔗 D	P 🕢 D	 Feels rough, not slimy; 1 = Present but not visible; Feels slimy;
Left Center	5	160	SAUD		P 🏈	0	P (A) D	P (A) D	P ØD	2 = Present and visible but <1mm; Rubbing fingers on surface produces a
Center	(D	91	F6		Ðø	2	PA D	P 🔊 D	P \land D	brownish tint on them, scraping leaves visible trail.
Right Center	15	69	COB	Ο	(P) A	3	(P) A D	P 🔕 D	P 🕢 D	3 = 1-5mm; 4 = 5-20mm;
Right Bank	19.5	34	FG		<u>م</u>	1	P 🔕 D	P 🙆 D	P 🔊 D	5 = >20mm; UD = Cannot determine if microalgae present,
	Note: Sub class cate	istrate size gories liste	s can be d on the	recorded eith supplementa	ner as direct Il page (dire	measures of th ct measurement	e median axis of Is preferred)	each particle or o	one of the size	substrate too small or covered with silt (formedy Z code) D = Dry, not assessed



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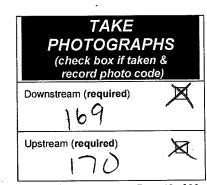
Site Code:				Site Name:	K	JYE a	5 MYR		Date:	//2011
Wetted Wid	th (m):	1.5		Bankfull Wic	Ith (m):	3 ^{Bai}	nkfull Height (m):	2.5	Tra	ansect F
						Transect S	ubstrates			
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed	CPOM	Microalgae Thickness Code	0000 0000 1 YE SHI KA MA HA HA 12 8 934 1 2400	Macroalgae Unattached	Macrophytes	Microalgae Thickne Codes 0 = No microalgae pres Feels rough, not slimy
Left Bank	.5	25	FL		ЮA	l <u>i</u> s	P 🕢 D	Р 🚯 D	P 🔊 D	1 = Present but not visil Feels slimy;
Left Center	1.5	29	305		P A	3	P \land D	P 🔊	P 🔕 D	2 = Present and visible <1mm; Rubbing finge on surface produces
Center	3,5	44	6		Р 🖉	(. P 🔗 D	P 🚯 D	PAD	brownish tint on then scraping leaves visib trail
Right Center	5	\dot{O}	BLE		Р 🄗	2	P OD	P 🚯 D	P 🔗 . D	3 = 1-5mm; 4 = 5-20mm;
Right Bank	6.5	15	800		P (A)	2	P 🔊 D	P 🔥 D	P D	5 = >20mm; UD = Cannot determine microalgae present.
							the median axis of ents preferred)	each particle or	one of the size	substrate too small o covered with silt (formerly Z code).

	80	X.C.																																																																					
202	23.22	2.10	2.2.26		2005		1.60	1000	8 . S.A.	07.3	22.00	24		60 C C	 	- 22	 80. R	100		112		10.	242	32		60 C	22			34					200	88					-						***	288	22		-									83	339	82					88				52
	-63 C	3325	1210	: XXXX		600.0		10 A	- 22							333	 	-			9.W	8/6	***	396	8999	0.00			889		88	592	-88	886			22	23													22									88 C		-	200					200	200		е
2000	10 R	S		3838	. e .	8 . C . C	8/12	a 14	223					200								100		900									120	22	82					20		22						****	80						200							100								æ	Æ
A	22 2		286	8390		270 M		879 B	5.00				2000	1.97			sur?			20		12.0			200					33	89	83	88	580	***		e G						6X				300 C		S46	886)			Sar	 - 44	1922					222	18%				886						1

RIPARIAN VEGETATION (facing downstream)		Spar	nt (0 se (< erate	10%		3 = H 4 = V						INSTREAM HABITAT COMPLEXITY	2 = 3 =	Spar Mod Heav		10-4 40-7	0%) 0%) 5%)		DENSIOMET READINGS (0 count covered	-17)
Vegetation Class		Lef	t Ba	nk			Rig	nt Ba	ank			Filamentous Algae	0	1	2	3	4]	Center	
Upper	Can	ору	(>5)	m hi	gh)							Aquatic Macrophytes/ Emergent Vegetation	0	1	2	3	4		Left Center	4
Trees and saplings >5 m high	(6)	1	2	3	4	6)	1	2	3	4	1	Boulders	0	1	Ø	3	4]	Upstream	\mathcal{O}
LowerC	anop	y (0.	5 m	-5 m	higl	1)	7					Woody Debris >0.3 m	Ø	1	2	3	4		Center	1
All vegetation 0.5 m to 5 m	0	1	2	3	4	Ø	1	2	3	4		Woody Debris <0.3 m	Ø	1	2	3	4		Right Center	
Groun	d Cov	ver (<0.5	m h	igh)							Undercut Banks	D	1	2	3	4		Downstream	$\left O \right $
Woody shrubs & saplings <0.5 m	0	Ø	2	3	4	0	0	2	3	4		Overhang. Vegetation	Ø	1	2	3	4		Optional	T
Herbs/ grasses	0	1	2	3	4	0	1	2	3	4		Live Tree Roots	0	1	2	3	4		Left Bank Right Bank	
Barren, bare soil/ duff	0	1	2	3	Ð	0	1	2	3	(4)		Artificial Structures	Ø	1	2	3	4			

HUMAN INFLUENCE (circle only the closest to wetted channel)	B = 0 C = B P = >	10m+<	Bank 50m fi	& 10m I om Cha 'es or No	nnel;	annel;				
		Left I	Bank	(Cha	nnel	F	Right	Banl	(
Walls/ Rip-rap/ Dams	P	С	В	0	Y	Ø	(0)	В	С	Р
Buildings	Р	С	В	9	Y	Ņ	Y	В	С	Р
Pavement/ Cleared Lot	Р	С	В	d			D	В	С	Ρ
Road/ Railroad	Р	С	В	d	Y	Ņ	þ	В	С	Р
Pipes (Inlet/ Outlet)	Р	С	В	d	Y	Ň	Q	В	С	Ρ
Landfill/ Trash	Р	С	В	d	Y	Ŋ	ģ	В	С	Ρ
Park/ Lawn	Р	С	В	đ			Ô	В	С	Р
Row Crop	Р	С	В	þ			Ø	В	С	Ρ
Pasture/ Range	P	С	В	0			Ó	В	С	Р
Logging Operations	P	С	В	10			Q	В	С	Ρ
Mining Activity	P	С	В	0	Y	Ŋ	d	В	С	Р
Vegetation Management	P	С	В	0			d	В	С	Р
Bridges/ Abutments	P	С	В	0	Y	Ņ	0	В	С	Р
Orchards/ Vineyards	P	С	В	6		ł	Q	В	С	Ρ.

	Left Bank	eroded	vulnerable	stable
--	-----------	--------	------------	--------

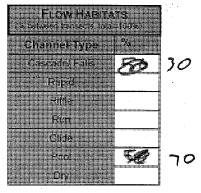


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FULL VERSION

Revision Date: February 9th, 2011

		nter-7	F rans	ect: FG	r F	N N	Wetted Width (m	»: 4.5		
					In	ter-Transect	Substrates			
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	CPOM	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	0 = No microalgae presen
Left Bank	.5	30	CoB	10	Р 🕢	- 1	P 🔊 D	РĄД	P 🕢 D	 Feels rough, not slimy; 1 = Present but not visible Feels slimy;
Left Center	2	54	BLD		P 🖗	2	P 👩 D	P AD	P 🚯 D	2 = Present and visible bu <1mm; Rubbing fingers on surface produces a
Center	2.5	35	917	1.	P Ø	2	P 🔊 D	PAD	P 🕢 D	brownish tint on them, scraping leaves visible
Right Center	3	90	BUD	ann-	Р Ю	1	P 🖉 D	P 🚯 D	P 👩 D	trali. 3 = 1-5mm; 4 = 5-20mm;
Right Bank	3.5	28	BUD		Р 🕖	3	P (D) D	P 🖉 D	P 🔕 D	5 = >20mm; UD = Carinot determine if microalgae present.
	Note: Sub class cate	strate size gories liste	s can be ed on the	recorded eith supplementa	ner as direct Il page (dire	measures of th ct measuremen	e median axis of ts preferred)	each particle or	one of the size	substrate too small or covered with silt (formerly Z code) D = Dry not assessed



SWAMP Stream Habitat Cha	racterization Form	FULL VERSION	Revisi	on Date: February 9 th , 2011
Site Code:	Site Name: NYR	abu MTR		Date:// 2011
Wetted Width (m):	Bankfull Width (m): 20	Bankfull Height (m):	1.5	Transect G

						Transect Su	bstrates			
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	CPOM	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickness Codes 0 = No microalgae present, Feels rough, not slimy;
Left Bank	15	7	COB	D	Р Ø		P 🕢 D	P 🔊 D	P 🙆 D	1 = Present but not visible, Feels slimy, 2 = Present and visible but
Left Center	175	11	COB	30	P 🔗	2	P 🐼 D.	P 🔗 D	Р (Д) D	<1mm; Rubbing fingers on surface produces a
Center	I	25	COB	0	PD	١	P 🚯 D	P 🙆 D	P 🔊 D	brownish tint on them, scraping leaves visible trail.
Right Center	1.5	35	BLD	-	Р 🕭	0	P 🔗 D	P 🙆 D	P 🙆 D	3 = 1-5mm; 4 = 5-20mm;
Right Bank	133	23	BLD	· · · ·	P (A)	0	Р 🖉 D	P AD	P 👌 D	5 = >20mm; UD = Cannot determine if microalgae present,
	Note: Sul class cate	strate size gories liste	ed on the	recorded eith supplement	her as direc al page (dire	t measures of th ect measuremen	e median axis of its preferred)	each particle or	one of the size	substrate too small or covered with silt (formerly Z code). D = Dry, not assessed

RIPARIAN VEGETATION (facing downstream)	1 =	Abse Spars Mode	se (<	10%		4 = V	leavy ery H					INSTREAM HABITAT COMPLEXITY	1 = 2 = 3 =	Heav		(40-75	1%) 0%) 5%)		DENSIOMET READINGS (0 count covered	-17)
Vegetation Class		Lef	Ba	nk			Rigi	nt Ba	ank			Filamentous Algae	\bigcirc)1	2	3	4		Center	~
Upper	Can	ору	(>5 i	rfi hi	gh)							Aquatic Macrophytes/ Emergent Vegetation	0	1	2	3	4		Left Center	0
Trees and saplings >5 m high	(6)	1	2	3	4	Ø	1	2	3	4	1	Boulders	0	1	2	3	4	1	Upstream	0
Lower C	anop	y (0.	5 m-	-5 m	hîgl	1)						Woody Debris >0.3 m	0	1	2	3	4		Center	2
All vegetation 0.5 m to 5 m	\bigcirc	1	2	3	4	6	1	2	3	4		Woody Debris <0.3 m	0	1	2	3	4		Right Center	
Groun	d Co	ver (·	<0.5	m h	ligh)	L						Undercut Banks	0	1	2	3	4]	Downstream	0
Woody shrubs & saplings <0.5 m	0	ð	2	3	4	0	Ø	2	3	4		Overhang. Vegetation	Ŏ	1	2	3	4		Optional	1.
Herbs/ grasses	0	0	2	3	4	0	Ъ	2	3	4		Live Tree Roots	0	1	2	3	4		Left Bank	
Barren, bare soil/ duff	0	1	2	3	(4)	0	1	2	3	4		Artificial Structures	6	1	2	3	4	1	Right Bank	

HUMAN INFLUENCE (circle only the closest to wetted channel)	B = 0 C = B P = >1	10m+<5	; Bank 50m fn	& 10m fr om Char es or No	nnel;	annel;				
		Left I	Bank		Cha	nnel		Right	Banl	(
Walls/ Rip-rap/ Dams	P	С	В	(0)	Y	(\mathbb{N})	\emptyset	В	С	Р
Buildings	Р	С	В	q	Y	Nf	9	В	С	P
Pavement/ Cleared Lot	Р	С	В	0			9	В	С	Р
Road/ Railroad	P	С	В	ø	Y	N	9	В	С	Р
Pipes (Inlet/ Outlet)	P	С	В	þ	Y	N	d	В	С	Р
Landfill/ Trash	P	С	В	þ	Y	N	q	В	С	Р
Park/ Lawn	P	С	В	þ			0	В	С	P
Row Crop	P	С	В	þ			d	В	С	Р
Pasture/ Range	P	С	В	þ			q	В	С	Р
Logging Operations	P	С	В	0		1	d	В	С	Р
Mining Activity	P	Ç	В	0	Y	N	q	В	С	Р
Vegetation Management	P	C	В	0			0	В	С	Р
Bridges/ Abutments	P	С	В	þ	Y	Ŵ	10	В	С	Р
Orchards/ Vineyards	P	С	В	6			9	В	С	Р

(score zone	5m upstream a	STABILITY ind 5m downstream full - wetted width)	of transect
Left Bank	eroded	vuinerable	stable
Right Bank	eroded	vulnerable	stable
		1	

FULL VERSION

Revision Date: February 9th, 2011

	I	nter-7	[rans]	ect: GI	I	Ň	Netted Width (n	n): 8		· · · · · · · · · · · · · · · · · · ·
					In	ter-Transect	Substrates			
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	СРОМ	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thicknes Codes 0 = No microalgae preser
Left Bank	15	43	COB	6	Р Ø	0	P 🔊 D	P 🖍 D	P ∂D	 Feels rough, not slimy; 1 = Present but not visible Feels slimy;
Left Center	2	23	F6	·	Р 🔗	0	P 🚯 D	P 🔕 D	P 🖉 D	2 = Present and visible b <1mm; Rubbing fingers on surface produces a
Center	4	32	(6	 ^_	₽₽		P AD	P €)D	P 🕢 D	brownish lint on them; scraping leaves visible
Right Center	6	29	(6	/	Р 🏈	2	P 🛷 D	P ∂ D	P 🔗 D	trail. 3 = 1-5mm; 4 = 5-20mm;
Right Bank	7.8	35	COB	90	P (Å	t,	P 🔊D	P 🖉 D	P 🔏 D	5 = >20mm; UD = Cannot determine i microalgae present.
	Note: Sub class cate	strate size gories liste	s can be d on the	recorded eith supplementa	ier as direct Il page (dire	méasures of the ct measurement	e median axis of is preferred)	each particle or (one of the size	substrate too small or covered with silt (formerly Z code). D = Dry, act assessed

FLOW HABITA	
Channel Type Obseader Falls	
Frand	
Riffe	20
Run	
Gilde	10
Dy	

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SVIAN	Stream	ταριίαι	Onarac	ACTIZATION	1 01111			/ERSION					/ 9 th , 2011	
Site Code:				Site Name:	NYR	ab.					Date: _	/	/ 2011	
Wetted Wid	th (m): 2	.5		Bankfull Wie	dth (m): / 9	5	Bank	full Height (m):	1.5		T	rans	sect H	
		-	L_											
-	Dist		mm/	%		I ranso Micro		bstrates				Mi	croalgae Thickne	ess
Position	from LB (m)	Depth (cm)	size	Cobble Embed.	CPOM	Thick Co	mess	Macroalgae Attached	Macroalg Unattach	100 B	acrophyte	0 =	Codes No microalgae prese reels rough, not slimy	
Left Bank	15	12	COB	0	Р 🖉	2		р 🔗 D	P Ø 1)	P 🖗 D	1 = F	Present but not visib eels slimy: Present and visible l	blė,
Left Center	1	17	BID		Р 🖗	-	3	PAD	P 🐼	D	P 🔊 D		Imm; Rubbing finger on surface produces	ers a
Center	1,5	23	BLD		P 🕢		2	P ∳D	P 🚳 1	D	P 🔗 D		brownish tint on them scraping leaves visibl trail.	
Right Center	2.5	1	BLD		P 🛆	2		Р Ъ Д	P 🔊 1	D	р 🖗 D	3 = 4 =	= 1-5mm; = 5-20mm;	
Right Bank	3	10	BLD		Р 🏟	1		P 😡 D	Р 🔕 🛛	D	P \land D	U	= >20mm;) = Cannot determine microalgae present,	
	Note: Sul	ostrate siz	es can be led on the	recorded ei supplement	ther as direct al page (direct	t measur ect meas	res of th turemen	e median axis of ts preferred)	each partic	le or one	of the size		substrate too small o covered with silt (formerly Z code).	n.
		- -											= Dry, not assessed	
	N VEGET	A COMPANY OF A COM	1 = Spa	ent (0%) irse (<10%)	3 = Heav 4 = Very			INSTF Hab		3 = Heav	se (<10 erate (10-40 v (40-75	%) %) %)	DENSIOMET READINGS (0 count covered)-1
(facin)	g downstrea	im)	2 = Moo	derate (10-40	%)			COMP	_EXITY	- 4 = ∨ery	Heavy (>75'	*6}		<u> </u>
Vege	tation Cla	ass	Le	ft Bank	Ri	ght Bar	nk	Filamentou		Ø 1		4	Center Left	1
		Upper	Canopy	/ (>5 m higi	1)			Aquatic Ma Emergent V		@ 1		4	Center	$\frac{1}{2}$
Trees and	saplings >5		<u>(</u>) 1	234		12	34	Boulders		0 1	© 3 2 3	4	Upstream Center	
			<u>()</u>).5 m-5 m h	1 100			Woody Deb		<u>6</u> 1		4	Right	1
All vegeta	ation 0.5 m		() 1	2 3 4		12	34		oris <0.3 m				Center	
			d Cover	(<0.5 m hig				Undercut E		01	2 3	4	Downstream Optional	<u> </u>
Woody	shrubs & sa <0.5 m	piings	0 1	2 3 4	F Ø 1	2	34	Overharig.	Vegetation	01	2 3	4	Left Bank	T.
Не	rbs/ grasse	s	Ø 1	2 3 4	1 1	2	34	Live Tree F	Roots	01	23	4		+
Derror	, bare soil/	duff	0 1	2 3 (2	0 0 1	2	3 74)	Artificial St	ructures	1071	2 3	4	Right Bank	

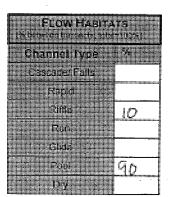
HUMAN INFLUENCE (circle only the closest to wetted channel)	B = C C = B P =>	10m+<	Bank 50m fr	& 10m om Cha es or Ni		nnel;				
		Left	Bank	6	Chan	nel		Right	Banl	(
Walls/ Rip-rap/ Dams	P	С	В	(ó)	Y (N)	(6)	В	С	Р
Buildings	P	С	В	Ý	Y	N	ρ	В	С	Р
Pavement/ Cleared Lot	Р	С	В	þ			p	В	С	Р
Road/ Railroad	P	С	В	þ	Y	Ν	þ	В	С	Р
Pipes (Inlet/ Outlet)	P	С	В	þ	Y	Ν	þ	В	С	Р
Landfill/ Trash	P	С	В	ģ	Y	N	¢	В	С	Р
Park/ Lawn	P	С	В	ģ			Q	В	С	Р
Row Crop	P	С	В	þ			9	В	С	Р
Pasture/ Range	P	С	В	Q			Ø	В	С	Р
Logging Operations	P	С	В	d			9	В	С	Р
Mining Activity	P	С	В	Q	Y	Ν	d	В	С	Р
Vegetation Management	P	С	В	d			0	В	С	Р
Bridges/ Abutments	P	С	В	0	Y	N	0	В	С	Р
Orchards/ Vineyards	P	С	В	d		1	0	В	С	Р

BANK S	itallitte -	
		يحجيني المحاد
iscore zons (m. upst.exm. between bank)		<u></u>
		<u> </u>
	a a teoremintes	Éiabio I
	using rahis	Étable 1
betrose stored	vuinerable	Atabie 1
Loft Dank eroded	vuinerable	Étable 1
Loft Dank eroded	vuinerable	fiable
Loft Dank eroded	vuinerable	fable '
Left Dank eroded	vuinerable	fiable '
Left Bank eroded	vuinerable	kiabie
Loft Bank eroded	vuinerable	kiable
Left Bank eroded	vuinerable	fiabio
Loft Bank eroded	vuinerable	ftable
Loft Bank eroded	vuinerable	
Loft Bank eroded	vuinerable	
Loft Bank eroded	vuinerable	fabio '
Loft Bank eroded	vuinerable	
Loft Bank eroded	vuinerable	fable ¹
Loft Bank eroded Right Bank eroded	vuinerable	(atable table)
Loft Bank eroded	vulnerable vulnerable	Atable '

FULL VERSION

Revision Date: February 9th, 2011

		Inter-'	Trans	sect: H			Wetted Width (m): 12							
					In	ter-Transect	t Substrates							
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed,	CPOM	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickness Codes 0 = No microalgae present,				
Left Bank	15	(1	(OB	40	PA	2	P 🎘 – D	P 🎝 D	P 🖗 D	Feels rough, not slimy; 1 = Present but not visible, Feels slimy;				
Left Center	3	41	BUD	<u> </u>	Р 🍙	2	P & D	P 🏠 D	P 🚯 D	2 = Present and visible but <1mm; Rubbing fingers on surface produces a				
Center	Q	65	BID		Р 🐼	3	P AD	P AD	P D	brownish tint on them, scraping leaves visible trail.				
Right Center	9	85	F6		₽₿		P AD	P de⊃D	P (A) D	3 = 1-5mm; 4 = 5-20mm;				
Right Bank	11.5	41	BiD	·	Р 🖗	3	P A D	P 🕢 D	P AD	5 = >20mm; UD = Cannot determine if microalgae present.				
	Note: Sub class cate	strate size gories liste	s can be d on the	recorded eith supplementa	ier as direct I page (dire	t measures of th ict measuremen	e median axis of its preferred)	each particle or (one of the size	Substrate foo small or covered with silt (formerly Z code). D = Dry, not assessed				



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SWAMP Stream Habitat	Chara	acteriz	ation	Form		FU	LL V	ERSION	Rev	vision Da	nte: Fe	ebrua	ary 9	th , 2011	
Site Code:		Site I	Site Name: NYR					MYR) Mine~		Date:		_/	/ 2011	
Wetted Width (m):		Banki	Bankfull Width (m): 21				Bankf	ull Height (m):			Trai	nse	ect I		
					-										
Dist	mm/		%		Tran Mic			ostrates				1	Micro	algae Thickne	SS
Position from LB (m) (cm)	size	Co	bble bed.	CPOM	Thi	ckne 'ode		Macroalgae Attached	Macroalg Unattach		crophy	tes	0 = No	Codes microalgae prese s rough, not slimy	ent,
Left 15 12	BUT			(Å A		2	-	P () D	Р 🌒 I) Р	(A) I	,	1 = Pr Feel	esent but not visit s slimy;	ole,
Left 2 12 Center 2 12	BIT	-		P (A)		.2	-	P (A)D	P Ø) P	(A) I		<1m on s	esent and visible m; Rubbing finge surface produces	rs a
Center 2.5 21	BiD			P (A)	1		P 🆄 D	PA	D P	Ø . I	>		whish tint on them aping leaves visibl	
Right Center 3.5 5	BU		-	Þ A		l		P 🕢D	P 🕢	D P	۵ı		3 = 1- 4 = 5-	5mm; 20mm;	
Right 4.5 0	DU	> -		(B) A		2	-	P A D	P (A)	D F	<u>A</u> I	>	UD = mic	20mm; Cannot determine roalgae present,	
Note: Substrate siz class categories lis	es can l	e recor	ded eith	ier as dir Loage (c	ect meas	sures	of the	e median axis of s preferred)	each partic	le or one c	f the si	ze	cov	strate too small o ered with silt	r
class calegones iis		ie supp	icincina	n puge (e				-, -,						merty Z code). ry, not assessed	
RIPARIAN VEGETATION (facing downstream)	1 = Sp	osent (0 barse (<		4 = Ve	avy (40- ry Heavy			INSTR Habi Compl	TAT	0 = Absen 1 = Sparse 2 = Moder 3 = Heavy 4 = Very H	e (<1) ate (10-4) (40-7)	0%) 0%) 5%)		DENSIOMET READINGS (0 count covered	-17)
Vegetation Class	1	eft Ba	nk	L F	Right B	ank	-	Filamentous		01	23	4		Center	0
			m high)					Aquatic Mac Emergent V		01	2 3	4		Left	
Trees and saplings >5 m high		1 2	34	0	1 2	3	4	Boulders			23	4		Upstream	0
Lower C		(0.5 m	-5 m hig	^				Woody Deb		<u>6</u> 1	2 3	4		Center Right	Z
All vegetation 0.5 m to 5 m	0	12	34	6	12	3	4	Woody Deb		61	2 3	4		Center	0
Groun	d Cove	r (<0.5	m high	n)				Undercut E	lanks	0 1	2 3			Downstream Optional	<u> </u>
Woody shrubs & saplings <0.5 m	0	1 (2)	34	0 (D 2	3	4	Overhang.	_	Ø 1	2 3	4		Left Bank	
Herbs/ grasses	6 (Ð 2	34	0	12	3	4	Live Tree F	loots	61	2 3			Right Bank	
Barren, bare soil/ duff	0	12	3 (4)	0	12	3	(4)	Artificial St	ructures	01	2 3	4			[

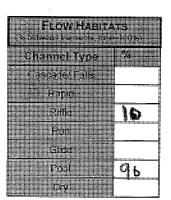
HUMAN INFLUENCE (circle only the closest to wetted channel)	B = 0 C = B P = >1	10m+<	; Bank 50m fro	& 10m fi om Char es or No		innel;				
		Left	Bank		Cha	nnel	1	Right Bank		
Walls/ Rip-rap/ Dams	Р	С	В	(0)	Y	N	10	В	С	Р
Buildings	P	С	В	ý	Y	Ň	Ŷ	В	С	Р
Pavement/ Cleared Lot	Р	С	В	þ			þ	В	С	Р
Road/ Railroad	P	С	В	0	Y	Ν	0	В	С	Р
Pipes (Inlet/ Outlet)	P	С	В	0	Y	Ν	þ	В	С	Р
Landfill/ Trash	P	С	В	0	Y	Ņ	ρ	В	С	Р
Park/ Lawn	P	С	В	0			þ	В	С	È
Row Crop	P	С	В	0			þ	В	С	Р
Pasture/ Range	P	С	В	0			þ	В	С	P
Logging Operations	P	С	В	0			þ	В	С	Р
Mining Activity	Р	С	В	0	Y	N	þ	В	С	Р
Vegetation Management	P	С	В	0			þ	В	С	Р
Bridges/ Abutments	P	С	В	10	Y	N	þ	В	С	Р
Orchards/ Vineyards	P	С	В	þ			0	В	С	Р

	between bank	full - wetted width)	n of transect
			0
Left Bank	eroded	vuinerable	stable
Right Bank	eroded	vuinerable	stable

FULL VERSION

Revision Date: February 9th, 2011.

		Inter-	Tran	sect: IJ	-	· · v	Wetted Width (m	1): 14		· · ·
	Inter-Transect Substrates									
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	СРОМ	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickness Codes 0 = No microalgae present,
Left Bank	.5	35	BUD		Р 🙆	3	PAD	P A D	P 🔕 D	 Feels rough, not slimy; 1 = Present but not visible, Feels slimy;
Left Center	3,5	56	(03	20	Р (Ау	2	P (A) D	P (A) D	P (A) D	2 = Present and visible but <1mm; Rubbing fingers on surface produces a
Center	7	88	BUD	\sim	P A	2	P (A) D	P (A) D	P D	brownish tint on them, scraping leaves visible
Right Center	10.5	85	BED	·	Р 🖉	3	P ∯ D	P 🔗 D	P 🔊 D	trail. 3 = 1-5mm; 4 = 5-20mm;
Right Bank	13.5	60	BLZ		(P)A	43	P € ⊃D	PQD	PAD	5 = >20mm; UD = Cannot determine if microalgae present,
	Note: Sub class cate	strate size gories liste	s can be id on the	recorded eith supplementa	ier as direct I page (dire	measures of the ct measurement	e median axis of s preferred)	each particle or c	ine of the size	substrate too small or covered with silt (formerly Z code) D = Dry, not assessed



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SWAMP Stream Habitat Ch	aracterization Form	FULL VERSION	Revision Date: February 9 th , 2011
Site Code:	Site Name: NYE	abu MIR	Date: / / 2011
Wetted Width (m):	Bankfull Width (m):	Bankfull Height (m):	✓ Transect J

						Transect Su	bstrates			
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	CPOM	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickne Codes 0 = No microalgae prese Feels rough, not slimy
Left Bank	.5	16	104	30	₽ A	2	P 🖉 D	P A D	PA D	1 = Present but not visit Feels slimy,
Left Center	3	29	C035	0	P (Ā)	. 3	P 🏚 D	P (A) D	P 🗿 D	2 = Present and visible <1mm; Rubbing finge on surface produces
Center	6.5	0	EB		P A	کہ	P A D	P \land D	P A D	brownish tint on them scraping leaves visibl trail.
Right Center	9,5	58	Bip		P A	\sim	PAD	P 🕢 D	P / D	3 = 1-5mm; 4 = 5-20mm;
Right Bank	12.5	32	COB	D	PA	2	(P)A D	PA D	P A D	5 = >20mm; UD = Cannot determine microalgae present,
			s can be			t measures of th ct measuremen		each particle or	one of the size	substrate too small or covered with silt (formerly Z code) D = Dry, not assessed

RIPARIAN VEGETATION (facing downstream)	1 =	Abse Spar Mode	se (<	10%		3 = H 4 = V						INSTREAM HABITAT COMPLEXITY	1 = 2 = 3 =	Heav		(10-4) (40-7)	0%) 0%) 5%)		DENSIOMET READINGS (0 count covered	-17)
Vegetation Class		Lef	t Ba	nk			Rig	ht E	Bank			Filamentous Algae	Ø	1	2	3	4		Center	5
Upper	Can	ору	(>5)	m h	igh)							Aquatic Macrophytes/ Emergent Vegetation	0	1	2	3	4		Left Center	
Trees and saplings >5 m high	70)	71	2	3	4	10,	D	2	3	4	1	Boulders	0	1	2	3	4]	Upstream	
Lower C	anop	y (0,	5 m	-5 m	n higl	n) 🦈						Woody Debris >0.3 m	3	1	2	3	4		Center	(
All vegetation 0.5 m to 5 m	0	1	2	3	4	0	1	2	3	4		Woody Debris <0.3 m	0	0	2	3	4		Right Center	
Groun	d Co	ver (<0.5	mł	nigh)							Undercut Banks	1024	Ũ	2	3	4		Downstream	6
Woody shrubs & saplings <0.5 m	0	0	2	3	4	0	\mathcal{O}	2	3	4		Overhang. Vegetation	0	1	2	3	4		Optional	
Herbs/ grasses	0	0	2	3	4	0	C	> 2	3	4		Live Tree Roots	0	1	2	3	4		Left Bank	\Box
Barren, bare soil/ duff	0	1	2	3	Ð	0	1	2	3	۲		Artificial Structures	0	1	2	3	4	1	Right Bank	

HUMAN INFLUENCE (circle only the closest to wetted channel)	0 = Not Present; B = On Bank; C = Between Bank & 10m from Channel; P = >10mt<50m from Channel; Channel (record Yes or No)												
		Left I	Bank	~	Cha	nnel	Right Bank						
Walls/ Rip-rap/ Dams	Р	С	В	(0)	Y	N	76)в	С	Р			
Buildings	Р	С	В	Ŷ	Y	ļγ	Q	В	C.	Р			
Pavement/ Cleared Lot	Р	С	В	þ			þ	В	С	Ρ			
Road/ Railroad	Р	С	В	þ	Y	Ν	þ	В	С	Р			
Pipes (Inlet/ Outlet)	Р	С	В	þ	Y	Ν	þ	В	С	Р			
Landfill/ Trash	Р	С	В	þ	Y	N	Ø	В	С	Р			
Park/Lawn	Р	С	В	þ		•	9	В	С	Р			
Row Crop	P	Ċ	В	ρ			d	В	С	Р			
Pasture/ Range	P	С	В	þ			d	В	С	Р			
Logging Operations	Р	С	В	þ			q	В	С	Р			
Mining Activity	Р	С	В	q	Ø	N	¢	В	С	Р			
Vegetation Management	P	С	В	9			þ	В	С	Р			
Bridges/ Abutments	Р	С	В	ø	Y	Ņ	þ	В	С	Р			
Orchards/ Vineyards	Р	С	В	þ			þ	В	С	Р			

ipecere zona 5m up netani netani		rensirsem vilk streidin	er sæd
Left Dank en	oded vulna	irable 🖊	slable \
Right Bank en	oded I with	watela 🔍	stabla J

FULL VERSION

Revision Date: February 9th, 2011

	F	nter-T	Frans	ect: JK		N	Vetted Width (m): 4		
		ф., 27	•		Int	er-Transect	Substrates	100		
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	СРОМ	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickness Codes 0 = No microalgae present, Feels rough, not slimy;
Left Bank	.5	5	BLD	_	РА	2_	P AD	. P 🚯 D	P 🕢 D	 1 = Present but not visible; Feels slimy; 2 = Present and visible but
Left Center	1	19	C oB	0	P 🕭	3	P (6) D	P 🔗 D	P (A) D	<1mm; Rubbing fingers on surface produces a
Center	2	19	(03	30	Р	2	P (Å) D	P 🏠 D	PCA D	brownish tint on them, scraping leaves visible trail.
Right Center	3	17	(673	Ó	ΡQA	2	P Ø D	P 🍝 D	P 🙆 D	3 = 1-5mm; 4 = 5-20mm; 5 = >20mm;
Right Bank	3.5	15	F6		Р 🕥	0	P 🔊 D	P 🔊 D	P A D	UD = Cannot determine if microalgae present, substrate too small or
28	Note: Sub class cate	ostrate size gories liste	is can be ed on the	recorded eith supplementa	ner as direc al page (dira	t measures of the transmission of transmission of the transmission of the transmission of the transmission of the transmission of transmission of the transmission of transmission of the transmission of transmission of the transmission of transmis	te median axis of its preferred)	each particle or	one of the size	covered with silt (formerly Z code). D = Dry, not assessed

E. My Hasinans
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E Channel Type 🛛 🦉 👘
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ite Code:				Site Name:	N	ir abu	MYR		Date:// 2011			
letted Wid	th (m): {	3		Bankfull Wid			full Height (m):		Tra	Transect K		
•						Transect Su	bstrates					
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	CPOM	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickness Codes 0 = No microalgae present Feels rough, not slimy;		
Left Bank	15	14	BID		РÂ	3	P A D	₽ ∕́́́́́D	ΡÆD	1 = Present but not visible Feels slimy;		
Left Center	2	21	BED		PA	Z	Ø A D	P 🔊 D	P 🔕 D	2 = Present and visible bu <1mm; Rubbing fingers on surface produces a		
Center	4	22	BLD		P (A)	2	P 🚯 D	P 🔊 D	P 🖉 D	brownish tint on them, scraping leaves visible trail.		
Right Center	6	22	BUT		P (A)	2	P 🚯 D	P A D	P 🖉 D	3 = 1-5mm; 4 = 5-20mm;		
Right Bank	7.5	11	BLD	-	Þá		PAD	PAD	P A D	5 = >20mm; U = Cannot determine if microalgae present,		
	Note: Sul class cate	ostrate siz egories list	es can be ed on the	recorded eit supplement	her as direc al page (dire	t measures of th act measuremen	ie median axis of its preferred)	each particle or	one of the size	substrate too small or covered with silt (formerty Z code), D = Dry, not assessed		
							INST		Absent (0%) Sparse (<10%)	DENSIOMETER		
	N VEGET		1 = Spa		4 = Very	vy (40-75%) Heavy (>75%)	HAB COMPI	ITAT 2= 3=	Moderate (10-40%) Heavy (40-75%) Very Heavy (>75%)	READINGS (0-1 count covered do		
Vege	tation Cla			ft Bank		ght Bank	Filamentou Aquatic Ma	crophytes/	<u>1234</u>) 1234	Center Left		
Troop and	saplings >5		Canopy	∕(>5 m high		234	Emergent \ Boulders	/egetation 0	$\frac{1}{2}34$	Center . Upstream		
Tiees and).5 m-5 m hi			Woody Deb	oris >0.3 m)1 2 3 4	Center (
All veaet	ation 0.5 m		~	234		2 3 4	Woody Del	oris <0.3 m	1 2 3 4	Tugin		
				(<0.5 m hig			Undercut I	<u>></u>		Downstream		
Woody	shrubs & sa		o fr)2 3 4		2 3 4	Overhang.	Vegetation 0) 1 2 3 4	Optional		
	<0.5 m			<u> </u>	- <u> </u> -	- 6				Left Bank		

0 1 2 3 4

0 1 2

3 (4)

HUMAN INFLUENCE (circle only the closest to wetted channel)	B = 0 C = B P = >	10m+<5	; Bank 50m fr	& 10m fi om Char es or No		nnel;		9		
		Left I	Bank		Channel			Right Bank		
Walls/ Rip-rap/ Dams	P	С	В	6	Υζ	N	\bigcirc	В	С	Р
Buildings	Р	С	В	Ŷ	Y :	Z	P	В	С	<u>P</u>
Pavement/ Cleared Lot	Р	С	В	- þ			φ	В	С	P
Road/ Railroad	P	С	В	0	Y	N	þ	В	С	Р
Pipes (Inlet/ Outlet)	P	С	В	þ	Y	N	þ	В	С	Р
Landfill/ Trash	P	С	В	- ¢	Y	N	þ	В	С	Р
Park/ Lawn	Р	С	В	q			þ	В	С	Р
Row Crop	Р	С	В	q			0	В	С	Р
Pasture/ Range	P	С	В	d.			0	В	С	Р
Logging Operations	P	С	В	þ			0	В	С	Р
Mining Activity	P	С	В	- þ	Y	Ν	þ	В	С	Р
Vegetation Management	P	С	В	¢.			þ	В	С	Р
Bridges/ Abutments	P	С	В	q	Y	Ņ	Ø	В	С	Р
Orchards/ Vineyards	Р	С	В	0			d	В	С	Р

0 1 (2) 3 4

3 (4)

0 1 2

Herbs/ grasses

Barren, bare soil/ duff

(score zone	5m upstream a	STABILITY and 5m downstream full - wetted width)	of transect
Left Bank	eroded	vuinerable	stable
Right Bank	eroded	vulnerable	stable /

Right Bank

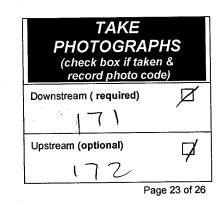
10 1 2 3 4

2 3 4

0)1

Live Tree Roots

Artificial Structures



SWAMP Stream Hab	itat Characterizatio	n Form	FUL	L VERSION	Rev	ision Date: February 9 th , 2011	
Site Code:		Date: _	1_	/ 2011		FULL FORM	
	BENTHIC INVER	TEBRATE	SAMPLE	S		Chemistry Equipmen	t ID
	llection Method ard or margin-center	er-margin)		Replicate	# jars		
RWB (standard)	RWB (MCM)		25	1		pH	
RWB (standard)	RWB (MCM)	TR		2		temperature	
RWB (standard)	RWB (MCM)		20	i		dissolved	
						oxygen specific	
RWB (standard)	RWB (MCM)	TR	C			conductance	
Field Notes/ Com	ments:					salinity	
		•				alkalinity	
					та.	turbidity	
			· •			silica	
	•						
						Velocity	
Callenting			S SWAM	CIA/AMD	CMAND	Water and Sedimen	t
Collection (circle one or write new n		EMAP	EMAP		SWAMP EMAP	Chemistry Samples	
Collection (sum # of transect	Device s per device)	Rep. 1	Rep. 2	Rep.	Rep.	Check if a WATER chemistry grab sample was collected	`
Rubber Delimiter (area	=12.6cm²)					(nutrients, SSC, etc.)	
PVC Delimiter (area=12						Check if a DUPLICATE WATER chemistry grab sample was	
Syringe Scrubber (area	1=5.3cm ²)					collected	
Other area= Number of transects s	ampled (0, 11)					Check if a SEDIMENT chemistry sample was collected	
						Check if a DUPLICATE	
Composite Volume (m	L)			_		SEDIMENT chemistry sample	
Assemblage ID volume (diatoms) (50 mL tube)					was collected Sediment	L
Assemblage ID volume (_		Device:	RAB
Check if Qualitative Alga	(50 mL tube)					Material: Stainless Steel Polyethy Polycarbonate Ott	/lene her
collected with soft algae/ (required even if macroalgae	diatom sample					Sediment Collection 2 or Depth (cm):	5
Check if a water chem. in was collected (chl, AFDM	ntegrated sample 1)					Create Lab Collection records for each check box for integrated and grab water chemistry samples	ked
Chlorophyll a volume (25 mL (prefe							
Ash Free Dry Mass (AFDM) volume (25 m	use GF/F filter L (preferred vol)						
		ADDIT	IONAL P	HOTOGRAPH	IS		
Description	Photo	Code		Descr	iption	Photo Code	
		· · · ·					

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FULL VERSION

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Flow Habitat Type	DESCRIPTION
Cascades	Short, high gradient drop in stream bed elevation often accompanied by boulders and considerable turbulence
Falls	High gradient drop in elevation of the stream bed associated with an abrupt change in the bedrock
Rapids	Sections of stream with swiftly flowing water and considerable surface turbulence. Rapids tend to have larger substrate sizes than nffles
Riffles	Shallow sections where the water flows over coarse stream bed particles that create mild to moderate surface turbulence; (< 0.5 m deep, > 0.3 m/s).
Runš	Long, relatively straight, low-gradient sections without flow obstructions. The stream bed is typically even and the water flows faster than it does in a pool; (> 0.5 m deep, > 0.3 m/s). A step-run is a senes of runs separated by short riffles or flow obstructions that cause discontinuous breaks in slope
Glides	A section of stream with little or no turbulence, but faster velocity than pools; (< 0.5 m deep, < 0.3 m/s)
Pools	A reach of stream that is characterized by deep, low- velocity water and a smooth surface; (> 0.5 m deep, < 0.3 m/s)

BANK STABILITY Although this measure of the degree of erosive potential is subjective, it can

provide clues to the erosive potential of the banks within the reach. Assign the category whose description best fits the conditions in the area between the

wetted channel and bankfull channel (see figure below)

Eroded

Vulnerable

Stable

Banks show obvious signs of erosion from the current or

previous water year; banks are usually bare or nearly bare

Banks have some vegetative protection (usually annual

growth), but not enough to prevent erosion during flooding

Bank vegetation has well-developed roots that protect banks

from erosion; alternately, bedrock or artificial structures (e.g. concrete/ rip-rap) prevent bank erosion

Size Class Code	Size Class Range	Size Class Description	Common Size Reference
RS	> 4 m	bedrock, smooth	larger than a car
RR	> 4 m	bedrock, rough	larger than a car
ХВ	1 - 4 m	boulder, large	meter stick to car
SB	25 cm - 1.0 m	boulder, small	basketball to meter stick
СВ	64 - 250 mm	cobbie	tennis ball to basketball
GC	16 - 64 mm	gravel, coarse	marble to tennis ball
GF	2 – 16 mm	gravel, fine	ladybug to marble
SA	0.06 – 2 mm	sand	gritty to ladybug
FN	< 0.06 mm	fines	not gritty
HP	< 0.06 mm	hardpan (consolidated fines)	
WD	NA	wood	
RC	NA	concrete/ asphalt	
ОТ	NA	other	

CPOM/ COBBLE EMBEDDEDNESS

CPOM: Record presence (P) or absence (A) of coarse particulate organic matter (>1.0 mm particles) within 1 cm of each substrate particle

Cobble Embeddedness: Visually estimate % embedded by fine particles (record to nearest 5%)

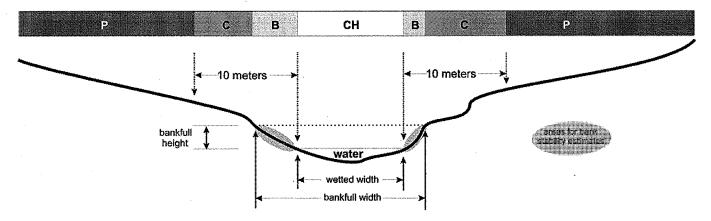


Figure 1. Cross-sectional diagram of stream transect indicating regions for assessing human influence measures:

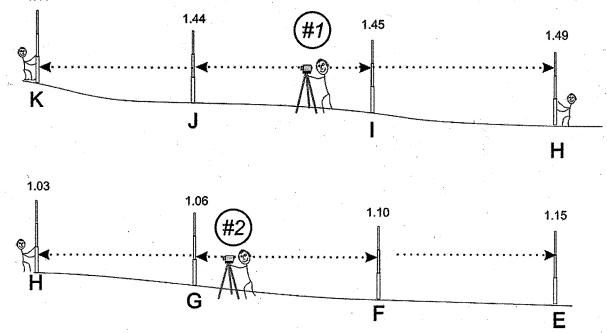
- The measurement zone extends 5 meters upstream and 5 meters downstream of each transect
- Record one category for each bank and for the wetted channel (3 values possible)
- In reaches with wide banks, region "C" may be entirely overlapped by region "B"; in these cases, circle "B"
- Region "P" extends from 10 meters to the distance that can be seen from the channel, but not greater than 50 m

FULL VERSION

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		SLOPE	and Bearl	ng Form	Λ	EXA	CAMPLE AUTOLI CLINOM HANDLI							
Charling	(re		MAIN S nt of inter-trans upplemental so			iment	SUPPLEMENTAL SEGMENT (record percent of inter-transect distance in each segment if supplemental segments are used)							
Starting Transect		ia rod rements	Slope (%) or Elevation Difference Cm	Segment Length (m)	Bearing (0°-359°)	Percent of Total Length (%)	Stadia rod measurements	Slope or Elevation Difference	Segment Length (m)	Bearing (0°-359°)	Percent of Total Length (%)			
K	1.41	*												
J	1.44	1 1 1 1	3	15	140	100		:		4				
1	1.45		1	15	145	100								
Η	1.49	1.03	4	15	150	100								
G		1.06	3	15	143	100								
F		1.10	4	15	187	100								
Е		1.15	5	15	195	100								

1.41



1. Level the autolevel at Position #1

2. Place base of stadia rod at water level every time

3. Sight to stadia rod at Transect K, then Transect J

4. Rotate scope and sight to Transects I and H.

5. Move level to Position #2 and re-level

6. Re-sight to stadia rod at Transect H, then Transect G 7. Rotate scope and sight to Transects F and E

Note: Sites will vary in the number of separate level positions needed to survey the reach.

•	SWAN	AP Stream Ha	abitat Chara	cterizatio	n Forn	n	FULL \	/ERSIO	<u>v</u>	Rev	vision Date	e: Februa	ary 9 th , 1	2011	
	Re	ACH DOCUM	MENTATION		S						150 m Dis m) = 250 m				
	Project	Name: \	WA					Date: ⁻	1 /	13 1		Sample Collection	Time:	930	>
	Stream	Name:		Drego) N (Creek		ite Name	•		Ovegor	n Cri	eKE	selow	Logia
	Site Co	ode: YCB	M1-2		• •		C /	rew Men TS he	nters:	ter;	Ver-	huei,	ω	sem	in .
No?	Latitud	e (actual – dec	imal degrees	s): 🕅 (Q	670	142	N	atum: IAD83							
57m	Longitu	ıde (actual – d	ecimal degre	es): Ŵ	431	07118	3 °	ther:	GPS De	evice:	GARM	n bt)		
	. Am	len Water	Quaimh	ASIMANA	NTS .							REAC	H LENG	TH	
	Temp 20.4 pH 7.7 Aleafory -									Ð,		al Length			20
-				zi. cre		-		top of form		15	20				
	Dissol Of Im		Specific. Dondiet Jos	178	, 3	alany: fact)	محصيحة	sir Ingi	111111111111111111111111111111111111111	-	Explanati	on:	Λ.	m	
	cai date		cal. cate					cal. cale	·····			< 1		•)	
	t st mo	DISCHARGE			trooml			che			ge meası in in field			ossible	
		ELOCITY AREA				cal. date	,.8	Trans (m):	sect Widt		BUOYAN	т Овјес	т Метн		
		Distance from/	L Depth _M	Velocity	, 	Distance	from	Depth	Velo	city	velo	city area n Rioat		- h	Float 3
	1	_eft Bank (@n) I	`((25) -1↑ ⊘	(ft/sec) D	11	Left Bank	(cm)	(cm) 1, 8	(ft/so		Distance	<u> </u>		/	
	2	2	. L .	0	12	17		1.6	15		(m) Float Time (sec)	• \	$\sqrt{7}$		
	3	3	19	,18	13	13		1.6	• 4	7 -	Flo	at Reacl	<u> </u>		
	4	4	1,1	.12	14	14		1.6	(width (m) depth(cm)	Upper Section		A CONTRACT CONTRACTOR	Lower Section
	5	5	.9	.4	15	15		1.5	、3		Width		+		
	6 7	<u>لا</u>	.9	139	16 17	16		(.2	14		Depth 1 Depth 2	\vdash		$\setminus \vdash$	·
•	8	Ŕ	1.5	.39	18	18		1.2	12		Depth 3	/		-	• •
	9	9	1.4	104	19	19		12	12	-7	Depth 4				
	10	D	1.5	.135	20	20		.5	, C)9	Depth 5]
				- Sterry	BLEF	(12031.0%)	NDTIDI	(S. C.			topa) </td <td></td> <td></td> <td>- 1352 H.A</td> <td></td>			- 1352 H.A	
	E	Melene al ce	atrantal (encugh Is	a incre	ase surfa	eenno	A)	NO.	I	<u>}</u> "	ininal			
	Ē	Viencenfi	òs h lozuli	ten inneren e	iatxiy I.	ipsfream	(*500 m	Y.	. NG		<i>X</i> [i year		r 5 year	
		Aleminanida	ndusediğindi	rozek de dest	rea sur	nounding	reach					orest	P	tangelar en	đ
									Indust	nal		uto Toxn		Other	
	EN	TIONAL COBBI	E 1 30	2 50	3 40	4 (D	5 5	6 30	7 30	8 50	e 60	10 20	11	12 10	13 45
	(carry	MEASURES over from transe if needed to atta	ect 14	15	16	17	18	19	20	21	22	23	24	25	, -
	tar	get count of 25; neasure in %)													

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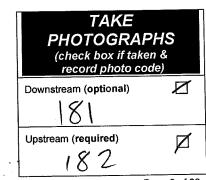
Site Code:			Date:	1	_/ 20	011	•					
SLOPE and	BEAF	RING FO	DRM (trai	nsect	base	ed - f	or Full	PHAE	B only)		AUTOLEVE CLINOMETI HANDLEVE	ER 🚽
		f inter-tran	SEGMENT sect distance		segme	nt	(re		SUPPLEMEN ent of inter-trans	sect distance	e in each se	gment
Starting Transect Stadia rod measurements	SI	ope (%) or Elevation Difference	Segments an Segment Length (m)	e used) Bearin (0°-359	g c	Percent of Total Length (%)		if : lia rod irements	Slope or Elevation Difference	Segment Length	e used) Bearing (0°-359°)	Percent of Total Length (%)
K						2		5 5 5				
J		3	15			10		1 1 1				
		3				1						
H		5					· · ·					
G		6										
		2										
E		1									P.	
D		1										
С		5		N								
B		8										
A		0										
additional calculation area										-		
	TIONAL		T CHARACT	ERIZAT					High Gradie	nt 🗾	Low Gra	
Parameter	favorab	ole for epifau	6 of substrate nal colonization		% mix of	o ptim a i stable ha	bitat (30-		Marginal mix of stable habita		Pool ss than 20% st	
Epifaunal Substrate/ Cover	gr subme	adient streai erged logs, u	50% for low- ms); mix of ndercut banks, stable habitat		suited fo	gradient s or full colo otential			low-gradient stream e frequently disturbe removed	ed or la	% in low-gradie ack of habitat is bstrate unstable	s obvious;
Score:	20 Little c	19 18 or no enlarge	17 (16) ment of islands			/ increase			9 8 7 deposition of new c		vy deposits of	
Sediment Deposition	the bo	ottom affecte	ess than 5% of d by sediment in low-gradient	sand, the b	or fine s ottorn af	ostly from ediment; fected (20 lient strea	5-30% of +50% in	sand, or f 50% of t	he bottom affected low-gradient stream	s; 30- no (50 - no	creased bar de re than 50% of anging frequent low-gradient s	the bottom Ily (>80% in
Score:	20	<u>19 18</u>		15 Som		13 elization p	2 11 present,		987	6 5 Ba		210
Channel Alteration			fredging absent m with normal Π	(e.g., b of par ma	ridge ab st chann ay be pre	outments); elization (esent but r	evidence > 20yrs) ecent	embankm present c	zation may be exter ents or shoring stru on both banks; 40 to eam reach disrupte	ctures react	ent; Over 80% n channelized a ream habitat gi	of the stream and disrupted, reatly altered
Score:	20 (19 18	17 16	15		tion not pi	esent 2 11		987	6 5	or removed e	2 1 0

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SWAMP Stream Habitat	Chara	cterization	Form	E	ULL V	ERSION	Revi	sion Date: Febru	ary 9 th , 2011
Site Code:		Site Name:	^	24	blw	LCD		Date:	_//2011
Wetted Width (m):		Bankfull Wic	ith (m): Z	8	Bankf	ull Height (m):	1:5	Tra	nsect A
Dist	mm/	%		I ranse Micro:		ostrates			Microalgae Thickness
Position from Depth	size	Cobble	CPOM	Thick	ness	Macroalgae Attached	Macroalga Unattache	0000000 80000 V5 64 F 64 6 6 7 6 1 8 6 V8 E 64, V6 6 7	Codes 0 = No microalgae present, Feels rough, not silmy;
LB (m) (clin)	66		ФА	1		P (A) D	P (A)D	P 🖉 D	1 = Present but not visible, Feels slimy;
Bank 7 1 Left 1.5 00	265	, _	PØ	0	,	P Q D	PAD	P D	2 = Present and visible but <1mm; Rubbing fingers on surface produces a
Center 2.5 42	3,67		PA	0	,	P 🚯 D	P OD	· P D	brownish tint on them, scraping leaves visible trail.
Right Center 3.5 22	260		PO	C	•	P 🕢 D	P 🏠 D	PDD	3 = 1-5mm; 4 = 5-20mm;
Right 4.5 22	BE		Р 💪	· i	0	P Ð D	P AD	PA D	5 = >20mm; UD = Cannot determine if microalgae present,
Note: Substrate siz class categories lis	es can l	e recorded eil	her as direc	st measur	es of the	e median axis of	f each particle	or one of the size	substrate too small or covered with silt
class categories its	tea on u	le supplement	ai page (uii	ectmeas	uchien	a protected y		-	(formeriy Z code): D = Dry, not assessed
			.	110 75	0(5	INST	REAM	0 = Absent (0%) 1 = Sparse (<10%)	DENSIOMETER
RIPARIAN VEGETATION (facing downstream)	1 = Sp	osent (0%) parse (<10%) oderate (10-40	4 = Very	vy (40-75 Heavy (>				2 = Moderate (10-40%) 3 = Heavy. (40-75%) 4 = Very Heavy (>75%)	READINGS (0-17) count covered dots
Vegetation Class		eft Bank		ght Bar	n k r	Filamentou		0)1234	Center
	1	by (>5 m high		<u> 3</u>		Aquatic Ma Emergent \	crophytes/ /egetation	0 1 2 3 4	Left Center
Trees and saplings >5 m high	0	1 (2) 3 4	0	1)2 :	3 4	Boulders		0 1 (2) 3 4	Upstream
Lower	anopy	(0.5 m-5 m h	igh)	<i>.</i>		Woody Del		$\underbrace{01234}{2}$	Center IL Right
All vegetation 0.5 m to 5 m	0	M) 2 3 4	00	D2 :	34	Woody De	bris <0.3 m	0 (1) 2 3 4	Center //
Grour	id Cove	r (<0.5 m hig	h)			Undercut	Banks	0 1 2 3 4	Downstream (/)
Woody shrubs & saplings <0.5 m	0 (1) 2 3 4	0 (1	D 2	34		Vegetation	0 (1) 2 3 4	Left Bank
Herbs/ grasses	0	1 2 3 4	i 0 1	12	3 4	Live Tree I		0 1 2 3 4	- Right Bank
Barren, bare soil/ duff	0	1 2 3 (4	•) 0 1	12	3 (4)	Artificial S	tructures	0 1 2 3 4	

HUMAN INFLUENCE (circle only the closest to wetted channel)	B = C = P =	0 = Not Present; B = On Bank; C = Between Bank & 10m from Channel; P = >10m+<50m from Channel; Channel (record Yes or No)												
		Left	Bank		Chan	pel	Right Bank							
Walls/ Rip-rap/ Dams	P	С	В	Ø	Y (N	\odot	B	С	P				
Buildings	P	С	В	0	Y	Ń	P	В	С	.P				
Pavement/ Cleared Lot	P	C C	В	ø			Ŷ	В	С	P				
Road/ Railroad	P	C	В	ø	Y	N	Ŷ	В	. C	Р				
Pipes (Inlet/ Outlet)	F	C C	В	þ	Y	Ņ	d	В	С	P				
Landfill/ Trash	F	, C	В	þ	Y	N	9	В	С	Р				
Park/ Lawn	F	, C	В	þ			0	В	С	Р				
Row Crop	F	, C	В	þ			þ	B	С	Р				
Pasture/ Range	F	, с	В	þ			þ	В	С	Ρ				
Logging Operations	F	, C	В	þ			þ	В	С	Р				
Mining Activity	F	, C	В	0	Y	N	þ	В	С	Ρ				
Vegetation Management	F	, с	В	0			þ	В	С	Ρ				
Bridges/ Abutments	F	, C	В	p	Y	N	þ	В	ć	Р				
Orchards/ Vineyards	F	- C	В	b		I	q	В	С	Р				

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Left Dank	eroded	vuinerabļa	(stable)
- Rejat Dank	eroded	winerable	



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SWAMP Str		Characterization		<u>FULL</u>	VERSION	Revisio	n Date: Februa	ary 9 th , 2011		
	Inter-7	Transect: AE			Wetted Width (m): 25				
	Dist from Depth	mm/ % size Cobble		Microalgae	Macroalgae	Macroalgae		Microalgae Th	ickness	
	B (m) (cm)	class Embed.		Thickness Code	Attached	Unattached	Macrophytes	Codes 0 = No microalga Feels rough, no	e present, It slimv:	
Bank /	7 (03	-	P (A)	0	PAD	P AD	PAD	1 = Present but n Feels slimy; 2 = Present and y	ot visible, isible but	
Center @ 1	80 BED		PB	UD	PAD	PAD	PAD	 <1mm; Rubbing on surface pro- brownish tint or 	fingers fuces a	
est Right 15	30		P A P A					scraping leaves trail. 3 = 1-5mm;	s visible	
est Leve pool Bankov No No No No No No No No No No	80	- (P A		P A D P A D	P A D P A D		4 = 5-20mm 5 = >20mm UD = Cannot dete		
CO Banko is 2	ote: Substrate sizes	can be recorded eith d on the supplemental	or on direct m	neasures of th			1 🛛	microalgae pres substrate too si covered with sil	sent, nall or	
		2 on the supplemental	page (onect	measuremen	(s preferred)			(formerly Z cod D = Dry, not asse	e).	
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Site Code:				Site Name:	$\mathcal{O}\mathfrak{c}$	C_{ℓ}	61-	·L	CV			D	ate:	_//2011	
Wetted Wid	th (m):	25		Bankfull Wic	lth (m):	30	Bankfu	ıll Heig	ht (m):	13	5		Tra	nsect B	
						Transe	ect Sub	strate	S						
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	CPOM	Microa Thick Coc	ness	Macro Atta		111000000000000000000000000000000000000	oalgae ached	Macru	ophytes	Microalgae Thickr Codes 0 = No microalgae pro Feels rough, not sin	
Left Bank	^, S	21	94 D		Р (9	С	7	P (A	j)d	P (A	9 D	` P (à) D	1 = Present but not vi Feets slimy 2 = Present and visibl	
Left Center	6	92	BUT	-	P A	t	>	ΡA	D	P	A D	Р	A D	<1mm; Rubbing fing on surface produce	
Center	12.5	190	669	-	Р (А)	UT	>	ΡA	D	Р.	A D	Р	A D	brownish tint on the scraping leaves vis trail	
Right Center	18.5	220		-	P Ø			Р	D	P	A D	Р	A D	3 = 1-5mm; 4 = 5-20mm; 5 = >20mm;	
Right Bank	24.5	260			PA			P. A	D	P /	D	Р	Å D	UD = Cannot determi microalgae present substrate too small	

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RIPARIAN VEGETATION (facing downstream)	0 = At 1 = Sp 2 = Mo	bars	e (<	10%)		3 = F 4 = V						INSTREAM HABITAT COMPLEXITY	3 = H	oarse oderate i	(40-75	%) %) %)		DENSIONET READINGS (0 count covered	-17)
Vegetation Class	L	eft	Ba	nk			Rig	ht B	ank			Filamentous Algae	\bigcirc	12	3	4		Center	10
Upper	Canor) YC	>5 i	n hi	gh)							Aquatic Macrophytes/ Emergent Vegetation	0 (i) 2	3	4	┝	Left	13
Trees and saplings >5 m high	0	1	12	3	4	70	1	2	3	4		Boulders	0	$\frac{1}{1}$ (2)	3	4		Upstream	12
Lower C	anopy	(0.5	m	5 m	high	1)						Woody Debris >0.3 m	0 (1) 2	3	4	Γ	Center	10
All vegetation 0.5 m to 5 m	0	1	2	3	4	0	1) 2	3	4		Woody Debris <0.3 m	00	D 2	3	4	╞	Right Center	a
Groun	l Cove	r (<	0.5	m h	igh)							Undercut Banks	0	1 (2)	3	4		Downstream	
Woody shrubs & saplings <0.5 m	0 {	1)	2	3	4	0	D	2	3	4]	Overhang. Vegetation	٥ (D 2	3	4	ľ	Optional Left Bank	1
Herbs/ grasses	0	 1	2	3	4	0	(A)	2	3	4		Live Tree Roots	6	1 2	3	4			
Barren, bare soil/ duff	0	1 /	2	3	4	0	$\frac{1}{1}$	2	3	(4)		Artificial Structures	0	1 2	3	4		Right Bank	-

HUMAN INFLUENCE (circle only the closest to wetted channel)	B = C = P =	0 = Not Present; B = On Bank; C = Between Bank & 10m from Channel; P = >10m+<50m from Channel; Channel (record Yes or No)												
		Left	Bank	(Cha	nŋęl	~	Right	Banl	< .				
Walls/ Rip-rap/ Dams	, F	° C	В	(õ) -	Y	71	10)	В	С	Р				
Buildings	F	, с	В	φ	Y	NA .	4	В	С	Р				
Pavement/ Cleared Lot	F	, с	В	þ			Ø	В	С	Р				
Road/ Railroad	F	, с	В	þ	Y	N	Ģ	В	С	Р				
Pipes (Inlet/ Outlet)	F	, с	В	d	Y	Ŵ	q	В	С	Р				
Landfill/ Trash	F	, C	В	0	Y	N	þ	В	С	Р				
Park/ Lawn	F	<u>, с</u>	В	0			0	В	С	Ρ				
Row Crop	F	<u>, с</u>	В	0			d	В	С	Р				
Pasture/ Range	F	, с	В	0			d	В	С	Р				
Logging Operations	F	° C	В	0			ø	В	С	Ρ				
Mining Activity	F	° C	В	0	Y	Ŋ	ģ	В	.C	Р				
Vegetation Management	F	° C	В	d			d	В	С	Ρ.				
Bridges/ Abutments	F	° C	В	d	Y	N	0	В	С	P				
Orchards/ Vineyards	I	- C	В	d			0	В	С	Р				

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RIGHTSONK	eroded	winerable	(stable_/

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OULY VERSION Revision Date February 9", 2011 INCE-TENSER C Week watch (m): U.S. INCE-TENSER Week watch (m): U.S. INCE-TENSER POD P OD P <th 2"="" colspa="</th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th>•</th><th>•</th><th>•</th></tr><tr><th>OPEC TABLE & DEFINITION Colspan=">Colspan="2">OPEC TO PECTO COLSPAN= COLSPAN= PECTO COLSPAN= P</th> <th></th> <th>SWAMP</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th>n Date: Febru</th> <th>ary 9th, 2011</th>	Colspan="2">OPEC TO PECTO COLSPAN= COLSPAN= PECTO COLSPAN= P		SWAMP							n Date: Febru	ary 9 th , 2011
			Inte	er-Transect:			(n): 4.5			
$\frac{5}{12} \frac{12}{12} \frac{12}$			Dist	. mm/ %	h					Misroalgae Thickness	
		Position	from De	m) size Cobb		Thickness		Macroalgae Unattached	Macrophytes	Codes	
	-		_		The second	1			n Án	Feels rough, not slimy;	
										Feels slimy, 2 = Present and visible but	
					(₱ A		PAD	PAD	PAD	<1mm; Rubbing fingers on surface produces a	
		Center		0 360 -	Р (А)		PAD	PAD	PAD	scraping leaves visible	
United U.S. D - O I P A D			3.5 5	0 1 -	P 🔗		PAD	PAD	PAD	3 = 1-5mm;	
	i.	Right			(P) Á		PAD	PAD	PAD	5 = >20mm;	
	1	Dank	Note: Substrate	sizes can be recorded	either as direc	t measures of th	e median axis of			microalgae present, substrate too small or	
	-		class categorie:	s listed on the supplem	ental page (dire	ect measuremen	ts preferred)			(formerly Z code),	
	- The second									D=Dry, not assessed	
		- Econ	- Alenerge-			· ·			•		
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SWAMP Stream Habitat Cha	racterization Form <u>F</u>	ULL VERSION	Revision Date: February 9 th , 2011
Site Code:	Site Name: ()V ((blu LCD	Date:// 2011
Wetted Width (m): 3,5	Bankfull Width (m):	Bankfull Height (m):	<i>⊘</i> Transect C

						Transect Su	bstrates			
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	CPOM	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickness Codes 0 = No microalgae presen Feels rough, not slimy;
Left Bank	5	6.5	COB	0	ØØ	1	P A D	P (A) D	P 🕢 D	1 = Present but not visible Feels slimy; 2 = Present and visible but
Left Center	175	34	307	/	P ��	~	P ADD	P 🔊 D	р 🚯 D	<1mm; Rubbing fingers on surface produces a
Center	105	31	350	CONSTRUCTION N	P 🕢	AB	PFD	P 🚯 D	P 🔗 D	brownish tint on them, scraping leaves visible trail.
Right Center	2-25	25	880		P 🔊	D	PAD	P 🕭 D	P 🏠 D	3 = 1-5mm; 4 = 5-20mm;
Right Bank	3	1(BED		Â	O	P AD	рбD	P ♠ D	5 = >20mm; UD = Cannot determine i microalgae present,
	Note: Sut class cate	strate size gories liste	es can be ed on the	recorded eit supplement	her as direc al page (dire	t measures of th ect measuremen	ie median axis o its preferred)	feach particle or	one of the size	substrate too small or covered with silt (formerly Z code) D = Dry, not assessed

_	•												0=		1000000	(0%)			Distance and the second	
	RIPARIAN VEGETATION (facing downstream)	0 = A 1 = S 2 = N	Spara	se (<	10%)	3 = F 4 = V					INSTREAM HABITAT COMPLEXITY	1 = : 2 = 3 =	Absan Sparsi Moder Heavy Very H	e rate (1 1 (4	(<10 0-40 0-75	%) %) %)		DENSIOMETE READINGS (0- count covered of	-17)
	Vegetation Class		Lef	t Ba	nk			Rig	ht B	ank		Filamentous Algae	6)1	2	3	4	II	Center	٦
	Upper	Cano	ору	(>5 r	n hi	gh)						Aquatic Macrophytes/ Emergent Vegetation	0	1	2	3	4		Left Center	. ,
	Trees and saplings >5 m high	0	6	2	3	4	0	1	2	73)	4	Boulders	0 ($\overline{1}$	2	3	4		Upstream	16
	Lower C	anopy	y (0.	5 m-	5 m	high	n)			~~~		Woody Debris >0.3 m	\bigcirc	1	2	3	4		Center	17
	All vegetation 0.5 m to 5 m	0	(1)	2	3	4	0	1	2) 3	4	Woody Debris <0.3 m	0	1	2	3	4		Right Center	
	Groun	d Cov	er (<0.5	m h	igh)						Undercut Banks	0	O	2	3	4		Downstream	16
	Woody shrubs & saplings <0.5 m	0	1	0	3	4	0	1	6	3	4	Overhang. Vegetation	0	Ē	Ó	3	4		Optional Left Bank	
		0	1	6	2	4	0	Pi	\rangle_{2}	3	4	Live Tree Roots	6	. 1	2	3	4			
	Herbs/ grasses	0	1	(2)	<u>১</u>	4		C.S			<u> </u>							4	Right Bank	-
	Barren, bare soil/ duff	0	1	2	(3)	4	0	1	2	(3) 4	Artificial Structures	(0)	1	2	3	4			l

HUMAN INFLUENCE (circle only the closest to wetted channel)	B = 0 C = B P = >1	0m+<5	; Bank 50m fro	& 10m f im Chai is or No		nnel;				
		Left	Bank	~	Chai	nnel	~	Ŗight	Banl	(
Walls/ Rip-rap/ Dams	P	С	В	(0)	Y	\mathbb{Q}	6	′в	С	Р
Buildings	P	С	В	Ŷ	Y	N	9	В	С	P
Pavement/ Cleared Lot	P	С	В	þ			ģ	В	С	Р
Road/ Railroad	Р	С	В	þ	Y	N	ģ	В	С	Р
Pipes (Inlet/ Outlet)	P	С	В	þ	Y	N	ģ	В	С	Р
Landfill/ Trash	P	С	В	þ	Y	Ν	Ó	В	С	Р
Park/ Lawn	P	С	В	þ			Ø	В	С	Р
Row Crop	P	С	В	0			Ó	В	С	Ρ
Pasture/ Range	P	С	В	0			ø	В	С	Р
Logging Operations	P	С	В	0			þ	В	С	Ρ
Mining Activity	P	С	В	d	Y	N	þ	В	С	Р
Vegetation Management	P	С	В	d			ρ	В	С	Р
Bridges/ Abutments	P	С	В	d	Y	N	þ	В	С	Р
Orchards/ Vineyards	P	С	В	Q,		1	d	В	С	Р

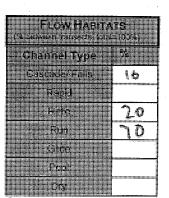
			\sum
Left Bank	eroded	vulnerable	stable
Right Bank	eroded	vulnerable	stable

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FULL VERSION

Revision Date: February 9th, 2011

- 		nter-7	Frans	ect: CI)	1	Wetted Width (m	n): L{		
					In	ter-Transect	Substrates			a based as
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	СРОМ	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickness Codes 0 = No microalgae present
Left Bank	.5	15	03	0	() A	0	P A D	P A D	P 🔊 D	 Feels rough, not slimy; 1 = Present but not visible, Feels slimy;
Left Center	١	31	307		Р 🄊	(PAD	PAD	ΡΑΟ	2 = Present and visible but <1mm, Rubbing fingers on surface produces a
Center	2	60	BUR	>	РА	· [PAD	PAD	PAD	brownish tint on them, scraping leaves visible
Right Center	3	57		- ·	РА)	PAD	PAD	PAD	trail. 3 = 1-5mm; 4 = 5-20mm;
Right Bank	3.5	18	BED		(P) A		PAD	PAD	PAD	5 = >20mm, UD = Carnot determine if microalgae present,
	Note: Sub class cate	strate size gories liste	s can be i d on the :	ecorded eith supplementa	ier as direct Il page (dire	measures of th ct measurement	e median axis of ts preferred)	each particle or c	one of the size	substrate too small or covered with silt (formerly Z code) D = Dry, not assessed



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Site Code:				Site Name:	00	2 blw	LCD		Date:// 2011			
Wetted Widt	^{h (m):} 3	15		Bankfull Wic	ith (m):	ר Bank	dull Height (m):	1.5	Tra	ansect D		
						Transect Su	bstrates					
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	CPOM	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickne Codes 0 = No microalgae prese Feels rough, not simy		
Left Bank	رح	18	COB	0	Ø₽ A.	Ø	P A D	PAD	РĄD	1 = Present but not visib Feels slimy;		
Left Center	.75	24	60	Ø	P Ø	l	P 🔗 D	PGD	P 👌 D	2 = Present and visible t <1mm; Rubbing finger on surface produces a		
Center	1.5	38	COB	10	P (7)	Ø	P 🊯 D	P & D	PAD	brownish tint on them scraping leaves visible trail.		
Right Center	2,25	2	BED	-	P Ø	l	P 🂫 D	PAD	PAD	3 = 1-5mm; 4 = 5-20mm;		
Right Bank	3	12	BUT	-	(P) A	Ь	P 🔊 D	P AD	P D	5 = >20mm) UD = Cannot determine microalgae present,		
						t measures of th ect measuremen	e median axis of	each particle or	one of the size	substrate too small or covered with silt (formerly Z code).		

RIPARIAN VEGETATION (facing downstream)	1 = :	Spar	se (•	0%) <10%) ∋ (10≁)	3 = H 4 = V					INSTREAM HABITAT COMPLEXITY	1 = S 2 = N 3 = H	osent parse loderat leavy 'ery Hei	9 (10-4 (40-1	10%) 40%) 75%)		DENSIOMET READINGS (0 count covered	-17)
Vegetation Class		Lef	t Ba	ank			Rig	ht E	lank		Filamentous Algae	/0/	12	3	4		Center	
Upper	r Can	ору	(>5	m hig	gh)						Aquatic Macrophytes/ Emergent Vegetation	0	12	3	4		Left Center	15
Trees and saplings >5 m high	0	1	$\binom{2}{2}$	3	4	. 0	1	12	3	4	Boulders	0 (D 2	3	4		Upstream	[["]
LowerC	anop	y (0	5-6	1-5 m	higi	n)			÷		Woody Debris >0.3 m	\bigcirc	12	3	4]	Center	$ _{1C}$
All vegetation 0.5 m to 5 m	0	1	2	3	4	0	1	2) 3	4	Woody Debris <0.3 m	0	12	3	4		Right Center	12
Groun	d Cov	ver (<0.5	5 m hi	igh)	1		Ť			Undercut Banks	0 ($\hat{\mathcal{V}}^2$	3	4	1	Downstream	14
Woody shrubs & saplings <0.5 m	0	C	2	3	4	0	1	2) 3	4	Overhang. Vegetation	0	1 🧕	3	4		Optional	
Herbs/ grasses	0	1	2	3	4	0	1	2	3	4	Live Tree Roots	6	1 2	3	4		Left Bank	
Barren, bare soil/ duff	0	1	3	3	4	0	1	(2)	3	4	Artificial Structures	6	1 2	3	4		Right Bank	

HUMAN INFLUENCE (circle only the closest to wetted channel)	B = 0 C = B P = >1	0m+<5	Bank 50m fr	& 10m f om Char es or No	nnel;	annel;			•	
		Left	Bank		Cha	nnel		Right	Banl	6
Walls/ Rip-rap/ Dams	P	6	В	0	Y	(ár)	6	ЪВ	С	Р
Buildings	Р	С	В	(07	Υ	Ŋ	ρ	В	С	Р
Pavement/ Cleared Lot	P	С	В	P			þ	В	С	Ρ
Road/ Railroad	Р	С	В	¢.	Y	Ņ	þ	В	С	Ρ
Pipes (Inlet/ Outlet)	P	С	В	ø	Y	N	þ	В	С	Ρ
Landfill/ Trash	Р	С	В	þ	Y	N	0	В	С	Ρ
Park/ Lawn	P	С	В	þ			0	В	С	P
Row Crop	Р	С	В	þ			0	В	С	Р
Pasture/ Range	Р	С	В	d			q	В	С	Р
Logging Operations	Р	С	В	q			q	В	С	Р
Mining Activity	Р	Ċ	В	9	Y	Ņ	þ	В	С	Р
Vegetation Management	Р	· C	В	0			o	В	С	Р
Bridges/ Abutments	Р	С	В	d	Y	N	0	В	С	Р
Orchards/ Vineyards	Р	С	В	d			d	В	С	Р

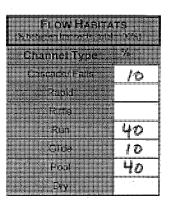
(seren zors)	BANKS Imposision Internetiono Internetiono	ng Sin Sharin Mi	n of the sect
Lafelank	eroded	vuinerabie	stable \
Right Bank	eroded	vulnerablic	skøble /

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FULL VERSION

Revision Date: February 9th, 2011

		nter-7	Frans	ect: DI	C		Wetted Width (n	n): 415		
					In	ter-Transect	Substrates			
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	CPOM	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickness Codes 0 = No microalgae present,
Left Bank		12	COB	10	Р 🖗	0	P OD	P 🍕 D	P 🕢 D	 Feels rough, not slimy; 1 = Present but not visible, Feels slimy;
Left Center	1,5	20	COB	20	Ρæ	1	P 👌 D	P 🎝 D	P 👌 D	2 = Present and visible but <1mm; Rubbing fingers on surface produces a
Center	2.5	63	BUD		Р (А)	- 1	P 🖉 D	P 🔊 D	Р 🐼 D	brownish tint on them, scraping leaves visible trail
Right Center	3.5	52	(6)		Р 🖗	0	P 🚯 D	P 🔥 D	P \land D	3 = 1-5mm; 4 = 5-20mm;
Right Bank	4.5	29	BED	No.	Р 🔗	6	POD	POD	P 👌 D	5 = >20mm; UD = Cannot determine if microalgae present,
						measures of th ct measuremen		each particle or	one of the size	substrate too small or covered with silt (formerly Z code) D = Dry, not assessed



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te Code:				Site Name:	00	2 bl	w	LCD		Date:	_//2011
etted Widt	^{h (m):} 5	.5	E	Bankfull Wid	lth (m): ረ	<i>1.5</i> ∣ [₿]	Bankful	ll Height (m):	lo	Tra	nsect E
					-	Transect	Subs	strates			
osition	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	CPOM	Microalg Thicknes Code		Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thicknes Codes 0 = No microalgae presel Feels rough, not slimy;
Left Bank	<u>, 5</u>	4	UB	20	PА	12	2	P 🚯 D	P 🔗 D	P 🏈 D	1 = Present but not visible Feels slimy;
Left Center	(.5	16	OB	(Ð	Р 🥝	(P (A D	P 🚯 D	P 🚯 D	2 = Present and visible b <1mm; Rubbing fingers on surface produces a
Center	2.5	41	16	<u> </u>	РА			PAD	PAD	PA.D	brownish tint on them, scraping leaves visible trail
Right Center	3.5	40	610		PA	2		P Ø D	ΡŊD	P Ø D	3 = 1-5mm; 4 = 5-20mm;
Right Bank	4.5	q	B80	Charles	Р 🖉	l		P AD D	P 🅢 D	P Ø D	5 = >20mm; UD = Cannot determine i microalgae present,
	Note: Sub class cate	strate size gories list	es can be ed on the	recorded eit supplement	her as direc al page (dire	t measures ect measure	of the i ments	median axis of preferred)	each particle or	one of the size	substrate too small or covered with silt (formeny Z code).
											D = Dry, not assessed
and the second	N VEGET/ downstrea			nt (0%) se (<10%) erate (10-40	4 = Very	y (40-75%) Heavy (>75		INSTF Hab Compl	REAM 1= 2= ITAT 3=	Absent (0%) Sparse (<10%) Moderate (10-40%) Heavy (40-75%) Very Heavy (>75%)	DENSIOMETE READINGS (0-1 count covered do
Vegel	ation Cla	ISS	Lef	t Bank	Rig	iht Bank		Filamentous	s Algae	1 2 3 4	Center Left
		Upper	Canopy	(>5 m high) pr	`		Emergent V	egetation)1 2 3 4	Center
	saplings >5	m hiah	0 1	2 3 4	0 1	2 3	4	Boulders	0. vris >0.3 m (0	1 2 3 4	Upstream

HUMAN INFLUENCE (circle only the closest to wetted channel)	B = 0 C = B P = >1	0m+ </th <th>; Bank i0m fn</th> <th>& 10m fi om Char es or No</th> <th>nnel;</th> <th>annel;</th> <th></th> <th></th> <th></th> <th></th>	; Bank i0m fn	& 10m fi om Char es or No	nnel;	annel;				
		Left	Bank		Cha	nnel	F	light	Banl	ĸ
Walls/ Rip-rap/ Dams	Р	С	В	6	Y	M	16)	В	С	Р
Buildings	Р	С	В	9	Y	N	Y	В	С	Р
Pavement/ Cleared Lot	Р	С	В	¢			þ	В	С	Р
Road/ Railroad	P	С	В	0	Y	N	Ø	В	С	P
Pipes (Inlet/ Outlet)	Р	С	В	ø	Y	N	- Ø	В	С	Р
Landfill/ Trash	P	С	В	þ	Y	Ŋ	ø	В	С	Р
Park/ Lawn	P	С	В	0			þ	В	С	Ρ
Row Crop	P	С	В	0			0	В	С	Ρ
Pasture/ Range	P	С	В	0			0	В	С	Р
Logging Operations	P	С	В	0			0	В	С	Р
Mining Activity	P	С	В	0	Y	N	0	В	С	Р
Vegetation Management	P	С	В	0			þ	В	С	Р
Bridges/ Abutments	P	С	В	þ	Y	N	¢	В	С	Р
Orchards/ Vineyards	P	С	В	þ		-	þ	В	С	Р

Ground Cover (<0.5 m high)

0 1 2 3 4

0 (1) 2 3 4

3 4

0 1 🚱

0 1 2

0 1

0 1 2 (3) 4

6

3

3 4

4

Woody shrubs & saplings <0.5 m

Herbs/ grasses

Barren, bare soil/ duff

Right Bank	eroded	vulnerable	stable
Left Bank	eroded	vulnerable	stable
(score zone	5m upstream a	STABILITY nd 5m downstrea full - wetted width)	im of transect

(0)12

0)1

(0)1

0(1) 2 3 4

2 34

2

3 4

3 4

Undercut Banks

Live Tree Roots

Artificial Structures

Overhang. Vegetation

Downstream Optional

Left Bank

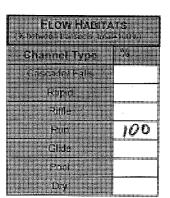
Right Bank

12

FULL VERSION

Revision Date: February 9th, 2011

]	[nter-'	Trans	ect: El	ł	N N	Wetted Width (n	n): Y	· · · ·	
					In	ter-Transect	Substrates			
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	CPOM	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickness Codes 0 = No microalgae presen
Left Bank	15	24	603	80	(P) A	· (P 🖉 D	P 🐼 D	P 🙆 D	 Feels rough, not slimy; 1 = Present but not visible Feels slimy;
Left Center		56	307		P Ø		P 🚯 D	P 🚯 D	P 🔊 D	2 = Present and visible bu <1mm, Rubbing fingers on surface produces a
Center	2	49	COB	0	P A	2	P A D	P (A) D	P D	brownish tint on them, scraping leaves visible
Right Center	3	47	SORIA		Р 🖉	Ø	P (A) D	P 🚯 D	P 🗿 D	trail. 3 = 1-5mm; 4 = 5-20mm;
Right Bank	3.5	٦	BED	-	Р 🔊	1	P D .	P D	P D	5 = >20mm; UD = Cannot determine if microalgae present.
	Note: Sub class cate	strate size gories liste	s can be r ed on the s	ecorded eith supplementa	ier as direct I page (dire	measures of th ct measurement	e median axis of Is preferred)	each particle or	one of the size	substrate too small or covered with silt (formerly Z code).



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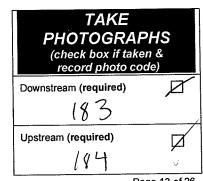
ite Code:				Site Name:	OC	blu	LCD		Date:	//2011
letted Wid	տ (m): լ_		1	Bankfull Wid	th (m): -	Banl	kfull Height (m):	1.5	Tra	ansect F
						Transect Su	bstrates			and the second second
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	CPOM	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickne Codes 0 = No microalgae prese Feels rough, not slimy
Left Bank	, <u>5</u>	1	6		PA	l	P 🚯 D	P (A) D	P A D	1 = Present but not visit Feels slimy; 2 = Present and visible
Left Center	(9	COB	16	P (Å)	2	P 🔗 D	P D	P AD	<1mm; Rubbing finge on surface produces
Center	Z	46	(03	60	(P) A	2	P Ø D	P 🜔 D	P 🙆 D	brownish tinf on them scraping leaves visib trail
Right Center	3	48	BUT	-	Р 🔊		P (A) D	P (A) D	P A D	3 = 1-5mm; 4 = 5-20mm; 5 =>20mm;
Right Bank	4.5	12	6)		P (A)	0	• P \land D	P (A) D	P (A) D	UD = Cannot determine microalgae present,
	Note: Sub	ostrate size	es can be	recorded eit	ner as direc al page (dire	t measures of t ect measureme	ne median axis of hts preferred)	l each particle or	one of the size	substrate too small c covered with silt (formerty Z code).

																						<u>8.</u>				

RIPARIAN VEGETATION (facing downstream)	0 = Absent (0%) 1 = Sparse (<10%) 2 = Moderate (10-40%)	3 = Heavy (40-75%) 4 = Very Heavy (>75%)	INSTREAM HABITAT COMPLEXITY	0 = Absent (0%) 1 = Sparse (<10%) 2 = Moderate (10-40%) 3 = Heavy (40-75%) 4 = Very Heavy (>75%)	DENSIOMETER READINGS (0-17) count covered dots
Vegetation Class	Left Bank	Right Bank	Filamentous Algae	(1) 2 3 4	Center //o
Upper	r Canopy (>5 m high)		Aquatic Macrophytes/ Emergent Vegetation	0 1 2 3 4	Left IQ Center (
Trees and saplings >5 m high	0 1 27 3 4	0 1 2 3 4	Boulders	0 (1) 2 3 4	Upstream
	anopy (0.5 m-5 m higi		Woody Debris >0.3 m	0 1 2 3 4	Center
All vegetation 0.5 m to 5 m	0 1 2 3 4	0 1 2 3 4	Woody Debris <0.3 m	1 2 3 4	Right (7 Center
Groun	d Cover (<0.5 m high)		Undercut Banks	0 (1) 2 3 4	Downstream
Woody shrubs & saplings <0.5 m	0 1 2 3 4	0 1 2 3 4	Overhang. Vegetation	0 1 ② 3 4	Optional Left Bank
Herbs/ grasses	0 1 2 3 4	0 17 2 3 4	Live Tree Roots	0 1 2 3 4	
Barren, bare soil/ duff	0 1 🧭 3 4	0 1 2 3 4	Artificial Structures	0 1 2 3 4	Right Bank

HUMAN INFLUENCE (circle only the closest to wetted channel)	B = Or C = Be P = >1	0m+<5	Bank i0m fre	& 10m 1 om Cha es or No					
		Left I	Bank	0	Channel		Right	Banl	ĸ
Walls/ Rip-rap/ Dams	Р	С	В	0	YN	6	В	С	Ρ
Buildings	Р	С	В	Q	YŅ	Q	В	С	Р
Pavement/ Cleared Lot	P	С	В	þ		Ø	В	С	Р
Road/ Railroad	Р	С	В	0	ΥN	þ	В	С	Р
Pipes (Inlet/ Outlet)	P	С	В	0	Y	0	в	С	Р
Landfill/ Trash	P	С	В	q	YN	0	В	С	Ρ
Park/ Lawn	P	С	В	¢		0	в	С	Р
Row Crop	Р	С	В	q		0	В	С	Р
Pasture/ Range	P	С	В	q		þ	В	С	Р
Logging Operations	P	С	В	đ		þ	В	С	Р
Mining Activity	P	С	В	¢	YN	0	В	С	Ρ
Vegetation Management	P	С	В	d		d	В	С	Р
Bridges/ Abutments	P	С	В	d	YN	d	В	С	Р
Orchards/ Vineyards	P	С	В	d		d	В	С	Р

BANK STABILITY	
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	erandaa i

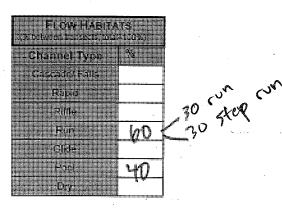


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FULL VERSION

Revision Date: February 9th, 2011

		nter-7	Frans	ect: FC	r F	N	Netted Width (m	n): 3		
	-				In	ter-Transect	Substrates			
Position	Dist from LB (m)	Depth (em)	mm/ size class	% Cobble Embed	CPOM.	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickness Codes 0 = No microalgae present,
Left Bank	15	41	Cob	20	€⁄A	\mathcal{V}	₽ € ∕D	P Q D	P D	Feels rough, not slimy; 1 = Present but not visible, Feels slimy;
Left Center	<u>,75</u>	3	507		Р 🔊	· (P A D	P 🖗 D	P D D	2 = Present and visible but <1mm; Rubbing fingers on surface produces a
Center	1.5	50	(613	30	Р 🖗	O	P 🚯 D	PbD	PAD	brownish tint on them, scraping leaves visible trail
Right Center	2.25	47	(OB	10	P A	Ż	Р 🙆 D	P 🕢 D	P 🔊 D	3 = 1-5mm, 4 = 5-20mm;
Right Bank	2.5	14	63	20	(P) A	× (P 🚯 D	P D	P A D	 5 = >20mm; UD = Cannot determine if microalgae present;
	Note: Sub class cate	strate šize gories liste	s can be i d on the	recorded eith supplementa	ier as direct Il page (dire	measures of the ct measurement	e median axis of ts preferred)	each particle or o	one of the size	substrate too small or covered with silt (formerly Z code). D = Dry, not assessed



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SWAMF	Stream	Habitat	Charac	terization	Form	FULL	VERSION	Revisi	on Date: Febru	iary 9 th , 2011
Site Code:				Site Name:	00	blu	LCD		Date:	/ / 2011
Wetted Wid	th (m):	4		Bankfull Wic	ith (m):	15 Bank	dull Height (m):	1.5	Tra	nsect G
						Transect Su	bstrates			
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	СРОМ	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickness Codes 0 = No microalgae present
Left Bank	15	2	BUD		(P)A	6	P A D	р (А) D	P A D	Feels rough, not slimy; 1 = Present but not visible, Feels slimy;
Left Center	1.	0	BUD	-	P (A)	0	P ⊗ D	P 🎗 D	P`QD	2 = Present and visible but <1mm; Rubbing fingers on surface produces a
Center	2	38	BUD	~	Р 🔗	J	P 🕢 D	P 🎝 D	P. 🕢 D	brownish tint on them, scraping leaves visible trail.
Right Center	3	32	COB	20	P A	40	P & D	P 🔊 D	P 🖗 D	3 = 1-5mm; 4 = 5-20mm; 5 = >20mm;
Right Bank	3.5	7	BED		° P 🕢	}	PAD	р Ю Д	P D	UD = Cannot determine if microalgae present,
	Note: Su class cat	bstrate size egories list	es can be ed on the	recorded eit supplement	her as direc al page (dire	t measures of the transmission of transmission of the transmission of transmission of the transmission of transmission of transmission of transmission of the transmission of	ne median axis of hts preferred)	each particle o	r one of the size	substrate too small or covered with silt (formerly Z code). D = Dry, not assessed
	N VEGET g downstrea		1 = Spa	ent (0%) rse (<10%) erate (10-40	4 = Very	y (40-75%) Heavy (>75%)	INSTE Hab Comp	REAM 1 ITAT 3	= Absent (0%) = Sparse (<10%) = Moderate (10-40%) = Heavy (40-75%) = Very Heavy (>75%)	DENSIOMETER READINGS (0-1) count covered do
Vege	tation Cl	ass	Le	ft Bank	Rig	ht Bank	Filamentou Aquatic Ma		J	Center Left
		Upper	Canopy	(>5 m high)	~	Emergent V	regetation	<u> </u>	Center
Trees and	saplings >		0 (1)	<u>/234</u>	0 1	(2)34	Boulders Woody Deb	0 0.3 m		Upstream Center
Allunget	ation 0 E m	T	anopy (U 0 /1) 2 3 4	gn) 0 (1	234	Woody Det			Right
All veget	ation 0.5 m	10.5 m	<u>" ' ''</u>	~ 2 3 4		/ - • •		<u> </u>		Center

HUMAN INFLUENCE (circle only the closest to wetted channel)	B = 0 C = B P = >	0m+<5	; Bank 50m fr	& 10m f om Chai es or No		nnel;				
		Left I	Bank		Chan	nel		Right	Banl	¢ · ·
Walls/ Rip-rap/ Dams	P	С	В	0	Y (Ń)	6	B	С	Р
Buildings	Р	С	В	Q	Y	Ň	ò	В	С	Ρ
Pavement/ Cleared Lot	P	С	В	þ			q	В	С	Р
Road/ Railroad	Р	С	В	ġ	Y	Ņ	q	В	С	Р
Pipes (Inlet/ Outlet)	Р	С	В	þ	Y	Ŋ.	d	В	С	Р
Landfill/ Trash	P	С	В	ģ	Y	N	Ø	В	С	Ρ
Park/ Lawn	P	С	В	ģ			ø	В	С	Р
Row Crop	P	С	В	ø			¢	В	С	Р
Pasture/ Range	P	С	В	þ			ø	В	С	Р
Logging Operations	P	С	В	þ			þ	В	С	Р
Mining Activity	P	С	В	¢.	Y	Ņ	þ	В	С	P
Vegetation Management	P	С	В	4			¢	В	С	Р
Bridges/ Abutments	P	С	В	d	Y	N	þ	В	С	Ρ
Orchards/ Vineyards	P	С	В	0		1	þ	В	С	Р

2 3 4

0 1 (2) 3 4

0 (1) 2

1

0 1

0

4

(2)

2

3 4

3 4

4

3

Ground Cover (<0.5 m high)

0 1

0 1 (2) 3

Woody shrubs & saplings <0.5 m

Herbs/ grasses

Barren, bare soil/ duff

Left Bank	eroded	vulnerable	stable
1.00.1			stable
	between bank	full - wetted width)	
(score zone		ind 5m downstream	of transect

0 (1) 2

ന്തി

0 1 2 3 4

(0) 1 2 3 4

1 2 3 4

Undercut Banks

Live Tree Roots

Artificial Structures

Overhang. Vegetation

34

 φ

Downstream

Left Bank

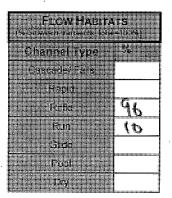
Right Bank

Optional

FULL VERSION

Revision Date: February 9th, 2011

	Ι	nter-7	Frans	ect: GI	I	V	Vetted Width (m	1): 3.5		
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed	CPOM	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickness Codes 0 = No microalgae present,
Left Bank	5	(0)	BED		Ø A	\$40	P 🖉 D	Р 🕢 D	р 🖗 D	Feels rough, not slimy; 1 = Present but not visible, Feels slimy;
Left Center	.75	12	CG		Р 🔊		P 🖉 D	P (D)	PAD	2 = Present and visible but <1mm; Rubbing fingers on surface produces a
Center	1.75	23	wh	70	P Ø		р 🄕 D	P AD	Р 🖗 D	brownish lint on them, scraping leaves visible
Right Center	2.5	52	103		P (Å)	Ō	P A D	P 🌔 D	PQ D.	trail. 3 = 1-5mm; 4 = 5-20mm;
Right Bank	3	14	BED		Р 🏠	2	P⊅D	P 🔊 D	P D	5 = >20mm; UD = Cannot determine if microalgae present;
	Note: Sub class cate	strate size gories liste	s can be ed on the	recorded eith supplementa	ier as direct I page (dire	measures of the ct measurement	e median axis of s preferred)	each particle or o	one of the size	substrate too small or covered with slit (formerly Z code). D = Dry, not assessed



tributary btw GH + G RBA- cold auter compared to O.C.

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SWAMP	Stream	nabilal	Unara		-		ULL VE						9 th , 2011	
Site Code:				Site Name:		610	<u> </u>	CD			Date:	′	/2011	
Netted Widt	:h (m):	3		Bankfull Wid	^{th (m):}	2	Bankful	ll Height (m):	1.5		Tra	ans	ect H	
			1			Trana	ect Subs	stratos						
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	CPOM	Micro: Thick	nlgae ness	Macroalgae Attached	Macroalg Unattach		crophytes	0 =	croalgae Thickne Codes No microalgae pres eels rough, not slim	sen
Left Bank	15	ZI	BED		Р 🔊	0		P 🖄 D	р 💩 ј	D P	DD	1 = F	Present but not visi eels slimy;	ible
Left Center		27	BLD	> _	P 🔊			P 🚯 D	p Ø	D P	D	< c	Present and visible 1mm, Rubbing finge in surface produces	ers a
Center	1.5	30	COB	30	P	ļ		P A D	P 🙆 1		Ø D	i s	rownish tint on ther craping leaves visit rail.	
Right Center	2	ろい	(6		P 🖄	D		P A D	P 🏈 1		D	4 =	1-5mm; 5-20mm; >20mm;	
Right Bank	2.5	18	BUD		Р 🔊	٩	-	P 🚳 D	P 🔊		D	UD r	= Cannot determin microalgae present,	
	Note: Sul class cate	ostrate size egories list	es can be ed on th	e recorded eiti e supplement	ner as direc al page (dire	t measur ect measi	es of the i urements	median axis of preferred)	each partic	le or one c	f the size		aubstrate too small o covered with silt formerty Z code). - Dry, not assessed	
	N VEGET I downstrea	0000 (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Constant) (Const	1 = Spa	ent (0%) arse (<10%) derate (10-40°	3 = Heav 4 = Very %)			Instf Hab Compi	TAT	3 = Heavy			DENSIOMET READINGS (0 count covered)-1
Vege	tation Cla			ft Bank / (>5 m high		iht Ban	k	Filamentou Aquatic Mac	crophytes/	01 01	2 3 4 2 3 4		Center Left	\downarrow
Trees and	saplings >5		Canopy 0 1	(>5 m high))	(2) :	3 4	Emergent V Boulders		00	2 3 4		Center Upstream	

Trees and saplings >5 m high			- Doulders			-	<u>.</u>
	Canopy (0.5 m-5 m higi	1)	Woody Debris >0.3 m	0 1	2	3 4	4
All vegetation 0.5 m to 5 m	0 1 2 3 4	0 1 (2) 3	4 Woody Debris <0.3 m	Ø 1	2	3 4	4
Grour	nd Cover (<0.5 m high)	L	Undercut Banks	(0) 1	2	3 4	4
Woody shrubs & saplings <0.5 m	0 1 (2) 3 4	0 1 ② 3	4 Overhang. Vegetation	00	2	3 4	4
Herbs/ grasses	0 1 2 3 4	0 1 2 3	4 Live Tree Roots	O 1	2	3 4	4
Barren, bare soil/ duff	0 1 (2) 3 4	0 1 2 (3)	4 Artificial Structures	107 1	2	3 4	4
Human Influence	0 = Not Present; B = On Bank; C = Between Bank & 10m	rom Phainal			B	41-5	5

1 (2)

HUMAN INFLUENCE (circle only the closest to wetted channel)	B = On Bank; C = Between Bank & 10m from Channel; P = >10m+<50m from Channel; Channel (record Yes or No)									
		Left I	Bank	~	Char	nnel		Right	Banl	ĸ
Walls/ Rip-rap/ Dams	P	С	В	6	Y	Ø	6	B	С	Р
Buildings	Р	С	В	p	Y	þi 🕺	9	В	C	P
Pavement/ Cleared Lot	P	С	В	0			9	В	С	P
Road/ Railroad	P	С	В	0	Y	Ν	Ŷ	В	С	P
Pipes (Inlet/ Outlet)	P	С	В	0	Y	N	đ	В	С	Р
Landfill/ Trash	P	С	В	þ	Y	Ν	¢	В	С	P
Park/ Lawn	P	С	В	þ			ģ	В	С	P
Row Crop	P	С	В	þ			Ø	В	С	Р
Pasture/ Range	Р	С	В	ģ			þ	В	С	Р
Logging Operations	Р	С	В	þ			þ	В	С	Р
Mining Activity	Р	С	В	d	Y	Ν	0	В	С	Р
Vegetation Management	P	С	В	9			0	В	С	Р
Bridges/ Abutments	P	С	В	d	Y	Ν	0	В	Ċ	Р
Orchards/ Vineyards	P	С	В	0		V	þ	В	С	Р

5 m high 0 1 (2) 3 4 0 Lower Canopy (0.5 m-5 m high)

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	winerable	/date
Latt Bank eroded	winerable	/date
Latt Bank eroded	winerable	/date
Latt Bank eroded	winerable	/date
Left Bank eroded	winerable	/date
Latt Bank eroded	winerable	/date
Lott Bank eroded Right Bank eroded	winerable	/date
Lott Bank eroded Right Bank eroded	winerable	(stable)
Left Bank eroded	winerable	/date

5

Center Right

Center Downstream

Left Bank

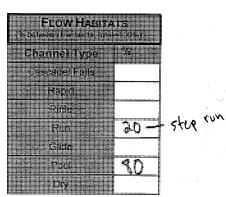
Right Bank

Optional

FULL VERSION

Revision Date: February 9th, 2011

		[nter-'	Trans	ect: H	[١	Netted Width (n	n): (Ø		· · · · · · · · · · · · · · · · · · ·
					In	ter-Transect	Substrates			
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	СРОМ	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	0 = No microalgae present.
Left Bank	.5	10	BED	-	PA	I.	P A D	P O D	P 🖗 D	Feels rough, not slimy; 1 = Present but not visible, Feels slimy;
Left Center	1.5	19	COB	(6	P (Å)	. L	P 🔗 D	P 🚯 D	P 🔊 D	2 = Present and visible but <1mm; Rubbing fingers on surface produces a
Center	3	9	BUD	<u> </u>	A A	0	₽ĄD	P 🚯 D	P \Lambda D	brownish tint on them, scraping leaves visible
Right Center	4.5	35	63	50	A (2	P 🔗 D	P 👌 D	P 🗿 D	trail. 3 = 1-5mm; 4 = 5-20mm;
Right Bank	5.5	9	COB	20	ÐА	2	P 🚯 D	PAJD	P 🕭 D	5 = >20mm; UD = Cannot determine if microalgae present.
	Note: Sub class cate	strate size gories liste	s can be d on the	recorded eith supplementa	ier as direct I page (dire	measures of the ct measurement	e median axis of ts preferred)	each particle or	one of the size	substrate too small or covered with silt (formerly Z code) D = Dry, not assessed



Page 18 of 26

Site Code:				Site Name:	OC	blw	$\mathcal{L}\mathcal{O}$		Date:	// 2011
Wetted Wid	th (m): ر	6		Bankfull Wid	Ith (m): {	L Ban	kfull Height (m):	1.5	Tra	ansect I
						Transect St	ibstrates			
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	CPOM	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thicknes Codes 0 = No microalgae preser
Left Bank	.5	15	CoB	20	(P) A	2	P A D	P 🕢 D	P A D	 Feels rough, not slimy; 1 = Present but not visible Feels slimy;
Left Center	\mathcal{V}	D	BUD	-	PA	3	P A D	P DD	PAD	2 = Present and visible bi <1mm; Rubbing fingers on surface produces a
Center	4	40	66	-	ΡĄ	0	P A D	P 🖗 D	P (A) D	brownish tint on them, scraping leaves visible
Right	Right 10 25 cm			P(A) = P(A) + P(A) + P(A) + P(A)				PAD	P A D	trail. 3 = 1-5mm:

	1	10	\mathcal{O}							Scraping icaves visible
Right Center	le	25	Cos	0	Р (А)	. (P (Ay D	P A D	P (A) D	trail. 3 = 1-5mm; 4 = 5-20mm;
Right Bank	7.5	15	310		PA	l	P 70 D	P () D	P (A) D	5 = >20mm; UD = Cannot determine if microalgae present.
						t measures of t ect measureme	ne median axis o nis preferred)	f each particle or	one of the size	biotrate too small or covered with silt (formeny Z code) D = Dry, not assessed
	VEGETA downstrear	TION		nt (0%) se (<10%) srate (10-40%	4 = Very	ry (40-75%) Heavy (>75%)	INST HAB Comp	REAM 1= 2= 1TAT 3=	Absent (0%) Sparse (<10%) Moderate (10-40%) Heavy (40-75%) Very Heavy (>75%)	DENSIOMETER READINGS (0-17) count covered dots
Veget	ation Cla	SS	Lef	t Bank	Ric	ht Bank	Filamentou	s Algae 🛛 🖉 0	1 2 3 4	Center 1/
			Canopy	(>5 m high)		•	Aquatic Ma Emergent V		1 ② 3 4	Left 16
Trees and s	aplings >5	m high	0 1	2 3 4	0 (9	2 3 4	Boulders	0		Upstream 13
	1	_ower Ca	nopy (0	.5 m-5 m hig	gh)		Woody Deb	oris >0.3 m	1 2 3 4	Center
All vegetat	tion 0.5 m t	:o5 m	0 1	2 3 4	0 1	2 3 4	Woody Det		1 2 3 4	Right 15
		Ground	Cover (<0.5 m high)		Undercut E	Banks 0	(2 3 4)	Downstream IS
	nrubs & sap <0.5 m	lings	0 1	2 3 4	00	2 3 4	Overhang.	Vegetation 0	6 6 3 4	Optional
Herb	os/ grasses		0 1	Ø 3 4	0 1	2 (3) 4	Live Tree F	Roots	1 2 3 4	Left Bank
Barren,	bare soil/ d	luff	0 1	(2) 3 4	0 1	(2) 3 4	Artificial St	ructures 0	1234	Right Bank

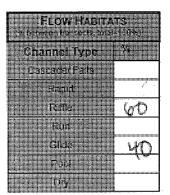
HUMAN INFLUENCE (circle only the closest to wetted channel)	0 = Not Present; B = On Bank; C = Between Bank & 10m from Channel; P = >10m+<50m from Channel; Channel (record Yes or No)											
		Left I	Bank		Cha	nnel	~	Right	Ban	k		
Walls/ Rip-rap/ Dams	Р	С	В	0	Y	Ø	Ø	В	С	Р		
Buildings	Р	С	В	q	Y	Ŋ	9	В	С	Ρ		
Pavement/ Cleared Lot	Р	С	В	þ			ø	В	С	Ρ		
Road/ Railroad	Р	С	В	0	Y	N	ø	В	С	P		
Pipes (Inlet/ Outlet)	Р	С	В	Q	Y	N	ø	В	С	P.		
Landfill/ Trash	Р	С	В	d	Y	N	þ	В	С	Р		
Park/Lawn	Р	С	В	¢			þ	В	С	Р		
Row Crop	P	С	В	ø			¢	В	С	Ρ		
Pasture/ Range	Р	С	В	þ			q	В	С	Р		
Logging Operations	Р	С	В	þ			0	В	С	P		
Mining Activity	Р	С	В	þ	Y	N	0	В	С	Р		
Vegetation Management	Р	С	В	þ			0	В	С	Р		
Bridges/ Abutments	Р	С	В	Q	Y	Ŋ	0	В	С	Р		
Orchards/ Vineyards	P	С	В	d			0	В	С	Р		

fraite zoiet fin inst		
LeftBank erod	ed winerabl	e flashe
Right Bank arod	ed vuinerabl	e fteibie /

FULL VERSION

Revision Date: February 9th, 2011

]	Inter-	Tran	sect: IJ		N	Wetted Width (m	1: H15		
					In	ter-Transect	Substrates			
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	CPOM	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickness Codes 0 = No microalgae present Feels rough, not sirny;
Left Bank	.5	20	COB	30	(P)A	2	P 🖗 D	Р 🕖 D	P 🔊 D	1 = Present but not visible, Feels slimy;
Left Center	1.5	31	驗		Р 🔗	l	P 🔊 D	P 🔗 D	P 🖗 D	2 = Present and visible but <1mm; Rubbing fingers on surface produces a
Center	2.5	0	807		(P) A	0	P 🕅 D	P Ø D	Р 🕢 D	brownish tint on them, scraping leaves visible trail.
Right Center	3.5	13	CoB	0	P 🔗	0	P 🔗 D	Р (5) D	P. (A) D	3 = 1-5mm; 4 = 5-20mm; 5 = >20mm;
Right Bank	24	(3	307		P A		P 🔗 D	P 🖗 D	P A D	UD = Cannot determine if microalgae present.
						t measures of th ect measuremen	e median axis of ts preferred)	each particle or	one of the size	substrate too small or covered with silt (formerly Z code) D = Dry, not assessed



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etted Width				Bankfull Width (m):				UD		Date:// 2011			
	n (m):	5		Bankfull Wid	th (m):	ź	Bankfi	ull Height (m):	0.]		Transect J		
						Transe	et Sub	strates					
osition	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	CPOM	Microa Thicki Cod	ness	Macroalgae Attached	Macroalg Unattache		crophytes	Microalgae Thicknes Codes 0 = No microalgae preser Feels rough, not slimy;	
Left Bank	.5	(2	BUD	4	ΈA	l		P (A) D	PGT	P	Ø D	1 = Present but not visible Feels slimy;	
Left Center	1.5	20	(03	(0)	Р 🔕	ス	、	PÓD	Р 🏠 Г) P	(A) D	2 = Present and visible b <1mm; Rubbing fingers on surface produces a	
	2.5	22	BUD	`	ØA	ł		PAD	PAD) P	A D	brownish tint on them, scraping leaves visible trail	
Right Center	3.5	26	COB	10	Р (с)	6		POD	PAD) P	A D	3 = 1-5mm; 4 = 5-20mm;	
Right Bank	4.5	רו	C6		ØА	2	-	P 🕢 D	P A I) P	Ø D	5 = >20mm; UD = Cannot determine i microalgae present,	
	Note: Sub class cate	strate size gories list	es can b ed on th	e recorded eith e supplementa	ner as dírec al page (díre	t measure ect measu	es of the rements	median axis of s preferred)	each particl	e or one o	f the size	substrate too small or covered with silt (formerly Z code).	
												D=Dry, not assessed	
RIPARIAN (facing	I VEGET# downstrea	0.000.000000000000000000000000000000000	1 = Spa	ent (0%) arse (<10%) derate (10-40%	4 = Very	/y (40-75% Heavy (>		INSTR Habi Compl	TAT	3 ≠ Heavy		DENSIOMETE READINGS (0- count covered do	
Vegeta	ation Cla	SS	Le	ft Bank	Rig	<mark>ght B</mark> an	k	Filamentous			2 3 4	Center	
Trees and s			Canop	y (>5 m high))	<u>ि</u> 3		Aquatic Mac Emergent V Boulders			2 3 4	Center Upstream	

Ø 2

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3 4

3 4

0

0 1

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1 2

HUMAN INFLUENCE (circle only the closest to wetted channel)	0 = Not Present; B = On Bank; C = Between Bank & 10m from Channel; P = >10mr<50m from Channel; Channel (record Yes or No)													
		Left	Bank	~	Char	npel	Right Bank							
Walls/ Rip-rap/ Dams	Р	С	В	(0)	Y	6	(0)	В	С	Р				
Buildings	Р	С	В	Y	Y	Ŋ	p	В	С	Ρ				
Pavement/ Cleared Lot	Р	С	В	d			9	В	С	Р				
Road/ Railroad	Р	С	В	d	Y	Ŋ	þ	В	С	Р				
Pipes (Inlet/ Outlet)	Р	С	В	0	Y	Ņ	0	В	С	Ρ				
Landfill/ Trash	P	С	В	đ	Y	Ņ	0	В	С	Р				
Park/ Lawn	P	С	В	þ			0	В	С	Р				
Row Crop	P	С	В	þ			0	В	С	Р				
Pasture/ Range	P	С	В	þ			0	В	С	Ρ				
Logging Operations	Р	С	В	þ			0	В	С	Р				
Mining Activity	P	С	В	ģ	Y	Ν	d	В	С	Р				
Vegetation Management	P	С	В	ģ			0	В	С	Р				
Bridges/ Abutments	P	С	В	d	Y	N	d	В	С	Р				
Orchards/ Vineyards	P	С	В	0			d	В	С	Р				

All vegetation 0.5 m to 5 m

Woody shrubs & saplings <0.5 m

Herbs/ grasses

Barren, bare soil/ duff

0 (1) 2

Ground Cover (<0.5 m high)

0 1

0 1

0

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(2) 3 4

2 3 4

2

3 4

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	eroded	vuinerable	a starting and the second s
Right Bank	arodad	winerable	sijebie

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R A 1

0 1 2

Woody Debris <0.3 m

Overhang. Vegetation

Undercut Banks

Live Tree Roots

Artificial Structures

2

0 1 2 3 4

0 1 2 3 4

2

34

3 4

3 4

9

Right

Center

Downstream

Left Bank

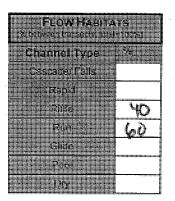
Right Bank

Optional

FULL VERSION

Revision Date: February 9th, 2011

	Ì	[nter-'	Trans	ect: Jk		1	Wetted Width (m): 4.5									
					In	ter-Transect										
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	CPOM	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickness Codes 0 = No microalgae present						
Left Bank	15	8	OB	5	PA	2	PGD	P 60 D	P 🏈 D	 Feels rough, not slimy; 1 = Present but not visible, Feels slimy; 						
Left Center	1.5	0	UD		PA	Z	ΡØD	P Q D	P Ø D	2 = Present and visible but <1mm; Rubbing fingers on surface produces a						
Center	2.5	29	103	10	P 🖗		P 🥢 D	P 🔊 D	P 🔗 D	brownish tint on them, scraping leaves visible						
Right Center	3.5	20	S	~	Р 🕅	N CONTRACTOR OF	P 🕅 D	P D	P D	trail. 3 = 1-5mm; 4 = 5-20mm;						
Right Bank	4.25	4,5	COB	JD	D A	2.	P D	P 🐼 D	PAD	5 = >20mm; UD = Cannot determine if microalgae present.						
	Note: Sub class cate	strate size gories liste	s can be ed on the	recorded eith supplementa	ner as direc Il page (dire	t measures of th ct measuremen	e median axis of ts preferred)	each particle or	one of the size	substrate too small or covered with silt (formerty Z code) D = Dry, not assessed						



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SWAMP	Stream	Habitat	Charac	terization	Form	E	ULL V	ERSION	Rev	rision Date: Febr	uary 9 th , 2011					
Site Code:				Site Name:		6		LCD		Date:	// 2011					
Wetted Wid	th (m):	5		Bankfull Wid	th (m):	1.5	Bank	full Height (m):	1.5	Transect K						
						Transe										
	Dist	Depth	mm/	%		Microa	lgae	Macroalgae	Macroals	ae	Microalgae Thickness Codes					
Position	from LB (m)	(cm)	size class	Cobble Embed.	CPOM	Thicka Cod		Attached	Unattach	(1) 10 10 10 10 10 10 10 10 10 10 10 10 10	0 = No microalgae present, Feels rough, not slimy;					
Left Bank	.5	20	G	\sim	Р 🖉	Ĉ	>	P 🔊 D	PÀI	D P A D	1 = Present but not visible, Feels slimy;					
Left	1.5	In	COB	\mathcal{O}	₽ A	٦	~	P 🔊 D	P \Lambda I	D P A D	2 = Present and visible but <1mm, Rubbing fingers on surface produces a					
Center Center	2.5	24	BUD		(DA	- 0	>	P D	PA	D P (Ā) D	brownish tint on them, scraping leaves visible					
Right	3.5	22	BUD		РØ	б		PQD	P 🏈 1	D P D	trail. 3 = 1-5mm; 4 = 5-20mm;					
Center Right	42	7	103	20	РА	2	and the second se	P 🔊 D	P A)	D P 🔊 D	5 = >20mm; U = Cannot determine if					
Bank	Note: Sul	strate size	es can be	recorded eit	1er as direc	t measure	es of th	e median axis o	f each partic	le or one of the size	microalgae present, substrate too small or					
	class cate	egories list	ed on the	supplement	al page (dire	ect measu	remen	ts preferred)			covered with silt (formerly Z code) D = Dry, not assessed					
										0 = Absent (0%)						
RIBARIA	N VEGET	ΔΤΙΟΝ	0 = Abse		3 = Heav	ıy (40-75	%) 750()		REAM	1 = Sparse (<10%) 2 = Moderate (10-40%)	READINGS (0-17)					
	g downstrea			se (<10%) erate (10-40 ⁴	4 = Very %)	Heavy (P	(3%)	COMP		3 = Heavy (40-75%) 4 = Very Heavy (>75%)	count covered dots					
Vege	tation Cla	ISS	Lef	t Bank	Rig	ght Ban	k	Filamentou		0 1 2 3 4	Center Left					
		Upper	Canopy	(>5 m high)			Aquatic Ma Emergent \		0 1 2 3 4	Contor					
	saplings >5		00	2 3 4	0 1	23	3 4	Boulders Woody Del	nis >0.3 m	0 1 2 3 4	Upstream 16					
				.5 m-5 m hi	\uparrow				bris <0.3 m	6 1 2 3 4	Right					
All vegeta	ation 0.5 m		0 1	2 3 4	0 (1	<u>y</u>	> 4	Undercut		0 1 2 3 4	Center / L Downstream					
Woody	shrubs & sa		I Cover	$\frac{<0.5 \text{ m hig}}{(2) 3 4}$	1	D 3	4	1	Vegetation	0 1 2 3 4	Optional					
	<0.5 m			<u>Co</u>	-			Live Tree		$\bigcirc 1 2 3 4$						
He	rbs/ grasse	s	01	(2) 3 4	0 (1) 2 3	5 4			() 1 2 3 4	- Right Bank					

34

1

(2)

0

HUMAN INFLUENCE (circle only the closest to wetted channel)	0 = Not Present; B = On Bank; C = Between Bank & 10m from Channel; P = >10m+<50m from Channel; Channel (record Yes or No)														
		Left I	Bank		Chan	nel	Right Bank								
Walls/ Rip-rap/ Dams	Р	С	В	(6)	Y(Ň	(0)	В	С	Ρ					
Buildings	Р	С	В	T	Y	N	9	В	С	Р					
Pavement/ Cleared Lot	Р	С	В	q			0	В	С	P					
Road/ Railroad	Р	С	В	0	Υ	Ņ	þ	В	С	Р					
Pipes (Inlet/ Outlet)	Р	С	В	0	Y	Ņ	0	В	С	P					
Landfill/ Trash	Р	С	В	0	Y	h	0	В	С	Р					
Park/ Lawn	Р	С	В	q			0	В	С	Р					
Row Crop	Р	С	В	d			q	В	С	P					
Pasture/ Range	Р	С	В	¢			d	В	С	Р					
Logging Operations	P	С	В	þ			d	В	С	P					
Mining Activity	P	С	В	þ	Y	Ņ	4	В	С	Р					
Vegetation Management	P	С	В	þ			Ø	В	С	Ρ					
Bridges/ Abutments	P	С	В	þ	Y	N	þ	В	С	Р					
Orchards/ Vineyards	P	С	В	b			þ	В	С	Р					

Barren, bare soil/ duff

0 1 (2) 3 4

<i>e</i> 3000000000000000000000000000000000000			
(100 - 700 e.) 	n na sin tana musika ma musika ma		te caracteria
Left Sank	eroded	vuinerabio	/stable
Right Sank	croded	vuinensbio	(statule /
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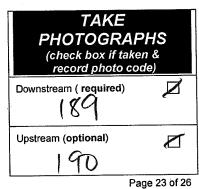
2

1

3 4

Artificial Structures

Right Bank



SWAMP Stream Hab	oitat Characterizatio	n Form	<u>FULL</u>	VERSION	Rev	ision Date: February 9 th , 2011						
Site Code:		Date:	/	_ / 2011		FULL FORM						
	BENTHIC INVER	TEBRATE	SAMPLES			Chemistry Equipmen	t ID					
	llection Method lard or margin-cente	er-margin)	F	leplicate	# jars	Analyte Equipm	nent					
RWB (standard)	RWB (MCM)		NC	1		pН						
RWB (standard)	RWB (MCM)	TR	C C	2		temperature						
RWB (standard)	RWB (MCM)	TR	C			dissolved oxygen						
RWB (standard)	RWB (MCM)	TR	C			specific conductance						
Field Notes/ Com	nments:					salinity						
						alkalinity						
		. •				turbidity						
			·.			silica						
	-				•	Velocity						
	ALGAE					Water and Sedimen	nt					
Collection (circle one or write new r	Method method if applicable)	SWAMP Emap	SWAMP EMAP	SWAMP EMAP	SWAMP Emap	Chemistry Samples	•					
Collection (sum # of transect	Device s per device)	Rep. 1	Rep. 2	Rep.	Rep.	Check if a WATER chemistry grab sample was collected						
Rubber Delimiter (area						(nutrients, SSC, etc.)						
PVC Delimiter (area=12 Syringe Scrubber (area	the second se					Check if a DUPLICATE WATER chemistry grab sample was						
Other area=	a-5.30m)					collected						
Number of transects s	ampled (0-11)					Check if a SEDIMENT chemistry sample was collected						
Composite Volume (m	ıL)					Check if a DUPLICATE SEDIMENT chemistry sample						
Assemblage ID volume ((diatoms)					was collected						
	(50 mL tube)					Sediment Collection SCOOP CORE (Device:	GRAB					
Assemblage ID volume ((soft algae) (50 mL tube)					Material Stainless Steel Polyeth	ylene her					
Check if Qualitative Alga collected with soft algae/ (required even if macroalga	e sample was diatom sample					Sediment Collection	5					
Check if a water chem. in was collected (chl, AFDM	ntegrated sample					Create Lab Collection records for each chec box for integrated and grab water chemistry samples						
Chlorophyll a volume (25 mL (prefe	use GF/F filter					Complete						
Ash Free Dry Mass	use GF/F filter L (preferred vol)											
		Addit	IONAL PH	OTOGRAPH	S							
Description	Photo	Code		Descr	iption	Photo Code						
	· · · ·]					
			1									

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FULL VERSION

Revision Date: February 9th, 2011

Flow Habitat Type	DESCRIPTION
Cascades	Short, high gradient drop in stream bed elevation often accompanied by boulders and considerable turbulence
Falls	High gradient drop in elevation of the stream bed associated with an abrupt change in the bedrock
Rapids	Sections of stream with swiftly flowing water and considerable surface turbulence. Rapids tend to have larger substrate sizes than riffles
Riffles	Shallow sections where the water flows over coarse stream bed particles that create mild to moderate surface turbulence; (< 0.5 m deep, > 0.3 m/s).
Runs	Long, relatively straight, low-gradient sections without flow obstructions. The stream bed is typically even and the water flows faster than it does in a pool; (> 0.5 m deep, > 0.3 m/s). A step-run is a series of runs separated by short riffles or flow obstructions that cause discontinuous breaks in slope
Glides	A section of stream with little or no turbulence, but faster velocity than pools; (< 0.5 m deep, < 0.3 m/s)
Pools	A reach of stream that is characterized by deep, low- velocity water and a smooth surface; (> 0.5 m deep, < 0.3 m/s)

BANK STABILITY Although this measure of the degree of erosive potential is subjective, it can

provide clues to the erosive potential of the banks within the reach. Assign the category whose description best fits the conditions in the area between the

wetted channel and bankfull channel (see figure below)

Eroded

Vulnerable

Stable

Banks show obvious signs of erosion from the current or

previous water year; banks are usually bare or nearly bare

Banks have some vegetative protection (usually annual

growth), but not enough to prevent erosion during flooding

Bank vegetation has well-developed roots that protect banks from erosion; alternately, bedrock or artificial structures (e.g.,

concrete/ rip-rap) prevent bank erosion

Size Class Code	Size Class Range	Size Class Description	Common Size Reference				
RS	` >4 m	bedrock, smooth	larger than a car				
RR	> 4 m	bedrock, rough	larger than a car				
ХВ	1 - 4 m	boulder, large	meter stick to car				
SB	25 cm - 1.0 m	boulder, small	basketball to meter stick				
СВ	64 - 250 mm	cobble	tennis ball to basketball				
GC	16 - 64 mm	gravel, coarse	marble to tennis ball				
GF	2 – 16 mm	gravel, fine	ladybug to marble				
SA	0.06 – 2 mm	sand	gritty to ladybug				
FN	< 0.06 mm	fines	not gritty				
HP	< 0.06 mm	hardpan (consolidated fines)					
WD	NA	wood					
RC	NA	concrete/ asphalt					
ОТ	NA	other					

CPOM/ COBBLE EMBEDDEDNESS

CPOM: Record presence (P) or absence (A) of coarse particulate organic matter (>1.0 mm particles) within 1 cm of each substrate particle

Cobble Embeddedness: Visually estimate % embedded by fine particles (record to nearest 5%)

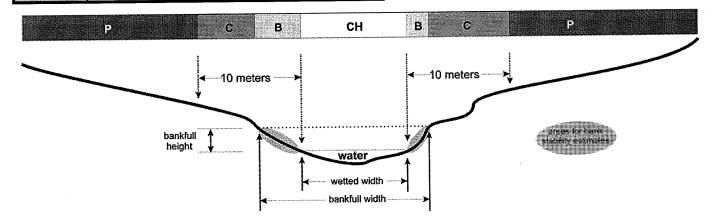


Figure 1. Cross-sectional diagram of stream transect indicating regions for assessing human influence measures:

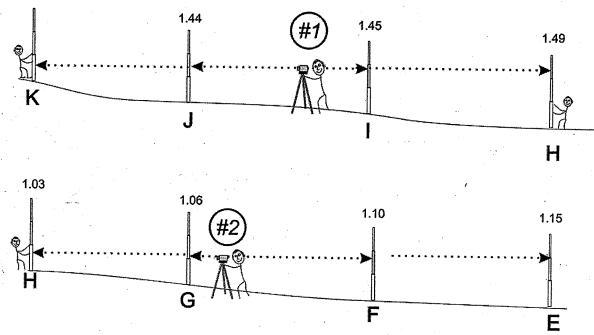
- The measurement zone extends 5 meters upstream and 5 meters downstream of each transect
- Record one category for each bank and for the wetted channel (3 values possible)
- In reaches with wide banks, region "C" may be entirely overlapped by region "B"; in these cases, circle "B"
- Region "P" extends from 10 meters to the distance that can be seen from the channel, but not greater than 50 m

FULL VERSION

Revision Date: February 9th, 2011

		SLOPE	and Bearl	ng Fori	Ń	EXA	MPLE		C	AUTOLEV LINOMET IANDLEV	ER .							
Starting	(rei	cord perce if s	MAIN S nt of inter-trans upplemental se	EGMENT ect distance egments ar	in each seg e used)	iment	SUPPLEMENTAL SEGMENT (record percent of inter-transect distance in each segment if supplemental segments are used)											
Transect		ia rod rements	Slope (%) or Elevation Difference	Segment Length (m)	Bearing (0°-359°)	Percent of Total Length (%)	Stadia rod measurements	Slope or Elevation Difference	Segment Length (m)	Bearing (0°-359°)	Percent of Total Length (%)							
K	1.41																	
J	1.44		3	15	140	100												
	1.45	1	1	15	145	100												
Н	1.49	1.03	4	15	150	100												
G		1.06	3	15	143	100												
F		1.10	4	15	187	100												
E		1.15	5	15	195	100					a si ta							

1.41



- 1. Level the autolevel at Position #1
- 2. Place base of stadia rod at water level every time
- 3. Sight to stadia rod at Transect K, then Transect J
- 4. Rotate scope and sight to Transects I and H.
- 5. Move level to Position #2 and re-level

6. Re-sight to stadia rod at Transect H, then Transect G7. Rotate scope and sight to Transects F and E

Note: Sites will vary in the number of separate level positions needed to survey the reach.

	SWA	MP Stream Ha	abitat Chara	acterizatio	n Form	1	FULL \	/ERSIO	N	Revis	ion Date	: Februa	ary 9 th , 2	2011	
	R	EACH DOCUN	ENTATION	I	St			ith (wetted i Length (v							
	Projec	ct Name:	ICWA	· · ·				Date: 7	/ 1	D 1	20000	Sample Collection		133	0
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Botton	Longi	tude (actual – de	ecimal degre		43	1.26		ther:	GPS De	evice:	GARN	NIN	60		
J.	An	BIENT WATER	QUALITY ME	ASUREME	NTS			silica are o				REAG	CH LENG	TH	
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	Disso		date Specific.	cm) 132		alinity.	~	Silica			Explanati	on:			
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	date	DISCHARGE	MEASURE	MENTS	date	<u> </u>		date che	ck if dis			irement			
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11	8	14	1.1	0.1	18	C	-				Depth 3				
1496	9	16	•4	1.24	19						Depth 4				<u></u>
, Ylp	10	18	, 4	1.15	20						Depth 5				<u> </u>
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FULL VERSION

Revision Date: February 9th, 2011

Site Code:					Date:		7	1 2	2011												
										_									OLEVE		
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Epifaunal	Substrate/	favo	reater tha rable for o and fish co	epifauna	l coloniz	ation		% mix c for low						of stable					20% sta /-gradiei		
Ca	over		gradient merged lo obble or c	ogs, und	ercut ba	inks,		-suited f		oloniz			rate fre	equently removed	disturbe		la	ick of h	abitat is unstable	obviou	IS;
Sc	ore:		19 e or no ei					(D) ome nev			bar	10 Moder	9	8 position (7	6	5 Heav	4 vy depo	3 2 isits of fi	2 1 ine mal	
Sediment	Deposition	the	boint bars bottom a bosition (<	iffected I 20% in I	oy sedin low-grad	nent	sand, the b	nation, n or fine : pottom a	sedimer iffected	nt; 5-3 (20-5)	30% of 0% in	sand, c 50% c	or fine of the l	sedimen pottom a 4-gradier	t on bar ffected (s; 30- 50 -	moi cha	re than nging fi	bar dev 50% of requent	the bot y (>80	ttom % in
Sc	ore:	20	: 19	18	17	16	15	low-grad	• 13	12	11	Ø	9	8	7	6	5	4		2 1	0
Channel	Alteration		nnelizatio minimal;				(e.g., t of pa	ne chani oridge a ist chani ay be pr	butmen nelizatio	its); ev on (> 2	idence 20yrs)	embani preser	kment: ht on b	on may l s or shor oth bank	ing struc (s; 40 to	tures 80%	cerne reach	nt; Ove chann	red with r 80% c elized a	of the s nd disn	tream upted.
Sc	ore:	20	h 9	18	17	16		anneliz: 14			ent	of 10	strean 9	n reach o 8	disrupted	1 6	5		ibitat gro noved e 3 2		

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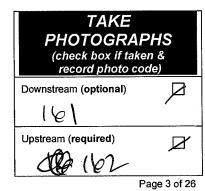
SWAMP Stream Habitat Cl	haracterization Form	FULL VERSION	Revision Date: February 9 th , 2011
Site Code:	Site Name: OC	abu MYR	Date:// 2011
Wetted Width (m): 9,5	Bankfull Width (m): 13	Bankfull Height (m)	Transect A

	Transect Substrates											
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed,	CPOM	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickness Codes 0 = No microalgae present, Feels rough, not slimy;		
Left Bank	.5	53	BUD	-	Ø A	2	P A D	р 🕢 D	P 🔊 D	1 = Present but not visible, Feels slimy;		
Left Center	2	71	BLD		P (A)	2	P A D	P 🅢 D	Р Q D	2 = Present and visible but <1mm; Rubbing fingers on surface produces a		
Center	4	51	CoB	30	PA	2	PAD	PAD	PAD	brownish tint on them, scraping leaves visible		
Right Center	6	6	BLD	-	P (A)	l	P 🏉 D	P \land D	P 🕢 D	trail. 3 = 1-5mm; 4 = 5-20mm;		
Right Bank	9	12	67	~	P 🔗		PAD	PAD	PAD	5 = >20mm; UD = Cannot determine if microalgae present,		
						t measures of th ect measuremen	e median axis of ts preferred)	each particle or	one of the size	substrate too small or covered with silt (formeny Z code). D = Dry, not assessed		

RIPARIAN VEGETATION (facing downstream)	0 = Absent (0%) 3 = Heavy (40-75%) INSTREAM 1 = Sparse (<10%) 1 = Sparse (<10%) 4 = Very Heavy (>75%) HABITAT 2 = Moderate (10-40%) F	DENSIOMETER READINGS (0-17) count covered dots
Vegetation Class	Left Bank Right Bank Filamentous Algae (0) 1 2 3 4	Center /
Upper	r Canopy (>5 m high) Aquatic Macrophytes/ Emergent Vegetation 0 1 2 3 4	Left (/ Center / O
Trees and saplings >5 m high	0 1 2 (3) 4 0 1 2 (3) 4 Boulders 0 1 2 (3) 4	Upstream (
Lower C	Canopy (0.5 m-5 m high) Woody Debris >0.3 m (0) 1 2 3 4	Center 8
All vegetation 0.5 m to 5 m	0 1 2 3 4 0 1 2 3 4 Woody Debris <0.3 m 0 1 2 3 4	Right 0 Center
Groun	d Cover (<0.5 m high) Undercut Banks 0 1 2 3 4	Downstream
Woody shrubs & saplings <0.5 m	0 1 2 3 4 0 2 3 4 0 2 3 4 0 0 2 3 4 0 0 2 3 4	Optional
Herbs/ grasses	0 1 2 3 4 0 1 3 3 4 Live Tree Roots 0 1 2 3 4	Left Bank
Barren, bare soil/ duff	0 1 2 3 4 0 1 2 3 4 Artificial Structures 0 1 2 3 4	Right Bank

HUMAN INFLUENCE (circle only the closest to wetted channel)	B = 0 C = B P = >	10m+<:	; Bank 50m fn	& 10m f om Char es or No		nnel;					
		Left Bank Channel					Right Bank				
Walls/ Rip-rap/ Dams	P	С	В	$\left(\right)$	Y (DA.	$(\bigcirc$	В	С	Р	
Buildings	Р	С	В	Y	Y	Ν	Y	В	С	Р	
Pavement/ Cleared Lot	Р	С	В	ø			0	В	С	P	
Road/ Railroad	Р	С	В	¢	Y	N	þ	В	С	Р	
Pipes (Inlet/ Outlet)	P	С	В	þ	Ϋ́	N	þ	В	С	Р	
Landfill/ Trash	P	С	В	þ	Y	N	Ø	В	Ç	Р	
Park/ Lawn	P	С	В	þ			ø	В	C	Р	
Row Crop	P	С	В	þ			þ	В	С	Р	
Pasture/ Range	P	С	В	þ			þ	В	С	Р	
Logging Operations	P	С	В	þ			þ	В	С	Р	
Mining Activity	Р	С	В	d	Y	Ņ	þ	В	С	Р	
Vegetation Management	P	С	В	0			þ	В	С	Р	
Bridges/ Abutments	Р	С	В	0	Y	N	Q.	В	С	Р	
Orchards/ Vineyards	Р	С	В	d		l	0	В	С	Р	

(2010)2019	BANK 2 In Lostean 1 Iotaan Cane	uli wedej pliti	n of instead
-LeftBank	ercded	winerable	Alabin
-Right Dank	eroded	vulnerabile	(stabie)



SWAMP Stream Habitat (Characterizatio	ori Form	FULL	VERSION	Revisio	rı Date: Februa	y 9 th , 2011		
Inter-7	Fransect: A	AB		Wetted Width (m					
Position LB (m)	mm/ % size Cobbl class Embed	e CPOM	ter-Transect Microalgae Thickness Code	Substrates Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickness Codes 0 = No microalgae present,		
Left 5 32	Ber	P 🕢	N N	PAD	PAD	PAD	Feels rough, not slimy; 1 = Present but not visible, Feels slimy;		
Left Center, 175 59	BED -	P A	- 1	PAD	P 🔊 D	P A D	2 = Present and visible but <1mm, Rubbing fingers		
Center 99	5AD	P A	D	P 🔊 D	P @ D	P 🙆 D	on surface produces a brownish tint on them, scraping leaves visible		
Right Center 1.25 59	BED -	P Ø	(P (D	P 🕻 D	P 46 D	trail, 3 = 1-5mm; 4 = 5-20mm;		
Right Bank 1.5 31	BED -	P (A)		PPD	P D		5 = >20mm; UD = Cannot determine if		
Note: Substrate size class categories liste	s can be recorded	either as direc	t measures of th ect measurement	e median axis of	each particle ör	one of the size	microalgae present, substrate too small or covered with silt		
		,		, a p. c.o., ou)			(formerly Z code). D = Dry, not assessed		
FLOW HABITATS		· .	· .	, 					
Channel Type 5			· · · ·		• • •				
Canoe ++++++ Hool I.6-D Dry				· · · · · · · · · · · · · · · · · · ·	· ·				
				•					
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SWAMP Stream Habitat Char	acterization Form	FULL VERSION	Revision Date: February 9 th , 2011
Site Code:	Site Name: Dr. Cr.	abu MYR	Date:// 2011
Wetted Width (m): (D	Bankfull Width (m):	Bankfull Height (m):	5 Transect B

						Transect Su	bstrates			
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	CPOM	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thick Codes 0 = No microalgae pr Feels rough, not sli
Left Bank	15	55	ee Geo		Р 🖉	242	P D	P 👌 D	P 🔊 D	1 = Present but not v Feels slimy;
Left Center	2.5	14	BLD		P (A)	l	P A D	P 🙆 D	P 🔕 D	2 = Present and visit <1mm, Rubbing fin on surface product
Center	5	24	66	-	РŚ	١	P 🕢 D	P 🚳 D	р Ф Д	brownish tint on th scraping leaves vis trail
Right Center	7.5	D	BUD		ØА	1	PA D	P D	P D	3 = 1-5mm; 4 = 5-20mm;
Right Bank	9,5	2	CG		ØА	02	D D	р (2) D	P \land D	5 = >20mm; UD = Cannot determ microalgae presen
						t measures of th ect measuremen	e median axis of its preferred)	each particle or	one of the size	substrate too smal covered with silt (formerly Z code). D = Dry, not assessed

RIPARIAN VEGETATION (facing downstream)	1 =	Spar			4 = ∨			-75%) y (>75			INSTREAM HABITAT COMPLEXITY	0 = Abse 1 = Spar 2 = Mod 3 = Hear 4 = Very	se erate (vy (40-75	%) %) %)		DENSIOMET READINGS (0 count covered	-17)
Vegetation Class		Lef	t Ba	nk		Rig	nt E	Bank			Filamentous Algae	6/1	2	3	4	Γ	Center	14
Upper	Can	ору	(>5)	m high)							Aquatic Macrophytes/ Emergent Vegetation	00	2	3	4		Left	8
Trees and saplings >5 m high	0	1	Ø	3 4	0	1	2	Ø	'4		Boulders	0 1	2	3	4		Center Upstream	9
Lower C	anop	y (0	.5 m	-5 m higl	1)						Woody Debris >0.3 m	0 🔿	2	3	4		Center	()
All vegetation 0.5 m to 5 m	0	1	2	O 4	0	1	2	6	4		Woody Debris <0.3 m	00	2	3	4 ·		Right Center	
Groun	d Co	ver (<0.5	m high)	l						Undercut Banks	01	2	3	4		Downstream	
Woody shrubs & saplings <0.5 m	0	1	2	Ø 4	0	1	2	3	4		Overhang. Vegetation	0 1	0	3	4		Optional	
Herbs/ grasses	0	<i>(</i> 1)	2	34	0	6)	2	3	4	1	Live Tree Roots	1	2	3	4		Left Bank	
Barren, bare soil/ duff	0	1	12	34	0	1	12	3	4		Artificial Structures	() 1	2	3	4		Right Bank	

HUMAN INFLUENCE (circle only the closest to wetted channel)	B = 0 C = B P = >	10m+<	; Bank 50m fi	: & 10m rom Cha 'es or N		iel;				
		Left	Bank	(Chann	Right Bank				
Walls/ Rip-rap/ Dams	P	С	В	\bigcirc	Y	1	6	В	С	Р
Buildings	P	С	В	Q	Y	Ý	õ	В	С	Р
Pavement/ Cleared Lot	P	С	В	đ			Q	В	С	Р
Road/ Railroad	P	С	В	d	Y	N	q	В	С	Ρ
Pipes (Inlet/ Outlet)	P	С	В	0	YI		d	В	С	Р
Landfill/ Trash	P	С	В	0	Y		đ	В	С	Ρ
Park/ Lawn	Р	С	В	0			O	В	С	Ρ
Row Crop	Р	С	В	0			0	В	С	Р
Pasture/ Range	P	С	В	0			0	В	С	Р
Logging Operations	P	С	В	d			0	B	С	Ρ
Mining Activity	P	С	В	đ	YI	Į.	0	В	С	Р
Vegetation Management	P	С	В	ģ			0	В	С	Ρ
Bridges/ Abutments	P	С	В	ģ	YI	V	0	В	С	Р
Orchards/ Vineyards	P	С	В	4		I.	q	В	С	Р

Right Bank	eroded	vulnerable	stable
Left Bank	eroded	vulnerable	stable
(score zone	5m upstream a	STABILITY ind 5m downstream full - wetted width)	of transect

									· · ·
SWAMP Str		Characterizatio		FULL \	VERSION	Revisio	n Date: Febru	uary 9 th , 2011	
	Inter-	Transect: I			Wetted Width (m): 8	1		
	Dist	%		er-Transect Microalgae	Substrates			Microalgae Th	icknose
Position f	rom Depth	size Cobbl	e CPOM	Thickness	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Codes 0 = No microalga	
Left	3 (m)	class Ember	- (DA	Code	<u> </u>		- A-	 Feels rough, no 1 = Present but n 	ot slimy;
Bank Left		BED -		V	P A D	P Ø D	P 🔊 D	Feels slimy; 2 = Present and y	visible but
Center	2 92	BUD -	Pa		P A D	P AD	PAD	<1mm; Rubbing on surface pro	g fingers duces a
Center	F 87	RD -	PA	· 1	P D D	P 🚯 D	P 🔊 D	brownish tint o scraping leave	
Right Center	e 77	C6 -	P A	O	P 🕼 D	P 🕢 D	P AD	trail, 3 = 1-5mm; 4 = 5-20mm;	
Right	5 47	<u></u>	- P 🔊	0	P 🅢 D	P 🕢 D	P (A) D	 4 - 5-20mm, 5 = >20mm, UD = Cannot determine 	ermine if
		S can be recorded	L	_			_	microalgae pre substrate too s	sent,
cla	ss categories list	ed on the suppleme	ental page (direct	measuremen	ts preferred)	each panicle of		covered with si (formerly Z cod	lt ie).
	· · ·	in na prived an						D = Dry, not asse	essed
E TRAFT					· · · · · ·			· · ·	
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	aracterization Form	FULL VERSION	Revision Date: February 9 th , 2011
Site Code:	Site Name: 🖉 OC	aby MYR	Date:// 2011
Wetted Width (m): 7,5	Bankfull Width (m): 13	Bankfull Height (m):	2,5 Transect C

Position	Dist from LB (m)	Depth. (cm)	mm/ size class	% Cobble Embed.	CPOM	Transect Su Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickne Codes 0 = No microalgae prese
Left Bank	15 (11)	90	BET		P (A)	22	P 🔕 D	P DD	р Ø D	 Feels rough, not slimy 1 = Present but not visib Feels slimy;
Left Center	2	37	500	-	P 🕢	0	P A D	P D	P 🔕 D	2 = Present and visible <1mm; Rubbing finge on surface produces
Center	4	31	(B	25	Р 🖉	v	P A D	P 🕢 D	р (Д) D	brownish tint on then scraping leaves visib trail.
Right Center	6	55	CG	·	Р (С)	0	P Ø D	P 🕢 D	Р Д Д	3 = 1-5mm; 4 = 5-20mm;
Right Bank	7	Ó	BED	~	PA	{	P D	P (D)D	p 🔊 D	5 = >20mm; UD = Cannot determine microalgae present,
						t measures of th ct measuremen		each particle or	one of the size	substrate too small or covered with silt (formerly Z code) D = Dry, not assessed

RIPARIAN VEGETATION (facing downstream)	1 =	Abse Spar Mod	se (<	:10%		3 = F 4 = V						INSTREAM HABITAT COMPLEXITY	0 = Abse 1 = Spar 2 = Mod 3 = Heav 4 = Very	se erate /y	(40-7	0%) 0%) 5%)		DENSIOMET READINGS (0 count covered of	-17)
Vegetation Class		Lef	t Ba	ink			Rig	ht B	ank			Filamentous Algae	Ø 1	2	3	4		Center	1-
Uppe	Car	iopy	(>5	m hi	gh)							Aquatic Macrophytes/ Emergent Vegetation	071	2	3	4		Left Center	11
Trees and saplings >5 m high	0	1	2	(3)	4	O	1	2	(3)	4	1	Boulders	0 1	2	Ċ	4]	Upstream	15
LowerC	ano	ру (О	.5 m	-5 m	higl	n)			v			Woody Debris >0.3 m	00	2	3	4		Center	7
All vegetation 0.5 m to 5 m	0	1	2	()	4	0	1	2	19	4		Woody Debris <0.3 m	00	2	3	4		Right Center	<u>v</u>
Groun	d Co	over (<0.5	mh	igh)							Undercut Banks	00	2	3	4		Downstream	δ
Woody shrubs & saplings <0.5 m	0	1	Ø	3	4	0	θ	2	3	4		Overhang. Vegetation	° Ó	2	3	4		Optional Left Bank	,
Herbs/ grasses	0	0	2	3	4	0	1	0	3	4		Live Tree Roots	01	2	3	4			
Barren, bare soil/ duff	0	1	Ż	(3)	4	0	1	2	(3)	4	1	Artificial Structures	0/1	2	3	4]	Right Bank	

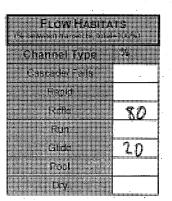
HUMAN INFLUENCE (circle only the closest to wetted channel)	B = 0 C = B P = >	10m+<:	; Bank 50m fr	& 10m f om Chai es or No					
		Left	Bank	(Channel		Right	Ban	«
Walls/ Rip-rap/ Dams	P	С	В	0	Y (N)	0) в	С	Р
Buildings	P	С	В	q	YN	9	В	С	Ρ
Pavement/ Cleared Lot	P	С	В	d		Ý	В	С	Р
Road/ Railroad	P	С	В	d	YN	9	В	С	Р
Pipes (Inlet/ Outlet)	P	С	В	d	YN	d	В	С	Р
Landfill/ Trash	P	C.	В	ø	YN	d	В	С	Р
Park/ Lawn	P	С	В	þ		d	В	С	P
Row Crop	Р	С	В	0		Ó	В	С	Р
Pasture/ Range	P	С	В	0		Ó	В	С	Ρ
Logging Operations	P	С	В	0		þ	В	С	Р
Mining Activity	P	С	В	0	YN	þ	В	С	Ρ
Vegetation Management	P	C	В	0		þ	В	С	Р
Bridges/ Abutments	P	C	В	0	YN	þ	В	С	Р
Orchards/ Vineyards	P	С	В	10		6	В	С	P

		nd 5m downstream full - wetted width)	of transect
			A
Left Bank	eroded	vuinerable	stable
Right Bank	eroded	vulnerable	stable

FULL VERSION

Revision Date: February 9th, 2011

].	nter-7	Frans	ect: CI)	١	Netted Width (n	n): 8		
					In	ter-Transect	Substrates			
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	СРОМ	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickness Codes 0 = No microalgae present
Left Bank	.5	90	US	0	PB	0	PAD	P A D	P (D	Feels rough, not slimy; 1 = Present but not visible, Feels slimy;
Left Center	2	28	BUD	. <u></u>	Р 🖉	l .	P A D	P A D	P 🕢 D	2 = Present and visible but <1mm; Rubbing fingers on surface produces a
Center	Ч	26	COB	35	P A		PAD	PAD	PAD	brownish tint on them, scraping leaves visible trail.
Right Center	the second se	6	BLD		P A	\mathcal{V}	PA D	P 🔊 D	P 🔕 D	3 = 1-5mm; 4 = 5-20mm;
Right Bank	7.5	D	WB	20	(P) A	l	₽ ø d	P 🖗 D	PAD	5 = >20mm; UD = Cannot determine if microalgae present,
	Note: Sub class.cate	strate size gories liste	s can be ed on the	recorded eith supplementa	ner as direc Il page (dire	measures of th of measuremen	e median axis of ts preferred)	each particle or	one of the size	substrate too small or covered with silt (formeity Zicöde), D = Dry, not assessed



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Site Code:				Site Name:	ÔC	abu N	NYR		Date:	_//2011
Wetted Widt	h (m):	5		Bankfull Wid	th (m): C	1 ^{Ba}	ankfull Height (m):	1.5	Tra	nsect D
						Transect	Substrates			
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	CPOM	Microalga Thicknes: Code		Macroalgae Unattached	Macrophytes	Microalgae Thickne: Codes 0 = No microalgae prese Feels rough, not slimy,
Left Bank	.5	45	F6.		₽ A	6	P 🖓 D	P 🍙 D	PC D	 1 = Present but not visib Feels slimy;
Left Center	1,5	54	BUT	> ~	P (A)	2	P 🔗 D	P 🕼 D	P 🖗 D	2 = Present and visible I <1mm; Rubbing finger on surface produces
Center	2.5	57	CB	0	Ю́А	1	P AD	р 🅟 D	р 🔗 D	brownish tint on them scraping leaves visibl trail
Right Center	4	42	BIT	, ~	Р 🕖	.2	PAD	POD	P Ø D	3 = 1-5mm; 4 = 5-20mm;
Right Bank	4.5	10	BED		PA	J	P D	P Ø D	₽ Ø D	5 = >20mm; UD = Cannot determine microalgae present,
	Note: Sub class cate	strate size gories liste	es can b ed on th	e recorded eit e supplement	ner as direc al page (dire	t measures c ect measuren	f the median axis o hents preferred)	f each particle or	one of the size	substrate too small or covered with silt (formerty Z code).

RIPARIAN VEGETATION (facing downstream)		DENSIOMETER READINGS (0-17) count covered dots
Vegetation Class	Left Bank Right Bank Filamentous Algae (0) 1 2 3 4	Center
<u> </u>	Canopy (>5 m high) Aquatic Macrophytes/ Emergent Vegetation 0 1 2 3 4	Left () Center C
Trees and saplings >5 m high	0 1 2 (3) 4 0 1 2 (3) 4 Boulders 0 1 2 (3) 4	Upstream
	anopy (0.5 m-5 m high) Woody Debris >0.3 m 0 (1) 2 3 4	Center
All vegetation 0.5 m to 5 m	0 1 2 3 4 0 1 2 3 4 Woody Debris <0.3 m 0 1 2 3 4	Right / 1 Center
Groun	d Cover (<0.5 m high) Undercut Banks 0 (1) 2 3 4	Downstream
Woody shrubs & saplings <0.5 m	0 1 2 3 4 0 1 2 3 4 Overhang. Vegetation 0 1 2 3 4	Optional Left Bank
Herbs/ grasses	0 1 2 3 4 0 0 2 3 4 Live Tree Roots 0 1 2 3 4	
Barren, bare soil/ duff	0 1 2 (3) 4 0 1 2 3 (4) Artificial Structures (5) 1 2 3 4	Right Bank

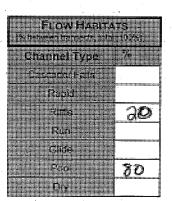
HUMAN INFLUENCE (circle only the closest to wetted channel)	B = 0 C = B P = >	10m+<	; Bank 50m fro	& 10m f om Char es or No		inel;				
		Left I	Bank		Chan	nel	F	Right	Banl	¢
Walls/ Rip-rap/ Dams	Р	С	В	76)	Y (N)	\bigcirc	В	С	Ρ
Buildings	P	С	В	Ŷ	Y	N	P	В	С	Р
Pavement/ Cleared Lot	Р	С	В	φ.			Ø	В	С	Ρ
Road/ Railroad	Р	С	В	þ	Y	Ņ	þ	В	С	Р
Pipes (Inlet/ Outlet)	P	С	В	9	Y	N	þ	В	С	Р
Landfill/ Trash	P	С	В	q	Y	Ν	Ø	В	С	Р
Park/ Lawn	P	С	В	ø			Ø	В	С	Р
Row Crop	P	С	В	ø			þ	В	С	Р
Pasture/ Range	P	С	В	0			Ø	В	C	Р
Logging Operations	P	С	В	9			¢	В	С	Р
Mining Activity	P	С	В	9	Y	N	Ø	В	С	Р
Vegetation Management	P	С	В	ø			9	В	С	Р
Bridges/ Abutments	P	С	В	0	Y	ψ	9	В	С	Р
Orchards/ Vineyards	P	С	В	¢.			d	В	Ċ	Р

	T	La contra-	(Ashia)
Left Bank	eroded	vulnerable	stable

FULL VERSION

Revision Date: February 9th, 2011

		Inter-7	Frans	ect: DI	£		Wetted Width (m	1): 6	· · ·	
		1			In	ter-Transect	Substrates		100	
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed	СРОМ	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	0 = No microalgae present,
Left Bank	15	24	F6		P A	OZ	₿ A D	P ∅ D	P 🙆 D	Feels rough, not slimy; 1 = Present but not visible; Feels slimy;
Left Center	1.5	27	CB	15	P (Å	an (a a a	P 🔗 D	P A D	P Ø D	2 = Present and visible but <1mm; Rubbing fingers on surface produces a
Center	3	45	CB	65	PA	Ø	P 🔗 D	P 🖉 D	P 🔗 D	brownish tint on them, scraping leaves visible
Right Center	4:5-	18	BLD		PA	1	P 🖉 D	P 🌒 D	PA D	trail. 3 = 1-5mm; 4 = 5-20mm;
Right Bank	5.5	0	COB	50	P A	1	P 🔊 D	P 🔊 D	D	5 = >20mm; UD = Cannot determine if microalgae present,
	Note: Sub class cate	strate size gories liste	s can be d on the	recorded eith supplementa	ner as direc Il page (dire	measures of th ct measuremen	e median axis of ts preferred)	each particle or o	one of the size	substrate too small or covered with silt (formetly Z code) D = Dry, not assessed



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Site Code:				Site Name:	X	abv M'	1R		Date:	// 2011
Wetted Wid	th (m):	L	·	Bankfull Wid	ith (m):	3 Bank	dull Height (m):	1.8	Tra	nsect E
						Transect Su	bstrates			
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed	CPOM	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thicknes Codes 0 = No microalgae preser Feels rough, not slimy,
Left Bank	.5	44	SAND		(P) A	D	P 🕢 D	P 🚯 D	P 🖉 D	1 = Present but not visible Feels slimy;
Left Center	2	58	BED		PA	t.	P \Lambda D	PAD	P 🕭 D	2 = Present and visible b <1mm; Rubbing fingers on surface produces a
Center	L4	ab	EG		Р 🔊	. 0	P ₽ D	P AD	P 🖉 D	brownish tint on them, scraping leaves visible

brownish tint on them, scraping leaves visible trail. 3 = 1-5mm, 4 = 5-20mm, 5 = >20mm, UD = Cannot determine if microalgae present, substrate too small or covered with silt (formerly Z code). D = Dry, not assessed POD Right PA P 🖉 D 6 BLD P 🔊 D 63 Center Right Bank 75 PA PA D P 🖉 D Р 🔗 D 2 5 BED Note: Substrate sizes can be recorded either as direct measures of the median axis of each particle or one of the size class categories listed on the supplemental page (direct measurements preferred)

RIPARIAN VEGETATION (facing downstream)	0 = Absent (0%) 1 = Sparse (<10%) 2 = Moderate (10-40%	3 = Heavy (40-75%) 4 = Very Heavy (>75%))	INSTREAM HABITAT COMPLEXITY	0 = Absent (0%) 1 = Sparse (<10%) 2 = Moderate (10-40%) 3 = Heavy (40-75%) 4 = Very Heavy (>75%)	DENSIOMETER READINGS (0-17) count covered dots
Vegetation Class	Left Bank	Right Bank	Filamentous Algae	0 1 2 3 4	Center
Upper	r Canopy (>5 m high)		Aquatic Macrophytes/ Emergent Vegetation	6 1 2 3 4	Left /
Trees and saplings >5 m high	0 1 2 3 4	0 1 2 3 4	Boulders	0 1 2 3 4	Upstream 7
Lower C	anopy (0.5 m-5 m hig	h)	Woody Debris >0.3 m	0 1 2 3 4	Center
All vegetation 0.5 m to 5 m	0 1 2 3 4	0 1 2 3 4	Woody Debris <0.3 m	0 1 2 3 4	Right // Center
Groun	d Cover (<0.5 m high)	Undercut Banks	0 0 2 3 4	Downstream
Woody shrubs & saplings <0.5 m	0 1 2 3 4	0 1 2 3 4	Overhang. Vegetation	0 1 2 3 4	Optional
Herbs/ grasses	0 1 2 3 4	0 1 2 3 4	Live Tree Roots	0 1 2 3 4	Left Bank Right Bank
Barren, bare soil/ duff	0 1 2 (3) 4	0 1 2 3 🗿	Artificial Structures	0 1 2 3 4	

HUMAN INFLUENCE (circle only the closest to wetted channel)	0 = Not Present; B = On Bank; C = Between Bank & 10m from Channel; P = >10m<50m from Channel; Channel (record Yes or No)												
		Left	Bank		Cha	nnel	I	Right Bank					
Walls/ Rip-rap/ Dams	Р	С	В	(\emptyset)	Y	\mathbb{O}	$\left(0\right)$	В	С	Р			
Buildings	Р	С	В	Ŷ	Y	Ŋ	9	В	С	Р			
Pavement/ Cleared Lot	Р	С	В	þ			p	В	С	Р			
Road/ Railroad	Р	С	В	þ	Y	Ŋ	þ	В	С	Р			
Pipes (Inlet/ Outlet)	Р	С	В	þ	Y	N	þ	В	C	Р			
Landfill/ Trash	P	С	В	ρ	Y	N	þ	В	С	Р			
Park/ Lawn	P	С	В	þ			þ	В	С	Ρ			
Row Crop	P	С	В	•			d	В	С	Р			
Pasture/ Range	P	С	В	d			d	В	С	Р			
Logging Operations	P	С	В	d			0	В	С	Р			
Mining Activity	P	С	В	d	Y	Ņ	q	В	С	Р			
Vegetation Management	P	С	В	d			d	В	С	Р			
Bridges/ Abutments	P	С	В	d	Y	N	þ	В	С	Р			
Orchards/ Vineyards	P	С	В	d			b	В	С	Р			

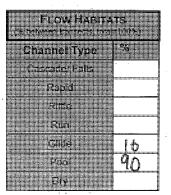
5007 2016	BARRS Internette Silvernistik	STABILITY ni indoerense ui sectiodestrij	estranoci.
Lett Bark	eroded	winerable	plable 🔪
Right Bank	enoded	winerable	[/ stable /
			The second s

bedrock

FULL VERSION

Revision Date: February 9th, 2011

		[nter-]	Frans	ect: EI	7	4	Netted Width (m	n): 5.5	· · · · ·	
					In	ter-Transect	Substrates			
Position	Dist from LB (m)	Depth (cm)	mm/: size class	% Cobble Embed.	CPOM.	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickness Codes 0 = No microalgae present
Left Bank	5	34	63	20	PA	2	P 🔊 D	P 🖗 D	P D	Feels rough, not slimy; 1 = Present but not visible, Feels slimy;
Left Center	115	50	BLD		() А	· [PØD	P 🔊 D	P 🗿 D	2 = Present and visible but <1mm; Rubbing fingers on surface produces a
Center	3	60.	COB	30	P A	2	P D	P 🚯 D	P A D	brownish lint on them, scraping leaves visible trail
Right Center	4.5	35	BLD	-	Р 🔕		P 🖗 D	P D -	P ØD	3 = 1-5mm; 4 = 5-20mm;
Right Bank	S	210	BUD	-	P A	2	P �⊃D	P 🖉 D	р 🖗 D	5 = >20mm; UD = Cannot determine if microalgae present,
						t measures of th ct measuremen		each particle or	one of the size	substrate too small or covered with silt (formerly Z code), D = Dry, not assessed



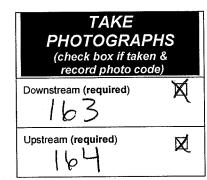
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Site Code:				Site Name:	30	ab M	TR		Date:	// 2011			
Wetted Wid	th (m):	4	ľ	Bankfull Wid	ith (m): [D Bai	nkfull Height (m):	2.5	Tra	ansect F			
Transect Substrates													
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	CPOM	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickne Codes 0 = No microalgae pres			
Left Bank	15	36	Sant		р 🀼	0	P 🖉 D	P 🖉 D	P 📿 D	 Feels rough, not slimy 1 = Present but not visit Feels slimy; 			
Left Center	1	49	BUD		PØ	2	P 🗿 D	P 🖗 D	P 🔕 D	2 = Present and visible <1mm; Rubbing finge on surface produces			
Center	2	258	Fb		A	0	P 🖗 D	P 🖗 D	P D	brownish lint on them scraping leaves visib trail			
Right Center	3	10	BIT	-	ØА		P A D	P A D	P Ø D	3 = 1-5mm; 4 = 5-20mm;			
Right Bank	3.5	78	COB	10	P 🔗	Ì	P 🖉 D	P AD	P 🖉 D	5 = >20mm; UD = Cannot determine microalgae present,			
Bank	Note: Sut		es can be	recorded eit	her as direc		the median axis of ents preferred)			\$\$\$78.1011710770970970900000000000000			

RIPARIAN VEGETATION (facing downstream)	1 =	Spai	ent ((rse (* erate	:10%) -40%)	4 = V		/ (40- leavy				INSTREAM HABITAT COMPLEXITY	1 2 3	= Sp = Mc = He	sent arse oderate avy ry Hea) + (10- (40-	75%)		DENSIOMET READINGS (0 count covered	-17)
Vegetation Class		Lei	it Ba	ink			Rig	ht B	ank			Filamentous Algae	19) 1	2	3	; 4]	Center	
Upper	Can	ору	(>5	m h	igh)							Aquatic Macrophytes/ Emergent Vegetation	0	1) 2	3	4		Left Center	a
Trees and saplings >5 m high	0	1	76)	3	4	0	1	(2)	3	4	1	Boulders	0	1	2	(3)4]	Upstream	4
Lower C	anor	y (0	.5 m	-5 m	n higl	1)						Woody Debris >0.3 m	0	(1) 2	73	4		Center	17
All vegetation 0.5 m to 5 m	0	1	(2)	3	4	0	1	()	3	4		Woody Debris <0.3 m	0	C) 2	3	3 4		Right Center	0
Groun	d Co	ver	(<0.5	mt	nigh)			<u> </u>				Undercut Banks	6) 1	2	3	34	1	Downstream	8
Woody shrubs & saplings <0.5 m	0	$\overline{\mathbb{O}}$	2	3	4	0	Ø	2	3	4		Overhang. Vegetation	0	1	(2) 3	34		Optional	Ι.
Herbs/ grasses	0	1	2	Ø	4	0	0	2	3	4		Live Tree Roots	C) 1	2	3	3 4		Left Bank	
Barren, bare soil/ duff	0	1	2	Ō	4	0	1	2	3	٢	-	Artificial Structures	C) 1	2	3	34	1	Right Bank	

HUMAN INFLUENCE (circle only the closest to wetted channel)	B = 0 C = B P = >	0 = Not Present; B = On Bank; C ≠ Between Bank & 10m from Channel; P ≈ >10m+<50m from Channel; Channel (record Yes or No)												
		Left	Bank		Char	inel	Right Bank			k				
Walls/ Rip-rap/ Dams	P	С	В	(0)	Y	(N)	\bigcirc	В	С	Р				
Buildings	P	С	В	0	Y	M	Q	В	С	Р				
Pavement/ Cleared Lot	Р	С	В	þ			ģ	В	С	Р				
Road/ Railroad	P	С	В	þ	Y	N	d	В	С	Р				
Pipes (Inlet/ Outlet)	P	С	В	þ	Y	Ν.	0	В	С	Р				
Landfill/Trash	P	С	В	þ	Y	N	0	В	С	Р				
Park/ Lawn	P	С	В	0			0	В	С	Р				
Row Crop	P	С	В	0			0	В	С	Р				
Pasture/ Range	P	С	В	þ			d	В	С	Р				
Logging Operations	P	С	В	þ			Ø	В	С	Р				
Mining Activity	P	С	В	þ	Y	N	þ	В	С	Р				
Vegetation Management	P	С	В	þ			þ	В	С	Ρ				
Bridges/ Abutments	P	С	В	q	Y	N	þ	В	С	Р				
Orchards/ Vineyards	P	С	В	d		L.	6	В	С	Р				

(Wither Dirne)			n ut inanseri
nizek Bark -	eroded	winerable	Atable]
	eroded	vulnerable	stable /



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FULL VERSION

Revision Date: February 9th, 2011

	I	nter-7	Frans	ect: FG	Ĩ	Y	Wetted Width (m	n): 7		
					In	ter-Transect	Substrates			
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	CPOM	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickness Codes 0 = No microalgae present,
Left Bank	.5	36	SAND		P A	ь	P 🖉 D	P 🖉 D	P 🖗 D	Feels rough, not slimy, 1 = Present but not visible, Feels slimy;
Left Center	2	35	SAND	<u> </u>	₽ A	. 0.	P 🖉 D	P 🔊 D	P 👌 D	2 = Present and visible but <1mm; Rubbing fingers on surface produces a
Center	3.5	91	FANT		P A	0	P 🔊 D	P D	P 🕢 D	brownish tint on them, scraping leaves visible trail.
Right Center	5.5	57	3ED	and the second s	P /A)	÷ (P A D	• P A D	P A D	3 = 1-5mm; 4 = 5-20mm;
Right Bank	6.5	10	COB	5	PA	1	P 🖗 D	P D	P D	5 = >20mm; UD = Cannot determine if microalgae present,
	Note: Sub class cate	strate size gories liste	s can be ed on the	recorded eith supplementa	ier as direct Il page (dire	t measures of th of measuremen	e median axis of ts preferred)	each particle or	one of the size	substrate too small or covered with silt (formetly Z code) D = Dry, not assessed

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Page 14 of 26

SWAMP Site Code:	Oliculti	Tubitut		Site Name:		ا بالم	MYR		ion Date: Febru Date:				
Vetted Wid	th (m):			Bankfull Wid		-	full Height (m):	1					
velled viid	ui (iii).	4,5		Darikidir vila	iai (iii).	1.5			Ira	nsect G			
						Transect Su	bstrates						
Position	Dist from	Depth	mm/ size	% Cobble	CPOM	Microalgae Thickness	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thicknes Codes 0 = No microalgae preser			
Left	LB (m)	(cm) 14	class	Embed.	(P)A	Code	P (A) D		P (A) D	Feels rough, not slimy; 1 = Present but not visible			
Bank Left	15	14	BUD		(P)A	J .			_	Feels slimy; 2 = Present and visible bi			
Center	1	70	63	10	Ø ^	2	P A D	P O D	P D	<1mm; Rubbing fingers on surface produces a			
Center	2.5	79	BLD		ØА	2	P 🕖 - D	P A D	P 🕢 D	brownish tint on them, scraping leaves visible trail.			
Right Center	35	60	BED	-	Р 🕢	0	P €∕D	P 🔗 D	P Q D	3 = 1-5mm; 4 = 5-20mm;			
Right Bank	4	54	BED		P A	0	P AD	₽ ØD	P 🕢 D	5 = >20mm; UD = Cannot determine i microalgae present,			
	Note: Sub	strate size	es can be	recorded eith	ner as direc	t measures of th ect measuremen	e median axis of ts preferred)	each particle	or one of the size	substrate too small or covered with silt			
		9							And the second second	(formerly Z code). D = Dry, not assessed			
			0 = Abs	ent (0%)	3 = Heav	v (40-75%)	INSTR	REAM 1	= Absent (0%) = Sparse (<10%)	DENSIOMETE READINGS (0-1			
	N VEGET/ g downstrea	S2000000000000000000000000000000000000	1 = Spa	rse (<10%) lerate (10-40°	4 = Very	Heavy (>75%)	HAB COMPI	ITAT 3	= Moderate (10-40%) = Heavy (40-75%) = Very Heavy (>75%)	count covered de			
Vege	tation Cla	ISS	Le	ft Bank	Rig	ht Bank	Filamentou		D1234	Center			
		Upper	Canopy	(>5 m high)		Aquatic Ma Emergent V	crophytes/ egetation	0 1 2 3 4	Left Center			
Trees and	saplings >5	m high	0 1	2 3 4	0 1	2 3 4	Boulders	() 1 2 3 4	Upstream			
			nopy (C).5 m-5 m hi	gh)	<u> </u>	Woody Deb	nis >0.3 m 🛛	2 1 2 3 4	Center			
All vegeta	ation 0.5 m	to 5 m	0 1	À 3 4	0 1	2 3 4	Woody Deb	oris <0.3 m 🛛 (0 1 2 3 4	Right Center			
		Ground	l Cover	(<0.5 m higl	n)		Undercut E	Banks (O 2 3 4	Downstream			
Woody s	shrubs & sar <0.5 m	olings	0 1) 2 3 4	00	2 3 4	Overhang.	Vegetation	0 1 2 3 4	Optional			
								lasta 6	2	- Left Bank			

Ø 3 4

3 (4)

0 1

0

1 2 Live Tree Roots

Artificial Structures

HUMAN INFLUENCE (circle only the closest to wetted channel)	0 = Not Present; B = On Bank; C = Between Bank & 10m from Channel; P = >10m+<50m from Channel; Channel (record Yes or No)											
		Left I	Bank	_	Chan	nel Right Bank				\$		
Walls/ Rip-rap/ Dams	P	С	В	(0)	Υ(Ŵ	6	в	С	Р		
Buildings	Р	С	В	q	Y	N	Ý	В	С	Р		
Pavement/ Cleared Lot	Р	С	В	0			þ	В	С	Р		
Road/ Railroad	P	С	В	0	Y	Ν	þ	В	С	Р		
Pipes (Inlet/ Outlet)	Р	С	В	0	Y	Z	þ	В	С	Ρ		
Landfill/ Trash	P	С	В	q	Y	Ν	¢	В	С	Ρ		
Park/ Lawn	P	С	В	d			¢	В	С	Р		
Row Crop	Р	С	В	0			ø	В	С	Р		
Pasture/ Range	P	С	В	d			þ	В	С	Р		
Logging Operations	P	С	В	_d			¢	В	С	Р		
Mining Activity	Р	С	В	d	Y	N	d	В	С	Р		
Vegetation Management	P	С	В	ø			d	В	С	Р		
Bridges/ Abutments	P	С	В	þ	Y	N	d	B	С	Р		
Orchards/ Vineyards	P	С	В	þ			0	В	С	Ρ		

T

0 1 69 3 4

0 1

2 3 4

Herbs/ grasses

Barren, bare soil/ duff

Right Bank	eroded	vulnerable	stable	
Left Bank	eroded	vulnerable	stable	Ĺ
	5m upstream a	STABILITY ind 5m downstream full - wetted width)	of transect	N

0 1 2 3 4

2 3 4

0 1

Right Bank

FULL VERSION

Revision Date: February 9th, 2011

	Inter-Transect: GH						Wetted Width (m): 3,5						
	Inter-Transect Substrates												
Position	Dist from LB (m).	Depth (cm)	mm/ size class	% Cobble Embed,	CPOM	Microalgae Thickness Code	Macroalgae Altached	Macroalgae Unattached	Macrophytes	Microalgae Thickness Codes 0 = No microalgae present,			
Left Bank	45	21	E6	(∱ A	l' l'	P 🔊 D	P 🔊 D	P 🔗 D	Feels rough, not slimy; 1 = Present but not visible, Feels slimy;			
Left Center	1	30	CG		PA	e D	P 🔊 D	P 🔊 D	P A D	2 = Present and visible but <1mm; Rubbing fingers on surface produces a			
Center	Э	52	SAND	[.]	Р 🔊	0	P 👌 D	POD	P 🚯 D	brownish lint on them, scraping leaves visible trail			
Right Center	3	0	310		() A	2	() A D	Р (3) D	P 🔊 D	3 = 1-5mm; 4 = 5-20mm;			
Right Bank	3.35	30	BED	 '	80	2	A D	Р () D	P 🕭 D	5 = >20mm; UD = Cannot determine if microalgae present.			
	Note: Sub class cate	strate size gories liste	s can be ed on the	recorded eith supplementa	ner as direc Il page (dire	t measures of the ct measurement	e median axis of is preferred)	each particle or	one of the size	substrate too small or covered with silt (formerty Z code) D = Dry, not assessed			

FLOW MABITATS (Schewen transects Scheme) Channel Type 5 Cascador Fails Radid Ratio Run 20 Gride 5 Phol. 50 Dry

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Site Code:				Site Name:	SO	abu	MYR		Date:	_//2011			
Wetted Wid	th (m):	4		Bankfull Wic	lth (m): -	Bank	full Height (m):	1.5	Transe				
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	CPOM	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thicknes Codes 0 - No microalgae prese Feels rough, not slimy;			
Left Bank	. 5	17	COB	10	(P) A	2	P 🔊 D	P 🖉 D	P A D	1 = Present but not visib Feels slimy;			
Left Center	l	36	BLD	••••	Р 😡	}	P AD	P D	P (A) D	2 = Present and visible t <1mm; Rubbing finger on surface produces :			
Center	2	0	003	40	D A	l	P D	P \land D	P AD	brownish tint on them scraping leaves visible trail			
Right Center	3	0	BLD	~	ĎА	2	EA D	P 🔊 D	P 🙆 D	3 = 1-5mm; 4 = 5-20mm; 5 = >20mm;			
Right Bank	3.5	15	FG		PA	•	PAD	PAD	PAD	UD = Cannot determine microalgae present,			
	Note: Sut class cate	ostrate size egories list	es can be ed on the	recorded eit supplement	her as direc al page (dire	t measures of the transmission of transmission of the transmission of transmission of transmission of the transmission of transmis	e median axis of its preferred)	each particle or	one of the size	covered with silt (formerly Z code).			

RIPARIAN VEGETATION (facing downstream)	0 = Absent (0 1 = Sparse (< 2 = Moderate	10%)	3 = Heav 4 = Very					INSTREAM HABITAT COMPLEXITY	0 = Abse 1 = Spa 2 = Mod 3 = Hea 4 = Very	rse erate (vy (4	40-75%)	DENSIOMET READINGS (0 count covered of	-17)
Vegetation Class	Left Ba	nk	Rig	ht B	ank			Filamentous Algae	001	2	3 4	4	Center	17
Upper	r Canopy (>5 r	n high)						Aquatic Macrophytes/ Emergent Vegetation	0 1	2	3 4	4	Left Center	
Trees and saplings >5 m high	0 1 2	3 4	0 1	(2)	3	4	1	Boulders	0 1	2	3	4	Upstream	12
	anopy (0.5 m	5 m high	1)	~				Woody Debris >0.3 m	00	2	3 4	4	Center	1-1
All vegetation 0.5 m to 5 m	0 (1) 2	34	0 (1	> 2	3	4		Woody Debris <0.3 m	0 D	2	3 4	4	Right Center	
Groun	d Cover (<0.5	m high)						Undercut Banks	0 1	2	3 4	4	Downstream	11
Woody shrubs & saplings <0.5 m	0 1 2	34	• (Ì) 2	3	4		Overhang. Vegetation	0 1	0	3	4	Optional Left Bank	
Herbs/ grasses	0 1 2	34	00	2	9	4		Live Tree Roots	0 (1)	2	3	4	Right Bank	5
Barren, bare soil/ duff	0 1 2	(3) 4	0 1	ź	3	4	5	Artificial Structures	0 1	2	3	4	Thight Dalik	

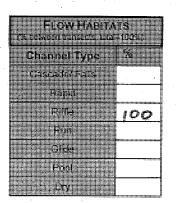
HUMAN INFLUENCE (circle only the closest to wetted channel)	B = 0 C = B P = >1	0m+<5	Bank 0m fr	& 10m om Cha es or N		annel;				
		Left I	Bank		Cha	nnel	F	light	Banl	‹
Walls/ Rip-rap/ Dams	Р	С	В	0	Y	\mathbb{N}	\tilde{O}	В	С	Р
Buildings	Р	С	В	q	Y	M	Y	В	С	P
Pavement/ Cleared Lot	Р	С	В	9			þ	В	С	Р
Road/ Railroad	Р	С	В	q	Y	N	þ	В	· C	Р
Pipes (Inlet/ Outlet)	P	С	В	d	Y	N	þ	В	С	Р
Landfill/ Trash	P	C	В	q	Y	N	þ	В	С	Р
Park/ Lawn	Р	С	В	d			þ	В	С	Р
Row Crop	P	С	В	9			þ	В	С	Р
Pasture/ Range	P	С	В	ø			•	В	С	Р
Logging Operations	P	С	В	þ			Ø	В	С	Ρ
Mining Activity	P	С	В	þ	Y	N	þ	В	С	Р
Vegetation Management	P	С	В	. þ			þ	В	С	Р
Bridges/ Abutments	Р	С	В	þ	Y	Ņ	Q	В	С	Р
Orchards/ Vineyards	P	С	В	9		1	q	В	С	Ρ

BANK S Iscore 2010 Smith Path Mill between bank	STABILITY Indonesian National Antipe	nd larset
Left Bank erodod	vuinerable	/ stable \
Right Bank eroded	witherable	

FULL VERSION

Revision Date: February 9th, 2011

		Inter-'	Trans	sect: H	[١	Netted Width (n	n): 3	· · ·	
1993				and and	In	ter-Transect	Substrates			
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	СРОМ	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickness Codes 0 = No microalgae present
Left Bank	.5	29	FG	-	PA	0	P 🖒 D	Pab	🖗 A D	 Feels rough, not slimy, 1 = Present but not visible, Feels slimy;
Left Center	1	3	3LD		Р (А)	t	P 🔊 D	POD	P & D	2 = Present and visible but <1mm; Rubbing fingers on surface produces a
Center	1,5	3	COB	30	P A		P 🕜 D	P 🕢 D	P 🔕 D	brownish tint on them, scraping leaves visible trail.
Right Center	2)	BUD		ФA	2	€ PAD	P (A) D	P 🔊D	3 = 1-5mm; 4 = 5-20mm;
Right Bank	2.5	15	COB	50	₽ A	I	P📿 D	P A D	• A D	5 = >20mm; UD = Cannot determine if microalgae present;
	Note: Sub class cate	strate size gories liste	s can be ed on the	recorded eith supplementa	her as direct al page (dire	t measures of the ct measurement	e median axis of Is preferred)	each particle or	one of the size	substrate too small or covered with silt (formerly Z code). D = Dry, not assessed



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SWAMP	Stream	Habitat	Charac	cterization				/ERSION	Rev		bruary 9 th , 2011
Site Code:				Site Name:		i al		MYR		Date: (211101201212
Wetted Wid	th (m):	11		Bankfull Wid	ith (m):	15	Bank	full Height (m):	Im	Т	ransect I
						Trans	ect Su	bstrates			
	Dist	Depth	mm/	%		Micro	algae	Macroalgae	Macroalg	ae	Microalgae Thickness Codes
Position	from LB (m)	(cm)	size class	Cobble Embed.	CPOM	Thick		Attached	Unattach	A CONTRACTOR OF A CONTRACTOR O	0 = No microalgae present, Feels rough, not slimy;
Left Bank	15	28	BLD		(P)A	2	_	PAD	р 🌒	D P D	1 = Present but not visible, Feels slimy,
Left Center	3	39	COB	30	PA		5	P Ø D	ΡØΙ) P 🙆 D	2 = Present and visible but <1mm; Rubbing fingers on surface produces a
Center	5.5	18	H.D		(P) A		2	PAD	Р 🔗 І		brownish tint on them, scraping leaves visible
Right Center	8.5	50	BD	-	P A		0	PQD	P A	D P (A) D	trail. 3 = 1-5mm; 4 = 5-20mm;
Right Bank	10.5	47	66	-	Р (д)		6	P 🔗 D	P 🔗 I) P 🕢 D	5 = >20mm; UD = Cannot determine if microalgae present,
	Note: Sut	ostrate size	es can be	recorded eit supplement	her as dire	ct measur	es of th	e median axis of	each particl	e or one of the size	
	Class cate	egories list	eu on me	supplement	ai page (uii	ectineas	oremen	(a preferred)			(formerly Z code). D = Dry, not assessed
	N VEGET g downstrea	2010-000 CONTRACTOR (0)	1 = Spa	ent (0%) rse (<10%) lerate (10-40	4 = Very	vy (40-75 Heavy (≯		INSTR Hab Compl	ITAT	0 = Absent (0%) 1 = Sparse (<10%) 2 = Moderate (10.40%) 3 = Heavy (40.75%) 4 = Very Heavy (>75%)	READINGS (0-17)
Vege	tation Cla			ft Bank (>5 m high	_	ght Bar	<u>ik</u>	Filamentous Aquatic Mad	crophytes/		4 Center //
Trees and	saplings >5		0 1	2 3 4		1 2) :	3 4	Emergent V Boulders	egetation	~	4 Center Upstream
				.5 m-5 m hi	-			Woody Deb	ris >0.3 m	0 1 2 3	4 Center // Right //
All vegeta	ation 0.5 m	to 5 m	• Ø	234	0	D 2 :	34	Woody Deb	oris <0.3 m		4 Center
		9000	l Cover	(<0.5 m hig	n)			Undercut E	Banks	0 1 2 3	4 Downstream
Woody s	shrubs & sa; <0.5 m	plings	0 1 [°]	Ø 3 4	00) 2 3	34	Overhang.	Vegetation	0 1 ② 3	4 Optional
He	rbs/ grasses	5	0 (T	2 3 4	0 (1	72 :	34	Live Tree R	Roots	6) 1 2 3	4 Left Bank (
Barrer	n, bare soil/	duff	0 1	2 3 4	7 0 1	2 3	3 10	Artificial St	ructures	0/1 2 3	4 Right Bank

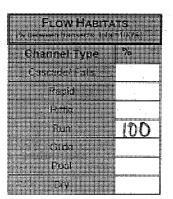
HUMAN INFLUENCE (circle only the closest to wetted channel)	B = C C = B P = >	10m+<	; Bank 50m fri	& 10m f om Char es or No	nnel;	annel;				
		Left	Bank	_	Cha	nnel		Right	Ban	ĸ
Walls/ Rip-rap/ Dams	P	С	B	\bigcirc	Y	\mathbf{Q}	Ø) в	С	Р
Buildings	P	С	В	Q	Y	Ņ	9	В	С	Ρ
Pavement/ Cleared Lot	Р	С	В	ø			q	В	С	Ρ
Road/ Railroad	P	С	В	þ	Y	Ņ	Ø	В	С	Ρ
Pipes (Inlet/ Outlet)	P	С	В	0	Y	Ζ	Ø	В	С	P
Landfill/ Trash	Р	С	В	þ	Y.	Ņ	þ	В	С	Ρ
Park/ Lawn	P	С	В	0			þ	B	С	Ρ
Row Crop	P	С	В	0		1	þ	В	С	Ρ
Pasture/ Range	P	С	В	0			Ì	В	С	Р
Logging Operations	P	С	В	0			d	В	С	Р
Mining Activity	Р	С	В	0	Y	N	d	В	С	Р
Vegetation Management	Р	С	В	0			0	В	С	Ρ
Bridges/ Abutments	P	С	В	0	Y	N	d	В	С	Р
Orchards/ Vineyards	P	С	В	þ	•	1	d	В	С	Р

iscus new M			i ef Imozet
Lett Bank	eroded	vulnerable	/stable`\
Rept Fank	eroded	vuinerabla	/ stable/
European and a substantial and a substa			

FULL VERSION Revision Date:

Revision Date: February 9th, 2011

		Inter-	Tran	sect: IJ		١.	Wetted Width (n	1): 4,5	 .	
					In	ter-Transect	Substrates			
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	CPOM.	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickness Codes 0 = No microalgae present,
Left Bank	5	22	RD	<u> </u>	ØА	2	P A D	P 🍙 D	P 🖗 D	 Feels rough, not slimy; 1 = Present but not visible, Feels slimy;
Left Center	1.5	44	SAND	<u> </u>	P A	0	P AD	P 🏠 D	P A D	2 = Present and visible but <1mm: Rubbing fingers on surface produces a
Center	2.5	55	GAND		(P) A	Ð	р Ф Д	P 🍙 D	P 🏠 D	brownish tint on them, scraping leaves visible
Right Center	3.5	20	BID		βA	2	P A D	P 🖉 D	P 🔊 D	trail. 3 = 1-5mm; 4 = 5-20mm;
Right Bank	4.5	35	loB	70	Р 🔊	<u> </u>	P AD	P 🔊 D	P 🔊 D	5 = >20mm; UD = Cannot determine if microalgae present.
	Note: Sub class cate	strate size gories liste	s can be d on the	recorded eith supplementa	ner as direc al page (dire	t measures of th ct measuremen	e median axis of Is preferred)	each particle or o	one of the size	substrate too small or covered with silt (formenty Z code) D = Dry, not assessed



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etted Wid	th (m):	50	- 1	Bankfull Wid	ith (m): /	م کی v ح Banl	kfull Height (m):	2	Tra	insect J
		5.5			(<u> </u>		
	Dist	D	mm/	.%		Transect Su Microalgae	Macroalgae	Macroalgae		Microalgae Thickne
osition	from LB (m)	Depth (cm)	size class	Cobble Embed.	CPOM	Thickness Code	Attached	Unattached	Macrophytes	Codes 0 = No microalgae prese Feels rough, not slimy
Left Bank	.5	56	SND		P A	0	P A D	P 🚯 D	P 🕭 D	1 = Present but not visib Feels slimy;
Left Center		36	63	30	P (A)	2	P & D	P 🖉 D	P 🙆 D	2 = Present and visible I <1mm; Rubbing finger on surface produces
Center	2.5	36	FG		P 🚯	6	P 🖗 D	P 🕢 D	P D	brownish tint on them scraping leaves visible trail
Right Center	3.5	23	COB	10	P A	Z	P Ø D	P (D	P 15 D	3 = 1-5mm; 4 = 5-20mm;
Right Bank	5.0	6	FAR	~	P A.	0	P Ø D	P (A) D	P 🔕 D	5 = >20mm, UD = Cannot determine microalgae present,
Buik	Note: Sub	strate size	es can b	e recorded eit	her as direc	t measures of t ect measureme	ne median axis or ots preferred)	f each particle or	one of the size	substrate too small or covered with silt
	Ciass cate	-gones iisi	cu on in	e supplement	a, pege (a		,, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,,			(formerly Z code). D = Dry. not assessed

				2020.00						and the second	And the second					83		2
Vegetation Class		Lef	t Ba	nk			Rig	ght B	anl	k	Filamentous Algae	(\mathfrak{O})	12	3	4]	Center	ĺ
Upper	Con	0014	155	m hi	ab)						Aquatic Macrophytes/	m	1 2	3	4		Left	ļ
Opper	Gan	opy	1-21	** **	ynj						Emergent Vegetation	U				1	Center	i
Trees and saplings >5 m high	0	1	2	3/	Ð	0	1	Q	<u>)</u> 3	4	Boulders	0	1 (2) 3	4		Upstream	Ļ
Lower C	anop	oy (0	5 m	5 m	higi	n)					Woody Debris >0.3 m	\bigcirc	1 2	3	4		Center	ŀ
			<i>(</i>	-				æ			Jaka du Dahria 40.2 m	0	4 0	3	4		Right	ĺ
All vegetation 0.5 m to 5 m	0	1	C	3	4	0	1	e	3	4	Woody Debris <0.3 m	9	1 2				Center	ĺ
Groun	d Co	ver (<0.5	m h	ligh)						Undercut Banks	0(D 2	: 3	4		Downstream	l
Woody shrubs & saplings	-		m			Γ	e.	7	~	4			A		4		Optional	S.March
<0.5 m	0	1	6/	3	4	0	C	2	3	4	Overhang. Vegetation	0 (<u>י</u>		4		Left Bank	ſ
	_	6	2	~				6	2 2	4	Live Tree Roots	6	1 2	2 3	4		Leit Dalik	
Herbs/ grasses	0	\odot	2	3	4	0	1	C	83	4		U	1 4		-		Right Bank	ĺ
Barren, bare soil/ duff	0	1	2	(3)	4	0	1	2	G	34	Artificial Structures	0	1 2	2 3	4		Right Bank	ŀ
	1								-			\sim						

HUMAN INFLUENCE (circle only the closest to wetted channel)	B = 0 C = B P = >1	10m+<5	; Bank (50m fro	& 10m fi im Char is or No		inel;				
		Left	Bank		Chan	nel		Right	Banl	ĸ
Walls/ Rip-rap/ Dams	P	С	В	6)	Y (3	6	В	С	Р
Buildings	Р	С	В	Ý	Y	Ŋ	P	В	С	Р
Pavement/ Cleared Lot	P	С	В	0			þ	В	С	Р
Road/ Railroad	Р	С	В	ø	Y	Ν	þ	В	С	Р
Pipes (Inlet/ Outlet)	P	С	В	ø	Y	Ņ	•	В	С	Р
Landfill/ Trash	P	С	В	þ	Y	ή	ø	В	Ċ	Р
Park/ Lawn	P	С	В	þ			þ	В	С	Р
Row Crop	P	С	В	þ			D	В	С	Р
Pasture/ Range	Р	С	В	þ			þ	В	С	Р
Logging Operations	P	С	В	0			0	В	С	Р
Mining Activity	Р	С	В	0	Y	Ν	0	В	С	Р
Vegetation Management	P	С	В	0			0	В	С	Р
Bridges/ Abutments	P	С	В	0	Y	Ņ	þ	В	С	Р
Orchards/ Vineyards	P	С	В	0		1	b	В	С	Р

(schreizh) g	BANKS Singestreens	r president De Santa Americani Hill - Staat Warmi	er taisea
			<u>ija</u> ti
Loft Dank	ercded	winerable	/ stable /
- Fögint Samk	eroded	winerable	🔪 statile 🖊

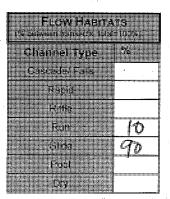
9 16 7

 $\boldsymbol{\times}$

FULL VERSION

Revision Date: February 9th, 2011

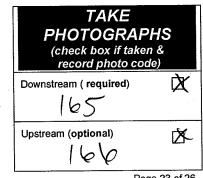
		[nter-'	Trans	ect: JK		. 1	Wetted Width (m): 4, 0						
	Inter-Transect Substrates												
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	CPOM	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickness Codes 0 = No microalgae present			
Left Bank	15	38	SAND	(РА	0	РÓрD	P 🚯 D	PAD	 Feels rough, not slimy; 1 = Present but not visible, Feels slimy; 			
Left Center		35	LOB	70	Р 🏈	Ι.	P 🔊 D	PAD	P 🔕 D	2 = Present and visible but <1mm; Rubbing fingers on surface produces a			
Center	2	23	605	.50	Р 🔗	0	PAD	P 🚯 D	PADD	brownish tint on them, scraping leaves visible trail			
Right Center	3	7	63	90	Р ()	0	P (A) D	P 🖉 D	P \land D	3 = 1-5mm; 4 = 5-20mm;			
Right Bank	3.5	16	SAUT	~	PA	0	P AD	P AD	POD	5 = >20mm; UD = Cannot determine if microalgae present,			
	Note: Sub class cate	strate size gories liste	s can be ed on the	recorded eith supplementa	ier as direc I page (dire	t measures of the ct measurement	e median axis of is preferred)	each particle or o	one of the size	substrate too small or covered with silt (formerly Z code) D = Dry, not assessed			



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SWAMP Stream Habitat	Chara	cterization	Form	FULL	ERSION	Revisio	on Date: Febru	iary 9 th , 2011			
Site Code:	Site Name:	ÓC	abu	260 MTR Date: 071 1012016							
Wetted Width (m): 5.5		Bankfull Wic	th (m):	Bank	full Height (m):	15m	Tra	Transect K			
011-											
Dist	mm/	%		Transect Su Microalgae	100 C			Microalgae Thickness			
Position from (cm)	size	Cobble	CPOM	Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Codes 0 = No microalgae present, Feels rough, not slimy,			
Left 5 24	(03		(DA	· (P 🔕 D	P D	P 🔗 D	1 = Present but not visible, Feels slimy;			
Left []]	SAWE		PA	0	P 🔊 D	P AD	P D	2 = Present and visible but <1mm, Rubbing fingers on surface produces a			
Center 2.5 O	80	>	PA	P	P 🔕 D	P 🐼 D	P 🔗 D	brownish tint on them, scraping leaves visible trail.			
Right Center 3.5 Q	CG		P Ø	1	P 🚯 D	₽ Ø ₽D	P 🕢 D	3 = 1-5mm; 4 = 5-20mm;			
Right Bank 5 7	1G		ЮA	Ø	P 🏟 D	P 🔊 D	P 🚯 D	5 = >20mm; U = Cannot determine if microalgae present,			
Note: Substrate siz class categories lis	es can b ted on th	e recorded eit ie supplement	ner as direc al page (dir	t measures of th ect measuremen	e median axis of ts preferred)	each particle or	one of the size	substrate too small or covered with silt (formerly Z code).			
		-						D = Dry, not assessed			
	0 = Ab	sent (0%)	3 = Hear	vy (40-75%)	INST	REAM 1=	Absent (0%) Sparse (<10%) Moderate (10-40%)	DENSIOMETER READINGS (0-17)			
RIPARIAN VEGETATION (facing downstream)		arse (<10%) iderate (10-40		Heavy (>75%)	HAB Comp	ITAT 3=	Heavy (40-75%) Very Heavy (>75%)	count covered dots			
Vegetation Class	L	eft Bank	Ri	ght Bank	Filamentou	s Algae 🛛 🙆) 1 2 3 4	Center 16			
-	Canop	y (>5 m <u>hi</u> gh)		Aquatic Ma Emergent V) 1 2 3 4	Left P Center			
Trees and saplings >5 m high	0 1	2 (3)4	0 1	2 3 4	Boulders		① 2 3 4	Upstream 5			
	anopy	(0.5 m-5 m hi	gh)	~~~~	Woody Det	oris >0.3 m) 1 2 3 4	- Center Right IS			
All vegetation 0.5 m to 5 m	0 1	(2) 3 4	0 1	2 3 4	Woody Det			Center 11b			
	d Cove	r (<0.5 m hig	n)	-	Undercut E	Banks ()		Downstream I			
Woody shrubs & saplings <0.5 m	0 1	2/3 4	0 1	2 3 4	Overhang.	Vegetation 0	(1) 2 3 4				
Herbs/ grasses	0 '	1 2 3 4	0 8	2 3 4	Live Tree F	Roots	1234				
Barren, bare soil/ duff	0	1 2 3 4	0 1	2 3 4	Artificial Si	tructures	1 2 3 4	Right Bank			

HUMAN INFLUENCE (circle only the closest to wetted channel)	0 = Not Present; B = On Bank; C = Between Bank & 10m from Channel; P = >10m+50m from Channel; Channel (record Yes or No)										
		Left E	Bank	,	Cha	nnel		Right	Bank	(
Walls/ Rip-rap/ Dams	Р	С	В	$\langle 0 \rangle$	Y	\bigotimes	(ð)	В	С	Р	
Buildings	Р	С	В	à	Y	N	Ŷ	В	С	Р	
Pavement/ Cleared Lot	Р	С	В	þ			ģ	В	С	Р	
Road/ Railroad	Р	С	В	¢	Y	N	9	В	С	P	
Pipes (Inlet/ Outlet)	Р	С	В	þ	Y	N	4	В	С	Р	
Landfill/ Trash	Р	С	В	¢	Y	N	¢	В	С	Р	
Park/ Lawn	Р	С	В	¢			0	В	С	Р	
Row Crop	Р	С	В	9			ø	В	С	Ρ	
Pasture/ Range	Р	С	В	d			0	В	С	P	
Logging Operations	Р	С	В	q			0	В	С	Р	
Mining Activity	P	С	В	ø	Y	Ν	q	В	С	Р	
Vegetation Management	Р	С	В	þ			d	В	С	Ρ	
Bridges/ Abutments	Р	С	В	þ	Y	Ν	d	В	С	Р	
Orchards/ Vineyards	Р	С	В	þ		. 1	d	В	С	Ρ	



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SWAMP Stream Hab	itat Characterizatio	n Form	<u>FULL</u>	VERSION	Revi	sion Date: February 9 th , 2011						
Site Code:		Date: _	/	/ 2011	-	FULL FORM						
	BENTHIC INVERT	TEBRATE S	SAMPLES			Chemistry Equipment	t ID					
	llection Method ard or margin-cente	er-margin)	F	Replicate	# jars	Analyte Equipm	ent					
RWB (standard)	RWB (MCM)		C	1		pH						
RWB (standard)	RWB (MCM)	TR	c	2	_	temperature						
RWB (standard)	RWB (MCM)	TR	······			dissolved						
						oxygen specific	-					
RWB (standard)	RWB (MCM)	TR				conductance						
Field Notes/ Com	iments:					salinity						
					•	alkalinity						
			· · · · · ·	and the second	; "	turbidity						
		*				silica						
		• •				Velocity						
Collection	Method	SWAMP	SWAMP	SWAMP	SWAMP	Chemistry Samples						
(circle one or write new r		EMAP	EMAP	EMAP	EMAP		·					
Collection (sum # of transect		Rep. 1	Rep. 2	Rep.	Rep.	Check if a WATER chemistry grab sample was collected						
Rubber Delimiter (area	=12.6cm ²)					(nutrients, SSC, etc.)						
PVC Delimiter (area=12			·	·		Check if a DUPLICATE WATER						
Syringe Scrubber (area	a=5.3cm ²)					chemistry grab sample was collected						
Other area=	:					Check if a SEDIMENT chemistry						
Number of transects s	ampled (0-11)					sample was collected						
Composite Volume (m	ıL)					Check if a DUPLICATE SEDIMENT chemistry sample						
Assemblage ID volume ((diatoms)					was collected						
	(50 mL tube)	a an					GRAB					
Assemblage ID volume ((soft algae) (50 mL tube)					Device: Material: Stainless Steel Polyeth Bolycarbonato Oti						
Check if Qualitative Alga	e sample was					Sediment Collection	her					
collected with soft algae/ (required even if macroalga						Depth (cm): 2 or	5					
Check if a water chem. i was collected (chl, AFD						Create Lab Collection records for each chec box for integrated and grab water chemistry samples						
Chlorophyll a volume (25 mL (prefe	use GF/F filter rred volume)	-	· .									
Ash Free Dry Mass (AFDM) volume (25 m	use GF/F filter L (preferred vol)											
			TIONAL PH	IOTOGRAPH	S							
Description	Photo	Code		Descri	ption	Photo Code						
				•) *								
				•								

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FULL VERSION

Size

Revision Date: February 9th, 2011

Size Class

Common Size

Size Class

Flow Habitat Type	DESCRIPTION
Cascades	Short, high gradient drop in stream bed elevation often accompanied by boulders and considerable turbulence
Falls	High gradient drop in elevation of the stream bed associated with an abrupt change in the bedrock
Rapids	Sections of stream with swiftly flowing water and considerable surface turbulence. Rapids tend to have larger substrate sizes than riffles
Riffles	Shallow sections where the water flows over coarse stream bed particles that create mild to moderate surface turbulence; (< 0.5 m deep, > 0.3 m/s).
Runs	Long, relatively straight, low-gradient sections without flow obstructions. The stream bed is typically even and the water flows faster than it does in a pool; (> 0.5 m deep, > 0.3 m/s). A step-run is a series of runs separated by short riffles or flow obstructions that cause discontinuous breaks in slope
Glides	A section of stream with little or no turbulence, but faster velocity than pools; (< 0.5 m deep, < 0.3 m/s)
Pools	A reach of stream that is characterized by deep, low- velocity water and a smooth surface; (> 0.5 m deep, < 0.3 m/s)

Class	Range	Description	Reference
RS	> 4 m	bedrock, smooth	larger than a car
RR	> 4 m	bedrock, rough	larger than a car
ХВ	1 - 4 m	boulder, large	meter stick to car
SB	25 cm - 1.0 m	boulder, small	basketball to meter stick
СВ	64 - 250 mm	cobble	tennis ball to basketball
GC	16 - 64 mm	gravel, coarse	marble to tennis ball
GF	2 – 16 mm	gravel, fine	ladybug to marble
SA	0.06 – 2 mm	sand	gritty to ladybug
FN	< 0.06 mm	fines	not gritty
HP	< 0.06 mm	hardpan (consolidated fines)	·
WD	NA	wood	
RC	NA	concrete/ asphalt	
OT	NA	other	

provide clues category wh	BANK STABILITY measure of the degree of erosive potential is subjective, it can to the erosive potential of the banks within the reach. Assign the ose description best fits the conditions in the area between the etted channel and bankfull channel (see figure below)
Eroded	Banks show obvious signs of erosion from the current or previous water year; banks are usually bare or nearly bare
Vulnerable	Banks have some vegetative protection (usually annual growth), but not enough to prevent erosion during flooding
Stable	Bank vegetation has well-developed roots that protect banks from erosion; alternately, bedrock or artificial structures (e.g., concrete/ rip-rap) prevent bank erosion

	3 200 Y 000, 8 . 8 .	/ Сов	and the second second	
	6			
	4. STOL	Hilling Marching		
		DEDN		
	S. F. E as 3 and ge	101-00111		
	4)//m/m/#	18/06/2/1	online line interest	
///////////////////////////////////////		Contraction of the Contraction of the		

CPOM: Record presence (P) or absence (A) of coarse particulate organic matter (>1.0 mm particles) within 1 cm of each substrate particle

Cobble Embeddedness: Visually estimate % embedded by fine particles (record to nearest 5%)

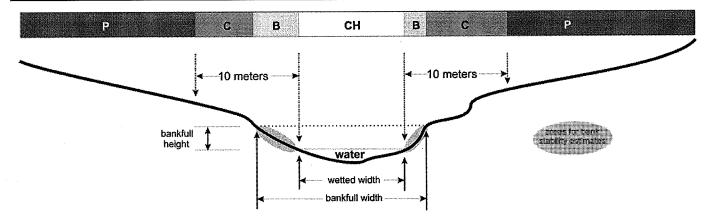


Figure 1. Cross-sectional diagram of stream transect indicating regions for assessing human influence measures:

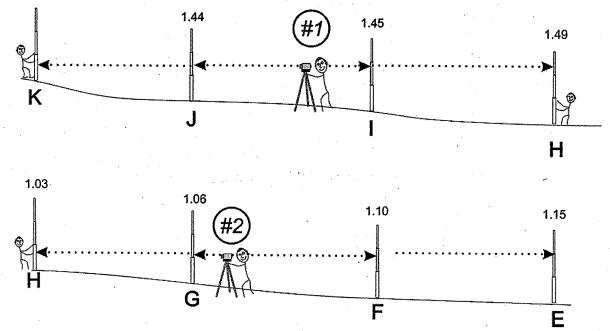
- The measurement zone extends 5 meters upstream and 5 meters downstream of each transect
- Record one category for each bank and for the wetted channel (3 values possible)
- In reaches with wide banks, region "C" may be entirely overlapped by region "B"; in these cases, circle "B"
- Region "P" extends from 10 meters to the distance that can be seen from the channel, but not greater than 50 m

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		SLOPE	and Beari	ng Fori	Й.	EXA	MPLE		C	UTOLEV LINOMET IANDLEV	ER		
Starting	(rec	ord perce if si	MAIN S nt of inter-trans upplemental se	ect distance	in each seg e used)	SUPPLEMENTAL SEGMENT (record percent of inter-transect distance in each segment if supplemental segments are used)							
Transect	Stadia rod measurements		Slope (%) or Elevation Difference Cm %	Segment Length (m)	Bearing (0°-359°)	Percent of Total Length (%)	Stadia rod measurements	Slope or Elevation Difference	Segment Length (m)	Bearing (0°-359°)	Percent of Total Length (%)		
K	1.41												
J	1.44	•	3	15	140	100	4						
	1.45		÷ 1	15	145	100			5.				
Н	1.49	1.03	4	15	150	100							
G		1.06	3	15	143	100				• .			
F	1	1.10	4	15	187	100							
Е		1.15	5	15	195	100							

1.41



1. Level the autolevel at Position #1

2. Place base of stadia rod at water level every time

3. Sight to stadia rod at Transect K, then Transect J

4. Rotate scope and sight to Transects I and H.

5. Move level to Position #2 and re-level

6. Re-sight to stadia rod at Transect H, then Transect G 7. Rotate scope and sight to Transects F and E

Note: Sites will vary in the number of separate level positions needed to survey the reach.

	SWAM	IP Stream Ha	bitat Charac	cterizatio	n Form	<u> </u>	-ULL V	ERSION	<u> </u>	Revis	ion Date:	Februa	ry 9 th , 20	011	
	Re/	асн Досим	IENTATION	-	Sta	ndard Rea Alternat	ch Lengt e Reach	n (wetted) Length (w	width ≤ 10 etted widtl	m) = 15 n >10 m	i0 m Dista) = 250 m	ince betwe Distance b	en transe between ti	ects = 15 ansects	m = 25 m
1	Project	Name: Y	CINA					ate:				omnla			
	Stream	Name: M	INDDLE	UBA			Si	Site Name/ Description: ABV OREGON CREEK							
	Site Co	-	M1 - 4					rew Mem	bers: NCC1	<u>M.</u>	ASHEN	FELT	ERC	. WISE	man
TOP	Latitude	e (actual – d ec	imal degrees): 949 OL	,654	29		datum: NAD83							
U1M	M Longitude (actual - desimal degrees): 200 4362184							other: GPS Device: GARMIN 60							
1	Амв	IENT WATER	QUALITY ME	ASUREME	NTS			silica are o date requ				REAC	H LENGT	Н	
	Temp (Deg C) 21.0 pH 7.6 Alkalinity - (mg/L)							Turbidii (ntu)	S1000000			I Length		10	
	(Deg (37	cal. date			<u> 3</u> ,	-	cal. date	· · · · · · · · · · · · · · · · · · ·		(see reach at l	op of form		25	Ó
	Dissolv O ² (mg		Specific. Conduct (uS/c	m) 121	Ch.C. 600 (2010) 202	llinity. ppt)		Silica (mg/L	10000000	٦.[Explanatio	n:			
	cal. date	1.10	cal. date		cal. date			cal. date	· ·						
	uate	DISCHARGE		MENTS		÷		chee	ck if dis	charg	e measu	rements	not po	ssible	
		asurement = le				cal. date			ect Width		in field r BUOYANT	1		D (use C	NLY if
		ELOCITY AREA				Distance	from	(m): Depth	Veloc	situ	veloc	i ty area m		<u> </u>	
		Distance from eft Bank (Depth (@3)(n	Velocity (ft/sec)		Left Bank	(cm)	(cm)	(ft/se	:c)	Distance	Float	1 Flo	at 2 F	loet 3
	1	<u> </u>	0	0	11 12	30		2.0	1.5		(m) Float Time		-		
	2 3		12	1.05	12	33		0	6		<u>(sec)</u> Flo	at Reach	Cross	Section	
۰.	4	<u> </u>	- ' >	1.62	14	39		0	0		width (m) depth(cm)	Upper Section	Midd		ower ection
	5	12	E.	,84	15	42		,4	, 38		Width	\sim			
	6	15	1.2	1.5	16	45	5	0	D		Depth 1				
	7	18	12	.69	17	48		0	0		Depth 2				>
	8	21	1	, 1	18	51		:3	.1		Depth 3 Depth 4	$- \in$			
	9 10	24	, Z , 8	1.53	19 20	<u> </u>	7	.2	0		Depth 5				\geq
	10	- 21	, 0			ELD CO			k one br	v ner t					
	E	vidence of rec	ent rainfall.				-		NO		, .	inimal		10% flov increase	
		Evidence of fi							NO) 	X	1 year		< 5 year	
		_vidence of n	ies in reach	or mined			(.,	Agricul	/		orest	XF	tangelar	nd
		Dominant la	induse/ land	cover in a	irea sui	rounding	g reach		Urba Indust	n/	Sub	urb/Town		Other	
	App	ITIONAL COBE	ILE 1	2	3	4	5	6	7	8	9	10	11	12	13
	En	ABEDDEDNESS	Contraction of the second s	20	30	10	50	0	40	20	60	30	0	80	70
	(carry	v over from trans	ain	15	16	17	18	19	20	21	22	23	24	25	
	ta	rget count of 25; measure in %)		50	60	30	. O	60	46	70	90	10	20	50	

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Site Code:	÷	•			Date:		,	· ,	2011												
	SLOPE	and B	EARIN			tra	nsec				or Fu	li PH	AB	only)			AUTO CLINO HAND	METE	R	\times
Starting	(rec	ord perce		IAIN SI er-transi ental se	ect dis	tance	in eac e used	h segi)	ment		(record (percei	SUPPL nt of int ipplem	er-tran	sect d	istance	ENT e in eac		ment	
Transect	Stadi measur		Slope Eleva Differ Cm	tion	Segn Len (m	gth	Beari (0°-3;		Perc of To Leng (%	otal gth		adia rod Suremer		Sloj Elev	be or ation rence	Set	gment ingth (m)	Bear (0°-3	ring	Perce of To Leng (%)	tal th
ĸ															<u> </u>						
J			2	•	2	5			11	D							1			•	
I		2	C)					(1 1 1 1 1 1									
Н			• 5	_											-				-		
G			0) •								-									
F		5	2	_	•				-								;				
E	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		5)				-	-		•			-							
D			\overline{O}	-													-				
C B	, , , , , , , , , , , , , , , , , , ,		15	-														_			
A			. (-						-									;	·	_
additional calculation		· ·	5 י			V			7			1		1							
area	Ą		IAL HAE	BITAT (CHAR	ACT	ERIZAT						Hi	gh Gi	radie	nt 🗂	.	Low	Grad	lient	Z
Para				ptima	l .				bopti	imal			M	argin	al		- 1		oor		
Epifaunal Co		e/	orable for (and fish co gradient bmerged k	epifaunal over (50% streams)	coloniz 6 for low ; mix of	ation /-	50%	for lov -suited	of stabl v-gradie for full potentia	ent stre coloniz	ams);	30%	6 in Iow trate fre	of stable -gradien equently removed	t stream dísturbe	is);	(10%) lac	in low-g k of hab	radient itat is o	le habita streams bvious; or lacking);
Sco	ore:	20	20bble or o 19 tle or no er	other stab 18	le habit 17	^{at} 16	15/	14	13 w incre	12		_10	9	8	7	6	5	4 3	2	1	0
Sediment I	Depositio	or Dn th	point bars e bottom a position (<	and less ffected b	than 5% y sedim	6 of ent	form sand, the b	nation, or fine pottom	mostly f sedime affected adjent st	from gr ent: 5-: 1 (20-5)	avel, 30% of 0% in	sand, 50%	or fine of the l	oosition o sediment oottom at -gradien	on bars	s; 30- 50 -	incre more chan	eased ba than 50	ar deve 1% of th juently	e bottom (>80% ir	
Sco	•	20 Cha	19 annelizatio				(e.g., l	oridge a	13 nelizati abutmer	nts); ev	idence	(10) Chani	9 nelizati	8 on may b	7 e exten:	6 sive:	5 Banl	4 3 ks shore	d with g	1 Jabian or	0
Channel /				pattern			of pa m: ch	ist char ay be p anneliz	nelizati resent t ation no	ion (> 2 but reci ot pres	Oyrs) ent ent	prese of	nt on b stream	s or shori oth bank 1 reach d	s; 40 to i isrupted	80%	reach o Instre	channeliz am habil or remov	ed and at grea ved ent	l disrupte tly altere	ed.
Sco	ne.	20	19	(18)	17	16	15	14	13	12	11	10	9	8	7	6	5	4 3	-2	1	0

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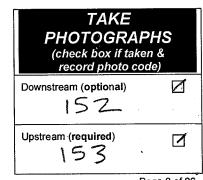
Site Code: Site Name: MYP aby OC Date:	
	//2011
Wetted Width (m): K Bankfull Width (m): 2.5 Bankfull Height (m): 1.5 Trans	sect A

						Transect Su	bstrates			
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	CPOM	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickness Codes 0 = No microalgae present, Feels rough, not slimy;
Left Bank	Ø	13	CB	0	P A	1	P 🔊 D	P 🔊 D	P 🙆 D	1 = Present but not visible, Feels slimy;
Left Center	4.5	51	BUD		P 🖄	(P 🖉 D	P A D	PAD	2 = Present and visible but <1mm; Rubbing fingers on surface produces a
Center	9	40	CB	0	P (Å)	2	P \Lambda D	P 🔕 D	P (A) D	brownish tint on them, scraping leaves visible trail
Right Center	13.5	50	COB	10	P (A)	2	Р Ф D	P OD	PAD	3 = 1-5mm; 4 = 5-20mm;
Right Bank	17.5	36)	BUD		P A	ŀ	P (A) D	P 🎒 D	P 🏠 D	5 = >20mm; UD = Cannot determine if microalgae present,
						t measures of th ect measuremen	e median axis of ts preferred)	each particle or	one of the size	substrate too small or covered with silt (formeny Z code). D = Dry. not assessed

RIPARIAN VEGETATION (facing downstream)	1 =	Spar	ent (0 se (< erate	10%		4 = ∖		/ (40- leavy				INSTREAM HABITAT COMPLEXITY	1 = 5 2 = N 3 = F	leavy	e ate (((0% (<1((10-4) (40-7) y (>7)	2%) 0%) 5%)		DENSIOMET READINGS (0 count covered	-17)
Vegetation Class		Lef	t Ba	nk			Rig	ht B	ank			Filamentous Algae	Ø	1	2	3	4		Center	5
Upper	Can	ору	(>5 1	m hi	gh)			•				Aquatic Macrophytes/ Emergent Vegetation	6	1	2	3	4		Left Center	
Trees and saplings >5 m high	0	1	Ø	3	4	0	1	0	3	4		Boulders	Q	1	2	3)4]	Upstream	11
LowerC	anop	y (0	.5 m	-5 m	higt	1)						Woody Debris >0.3 m	\bigcirc	1	2	3	4		Center	17
All vegetation 0.5 m to 5 m	0	1	Ø	3	4	0	1	Ø	3	4		Woody Debris <0.3 m	Q	1	2	3	4		Right Center	10
Groun	d Co	ver (<0.5	m h	ligh)							Undercut Banks	\odot	1	2	3	4]	Downstream	10
Woody shrubs & saplings <0.5 m	0	$\overline{\textcircled{O}}$) 2	Ş	4	0	0	2	3	4]	Overhang. Vegetation	0	0	2	3	À		Optional	
Herbs/ grasses	0	1	B	3	4	0	1	2	3	4		Live Tree Roots	0 (Ð	2	3	4		Left Bank	
Barren, bare soil/ duff	0	1	2	3	٩	0	1	2	3	٨		Artificial Structures	0	1	2	3	4	1	Right Bank	

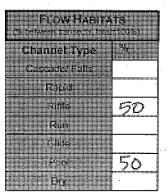
HUMAN INFLUENCE (circle only the closest to wetted channel)	B=O C=B P=>	10m+<	i Bank 50m fr	& 10m 1 om Cha es or No					
		Left	Bank	<u> </u>	Channel		Right	Bank	(
Walls/ Rip-rap/ Dams	Р	С	В	Ó	YB	6	В	С	Р
Buildings	Р	С	В	ρ	YN	P	В	С	Ρ
Pavement/ Cleared Lot	Р	С	В	þ		þ	В	С	Ρ
Road/ Railroad	P	С	В	þ	YN	p	В	С	P
Pipes (Inlet/ Outlet)	Р	С	В	Ó	YN	b	В	С	Ρ
Landfill/ Trash	P	С	B	0	ØN	0	B	С	Р
Park/ Lawn	P	С	В	0		Ø	В	С	Р
Row Crop	P	С	B	Ý		þ	В	C	Р
Pasture/ Range	P	С	В	þ		þ	В	С	Ρ
Logging Operations	P	С	В	0		þ	В	С	Р
Mining Activity	P	С	B	0	Ø N	0	B	С	P
Vegetation Management	P	С	В	Ø		0	В	С	P
Bridges/ Abutments	Р	С	В	ø	Y (N)	φ	В	C	Р
Orchards/ Vineyards	Р	С	В	0		0	В	С	Р

		F.0290/0000000000000000000000000000000000	
	, Linnin s	arae Lorv ()	• • • • • • • • • • • • •
	arealari	undraaabba	
Rent Bank	ercded	Auinenable	stable



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SWAMP	n Date: Febru	ıary 9 th , 2011								
		nter-7	Frans	ect: AI	3	N	Netted Width (n	1): 18		
					In	ter-Transect	Substrates			
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	СРОМ	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickness Codes 0 = No microalgae present,
Left Bank	15	24	СВ	0	PA	Ð	P 🚯 D	P 🚯 D	P 🕢 D	Feels rough, not slimy; 1 = Present but not visible, Feels slimy;
Left Center	4.5	49	CB	0	Р 🔊	2	P A D	P 🏠 D	P 🍙 D	2 = Present and visible but <1mm; Rubbing fingers on surface produces a
Center	9	62	CB	0	Р		P 阁 D	P \land D	P 🕢 D	brownish tint on them, scraping leaves visible frail
Right Center	13.5	0	BUD	~	ØА	0	PAD	P 🙆 D	P A D	3 = 1-5mm; 4 = 5-20mm;
Right Bank	17.5	30	UB	70	Р (Â)	(P 🔗 D	P 🔊 D	P 🏟 D	5 = >20mm; UD = Cannot determine if microalgae present;
						t measures of th of measuremen		each particle or	one of the size	substrate too small or covered with silt (formerly Z code). D = Dry, not assessed



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SWAMP Stream Habitat Char	acterization Form	FULL VERSI	ON Re	evision Date: February 9 th , 2011	
Site Code:	Site Name:	MYR abv	00	Date:// 2011	
Wetted Width (m):	Bankfull Width (m): 2	S Bankfull Heig	1)ht (m):	Transect B	

						Transect Su	bstrates			
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	CPOM	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickne Codes 0 = No microalgae pres Feels rough, not slimy
Left Bank	.5	32	CG	·	(P)A	.(P 🔗 D	P 🔊 D	P 🔕 D	1 = Present but not visi Feels slimy;
Left Center	4	32	BUD	and the second second	PA	2.	P (A) D	P 🔗 D	P 🕢 D	2 = Present and visible <1mm; Rubbing finge on surface produces
Center	8	36	CB.	50	P 🕢	l	P 🖉 D	P 🕢 D	P A D	brownish tint on then scraping leaves visib
Right Center	12	15	BUD		P A	2	POD	P 🕢 D	P 🔕 D	trail. 3 = 1-5mm; 4 = 5-20mm;
Right Bank	15.5	15	BLD	<u> </u>	P (A)	2	P 🕢 D	р 🕢 D	P 🕢 D	5 = >20mm; UD = Cannot determine microalgae present.
						t measures of th ect measuremen		each particle or	one of the size	substrate too small o covered with silt (formerly Z code). D = Dry, not assessed

RIPARIAN VEGETATION (facing downstream)	1 =	Spa	ent ((rse (• lerate	<10%	,) 40%)	3 = H 4 = V						INSTREAM HABITAT COMPLEXITY	0 = Abse 1 = Spar 2 = Mode 3 = Heav 4 = Very	se erate (N ((40-75	0%) 0%) 5%)	DENSIOMET READINGS (0 count covered	-17)
Vegetation Class		Le	ft Ba	ank	÷.	j	Rig	ht B	ank			Filamentous Algae	@ 1	2	3	4	Center	3
Upper	Can	ору	(>5	m hi	igh)							Aquatic Macrophytes/ Emergent Vegetation	01	2	3	4	Left Center	
Trees and saplings >5 m high	$\left(\delta \right)$) 1	2	3	4	0	1	(2)	3	4		Boulders	0 1	2	(3))4	Upstream	\circ
Lower C	añop	y (0	.5 m	-5 m	hig	1)						Woody Debris >0.3 m	(0)1	2	3	4	Center	10
All vegetation 0.5 m to 5 m	0	1	2	3	4	0	1	٧	3	4		Woody Debris <0.3 m	00	2	3	4	Right Center	5
Groun	d Co	/er	(<0.5	mt	nigh)		÷					Undercut Banks	<u>(</u>) 1	2	3	4	Downstream	2
Woody shrubs & saplings <0.5 m	0	1	Ø	à	4	0	1	2	3	4]	Overhang. Vegetation	0 1	2	3	4	Optional	
Herbs/ grasses	0	1	2	Ø	4	0	1	2	٩	4		Live Tree Roots	Ø1	2	3	4	Left Bank	—
Barren, bare soil/ duff	0	1	2	B	4	0	1	2	膨	4		Artificial Structures	01	2	3	4	Right Bank	

HUMAN INFLUENCE (circle only the closest to wetted channel)	B = 0 C = B P = >	0m+<	c 1 Bank 50m fn	& 10m om Cha es or N		出;				
		Left	Bank		Channe	1	I	Right	Banl	k .
Walls/ Rip-rap/ Dams	Р	С	В	Ø	YQ	2	Ø	В	С	Р
Buildings	P	С	В	p	YN		q	В	С	Ρ
Pavement/ Cleared Lot	P	C	В	þ			d	В	С	Ρ
Road/ Railroad	P	С	В	¢	YN		0	В	С	Ρ
Pipes (Inlet/ Outlet)	Р	С	В	9	YN		0	В	С	Р
Landfill/ Trash	Р	С	В	4	YN		0	В	С	Р
Park/ Lawn	Р	С	В	d			0	В	С	Ρ
Row Crop	Р	С	В	d			0	В	С	Ρ
Pasture/ Range	Р	С	В	d			Q	В	С	Р
Logging Operations	Р	С	B,	7 O			d	В	С	Р
Mining Activity	Р	С	B	0	0 N		0	℗	С	Р
Vegetation Management	Р	С	В	0			Ø	В	С	Р
Bridges/ Abutments	Р	С	В	ø	YØ	•	¢	В	С	Р
Orchards/ Vineyards	Р	С	В	Q			ġ	В	С	Р

	ng Sindowersen dan weber With)	
LeftBank eroded	vuinerable	(Cetable)
Right Bank eroded	winerable	(AAAA

				ect: BC			/ <u>ERSION</u> Wetted Width (m	. '		uary 9 th , 2011
					In	ter-Transect	Substrates			
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	СРОМ	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thick Codes 0 = No microalgae pro
Left Bank	.5	17	CB	0	P 🔊	2	P OD	P 🔊 D	P 🕢 D	 Feels rough, not slir 1 = Present but not vi Feels slimy;
Left Center	4.5	27	BLD		P A	2	PA D	P A D	P \Lambda D	2 = Present and visibl <1mm; Rubbing fing on surface produce
Center	9	52	BLD	-	PA	Z	PA D	P 🕢 D	PAD	brownish tint on the scraping leaves vis trail.
Right Center	13.5	23	CB	70	P 🔊	ł	P 🙆 D	P 🔗 D	POD	3 = 1-5mm; 4 = 5-20mm;
Right Bank	17.5	0	BLD		PA	. I	P 🆄 D	P A) D	P 👌 D	5 = >20mm; UD = Cannot determin microalgae present
						t measures of th ct measuremen	e median axis of ts preferred)	each particle or (one of the size	substrate too small covered with silt (formerly Z code). D = Dry. not assessed

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SWAMP Stream Habitat Cha	racterization Form	FULL VERSION Revi	sion Date: February 9 th , 2011
Site Code:	Site Name: MTE	abv OC	Date: / / 2011
Wetted Width (m):	Bankfull Width (m): 30	Bankfull Height (m): 2	Transect C

Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	CPOM	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thi Codes 0 = No microalgae
Left Bank	• 5	22	C03	O	(P) ۸	Į.	P 🕢 D	P \land D	P 🔊 D	Feels rough, not 1 = Present but no Feels slimy;
Left Center	Ч	.39	CG		Р 🔊	0	P 🐼 D	P 🖉 D	P A D	2 = Present and vi <1mm; Rubbing on surface prod
Center	8	31	COB	20	P 🔊	l	P 🔊D	P 🔞 D .	P 🔊 D	brownish tint on scraping leaves
Right Center	12	ð	BLD		P A	t	P 🔊 D	P \Lambda D	р 🏠 D	trail. 3 = 1-5mm; 4 = 5-20mm;
Right Bank	15.5	D	BLD	~	PA	O	P 🕢 D	P 🐼 D	" P 🚯 D	5 = >20mm; UD = Cannot dete microalgae pres
						t measures of th oct measuremen		each particle or	one of the size	substrate too sn covered with sill (formerly Z code D = Dry, not asse

RIPARIAN VEGETATION (facing downstream)	1 = \$	Spar	ent (0 se (< erate	10%		3 = H 4 = Ve						INSTREAM HABITAT COMPLEXITY	3 =	Spar Mode Heav	se erate ('	40-75	1%) 1%) 5%)		DENSIOMET READINGS (0 count covered of	-17)
Vegetation Class		Lei	t Ba	nk			Rig	ht B	ank			Filamentous Algae	6	1	2	3	4		Center	7
Upper	Can	vac	(>5)	m hi	ah)							Aquatic Macrophytes/ Emergent Vegetation	6	1	2	3	4		Left	4
•••		<u> </u>	<u>.</u>		<u> </u>		4	<u> </u>	<u>a</u>					4	6	2	4		Center Upstream	
Trees and saplings >5 m high	<u> </u>	0	2	3	4		1	2	(3)) 4		Boulders	0	1	4	3	4	4	•	
Lower C	anop	y (0	.5 m-	5 m	higl	ו)						Woody Debris >0.3 m	Ø	1	2	3	4		Center	1
All vegetation 0.5 m to 5 m	0	1	Ø	3	4	0	1	2	O	4		Woody Debris <0.3 m	0	Ф	2	3	4		Right Center	
Groun	d Cov	er (<0.5	m h	igh)	l						Undercut Banks	0	1	2	3	4]	Downstream	2
Woody shrubs & saplings <0.5 m	0	1	0	3	4	0	1	0) 3	4		Overhang. Vegetation	0	0	2	3	4		Optional	
Herbs/ grasses	0	1	Ø	3	4	0	1	Ĉ)	3	4		Live Tree Roots	0	1	2	3	4]	Left Bank	
Barren, bare soil/ duff	0	1	2	ß	4	0	1	2	3) 4	1	Artificial Structures	6	1	2	3	4	1	Right Bank	

HUMAN INFLUENCE (circle only the closest to wetted channel)	B = 0 C = B P = >	10m+<	Bank 50m fr	& 10m f om Chai es or No	nnel;	annel;				
		Left	Bank		Cha	nnel	<u> </u>	Right	Ban	ĸ
Walls/ Rip-rap/ Dams	P	С	В	0	Y		3	В	С	Р
Buildings	Р	С	В	ø	Y	R.	P	В	С	Р
Pavement/ Cleared Lot	Р	С	В	þ			þ	В	С	Р
Road/ Railroad	Р	С	В	9	Y	Ŋ	Ŷ	В	С	Р
Pipes (Inlet/ Outlet)	P	С	В	ø	Y	Ņ	¢	В	С	Р
Landfill/ Trash	P	С	В	þ	Y	Ņ	þ	В	С	Р
Park/ Lawn	P	С	В	· •			þ	В	С	Р
Row Crop	P	С	В	¢.			þ	В	С	Р
Pasture/ Range	P	С	В	þ			¢	В	С	Р
Logging Operations	P	С	В	6	_		Ō	В	С	Р
Mining Activity	P	С	В	0	0	Ν	0	B	С	Р
Vegetation Management	Р	С	В	9			Q	В	С	Р
Bridges/ Abutments	P	С	В	ø	Y	(N)	¢	В	С	Р
Orchards/ Vineyards	P	С	В	0		~	0	В	С	Р

	ettern 14 K		notinensed.
Left Bank	eroded	vuinerable	(stable)
Right Bank	eroded	Kinerable	stabla

FULL VERSION

Revision Date: February 9th, 2011

	I	nter-7	Frans	ect: CI)	-1	Wetted Width (n	n): /4		
					In	ter-Transect	Substrates			
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed,	CPOM	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickness Codes 0 = No microalgae present,
Left Bank	.5	44	EUD	. <u></u> .	∕⊅ A	Z	Р 🙆 D	P 🐼 D	P 🔊 D	Feels rough, not slimy; 1 = Present but not visible, Feels slimy;
Left Center	3.5	62	BLD	-	p Ø	2	P A D	P 🚯 D	P 🔗 D	2 = Present and visible but <1mm; Rubbing fingers on surface produces a
Center	7	69	COB	10	Р 🖄	t .	P 🏠 D	P 🔊 D	P 🕢 D	brownish lint on them, scraping leaves visible trail
Right Center	10.5	10	CB	0	P 🖉	l	. P 🔕 D	Р б D	P 🙆 D	3 = 1-5mm; 4 = 5-20mm;
Right Bank	17.5	D	BUD		ЮA	2	P 🔗 D	P 🚯 D	P \land D	5 = >20mm; UD = Cannot determine if microalgae present.
						measures of th ct measuremen		each particle or	one of the size	substrate too small or covered with silt (formerly Z code) D = Dry, not assessed

 FLOW HABITATS

 Sobcore to sets start(004)

 Channel Type

 Cascadel Fails

 Nacid

 Rifle

 30

 Run

 Glide

 Pool

 Dv

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Site Code:				Site Name:	Mar	2 abr	$\mathcal{O}\mathcal{O}$		Date:	_//2011
Vetted Wid	th (m):	4		Bankfull Wic	^{tth (m):} (8 Banl	kfull Height (m):	.5	Tra	ansect D
		· ·				Transect Su	bstrates			
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	CPOM	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thicknes Codes 0 = No microalgae prese Feels rough, not slimy;
Left Bank	15	33	CG	-	P A	2		P 🏠 D	PA D	1 = Present but not visibl Feels slimy;
Left Center	3.5	91	BUD	-	P (Å)	I	P ØD	P 🚯 D	PAD	2 = Present and visible t <1mm; Rubbing finger on surface produces a
Center	7	78	CB	10	P Ø	D	P 🖉 D	P D	P A D	brownish tint on them scraping leaves visible trail
Right Center	16.5	24	BUD		ФA	۱	Р ØD	P (A) D	P D	3 = 1-5mm; 4 = 5-20mm; 5 = >20mm;
Right Bank	13.5	40	10B	סר	PA	1	P 🕭 D	P 🚯 D	P 🚯 D	UD = Cannot determine microalgae present,
	Note: Sub class cate	strate size gories list	es can be ed on the	recorded eit supplement	ner as direc al page (dire	t measures of the transmission of transmission of transmission of the transmission of	te median axis of ts preferred)	each particle or	one of the size	substrate too small or covered with silt (formerly Z code).

RIPARIAN VEGETATION (facing downstream)	1 = 5	Spar	ent (0 se (< erate	10%		4 = ∨	léavy 'ery H					INSTREAM HABITAT COMPLEXITY	0 = Abe 1 = Spa 2 = Moi 3 = Hea 4 = Ver	irse Ierate (ivy (40-75	%) %) %)		DENSIOMET READINGS (0- count covered of	-17)
Vegetation Class		Lei	t Ba	nk			Rig	nt B	ank			Filamentous Algae	() 1	2	3	4	Γ	Center	Ó
Upper	Can	opy	(>5)	m hi	igh)							Aquatic Macrophytes/ Emergent Vegetation	01	2	3	4	ł	Left Center	
Trees and saplings >5 m high	0	1	Þ	3	4	0	1	2	8	4	1	Boulders	0 1	0	3	4		Upstream	1
Lower C	anop	y (0	.5 m	-5 m	n hig	h)			<u> </u>			Woody Debris >0.3 m	O^1	2	3	4		Center Right	10
All vegetation 0.5 m to 5 m	0	1	2	3	4	0	1	2	Ø	4		Woody Debris <0.3 m	00) 2	3	4		Center	2
Groun	d Cov	er	<0.5	m t	nigh)							Undercut Banks	01	2	3	4		Downstream	
Woody shrubs & saplings <0.5 m	0	1	2	3) 4	0	1	2	٢	4		Overhang. Vegetation	06	2	3	4		Optional Left Bank	
Herbs/ grasses	0	i	3	3	4	0	(p	2	3	4		Live Tree Roots	0 1	2	3	4			
Barren, bare soil/ duff	0	Ó	2	3	4	0	1	Ø	3	4		Artificial Structures	01	2	3	4		Right Bank	

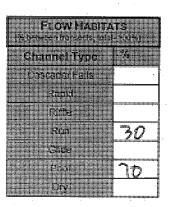
HUMAN INFLUENCE (circle only the closest to wetted channel)	B = 0 C = Be P = >1	0m+<5	Bank 50m fr	& 10m f om Chai es or No	nnel;	annel;				
		Left I	Bank		Cha	nnel	F	Right	Banl	<u>د</u>
Walls/ Rip-rap/ Dams	Р	С	В	\bigcirc	Y	₩2	6	В	С	Р
Buildings	Р	С	В	q	Y	Ņ	Y	В	С	P
Pavement/ Cleared Lot	P	С	В	9			þ	В	С	Р
Road/ Railroad	Р	С	В	ø	Y	Ŋ	φ	В	С	Р
Pipes (Inlet/ Outlet)	P	С	В	ø	Y	N	ø	В	С	Ρ
Landfill/ Trash	Р	С	В	þ	Y	N	þ	В	С	Р
Park/ Lawn	P	С	В	þ			0	В	С	Р
Row Crop	Р	С	В	þ			þ	В	С	Ρ
Pasture/ Range	Р	С	В	¢.			þ	В	С	Р
Logging Operations	Р	С	В	þ			6	В	С	Ρ
Mining Activity	P	С	В	0	Ø	N	0	Ø	С	Р
Vegetation Management	P	С	В	0			0	В	С	Р
Bridges/ Abutments	Р	С	В	d	Y	M	q	В	С	Р
Orchards/ Vineyards	P	С	В	d		V	Ó	В	С	Р

BANK STABILITY (score zone in patricum a d Sin downstream of transect potween bankhar - withind within
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FULL VERSION

Revision Date: February 9th, 2011

		nter-7	Frans	ect: DI	C	Ň	Wetted Width (m	n): 15		
				199	In	ter-Transect	Substrates			
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	CPOM	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	0 = No microalgae pres
Left Bank	15	77	BLD		(P) A		(P) A D	P 🙆 D	P 🔊 D	 Feels rough, not slimy 1 = Present but not visit Feels slimy;
Left Center	4	69	COB	0	P (Å)	i L	P D	P 🚯 D	P 🕢 D	2 = Present and visible <1mm; Rubbing finge on surface produces
Center	7.5	0	BUD	_	P A	2	P 🔂 D	P 🔊 D	P 🔗 D	brownish tint on then scraping leaves visib
Right Center	11.5	29	BUD	<u> </u>	ЮА	D	P 🕢 D	P 🔊 D	P 🚯 D	trail, 3 = 1-5mm; 4 = 5-20mm;
Right Bank	19.5	16	66	-	(ÞA	0	P 🚯 D	P 😡 D	P 🚯 D	5 = >20mm; UD = Cannot determine microalgae present;
	Note: Sub class cate	strate size gories liste	s can be d on the	recorded eith supplementa	ner as direct Il page (dire	t measures of th of measuremen	e median axis of ts preferred)	each particle or o	one of the size	substrate too small or covered with silt (formeny Z code) D = Dry, not assessed



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te Code: /etted Wid	th (m):			Site Name: Bankfull Wid		,	kfull Height (m):	2 -	Date:	· · ·			
ellea vaia	ui (iii).	Ч		Bankian The	1	0		2.5		ansect E			
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	CPOM	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickne Codes 0 = No microalgae pres Feels rough, not slimy			
Left Bank	,5	60	BLD)	ØА	2	P A D	Р (5) D	~ P 🐼 D	1 = Present but not visit Feels slimy, 2 = Present and visible			
Left Center	3,5	82	CG		٣A	0	P 🐼 D	P 🔕 D	· P 🚯 D	<1mm; Rubbing finge on surface produces			
Center	7	102	BLC		P A	0	P 🕭 D	PAD	P ØD	brownish tint on them scraping leaves visible trail			
Right Center	10.5	6	BUT	>	P 🕭	0	P 🗿 D	P 🚯 D	P 🖉 D	3 = 1-5mm; 4 = 5-20mm; 5 = >20mm;			
Right Bank	13.5	10	BLD	-	(P) A		P 🔊 D	P Ø D	р б О D	UD = Cannot determine microalgae present,			
	Note: Su class cat	ostrate size egories list	es can b ed on th	e recorded eit e supplement	her as direc al page (dire	t measures of t ect measureme	the median axis on the preferred (f each particle or	one of the size	substrate too small o covered with silt (formerly Z code).			
										D = Dry, not assessed			

(facing downstream)		Mode			40%)				·			COMPLEXITY				y (>75		count covered (dois
Vegetation Class		Lef	t Ba	nk			Rig	ht B	ank			Filamentous Algae	0	1	2	3	4	Center	10
Upper	Can	ору	(>5 i	m hi	gh)							Aquatic Macrophytes/ Emergent Vegetation	0	1	2	3	4	Left Center	
Trees and saplings >5 m high	6	$\overline{)}_1$	2	3	4	0	1	2	3	4	1	Boulders	0	1	2	3	4	Upstream	0
Lower C	anop	y (0.	5 m-	-5 m	higt	1)						Woody Debris >0.3 m	\bigcirc	1	2	3	4	Center	10
All vegetation 0.5 m to 5 m	0	1	2		0	0	1	2	3	4]	Woody Debris <0.3 m	0 (1	2	3	4	Right Center	0
Groun	d Co	ver (<0.5	m h	igh)							Undercut Banks	0 (D	2	3	4	Downstream	
Woody shrubs & saplings <0.5 m	0	1	٨	3	4	0	1	2	3	4		Overhang. Vegetation	0 (1	2	3	4	Optional Left Bank	_
Herbs/ grasses	0	D	2	3	4	0	G) 2	3	4		Live Tree Roots	6	1	2	3	4		
Barren, bare soil/ duff	0	1	2	Ì	24	0	1	2	Ø	4	1	Artificial Structures	0	1	2	3	4	Right Bank	

HUMAN INFLUENCE (circle only the closest to wetted channel)	B=0 C=B P=>	0 = Not Present; B = On Bank; C = Between Bank & 10m from Channel; P = >10m+<50m from Channel; Channel (record Yes or No)												
		Left I	Bank	(Cha	nnel	F	Right	Banl	()				
Walls/ Rip-rap/ Dams	P	С	В	Ø	Y	®	6	В	С	Р				
Buildings	P	С	В	Q	Y	Ŋ	Ŷ	В	С	P				
Pavement/ Cleared Lot	P	С	В	ø			Ø	В	С	P				
Road/ Railroad	Р	С	В	ø	Y	N	ÌÌ	В	С	Р				
Pipes (Inlet/ Outlet)	P	С	В	þ	Y	Ņ	þ	В	С	P				
Landfill/ Trash	P	С	В	þ	Y	Ņ	0	В	С	Р				
Park/ Lawn	P	С	В	þ			0	В	С	Р				
Row Crop	P	С	В	þ			0	В	С	Р				
Pasture/ Range	P	С	В	þ			0	В	С	Р				
Logging Operations	P	С	В	þ			þ	В	С	Р				
Mining Activity	P	С	В	þ	Y	Ņ	þ	В	С	Р				
Vegetation Management	P	С	В	Q			þ	В	С	Р				
Bridges/ Abutments	P	С	В	ø	Y	N	þ	В	С	Р				
Orchards/ Vineyards	P	С	В	0			0	В	С	Р				

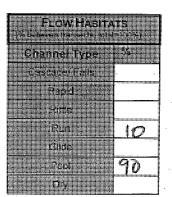
frank Trite			notranset
		d-ministri	
- Left Flank -	eroded	vuinerabla	<u>(stable</u>)
. Richtigank	anoded	vuimerable	Gana)

FULL VERSION

Revision Date: February 9th, 2011

		[nter-'	Trans	ect: EI	<u> </u>		Wetted Width (n	n): 16		
	1911	1			In	ter-Transec				
Position	Dist from LB (m)	Depth (cm)	size	% Cobble Embed.	СРОМ	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickness Codes 0 = No microalgae present
Left Bank	.5	29	BLD		PA	2	P 🔊 D	PA D	D D	 Feels rough, not slimy; 1 = Present but not visible, Feels slimy;
Left Center	4	63	(B	5	Р 🖉	0	P & D	P 🔗 D	P	2 = Present and visible but <1mm; Rubbing fingers on surface produces a
Center	9	84	CB	10	Р 🖉	1	P 🔊 D	P 🚯 D	P 🕢 D	brownish tint on them, scraping leaves visible
Right Center	12	65	纪	~	° P 🖉		P (A)D	P 🏠 D	P D	trail. 3 = 1-5mm; 4 = 5-20mm;
Right Bank	15.5	10	Œ	0	ÞÁ	2	P 🕢 D	P AD	P D	5 = >20mm, UD = Cannot determine if microalgae present,
	Note: Sub class cate	strate size gories liste	s can be ed on the	recorded eith supplementa	ier as direc Il page (dire	t measures of th ot measuremen	e median axis of its preferred)	each particle or	one of the size	Substrate too small or covered with silt (formerly Z code) D = Doy, not assessed

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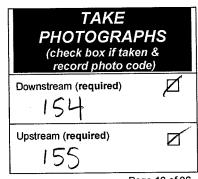
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Vetted Width (m):	14	Bankfull Wid	tth (m): 🔿	Boni									
		· · · ·	<u></u>	O Bank	kfull Height (m):	1.5	Transect F						
Transect Substrates Microalgae Thickness													
Position from LB (m)	Depth (cm) (cm) (cm)	Cobble	СРОМ	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickne Codes 0 = No microalgae prese Feels rough, not slimy					
Left 5	32 BUD	1	Ø A	2	P 🔗 D	P & D	Р 🔗 D	1 = Present but not visib Feels slimy;					
Left 3,5	46 84	> _	P Ø	2	P 🚯 D	P 6 D	P 🖉 D	2 = Present and visible I <1mm, Rubbing finger on surface produces :					
Center 7	6 347		(P) A		P 🚯 D	P 👩 D	P D	brownish tint on them scraping leaves visible trail					
Right JD.5	55 68	5 80	PA	0	Р (Д) D	P 🔊 D	PAD	3 = 1-5mm; 4 = 5-20mm;					
Right Bank 13.5	51 SNT	>	PA	Ð	P 🖉 D	P 🕢 D	P D	5 = >20mm; UD = Cannot determine microalgae present,					
Note: Subs	trate sizes can t ories listed on th	e recorded eit	her as direct al page (dire	t measures of the	ne median axis of nts preferred)	each particle or	one of the size	substrate too small or covered with silt (formerly Z code).					
			•					D = Dry, not assessed					

(facing downstream)	2 = Moderate (10-40%)		COMPLEXITY	4 = Very Heavy (>75%)	count covered dots
Vegetation Class	Left Bank	Right Bank	Filamentous Algae	6 1 2 3 4	Center 5
Upper	r Canopy (>5 m high)		Aquatic Macrophytes/ Emergent Vegetation	0 1 2 3 4	Left Center
Trees and saplings >5 m high	0 1 1 2 3 4	0 1 2 3 4	Boulders	0 1 2 3 4	Upstream
	anopy (0.5 m-5 m high	1)	Woody Debris >0.3 m	0 (1) 2 3 4	Center C
All vegetation 0.5 m to 5 m	0 1 2 3 4	0 1 2 3 🕢	Woody Debris <0.3 m	1 2 3 4	Right Center
Groun	d Cover (<0.5 m high)		Undercut Banks	1 2 3 4	Downstream
Woody shrubs & saplings <0.5 m	0 1 2 🔗 4	0 1 2 🚯 4	Overhang. Vegetation	0 1 2 3 4	Optional
Herbs/ grasses	0 (17 2 3 4	0 1 62 3 4	Live Tree Roots	0 1 2 3 4	
Barren, bare soil/ duff	0 1 (2) 3 4	0 (1) 2 3 4	Artificial Structures	01234	Right Bank

HUMAN INFLUENCE (circle only the closest to wetted channel)	0 = Not Present; B = On Bank; C = Between Bank & 10m from Channel; P = >10m+<50m from Channel; Channel (record Yes or No)												
		Left	Bank		Chan	nel		Right	Ban	ĸ			
Walls/ Rip-rap/ Dams	P	С	В	0	Y (Ø	Ø	ЭВ	С	Р			
Buildings	P	С	В	Q	Y	Ń	9	В	С	Р			
Pavement/ Cleared Lot	Р	С	В	þ			þ	В	С	Р			
Road/ Railroad	Р	С	В	þ	Y	Ņ	Q	В	С	P			
Pipes (Inlet/ Outlet)	P	С	В	þ	Y	Ŋ	d	В	С	Р			
Landfill/ Trash	P	С	В	þ	Y	Ŋ	đ	В	С	Р			
Park/ Lawn	Р	С	В	d			¢	В	С	Р			
Row Crop	Р	С	В	d			Ø	В	С	Р			
Pasture/ Range	Р	C	В	d			þ	В	С	Р			
Logging Operations	Р	С	В	0			þ	В	С	Р			
Mining Activity	Р	С	В	d .	Y	N	þ	В	С	Р			
Vegetation Management	Р	С	В	¢			0	В	С	Р			
Bridges/ Abutments	P	С	В	4	Y	N	þ	В	С	Ρ			
Orchards/ Vineyards	Р	С	В	ð			6	В	С	Р			

	e namen ad 5- oranisinya hitowani adhi	notbanest
Left Bank eroded	vulnerabio	Katik
Right Bank eroded	vulnerable	(stabig

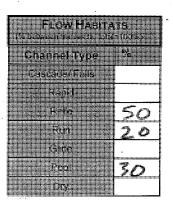


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FULL VERSION

Revision Date: February 9th, 2011

		nter-7	Frans	ect: FC	r F	- V	Netted Width (n	1): 12		
			•		In	ter-Transect	Substrates			
Position	Dist from LB (m)	Depth (em)	mm/ size class	% Cobble Embed	CPOM	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickness Codes 0 = No microalgae present,
Left Bank	15	16	CB	0	PA	l	P 🚯 D	P 🔗 D	P 🙆 D	 Feels rough, not slimy; 1 = Present but not visible, Feels slimy;
Left Center	3	33	CB	0	Р 🔕	l	P 🕢 D	P 🔊 D	PAD	2 = Present and visible but <1mm; Rubbing fingers on surface produces a
Center	6	67	300		P A	0	р б Д	P 🖉 D	P \Lambda D	brownish lint on them, scraping leaves visible
Right Center	9	48	CB	70	. P 🕥	õ	P 🔕 D	P 🔗 D	P 🕢 D	trail: 3 = 1-5mm; 4 = 5-20mm;
Right Bank	11.5	11	BUD	and the second sec	PA	0	P 🙆 D	P 🙆 D	P`0	5 = >20mm, UD = Cannot determine if microalgae present,
	Note: Sub class cate	strate size gories liste	s can be d on the	recorded eith supplementa	ier as direct Il page (dire	measures of the ct measurement	e median axis of is preferred)	each particle or d	one of the size	substrate too small or covered with silt (formerty Z code) D = Dry, not assessed



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Site Code:				Site Name:	MYR	abv .	0	r. Cr.		Da	nte: <u>0</u> 7	_/ <u>/</u> 201	n
Wetted Wid	th (m):	15		Bankfull Wic	^{ith (m):} 30	ð ^B	ankfull	Height (m):	3		Trar	nsect G	
			p Selection			Transect	Subs	trates				ng sa	
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	CPOM	Microalga Thicknes Code	, IV	Acroalgae Attached	Macroala Unattach		nhytes	Microalgae Thickne Codes 0 = No microalgae pres Feels rough, not slim	sent,
Left Bank	.5	46	Cob	40	PA	2		₽ ØD	р 🖉 I		. 88	1 = Present but not visi Feels slimy;	ble,
Left Center	4	57	COB	0	Р 🖉	(P AD	P Ø I) P 🏈	D Ø	2 = Present and visible <1mm, Rubbing finge on surface produces	ers
Center	7.5	79	SANIS	,	P A	0		P D	P A) P (DD	brownish tint on ther scraping leaves visit trail.	
Right Center	11.5	54	BLD		P (Å	1		P AD	Р 🙆 1	D P (シ	3 = 1-5mm; 4 = 5-20mm;	
Right Bank	14.5	31	COB	20	P A	2		P (A) D	P 🚯	D P (5 = >20mm; UD = Cannot determine microalgae present.	e if
				recorded eith supplement:				nedian axis of preferred)	each partic	e or one of th		substrate too small c covered with silt (formeny Z code) D = Dry, not assessed	
	N VEGET/) downstrea	A CONTRACTOR OF	1 = Spa	ent (0%) rse (<10%) lerate (10-40%	4 = Very	ry (40-75%) Heavy (>75%	6)	Instr Habi Compl	ТАТ	0 = Absent 1 = Sparse 2 = Moderate (3 = Heavy (4 = Very Heave	40-75%)	DENSIOMET READINGS (0 count covered	-17)
Vege	tation Cla			Left Bank Right I				Filamentous Aquatic Mac				Center Left	
Trees and	saplings >5		Canopy	(>5 m high)		2 (3) 4		Emergent Ve Boulders	egetation	$ \bigcirc 1 2 $ 0 1 2	34 (3)4	Center Upstream	2
- necs and	sapings - o		<u> </u>		<u> </u>	- @						Cantan	

Vegetation Class		Lef	Ba	ank			Rig	ht B	ank			Filamentous Algae	O 1	2	3	4
Upper	Can	ору	(>5	m hi	gh)							Aquatic Macrophytes/ Emergent Vegetation	@1	2	3	4
Trees and saplings >5 m high	0	1 ((2)) 3	4	0	1	2	3	4	Γ	Boulders	0 1	Ź	3) 4
Lower C	anop	y (0.	5 m	-5 m	hig	h)						Woody Debris >0.3 m	0 1		3	4
All vegetation 0.5 m to 5 m	0	1	2	3	4	0	1	2	3	4		Woody Debris <0.3 m	01	0	3	4
Groun	d Cov	er (•	<0.5	5 m h	igh)							Undercut Banks	01	2	3	4
Woody shrubs & saplings <0.5 m	0	1	2	3	4	0	1	2	3	4		Overharig. Vegetation	0 (1) 2	3	4
Herbs/ grasses	0	Ð	2	3	4	0	1	2	3	4		Live Tree Roots	0 1	2	3	4
Barren, bare soil/ duff	0	1	2	3	4	0	$\overline{(1)}$	2	3	4		Artificial Structures	01	2	3	4
				~		•	$\overline{\mathbf{\nabla}}$									

HUMAN INFLUENCE (circle only the closest to wetted channel)	B C P	0 = Not Present; B = On Bank; C = Between Bank & 10m from Channel; P = >10m+<50m from Channel; Channel (record Yes or No)											
		Left Bank					Channel			Right Bank			
Walls/ Rip-rap/ Dams		þ	С	В	0	$\mathbf{\Sigma}$	Y.	6	9	6	В	С	Р
Buildings		>	С	В	Q		Y	Ņ		9	В	С	Р
Pavement/ Cleared Lot		>	С	В	0					q	В	С	Р
Road/ Railroad		D D	Ċ	В	d		Y	Ŋ		0	В	С	Р
Pipes (Inlet/ Outlet)		Ρ	С	В	d		Y	Ŋ		0	В	С	Р
Landfill/ Trash		Ρ	С	В	d		Υ.	Ŋ		đ	В	С	Р
Park/ Lawn		Ρ	С	В	¢					q	В	С	Р
Row Crop		Ρ	С	В	ø					d	В	С	Р
Pasture/ Range		Ρ	С	В	þ			1		d	В	С	Р
Logging Operations		Р	С	В	þ			T		đ	В	С	Р
Mining Activity		P	С	В	0		Υ	Ņ		Q	В	С	Р
Vegetation Management		Ρ	С	В	0					d	В	С	Р
Bridges/ Abutments		Ρ	С	В	0		Y	Ŋ		O	В	С	Р
Orchards/ Vineyards		Ρ	С	В	0			,		0	В	С	Р

Right Bank	eroded	vulnerable	stable
Left Bank	eroded	vulnerable	stable
(score zone	5m upstream a	STABILITY ind 5m downstream full - wetted width)	of transect

5

 \bigcirc

Center Right

Center Downstream Optional

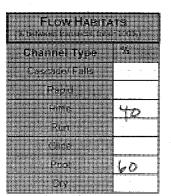
Left Bank

Right Bank

FULL VERSION

Revision Date: February 9th, 2011

	I	nter-7	Trans	ect: GI	Ι	L.	Vetted Width (m	1): /4		
					In	ter-Transect	Substrates			
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	CPOM	Microalgae Thickness Code	Macroalgae Attached	Maeroalgae Unattached	Macrophytes	Microalgae Thickness Codes 0 = No microalgae present,
Left Bank		20	15		PA	1	P ØD	P 🔊 D	P 🕢 D	 Feels rough, not slimy; 1 = Present but not visible, Feels slimy;
Left Center	3:5	42	CB	30	Р 🕭	0	P 🔕 D	P 🔗 D	PA D	2 = Present and visible but <1mm, Rubbing fingers on surface produces a
Center	7	60	ĉЪ		OD	· · / · · ·	P (A) D	P 🖉 D	P \land D	brownish tint on them, scraping leaves visible trail
Right Center	10,5	31	BLD		Р Ø		P 🕢 D	P 🔗 D	P 🖉 D	3 = 1-5mm; 4 = 5-20mm;
Right Bank	13,5	9	CG	<u> </u>	(P)A	ł	P 🖉 D	P AD	P (A)D	5 = >20mm; UD = Cannot determine if microalgae present.
	Note: Sub class cate	strate size gories liste	s can be d on the	recorded eith supplementa	ner as direc al page (dire	t measures of th ct measuremen	e median axis of is preferred)	each particle or (one of the size	substrate too small or covered with silt (formerly Z.code). D = Dry, not assessed



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te Code:				Site Name:			Or.Cr.		Date:			
Vetted Width (m):				Bankfull Wid	^{th (m):} 2		.5	Transect H				
Transect Substrates												
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed	CPOM	Microalgae Thickness Code		Macroalgae Unattached	Macrophytes	Microalgae Thicknes Codes 0 = No microalgae prese Feels rough, not slimy		
Left Bank	5	70	CG		ÞÀ	2	DA D	P O D	PA D	1 = Present but not visib Feels slimy; 2 = Present and visible 1		
Left Center	4	42	65	סר	P (2)	(P (Â) D	P A D	P D	<1mm: Rubbing finger on surface produces		
Center	8	78	GANT		Р 🔗	ଚ	P Ø D	P 🔊 D	P. A D	brownish tint on them scraping leaves visibl trail.		
Right Center	12	68	SAND		P ۸	6	P 🐼 D	P (A) D	P Ø D	3 = 1-5mm; 4 = 5-20mm; 5 = >20mm;		
Right Bank	15.5	[]	Coz	10	\mathcal{P}^{A}	2	P 🖗 D	P 🔊 D	рØD	UD = Cannot determine microalgae present.		
	Note: Sul class cate	ostrate size egories list	ed on th	e recorded eit e supplement	ner as direc al page (dir	t measures of ect measurem	the median axis o ents preferred)	f each particle or	one of the size	substrate too small of covered with silt (formeny Z code). D = Dry, not assessed		

RIPARIAN VEGETATION (facing downstream)	0 = Absent (0%) 3 = Heavy (40-75%) 1 = Sparse (<10%) 4 = Very Heavy (>75%) 2 = Moderate (10-40%)	INSTREAM 1 = Sparse <10%	READINGS (0-17) count covered dots
Vegetation Class	Left Bank Right Bank	Filamentous Algae 0 1 2 3 4	Center Left
9	r Canopy (>5 m high)	Aquatic Macrophytes/ Emergent Vegetation	Left O
Trees and saplings >5 m high	(0) 1 2 3 4 0 (1) 2 3 4	Boulders 0 1 2 3 4	Upstream >
	Canopy (0.5 m-5 m high)	Woody Debris >0.3 m (0) 1 2 3 4	Center S
All vegetation 0.5 m to 5 m	0 1 (2) 3 4 0 1 (2) 3 4	Woody Debris <0:3 m ① 1 2 3 4	Center O
Groun	nd Cover (<0.5 m high)	Undercut Banks 😡 1 2 3 4	Downstream
Woody shrubs & saplings <0.5 m	0 1 2 3 4 0 1 2 3 4	Overhang. Vegetation 0 🕢 2 3 4	Optional Left Bank
Herbs/ grasses	0 (1 2 3 4 0 (1 2 3 4	Live Tree Roots 0 (1) 2 3 4	
Barren, bare soil/ duff	0 1 2 3 (4) 0 1 2 (3) 4	Artificial Structures 0 1 2 3 4	Right Bank

HUMAN INFLUENCE (circle only the closest to wetted channel)	B = 0 C = B P = >	10m+<	; Bank 50m fri	& 10m fi om Char es or No	inel;	annel;				
		Left Bank				nnel	Right Bank			
Walls/ Rip-rap/ Dams	P	С	В	\mathcal{O}	Y	(N)2	107	В	С	Р
Buildings	Р	С	В	Q	Y	Ň	φ	В	С	P
Pavement/ Cleared Lot	Р	С	В	þ			Þ	В	С	P
Road/ Railroad	Р	С	В	þ	Y	Ŵ	P	В	С	Р
Pipes (Inlet/ Outlet)	P	С	В	þ	Y	Ŋ	ø	В	С	Р
Landfill/ Trash	P	С	В	þ	Y	N	Ø	В	С	Р
Park/ Lawn	P	С	В	þ			¢	В	С	P
Row Crop	P	С	В	þ			þ	В	С	Р
Pasture/ Range	P	С	В	þ			þ	В	C	Р
Logging Operations	P	С	В	þ			þ	В	С	Р
Mining Activity	• P	С	В	φ.	Y	Ŋ	þ	В	С	Р
Vegetation Management	P	С	В	0			Ø	В	С	Р
Bridges/ Abutments	P	С	В	d	Y	Ň	9	В	С	Р
Orchards/ Vineyards	P	С	В	d			d	В	С	Р

Trans mar		STABLITY nd S II down down UI - webs I - down	
LeftBank	eroded	(vulnerab))a	stable
Right Bank	eroded	vulnerable	(Astable)

FYLF talegoles

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FULL VERSION

Revision Date: February 9th, 2011

		[nter-'	Trans	sect: H	[١	Netted Width (n	n): 16		
					In	ter-Transect	Substrates			
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	СРОМ	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickness Codes 0 = No microalgae present
Left Bank	5	23	LOB	40	PA	~ Z*	P 🖉 D	P 🔊 D	PA D	 Feels rough, not slimy; 1 = Present but not visible, Feels slimy;
Left Center	Ч	78	CoB	'SD	🖉 А	(P 🕢 D	P 🔕 D	P D	2 = Present and visible but <1mm; Rubbing fingers on surface produces a
Center	8	103	SAUD	· ·	P Ø	D	P 🖗 D	P D	P 🔊 D	brownish tint on them, scraping leaves visible
Right Center	12	120	IAND		РØ	Ð	₽ 🕢 D	P �₽D	P 🔊 D	trail. 3 = 1-5mm; 4 = 5-20mm;
Right Bank	(5.5	143	SANT	<u> </u>	PA	0	P AD	P AD	PQD	5 = >20mm; UD = Cannot determine if microalgae present,
	Note: Sub class cate	strate size gories liste	s can be id on the	recorded eith supplementa	ier as direc Il page (dire	t measures of the ct measurement	e median axis of s preferred)	each particle or o	one of the size	substrate too small or covered with silt (formerly Z code) D = Dry, not assessed

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SWAMP Stream Habitat Char	acterization Form	F	ULL VERSION Rev	ision Date: February 9 th , 2011
Site Code:	Site Name:	~	MTR aby Or.Cr.	Date: / / 2011
Wetted Width (m):	Bankfull Width (m):	20	Bankfull Height (m):	Transect I

						Transect Su	bstrates			
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed:	CPOM	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickness Codes 0 = No microalgae presen Feels rough, not slimy;
Left Bank	15	34	SAND		(P) A	\circ	P 🖓 D	P 🔕 D	P A D	1 = Present but not visible Feels slimy; 2 = Present and visible but
Left Center	4.5	205	SAND	-035.11m.,.	P (A)		PAD	PAD	P A D	<1mm; Rubbing fingers on surface produces a
Center	9	210	BLD		P	١	P 🔊 D	P \land D		brownish tint on them, scraping leaves visible trail
Right Center	13.5	133	BLD		Р Ø	l	P & D	P 🕭 D	P AD	3 = 1-5mm; 4 = 5-20mm;
Right Bank	17.5	15	SAND	·	D A	0	P 🐼 D	P 🔊 D	P D	5 = >20mm; UD = Cannot determine if microalgae present.
	Note: Sut class cate	strate size gories list	ed on the	recorded eit supplement	ner as direc al page (dire	t measures of th oct measuremen	e median axis of ts preferred)	each particle or	one of the size	substrate too small or covered with silt (formerly Z code) D = Dry, not assessed

RIPARIAN VEGETATION (facing downstream)	0 = Absent (0%) 1 = Sparse (<10%) 2 = Moderate (10-40%)	3 = Heavy (40-75%) 4 = Very Heavy (>75%)	INSTREAM HABITAT COMPLEXITY	0 = Absent (0%) 1 = Sparse (<10%) 2 = Moderate (10-40%) 3 = Heavy (40-75%) 4 = Very Heavy (>75%)	DENSIOMETER READINGS (0-17) count covered dots
Vegetation Class	Left Bank	Right Bank	Filamentous Algae	1 2 3 4	Center
Upper	r Canopy (>5 m high)		Aquatic Macrophytes/ Emergent Vegetation	01234	Left U Center
Trees and saplings >5 m high	0 1 2 (3) 4	0 1 2 (3) 4	Boulders	0 (1) 2 3 4	Upstream 2
	anopy (0.5 m-5 m higi		Woody Debris >0.3 m	0 1 2 3 4	Center (2
All vegetation 0.5 m to 5 m	0 1 2 3 4	0 1 2 3 4	Woody Debris <0.3 m	0 1 2 3 4	Right Center
Groun	d Cover (<0,5 m high)		Undercut Banks	0 (1) 2 3 4	Downstream
Woody shrubs & saplings <0.5 m	0 1 2 3 4	0 1 2 3 4	Overhang. Vegetation	(i) 1 2 3 4	Optional
Herbs/ grasses	0(1) 2 3 4	0 17) 2 3 4	Live Tree Roots	0 1 2 3 4	Left Bank
Barren, bare soil/ duff	0 1(2) 3 4	0 1 2 (3) 4	Artificial Structures	01234	Right Bank -

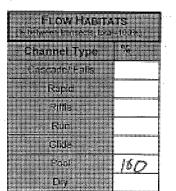
HUMAN INFLUENCE (circle only the closest to wetted channel)	B = 0 C = B P = >	10m+<	; Bank 50m fr	& 10m fi om Char es or No	nnel;	annel)						
		Left I	Bank		Cha	nnel	Right Bank					
Walls/ Rip-rap/ Dams	Р	С	В	Q	Y	\mathfrak{P}	6	В	С	Р		
Buildings	P	С	В	ø	Y	Ŵ	9	В	С	Р		
Pavement/ Cleared Lot	P	С	B	Q.			þ	В	С	Ρ		
Road/Railroad	Р	С	В	d	Y	N	0	В	С	Р		
Pipes (Inlet/ Outlet)	P	С	В	d	Y.	Ŋ	0	В	С	Р		
Landfill/ Trash	P	С	В	d	Y	Ņ	· 0	В	С	Р		
Park/ Lawn	P	С	В	d			ρ	В	С	Р		
Row Crop	Р	С	В	ø			þ	В	С	Р		
Pasture/ Range	P	С	В	þ			Ø	В	С	Р		
Logging Operations	P	С	В	0			þ	В	С	Р		
Mining Activity	P	С	В	0	Y	N	þ	В	С	Ρ		
Vegetation Management	P	С	В	0			þ	В	С	P		
Bridges/ Abutments	P	С	В	0	Y	N	Q	В	С	Р		
Orchards/ Vineyards	P	С	В	þ		1	d	В	С	Р		

			\sim
Left Bank	eroded	vulnerable	stable
Right Bank	eroded	vulnerable	stable

FULL VERSION

Revision Date: February 9th, 2011

		Inter-'	Tran	sect: IJ	ſ		Wetted Width (n	n): [7	de la	•
					In		t Substrates			
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	CPOM	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickness Codes 0 = No microalgae present,
Left Bank	.5	75	BED		(DA)	2	P 🕢 D	P 🔊 D	PAD	Feels rough, not slimy; 1 = Present but not visible, Feels slimy;
Left Center	5	250	BUD		PA	1 .	P 🔊 D	P 🔊 D	PA D	2 = Present and visible but <1mm, Rubbing fingers on surface produces a
Center	485	105	GAND		PA	0	P 🐼 D	₽ Ø ⊅D	P 🕢 D	brownish tint on them; scraping leaves visible
Right Center	13.5	110	SAN)		(P) A	6	P A D	P 🎝 D	P 🐼 D	trail. 3 = 1-5mm; 4 = 5-20mm;
Right Bank	16.5	50	SANT	2	(P) A	Ø	P 🚯 D	₽ A ⊃D	p 🕥d	5 = >20mm; UD = Cannot determine if microalgae present.
	Note: Sub class cate	strate size gories liste	s can be i d on the	ecorded eith supplementa	ner as direct al page (dire	measures of th ct measuremen	ie median axis of its preferred)	each particle or c	ne of the size	substrate too small or covered with silt (formerly Z code), D = Dry, not assessed



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Site Code:				Site Name:		MTK	abv Or	Cr.	Date:// 2011				
Wetted Widt	h (m):	15		Bankfull Wid	ith (m): 🎖	20 Bar	nkfull Height (m):	1.5	Tra	ansect J			
						Transect S	ubstrates						
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	CPOM	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickne Codes 0 = No microalgae pres Feels rough, not slim			
Left Bank	15	2.40	COB	- <u> </u>	РА		PAD	PAD	PAD	1 = Present but not visi Feels slimy, 2 = Present and visible			
Left Center	023	121	SAND	>	Р 🕥	0	P D	P D	P D	<1mm, Rubbing fings on surface produces			
Center	7.5	99	FG		P 🔊	в	P 600	P AD	P D	brownish tint on ther scraping leaves visit trail			
Right Center	10,5	83	COB	30	DA	2	P AD	P ØD	P D	3 = 1-5mm; 4 = 5-20mm;			
Right Bank	14.5	ala	SAUD		ЮA	0	P ØD	Р б ~ D	DA D	5 = >20mm; UD = Cannot determine microalgae present,			
	Note: Sut	strate size	es can b	e recorded eit	her as direc	t measures of ct measureme	the median axis of ents preferred)	f each particle or	one of the size	substrate too small o covered with silt (formerly Z code).			

RIPARIAN VEGETATION (facing downstream)	0 = Abse 1 = Spar 2 = Mode	se (<	10%)	4			(40-7 eavy				INSTREAM HABITAT COMPLEXITY	1 = 2 = 3 =	Heavy		40-75	0%) 0%) 5%)		DENSIOMET READINGS (0 count covered	-17)
Vegetation Class	Lef	t Ba	nk		F	Righ	nt Ba	ink			Filamentous Algae	9	1	2	3	4		Center	a
	r Canopy	(>5)	m high	ŋ							Aquatic Macrophytes/ Emergent Vegetation	0	1	2	3	4		Left Center	<u>ן</u> ק
Trees and saplings >5 m high	0 11	2	3 4		0	1	$\overline{\mathcal{O}}$	3	4		Boulders	0(D	2	3	4	1	Upstream	2
	anopy (0	.5 m-	-5 m h	igh)							Woody Debris >0.3 m	0	1	2	3	4]	Center Right	13
All vegetation 0.5 m to 5 m	00	2	34		0	1	O	3	4		Woody Debris <0.3 m	0	Ð	2	3	4		Center	0
Groun	d Cover (<0.5	m hig	h)							Undercut Banks	0	1	2	3	4].	Downstream	μ.
Woody shrubs & saplings <0.5 m	00	2	34		0	1	Ø	3	4		Overhang. Vegetation	0 (0	2	3	4		Optional Left Bank	
Herbs/ grasses	0 Q	2	34		0	1	Ø	3	4]	Live Tree Roots	0	1	2	3	4			
Barren, bare soil/ duff	0 1	2	3 4	2	0	1 (0	3	4		Artificial Structures	0	1	2	3	4		Right Bank	

HUMAN INFLUENCE (circle only the closest to wetted channel)	B = 0 C = B P = >1	0 = Not Present, B = On Bank; C = Between Bank & 10m from Channel; P = >10m+<50m from Channel; Channel (record Yes or No)													
		Left F	Bank		Cha	nnel	~	Right	Banl	ĸ					
Walls/ Rip-rap/ Dams	Р	С	в ($\mathbf{\hat{o}}$	Y	(\mathfrak{O})	(ò)) B_	С	Р					
Buildings	Р	С	В	Q	Y	ž	Ĩ	В	С	Р					
Pavement/ Cleared Lot	Р	С	В	¢			ø	В	С	Р					
Road/ Railroad	Р	С	В	¢	Y	N	Þ	В	С	Р					
Pipes (Inlet/ Outlet)	Р	С	В	9	Y	N	þ	В	С	Р					
Landfill/Trash	Р	С	В	9	Y	Ν	ģ	В	С	Р					
Park/ Lawn	P	С	В	¢			ģ	В	С	Р					
Row Crop	P	С	В	9			Ģ	В	С	Ρ					
Pasture/ Range	Р	С	В	¢			Ó	В	С.	Р					
Logging Operations	Р	С	B	¢			ģ	В	С	Ρ					
Mining Activity	P	С	В	¢.	Y	N	ģ	В	С	Р					
Vegetation Management	P	С	В	Ó			Q	В	С	Р					
Bridges/ Abutments	P	C.	В	ģ	Y	N	Q	В	С	Р					
Orchards/ Vineyards	P	С	В	¢		1	þ	В	С	Р					

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FULL VERSION

Revision Date: February 9th, 2011

	Ĵ	[nter-]	Frans	sect: Jk			Wetted Width (m	n): / D		• •
	D :		<u> </u>		In	ter-Transect	Substrates			
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	СРОМ	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickness Codes 0 = No microalgae present,
Left Bank	15	99	BED		P 🔊	l	P A D	P 🖉 D	р 🖉 D	Feels rough, not slimy; 1 = Present but not visible, Feels slimy;
Left Center	2.5	D	BLD		Р Ø	2	P A D	P A D	P \land D	2 = Present and visible but <1mm: Rubbing fingers on surface produces a
Center	5	67	CB	70	Р 🔗	l	P 👌 D	P (A) D	P 🔕 D	brownish tint on them, scraping leaves visible trail.
Right Center	7.5	0	BLD	-	Р 🕖	1	P AD	P 🔊 D	P 🔊 D	3 = 1-5mm; 4 = 5-20mm;
Right Bank	9.5	3	CB	10	Р Ø	. (.	P 🔊 D	P 🖉 D	P \land D	5 = >20mm, UD = Cannot determine if microalgae present,
	Note: Sub class cate	strate size gories liste	s can be d on the	recorded eith supplementa	ier as direct I page (dire	measures of th of measuremen	e median axis of ts preferred)	each particle or o	one of the size	substrate too small or covered with silt (formerly Z code). D = Dry, not assessed

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Run Girta	20
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Site Code:				Site Name:	• (• •	ab	~	Or, Cr.	, ·	Date:// 2011					
Wetted Wid	th (m):	3		Bankfull Wid	^{Ith (m):} 2	5	Bankf	ull Height (m):	1.5	Transect K					
						Transe	et Sul	ostrates		State State					
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	CPOM	Microa Thickn Cod	iess	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickne Codes 0 = No microalgae prese Feels rough, not slimy				
Left Bank	, 5	27	CG		Þ À	C	>	p 🖉 D	P 🖉 D	P D	1 = Present but not visit Feels slimy;				
Left Center	3	29	SER		(P)A	2		(P)A D	P \land D	P 🕭 D.	2 = Present and visible <1mm; Rubbing finger on surface produces				
Center	6.5	30	CB	20	Р О	١		P 🙆 D	P (D)	P D	brownish tint on them scraping leaves visibl trail				
Right Center	9.5	0	BLD		P 🖄	l		P 🔕 D	P 🙆 D	P 🔊 D	3 = 1-5mm; 4 = 5-20mm;				
Right Bank	12.5)0	CB	30	ĎА	١.		P 🔊 D	P 🔊 D	P 🔗 D	5 = >20mm; U = Cannot determine if microalgae present,				
	Note: Sub class cate	strate size gories list	es can bi ed on th	e recorded eit e supplement	her as direc al page (dire	t measure ect measu	s of the rement	e median axis of s preferred)	each particle of	one of the size	substrate too small o covered with silt (formerty Z code). D = Dry, not assessed				

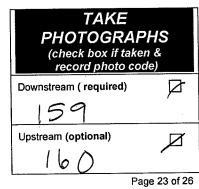
RIPARIAN VEGETATION (facing downstream)	0 = Abser 1 = Spars 2 = Mode	se (<'	10%)	4 = V			-75%) y (>75			INSTREAM HABITAT COMPLEXITY	1 = Spa 2 = Mod 3 = Hea 4 = Very	lerate (* vy (*	40-75	%) %)		READINGS (0 count covered	-17)
Vegetation Class	Left	Ba	nk		Rig	nt B	lank			Filamentous Algae	(A) 1	2	3	4	Γ	Center	17
Upper	r Canopy	(>5 n	n high)							Aquatic Macrophytes/ Emergent Vegetation	01	2	3	4	┝	Left Center	16
Trees and saplings >5 m high	0 (1)	2	34	0	1	(2)) 3	4		Boulders	0 1	2	3	4		Upstream	5
	anopy (0.	5 m-	5 m hig	h)						Woody Debris >0.3 m	(6)1	2	3	4		Center	8
All vegetation 0.5 m to 5 m	0 1	0	34	0	1	2) 3	4		Woody Debris <0.3 m	° C) 2	3	4	╞	Center	6
Groun	d Cover (·	<0.5	m high)							Undercut Banks	01	2	3	4		Downstream	
Woody shrubs & saplings <0.5 m	0 1	2	<u>3</u> 4	0	1	2	3	4		Overhang. Vegetation	01	2	3	4		Optional Left Bank	×
Herbs/ grasses	0 (1)	2	3 4	0	m	2	3	4		Live Tree Roots	01	2	3	4			
nerusi grasses		-	· · ·	Ľ	$\underline{\circ}$	~			1							Right Bank	
Barren, bare soil/ duff	0 1	<u>(2)</u>	3 4	0	1	<u>(2)</u>	3	4		Artificial Structures	101	2	3	4		-	

HUMAN INFLUENCE (circle only the closest to wetted channel)	0 = Not Present; B = On Bank; C = Between Bank & 10m from Channel; P = >10m+<50m from Channel; Channel (record Yes or No)										
		Left I	Bank		Chan	Channel		Right Bank			
Walls/ Rip-rap/ Dams	P	С	В	6)	YC	B	Ø	В	С	Р	
Buildings	Р	С	В	G	Y	Ī.	P	В	С	P	
Pavement/ Cleared Lot	Р	С	В	q			9	В	С	Р	
Road/ Railroad	Р	С	В	d	Y	ĥ	q	В	С	Р	
Pipes (Inlet/ Outlet)	Р	С	В	0	Y	Ņ	d	В	С	Р	
Landfill/ Trash	Р	С	В	0	Y	Ņ	¢	В	С	Ρ	
Park/ Lawn	Р	С	В	0			¢	В	С	Р	
Row Crop	P	С	В	0			¢	В	С	P	
Pasture/ Range	P	С	В	0			0	В	С	Р	
Logging Operations	P	С	В	0			ø	В	С	Ρ	
Mining Activity	P	С	В	0	Y	N	¢	В	С	Р	
Vegetation Management	P	С	В	0			ø	В	С	Р	
Bridges/ Abutments	P	С	В	0	Y	N	þ	В	С	Р	
Orchards/ Vineyards	P	С	В	0			6	В	С	Р	

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SWAMP Stream Hab	itat Characterization	n Form	<u>FULL</u>	VERSION	Rev	ision Date: February 9 th , 2011	
Site Code:	n ginn i An start	Date: _	/	/ 2011		FULL FORM	
	BENTHIC INVERT	EBRATE	SAMPLES	3		Chemistry Equipment	t ID
	llection Method ard or margin-cente	r-margin)		Replicate	# jars	C. Alexandra and a second s	
RWB (standard)	RWB (MCM)	TR	xc	1		pH.,	
RWB (standard)	RWB (MCM)	TR	C	2		temperature	
RWB (standard)	RWB (MCM)	TR				dissolved oxygen	
RWB (standard)	RWB (MCM)	TR				specific conductance	-
Field Notes/ Corr	nments:				- .	salinity	
					· * ,	alkalinity	
						turbidity	
						silica	
						Velocity	
	ALGAE				¥1	Water and Sedimen	t
Collection (circle one or write new r		SWAMP Emap	SWAMP EMAP	SWAMP EMAP	SWAMP EMAP	Chemistry Samples	
Collection (sum # of transect		Rep. 1	Rep. 2	Rep.	Rep.	Check if a WATER chemistry grab sample was collected	
Rubber Delimiter (area						(nutrients, SSC, etc.)	
PVC Delimiter (area=12 Syringe Scrubber (area				_		Check if a DUPLICATE WATER chemistry grab sample was	
Other area=	1-5.3cm)					collected	
Number of transects s	ampled (0-11)					Check if a SEDIMENT chemistry sample was collected	
Composite Volume (m	nL)					Check if a DUPLICATE SEDIMENT chemistry sample	
Assemblage ID volume (diatoms)			_		was collected	
	(50 mL tube)				4 	Sediment Collection SCOOP CORE C Device:	GRAB
Assemblage ID volume (soft algae) (50 mL tube)					Material Stainless Steel Polyethy	/lene her
Check if Qualitative Alga collected with soft algae/ (required even if macroalga	e sample was diatom sample					Sediment Collection 2 or Depth (cm):	
Check if a water chem. in was collected (chl, AFDN	ntegrated sample					Create Lab Collection records for each check box for integrated and grab water chemistry samples	ked
Chlorophyll a volume (25 mL (prefe	use GF/F filter rred volume)					our per se	
Ash Free Dry Mass (AFDM) volume (25 m	use GF/F filter L (preferred vol)						
			IONAL PI	HOTOGRAPH	S		
Description	Photo (Code		Descri	ption	Photo Code	
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FULL VERSION

Revision Date: February 9th, 2011

Flow Habitat Type	DESCRIPTION
Cascades	Short, high gradient drop in stream bed elevation often accompanied by boulders and considerable turbulence
Falls	High gradient drop in elevation of the stream bed associated with an abrupt change in the bedrock
Rapids	Sections of stream with swiftly flowing water and considerable surface turbulence. Rapids tend to have larger substrate sizes than riffles
Riffles	Shallow sections where the water flows over coarse stream bed particles that create mild to moderate surface turbulence; (< 0.5 m deep, > 0.3 m/s).
Runs	Long, relatively straight, low-gradient sections without flow obstructions. The stream bed is typically even and the water flows faster than it does in a pool; (> 0.5 m deep, > 0.3 m/s). A step-run is a series of runs separated by short riffles or flow obstructions that cause discontinuous breaks in slope
Glides	A section of stream with little or no turbulence, but faster velocity than pools; (< 0.5 m deep, < 0.3 m/s)
Pools	A reach of stream that is characterized by deep, low- velocity water and a smooth surface; (> 0.5 m deep, < 0.3 m/s)

Size Class Code	Size Class Range	Size Class Description	Common Size Reference		
RS	> 4 m	bedrock, smooth	larger than a car		
RR	> 4 m	bedrock, rough	larger than a car		
ХВ	1 - 4 m	boulder, large	meter stick to car		
SB	25 cm - 1.0 m	boulder, small	basketball to meter stick		
CB	64 - 250 mm	cobble	tennis ball to basketball		
GC	16 - 64 mm	gravel, coarse	marble to tennis ball		
GF	2 – 16 mm	gravel, fine	ladybug to marble		
SA	0.06 – 2 mm	sand	gritty to ladybug		
FN	< 0.06 mm	fines	not gritty		
HP	< 0.06 mm	hardpan (consolidated fines)			
WD	NA	wood			
RC	NA	concrete/ asphalt			
ОТ	NA	other			

provide clues category wh	BANK STABILITY s measure of the degree of erosive potential is subjective, it can to the erosive potential of the banks within the reach. Assign the ose description best fits the conditions in the area between the atted channel and bankfull channel (see figure below)
Eroded	Banks show obvious signs of erosion from the current or previous water year; banks are usually bare or nearly bare
Vulnerable	Banks have some vegetative protection (usually annual growth), but not enough to prevent erosion during flooding
Stable	Bank vegetation has well-developed roots that protect banks from erosion; alternately, bedrock or artificial structures (e.g., concrete/ rip-rap) prevent bank erosion

C			
		DEDN	

CPOM: Record presence (P) or absence (A) of coarse particulate organic matter (>1.0 mm particles) within 1 cm of each substrate particle

Cobble Embeddedness: Visually estimate % embedded by fine particles (record to nearest 5%)

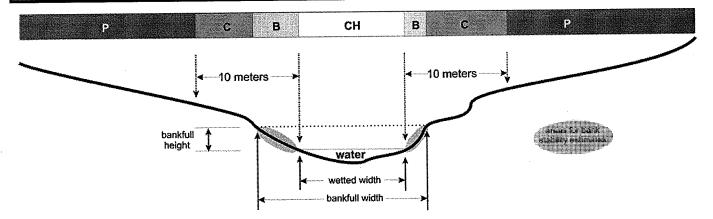


Figure 1. Cross-sectional diagram of stream transect indicating regions for assessing human influence measures:

- The measurement zone extends 5 meters upstream and 5 meters downstream of each transect
- Record one category for each bank and for the wetted channel (3 values possible)
- In reaches with wide banks, region "C" may be entirely overlapped by region "B"; in these cases, circle "B"
- Region "P" extends from 10 meters to the distance that can be seen from the channel, but not greater than 50 m

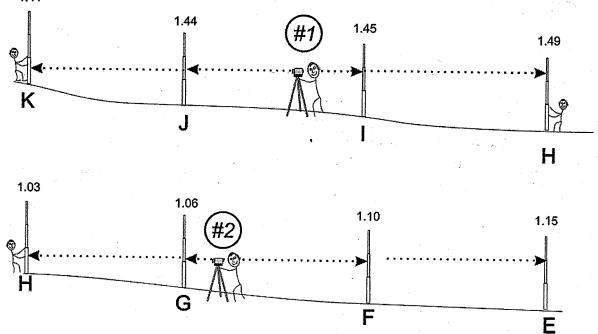
FULL VERSION Revision Date: February 9th, 2011

1.1.1

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	SL	OPE	and Beari	ng Fori	M.	EXA	MPLE		C	AUTOLEV LINOMET HANDLEV		
Starting	MAIN SEGMENT (record percent of inter-transect distance in each segment if supplemental segments are used)						SUPPLEMENTAL SEGMENT (record percent of inter-transect distance in each segment if supplemental segments are used)					
Transect	Stadia ro measureme	2010 Barris	Slope (%) or Elevation Difference Cm	Segment Length (m)	Bearing (0°-359°)	Percent of Total Length (%)	Stadia rod measurements	Slope or Elevation Difference	Segment Length (m)	Bearing (0°-359°)	Percent of Total Length (%)	
K	1.41											
J	1.44		3	15	140	100					· .	
	1.45		y 1	15	145	100						
Н	1.49 1	.03	4	15	150	100						
G	1	.06	3	15	143	100	4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1					
F	1	.10 ⁻	4	15	187	100				-		
Е	1	.15	5	15	195	100			•	· .		

1.41



- 1. Level the autolevel at Position #1
- 2. Place base of stadia rod at water level every time
- 3. Sight to stadia rod at Transect K, then Transect J
- 4. Rotate scope and sight to Transects I and H.
- 5. Move level to Position #2 and re-level

6. Re-sight to stadia rod at Transect H, then Transect G 7. Rotate scope and sight to Transects F and E

Note: Sites will vary in the number of separate level positions needed to survey the reach.

	UTN	1 TOP	= 06	64918	r, c	13622	238								
		/IP Stream Ha	abitat Chara	acterizatio	n For	n <u>FULI</u>	<u>ILL VERSION</u> Revision Date: February 9 th , 2011 Length (wetted width ≤ 10 m) = 150 m Distance between transects = 15 m								
	Re	ACH DOCUM	IENTATION	1	. S			width ≤ 10 m) = vetted width ≥10) m) = 250 m	Distance be					
	Project	Name: YCV	NA				Date:	1 / 9	/ 201 2 S	ample ollection T	ime: 0ª	100			
		Name: MY			9¢	· · ·		/ Description:	MYR	below					
	Site Co	ode: 7CB	MI-5	5			Crew Men	nbers: C.V.	ertucei Ashente	Iter C	Wise	man			
~ Khom	Latitud	e (actual – dée	imal degree	s): °N Ø	664	1899	datum: NAD83								
VOX	Longitu	ude (actual – et	cimal degra	€5): ⁰W	43	62044	other: GPS Device: GARMIN 60								
	Аме	BIENT WATER	QUALITY ME	EASUREMEI	NTS		nd silica are o tion date req			REACH	LENGTH				
1	Tem (Deg		рH	6.3	S A	lkalinity (mg/L)	Turbid (ntu)			al Length (250			
			cal. date				cal. date			top of form)	omioo.	200			
	Dissol O ² (mo		Specific. Conduct (uS/	cm) 124		Salinity. (ppt)	Silica (mg/L		Explanatio	on: 					
	cal. date		cal. date		ca dai	12222200	cal. date								
	. st	DISCHARGE		a second second second second			che	ck if discha	rge measu ain in field r			ible			
	1999 (A. 1997)	asurement = le				cal. date	Tran: (m):	sect Width	BUQYANT	г Овјест	Method (use ONLy if			
		Distance from		Velocity	, 	Distance from	`` /	Velocity	veloc	city area met					
		_eft Bank (ੴ) ⊘		(ft/sec)	11	Left Bank (cm) ちゃ	(cm)	(ft/sec)	Distance	Float 1	Fillat	2 Float 3			
	2	5	0	1.73	12	55	. 6	.69	(m) Float Time		+/	/			
-	3	10	1.4	122	13	60	. 6	124	(sec) Flo	at Reach (Pross Ser	stion			
	4	15	1.2	191	14	65		1.26	width (m) depth(cm)	Upper Section	Middle Section	Lower Section			
-	5	20	1.6	1.08	15	70	13	. 93	Width						
	6	25	[,0	1.02	16	75	0	0	Depth 1	/		λ			
	7	20	,5	.8	17	80	0	0	Depth 2						
	8 9	35	19	153	18 19	90	, 4	1,65	Depth 3 Depth 4			-			
	9 10	40 45	,9	144	20	95	,)	1.42	Depth 6	r		\			
		()	• 1				ONS (che								
	E	vidence of rec	ent rainfall			ase surface ru		NO	[<u>.</u>]	inimal		% flow rease			
	E	Evidence of fir	es in reach	or immedi	iately 1	upstream (<500	lm)	NO	X <	1 year		years			
				and the second				Agriculture		orest	X Ran	geland			
		Dominant la	nduse/ land	cover in a	rea su	rrounding reac	h	Urban/ Industrial	Subu	ırb/Town	0	ther			
	ADDI	TIONAL COBBI	_E 1	2	3	4 5	6	7 8	9	10	11 1	12 13			
		IBEDDEDNESS	20	10	5	0 30	35	50 55	5 15	25 :	30 1	0 35			
	forms	over from transe if needed to atta	in 🗌	15	16	17 18	19	20 21	22	23	24 2	25			
		get count of 25; neasure in %)	60	40	(5	0 10	25	30							
	NOT	E! TOP	OF S	ITE W	いちん	T INTO	DEE	P. ALTE	IRED	POOL	BY	Page 1 of 26			

HWY 49, SHIFTE TRANSECTS 50M DS OF ORIGINAL "BOTTOM"

S here was

A

FULL VERSION

Revision Date: February 9th, 2011

Site Code:		~		Date: 0 1	1091	204 /	2					
	SLOPE	and Br	EARING FO	RM (trar	nsect ba	ased - f	or Full	PHAB	only)		AUTOLEVE	RX
			MAINS	EGMENT					SUPPLEMEN'		HANDLEVE	
Starting	(rec		nt of inter-trans	ect distance		gment	(re		ant of inter-trans	ect distance	in each seg	iment
Transect	Stadia measure		Slope (%) or Elevation Difference Cm % X	Segment Length (m)	Bearing (0°-359°)	Percent of Total Length (%)		lia rod irements	Slope or Elevation Difference	Segment Length (m)	Bearing (0°-359°)	Percent of Total Length (%)
K												
J	1		1.5	25	-	(0		5				
_			5	25		10						
Η			\mathcal{O}	25		10					-	
G			15	25		(0		F 5 7 7 1			-	
F			1	25		10						
E			l	25		iD						
D			15	25		10						
C			15	25		10		2				
В			Ą	25		0 /		5 5 6 8 9 9				
Α	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		О	25		10						
additional calculation area				•					· · · · ·	-		
	,	Addition	ial Habitat	CHARACT	ERIZATION	۷		ł	ligh Gradiei	nt 🔲	Low Gra	dient
Para	meter		Optim Greater than 70%	of substrate		uboptim			Marginal		Poor	
Epifauna Ci	l Substra over	te/	orable for epifaun and fish cover (50 gradient stream Ibmerged logs, un	% for low- s); mix of dercut banks,	50% for	nix of stable ha low-gradient s ed for full colo potential	treams);	30% in I	nix of stable habitat ow-gradient stream frequently disturbe removed	s); (10% dor la	ss than 20% sta 6 in low-gradier ick of habitat is ostrate unstable	nt streams); obvious;
So	ore:	20		17 16	15 14	• • •	12 11	10 9) 8 7	6 5	4 3 2	
Sediment	Depositi	on th	ttle or no enlargerr point bars and les te bottom affected eposition (<20% in streams	s than 5% of by sediment low-gradient	formatio sand, or fi the botto	new increase in, mostly from ine sediment, im affected (20 gradient strea	i gravel, 5-30% of 250% in	sand, or fir 50% of th	leposition of new gr re sediment on bars re bottom affected (ow-gradient stream	30- 50 - moi s) cha	vy deposits of fi reased bar dev re than 50% of nging frequentl low-gradient st	elopment; the bottom y (>80% in
Sc	ore:	20		17 16		hannelization		10 (S) 8 7 ation may be exten		4 3 2 nks shored with	i gabian or
Channel	Alteratio	n c	iannelization or dro or minimal; stream pattern	with normal	of past cl may b	pe abutments) hannelization e present but elization not p	> 20yrs) recent	embankme present or	ints or shoring struct both banks; 40 to am reach disrupted	tures reach	ent; Over 80% c channelized a eam habitat gre or removed e	nd disrupted. eatly altered
Sc	ore:	20	19 1 <u></u> 8	17 16	15 14	. 11	12 11	10 ទ	87	6 5	4 3 2	

Page 2 of 26

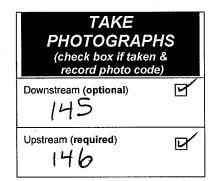
SWAMP Stream Habitat Ch	aracterization Form	FULL VERSION	Revision Date: February 9 th , 2011
Site Code:	Site Name: MYR	, w oc	Date: 07/09/2015 2
Wetted Width (m): 35 m	Bankfull Width (m): 50	Bankfull Height (m):	Transect A

						Transect Su	bstrates			
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	CPOM	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickness Codes 0 = No microalgae present, Feels rough, not slimy;
Left Bank	,5	73	110	70	P A	Ø	P A D	P 🔕 D	PAD	1 = Present but not visible, Feels slimy;
Left Center	8.5	109	<i>,</i> 65	40	P 🔕	D	P 🏠 D	P 🖉 D	P 🕢 D	2 = Present and visible but <1mm; Rubbing fingers on surface produces a
Center	17.5	46	GAN	D	A	D	P A D	P A D	PAD	brownish tint on them, scraping leaves visible trail
Right Center	26.0	35	GAND	0	P A	0	P \land D	P (A) D	P 🏠 D	3 = 1-5mm, 4 = 5-20mm;
Right Bank	34.5	23	SAND	0	Ю́А	0	P \land D	P 🖉 D	P A D	5 = >20mm; UD = Cannot determine if microalgae present,
						t measures of th oct measuremen	e median axis of ts preferred)	each particle or	one of the size	substrate too small or covered with silt (formerly Z code): D = Dry, not assessed

RIPARIAN VEGETATION (facing downstream)	1 =	Abse Spar Mod	rse (<	:10%	~~~~	3 = H 4 = ∀6						INSTREAM HABITAT COMPLEXITY	1 = 2 = 3 =	Heav	ie rate (y ((0% (<10 (10-40 (40-75 y (>75	0%) 0%) 5%)		DENSIOMET READINGS (0 count covered)-17)
Vegetation Class		Lei	t Ba	ink			Rig	ht B	ank			Filamentous Algae	0	1	2	3	4	Ī	Center	
Upper	r Cai	юру	(>5	m h	igh)					~		Aquatic Macrophytes/ Emergent Vegetation	0	$\overline{\bigcirc}$	2	3	4		Left	1
Trees and saplings >5 m high	0	1	2	3	4	0	1	2	3	(4)	1	Boulders	0 (1)	2	3	4	. 1	Upstream	0
Lower C	ano	p y (0	.5 m	-5 n	n hig	n)				<u> </u>		Woody Debris >0.3 m	0	1	2	3	.4		Center	2
All vegetation 0.5 m to 5 m	0	1	2	3	(4)	0	1	2	(3)) 4		Woody Debris <0.3 m	0	Ø	2	3	4		Right	14
Groun	d Cc	ver (<0.5	m	high)				$\overline{}$			Undercut Banks	0	1	2	3	4		Center Downstream	${\mathcal O}$
Woody shrubs & saplings	0	1	2	3	12	0	1	2	6)	4		Overhang. Vegetation	0	n	2	3	4		Optional	1
<0.5 m Herbs/ grasses	0	6	2	3	4	0	1	(2)	3	4		Live Tree Roots	0	$\overline{\mathbb{A}}$	2	3	4		Left Bank	X
Barren, bare soil/ duff	0		2	3	Â)	0	1	2	3	(<u>4</u>)		Artificial Structures	0		2	3	4		Right Bank	$ \mathbf{x} $

HUMAN INFLUENCE (circle only the closest to wetted channel)	0 = Not Present; B = On Bank; C = Between Bank & 10m from Channel; P = >10m+<50m from Channel; Channel (record Yes or No)													
		Left	Bank	~	Cha	nnel		ĸ						
Walls/ Rip-rap/ Dams	P	С	В	0	Y	0	Q	В	С	Р				
Buildings	Р	С	В	Q	Y	(Ñ)	Q	В	С	Ρ				
Pavement/ Cleared Lot	P	С	В	0			0	В	С	Ρ				
Road/ Railroad	(P)	С	В	Q	Y	\mathbb{P}	0	В	С	Ρ				
Pipes (Inlet/ Outlet)	P	С	В	0	Y	Ø	Ø	В	С	Ρ				
Landfill/ Trash	P	С	В	Ø	Y	Ø	$\left(0\right)$	В	С	Ρ				
Park/ Lawn	P	С	В	0			Ø	В	С	Р				
Row Crop	Р	С	В	0			0	В	С	Р				
Pasture/ Range	Р	С	В	0			19	В	С	Р				
Logging Operations	Р	С	В	Ø			\mathcal{O}	В	С	Р				
Mining Activity	P	С	В	Ø	Y		6	В	С	Р				
Vegetation Management	Р	С	В	6			Ø	В	С	Р				
Bridges/ Abutments	P	С	В	0	Y	(N)	$\left(\right)$	В	С	Р				
Orchards/ Vineyards	P	С	B	0		<u> </u>	Ø	В	С	Р				

teres sent	DANAS		io na soci
Left Bank	eroded	vuinerable	Sec.
Right Bank	eroded	vuinerabie	(B)



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SWAMP Stream Habitat Characterization Form FULL VERSION Revision Date: February 9 th , 2011 Inter-Transect: AB Wetted Width (m): 35 ~ Inter-Transect: AB Wetted Width (m): 35 ~ Inter-Transect: AB Microalgae Macroalgae Macrophytes Microalgae Thickness Position Dist from Depth (cm) mm/ size % Cobble Cobble CPOM Microalgae Macroalgae Macrophytes Microalgae Thickness Codes Left
Dist positionDepth from LB.(m)mm/ size (cm)% size Cobble classMicroalgae CPOMMacroalgae Thickness CodeMacroalgae UnattachedMacroalgae
Left · · · · · · · · · · · · · · · · · · ·
Center 8,5 III 20 P (A) O P (A) D P (A) D A (D) Constraint (C) Center I III 20 P (A) O P (A) D P (A) D P (A) D State Constraint (C) Constraint (C) <thconst< td=""></thconst<>
Center 1 49 Sty 90 P A S P A D P A D Scraping leaves visible trail.
Center 25^{-1} 55 4^{AN} P P A V P A D P A D $4 = 5-20$ mm.
Bank 34.5 20 0.8 30 PA O PAD PAD UD = Cannot determine if microalgae present.
Note: Substrate sizes can be recorded either as direct measures of the median axis of each particle or one of the size class categories listed on the supplemental page (direct measurements preferred) substrate too small or covered with silt (formerly Z code).
D = Diry, not assessed
FLOW HABITATS
Channel Type
Cinstate/Falls.
Ranki
Frun 20
Pool 30
Page 4 of 26

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SWAMP Stream Habitat Chara	acterization Form	FULL VERSION	Revisio	on Date: February 9 th , 2011
Site Code:	Site Name: MYR 5	w Or. Cr	· ·	Date: 071091209 12
Wetted Width (m): 35	Bankfull Width (m): 50	Bankfull Height (m):	.5	Transect B

						Transect Su	bstrates			
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	CPOM	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickness Codes 0 = No microalgae present, Feels rough, not slimy.
Left Bank	,5	37	490	0	PA	2	P 🕢 D	P 🖉 D	P 🙆 D	1 = Present but not visible, Feels slimy,
Left Center	8.5	81	140	40	P A	0	р () D	P 🔕 D	P 🙆 D	2 = Present and visible but <1mm; Rubbing fingers on surface produces a
Center	17	58	44	60	РА	2	P \land D	P 🔊 D	P D	brownish tint on them, scraping leaves visible trail
Right Center	25.5	29	grow	-	Р 🖉	Ø	Р (Д D	P 🐼 D	P ØD	3 = 1-5mm; 4 = 5-20mm;
Right Bank	34.5	26	gran		PA	Ø	P 🗿 D	P 🅢 D	1 A D	5 = >20mm; UD = Cannot determine if microalgae present,
						t measures of th ect measuremen	e median axis of ts preferred)	each particle or	one of the size	substrate too small or covered with slit (formerty 2 code). D = Dry, not assessed

RIPARIAN VEGETATION (facing downstream)	1 = 5	Spar	ent (C se (* erate	<1Ó%	;) 40%)	3 = H 4 = V					INSTREAM HABITAT COMPLEXITY	1 = 2 = 3 =	Hea	rse erate (10-40 40-71	0%) 0%) 5%)		DENSIOMET READINGS (0 count covered	-17)
Vegetation Class		Lef	t Ba	ank			Rig	ht B	ank		Filamentous Algae	0	1	2	3	4		Center	1.
Upper	Can	ору	(>5	mh	igh)						Aquatic Macrophytes/ Emergent Vegetation	0	0	2	3	4		Left Center	9
Trees and saplings >5 m high	0	1	2	3	(4)	0	1	2	3	0	Boulders	0	1	(2)	3	4		Upstream	0
Lower C	anop	y (0	.5 m	-5 m	n higt	1)					Woody Debris >0.3 m	0	1	2	3	4		Center	0
All vegetation 0.5 m to 5 m	0.	1	2	3	€	0	1	2	3	Ø	Woody Debris <0.3 m	0	Ø	2	3	4		Right Center	0
Groun	d Cov	/er (<0.5	i m l	nigh)						Undercut Banks	(0)) 1	2	3	4		Downstream	
Woody shrubs & saplings <0.5 m	0	1	2	3	4	0	1	2	3	4	Overhang. Vegetation	Ő	(1)) 2	3	4		Optional	<u> </u>
Herbs/ grasses	0	1	2	0	4	0	1	0	3	4	Live Tree Roots	6) 1	2	3	4		Left Bank Right Bank	
Barren, bare soil/ duff	0	1	Ø	3	4	0	1	(4	3	4	Artificial Structures	0	1	2	3	4]	Right Bank	

HUMAN INFLUENCE (circle only the closest to wetted channel)	0 = Not Present; B = On Bank; C = Between Bank & 10m from Channel; P = >10m+<50m from Channel; Channel (record Yes or No)														
		Left I	Bank	(Cha	nnel		Right	Ban	k					
Walls/ Rip-rap/ Dams	P	С	В	6	Y	Ŵ	0	В	С	P,					
Buildings	P	С	В	¢	Y	N	9	В	С	Ρ					
Pavement/ Cleared Lot	P	С	В	ģ			d	В	С	Ρ					
Road/Railroad	Р	С	В	d	Y	N	d	В	С	Ρ					
Pipes (Inlet/ Outlet)	P	С	В	ģ	Y	N	d	В	С	Ρ					
Landfill/ Trash	Р	С	В	þ	Y	Ν	d	В	С	Ρ					
Park/ Lawn	P	С	В	ģ			¢	В	С	Ρ					
Row Crop	P	С	В	þ			9	В	С	Р					
Pasture/ Range	P	С	В	þ			Ø	В	С	Р					
Logging Operations	P	С	В	ģ			¢	В	С	Р					
Mining Activity	P	С	В	ø	Y	Ν	þ	В	С	Р					
Vegetation Management	Р	С	В	6			¢	В	С	Р					
Bridges/ Abutments	Р	С	В	ø	Y	N	0	В	С	Р					
Orchards/ Vineyards	Р	С	В	6		·	9	В	С	Ρ					

		al an deserve at	
Left Bank	eroded	vutnerable	stable
n Right Sanke	eroded	vuinerabie	Zstably

SWAMP	Stream I	Habitat (Charac	terization	Form	<u>FULL V</u>	<u>/ERSION</u>	n Date: Febr	uary 9 th , 2011				
	Ĩ	nter-7	Frans	ect: BC	7)	Wetted Width (m): 35							
					. In	ter-Transect	Substrates						
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	СРОМ	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	U = No microalgae present,			
Left Bank	.5	45	GANY		PA	Ο	P Ø D	P 🖗 D	P A D	 Feels rough, not slimy; 1 = Present but not visible, Feels slimy; 			
Left Center	6,5	96	55	70	PA	2	P 🏠 D	P \Lambda D	P 🗿 D	2 = Present and visible but <1mm; Rubbing fingers on surface produces a			
Center	17	35	50	40	(F A	2	P D D	P A D	P 🖗 D	brownish tint on them, scraping leaves visible trail.			
Right Center	25.5	2.6	310	<u> </u>	Р 🖗	Ð	·P. A D	P 🚯 D	PAD	3 = 1-5mm; 4 = 5-20mm;			
Right Bank	34.5	10	UB	50	₽ A	2	P 🏠 D	р 🔗 D	PAD	5 = >20mm, UD = Cannot determine if microalgae present,			
						t measures of th of measurement		each particle or o	one of the size	substrate too small or covered with silt (formerly Z code) D = Dry, not assessed			
		•		معرف معرف	• •								
	Y HABITA Harita		· · ·	1	¹⁹ 19			1 .	x 1				
n Chenne	Тура	56		÷ #									

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Cascodel Palls Cascodel Palls Rapid Rime 10 Run 40 Glids 30 Pool 20

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lite Code:	Site Name: MTK	blw Or. Cr.	Date: 071091204512
Vetted Width (m): 30	Bankfull Width (m): 50	Bankfull Height (m): 1,5	Transect C

Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	СРОМ	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickness Codes 0 = No microalgae presen Feels rough, not slimy
Left Bank	15	66	12	_	(P) Å	0	P A D	P 🖉 D		1 = Present but not visible Feels slimy,
Left Center	7.5	84	SKNS	-	ĎА	O .	P 🚯 D	P OD	D A D	2 = Present and visible bu <1mm; Rubbing fingers on surface produces a
Center	15	28	70	Ø	P 🕢	١	P 🏟 D	P 🔗 D	P 🕢 D	brownish tint on them, scraping leaves visible trail.
Right Center	22.5	2	SAND		P 🚯	0	P 🖨 D	P A D	Р 🙆 D	3 = 1-5mm; 4 = 5-20mm;
Right Bank	29.5	22	cob	15	P A	D	P 🏈 D	P A D	P A D	5 = >20mm; UD = Cannot determine i microalgae present,
	Note: Sub class cate	strate size gories liste	es can be ed on the	recorded eit	her as direc al page (dire	t measures of th ect measuremen	e median axis of ts preferred)	each particle or	one of the size	substrate too small or covered with silt (formerly Z code). D = Dry, not assessed

RIPARIAN VEGETATION (facing downstream)	1.=	Spai	ent (0 rse (< erate	10%)	3 = H 4 = V						INSTREAM HABITAT COMPLEXITY	1= 2= 3=	Absent Sparse Modera Heavy Very He) ate (10 (40)-75%	6) 6)		DENSIOMET READINGS (0 count covered of	-17)
Vegetation Class		Le	ft Ba	nk			Rig	ht B	ank	(Filamentous Algae	\bigcirc	1	2	3	4	ſ	Center	1
Upper	r Can	ору	(>5 i	m hi	gh)							Aquatic Macrophytes/ Emergent Vegetation	0	1 (\hat{z}	3	4	+	Left Center	0
Trees and saplings >5 m high	0	1	2	3	(4)	0	1	2	13	4	1	Boulders	0	1 (2	3	4		Upstream	
Lower C	anop	y (0	.5 m	-5 m	hig	1)			~			Woody Debris >0.3 m	0	\odot	2	3	4	ſ	Center	6
All vegetation 0.5 m to 5 m	0	1	2	(3)	4	0	1	2	3	4		Woody Debris <0.3 m	0	0	2	3	4		Right Center	
Groun	d Co	ver	<0.5	mh	igh)							Undercut Banks	0	0	2	3	4		Downstream	
Woody shrubs & saplings <0.5 m	0	1	2	3	4	0	`1	2	3	4	•	Overhang. Vegetation	0	1 (3	3	4		Optional Left Bank	
Herbs/ grasses	0	1	(5)	3	4	0	1	2	13) 4]	Live Tree Roots	0	ന	2	3	4			X
			9			Ľ		~~~	U				-	~			_		Right Bank	X
Barren, bare soil/ duff	0	1	2	3	<u> </u>	0	1 ($\binom{2}{2}$	3	4		Artificial Structures	C	<u></u>	2	3	4		<u> </u>	

HUMAN INFLUENCE (circle only the closest to wetted channel)	B = 0 C = B P = >	0 = Not Present; B = On Bank, C = Between Bank & 10m from Channel; P = >10m+<50m from Channel; Channel (record Yes or No)												
		Left	Bank		Cha	nnel	Right Bank							
Walls/ Rip-rap/ Dams	P	С	В	0	Y	8	0) В	С	Р				
Buildings	P	С	В	þ	Y	Ø	ρ	В	С	Ρ				
Pavement/ Cleared Lot	Р	С	В	0			þ	В	С	Р				
Road/ Railroad	P	С	В	þ	Y	Ø	P	В	С	Ρ				
Pipes (Inlet/ Outlet)	P	С	В	þ	Y	Ŵ	þ	В	С	Р				
Landfill/ Trash	Р	С	В	þ	Y	\bigcirc	þ	В	С	Ρ				
Park/ Lawn	P	С	В	þ			þ	В	С	Ρ				
Row Crop	P	С	В	Q			þ	В	С	P				
Pasture/ Range	Р	С	В	ģ			þ	В	С	Р				
Logging Operations	Р	С	В	ģ			d	В	С	Ρ				
Mining Activity	P	С	В	ø	Y	Ν	q	В	С	Р				
Vegetation Management	P	С	В	þ			Q	В	С	Р				
Bridges/ Abutments	Р	С	В	þ	Y	N	d	В	С	Р				
Orchards/ Vineyards	P	С	В	ð			C	В	С	Р				

(score zone Sm bas			
Left Bank 🔹	iroded	vuinerable	(stable)
Reini Bank i	rodød	winerable	(etab)

FULL VERSION

Revision Date: February 9th, 2011

		[nter-]	Frans	ect: CI)	N N	Wetted Width (n	n): 32m	:				
	Inter-Transect Substrates												
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	СРОМ	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	0 = No microalgae presen			
Left Bank	.5	36	828	and the second s	(P) A	2	P \land D	P A D	PA D	 Feels rough, not slimy; 1 = Present but not visible Feels slimy; 			
Left Center	9	26	UB	5	РА	Z	P 🏟 D	P 🚯 D	P∕¶\$⊃D	2 = Present and visible bu <1mm; Rubbing fingers on surface produces a			
Center	218	21	100	20	Þ á	1	P 🖉 D	P 🔊 D	P 🕢 D	brownish tint on them, scraping leaves visible trail.			
Right Center	27	9	Brz		Р 🙆	l	PAD	PAD	PAD	3 = 1-5mm; 4 = 5-20mm;			
Right Bank	31.5	20	603	30	ΡΑ		PAD	PAD	PAD	5 = >20mm; UD = Cannot determine if microalgae present;			
	Note: Sub class cate	strate size gories liste	s can be ed on the	recorded eith supplementa	ner as direc al page (dire	t measures of th ect measuremen	e median axis of ts preferred)	each particle or	one of the size	substrate too small or covered with silt (formerly Z code) D = Dry, not assessed			

FLOW HABITATS This bioscent transects (202+100%) Channel Type % Cascade/ Faits Rabits Rolts 80 Run 10 Gide 10 Pool

Page 8 of 26

SWAMP	Stream	Habitat	Chara	<u>cterization</u>	⊢orm		VERSION	Revis	ion Date: Febru	
Site Code:				Site Name:	MYR				Date: 0	1/09/2040/12
Wetted Wid	fetted Width (m): 32 m Bankfull Width (m): 45 Bankfull Height (m):									insect D
<u></u>						Transect Su	bstrates			
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	СРОМ	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	NU SIGNATION TO S	Microalgae Thickness Codes 0 = No microalgae present, Feels rough, not slimy;
Left Bank	.5	29	60	-	РА	1	P (Â D	Р 🖉 D	P A D -	1 = Present but not visible, Feels slimy;
Left Center	9	38	60B	0	P (Â)	l	P 🖗 D	P 🖉 D	P 🔕 D	2 = Present and visible but <1mm; Rubbing fingers on surface produces a
Center	18	18	COB	20	P A	l	P () D	P 🖉 D	P 🖉 D	brownish tint on them, scraping leaves visible trail.
Right Center	27	17	6	-	Р (А)	ſ	P A D	P \Lambda D	P A D	3 = 1-5mm; 4 = 5-20mm;
Right Bank	31.5	\$2	BLD	-	P A	Ò	P A D	P A D	PAD	5 = >20mm; UD = Cannot determine if microalgae present.
	Note: Sub class cate	ostrate size egories listi	es can b ed on th	e recorded eit e supplement	ter as direc al page (dire	t measures of th act measuremen	e median axis of its preferred)	each particle	or one of the size	substrate too small or covered with silt (formerly Z code), D = Dry, not assessed
	N VEGET/ j downstrea		1 = Spa	sent (0 %) arse (<10%) derate (10-409	4 = Very	y (40-75%) Heavy (>75%)	INSTR Hab Compi	REAM 1 ITAT 3	= Absent (0%) = Sparse (<10%) = Moderate (10-40%) = Heavy (40-75%) = Very Heavy (>75%)	DENSIOMETER READINGS (0-17 count covered dot
Vege	tation Cla			eft Bank y (>5 m high		jht Bank	Filamentous Aquatic Mac Emergent V	crophytes/) <u>1 2 3 4</u>) 1 (2) 3 4	Center Left (
Trees and	saplings >5	<u> </u>	0 1	2 3 4	0 1	2 3 4	Boulders		0 1 (2) 3 4	Center - Upstream 4

Woody Debris >0.3 m

Woody Debris <0.3 m

Overhang. Vegetation

Undercut Banks

Live Tree Roots

Artificial Structures

HUMAN INFLUENCE (circle only the closest to wetted channel)	B = 0 C = 1 P = 2	0 = Not Present; B = On Bank C = Between Bank & 10m from Channel; P = >10m+<50m from Channel; Channel (record Yes or No)												
		Left	Bank		Cha	nnel	Right Bank							
/Walle/ Rip-rap/ Dams	P	. C	В	6)	Y	\bigcirc	Ø	В	С	Р				
Buildings	P	С	В	P	Y	A	ρ	В	С	Р				
Pavement/ Cleared Lot	P	С	В	þ			p	В	С	Р				
Road/ Railroad	P	С	В	þ	Y	N)	þ	В	С	Р				
Pipes (Inlet/ Outlet)	P	С	В	þ	Y	Ø	þ	В	С	Р				
Landfill/ Trash	P	С	В	þ	Y	N	q	В	С	Р				
Park/ Lawn	P	С	В	þ			d	В	С	Р				
Row Crop	P	С	В	þ			đ	В	С	Р				
Pasture/ Range	P	С	В	þ			4	В	С	Ρ				
Logging Operations	P	С	В	¢		~	9	В	С	Р				
Mining Activity	P	С	В	þ	Y	N	¢	В	С	Ρ				
Vegetation Management	P	С	В	þ			d	В	С	Р				
Bridges/ Abutments	P	С	В	þ	Y	(M)	d	В	С	Р				
Orchards/ Vineyards	P	С	B	b		~	0	В	С	Р				

1 2 3 (4)

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2

2 🗿 4

ß 4

34

0 1 2

0

0

0 1

12

1 2

2 3 (4)

(3)

3

3 4

4

4

All vegetation 0.5 m to 5 m

Woody shrubs & saplings <0.5 m

Herbs/ grasses

Barren, bare soil/ duff

Lower Canopy (0.5 m-5 m high)

0

0 1

0 1

Ground Cover (<0.5 m high)

0 1

(\$2019 2019)	BANK - Inuciseum - Sewern Fack	o TABELI IY ni ban downoi ne ei geowethed welling	infransen:
Løtt Bank	ercded	vulnerable	(tably)
Raht Fank	eroded	vulnerable	pable)

0 (1) 2

0 (1) 2

(2)

2

0(1) 2

0 1

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 \bigcirc 1 2 3 4

34

3 4

34

34

34

2

6

×

X

Center

Right

Center

Downstream

Left Bank

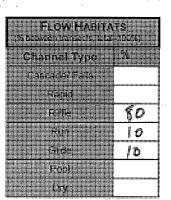
Right Bank

Optional

FULL VERSION

Revision Date: February 9th, 2011

		nter-7	Frans	ect: DF	C	l l	Wetted Width (m): 30 m					
					· In	ter-Transect	Substrates			and the second		
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed,	CPOM	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickness Codes 0 = No microalgae present.		
Left Bank	™ 5	28	66	—	PA	0	P A D	P A D	PA D	 Feels rough, not slimy; 1 = Present but not visible, Feels slimy; 		
Left Center	7.5	14	ĘоВ	0	(P) A	2	P 🔊 D	P 🙆 D	P 🗿 D	2 = Present and visible but <1mm; Rubbing fingers on surface produces a		
Center	15	29	60	— -	P A	0	P 🚯 D	P 🔊 D	Р 🕐	brownish lint on them, scraping leaves visible trail.		
Right Center	22.5	17	BUD	:	(P) A		P 🖉 D	P \land D	P 🚯 D	3 = 1-5mm; 4 = 5-20mm;		
Right Bank	29.5	3	C6	~	Р 🔊	0	PAD	P A D	P 🍙 D	5 = >20mm; UD = Cannot determine if microalgae present,		
						measures of th ct measuremen		each particle or	one of the size	substrate too small or covered with silt (formerly Z code), D = Dry, not assessed		



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SWAMP Stream Habitat Chara	acterization Form FULL VERSION Re	vision Date: February 9 th , 2011
Site Code:	Site Name: MTR bw Or.Cr.	Date: 07/69/201812
Wetted Width (m): 32	Bankfull Width (m): 45 Bankfull Height (m): 1,5	Transect E

						Transect Su	bstrates			
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	CPOM.	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickness Codes 0 = No microalgae present, Feels rough, not slimy;
Left Bank	15	20	COB	60	D A	l	PAD	P 🗿 D	P 🚯 D	1 = Present but not visible, Feels slimy;
Left Center	9	32	BLD	-	() A	Z	P A D	р 🎝 D	P AS D	2 = Present and visible but <1mm; Rubbing fingers on surface produces a
Center	18	19	S	40	PA	2	P \land D	P 💭 D	P 🔕 D	brownish tint on them, scraping leaves visible
Right Center	27	40	COB	25	P	: (P 🖉 D	P 🔊 D	P A D	trail. 3 = 1-5mm; 4 = 5-20mm;
Right Bank	31.5	18	5mm		₽ A	1	P D	P 🔊 D	P 🕢 D	5 = >20mm; UD = Cannot determine if microalgae present.
	100000000000000000000000000000000000000	000000000000000000000000000000000000000		01991191999999999999999999999999999999	50000000000000000000000000000000000000	t measures of th ect measuremen	000000000000000000000000000000000000000	each particle or	one of the size	substrate too small or covered with silt (formerly Z code) D = Dry, not assessed

RIPARIAN VEGETATION (facing downstream)	0 = Absent (0%) 1 = Sparse (<10%) 2 = Moderate (10-40%	3 = Heavy (40-75%) 4 = Very Heavy (>75%))	INSTREAM HABITAT COMPLEXITY	0 = Absent (0%) 1 = Sparse (<10%) 2 = Moderate (10-40%) 3 = Heavy (40-75%) 4 = Very Heavy (>75%)	DENSIOMETER READINGS (0-17) count covered dots
Vegetation Class	Left Bank	Right Bank	Filamentous Algae	01234	Center
Upper	Canopy (>5 m high)		Aquatic Macrophytes/	0 1 2 3 4	Left 2
-r.E		<u> </u>	Emergent Vegetation		Center 1
Trees and saplings >5 m high	0 1 (2) 3 4	0 1 (2) 3 4	Boulders	0 1 2 3 4	Upstream
Lower C	anopy (0.5 m-5 m hig	h)	Woody Debris >0.3 m	0 (1) 2 3 4	Center
All vegetation 0.5 m to 5 m	0 1 2 🕄 4	0 1 2 3 4	Woody Debris <0.3 m	0 1 2 3 4	Right Center
Groun	d Cover (<0.5 m high		Uridercut Bariks	0 1 2 3 4	Downstream O
Woody shrubs & saplings <0.5 m	0 1 2 3 4	0 1 2 🗿 4	Overhang. Vegetation	0 1 2 3 4	Optional
Herbs/ grasses	0 (1) 2 3 4	0 1 🖉 3 4	Live Tree Roots	0 1 2 3 4	Left Bank
Barren, bare soil/ duff	0 1 2 3 4	0 (1) 2 3 4	Artificial Structures	0 1 2 3 4	Right Bank

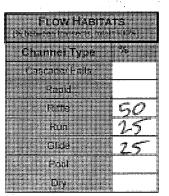
HUMAN INFLUENCE (circle only the closest to wetted channel)	B = Or C = Be P = >1	0 = Not Present; B = On Bank; C = Between Bank & 10m from Channel; P = >10m+<50m from Channel; Channel (record Yes or No)									
		Left I	Bank	(Channel	Right Bank					
Walls/ Rip-rap/ Dams	Р	С	В	Ø	(Y) N	6	В	С	Р		
Buildings	Р	С	В	Þ	Y 19	p	В	С	Р		
Pavement/ Cleared Lot	R	С	В	6		þ	В	С	Р		
Road/ Railroad	(P)	С	В	0	Y 🔞	þ	В	С	Р		
Pipes (Inlet/ Outlet)	P	С	В	0	Y 0 9	þ	B	С	Р		
Landfill/ Trash	Р	С	В	9	YAN	þ	В	С	Р		
Park/Lawn	Р	С	В	Ø	-	þ	В	С	Р		
Row Crop	Р	С	В	þ		ø	В	С	Р		
Pasture/ Range	Р	С	В	þ		Ø	В	С	Ρ		
Logging Operations	Р	С	В	þ		þ	В	C	Р		
Mining Activity	Р	С	В	þ	ΥØ	þ	В	С	Р		
Vegetation Management	Р	С	В	þ		þ	В	С	Р		
Bridges/ Abutments	Р	С	В	þ	YO	þ	В	С	Р		
Orchards/ Vineyards	Р	С	В	d		þ	B	С	Р		

12000-2010 B	BANKS	STABILITY në 5m downsteau uli - wellet wello	roftenses:
Left Bark	eroded		
Right Bank	eroded	vulnerable	

FULL VERSION

Revision Date: February 9th, 2011

Positionfrom LB (m)Depth (em)size classCobble Embed.CPOM Thickness CodeThickness CodeMacroalgae AttachedMacrophytesCodesLeft Bank.5.34.6001P \textcircled{A} DP \textcircled{A} DP \textcircled{A} DP \textcircled{A} DP \textcircled{A} D1-P \textcircled{A} D1			nter-	Frans	ect: EF		١	Netted Width (m	1): 30	•	• • • • • • • • • • • • • • • • • • •
Positionfrom LB (m)Depth (em)size classCobble Embed.CPOM Thickness CodeThickness CodeMacroalgae AttachedMacrophytesCodesLeft Bank.5.34.6001P \textcircled{A} DP \textcircled{A} DP \textcircled{A} DP \textcircled{A} DP \textcircled{A} D1-P \textcircled{A} D1						In	ter-Transect	Substrates			
Left Bank.534 \mathcal{LG} \mathcal{P} P	Position	from		size	Cobble	ĆPOM	Thickness	k		Macrophytes	0 = No microalgae present,
Left Center7.528 cog 50 $\mathbb{P}A$ \mathcal{O} $\mathbb{P}A$ \mathbb{D} $\mathbb{P}A$ $$	134.00	.5	34	6	-	ØØ	.	P AD	PØD	P 🏟 D	1 = Present but not visible, Feels slimy,
Center1511 $\omega 5$ \mathcal{O} \mathcal{P} <t< td=""><td></td><td>7.5</td><td>28</td><td>603</td><td>50</td><td>PA</td><td></td><td>PAD</td><td>PAD</td><td>PAD</td><td>2 = Present and visible but <1mm; Rubbing fingers on surface produces a</td></t<>		7.5	28	603	50	PA		PAD	PAD	PAD	2 = Present and visible but <1mm; Rubbing fingers on surface produces a
Right Center 22.5 37 $(G$ $ P \textcircled{O}$ $P \textcircled{O}$ $P \textcircled{O}$ $P \textcircled{O}$ $P \textcircled{O}$ $3 = 1.5 \text{mm},$ Picht 2.5 37 $(G$ $ P \textcircled{O}$ $P \textcircled{O}$ $P \textcircled{O}$ $P \textcircled{O}$ $P \textcircled{O}$ $3 = 1.5 \text{mm},$ Picht 2.5 37 $(G$ $ P \textcircled{O}$ $P \textcircled{O}$ $P \textcircled{O}$ $P \textcircled{O}$ $3 = 1.5 \text{mm},$ Picht 2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5	Center	15	11	LOB	50	€ A	. 1	P A D	P 🔊 D	P 🕢 D	brownish tint on them, scraping leaves visible trail
		22.5	37	(G		Р 🖗	6	Р (б) D	P Ø D	P 🖉 D	3 = 1-5mm; 4 = 5-20mm;
Bank 21.3 (1 2 10 T/A 1 FOD T AD T AD microalgae present.	Right Bank	29.5	17	COB	10	ÐA	te s p	P D	P (A) D	P AD	UD = Cannot determine if microalgae present.
class categories listed on the supplemental page (direct measurements preferred) covered with silt (formerty Z code).									each particle or	one of the size	



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ite Code:				Site Name:	MYR	- 6	-	Or. Cr.		Date: <u>o</u>	<u> 1 / 0 9</u> /2011
Vetted Wid	th (m):	28 m		Bankfull Wid	^{Ith (m):} 3	5	Bank	full Height (m):	1,0	Tra	ansect F
						Trans	ect Su	bstrates		_	
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	CPOM	Micro Thick Co	algae ness	Macroalgae Attached	Macroalga Unattache		Microalgae Thicknes Codes 0 = No microalgae preser Feels rough, not slimy;
Left Bank	15	30	BLD	-	ØА	· • • • •		р Д D	P 🏠 D	P 🚱 D	 1 = Present but not visible Feels slimy;
Left Center	ſ	47	BLD		ÐA	1	!	P 🖒 D	P 🕑 D	P. 🚯 D	2 = Present and visible b <1mm; Rubbing fingers on surface produces a
Center	14	10	603	50	ФА	2	1	P 🔊 D	P AD	Ý 🖉 D	brownish tint on them, scraping leaves visible trail.
Right Senter	21	2	CoB	40	P 🕖	1		P \land D	PQD	P D	3 = 1-5mm; 4 = 5-20mm;
Right Bank	27.5	((COB	30	P A	1		P \land D	PAT	P (A) D	5 = >20mm; UD = Cannot determine i microalgae present;
	Note: Su class cat	bstrate size egories list	es can be ed on the	recorded eit supplement	her as direc al page (dire	t measur ect measi	es of th uremen	e median axis of is preferred)	each particle	e or one of the size	substrate too small or covered with silt (formerly Z code). D = Dry, not assessed
	N VEGET I downstrea	E	1 = Spa	ent (0%) rse (<10%) lerate (10-40%	3 = Heav 4 = Very %)			INSTF Hab Compi	ITAT	0 = Absent (0%) 1 = Sparse (<10%) 2 = Moderate (10-40%) 3 = Heavy (40-75%) 4 = Very Heavy (>75%)	DENSIOMETE READINGS (0-1 count covered do
Veget	tation Cl	· · · · ·		ft Bank (>5 m high		jht Ban	k	Filamentou Aquatic Ma Emergent V	crophytes/	① 1 2 3 4 0 ① 2 3 4	Center Left Center
Trees and	saplings >		0 1	2 3 4 1.5 m-5 m hi		2 3	3 4	Boulders Woody Deb		0 1 (2) 3 4 0 (1) 2 3 4	Upstream Center

1 2 🗿 4

B 4

(3) 4

4

2

0 1 ② 3

0

0 1 2

0 1

HUMAN INFLUENCE (circle only the closest to wetted channel)	B = 0 C = B P = >	10m+<	: Bank 50m fr	& 10m I om Cha es or No					
		Left	Right	Banl	(
Walls/ Rip-rap/ Dams	Р	С	В	Ø	YQ	6	В	С	Р
Buildings	Р	С	В	q	YN	9	В	С	Ρ
Pavement/ Cleared Lot	Р	С	В	0		Þ	В	С	Р
Road/ Railroad	Р	С	В	9	YN	þ	В	С	Р
Pipes (Inlet/ Outlet)	P	С	В	d	YN	•	В	С	Ρ
Landfill/ Trash	P	С	В	0	YN	Ø	В	С	Ρ
Park/ Lawn	P	С	В	d		þ	В	С	Р
Row Crop	P	С	В	đ		Ø	В	С	Р
Pasture/ Range	P	С	В	þ		þ	В	С	Р
Logging Operations	P	С	В	þ		þ	В	С	Р
Mining Activity	Р	С	В	þ	YN	þ	В	С	Р
Vegetation Management	Р	С	В	¢.		þ	В	С	Р
Bridges/ Abutments	Р	С	В	0	YN	þ	В	С	Р
Orchards/ Vineyards	Р	С	В	6		þ	В	С	Р

Ground Cover (<0.5 m high)

0

0

0 1

0 1 2 (3) 4

1 ② 3 4

1 2 3 4

@ 3 4

All vegetation 0.5 m to 5 m

Woody shrubs & saplings

<0.5 m

Herbs/ grasses

Barren, bare soil/ duff

(2016-2010)	BANNS Internand Internand	y) weter with	
- Lefanark-	ercded	winerable	প্রার্ক্রান্স
Right Bank	eroded	w.inerable	Table)

0 1 2

0 (1) 2

0

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0)1

Woody Debris <0.3 m

Overhang. Vegetation

Undercut Banks

Live Tree Roots

Artificial Structures

34

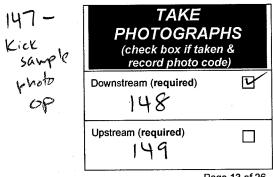
34

34

1 2 3 4

2

2 3 4



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3

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Right

Center

Downstream

Left Bank

Right Bank

Optional

FULL VERSION

Revision Date: February 9th, 2011

	Ι	nter-7	F rans	ect: FC	r J	١	Netted Width (m	1): 30		
					In	ter-Transect	Substrates			
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	CPOM	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickne Codes 0 = No microalgae pres
Left Bank	,5	28	Bid		ØA	1	P 🔗 D	P 🔊 D	• P 🕢 D	 Feels rough, not slimy 1 = Present but not visil Feels slimy;
Left Center	7,5	39	603	20	ØА	2	P 🔗 D	P 🔗 D	PA D	2 = Present and visible <1mm; Rubbing finge on surface produces
Center	15	22	LOB	30	Р 🖉	t t	PØD	P A D	Ø A D	brownish tint on then scraping leaves visib trail.
Right Center	22.5	14	BLD		P 🔕	· 1	P D	P 🕢 D	P \land D	3 = 1-5mm; 4 = 5-20mm;
Right Bank	29.5	41	60		РŔ	0	P 🔊 D	P 🙆 D	P \land D	5 = >20mm; UD = Cannot determine microalgae present.
	Note: Sub class cate	strate size gories liste	s can be ed on the	recorded eith supplementa	ner as direc al page (dire	t measures of th of measuremen	e median axis of Is preferred)	each particle or	one of the size	substrate too small o covered with silt (formerly Z code) D = Dry, not assessed

dhi Plamita	
iei Type 👘	
C Port	
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Site Code:				Site Name:	MYR	blu	Gr	Cr		Date: 🗢	<u>7/09</u> /20 6 2 / 7
Wetted Wid	th (m): 🦯	26		Bankfull Wie	^{ith (m):} 3	5	Bankfull	Height (m):	1.0	Tra	insect G
						Transec	t Subst	rates		de de la com	
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	CPOM	Microal Thickne Code	ess M	acroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickness Codes 0 = No microalgae present
Left Bank	.5	60	BUD	-	Р 🖉	0	1	P @ D	P 🕢 D	P 🕢 D	 Feels rough, not slimy; 1 = Present but not visible, Feels slimy;
Left Center	6.5	62	BLD	بمتكري	() A	1]	P 🙆 D	P 🖇 D	P Ø D	2 = Present and visible but <1mm; Rubbing fingers on surface produces a
Center	13		· · .		РА]	PAD	PAD	P A D	brownish tint on them, scraping leaves visible
Right Center	19.5	47	6		PA	0	.]	P Ø D	P 🔗 D	P A D	trail. 3 = 1-5mm; 4 = 5-20mm;
Right Bank	25.5	4	BLD	and the second s	(P) A	1]	P 🗿 D	P 🔗 D	P A D	5 = >20mm; UD = Cannot determine if microalgae present,
				recorded eit supplement					each particle o	r one of the size	substrate too small or covered with silt (formerty Z code). D = Dry, not assessed
	N VEGET. I downstrea	1.29042.0429.00000.7 4 59	1 = Spa	ent (0%) rse (<10%) lerate (10-40°	4 = Very I	y (40-75%) Heavy (>75		INSTF Hab Compi	REAM 1 ITAT 3	= Absent (0%) = Sparse (<10%) = Moderate (10-40%) = Heavy (40-75%) = Very Heavy (>75%)	DENSIOMETER READINGS (0-11 count covered do
Vegetation Class Le Upper Canopy		eft Bank Right Bank				Filamentous Algae		1-	Center Left		
Trees and	saplings >5		0 1	2 3 4	0 1	2 13	4	Boulders	0	1 ② 3 4	_ Center _ Upstream

Woody Debris >0.3 m

Woody Debris <0.3 m

Overhang. Vegetation

Undercut Banks

Live Tree Roots

Artificial Structures

Ø

2

0 1

0 1 2

0 1

0

(1

2 3 4

. 3 4

3 4

3

4

HUMAN INFLUENCE (circle only the closest to wetted channel)	B = C C = B P = >	0 = Not Present; B = On Bank; C = Between Bank & 10m from Channel; P = >10m+ <50m from Channel; Channel (record Yes or No)											
		Left	Bank		Cha	nnel		Right Bank					
Walls/ Rip-rap/ Dams	P	С	В	Ø	Y	\$P	6	Эв	С	Ρ			
Buildings	P	С	В	. 9	Y	N	Ø	В	С	Ρ			
Pavement/ Cleared Lot	P	С	В	ø			q	В	С	Ρ			
Road/ Railroad	P	С	В	•	Y	N	d	В	С	Р			
Pipes (Inlet/ Outlet)	P	С	В	þ	Y	N	0	В	С	Р			
Landfill/ Trash	P	С	В	þ	Y	N	d	В	С	Р			
Park/ Lawn	P	С	В	þ			q	В	С	Ρ			
Row Crop	P	С	В	0			ø	В	С	Ρ			
Pasture/ Range	P	С	В	0			þ	В	С	Ρ			
Logging Operations	P	С	В	0			þ	В	С	Ρ			
Mining Activity	P	С	В	0	Y	N	þ	В	С	Ρ			
Vegetation Management	P	С	В	0			þ	В	С	Ρ			
Bridges/ Abutments	P	С	В	0	Y	Ŋ	þ	В	С	P			
Orchards/ Vineyards	P	С	В	b		7	b	В	С	Р			

2 (3) 4

34

<u>3</u>4

B 4

٥

2

2

 Trees and saplings >5 m high
 0
 1
 2
 3
 4

 Lower Canopy (0.5 m-5 m high)

Ground Cover (<0.5 m high)

0 1

0 1

0 1

0 1

All vegetation 0.5 m to 5 m

Woody shrubs & saplings

<0.5 m

Herbs/ grasses

Barren, bare soil/ duff

lazata zane.					
Lein Bank ::	eroded	winerable	7	stable	I.
Right Bank	patora	vulnerable	K	statile	ļ

0 (1) 2 3 4

0 1 2 3 4

0 🕜 🌮 3 4

0 🕖 2 3 4

0(1) 2 3 4

2 3 4

(0)1

3

D

-

Center

Right

Center

Downstream

Left Bank

Right Bank

Optional

FULL VERSION

Revision Date: February 9th, 2011

	I	nter-7	Frans	ect: GI	I	۱.	Wetted Width (m): 32m							
					In	ter-Transect	Substrates							
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	СРОМ	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickness Codes 0 = No microalgae present,				
Left Bank	.5	34	BLD		P A	Z	P (A) D	P 🔊 D	P 🕢 D	Feels rough, not slimy; 1 = Present but not visible, Feels slimy;				
Left Center	8	26	BLD		ØА	1		P 🔊 D	P 🔊 D	2 = Present and visible but <1mm; Rubbing fingers on surface produces a				
Center	16	20	BUD	- A	P. (A)	6	P 🖉 D	P 🖉 D	P 🙆 D	brownish tint on them, scraping leaves visible trail				
Right Center	24	14	COB	15	Ø A	1	P 👌 D	P 🔕 D	P \land D	3 = 1-5mm; 4 = 5-20mm;				
Right Bank	31.5	7	COB	50	PA	l	P 🔊 D	P AD	P O D	5 = >20mm; UD = Cannot determine if microalgae present;				
						t measures of th ect measuremen		each particle or	one of the size	substrate too small or covered with silt (formerly Z code)				

			151
Cha	nnei Ty	08	
	ennari Rend	i ts 	
	RT9		50
	Run		30
	Cice		20
	Peol		o
	2672		:

Page 16 of 26

e Code:							Date: 07/09/2				
etted Widtl	n (m):	31 m		Bankfull Width (m): 40 Bankfull Height (m): 1,5 Trans						ansect H	
						Transeo	t Substrates				
osition	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	CPOM	Microal Thickn Code	ess Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickn Codes 0 = No microalgae pre Feels rough, not slim	
Left Bank	15	66	BLD		Р 🖉	0	″ P 🕲 D	P 🖒 D	P 🖒 D	1 = Present but not vis Feels slimy;	
Left Senter	8	71	BLD		P 🙆	2	P Ø D	P 🖉 D	P 🖉 D	2 = Present and visible <1mm; Rubbing finge on surface produces	
Center	15.5	3	SAND		Ο A	0	P 🍙 D	P 🔕 D	CA D	brownish tint on ther scraping leaves visit trail	
Right Senter	23.5	D	BUD		P 🔊	. (P ØD	P AD	P 🐼 D	3 = 1-5mm; 4 = 5-20mm;	
Right Bank	30.5	5	6	-	Ø A	Ο	P 🕉 D	P 💋 D	P D	5 = >20mm; UD = Cannot determin microalgae present,	
	Note: Sul	strate size	es can be ed on the	e recorded eit e supplement	her as direc al page (dire	t measure: ect measur	s of the median axis c ements preferred)	of each particle o	rone of the size	substrate too small o covered with silt (formerly Z code);	
									-	D = Dry, not assessed	
	VEGET		$\Omega = Abs$	ent (0%)	3 = Heau	y (40-75%	INST	REAM 1	Absent (0%) Sparse (<10%) Moderate (10-40%)	DENSIONET READINGS (0	

1 2 3 4

1 ② 3 4

4

0 1 2 🦪 4

0 1 🖉 3

0

Filamentous Algae

Aquatic Macrophytes/ Emergent Vegetation

Woody Debris >0.3 m

Woody Debris <0.3 m

Overhang. Vegetation

Undercut Banks

Live Tree Roots

Boulders

(0)1 2

0 1 2

0 🛈

0 🛈 2

1

0 (1)

0 1 2

0

(1) 2

0 1 🖉 3 4

2 3 4

2

2

34

34

34

3 4

34

34

3 4

Center

Left

Center

Upstream

Center

Right

Center

Downstream

Left Bank

Right Bank

Optional

8

Ζ

6

										1 1		
Barren, bare soil/ duff	0	1	2 🤇	54	0	1	2	S) 4	ΙΓ	Artificia	I Structures
HUMAN INFLUENCE (circle only the closest to wetted channel)	P = >1	n Banl etweer I0m+<	c; n Bank 50m fr	& 10m I om Cha es or No	nnel;	anne	ə);					
		Left	Bank		Cha	inne	əl		Right	Ban	k	
Walls/ Rip-rap/ Dams	(P)	C	B	0	C	D _N		6	B	С	Р	Ħ
Buildings	P	С	B	р	Y	0	D	P	В	С	Р	
Pavement/ Cleared Lot	P	С	В	b		1		þ	В	С	Р	
Road/ Railroad	Ø	С	В	0	Y	N	I	þ	В	С	Р	
Pipes (Inlet/ Outlet)	P	С	В	Ø	Y	Ŋ		ø	В	С	Р	
Landfill/ Trash	P	С	В	ρ	Y	ţ	ľ	þ	В	С	Р	
Park/ Lawn	P	С	В	ρ				¢	В	С	Р	
Row Crop	P	С	В	þ				¢	В	С	Р	
Pasture/ Range	P	С	В	þ				9	В	С	Р	
Logging Operations	Р	С	В	þ				þ	В	С	Р	
Mining Activity	Р	С	В	þ	Y	N		0	В	С	Р	
Vegetation Management	P	С	В	0				0	В	С	Р	
Bridges/ Abutments	P	С	В	þ	Y	N		d	В	С	P	
Orchards/ Vineyards	P	С	В	þ			•	0	В	С	Р	

Vegetation Class Left Bank Right Bank

0 1 🙆 3 4

0 1 (2) 3 4

0 1 🙆 3 4

Upper Canopy (>5 m high)

 Trees and saplings >5 m high
 0
 1
 2
 3
 4
 0

 Lower Canopy (0.5 m-5 m high)

Ground Cover (<0.5 m high)

All vegetation 0.5 m to 5 m

Woody shrubs & saplings <0.5 m

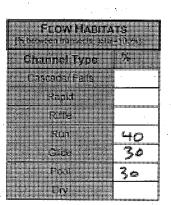
Herbs/ grasses

[<u>10010</u> 2004	BANK S	a synthese de la	iol tantes.
Left Bank	eroded	vulnerable	_efable/ \searrow
. Fight Sank	eroded	vuinerable	(stable 🗸

FULL VERSION

Revision Date: February 9th, 2011

		[nter-'	Trans	sect: Hl		1	Wetted Width (n	1): 25		
					In	ter-Transect	Substrates			
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	СРОМ	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickness Codes 0 = No microalgae present
Left Bank	.5	48	BLD		(A)	0	P 👌 D	P \land D	P 🔕 D	Feels rough, not slimy; 1 = Present but not visible Feels slimy;
Left Center	6	רר	Сов	15	(ề) A	t t	P 🔊 D	. P \land D	P 🔊 D	2 = Present and visible bu <1mm; Rubbing fingers on surface produces a
Center	12,5	10	SAUD		P A	0	P 🔊 D	P D	P \land D	brownish tint on them, scraping leaves visible trail
Right Center	18.5	28	COB	40	P 🔗	0	P 🙆 D	P 🔊 D	PAD	3 = 1-5mm; 4 = 5-20mm;
Right Bank	24.5	1	CoB	20	Ø A	1	P 🖉 D	P (A) D	P D	 5 = >20mm; UD = Cannot determine if microalgae present;
	Note: Sub class cate	strate size gories liste	s can be d on the	recorded eith supplementa	ier as direc Il page (dire	t measures of th ect measuremen	e median axis of Is preferred)	each particle or (one of the size	substrate too small or covered with silt (formetly Z code)



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Site Code:				Site Name:	MT	e l	Ju	Or.Cr	· · ·	Date: 0	Date: <u>0 7 1 8 9</u> 1 20 0 1 7				
Vetted Wid	^{th (m):}	D		Bankfull Wid	^{th (m):} 3	5	Bankf	ull Height (m):	1-	Tra	ansect I				
								ostrates							
	Dist		mm/	%		Micro					Microalgae Thicknes				
Position	from LB (m)	Depth (cm)	size	Cobble Embed.	СРОМ	Thick Co	ness	Macroalgae Attached	Macroalg Unattach	600 000 000 00 00 00 00 00 00 00 00 00 0	Codes 0 = No microalgae prese Feels rough, not slimy;				
Left Bank	15	67	CB	60	ØА			P 🖗 D	P AI	D PAD	1 = Present but not visible Feels slimy;				
Left Center	5	72	BUD		P Ø	a		P A D	Р 倒 І	D P 🕢 D	2 = Present and visible b <1mm; Rubbing fingers on surface produces a				
Center	10		C.S.	,	РА			PAD	ΡΑΙ	D P A D	brownish tint on them, scraping leaves visible trail.				
Right Center	15	18	COB	30	Р 🔕	١		P 🔊 D	P ØI	D PAD	3 = 1.5mm; 4 = 5-20mm;				
Right Bank	19.5	0	BLD	-	ØА	C) .	P 🔊D	PØ		5 = >20mm; UD = Cannot determine microalgae present,				
	Note: Sub	strate size	es can be	recorded eit	her as direc	t measur	es of the	e median axis of	each partic	e or one of the size	substrate too small or covered with silt				
	Class cale	-gones ist		supplementa	a page (un	Serneds	urement	- protonical			(formerly Z code). D = Dry, not assessed				
								INSTE	EAM	0 = Absent (0%) 1 = Sparse (<10%)	DENSIOMETE				
	N VEGET/ downstrea	· / · / · / · / · / · / · / · / · / · /	1 = Spa	ent (0%) rse (<10%) lerate (10-40%	3 = Heav 4 = Very			Нав	TAT	2 = Moderate (10-40%) 3 = Heavy (40-75%) 4 = Very Heavy (>75%)	READINGS (0- count covered d				
Vere	tation Cla	221		ft Bank	1	ht Bar	ĸ	Filamentou		0 1 2 3 4	Center				
•				(>5 m high				Aquatic Mac Emergent V	crophytes/	0 10 2 3 4	Left				
Trees and	saplings >5	m high	0 1	2 3 🦂	0 1	2	3 🕢	Boulders ·		01234	Upstream				
				0.5 m−5 m hi		2/		Woody Deb		0 1 2 3 4	Center Right				

All vegetation 0.5 m to 5 m Grour	0 Ind Cov			<u> </u>			1	-	3	·	Woody Debris <0.3 m Undercut Banks
Woody shrubs & saplings <0.5 m	Т	1		3	<u></u>	0	1	2	Ø	• 4	Overhang. Vegetation
Herbs/ grasses	0	1	Ø	3	4	0	1	Ø	3	4	Live Tree Roots
Barren, bare soil/ duff	0	C	2	3	4	0	1	0	3	4	Artificial Structures

Left Bank eroded vulnerable stable	1550 E 20-0-		nd Sin downstron nt - wetted width	
	Left Sank	eroded	vuinerable	

0 1 💋 3 4

0 (1) 2 3 4

34

2 3 4

2 3 4

0 1 2

1

0 1 Center Downstream

Left Bank

Right Bank

Optional

 \mathcal{O}

HUMAN INFLUENCE (circle only the closest to wetted channel)	B = On Bank; C = Between Bank & 10m from Channel; P = >10m+<50m from Channel; Channel (record Yes or No)												
		Left	Bank		Char	nel		Right	Ban	k			
Walls/ Rip-rap/ Dams	P	С	(B)	0	C	N	6	Эв	С	Р			
Buildings	Р	С	В	9	Y		9	В	С	Р			
Pavement/ Cleared Lot	Р	С	В	¢		1	p	В	С	Р			
Road/ Railroad	Ø	С	В	0	Y	N	þ	В	С	Р			
Pipes (Inlet/ Outlet)	Р	С	В	Ø	Y	N	þ	В	С	Р			
Landfill/ Trash	P	С	В	ģ	Y	Ŋ	ģ	В	С	Р			
Park/ Lawn	Р	С	В	d			q	В	С	Р			
Row Crop	Р	С	В	þ			d	В	С	Р			
Pasture/ Range	Р	С	В	d			¢	В	С	Р			
Logging Operations	Р	С	В	ø			0	В	С	Р			
Mining Activity	Р	С	В	þ	Y	Ν	ļ	В	С	Ρ			
Vegetation Management	P	С	В	þ			¢	В	С	Р			
Bridges/ Abutments	P	С	В	þ	Y	Ń	¢	В	С	Р			
Orchards/ Vineyards	P	С	В	6			d	В	С	Р			

FULL VERSION

Revision Date: February 9th, 2011

										•			
		Inter-	Tran	sect: IJ		١	Netted Width (m	1): 20	· · ·	······································			
	Inter-Transect Substrates												
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	СРОМ	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickness Codes 0 = No microalgae present			
Left Bank	.5	23	CB	5	PA		P A D	P D	PA D	 Feels rough, not slimy; 1 = Present but not visible; Feels slimy; 			
Left Center	5	66	CB	0	P A	2	PAD	P A D	P 🖗 D	2 = Present and visible but <1mm; Rubbing fingers on surface produces a			
Center	10	40	GC		P A	0	P 🔊 D	P 🖉 D	P 🖉 D	brownish tint on them, scraping leaves visible trail			
Right Center	15	29	CB	Ð	Р 🔊	1	P A D	₽ ØD	P AD	3 = 1-5mm; 4 = 5-20mm;			
Right Bank	19.5	5	CB	16	Р \land	1	P 🔊 D	P 🖉 D	P 🔊 D	5 = >20mm; UD = Cannot determine if microalgae present.			
	Note: Sub class cate	strate size gories liste	ed on the	recorded eith supplementa	ner as direc Il page (dire	t measures of th of measurement	e median axis of Is preferred)	each particle or o	one of the size	substrate too small or covered with silt (formeny Z code). D = Dry, not assessed			

FLOW HABITATS 1% betweet instructive (%) (%) (%) Channel Type % Cascodel Falls (%) Rappal (%) Rims 2.0 Run 2.0 Glide 3.2 Post 3.0 D/y (%)	the second se	
Tensioner beroech, beschost Channel Type % Cascodrol Falls % Rapid % Riffis 2.0 Run 2.0 Glide 3.0		
Channel Type % Cascodre/ Falls	т пределата	15
Channel Type % Cascodre/ Falls	in the second second second second	
Cascodel Falis Rapid Rims 2.0 Run 2.0 Glide 32 Pool 3.0		
Cascodel Falis Rapid Rims 2.0 Run 2.0 Glide 32 Pool 3.0		, Alexandra de la companya de la com
Rapd Hittis 20 Run 20 Glide 32 Pora 30		
Rapd. Run 20 Glide 32 Psol 30		
Nims 20 Run 20 Glide 32 Pacil 30		
Nims 20 Run 20 Glide 32 Pacil 30		
Run 20 Glide 32 Pacil 30		
Run 20 Glide 32 Pacil 30		·
Glide 32 Pool 30		20
Glide 32 Pool 30		
Pool 30	Rin	20
Pool 30		
Pool 30	THE A	20
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Dry Life		20
	n.	
	e e e e e e e e e e e e e e e e e e e	

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SWAMP Stream Habitat Chara	acterization Form	FULL VERSION	Revis	sion Date: February 9 ^m , 2011
Site Code:	Site Name: MYE	blu Or. Cr.		Date: 0 7 1 0 9 1 2048 12

Sile Code.		ω α ω	
Wetted Width (m): 15	Bankfull Width (m): 25	Bankfull Height (m): 1, 5	Transect J

						Transect Su	bstrates			
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed:	СРОМ	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickne Codes 0 = No microalgae pres Feels rough, not slimy
Left Bank	.5	44	COB	50	ØА	2	P 🖉 D	Р 🙆 D	D A D	1 = Present but not visit Feels slimy;
Left Center	4	16	СОВ	0	P 🔊	0	P Ø D	P 🔕 D	P 🕭 D	2 = Present and visible <1mm; Rubbing finge on surface produces
Center	7.5	28	COB	0	P Â	1	P 🏠 D	P 🔗 D	P 🕢 D	brownish tint on them scraping leaves visib trail
Right Center	11.5	39	CG.	0	Р 🔗	0	P (D	Р (Д) D	PAD	3 = 1-5mm; 4 = 5-20mm;
Right Bank	14,5	5	CG	50	(P) A	0	P 🔊 D	P 🔕 D	P \land D	5 = >20mm; UD = Cannot determine microalgae present,
	Note: Sut class cate	strate size gories list	es can be ed on the	recorded eit supplement	her as direc al page (dire	t measures of th oct measuremen	e median axis of its preferred)	each particle or	one of the size	substrate too small of covered with silt (formeny Z code). D = Dry, not assessed

RIPARIAN VEGETATION (facing downstream)	0 = Absent (0%) 1 = Sparse (<10%) 2 = Moderate (10-40%	3 = Heavy (40-7 4 = Very Heavy (INSTREAM HABITAT COMPLEXITY	0 = Absent (0%) 1 = Sparse (<10%) 2 = Moderate (10-40%) 3 = Heavy (40-75%) 4 = Very Heavy (>75%)	DENSIOMETER READINGS (0-17) count covered dots
Vegetation Class	Left Bank	Right Ba	nk	Filamentous Algae	0 1 2 3 4	Center 9
Upper	Canopy (>5 m high)			Aquatic Macrophytes/ Emergent Vegetation	0 10 2 3 4	Left l
Trees and saplings >5 m high	0 12 3 4	0 1 2	3 4	Boulders	0 1 2 3 4	Upstream
	anopy (0.5 m-5 m hig	h)		Woody Debris >0.3 m	0 1 2 3 4	Center /
All vegetation 0.5 m to 5 m	0 1 2 🗿 4	0 1 2	34	Woody Debris <0.3 m	0 1 2 3 4	Right O Center
Groun	d Cover (<0.5 m high)		Undercut Banks	0 1 2 3 4	Downstream O
Woody shrubs & saplings <0.5 m	0 1 2 3 4	0 1 2	3 4	Overhang. Vegetation	0 1 2 3 4	Optional
Herbs/ grasses	0 1 (2) 3 4	0 1 2	34	Live Tree Roots	O 1 2 3 4	Left Bank
Barren, bare soil/ duff	0 1 2 3 3	0 1 2	3 4	Artificial Structures	0 1 2 3 4	Right Bank

HUMAN INFLUENCE (circle only the closest to wetted channel)	B = C C = B P =>	0 = Not Present; B = On Bank; C = Between Bank & 10m from Channel; P = >10m+<50m from Channel; Channet (record Yes or No)										
		Left	Bank		Channel	1	Right	Banl	٢			
Walls/ Rip-rap/ Dams	Р	С	₿	0	(N	6	B	С	Р			
Buildings	P	С	В	${}^{}$	YC	9	В	С	Р			
Pavement/ Cleared Lot	P	С	В	4		þ	В	С	Р			
Road/ Railroad	P	O	В	0	YOD	P	В	С	Р			
Pipes (Inlet/ Outlet)	P	C	В	0	ΥŒ	þ	В	С	Р			
Landfill/ Trash	Р	С	℗	0	ØΝ	þ	В	С	Ρ			
Park/ Lawn	Р	С	В	0		þ	В	С	P			
Row Crop	P	С	В	ρ		þ	В	С	Р			
Pasture/ Range	P	С	В	þ		þ	В	С	Р			
Logging Operations	P	С	В	q		þ	В	С	Р			
Mining Activity	P	С	В	d	Y N	0	В	С	Р			
Vegetation Management	P	С	В	d		0	В	С	Р			
Bridges/ Abutments	Р	С	В	ø	Y N	d	В	С	Р			
Orchards/ Vineyards	P	С	В	þ		¢	В	С	Р			

BANK STABILITY Coord zone for underson and functional parts of that between barkhul - under with)	ent i i
Left Bank eroded winerable s	atria
Right Bank eroded vulnerable s	atrie 🗸

FULL VERSION

Revision Date: February 9th, 2011

		[nter-'	Frans	sect: JK			Wetted Width (m	n): 32					
	Inter-Transect Substrates												
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	СРОМ	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickness Codes 0 = No microalgae present,			
Left Bank	1.5	38	BUD		Ø A	2	PA D	P 🖉 D	PA D	 Feels rough, not slimy; 1 = Present but not visible, Feels slimy; 			
Left Center	8	22	CB	20	PA	D	P 🕢 D	P \land D	P 🙆 D	2 = Present and visible but <1mm; Rubbing fingers on surface produces a			
Center	16	25	CB	30	ЮA	91	P 🕢 D	P 🔊	р бо D	brownish tint on them, scraping leaves visible trail.			
Right Center	24	8	BUD		ÐA	. (P D	P 🕖 D	Р Ф D	3 = 1-5mm; 4 = 5-20mm;			
Right Bank	315	3	CB	0	PA	1	P AD	P (A)D	P D	5 = >20mm; UD = Cannot determine if microalgae present.			
	Note: Sub class cate	strate size gories liste	s can be ed on the	recorded eith supplementa	ier as direct Il page (dire	I measures of the transmission of transmission of the transmission of transmission of transmission of the transmission of transmission of the transmission of transmis	ie median axis of its preferred)	each particle or	one of the size	substrate too small or covered with silt (formerly Z code) D = Dry, not assessed			

FLOW HADTATS
e se los
- Channel Type - 24
Cascede Fais
- Fand
En En 7-ol
e
GHELL 70
EXTERNAL 10

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SWAMP	Stream	Habitat	Charad	terization	Form	Fl	ULL V	ERSION	Rev	ision Date: Feb	oruary 9 th , 2011		
Site Code: Si				Site Name:		blw	\mathcal{O}_{1}	r. Cr.		Date: 🖉	Date: 01/09/20@12		
Wetted Wid	Wetted Width (m): 32				lth (m): 4		Bank	full Height (m): フィ		Tr	ansect K		
· · ·			I		<u></u>			· · · · · · · · · · · · · · · · · · ·	· · ·	2 - 19 - H			
	Dist		mm/	%		I ranse Microa		bstrates	Manada		Microalgae Thickness		
Position	from LB (m)	Depth (cm)	size class	Cobble Embed.	CPOM	Thick: Cod	iess	Macroalgae Attached	Macroalg Unattach		0 = No microalgae present,		
Left Bank	<u>, 5</u>	24	RT		(P) A	2		Р Ф D	P 🙆 I	D' (P)A 'D'	Feels rough, not slimy; 1 = Present but not visible, Feels slimy;		
Left Center	8	73	COB	0	PA	1		Р Ø D	Р 🖉 І	D P 🙆 D	2 = Present and visible but <1mm, Rubbing fingers on surface produces a		
Center	16	0	BUD		PA	1		PAD	ΡΑΙ	D P A D	brownish tint on them, scraping leaves visible trail.		
Right Center	24	27	CoB	15	P A	· (P 10 D	P	P Q D	3 = 1-5mm; 4 = 5-20mm;		
Right Bank	CT SIS	43	GR		PA	0		PDD	P 🔊 I	D P D	5 = >20mm; U = Cannot determine if microalgae present,		
LIGHT	Note: Sut	ostrate size	es can be	recorded eit	her as direc	t measure	es of th	e median axis of	each particl	e or one of the size	substrate too small or covered with silt		
	class cate	gories listi	ed on the	supplement	ai page (uii)	ect measu	nemen	is preience)			(formerty Z code). D = Dry, not assessed		
										0 = Absent (0%)	DENSIOMETER		
- CONTRACTOR OF CONTRACTOR	N VEGET	P	1 = Spa	ent (0%) rse (<10%)	4 = Very	ry (40-759 Heavy (>		INSTR Hab		1 = Sparse (<10% 2 = Moderate (10-40% 3 = Heavy (40-75%)	READINGS (0-17)		
(facin	g downstrea	im)	2 = Moo	ierate (10-40	%)			COMPI	EXITY	4 = Very Heavy (>75%			
Vege	tation Cla	ISS	Le	ft Bank	Ri	ght Ban	<u>k</u>	Filamentou			Left Y		
		Upper	Canopy	/ (>5 m high)			Emergent V		0 î (2) 3 4	Center		
Trees and	saplings >5	m high	0 1	2 3 🤇		03	3 4	Boulders		0 1 2 3 4 0 1 2 3 4			
		Lower Ca	anopy (().5 m-5 m h				Woody Deb			Right D		
All vegetation 0.5 m to 5 m 0		01	2 3 🤇) 0 1	2 '(3) 4	Woody Deb	oris <0.3 m	0 (1) 2 3 4	Center			
		Ground	l Cover	(<0.5 m hig	h)			Undercut E	lanks	0 1) 2 3 4	4 Downstream O Optional		
Woody	shrubs & sa <0.5 m	plings	01	Ø 3 4	0 1	2	24	Overhang.	Vegetation	0 1 2 3 4	4 Left Bank /		
He	rbs/ grasses	3	0 1	Ø 3 4	0 C) 2 3	4	Live Tree F	loots	0 (1) 2 3 4			
Barro	n haro soil/	duff	0 1	2 3 4	0 1	12 3	4	Artificial St	ructures	0 1 2 3	4 Kight Dank V		

3 4

Ø

Artificial Structures

0

1 2 3 4

HUMAN INFLUENCE (circle only the closest to wetted channel)	B = 0 C = B P = >	0 = Not Present; B = On Bank; C = Between Bank & 10m from Channel; P = >10m+<50m from Channel; Channel (record Yes or No)												
		Left E	Bank	(Cha	nnel	Right Bank							
Walls/ Rip-rap/ Dams	P	0	В	0	Ø	Ň	6	В	С	Р				
Buildings	Р	С	B	Ø	Y	6	9	В	С	Р				
Pavement/ Cleared Lot	P	С	В	Q.			Ø	В	С	Р				
Road/ Railroad	P	C) В	0	Y	N	Ø	В	С	Р				
Pipes (Inlet/ Outlet)	P	С	В	0	Y	Ν	ø	В	С	Р				
Landfill/ Trash	P	С	В	φ	Y	Ν	þ	В	С	Р				
Park/ Lawn	P	С	В	þ			0	В	С	Р				
Row Crop	P	С	В	þ			þ	В	С	Р				
Pasture/ Range	P	С	В	þ			þ	В	С	Р				
Logging Operations	P	С	В	0			Þ	В	С	Р				
Mining Activity	P	С	В	0	Y	N	þ	В	С	Р				
Vegetation Management	P	С	В	0			Ø	В	С	Р				
Bridges/ Abutments	P	С	В	þ	Y	N	ø	В	С	P				
Orchards/ Vineyards	P	С	В	þ		,	9	В	С	Р				

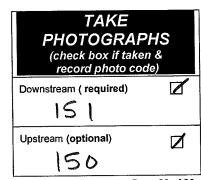
0 1

2 3 4

0 1

Barren, bare soil/ duff

e maestaan mé war, eanet Nade naestree	n in fransister In Letted With	
Left Bank eroded	winerable	(stable)
Right Bank eroded	w.ineratile	



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SWAMP Stream Hab	oitat Characterization	n Eorm	<u>FULL</u>	<u>VERSION</u>	Rev	ision Date: February 9 th , 2011	
Site Code:		Date: _	/	_/ 2011		FULL FORM	
	BENTHIC INVER	TEBRATE	SAMPLES			Chemistry Equipment	t ID
	llection Method	1		Replicate	# jars	Analyte Equipm	
RWB (standard)	RWB (MCM)		RC	1		рH	
RWB (standard)	RWB (MCM)	TR	C I	2		temperature	
RWB (standard)	RWB (MCM)	TR	C	and a state of the		dissolved oxygen	
RWB (standard)	RWB (MCM)	TR	C			specific conductance	
Field Notes/ Com	nments:		/		- /	salinity	
					and the second s	alkalinity	
				and the second second		turbidity	• .
		4		and the second second		silica	
		•• • • •	and the second second second			Velocity	
	ALGAE					Water and Sedimen	t
Collection (circle one or write new r		SWAMP Emap	SWAMP EMAP	SWAMP EMAP	SWAMP EMAP	Chemistry Samples	
Collection (sum # of transect	Device	Rep.	Rep.	Rep.	Rep.	Check if a WATER chemistry grab sample was collected	
Rubber Delimiter (area					CHEROSEN THE	(nutrients, SSC/etc.)	
PVC Delimiter (area=12				and meridiand		Check if a DUPLICATE WATER chemistry grab sample was	
Syringe Scrubber (area	a=5.3cm [*])					collected	
Other area=						Check if a SEDIMENT chemistry sample was collected	
Number of transects							
Composite Volume (m					Faller and a state of the state	Check if a DUPLICATE SEDIMENT chemistry sample was collected	
Assemblage ID volume	(diatoms) (50 mL tube)			North Contraction		Sediment Collection SCOOP CORE G Device:	GRAB
Assemblage D volume	(soft algae) (50 mL tube)	/	i	and the second sec		Material Stainless Steel Polyethy	ylene her
Check if Qualitative Alga collected with soft algae/ (required even it macroalga	le sample was diatom sample					Sediment Collection Depth (cm): 2 or	
Check if a water chem. i was collected (chl, AFD	ntegrated sample		6			Create Lab Collection records for each check box for integrated and grab water chemistry samples	ked
Chlorophyll a volume (25 mL (prefe	use GF/F filter erred volume)		1		t a construction of the second s	Semples	
Ash Free Dry Mass	use GF/F filter L (preferred vol)		$\overline{}$		<u>`````````````````````````````````````</u>		
			TIONAL PH	OTOGRAPH	S		
Description	Photo	Code		Descr	iption	Photo Code	
			_				
	and the second		1			<u></u>	

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FULL VERSION

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Flow Habitat Type	DESCRIPTION
Cascades	Short, high gradient drop in stream bed elevation often accompanied by boulders and considerable turbulence
Falls	High gradient drop in elevation of the stream bed associated with an abrupt change in the bedrock
Rapids	Sections of stream with swiftly flowing water and considerable surface turbulence. Rapids tend to have larger substrate sizes than niffles
Riffles	Shallow sections where the water flows over coarse stream bed particles that create mild to moderate surface turbulence; (< 0.5 m deep, > 0.3 m/s).
Runs	Long, relatively straight, low-gradient sections without flow obstructions. The stream bed is typically even and the water flows faster than it does in a pool; (> 0.5 m deep, > 0.3 m/s). A step-run is a series of runs separated by short riffles or flow obstructions that cause discontinuous breaks in slope
Glides	A section of stream with little or no turbulence, but faster velocity than pools; (< 0.5 m deep, < 0.3 m/s)
Pools	A reach of stream that is characterized by deep, low- velocity water and a smooth surface; (> 0.5 m deep, < 0.3 m/s)

BANK STABILITY Although this measure of the degree of erosive potential is subjective, it can

provide clues to the erosive potential of the banks within the reach. Assign the category whose description best fits the conditions in the area between the

wetted channel and bankfull channel (see figure below)

Eroded

Vulnerable

Stable

Banks show obvious signs of erosion from the current or

previous water year; banks are usually bare or nearly bare

Banks have some vegetative protection (usually annual

growth), but not enough to prevent erosion during flooding

Bank vegetation has well-developed roots that protect banks

from erosion; alternately, bedrock or artificial structures (e.g.,

Size Class Code	Size Class Range	Size Class Description	Common Size Reference
RS	_>4 m	bedrock, smooth	larger than a car
RR	> 4 m	bedrock, rough	larger than a car
ХВ	1 - 4 m	boulder, large	meter stick to car
SB	25 cm - 1.0 m	bouider, small	basketball to meter stick
СВ	64 - 250 mm	cobble	tennis ball to basketball
GC	16 - 64 mm	gravel, coarse	marble to tennis ball
GF	2 – 16 mm	gravel, fine	ladybug to marble
SA	0.06 – 2 mm	sand	gritty to ladybug
FN	< 0.06 mm	fines	not gritty
HP	< 0.06 mm	hardpan (consolidated fines)	
WD	NA	wood	
RC	NA	concrete/ asphalt	
ОТ	NA	other	

CPOM/ COBBLE EMBEDDEDNESS

CPOM: Record presence (P) or absence (A) of coarse particulate organic matter (>1.0 mm particles) within 1 cm of each substrate particle

Cobble Embeddedness: Visually estimate % embedded by fine particles (record to nearest 5%)

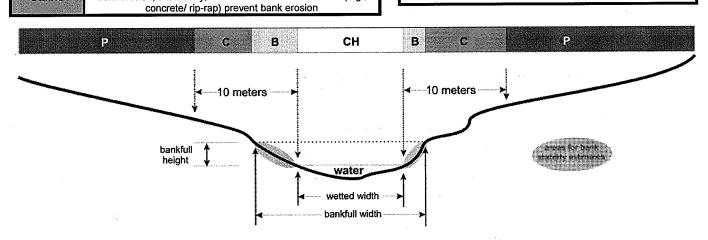


Figure 1. Cross-sectional diagram of stream transect indicating regions for assessing human influence measures:

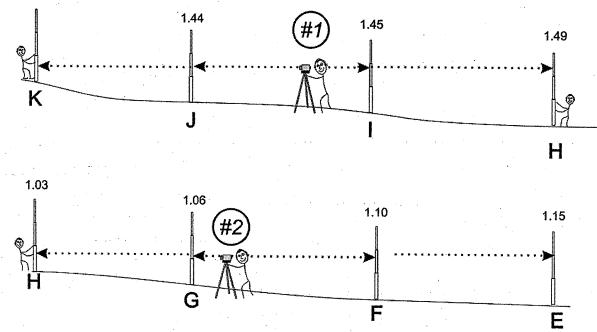
- The measurement zone extends 5 meters upstream and 5 meters downstream of each transect
- Record one category for each bank and for the wetted channel (3 values possible)
- In reaches with wide banks, region "C" may be entirely overlapped by region "B"; in these cases, circle "B"
- Region "P" extends from 10 meters to the distance that can be seen from the channel, but not greater than 50 m

FULL VERSION

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		SLOPE	and Beari	ng Fori	Л	EXA	MPLE		С	UTOLEV LINOMET	ER
Starting	(rea		MAIN S nt of inter-trans upplemental se			ment	(record perce	SUPPLEMENT of inter-trans	ect distance	in each seg	iment
Transect		ia rod rements	Slope (%) or Elevation Difference Cm	Segment Length (m)	Bearing (0°-359°)	Percent of Total Length (%)	Stadia rod measurements	Slope or Elevation Difference	Segment Length (m)	Bearing (0°-359°)	Percent of Total Length (%)
K	1.41										
J	1.44		3	15	140	100					
	1.45		1	15	145	100			-		
Н	1.49	1.03	4	15	150	100					
G	.`	1.06	3	15	143	100		· · · · ·	• • •		
F		1.10	4	15	187	100			<i>.</i>		
Е		1.15	5	15	195	100		· · · · · ·			

1.41



1. Level the autolevel at Position #1

2. Place base of stadia rod at water level every time

3. Sight to stadia rod at Transect K, then Transect J

4. Rotate scope and sight to Transects I and H.

5. Move level to Position #2 and re-level

6. Re-sight to stadia rod at Transect H, then Transect G 7. Rotate scope and sight to Transects F and E

Note: Sites will vary in the number of separate level positions needed to survey the reach.

	SWAMF	P Stream Ha	bitat Chara	cterization	Fórm	FUL	<u>VERSION</u>	<u>I</u> Rev	ision Date:	February 9 th	', 2011	
		сн Docum				dard Reach Le	ength (wetted) ach Length (w	width ≤ 10 m) = etted width >10	150 m Distar m) = 250 m D	nce between tr listance betwe	ansects = 15 en transects	m = 25 m
	Project N	Name: YC	WA					י 12 י	/ 201 Sa	mple llection Time:	02	
	Stream N		ODLE Y	UBA 1	Riv	ER	/Site Name	Description:	A ABV	NORTH	+ YUBI	A
2 - E	Site Cod	le: YCI	3M1 -	6			A	bers: a , M. A s				
VIN	Latitude	(actual – deci	mal degrees	s): 09 66	05	74	datum: NAD83		 			
Bortom	Longitud	le (actual – de	cimal degre	es): 🛷 4	350	7341	other:	GPS Device:	GARMI	N 60		
	Ambi	ENT WATER	QUALITY ME	ASUREMEN	TS	turbidity a calibra	nd silica are o tion date requ	ptional; ir e d		REACH LE	NGTH	
	Temp (Deg C	21.8	рH	7.1		linity g/L)	– Turbidi (ntu)	ty Oa	Actual	Length (m) length guidelin	les 2.5	-
	(203 0	2.00	cal. date				cal. date			op of form)		, 0
• •	Dissolve O ² (mg/		Specific. Conduct (uS/	cm) [13]	200025000000	inity. 🔶	Silica		Explanation	$\sim 1 C$) m	
	cal. date		cal. date		cal. date		cal. date			/ 10		
		DISCHARGE	MEASURE			an a	che	ck if discha	rge measur ain in field n	ements not	possible	
		surement = le				ak date		sect Width	BUOYANT	Овјест Ме	THOD (use (
		LOCITY AREA	Depth	Velocity		49.1 Distance from	cfs (m):) Depth	Velocity	vèloci	ty area method	Float 2	1
	Le	eft Bank (cm)	(cm)	(ft/sec)	L	.eft Bank (cm) (cm)	(ft/sec)	Distance			ioaco
	1	3	1.4	(18) 1,10	11 12	<u>33</u> 36	,9	, 19	(m) Float Time		-/+	an a
	3	<u>6</u> 9	1,4	3.38	13	39	2,0	,52	(sec) Floa	it Reach Cro	ss Sectior	1
	4	12	1.2	2.02	14	42	1.4	108	width (m) depth(cm)			Lower Section
	5	15	(.)	1.4	15	45	1.5	,02	Width			
	6	18	,9	,64	16	48	.5	,98	Depth 1	_/	\longrightarrow	
	7	21	13	1.81	17	51	2.4	126	Depth 2 Depth 3	-/-+	-	
	8	24	,9	113	18 19	<u> </u>	12	, 01	Depth 4 ¹⁴	1		$\overline{)}$
	9 10	27 30	12	1.45	20	21			Depth 5			
	Contraction of the local distribution of the				BLE FI		FIONS (che	ck one box pe	er topic)			
• •	Ev	vidence of rec	ent rainfall:					NO		nimal	>10% flo increas	
	E	vidence of fi	res in reach	or immedi	ately u	pstream (<50)0 m)	NO	X <	lyear	< 5 yea	rs
								Agriculture	F	orest X	Rangela	nd
		Dominant la	induse/ land	dcover in ar	ea suri	rounding rea	icn	Urban/ Industrial	Subu	rb/Town	Other	
•	Addi	TIONAL COBE	ILE 1	2	3	4 5		7 8	Distantia Contraction Contraction	10 11		13
		BEDDEDNESS MEASURES		30	20	25 15	ANNESSE CAMPACONCERSE	0 (Service Language Content	23 24	anone activities	50
	forms	over from trans if needed to att get count of 25;	ain	15	16	17 1	8 19	20 2	1 22	23 24		
		get count of 25, neasure in %)									Pag	e 1 of 26

NOTE : SITE BELINS ABV CONFLUENCE POOL

FULL VERSION

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Site Code	:			Date:		_1_		2011												
	SLOPE an	d Bea	RING FO	DRM (tra	nsec	t ba	ised	- fc	or Ful	I PH	AB	only	()			AUTO CLINO	METE	R 🗋	×
			MAINS	Segme	NT								SUPP	LEMEN	TAL	SECH		HER	<u> </u>	
Starting	(record	if supp	of inter-tran	sect dis segmen	tance ts ar	e in eac re used	h seg)	ment		(r	ecord p	erce	nt of in	ter-tran	sect di	stance	e in eacl e used	n segi	ment	
Transect	Stadia roo measureme	i nts	ilope (%) or Elevation Difference	Segn Leni (m	gth	Bear (0°-3)		Perc of To Leng (%	otal 9th		dia rod uremen	ts	Eler	pe or vation prence	Le	iment ngth m)	Bear (0°-38		Percer of Tota Lengt (%)	al
K																				
J			4	2	5			11	2				· .			n in			<u></u>	
			8					.										•		_
Н			4					·						-						
G			3			and the			÷		· · ·									
F			5								, ÷.									_
E	POOL		0					\neg												_
D			\mathcal{O}_{1}					T												
С			D					T					•						-	<u>~</u>
В			3																	
Α			2		,			J								_				-
additional calculation area					<u></u>					ч	<u>.</u>									┥
	Add	ITIONAL	Навітат	CHAR	ACTI	ERIZAT	rion .		s			Hi	gh G	radier	^{nt} X		Low (Grad	ient_]
Para	meter		Optim ter than 70%	of substra				bopti				M	largin	al			Po	or		
	Substrate/	and gra subme	le for epifaun fish cover (50 adient stream rged logs, un	% for low s); mix of dercut bar	- iks,	50%	o for lov I-suited	of stabl y-gradie for full o potentia	nt stre: coloniz	ams);	30%	in low	Agradier	e habitat (It streams disturbed);	(10%) lac	than 20% in low-gr k of habit trate unsl	adient at is ot	streams); pvious;	
Sc	ore:	20	le or other sta 19 18	17	16]	15	14	13	12	11	710	9	8	7	6	5	4 3	2	1 C))
Sediment	Deposition	or poin the bo	r no enlarger t bars and les ttom affected tion (<20% in streams	s than 5% by sedime low-gradi	o of ent	forn sand, the t	nation, or fine pottom	w increa mostly f sedime affected adient st	rom gr nt; 5-3 (20-5)	avel, 10% of 0% in	sand, o 50% c	r fine of the l	sedimen oottorn a	of new gra t on bars; ffected (5 it streams	30- 0 -	incre more chan	deposits eased bar than 50% ging frequ w-gradie	develo 6 of the 1ently (bottom >80% in	
Sco	ore:		19 18		16	15	(14)	13 1 13	12	11	10	9	8	7	6	5	43	2	1 0	
	Alteration		lization or dre imal; stream pattern			(e.g., l of pa ma	oridge a ist char ay be p	abutmer inelization resent b ration no	its); ev on (> 2 iut rece	idence Oyrs) ent	embank presen	ments t on b	s ór shor oth bank	e extens ng struct s; 40 to 8 lisrupted	ures	cernen reach c Instrea	hannelize)% of t ed and t great	he stream disrupted ly altered	
Sco	ore:	20 (1	19/ 18	17	16	15	14	13	12	11	10	9	8	7	6		4 3	2	1 0	337

ite Code:				Site Name:	MYR	- ab	JN	JYR		Date:	_/_	/ 2011	
Vetted Widt	h (m):	8		Bankfull Wid	^{ith (m):}	8	Bankf	ull Height (m):	1:5	Tra	anse	ct A	
						Transe	et Sut	ostrates					
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	CPOM	Micros Thick Co	ilgae ness	Macroalgae Attached	Macroalg Unattach	Maiorobinvies	0 = No	algae Thickn Codes microalgae pres s rough, not slim	sen
Left Bank	.6	18	(0B	0	OP A	\$	2	P 🔊 D	P (A) I	D O AD	1 = Pr Feel	esent but not vis s slimy;	ible
Left Center	4.5	39	(6B	10	P A	3 0	5	P Ø D	Р 🖗 І	D P 🙋 D	<1m on s	esent and visible m; Rubbing finge surface produces	ers 9 a
Center	9	10	COR	, 20	РÓ	34	2	P Ó D	P 🔊 I	D P (A) D		whish tint on thei aping leaves visit	
Right Center	13.5	24	BL		Р 🖗	1		P 👌 D	P 🔗 I	D P 🐼 D	3 = 1- 4 = 5-	5mm; 20mm;	
Right Bank	17.5	12	BLT		P (A)			P AD	P @ 1	D P A D		omm; Cannot determin roalgae present,	e if
	Note: Sul class cate	ostrate size egories list	es can b ed on th	e recorded eit e supplement	her as direc al page (dir	t measur ect meas	es of the urement	median axis of s preferred)	each partic	e or one of the size	cov (for	strate too small ered with silt meny Z code).	
										1001		ry, not assessed	
	N VEGET i downstrea		1 = Sp	sent (0%) arse (<10%) derate (10-40	4 = Very	vy (40-75) Heavy (>		INSTF Hab Compi	ITAT	0 = Absent (0%) 1 = Sparse (<10%) 2 = Moderate (10-40%) 3 = Heavy (40-75%) 4 = Very Heavy (>75%)	2223	DENSIOMET READINGS (C count covered)-1
Vege	tation Cla	ass	Le	eft Bank	Ri	ght Ban	k	Filamentous		<u>) 1 2 3 4</u>		Center Left	T
		Upper	Canop	y (>5 m high				Aquatic Mac Emergent V				Center	t
Trees and	saplings >5		01	2 3 4 0.5 m-5 m h	<u>0</u> 1	2 3	3 4	Boulders Woody Deb	ris >0.3 m	0 1 (2) 3 4 0 1 2 3 4		Upstream Center	╉

HUMAN INFLUENCE (circle only the closest to wetted channel)	B = 0 C = Be P = >1	0m+<	; Bank 50m fri	& 10m f om Chai es or No	nnel;	annel;				
		Left	Bank		Cha	nnel		Right	Banl	¢
Walls/ Rip-rap/ Dams	P	С	В	Ø	Ϋ́	Ś	(0)	В	С	Р
Buildings	Р	С	В	ρ	Y	N	9	В	С	Р
Pavement/ Cleared Lot	P	С	В	þ			d	В	С	Р
Road/ Railroad	P	С	В	0	Y	N	d	В	С	Р
Pipes (Inlet/ Outlet)	P	С	В	0	Y	Ŋ	d	B _.	С	Р
Landfill/ Trash	P	Ċ	В	¢.	. Y	Ņ	þ	В	С	Р
Park/ Lawn	P	С	В	d			d	В	С.	Р
Row Crop	Р	С	В	9			O	В	С	P
Pasture/ Range	P	С	В	¢	•		q	В	С	Ρ
Logging Operations	P	С	В	0			q	В	C	Р
Mining Activity	P	С	ً₿		Y	Ņ	•	В	С	Р
Vegetation Management	P	С	В	Q			4	В	C	Р
Bridges/ Abutments	P	С	В	d	Y	N	0	В	С	Ρ
Orchards/ Vineyards	P	С	В	d		- 1	o	В	С	Р

0 1 2 (3) 4

2

2 3 4

3 4

3 (4)

Ground Cover (<0.5 m high)

1

0 (1) 2

0

0 1

All vegetation 0.5 m to 5 m

Woody shrubs & saplings

<0.5 m

Herbs/ grasses

Barren, bare soil/ duff

1 (2)

1 ②

(1) 2

0

0

0

0 1 2 34

3 4

3 (4)

4

3

(score zone	5m upstream a	STABILITY ind 5m downstream full - wetted width)	of transect
	Detween Dank	ini - Wened Width)	\sim
Left Bank	eroded	vulnerable	/stable
Right Bank	eroded	vulnerable	stable

() 1

0 1 2

Woody Debris <0.3 m

Overhang. Vegetation

Undercut Banks

Live Tree Roots

Artificial Structures

2

0 1 2 3 4

2

0 1 2

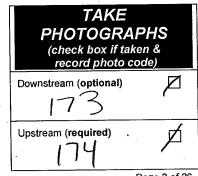
0 1

3 4

34

34

34



Page 3 of 26

Right

Center Downstream

Left Bank

Right Bank

Optional

Ι	nter-Tran	sect: AI	3		/ <u>ERSION</u> Netted Width (m		n Date: February	· · · · · · · · · · · · · · · · · · ·
			In	er-Transect	Substrates			
Position from LB (m)	Depth (cm) class	Cobble	CPOM	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes 0	icroalgae Thicknes Codes No microalgae presen
Left 5	39 SANJ	/	() A	Ø	P ØD	P A D		Feels rough, not slimy; = Present but not visible Feels slimy;
Left	35 003	0	PØ	2	PA D	P 🔊 D	P D	 Present and visible bu <1mm; Rubbing fingers on surface produces a
Center 4	59 BUT		P (A)	2	(P) A D	P D	PAND	brownish tint on them, scraping leaves visible trail.
Center L	43 02		P (A)	0	P 🖉 D	P D		= 1-5mm; = 5-20mm; = >20mm;
Bank 61.5 Note: Sub	2 BU strate sizes can b	e recorded eith	P Ø	measures of th	P D D	P Ø D each particle or	one of the size	D = Cannot determine if microalgae present, substrate too small or
class cate	gories listed on th	e supplementa	al page (dire	ct measurement	s preferred)			covered with silt (formerly Z'code). = Dry, not assessed
FLOW HARTA		· ·	21 1		۰ ـ ـ ^۲			
Channel Type	inos: Ke	anta da Anta da					·	
Custade/Falls		•			•			•
Rapd	40						•	
Run		•			• 4	···	n n n n N	• • • • •
Gilde Paol	20 40	· · ·						
Dry					· •.		· .	
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		·		•		;	••	
		·				<i>.</i> .		Page 4 of 26

ite Code:				Site Name:	MY	(R abi	1 NYR	-	Date:	_//2011
letted Wid	th (m): 2	4		Bankfull Wid	rth (m): ح	bo Bar	kfull Height (m):	1.5	Tra	nsect B
				-		Transect S	ubstrates			
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	CPOM	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thicknes Codes 0 = No microalgae prese Feels rough, not slimy;
Left Bank	.5	20	(03	75	(PA	1	P A D	P OD	P 🖉 D	1 = Present but not visible Feels slimy;
Left Center	6	70	COB	50	ΡΑ	0	P D	P 🔊 D	P 🏈 D	2 = Present and visible b <1mm; Rubbing fingers on surface produces a
Center	12	136	BET	>	P 🔗	0	P Ø D	P 🔗 D	P 🔕 D	brownish tint on them, scraping leaves visible trail
Right Center	18	0	BED		P 🔊	0	P 🕢 D	P 🔊 D	Р () Ф D	3 = 1.5mm; 4 = 5-20mm;
Right Bank	73.5	44	COB	60	Р 🕢	· (Р (5 D	РÓр	P Ø D	5 = >20mm; UD = Cannot determine microalgae present,
	Note: Sul class cate	ostrate siz egories list	es can b ed on th	e recorded eit e supplement	her as direc al page (dire	t measures of the measurement	he median axis of ints preferred)	feach particle o	r one of the size	substrate too small or covered with silt (formerly Z code) D = Dry, not assessed
Sec. 2. 6 / C. 2 10 1 10 10 10 10 10 10 10 10 10 10 10 1	N VEGET		1 = Spa	ent (0%) arse (<10%) derate (10-40	4 = Very	y (40-75%) Heavy (>75%)		REAM 1 ITAT 3	= Absent (0%) = Sparse (<10%) = Moderate (10.40%) = Heavy (40-75%) = Very Heavy (>75%)	DENSIOMETE READINGS (0- count sovered of
Vege	tation Cla	iss	Le	ft Bank	Riç	iht Bank	Filamentou Aquatic Ma		b	Center Left
	Upper Canopy (>5 m high)						Emergent \) 1 2 3 4	Center

34

34

34

3 (4)

3 4

2

2

2

o (1)

0

1 2

0

0

HUMAN INFLUENCE (circle only the closest to wetted channel)	B = 0 C = B P = >1	10m+<	Bank (50m fro	s 10m fi m Char s or No		iel;				
		Left	Bank		Chann	el	~	Right	Banl	،
Walls/ Rip-rap/ Dams	P	С	В	Ø	Y (1	9	16	Эв	С	Р
Buildings	P	С	В	p	YI	N	Y	В	С	Р
Pavement/ Cleared Lot	P	С	В	þ			q	В	С	Р
Road/ Railroad	P	С	В	þ	YI	ļ	ģ	В	С	Р
Pipes (Inlet/ Outlet)	P	С	В	þ	ΥI	N	4	В	С	Р
Landfill/ Trash	Р	С	В	þ	Y	N	ø	В	С	Р
Park/ Lawn	P	С	В	þ			ø	В	С	P
Row Crop	P	С	В	0			þ	В	С	Р
Pasture/ Range	P	С	В	0			ģ	В	С	Р
Logging Operations	P	С	В	6			d	В	С	Р
Mining Activity	P	С	B	0	Y	Ņ	q	В	С	Р
Vegetation Management	P	С	B	Ø			đ	В	С	Р
Bridges/ Abutments	P	С	В	Q.	Y	N	¢	В	С	Р
Orchards/ Vinevards	Р	С	В	1		i —	d	В	С	Р

Lower Canopy (0.5 m-5 m high)

ก

1 2 3 4

Ø 3

3 Ø 0 1 2

4

2 34

Trees and saplings >5 m high (0) 1 2 3 4 (0) 1

Ground Cover (<0.5 m high)

All vegetation 0.5 m to 5 m

Woody shrubs & saplings

<0.5 m

Herbs/ grasses

Barren, bare soil/ duff

(Ò)

0

0 1

0 1 2

BANK S (store zone Smillpothers) between terrs?		trat transers
Left Banx eroded	vulnerable	/stable /
Right Bank eroded	vuinerable	🖉 stabje ^{ze}

0 1

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0

Ø

0

(D 1

1

1 2

1 2

1

Boulders

Woody Debris >0.3 m

Woody Debris <0.3 m

Overhang. Vegetation

Undercut Banks

Live Tree Roots

Artificial Structures

34

3 4

3 4

2 3 4

0 3 4

ž 3 4

0 1 2 3 4

2

Upstream

Center

Right

Center

Downstream

Left Bank

Right Bank

Optional

1

6

	ľ	Inter-	F rans	ect: BC			Wetted Width (r		on Date: Febr	
					lm		t Substrates			
Position	Dist from LB (m)	Depth (cm)	mm/ sîze class	% Cobble Embed	СРОМ	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickness Codes 0 = No microalgae presen
Left Bank	1.5	35	GANT		PA		P 🔗 D	P 🗿 D	P 🚱 D	 Feels rough, not slimy; 1 = Present but not visible Feels slimy;
Left Center	4.5	46	C03	30	P (Å)	0	P A D	P 🖉 D	P A D	2 = Present and visible bu <1mm; Rubbing fingers on surface produces a
Center	9	64	BUD		ØÀ	(P 🕢 D	P 🔊 D	P ØD	brownish tint on them, scraping leaves visible trail.
Right Center	13:5	178	BUD	 .	Р 🖗	2	P 🕭 D	P 🚯 D	P 🔊 D	3 = 1-5mm; 4 = 5-20mm;
Right Bank	17.5	201	BUT		Р 🕖	0	P 🖉 D	P 🐼 D	P 🐼 D	5 = >20mm, UD = Cannot determine if microalgae present,
	Note: Sub class cate	strate size gories liste	s can be r ed on the s	ecorded eith supplements	ter as direct Il page (dire	measures of t ct measurement	ne median axis of hts preferred)	each particle or	one of the size	substrate too small or covered with silt (formerly Z code). D = Dry, not assessed
	1							49 - 25		
					•			• • •		
Channe craam		%	· ·	· .	·	. ·		•		1917 - 1917 - 1917 - 1917 - 1917 - 1917 - 1917 - 1917 - 1917 - 1917 - 1917 - 1917 - 1917 - 1917 - 1917 - 1917 -
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D -1		ινV						1 g		
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SWAMP Stream Habitat Char	acterization Form	FULL VERSION	Revision Date: February 9 th , 2011					
Site Code:	Site Name: MYR	aby NYR		Date: / / 2011				
Wetted Width (m):	Bankfull Width (m): 2	Bankfull Height (m):	1	Transect C				

						Transect Su	bstrates			and the second
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	CPOM	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thicknes Codes 0 = No microalgae preser Feels rough, not slimy;
Left Bank	5	30	30		·PA		PAD	PAD	ΡΑΟ	1 = Present but not visible Feels slimy;
Left Center	5	92	(OB	80	PA	Ø	P 🔊 D	P 🕢 D	P 🕜 D.	2 = Present and visible be <1mm; Rubbing fingers on surface produces a
Center	9.5	98	103	80	P 🔗	2	P 😽 D	P 🔗 D	PAD	brownish tint on them, scraping leaves visible trail
Right Center	14.5	110	COB	60	(DA	0	P 🔊 D	P 🖗 D	P 🔗 D	3 = 1-5mm; 4 = 5-20mm;
Right Bank	18.5	176	SUD	To see	P 🔗	L	POD	P 🏈 D	P 🖉 D	5 = >20mm; UD = Cannot determine i microalgae present,
						t measures of th oct measuremen	e median axis of its preferred)	each particle or	one of the size	substrate too small or covered with silt (formerly Z code). D = Dry, not assessed

RIPARIAN VEGETATION (facing downstream)	1 =	Abse Spar Mode	se (<	10%)	3 = H 4 = V(INSTREAM HABITAT COMPLEXITY	123	= S = M = H	leav		40-75	0%) 0%) 5%)		DENSIOMETI READINGS (0- count covered of	-17)
Vegetation Class		Lef	t Ba	nk			Rigi	ht B	ank			Filamentous Algae	0	2	1	2	3	4	<u>ן</u>	Center	5
Upper	Car	onv	(>5)	m hi	ah)							Aquatic Macrophytes/	0)	1	2	3	4		Left	2
oppo		Υ	1 -		5,							Emergent Vegetation			\sim				4	Center	14
Trees and saplings >5 m high	10	1 (2	3	4	19	1	2	3	4	J	Boulders	0		1)2	3	4		Upstream	
Lower C	an lef	by (0.	5 m	-5 m	higl	1)						Woody Debris >0.3 m	9)	1	2	3	4		Center	15
All vegetation 0.5 m to 5 m	6) 1	2	3	4	0	1	2	3	4		Woody Debris <0.3 m	Ø)	1	2	3	4		Right Center	13
Groun	d Co	ver (<0.5	m h	ligh)							Undercut Banks	þ)	1	2	3	4		Downstream	4
Woody shrubs & saplings <0.5 m	0	0	2	3	4	6	1	2	3	4		Overhang. Vegetation	q		1	2	3	4		Optional	
Herbs/ grasses	0	6	2	3	4	0	1	2	3	4	1	Live Tree Roots	d		1	2	3	4		Left Bank	
Barren, bare soil/ duff	0	1	2	3	(4)	0	1	2	3	Ø	1	Artificial Structures	q	1	1	2	3	4		Right Bank	

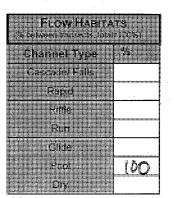
HUMAN INFLUENCE (circle only the closest to wetted channel)	B = 0 C = B P = >	0m+<	; Bank (50m fro	3 10m fi m Char s or No	nnel;	annel;				
		Left	Bank		Cha	nnel	F	≷ight	Ban	ĸ
Walls/ Rip-rap/ Dams	P	С	В	(0)	Y	Ø	(0)	В	С	Р
Buildings	Р	С	В	γ	Y	Ņ	Ŷ	В	С	P
Pavement/ Cleared Lot	Р	С	В	þ			þ	В	С	Р
Road/ Railroad	Р	С	В	þ	Y	Ņ	þ	В	С	Р
Pipes (Inlet/ Outlet)	P	С	В	þ	Y	Ń	þ	В	С	Р
Landfill/ Trash	P	С	В	0	Y	Ŋ	¢	В	С	Р
Park/ Lawn	Р	С	В	0			þ	В	С	Р
Row Crop	Р	С	В	þ			þ	В	С	۰P
Pasture/ Range	P	С	В	þ			0	В	С	Р
Logging Operations	P	С	В	6			0	В	С	Р
Mining Activity	Р	С	B	0	Y	N	0	В	С	Р
Vegetation Management	Р	С	В	Ø			þ	В	С	Ρ
Bridges/ Abutments	P	С	В	Ŷ	Y	Ŋ	9	В	С	Р
Orchards/ Vineyards	Р	С	В	þ			Ø	В	С	Р

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Revision Date: February 9th, 2011

	Ι	nter-7	Frans	ect: CI)	1	Wetted Width (m	1): [le		
					In	ter-Transect	Substrates			
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	CPOM	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickness Codes 0 = No microalgae present,
Left Bank	.5	26	BED		Р 🔗		P 🔗 D	P 🔗 D	Р () D	Feels rough, not slimy; 1 = Present but not visible, Feels slimy;
Left Center	Ч	112	317	~	P·Ø	Ð	PAD	P 🏠 D	P 🔕 D	2 = Present and visible but <1mm, Rubbing fingers on surface produces a
Center	8	115	形	_	Р 🔕	0	P 🏈 D	Р 🔗 D	P 🔊 D	brownish tint on them, scraping leaves visible trail
Right Center	12	130	BUD	>	Р 성	. (P A D	P (A) D	P 🔏 D	3 = 1-5mm; 4 = 5-20mm;
Right Bank	15.5	145	BUD	<u> </u>	P (?)	1	PDD	P 👌 D	P 🙆 D	5 = >20mm; UD = Cannot determine if microalgae present,
						t measures of th of measuremen	e median axis of ts preferred)	each particle or	one of the size	substrate too small or covered with silt (formerly Z code). D = Dry, not assessed



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SWAMP Stream Habitat Char	acterization Form	FULL VERSION	Revision Date: February 9 th , 2011
Site Code:	Site Name: MYK	abo NYR	, Date:// 2011
Wetted Width (m):	Bankfull Width (m):	Bankfull Height (m): Ι, ξ	Transect D

						Transect Su	bstrates			•
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	CPOM	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickness Codes 0 = No microalgae present, Feels rough, not slimy;
Left Bank	.5	16	JED	æ.	P 🚯	Į –	P 🚯 D	P \land D	P 🕢 D	1 = Present but not visible, Feels slimy;
Left Center	3.5	30	380		PA	0	P 🏠 D	P 🔗 D	P \land D	2 = Present and visible but <1mm; Rubbing fingers on surface produces a
Center	7	48	BED		P A	0	p 🔊 d	P 🐼 D	P 🙆 D	brownish tint on them, scraping leaves visible trail
Right Center	10.5	156	340		ΡÒ	0	P 🔊 D	P 🚯 D	P D	3 = 1-5mm; 4 = 5-20mm;
Right Bank	17.5	80	BED		Р Ø	0	P 🔥 D	Р Ф D	P 🙆 D	5 = >20mm; UD = Cannot determine if microalgae present,
	Note: Sub class cate	strate size gories liste	es can be ed on the	recorded eitl supplementa	ter as direc al page (dire	measures of th ct measuremen	e median axis of ts preferred)	reach particle or	one of the size	substrate too small or covered with silt (formerly Z code). D = Dry, not assessed

RIPARIAN VEGETATION (facing downstream)	1 =	Abse Spara Mode	se (<	10%		3 = H 4 = Ve						INSTREAM HABITAT COMPLEXITY	1= 2= 3=	Hea	rse erate (1	10-75	1%) 1%) 1%)	DENSIOMET READINGS (0 count covered	-17)
Vegetation Class Left Ban		nk			Righ	nt Ba	ank		F	ilamentous Algae	Ø	1	2	3	4	Center	5		
Upper	Can	ору	(>5 i	m bi	gh)							Aquatic Macrophytes/ Emergent Vegetation	O	1	2	3	4	Left Center	
Trees and saplings >5 m high 70 1 2		3	4	t	1	2	3	4		Boulders	0	1	\oslash	3	4	Upstream	IT		
Lower C	anop	y (0.	5 m	-5 m	higl	1)					\	Noody Debris >0.3 m	0	1	2	3	4	Center	12
All vegetation 0.5 m to 5 m	Ø	1	2	3	4	Ø	1	2	3	4	v	Voody Debris <0.3 m	р	1	2	3	4	Right Center	12
Groun	d Co	ver (·	<0.5	m h	ligh)						Γ	Jndercut Banks	þ	1	2	3	4	Downstream	4
Woody shrubs & saplings <0.5 m	0	Ø	2	3	4	0	ᠿ	2	3	4		overhang. Vegetation	0	1	2	3	4	Optional	1
Herbs/ grasses	0	D	2	3	4	Ø	1	2	3	4] [ive Tree Roots	þ	1	2	3	4	Left Bank	
Barren, bare soil/ duff	0	1	2	3	Ð	0	1	2	3	Ð	17	Artificial Structures	ю	1	2	3	4	Right Bank	

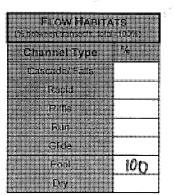
HUMAN INFLUENCE (circle only the closest to wetted channel)	0 = Not Present; B = On Bank; C = Between Bank & 10m from Channel; P = >10m+≤50m from Channel; Channel (record Yes or No)									
		Left I	Bank		Chan	inel		Right	Ban	ĸ
Walls/ Rip-rap/ Dams	Р	С	В	Ø	Y(Ň	76) в	С	Р
Buildings	P	С	В	P	Y	N	P	В	С	Р
Pavement/ Cleared Lot	P	С	В	þ			0	В	С	Р
Road/ Railroad	P	С	В	¢.	Y	N	0	В	С	Ρ
Pipes (Inlet/ Outlet)	P	С	В	ø	Y	N	þ	В	С	Р
Landfill/ Trash	P	С	В	þ	Y	Ν	þ	В	С	Р
Park/ Lawn	P	С	В	d			þ	В	С	Р
Row Crop	P	С	В	d			þ	В	С	Р
Pasture/ Range	P	С	В	0		Τ	þ	В	С	Р
Logging Operations	Р	С	В	Q			þ	В	С	Р
Mining Activity	Р	С	В	d	Y	N	þ	В	С	Ρ
Vegetation Management	Р	С	В	9			Ø	В	С	Р
Bridges/ Abutments	Р	С	В	d	Y	Ŋ	Ø	В	С	Р
Orchards/ Vineyards	Р	С	В	d			Ø	В	С	Р

tsoore zere S b	n uzviren a	es Castalicario di Castalicari	nataanset
Left Bank	proded	winerable	ş á bie 🔨
Right Bank	eroded	vulnerable	(stable)

FULL VERSION

Revision Date: February 9th, 2011

	I	nter-7	Frans	ect: DE	2	N	Netted Width (m	1): 14		
					In	ter-Transect	Substrates			
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	CPOM	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickness Codes 0 = No microalgae present,
Left Bank	5	18	BED		Ø À	5	P 🏠 D	P D	P 🙆 D	 Feels rough, not slimy; 1 = Present but not visible, Feels slimy;
Left Center	3.5	102	BLD		Р 🔕	· (P 🔗 D	р Q Д	P 🔕 D	2 = Present and visible but <1mm; Rubbing fingers on surface produces a
Center	7	125	Fb	· !	P A	0	P 🕢 D	P \Lambda D	P 👌 D	brownish tint on them, scraping leaves visible trail.
Right Center	10.5	151	BUD	~	Р 🔗	0	P 🅢 D	P 🕢 D	P 🕢 D	3 = 1-5mm; 4 = 5-20mm;
Right Bank	13.5	169	BUD	~	P 🔊	Ð	ΡÓD	P 🌒 D	P ØD	 5 = >20mm; UD = Cannot determine if microalgae present,
	Note: Sub class cate	strate size gories liste	s can be d on the	recorded eith supplementa	ier as direc I page (dire	t measures of th of measuremen	e median axis of Is preferred)	each particle or	one of the size	substrate too small or covered with silt (formerly Z code) D = Dry, not assessed



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Site Code:	Characterization Form	FULL VERSION Revis	sion Date: February 9 th , 2011
	Site Name: ハイビ	こ	Date:// 2011
Wetted Width (m): 15	Bankfull Width (m): 19	Bankfull Height (m): 1,5	Transect E

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/

						Transect Su	bstrates			
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	CPOM	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickness Codes 0 = No microalgae present, Feels rough; not slimy;
Left Bank	.5	200	BD		P	2	PA D	P 🕢 D	P Go D	1 = Present but not visible, Feels slimy, 2 = Present and visible but
Left Center	5	250	BED	1000 0000	РА	0	PAD	PAD	ΡΑΟ	<1mm. Rubbing fingers on surface produces a
Center	7.5	300	BED		РА	2	PAD	PAD	PAD	brownish tint on them, scraping leaves visible trail.
Right Center	12,5	250	Bid		РА	D	PAD	PAD	PAD	3 = 1-5mm; 4 = 5-20mm;
Right Bank	14.5	200	BLD		ΡA	D	PAD	PAD	PAD	5 = >20mm; UD = Cannot determine if microalgae present,
	Note: Sub class cate	ostrate size egories liste	s can be ed on the	recorded eith supplement	ner as direc al page (dir	t measures of th ect measuremen	e median axis of ts preferred)	reach particle or	one of the size	substrate too small or covered with silt (formerly Z code). D = Dry. not assessed

RIPARIAN VEGETATION (facing downstream)	0 = Absent (0% 1 = Sparse (<1 2 = Moderate (0%) 4	3 = Heavy = Very He	(40-75%) avy (>75%)	() INSTREAM HABITAT COMPLEXITY	0 = Absent (0%) 1 = Sparse (<10%) 2 = Moderate (10-40%) 3 = Heavy (40-75%) 4 = Very Heavy (>75%)	DENSIOMET READINGS (0 count covered	-17)
Vegetation Class	Left Bar	nk	Righ	t Bank	Filamentous Algae	0 1 2 3 4	Center	\$ /
*	Canopy (>5 m	n high)			Aquatic Macrophytes/ Emergent Vegetation	0 1 2 3 4	Left Center	7
Trees and saplings >5 m high	6 1 2	3 4	6 1	2 3 4	4 Boulders	0 1 2 3 4	Upstream	<u> </u>
	anopy (0.5 m-{	5 m high)	<u>ک</u>		Woody Debris >0.3 m	0 1 2 3 4	Center	12
All vegetation 0.5 m to 5 m	0 1 2	3 4	() 1	2 3 4	4 Woody Debris <0.3 m	01234	Right Center	2
Groun	d Cover (<0.5)	m high)			Undercut Banks	p 1 2 3 4	Downstream	<u>د</u>
Woody shrubs & saplings <0.5 m	0 () 2	34	0 (1)	2 3 4	4 Overhang. Vegetation	0 1 2 3 4	Optional Left Bank	
Herbs/ grasses	0 1 2	3 4	0 0	2 3 4	4 Live Tree Roots	01234		-
Barren, bare soil/ duff	0 1 2	3 🕘	0 1	2 3 74	Artificial Structures	0 1 2 3 4	Right Bank	

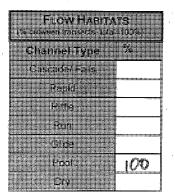
HUMAN INFLUENCE (circle only the closest to wetted channel)	B = 0 C = Be P = >1	0m+<	; Bank 50m fro	& 10m f om Chai es or No		annel;				
		Left	Bank		Cha	nnel		Right	Banl	<u>د</u>
Walls/ Rip-rap/ Dams	Р	С	В	(0)	Y	(Ń)	6) в	С	Р
Buildings	P	С	В	γ	Y	N	Ŏ	В	С	Р
Pavement/ Cleared Lot	Р	С	В	q			q	В	С	Р
Road/ Railroad	P	С	В	d	Y	N	0	В	С	Р
Pipes (Inlet/ Outlet)	Р	С	В	0	Y	N	d	В	С	Р
Landfill/ Trash	P	С	В	0	Y	Ν	d	В	С	Р
Park/ Lawn	Р	С	В	0			0	В	С	Р
Row Crop	Р	С	В	0			d	В	С	Р
Pasture/ Range	P	С	В	0			•	В	C	Р
Logging Operations	Р	С	В	0			Ø	В	С	Р
Mining Activity	P	С	В	0	Y	Ņ	þ	В	С	Р
Vegetation Management	Р	С	В	0			þ	В	С	Р
Bridges/ Abutments	Р	С	В	0	Y	N	Ø	В	С	Р
Orchards/ Vineyards	P	С	В	0		1	Q	В	С	Р

	5m upstream a	STABILITY and 5m downstream	of transect
	between bank	full - wetted width)	
Left Bank	eroded	vuinerable	stable
Right Bank	eroded	vulnerable	stable

FULL VERSION

Revision Date: February 9th, 2011

			[nter-]	Frans	sect: EI	Ţ	. \	Wetted Width (m	n): 3		a a construction of the second se
		199				In	ter-Transect	Substrates			
	Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	СРОМ	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickness Codes 0 = No microalgae present,
	Left Bank	15	31	617		P A	l	P 🖗 D	P 😡 D	P AD	Feels rough, not slimy; 1 = Present but not visible, Feels slimy;
	Left Center	3	60	ÉD		Р (2)	. (P ∲D	PAD	P 🔊 D	2 = Present and visible but <1mm; Rubbing fingers on surface produces a
ſ	Center	6.5	200	350		P 🕢	6	PPD	PDD	P 🔊D	brownish tint on them, scraping leaves visible trail
(5)	Right Center	9.5	220	BID	~	Р (ђ		P 🅢 D	₽ (2)? D	P 🚯 D	3 = 1-5mm 4 = 5-20mm;
(Right Bank	12.5	240	860		P 🖗		P (A) D	P 🎝 D	P (A) D	5 = >20mm, UD = Cannot determine if microalgae present,
		Note: Sub class cate	strate size gories liste	s can be d on the	recorded eith supplementa	ner as direct Il page (dire	measures of th ct measuremen	e median axis of Is preferred)	each particle or	one of the size	substrate too small or covered with sill (formerly Z code) D = Dry, not assessed



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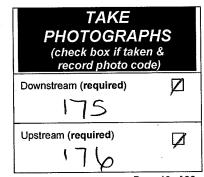
SWAMP Stream Habitat (Characterization Form	n _ F	-ULL VEF	RSION	Revi	Revision Date: February 9 th , 2011				
Site Code:	Site Name:	MAR	ah	NYR	-	Date:// 2011				
Wetted Width (m):	Bankfull Width (m)	" (3	Bankfull	Height (m): 🥻	2	Transect F				

						Transect Su	bstrates			-
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	СРОМ	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickness Codes 0 = No microalgae present, Feels rough, not slimy;
Left Bank	.5	8	LOB	6	P A	P	P 🖗 D	Р (д) D	PAD	1 = Present but not visible, Feels slimy,
Left Center	3	75	CG		Р 🖗	Ð	PQ D	р б D	P 🖗 D.	2 = Present and visible but <1mm; Rubbing fingers on surface produces a
Center	6	180	BUD	~_	Р 🔕		P 🚯 D	P O D	POD	brownish tint on them, scraping leaves visible trail
Right Center	q	200	BUD		Р 😡		Р () D	РQD	P & D	3 = 1-5mm; 4 = 5-20mm;
Right Bank	11.5	150	BUD	<u> </u>	P (b)	~	P AD	P 🆧 D	P D	5 = >20mm; UD = Cannot determine if microalgae present,
	Note: Sub class cate	strate size gories liste	s can be d on the	recorded eith supplementa	ner as direc al page (dire	t measures of th ct measuremen	e median axis of its preferred)	each particle or	one of the size	substrate too small on covered with silt (formerly Z code). D = Dry, not assessed

RIPARIAN VEGETATION (facing downstream)		Spar		10%)	3 = H 4 = V						Instream Habitat Complexity	1= 2= 3=	• Hea	se erate (40-75)%))%) 5%)		DENSIOMET READINGS (0 count covered of	-17)
Vegetation Class		Lef	t Ba	nk			Rig	nt Ba	ank			Filamentous Algae	0	1	2	3	4		Center	0
Upper	Can	onv	(>5 1	m hi	ah)							Aquatic Macrophytes/	6	≥ 1	2	3	4		Left	Ľ
	- <u>A</u>	- P J	· · ·		5.01	-~		20			4 L	Emergent Vegetation	<u> </u>		6				Center	5
Trees and saplings >5 m high	(0)	1	2	3	4	0	1	2	3	4	ιL	Boulders	0	1	Q2	3	4		Upstream	
Lower C	anop	y (0.	5 m-	-5 m	higl	<u>1) </u>						Woody Debris >0.3 m	Q	1	2	3	4		Center	14
All vegetation 0.5 m to 5 m	69	1	2	3	4	0	1	2	3	4		Woody Debris <0.3 m	P	1	2	3	4		Right Center	
Groun	d Cov	er (<0.5	mh	igh)	1					1	Undercut Banks	0	1	2	3	4	1	Downstream	T
Woody shrubs & saplings	~	4				6	4	2	3	4	1	Overhang. Vegetation	1	1	2	3	4	1	Optional	
<0.5 m	0	1	2	3	4	Ø		2	3	4		Overhang, vegetation	Y		-	<u> </u>			Left Bank	
Herbs/ grasses	10	1	2	3	4	0	ñ	2	3	4	7 ſ	Live Tree Roots	d	1	2	3	4		сеп валк	-
Tierbs/ grasses	V	•	2	U	-	ľ	U	-	Ŭ										Right Bank	-
Barren, bare soil/ duff	0	1	2	3	Ð	0	1	2	3	(4)] [Artificial Structures	9	1	2	3	4			

HUMAN INFLUENCE (circle only the closest to wetted channel)	B = 0 C = B P = >1	10m+<5	Bank 50m fr	& 10m fr om Char es or No					
		Left I	Bank		Channel		Right	Ban	ĸ
Walls/ Rip-rap/ Dams	Р	С	В	0	YA	\bigcirc	В	С	Р
Buildings	Р	С	В	ρ	YW	Ŷ	В	С	Р
Pavement/ Cleared Lot	P	С	В	þ		Ŷ	В	С	Р
Road/ Railroad	Р	С	В	0	YN	Ó	В	С	Р
Pipes (Inlet/ Outlet)	P	С	В	0	YN	d	В	С	Р
Landfill/ Trash	P	С	В	¢	YN	d	В	С	Р
Park/ Lawn	P	С	В	þ		Ø	В	С	Р
Row Crop	P	С	В	þ		¢	В	С	Р
Pasture/ Range	P	С	В	þ		¢	В	С	Ρ
Logging Operations	P	С	В	0		ø	В	С	Ρ
Mining Activity	P	С	В	0	YN	þ	В	С	Р
Vegetation Management	P	С	В	0		0	В	С	Р
Bridges/ Abutments	P	С	В	þ	YN	þ	В	С	Р
Orchards/ Vineyards	Р	С	В	þ		þ	В	С	Ρ,

BANK S Istore zorie Structus Later Seturem Toriet	ud See thus chesn	istrined.
Latt Bank eroded	vulnerable	/stable)
Right Bank eroded	vuinerable	(stab)

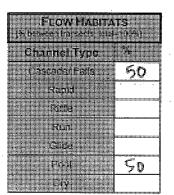


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FULL VERSION

Revision Date: February 9th, 2011

	Inter-Transect: FG Wetted Width (m):													
					In	ter-Transect	Substrates							
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed,	СРОМ	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickness Codes 0 = No microalgae present				
Left Bank	15	\$6	BED)	РĎ	3	P 🕢 D	P 🔊 D	P 🔊 D	 Feels rough, not slimy; 1 = Present but not visible, Feels slimy; 				
Left Center	3.5	50	CG	-	Р 🔕	l	P A D	P A D	P 🏟 D	2 = Present and visible but <1mm; Rubbing fingers on surface produces a				
Center	7	Ď	BED	~	Р 🕖	2	PA D	P 🔊 D	P 🖉 D	brownish tint on them, scraping leaves visible trail				
-Right Center	10.5	69	BLD	·	P (A)	(P 🔊 D	P 🔿 D	P \Lambda D	3 = 1-5mm; 4 = 5-20mm;				
Right Bank	13.5	21	BED		Р 🎝	0	P 🗿 D	P (A) D	P D	5 = >20mm; UD = Cannot determine if microalgae present.				
	Note: Sub class cate	strate size gories liste	s can be ed on the	recorded eith supplementa	ier as direc I page (dire	measures of th of measuremen	e median axis of Is preferred)	each particle or (one of the size	substrate too small or covered with silt (formerly Z code) D = Dry, not assessed				



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Site Code:				Site Name:	MN/K	e abu	NYR		Date:	// 2011			
Wetted Widt	h (m): l	4		Bankfull Wid	^{th (m):} 7	l Bar	kfull Height (m):	1.5	Tra	nsect G			
						Transect S	ubstrates						
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	CPOM	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thicknes Codes 0 = No microalgae prese Feels rough, not slimy;			
Left Bank	.5	110	16		Р 🐼	2	P & D	₽ Æ>D	P 🔕 D	1 = Present but not visible Feels slimy; 2 = Present and visible b			
Left Center	3.5	71	BLT		P 6	. 1	PAD	PAD	PĂD	<1mm; Rubbing finger on surface produces a			
Center	7	0	365	· · · ·	P Ø	0	P 🕢 D	P 🖗 D	P (D) D	brownish tint on them scraping leaves visible trail.			
Right Center	10,5	0	BEL	> -	Р 🖗	Ø	P 🔊 D	PDD	P Ø D	3 = 1-5mm; 4 = 5-20mm; 5 = >20mm;			
Right Bank	13.5	60	COB	6	P 🔊	0	P AD	P (A) D	^P ⊘ ^D	UD = Cannot determine microalgae present.			
	Note: Sub class cate	strate size gories list	es can b ed on th	e recorded eit e supplement	ner as direc al page (dire	t measures of act measureme	the median axis o ents preferred)	f each particle or	one of the size	substrate too small or covered with silt (formerly Z code) D = Dry, not assessed			

RIPARIAN VEGETATION (facing downstream)	0 = / 1 = : 2 =		se (<	10%)	3 = H 4 = Ve						INSTREAM HABITAT COMPLEXITY	1 = 2 = 3 =	Heav	se brate (ly ((0%) (<10 10-40 40-75 y (>75	%) %) %)		DENSIOMET READINGS (0- count covered i	-17)
Vegetation Class		Lef	: Ba	nk			Rigl	nt Ba	ank			Filamentous Algae	10	1	2	3	4		Center	9
Upper	Can	ору	(>5 i	n hi	gh)							Aquatic Macrophytes/ Emergent Vegetation	0	1	2	3	4		Left Center	7
Trees and saplings >5 m high	0	71)	2	3	4	6	1	2	3	4		Boulders	0	1	2	3	4		Upstream	5
Lower C	anop	y (0,	5 m-	5 m	high	1)						Woody Debris >0.3 m	0	1	2	3	4		Center Right	10
All vegetation 0.5 m to 5 m	0	0	2	3	4	10	1	2	3	4	ļ	Woody Debris <0.3 m	0	1	2	3	4.		Center	2
Groun	d Co	ver (<0.5	m h	igh)							Undercut Banks	0	1	2	3	4		Downstream	14
Woody shrubs & saplings <0.5 m	0	O	2	3	4	ß	1	2	3	4		Overhang. Vegetation	0	1	2	3	4		Optional Left Bank	
Herbs/ grasses	0	6	2	3	4	0	1	2	3	4		Live Tree Roots	0	1	2	3	4		Right Bank	
Barren, bare soil/ duff	0	1	2	3 -	15	0	1	2	3	Ð	1	Artificial Structures	0	1	2	3	4	<u> </u>		<u> </u>

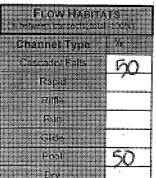
HUMAN INFLUENCE (circle only the closest to wetted channel)	B = 0 C = Be P = >1	0m+<5	Bank i0m fn	& 10m om Cha es or No					
		Left B	Bank		Channel	F	light	Banl	()
Walls/ Rip-rap/ Dams	Р	С	В	0	Y	(0)	В	С	Р
Buildings	Р	С	В	Ŷ	YN	p	В	С	P
Pavement/ Cleared Lot	P	С	В	¢.		р р	В	С	P
Road/ Railroad	Р	С	В	ø	YN	Q	В	C	P
Pipes (Inlet/ Outlet)	Р	С	В	þ	YN	ġ	В	С	Р
Landfill/ Trash	Р	С	В	9	YN	¢	В	С	Р
Park/ Lawn	P	С	В	þ		ø	В	С	Р
Row Crop	P	C	В	¢		þ	В	_C_	P
Pasture/ Range	P	С	В	þ		þ	В	С	Р
Logging Operations	Р	С	В	d		0	В	С	Р
Mining Activity	P	С	В	0	YN	0	В	С	Р
Vegetation Management	P	С	В	q		þ	В	С	P
Bridges/ Abutments	P	С	В	ø	YN	þ	В	С	Р
Orchards/ Vineyards	P	С	В	¢		Þ	В	С	Р

BANK STABILITY texte zo e 5m upstreen and 5m downstreem if the sold boween bankful - welled width
(actes core im upstream and im cownstream of the sect potween the kind - waited widt)
Convert and Smuthtern what the convertient of the second convert to show the second seco
convern harknif - wirted with)
convention while writes with
cowen worktur, water with
Zoween harknif - wittes witch)
cemetn barktul - militä WCD)
USAVEC1 US FILE - STRIKE FRANKLI

FULL VERSION

Revision Date: February 9th, 2011

-	I	nter-7	Frans	ect: GI	I		Wetted Width (n	1): 15	1	······································
		L. States			In	ter-Transec	t Substrates			
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed,	CPOM	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	0 = No microalgae present.
Left Bank	.to	9.5	06		(P) A	20	P 🔗 D	P 🔗 D	P 🕢 D	 Feels rough, not slimy; 1 = Present but not visible, Feels slimy;
Left Center	4	86	BLD		P 🔊	l	PA D	P 🚯 D	Р 💋 D	2 = Present and visible but <1mm, Rubbing fingers on surface produces a
Center	7.5	76	BD		Р 🔗	D	P 🖉 D	P 🔊 D	PAD	brownish tint on them, scraping leaves visible
Right Center	11.5	15	BED	<u></u>	РØ	(P A) D	P & D	P 🚯 D	trail. 3 = 1-5mm; 4 = 5-20mm;
Right Bank	14.5	0	BED	·~	P 🗖	G	P 🔊D	P 🖗 D	POD	5 = >20mm; UD = Cannot determine if microalgae present
	Note: Sub class cate	strate size gories liste	s can be d on the	recorded eith supplementa	ier as direct I page (dire	measures of th ct measuremen	e median axis of ts preferred)	each particle or o	one of the size	substrate too small or covered with silt (formeny Z code).





cascale coscude 1007

ite Code:		Habitat (Site Name:		IL abu	NYR		Date:	// 2011
letted Wid	th (m): (2		Bankfull Wid			full Height (m):	1.5	Tra	insect H
						Transect Su	bstrates			
Position	Dist from LB(m)	Depth (cm)	mm/ size class	% Cobble Embed.	CPOM	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thicknes Codes 0 = No microalgae preser Feels rough, not slimy;
Left Bank	.5	19	COB	20	P A	2	P 🏈 D	р () D	P 🕭 D	 1 = Present but not visible Feels slimy;
Left Center	3	0	BED	-	P &>	O	P 🕢 D	P 🕢 D	P 🔕 D ,	2 = Present and visible but <1mm; Rubbing fingers on surface produces a
Center 6 7 2 B			BLD		P 🔊	D	P 🔊 D	P \Lambda D	P 🗿 D	brownish tint on them, scraping leaves visible trail
Right Center	ÿ	56	BLD		P (A)	93	P 🔗 D	P 🏠 D	P 🖉 D	3 = 1-5mm; 4 = 5-20mm;
Right Bank	11.5	18	65	-	DA	0	P 🚱 D	РОО	P D	5 = >20mm; UD = Cannot determine i microalgae present,
	Note: Sut class cate	ostrate size egories listi	s can be ed on the	e recorded eit supplement	her as direc al page (dire	t measures of th oct measuremen	e median axis of ts preferred)	each particle or	one of the size	substrate too small or covered with silt (formerly Z code). D = Dry, not assessed
	N VEGET	57 (1992)	1 = Spa	ent (0%) irse (<10%) derate (10-40	4 = Very	y (40-75%) Heavy (>75%)	Instr Hab Compi	REAM 1= 23 ITAT 3=	Absent (0%) Sparse (<10%) Moderate (10-40%) Heavy (40-75%) Very Heavy (>75%)	DENSIOMETE READINGS (0 count covered do
Vege	tation Cla			ft Bank / (>5 m hìgh		iht Bank	Filamentou Aquatic Ma Emergent V	crophytes/)1 2 3 4 1 2 3 4	Center Left Center

34

34

3 (4)

3 4

6

0 1 2

1 2

0 10 2

0 🔿 2

HUMAN INFLUENCE (circle only the closest to wetted channel)	B = 0 C = B P = >1	Not Present; On Bank; Between Bank & 10m from Channel; Softwark=50m from Channel; Crecord Yes or No; Left Bank Channel Right Bank												
		Left I	Bank		Cha	nnel	(Right	Banl	<				
Walls/ Rip-rap/ Dams	P	С	В	10	Y	Ø	(0)	В	С	Ρ				
Buildings	P	С	В	2	Y	N	<u> </u>	В	С	Р				
Pavement/ Cleared Lot	P	С	В	þ			Þ	В	С	Ρ				
Road/ Railroad	P	С	В	ø	Y	Ņ	þ	В	С	Ρ				
Pipes (Inlet/ Outlet)	P	С	В	þ	Y	N	þ	В	С	Р				
Landfill/ Trash	P	С	В	þ	Y	N	þ	В	С	Р				
Park/ Lawn	P	С	В	0			Q	В	С	P				
Row Crop	P	С	В	0			•	В	С	Р				
Pasture/ Range	P	С	В	0			ø	В	С	Р				
Logging Operations	Р	С	В	0			Þ	В	С	Р				
Mining Activity	P	С	В	þ	Y	N	þ	В	С	Ρ				
Vegetation Management	P	С	В	0			þ	В	С	Ρ				
Bridges/ Abutments	P	С	В	þ	Y	Ŋ	þ	В	С	Ρ				
Orchards/ Vineyards	P	С	В	- ¢		1	0	В	С	Ρ				

Lower Canopy (0.5 m-5 m high)

0

0

0 1

All vegetation 0.5 m to 5 m

Woody shrubs & saplings <0.5 m

Herbs/ grasses

Barren, bare soil/ duff

0 1 2 3 4

2 3 4

2 3 4

2 3 (3

Ground Cover (<0.5 m high)

b

Ð

ciecce zong Smillostrømma boxwoen borkt	n tritoviti 1920 Alexandro viti	
Left Bank, eroded	vulnerable	[∫ statū̃≹_]
Right Bank eroded	vulnerabla	

2

2

2

2

2 3 4

1

1 2 34

1

(1) 1

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> n 1

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Woody Debris >0.3 m

Woody Debris <0.3 m

Overhang. Vegetation

Undercut Banks

Live Tree Roots

Artificial Structures

34

34

3 4

34

Center

Right

Center

Downstream

Left Bank

Right Bank

Optional

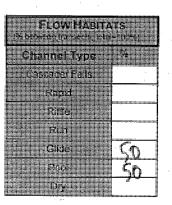
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2

FULL VERSION

Revision Date: February 9th, 2011

		Inter-'	Trans	sect: H	[Wetted Width (n	n): 20		
					In	ter-Transect	Substrates			
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	CPOM	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickness Codes 0 = No microalgae present
Left Bank	15	100	385		P Ø	1.1	P D	P 🔊 D	PAD	Feels rough, not slimy; 1 = Present but not visible, Feels slimy;
Left Center	-5	30	6	<u> </u>	Р 🅢	0 <u>0</u>	P 🔗 D	P 🕢 D	P AD	2 = Present and visible but <1mm; Rubbing fingers on surface produces a
Center	()	50	COB	70	(P) A	2	P to D	P 🔊 D	P 🔞 D	brownish tint on them, scraping leaves visible trail
Right Center	15	20 37	COR		Р 🔿	× (P 🚯 D	P 👌 D	P 🔊 D	3 = 1-5mm; 4 = 5-20mm;
Right Bank	195	34	(6B)	30	₽ ⁄Ð	Ь	P A D	P 🚯 D	P DD	5 = >20mm; UD = Cannot determine if microalgae present.
	Note: Sub class cate	strate size gories liste	s can be d on the	recorded eith supplementa	ier as direc I page (dire	t measures of th of measuremen	e median axis of Is preferred)	each particle or o	one of the size	substrate too small or covered with silt (formerty Z code). D = Dry, not assessed



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te Òode:				Site Name:	Mu	12 abr			Date:	// 2011
etted Widt	^{h (m):} 4	2 13		Bankfull Wid	ith (m): (8 Bani	kfull Height (m):	2	Tra	ansect I
						Transect Si	ibstrates			
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	СРОМ	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thicknes Codes 0 = No microalgae prese Feels rough, not slimy;
Left Bank	,5	3	BED		P A	0	P 🙆 D	P 🔊 D	P 🙆 D	1 = Present but not visible Feels slimy;
Left Center	3	0	BUD	1-	P 🐼	0	P 🔊 D	P OD	POD	2 = Present and visible b <1mm; Rubbing finger on surface produces a
Center	6.5	101	BED	-	PA	0	P 🎒 D	P 🖗 D	P 🔊 D	brownish tint on them, scraping leaves visible trail
Right Center	9.5	91	BUT	1	PA	2	O A D	P 🕢 D	¢OD)	3 = 1-5mm; 4 = 5-20mm; 5 = >20mm;
Right Bank	12.5	38	COB	50	Ø A	2	(PAD	P` 🖗 D	P 🕢 D	UD = Cannot determine microalgae present;
	Note: Sul class cate	ostrate size egories liste	es can be ed on the	recorded eit supplement	her as díreo al page (dire	t measures of t ect measureme	ne median axis of hts preferred)	each particle or	one of the size	substrate too small or covered with silt (formerly Z code), D = Dry, not assessed
								1.07	Absent (0%)	
	N VEGET 1 downstrea			ent (0%) rse (<10%)	4 = Very	vy (40-75%) Heavy (>75%)	INSTF Hab	REAM 1= 2= ITAT 3=	Sparse (<10%) Moderate (10-40%) Heavy (40-75%) Very Heavy (>75%)	DENSIOMETE READINGS (0- count covered of

10000	201 X X X X X X X X X X X X X X X X X X X					1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1							an a	22.126.28.23	Clean contraction		///////////////////////////////////////
	Lef	t Ba	nk		1.000	Rig	nt B	ank		Filamentous Algae	0	1	2	3	4	Center	15
r Can	opy	(>5 i	m hi	gh)						Aquatic Macrophytes/	0) 1	2	3	4		12
ത	1	2	3	4	6	1	2	3	4	Boulders	To	1	(2)	3	4	Upstream	12
Canor	.)y (0.	5 m-	-5 m	hig	h					Woody Debris >0.3 m	0	1	2	3	4	Center	5
0	1	2	3	4	-	(1)) 2	3	4	Woody Debris <0.3 m	0	1	2	3	4	Center	
id Co	ver(<0.5	m h	ligh)	1 2	$\overline{}$				Undercut Banks	P	1	2	3	4	Downstream	15
0	Ô	2	3	4	o	0	2	3	4	Overhang. Vegetation	0	1	2	3	4	Optional	Ť
6	1	2	3	4	0	M	2	3	4	Live Tree Roots	0	1	2	3	4		-
	1	2	3	4	0	$\frac{1}{1}$	2	3	Ø	Artificial Structures	10	1	- 2	3	4	Right Bank	
	O Danop	r Canopy 1 Canopy (0. 1 1	r Canopy (>5) 0 1 2 Canopy (0.5 m	r Canopy (>5 m hi	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	r Canopy (>5 m high) Canopy (0.5 m-5 m high) \bigcirc 1 2 3 4 \bigcirc Canopy (0.5 m-5 m high) \bigcirc 1 2 3 4 \bigcirc nd Cover (<0.5 m high) 0 \bigcirc 2 3 4 0 \bigcirc 1 2 3 4 0 \bigcirc 1 2 3 4 0	r Canopy (>5 m high) $\bigcirc 1 2 3 4 0 1$ Canopy (0.5 m-5 m high) $\bigcirc 1 2 3 4 0 1$ $\bigcirc 1 2 3 4 0 1$	r Canopy (>5 m high) $\bigcirc 1 2 3 4 0 1 2$ Canopy (0.5 m-5 m high) $\bigcirc 1 2 3 4 0 0 2$ nd Cover (<0.5 m high) 0 0 2 3 4 0 0 2 0 1 2 3 4 0 2	r Canopy (>5 m high) $\bigcirc 1 2 3 4 0 1 2 3$ Canopy (0.5 m-5 m high) $\bigcirc 1 2 3 4 0 1 2 3$ $\bigcirc 1 2 3 4 0 1 2 3$ $\bigcirc 1 2 3 4 0 0 2 3$ $\bigcirc 1 2 3 4 0 0 2 3$ $\bigcirc 1 2 3 4 0 0 2 3$	r Canopy (>5 m high) (a) 1 2 3 4 (b) 1 2 3 4 Canopy (0.5 m 5 m high) (b) 1 2 3 4 (c) 1 2 3 4 (r Canopy (>5 m high) Aquatic Macrophytes/ Emergent Vegetation (1) 1 2 3 4 (0) 1 2 3 4 (2) 1 2 3 4 (0) 1 2 3 4 (2) 1 2 3 4 (0) 1 2 3 4 (2) 1 2 3 4 (0) 1 2 3 4 (2) 1 2 3 4 (0) 1 2 3 4 (2) 1 2 3 4 (0) 1 2 3 4 (2) 1 2 3 4 (0) 1 2 3 4 (2) 1 2 3 4 (0) 1 2 3 4 (2) 1 2 3 4 (0) 1 2 3 4 (2) 1 2 3 4 (0) 1 2 3 4 (2) 1 2 3 4 (0) 1 2 3 4 (3) 1 2 3 4 (1) 1 2 3 4 (3) 1 2 3 4 (1) 1 2 3 4 (3) 1 2 3 4 (1) 1 2 3 4 (3) 1 2 3 4 (1) 1 2 3 4 (3) 1 2 3 4 (1) 1 2 3 4 (3) 1 2 3 4 (1) 1 2 3 4 (3) 1 2 3 4 (1) 1 2 3 4 (3) 1 2 3 4 (1) 1 2 3 4 (3) 1 2 3 4 (1) 1 2 3 4 (3) 1 2 3 4 (1) 1 2 3 4 (3) 1 2 3 4 (1) 1 2 3 4 (3) 1 2 3 4 (1) 1 2 3 4 (3) 1 2 3 4 (1) 1 2 3 4 (3) 1 2 3 4 (1) 1 2 3 4 (3) 1 2 3 4 (1) 1 2 3 4 <td>Canopy (>5 m high) Aquatic Macrophytes/ Emergent Vegetation O Image: Control of the system <</td> <td>Left Bank Right Bank r Canopy (>5 m high) I 2 3 4 Image: Control of the second second</td> <td>Left Bank Right Bank r Canopy (>5 m high) Image: Control of the second seco</td> <td>Left Bank Right Bank r Canopy (>5 m high) Aquatic Macrophytes/ Emergent Vegetation 0 1 2 3 0 1 2 3 4 0 1 2 3 4 0 1 2 3 4 0 1 2 3 4 0 1 2 3 4 0 1 2 3 4 Woody Debris >0.3 m 0 1 2 3 0 1 2 3 4 0 1 2 3 4 Woody Debris >0.3 m 0 1 2 3 0 1 2 3 4 0 1 2 3 4 Undercut Banks p 1 2 3 0 1 2 3 4 0 1 2 3 4 Undercut Banks p 1 2 3 0 1 2 3 4 0 1 2 3 4 Undercut Banks 0 1 2 <t< td=""><td>Left Bank Right Bank r Canopy (>5 m high) Filamentous Algae 0 1 2 3 4 Image: Control of the structure of the</td><td>Left Bank Algine Dank r Canopy (>5 m high) Aquatic Macrophytes/ Emergent Vegetation 0 1 2 3 4 (O) 1 2 3 4 (O) 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1</td></t<></td>	Canopy (>5 m high) Aquatic Macrophytes/ Emergent Vegetation O Image: Control of the system <	Left Bank Right Bank r Canopy (>5 m high) I 2 3 4 Image: Control of the second	Left Bank Right Bank r Canopy (>5 m high) Image: Control of the second seco	Left Bank Right Bank r Canopy (>5 m high) Aquatic Macrophytes/ Emergent Vegetation 0 1 2 3 0 1 2 3 4 0 1 2 3 4 0 1 2 3 4 0 1 2 3 4 0 1 2 3 4 0 1 2 3 4 Woody Debris >0.3 m 0 1 2 3 0 1 2 3 4 0 1 2 3 4 Woody Debris >0.3 m 0 1 2 3 0 1 2 3 4 0 1 2 3 4 Undercut Banks p 1 2 3 0 1 2 3 4 0 1 2 3 4 Undercut Banks p 1 2 3 0 1 2 3 4 0 1 2 3 4 Undercut Banks 0 1 2 <t< td=""><td>Left Bank Right Bank r Canopy (>5 m high) Filamentous Algae 0 1 2 3 4 Image: Control of the structure of the</td><td>Left Bank Algine Dank r Canopy (>5 m high) Aquatic Macrophytes/ Emergent Vegetation 0 1 2 3 4 (O) 1 2 3 4 (O) 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1</td></t<>	Left Bank Right Bank r Canopy (>5 m high) Filamentous Algae 0 1 2 3 4 Image: Control of the structure of the	Left Bank Algine Dank r Canopy (>5 m high) Aquatic Macrophytes/ Emergent Vegetation 0 1 2 3 4 (O) 1 2 3 4 (O) 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

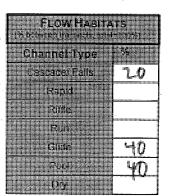
HUMAN INFLUENCE (circle only the closest to wetted channel)	B = 0 C = B P = >1	t Prese Bank Stween Om+<5 nel (rec	i Bank 50m fre	om Cha		annel;		9		
		Left	Bank	~	Cha	nnel	F	Right	Banl	(
Walls/ Rip-rap/ Dams	P	С	В	(0)	Y	\bigcirc	\bigcirc	В	С	Р
Buildings	P	С	В	Y	Y	Z	9	В	С	Р
Pavement/ Cleared Lot	Р	С	В	ø			Ý	В	С	Р
Road/ Railroad	Р	С	В	q	Y	Z	þ	В	С	P
Pipes (Inlet/ Outlet)	P	С	В	d	Y	Ν	¢	В	С	P
Landfill/ Trash	Р	С	В	þ	Y	Ν	¢	В	С	Р
Park/ Lawn	P	С	В	ø			þ	В	С	Р
Row Crop	P	С	В	þ			ø	В	С	Р
Pasture/ Range	Р	С	В	þ			¢	В	С	P
Logging Operations	Р	С	В	þ			þ	В	С	Р
Mining Activity	P	С	В	þ	Y	N	þ	В	С	Р
Vegetation Management	P	С	В	þ		1	þ	В	С	Р
Bridges/ Abutments	P	С	В	þ	Y	N	0	В	С	Р
Orchards/ Vineyards	Р	С	В	þ		1	0	В	С	Р

Right Bank	eroded	vulnerable	stable
Left Bank	eroded	vulnerable	stable
(score zone	5m upstream a	STABILITY and 5m downstream full - wetted width)	of transect

FULL VERSION

Revision Date: February 9th, 2011

		Inter-'	Tran	sect: IJ	-	.1	Wetted Width (n	n): 13.5		
					In	ter-Transect				
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	CPOM	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickness Codes 0 = No microalgae present.
Left Bank	<u> </u>	31	32	<u> </u>	P Ø	0	P 🕅 D	P 🔊 D	P 🗿 D	Feels rough, not slimy; 1 – Present but not visible; Feels slimy;
Left Center	3.5	54	BEE		Р (7)	ł	P 🕢 D	P 🗿 D	P 🏠 D	2 = Present and visible but <1mm; Rubbing fingers on surface produces a
Center	٦	ð	肠		Р 6	· Ø	P & D	Р 6 Д	P D	brownish tint on them, scraping leaves visible
Right Center	10,5	108	D		Р 🖉	(PAD	P (A) D	PAD	trail. 3 = 1-5mm; 4 = 5-20mm;
Right Bank	13	33	BED	(P A	2	P 🕢 D	P 🔊 D	P 🕢 D	5 = >20mm; UD = Cannot determine if microalgae present;
	Note: Sub class cate	strate size: gories liste	s can be d on the	recorded eith supplementa	ier as direct I page (dire	t measures of th ct measuremen	e median axis of ts preferred)	each particle or o	one of the size	substrate too small or covered with sit (formerly Z code), D = Dry, not assessed



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ite Code:	Stream I			Site Name:		8	abv	NYI	2	Date:	_//2011
	th (m): Z	,		Bankfull Wid		28	-	full Height (m):	2.5	Tra	insect J
						Trans	ect Sul	ostrates			
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	CPOM	Micro Thick Co	ness	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thicknes Codes 0 = No microalgae preser Feels rough, not slimy,
Left Bank	5	23	BUT		PA	£		р 🚫 D	P 🕢 D	PAD	1 = Present but not visibl Feels slimy;
Left Center	5	59	COB	30	Р 🔕	. 2	-	P 🔗 D	P 🔊D	P D	2 = Present and visible b <1mm; Rubbing finger: on surface produces a
	Ph2895	0	BED		PB	0		P 🔕 D	PAD	PAD	brownish tint on them, scraping leaves visible trail
Right Center	(5.5	64	BLT	> -	Р 🖗	2	-	P 🔗 D	P 🖉 D	P A D	3 = 1-5mm; 4 = 5-20mm; 5 = >20mm;
Right Bank	20,5	39	BUD	-	РØ	Ø		Р 67 D	P () D	P 🖗 D	UD = Cannot determine i microalgae present,
	Note: Sub class cate	ostrate size egories list	es can be ed on the	e recorded eit e supplement	her as direc al page (dire	t measur ect meas	es of th uremen	e median axis of is preferred)	each particle or	one of the size	substrate too small or covered with silt (formerly Z code).
										Absent (0%)	D = Dry, not assessed
	N VEGETA g downstrea		1 = Spa	ent (0%) irse (<10%) derate (10-40	3 = Heav 4 = Very %)			INSTF Hab Compi	REAM 1= 2= ITAT 3=	Sparse (<10%) Moderate (10-40%) Heavy (40-75%) Very Heavy (>75%)	DENSIOMETE READINGS (0- count covered d
Vege	tation Cla			ft Bank	<u> </u>	jht Bar	nk	Filamentou Aquatic Ma	crophytes/		Center Left
Upper Canopy (>5 m high) Trees and saplings >5 m high 0 0 0 0 3 4 0 0		2	3 4	Emergent V Boulders	/egetation 0		Center Upstream				
Trees and			0 <u>(</u> anopy (0.5 m-5 m h	b			Woody Deb	oris >0.3 m		Center Right

1 2 3 4

34

3 (4)

0 1 🖉 3 4

0 (1) 2

0

0 1 2

34

34

3 (4)

HUMAN INFLUENCE (circle only the closest to wetted channel)	B = 0 C = B P = >1	0 = Not Present; B = On Bank, C = Between Bank & 10m from Channel; P = >10m + 50m from Channel; Channel (record Yes or No)												
		Left I	Bank	~	Chan	inel	F	light	Bank	(
Walls/ Rip-rap/ Dams	P	С	в	6	Y	M)	6	В	С	Р				
Buildings	Р	С	В	ø	Y	Ŋ	Ŷ	В	С	<u>Р</u>				
Pavement/ Cleared Lot	P	С	В	þ			p	В	С	P				
Road/Railroad	Р	С	В	þ	Y	Ν	þ	В	С	<u>Р</u>				
Pipes (Inlet/ Outlet)	Р	С	В	þ	Y	N	þ	В	С	Р				
Landfill/ Trash	P	С	В	þ	Y	N	þ	В	С	Р				
Park/ Lawn	P	С	В	0			þ	В	С	P				
Row Crop	P	С	В	þ			0	В	С	Р				
Pasture/ Range	Р	С	В	þ			0	В	С	P				
Logging Operations	P	С	В	þ			þ	В	С	Р				
Mining Activity	P	С	В	0	Y	Ŋ	þ	В	С	Р				
Vegetation Management	P	С	В	р			d	В	_ C	Р				
Bridges/ Abutments	P	С	B	þ	Y	N	0	В	С	P				
Orchards/ Vineyards	P	С	В	þ			þ	В	С	Р				

0 1 (2)

Ø

0 (1) 2 3 4

2

Ground Cover (<0.5 m high)

0 1

0 1

All vegetation 0.5 m to 5 m

Woody shrubs & saplings <0.5 m

Herbs/ grasses

Barren, bare soil/ duff

iztre dire.			of massed .
Lations	eroded	w.ingrable	Atabiè \
Right Bank	eroded	vuinerable	∫ (stable ∫

1 2 3 4

1 2

1

10

3 4

2 3 4

0 1 2 3 4

1 2 3 4

Woody Debris <0.3 m

Overhang. Vegetation

Undercut Banks

Live Tree Roots

Artificial Structures

Right

Center

Downstream

Left Bank

Right Bank

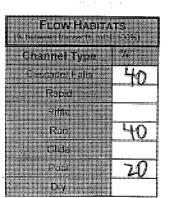
Optional

2

FULL VERSION

Revision Date: February 9th, 2011

		Inter-'	Frans	sect: Jk	C C		Wetted Width (n	n): <u>1</u> 3		
			1	l.	In		t Substrates			
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	СРОМ	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickness Codes 0 = No microalgae present
Left Bank	.5	0	EU7	-	ÞØ	6	P 🐼 D	P A D	P 🎗 D	 Feels rough, not slimy; 1 = Present but not visible, Feels slimy;
Left Center	4	50	(0b	40	Р 🖉	0	P 🔊 D	P (A) D	P 🔗 D	2 = Present and visible but <1mm, Rubbing fingers on surface produces a
Center	11.5	5	COB	(q)	Р 🖄	2	P AD	P AD	P 🖉 D	brownish tint on them, scraping leaves visible
Right Center	17.5	20	BLD		P A	0	P A D	P \Lambda D	P \land D ,	trail. 3 = 1-5mm; 4 = 5-20mm;
Right Bank	21.5	9	CG	_	P (A)	\mathcal{O}	P Ø D	PAD	P 🖗 D	 5 = >20mm; UD = Cannot determine if microalgae present;
	Note: Sub class cate	strate size gories liste	s can be ed on the	recorded eith supplementa	ier as direct Il page (dire	measures of th ct measuremen	ie median axis of its preferred)	each particle or o	one of the size	substrate too small or covered with silt (formerty Z code). D = Dry, not assessed



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SWAMP	Stream	Habitat	Charac	terization	Form	FULI		RSION	Rev	vision Date:	Februa	ry 9 th , 2011		
Site Code:				Site Name:		MYR	ab	J NYR	<u>.</u>	Date):	//2011		
Wetted Wid	th (m):	6	.	Bankfull Wid		-	Bankfull Height (m):				Transect K			
L	<u> </u>	<u>v</u>	L_							-				
	Dist		mm/	%		Transect S Microalga					N	Aicroalgae Thickne	SS -	
Position	from	Depth (cm)	size	Cobble	CPOM	Thickness	. 1	facroalgae Attached	Macroalg Unattach	Macron	nytes 0	Codes = No microalgae prese		
Left	LB (m)		class	Embed.	P A	Code		РА D	PAI	D P A	D 1	Feels rough, not slimy = Present but not visib Feels slimy:		
Bank Left	1) 4	38	COB			7		P AD	P A I		2	Present and visible t <1mm: Rubbing finger		
Center	1	81	COB	90	P A	5.		V	<u> </u>			on surface produces a brownish tint on them	a i,	
Center	8	112	COB	50	P 👌	2	_	P O D	P (0)		<u> </u>	scraping leaves visible trail. 3 = 1-5mm;	e	
Right Center	12	76	F6		Р 🔕	0	<u>.</u>	P Ø D	P Ø		4	s = 1-5mm, \$ = 5-20mm; 5 = >20mm;		
Right Bank	15.5	19	COB	70	P A	· 0		P (A) D	P 🎒 1	D PA	Di	J = Cannot determine if microalgae present,		
	Note: Sut	strate size	es can be	recorded eit	her as direc	t measures o ect measurem	f the n	nedian axis of preferred)	each partic	le or one of the	size	substrate too small or covered with silt		
	Class cale	-gones list	eu un uie	supplement	ar page (on (ot medeuron					1	(formerly Z code). D = Dry, not assessed		
								huarr			0%) <10%)	DENSIONET	ER	
	N VEGET		1 = Spa	ent (0%) rse (<10%)	4 = Very	ry (40-75%) Heavy (>75%	s)	INSTE Hab		2 = Moderate (10 3 = Heavy (40)-40%))-75%)	READINGS (0- count covered of		
(facin	g downstrea	m)	2 = Mod	erate (10-40	%)			Comp	EXITY	4 = Very Heavy (
Vege	tation Cla			ft Bank		ht Bank		Filamentou Aquatic Ma			3 4	Center Left	14	
				(>5 m high				Emergent V		U	3 4	Center Upstream	6	
Trees and	saplings >5	m high	(0/ 1	2 3 4 1,5 m-5 m hi		234	¥	Bouiders Woody Deb	nis >0.3 m		3 4 3 4	Center		
All veget	ation 0.5 m	1	0 1	(2) 3 4		2 3 4	\$	Woody Det	oris <0.3 m	0 1 2	34	Right Center	2	
		Ground	l Cover	(<0.5 m hig	h)			Undercut E	Banks	0 1 2	34	Downstream	5	
Woody	shrubs & sa <0.5 m	plings	0 1	2 3 4	0 (1) 2 3 4	4	Overhang.	Vegetation	0 1 2	34	Optional Left Bank		
He	erbs/ grasses	6	0 () 2 3 4	0 6) 2 3 4	4	Live Tree F	Roots	0 1 2	34	Right Bank		

3 (4)

HUMAN INFLUENCE (circle only the closest to wetted channel)	B = 0 C = B P = >1	0 = Not Present; B = On Bank; C = Between Bank & 10m from Channel; P = >10mt<50m from Channel; Channel (record Yes or No)											
		Left Bank				inel	~	Right	Banl	<u>د</u>			
Walls/ Rip-rap/ Dams	P	С	В	(9	Y	(Ń)	(0	/в	С	Р			
Buildings	P	С	В	Ŷ	Y	Ņ	9	В	С	Ρ			
Pavement/ Cleared Lot	Р	С	В	þ			þ	В	С	Р			
Road/ Railroad	P	С	В	þ	Y	Ν	Ŷ	В	С	Р			
Pipes (Inlet/ Outlet)	Р	С	В	þ	Y	Ņ	d	В	С	Р			
Landfill/ Trash	Р	C	В	þ	Y	N	þ	В	С	Р			
Park/ Lawn	P	С	В	þ			q	В	С	Р			
Row Crop	P	С	В	þ			d	В	С	Р			
Pasture/ Range	P	С	В	ģ			g	В	С	Р			
Logging Operations	P	С	В	0			ø	В	С	Р			
Mining Activity	P	С	В	0	Y	Ŵ	ø	В	С	Р			
Vegetation Management	P	С	В	0			þ	В	С	Р			
Bridges/ Abutments	P	С	В	0	Y	Ń	ģ	В	С	Р			
Orchards/ Vineyards	Р	С	В	d		1	b	В	С	Р			

1 2 3 4

0 1 2

0

Barren, bare soil/ duff

6

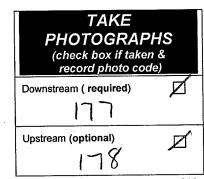
Artificial Structures

2

1

3 4

Right Bank



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SWAMP Stream Hat	oitat Characterizatio	n Form	FULL	<u>VERSION</u>	Rev	ision Date: February 9 th , 2011
Site Code:	· · · · · · · · · · · · · · · · · · ·	Date: _	/	/ 2011		FULL FORM
	BENTHIC INVER	TEBRATE	SAMPLES	3		Chemistry Equipment ID
	Ilection Method	er-margin)		Replicate	# jars	Analyte Equipment
RWB (standard)	RWB (MCM)		2S	1		pH
RWB (standard)	RWB (MCM)	TR		2	-	temperature
RWB (standard)	RWB (MCM)	TR	C			dissolved oxygen
RWB (standard)	RWB (MCM)	TR	C			specific conductance
Field Notes/ Con	nments:				 	salinity
	· .		• •			alkalinity
				• •		turbidity
• • • • •			. •			silica
	• •		-			Velocity
		SAMPLE				Water and Sediment
Collection (circle one or write new)	Method method if applicable)	SWAMP Emap	SWAMP EMAP	SWAMP EMAP	SWAMP EMAP	Chemistry Samples
Collection (sum # of transec	Device	Rep. 1	Rep. 2	Rep.	Rep.	Check if a WATER chemistry grab sample was collected
Rubber Delimiter (area						(nutrients, SSC, etc.)
PVC Delimiter (area=1 Syringe Scrubber (area				-		Check if a DUPLICATE WATER chemistry grab sample was
Other area=	a=0.50m)				-	collected
Number of transects s	sampled (0-11)					Check if a SEDIMENT chemistry sample was collected
Composite Volume (n	nL)					Check if a DUPLICATE SEDIMENT chemistry sample
Assemblage ID volume	(diatoms)					SEDIMENT chemistry sample was collected Sediment
	(50 mL tube)					Collection SCOOP CORE GRAB
Assemblage ID volume	(soft algae) (50 mL tube)					Material: Stainless Steel Polyethylene Polycarbonate Other
Check if Qualitative Alga collected with soft algae, (required even if macroalga	diatom sample					Sediment Collection 2 or 5 Depth (cm):
Check if a water chem. i was collected (chl, AFD						Create Lab Collection records for each checked box for integrated and grab water chemistry samples
Chlorophyll a volume (25 mL (pref e	use GF/F filter Frred volume)					
Ash Free Dry Mass (AFDM) volume (25 m	use GF/F filter L (preferred vol)				•	
			IONAL PI	HOTOGRAPH	S	
Description	Photo	Code		Descri	ption	Photo Code
·		····				
					····	

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FULL VERSION

Revision Date: February 9th, 2011

Flow Habitat Type	DESCRIPTION
Cascades	Short, high gradient drop in stream bed elevation often accompanied by boulders and considerable turbulence
Falls	High gradient drop in elevation of the stream bed associated with an abrupt change in the bedrock
Rapids	Sections of stream with swiftly flowing water and considerable surface turbulence. Rapids tend to have larger substrate sizes than riffles
Riffles	Shallow sections where the water flows over coarse stream bed particles that create mild to moderate surface turbulence; (< 0.5 m deep, > 0.3 m/s).
Runs	Long, relatively straight, low-gradient sections without flow obstructions. The stream bed is typically even and the water flows faster than it does in a pool; (> 0.5 m deep, > 0.3 m/s). A step-run is a series of runs separated by short riffles or flow obstructions that cause discontinuous breaks in slope
Glides	A section of stream with little or no turbulence, but faster velocity than pools; (< 0.5 m deep, < 0.3 m/s)
Pools	A reach of stream that is characterized by deep, low- velocity water and a smooth surface; (> 0.5 m deep, < 0.3 m/s)

BANK STABILITY Although this measure of the degree of erosive potential is subjective, it can

provide clues to the erosive potential of the banks within the reach. Assign the category whose description best fits the conditions in the area between the

wetted channel and bankfull channel (see figure below)

Eroded

Vulnerable

Stable

Banks show obvious signs of erosion from the current or

previous water year; banks are usually bare or nearly bare

Banks have some vegetative protection (usually annual

growth), but not enough to prevent erosion during flooding

Bank vegetation has well-developed roots that protect banks

from erosion; alternately, bedrock or artificial structures (e.g., concrete/ rip-rap) prevent bank erosion

Size Class Code	Size Class Range	Size Class Description	Common Size Reference
RS	>4 m	bedrock, smooth	larger than a car
RR	> 4 m	bedrock, rough	larger than a car
ХВ	1 - 4 m	boulder, large	meter stick to car
SB	25 cm - 1.0 m	boulder, small	basketball to meter stick
СВ	64 - 250 mm	cobble	tennis ball to basketball
GC	16 - 64 mm	gravel, coarse	marble to tennis ball
GF	2 – 16 mm	gravel, fine	ladybug to marble
SA	0.06 – 2 mm	sand	gritty to ladybug
FN	< 0.06 mm	fines	not gritty
HP	< 0.06 mm	hardpan (consolidated fines)	
WD	NA	wood	
RC	NA	concrete/ asphalt	
ОТ	NA	other	

CPOM/ COBBLE EMBEDDEDNESS

CPOM: Record presence (P) or absence (A) of coarse particulate organic matter (>1.0 mm particles) within 1 cm of each substrate particle

Cobble Embeddedness: Visually estimate % embedded by fine particles (record to nearest 5%)

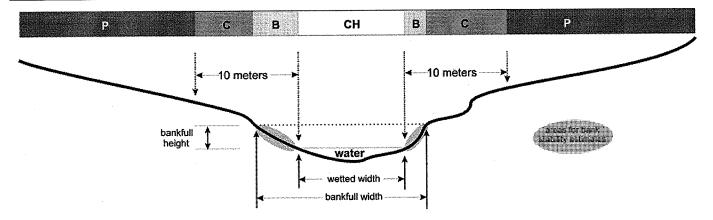


Figure 1. Cross-sectional diagram of stream transect indicating regions for assessing human influence measures:

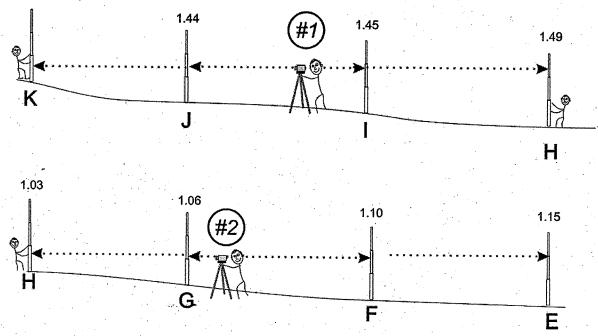
- The measurement zone extends 5 meters upstream and 5 meters downstream of each transect
- Record one category for each bank and for the wetted channel (3 values possible)
- In reaches with wide banks, region "C" may be entirely overlapped by region "B"; in these cases, circle "B"
- Region "P" extends from 10 meters to the distance that can be seen from the channel, but not greater than 50 m

FULL VERSION

Revision Date: February 9th, 2011

	ŝ	Slope	and Beari	NG FORM	Л	EXA	MPLE		C	UTOLEV LINOMET IANDLEV	'ER
Starting	(rec	ord perce if st	MAIN SI nt of inter-trans upplemental se	ect distance	in each seg a used)	iment	(record perce	SUPPLEMENT nt of inter-trans upplemental so	ect distance	in each seg	ment
Transect	Stadia measure	70-0-00023255-0000000	Slope (%) or Elevation Difference Cm 🚺 %	Segment Length (m)	Bearing (0°-359°)	Percent of Total Length (%)	Stadia rod measurements	Slope or Elevation Difference	Segment Length (m)	Bearing (0°-359°)	Percent of Total Length (%)
K	1.41										
J	1.44		3	15	140	100			e e e e e e e e e e e e e e e e e e e		
	1.45		1	15	145	100					
Н	1.49	1.03	4	15	150	100					a di se terreta di seconda d
G		1.06	3	15	143	100					
F		1.10	4	15	187	100	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5		-		
E		1.15	5	15	195	100					·.

1.41



1. Level the autolevel at Position #1

2. Place base of stadia rod at water level every time

3. Sight to stadia rod at Transect K, then Transect J

4. Rotate scope and sight to Transects I and H.5. Move level to Position #2 and re-level

6. Re-sight to stadia rod at Transect H, then Transect G7. Rotate scope and sight to Transects F and E

Note: Sites will vary in the number of separate level positions needed to survey the reach.

	SWAMP Stream Habi		rization Fo	<u>m FL</u>	ILL VERSI	<u>ON</u>	Rev	vision Da	te: Febr	uary 9 th , 2	2011	
	REACH DOCUME	NTATION		Standard Reach Alternate	Length (wette Reach Length	ed width s (wetted v	\$ 10 m) = vidth >10	150 m E m) = 250 i	listance be n Distan	etween trans	ects = 1 transect	5 m s = 25 m
	Project Name: YCU	JA			Date:	ר /	14 1	201 ()	Sample Collectio		123	
. :		A RIVE	P		Site Nan		ription:	YUBA	AB	I Co	LGA	TE
	Site Code: 7CBN	11-7	· · · · · · · · · · · · · · · · · · ·		Crew Me	Auces	, C. 1	N isen	ian 1	n. Ask	mfet	ter
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Borrow	Longitude (actual – decir							GAR	MIN	60		
	AMBIENT WATER QU				and silica are ration date re	quìred			Rea	CH LENGT	TH I	
	(Deg C) 0. 7. 0	pH al.	8.2	(mg/L)	Turb (nt cal.		0	(see rea	ual Leng	guidelines	24	50
	Dissolved	ate Specific:	120	Salinity.	date Sili	~2		Explanat	t top of fo	rm)		
	cal. ca	nduct (uS/cm) al.	129	(ppt)	(mg					10 m	`	
	date date date			te	date	ook if d		0 77000		ts not po		
	1 st measurement = left b	ank (looking o	lownstream)	cal. date		nsect Wid	(explai	n in field	notes s	ection)		
				-1	フ (m):			BUOYAN	NT OBJE	CT METHO method not	D (use C possible	NLY if
			locity /sec)	Distance from Left Bank (cr			ocity sec)		Floa	nt 1 Floa	at 2 /F	loat 3
	2		11			·		Distance (m) Float Tim			4	
	3 no t	104) 12		-			(sec)		A Cross S	ection	
	4 LaKE	'n	14					width (m) depth(cm)	Upper Section	Middle) L	ower ection
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	7 Flow	appr	0X 16	le.				Depth 1	\mid			
	8 7 6 7 4	5	jai 1918	Jate	A .		·	Depth 2 Depth 3 /	<u> </u>		\mathbf{h}]
	9 750	ona	a 915	000			I E	Depth 4				
	10 Dase	<u> </u>	20	·		4		Depth 5				·
ŀ				IELD CONDIT		ck one b	ox per to	pic)			201 0	
	Evidence of recent i					NC		<u>X</u>	inimal		0% flow crease	
	Evidence of fires in	reach or im	mediately u	pstream (<50	0 m)	NC			1 year		ō years	
	Dominant landus	e/ landcover	in area sur	rounding rea	sh	Agricul Urba	n/		orest irb/Town		ngeland Other	
L L		1 2	3	4 5	6	Indust 7	rial 8	9	10	11	12	12
	EMBEDDEDNESS MEASURES	0 0		0 15	AND AND AN AN AN AND AND THE PARTY	40	0	30	70		5	13 5
	(carry over from transect forms if needed to attain target count of 25;	14 18 5 16		17 18 17 0	19	20	21	22	23	24	25	
	measure in %)	/'	> 15	00	5	0						

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FULL VERSION

Revision Date: February 9th, 2011

Site Code:		Date: 👌 🧻	1141	2010 2						
SLOPE and I	BEARING FO	RM (tran	sect ba	ased - fo	r Full i	PHAB	only)		AUTOLEVE CLINOMETE HANDLEVE	R 1/1/1
troopt or	MAIN S	EGMENT sect distance	in each seo	iment	(rec	ord percer	SUPPLEMENT nt of inter-trans	ect distanc	e in each seg	ment
Starting Transect Stadia rod measurements	Slope (%) or Elevation Difference	egments are Segment Length	Bearing (0°-359°)	Percent of Total Length	Stadia measure	if su a rod	Slope or Elevation Difference	egments a Segment Length (m)	Bearing (0°-359°)	Percent of Total Length (%)
	cm			(%)			_cm %			
K				1 -						-
J	2	25	· ·	(0						
l	0						1			
	\mathcal{O}									
G	5									
F	5								•	
E	0					 				
D	2				-	1 1 1 1 1				
C	11					1 2 3 4				
B	3) 1 1 3				
A	2	J					. 5			
additional calculation area	<u>+</u>						*- *-			
	tional Habita	AT CHARAC	TERIZATIC	DN			High Gradie	ent 📉	Low Gr	adient
Parameter	Opti Greater than 70			Suboptim			Marginal	at (10	Poc	
Epifaunal Substrate/ Cover	favorable for epifa and fish cover gradient strea submerged logs,	(50% for low- ams); mix of	50% fo well-su	mix of stable h or low-gradient s uited for full colo potential	streams);	30% in	nix of stable habit low-gradient strea frequently disturn removed	ims); (bed or	10% in low-grad lack of habitat substrate unstal	ient streams); is obvious;
Score:	cobble or other	stable habitat 8 17 16	15	14 13	12 11	10	987	6 5	-	2 1 0
Sediment Deposition	Little or no enlarg or point bars and the bottom affec deposition (<20% strea	less than 5% of ted by sediment 6 in low-gradient	forma sånd, o the bo	ne new increase tion, mostly fror r fine sediment; ttom affected (2 w-gradient strea	n gravel, 5-30% of 0-50% in	sand, or f 50% of t	deposition of new ine sediment on b he bottom affecter low-gradient stre	graver, ars; 30- d (50 -	leavy deposits o increased bar o more than 50% changing freque low-gradien	evelopment; of the bottom ntly (>80% in streams)
Score:	20 19 1	$-\alpha$	Some	channelization		10 Channel	9 8 7 zation may be ext	6 5 ensive:	Banks shored v	2 1 0
Channel Alteration		dredging abser am with normal tern	it (e.g., br of past may	idge abutments t channelization y be present but nnelization not); evidence (> 20yrs) recent present	embankrr present of st	ents or shoring st on both banks; 40 ream reach disrup	ructures to 80% ted	ement; Over 80 lach channelized nstream habitat or remove	l and disrupted. greatly altered t entirely
Score:	20 (19) 1	8 17 10	6 15	14 13	12 11	10	9 8 7	6 5	5 4 3	2 1 0

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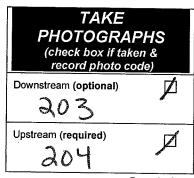
SWAMP Stream Habitat Char	acterization Form	FULL VERSION	Revision Date: February 9 th , 2011
Site Code:	Site Name: YR a	ov CPH	Date: 071141201# 2
Wetted Width (m): 15	Bankfull Width (m): 19	Bankfull Height (m):	Transect A

	Transect Substrates											
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	CPOM	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickne Codes 0 = No microalgae prese		
Left Bank	.5	18	(G		P (À	D	P \Lambda D	P A D	P A D	 Feels rough, not slimy 1 = Present but not visib Feels slimy; 		
Left Center	Y	07	COB	10	P (Å	1	P A D	P D	Р 🖗 D	2 = Present and visible <1mm: Rubbing finger on surface produces		
Center	7.5	103	BUT		P 🔊	(P 🖗 D	P DD	PAD	brownish tint on them scraping leaves visibl		
Right Center	11.5	D.	BED		₽ Æ	O	P 🔗 D	P D	PØD	trail 3 = 1-5mm; 4 = 5-20mm;		
Right Bank	14.5	86	BED		PA	D	P 🐼 D	P AD	Р 🙆 D	5 = >20mm; UD = Cannot determine		
	Note: Sub class cate	strate size gories liste	s can be ed on the	recorded eith supplementa	er as direct I page (dire	measures of the ct measurement	e median axis of s preferred)	each particle or o	one of the size	microalgae present, substrate too small or covered with silt (formerly Z code). D = Dry, not assessed		

RIPARIAN VEGETATION (facing downstream)	0 = / 1 = { 2 = [Spar Mode	se (< erate	:10% (10-		4 = \	Heav /ery F					INSTREAM HABITAT COMPLEXITY	1 = 2 = 3 =	Hea		(10-4 (40-7	0%) 0%) 5%)		DENSIOMET READINGS (0 count covered)-17)
Vegetation Class		Lef	t Ba	nk			Rig	ht E	ank	:		Filamentous Algae	0	1	2	3	4	1	Center	1
Uppe	r Cano	ору	(>5 i	m hi	gh)							Aquatic Macrophytes/ Emergent Vegetation	Ø) 1	2	3	4	1	Left	8
Trees and saplings >5 m high	[0]	1	2	3	4	0	1	2	3	4		Bouiders	$\overline{\bigcirc}$	<u>r</u> 1	C	3	4		Center Upstream	1
Lower C	anopy	y (0.	5 m-	5 m	hig	n)						Woody Debris >0.3 m	0	1	2	3	4		Center	0/
All vegetation 0.5 m to 5 m	0	(1)	2	3	4	0	$\widehat{(1)}$). 2	3	4	1	Woody Debris <0.3 m	6	1	2	3	4	1	Right	8
Groun	d Cov	er (•	<0.5	m h	igh)	L						Undercut Banks	0	1	2	3	4	$\left \right $	Center Downstream	2
Woody shrubs & saplings <0.5 m	6	1	2	3	4	0	0	2	3	4]	Overhang. Vegetation	0	1	2	3	4		Optional	
Herbs/ grasses	\bigcirc	1	2	3	4	0	$\overline{\mathbb{O}}$	2	3	4	1	Live Tree Roots	0	1	2	3	4		Left Bank	-
Barren, bare soil/ duff	0	1	2	3 (1	0	1	2	3	4		Artificial Structures	0	1	2	3	4		Right Bank	-

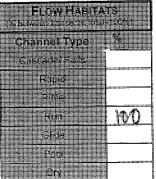
HUMAN INFLUENCE (circle only the closest to wetted channel)	B = C C = B P = >	10m+<	«; Ó	m Cha	from Ch nnel;))	annel;				
		Left	Bank	0	Cha	nnel		Right	Ban	k
Walls/ Rip-rap/ Dams	Р	С	В	6/	Y	8	6	В	С	P
Buildings	P	С	В	Ø	Y	Ø	Ģ	B	č	P
Pavement/ Cleared Lot	Р	С	В	ø		¥.	q	В	С	Р
Road/ Railroad	Р	С	В	ø	Y	62	0	В	С	Р
Pipes (Inlet/ Outlet)	Р	С	В	6	Y	R	0	В	С	Р
Landfill/ Trash	Р	С	0	0	(\mathbf{Y})	Ν	0	В	С	Р
Park/ Lawn	Р	С	В	ρ			d	В	C	Ρ.
Row Crop	Р	С	В	Ø			¢	В	С	Р
Pasture/ Range	Р	С	В	Ø.			6	В	С	Р
Logging Operations	P	С	В	þ			6	В	С	Р
Mining Activity	Р	С	В	¢	Y	\square	þ	В	С	Р
Vegetation Management	Р	С	В	0			0	В	С	Р
Bridges/ Abutments	Р	С	В	ø	Y	M7	0	В	С	Р
Orchards/ Vineyards	Р	С	В	0		<u> </u>	đ	В	С	Р

BANK STABILITY riscore 20: o Simularities and Sim downstrum of homeocl bioween hardfull outbouwarby Loft Bank eroded vulnerable stable Right Bank eroded vulnerable stable		
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SWAMP	Stream H	labitat C	Charact	erization l	Form	<u>FULL V</u>	<u>ERSION</u>	n Date: Febru	uary 9 th , 2011				
	Inter-Transect: AB Wetted Width (m):												
	Inter-Transect Substrates												
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	СРОМ	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickness Codes 0 = No microalgae present, Feels rough, not slimy,			
Left Bank	15	20	BED	-	P \Lambda	l.	PAD	P Ø D	PAD	1 = Present but not visible, Feels slimy, 2 = Present and visible but			
Left Center	4	108	BED	_	РØ	0	P 🕢 D	P 🖉 D	PDD	<1mm; Rubbing fingers on surface produces a brownish tint on them,			
Center	8	112	BED	\mathbf{r}	Р 🕑	∂	P Ø D	P ∕ €D	P R D	scraping leaves visible trail.			
Right Center	12	128	BUD		P 🔗	0	P O D	PDD	POD	3 = 1-5mm; 4 = 5-20mm; 5 = >20mm;			
Right Bank	15.5	19	CG	-	P A	Ø	P D	P 🔗 D	P D	UD = Cannot determine if . microalgae present, substrate too small or			
	Note: Sub class cate	ostrate size ogories list	es can be ed on the	recorded eit supplement	her as direc al page (dire	t measures of the ect measurement	e median axis ol its preferred)	each particle or	one of the size	covered with slit (formerly Z code) D = Dry, not assessed			



ul sime

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SWAMP Stream Habitat (Characterization Form	FULL VERSION Re	evision Date: February 9 th , 2011
Site Code:	Site Name: 16 ab	CRH	Date: 07114120102
Wetted Width (m):	Bankfull Width (m): 2	Bankfull Height (m): 1, 5	Transect B
		ansect Substrates	

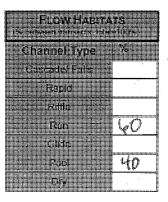
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed	CPOM	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickness Codes 0 = No microalgae present Feels rough, not slimy,
Left Bank	.5	80	BED		P A	0	Р Q ́ D	P 穦 D	P D D	1 = Present but not visible, Feels slimy;
Left Center	4,5	107	BED)	P A	Ć	P \land D	P 🛃 D	P 🔊 D	2 = Present and visible but <1mm; Rubbing fingers on surface produces a
Center	9	(1	ELD	_	P (A)	1	P A D	P 🔊 D	P (A) D	brownish tinf on them, scraping leaves visible trail.
Right Center	13.5	75	BUD	~	₽ ∧⊙	Ø	P 🔗 D	P 🖉 D	P 🔗 D	3 = 1-5mm; 4 = 5-20mm;
Right Bank	ちら	86	BUD		Р 🔗	2	P \Lambda D	P 🕭 D	PAD	5 = >20mm; UD = Cannot determine if microalgae present,
	Note: Sub class cate	strate size gories liste	s can be ed on the	recorded eith supplementa	ner as direc 1 page (dire	t measures of th ect measuremen	e median axis of (s preferred)	each particle or	one of the size	substrate too small or covered with silt (formerly Z code). D = Dry, not assessed

RIPARIAN VEGETATION (facing downstream)	0 = Absent (0%) 3 = Heavy (40-75%) 1 = Sparse (<10%) 4 = Very Heavy (>75%) 2 = Moderate (10-40%) COMPLEX	T 2 = Moderate (10-40%) 3 = Heavy (40-75%) READINGS (0-17) count covered dots
Vegetation Class	Left Bank Right Bank Filamentous Alg	
Upper	Canopy (>5 m high) Aquatic Macroph Emergent Veget	
Trees and saplings >5 m high	0 1 2 3 4 0 1 2 3 4 Boulders	0 1 (2) 3 4 Upstream
Lower C	nopy (0.5 m-5 m high) Woody Debris >	
All vegetation 0.5 m to 5 m	0 1 2 3 4 0 1 2 3 4 Woody Debris <	
Groun	Cover (<0.5 m high) Undercut Bank	s 🛈 1 2 3 4 Downstream 🕑
Woody shrubs & saplings <0.5 m	0 1 2 3 4 0 1 2 3 4 Overhang. Veg	
Herbs/ grasses	0 6 2 3 4 0 1 2 3 4 Live Tree Roots	
Barren, bare soil/ duff	0 1 2 3 🖗 0 1 2 3 🕢 Artificial Structu	ures 0 1 2 3 4 Right Bank

HUMAN INFLUENCE (circle only the closest to wetted channel)	B=0 C=B P=>	0 = Not Present; B = On Bank; C = Between Bank & 10m from Channel; P = >10m+50m from Channel; Channel (record Yes or No)									
		Left Bank			Channel		Right Bank			٢	
Walls/ Rip-rap/ Dams	P	С	В	(0)	Y	(N)	0	в	С	Р	
Buildings	P	С	В	Ŷ	Y	Ň	φ	В	С	Ρ	
Pavement/ Cleared Lot	P	С	В	þ			ø	В	С	Р	
Road/ Railroad	P	С	В	þ	Y	N	þ	В	С	Р	
Pipes (Inlet/ Outlet)	P	С	В	ø	Y	N	ø	В	С	Р	
Landfill/ Trash	P	С	В	þ	Y	N	0	В	С	Р	
Park/ Lawn	P	С	В	þ.			þ	В	С	Р	
Row Crop	P	С	В	þ			þ	В	С	Р	
Pasture/ Range	P	С	В	þ			Ŷ	В	С	Р	
Logging Operations	P	С	В	þ			ø	В	С	Р	
Mining Activity	P	С	ß	Ō	C) N	0	В	С	Р	
Vegetation Management	P	С	B	Ø			0	В	С	Р	
Bridges/ Abutments	P	C	В	0	Y	N	þ	В	С	Р	
Orchards/ Vineyards	P	С	В	Q.		1	0	В	С	Р	

(scare zone	BANK : Inturviteina Diversituitei		
Len Bank	ercded	vulnerable	(stable)
Right Bank	eroded	vulnerable	stable/

SWAMP Stream Habitat Characterization Form						FULL VERSION Revision Date: Febru				uary 9 th , 2011	
	Inter-Transect: BC						Netted Width (m); [7			
					In	ter-Transect	Substrates				
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	СРОМ	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickness Codes 0 = No microalgae present,	
Left Bank	.5	25	BED		Р 🔕	0	PAD	P 70 D	P 🔗 D	 Feels rough, not slimy; 1 = Present but not visible, Feels slimy; 	
Left Center	4	161	BUD		РЮ	l	P A D	P A D	P 🕢 D	2 = Present and visible but <1mm; Rubbing fingers on surface produces a	
Center	8 .5 [.]	0	BUD		Р 🔕	Ð	P A D	Р () D	POD	brownish tint on them, scraping leaves visible trail.	
Right Center	17.5	167	BED		ΡA	2	PAD	PQD	P/Q D	3 = 1-5mm; 4 = 5-20mm;	
Right Bank	16.5	4	The	·	Р 🏠	(P 🖉 D	PAD	PAD	5 = >20mm; UD = Cannot determine if microalgae present,	
	Note: Sub class cate	strate size gories liste	ed on the	recorded eith supplementa	ier as direc I page (dire	t measures of th ct measuremen	e median axis of ts preferred)	each particle or o	one of the size	substrate too small or covered with silt (formerly Z code). D = Dry, not assessed	



Page 6 of 26

FULL VERSION

Revision Date: February 9th, 2011

Site Code:	Site Name: YR abv	CPH	Date: 07/14/2010 2
Wetted Width (m): 15	Bankfull Width (m): 18	Bankfull Height (m):	Transect C

	Transect Substrates											
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	CPOM.	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickness Codes 0 = No microalgae present, Feels rough, not slimy;		
Left Bank	15	21	BUI	> —	PÂ	١	DA D	P 🔊	P A	1 = Present but not visible, Feels slimy;		
Left Center	4	143	COB	6	Р 🕭	D	P Q D	P AD	PAD	2 = Present and visible but <1mm; Rubbing fingers on surface produces a		
Center	7.5	0	BUD		РØ	0	P 🔗 D	P 🖗 D	P 🕢 D	brownish tint on them, scraping leaves visible trail		
Right Center	11.5	300	COB	10	P 🔗	Ð	P 🖉 D	p 🖉 d	P 🔊 D	3 = 1-5mm; 4 = 5-20mm;		
Right Bank	14.5	157	BUD	~	PA		P (A) D	P 🔊 D	PAD	5 = >20mm; UD = Cannot determine if microalgae present.		
						t measures of th of measuremen	e median axis of ts preferred)	each particle or	one of the size	substrate too small or covered with silt (formerly Z code) D = Dry, not assessed		

RIPARIAN VEGETATION (facing downstream)	0 = Absent (0%) 1 = Sparse (<10%) 2 = Moderate (10-40%	3 = Heavy (40-75%) 4 = Very Heavy (>75%) 6)	INSTREAM 1 HABITAT 3	= Absent: (0%) = Sparse: (<10%) = Moderate (10-40%) = Heavy: (40-75%) = Very Heavy (>75%)	DENSIOMETE READINGS (0- count covered d	17)
Vegetation Class	Left Bank	Right Bank	Filamentous Algae) 1 2 3 4	Center	Ş
Upper	r Canopy (>5 m high)	0	Aquatic Macrophytes/ Emergent Vegetation) 1 2 3 4	Left Center	N N
Trees and saplings >5 m high	0 1 2 3 4	0 1 2 3 4	Boulders 0	1 2 3 4	Upstream	_
Lower C	anopy (0.5 m-5 m hig	jh)	Woody Debris >0.3 m	71234	Center	8
All vegetation 0.5 m to 5 m	O 1234	0 1 2 3 4	Woody Debris <0.3 m	1 2 3 4	Right Center	
Groun	d Cover (<0.5 m high)	Undercut Banks	1 2 3 4	Downstream	6
Woody shrubs & saplings <0.5 m	0 1 2 3 4	0 1 2 3 4	Overhang. Vegetation)1 2 3 4	Optional	
Herbs/ grasses	0 1 2 3 4	0 1 2 3 4	Live Tree Roots	51234	Left Bank	
Barren, bare soil/ duff	0 1 2 3 4	0 1 2 3 (4)	Artificial Structures)1 2 3 4	Right Bank	

HUMAN INFLUENCE (circle only the closest to wetted channel)	B = 0 C = B P = >1	0 = Not Present; B = On Bank; C = Between Bank & 10m from Channel; P = >10m+<50m from Channel; Channel (record Yes or No)									
		Left Bank			Channel		Right Bank				
Walls/ Rip-rap/ Dams	Р	С	В	(0)	Y	\mathbb{V}	6	В	С	Р	
Buildings	Р	С	В	ρ	Y	N	0	В	С	Ρ	
Pavement/ Cleared Lot	Р	С	В	þ			þ	В	С	Р	
Road/ Railroad	Р	С	В	þ	Y	Ν	þ	В	С	Р	
Pipes (Inlet/ Outlet)	Р	С	В	þ	Y	N	þ	В	С	Р	
Landfill/ Trash	Р	С	В	ø	Y	Ν	þ	В	С	Р	
Park/ Lawn	Р	С	В	þ			þ	В	С	Р	
Row Crop	Р	С	В	þ			ø	В	C ·	Р	
Pasture/ Range	Р	С	В	0			þ	В	С	Р	
Logging Operations	Р	С	В	0			0	В	С	Р	
Mining Activity	Р	С	В	0	Y	Ņ	0	В	С	Р	
Vegetation Management	P	С	В	0			0	В	С	Р	
Bridges/ Abutments	Р	С	В	0	Y	Ņ	þ	В	C	Р	
Orchards/ Vineyards	P	С	В	þ		-	6	В	С	Р	

		4 I A H I I I I I I I I I I I I I I I I I	nsi hany s
- List Esink	eroded	vuinerable	/stable
. Right Bank	eroded	vuinerable	(stable)

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FULL VERSION

Revision Date: February 9th, 2011

	I	nter-7	Frans	ect: CI)	,	Wetted Width (n	1): 14		
	1000				In	ter-Transect	Substrates			
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed	CPOM	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickness Codes 0 = No microalgae present,
Left Bank	5	15	BED	. — .	Р 🖗	1	P 🖉 D	P AD D	P 🕢 D	 Feels rough, not slimy, 1 = Present but not visible, Feels slimy,
Left Center	3.5	0	850	/	Р 🖉	\$ 2	🖗 A D	P 🕢 D	P 🕢 D	2 = Present and visible but <1mm: Rubbing fingers on surface produces a
Center	7	60	BED		р (9	0	P ØD	₽ 60 D	PAD	brownish tint on them, scraping leaves visible trail.
Right Center	10.5	138	BED		Р 🖉	ð	PA D	P DD	P 🖉 D	3 = 1-5mm; 4 = 5-20mm;
Right Bank	17.5	52	BED		P 🕢	2	A D	P 🖗 D	P D	5 = >20mm; UD = Cannot determine if microalgae present;
						I measures of th of measurement		each particle or o	one of the size	substrate too small or covered with silt (formerly Z code). D = Dry, not assessed

FLOW HABITATS
Channel Type 🦉 👘
Concercity Frank 👘 🐔 🔊
- Root -
R To
Cilipe Prool 20 Dry

SWAMP Stream Habitat Chara	acterization Form	FULL VERSION	Revision Date: February 9th, 2011	
Site Code:	Site Name: YR a	av CPH	Date:// 201	1
Wetted Width (m):	Bankfull Width (m): 25	Bankfull Height (m):	Transect D	

	Transect Substrates											
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	СРОМ	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickness Codes 0 = No microalgae present, Feels rough, not slimy;		
Left Bank	5	24	103	0	РÔ	み	P 🔊 D	P AD	Р 🙆 D	1 = Present but not visible, Feels slimy;		
Left Center	4.5	65	COB	20	РА	6	PAD	P 🏠 D	PAD	2 = Present and visible but <1mm; Rubbing fingers on surface produces a		
Center	9	6	350		Р 🕭	9	PAD	P AD	P 🔊 D	brownish tint on them, scraping leaves visible trail		
Right Center	13.5	106	COB	10	P (A)	2	PA D	Р 🕉 D	P 🕭 D	3 = 1-5mm; 4 = 5-20mm;		
Right Bank	17.5	126	BUD		Р 🖗	ł	₽ Ø D	P D	P (A) D	5 = >20mm; UD = Cannot determine if microalgae present.		
	Note: Sub class cate	substrate too small or covered with silt (formeny Z code). D = Dry, not assessed										

RIPARIAN VEGETATION (facing downstream)	1 =	Spar	ent (0 se (< erate	10%		3 = ⊦ 4 = V						INSTREAM HABITAT COMPLEXITY	3 =	Spar Mod Heat		10-4 40-7	0%) 0%) 5%)		DENSIOMET READINGS (0 count covered	-17)
Vegetation Class		Lef	t Ba	nk			Rig	nt E	lank			Filamentous Algae	0	1	2	3	4]	Center	1
Uppe	r Can	ору	(>5	n hi	igh)	~						Aquatic Macrophytes/ Emergent Vegetation	0	1	2	3	4		Left Center	0
Trees and saplings >5 m high	10	1	2	3	4	Ø	1	2	3	4		Boulders	0	1	٢	3	4		Upstream	0
Lower C	anop	y (0	.5 m-	5 m	n higl	1)						Woody Debris >0.3 m	0	1	2	3	4		Center	8
All vegetation 0.5 m to 5 m	10	1	2	3	4	Ó) 1	2	3	4		Woody Debris <0.3 m	୦	1	2	3	4		Right Center	
Groun	d Co	ver (<0.5	m t	nigh)		105	÷				Undercut Banks	\bigcirc	1	2	3	4		Downstream	Ø
Woody shrubs & saplings <0.5 m	0	1	1	3	4	0	Ð	2	3	4		Overhang. Vegetation	0	1	2	3	4	<i>′</i>	Optional Left Bank	1
Herbs/ grasses	0	0	2	3	4	0	0	2	3	4] .	Live Tree Roots	Ø	1	2	3	4			$\left \begin{array}{c} \\ \end{array} \right $
Barren, bare soil/ duff	0	1	2	3	(4)	0	1	2	3	(4)		Artificial Structures	0	1	2	3	4		Right Bank	

HUMAN INFLUENCE (circle only the closest to wetted channel)	B = 0 C = B P = >1	0 = Not Present; B = On Bank; C = Between Bank & 10m from Channel; P = >10m+<50m from Channel; Channel (record Yes or No)										
		Left Bank			Chai	Right Bank						
Walls/ Rip-rap/ Dams	Р	С	В	0	Y	Ŋ	(0)	В	С	Р		
Buildings	Р	С	В	þ	Y	Ņ	φ	В	С	Р		
Pavement/ Cleared Lot	Р	С	В	þ			þ	В	С	Ρ		
Road/ Railroad	Р	С	В	þ	Y	N	ø	В	С	Ρ		
Pipes (Inlet/ Outlet)	P	С	В	0	X	N	9	В	С	Ρ		
Landfill/ Trash	P	С	В	ģ	Y) N	d	В	С	Р		
Park/ Lawn	P	С	В	ģ			d	В	С	Ρ		
Row Crop	P	С	В	4			0	В	С	Р		
Pasture/ Range	P	С	В	ģ			0	В	С	Р		
Logging Operations	P	С	В	d			0	В	С	Р		
Mining Activity	P	С	В	d	Y	Ņ	0	В	С	Р		
Vegetation Management	P	С	В	đ			0	В	С	Р		
Bridges/ Abutments	P	С	В	¢	Y	Ņ	0	В	С	Р		
Orchards/ Vineyards	P	С	В	þ		1	0	В	С	Р		

(score zone	5m upstream a	STABILITY and 5m downstream full - wetted width)	of transect
		*	\frown
Left Bank	eroded	vulnerable	stable
Right Bank	eroded	vulnerable	stable

FULL VERSION

Revision Date: February 9th, 2011

		nter-	Frans	ect: DI	C	1 	Wetted Width (n	n): (6		· · · ·
		-	272 		In	ter-Transec	Substrates			4
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	СРОМ	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickness Codes 0 = No microalgae presen
Left Bank	15	19	(6	-	Р 🐼	2	P 🔗 D	P (A) D	P (A)D	 Feels rough, not slimy; 1 = Present but not visible Feels slimy;
Left Center	Y	122	COB	О	ΡA	Ø	P 🖗 D	PAD	PAD	2 = Present and visible bu <1mm, Rubbing fingers on surface produces a
Center	8	0	350	~ ~	РА	Ö	P AD	PAD	PAD	brownish tint on them, scraping leaves visible
Right Center	ね	60	COB	Ø	РА	.÷ (P 🏠 D	PAD	PAD	trail. 3 = 1-5mm; 4 = 5-20mm;
Right Bank	15.5	16	BED		PA	0	P 🚯 D	PAD	PAD	5 =>20mm; UD = Cannot determine if microalgae present;
	Note: Sub class cate	strate size gories liste	s can be ed on the	recorded eith supplementa	ner as direc Il page (dire	t measures of th of measuremen	te median axis of its preferred)	each particle or	one of the size	substrate too small or covered with silt (formenty Z code) D = Douglot assessed

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e e	ite	
	1916	70
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SWAMP Stream Habitat Cha	racterization Form	า	FULL VE	RSION	Revisi	on Date: February 9 th , 2011
Site Code:	Site Name:	YR	abs	CPH		Date:// 2011
Wetted Width (m):	Bankfull Width (m)	30	Bankful	Height (m):	2.5	Transect E

						Transect Su	bstrates			
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	CPOM	Microalgae Thickness Code	Macroalgae Attached	Maeroalgae Unattached	Macrophytes	Microalgae Thickne Codes 0 = No microalgae prese Feels rough, not slimy
Left Bank	.5	59	(OB	50	ŴА	3	PA D	РÔД	P D	1 = Present but not visib Feels slimy,
Left Center	4	110	BLD	/	P A	(.)	PAD	PAD	PAD	2 = Present and visible t <1mm; Rubbing finger on surface produces :
Center	6.8.5	120	BLD		P 🔗	(P (A) D	PAD	PA ₂ D	brownish tint on them scraping leaves visible trail
Right Center	12.5	6B	BED	and a caller.	P (A)	(P (A) D	PAD	РАД	3 = 1-5mm; 4 = 5-20mm;
Right Bank	16.5	62	BED	-	P (A)	(р Ød	P 🔊 D	P A D	5 = >20mm; UD = Cannot determine microalgae present,
						t measures of th ect measuremen	e median axis of ts preferred)	each particle or	one of the size	substrate too small or covered with sit (formerly Z code) D = Dry, not assessed

RIPARIAN VEGETATION (facing downstream)	0 = Absent (0%) 1 = Sparse (<10%) 2 = Moderate (10-40%)	3 = Heavy (40-75%) 4 = Very Heavy (>75%) %)	INSTREAM HABITAT COMPLEXITY	0 = Absent (0%) 1 = Sparse (<10%) 2 = Moderate (10-40%) 3 = Heavy (40-75%) 4 = Very Heavy (>75%)	DENSIOMETER READINGS (0-17) count covered dots
Vegetation Class	Left Bank	Right Bank	Filamentous Algae	1 2 3 4	Center (
Upper	Canopy (>5 m high		Aquatic Macrophytes/ Emergent Vegetation	1 2 3 4	Center
Trees and saplings >5 m high	0 1 2 3 4	0 1 2 3 4	Boulders	0 1 (2) 3 4	Upstream Ø
Lower C	anopy (0.5 m-5 m hi	gh)	Woody Debris >0.3 m	6 1 2 3 4	Center 9
All vegetation 0.5 m to 5 m	0 1 2 3 4	0 1 2 3 4	Woody Debris <0.3 m	6 1 2 3 4	Right Center
Groun	d Cover (<0.5 m high	1)	Undercut Banks	(0) 1 2 3 4	Downstream
Woody shrubs & saplings <0.5 m	0 1 2 3 4	a 1 2 3 4	Overhang. Vegetation	01234	Optional
Herbs/ grasses	0 1 2 3 4	0 1 2 3 4	Live Tree Roots	01234	Left Bank -
Barren, bare soil/ duff	0 1 2 3 (4)	0 1 2 3 (4)	Artificial Structures	0 1 2 3 4	Right Bank

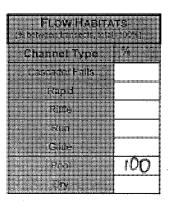
HUMAN INFLUENCE (circle only the closest to wetted channel)	B = 0 C = B P = >	0 = Not Present; B = On Bank; C = Between Bank & 10m from Channel; P = >10m+<50m from Channel; Channel (record Yes or No)											
		Left	Bank	~		Char	nnel	Right Bank					
Walls/ Rip-rap/ Dams	P	С	В	(0)	Л	Y	(6	Эв	С	Р		
Buildings	Р	С	В	Ý		Y	Ŋ	0,	В	С	Р		
Pavement/ Cleared Lot	P	С	В	d				0	В	С	Р		
Road/ Railroad	P	С	В	0		Y	Ņ	q	В	С	Р		
Pipes (Inlet/ Outlet)	P	С	В	0	1	Y	N	d	В	С	Р		
Landfill/ Trash	P	С	В	d		Y	Ń	d	В	С	Р		
Park/ Lawn	P	С	В	d				d	В	С	Р		
Row Crop	Р	С	В	d				0	В	С	Р		
Pasture/ Range	P	С	В	d				q	В	С	Р		
Logging Operations	P	С	В	¢				d	В	С	Р		
Mining Activity	P	С	ً	Ż,		Ø	N	q	В	С	Р		
Vegetation Management	P	С	B	đ				¢	В	С	Р		
Bridges/ Abutments	P	С	В	q	ľ	Y	Ń	þ	В	С	Р		
Orchards/ Vineyards	P	С	В	đ			1	þ	В	С	Р		

inter ford	BANK S Sin ustrasina Lewish bend	STABILITY Id fin disastrian It - valued addite	telermene i
Left Bank	eroded	vuinenable	/ stable
Right Bank	eroded	vuinerable	stable/

FULL VERSION

Revision Date: February 9th, 2011

	1	nter-7	Frans	ect: EF	7	· 1	Netted Width (n	n): 14					
	Inter-Transect Substrates												
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	CPOM	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickness Codes 0 = No microalgae present			
Left Bank	.ج	56	BED		р 🄕	t l	P 🔗 D	₽ 🐼 D	P 👌 D	 Feels rough, not slimy; 1 = Present but not visible, Feels slimy; 			
Left Center	3,5	70	BED	-	РА	Ø	₽ 🐼 D	P 6 D	P Q D	2 = Present and visible but <1mm; Rubbing fingers on surface produces a			
Center	7	94	BED	-	РА	0	P & D	P A D	P 🖗 D	brownish tint on them, scraping leaves visible trail.			
Right Center	(0.5	129	BED	/	РÀ	6	₽ 🔗 D	P 🔊 D	P 🔊 D	3 = 1-5mm; 4 = 5-20mm;			
Right Bank	13.5	27	350		PA	2	©a d	Р б D	P D D	5 = >20mm; UD = Cannot determine if microalgae present.			
						measures of th ct measuremen		each particle or		substrate too small or covered with silt (formerly Z code) D = Dry, not assessed			



tunk yage 5.5

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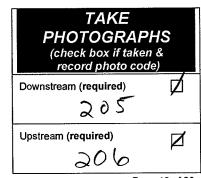
SWAMP Stream Habitat Char	acterization Form	FULL VERSION	Revision Date: February 9 th , 2011
Site Code:	Site Name: YR	chu CPH	Date:// 2011
Wetted Width (m):	Bankfull Width (m): 30	Bankfull Height (m): 1,5	Transect F

						Transect Su	bstrates			
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	CPOM	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickness Codes 0 = No microalgae present, Feels rough, not slimy?
Left Bank	15	32	(6		P Ø	4	P A D	P 🔊 D	Р Ю D	1 = Present but not visible, Feels slimy;
Left Center	4	44	BET	,	Р 🔗	(р 🖗 D	PAD	P A D	2 = Present and visible but <1mm; Rubbing fingers on surface produces a
Center	8	280	BED		PÀ	0	p 🕢 d	P D	P D	brownish fint on them, scraping leaves visible trail.
Right Center	ね	78	BED	·	ØĂ	0	P 🔊 D	PAD	PAD	3 = 1-5mm; 4 = 5-20mm;
Right Bank	15.5	17	COB		₽A	2	P A D	P 🔗 D	P 🔗 D	5 = >20mm; UD = Cannot determine if microalgae present,
						t measures of th ct measuremen	e median axis of ts preferred)	each particle or	one of the size	substrate too small or covered with silt (formeny Z code) D = Dry, not assessed

RIPARIAN VEGETATION (facing downstream)	1 = 3	Abse Spars Mode	se (<	10%) 40%)	4 = ∖	leavy ery H				INSTREAM HABITAT COMPLEXITY	1 = 2 = 3 =	Heav		40-75	0%) 0%) 5%)		DENSIOMET READINGS (0 count covered	-17)
Vegetation Class		Lef	: Ba	nk			Rigi	nt Ba	ank		Filamentous Algae	(0)	1	2	3	4]	Center	-
Upper	Can	ору	(>5 r	n hi	gh)						Aquatic Macrophytes/ Emergent Vegetation	Õ	1	2	3	4		Left Center	
Trees and saplings >5 m high	Ø	1	2	3	4	0	1	2	3	4	Boulders	0	1	(2)	3	4		Upstream	$ \odot$
Lower C	anop	y (0.	5 m-	5 m	high	7)				.	Woody Debris >0.3 m	0	1	2	3	4		Center	9
All vegetation 0.5 m to 5 m	\bigcirc	1	2	3	4	6	1	2	3	4	Woody Debris <0.3 m	Ø	Ø	2	3	4		Right Center	0
Groun	d Cov	/er (·	<0.5	m h	igh)						Undercut Banks	B	1	2	3	4		Downstream	
Woody shrubs & saplings <0.5 m	0	6	2	3	4	0	1	2	3	4	Overhang. Vegetation	Ø	1	2	3	4		Optional	
Herbs/ grasses	0	Ð	2	3	4	0	Ô	2	3	4	Live Tree Roots	Ø	1	2	3	4		Left Bank	-
Barren, bare soil/ duff	0	1	2	3	(P)	0	1	2	3	(4)	Artificial Structures	6	1	2	3	4		Right Bank	-

HUMAN INFLUENCE (circle only the closest to wetted channel)	B = 0 C = B P =>	10m+<	; Bank 50m fro	& 10m f om Chai es or No		nnel;				
		Left I	Bank	-	Char	inel	F	Right	Banl	د
Walls/ Rip-rap/ Dams	Р	С	В	()	Y,	¥	(6)	В	С	Ρ
Buildings	Р	С	В	ρ	Y	N	p	В	С	Р
Pavement/ Cleared Lot	Р	С	В	þ			þ	В	С	Ρ
Road/ Railroad	Р	С	В	0	Y	Ņ	þ	В	С	Ρ
Pipes (Inlet/ Outlet)	Р	С	В	0	Y	Ŵ	þ	В	С	Р
Landfill/ Trash	Р	С	В	0	Y	N	þ	В	С	Р
Park/ Lawn	Р	С	В	0			þ	В	С	Ρ
Row Crop	P	С	В	0			þ	В	С	Ρ
Pasture/ Range	P	С	В	0			¢	В	С	Р
Logging Operations	P	С	В	þ			¢	В	С	Р
Mining Activity	P	С	В	þ	Y	Ņ	9	В	С	Р
Vegetation Management	P	С	В	0			d	В	С	Р
Bridges/ Abutments	P	С	В	þ	Y	Ň	d	В	С	Р
Orchards/ Vineyards	P	С	В	ø			¢	В	С	Р

(scare znie)	ini distanti argunati Grass	STABILITY - d Smither Siner 21 - orderd with:	ne taning Marine
Lift Sonk	eroded	vulnerable	ftable /
Bank Bank	eroded	vuinerable	Autie/

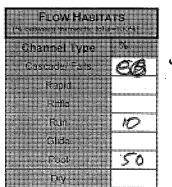


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FULL VERSION

Revision Date: February 9th, 2011

		nter-7	Frans	ect: FG	r T	Ŋ	Wetted Width (m): 1						
					In	ter-Transect	Substrates						
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	CPOM	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickness Codes 0 = No microalgae present,			
Left Bank	.5	32	ЮB	DD	P.A.	1	P @ D	P 🔊 D	P 🏞 D	Feels rough, not slimy; 1 = Present but not visible, Feels slimy,			
Left Center	3,5	50	BED	-	PA	d	• A D	P 🁌 D	PAD	2 = Present and visible but <1mm; Rubbing fingers on surface produces a			
Center	7	66	COB	30	PA	i si t	P 🔊 D	P 👌 D	PAD	brownish tint on them, scraping leaves visible trail			
Right Center	10,5	44	BED		РА	0	P 🖉 D	PAD	PAD	3 = 1-5mm; 4 = 5-20mm;			
Right Bank	13.5	16	BED		РА	2	PA D	PAD	P 👩 D	5 = >20mm, UD = Cannot determine if microalgae present,			
	Note: Sub class cate	strate size gories liste	s can be d on the	recorded eith supplementa	ner as direc Il page (dire	t measures of th of measuremen	e median axis of ts preferred)	each particle or	one of the size	substrate too small or covered with silt (formerly Z code). D = Dry, not assessed			



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te Code:				Site Name:	Site Name: YR aby CPH					Date: 07114120162						
etted Widf	th (m):	20		Bankfull Wic	lth (m): [to Bani	kfull Height (m):	3.5	Tra	ansect G						
						Transect Su	ibstrates		1	AN AND A LONG THIS IS A						
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	CPOM	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickne Codes 0 = No microalgae prese Feels rough, not slimy						
Left Bank	15	32	COB	Δ	Р 🕭	0)	P 🕢 D	Р б D	р 6 Д	1 = Present but not visib Feels slimy; 2 = Present and visible						
Left Center	S	19	BLD	-	Р 74	2	Ø A D	PAD	PAD	<1mm; Rubbing finger on surface produces						
Center	10	0	BED	>	РА	0	P 🔊 D	PAD	PAD	brownish tint on them scraping leaves visibl trail						
Right Center	15				P A		P A D	ΡΑ̈́D	P A D	3 = 1-5mm; 4 = 5-20mm;						
Right Bank	19.5	51	BD	wanters.	ΡΑ	1	P 🔊 D	PAD	PAD	5 = >20mm; UD = Cannot determine microalgae present,						
	Note: Sub	ostrate size egories liste	s can b ed on th	e recorded eit e supplement	her as direc al page (dire	t measures of the transmission of transmission of the transmission of transmis	ne median axis of hts preferred)	each particle or	one of the size	substrate too small of covered with silt (formerty Z code).						
				22						D = Dry, not assessed						

RIPARIAN VEGETATION (facing downstream)	0 = Absent 1 = Sparse 2 = Modera	(<10%)	3 = H 4 = V						INSTREAM HABITAT COMPLEXITY	2 = 3 =	Heav	se arate (/y (Heav	(10-4) (40-7)	5%)		READINGS (0 count covered	
Vegetation Class	Left	Bank			Righ	it Ba	ink			Filamentous Algae	Ø	1	2	3	4]]	Center	5
Upper	Canopy (>	5 m hi	gh)	6						Aquatic Macrophytes/ Emergent Vegetation	0	1	2	3	4		Left Center	
Trees and saplings >5 m high	(0) 1 :	23	4	Q	1	2	3	4	1	Boulders	0	1	2	(3/	4		Upstream	0
Lower C	anopy (0.5	m-5 m	high	1)						Woody Debris >0.3 m	Ø	1	2	3	4		Center	u
All vegetation 0.5 m to 5 m	Ø 1 2	23	4	Ø	1	2	3	4		Woody Debris <0.3 m	0	1	2	3	4		Right Center	0
Groun	d Cover (<0).5 m h	ligh)	- 71		2				Undercut Banks	0	1	2	3	4		Downstream	
Woody shrubs & saplings <0.5 m	0 1	23	4	Ø	1	2	3	4		Overhang. Vegetation	Õ	1	2	3	4		Optional Left Bank	
Herbs/ grasses	0 ①	23	4	0	0	2	3	4		Live Tree Roots	6	1	2	3	4			-
Barren, bare soil/ duff	0 1	23	0	0	1	2	3	D	1	Artificial Structures	B	1	2	3	4		Right Bank	

HUMAN INFLUENCE (sircle only the closest to wetted channel)	B = O C = Be P = >1	0m+<{	Bank 0m fr	& 10m f om Chai es or No					
		Left I	Bank		Channel		Right	Banl	<u>د</u>
Walls/ Rip-rap/ Dams	P	С	В	65	Y (Ŋ?	(Ó)	В	С	Р
Buildings	Р	С	В	9	YN	P	В	С	Р
Pavement/ Cleared Lot	Р	С	В	ģ		Þ	В	С	Р
Road/ Railroad	Р	С	В	¢	YN	þ	В	С	Р
Pipes (Inlet/ Outlet)	Р	С	В	ģ	YN	þ	В	С	Р
Landfill/ Trash	P	С	В	ø	YN	þ	в	С	Р
Park/ Lawn	P	С	В	þ		þ	В	С	Ρ
Row Crop	Р	С	В	6		þ	В	С	Р
Pasture/ Range	Р	С	В	¢.		0	В	С	Р
Logging Operations	Р	С	В	ø		0	В	С	Р
Mining Activity	P	С	В	þ	YN	0	В	С	Р
Vegetation Management	Р	С	В	þ		0	в	С	Р
Bridges/ Abutments	P	С	В	þ	YN	0	В	С	Р
Orchards/ Vineyards	Р	С	В	d		0	В	С	Р

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Left Bank o	roded h	alinerable	/stable /
Right Bank 🛛 📾	roded v	alinerable	(stable/

FULL VERSION

Revision Date: February 9th, 2011

	Ι	nter-7	Frans	ect: GI	Ι		Wetted Width (n	n): 17		
					In	ter-Transect	Substrates			
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	СРОМ	Microalgae Thickness Code	Macroalgae Attached	Macroalgae. Unattached	Macrophytes	Microalgae Thickness Codes 0 = No microalgae present
Left Bank	.5	13	807		Р 🖉	0	P 🖉 D	P 🚯 D	P 🔊 D	 Feels rough, not slimy; 1 = Present but not visible, Feels slimy;
Left Center	Ч	D	847	· '	P A	6	P 🔗 D	PAD	PAD	2 = Present and visible but <1mm; Rubbing fingers on surface produces a
Center	8.5	760	63	0	PA	2	P (A) D	PAD	PAD	brownish tint on them, scraping leaves visible
Right Center	ŋ.5	60	COB	30	РА	13	P 🔊 D	PAD	PAD	trail. 3 = 1-5mm; 4 = 5-20mm;
Right Bank	16.5	37	6B	0	·P A	2	P A D	PAD	PAD	 5 =>20mm; UD = Cannot determine if microalgae present.
	Note: Sub class cate	strate size gories liste	s can be d on the	recorded eith supplementa	ner as direc al page (dire	t measures of th ect measuremen	e median axis of ts preferred)	each particle or	one of the size	substrate too small or covered with silt (formely Z code) D = Dry, not assessed

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Channel Type	
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	acterization Form		FULL VERSION	Revision Date: February 9th, 2011
Site Code:	Site Name:	TR	alw CPH	Date:// 2011
Wetted Width (m): 21 m	Bankfull Width (m):	38	Bankfull Height (m):	Transect H

	Transect Substrates												
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	CPOM	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickness Codes 0 = No microalgae present, Feels rough, not slimy;			
Left Bank	5	44	(0B	0	Р 🙆	0	Р 🔗 D	PAD	PACD	1 = Present but not visible, Feels slimy,			
Left Center	G .5	19	COB	0	РÒ	O ,	DA D	PAD	PAD	2 = Present and visible but <1mm; Rubbing fingers on surface produces a			
Center	11	105	BD	· (P 🖄	<u>l</u> .	P 🕢 D	PAD	PAD	brownish tint on them, scraping leaves visible trail.			
Right Center	11.5	Ð	BUD	Ì	PA	Ð	P 🐼 D	PAD	PAD	3 = 1-5mm; 4 = 5-20mm;			
Right Bank	20.5	15	BUD		P A	(P 🖗 D	P 🚯 D	PAD	5 = >20mm; UD = Cannot determine if microalgae present,			
						t measures of th ct measuremen	e median axis of ts preferred)	each particle or	one of the size	substrate too small or covered with silt (formetty Z code). D = Doy _ not assessed			

RIPARIAN VEGETATION (facing downstream)	0 = Absent (0%) 1 = Sparse (<10%) 2 = Moderate (10-40%)	3 = Heavy (40-75%) 4 = Very Heavy (>75%)	INSTREAM HABITAT COMPLEXITY	0 = Absent (0%) 1 = Sparse (<10%) 2 = Moderate (10-40%) 3 = Heavy (40-75%) 4 = Very Heavy (>75%)	DENSIOMETER READINGS (0-17) count covered dots
Vegetation Class	Left Bank	Right Bank	Filamentous Algae	0/1234	Center 5
Upper	r Canopy (>5 m high)		Aquatic Macrophytes/ Emergent Vegetation	0 1 2 3 4	Left Center
Trees and saplings >5 m high	(0) 1 2 3 4	(0) 1 2 3 4	Boulders	0 1 2 (3) 4	Upstream U
LowerC	anopy (0.5 m-5 m hig	1)	Woody Debris >0.3 m	Q 1 2 3 4	Center 4
All vegetation 0.5 m to 5 m	(0, 1 2 3 4)	10 1 2 3 4	Woody Debris <0.3 m	0 1 2 3 4	Right Center
¥	d Cover (<0.5 m high)	<u> </u>	Undercut Banks	(0) 1 2 3 4	Downstream
Woody shrubs & saplings <0.5 m	0 0 2 3 4	0 1 2 3 4	Overhang. Vegetation	0 1 2 3 4	Optional
Herbs/ grasses	0 1 2 3 4	0 1 2 3 4	Live Treé Roots	(0) 1 2 3 4	Left Bank
Barren, bare soil/ duff	0 1 2 3 (4)	0 1 2 3 (4)	Artificial Structures	<u>A</u> 1 2 3 4	Right Bank

HUMAN INFLUENCE (circle only the closest to wetted channel)	B = 0 C = B P = >1	0 = Not Present; B = On Bank; C = Between Bank & 10m from Channel; P ⇒ 10m+<50m from Channel; Channel (record Yes or No)											
		Left Bank				nel Right Ban			Banl	(
Walls/ Rip-rap/ Dams	Р	С	В	(0)	Y/N	'	/ó/	В	С	Р			
Buildings	Р	С	В	P	YN		P	В	С	Р			
Pavement/ Cleared Lot	Р	С	В	þ			þ	В	С	Р			
Road/ Railroad	Р	С	В	þ	YN		9	В	С	Р			
Pipes (Inlet/ Outlet)	Р	С	В	ģ	YN		9	В	С	Р			
Landfill/ Trash	Р	С	В	d	YN		q	В	С	Ρ			
Park/ Lawn	Р	С	В	d			q	В	С	Р			
Row Crop	Р	С	В	d			þ	В	С	Р			
Pasture/ Range	Р	С	В	d			þ	В	С	Р			
Logging Operations	Р	С	В	ø			9	В	С	Р			
Mining Activity	P	С	В	þ	YN		0	В	С	Р			
Vegetation Management	P	С	В	þ			¢	В	С	Р			
Bridges/ Abutments	P	С	В	0	YN		þ	В	С	Р			
Orchards/ Vineyards	P	С	В	0			ø	В	С	Р			
				1									

Escare zone Sin u Come	sinesmissist Sintisistikuli	-colo () In control con acting worth)	
Left Bank or	oded h	adnerable	/stable \
Right Bank 🛛 🕬	odod I	Adnerable	(stable /

FULL VERSION

Revision Date: February 9th, 2011

		Inter-'	Frans	sect: HI	[1	Netted Width (n	n): (6						
	Inter-Transect Substrates													
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	CPOM	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thicknes Codes 0 = No microalgae preser				
Left Bank	.5	40	BUD		P Ø	2	P 🐼 D	PAD	PAD	 Feels rough, not slimy; 1 = Present but not visible Feels slimy; 				
Left Center	Ц	(67	BLD		Р 🖗	1	P D D	PAD	PAD	2 = Present and visible b <1mm; Rubbing fingers on surface produces a				
Center	S	190	COB	0	Р 🔕	0	P AD	PAD	PAD	brownish tint on them, scraping leaves visible				
Right Center	12	89	(03	70	PA	Э	P 🕢 D	PAD	PAD	trail. 3 = 1-5mm; 4 = 5-20mm;				
Right Bank	\$ 175	.22	COB	40	Р 🖗	0	PA D	P AD	P 🖉 D	5 = >20mm; UD = Cannot determine i microalgae present.				
	Note: Sub class cate	strate size gories liste	s can be ed on the	recorded eith supplemente	ier as direct I page (dire	t measures of th of measuremen	e median axis of Is preferred)	each particle or	one of the size	substrate too small or covered with silt (formerly 2 code).				

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Channel Type
Summary and an and an
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SWAMP	Stream	Habitat	Chara	cterization	Form	F	ULL V	ERSION	Rev	ision Da	ate: Fe	bruar	v 9 th , 2011	
Site Code:				Site Name:	YK	Ċ	.bv	CPH			Date: _		//2011	
Wetted Width (m):				Bankfull Wid	Ith (m): 3	5	Bank	full Height (m):	liD	-		ran	sect I	
	<u>`</u>	<u> </u>	h			Transe	ect Su	bstrates						
Position	Dist from	Depth (cm)	mm/ size	% Cobble	CPOM	Micro Thick	algae ness	Macroalgae Attached	Macroalg Unattach	1 1/12	crophyte	s o	licroalgae Thickne: Codes = No microalgae prese	ent,
Left Bank	LB (m)	170	class BEC	Embed.	Р (Coi Coi		PAD	Р 阁 І) P	AD	1	Feels rough, not slimy = Present but not visib Feels slimy;	ble,
Left Center	પ	52	BED	-	РА	l	(P A D	ΡΑΙ				 Present and visible it mm, Rubbing finger on surface produces a brownish tint on them 	rs a
Center Right	7.5	000	UP-	00			$\frac{1}{2}$	PAD PAD	PAI PAI		_ <u>_</u>		scraping leaves visible trail = 1-5mm;	
Center Right Bank	11.5	32	38) (08		P Ø	6	?	P Ø D	PAI			5	= 5-20mm; = >20mm; ID = Cannot determine microalgae present;	e if
	Note: Sub class cate	strate size gories list	ed on the	e recorded eit e supplement	her as direc al page (dire	t measur ect meas	es of th uremen	e median axis of ts preferred}	each particl	e or one c	of the size		substrate too small or covered with silt (formerly Z code).) = Dry, not assessed	
	N VEGET.) downstrea		1 = Spa	ent (0%) irse (<10%) derate (10-40	3 = Heav 4 = Very %)			Instr Hab Compi	ITAT	3 = Heavy		6) 6)	DENSIOMETR READINGS (0- count covered of	-17
Vege	tation Cla			ft Bank / (>5 m high		ght Ban	ik	Filamentou Aquatic Ma Emergent V	crophytes/	0) 1 (0) 1	23 23	4	Center Left Center	ķ
Trees and	saplings >5	m high	(7) 1	2 3 4 0.5 m-5 m h		2 3	3 4	Boulders Woody Deb		01 01		4	Upstream Center	1 1
All vegeta	ation 0.5 m			234		2	34	Woody Det		0 1		4	Right Center	C
Woody s	shrubs & sa <0.5 m	<u> </u>	I Cover 0 (1	(<0.5 m hig	\neg) 2 3	3 4	Undercut E Overhang.	3anks Vegetation			4	Downstream Optional	
He	rbs/ grasses	3	• Ğ) 2 3 4	Ø 1	2 3	3 4	Live Tree F	Roots	6 1	23	4	Left Bank Right Bank	ļ-
Barrer	n, bare soil/	duff	0 1	2 3 4	0 1	2 3	3 (4)	Artificial St	tructures	01	23	4		-

HUMAN INFLUENCE (circle only the closest to wetted channel)	0 = Not Present, B = On Bank, C = Between Bank & 10m from Channel; P = >10m+<50m from Channel; Channel (record Yes or No)												
		Left E	Bank	~	Char	nel		Right	Bank	с			
Walls/ Rip-rap/ Dams	Р	С	в ((°)	Y	(\mathbf{N})	()	В	С	Р			
Buildings	Р	С	В	ρ	Y	Ň	Y	Æ	С	Р			
Pavement/ Cleared Lot	Р	С	В	þ			Ø	¥	С	Р			
Road/ Railroad	Р	С	В	þ	Y	N	¢	₿ ¢	С	Р			
Pipes (Inlet/ Outlet)	P	С	В	þ	Y	Ň	d	ß	С	Р			
Landfill/ Trash	Р	С	В	þ	Y	N	d	<i>[</i> β	С	Р			
Park/ Lawn	Р	С	В	þ			ø	B	С	Р			
Row Crop	Р	С	В	þ			Ø	₿	С	Р			
Pasture/ Range	P	С	В	þ			Ø	в	С	Р			
Logging Operations	P	С	В	0			¢	Ъ	С	Р			
Mining Activity	Р	С	В	ø	Y	N	đ	В	(\circ)	Р			
Vegetation Management	Р	С	В	þ		1	ρ	В	č	Р			
Bridges/ Abutments	P	С	В	ø	Y	μ	þ	В	С	Р			
Orchards/ Vineyards	Р	С	В	6			b	В	С	Р			

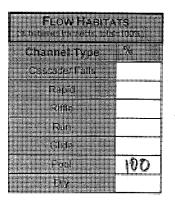
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FULL VERSION

Revision Date: February 9th, 2011

		Inter-	Tran	sect: IJ		١	Wetted Width (n	n): / Y		·			
	Inter-Transect Substrates												
Position	Dist from LB (m)	Depth (cm)	size class	% Cobble Embed.	СРОМ	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickness Codes 0 = No microalgae present			
Left Bank	.5	48	Bet		P 🔊	(PAD	P AD D	PAD	Feels rough, not slimy; 1 = Present but not visible, Feels slimy;			
Left Center	3,5	205	BED	~	Р 🖗	-	P AD	PAD	PAD	2 = Present and visible but <1mm; Rubbing fingers on surface produces a			
Center)	0	369	0	Р 🖉	Ö	P 🖉 D	PAD	PAD	brownish tint on them, scraping leaves visible trail.			
Right Center	(0,5	91	BED	CG	P 🔗	1	P AD	PAD	PAD	3 = 1-5mm; 4 = 5-20mm;			
Right Bank	13.5	27	C6R5	50	PA	2	Ø A D	& OD	P 🖉 D	5 = >20mm; UD = Cannot determine if microalgae present.			
	Note: Sub class cate	strate size gories liste	s can be d on the	recorded eith supplementa	ner as direct Il page (dire	measures of th Ct measuremen	e median axis of ts preferred)	each particle or	one of the size	substrate too small or covered with silt (formeny Z code) D = Dry, not assessed			



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SWAMP Stream Habitat Ch	aracterization Form	FULL VERSION	Revision Date: February 9 th , 2011
Site Code:	Site Name: TR	ebu CPH	Date:// 2011
Wetted Width (m): 22	Bankfull Width (m): 4-	Bankfull Height (m):	Transect J

						Transect Su	bstrates			
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	CPOM	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickness Codes 0 = No microalgae present, Feels rough, not slimy;
Left Bank	.5	32	660		Р 🔕	l ·	P \land D	P 🕢 D	PAD	1 = Present but not visible, Feels slimy,
Left Center	5.5	114	16		РА	2	P 🔕 D	PAD	PAD	2 = Present and visible but <1mm; Rubbing fingers on surface produces a
Center	11	235	G	_	Р 🕢	0	P 🔗 D	ΡΑΟ	PAD	brownish tint on them, scraping leaves visible trail.
Right Center	16.5	id	(OB	42	РÐ	0	P 🚯 D	PAD	PAD	3 = 1-5mm; 4 = 5-20mm;
Right Bank	215	60	ØGF6	·	PA	D	P 🕢 D	P 🙆 D	P (A) D	5 = >20mm; UD = Cannot determine if microalgae present,
						t measures of th ect measuremen	e median axis of its preferred)	each particle or	one of the size	substrate too small or covered with silt (formerly Z code). D = Dry, not assessed

RIPARIAN VEGETATION (facing downstream)	1 = 3	Spar	int (0' se (< erate	10%)	3 = H 4 = Ve						INSTREAM HABITAT COMPLEXITY	2 = 3 =	Spar Mod Hea	rse erate (40-75	1%) 1%) 5%)		DENSIOMET READINGS (0 count covered	-17)
Vegetation Class		Lef	t Ba	nk			Rigl	nt Ba	ank			Filamentous Algae	(0)	1	2	3	4		Center	9
Upper	Can	ору	(>5 r	n hi	gh)							Aquatic Macrophytes/ Emergent Vegetation	Õ	1	2	3	4		Left Center	1
Trees and saplings >5 m high	6	1	2	3	4	10	1	2	3	4	1	Boulders	0	1	Q	3	4		Upstream	Ø
Lower C	anop	y (0	.5 m-	5 m	hig	1)						Woody Debris >0.3 m	0	1	2	3	4		Center	6
All vegetation 0.5 m to 5 m	0	1	2	3	4	0	1	2	3	4		Woody Debris <0.3 m	0	1	2	3	4		Right Center	2
Groun	d Cov	ver (<0.5	m h	igh)		11.2					Undercut Banks	Ø	1	2	3	4		Downstream	\square
Woody shrubs & saplings <0.5 m	0	0	2	3	4	٥ (Ð	2	3	4		Overhang. Vegetation	Õ	1	2	3	4		Optional	
Herbs/ grasses	0	1	0	3	4	0	1	2	3	4		Live Tree Roots	0	1	2	3	4		Left Bank	
Barren, bare soil/ duff	0	1	2	3,	(4)	0	1	2	3			Artificial Structures	6	1	2	3	4	1	Right Bank	

HUMAN INFLUENCE (circle only the closest to wetted channel)	B = 0 C = B P = >	10m+<{	; Bank 50m fri	& 10m fi om Char es or No		nnel;				
		Left I	Bank	\cap	Char	nnel	F	Right	Banl	ĸ
Walls/ Rip-rap/ Dams	Р	С	В	6	Y (Ŕ	(0)	В	С	Р
Buildings	Р	С	В	þ	Y	Ń	Ő	В	С	Р
Pavement/ Cleared Lot	Р	С	В	þ			þ	В	С	Р
Road/ Railroad	Р	С	В	Þ	Y	Ν	0	В	С	Р
Pipes (Inlet/ Outlet)	Р	С	В	þ	Y	Ν	0	В	С	Р
Landfill/ Trash	Р	С	В	þ	Y	Ν	0	В	С	Ρ
Park/ Lawn	Р	С	В	ρ			þ	В	С	Р
Row Crop	Р	С	В	þ			þ	В	С	Р
Pasture/ Range	Р	С	В	þ			0	В	С	Р
Logging Operations	Р	С	В	þ			þ	В	С	Р
Mining Activity	P	С	В	þ	Y	N	d	В	С	Р
Vegetation Management	P	С	В	0			d	В	С	Р
Bridges/ Abutments	P	С	В	þ	Y	N	d	В	С	Р
Orchards/ Vineyards	P	С	В	p			0'	В	С	Р

			\sim
Left Bank	eroded	vulnerable	stable

FULL VERSION

Revision Date: February 9th, 2011

		Inter-'	Trans	sect: JK			Wetted Width (m	n): / つ	• • •	•
					In In	ter-Transec	t Substrates			
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	CPOM	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thicknes Codes 0 = No microalgae prese
Left Bank	5	0	BCD		Р 🔗	0	P 🐼 D	P 🚓 D	P & D	 Feels rough, not slimy; 1 = Present but not visibl Feels slimy;
Left Center	3	0	BUD)	Р 🔊	0	P 🕢 D	PAD	PAD.	2 = Present and visible b <1mm; Rubbing fingers on surface produces a
Center	6.5	93	CoB	0	P	2	P 🔊D	PAD	PAD	brownish tint on them, scraping leaves visible
Right Center	9,5	0	BUD		P 🖄	1	P 🔊 D	PAD	PAD	trail. 3 = 1-5mm; 4 = 5-20mm;
Right Bank	12.5	COB	12	15	РØ	2	P 🖉 D	PAD	PAD	5 = >20mm; UD = Cannot determine i microalgae present.
	Note: Sub class cate	ostrate size egories liste	es can be ed on the	recorded eith supplementa	ier as direc Il page (dire	t measures of the transmission of transmission of the transmission of the transmission of the transmission of the transmission of transmission of the transmission of transmission of the transmission of transmission of the transmission of transmis	ne median axis of nts preferred)	each particle or	one of the size	substrate too small or covered with silt (formerly Z code). D = Dry, not assessed

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en Por	30

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SWAMP	Stream.	Habitat	Chara	cterization	Form	F	ULL V	/ERSION	Revis	ion Date: Febru	uary 9 th , 2011	
Site Code:				Site Name:	YR	al	Š	CAt		Date:	/ / 2011	
Wetted Wid	th (m):	2		Bankfull Wi	^{ith (m):} 5	D	Bank	full Height (m):	Transect K			
						Trans	ect Su	bstrates				
Position	Dist from	Depth (cm)	mm/ size	% Cobble	ČPOM	Micro Thick	ness	Macroalgae Attached	Macroalgas Unattached	2003 2001 V/ 5-162 6 9 3 A 18 5 76 5 GL 1000	Microalgae Thickness Codes 0 = No microalgae present,	
Left Bank	LB (m)	35	class BED		P(A)	00 0		Ø A D	P 🚯 D	P 🐼 D	Feels rough, not slimy; 1 = Present but not visible, Feels slimy;	
Left Center	3	17	BET	>	Р 🔊	2		Ø A D	P 🐼 D	P 🕭 D	2 = Present and visible but <1mm; Rubbing fingers on surface produces a	
Center	þ	69	60	-	P 🔊	12		P AD	PAD	P A D P A D	brownish tint on them, scraping leaves visible trail, 3 = 1-5mm;	
Right Center Right	9	78	COB COB	5	РØ ØØ	2	<u></u>	P & D P & D		P A D P A D	5 = 1-3000, 4 = 5-20000; 5 = >20000; U = Cannot determine if	
Bank	Note: Sut class cate	, ostrate size ogories list	es can b ed on th	e recorded ei e supplement	her as direct al page (dire	measur ct meas	es of th uremen	e median axis of ts preferred)	each particle	or one of the size	microalgae present, substrate too small or covered with silt (formerly Z code) D = Dry, not assessed	
	N VEGET . g downstrea		1 = Spa	sent (0%) arse (<10%) derate (10-40	3 = Heav 4 = Very I %)			INSTF Hab Compi	REAM	0 = Absent (0%) = Sparse (<10%) = Moderate (10-40%) = Heavy (40-75%) = Very Heavy (>75%)	DENSIOMETER READINGS (0-17) count covered dots	
Vege	tation Cla			eft Bank y (>5 m higi	¥	ht Bar	ik	Filamentou Aquatic Ma Emergent V	crophytes/	0)1 2 3 4 0)1 2 3 4	Center Left Center	
Trees and	saplings >5		<u> </u>	234 0.5 m-5 m h	(Ø 1 igh)	2	34	Boulders Woody Deb	-	0 1 <mark>2 3 4</mark> 0 1 2 3 4	Upstream O Center	
All vegeta	ation 0.5 m	to 5 m	6 1	234	0 1	2	34	Woody Deb	N	<u> </u>	Center	
			l Cover	·(<0.5 m hig				Undercut E	P		Downstream C Optional	
	shrubs & sa <0.5 m		0 1				34 34	Overhang. Live Tree F	Poots	6 1 2 3 4	Left Bank	
He	rbs/ grasse	s i	0 (1	2 3 4		2	5 4			0 1 2 3 4	Pight Bank	

3 4

2 1

HUMAN INFLUENCE (circle only the closest to wetted channel)	B = 0 C = B P = >1	10m+<:	Bank 50m fri	& 10m f om Char as or No	nnel;	annel;				
		Left	Bank		Cha	nnel	_ F	Right	Banl	ĸ
Walls/ Rip-rap/ Dams	P	С	В	6	Y	(x)	6	В	С	Ρ
Buildings	P	С	В	្ខ	Y	Ņ	9	В	С	Р
Pavement/ Cleared Lot	P	С	В	þ			þ	В	С	Ρ
Road/ Railroad	Р	С	В	þ	Y	Ŋ	þ	В	С	Р
Pipes (Inlet/ Outlet)	P	С	В	þ	Y	Ŋ	þ	В	С	Р
Landfill/ Trash	P	С	В	ю	Y	Ņ	ρ	В	С	Р
Park/ Lawn	P	С	В	0			þ	В	С	P
Row Crop	P	С	В	0			þ	В	С	Р
Pasture/ Range	Р	С	В	0			Ø	В	С	Р
Logging Operations	P	С	В	0			¢	В	С	P
Mining Activity	P	С	В	ρ	Y	Ŋ	¢	В	С	P
Vegetation Management	P	С	В	þ			ø	В	С	Ρ
Bridges/ Abutments	P	С	В	ģ	Y	Ņ	þ	В	С	Р
Orchards/ Vineyards	P	С	В	0			Ø	В	С	Р

0 1 2

3 4

0

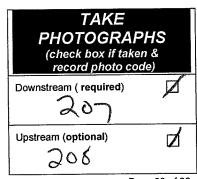
Barren, bare soil/ duff

	staeluny -	
BANKS		
ਨ ਜਿਸਦੇ ਹੋਣ ਕੇ ਪੱਛੇ ਹੈ। ਗਿਆ ਸਿੰਘ ਸੰਸੰਦ ਹੈ। ਗਿਆ ਸਿੰਘ ਸੰਸੰਦ ਹੈ।		

10) 1

Artificial Structures

2 3 4 Right Bank



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SWAMP Stream Hab	itat Characterization	n Form	<u>FUL</u>	L VERSION	Rev	ision Date: February 9 th , 2011	
Site Code:		Date: _	/	/ 2011	4	FULL FORM	
	BENTHIC INVERT	EBRATE	SAMPLE	S		Chemistry Equipment	: ID
	lection Method ard or margin-cente	r-margin)		Replicate	# jars	Analyte Equipm	ent
RWB (standard)	RWB (MCM)	TR	2N	1 .		pН	
RWB (standard)	RWB (MCM)	TR	C	[~] 2		temperature	
RWB (standard)	RWB (MCM)	TR	C			dissolved oxygen	
RWB (standard)	RWB (MCM)	TR	C			specific conductance	
Field Notes/ Com	ments:					salinity	
	•					alkalinity	
		•			•	turbidity	
						silica	
						Velocity	
Qallastian	ALGAE		S Swami	P SWAMP	SWAMP	Water and Sedimen	
Collection (circle one or write new n	nethod if applicable)	EMAP	EMAP	EMAP	EMAP	Chemistry Samples	
Collection (sum # of transect		Rep. 1	Rep. 2	Rep.	Rep.	Check if a WATER chemistry grab sample was collected	
Rubber Delimiter (area						(nutrients, SSC, etc.)	
PVC Delimiter (area=12 Syringe Scrubber (area						Check if a DUPLICATE WATER chemistry grab sample was	
Other area=							
Number of transects s	ampled (0-11)					Check if a SEDIMENT chemistry sample was collected	
Composite Volume (m	L)				- 1. 1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1	Check if a DUPLICATE SEDIMENT chemistry sample	
Assemblage ID volume (was collected Sediment	
Assemblage ID volume ((50 mL tube)					Device:	RAB
	(50 mL tube)					Material: Stainless Steel Polyethy Polycarbonate Oth	
Check if Qualitative Alga collected with soft algae/ (required even if macroalgae	diatom sample					Sediment Collection 2 or Depth (cm):	5
Check if a water chem. in was collected (chl, AFDN						Create Lab Collection records for each check box for integrated and grab water chemistry samples	(ed
Chlorophyll a volume (25 mL (prefe	use GF/F filter rred volume)						
Ash Free Dry Mass (AFDM) volume (25 m	use GF/F filter L (preferred vol)						
				HOTOGRAPH	IS		
Description	Photo	Code		Descr	iption	Photo Code	
				•		n and a second	

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FULL VERSION

01-0

Revision Date: February 9th, 2011

Flow Habitat Type	DESCRIPTION
Cascades	Short, high gradient drop in stream bed elevation often accompanied by boulders and considerable turbulence
Falls	High gradient drop in elevation of the stream bed associated with an abrupt change in the bedrock
Rapids	Sections of stream with swiftly flowing water and considerable surface turbulence. Rapids tend to have larger substrate sizes than nffles
Riffles	Shallow sections where the water flows over coarse stream bed particles that create mild to moderate surface turbulence; (< 0.5 m deep, > 0.3 m/s).
Runs	Long, relatively straight, low-gradient sections without flow obstructions. The stream bed is typically even and the water flows faster than it does in a pool; (> 0.5 m deep, > 0.3 m/s). A step-run is a series of runs separated by short riffles or flow obstructions that cause discontinuous breaks in slope
Glides	A section of stream with little or no turbulence, but faster velocity than pools; (< 0.5 m deep, < 0.3 m/s)
Pools	A reach of stream that is characterized by deep, low- velocity water and a smooth surface; (> 0.5 m deep, < 0.3 m/s)

Class Code	Size Class Range	Size Class Description	Common Size Reference
RS	⊶ >4m	bedrock, smooth	larger than a car
RR	> 4 m	bedrock, rough	larger than a car
ХВ	1 - 4 m	boulder, large	meter stick to car
SB	25 cm - 1.0 m	boulder, small	basketball to meter stick
СВ	64 - 250 mm	cobble	tennis ball to basketball
GC	16 - 64 mm	gravel, coarse	marble to tennis ball
GF	2 – 16 mm	gravel, fine	ladybug to marble
SA	0.06 – 2 mm	sand	gritty to ladybug
FN	< 0.06 mm	fines	not gritty
HP	< 0.06 mm	hardpan (consolidated fines)	
WD	NA	wood	
RC	NA	concrete/ asphalt	
OT	NA	other	

BANK STABILITY Although this measure of the degree of erosive potential is subjective, it can provide clues to the erosive potential of the banks within the reach. Assign the category whose description best fits the conditions in the area between the wetted channel and bankfull channel (see figure below) Eroded Banks show obvious signs of erosion from the current or previous water year; banks are usually bare or nearly bare Vulnerable Banks have some vegetative protection (usually annual growth), but not enough to prevent erosion during flooding Stable Bank vegetation has well-developed roots that protect banks from erosion; alternately, bedrock or artificial structures (e.g., concrete/ rip-rap) prevent bank erosion

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100	<u> </u>						
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	s ensi'/	20 00	88.8	1 44 2	3 000	10 1 m 12	
	hennided		danali wa			200 C	

**CPOM:** Record presence (P) or absence (A) of coarse particulate organic matter (>1.0 mm particles) within 1 cm of each substrate particle

Cobble Embeddedness: Visually estimate % embedded by fine particles (record to nearest 5%)

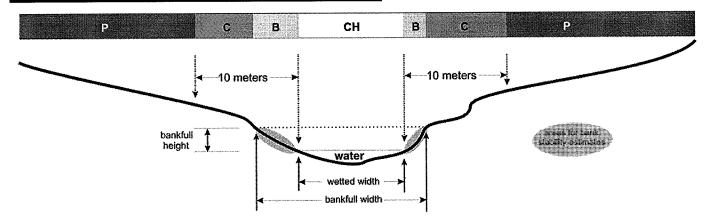


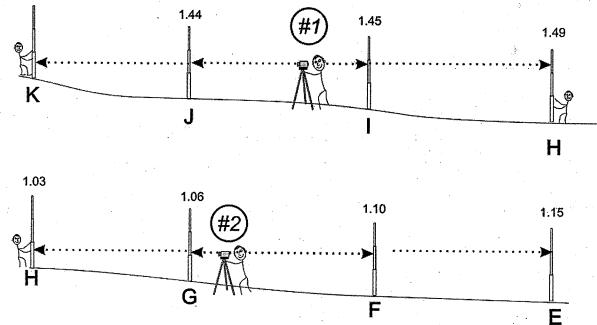
Figure 1. Cross-sectional diagram of stream transect indicating regions for assessing human influence measures:

- The measurement zone extends 5 meters upstream and 5 meters downstream of each transect
- Record one category for each bank and for the wetted channel (3 values possible)
- In reaches with wide banks, region "C" may be entirely overlapped by region "B"; in these cases, circle "B"
- Region "P" extends from 10 meters to the distance that can be seen from the channel, but not greater than 50 m

FULL VERSION

Revision Date: February 9th, 2011

		SLOPE	and Bearl	NG FORI	Ń	EXA	MPLE		C	UTOLEV LINOMET IANDLEV	ER
Starting	(re		MAIN S nt of inter-trans upplemental se			iment		SUPPLEMENT ent of inter-trans upplemental so	ect distance	in each seg	iment
Transect		ia rod rements	Slope (%) or Elevation Difference Cm	Segment Length (m)	Bearing (0°-359°)	Percent of Total Length (%)	Stadia rod measurements	Slope or Elevation Difference	Segment Length (m)	Bearing (0°-359°)	Percent of Total Length (%)
К	1.41										
J	1.44		3	15	140	100				27.5	
I	1.45		1	15	145	100					
Н	1.49	1.03	4	15	150	100				- -	
G		1.06	* <b>3</b>	15	143	100					
F		1.10	4	15	187	100					
Е		1.15	5	15	195	100		-			
1.4	1								*		



1. Level the autolevel at Position #1

2. Place base of stadia rod at water level every time

3. Sight to stadia rod at Transect K, then Transect J

4. Rotate scope and sight to Transects I and H.

5. Move level to Position #2 and re-level

6. Re-sight to stadia rod at Transect H, then Transect G 7. Rotate scope and sight to Transects F and E

Note: Sites will vary in the number of separate level positions needed to survey the reach.

	SWAM	P Stream Ha	abitat Chara	acterizatio	n Forn	n	FULL	VERSIO	N	Rev	ision Date	e: Febru	ary 9 th , 1	2011	
	Re/	ACH DOCUN	NENTATION	i	S						150 m Dis m) = 250 m				
	Project	Name: 🔨	CWA			Allerina		Date:	/	<u>५</u> /	2014	Sample Collection		801	$\widehat{}$
÷.,	Stream	Name: N	BA I	RIVER				Site Name	/ Descri	ption:	JUBA			Coll	ATE
	Site Co	de: NCB	M1-8	5				Crew Men	nbers:	tshar	felfer.	¥	semar		
0	Latitude	actual – dec	imal degree	s): 🕅 🌘	55'	396		datum: NAD83	د بر						
10 pm	Longitue	de (actual – de	ecimal degre	····· •	43	5460		other:	GPS D	evice:	GARM	in 6	0		
<b>J</b>	Амв	IENT WATER	QUALITY MI	EASUREME	NTS			d silica are o on date requ	optional;				CH LENG	TH	
	Temp (Deg.C		pН	7.7		kalinity mg/L)		Turbid (ntu)	ity	0		al Lengt		121	50
		100	cal. date			<u> </u>	Ŷ	cal. date	-			h length g top of for		d	
	Dissolv O ² (mg/	ed 9,7	Specific. Conduct (uS/	_{sm)} 97	S	alinity. (ppt)	÷	Silica		/	Explanati	•	10	()	
	cal. date		cal. date		ca dat			cal. date				>	IОт	wit	e
		DISCHARGE			roaml	1		che			<b>je meas</b> u n in field			ossible	
. *		LOCITY AREA				cal. date			sect Widt		BUOYAN	т Овјес	т Метн		
	D	)istance from	X Depth	Velocity		Distance	from	Depth	Velo	CONTRACTOR OF A	Velo			ot possible	loat 3
Ø	1	eft Bank (CO) QS	<u>(cm)</u> ひ	(ft/sec) O	11	Left Bank 4.9245	<u>((cm)</u>	<u>(cm)</u> 3,4	(fivs)	ec) סן,	Distance (m)	$\mathbf{X}$			/
(182	2	90	1.4	0.13	12	3.38 40	)	2.6	1.24	t/1.4	Float Time (sec)	) _ (			
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,728	4	- 80	3.1	0.37 .10	OCSIGE VER	43631	0	2.9	1.64	[13]	width (m) depth(cm)	Upper Section	Midd		Lower ection
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		idence of rec							NC	)	$\frac{1}{1}$	inimal		increase	10000000
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		Dominant la	nduse/ land	cover in a	rea sui	rounding	reach	ı.	Agricul Urba			orest urb/Town	-/ 1	Rangelan Other	d
						<u> </u>			Indus					12	40
	Еме	IONAL COBBI BEDDEDNESS		15	<u>3</u> ১D	4 60	_₅ 65	6 80	7	8	9 50	10 56	-11 40	12	13 10
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	targ	et count of 25; easure in %)	5	$\left  \begin{array}{c} 0 \end{array} \right $	90	15	15	30	90						
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FULL VERSION

Revision Date: February 9th, 2011

Site Code:				C	ate:		_/ :	2011											
	SLOPE	and Br	EARING	For	м (tra	nsec	t bas	sed - '	for F	Full	PHAE	3 only	r)			AUTO CLINO	METE	R	Z
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	(rec	ord perce	nt of inter	-transe	GMENT ct distanc gments a			nent		(red	cord perc			ect dis	tance	in eac		ment	
Starting Transect	Stadia		Slope (? Elevat	6) or ion	Segment	Bear		Percent of Total		Stadi	ia rod	Slo	pe or /ation	Segr	nent	Bear		Perci	
	measur	ements	Differe cm	nce %	Length (m)	(0°-38	59 [°] )	Length (%)	n	neasu	rements	Cm	erence	Len (rr		(0°-3	59°)	Leng (%	
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additional calculation area				-	÷		=,			Ъ.,			· .						
		Additio	nal Hae	BITAT	CHARAC	TERIZA	TION					High C	Gradie	nt 🕎	1	Low	Gra	dien	
Para	ameter		O Greater tha	ptima n 70% o			Su	boptin	nal			Margi					9001		Ţ,
Epifauna C	l Substra over	te/	and fish co gradient	over (50° streams)		50	% for lov	of stable f w-gradient for full col potential	stream	s);	30% in	mix of stat low-gradii e frequent remov	ent stream ly disturbe	ns);	(10%) Ia	6 in low- ck of ha	gradie bitat is	ible hab it strear obvious or lacki	ns); ;;
S	core:	20	cobble or c			15	14		12	11	10	9 8	7	6	5			2 1	0
Sedimen	t Deposit	0	r point bars	and less	ent of island: than 5% of sediment	fo	rmation,	ew increas mostly fro e sediment	m grave	el,	sand, or f	deposition	ent on bar	s; 30- 🛛	inc	reased l	bar dev	ne mate elopme the bott	nt;
		d	leposition (- :	20% in I streams)	ow-gradient	the	e bottom	affected ( adjent stre	20-50% ams)	in	80% ir	he bottom I low-gradi	ent strear	ns)	cha	nging fr Iow-gra	equent dient sl	y (>80% reams)	5 in
S	core:	2( C		18 on or dre	17 16 dging absen	Sc		) 13 Innelization abutments	ı preser		Channeli	9 8 zation ma	7 y be exter	6 isive:		nks shoi	ed with	2 1 gabian of the str	
Channe	I Alteratio	on	or minimal;			of	oast cha may be	nnelizatior present bu ization not	) (> 20y t recent	rs)	present of	ents or sh on both ba ream reacl	nks; 40 to	80%	reach	charine eam hal	lized a	nd disru eatly alte	pted.
S	core:	20	) 19	18	17 16	15	14	13	12	(11)	10	98	7	6	5	4	3	2 1	0

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Site Code:				Site Name:	YR	blw		// 2011			
Wetted Widt		32		Bankfull Wic	ith (m): 🥤	8 ^{Ban}	kfull Height (m):	2	Transect A		
					÷	Transect Si	ibstrates				
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	CPOM	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thicknes Codes 0 = No microalgae preser	
Left Bank	.5	72	COB	36	P A	3	P 🔊 D	P 🕢 D	P A D	<ul> <li>Feels rough, not slimy;</li> <li>1 = Present but not visible Feels slimy;</li> </ul>	
Left Center	G	102	BD	$\sim$	P (A)	2	(DAD	P A D	P 🗿 D	2 = Present and visible b <1mm; Rubbing fingers on surface produces a	
Center	00816	71	BLD	<u> </u>	P (Å)	2	P D	P 🔊 D	.P 🕢 D	brownish tint on them, scraping leaves visible	

3

3

Note: Substrate sizes can be recorded either as direct measures of the median axis of each particle or one of the size class categories listed on the supplemental page (direct measurements preferred)

(P) A

P A

( A D

P 🚯 D

P \land D

P 🖉 D

P 🙆 D

P 🚯 D

scraping leaves visible trail. 3 = 1-5mm; 4 = 5-20mm; 5 = >20mm; UD = Cannot determine if microalgae present, substrate too small or

substrate too small or covered with silt (formerly Z code). D = Dry, not assessed

RIPARIAN VEGETATION (facing downstream)	0 = Ab 1 = Sp 2 = Mo	arse (-		3 = H 4 = V					INSTREAM HABITAT COMPLEXITY	1.2	= Hea		(40-75	)%) )%) )%)		DENSIOMET READINGS (0 count covered	)-17)
Vegetation Class	L	eft Ba	ink		Ric	ht B	ank		Filamentous Algae	0	G	2	3	4	] [	Center	5
Upper	r Canop	y (>5	m high)		_				Aquatic Macrophytes/ Emergent Vegetation	0	) 1	2	3	4		Left Center	10
Trees and saplings >5 m high	0 1	) 2	34	0	1	)2	3	4	Boulders	0	1	2	3	4	1	Upstream	
LowerC	anopy	(0.5 m	-5 m hig	ih)	~	<u>.</u>			Woody Debris >0.3 m	6	1	2	3	4		Center	1.
All vegetation 0.5 m to 5 m	0 1	2	3 4	0	1	2	3	4	Woody Debris <0.3 m	6	1	2	3	4		Right	9
Groun	 d Cove	r (<0.5	m high	)			/		Undercut Banks	0	) ] 1	2	3	4		Center Downstream	11
Woody shrubs & saplings <0.5 m	0 (1	$\mathcal{D}^2$	34	0	1	0	3	4	Overhang. Vegetation	0	6	2	3	4		Optional	T
Herbs/ grasses	0 1	1 2	34	0	1	2	3	4	Live Tree Roots	0	) 1	2	3	4		Left Bank	
Barren, bare soil/ duff	0 1	1 (2)	3 4	0	1	12	3	4	Artificial Structures	6	1	2	3	4		Right Bank	

HUMAN INFLUENCE (circle only the closest to wetted channel)	B = 0 C = B P = >	10m+<	; Bank 50m fr	& 10m om Cha es or No		annel;				
		Left I	Bank	~	Cha	nnel		Right	Ban	k
Walls/ Rip-rap/ Dams	·P	С	В	$\overline{0}$	Y	(N)	( 0	)в	С	Р
Buildings	P	С	В	9	Y	Ň	Q	В	С	Р
Pavement/ Cleared Lot	Р	С	В	d			Ø	В	С	Р
Road/ Railroad	Р	С	В	0	Y	N	0	В	С	Р
Pipes (Inlet/ Outlet)	P	С	В	0	Y	Ν	d	В	С,	Р
Landfill/ Trash	P	С	В	q	Y	Ŋ	q	В	С	Р
Park/ Lawn	P	С	В	q			d	В	С	Р
Row Crop	P	С	В	9			đ	В	С	Р
Pasture/ Range	P	С	В	þ			ø	·B	С	Р
Logging Operations	Р	С	В	þ			þ	В	С	Р
Mining Activity	Р	С	В	þ	Y	Ν	0	В	С	Р
Vegetation Management	Р	С	В	þ			þ	В	С	Р
Bridges/ Abutments	Р	С	В	þ	Y	Ŋ	þ	В	С	Р
Orchards/ Vineyards	Р	С	В	þ			b	В	С	Р

24

31.5

Right

Center Right Bank

45

7.5

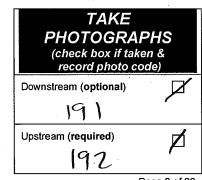
RD

COB

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50

(scare 20 m			nothansett
- Leiteark	eroded	wuinerable	∫ statilė ∖
- Right Park	eroded	winerable	∖stabie /



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SWAMP	Stream H	labitat (	Charact	erization	Form	FULL V	ERSION	Revisio	n Date: Febr	uary 9 th , 2011
	I	nter-]	Frans	ect: AE	8	<u>\</u>	Netted Width (m	<u>): 32</u>		
		1.000			In	ter-Transect	Substrates			
Position	Dist from LB (m)	Depth (cm)	size class	% Cobble Embed.	CPOM	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickness Codes 0 = No microalgae present Feels rough, not slimy;
Left Bank	.5	10	COR	70	P Ó	3	P ØD	P ØD	P 🔊 D	1 = Present but not visible, Feels slimy;
Left Center	8	46	6		P 🆄	2	° P 🙆 D	P \land D	P 🕭 D	2 = Present and visible but <1mm; Rubbing fingers on surface produces a
Center	16	88	BDD		Р 🔕	23	DA D	P 🙆 D	P 🚯 D	brownish tint on them, scraping leaves visible trail.
Right Center	24	101	BD		Р 🔕	2	P O D	P ØD	P 🐼 D	3 = 1-5mm; 4 = 5-20mm; 5 = >20mm;
Right Bank	31.5	120	COB	60	ØА	3	P 🔊 D	P D	P 🔊 D	UD = Cannot determine if microalgae present,
						measures of th ct measuremen		each particle or	one of the size	substrate too small or covered with silt (formerly Z code). D = Dry, not assessed

FLOW HABITA	
• Channel Type	¥.
L LE Das guer Falls	
- Sand	
- Kre	
Runi Glide	
<b>For</b>	100
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SWAMP Stream Habitat	Characterization Form	FULL VERSION	Revision Date: February 9th, 2011
Site Code:	Site Name: Yuba	blw Colgate	Date:// 2011
Wetted Width (m): 31	Bankfull Width (m): 3	8 Bankfull Height (m): 2	Transect B

					12 - 12 - 12 - 12 - 12 - 12 - 12 - 12 -	Transect Su	bstrates			
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	СРОМ	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickness Codes 0 = No microalgae present Feels rough, not slimy;
Left Bank	15	15	94vD	and the second se	(Þ á	(	P 🏠 D	P AD	PAD	1 = Present but not visible, Feels slimy;
Left Center	7.5	and an	COB	30	P A	3	P A D	р 🚫 D	PAD	2 = Present and visible but <1mm; Rubbing fingers on surface produces a
Center	15	102	66	C. Market Street	Р 🔗	2	P 🍝 D	P 🔊 D	P \land D	brownish tint on them, scraping leaves visible
Right Center	22.5	133	8	tragar.	PA	N	PA D	P 🔊 D	P 🔊 D	trail. 3 = 1-5mm; 4 = 5-20mm;
Right Bank	70.5	51	CoB	40	PA	- 3	P 🔊 D	P D	P ÔD	5 = >20mm; UD = Cannot determine if microalgae present,
						t measures of th ct measuremen	e median axis of ts preferred)	each particle or	one of the size	substrate too small or covered with silt (formerly Z code).

RIPARIAN VEGETATION (facing downstream)	1 = 3	Spai	ent (C se (* erate	×10%	) 40%)	3 = H 4 = V					INSTREAM HABITAT COMPLEXITY	1 = 2 = 3 =	Heav		(10-4 (40-7	0%) 0%) 5%)		DENSIOMET READINGS (0 count covered	-17)
Vegetation Class		Lef	t Ba	ink			Rig	htE	Bank		Filamentous Algae	6	)1	2	3	4	]	Center	1-7
Upper	Can	ору	(>5	m hi	gh)						Aquatic Macrophytes/ Emergent Vegetation	0	)1	2	3	4		Left Center	13
Trees and saplings >5 m high	0 (	(1)	2	3	4	0	/1	2 (	3	4	Boulders	0	1	(2	)3	4		Upstream	9
Lower C	anop	ŷ (0	.5 m	-5 m	high	1)	<i>.</i>				Woody Debris >0.3 m	C	)1	2	3	4		Center	9
All vegetation 0.5 m to 5 m	0	1	(2)	3	4	0	1	e	3	4	Woody Debris <0.3 m	$ \odot$	1	2	3	4		Right Center	8
Groun	d Cov	/er (	<0.5	m h	igh)	· ·					Undercut Banks	0	Ø	2	3	4		Downstream	8
Woody shrubs & saplings <0.5 m	0	1	Ø	3	4	0	1	Ē	) 3	4	Overhang. Vegetation	0	$\overline{\mathbb{O}}$	2	3	4		Optional	T.
Herbs/ grasses	0	1	2	(3)	4	0	1	2	ð	4	Live Tree Roots	6	1	2	3	4		Left Bank	
Barren, bare soil/ duff	0	1	(2)	3	4	0	1	3	3	4	Artificial Structures	F	)1	2	3	4	1	Right Bank	$\sim$

HUMAN INFLUENCE (circle only the closest to wetted channel)	B = 0 C = B P = >	0 = Not Present; B = On Bank; C = Between Bank & 10m from Channel; P = >10m+<50m from Channel; Channel (record Yes or No)											
		Left	Bank	٢	Chan	ıel	Right Bank						
Walls/ Rip-rap/ Dams	P	С	В	10)	Υ(	Ń)	16	)в	С	Р			
Buildings	Р	С	В	A	Y	M	6	В	С	Ρ			
Pavement/ Cleared Lot	Р	С	В	0			0	В	С	Ρ			
Road/ Railroad	Р	С	В	0	Y	Ņ	ģ	В	С	Ρ			
Pipes (Inlet/ Outlet)	Р	С	В	0	Y	Ŋ	ģ	В	С	Р			
Landfill/ Trash	Р	С	В	0	Y	Ņ	d	В	С	Р			
Park/ Lawn	Р	С	В	d			đ	В	С	Ρ			
Row Crop	P	С	В	¢			þ	В	С	Р			
Pasture/ Range	P	С	В	þ			þ	В	С	Ρ			
Logging Operations	P	С	В	þ			þ	В	С	Р			
Mining Activity	Р	С	В	0	Y	Ņ	þ	В	С	Р			
Vegetation Management	P	С	В	0			þ	В	С	Р			
Bridges/ Abutments	P	С	В	0	Y	Ν	þ	В	С	Р			
Orchards/ Vineyards	Р	С	В	0		<b>b</b>	þ	В	С	Р			

Right Bank	eroded	vulnerable	stable
Left Bank	eroded	vulnerable	stable
	5m upstream a	STABILITY and 5m downstrea full - wetted width)	

SWAMP Str				erization ect: BC			VERSION Wetted Width (n		n Date: Febr	uary 9 th , 2011
	Dist		mm/	%		ter-Transec Microalgae	t Substrates			Microalgae Thickness
Position f	rom B (m)	Depth (cm)	size	Cobble Embed	CPOM	Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Codes 0 = No microalgae present,
Left Bank	5	11	COB	30	р 🕥	3	ØA D	P DD	P AD	<ul> <li>Feels rough, not slimy;</li> <li>1 = Present but not visible, Feels slimy;</li> </ul>
Left Center	8	44	CG		P 🔊	0	P A D	P 👩 D	PAD	2 = Present and visible but <1mm; Rubbing fingers on surface produces a
Center	6	93	bid	··· <b>America</b>	P (A)	3	(B A D	P 🔊 D	POD	brownish tint on them, scraping leaves visible trail.
como	24	151	BUD	<b>19</b> 00	ΡA	2	P AD	P AD	РФО	3 = 1-5mm; 4 = 5-20mm;
Right Bank	31.5	26	850		Р <b>(</b> А́)	3	P (A) D	P A D	P D D	5 = >20mm; UD = Cannot determine if microalgae present;
No Cla	ote: Sub ass cate	strate sizes gories lister	can be re d on the s	ecorded eith upplements	ier as direc Il page (dire	t measures of t ect measureme	he median axis of nts preferred)	each particle or	one of the size	substrate too small or covered with silt (formerly Z code).
										D = Dry, not assessed
Casinas Tr		×.						•••		
. ccatalet Fa	15						4			
isapul Riffe		40		• •						
								÷.		
ela: 		60								
<del>-</del>				*			•		20 1	
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SWAMP Stream Habitat Cha	aracterization Form	FULL VERSION	Revision Date: February 9 th , 2011
Site Code:	Site Name: Yv54	blu CPH	Date: / / 2011
Wetted Width (m): 36	Bankfull Width (m): 44	Bankfull Height (m):	3 Transect C

						Transect Su	bstrates			
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	CPOM	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickness Codes 0 = No microalgae present, Feels rough, not slimy,
Left Bank	5		CoB	20	P 🚯	3	(P)A D	P 🖗 D	Р 🖗 D	1 = Present but not visible, Feels slimy;
Left Center	q	53	517	/	Р 🖗	2	P 🏟 D	P ( D	PAD	2 = Present and visible but <1mm; Rubbing fingers on surface produces a
Center	15	Ø	BED	-	РØ	2	P ∳}D	P 🔊 D	P 🔗 D	brownish tint on them, scraping leaves visible trail.
Right Center	27				Р 🚯		PAD	PAD	PAD	3 = 1-5mm; 4 = 5-20mm;
Right Bank	75.5	122	(0B	70	РØ	l	P Ø D	P 🏈 D	P 🇿 D	5 = >20mm; UD = Cannot determine if microalgae present;
						t measures of th ct measuremen		each particle or	one of the size	substrate too small or covered with silt (formerly Z code). D = Dry, not assessed

RIPARIAN VEGETATION (facing downstream)	1 = 3	Spar	ent (O se (< erate	10%		3 = ⊦ 4 = V					INSTREAM HABITAT COMPLEXITY	1 = 2 = 3 =	Moc Hea		(40-75	0%) 0%) 5%)		DENSIOMET READINGS (0 count covered	-17)
Vegetation Class	Vegetation Class Left B			nk			Rig	ht B	ank		Filamentous Algae	0	Л	2	3	4		Center	1
Upper	Can	ору	(>5 r	n hi	igh)						Aquatic Macrophytes/ Emergent Vegetation	Ø	1	2	3	4		Left Center	12 C
Trees and saplings >5 m high	10/	1	2	3	4	0	(1)	2	3	4	Boulders	0	1	2	3	4	]	Upstream	2
Lower C	anop	y (0.	5 m-	5 m	high	1)					Woody Debris >0.3 m	0	1	2	3	4		Center	1
All vegetation 0.5 m to 5 m	0	6	2	3	4	0	1	(2)	3	4	Woody Debris <0.3 m	Õ	1	2	3	4		Right Center	6
Groun	d Cov	/er (	<0.5	m h	igh)			<u>~</u>			Undercut Banks	0	0	2	3	4	1	Downstream	10
Woody shrubs & saplings <0.5 m	0	1	Ø	3	4	0	1	3	3	4	Overhang. Vegetation	0	Ø	2	3	4		Optional	
Herbs/ grasses	0	1	Ø	3	4	0	Ø	2	3	4	Live Tree Roots	0	1	2	3	4		Left Bank	
Barren, bare soil/ duff	0	1	2	3	(4)	0	1	2	Ø	47	Artificial Structures	0	1	2	3	4		Right Bank	

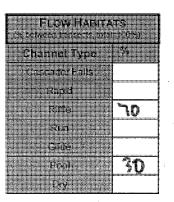
HUMAN INFLUENCE (circle only the closest to wetted channel)	B = 0 C = B P = >	0 = Not Present; B = On Bank; C = Between Bank & 10m from Channel; P = >10m+<50m from Channel; Channel (record Yes or No)											
		Left	Bank	Chanpel			Right Bank						
Walls/ Rip-rap/ Dams	Р	С	В	(0)	Y	N)	(0)	В	С	Р			
Buildings	P	С	В	Ý	Y	٦Ŋ (	Ŷ	В	С	Р			
Pavement/ Cleared Lot	Р	С	В	þ			ģ	В	С	Р			
Road/ Railroad	Р	С	В	ģ	Y	Ņ	Ó	В	С	Ρ			
Pipes (Inlet/ Outlet)	P	С	В	d	Y	Ň	ģ	В	С	Р			
Landfill/ Trash	Р	Ċ	В	d	Y	Ň	þ	В	С	Ρ			
Park/ Lawn	Р	С	В	đ			þ	В	С	Р			
Row Crop	Р	С	В	¢			þ	В	С	Р			
Pasture/ Range	Р	С	В	þ			þ	В	С	Р			
Logging Operations	Р	С	В	þ			þ	В	С	Ρ			
Mining Activity	Р	С	В	þ	Y	N	þ	В	С	Р			
Vegetation Management	Р	С	В	0			þ	В	С	Р			
Bridges/ Abutments	Р	С	В	0	Y	N	þ	В	С	Р			
Orchards/ Vineyards	Р	С	В	þ		1	Ò	В	С	Р			

	5m upstream a	STABILITY nd 5m downstrear full - wetted width)	n of transect
Left Bank	eroded	vulnerable	stable
Right Bank	eroded	vulnerable	stable

FULL VERSION

Revision Date: February 9th, 2011

		nter-7	Frans	ect: CI	)	. <b>\</b>	Wetted Width (m	n): <b>2</b>	1 1. - 1.	· · · · · · · · · · · · · · · · · · ·
	-				In	ter-Transect	Substrates			
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	CPOM	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickness Codes 0 = No microalgae present Feels rough, not slimy;
Left Bank	.5		COB	O	Р 🔕	3	P 🚫 D	P 🕢 D	PØ D	<ol> <li>Present but not visible, Feels slimy;</li> </ol>
Left Center	5.5	TT	68	20	РА	ß	PAD	PAD	PAD	2 = Present and visible but <1mm; Rubbing fingers on surface produces a
Center		81	BLP	and the second sec	РА	C.	PAD	PAD	PAD	brownish tint on them, scraping leaves visible trail.
Right Center	16.5	45	COB	76	РА	3	PAD	PAD	PAD	3 = 1-5mm; 4 = 5-20mm;
Right Bank	20.5	14	603	40	РА	3	P 👌 D	P 🔊 D	P 🖉 D	<ul> <li>5 = &gt;20mm;</li> <li>UD = Cannot determine if microalgae present.</li> </ul>
						t measures of th oct measuremen		each particle or	one of the size	substrate too small or covered with silt (formerty Z code) D = Dry, not assessed



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SWAMP Stream Habitat Chara	acterization Form	FULL VERSION Revi	evision Date: February 9 th , 2011				
Site Code:	Site Name: Yuba	blu CPH	Date:// 2011				
Wetted Width (m):	Bankfull Width (m): 33	Bankfull Height (m): 2.5	Transect D				

						Transect Su	bstrates	E		
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	СРОМ	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickness Codes 0 = No microalgae present Feels rough, not slimy;
Left Bank	.5	15	66	0	Р 🖗	2	P 🔗 D	P 🖉 D	P 🔊 D	1 = Present but not visible, Feels slimy,
Left Center	5	40	coBy	30	Р 🕅	3	PAD	PAD	PAD	2 = Present and visible but <1mm; Rubbing fingers on surface produces a
Center	(0	99	610	ADDRESSON.	Р 🚯	2	PAD	PAD	PAD	brownish tint on them, scraping leaves visible trail.
Right Center	15	68	KUD	Construction of the second second	Р 🕅	2	PAD	PAD	PAD	3 = 1-5mm; 4 = 5-20mm;
Right Bank	19.5	28	COB	20	Р 🔕	0	P AD	P 🖉 D	P 🔕 D	5 = >20mm; UD = Cannot determine if microalgae present,
						measures of the ct measurement		each particle or	one of the size	substrate too small or covered with silt (formerly Z code) D = Dry, not assessed

RIPARIAN VEGETATION (facing downstream)	1 =	Abse Spars Mode	se (<	10%		4 = ∖		y (40- Heavy				INSTREAM HABITAT COMPLEXITY	1 = 2 = 3 =	Hea		10-75	1%) 1%) 1%)		DENSIOMET READINGS (0 count covered	-17)
Vegetation Class		Lef	t Ba	nk			Rig	ht B	ank			Filamentous Algae	10/	1	2	3	4	] ]	Center	7
Upper	Can	ору	(>5 i	m hi	igh)							Aquatic Macrophytes/ Emergent Vegetation	Õ	) 1	2	3	4		Left Center	
Trees and saplings >5 m high	0	1	(2)	3	4	16	) 1	2	3	4		Boulders	0	1	0	3	4	1	Upstream	5
Lower C	anop	y (0.	5 m-	5 m	hig	n) 🐭						Woody Debris >0.3 m	0	) 1	2	3	4	]	Center	10
All vegetation 0.5 m to 5 m	0	87	2	3	4	lo	ſn	2	3	4		Woody Debris <0.3 m	Po	1	2	3	4		Right	10
Groun	d Co	ver (•	<0.5	m h	nigh)	l	$\mathbf{v}$					Undercut Banks	0	1	2	3	4		Center Downstream	4
Woody shrubs & saplings <0.5 m	0	B	Ø	3	4	0	1	0	3	4		Overhang. Vegetation	Ŏ	1	2	3	4		Optional	T
Herbs/ grasses	0	0	2	3	4	0	6	2	3	4		Live Tree Roots	6	, 1	2	3	4		Left Bank	
Barren, bare soil/ duff	0	1	2	3	74)	0	1	2	3	(4)	1	Artificial Structures	60,	1	2	3	4	1	Right Bank	

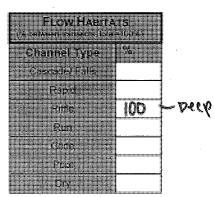
HUMAN INFLUENCE (circle only the closest to wetted channel)	B = 0 C = B P = >	10m+<	Bank 50m fr	: & 10m f rom Cha 'es or No	annel;					
		Left	Bank	( ہے	Cha	nnel	_ F	Right	Ban	k
Walls/ Rip-rap/ Dams	Р	С	В	Ö	Y	Ø	$(\mathfrak{b})$	В	С	Р
Buildings	P	С	В	Q	Y	Ň	Q	В	С	Р
Pavement/ Cleared Lot	P	С	В	ģ			0	В	С	Р
Road/ Railroad	P	С	В	d	Y	يتي. ا	O,	В	С	Р
Pipes (Inlet/ Outlet)	Р	С	В	0	Y	N	0	В	С	Р
Landfill/ Trash	P	С	В	0	Y	Ŋ	0	В	С	Р
Park/ Lawn	Р	С	В	ģ			ď	В	С	Р
Row Crop	P	С	В	þ			Ø	В	С	Р
Pasture/ Range	Р	С	В	þ			ģ	В	С	Р
Logging Operations	P	С	В	ю			þ	В	С	Р
Mining Activity	P	С	В	0	Y	Ņ	þ	В	С	Ρ
Vegetation Management	P	С	В	0			Ó	В	С	Р
Bridges/ Abutments	P	С	В	0	Y	Ņ	þ	В	С	Р
Orchards/ Vineyards	Р	С	В	⁶ 0			lo	В	С	Р

	5m upstream a	STABILITY and 5m downstrear full - wetted width)	n of transect
			-
Left Bank	eroded	vulnerable	stable
Right Bank	eroded	vulnerable	stable/

FULL VERSION

Revision Date: February 9th, 2011

	I	nter-7	Frans	ect: DF	1		Netted Width (m	1): 18		
					In	ter-Transect	Substrates			
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	CPOM	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickness Codes 0 = No microalgae present;
Left Bank	,5	16	COB	0	P Ø	2	PA D	P 🏠 D	PAD	<ul> <li>Feels rough, not slimy;</li> <li>1 = Present but not visible, Feels slimy;</li> </ul>
Left Center	4.5	122	<b>K</b> V	and a state of the	РØ	2	PAD	PAD	PAD	2 = Present and visible but <1mm; Rubbing fingers on surface produces a
Center	9	181	JUP	ANTICICIAN .	P A	3	PAD	PAD	PAD	brownish fint on them, scraping leaves visible trail.
Right Center	13.5	150	(BB	30	Р 🔊	2	PAD	PAD	P Å D	3 = 1-5mm; 4 = 5-20mm;
Right Bank	17.5	93	COB	OT	Р 🕅	Į	P (A) D	p 🔊 D	PAD	5 = >20mm; UD = Cannot determine if microalgae present,
						measures of th of measuremen		each particle or	one of the size	substrate too small or covered with silt (formerly Z code) D = Dry, not assessed



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SWAMP Stream Habitat Char	acterization Form	FULL VERSION	Revision Date: February 9 th , 2011
Site Code:	Site Name:	blu CPH	Date: / / 2011
Wetted Width (m):	Bankfull Width (m): 35	Bankfull Height (m):	Transect E

						Transect Su	bstrates			
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	CPOM	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickness Codes 0 = No microalgae present Feels rough, not slimy;
Left Bank	.5	21	(OB	0	P A	N	P AD	P A D	P A D	1 = Present but not visible, Feels slimy;
Left Center	47	96	ev	emenos.	ΡĄ	z	PAD	PAD	PAD	2 = Present and visible but <1mm; Rubbing fingers on surface produces a
Center	1845	107	\$P	S. Dascaron	ΡA	r	PAD	PAD	PAD	brownish tint on them, scraping leaves visible
Right Center [1	STEA	76	(of)	0	РА	Z	PAD	PAD	ΡΑ,	trail 3 = 1-5mm, 4 = 5-20mm;
Right Bank	145	24	COB	10	РÅ	ł	PAD	PAD	PAD	5 = >20mm; UD = Cannot determine if microalgae present,
						t measures of th of measuremen		each particle or	one of the size	substrate too small or covered with silt (formerly Z code). D = Dry, not assessed

RIPARIAN VEGETATION (facing downstream)	1 =	Abse Spar Mode	se (*	:10%		3 =   4 = V						INSTREAM HABITAT COMPLEXITY	1 = 2 = 3 =	Heav		40-75	0%) 0%) 5%)		DENSIOMET READINGS (0 count covered	-17)
Vegetation Class		Lef	t Ba	ink			Rig	ht E	ank			Filamentous Algae	0	1	2	3	4		Center	1
Upper	Can	ору	(>5	m h	igh)							Aquatic Macrophytes/ Emergent Vegetation	Õ	1	2	3	4		Left Center	Ý
Trees and saplings >5 m high	(0)	1	2	3	4	0	1	2	3	4	1	Boulders	0	1	(2)	3	4		Upstream	5
Lower C	anor	oy (0.	5 m	-5 m	n higi	n)						Woody Debris >0.3 m	$\bigcirc$	1	2	3	4		Center	2
All vegetation 0.5 m to 5 m	0	n	2	3	4	0	1	2	3	4		Woody Debris <0.3 m	0	1	2	3	4		Right	
Groun	d Co	ver (	<0.5	mt	nigh)	<u> </u>	<u>~</u>					Undercut Banks	6	1	2	3	4		Center Downstream	5
Woody shrubs & saplings <0.5 m	0	0	2	3	4	0	1	2	3	4		Overhang. Vegetation	Ø	1	2	3	4		Optional	
Herbs/ grasses	0	Ø	2	3	4	0	1	Ø	3	4		Live Tree Roots	0	1	2	3	4		Left Bank	
Barren, bare soil/ duff	0	1	2	3	(4)	0	1	2	3	(4)	-	Artificial Structures	Ø	1	2	3	4	1	Right Bank	

HUMAN INFLUENCE (circle only the closest to wetted channel)	B = 0 C = B P = >	10m+<	Bank 50m fre	& 10m fi om Char es or No		nnel;				
		Left	Bank		Chai	nnel		Right	Ban	ĸ
Walls/ Rip-rap/ Dams	Р	С	В	(6)	Y	N	(6)	В	С	Р
Buildings	Р	С	В	Q	Y	Ņ	ŷ	В	С	Ρ
Pavement/ Cleared Lot	Р	С	В	ġ			ġ	В	С	Р
Road/ Railroad	Р	С	В	þ	Y	Ŋ	ģ	В	С	Ρ
Pipes (Inlet/ Outlet)	Р	С	В	þ	Y	Ņ	ģ	В	С	Р
Landfill/ Trash	Р	С	В	þ	Y	Ņ	d	В	С	Р
Park/ Lawn	Р	С	в	þ			đ	В	С	Р
Row Crop	P	С	В	þ			Q	В	С	Р
Pasture/ Range	Р	С	В	þ		1	0	В	С	Р
Logging Operations	Р	С	В	þ			ď	В	С	Р
Mining Activity	Р	С	В	þ	Y	N	0	В	С	Р
Vegetation Management	P ·	С	В	þ			q	В	С	Р
Bridges/ Abutments	Р	С	В	þ	Y	Ŋ	d	В	С	Р
Orchards/ Vineyards	P	С	В	þ		1	Ø	В	С	Р
	-			4			ţ			

i to e conci	GANK 5 Hugonolen efeksettered		
Left Bank	ercded	winerable	/ stable }
Right Bank	eroded	wulmerable	( stabig

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FULL VERSION

Revision Date: February 9th, 2011

		nter-	Frans	ect: EF	7	, V	Wetted Width (m	1): 15		
					In	ter-Transect	Substrates			
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	CPOM	Microalgae Thickness Code	Macroalgae Attached	Maeroalgae Unattached	Macrophytes	Microalgae Thickness Codes 0 – No microalgae present Feels rough, not slimy;
Left Bank	5	18	347	••••	р 🕢	6	P A D	P Ø D	P 🏠 D	1 = Present but not visible, Feels slimy,
Left Center	Ч	69	C6	<u> </u>	ΡÁ	Ø	ΡΑΟ	PAD	PAD	2 = Present and visible but <1mm; Rubbing fingers on surface produces a
Center	7.5	89	UD		РА	0	• <b>P A D</b> •	PAD	ΡΑΟ	brownish tint on them, scraping leaves visible trail.
Right Center	11.5	54	Cob	Ø	РА	0	PAD	PAD	PAD	3 ≠ 1-5mm; 4 = 5-20mm;
Right Bank	14.5	28	COB	$\mathcal{O}^{(1)}$	РА	2	P 👌 D	PAD	PAD	5 = >20mm; UD = Cannot determine if microalgae present;
						t measures of th act measuremen		each particle or o	one of the size	substrate too small or covered with silt (formerly Z code). D = Dry, not assessed

Е ЕГСИГНАНТА	
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	C.C.
Channel Type:	
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FCC	
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SWAMP Stream Habitat C	Characterization Form	FULL VERSION	Revis	ion Date: February 9 th , 2011
Site Code:	Site Name: YR L	by CPH		Date: / / 2011
Wetted Width (m):	Bankfull Width (m):	Bankfull Height (m):	1.5	Transect F

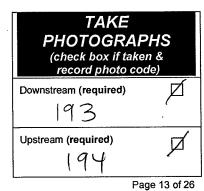
Y

						Transect Su	bstrates			
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	CPOM	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickness Codes 0 = No microalgae present, Feels rough, not slimy;
Left Bank	. {	45	440		р 🔗	3	🔁 A D	р 🖉 D	P Ø D	1 = Present but not visible, Feels slimy;
Left Center	3.5	97	BUD		ΡÁ	2	Ø A D	PAD	PAD	2 = Present and visible but <1mm, Rubbing fingers on surface produces a
Center	7	106	th9	~	РА	$\mathcal{V}$	P ØD	PAD	PAD	brownish tint on them, scraping leaves visible trail
Right Center	10,5	45	COB	30	Р 🕢	2	₽ Ø D	PÅD	PAD	3 = 1-5mm; 4 = 5-20mm;
Right Bank	(7.5	19	KUT	-	Р	2	Р <b>Ю</b> D	Р <b>(</b> ) D	р 🖗 D	5 = >20mm; UD = Cannot determine if microalgae present,
						t measures of th oct measuremen		each particle or	one of the size	substrate too small or covered with silt (formerly Z code). D = Dry, not assessed

RIPARIAN VEGETATION (facing downstream)	0 = Absent 1 = Sparse 2 = Moderat	(<10%)	3 = Heavy 4 = Very He			INSTREAM HABITAT COMPLEXITY	0 = Absent 1 = Sparse 2 = Moderate ( 3 = Heavy ( 4 = Very Heavy	40-75%)	DENSIOMET READINGS (0 count covered	)-17)
Vegetation Class	Left B	lank	Righ	t Bank		Filamentous Algae	(0) 1 2	34	Center	1
Upper	Canopy (>{	5 m high)				Aquatic Macrophytes/ Emergent Vegetation		3 4 🖯	Left Center	0
Trees and saplings >5 m high	(0) 1 2	34	0 1	2 3	4	Boulders	0 1 (2)	34	Upstream	0
Lower C	anopy (0.5 r	n-5 m higi	)) ()			Woody Debris >0.3 m	1 2	34	Center	2
All vegetation 0.5 m to 5 m	<b>@</b>	34	o Ø	23	4	Woody Debris <0.3 m	Q 1 2	34	Right Center	0
Groun	d Cover (<0.	5 m high)	1.275			Undercut Banks	(0) 1 2	34	Downstream	<u> </u>
Woody shrubs & saplings <0.5 m	0 1 2	34	0 ()	23	4	Overhang. Vegetation	0 1 2	34	Optional Left Bank	
Herbs/ grasses	0 1 2	) 3 4	0 1 (	<b>2)</b> 3	4	Live Tree Roots	0 1 2	34		
Barren, bare soil/ duff	0 1 2	3 (4)	0 1	23	Ø	Artificial Structures	0 1 2	3 4	Right Bank	

HUMAN INFLUENCE (circle only the closest to wetted channel)	0 = Not Present, B = On Bank: C = Between Bank & 10m from Channel; P = >10m+<50m from Channel; Channel (record: Yes or No)											
		Left	Bank	~	Cha	nnel	Right Bank					
Walls/ Rip-rap/ Dams	Р	С	В	6)	Y	Ø	10)	В	С	Р		
Buildings	P	С	В	P	Y	N	Ĵ,	В	С	Р		
Pavement/ Cleared Lot	Р	С	В	¢			þ	В	С	Р		
Road/ Railroad	Р	С	В	0	Y	Ŋ	þ	В	С	Р		
Pipes (Inlet/ Outlet)	Р	С	В	0	Y	N	þ	В	С	Р		
Landfill/ Trash	Р	С	В	ø	Y	Ŋ	0	В	С	Р		
Park/ Lawn	Р	С	В	ģ			0	В	С	Ρ		
Row Crop	Р	С	В	þ			þ	В	С	Р		
Pasture/ Range	Р	С	В	d			þ	В	С	Р		
Logging Operations	P	С	В	d			Ø	В	С	Р		
Mining Activity	Р	С	В	đ	Y	N	Q	В	С	Р		
Vegetation Management	P	С	В	0			d	В	С	Р		
Bridges/ Abutments	P	С	В	d	Y	N	d	В	С	Р		
Orchards/ Vineyards	P	С	В	0			0	В	С	Р		

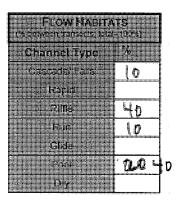
(ziel ors)	anarin ta R	nd Candown einer VII weiten Weith	n televiserte
LeftBank	ercded	vuinerable	(stable)
Right Bank	ercded	w.inerable	<b>AND</b>



FULL VERSION

Revision Date: February 9th, 2011

	I	nter-7	<b>Frans</b>	ect: FG	1 T	N N	Wetted Width (m	1): 15		
					In	ter-Transect	Substrates	1999-1977 1999-1977		
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	CPOM	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickness Codes 0 = No microalgae present.
Left Bank	15	22	EUD	<b></b>	Р 🙆	2	PA D	P (A) D	P 🔗 D	Feels rough, not slimy; 1 = Present but not visible, Feels slimy;
Left Center	3	104	BUD		РА	3	P 🗿 D	PAD	PAD	2 = Present and visible but <1mm; Rubbing fingers on surface produces a
Center	J.5	102	(L		РА	l	P (A) D	PAD	PAD	brownish tint on them, scraping leaves visible trail.
Right Center	1015	66	END	$\mathbf{\hat{\mathbf{b}}}$	РА	1	P ( D	PAD	PAD	3 = 1-5mm; 4 = 5-20mm;
Right Bank	14.5	27	633	8D	PA	Ð	PAD	P 🏟 D	P \land D	5 = >20mm; UD = Cannot determine if microalgae present,
						t measures of th ct measuremen		each particle or c	ne of the size	substrate too small or covered with silt (formerly Z code) D = Dry, not assessed



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etted Width (m):	27	E	Bankfull Wid	th (m):					
				ith (m): 3		nkfull Height (m):	1.5	Tra	insect G
					Transect S	ubstrates			
osition from LB (m	Depth (cm)	mm/ size class	% Cobble Embed.	СРОМ	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickn Codes 0 = No microalgae pres Feels rough, not slim
Left . S	- 12	BUD	· · ·	Р 🔕	Z	P 🔊 D	P Ø D	P D	1 = Present but not vis Feels slimy;
Left b.	5 111	ЬUD	$\sim$	РА	2:	P 🕢 D	P A D	PAD	2 = Present and visible <1mm; Rubbing finge on surface produces
Center 13	87	BUD		РА	2	P A D	PAD	PAD	brownish tint on ther scraping leaves visit trail.
Right Center 19.5	40	COB	20	РА	D	P D	PAD	PAD,	3 = 1-5mm; 4 = 5-20mm;
Right Q.	- 24	coB	30	PA	2	P ØD	Р <b>()</b> D	PAD	5 = >20mm; UD = Cannot determin microalgae present,
Note: S class c	ubstrate size ategories liste	es can be ed on the	recorded eith supplementa	ter as direct il page (dire	t measures of t ect measureme	the median axis of ints preferred)	each particle or	one of the size	substrate too small o covered with silt (formenty Z code). D = Dry, not assessed

RIPARIAN VEGETATION (facing downstream)	1 =	Spai	ent (0 se (< erate	10%	5) -40%)	3 = H 4 = V					INSTREAM HABITAT COMPLEXITY	2 = 3 =	Hea	rse erate ( vy ( Heavi	10-4 40-7	5%)		READINGS (0 count covered	
Vegetation Class		Le	t Ba	ink			Rig	ht B	ank		Filamentous Algae	0	1	2	3	4	] ]	Center	1
Uppe	r Cai	юру	(>5	m h	igh)						Aquatic Macrophytes/ Emergent Vegetation	Ø	1	2	3	4		Left Center	) O
Trees and saplings >5 m high	10	1	2	3	4	0	1	2	3	4	Bouiders	0	1	$\boldsymbol{\varnothing}$	3	4	]	Upstream	0
Lower C	ano	oy (0	.5 m	-5 m	n higl	n)	2				Woody Debris >0.3 m	Ô	1	2	3	4		Center	0
All vegetation 0.5 m to 5 m	0	) 1	2	3	4	6	) 1	2	3	4	Woody Debris <0.3 m	Q	1	2	3	4		Right Center	
Groun	d Co	ver	<0.5	m h	nigh)						Undercut Banks	Ò	1	2	3	4	1.	Downstream	<u> </u>
Woody shrubs & saplings <0.5 m	0	Ð	) 2	3	4	0	0	2	3	4	Overhang. Vegetation	0	1	2	3	4		Optional Left Bank	
Herbs/ grasses	0	1	Ô	) 3	4	0	1	0	3	4	Live Tree Roots	6	1	2	3	4			<u> </u>
Barren, bare soil/ duff	0	1	2	3	A)	0	1	2	3	A	Artificial Structures	0	) 1	2	3	4		Right Bank	

•

HUMAN INFLUENCE (circle only the closest to wetted channel)	B = 0 C = B P = >	0 = Not Present; B = On Bank; C = Between Bank & 10m from Channel; P = >10m+<50m from Channel; Channel (record Yes or No)											
		Left	Bank	$\sim$	Channel		Right Bank						
Walls/ Rip-rap/ Dams	P	С	В	6	YN	6	В	С	Р				
Buildings	Р	С	В	ρ	YN	ρ	В	С	Р				
Pavement/ Cleared Lot	Р	С	В	0		þ	В	С	Р				
Road/ Railroad	P	С	В	0	YN	Ø	В	С	Ρ				
Pipes (Inlet/ Outlet)	P	С	В	ρ	YN	d	В	С	Р				
Landfill/ Trash	P	С	В	0	YN	0	В	С	Р				
Park/ Lawn	Р	С	В	0		0	В	С	Ρ				
Row Crop	P	С	В	.0		0	В	С	Р				
Pasture/ Range	Р	С	В	þ		0	В	С	Р				
Logging Operations	P	С	В	þ		0	В	С	Р				
Mining Activity	P	С	В	9	YN	0	В	С	Ρ				
Vegetation Management	P	С	В	0		0	В	С	Р				
Bridges/ Abutments	P	С	В	d	YN	0	В	С	Р				
Orchards/ Vineyards	P	С	В	q		0	В	С	Р				

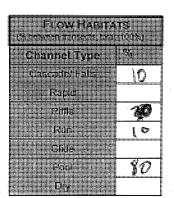
factre condition ba	i aisticim a		r cê lê er wet f
Loft Bank	eroded	vuinerable	Gable)
Right Bank	eroded	winerable	

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FULL VERSION

Revision Date: February 9th, 2011

	Ι	nter-7	Frans	ect: GE	I		Wetted Width (n	1): 28		· · · · · · · · · · · · · · · · · · ·
					In	ter-Transec	Substrates			
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	CPOM	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickness Codes 0 = No microalgae present
Left Bank	5	32	1457	<b></b>	Р 🙆	3	PA D	P AD	P 🏈 D	<ul> <li>Feels rough, not slimy;</li> <li>1 = Present but not visible, Feels slimy;</li> </ul>
Left Center	٦	(18	Buy	Ĺ	РА	3	(A D	PAD	ΡΑΟ	2 = Present and visible but <1mm; Rubbing fingers on surface produces a
Center	14	87	300	ļ	РА	Z	DA D	PAD	PAD	brownish lint on them, scraping leaves visible
Right Center	2(	34	仍乃	76	РА	l	P ØD	PAD	PAD	- trail. 3 = 1-5mm; 4 = 5-20mm;
Right Bank	27.5	15	COB	50	ΡÅ	$\mathcal{O}$	P D	PAD	PAD	5 = >20mm, UD = Cannot determine if microalgae present
	Note: Sub class cate	strate size gories liste	s can be ed on the	recorded eith supplementa	ier as direc I page (dire	measures of the transmission of transmission of the transmission of transmissi	e median axis of its preferred)	each particle or	one of the size	substrate too small or covered with sit (formerly Z code) D = Dry not assessed



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• SWAMP Stream Habitat Chara	cterization Form	FULL VERSION	Revisio	n Date: Februar	v 9 th , 2011			
Site Code:	1	lw CPH		71/4/2014 2				
Wetted Width (m):	Bankfull Width (m): 36	Bankfull Height (m):	1.5	Tran	sect H			
	Tra	nsect Substrates						
Position Dist from LB (m) (cm) class	Cobble CPOM Th	roalgae ickness Code Macroalgae Attached	Macroalgae Unattached	Macrophytes	licroalgae Thickness Codes = No microalgae present,			
Left 5 34 But		O DAD	P (D)	PAD	Feels rough, not slimy; = Present but not visible, Feels slimy; = Present and visible but			
Left 7.5 13 But	7 — P A	G (PAD	ΡΑΟ	PAD	<1mm. Rubbing fingers on surface produces a			
Center 13 158 BU		<i>𝔄</i> P ♠ D	PAD	P A D	brownish tint on them, scraping leaves visible trail.			
Right 22.5 70 But		2 DAD	PAD	4	= 1-5mm; = 5-20mm; = >20mm;			
Right 30.5 43 CG	- P A	2 PAD	PĄD	PADU	D = Cannot determine if microalgae present.			
Note: Substrate sizes can b class categories listed on th	e recorded either as direct mea le supplemental page (direct me	sures of the median axis of asurements preferred)	each particle or (		substrate too small or covered with silt (formerly Z code). = Dry, not assessed			
				Absent (0%)	DENSIOMETER			
RIPARIAN VEGETATION 1 = Sp	sent (0%) 3 = Heavy (40- arse (<10%) 4 = Very Heavy iderate (10-40%)		TAT 2= 3=	Sparse (<10%) Moderate (10-40%) Heavy (40-75%) Very Heavy (>75%)	READINGS (0-17 count covered dots			
	eft Bank Right B y (>5 m high)	ank Filamentous Aquatic Mac Emergent Ve	rophytes/	1 2 3 4 1 2 3 4	Center Left			
Trees and saplings >5 m high (0) 1	234 (212	3 4 Boulders	0	1 2 3 4	Center Upstream			
Lower Canopy (	$(0.5 \text{ m-5 m high})^{\circ}$	3 4 Woody Deb		1 2 3 4 1 2 3 4	Center L Right Center			
	r (<0.5 m high)	Undercut B		1 2 3 4	Center Downstream			

0 1 12 3 4

0 1 2 3 4

- 2

1

3 (4)

HUMAN INFLUENCE (circle only the closest to wetted channel)	0 = Not Present; B = On Bank; C = Between Bank & 10m from Channel; P = >10m+550m from Channel; Channel (record Yes or No)											
		Left Bank				inel	Right Bank					
Walls/ Rip-rap/ Dams	Р	С	В	Ø	Y	0	6	В	С	Р		
Buildings	Р	С	В	9	Y	Ŋ	Ŷ	В	С	Р		
Pavement/ Cleared Lot	Р	С	В	þ			þ	В	С	Ρ		
Road/ Railroad	P	С	В	þ	Y	N	þ	В	С	Ρ		
Pipes (Inlet/ Outlet)	Р	С	В	þ	Y	Ν	d	В	С	Ρ		
Landfill/ Trash	P	С	В	0	Y	Ŋ	d	В	С	Р		
Park/ Lawn	P	С	В	0			d	В	С	Ρ		
Row Crop	P	С	В	0			0	В	С	Р		
Pasture/ Range	P	С	В	0			0	В	С	Р		
Logging Operations	Р	С	В	þ			0	В	С	Р		
Mining Activity	P	С	В	þ	Y	N	0	В	С	Р		
Vegetation Management	P	С	В	9			0	В	С	Р		
Bridges/ Abutments	P	С	В	d	Y	N	0	В	С	Р		
Orchards/ Vineyards	Р	С	В	Q		1	Q	В	С	Р		

0 1 2 3 4

0

0 1

1 🕢 3 4

3 4

0

2

Woody shrubs & saplings <0.5 m

Herbs/ grasses

Barren, bare soil/ duff

BANK Goom zone brit uz Anaam Detween beit		art menter
Left Bank eroded	vuinerabio	/ stable ]
Right Rank eroded	vuinerable	(atable)

0 🔁 2 3 4

0) 1 2 3 4

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Overhang. Vegetation

Live Tree Roots

Artificial Structures

Optional

Left Bank

Right Bank

antin Antina Antin

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FULL VERSION

Revision Date: February 9th, 2011

	]	Inter-'	Trans	sect: H		- 1	Wetted Width (n	n): 27		
	100				In	ter-Transect	Substrates			
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	СРОМ	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thicknes Codes 0 = No microalgae prese
Left Bank	15	27	BUD		@ 😥	3	PAD	P (A) D	P 🗿 D	<ul> <li>Feels rough, not slimy;</li> <li>1 = Present but not visible Feels slimy;</li> </ul>
Left Center	7	97	40	·	ΡA	2	PA D	PAD	PAD	2 = Present and visible b <1mm; Rubbing fingers on surface produces a
Center	14	115	400		ΡA	0	PA D	PAD	PAD	brownish tint on them, scraping leaves visible
Right Center	ろい	76	W	~	ΡΑ	2	PA D	PAD	PAD	trail. 3 = 1-5mm; 4 = 5-20mm;
Right . Bank	265	14	BD		PA	2	P A D	POD	P D	5 = >20mm; UD = Cannot determine i microalgae present.
	Note: Sub class cate	strate size gories liste	s can be d on the	ecorded eith supplementa	ner as direct Il page (dire	measures of th ct measuremen	e median axis of ts preferred)	each particle or o	one of the size	substrate too small or covered with silt (formetly Z code).

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Channel Type	
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SWAMP Stream Habitat C	haracterization Form	FULL VERSION	Revision Date: February 9 th , 2011
Site Code:	Site Name: VR	gor of blu (	PH Date: / / 2011
Wetted Width (m):	Bankfull Width (m):	5 Bankfull Height (m):	Transect I

				i.		Transect Su	bstrates			
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	CPOM	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickness Codes 0 = No microalgae present Feets rough, not slimy;
Left Bank	.5	52	BUD	$\sim$	PA	0	PÀ D	P 🅢 D	P & D	1 = Present but not visible, Feels slimy,
Left Center	5.5	49	BUD		РА	Â	ØA D	PAD	ΡΑΟ	2 = Present and visible but <1mm. Rubbing fingers on surface produces a
Center	١١	197	FUR	~	РА	え	PAD	PAD	PAD	brownish tint on them, scraping leaves visible trail.
Right Center	165	89	SAND	5	РА	6	P 🔕 D	PAD	PAD	3 = 1-5mm; 4 = 5-20mm;
- Right Bank	20.5	26	SAND		- P Ø	O	P D D	PAD	PAD	5 = >20mm; UD = Cannot determine if microalgae present,
						t measures of th ect measuremen		each particle or	one of the size	substrate too small or covered with silt (formeny Z code), D = Dry, not assessed

RIPARIAN VEGETATION (facing downstream)	1 =	Spar	int (0 se (< erate	10%	5) -40%	4 = \		ry (40- Heavy				INSTREAM HABITAT COMPLEXITY	1 = 2 = 3 =	= Hea		(10-4) (40-7)	0%) 0%) 5%)		DENSIOMET Readings (0 count covered	-17)
Vegetation Class		Lef	t Ba	nk			Rig	jht B	ank			Filamentous Algae	0	1	2	3	4		Center	5
Upper	r Can	ору	(>5 i	m hi	igh)							Aquatic Macrophytes/ Emergent Vegetation	0	) 1	2	3	4		Left Center	
Trees and saplings >5 m high	0	n	2	3	4	0	17	2	3	4	8	Boulders	0	(1)	2	3	4	1	Upstream	O
Lower C	anop	y (0.	.5 m-	-5 m	n hig	h)	~~					Woody Debris >0.3 m	0	1	2	3	4		Center	2
All vegetation 0.5 m to 5 m	0	0	2	3	4	0	1	) 2	3	4		Woody Debris <0.3 m	0	1	2	3	4		Right Center	5
Groun	d Co	ver (	<0.5	m t	nigh)	<b>I</b>						Undercut Banks	0	1	2	3	4		Downstream	$ \mathcal{O} $
Woody shrubs & saplings <0.5 m	0	1	Ø	3	4	0	1	0	3	4	]	Overhang. Vegetation	Ø	1	2	3	4		Optional	5
Herbs/ grasses	0	Ø	2	3	4	0	0	2	3	4		Live Tree Roots	0	1	2	3	4		Left Bank	
Barren, bare soil/ duff	0	1	2	3	6	0	1	2	3	<b>(4)</b>		Artificial Structures	6	)1	2	3	4	1	Right Bank	

HUMAN INFLUENCE (circle only the closest to wetted channel)	B = 0 C = B P = >1	0m+<	; Bank 50m fr	& 10m f om Chai es or No	nnel;	annel;		7		
		Left I	Bank	_	Cha	nnel	A	Right	Banl	K
Walls/ Rip-rap/ Dams	Р	С	В	(0)	Y	ผ	0	В	С	Р
Buildings	Р	С	В	ŏ	Y	Ν	ρ	В	С	Р
Pavement/ Cleared Lot	Р	С	В	þ			0	В	С	Ρ
Road/ Railroad	P	С	В	þ	Y	N	0	В	С	Р
Pipes (Inlet/ Outlet)	Р	С	В	d	Y	Ņ	þ	В	С	Р
Landfill/ Trash	Р	С	В	d	Y	Ņ	þ	В	С	Р
Park/ Lawn	Р	С	В	d			þ	В	С	Р
Row Crop	P	С	В	þ			þ	В	С	Р
Pasture/ Range	P	С	В	¢			\$	В	С	Р
Logging Operations	P	С	В	ø			9	В	С	Р
Mining Activity	Р	С	В	¢	Y	Ŋ	q	В	С	Р
Vegetation Management	Р	С	В	¢			d	В	Ċ	Р
Bridges/ Abutments	Р	С	В	d	Y	N	0	В	С	Р
Orchards/ Vineyards	Р	С	В	d		4	d	В	С	Р
				l						

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	ercded	vainerahia	sister \

FULL VERSION

Revision Date: February 9th, 2011

	j	Inter-	Tran	sect: IJ	-	· ·	Wetted Width (m	1): 13.5		
1					In	ter-Transect	Substrates			
Position	Dist from LB (m)	Depth (cm)	mm/ size class	% Cobble Embed.	СРОМ	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickness Codes 0 = No microalgae present,
Left Bank	,5	20	COB	O	Р 🔕	3	P A D	P 🔊 D	P (A) D	Feels rough, not slimy; 1 = Present but not visible; Feels slimy,
Left Center	6	66	CoB	0	Р¢А	Э	P A D	P \land D	P A D	2 = Present and visible but <1mm; Rubbing fingers on surface produces a
Center	12	100	RD	0	P 4	3,	PAD	PAD	PAD	brownish tint on them; scraping leaves visible trail
Right Center	18	78	CG	_	РŖ	0	P A D	P 🕢 D.	PAD	3 = 1-5mm; 4 = 5-20mm;
Right Bank	23	0	BUD		(P) k	2	©A D	P 🖉 D	PAD	5 = >20mm; UD = Cannot determine if microalgae present;
						t measures of th of measuremen	e median axis of ts preferred)	each particle or	one of the size	substrate too small or covered with silt (formerly Z code) D = Dry, not assessed

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Channel Type	
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Factor	
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Rational State	20
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te Code:				Site Name:	YR	bw c	-PH		Date: 0	71/4/20102		
etted Widt	tted Width (m): 28				lth (m): L	5 Bank	1.5	Transect J				
						Transect Su	bstrates	3				
Position	Dist from	Depth (cm)	mm/ size class	% Cobble Embed.	CPOM	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thicknes Codes 0 = No microalgae prese		
Left Bank	<u>LB (m)</u> ,5	18	LOY	0	Р (А)	2	PAD	р 📿 D	P 🖉 D	<ul> <li>Feels rough, not slimy;</li> <li>1 = Present but not visible</li> <li>Feels slimy;</li> </ul>		
Left Center	7	39	BVD	-0	РА	a	P A D	ΡΑD	PAD	2 = Present and visible b <1mm; Rubbing fingers on surface produces a		
Center	14	67	FUT	· -	РА	3	PA D	PAD	PAD	brownish tint on them, scraping leaves visible trail		
Right Center	21	(7	BUT	-	PA	3044	Ø A D	PAD	PÅD	3 = 1-5mm; 4 = 5-20mm;		
Right Bank	275	0	BAD	· ·	P	3	PAD	P 🎝 D	P Ø D	5 = >20mm; UD = Cannot determine i microalgae present;		
	Note: Sub class cate	strate siz gories lis	es can b red on th	e recorded eit e supplement	her as direc al page (dire	t measures of the	ne median axis of hts preferred)	each particle or	one of the size	substrate too small or covered with silt (formerly Z code).		
							-			D = Dry, not assessed		
RIPARIA	N VEGET	ATION		ent (0%) arse (<10%)		vy (40-75%) Heavy (>75%)	INST HAB	REAM 1=	Absent (0%) Sparse (<10%) Moderate (10-40%) Heavy (40-75%)	DENSIOMETE READINGS (0- count covered d		

										2012 W. A. (1993)										
Vegetation Class		Lef	t Ba	nk			Rig	ht Ba	ank		Filament	ous Algae	$\mathcal{O}$	1	2	3	4		Center	
Upper	Can	opy	(>5 r	n hi	gh)							Macrophytes/ nt Vegetation	Ø	1	2	3	4	ŀ	Left Center	6
Trees and saplings >5 m high	0	1	2	3	4	0	Tr	) 2	3	4	Boulders	-	0	1	(2)	3	4		Upstream	0
Lower C	anop	<b>УЮ</b> .	.5 m-	5 m	high	1)	0				Woody D	Debris >0.3 m	Ó	1	2	3	4		Center	2
All vegetation 0.5 m to 5 m	0	6	2	3	4	0	$\bigcirc$	2	3	4	Woody E	Debris <0.3 m	Q	1	2	3	4		Right Center	
Groun	d Cov	/er (	<0.5	m h	igh)						Undercu	ut Banks	(0)	1	2	3	4		Downstream	
Woody shrubs & saplings <0.5 m	0	1	2	3	4	0	1	2	3	4	Overhan	ng. Vegetation	$\overline{0}$	) 1	2	3	4		Optional Left Bank	
Herbs/ grasses	0	(n)	2	3	4	0	0	2	3	4	Live Tre	e Roots	6	1	2	3	4			
Barren, bare soil/ duff	0	$\frac{\checkmark}{1}$	2	3	<b>(4</b> )	0	1	2	3	4	Artificial	Structures	3	1	2	3	4		Right Bank	

HUMAN INFLUENCE (circle only the closest to wetted channel)	B = 0 C = B P = >1	0 = Not Present; B = On Bank; C = Between Bank & 10m from Channel; P = >10m+<50m from Channel; Channel (record Yes or No)											
		Left I	Bank	m	Char	nnel	3	Right	Banl	(			
Walls/ Rip-rap/ Dams	Р	С	В	0	Y	$\mathbb{N}$	6	В	С	Р			
Buildings	P	С	В	9	Y	Z	P	В	С	Р			
Pavement/ Cleared Lot	Р	С	В	þ			þ	В	С	Р			
Road/ Railroad	Р	С	В	0	Y	Ν	Þ	В	С	Р			
Pipes (Inlet/ Outlet)	P	С	В	0	Y	N	Q	В	С	Р			
Landfill/ Trash	P	С	В	0	Y	Ņ	Q	В	С	Р			
Park/ Lawn	P	С	В	0			d	В	С	Р			
Row Crop	P	С	В	0			ø	В	С	Р			
Pasture/ Range	P	С	В	Q.			þ	В	С	Р			
Logging Operations	P	С	В	d			þ	В	С	Р			
Mining Activity	P	С	В	d	Y	Ŋ	þ	В	С	Ρ			
Vegetation Management	P	С	В	d			þ	В	С	Р			
Bridges/ Abutments	P	С	В	d	Y	N	d	B	С	Р			
Orchards/ Vineyards	P	С	В	d		- 1-	0	В	С	Р			

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Let Bank	eroded	vuinerable	Atobie
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FULL VERSION

Revision Date; February 9th, 2011

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	-	[nter-'	Trans	ect: Jk		, v	Wetted Width (m	1):29	······································	
	-			533	In	ter-Transect	Substrates			
Position	Dist from LB (m)	Depth (em)	size class	% Cobble Embed.	CPOM	Microalgae Thickness Code	Macroalgae Attached	Macroalgae Unattached	Macrophytes	Microalgae Thickness Codes 0 = No microalgae present,
Left Bank	.5		10B	0	Р 👌	2	PAD	P 🅢 D	Р <b>б</b> D	<ul> <li>Feels rough, not slimy;</li> <li>1 = Present but not visible, Feels slimy;</li> </ul>
Left Center	7.5	46	BUD		РА	Ø	P A D	PAD	PAD	2 = Present and visible but <1mm: Rubbing fingers on surface produces a
Center	15	53	COB	40	РА	3	PA D	PAD	PAD	brownish fint on them, scraping leaves visible
Right Center	22.5	30	60	-	РА	Ø	P (A) D	PAD	PAD	trail. 3 = 1-5mm; 4 = 5-20mm;
Right Bank	26.5	23	COB	30	РА	ん	PAD	P 🍙 D	PAD	5 = >20mm; UD = Cannot determine if microalgae present.
	Note: Sub class cate	strate size gories liste	s can be ed on the	recorded eith supplementa	ier as direct I page (dire	measures of th ct measurement	e median axis of Is preferred)	each particle or o	one of the size	substrate too small or covered with silt (formenty Z code) D = Dry, not assessed

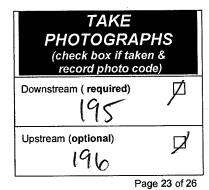
FLOW HADITATS
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Channel Type 2
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SWAMP Stream Habitat C	naracterization	Form F	ULL VE	RSION	Revis	ion Date: Febru	uary 9 th , 2011			
Site Code:	Site Name:	YR blu		PH		Date: <u>0</u> ]	<u>1114</u> 12014日			
Wetted Width (m): 30	Bankfull Widt	h (m): 38	Bankful	ll Height (m):	Zm	Transect K				
Dist	mm/ %	I rans Micro	ect Subs			en l	Microalgae Thickness			
Position from Depth LB (m) (cm)	size Cobble class Embed.	CPOM Thick		Macroalgae Attached	Macroalgae Unattached		Codes 0 = No microalgae present, Feels rough, not slimy;			
Left 5 8	OB O	P 🕢	3	P A D	P 🕢 D	P 🅢 D	1 = Present but not visible, Feels slimy;			
Left 7.5 60	CG -	PA C	メ	P 🔕 D	PÀD	PAD	2 = Present and visible but <1mm; Rubbing fingers on surface produces a			
Center 15 73	BUD —		-	PAD	PAD	PAD	brownish tint on them, scraping leaves visible trail			
Right Center 225 70	310	РА	2	PAD	PAD	P A D	3 = 1-5mm; 4 = 5-20mm;			
Right 29.5 18	=6 -	P 👩		PAD	₽ Ø∖́D	P 🖗 D	5 = >20mm; U = Cannot determine if microalgae present,			
Note: Substrate sizes class categories listed	can be recorded eith on the supplementa	er as direct measur page (direct meas	res of the r urements	median axis of preferred)	each particle	or one of the size	substrate too small or covered with silt (formerty Z code)			
						and the second second	D = Dry. not assessed			
	= Absent (0%)	3 = Heavy (40-75 4 = Very Heavy (>	%)	INSTR Habi	EAM	0 = Absent (0%) I = Sparse (<10%) 2 = Moderate (10-40%)	DENSIOMETER READINGS (0-17)			
	= Sparse (<10%) = Moderate (10-40%		((376)	COMPL	· · · · · · · · · · · · · · · · · · ·	3 = Heavy (40-75%) 4 = Very Heavy (>75%)	count covered dots			
Vegetation Class	Left Bank	Right Ban	ık	Filamentous			Center Left			
	inopy (>5 m high)	<u>^</u>		Aquatic Mac Emergent V	egetation		Center			
Tiede dite expirige e might	)/ 1 2 3 4 opy (0.5 m-5 m hig	1 - 1 /	34	Boulders Woody Debi		0 <u>(1)234</u> 0,1234	Upstream C Center			
	) (j) ź 3 4		3 4	Woody Deb	k	0 1 2 3 4	Right ( Center			
Ground	over (<0.5 m high			Undercut B		0) 1 2 3 4	Downstream O			
Woody shrubs & saplings <0.5 m	¹ ³ ⁴	0 1 (2) 3	34	Overhang.	/egetation	0) 1 2 3 4	Optional			
Herbs/ grasses	2 3 4	0 1 🔕 3	3 4	Live Tree R	oots	6) 1 2 3 4				
Barren, bare soil/ duff	) 1 2 3 (4)		3 (4)	Artificial Str	uctures	0 1 2 3 4	Right Bank			

HUMAN INFLUENCE (circle only the closest to wetted channel)	B = 0 C = B P = >	0 = Not Present; B = On Bank C = Between Bank & 10m from Channel; P ⇒ >10m +<50m from Channel; Channel (record Yes or No)											
		Left	Bank		Char	inel		Right	Ban	<b>k</b>			
Walls/ Rip-rap/ Dams	Р	С	В	$\bigcirc$	Y	(N)	(0)	В	С	Р			
Buildings	P	С	В	Q	Y	N	Ŷ	В	С	Ρ			
Pavement/ Cleared Lot	Р	С	В	d			Ý	В	С	Ъ			
Road/ Railroad	P	С	В	d	Y	N	þ	В	С	Ρ			
Pipes (inlet/ Outlet)	P	С	В	0	Y	NI I	þ	В	С	Ρ			
Landfill/ Trash	P	С	В	0	Y	N	þ	В	С	Р			
Park/ Lawn	P	С	В	0			þ	В	С	P			
Row Crop	P	С	В	0			þ	В	С	Р			
Pasture/ Range	P	С	В	d			þ	В	С	Р			
Logging Operations	P	С	В	d			þ	В	С	Р			
Mining Activity	P	С	В	d	Y	N	þ	В	С	Р			
Vegetation Management	P	С	В	đ			0	В	С	Р			
Bridges/ Abutments	P	С	В	ø	Y	N	•	В	С	Р			
Orchards/ Vineyards	P	С	В	6		1	0	В	С	Р			

BANK S CHERK ALLS SMULLINGTHE CHERKING SALES	STABILITY nj šin čovnišiman ul-weboj w dr.)	
LettBank eroded	wuinenaibile	/ stable }
Right Bank eroded	vuinerabia	[[stable]]



SWAMP Stream Hab	itat Characterizatio	n Form	<u>FULL</u>	VERSION	Revi	sion Date: February 9 th , 2011	
Site Code:		Date:	/	/ 2011	• • • •	FULL FORM	
	BENTHIC INVER		SAMPLES	· · · ·	••	Chemistry Equipment	: ID
	llection Method ard or margin-cente	v-maroin)	F	Replicate	# jars	Analyte Equipm	
RWB (standard)	RWB (MCM)		C .	1	-	pH .	
RWB (standard)	RWB (MCM)	TR	C	2		temperature	
RWB (standard)	RWB (MCM)	TR	c	<u></u> .	·	dissolved oxygen	
RWB (standard)	RWB (MCM)	TR	c			specific	
Field Notes/ Com	nments:					conductance salinity	
· ·		×			· . 	alkalinity	
	•		·.	· · · · ·			
	• .	•	2 · · · · ·			turbidity	
			· ·			șilica	<b>.</b> · ·
				1 - 4 - 1 1	·· · · ·	Velocity	
	ALGAE	SAMPLE	S			Water and Sedimen	4
Collection (circle one or write new r		SWAMP	SWAMP	SWAMP	SWAMP	Chemistry Samples	
Collection	Device	EMAP Rep.	EMAP Rep.	EMAP Rep.	EMAP Rep.	Check if a WATER chemistry	
(sum # of transect		1	2			grab sample was collected (nutrients, SSC, etc.)	
Rubber Delimiter (area PVC Delimiter (area=1)						Check if a DUPLICATE WATER	
Syringe Scrubber (area			· ·			chemistry grab sample was collected	
Other area=						Check if a SEDIMENT chemistry	<u> </u>
Number of transects s	sampled (0-11)	·				sample was collected	
Composite Volume (n	ıL)					Check if a DUPLICATE SEDIMENT chemistry sample	
Assemblage ID volume	(diatoms)					was collected	
	(50 mL tube)					Sediment Collection SCOOP CORE G Device:	RAB
Assemblage ID volume	(soft algae) (50 mL tube)	a server y				Material Stainless Steel Polyethy	/lene her
Check if Qualitative Alga collected with soft algae (required even if macroalga	/diatom sample					Sediment Collection	5
Check if a water chem. i was collected (chl, AFD	ntegrated sample					Create Lab Collection records for each check box for integrated and grab water chemistry	ked
Chlorophyll a volume (25 mL (prefe	use GF/F filter erred volume)					samples	
Ash Free Dry Mass	use GF/F filter L (preferred vol)						
		Addi	TIONAL PH	OTOGRAPH	IS		
Description	Photo			Descr	ription	Photo Code	
	·	• •.		· ·			]
·							

FULL VERSION

# Revision Date: February 9th, 2011

Flow Habitat Type	DESCRIPTION
Cascades	Short, high gradient drop in stream bed elevation often accompanied by boulders and considerable turbulence
Falls	High gradient drop in elevation of the stream bed associated with an abrupt change in the bedrock
Rapids	Sections of stream with swiftly flowing water and considerable surface turbulence. Rapids tend to have larger substrate sizes than riffles
Riffles	Shallow sections where the water flows over coarse stream bed particles that create mild to moderate surface turbulence; (< 0.5 m deep, > 0.3 m/s).
Runs	Long, relatively straight, low-gradient sections without flow obstructions. The stream bed is typically even and the water flows faster than it does in a pool; (> 0.5 m deep, > 0.3 m/s). A <b>step-run</b> is a series of runs separated by short riffles or flow obstructions that cause discontinuous breaks in slope
Glides	A section of stream with little or no turbulence, but faster velocity than pools; (< 0.5 m deep, < 0.3 m/s)
Pools	A reach of stream that is characterized by deep, low- velocity water and a smooth surface; (> 0.5 m deep, < 0.3 m/s)

BANK STABILITY

Although this measure of the degree of erosive potential is subjective, it can provide clues to the erosive potential of the banks within the reach. Assign the category whose description best fits the conditions in the area between the

wetted channel and bankfull channel (see figure below)

Eroded

Vulnerable

Stable

Banks show obvious signs of erosion from the current or

previous water year; banks are usually bare or nearly bare

Banks have some vegetative protection (usually annual

growth), but not enough to prevent erosion during flooding

Bank vegetation has well-developed roots that protect banks from erosion; alternately, bedrock or artificial structures (e.g.,

Size Class Code	Size Class Range	Size Class Description	Common Size Reference
RS	> 4 m	bedrock, smooth	larger than a car
RR	> 4 m	bedrock, rough	larger than a car
ΧВ	1 - 4 m	boulder, large	meter stick to car
SB	25 cm - 1.0 m	boulder, small	basketball to meter stick
СВ	64 - 250 mm	cobble	tennis ball to basketball
GC	16 - 64 mm	gravel, coarse	marble to tennis ball
GF	2 – 16 mm	gravel, fine	ladybug to marble
SA	0.06 – 2 mm	sand	gritty to ladybug
FN	< 0.06 mm	fines	not gritty
HP	< 0.06 mm	hardpan (consolidated fines)	
WD	NA	wood	
RC	NA	concrete/ asphalt	
ОТ	NA	other	

### CPOM/ COBBLE EMBEDDEDNESS

**CPOM:** Record presence (P) or absence (A) of coarse particulate organic matter (>1.0 mm particles) within 1 cm of each substrate particle

Cobble Embeddedness: Visually estimate % embedded by fine particles (record to nearest 5%)

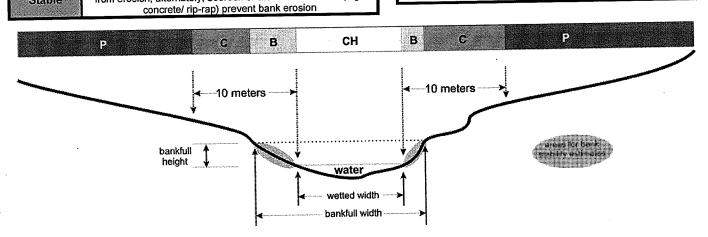


Figure 1. Cross-sectional diagram of stream transect indicating regions for assessing human influence measures:

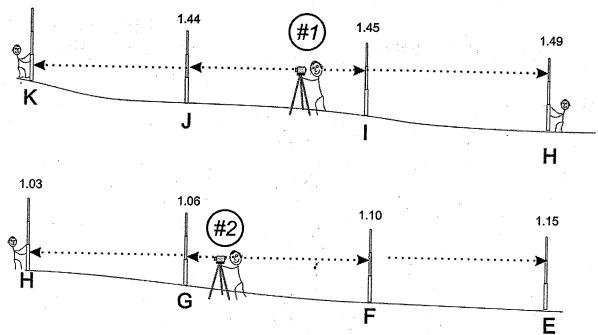
- The measurement zone extends 5 meters upstream and 5 meters downstream of each transect
- Record one category for each bank and for the wetted channel (3 values possible)
- In reaches with wide banks, region "C" may be entirely overlapped by region "B"; in these cases, circle "B"
- Region "P" extends from 10 meters to the distance that can be seen from the channel, but not greater than 50 m

FULL VERSION

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		SLOPE	and BEAR	ING FORI	м /	EXA	MPLE		C	AUTOLE\ LINOME HANDLE\	TER			
Starting	(re	cord perce if s	ent of inter-trans	EGMENT ect distance egments ar	in each seo e used)	SUPPLEMENTAL SEGMENT (record percent of inter-transect distance in each segment if supplemental segments are used)								
Transect	a carde a construction of the second s	ia rod rements	Slope (%) or Elevation Difference	Segment Length (m)	Bearing (0°-359°)	Percent of Total Length (%)	Stadia rod measurements	Slope or Elevation Difference	Segment Length (m)	Bearing (0°-359°)	Percent of Total Length (%)			
K	1.41										(70)			
J	1.44		3	15	140	100				17 × 14	1. 			
	1.45	ł       1	1	15	145	100								
Н	1.49	1.03	4	15	150	100				2				
G		1.06	3	15	143	100								
F		1.10	4	15	187	100								
Е		1.15	5	15	195	100								

1.41



- 1. Level the autolevel at Position #1
- 2. Place base of stadia rod at water level every time
- 3. Sight to stadia rod at Transect K, then Transect J
- 4. Rotate scope and sight to Transects I and H.
- 5. Move level to Position #2 and re-level
- 6. Re-sight to stadia rod at Transect H, then Transect G7. Rotate scope and sight to Transects F and E

Note: Sites will vary in the number of separate level positions needed to survey the reach.