

**STREAM HABITAT TYPING SURVEY DATA (NID Yuba-Bear, PG&E Drum Spaulding)**

Stream/Reach/Subreach: N. Yuba below Colgate P/H  
 Team: Patty Hardesty & Gaea Bailey  
 UTM: 0655061/4353986 NAD 83 (Habitat unit No. 1 based)

Data Sheet # 1  
 Page 1 of 3  
 Date 10/5/09

PM \_\_\_\_\_ Map Gradient: \_\_\_\_\_

Habitat Unit #	1				2				3				4				5							
Habitat Type <sup>1</sup>	FALL	CAS	CHU	RAP	FALL	CAS	CHU	RAP	FALL	CAS	CHU	RAP	FALL	CAS	CHU	RAP	FALL	CAS	CHU	RAP				
	HGR	LGR	GLI	(RUN)	HGR	LGR	(GLI)	RUN	HGR	LGR	GLI	RUN	HGR	LGR	GLI	(RUN)	HGR	(LGR)	GLI	RUN				
	STEP	POW	SHT	COP	STEP	POW	SHT	COP	STEP	POW	SHT	COP	STEP	POW	SHT	COP	STEP	POW	SHT	COP				
<sup>note if dammed pool</sup>	MCP	LAP	TRP	PLP	MCP	LAP	TRP	PLP	(MCP)	LAP	TRP	PLP	MCP	LAP	TRP	PLP	MCP	LAP	TRP	PLP				
Length (ft)	2352				235				1080				710				163							
Est. Avg. Width (ft)	180				183, 170				133, 135, 109, 106				120				105, 150							
Est. Avg. Pool Depth (ft)	no clear BED								2, 18, 16, 12, 12, 0															
Max. Pool Depth (ft)	est @ 5 ft								18, 18, 18				18				23.5 BED							
Pooltail Embedded %									Unable to sample															
Significant Cover? <sup>2</sup>	INSIGNIF VEG				BLDR WOOD				INSIGNIF VEG				BLDR WOOD				INSIGNIF VEG				BLDR WOOD			
<b>SUBSTRATE COMPOSITION</b>																								
Dominant Substrate	BED	BLD	COB	SLT	BED	BLD	COB	SLT	BED	BLD	COB	SLT	BED	BLD	COB	SLT	BED	BLD	COB	SLT				
Subdominant Substrate	GRV	SND	SLT		GRV	SND	SLT		GRV	SND	SLT		GRV	SND	SLT		GRV	SND	SLT					
Dominant Bank Substrate	BED	BLD	COB	SLT	BED	BLD	COB	SLT	BED	BLD	COB	SLT	BED	BLD	COB	SLT	BED	BLD	COB	SLT				
Length of LB and RB Exposed Banks (feet)	0				0				0				0				0							
Confinement <sup>3</sup>	1				1				2				1				1							
Unit Flagged/ Labeled? (Y/N)	yes - top				no				no				no				yes - top							
Tributary Inflow in cfs	no				no				no				no				no							
Landmarks or photos	DTA 2 = LDS# 2198				2199				2200, 2201				2202				2204							
Large Woody Debris <sup>5</sup> within bankfull width	Diameter class		Length class		Diameter class		Length class		Diameter class		Length class		Diameter class		Length class		Diameter class		Length class					
	/																							
No. of LWD Pieces within wetted width	0				0				0				0				0							
Fish Migration Barrier <sup>6</sup> (Y/N)?	no				no				no				no				no							
Spawning Gravel Area (sqft) Est. <sup>7</sup> (1/4" - 2.5")	All too deep				0				0				0				0							
Maximum Spawning Gravel Patch Size (sq-ft) Est.	N/A				N/A				N/A				N/A				N/A							
Comments / Observations:	Too deep to be glide, especially RBA; uniform cobble substrate, only occasional boulders								Weak control at base, pool tail into glide; Looks to be 30% deep but can't gauge well.				Too deep to gauge				1% 0655314, 4354371							

<sup>1</sup> FALL = Falls, CAS = Cascade, CHU = chute, RAP = Rapid, GLI = Glide, RUN = Run, STEP = Step Run, HGR = High Gradient Riffle (>4%), LGR = Low Gradient Riffle, POW = Pockel Water, SHT = Sheetflow, PLP = Plunge  
<sup>2</sup> Note if cover is a significant or dominant feature of the unit:  
 (e.g., logs in stream, lots of boulders, >25% surface area has instream or low overhanging vegetation, etc.)  
<sup>3</sup> Channel Confinement: 1=Confined Shallow; 2=Confined Deep; 3=Moderate Confined (<2x wetted channel width); 4=Unconfined (>= 2 wetted channel widths)  
<sup>4</sup> Criteria for LWD is: any downed wood within bankfull width of channel = or > than 1/2 bankfull width.  
 Size classes: 6-12", 12-24", 24-36", or 36" x 3-10", 10-25", 25-50", 50-75", 75"+ (ie. 6 | 25 = 6-12", 25-50")  
<sup>5</sup> Waterfalls, high velocity chutes or cascades at approx bankfull flows. NOTE VERTICAL DROP and IF CONDITIONAL or PERMANENT  
<sup>7</sup> Spawning Sized gravel submerged in an area of adequate depth and velocity within one unit

Notes regarding access points (road condition, bridge crossings, trails, etc.)

Start 15 units below dam; walking LBA no more access due to rocky cliff-outs & heavy veg. Flags @ base mistabled as "bottom" of HMU 1 #3 - pool long! Looks like maybe slight control in middle (2 pools?) but too deep to determine... one pool

**STREAM HABITAT TYPING SURVEY DATA (NID Yuba-Bear, PG&E Drum Spaulding)**

Stream/Reach/Subreach: N. YUBA below Colocate PH  
 Team: Patty Hardesty, Gaea Bailey  
 UTM: 0655314, 4354371 NAD 83 (Habitat unit No. 6, base)

Data Sheet # 2  
 Page 2 of 3  
 Date 10/5/09

PM \_\_\_\_\_ Map Gradient: \_\_\_\_\_

Habitat Unit #	6				7				8 PLT				9			
Habitat Type <sup>1</sup>	FALL	CAS	CHU	RAP	FALL	CAS	CHU	RAP	FALL	CAS	CHU	RAP	FALL	CAS	CHU	RAP
	HGR	LGR	GLI	(RUN)	HGR	LGR	GLI	RUN	HGR	LGR	GLI	RUN	HGR	LGR	GLI	(RUN)
	STEP	POW	SHT	COP	STEP	POW	SHT	COP	STEP	POW	SHT	COP	STEP	POW	SHT	COP
<sup>2</sup> note if downed pool	MCP	LAP	TRP	PLP	MCP	LAP	TRP	PLP	MCP	LAP	TRP	PLP	MCP	LAP	TRP	PLP
Length (ft)	436				171				140				310 + 120 = 430			
Est. Avg. Width (ft)	128, 105				104, 127				/				142, 113, 97			
Est. Avg. Pool Depth (ft)	/				/				/				/			
Max. Pool Depth (ft)	BED ≈ 5.5				≈ 6 ft				/				BED ≈ 7			
Pooltail Embedded %	/				/				/				/			
Significant Cover? <sup>2</sup>	INSIGNIF VEG				INSIGNIF VEG				INSIGNIF VEG				INSIGNIF VEG			
	BLDR WOOD				BLDR WOOD				BLDR WOOD				BLDR WOOD			
<b>SUBSTRATE COMPOSITION</b>																
Dominant Substrate	BED	BLD	COB	GRV	BED	BLD	COB	GRV	BED	BLD	COB	GRV	BED	BLD	COB	GRV
Subdominant Substrate	BLD	COB	SLT	SND	BLD	COB	SLT	SND	BLD	COB	SLT	SND	BLD	COB	SLT	SND
Dominant Bank Substrate	BED	BLD	COB	GRV	BED	BLD	COB	GRV	BED	BLD	COB	GRV	BED	BLD	COB	GRV
Length of LB and RB Exposed Banks (feet)	Ø				Ø				/				Ø			
Confinement <sup>4</sup>	1				1				/				1			
Unit Flagged/Labeled? (Y/N)	yes - base				no				/				no			
Tributary Inflow in cfs	no				no				/				no			
Landmarks or photos	2204				LBS-2205				2206				2207, 2208			
Large Woody Debris <sup>5</sup> within bankful width	Diameter class	Length class			Diameter class	Length class			Diameter class	Length class			Diameter class	Length class		
	#				#				#				#			
No. of LWD Pieces within wetted width	Ø				Ø				/				Ø			
Fish Migration Barrier <sup>6</sup> (y/n)?	no				no				/				no			
Spawning Gravel Area (sqft) Est. <sup>7</sup> (1/4" - 2.5")	maybe 4x6 RBA, too deep (est.)				none				/				1x3			
Maximum Spawning Gravel Patch Size (sq-ft) Est.	Ø N/A				N/A				/				1x3			
Comments / Observations:	glide-like in some areas, but deep, fast, variable subf. not insect pool min.				/				RBA-run, 2BA-rapid				Run-like in middle, but still standing waves			

<sup>1</sup> FALL = Falls, CAS = Cascade, CHU = chute, RAP = Rapid; GLI = Glide, RUN = Run, STEP = Step Run, HGR = High Gradient Riffle (>4%), LGR = Low Gradient Riffle, POW = Pockal Water, SHT = Sheetflow, POOL = COP = Convergence, MCP = mid-channel pool, LAP = Lateral, TRP = Trench, PLP = Plunge

The minimum unit length should be 1x active channel width, unless there is something notable or unique about it.

<sup>2</sup> Note if cover is a significant or dominant feature of the unit: (e.g., logs in stream, lots of boulders, >25% surface area has instream or low overhanging vegetation, etc.)

<sup>3</sup> Channel Confinement: 1=Confined Shallow; 2=Confined Deep; 3=Moderate Confined (<2x wetted channel width); 4=Unconfined (>= 2 wetted channel widths)

<sup>4</sup> Criteria for LWD is: any downed wood within bankful width of channel = or > than 1/2 bankful width.

Size classes: 6-12", 12-24", 24-36", or 36" + x 3-10", 10-25", 25-50", 50-75", 75" + [ie. 6 | 25 = 6-12", 25-50"]

<sup>5</sup> Waterfalls, high velocity chutes or cascades at approx bankful flows. NOTE VERTICAL DROP and IF CONDITIONAL or PERMANENT

<sup>7</sup> Spawning Sized gravel submersed in an area of adequate depth and velocity within one unit

Notes regarding access points (road condition, bridge crossings, trails, etc.)

Q/C Initials:

PKA

Several Willow sp., Robinia, Alder, big leaf maple, brickellia, through boulder banks - upland community change a little @ change into steep 40-60% slopes; sandy deposition at boulder base, wetted edge, Riparian community fairly well established, especially where the hugest of boulders are absent.

STREAM HABITAT TYPING SURVEY DATA (NID Yuba-Bear, PG&E Drum Spaulding)

Data Sheet # 3  
 Page 3 of 3  
 Date 10/5/09

Stream/Reach/Subreach: N. Yuba below Colgate Powerhouse  
 Team: Patty Hordesty, 3 Gaea Bailey  
 UTM: 0655503, 4354888 NAD 83 (Habitat unit No. top 10)

PM \_\_\_\_\_ Map Gradient: \_\_\_\_\_

Habitat Unit #	10				SPLIT				11				12				13							
Habitat Type <sup>1</sup>	FALL	CAS	CHU	RAP	FALL	CAS	CHU	RAP	FALL	CAS	CHU	RAP	FALL	CAS	CHU	RAP	FALL	CAS	CHU	RAP				
	HGR	LGR	GLI	RUN	HGR	LGR	GLI	RUN	HGR	LGR	GLI	RUN	HGR	LGR	GLI	RUN	HGR	LGR	GLI	RUN				
	STEP	POW	SHT	COP	STEP	POW	SHT	COP	STEP	POW	SHT	COP	STEP	POW	SHT	COP	STEP	POW	SHT	COP				
*note if dammed pool	MCP	LAP	TRP	PLP	MCP	LAP	TRP	PLP	MCP	LAP	TRP	PLP	MCP	LAP	TRP	PLP	MCP	LAP	TRP	PLP				
Length (ft)	313				101				200				250				95							
Est. Avg. Width (ft)	84, 103, 77				110, 70				130, 150				110, 130, 80				155, 170							
Est. Avg. Pool Depth (ft)	BFDack				=				=				=				=							
Max. Pool Depth (ft)	=				=				=				=				=							
Pooltail Embedded %	=				=				=				=				=							
Significant Cover? <sup>2</sup>	INSIGNIF VEG'				BLDR WOOD				INSIGNIF VEG'				BLDR WOOD				INSIGNIF VEG'				BLDR WOOD			
SUBSTRATE COMPOSITION																								
Dominant Substrate	BED (BLD) COB				BED BLD COB				BED (BLD) COB				BED (BLD) COB				BED (BLD) COB							
	GRV SND SLT				GRV SND SLT				GRV SND SLT				GRV SND SLT				GRV SND SLT							
Subdominant Substrate	BED BLD COB				BED BLD COB				BED BLD COB				BED BLD COB				BED BLD COB							
	GRV SND SLT				GRV SND SLT				GRV (SND) SLT				GRV (SND) SLT				GRV (SND) SLT							
Dominant Bank Substrate	BED (BLD) COB				BED BLD COB				BED (BLD) COB				BED (BLD) COB				BED (BLD) COB							
	GRV SND SLT				GRV SND SLT				GRV (SND) SLT				GRV SND SLT				GRV SND SLT							
Length of LB and RB Exposed Banks (feet)	R/L 0				-				0				0				0							
Confinement <sup>3</sup>	1				-				2				1				1							
Unit Flagged/ Labeled? (Y/N)	yes top				yes, box				no				no				no							
Tributary Inflow in cfs	no				no				no 22, 22, 22				no				no							
Landmarks or photos	2210				2211				LDS from Road				US from road				2214 bottle unit RAP							
Large Woody Debris <sup>5</sup> within bankfull width	Diameter	Length	Diameter	Length	Diameter	Length	Diameter	Length	Diameter	Length	Diameter	Length	Diameter	Length	Diameter	Length	Diameter	Length	Diameter	Length				
	# class	class	# class	class	# class	class	# class	class	# class	class	# class	class	# class	class	# class	class	# class	class	# class	class				
No. of LWD Pieces within wetted width	0				0				0				0				0							
Fish Migration Barrier <sup>6</sup> (Y/N)?	no				no				no				no				no							
Spawnable Gravel Area (sqft) Est. <sup>7</sup> (1/4" - 2.5")	out of water X2) 1x1 (3)				-				0				0				0							
Maximum Spawning Gravel Patch Size (sq-ft) Est.	1x2				-				N/A				N/A				N/A							
Comments / Observations:	run like in middle but still standing waves				at corner length & width measurements oblique				non-modelado due to corner!								Power house at pool next unit above rapid							

<sup>1</sup> FALL = Falls, CAS = Cascade, CHU = Chute, RAP = Rapid, GLI = Glide, RUN = Run, STEP = Step Run, HGR = High Gradient Riffle (>4%), LGR = Low Gradient Riffle, POW = Pocket Water, SHT = Sheetflow, COP = Convergence, MCP = mid-channel pool, LAP = Lateral, TRP = Trench, PLP = Plunge

The minimum unit length should be 1x active channel width, unless there is something notable or unique about it.  
<sup>2</sup> Note if cover is a significant or dominant feature of the unit: (e.g., logs in stream, lots of boulders, >25% surface area has in-stream or low overhanging vegetation, etc.)

<sup>3</sup> Channel Confinement: 1=Confined Shallow; 2=Confined Deep; 3=Moderate Confined (<2x wetted channel width); 4=Unconfined (>= 2 wetted channel widths)

<sup>4</sup> Criteria for LWD is: any downed wood within bankfull width of channel = or: than 1/2 bankfull width.  
 Size classes: 6-12", 12-24", 24-36", or 36" x 3-10", 10-25", 25-50", 50-75", 75" (ie. 6 | 25 = 6-12", 25-50")

<sup>6</sup> Waterfalls, high velocity chutes or cascades at approx bankfull flows. NOTE VERTICAL DROP and IF CONDITIONAL or PERMANENT  
<sup>7</sup> Spawning Sized gravel submersed in an area of adequate depth and velocity within one unit

Notes regarding access points (road condition, bridge crossings, trails, etc.)

Split is at corner w/pool from HMA #11 pool extending to past  
 RBA  
 LBA  
 pool 600ft total  
 400 to split, 200  
 NON no delable

STREAM HABITAT TYPING SURVEY DATA (NID Yuba-Bear, PG&E Drum Spaulding)

Stream/Reach/Subreach: North Yuba above Colgate PH.  
 Team: P. Hardesty G. Bailey  
 UTM: 0655938/4355021 NAD 83 (Habitat unit No. \_\_\_\_\_) PM \_\_\_\_\_ Map Gradient: \_\_\_\_\_  
 Data Sheet # 1  
 Page 1 of 4  
 Date 10/16/09

Habitat Unit #	1				2				3				4				5							
Habitat Type <sup>1</sup>	FALL	CAS	CHU	RAP	FALL	CAS	CHU	RAP	FALL	CAS	CHU	RAP	FALL	CAS	CHU	RAP	FALL	CAS	CHU	RAP				
	HGR	LGR	GLI	RUN	HGR	LGR	GLI	RUN	HGR	LGR	GLI	RUN	HGR	LGR	GLI	RUN	HGR	LGR	GLI	RUN				
	STEP	POW	SHT	COP	STEP	POW	SHT	COP	STEP	POW	SHT	COP	STEP	POW	SHT	COP	STEP	POW	SHT	COP				
*note if dammed pool	(MCP)	LAP	TRP	PLP	(MCP)	LAP	TRP	PLP	(MCP)	LAP	TRP	PLP	(MCP)	LAP	TRP	PLP	(MCP)	LAP	TRP	PLP				
Length (ft)	530				450				291				318				1036							
Est. Avg. Width (ft)	81, 115				81, 35, 116, 134				110, 123, 131				134, 141, 130				175, 142, 120, 73, 99, 56							
Est. Avg. Pool Depth (ft)	0+				—				—				—				6+							
Max. Pool Depth (ft)	6+				—				6+				—				6+							
Pooltail Embedded %	100 DEEP				—				70%				—				too deep							
Significant Cover? <sup>2</sup>	INSIGNIF VEG				BLDR WOOD				INSIGNIF VEG				BLDR WOOD				INSIGNIF VEG				BLDR WOOD			
SUBSTRATE COMPOSITION																								
Dominant Substrate	BED BLD COB				BED BLD COB				BED BLD COB				BED BLD COB				BED BLD COB							
Subdominant Substrate	GRV SND SLT				GRV SND SLT				GRV SND SLT				GRV SND SLT				GRV SND SLT							
Dominant Bank Substrate	BED BLD COB				BED BLD COB				BED BLD COB				BED BLD COB				BED BLD COB							
Length of LB and RB Exposed Banks (feet)	/				/				/				/				/							
Confinement <sup>4</sup>	3				* 3				3				1				2							
Unit Flagged/ Labeled? (Y/N)	Y @ TOP				Y @ BOTTOM				N				N				Y @ TOP							
Tributary inflow in cfs	—				NA				NA				NA				NA							
Landmarks or photos	—				—				*				—				—							
Large Woody Debris <sup>3</sup> within bankfull width	Diameter class		Length class		Diameter class		Length class		Diameter class		Length class		Diameter class		Length class		Diameter class		Length class					
	#		#		#		#		#		#		#		#		#		#					
No. of LWD Pieces within wetted width	/				/				/				/				/							
Fish Migration Barrier <sup>4</sup> (y/n)?	N				N				—				—				—							
Spawning Gravel Area (sqft) Est. <sup>7</sup> (1/4" - 2.5")	NA				(1x1)x45 (2x2)x2				(1x1)x3 2 1/2 wdd out water/RBA 1x4				(1x1)x4 (2x1)x2				(5x5)x2 (3x4)x1 (80x15)x1 (20x15)x1							
Maximum Spawning Gravel Patch Size (sq-ft) Est.	NA				2x2				1x1				2x1				20x15							
Comments / Observations: Fish? Wildlife? Amphib? Backwater or side chan. amphib habitat? Riparian? Landmarks, Photo #s, Etc.	POOL @ base of PH.				2.5% gradient				MCP with POW characteristics of pool tailout				4% gradient (WATER TEMP MONITOR LBA)				POOL TAILOUT HAS POW CHARACTERISTIC BUT DEEP, WATER NOT MOVING, NO SCOUR SO							

<sup>1</sup> FALL = Falls, CAS = Cascade, CHU = Chute, RAP = Rapid, GLI = Glide, RUN = Run, STEP = Step Run, HGR = High Gradient Riffle (>4%), LGR = Low Gradient Riffle, POW = Pockel Water, SHT = Sheetflow, Pools: COP = Convergence, MCP = mid-channel pool, LAP = Lateral, TRP = Trench, PLP = Plugage

The minimum unit length should be 1x active channel width, unless there is something notable or unique about it.

<sup>2</sup> Note if cover is a significant or dominant feature of the unit: (e.g., logs in stream, lots of boulders, >25% surface area has instream or low overhanging vegetation, etc.)

<sup>3</sup> Channel Confinement: 1=Confined Shallow; 2=Confined Deep; 3=Moderate Confined (<2x wetted channel width); 4=Unconfined (>= 2 wetted channel widths)

<sup>4</sup> Criteria for LWD is: any downed wood within bankfull width of channel = or > than 1/2 bankfull width.

<sup>5</sup> Size classes: 6-12", 12-24", 24-36", or 36"+ x 3-10", 10-25", 25-50", 50-75", 75"+ (ie. 6 | 25 = 6-12", 25-50")

<sup>6</sup> Waterfalls, high velocity chutes or cascades at approx bankfull flows. NOTE VERTICAL DROP and IF CONDITIONAL or PERMANENT

<sup>7</sup> Spawning Sized gravel submerged in an area of adequate depth and velocity within one unit

Notes regarding access points (road condition, bridge crossings, trails, etc.)

ENDS. UTM: 0656505  
 Page: 4355144

Murkey water  
 \* Camera w/o charge

Q/C initials: LB

Above wetted LBA

STREAM HABITAT TYPING SURVEY DATA (NID Yuba-Bear, PG&E Drum Spaulding)

Date Sheet # 1  
 Page 2 of 4  
 Date 10/16/09

Stream/Reach/Subreach: N. Yuba above Colgate Pth  
 Team: P. Hardesty G. Enley  
 UTM: 0656505/4355144 NAD 83 (Habitat unit No. \_\_\_\_\_) PM \_\_\_\_\_ Map Gradient: \_\_\_\_\_

Habitat Unit #	6				7				8				9				10			
Habitat Type <sup>1</sup>	FALL	CAS	CHU	RAP	FALL	CAS	CHU	RAP	FALL	CAS	CHU	RAP	FALL	CAS	CHU	RAP	FALL	CAS	CHU	RAP
	HGR	LGR	GLI	RUN	HGR	LGR	GLI	RUN	HGR	LGR	GLI	RUN	HGR	LGR	GLI	RUN	HGR	LGR	GLI	RUN
	STEP	POW	SHT	COP	STEP	POW	SHT	COP	STEP	POW	SHT	COP	STEP	POW	SHT	COP	STEP	POW	SHT	COP
*note if dammed pool	MCP	LAP	TRP	PLP	MCP	LAP	TRP	PLP	MCP	LAP	TRP	PLP	MCP	LAP	TRP	PLP	MCP	LAP	TRP	PLP
Length (ft)	91				67				52				171				85			
Est. Avg. Width (ft)	51	54	56		45	51			62	73			55	67	66		75	80	59	
Est. Avg. Pool Depth (ft)	—				—				—				—				—			
Max. Pool Depth (ft)	—				—				—				—				—			
Pooltail Embedded %	—				—				—				—				—			
Significant Cover? <sup>2</sup>	INSIGNIF VEG <sup>3</sup>				INSIGNIF VEG				INSIGNIF VEG				INSIGNIF VEG				INSIGNIF VEG			
	BLDR WOOD				BLDR WOOD				BLDR WOOD				BLDR WOOD				BLDR WOOD			
SUBSTRATE COMPOSITION																				
Dominant Substrate	BED	BLD	COB	SLT	BED	BLD	COB	SLT	BED	BLD	COB	SLT	BED	BLD	COB	SLT	BED	BLD	COB	SLT
Subdominant Substrate	GRV	SND			GRV	SND			GRV	SND			GRV	SND			GRV	SND		
Dominant Bank Substrate	BED	BLD	COB	SLT	BED	BLD	COB	SLT	BED	BLD	COB	SLT	BED	BLD	COB	SLT	BED	BLD	COB	SLT
	GRV	SND			GRV	SND			GRV	SND			GRV	SND			GRV	SND		
Length of LB and RB Exposed Banks (feet)	/				/				/				/				/			
Confinement <sup>4</sup>	1				1				1				1				1			
Unit Flagged/ Labeled? (Y/N)	Ye bottom				N				N				N				Ye TOP			
Tributary Inflow in cfs	NA				NA				NA				NA				NA			
Landmarks or photo's	—				—				—				—				—			
Large Woody Debris <sup>5</sup> within bankfull width	Diameter class			Length class			Diameter class			Length class			Diameter class			Length class				
	#			#			#			#			#			#				
No. of LWD Pieces within wetted width	/				/				/				/				/			
Fish Migration Barrier <sup>6</sup> (Y/N)?	N				N				N				N				N			
Spawning Gravel Area (sqft) Est. <sup>7</sup> (1/4" - 2.5")	—				—				8x2				20x4				—			
Maximum Spawning Gravel Patch Size (sq-ft) Est.	—				—				8x2				20x4				—			
Comments / Observations: Fish? Wildlife? Amphibs? Backwater or side chan. amphib habitat? Riparian? Landmarks, Photo #, Etc.	2.5% gradient				11% grad				1% gradient								9% gradient			

<sup>1</sup> FALL = Falls, CAS = Cascade, CHU = Chute, RAP = Rapid, GLI = Glide, RUN = Run, STEP = Step Run, HGR = High Gradient Riffle (>4%), LGR = Low Gradient Riffle, POW = Pocket Water, SHT = Sheelflow, Pool: COP = Convergence, MCP = mid-channel pool, LAP = Lateral, TRP = Trench, PLP = Plunge

The minimum unit length should be 1x active channel width, unless there is something notable or unique about it.

<sup>2</sup> Note if cover is a significant or dominant feature of the unit:

(e.g., logs in stream, lots of boulders, >25% surface area has instream or low overhanging vegetation, etc.)

Q/C Initials: JB

<sup>4</sup> Channel Confinement: 1=Confined Shallow; 2=Confined Deep; 3=Moderate Confined (<2x wetted channel width); 4=Unconfined (>= 2 wetted channel widths)

<sup>5</sup> Criteria for LWD is: any downed wood within bankfull width of channel = or > than 1/2 bankfull width.

Size classes: 6-12", 12-24", 24-36", or 36" x 3-10", 10-25", 25-50", 50-75", 75"+ (ie. 6 | 25 = 6-12", 25-50")

<sup>6</sup> Waterfalls, high velocity chutes or cascades at approx bankfull flows. NOTE VERTICAL DROP and IF CONDITIONAL or PERMANENT

<sup>7</sup> Spawning Sized gravel submersed in an area of adequate depth and velocity within one unit

Notes regarding access points (road condition, bridge crossings, trails, etc.)

No good indicators of H.W. line, Water deep so no BFD measurements.

END UTM: 0656536  
 page 4355528

STREAM HABITAT TYPING SURVEY DATA (NID Yuba-Bear, PG&E Drum Spaulding)

Data Sheet # 2  
 Page 3 of 4  
 Date 10/16/09

Stream/Reach/Subreach: N Yuba above Colgate PH  
 Team: P. Hardesty G. Bailey  
 UTM: 0656536/4355528 NAD 83 (Habitat unit No. \_\_\_\_\_) PM \_\_\_\_\_ Map Gradient: \_\_\_\_\_

Habitat Unit #	11				12				13				14				15			
Habitat Type <sup>1</sup>	FALL	CAS	CHU	RAP	FALL	CAS	CHU	RAP	FALL	CAS	CHU	RAP	FALL	CAS	CHU	RAP	FALL	CAS	CHU	RAP
	HGR	LGR	GLI	RUN	HGR	LGR	GLI	RUN	HGR	LGR	GLI	RUN	HGR	LGR	GLI	RUN	HGR	LGR	GLI	RUN
	STEP	POW	SHT	COP	STEP	POW	SHT	COP	STEP	POW	SHT	COP	STEP	POW	SHT	COP	STEP	POW	SHT	COP
*note if dammed pool	MCP	LAP	TRP	PLP	MCP	LAP	TRP	PLP	MCP	LAP	TRP	PLP	MCP	LAP	TRP	PLP	MCP	LAP	TRP	PLP
Length (ft)	257				33				723				54				592			
Est. Avg. Width (ft)	96, 101, 57				56				68, 109, 91				133				100, 108, 60, 81			
Est. Avg. Pool Depth (ft)	6+				---				---				---				6+			
Max. Pool Depth (ft)	6+				---				---				---				6+			
Pooltail Embedded %	TOO DEEP				---				---				---				TOO DEEP			
Significant Cover? <sup>2</sup>	INSIGNIF VEG <sup>3</sup> BLD <del>R</del> WOOD				INSIGNIF VEG <sup>3</sup> BLD <del>R</del> WOOD				INSIGNIF VEG <sup>3</sup> BLD <del>R</del> WOOD				INSIGNIF VEG <sup>3</sup> BLD <del>R</del> WOOD				INSIGNIF VEG <sup>3</sup> BLD <del>R</del> WOOD			
SUBSTRATE COMPOSITION																				
Dominant Substrate	BED	BLD	COB	GRV	BED	BLD	COB	GRV	BED	BLD	COB	GRV	BED	BLD	COB	GRV	BED	BLD	COB	GRV
Subdominant Substrate	BED	BLD	COB	GRV	BED	BLD	COB	GRV	BED	BLD	COB	GRV	BED	BLD	COB	GRV	BED	BLD	COB	GRV
Dominant Bank Substrate	BED	BLD	COB	GRV	BED	BLD	COB	GRV	BED	BLD	COB	GRV	BED	BLD	COB	GRV	BED	BLD	COB	GRV
Length of LB and RB Exposed Banks (feet)	/				/				/				/				/			
Confinement <sup>4</sup>	1				1, 2				2				2				2			
Unit Flagged/Labeled? (Y/N)	Y @ bottom				N				N				N				Y @ top			
Tributary Inflow in cfs	NA				NA				NA				NA				.5 cfs			
Landmarks or photos	/				/				/				/				/			
Large Woody Debris <sup>5</sup> within bankfull width	#	Diameter class	Length class	#	#	Diameter class	Length class	#	#	Diameter class	Length class	#	#	Diameter class	Length class	#	#	Diameter class	Length class	#
	/				/				/				/				/			
No. of LWD Pieces within wetted width	/				/				/				/				/			
Fish Migration Barrier <sup>6</sup> (y/n)?	N				N				N				N				N			
Spawning Gravel Area (sqft) Est. <sup>7</sup> (1/4" - 2.5")	NA				NA				NA				NA				NA			
Maximum Spawning Gravel Patch Size (sq-ft) Est.	NA				NA				NA				NA				NA			
Comments / Observations: Fish? Wildlife? Amphibs? Backwater or side chan. amphib habitat? Riparian? Landmarks, Photo #s, Etc.	6+ deep @ edge LBA				1.5% grad.								2% gradient				Depth is over 6 ft! at edge LBA			

<sup>1</sup> FALL = Falls, CAS = Cascade, CHU = Chute, RAP = Rapid, GLI = Glide, RUN = Run, STEP = Step Run, HGR = High Gradient Riffle (>4%), LGR = Low Gradient Riffle, POW = Pocket Water, SHT = Sheetflow, Pools: COP = Convergence, MCP = mid-channel pool, LAP = Lateral, TRP = Trench, PLP = Plunge

The minimum unit length should be 1x active channel width, unless there is something notable or unique about it.

<sup>2</sup> Note if cover is a significant or dominant feature of the unit: (e.g., logs in stream, lots of boulders, >25% surface area has instream or low overhanging vegetation, etc.)

<sup>3</sup> Channel Confinement: 1=Confined Shallow; 2=Confined Deep; 3=Moderate Confined (<2x wetted channel width); 4=Unconfined (>= 2 wetted channel widths)

<sup>4</sup> Criteria for LWD is: any downed wood within bankfull width of channel = or > than 1/2 bankfull width.

Size classes: 6-12", 12-24", 24-36", or 36" + x 3-10', 10-25', 25-50', 50-75', 75'+ (ie. 6 | 25 = 6-12", 25-50')

<sup>5</sup> Waterfalls, high velocity chutes or cascades at approx bankfull flows. NOTE VERTICAL DROP and IF CONDITIONAL or PERMANENT

<sup>7</sup> Spawning Sized gravel submersed in an area of adequate depth and velocity within one unit

Notes regarding access points (road condition, bridge crossings, trails, etc.)

Q/C initials: GB

END PAGE UTM:  
 0656670  
 4355787

STREAM HABITAT TYPING SURVEY DATA (NID Yuba-Bear, PG&E Drum Spaulding)

Stream/Reach/Subreach: N. YUBA above Colgate P.H.  
 Team: P. Hardesty, G. Bailey  
 UTM: 0656670/4355787

Data Sheet # 3  
 Page 4 of 4  
 Date 10/16/09

Habitat Unit #	16				17				18				19				20							
Habitat Type <sup>1</sup>	FALL	CAS	CHU	RAP	FALL	CAS	CHU	RAP	FALL	CAS	CHU	RAP	FALL	CAS	CHU	RAP	FALL	CAS	CHU	RAP				
	HGR	LGR	GLI	RUN	HGR	LGR	GLI	RUN	HGR	LGR	GLI	RUN	HGR	LGR	GLI	RUN	HGR	LGR	GLI	RUN				
	STEP	POW	SHT	COP	STEP	POW	SHT	COP	STEP	POW	SHT	COP	STEP	POW	SHT	COP	STEP	POW	SHT	COP				
<sup>2</sup> Note if depressed pool	MCP	LAP	TRP	PLP	MCP	LAP	TRP	PLP	MCP	LAP	TRP	PLP	MCP	LAP	TRP	PLP	MCP	LAP	TRP	PLP				
Length (ft)	105				110				216				412				~380*							
Est. Avg. Width (ft)	40 55				68 60				80 86 88				116, 117				100, 115, 105							
Est. Avg. Pool Depth (ft)	---				6+				---				---				6+							
Max. Pool Depth (ft)	---				6+				---				---				6+							
Pooltail Embedded %	---				100 DEEP				---				---				No Access							
Significant Cover? <sup>2</sup>	INSIGNIF VEG				BLDR WOOD				INSIGNIF VEG				BLDR WOOD				INSIGNIF VEG				BLDR WOOD			
SUBSTRATE COMPOSITION																								
Dominant Substrate	BED BLD COB				BED BLD COB				BED BLD COB				BED BLD COB				BED BLD COB							
Subdominant Substrate	GRV SND SLT				GRV SND SLT				GRV SND SLT				GRV SND SLT				GRV SND SLT							
Dominant Bank Substrate	BED BLD COB				BED BLD COB				BED BLD COB				BED BLD COB				BED BLD COB							
Length of LB and RB Exposed Banks (feet)	/				/				/				/				/							
Confinement <sup>4</sup>	2				2				2				2				2							
Unit Flagged/ Labeled? (Y/N)	Yes, bottom				N				N				N				Yes, bottom							
Tributary Inflow in cfs	---				---				---				---				---							
Landmarks or photos	---				---				---				---				---							
Large Woody Debris <sup>5</sup> within bankfull width	Diameter class		Length class		Diameter class		Length class		Diameter class		Length class		Diameter class		Length class		Diameter class		Length class					
	#		#		#		#		#		#		#		#		#		#					
No. of LWD Pieces within wetted width	/				/				/				/				/							
Fish Migration Barrier <sup>6</sup> (Y/N)?	N				N				N				N				N							
Spawning Gravel Area (sqft) Est. <sup>7</sup> (1/4" - 2.5")	(2x2) x 5				NA				10x8 20x3 15x2 (1x1)x11 3x2 4x6				20x30				NA							
Maximum Spawning Gravel Patch Size (sq-ft) Est.	2x2				NA				10x8				20x30				NA							
Comments / Observations: Fish? Wildlife? Amphibs? Backwater or side chan. amphib habitat? Riparian? Landmarks, Photo #s, Etc.	9% gradient				characteristics of POW, but no divergent flow & deep				4% gradient				Moved away from river to climb banks				* est. from above - cliffed out both sides							

<sup>1</sup> FALL = Falls, CAS = Cascade, CHU = Chute, RAP = Rapid, GLI = Glide, RUN = Run, STEP = Step Run, HGR = High Gradient Riffle (>4%), LGR = Low Gradient Riffle, POW = Pocket Water, SHT = Sheetflow, COP = Covergence, MCP = mid-channel pool, LAP = Lateral, TRP = Trench, PLP = Plunge

<sup>2</sup> Note if cover is a significant or dominant feature of the unit:  
 (e.g., logs in stream, lots of boulders, >25% surface area has instream or low overhanging vegetation, etc.)

<sup>3</sup> Channel Confinement: 1=Confined Shallow; 2=Confined Deep; 3=Moderate Confined (<2x wetted channel width); 4=Unconfined (>= 2 wetted channel widths)

<sup>4</sup> Criteria for LWD is: any downed wood within bankfull width of channel = or- than 1/2 bankfull width.  
 Size classes: 6-12", 12-24", 24-36", or 36" x 3-10", 10-25", 25-50", 50-75", 75" + (ie. 6 | 25 = 6-12", 25-50")

<sup>5</sup> Waterfalls, high velocity chutes or cascades at approx bankfull flows. NOTE VERTICAL DROP and IF CONDITIONAL or PERMANENT

<sup>7</sup> Spawning Sized gravel submerged in an area of adequate depth and velocity within one unit

Notes regarding access points (road condition, bridge crossings, trails, etc.)

UTM 0656850  
 4355960

NEXT UNITS AS SEEN FROM CLIFF-OUT?  
 HGR @ w/ 9% & looks like gradient continues to increase from here & up.

Q/C Initials: *GP*

**STREAM HABITAT TYPING SURVEY DATA (NID Yuba-Bear, PG&E Drum Spaulding)**

Data Sheet # 1  
 Page 1 of 24  
 Date 9/14/09

Stream/Reach/Subreach: Middle Yuba above N. Yuba junction  
 Team: Kathi Peacock, Gaea Bailey  
 UTM: 060581, 4359336 NAD 83 (Habitat unit No. 1 base)

PM \_\_\_\_\_ Map Gradient: \_\_\_\_\_

Habitat Unit #	1				2				3				4				5			
Habitat Type <sup>1</sup>	FALL	CAS	CHU	RAP	FALL	CAS	CHU	RAP	FALL	CAS	CHU	RAP	FALL	CAS	CHU	RAP	FALL	CAS	CHU	RAP
	HGR	LGR	GLI	RUN	HGR	LGR	GLI	RUN	HGR	LGR	GLI	RUN	HGR	LGR	GLI	RUN	HGR	LGR	GLI	RUN
	STEP	POW	SHT	COP	STEP	POW	SHT	COP	STEP	POW	SHT	COP	STEP	POW	SHT	COP	STEP	POW	SHT	COP
*note if dammed pool	<u>MCP</u>	LAP	TRP	PLP	MCP	LAP	TRP	PLP	MCP	LAP	TRP	PLP	MCP	LAP	TRP	PLP	MCP	LAP	TRP	PLP
Length (ft)	<u>463</u>				<u>185</u>				<u>110</u>				<u>90</u>				<u>35</u>			
Est. Avg. Width (ft)	<u>66, 59, 58</u>				<u>60, 64, 75</u>				<u>73, 73, 79, 73</u>				<u>75, 55, 58</u>				<u>80</u>			
Est. Avg. Pool Depth (ft)	<u>102</u>				—				—				—				—			
Max. Pool Depth (ft)	<u>10, 6, 30</u>				—				—				—				—			
Footfall Embedded %	<u>15%</u>				—				—				—				—			
Significant Cover? <sup>2</sup>	INSIGNIF VEG		<u>BLDR WOOD</u>		INSIGNIF VEG		<u>BLDR WOOD</u>		INSIGNIF VEG		<u>BLDR WOOD</u>		INSIGNIF VEG		<u>BLDR WOOD</u>		INSIGNIF VEG		<u>BLDR WOOD</u>	
SUBSTRATE COMPOSITION																				
Dominant Substrate	BED	<u>BLD</u>		COB	BED	<u>BLD</u>		COB	BED	<u>BLD</u>		COB	BED	<u>BLD</u>		COB	BED	<u>BLD</u>		COB
	GRV	SND		SLT	GRV	SND		SLT	GRV	SND		SLT	GRV	SND		SLT	GRV	SND		SLT
Subdominant Substrate	BED	BLD	<u>COB</u>		BED	<u>BLD</u>		COB	BED	BLD	<u>COB</u>		BED	<u>BLD</u>		COB	BED	<u>BLD</u>		COB
	GRV	SND	SLT		GRV	SND	SLT		GRV	<u>SND</u>	SLT		GRV	SND	SLT		GRV	SND	SLT	
Dominant Bank Substrate	<u>BED</u>	BLD	COB		<u>BED</u>	BLD	COB		<u>BED</u>	BLD	COB		<u>BED</u>	BLD	COB		<u>BED</u>	BLD	COB	
	GRV	SND	SLT		GRV	SND	SLT		GRV	SND	SLT		GRV	SND	SLT		GRV	SND	SLT	
Length of LB and RB Exposed Banks (feet)	<u>∅</u>				<u>∅</u>				<u>∅</u>				<u>∅</u>				<u>∅</u>			
Confinement <sup>4</sup>	1				1				1				1				1			
Unit Flagged/ Labeled? (Y/N)	yes, base				no				no				no				yes top			
Tributary inflow in cfs	<u>∅</u>				<u>∅</u>				<u>∅</u>				<u>∅</u>				<u>∅</u>			
Landmarks or photos	<u>DIA 1368</u>				<u>1369</u>				<u>1370</u>				<u>1371</u>				<u>1372</u>			
Large Woody Debris <sup>5</sup> within bankfull width	Diameter class		Length class		Diameter class		Length class		Diameter class		Length class		Diameter class		Length class		Diameter class		Length class	
	/		/		/		/		/		/		/		/		/		/	
No. of LWD Pieces within wetted width	<u>∅</u>				<u>∅</u>				<u>∅</u>				<u>∅</u>				<u>∅</u>			
Fish Migration Barrier <sup>6</sup> (y/n)?	no				Y <u>0600613/43529399</u>				no				no				no			
Spawning Gravel Area (sqft) Est. <sup>7</sup> (1/4" - 2.5")	<u>∅</u>				<u>∅</u>				<u>2x5</u>				<u>6x3, 2x4</u>				<u>∅</u>			
Maximum Spawning Gravel Patch Size (sq-ft) Est.	<u>N/A</u>				<u>N/A</u>				<u>2x5</u>				<u>6x3</u>				<u>N/A</u>			
Comments / Observations:	<u>Could be trench pool, but slow, so MPC</u>				<u>True cascade huge boulders, 12% grad. Barrier 4 ft perm</u>				<u>12' brook trout! Narrow run like top w/ lateral pools, still boulder &amp; scum holes, heterogen. subst. More pool-like at bottom, run in middle</u>				<u>step-run: distinct steps separated by short cascades 4% gradient</u>				<u>15% gradient</u>			

<sup>1</sup> FALL = Falls, CAS = Cascade, CHU = Chute, RAP = Rapid, GLI = Glide, RUN = Run, STEP = Step Run, HGR = High Gradient Riffle (>4%), LGR = Low Gradient Riffle (<4%), POW = Pocket Water, SHT = Sheetflow, COP = Convergence, MCP = mid-channel pool, LAP = Lateral, TRP = Trench, PLP = Plunge

The minimum unit length should be 1x active channel width, unless there is something notable or unique about it.

<sup>2</sup> Note if cover is a significant or dominant feature of the unit: (e.g., logs in stream, lots of boulders, >25% surface area has instream or low overhanging vegetation, etc.)

Q/C Initials: KBP

<sup>4</sup> Channel Confinement: 1=Confined Shallow, 2=Confined Deep, 3=Moderate Confined (<2x wetted channel width); 4=Unconfined (>= 2 wetted channel widths)

<sup>5</sup> Criteria for LWD is: any downed wood within bankfull width of channel => than 1/2 bankfull width.

Size classes: 6-12", 12-24", 24-36", or 36"+ x 3-10", 10-25", 25-50", 50-75", 75"+ (ie. 6 | 25 = 6-12", 25-50")

<sup>6</sup> Waterfalls, high velocity chutes or cascades at approx bankfull flows. NOTE VERTICAL DROP and IF CONDITIONAL or PERMANENT

<sup>7</sup> Spawning Sized gravel submersed in an area of adequate depth and velocity within one unit

Notes regarding access points (road condition, bridge crossings, trails, etc.)

#1 - pool at helicopter landing  
 #3 - slightly diverg channel around big rocks! And short rapid forms a control between 2 sections of pocket water  
 #5

STREAM HABITAT TYPING SURVEY DATA (NID Yuba-Bear, PG&E Drum Spaulding)

Stream/Reach/Subreach: Middle Yuba above N. Yuba Junction

Team: KP, GB

UTM: 066076, 4359472 NAD 83 (Habitat unit No. \_\_\_\_\_)

Data Sheet # 1

Page 2 of 24

Date 9/14/09

PM \_\_\_\_\_ Map Gradient: \_\_\_\_\_

Habitat Unit #	6				7				8				9				10							
Habitat Type <sup>1</sup>	FALL	CAS	CHU	RAP	FALL	CAS	CHU	RAP	FALL	CAS	CHU	RAP	FALL	CAS	CHU	RAP	FALL	CAS	CHU	RAP				
	HGR	LGR	GLI	RUN	HGR	LGR	GLI	RUN	HGR	LGR	GLI	RUN	HGR	LGR	GLI	RUN	HGR	LGR	GLI	RUN				
	STEP	POW	SHT	COP	STEP	POW	SHT	COP	STEP	POW	SHT	COP	STEP	POW	SHT	COP	STEP	POW	SHT	COP				
*note if dammed pool	MCP	LAP	TRP	PLP	MCP	LAP	TRP	PLP	MCP	LAP	TRP	PLP	MCP	LAP	TRP	PLP	MCP	LAP	TRP	PLP				
Length (ft)	216				101				28				105				125							
Est. Avg. Width (ft)	98, 60, 68				52, 75, 23				75				75, 60				77, 55							
Est. Avg. Pool Depth (ft)	8, 5, 3, 0				9.5, 3, 0				-				-				10, 6, 4, 0							
Max. Pool Depth (ft)	8				9				-				-				10+							
Pooltail Embedded %	0				26/1				0				-				can't tell - no access							
Significant Cover? <sup>2</sup>	INSIGNIF VEG				BLDR WOOD				INSIGNIF VEG				BLDR WOOD				INSIGNIF VEG				BLDR WOOD			
SUBSTRATE COMPOSITION																								
Dominant Substrate	BED BLD COB				BED BLD COB				BED BLD COB				BED BLD COB				BED BLD COB							
Subdominant Substrate	GRV SND SLT				GRV SND SLT				GRV SND SLT				GRV SND SLT				GRV SND SLT							
Dominant Bank Substrate	BED BLD COB				BED BLD COB				BED BLD COB				BED BLD COB				BED BLD COB							
Length of LB and RB Exposed Banks (feet)	0				0				0				0				0							
Confinement <sup>4</sup>	1				1				1				1				1							
Unit Flagged/ Labeled? (Y/N)	no				no				no				no				yes <del>top</del> mid							
Tributary Inflow in cfs	no				no				hole from LBA / no				no LBS → LBA				yes LBS from LBA							
Landmarks or photos	1373				1374				1375, 1376 LUP				1378 LBS from LBA				1377 LUS							
Large Woody Debris <sup>5</sup> within bankfull width	Diameter class		Length class		Diameter class		Length class		Diameter class		Length class		Diameter class		Length class		Diameter class		Length class					
	/		/		/		/		/		/		/		/		/		/					
No. of LWD Pieces within wetted width	1373 0				0				0				0				0							
Fish Migration Barrier <sup>6</sup> (y/n)?	no				no				yes 0660710 4359581				no				no							
Spawnable Gravel Area (sqft) Est. <sup>7</sup> (1/4" - 2.5")	2x6 out of water or in margin				0				0				0				0							
Maximum Spawning Gravel Patch Size (sq-ft) Est.	2x6				N/A				N/A 5 ft. perm barrier				NA				N/A							
Comments / Observations:	sandy banks RBA w/ pooling from high flows								some sm. woody debris along many potential areas for fish to pass water barriers 15% grad.								Deep & inaccessible - Est. depth from above End UTM 0660691 4359613							

<sup>1</sup> FALL = Falls, CAS = Cascade, CHU = Chute, RAP = Rapid, GLI = Glide, RUN = Run, STEP = Step Run, HGR = High Gradient Riffle (>4%), LGR = Low Gradient Riffle, POW = Pocket Water, SHT = Sheetflow, COP = Convergence, MCP = mid-channel pool, LAP = Lateral, TRP = Trench, PLP = Plunge

<sup>2</sup> Note if cover is a significant or dominant feature of the unit: The minimum unit length should be 1x active channel width, unless there is something notable or unique about it.

<sup>3</sup> Channel Confinement: 1=Confined Shallow; 2=Confined Deep; 3=Moderate Confined (<2x wetted channel width); 4=Unconfined (>= 2 wetted channel widths)

<sup>4</sup> Criteria for LWD is: any downed wood within bankfull width of channel => than 1/2 bankfull width. Size classes: 6-12", 12-24", 24-36", or 36"+ x 3-10", 10-25", 25-50", 50-75", 75"+ (ie. 6 | 25 = 6-12", 25-50")

<sup>5</sup> Waterfalls, high velocity chutes or cascades at approx bankfull flows. NOTE VERTICAL DROP and IF CONDITIONAL or PERMANENT

<sup>6</sup> Spawning Sized gravel submersed in an area of adequate depth and velocity within one unit

QC initials: KP

Notes regarding access points (road condition, bridge crossings, trails, etc.)

- photo 1377 transition between HAB #9 and #10 - poor control, but different pool types

- Very difficult access to HAB #9 and #10; deep waters & sheer bedrock walls

- #10 flagged on RBA cliff lip above pool (only area accessible) also UTM's see above

looking toward  
← coming from

middle yuba > N yuba mctn. 9/14/09  
P304 KP/GB

stopped @ HMV 10 - too steep & dangerous to  
0660691/4359615 (on LBA cliff) entrance

rough measure from cliff

#11 60' long 40' wide 15% grad. CAS

#12 75' long 75' wide STFP

#13 50' 75' CAS

#14 ground crevices POOL

photo # 1380 shows entire sequence

Flag med where stopped on cliff above #10  
labelled "MY + NY HMV10"

(My > Ny)

below my/ny junction

CAS

POW

TRP

deep, fast, steep

vert. walls/bldgs & bldrs.

not study site material.

no access.

DTA1 1406 → LOS ← TLE

1407 → across str. CAS

1410 - sand

1408 CAS → short on. walls "iron dly"

1409 LOS → CAS

Bldr - dom sm. patches of sp gravel under

bldrs where shools Thr.

lots pocket pools, ~~stabilized~~ stable bed - bed + water  
elm

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No. 612

Middle/N. Yuba Junc. p4 of 4 9/14/09  
(below pctn - rip. zone) GB

Limited Riparian veg. community due to sheer rock slopes of river canyon - no soils/transitional zone for established community. Plenty of riparian/mesic OBL plants, such as *Salix lucida*, *S. exigua*, *Alder incanus*, *Populus tremuloides*, at bars and base of canyon walls where wider. Typical riparian herbs: 2 asters (to be keyed later) *brickellia*, and occas. *Carex nudata* scattered throughout boulders at water's edge. *Carex* good indicator of turbulent flows & establish sed deposits (see *Sedges of Pac. NW*, book as reference)

Upland species generally  $\approx 35-50$  ft above boulder bar & includes canyon live oak as dominant some grey pine, *Ponderosa* & occ. black oak on. Some areas

~~On S-facing~~ In we grasses (too far to id) and *Archostaphylos patula* as under 3 mid story.

Typ per (Kamath weed), Scotch broom dominate @ base of access road to main road. Also spreading for short dist at river junction.