

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

Data Sheet # 1
 Page 1 of 4
 Date 9/14/09

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

Team: Kathi Peacock & Gaea Bailey

UTM: 060393, 4359384 ±874 NAD 83 (Habitat unit No. _____)

PM _____ Map Gradient: _____

Habitat Unit #	1				2				3				4				5							
Habitat Type ¹	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)	132				36				108				72				7							
Est. Avg. Width (ft)	89, 54				82				53, 82, 31				35, 47				50							
Est. Avg. Pool Depth (ft)	-				-				63, 21, 0				-				-							
Max. Pool Depth (ft)	-				-				6				-				-							
Pooltail Embedded %	-				-				0				-				-							
Significant Cover ²	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)	n/a				n/a				n/a				n/a				n/a							
Confinement ⁴	2				1				2				2				1							
Unit Flagged/ Labeled? (Y/N)	no - no riparian to bottom tie!				no				no				no				yes - top							
Tributary Inflow in cfs	no				no				no				no				no							
Landmarks or photos (DTA)	1381 + base, 1382 LDS see below				8 - under huge boulders				1385				1386				1387							
Large Woody Debris ⁵ within bankfull width	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 ⁶ (y/n)?	no				no				no				no				no							
Spawning Gravel Area (sq-ft) Est. ⁷ (1/4" - 2.5")	8x6, 5x3, 3x4, 2x5, 2x2, 4x4				4x4, 6x4, 3x3				2x8,				2x8, 4x8 2x2, 2x2				Ø							
Maximum Spawning Gravel Patch Size (sq-ft) Est.	8x6				6x4				2x8				4x8 2x2				N/A							
Comments / Observations:	in bed rock canyon HUGE med sized boulders provide lots of cover over water				Difficult to see what hab feature, as lg. boulders cover most water surface				lots gravels, but mostly too deep				Ambiguous due to minor side channel (LBA), very heterogen. flow deposition and low flow - NOT MODELABLE				6 ft. perm barrier 060301, 4359431							

¹ 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.

² 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: KP

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

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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")

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

⁷ 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: 1382 - back waterpool where middle Yuba meets N. Yuba LDS from hab #1
 1383 - same photo w/ gaea (for scale) 1384 - ART!

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

Data Sheet # 1
 Page 2 of 4
 Date 9/14/09

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

Team: KP, GB

UTM: 0600294, 4359449 NAD 83 (Habitat unit No. _____)

PM _____ Map Gradient: _____

Habitat Unit #	6				7				8				9				10							
Habitat Type ¹	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)	132				190				108				143				30							
Est. Avg. Width (ft)	62, 60, 73				40, 37, 39				49, 61, 55				37, 45, 32				75							
Est. Avg. Pool Depth (ft)	1.6, 3.4, 1.5, 0				-				6, 3, 4, 2.5, 0				-				-							
Max. Pool Depth (ft)	6				-				6				-				-							
Pooltail Embedded %	8				-				0				-				-							
Significant Cover? ²	INSIGNIF VEG				BLDR WOOD				INSIGNIF VEG				BLDR WOOD				INSIGNIF VEG				BLDR 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	BLD	COB	SLT	SND	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	BED	BLD	COB	GRV				
Length of LB and RB Exposed Banks (feet)	0				0				0				0				0							
Confinement ⁴	2				1				2				1				1							
Unit Flagged/ Labeled? (Y/N)	yes-base				no				no				no				yes-top							
Tributary Inflow in cfs	no				no				no				no				no							
Landmarks or photos	DJA 1388				1389				1390				1391				1392							
Large Woody Debris ⁵ 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 ⁶ (y/n)?	no				no				no				no				yes							
Spawning Gravel Area (sqft) Est. ⁷ (1/4" - 2.5")	3x2, 1x1, 1x1				1x1, 2x1				1x3, 12x6				2x2, 2x4, 2x3				0							
Maximum Spawning Gravel Patch Size (sq-ft) Est.	3x2				2x1				12x6				3x3				N/A							
Comments / Observations:	Punctuated by short steps				Punctuated by short steps				Pocket water at tail, head is pocket water								Split channel left perm barrier 0660113 4359512							

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

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

Data Sheet # 2

Stream/Reach/Subreach: N. Yuba above junction w/ Middle Yuba

Page 3 of 4

Team: Kathi Peacock, Gaea Bailey

Date 9/14/09

UTM: 0660113, 4359512 NAD 83 (Habitat unit No. 11, base)

PM _____ Map Gradient: _____

Habitat Unit #	11				12				13				14				15							
Habitat Type ¹	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)	38, 52				30, 27				40, 40, 42				37, 43, 38				41, 35, 34							
Est. Avg. Width (ft)	4.5, 2.5, 2, 0				—				5.5, 3, 2, 0				—				4.75, 2, 1.75, 0							
Est. Avg. Pool Depth (ft)	4.15				—				5.5				—				4.75							
Max. Pool Depth (ft)	0				—				—				—				0							
Pooltail Embedded %	0				—				—				—				0							
Significant Cover? ²	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 ⁴	1				1				1				1				2							
Unit Flagged/ Labeled? (Y/N)	yes-base				no				no				no				yes, top							
Tributary Inflow in cfs	no				no				no				no				no							
Landmarks or photos	1393				1394				1395				1396				1397							
Large Woody Debris ⁵ 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 ⁶ (y/n)?	no				no				no				no				no							
Spawning Gravel Area (sqft) Est. ⁷ (1/4" - 2.5")	0				2x1				0				0				2x1, 1x1							
Maximum Spawning Gravel Patch Size (sq-ft) Est.	N/A				2x1				N/A				N/A				2x1							
Comments / Observations:	subsurface flow sidechan LBA				8% grad non-modelable no short step @ base				riffle-like @ base step-run				step-run, riffle-like @ base 4% gradient				dead fish @ 7" photos = 1397							

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

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

Data Sheet # 2

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

Page 4 of 4

Team: KP, GB

Date 9/14/09

UTM: 0600510/4359537 NAD 83 (Habitat unit No. 16, base

PM

Map Gradient: _____

Habitat Unit #	<u>16</u>				<u>17</u>				<u>18</u>				<u>19</u>				<u>20</u>							
Habitat Type ¹	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)	<u>70</u>				<u>26</u>				<u>233</u>				<u>150</u>				<u>104</u>							
Est. Avg. Width (ft)	<u>28, 24, 20</u>				<u>73</u>				<u>72, 70, 84</u>				<u>55, 100</u>				<u>60, 45, 53</u>							
Est. Avg. Pool Depth (ft)	<u>3.25, 2.5, 1.75, 0</u>				<u>1.5</u>				<u>4</u>				<u>—</u>				<u>5, 3.5, 1.75, 0</u>							
Max. Pool Depth (ft)	<u>3.25</u>				<u>—</u>				<u>6</u>				<u>—</u>				<u>5</u>							
Pooltail Embedded %	<u>0</u>				<u>—</u>				<u>0</u>				<u>—</u>				<u>0</u>							
Significant Cover? ²	INSIGNIF VEG				BLDB WOOD				INSIGNIF VEG				BLDR WOOD				INSIGNIF VEG				BLDR 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)	<u>0</u>				<u>0 0</u>				<u>0</u>				<u>0</u>				<u>0</u>							
Confinement ⁴	<u>1</u>				<u>1</u>				<u>2</u>				<u>1</u>				<u>2</u>							
Unit Flagged/ Labeled? (Y/N)	<u>yes-base</u>				<u>no</u>				<u>no</u>				<u>no</u>				<u>Y @ top</u>							
Tributary Inflow in cfs	<u>no</u>				<u>no</u>				<u>no</u>				<u>no</u>				<u>no 100</u>							
Landmarks or photos	<u>DTA 1399</u>				<u>1400</u>				<u>1401</u>				<u>1403 LDS</u>				<u>1404, 1405, 1406, 1407, 1408</u>							
Large Woody Debris ⁵ 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>0</u>				<u>0</u>				<u>0</u>				<u>1</u>				<u>0</u>							
Fish Migration Barrier ⁶ (y/n)?	<u>no</u>				<u>yes</u>				<u>no</u>				<u>no</u>				<u>no</u>							
Spawnable Gravel Area (sqft) Est. ⁷ (1/4" - 2.5")	<u>2x5 10x1 4x1</u>				<u>0</u>				<u>0</u>				<u>0</u>				<u>6x3</u>							
Maximum Spawning Gravel Patch Size (sq-ft) Est.	<u>2x5</u>				<u>N/A</u>				<u>N/A</u>				<u>N/A</u>				<u>6x3</u>							
Comments / Observations:	<u>Riffle crest 1 res. depth next size of deep meets req.</u>				<u>split @ least 3 channels 4' perm. barrier w/ 100ft of last units</u>				<u>laden w/ algae</u>								<u>stop at bld rock 0659920 4359584</u>							

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

#19 & #20 start same pattern as seen #1-#10 down stream
post 20 - goes back to Row +

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

Data Sheet # 1

Stream/Reach/Subreach: North Yuba below New Bullards Bar

Page 1 of 4

Team: P. Hardesty G. Bailey Dam

Date 10/17/09

UTM: 0659861/4361878 NAD 83 (Habitat unit No. _____)

PM _____ Map Gradient: _____

Habitat Unit #	1A*				2				3				4				5							
Habitat Type ¹	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				
*code if downed pool	MCP	LAP	TRP	PLP	MCP	LAP	TRP	PLP	MCP	LAP	TRP	PLP	MCP	LAP	TRP	PLP	MCP	LAP	TRP	PLP				
Length (ft)	683				304				500				556				151							
Est. Avg. Width (ft)	139				55, 50, 18				79, 232, 201				91, 91, 129, 104, 73				233, 116, 111							
Est. Avg. Pool Depth (ft)	6+				—				6+				—				—							
Max. Pool Depth (ft)	6+				—				6+				BED 24.25				—							
Pooltail Embedded %	100 DEEP				—				100 DEEP				—				—							
Significant Cover? ²	INSIGNIF VEG ³				BLDR WOOD				INSIGNIF VEG ³				BLDR WOOD				INSIGNIF VEG ³				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	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)	/				/				/				/				/							
Confinement ⁴	2				2				2				2				2							
Unit Flagged/ Labeled? (Y/N)	Y @ bottom				N				N				N				Y @ bottom							
Tributary Inflow in cfs	—				5 Falls 353 LWS				NA				NA				NO							
Landmarks or photo's	LWS 354, 5.6				LWS 351 352 LWS				LWS				335 LWS				337 LWS							
Large Woody Debris ⁵ within bankfull width	/				/				/				/				/							
No. of LWD Pieces within wetted width	/				/				/				/				/							
Fish Migration Barrier ⁶ (Y/N)?	Y @ weir				N				N				N				N							
Spawning Gravel Area (sqft) Est. ⁷ (1/4" - 2.5")	—				—				—				—				—							
Maximum Spawning Gravel Patch Size (sq-ft) Est.	—				—				—				—				—							
Comments / Observations:	25 deep pool below dam ends in a weir (BH) that makes				a waterfall in HGR Gradient = 5% top is run like				prob 215 ft deep.				2.5% 3%				2 steps with 2 different water levels							

¹ 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.

² 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.)

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

⁴ 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")

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

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

Q/C Initials: JB

NO SATELLITES FOR
NO UTM'S

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

Access to water difficult. Took gated road from Marysville Road toward ~~dam~~ bottom of dam & unpaved road to waters edge. Blackberries "thick" and big pool blocks access to ds reach; needed a boat Used boat to cross pool.

* SEE BACK

This unit followed unit 1A

1B LGR 1% grad 50 wide BLD BED BLD
175 Long

Mapped going ds. due to difficult access and
uncertainty about time.

2064

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

Data Sheet # 2
 Page 3 of 4
 Date 10/17/09

Stream/Reach/Subreach: N. Yuba below New Bullards Bar
 Team: G. Bailey, D. Hardisty, Dam
 UTM: NO SATELLITE NAD 83 (Habitat unit No. _____) PM _____ Map Gradient: _____

Habitat Unit #	7				8				9				10											
Habitat Type ¹	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								
*note if decreased pool	MCP	LAP	TRP	PLP	MCP	LAP	TRP	PLP	MCP	LAP	TRP	PLP	MCP	LAP	TRP	PLP								
Length (ft)	124				241				188				379				82							
Est. Avg. Width (ft)	80.67				80 112 115				108, 118, 96				94, 60, 63, 85				55							
Est. Avg. Pool Depth (ft)	---				6+				---				---				---							
Max. Pool Depth (ft)	---				6+				---				---				---							
Pooltail Embedded %	---				Too DEEP				---				---				---							
Significant Cover? ²	INSIGNIF VEG ³				BLDR WOOD				INSIGNIF VEG ³				BLDR WOOD				INSIGNIF VEG ³				BLDR 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	GRV	SND	SLT	---	GRV	SND	SLT	---	GRV	SND	SLT	---	GRV	SND	SLT	---	GRV	SND	SLT	---				
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 ⁴	2				2				2				2				2							
Unit Finged/ Labeled? (Y/N)	Y @ TOP				N				N				N				Y @ BOTTOM							
Tributary Inflow in cfs	---				---				---				---				---							
Laminar or photo	338 LDS				339 LUS				340 LUS				342 LUS / 343 LUS				344 LUS							
Large Woody Debris ⁵ within bankful 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 ⁶ (Y/N)?	---				---				---				---				---							
Spawning Gravel Area (sqft) Est. ⁷ (1/4" - 2.5")	---				---				2x3				---				---							
Maximum Spawning Gravel Patch Size (sq-ft) Est.	---				---				2x3				---				---							
Comments / Observations: Fish? Wildlife? Amphib? Backwater or side chan. amphib habitat? Riparian? I and/or m, Photo #, Etc.	5% grad.				---				1% grad.				POOLS ARE bt deep throughout STEP RUN				4ft drop overall!							

¹ 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 = Shadeflow, COP = Convergence, MCP = mid-channel pool, LAP = Lateral, TRP = Trench, PLP = Plug

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

² 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: CB

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

⁵ 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")

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

⁷ 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.)

END PAGE

UTM: 0660041
4360972

PHOTO # 341 LUS @ DAM VIEW

10/17/09

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

Dam Sheet # 2
 Page 43 of 48
 Date 10/17/09

Stream/Reach/Subreach: N. Yuba below New Bullards Bar
 Team: G. Bailey P. Hardesty Dam
 UTM: 0660041/4360972

Habitat Unit #	11				12				13				18							
Habitat Type ¹	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				
*note if downed pool	MCP	LAP	TRP	PLP	MCP	LAP	TRP	PLP	MCP	LAP	TRP	PLP	MCP	LAP	TRP	PLP				
Length (ft)	264				212				228											
Est. Avg. Width (ft)	66, 88, 67				71, 74				57, 71, 68											
Est. Avg. Pool Depth (ft)	6+				6+															
Max. Pool Depth (ft)	6+				6+															
Pooltail Embedded %	TOO DEEP				TOO DEEP															
Significant Cover ²	INSIGNIF VEG		BLDR WOOD		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)	/				/				/											
Confinement ⁴	2				2				2											
Unit Flagged/Labeled? (Y/N)	Y @ TOP				N				NO FLAG*											
Tributary Inflow in ch	/				/				/											
Landmarks or photos	346 LDS				347 LDS				348 LLBA											
Large Woody Debris ³ within bankful width	Diameter class	Length class	Diameter class	Length class	Diameter class	Length class	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 ⁴ (y/n)?	/				/				/											
Spawning Gravel Area (sqft) Est. ⁷ (1/4" - 2.5")	20x5				20x5				/											
Maximum Spawning Gravel Patch Size (sq-ft) Est.	20x5				20x5				/											
Comments / Observations: Fish? Wildlife? Amphibians? Backwater or side chan. amphib habitat? Riparian? I and/or m. Photo #s, etc.	Prob > 10 ft deep. Mid pool control divides into 2 pools				Prob > 10 ft deep				2.5 grad stepped but. with standing waves. Garter snake											

¹ 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 = Shallow Pool; COP = Convergence, MCP = mid-channel pool, LAP = Lateral, TRP = Trench, PLP = Plug
 The minimum unit length should be 1x active channel width, unless there is something notable or unique about it.
² 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.)
³ Channel Confinement: 1=Confined Shallow, 2=Confined Deep; 3=Moderate Confined (<2x wetted channel width); 4=Unconfined (>= 2 wetted channel widths)
⁴ Criteria for LWD is: any downed wood within bankful width of channel >= 1/2 bankful width.
 Size classes: 6-12", 12-24", 24-36", or 36" x 3-10", 10-24", 25-50", 50-75", 75"+ [e.g. 6 | 25 = 6-12", 25-50"]
⁵ Waterfalls, high velocity chutes or cascades at approx bankful flows. NOTE VERTICAL DROP and IF CONDITIONAL or PERMANENT
⁷ Spawning Sized gravel submerged in an area of adequate depth and velocity within one unit

Q/C Initials: GB

Photo 349 is of drop-off, Δ in boulders & probably pocket water. Impassable - deep w/ shoer dirts. END UTMS.
 * Bedrock & boulders; nothing to flag.
 POW looks same as on N Yuba at junction w Middle Yuba
 0659961
 4360489