

**Summary of Stream Habitat and Fish Inventories on the  
Bayou, Buffalo, and Pleasant Hill Ranger Districts,  
Ozark-St. Francis National Forest, 2006**



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## **Introduction**

The USDA Forest Service, Southern Research Station, Center for Aquatic Technology Transfer (CATT) has been working with resource managers on the Ozark National Forest (ONF) since 2004 to adapt and implement basinwide visual estimation technique (BVET) stream inventories (Dolloff et al 1993). In summer 2004 and 2005 CATT personnel visited the Sylamore Ranger District and the Magazine and Boston Mountain Ranger Districts, respectively, to perform stream habitat inventories (Leonard et. al., 2004; Nuckols and Roghair, 2006). For 2006 the ONF requested assistance with stream habitat and fish inventories on streams on the Bayou, Buffalo, and Pleasant Hill Ranger Districts. The CATT deployed a crew of 8 persons to quantify stream habitat conditions and provide associated fish community information. In June 2006, CATT and ONF personnel visited 106 stream reaches, of which 30 were completely dry or containing insufficient wetted area for BVET habitat analysis. Stream habitat inventories were completed on a total of 76 reaches and fish data were collected within 29 of these reaches. The data collected can be used to describe current conditions of streams on the ONF and serve as a baseline for comparison with similar data collected in the future.

## **Methods**

### **Habitat Inventory**

Stream inventories began at USFS boundaries or at the downstream end of reaches as defined in the National Hydrography Dataset (NHD), which were often the confluence with another reach. A map delineating stream reaches with corresponding reach numbers was provided by the Forest prior to the start of the inventory. At the beginning of the inventory the crew determined the starting NHD\_ID number from these maps. Crews tracked their location and recorded changes in NHD\_ID numbers as they moved upstream. Surveys were terminated when encountering an upstream USFS boundary or a continuously dry channel for more than 500 m.

Two-stage visual estimation techniques were used to quantify habitat in the Bayou, Buffalo, and Pleasant Hill Ranger District streams. During the first stage, habitat was stratified into similar groups based on naturally occurring habitat units including pools (areas in the stream with concave bottom profile, gradient equal to zero, greater than average depth, and smooth water surface), and riffles (areas in the stream with convex bottom profile, greater than average gradient, less than average depth, and turbulent water surface). Glides (areas in the stream similar to pools, but with average depth and flat bottom profile) were identified during the survey but were grouped with pools for data analysis. Runs (areas in the stream similar to riffles but with average depth, less turbulent flow, and flat bottom profile), and cascades (areas of fast water with gradient  $\geq 12\%$ ) were grouped with riffles for data analysis.

Habitat in each stream was classified and inventoried by a two-person crew. One crew member identified each habitat unit by type (as described above), estimated average wetted width, average and maximum depth, riffle crest depth (RCD), substrate composition, and percent fines. The length (0.1 m) of each habitat unit was measured with a hip chain. Average wetted width was visually estimated. Average and maximum depth of each habitat unit were estimated by taking depth measurements at various places across the channel profile with a graduated staff marked in 5 cm increments. The RCD was estimated by measuring water depth at the deepest point in the hydraulic control between riffles and pools. The RCD was subtracted from average pool depth to obtain an estimate of residual pool depth. Substrates were assigned to one of nine size classes (Appendix A). Dominant substrate (covered greatest amount of surface area in habitat unit) and subdominant substrate (covered 2<sup>nd</sup> greatest amount of surface area in habitat unit) were visually estimated. Percent fines was the percent of surface area of the stream bed that consisted of sand, silt, or clay substrate particles (particles < 2 mm diameter). In addition, several stream features such as tributaries, waterfalls, and road crossings and their associated attributes (location, type, size, etc.) were recorded, where encountered.

The second crew member classified and inventoried large woody debris (LWD) within the stream channel, determined the Rosgen (1996) channel type associated with each habitat unit, and recorded data on a Dell Axim data logger. Pieces of LWD were assigned to one of four size classes (Appendix A). All woody debris less than 1.0 m long and less than 10 cm in diameter were omitted from the survey. Rosgen's channel type was visually estimated using criteria found in Rosgen (1996).

The first unit of each habitat type selected for intensive (second stage) sampling (i.e. accurate measurement of wetted width) was determined randomly. Additional units were selected systematically (every 10<sup>th</sup> habitat unit type for streams greater than 1000 m and every 5<sup>th</sup> habitat unit type for streams less than 1000 m). The wetted width of each systematically selected habitat unit was measured with a meter tape across at least three transects and averaged. In each of the systematically selected (second stage) riffles the bankfull stream channel width, riparian width, channel gradient, and water temperature were measured. In addition, a digital photograph looking upstream was taken. Bankfull channel width was recorded as the width of the bankfull channel perpendicular to flow. Riparian width was measured from the edge of the bankfull channel to the intersection with the nearest landform at an elevation equal to two-times maximum bankfull depth as described by Rosgen (1996). Gradient was measured with a clinometer by sighting from the downstream to the upstream end of the selected riffle. Water temperature was measured in flowing water out of direct sunlight with a thermometer. The downstream and upstream ends of every second paired sample unit were flagged to mark fish inventory and pebble count locations.

A calibration ratio was developed using the ratio of measured to estimated area, which allowed correction of visual estimates and calculation of confidence intervals (Hankin and Reeves 1988). BVET

calculations were computed with a Microsoft Excel spreadsheet using formulas found in Dolloff et al. (1993). Data were summarized using Excel spreadsheets and SigmaPlot graphics software.

### **Electrofishing Inventory**

An Appalachian Aquatics AA-24 backpack electrofishing unit was used to collect fish from every 2<sup>nd</sup> paired sample unit flagged during the habitat inventory. In each designated habitat unit we performed a single pass using one or two backpack electrofishing unit(s) and 2-3 dip netters per shocker. We did not set blocknets. The total shock time (seconds) was recorded from the built-in timer on the backpack electrofishing unit. The total number of young-of-year (age 0+) or adult (older than age 0+) of each captured species were recorded and fish were released back into the habitat unit. In cases where species identification was not certain specimens were vouchered. All vouchers were preserved in labeled containers using 10% formalin and were later identified in the lab.

### **Pebble Counts**

Pebble count data were collected using methods modified from those in Kappesser (2002) to characterize the substrate composition of sample reaches. Pebble counts were performed in riffles designated for electrofishing by walking transects perpendicular to the flow within the bankfull channel (Harrelson et al. 1994). The person walking the transect began at the edge of the bankfull channel on one side of the stream and walked heel-to-toe across the stream channel to the opposite bank. At each step the individual picked up the pebble at the tip of their toe and measured its intermediate axis with a ruler to the nearest millimeter. For very large particles, the same particle was counted as many times it was encountered. These procedures were repeated until at least 100 measurements were recorded. Transects were not terminated until the opposite bank was reached even if this resulted in more than 100 measurements. Transects were distributed throughout the riffle. If detritus, LWD, or other organic materials were encountered the rock substrate found directly below them was sampled. For data analysis the substrate particle sizes were grouped into size class categories (Table 8) and substrate classified as bedrock was placed within the very large boulder category (2048-4096 mm) (G. Kappesser, USDA Forest Service, personal communication).

### **Literature Cited**

- Dolloff, C. A., D. G. Hankin, and G. H. Reeves. 1993. Basinwide estimation of habitat and fish populations in streams. General Technical Report SE-83. Asheville, North Carolina: U.S. Department of Agriculture, Southeastern Forest Experimental Station.
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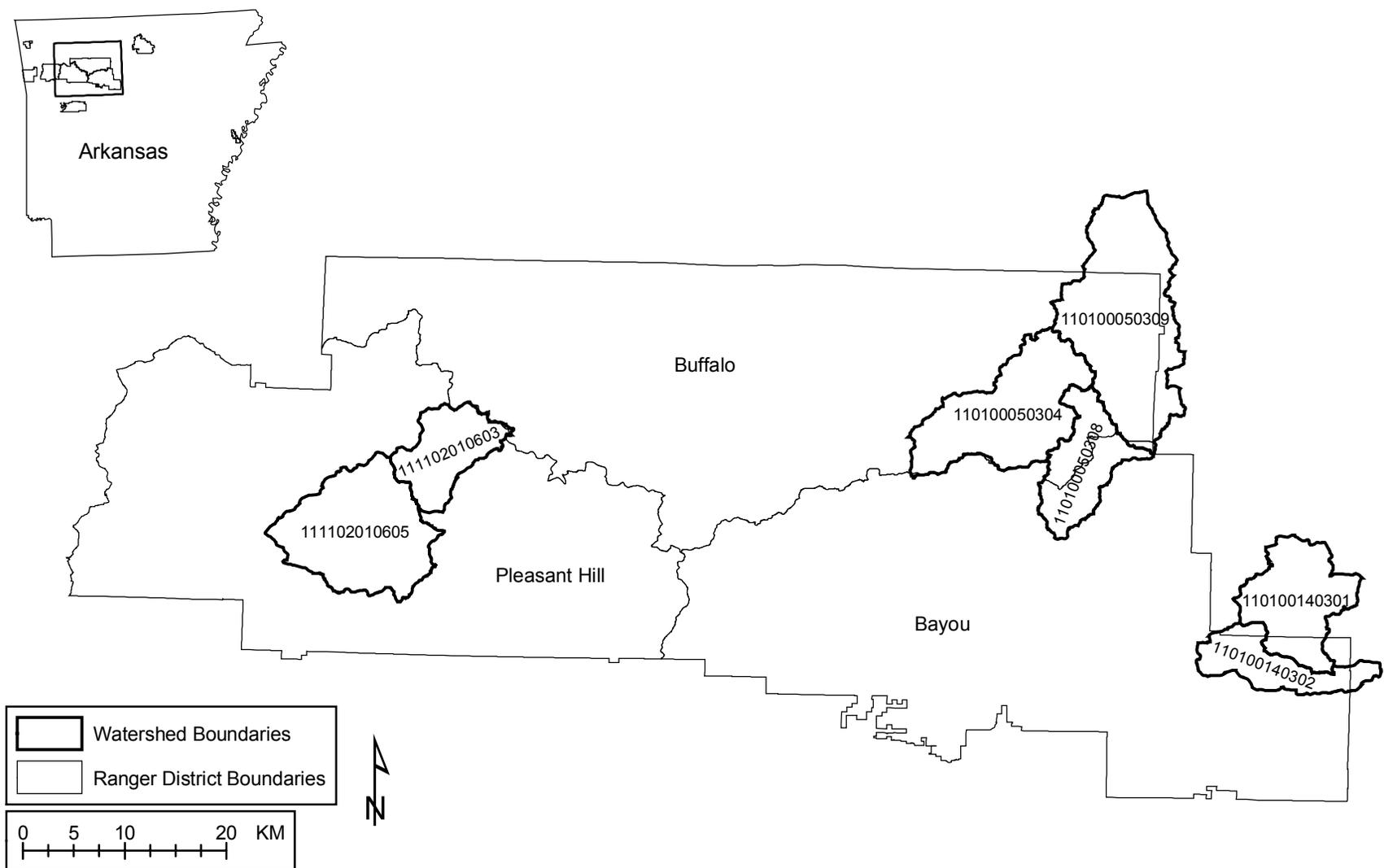


Figure 1. 6<sup>th</sup> level HUC watersheds visited within the Bayou, Buffalo, and Pleasant Hill Ranger Districts.

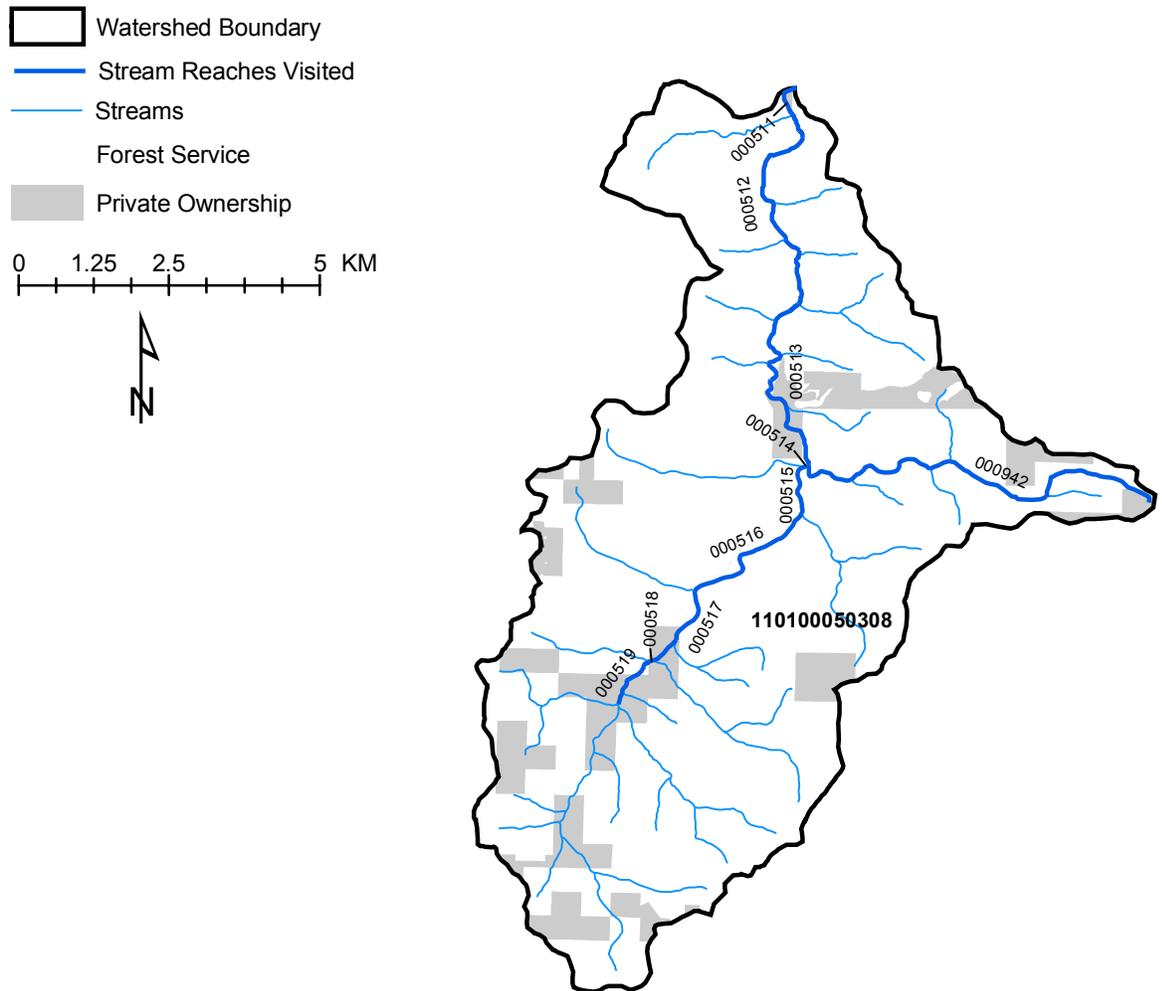


Figure 2. Stream reaches visited in 6<sup>th</sup> level HUC watershed 110100050308 in the Bayou and Buffalo Ranger Districts. Inventories may only include a portion of displayed reaches; see Table 2 for inventory details.

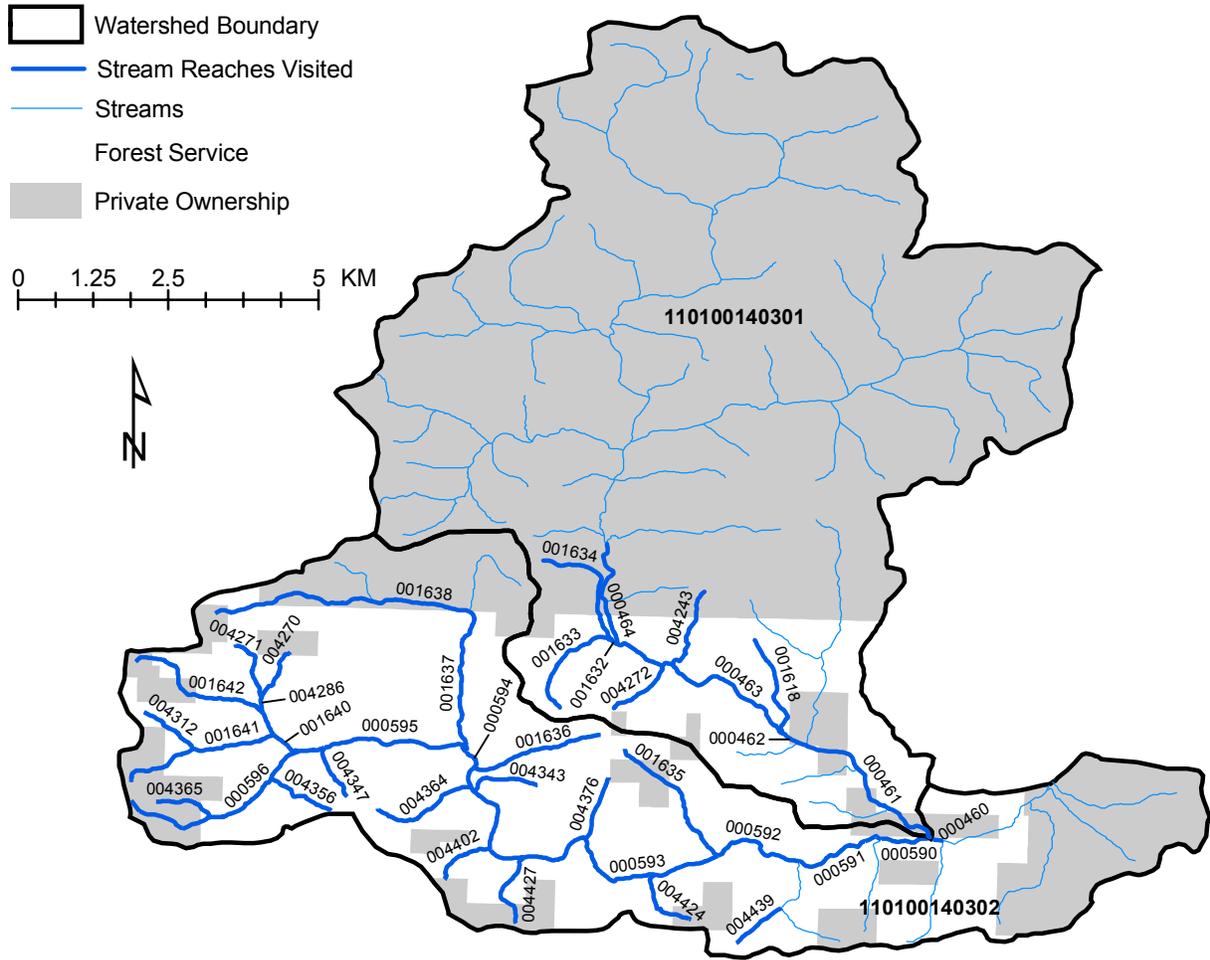


Figure 3. Stream reaches visited in 6<sup>th</sup> level HUC watershed 110100140301 and 110100140302 in the Bayou Ranger District. Inventories may only include a portion of displayed reaches; see Table 2 for inventory details.

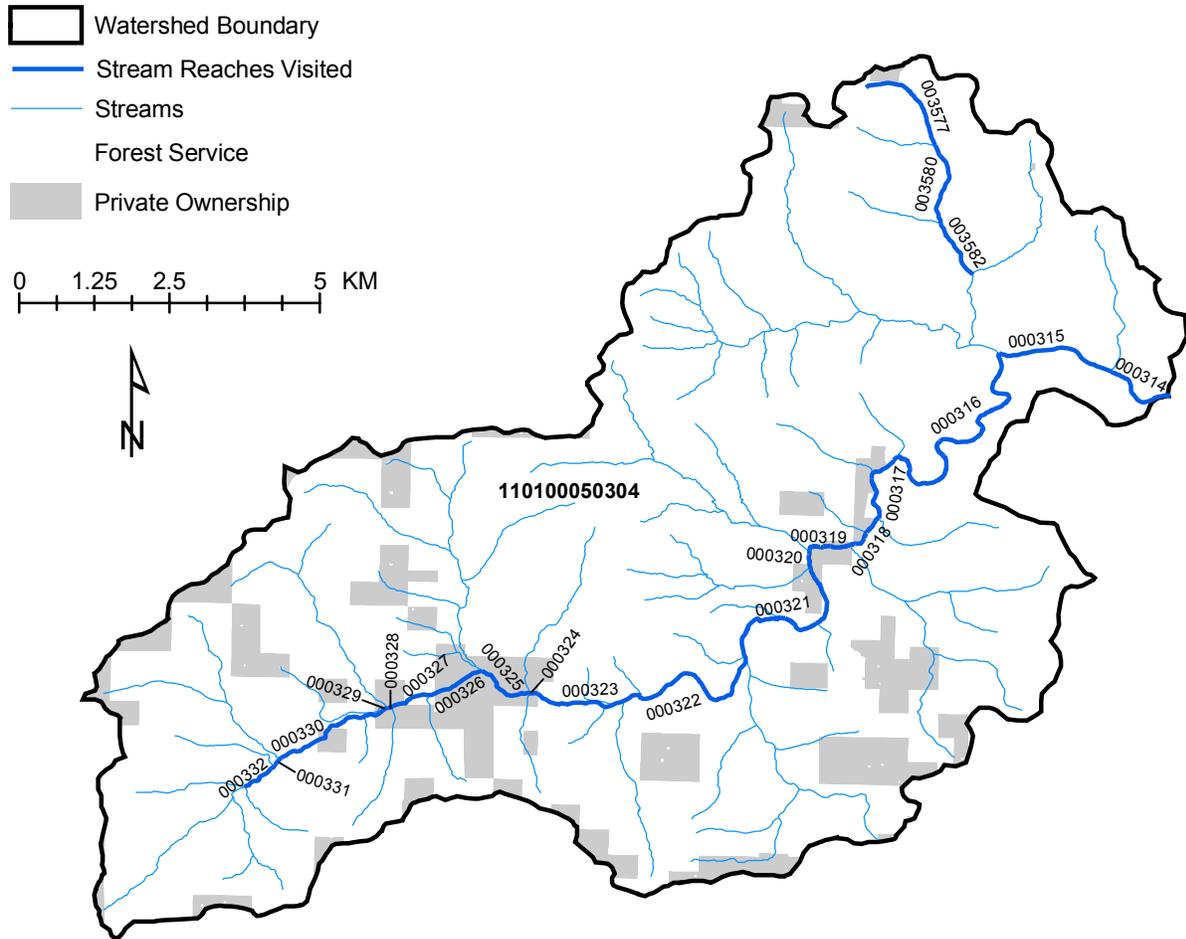


Figure 4. Stream reaches visited in 6<sup>th</sup> level HUC watershed 110100050304 in the Buffalo Ranger District. Inventories may only include a portion of displayed reaches; see Table 2 for inventory details.

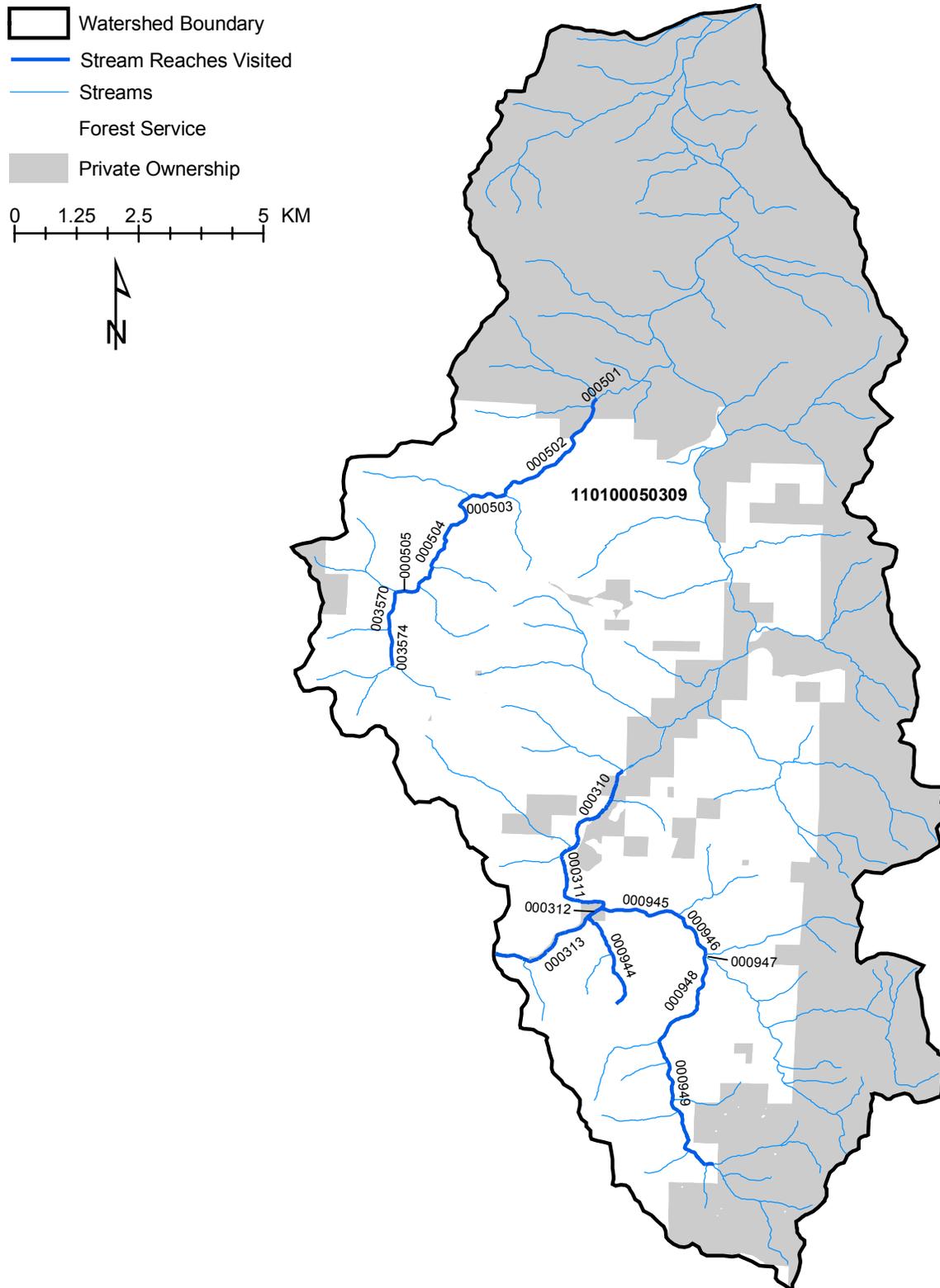


Figure 5. Stream reaches visited in 6<sup>th</sup> level HUC watershed 110100050309 in the Buffalo Ranger District. Inventories may only include a portion of displayed reaches; see Table 2 for inventory details.

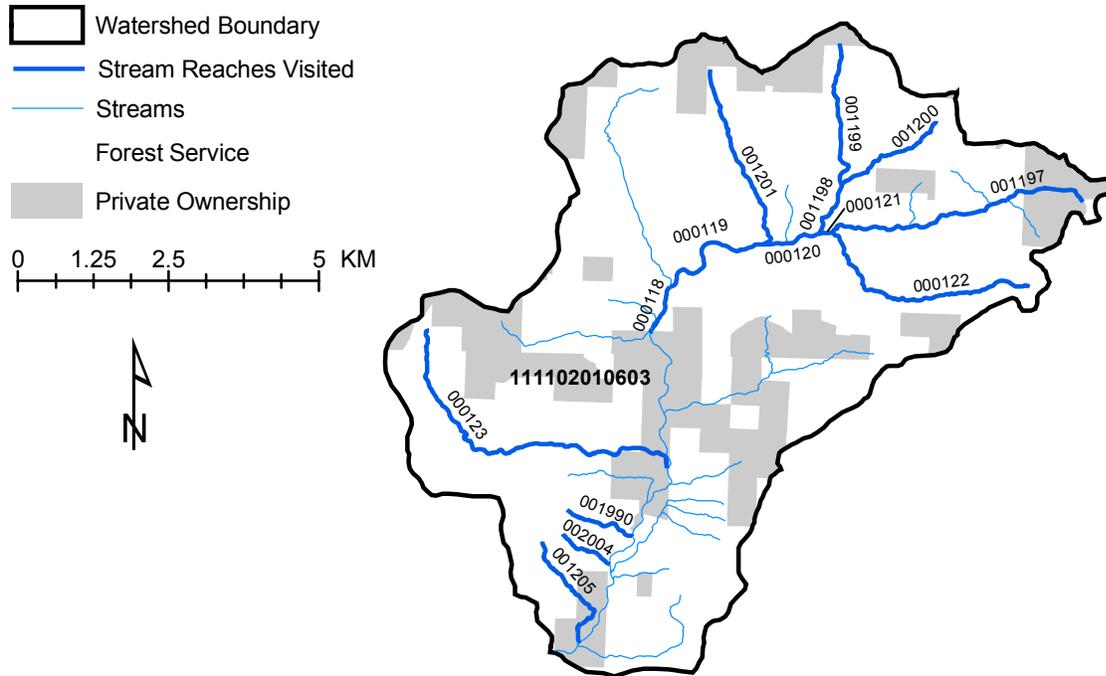


Figure 6. Stream reaches visited in 6<sup>th</sup> level HUC watershed 111102010603 in the Pleasant Hill Ranger District. Inventories may only include a portion of displayed reaches; see Table 2 for inventory details.

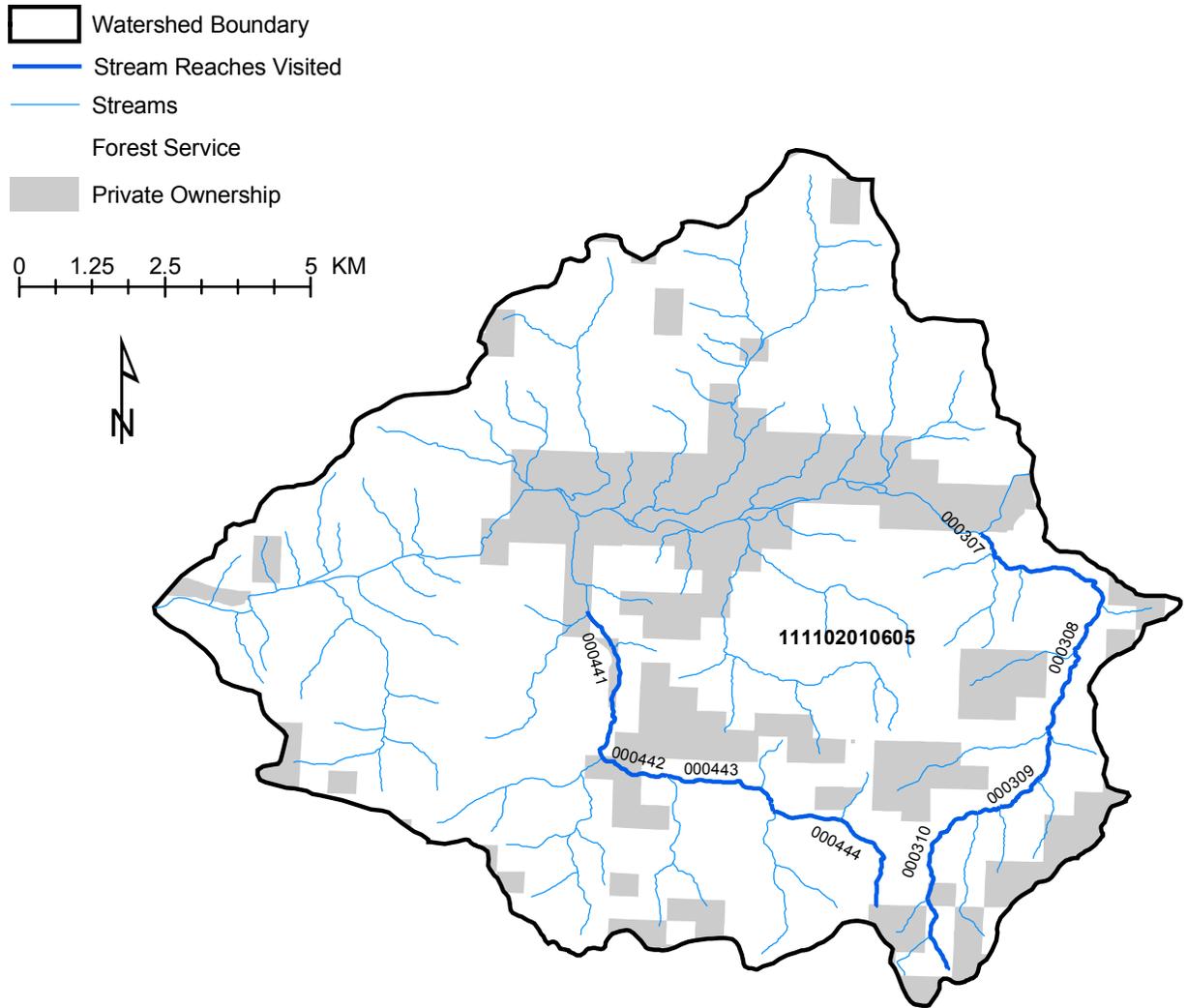


Figure 7. Stream reaches visited in 6<sup>th</sup> level HUC watershed 111102010605 in the Pleasant Hill Ranger District. Inventories may only include a portion of displayed reaches; see Table 2 for inventory details.

Table 1. Number of reaches visited and inventories completed in 6th level HUCs on the Bayou, Buffalo, and Pleasant Hill Ranger Districts, summer 2006. Reasons for incomplete inventories include: streambed dry or less than three paired sampled per pools or riffles completed.

District	6th level HUC	Total Reaches Visited	Inventory Incomplete: Dry or <3 paired samples	Inventory Complete	
				Habitat	Fish
Bayou	110100050308	7	0	7	2
	110100140301	10	6	4	3
	110100140302	29	14	15	6
Buffalo	110100050304	22	0	22	5
	110100050308	3	0	3	3
	110100050309	17	1	16	1
Pleasant Hill	111102010603	14	2	12	5
	111102010605	8	0	8	4
Total Count:		110	23	87	29

Table 2. Reaches visited and inventories completed in 6<sup>th</sup> Level HUCs on the Bayou, Buffalo, and Pleasant Hill Ranger Districts, summer 2006. Fish inventories were completed by the CATT after habitat inventories were completed. UT = unnamed tributary.

6th level HUC	Reach Number	Stream Name	Completed		Comments
			Habitat	Fish	
110100050309	000310	Richland Creek	X	-	inventoried 24,966 m
	000311		X	-	
	000312		X	-	
	000313		X	-	
110100050304	000314		X	X	Richland Creek crosses 6th level HUC
	000315		X	-	
	000316		X	-	
	000317		X	-	
	000318		X	X	
	000319		X	-	
	000320		X	X	
	000321		X	-	
	000322		X	X	
	000323		X	-	
	000324		X	-	
	000325		X	-	
	000326		X	-	
	000327		X	-	
	000328		X	-	
	000329		X	-	
	000330		X	X	
	000331		X	-	
	000332		X	-	
110100050309	000501	Dry Creek	X	-	inventoried 8,438 m
	000502		X	-	
	000503		X	-	

Table 2. Continued.

6th level HUC	Reach Number	Stream Name	Completed		Comments
			Habitat	Fish	
	000504	Dry Creek continued	X	-	
	000505		X	-	
	003570		X	-	
	003574		X	-	
110100050308	000511	Falling Water Creek	X	X	inventoried 12,079 m
	000512		X	X	
	000513		X	X	
	000514		X	-	
	000515		X	X	
	000516		X	-	
	000517		X	X	
	000518		X	-	
	000519		X	-	
110100050308	000942	Bailey Cole Creek	X	-	inventoried 3,638 m
110100050309	000944	UT of Richland Creek	-	-	Dry 500 m
110100050309	000945	Bobtail Creek	X	-	inventoried 7,483 m
	000946		X	X	
	000947		X	-	
	000948		X	-	
	000949		X	-	
110100050304	003577	Big Devils Fork	X	-	inventoried 3,487 m
	003580		X	-	
	003582		X	-	
110100140302	000460	South Fork Little Red River	X	-	inventoried 8,993 m
110100140301	000461		X	X	South Fork Little Red River crosses 6th level HUC
	000462		X	X	
	000463		X	X	
	000464		X	-	

Table 2. Continued.

6th level HUC	Reach Number	Stream Name	Completed		Comments
			Habitat	Fish	
110100140302	000590	Brushy Fork	X	X	inventoried 11,416 m
	000591		X	-	
	000592		X	X	
	000593		X	X	
	000594		X	-	
	000595		X	-	
110100140302	000596	Brushy Fork (headwater)	X	X	inventoried 797 m
110100140301	001618	UT of South Fork Little Red	-	-	Dry 500 m
110100140301	001632	UT of South Fork Little Red	-	-	Dry 500 m
	001633		-	-	
110100140301	001634	UT of South Fork Little Red	-	-	Dry 500 m
110100140302	001635	UT of Brushy Fork	-	-	Dry 524 m
110100140302	001636	UT of Brushy Fork	-	-	Waterfall impassable at 297 m
110100140302	001637	North Prong Brushy Fork	X	-	inventoried 4,260 m
	001638		X	-	
110100140302	001640	West Prong Brushy Fork	X	X	<3 paired (2 paired pools & 1 riffle), inventoried 1,189 m
	001642		X	-	
110100140302	001641	UT of West Prong Brushy Fork	X	X	<3 paired (3 paired pools & 2 riffles), inventoried 1,065 m
110100140302	004286	UT of West Prong Brushy Fork	-	-	5 wet units, dry 430 m, 0 paired units, inventoried 573 m
	004271		-	-	
110100140301	004243	UT of South Fork Little Red	-	-	Dry 500 m
110100140302	004270	UT of West Prong Brushy Fork	-	-	Dry 500 m
110100140301	004272	UT of South Fork Little Red	-	-	Dry 500 m
110100140302	004312	UT of West Prong Brushy Fork	-	-	Dry 500 m
110100140302	004343	UT of Brushy Fork	-	-	Dry 500 m
110100140302	004347	UT of Brushy Fork	-	-	Dry 500 m
110100140302	004356	UT of Brushy Fork	-	-	Dry 500 m
110100140302	004364	UT of Brushy Fork	X	-	<3 paired (3 paired pools & 1 riffle), inventoried 615 m

Table 2. Continued.

6th level HUC	Reach Number	Stream Name	Completed		Comments
			Habitat	Fish	
110100140302	004365	UT of Brushy Fork	-	-	Dry 500 m
110100140302	004376	UT of Brushy Fork	-	-	Dry 270 m, inventoried 440 m
110100140302	004402	UT of Brushy Fork	-	-	Dry 400 m
110100140302	004424	UT of Brushy Fork	-	-	Dry 500 m, inventoried 545 m
110100140302	004427	UT of Brushy Fork	X	-	<3 paired (7 paired pools & 0 riffles), inventoried 849 m
110100140302	004439	UT of Brushy Fork	-	-	Dry 500 m
111102010603	000118	Lewis Prong	X	X	inventoried 6,107 m
	000119		X	X	
	000120		X	-	
	000121		X	-	
	001197		X	-	
111102010603	000122	Waterfall Hollow	-	-	Dry 2,500 m
111102010603	000123	Panther Creek	X	X	inventoried 4,781 m
111102010605	000307	Bear Branch	X	X	inventoried 9,557 m
	000308		X	-	
	000309		X	X	
	000310		X	-	
111102010605	000441	Washita Creek	X	X	inventoried 6,500 m
	000442		X	X	
	000443		X	-	
	000444		X	-	
111102010603	001198	Turner Hollow	X	X	inventoried 1,807 m
	001200		X	-	
111102010603	001199	UT of Turner Hollow	X	-	inventoried 2,110 m
111102010603	001201	UT of Lewis Prong	-	-	Dry 750 m
111102010603	001205	UT of Panther Creek	X	X	<3 paired (3 paired pools & 1 riffle), inventoried 1,022 m
111102010603	001990	UT of Panther Creek	X	-	<3 paired (2 paired pools & 0 riffles), inventoried 989 m
111102010603	002004	UT of Panther Creek	X	-	<3 paired (2 paired pools & 0 riffles), inventoried 681 m

## Habitat Results

**Stream Index:**

<b>6th level HUC</b>	<b>Reach Number at Start of Inventory</b>	<b>Stream Name</b>	<b>Page</b>
110100050309	000310	Richland Creek	20
110100050309	000501	Dry Creek	28
110100050308	000511	Falling Water Creek	34
110100050308	000942	Bailey Cole Creek	42
110100050309	000945	Bobtail Creek	48
110100050304	003577	Big Devils Fork	54
110100140302	000460	South Fork Little Red River	59
110100140302	000590	Brushy Fork	65
110100140302	000596	Brushy Fork (headwater)	73
110100140302	001637	North Prong Brushy Fork	78
110100140302	001640	West Prong Brushy Fork	83
110100140302	001641	UT of West Prong Brushy Fork	88
110100140302	004364	UT of Brushy Fork	93
110100140302	004427	UT of Brushy Fork	98
111102010603	000118	Lewis Prong	103
111102010603	000123	Panther Creek	109
111102010605	000307	Bear Branch	116
111102010605	000441	Washita Creek	122
111102010603	001198	Turner Hollow	128
111102010603	001199	UT of Turner Hollow	133
111102010603	001205	UT of Panther Creek	138
111102010603	001990	UT of Panther Creek	143
111102010603	002004	UT of Panther Creek	148

<b>Stream:</b>	Richland Cr - 11010005000310-0332
District	Buffalo
USGS Quadrangle	Moore and Sand Gap
6 <sup>th</sup> Level HUC	110100050309 & 110100050304
Survey Date	06/08/06
Downstream Starting Point	Confluence with TRIB 03313
Total Distance Surveyed (km)	25.0

	<b>Pools</b>	<b>Riffles</b>
Percent of Total Stream Area	81	19
Total Area (m <sup>2</sup> )	241100 ± 38317	55622 ± 13459
Correction Factor Applied	1.02	1.19
Number of Paired Samples	29	18
Total Count	286	179
Number per km	11	7
Mean Area (m <sup>2</sup> )	843	311
Mean Maximum Depth (cm)	93	29
Mean Average Depth (cm)	49	18
Mean Residual Depth (cm)	36	--
Percent Inventoried as Glides	36	--
Percent Inventoried as Runs	--	8
Percent Inventoried as Cascades	--	0
Percent with >35% Fines	2	0

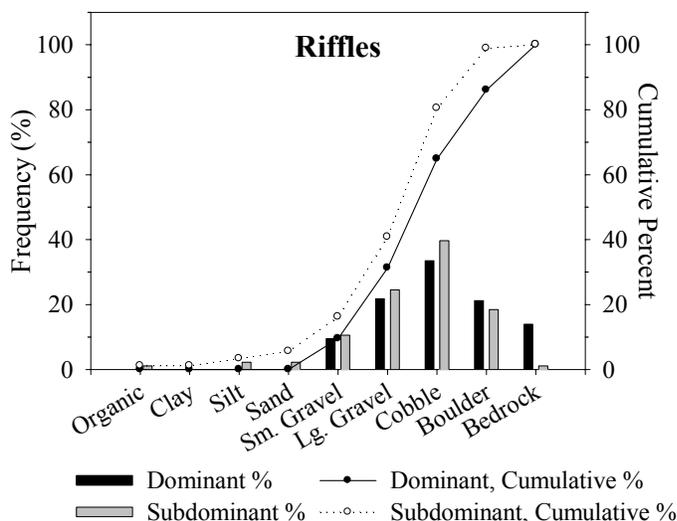
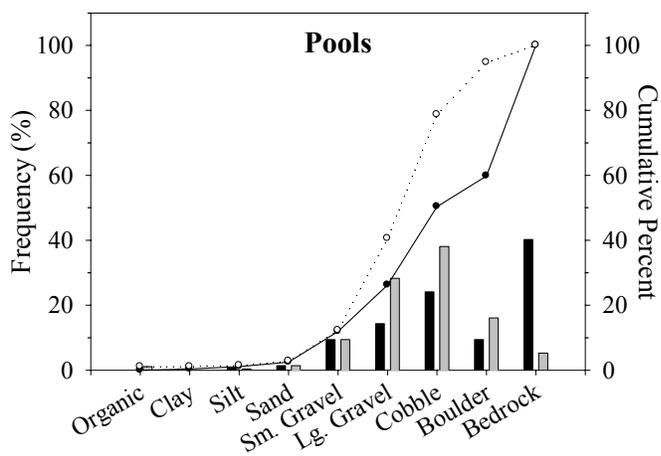
<b>Large Woody Debris Size</b>	<b>Pieces per km</b>
< 5 m long, 10 cm - 55 cm diameter	1
< 5 m long, > 55 cm diameter	0
> 5 m long, 10 cm - 55 cm diameter	1
> 5 m long, > 55 cm diameter	0
Total:	2

<b>Riparian Width</b>	<b>Total Width* (m)</b>	<b>Left &amp; Right Width ** (m)</b>
Mean	33	7
Maximum	73	50
75th Percentile	40	5
25th Percentile	20	2
Minimum	13	0.4

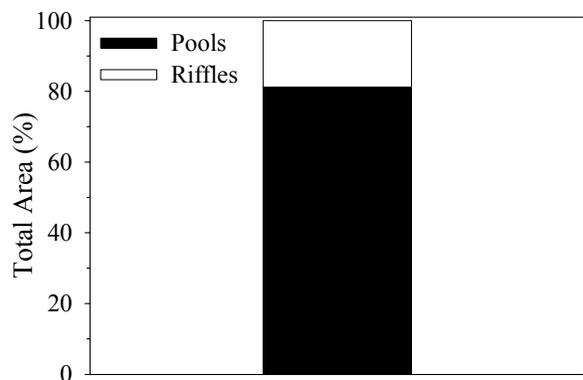
\*Left riparian, right riparian, and bankfull channel widths were added together for calculations

\*\*Left and right riparian measurements were grouped (not added) together for calculations

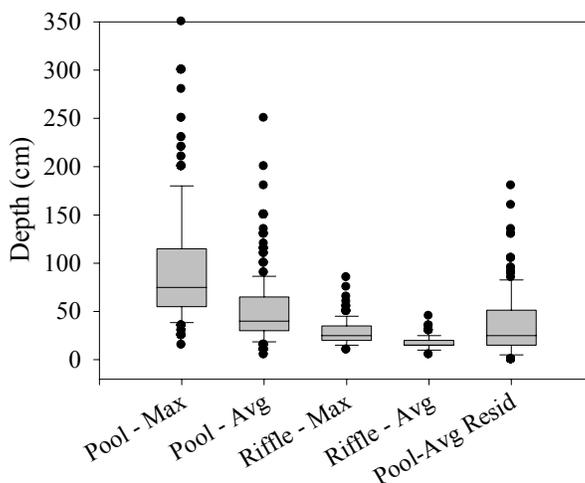
<b>Rosen's Channel Type</b>	<b>Frequency (%)</b>	<b>Other Stream Attributes</b>	
A	0	Mean Bankfull Channel Width (m)	16
B	100	Mean Channel Gradient (%)	3
C	0	Median Water Temperature (C)	22.5
D	0		
E	0		
F	0		
G	0		



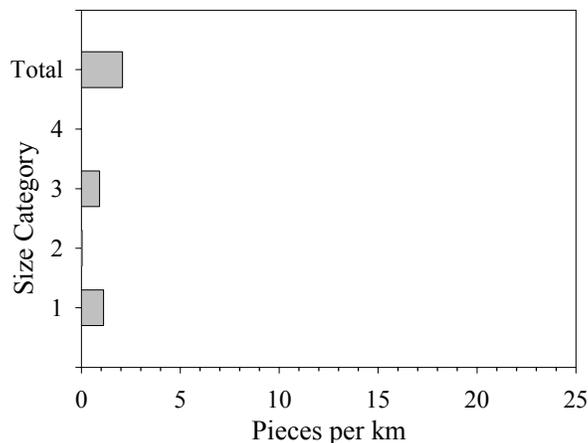
Frequency (percent) and cumulative percent of dominant and subdominant substrate occurrence for pools and riffles in stream section 000310 through 000332, summer 2006.



Estimated area of stream section 000310 through 000332 in pools and riffles as calculated using BVET techniques, summer 2006.



Maximum and average depths and residual pool depths for pools and riffles in stream section 000310 through 000332, summer 2006. The top and bottom of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data.



LWD per kilometer in stream section 000310 through 000332, summer 2006. Y-axis labels are LWD size classes described below.  
 Size 1: < 5 m long, 10-55 cm diameter  
 Size 2: < 5 m long, > 55 cm diameter  
 Size 3: > 5 m long, 10-55 cm diameter  
 Size 4: > 5 m long, > 55 cm diameter

Stream features found on stream section 000310 through 000332, BVET habitat survey, summer 2006. Distance is meters from start of survey.

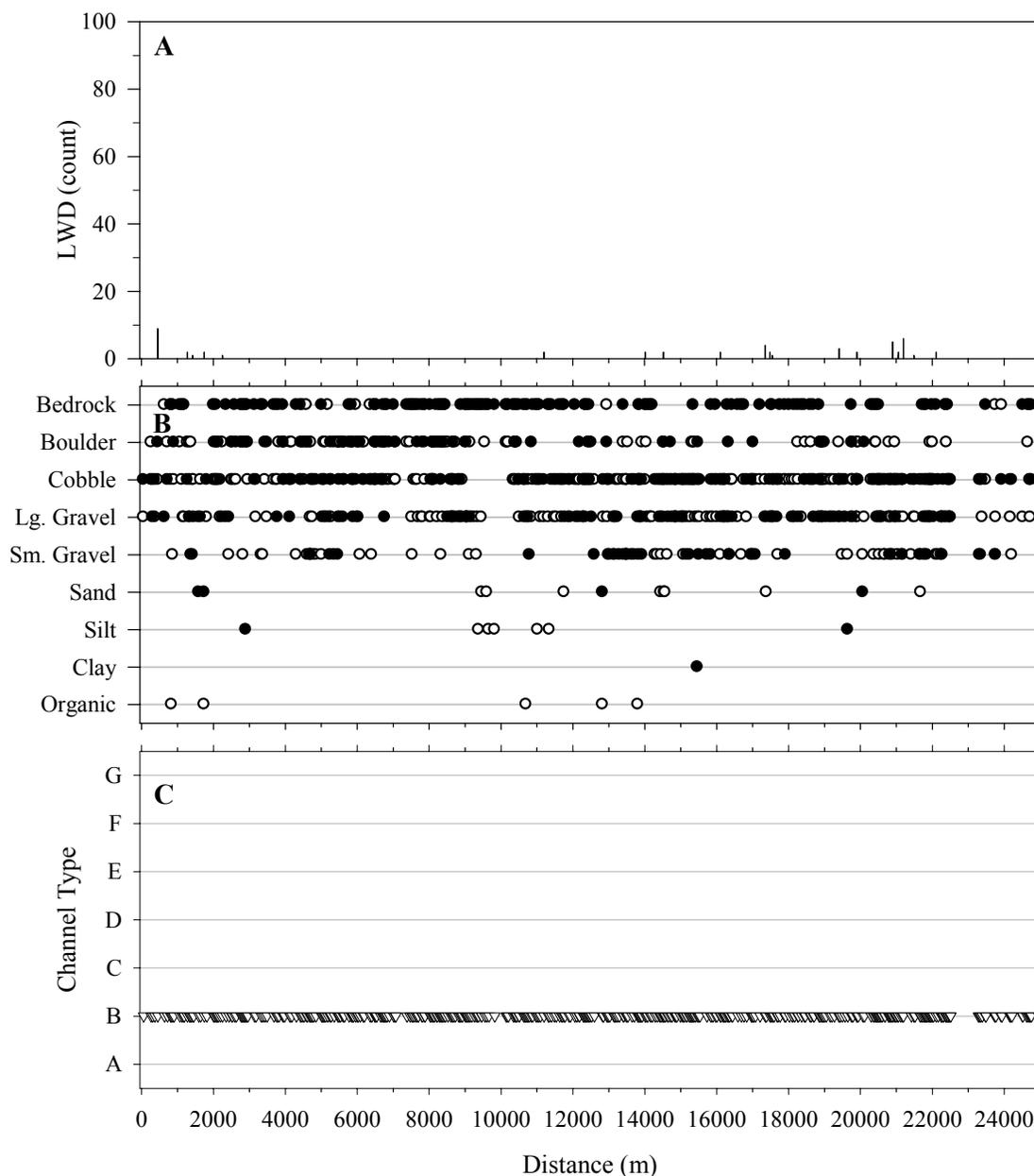
Feature	Distance (m)	Width (m)	In/Out	Comments
NHD_ID	55			11010005000310
SCH	418	3.5	In Left	
SCH	470	3.5	Out Left	
TRIB	673.5		In Right	003336 NHDID
NHD_ID	723.9			11010005000311
OTR	1197			awkwardly perched big boulder
FORD	1335			Dirt road, may be private
TRIB	1397		In Left	000945-dry
NHD_ID	1423			11010005000312
TRIB	1675		In Right	000944-dry
NHD_ID	2002.7			11010005000313
FORD	2283			dirt road on left
SCH	2848	4	In Right	
SCH	2958		Out Right	
OTR	3199			Trail
BRG	3212.7			Tall cement bridge, paved road 1205
TRIB	3683	10	In Left	000511(Falling Water)-dry
NHD_ID	3760			11010005000314
UNGR	3960.7			
SCH	4499	4	In Right	dry
NHD_ID	4677.7			11010005000315
TRIB	5243	0.5	In Left	flowing
TRIB	5415	1	In Left	trickle of water in along left bank
TRIB	5980	1	In Left	Dry
SCH	6154	5	In Right	Dry
TRIB	6525	2.5	In Left	Dry and overgrown
TRIB	6602	9	In Right	Devil's Fork 000559, dry
NHD_ID	6652			11010005000316
FALL	7070			Very wide
SCH	7638	3	Out Right	Dry
TRIB	7978	2	In Left	On left cliff
SCH	9029	3	In Left	dry
FALL	9191			Wide
SEEP	9528	3	In Left	Off of cliff
TRIB	10770	1	In Right	003403-dry
SCH	10991	2.5	In Right	Not flowing
SCH	11049	2	In Right	flowing
SCH	11063	8.5	In Left	Very wide, small pools of stagnant water. Easy to confuse for tributary/ main channel.
TRIB	11074	2	In Right	000897-Dry
NHD_ID	11103			11010005000317

Feature table continued.

Feature	Distance (m)	Width (m)	In/Out	Comments
SCH	11116	6.5	Out Left	Big
FORD	11441			Private land, dirt road
TRIB	11712	2	In Right	Has water
SCH	11815		In Right	
SCH	11864	4	Out Right	
TRIB	11865	2	In Right	dry
TRIB	11942	2	In Left	000932-Rose Hollow. wet with pools; stagnant
NHD_ID	12055.5			11010005000318
TRIB	12256	1.5	In Left	003428-dry
SCH	12316	2	In Right	
TRIB	12596	2.5	In Left	000927-Jack Jones Hollow (dry)
NHD_ID	12601			11010005000319
TRIB	13210	2.5	In Right	000898-dry
NHD_ID	13237			11010005000320
BRG	13302			Cement with water level marks, cement road FR1203/CR32
SEEP	13359		In Left	small drips off left bank
SEEP	13379		In Left	
SCH	13394	2	In Left	dry
TRIB	13509	2	In Right	000903-dry
SCH	13580	5.5	In Right	stagnant pools
SCH	13923	6	Out Right	
SCH	14224	3	In Right	
SCH	14290	3	Out Right	flowing
SLID	14361	4.5	In Left	
FORD	14509			abandoned water gauge and white-blazed trail
SCH	15221	1.5	In Left	flowing
SCH	15541	2	Out Left	
SCH	15603	2	Out Left	dry
NHD_ID	15734			11010005000321
SCH	15787	2.5	Out Right	
SCH	15787	2.5	In Left	
TRIB	16172	1	In Left	
TRIB	16583	2	In Left	dry
TRIB	16653	2	In Left	000922-Hideout Hollow, dry
NHD_ID	16693			11010005000322
TRIB	18274	1	In Left	Dry
TRIB	18749	1.5	In Left	000921-wet

Feature table continued.

Feature	Distance (m)	Width (m)	In/Out	Comments
NHD_ID	18853			11010005000323
TRIB	19003	1.5	In Left	003472-wet
SCH	19276	3	In Right	
TRIB	19522	3	In Right	003467-dry
FORD	19944			ATV trail, private
TRIB	20070	2	In Left	000920-dry
FORD	20070			private dirt road on right
NHD_ID	20070			11010005000325
FORD	20376			private dirt road
SCH	20505	4.5	In Left	cable over channel
TRIB	20765	3	In Right	stagnant
NHD_ID	20782			11010005000326
SCH	20928	1	In Left	
NHD_ID	21045			11010005000326
TRIB	21106	4	In Right	wet
SCH	21174	5	Out Left	
SEEP	21472		In Left	drips on left
TRIB	21763	2	In Left	000919-wet
NHD_ID	21765			11010005000327
FORD	22314			Wide ford, dirt road FR1255
TRIB	22325	2	In Left	000918-wet
TRIB	22372	3	In Right	000910-wet
NHD_ID	22372			11010005000330
SCH	22392	2	In Left	
TRIB	22513	3	In Right	000911-dry
UNGR	23284			
UNGR	23328			
UNGR	23480			
UNGR	23735			
UNGR	23916			
UNGR	24157			
UNGR	24200			
TRIB	24212	2	In Right	000912-dry
TRIB	24427	2	In Right	000915-dry
UNGR	24505			
NHD_ID	24505			11010005000332
TRIB	24589	1.5	In Left	Unnamed-dry
UNGR	24624			
UNGR	24692			
UNGR	24750			
UNGR	24966			



Distribution and abundance of LWD, distribution of substrates, and distribution of Rosgen's channel types (Rosgen 1996) in stream section 000310 through 000332, summer 2006. LWD, substrate, and channel type were recorded for each habitat unit in the stream. X-axis indicates distance upstream from confluence with tributary 03313. Vertical bars on (A) indicate total count of LWD; open circles represent the amount of the total LWD that was >5 m in length, >55 cm in diameter (size 4). Closed circles on (B) are dominant substrates, open circles are subdominant substrates. See Appendix A for substrate sizes. See Appendix A for channel type descriptions from (C).

Photos taken on stream section 000310 through 000332, during BVET habitat survey, summer 2006. Distance is meters from start of survey.

Unit Type	Unit Number	Distance (m)	Comments
P	2	270	Rock bluff on left. Patchy areas of cold water.
TRIB		673.5	003336 NHDID
R	4	837	
P	7	1068	
OTR		1197	Awkwardly perched big boulder
FORD		1335	
TRIB		1397	000945-dry
TRIB		1675	000944-dry
P	14	1745	bluff on right
G	15	2002.7	bullfrog tadpoles. photo of big crayfish in pool
P	16	2072	fossils in bedrock on left bank
FORD		2283	on left
R	16	2434	bf=75
BRG		3212.7	Tall cement bridge.
R	24	3435.5	Next to G28-two efish sections next to each other.
TRIB		3683	000511(Falling Water)-dry
R	34	4713	
TRIB		5415	trickle of water in along left bank
P	57	5844	Z-curve in river; Ernie swimming
R	44	6404	#159,Rosgen done.
TRIB		6602	Devil's Fork 000559, dry.
FALL		7070	Very wide.
P	75	7386	#166?
P	78	7638	Snapping turtle present.
R	54	7819.6	Right Riparian missing due to massive Poison Ivy growth on right.
P	86	8289	Pictures with cliff.
R	64	8924.3	
FALL		9191	Wide.
C	68	9380	
SEEP		9528	Off of cliff.
P	108	9550.8	Steep cliffs on left.
R	70	9610.8	Cliff in pictures is 65+ m tall.
R	74	10422	
SCH		11063	Very wide, small pools of stagnant water. Easy to confuse for tributary/ main channel.
R	84	11540	Right riparian is 50+m.
TRIB		11712	Has water.
TRIB		11942	000932-Rose Hollow. wet with pools; stagnant

Photo table continued.

<b>Unit Type</b>	<b>Unit Number</b>	<b>Distance (m)</b>	<b>Comments</b>
R	94	12850	Right riparian is 50+m, measurements messed up due to private pasture land on left.
BRG		13302	Cement with water level marks.
P	148	13405	Rock wall on left.
RN	104	13907	No right riparian; side channel.
FORD		14509	abandoned water gauge and white-blazed trail
R	114	14757	
SCH		15221	flowing.
R	124	15483	
TRIB		16172	
R	134	16693	Too big for efishing.
R	144	18274	
TRIB		18749	000921-wet.
R	154	19406	No right riparian due to side channel. Stopped due to time. 6/12/06
FORD		20376	Dirt
R	166	20683	
TRIB		21106	wet.
R	174	21890	
FORD		22314	Wide.
TRIB		22325	000918-wet
TRIB		22372	000910-wet

<b>Stream:</b>	Dry Creek - 11010005000501-0505 and 3570 & 3574
District	Bayou
USGS Quadrangle	Eula
6 <sup>th</sup> Level HUC	110100050309
Survey Date	06/13/06
Downstream Starting Point	Where Dry Cr enters Richland Cr
Total Distance Surveyed (km)	8.4

	<b>Pools</b>	<b>Riffles</b>
Percent of Total Stream Area	69	31
Total Area (m <sup>2</sup> )	7762 ± 549	3410 ± 1419
Correction Factor Applied	1.07	1.11
Number of Paired Samples	10	6
Total Count	95	54
Number per km	11	6
Mean Area (m <sup>2</sup> )	82	63
Mean Maximum Depth (cm)	45	20
Mean Average Depth (cm)	30	10
Mean Residual Depth (cm)	27	--
Percent Inventoried as Glides	9	--
Percent Inventoried as Runs	--	0
Percent Inventoried as Cascades	--	0
Percent with >35% Fines	4	0

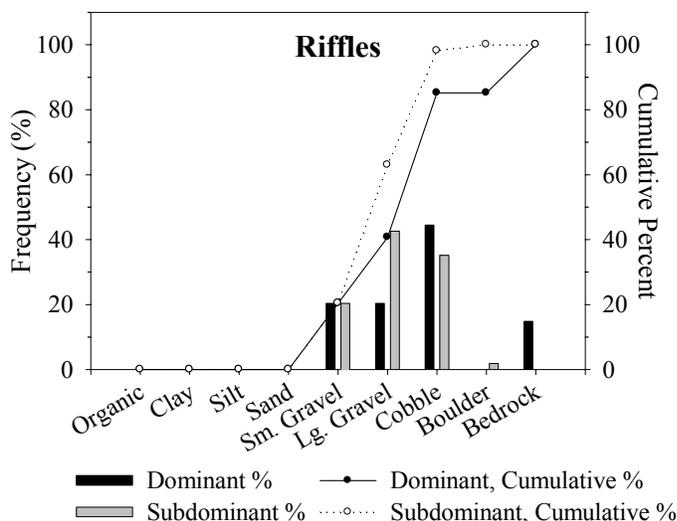
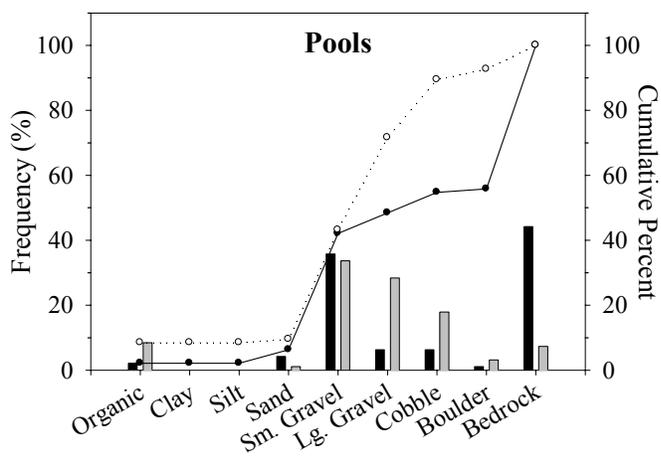
<b>Large Woody Debris Size</b>	<b>Pieces per km</b>
< 5 m long, 10 cm - 55 cm diameter	2
< 5 m long, > 55 cm diameter	0
> 5 m long, 10 cm - 55 cm diameter	4
> 5 m long, > 55 cm diameter	1
Total:	7

<b>Riparian Width</b>	<b>Total Width* (m)</b>	<b>Left &amp; Right Width ** (m)</b>
Mean	12	1
Maximum	16	4
75th Percentile	14	2
25th Percentile	9	1
Minimum	8	0.2

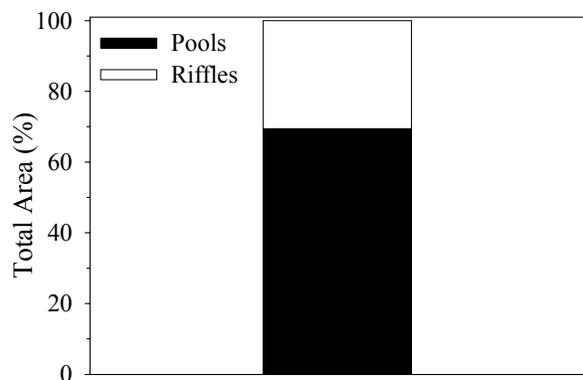
\*Left riparian, right riparian, and bankfull channel widths were added together for calculations

\*\*Left and right riparian measurements were grouped (not added) together for calculations

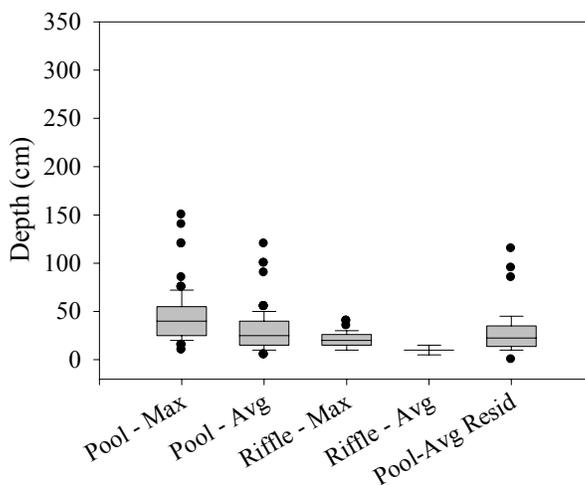
<b>Rosen's Channel Type</b>	<b>Frequency (%)</b>	<b>Other Stream Attributes</b>	
A	0	Mean Bankfull Channel Width (m)	9
B	100	Mean Channel Gradient (%)	3
C	0	Median Water Temperature (C)	20
D	0		
E	0		
F	0		
G	0		



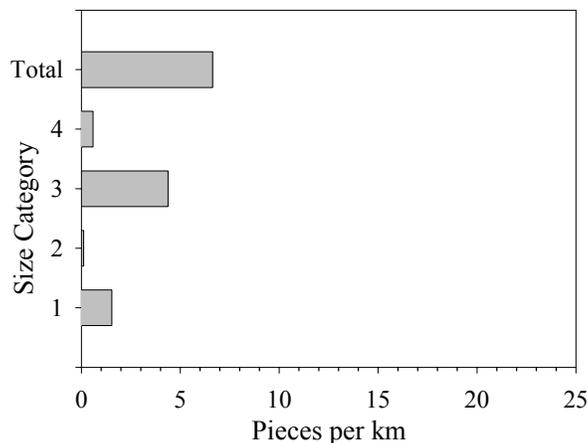
Frequency (percent) and cumulative percent of dominant and subdominant substrate occurrence for pools and riffles in stream section 000501 through 003574, summer 2006.



Estimated area of stream section 000501 through 003574 in pools and riffles as calculated using BVET techniques, summer 2006.



Maximum and average depths and residual pool depths for pools and riffles in stream section 000501 through 003574 summer 2006. The top and bottom of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data.



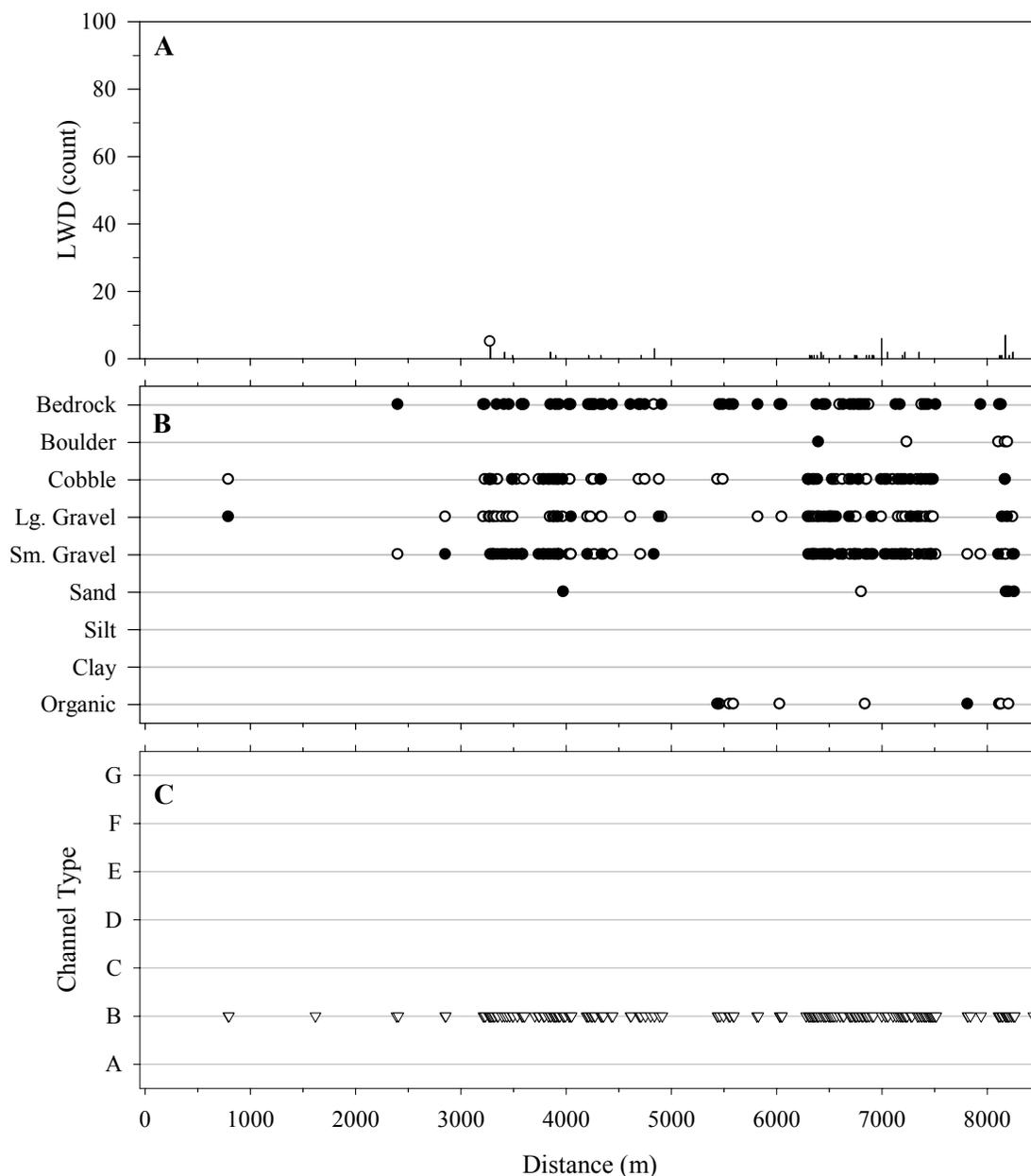
LWD per kilometer in stream section 000501 through 003574, summer 2006. Y-axis labels are LWD size classes described below.  
 Size 1: < 5 m long, 10-55 cm diameter  
 Size 2: < 5 m long, > 55 cm diameter  
 Size 3: > 5 m long, 10-55 cm diameter  
 Size 4: > 5 m long, > 55 cm diameter

Stream features found on stream section 000501 through 003574, BVET habitat survey, summer 2006. Distance is meters from start of survey.

Feature	Distance (m)	Width (m)	In/Out	Comments
TRIB	403.2		In Right	dry, photo 191
FORD	587.4			photos 192, 193; dirt road
UNGR	790.9			
NHD_ID	790.9			11010005000501
SEEP	794.2	0.5	In Left	wet
TRIB	836.1		In Left	dry photo 194
TRIB	1373		In Right	dry
TRIB	1617.7		In Right	dry, photo 195
UNGR	1617.7			
FORD	1721.7			photos 196,197; dirt road
TRIB	2219.6		In Left	dry, photo 198
SEEP	2362.7	1	In Right	for extended distance
UNGR	2388.7			
TRIB	2680.8		In Left	dry, photo 199
FORD	2782.3			atv trail, photos 200,201
UNGR	2849.7			
TRIB	2869.7		In Right	dry, photo 202
TRIB	3036.9		In Left	photo 203
UNGR	3213.1			
FORD	3236.1			photos 204, 205; trail
UNGR	3267.8			
SCH	3298		Out Left	dry
TRIB	3359.7		In Right	dry, photo 206
SCH	3676.9		Out Left	dry
TRIB	3702.9		In Left	dry, photo 209
UNGR	3703.9			
UNGR	3738.8			
TRIB	3880.1		In Left	dry
NHD_ID	3880.5			11010005000504
UNGR	3991.6			
TRIB	4036		In Left	dry, photo 212
TRIB	4061.2		In Left	photo 213
UNGR	4193.2			
SEEP	4246.7	0.5	In Right	wet
SEEP	4259.1	1	In Right	photo 215
UNGR	4430.1			
UNGR	4609.2			
TRIB	4655.1		In Right	dry, photo 218
UNGR	4700.9			
SCH	4753.2		In Left	dry
UNGR	4803.1			

Feature table continued.

<b>Feature</b>	<b>Distance (m)</b>	<b>Width (m)</b>	<b>In/Out</b>	<b>Comments</b>
SCH	4807.7	2	Out Left	wet
SCH	4837.9	1.5	In Left	wet
SCH	4871.3	2	Out Left	wet
SEEP	4953.7	2	In Right	wet
SCH	5311.2	0.5	In Right	wet, photo 219
SCH	5377.7		Out Right	dry
UNGR	5436.9			
UNGR	5546.3			
UNGR	5587.6			
UNGR	5812.5			
TRIB	5882.8		In Right	dry, photo 221
UNGR	6026.5			
UNGR	6042.8			
UNGR	6278.7			
FORD	6442.9			photos 224, 225; trail
TRIB	6587.2		In Left	dry, photo 226
TRIB	6799.4	0.5	In Left	photo 227
SEEP	6812.5	1.5	In Right	wet
UNGR	6820.7			
TRIB	7031.8		In Right	photo 229
UNGR	7057.9			
SCH	7137.6		In Left	dry
SCH	7191.5		Out Left	dry
UNGR	7201.3			
UNGR	7397.9			
TRIB	7490.7	2	In Left	wet, photo 232
UNGR	7503.8			
TRIB	7628		In Right	photo 233
UNGR	7810.5			
UNGR	7839.5			
SEEP	7845.4	0.5	In Right	wet
SEEP	7938.5	2	In Right	seems to be spring feed
FALL	7941.8			dry
UNGR	8105.5			
UNGR	8115.7			
UNGR	8141.9			
UNGR	8191.2			
UNGR	8201.2			
UNGR	8227.6			
UNGR	8252.8			
UNGR	8437.5			



Distribution and abundance of LWD, distribution of substrates, and distribution of Rosgen's channel types (Rosgen 1996) in stream section 000501 through 003574, summer 2006. LWD, substrate, and channel type were recorded for each habitat unit in the stream. X-axis indicates distance upstream from where Dry Creek enters Richland Creek. Vertical bars on (A) indicate total count of LWD; open circles represent the amount of the total LWD that was >5 m in length, >55 cm in diameter (size 4). Closed circles on (B) are dominant substrates, open circles are subdominant substrates. See Appendix A for substrate sizes. See Appendix A for channel type descriptions from (C).

Photos taken on stream section 000501 through 003574, during BVET habitat survey, summer 2006. Distance is meters from start of survey.

<b>Unit Type</b>	<b>Unit Number</b>	<b>Distance (m)</b>	<b>Comments</b>
TRIB		403.2	dry, photo 191
FORD		587.4	photos 192, 193
TRIB		836.1	dry, photo 194
TRIB		1617.7	dry, photo 195
FORD		1721.7	photos 196,197
TRIB		2219.6	dry, photo 198
TRIB		2680.8	dry, photo 199
FORD		2782.3	atv trail, photos 200,201
TRIB		2869.7	dry, photo 202
TRIB		3036.9	photo 203
FORD		3236.1	photos 204, 205
TRIB		3359.7	dry, photo 206
R	6	3437.7	photo 207
TRIB		3702.9	dry, photo 209
TRIB		3880.1	dry
R	16	3971.3	photo 211
TRIB		4036	dry, photo 212
TRIB		4061.2	photo 213
SEEP		4259.1	photo 215
TRIB		4655.1	dry, photo 218
SCH		5311.2	wet, photo 219
P	39	5441.5	waterfall hight is 14meters, photo 220
TRIB		5882.8	dry, photo 221
R	26	6300.6	photo 223
FORD		6442.9	photos 224, 225
TRIB		6587.2	dry, photo 226
R	36	6693.5	photo 227
TRIB		6799.4	photo 227
TRIB		7031.8	photo 229
R	44	7106	photo 230
R	49	7338.3	photo 231
TRIB		7490.7	wet, photo 232
TRIB		7628	photo 233

<b>Stream:</b>	Falling Water Creek - 11010005000511-0519
District	Buffalo and Bayou
USGS Quadrangle	Moore and Smyrna
6 <sup>th</sup> Level HUC	110100050308
Survey Date	06/08/06
Downstream Starting Point	confluence with Richland Creek, campground on left
Total Distance Surveyed (km)	12.1

	<b>Pools</b>	<b>Riffles</b>
Percent of Total Stream Area	74	26
Total Area (m <sup>2</sup> )	56721 ± 15464	19686 ± 3435
Correction Factor Applied	0.86	1.15
Number of Paired Samples	21	14
Total Count	186	114
Number per km	15	9
Mean Area (m <sup>2</sup> )	305	173
Mean Maximum Depth (cm)	76	30
Mean Average Depth (cm)	50	15
Mean Residual Depth (cm)	42	--
Percent Inventoried as Glides	21	--
Percent Inventoried as Runs	--	0
Percent Inventoried as Cascades	--	0
Percent with >35% Fines	1	1

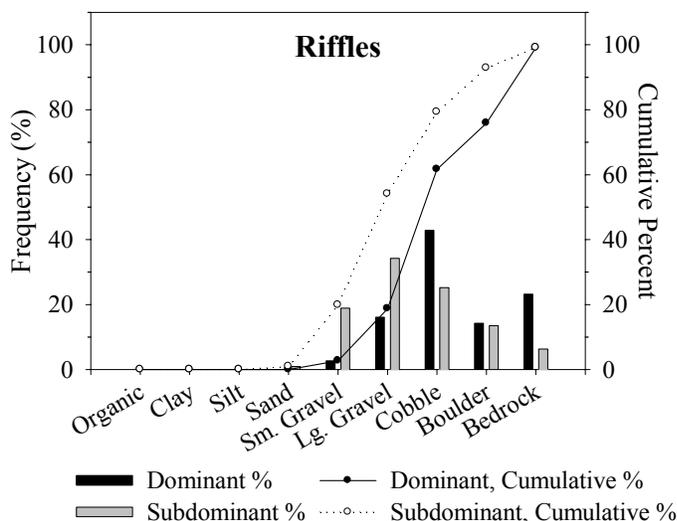
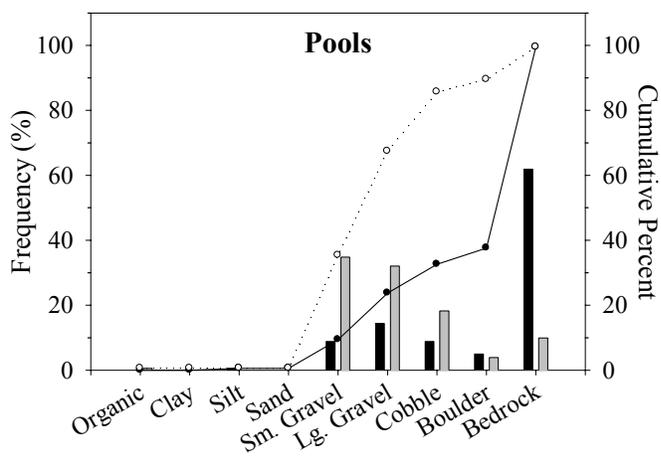
<b>Large Woody Debris Size</b>	<b>Pieces per km</b>
< 5 m long, 10 cm - 55 cm diameter	4
< 5 m long, > 55 cm diameter	0
> 5 m long, 10 cm - 55 cm diameter	6
> 5 m long, > 55 cm diameter	0
Total:	10

<b>Riparian Width</b>	<b>Total Width* (m)</b>	<b>Left &amp; Right Width ** (m)</b>
Mean	16	2
Maximum	26	9
75th Percentile	16	2
25th Percentile	13	1
Minimum	10	0.1

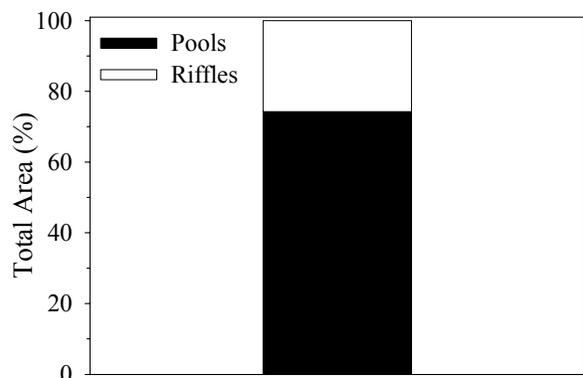
\*Left riparian, right riparian, and bankfull channel widths were added together for calculations

\*\*Left and right riparian measurements were grouped (not added) together for calculations

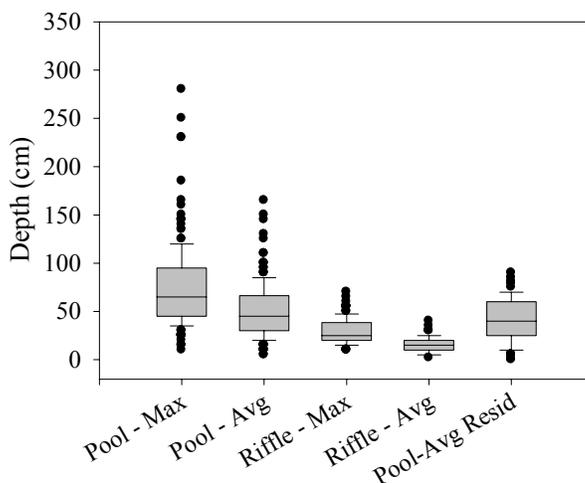
<b>Rosen's Channel Type</b>	<b>Frequency (%)</b>	<b>Other Stream Attributes</b>	
A	0	Mean Bankfull Channel Width (m)	12
B	83	Mean Channel Gradient (%)	2
C	0	Median Water Temperature (C)	20
D	0		
E	0		
F	17		
G	0		



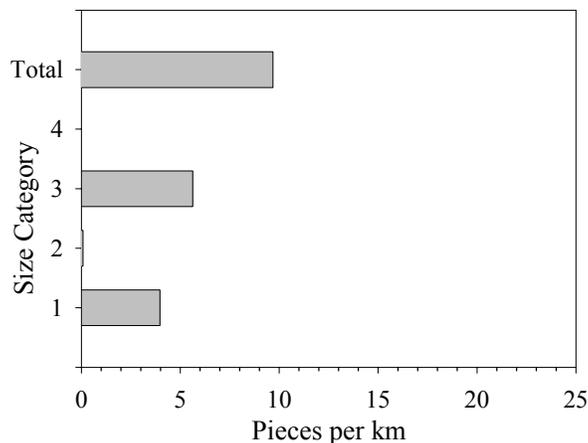
Frequency (percent) and cumulative percent of dominant and subdominant substrate occurrence for pools and riffles in stream section 000511 through 000519, summer 2006.



Estimated area of stream section 000511 through 000519 in pools and riffles as calculated using BVET techniques, summer 2006.



Maximum and average depths and residual pool depths for pools and riffles in stream section 000511 through 000519, summer 2006. The top and bottom of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data.



LWD per kilometer in stream section 000511 through 000519, summer 2006. Y-axis labels are LWD size classes described below.  
 Size 1: < 5 m long, 10-55 cm diameter  
 Size 2: < 5 m long, > 55 cm diameter  
 Size 3: > 5 m long, 10-55 cm diameter  
 Size 4: > 5 m long, > 55 cm diameter

Stream features found on stream section 000511 through 000519, BVET habitat survey, summer 2006. Distance is meters from start of survey.

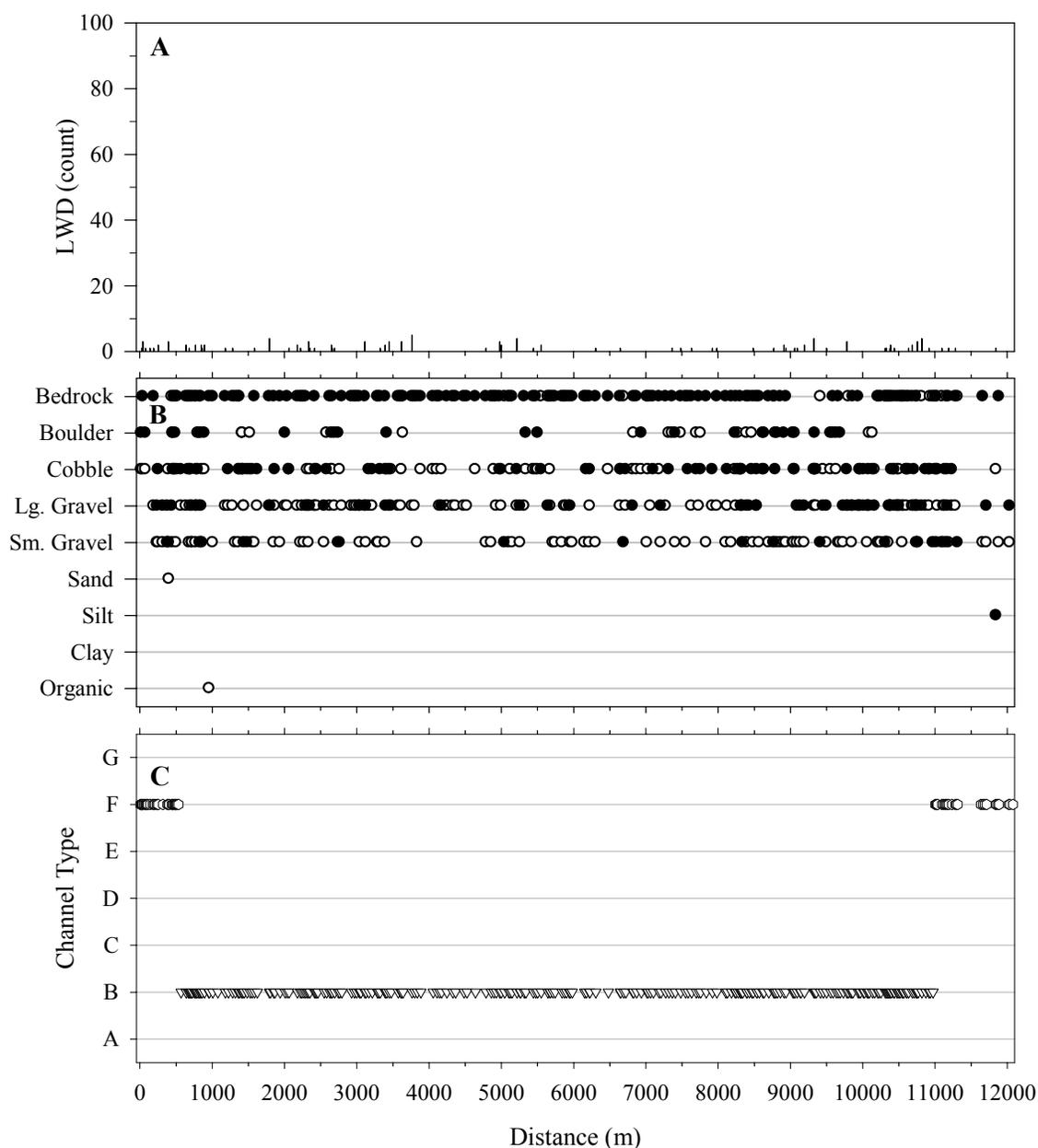
Feature	Distance (m)	Width (m)	In/Out	Comments
NHD_ID	6.7			11010005000511
SEEP	24.3		In Right	
SCH	46.3	1	In Left	
UNGR	61.8			
UNGR	94.5			
SEEP	116.3	0.5	In Right	
OTR	128.2			water flows backwards into large pool, possibly due to seep
UNGR	176.9			
SCH	253.1		Out Left	dry
UNGR	491.7			
UNGR	534.3			
SCH	735.4		In Left	dry
UNGR	755.4			Change to NHDID 11010005000512 was missed, this is an estimated placement of the change based on the map
NHD_ID	755.4			11010005000512
SCH	780.9	5	Out Left	
UNGR	953.1			
OTR	1006.5			rock shelf
UNGR	1077.7			
SCH	1199.9		In Left	dry
SCH	1362.5	2	In Right	
SCH	1381		Out Left	dry
UNGR	1404			
SCH	1541.9	2	In Left	dry, picture 135
TRIB	1562.3		In Right	NHDID 003434, dry, picture 137, NHDID Determined after survey in office and may not be accurate
TRIB	1713.2		In Right	NHDID unknown, dry, NHDID Determined after survey in office and may not be accurate
SEEP	1740.4		In Right	in on right
TRIB	2039		In Left	NHDID 003435, Picture 139, dry, survey paused at end of dat 4:52
SCH	2225.3		In Right	dry
UNGR	2462.7			
SCH	2626.6		In Right	dry
SCH	2786		Out Right	dry
TRIB	2922.3	0.5	In Left	photo #140 000943
NHD_ID	2928.1			11010005000513

Feature table continued.

Feature	Distance (m)	Width (m)	In/Out	Comments
SCH	2984.4	1	In Left	flowing
SCH	3036.9	1	In Right	flowing
SCH	3058.8		Out Left	dry
UNGR	3058.9			
SEEP	3130.3	0.1	In Left	trickle
SCH	3215.5		Out Right	dry
TRIB	3432.9		In Right	picture # 141 nhdid 003447
SEEP	3609.7	10	In Right	intermittent trickle
TRIB	4076.3	1	In Left	nhdid 003475 pictures 148-150
SEEP	4144.6	0.5	In Left	trickle
TRIB	4339.4	0.5	In Right	picture 151 nhdid 003454
SEEP	4507.4	0.1	In Right	trickle
SCH	4816.5		In Right	dry
FORD	4923.8			atv ford next to bridge picture 152
BRG	4927.9			dirt road, Falling Creek Road, picture 153
SCH	5073.4		In Left	dry
SCH	5167.1		Out Left	dry
UNGR	5266.9			
SCH	5313.9		In Left	dry
TRIB	5314		In Left	picture 155 nhdid 003470
SCH	5341.7		Out Left	dry
FORD	5715.5			trail, pictures 156&157
SCH	6193.1		In Right	dry
SCH	6230		Out Right	dry
TRIB	6438.1	1	In Right	nhdid 000934 picture 158
TRIB	6546.1	2	In Left	nhdid 000942 picture 160
SEEP	6588.8		In Right	spring
NHD_ID	6644.2			11010005000514
FORD	6653.7			trail, picture 161&162
NHD_ID	6722.3			11010005000515
FORD	7506.8			trail, picture 164
TRIB	7548.8	0.5	In Left	picture 165 nhdid000941
SCH	7709.6		In Left	dry
SCH	7753.4	0.5	Out Left	flowing
SCH	7875.7	3	In Right	flowing
SCH	7920.9		Out Right	dry
SEEP	8028.9		In Left	trickle
SEEP	8208.9		In Right	
SCH	8215.1	1	In Right	
SCH	8257.8		In Right	
UNGR	9144.4			

Feature table continued.

Feature	Distance (m)	Width (m)	In/Out	Comments
SCH	9257.7	1	In Right	
SCH	9329		Out Right	
TRIB	9729.9	1	In Right	NHDID 000941 Picture 169
NHD_ID	9732.4			11010005000516
UNGR	9834.8			
FALL	9847.9			picture 170
FORD	9848			
UNGR	10025			
FORD	10123			trail, Picture 172
FORD	10225			trail, Pictures 173-174
FALL	10520			picture 177
SCH	10564	1	In Right	
SCH	10682	0.1	Out Left	picture 178
SCH	10768		Out Left	
FORD	10829			trail, photos 179-180
TRIB	10900		In Left	nhdid 003496 picture 181
NHD_ID	10918			11010005000517
FORD	10930			trail, photos 182-183
TRIB	11160	1	In Left	man made dam to block off trib pic 185 000940
NHD_ID	11173			11010005000518
FORD	11232			private dirt road, photos 186-187
UNGR	11297			
TRIB	11308		In Right	photo 188
SCH	11381		In Left	dry
SCH	11410		In Right	
SCH	11480		Out Right	
SCH	11505		Out Left	
UNGR	11635			
NHD_ID	11635			11010005000519
UNGR	11688			
UNGR	11841			
UNGR	11869			
UNGR	12020			
UNGR	12079			photo 189, end at barbed wire fence on private property 6-12-06 11:42



Distribution and abundance of LWD, distribution of substrates, and distribution of Rosgen's channel types (Rosgen 1996) in stream section 000511 through 000519, summer 2006. LWD, substrate, and channel type were recorded for each habitat unit in the stream. X-axis indicates distance upstream from the confluence with Richland Creek. Vertical bars on (A) indicate total count of LWD; open circles represent the amount of the total LWD that was >5 m in length, >55 cm in diameter (size 4). Closed circles on (B) are dominant substrates, open circles are subdominant substrates. See Appendix A for substrate sizes. See Appendix A for channel type descriptions from (C).

Photos taken on stream section 000511 through 000519, during BVET habitat survey, summer 2006. Distance is meters from start of survey.

Unit Type	Unit Number	Distance (m)	Comments
R	14	236.5	
R	4	489.9	
SCH		1541.9	dry, picture 135
TRIB		1562.3	NHDID 003434, dry, picture 137, NHDID Determined after survey in office and may not be accurate
R	24	1867.2	
TRIB		2039	NHDID 003435, Picture 139, dry, survey paused at end of dat 4:52
TRIB		2922.3	photo #140 000943
TRIB		3432.9	picture # 141 nhdid 003447
R	15	3447.2	
C	17	3639.6	
TRIB		4076.3	nhdid 003475 pictures 148-150
TRIB		4339.4	picture 151 nhdid 003454
FORD		4923.8	atv ford next to bridge picture 152
BRG		4927.9	dirt road, Falling Creek Road, picture 153
R	25	4929.9	
TRIB		5314	picture 155 nhdid 003470
FORD		5715.5	trail, pictures 156&157
TRIB		6438.1	nhdid 000934 picture 158
R	35	6480.7	
TRIB		6546.1	nhdid 000942 picture 160
FORD		6653.7	trail, picture 161&162
R	39	6937.6	
FORD		7506.8	trail, picture 164
TRIB		7548.8	picture 165 nhdid000941
R	46	7698.5	
R	55	8536.4	
R	65	9454.9	
TRIB		9729.9	NHDID 000941 Picture 169
FALL		9847.9	picture 170
R	71	9958.1	
FORD		10123	trail, Picture 172
R	75	10251	
R	75	10367	
FALL		10520	picture 177
SCH		10682	picture 178
FORD		10829	trail, photos 179-180

Photo table continued.

<b>Unit Type</b>	<b>Unit Number</b>	<b>Distance (m)</b>	<b>Comments</b>
TRIB		10900	nhdid 003496 picture 181
FORD		10930	trail, photos 182-183
R	85	11004	farm and residence on either side of stream
TRIB		11160	man made dam to block off trib pic 185 000940
FORD		11232	private dirt road, photos 186-187
TRIB		11308	photo 188
UNGR		12079	photo 189, end at barbed wire fence on private property 6-12-06 11:42
UNGR		12079	end at barbed wire fence on private property 6-12-06 11:42

<b>Stream:</b>	Bailey Cole Creek - 11010005000942
District	Bayou
USGS Quadrangle	Smyrna
6 <sup>th</sup> Level HUC	110100050308
Survey Date	06/15/06
Downstream Starting Point	confluence with Falling Water Creek
Total Distance Surveyed (km)	3.6

	<b>Pools</b>	<b>Riffles</b>
Percent of Total Stream Area	66	34
Total Area (m <sup>2</sup> )	3320 ± 623	1691 ± 387
Correction Factor Applied	0.94	1.23
Number of Paired Samples	11	4
Total Count	111	42
Number per km	31	12
Mean Area (m <sup>2</sup> )	30	40
Mean Maximum Depth (cm)	25	10
Mean Average Depth (cm)	16	4
Mean Residual Depth (cm)	11	--
Percent Inventoried as Glides	11	--
Percent Inventoried as Runs	--	0
Percent Inventoried as Cascades	--	0
Percent with >35% Fines	0	0

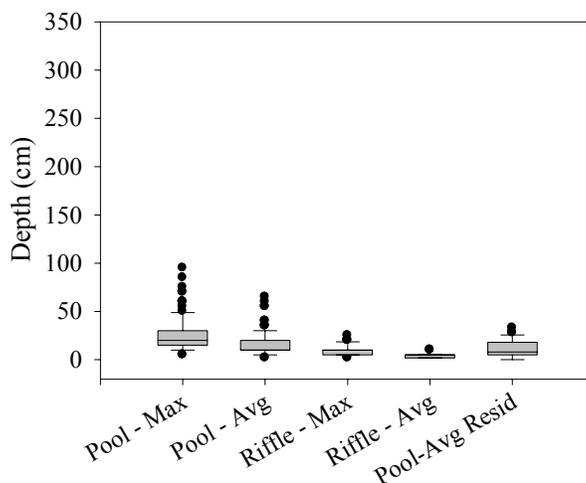
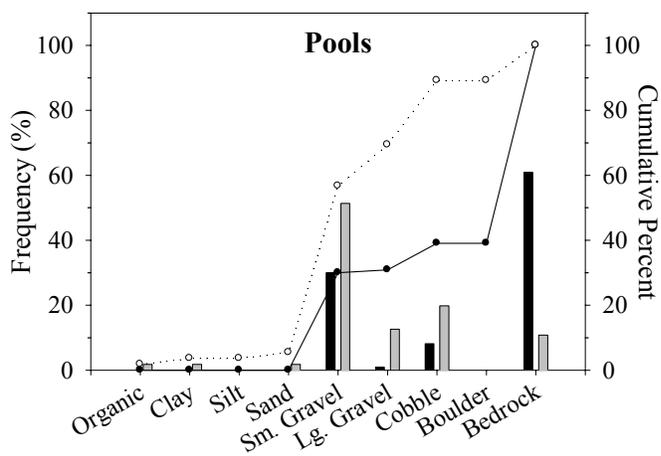
<b>Large Woody Debris Size</b>	<b>Pieces per km</b>
< 5 m long, 10 cm - 55 cm diameter	0
< 5 m long, > 55 cm diameter	0
> 5 m long, 10 cm - 55 cm diameter	1
> 5 m long, > 55 cm diameter	0
Total:	2

<b>Riparian Width</b>	<b>Total Width* (m)</b>	<b>Left &amp; Right Width ** (m)</b>
Mean	8	1
Maximum	14	3
75th Percentile	9	2
25th Percentile	5	0.4
Minimum	5	0.2

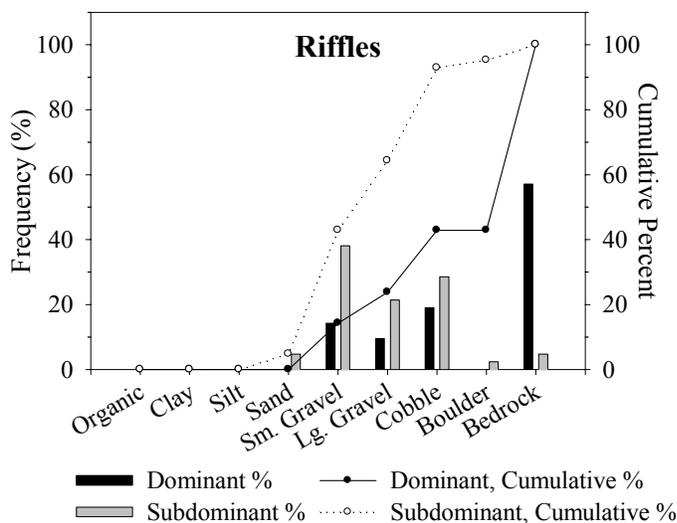
\*Left riparian, right riparian, and bankfull channel widths were added together for calculations

\*\*Left and right riparian measurements were grouped (not added) together for calculations

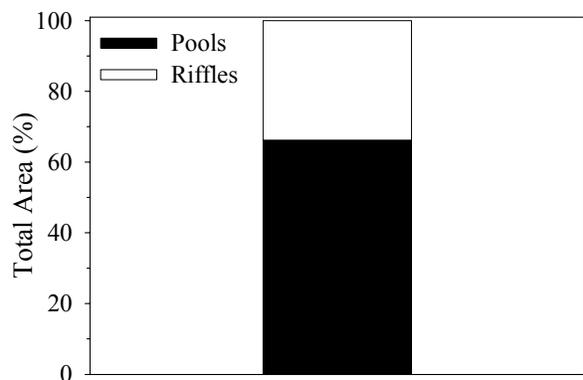
<b>Rosen's Channel Type</b>	<b>Frequency (%)</b>	<b>Other Stream Attributes</b>	
A	0	Mean Bankfull Channel Width (m)	6
B	62	Mean Channel Gradient (%)	4
C	0	Median Water Temperature (C)	20
D	0		
E	0		
F	38		
G	0		



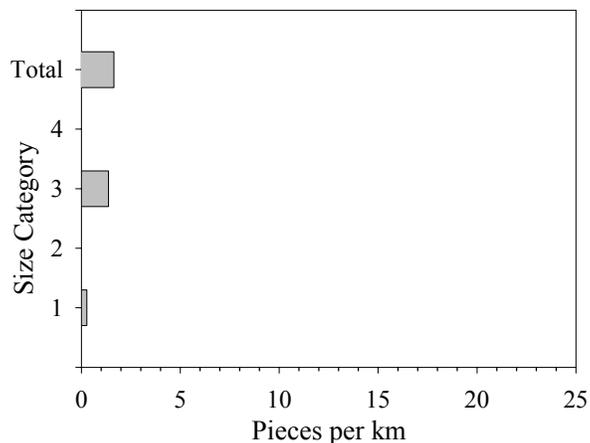
Maximum and average depths and residual pool depths for pools and riffles in stream section 000942, summer 2006. The top and bottom of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data.



Frequency (percent) and cumulative percent of dominant and subdominant substrate occurrence for pools and riffles in stream section 000942, summer 2006.



Estimated area of stream section 000942 in pools and riffles as calculated using BVET techniques, summer 2006.



LWD per kilometer in stream section 000942, summer 2006. Y-axis labels are LWD size classes described below.

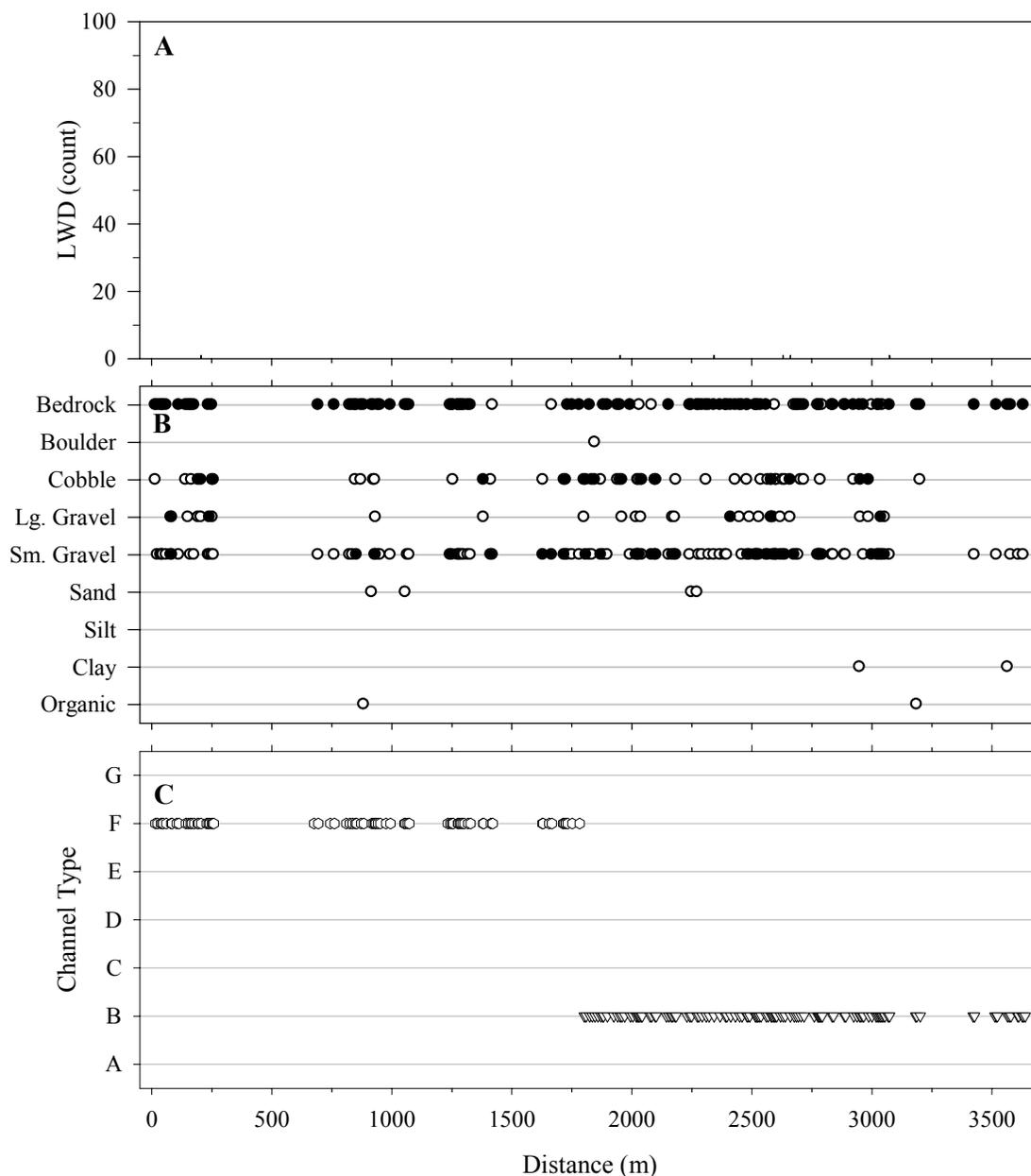
- Size 1: < 5 m long, 10-55 cm diameter
- Size 2: < 5 m long, > 55 cm diameter
- Size 3: > 5 m long, 10-55 cm diameter
- Size 4: > 5 m long, > 55 cm diameter

Stream features found on stream section 000942, BVET habitat survey, summer 2006. Distance is meters from start of survey.

Feature	Distance (m)	Width (m)	In/Out	Comments
NHD_ID	15.4			11010005000942
UNGR	103.9			
TRIB	151.5	0.7	In Right	photo 259, trib not on map
UNGR	191.5			
UNGR	228.3			
SCH	246.4		In Right	dry
SCH	375.3		Out Left	dry
TRIB	634.7		In Right	dry pic 262
UNGR	676.2			
UNGR	743.6			
UNGR	810.2			
TRIB	858.4		In Right	dry, photo 263
TRIB	882.4	1	In Right	wet
UNGR	976			
UNGR	1052.3			
UNGR	1233.1			
UNGR	1380			
UNGR	1627.4			
UNGR	1655.8			
UNGR	1713.9			
SEEP	1771.9	1	In Right	wet
UNGR	1858.9			
UNGR	1878.1			
UNGR	1924.2			
UNGR	1970			
UNGR	2003.9			
TRIB	2039.4	0.5	In Left	pic 266
UNGR	2075.5			
UNGR	2144.5			
UNGR	2164.4			
SEEP	2211.3	4	In Left	wet
UNGR	2229.2			
FALL	2242.5			pics 267-269
SEEP	2278.3	6	In Left	wet
TRIB	2368.6	1	In Right	pic 270
OTR	2431.3			1.2 meter high rock ledge, p 272
TRIB	2675.1	1	In Right	main split towards end of creek p 274
UNGR	2759.8			
SEEP	2781.9	1	In Left	wet

Feature table continued.

Feature	Distance (m)	Width (m)	In/Out	Comments
UNGR	2789.1			
UNGR	2938.1			
TRIB	2959.7		In Right	pic 284
UNGR	2960.3			
SEEP	2966.8	0.4	In Right	wet
UNGR	3018.1			
UNGR	3035.3			
UNGR	3050.9			
UNGR	3068.2			
TRIB	3078.6	0.1	In Right	pic 285
UNGR	3182.5			
FALL	3188.7			5
UNGR	3422			
UNGR	3512.5			
UNGR	3522.2			
UNGR	3571.4			
UNGR	3607.4			
UNGR	3626.4			
TRIB	3637.8		In Right	dry, pic290
UNGR	3637.8			



Distribution and abundance of LWD, distribution of substrates, and distribution of Rosgen's channel types (Rosgen 1996) in stream section 000942, summer 2006. LWD, substrate, and channel type were recorded for each habitat unit in the stream. X-axis indicates distance upstream from confluence with Falling Water Creek. Vertical bars on (A) indicate total count of LWD; open circles represent the amount of the total LWD that was >5 m in length, >55 cm in diameter (size 4). Closed circles on (B) are dominant substrates, open circles are subdominant substrates. See Appendix A for substrate sizes. See Appendix A for channel type descriptions from (C).

Photos taken on stream section 000942, during BVET habitat survey, summer 2006. Distance is meters from start of survey.

<b>Unit Type</b>	<b>Unit Number</b>	<b>Distance (m)</b>	<b>Comments</b>
TRIB		151.5	photo 259, trib not on map
R	6	241.2	photo 261
TRIB		634.7	dry pic 262
TRIB		858.4	dry, photo 263
TRIB		882.4	wet
R	16	1801.4	photo 267
TRIB		2039.4	pic 266
FALL		2242.5	pics 267-269
TRIB		2368.6	pic 270
R	26	2412.5	pic 271
OTR		2431.3	1.2 meter high rock ledge, photo 272
TRIB		2675.1	main split towards end of creek photo 274
TRIB		2959.7	pic 284
TRIB		3078.6	pic 285
FALL		3188.7	6 m height
TRIB		3637.8	dry, pic290

<b>Stream:</b>	Bobtail Creek - 11010005000945-0949
District	Buffalo
USGS Quadrangle	Moore
6 <sup>th</sup> Level HUC	110100050309
Survey Date	06/14/06
Downstream Starting Point	at confluence with Richland Creek
Total Distance Surveyed (km)	7.5

	<b>Pools</b>	<b>Riffles</b>
Percent of Total Stream Area	62	38
Total Area (m <sup>2</sup> )	10609 ± 1348	6570 ± 2765
Correction Factor Applied	0.90	1.04
Number of Paired Samples	18	13
Total Count	92	66
Number per km	12	9
Mean Area (m <sup>2</sup> )	115	100
Mean Maximum Depth (cm)	55	25
Mean Average Depth (cm)	33	13
Mean Residual Depth (cm)	26	--
Percent Inventoried as Glides	36	--
Percent Inventoried as Runs	--	0
Percent Inventoried as Cascades	--	0
Percent with >35% Fines	0	0

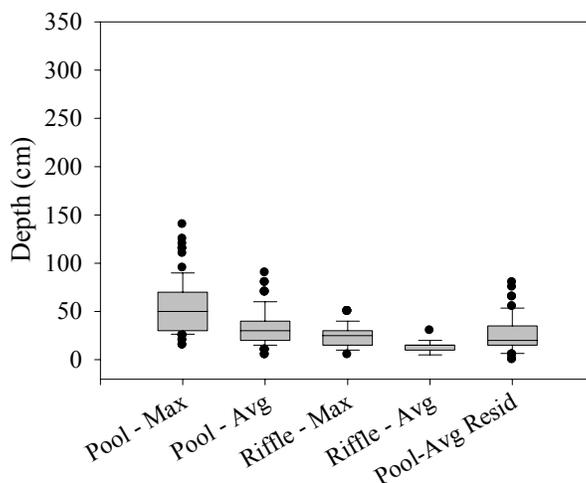
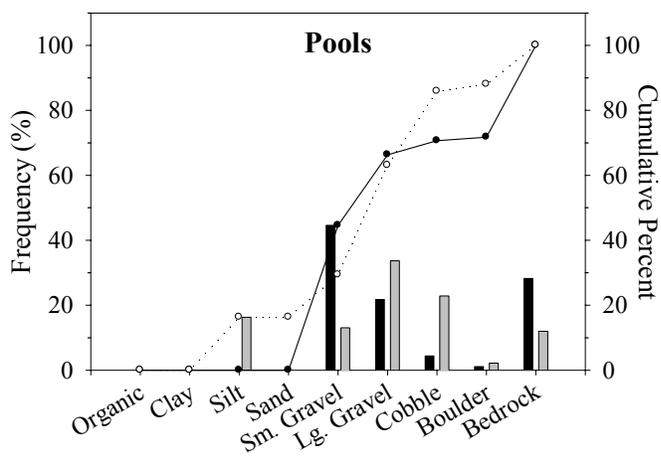
<b>Large Woody Debris Size</b>	<b>Pieces per km</b>
< 5 m long, 10 cm - 55 cm diameter	3
< 5 m long, > 55 cm diameter	0
> 5 m long, 10 cm - 55 cm diameter	11
> 5 m long, > 55 cm diameter	1
Total:	15

<b>Riparian Width</b>	<b>Total Width* (m)</b>	<b>Left &amp; Right Width ** (m)</b>
Mean	11	1
Maximum	17	8
75th Percentile	14	2
25th Percentile	9	0.5
Minimum	7	0.1

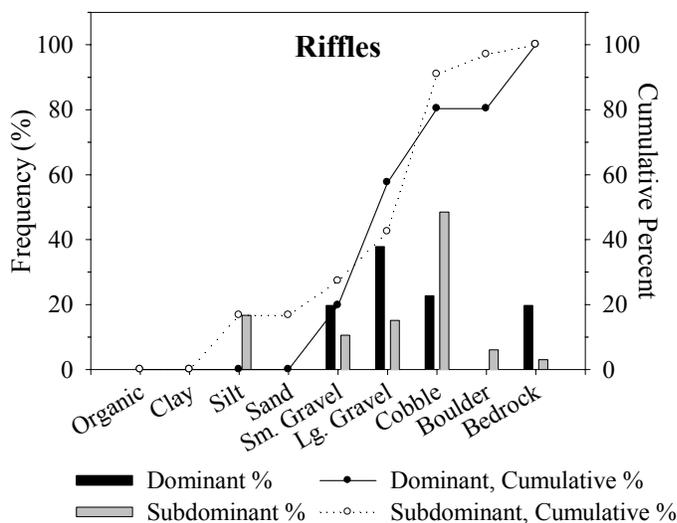
\*Left riparian, right riparian, and bankfull channel widths were added together for calculations

\*\*Left and right riparian measurements were grouped (not added) together for calculations

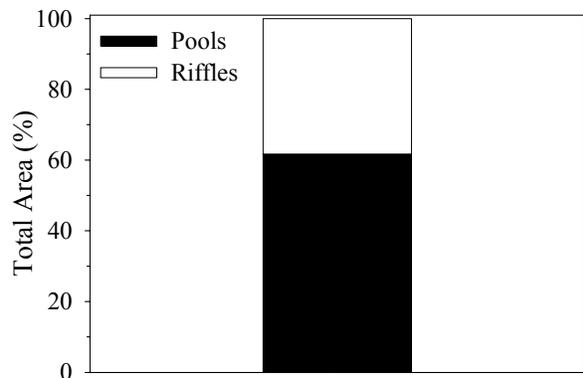
<b>Rosen's Channel Type</b>	<b>Frequency (%)</b>	<b>Other Stream Attributes</b>	
A	0	Mean Bankfull Channel Width (m)	8
B	100	Mean Channel Gradient (%)	5
C	0	Median Water Temperature (C)	20
D	0		
E	0		
F	0		
G	0		



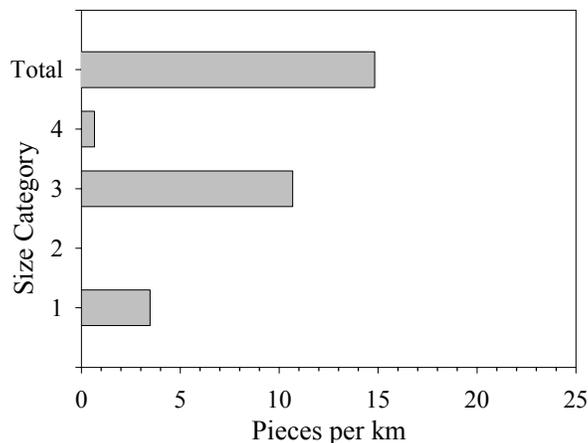
Maximum and average depths and residual pool depths for pools and riffles in stream section 000945 through 000949, summer 2006. The top and bottom of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data.



Frequency (percent) and cumulative percent of dominant and subdominant substrate occurrence for pools and riffles in stream section 000945 through 000949, summer 2006.



Estimated area of stream section 000945 through 000949 in pools and riffles as calculated using BVET techniques, summer 2006.



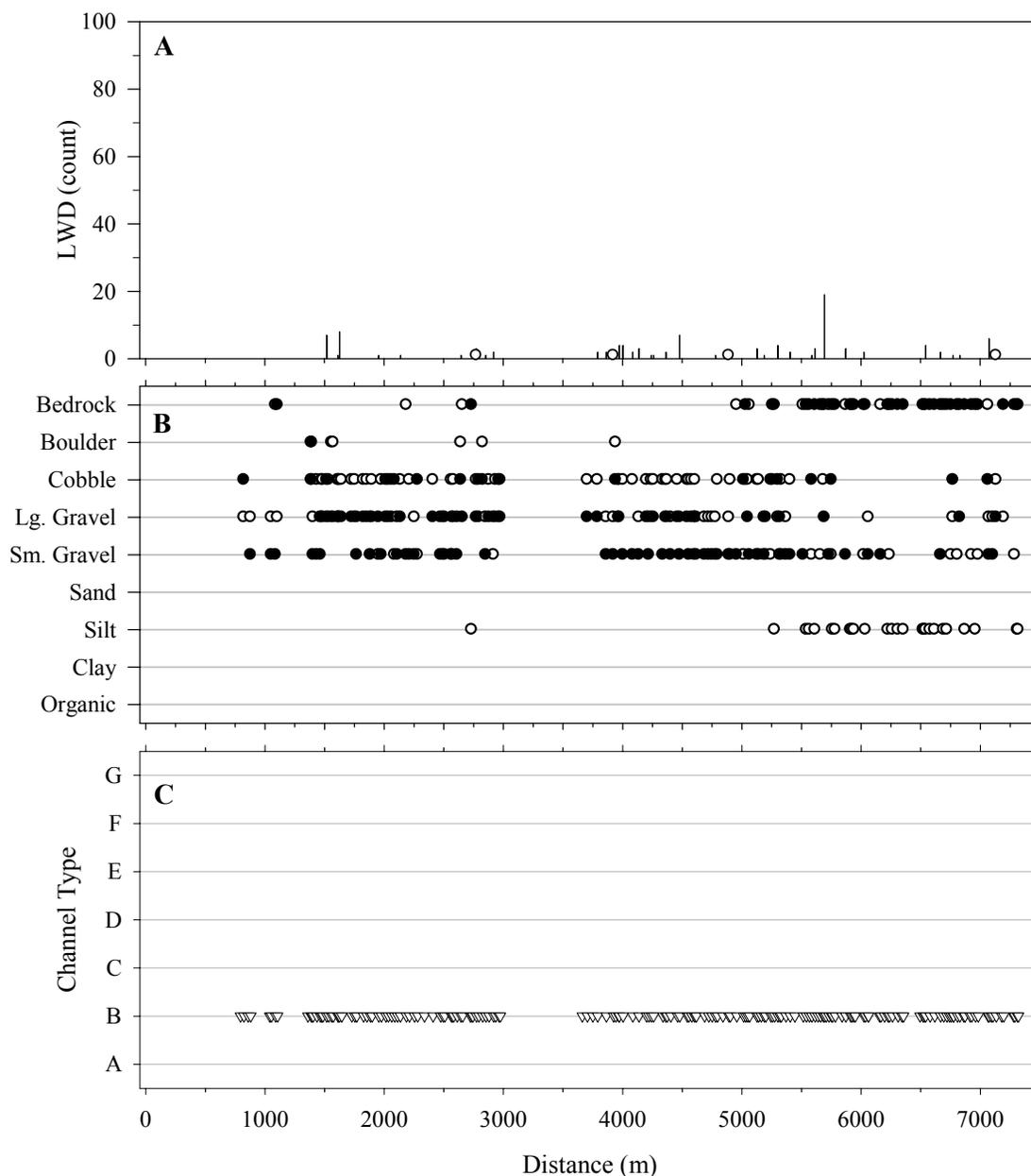
LWD per kilometer in stream section 000945 through 000949, summer 2006. Y-axis labels are LWD size classes described below.  
 Size 1: < 5 m long, 10-55 cm diameter  
 Size 2: < 5 m long, > 55 cm diameter  
 Size 3: > 5 m long, 10-55 cm diameter  
 Size 4: > 5 m long, > 55 cm diameter

Stream features found on stream section 000945 through 000949, BVET habitat survey, summer 2006. Distance is meters from start of survey.

Feature	Distance (m)	Width (m)	In/Out	Comments
FORD	8.4			atv trail/ ford
TRIB	635	0.3	In Right	small
UNGR	794.9			
NHD_ID	794.9			11010005000945
UNGR	859			
UNGR	1040.3			
SEEP	1054.4	0.3	In Right	moderate flow
SEEP	1089.2	0.6	In Right	moderate flow
UNGR	1360.4			distance for change to NHD ID 11010005000946 is approximate and based off map distance because trib 000957 was not seen
NHD_ID	1360.4			11010005000946; distance for change to NHD ID 11010005000946 is approximate and based off map distance because trib 000957 was not seen
FORD	1772.3			1772.3 atv trail crossing
FORD	2133.7			atv crossing
TRIB	2241.5	4	In Left	trib 000956, short bobtail hollow
NHD_ID	2255.4			11010005000947
UNGR	2336.9			1772.3 atv trail crossing
NHD_ID	2336.9			11010005000948; 1772.3 atv trail crossing
TRIB	2351	2.5	In Left	dry, trib 000953 little bobtail creek
SEEP	2554	1	In Right	spring
UNGR	2723.9			
UNGR	2743.2			
SCH	2985	1.5	In Left	dry
SCH	3025	1.5	Out Left	dry
UNGR	3662			2710m 2950m 2767m 2850m standing pool with fish
SCH	3705	1.5	In Right	wet
UNGR	3750.5			
SCH	3818	1.5	Out Right	none
TRIB	4162	0.5	In Right	dry
FORD	4171			overgrown atv trail
NHD_ID	4478.8			11010005000949
TRIB	4480	4	In Right	trib 000951
UNGR	4842			
TRIB	4957	1	In Right	dry, 003432
UNGR	5163			
SCH	5209	5	In Left	dry

Feature table continued.

Feature	Distance (m)	Width (m)	In/Out	Comments
SCH	5245	5	In Left	dry
SCH	5280	5	Out Left	dry
SCH	5288	5	Out Left	dry
UNGR	5445			
UNGR	5638.3			
SCH	5665	2	In Right	wet
UNGR	5706.2			
TRIB	5725	1.5	In Left	dry, 003436
SCH	5730	2	Out Right	dry
SCH	5784	1	In Right	wet
UNGR	5841			
SCH	5863	1	Out Right	wet
UNGR	5951			
TRIB	5996	2	In Right	dry, 003440
UNGR	6059			
UNGR	6154.5			
UNGR	6195.9			
UNGR	6343.6			
SCH	6356.8	3	In Right	dry
SCH	6399.7	3	Out Right	dry
SCH	6439	2	In Left	dry
SCH	6478	2	Out Left	dry
UNGR	6494.1			
TRIB	6589	1	In Left	dry, unnamed
UNGR	6742			
UNGR	6778			
UNGR	6862			
TRIB	6912	2.5	In Right	dry, trib 003451
UNGR	6914			
SCH	7050	2	In Left	dry
UNGR	7091.9			
UNGR	7178.9			
UNGR	7279.7			
TRIB	7318.4	2.5	In Right	dry, trib 003464
TRIB	7483	3	In Right	dry, trib 003463
UNGR	7483			trib on rt, end of 11010005000949 start of 11010005000950
NHD_ID	7483			11010005000949; trib on rt, end of 11010005000949 start of 11010005000950



Distribution and abundance of LWD, distribution of substrates, and distribution of Rosgen's channel types (Rosgen 1996) in stream section 000945 through 000949, summer 2006. LWD, substrate, and channel type were recorded for each habitat unit in the stream. X-axis indicates distance upstream from confluence with Richland Creek. Vertical bars on (A) indicate total count of LWD; open circles represent the amount of the total LWD that was >5 m in length, >55 cm in diameter (size 4). Closed circles on (B) are dominant substrates, open circles are subordinate substrates. See Appendix A for substrate sizes. See Appendix A for channel type descriptions from (C).

Photos taken on stream section 000945 through 000949, during BVET habitat survey, summer 2006. Distance is meters from start of survey.

Unit Type	Unit Number	Distance (m)	Comments
FORD		8.4	atv trail/ ford
R	3	1435.4	bankfull max/avg: 60/35
R	8	1729.8	atv trail crossing 50/30
FORD		2133.7	atv crossing
R	13	2137.1	bankfull max/avg: 40/30
TRIB		2241.5	trib 000956, short bobtail hollow
UNGR		2336.9	1772.3 atv trail crossing
UNGR		2336.9	1772.3 atv trail crossing
TRIB		2351	dry, trib 000953 little bobtail creek
R	18	2564	bankfull max/avg: 55/30
R	23	2917.6	bankfull max/avg: 50/35
R	28	3941.8	bankfull max/avg: 40/25
FORD		4171	overgrown atv trail
R	33	4338.3	bankfull max/avg: 40/35
TRIB		4480	trib 000951
R	38	4607	bankfull max/avg: 55/30
TRIB		4957	dry, 003432
R	43	5016	bankfull max/avg: 50/30
R	50	5405	bankfull max/avg: 45/20
R	53	5683	bankfull max/avg: 35/20
TRIB		5725	dry, 003436
TRIB		5996	dry, 003440
R	58	6541.8	bankfull max/avg: 20/10
TRIB		6912	dry, trib 003451
R	63	6960.3	bankfull max/avg: 20/15

<b>Stream:</b>	Big Devils Fork - 11010005003577, 003580, 003582
District	Buffalo
USGS Quadrangle	Moore
6 <sup>th</sup> Level HUC	110100050304
Survey Date	06/10/06
Downstream Starting Point	start at confluence with trib 11010005000893
Total Distance Surveyed (km)	3.5

	<b>Pools</b>	<b>Riffles</b>
Percent of Total Stream Area	53	47
Total Area (m <sup>2</sup> )	3327 ± 491	2971 ± 103
Correction Factor Applied	0.99	1.00
Number of Paired Samples	8	7
Total Count	42	36
Number per km	12	10
Mean Area (m <sup>2</sup> )	79	83
Mean Maximum Depth (cm)	68	23
Mean Average Depth (cm)	38	10
Mean Residual Depth (cm)	34	--
Percent Inventoried as Glides	10	--
Percent Inventoried as Runs	--	0
Percent Inventoried as Cascades	--	0
Percent with >35% Fines	0	0

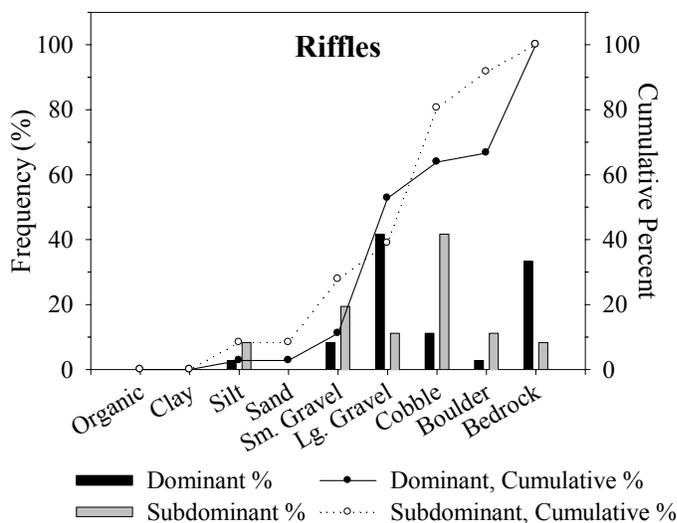
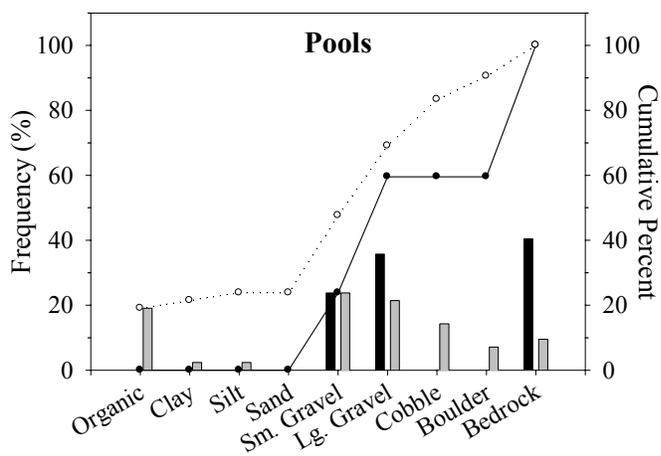
<b>Large Woody Debris Size</b>	<b>Pieces per km</b>
< 5 m long, 10 cm - 55 cm diameter	1
< 5 m long, > 55 cm diameter	0
> 5 m long, 10 cm - 55 cm diameter	5
> 5 m long, > 55 cm diameter	2
Total:	8

<b>Riparian Width</b>	<b>Total Width* (m)</b>	<b>Left &amp; Right Width ** (m)</b>
Mean	7	1
Maximum	12	7
75th Percentile	8	1
25th Percentile	6	0.4
Minimum	5	0.1

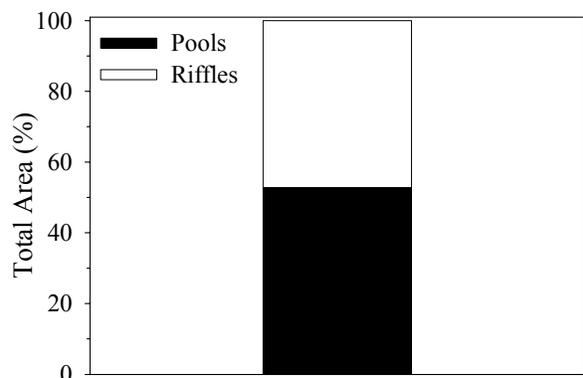
\*Left riparian, right riparian, and bankfull channel widths were added together for calculations

\*\*Left and right riparian measurements were grouped (not added) together for calculations

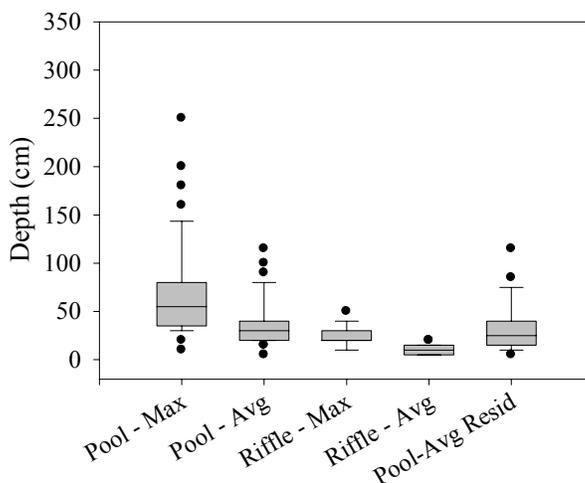
<b>Rosgen's Channel Type</b>	<b>Frequency (%)</b>	<b>Other Stream Attributes</b>	
A	0	Mean Bankfull Channel Width (m)	5
B	100	Mean Channel Gradient (%)	5
C	0	Median Water Temperature (C)	21
D	0		
E	0		
F	0		
G	0		



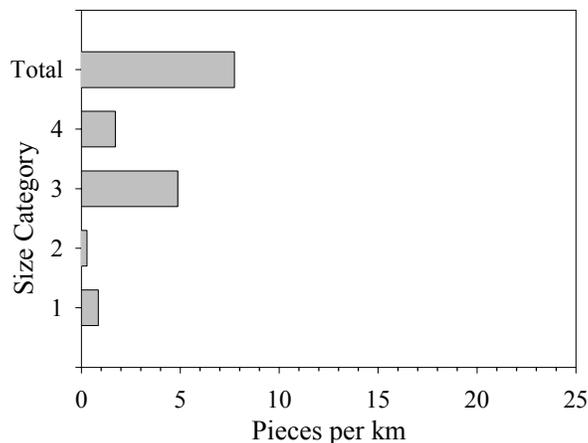
Frequency (percent) and cumulative percent of dominant and subdominant substrate occurrence for pools and riffles in stream section 003577 through 003582, summer 2006.



Estimated area of stream section 003577 through 003582 in pools and riffles as calculated using BVET techniques, summer 2006.



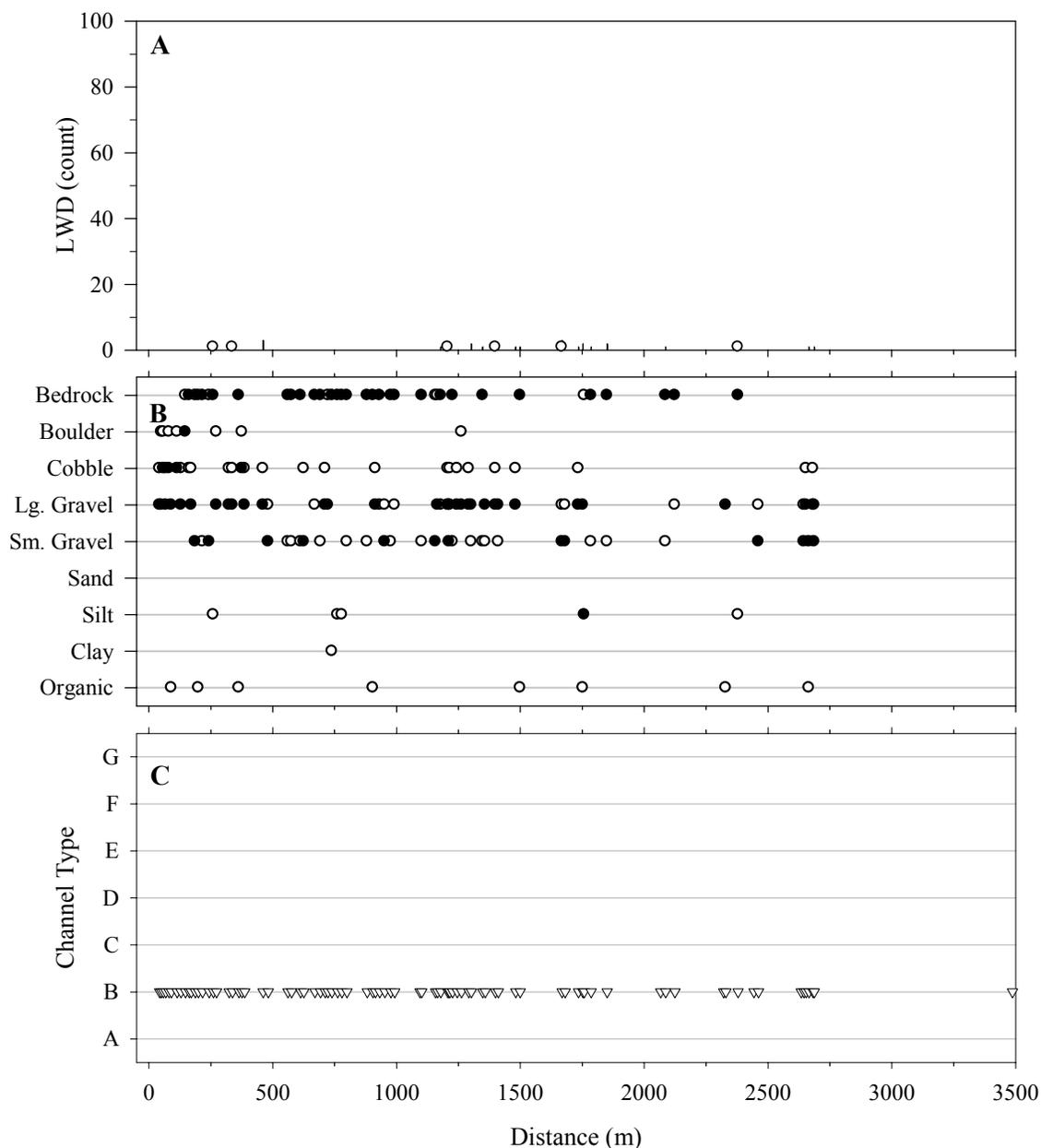
Maximum and average depths and residual pool depths for pools and riffles in stream section 003577 through 003582, summer 2006. The top and bottom of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data.



LWD per kilometer in stream section 003577 through 003582, summer 2006. Y-axis labels are LWD size classes described below.  
 Size 1: < 5 m long, 10-55 cm diameter  
 Size 2: < 5 m long, > 55 cm diameter  
 Size 3: > 5 m long, 10-55 cm diameter  
 Size 4: > 5 m long, > 55 cm diameter

Stream features found on stream section 003577 through 003582, BVET habitat survey, summer 2006. Distance is meters from start of survey.

Feature	Distance (m)	Width (m)	In/Out	Comments
				start at confluence with trib 11010005000893; road 16 to 1203 to 1200 to 1205, at 11 miles 1211 will be on left, turn right onto unmarked road to Hill Cemetary, at 0.3 miles roads fords Big Devil's Fork, at 0.4 miles park, hike 3487 meters downstream to trib 000893
TRIB		3.5	In Right	trib 11010005000893
NHD_ID	43.7			11010005003582
TRIB	144.5	1.5	In Left	unknown
TRIB	626.2	1	In Left	dry, unnamed, 2 stone mill wheels laying on trib bedrock
NHD_ID	992.6			11010005003580
TRIB	992.9	0.5	In Left	trib 11010005003304
UNGR	1094.4			
SCH	1549.8	1	In Left	dry
OTR	2005.1			atv trail/ ford
TRIB	2059.5	1	In Right	dry, unnamed
UNGR	2066.5			
UNGR	2321.3			
NHD_ID	2379.7			11010005003577; distance for location NHI ID # is approximate because trib 003257 was not seen
TRIB	2388.8	0.5	In Right	dry, unnamed
UNGR	2442.8			
UNGR	2634			trib 11010005003257 should be around 2500 meters but was not seen
UNGR	3487			



Distribution and abundance of LWD, distribution of substrates, and distribution of Rosgen's channel types (Rosgen 1996) in stream section 003577 through 003582, summer 2006. LWD, substrate, and channel type were recorded for each habitat unit in the stream. X-axis indicates distance upstream from confluence with tributary 000893. Vertical bars on (A) indicate total count of LWD; open circles represent the amount of the total LWD that was >5 m in length, >55 cm in diameter (size 4). Closed circles on (B) are dominant substrates, open circles are subdominant substrates. See Appendix A for substrate sizes. See Appendix A for channel type descriptions from (C).

Photos taken on stream section 003577 through 003582, during BVET habitat survey, summer 2006. Distance is meters from start of survey.

<b>Unit Type</b>	<b>Unit Number</b>	<b>Distance (m)</b>	<b>Comments</b>
TRIB			trib 11010005000893
R	3	81.9	
TRIB		144.5	unknown
R	8	260.2	
R	13	613	
TRIB		626.2	dry, unnamed, 2 stone mill wheels laying on trib bedrock
R	18	915.1	
TRIB		992.9	trib 11010005003304
R	23	1245.5	
R	28	1668.6	
R	33	2379.7	distance for location NHI ID # is approximate because trib 003257 was not seen
R		2379.7	11010005003577; distance for location NHI ID # is approximate because trib 003257 was not seen

<b>Stream:</b>	South Fork Little Red - 11010014000460-0464
District	Bayou
USGS Quadrangle	Rex
6 <sup>th</sup> Level HUC	110100140301 & 110100140302
Survey Date	06/01/06
Downstream Starting Point	unmarked (estimated) forest boundary 694 m downstream of ford off road 421
Total Distance Surveyed (km)	9.0

	<b>Pools</b>	<b>Riffles</b>
Percent of Total Stream Area	74	26
Total Area (m <sup>2</sup> )	92985 ± 30773	32093 ± 2457
Correction Factor Applied	0.96	0.99
Number of Paired Samples	12	8
Total Count	113	82
Number per km	13	9
Mean Area (m <sup>2</sup> )	823	391
Mean Maximum Depth (cm)	88	27
Mean Average Depth (cm)	54	14
Mean Residual Depth (cm)	44	--
Percent Inventoried as Glides	12	--
Percent Inventoried as Runs	--	4
Percent Inventoried as Cascades	--	0
Percent with >35% Fines	0	0

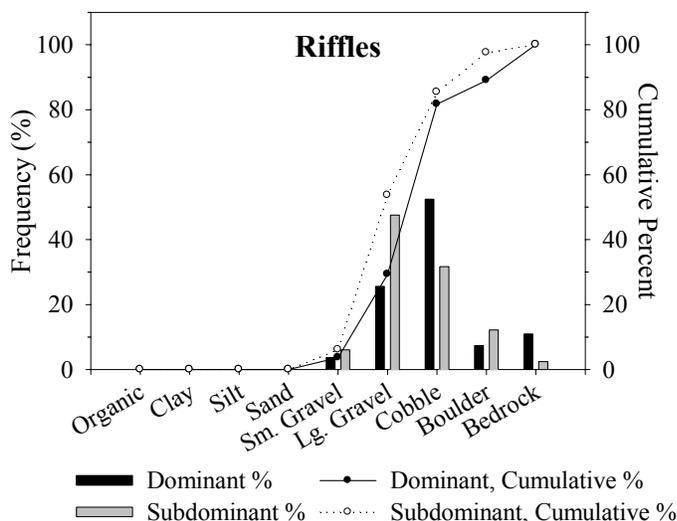
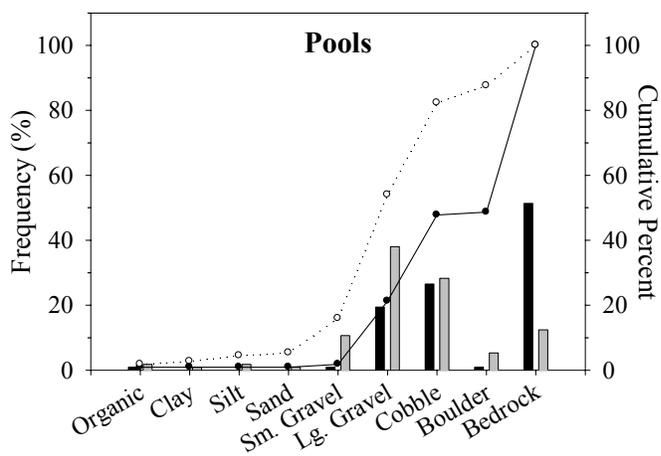
<b>Large Woody Debris Size</b>	<b>Pieces per km</b>
< 5 m long, 10 cm - 55 cm diameter	2
< 5 m long, > 55 cm diameter	0
> 5 m long, 10 cm - 55 cm diameter	6
> 5 m long, > 55 cm diameter	1
Total:	10

<b>Riparian Width</b>	<b>Total Width* (m)</b>	<b>Left &amp; Right Width ** (m)</b>
Mean	44	14
Maximum	117	50
75th Percentile	53	20
25th Percentile	23	1
Minimum	16	0.1

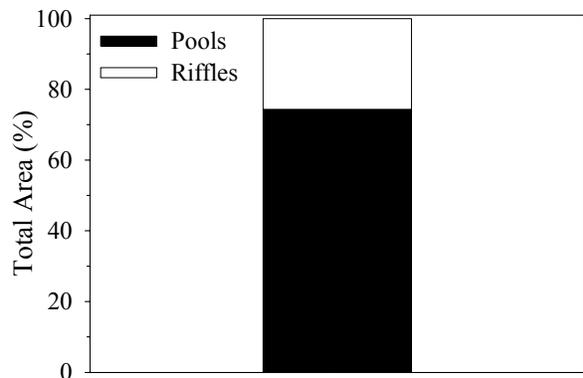
\*Left riparian, right riparian, and bankfull channel widths were added together for calculations

\*\*Left and right riparian measurements were grouped (not added) together for calculations

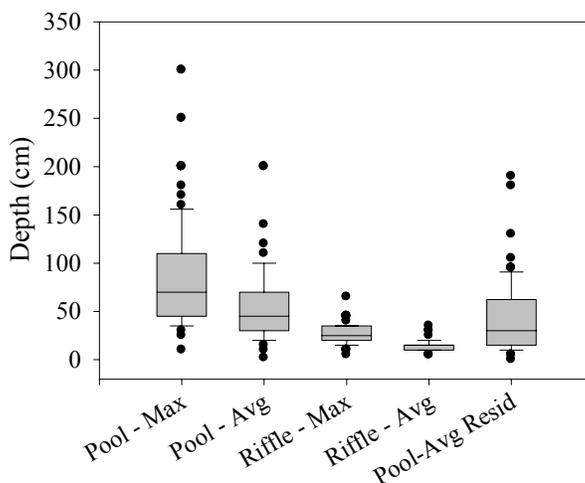
<b>Rosgen's Channel Type</b>	<b>Frequency (%)</b>	<b>Other Stream Attributes</b>	
A	0	Mean Bankfull Channel Width (m)	15
B	100	Mean Channel Gradient (%)	3
C	0	Median Water Temperature (C)	22
D	0		
E	0		
F	0		
G	0		



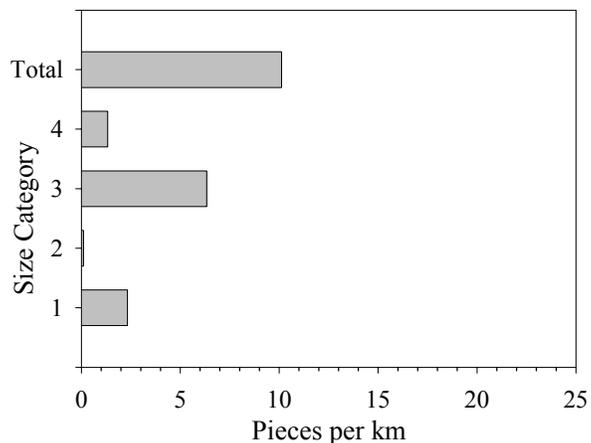
Frequency (percent) and cumulative percent of dominant and subdominant substrate occurrence for pools and riffles in stream section 000460 through 000464, summer 2006.



Estimated area of stream section 000460 through 000464 in pools and riffles as calculated using BVET techniques, summer 2006.



Maximum and average depths and residual pool depths for pools and riffles in stream section 000460 through 000464, summer 2006. The top and bottom of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data.



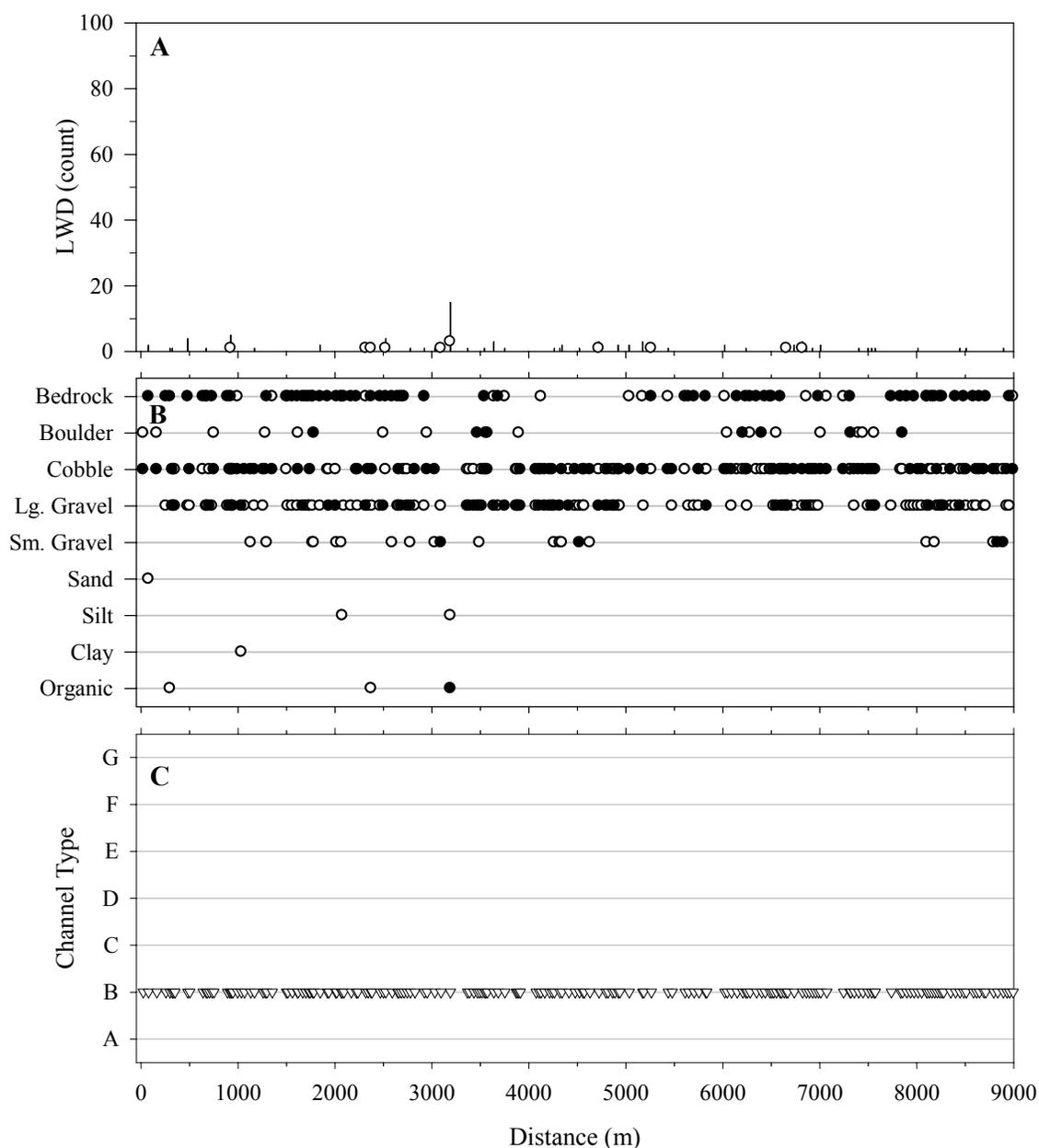
LWD per kilometer in stream section 000460 through 000464, summer 2006. Y-axis labels are LWD size classes described below.  
 Size 1: < 5 m long, 10-55 cm diameter  
 Size 2: < 5 m long, > 55 cm diameter  
 Size 3: > 5 m long, 10-55 cm diameter  
 Size 4: > 5 m long, > 55 cm diameter

Stream features found on stream section 000460 through 000464, BVET habitat survey, summer 2006. Distance is meters from start of survey.

Feature	Distance (m)	Width (m)	In/Out	Comments
NHD_ID	22.8	15		11010014000460; foot trail on left
TRIB	630	5	In Left	Brushy Creek
NHD_ID	672.3	5.5		11010014000461
OTR	694.1			road off of 421
SCH	888	3	In Right	
SCH	958.7	5	In Right	
TRIB	1526	2	In Right	dry
TRIB	1729	1.5	In Left	dry
SCH	1773	1.5	In Left	dry
SCH	1794	1.5	Out Left	dry
OTR	1911			road with ATVs on left
FORD	2019			Dirt Road 421
SCH	2169	15	In Left	stagnant pools, iron deposits
SCH	2233	10	Out Left	
SCH	2333	1	In Left	
SCH	2745	4	Out Left	
SCH	2746	5	Out Right	
FORD	2747			Trail, ATV use
OTR	2850			campsite on right and a deep pool
TRIB	2997	1.5	In Right	
NHD_ID	3030.2	8		11010014000462
TRIB	3109	1.5	In Left	
TRIB	3190	1.5	In Left	
OTR	3454			washed out cliff face
TRIB	3492	2	In Left	dry
TRIB	3618	2	In Right	very dry
NHD_ID	3640.1	6		11010014000463
OTR	3912			trail on right
TRIB	4074	2.5	In Right	substantial
SCH	4548	2	In Left	out at 2630
SCH	4588	2	In Left	
SCH	4648	3	Out Left	
TRIB	4895	1.5	In Right	dry
SCH	5035	3	In Right	
SCH	5084	7.5	Out Right	
TRIB	5649	5	In Left	dry with moderate vegetation
TRIB	5688	4	In Right	
SCH	5837	2	Out Left	
TRIB	6088	4	In Left	dry
SEEP	6422	1	In Right	Seep on rock face, unknown trail present

Feature table continued.

<b>Feature</b>	<b>Distance (m)</b>	<b>Width (m)</b>	<b>In/Out</b>	<b>Comments</b>
NHD_ID	6606.1	6		11010014000464
SCH	6609	1.5	In Left	
SCH	7498	3	In Left	
SCH	7572	7	Out Left	
FORD	7852			unknown trail present
FORD	7940			unknown trail present
OTR	8225			abandoned channel
TRIB	8405	1.5	In Right	
SCH	8684	1	In Right	
FORD	8865			unknown trail present
FORD	9071			well developed, unknown dirt road



Distribution and abundance of LWD, distribution of substrates, and distribution of Rosgen's channel types (Rosgen 1996) in stream section 000460 through 000464, summer 2006. LWD, substrate, and channel type were recorded for each habitat unit in the stream. X-axis indicates distance upstream from Forest Service Boundary. Vertical bars on (A) indicate total count of LWD; open circles represent the amount of the total LWD that was >5 m in length, >55 cm in diameter (size 4). Closed circles on (B) are dominant substrates, open circles are subdominant substrates. See Appendix A for substrate sizes. See Appendix A for channel type descriptions from (C).

Photos taken on stream section 000460 through 000464, during BVET habitat survey, summer 2006. Distance is meters from start of survey.

Unit Type	Unit Number	Distance (m)	Comments
P	5	481.8	cottonmouth
R	5	501.6	mussle shell not collected
TRIB		630	Brushy Creek
OTR		694.1	road off of 421
TRIB		1526	dry
R	16	1621	
TRIB		1729	dry
FORD		2019	Dirt Road 421
R	26	2498.9	
FORD		2747	Trail, ATV USE
OTR		2850	campsite on right and a deep pool
P	39	2922.3	too deep to accurately measure
TRIB		2997	
TRIB		3109	
P	41	3190.1	150 cm of organic debris prevent accurate measurements of lots of seilt as well
OTR		3454	dry
TRIB		3492	dry
R	36	3556.9	
OTR		3912	trail on right
TRIB		4074	substantial
P	51	4074.1	bluff on right
R	45	4521.9	
SCH		4548	out at 2630
TRIB		4895	dry
TRIB		5649	dry with moderate vegetation
P	69	6021.1	bluff on left
R	56	6045.6	tire on right bank
TRIB		6088	dry
SEEP		6422	Seep on rock face, unknown trail present
R	66	7011.1	
SCH		7498	
FORD		7852	unknown trail present
FORD		7940	unknown trail present
P	99	8108.7	
OTR		8225	abandoned channel
R	76	8278.4	
TRIB		8405	
FORD		8865	unknown trail present
FORD		9071	well developed, unknown dirt road

<b>Stream:</b>	Brushy Fork - 11010014000590-0595
District	Bayou
USGS Quadrangle	Rex and Lost Corner
6 <sup>th</sup> Level HUC	110100140302
Survey Date	06/01/06
Downstream Starting Point	confluence to south fork little red river
Total Distance Surveyed (km)	11.4

	<b>Pools</b>	<b>Riffles</b>
Percent of Total Stream Area	74	26
Total Area (m <sup>2</sup> )	59976 ± 11719	20893 ± 2867
Correction Factor Applied	1.03	0.85
Number of Paired Samples	17	12
Total Count	171	125
Number per km	15	11
Mean Area (m <sup>2</sup> )	351	167
Mean Maximum Depth (cm)	68	28
Mean Average Depth (cm)	46	13
Mean Residual Depth (cm)	39	--
Percent Inventoried as Glides	23	--
Percent Inventoried as Runs	--	2
Percent Inventoried as Cascades	--	0
Percent with >35% Fines	2	2

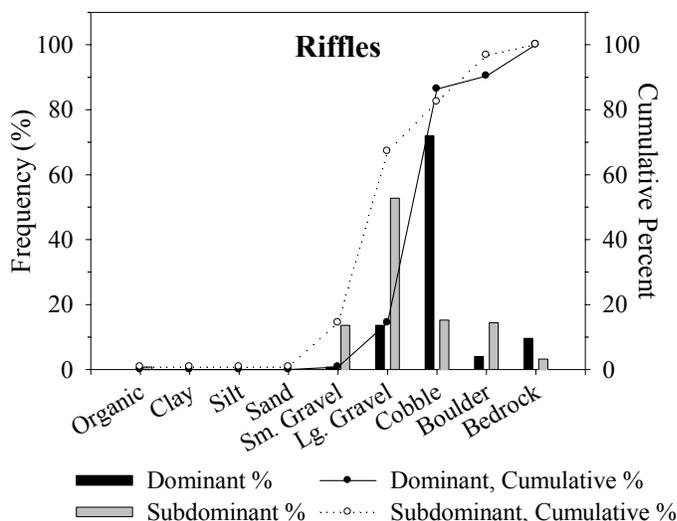
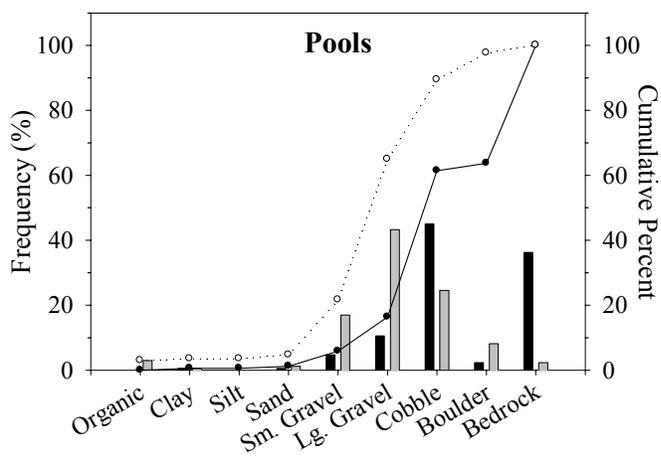
<b>Large Woody Debris Size</b>	<b>Pieces per km</b>
< 5 m long, 10 cm - 55 cm diameter	3
< 5 m long, > 55 cm diameter	0
> 5 m long, 10 cm - 55 cm diameter	13
> 5 m long, > 55 cm diameter	0
Total:	17

<b>Riparian Width</b>	<b>Total Width* (m)</b>	<b>Left &amp; Right Width ** (m)</b>
Mean	17	3
Maximum	31	16
75th Percentile	22	5
25th Percentile	13	1
Minimum	9	0.4

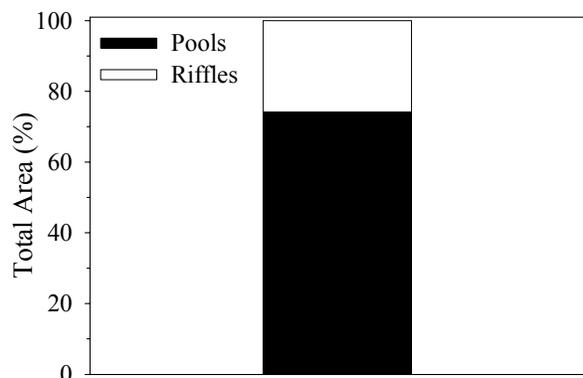
\*Left riparian, right riparian, and bankfull channel widths were added together for calculations

\*\*Left and right riparian measurements were grouped (not added) together for calculations

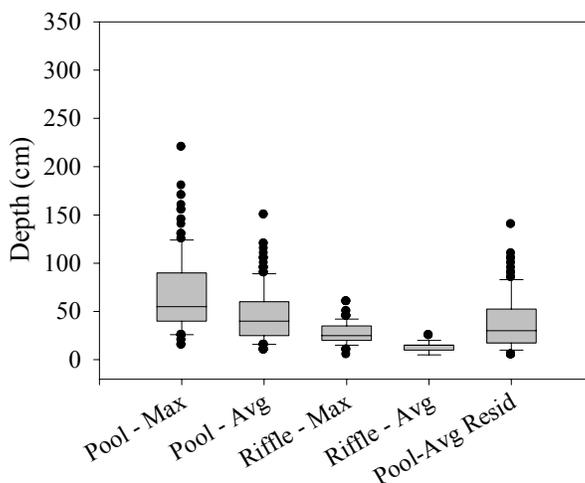
<b>Rosgen's Channel Type</b>	<b>Frequency (%)</b>	<b>Other Stream Attributes</b>	
A	0	Mean Bankfull Channel Width (m)	10
B	81	Mean Channel Gradient (%)	2
C	19	Median Water Temperature (C)	20
D	0		
E	0		
F	0		
G	0		



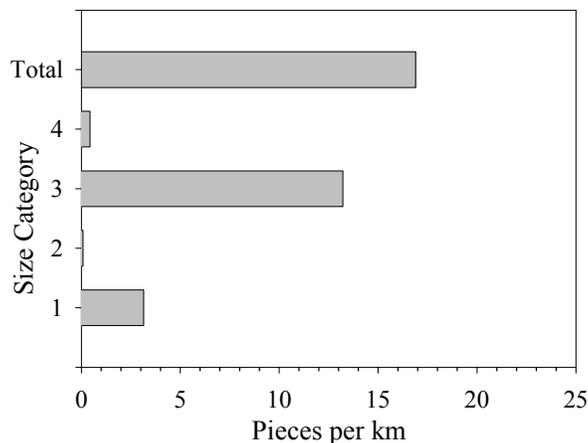
Frequency (percent) and cumulative percent of dominant and subdominant substrate occurrence for pools and riffles in stream section 000590 through 000595, summer 2006.



Estimated area of stream section 000590 through 000595 in pools and riffles as calculated using BVET techniques, summer 2006.



Maximum and average depths and residual pool depths for pools and riffles in stream section 000590 through 000595, summer 2006. The top and bottom of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data.



LWD per kilometer in stream section 000590 through 000595, summer 2006. Y-axis labels are LWD size classes described below.  
 Size 1: < 5 m long, 10-55 cm diameter  
 Size 2: < 5 m long, > 55 cm diameter  
 Size 3: > 5 m long, 10-55 cm diameter  
 Size 4: > 5 m long, > 55 cm diameter

Stream features found on stream section 000590 through 000595, BVET habitat survey, summer 2006. Distance is meters from start of survey.

Feature	Distance (m)	Width (m)	In/Out	Comments
				access: from 27 take White Oak Mtn Rd (1301) for 12 miles, turn right on 1307 and go 7.5 miles, turn left on 1342 and go 1.5 miles to ford, walk downstream 710 meters
NHD_ID	54.2			11010014000590
SCH	211.2		Out Left	DRY
TRIB	221.9		In Left	DRY
SCH	284.9	1.5	In Left	NA
SCH	304.5		Out Left	DRY
FORD	709.5			1 road two fords, dirt road 1342
NHD_ID	880.5			11010014000591; LOG JAM
SCH	951.4	1.5	In Right	
TRIB	1015.6		In Left	unnamed trib NHDID 001644, dry
UNGR	1061.5			
SCH	1069.5		Out Right	DRY
TRIB	1184.2	0.5	In Right	WET, feeds into pool
SCH	1355	0.5	In Right	
SCH	1401.1		Out Left	DRY
SCH	1538.4	3	In Right	WET
FORD	1557.8	0.1	In Left	atv trail
FORD	1881.8			unknown trail not on map
TRIB	1890.3		In Left	DRY, not on map, MIGHT BE TRIB 001643
SCH	2046.3	2	In Right	WETTED
SCH	2377	4	In Right	WET
SCH	2477.4	0.5	Out Right	WET
SCH	2513.7	3	In Left	WET
SCH	2577.2	4	Out Left	alternating main channel
SCH	2578.3	3	In Right	alternating main channel
SCH	2632.6	0.5	In Right	MOIST
SCH	2667.2	1	In Left	WET
SCH	2680.9		Out Right	DRY
SCH	2837.5	5	In Right	WET
SCH	2895.6		In Left	DRY
SEEP	2902.7	0.1	In Right	OFF OF CLIF
SCH	2917.1		Out Left	DRY
SCH	2938.5		In Right	DRY
NHD_ID	2967.3			11010014000592; starting new nhdid but not sure where actual break is
FORD	3046.2			horse tracks and atv mainly trail

Feature table continued.

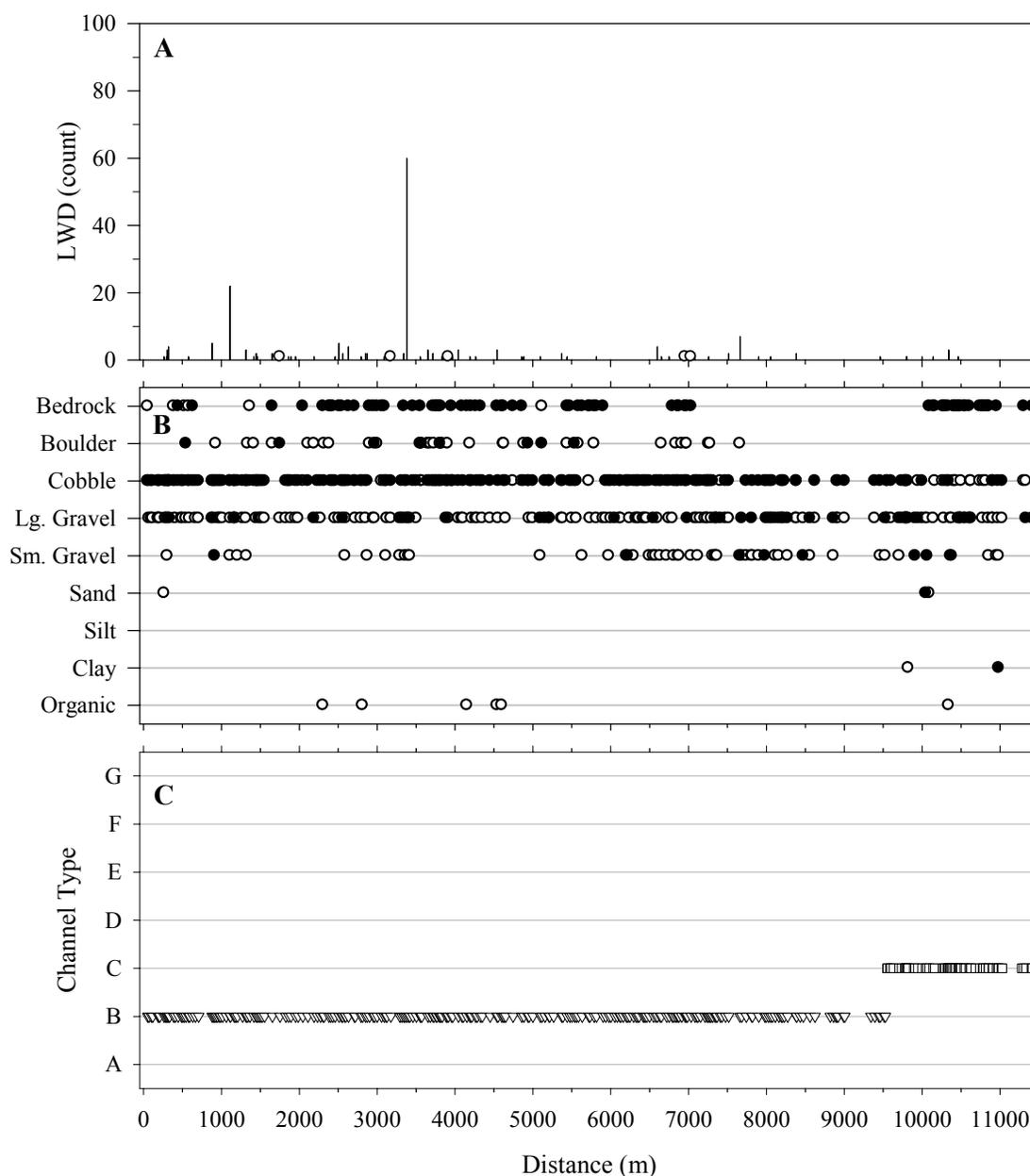
Feature	Distance (m)	Width (m)	In/Out	Comments
SCH	3052.1	4	In Right	wet
SEEP	3339.4	0.1	In Left	trickling
SCH	3460.9	3	In Left	wet
TRIB	3466.4	1	In Right	atv trail crosses ten meters upstream of trib NHDID 001635
SCH	3489.2	5	Out Left	wet
NHD_ID	3503.5			11010014000593
TRIB	3564.5	0.5	In Right	possible underground spring
SCH	3817.2	1	In Left	wet
TRIB	4267	1.5	In Left	blocked up by beaver dam, NHDID 004424
SCH	4604.1	3	In Right	wet
SCH	4661.2		Out Right	dry
SEEP	4756.9	0.5	In Right	multiple seeps on right bank
SCH	4830.4	0.5	In Right	wet
SCH	4953.2	1.5	Out Right	wet
UNGR	5266.1			
SCH	5479.8	1.5	In Right	wet
TRIB	5749	3	In Right	wet NHDID 004376
SCH	6009.5		In Left	dry
UNGR	6084			
SCH	6084.5		Out Left	dry
UNGR	6159.9			
SCH	6172.8	1	In Right	wet
TRIB	6339.2		In Left	dry
UNGR	6437.5			
SCH	6550.4		In Left	dry
SCH	6652	3	Out Left	wet
SCH	6698.5		In Right	dry
TRIB	6743.4		In Left	dry NHDID 004427
SCH	6751.9		Out Right	dry
TRIB	7160.3		In Left	dry
SCH	7202.5		In Right	dry
SCH	7258.6	1	In Left	wet
SCH	7276.4		Out Right	dry
SCH	7295.5		Out Left	dry
SCH	7315.8		In Left	dry
SCH	7407.8		In Right	dry
SCH	7428.6	6	Out Left	flowing
UNGR	7428.6			
TRIB	7478.9		In Left	dry, NHDID 004402

Feature table continued.

Feature	Distance (m)	Width (m)	In/Out	Comments
SCH	7504.3	2	In Left	wet
SCH	7551.2		Out Right	
SCH	7676.1		In Right	dry
SCH	7730		Out Right	dry
SCH	7856.5	3	In Left	wet
SCH	8000		Out Left	dry
SCH	8086.8	1	In Right	wet
SCH	8114.7	4	Out Right	wet
SCH	8181.4		In Right	dry
SCH	8228.1	3	Out Right	wet
TRIB	8281.2		In Right	dry nhdid004343
TRIB	8345.1		In Left	dry nhdid 004364
SCH	8346		In Right	has large deep pool in side channel
SCH	8425.3		Out Right	dry
UNGR	8433.9			
SCH	8622.3		In Left	dry
TRIB	8737.4		In Right	nhdid 001636 dry
UNGR	8820.3			
SCH	8854.2		In Right	dry
UNGR	8890.5			
UNGR	8994.4			
SCH	9024.6		In Right	dry
SCH	9109		In Left	dry
SCH	9153.8		Out Right	dry
SCH	9155.4		Out Right	dry
SCH	9242.5		In Right	dry
UNGR	9341.9			
SCH	9397.6		In Right	dry
SCH	9429.5		Out Right	dry
UNGR	9445.3			
UNGR	9514.7			
UNGR	9587.5			
SCH	9603.8		In Right	dry
UNGR	9632.8			
TRIB	9716.9		In Right	dry, NHDID 001637
SCH	9758.2	1.5	In Right	wet
SCH	9771.5	2	Out Right	wet
SCH	9781.7	2	In Left	wet
UNGR	9895.2			
SCH	10038	3	In Left	wet
SCH	10066		Out Left	dry

Feature table continued.

Feature	Distance (m)	Width (m)	In/Out	Comments
SCH	10260		In Right	dry
TRIB	10274		In Left	unnamed
SCH	10281		In Left	dry
SCH	10305		Out Right	dry
UNGR	10326			
UNGR	10355			
OTR	10507			rock two ledges first is .45m high second is .5m
SCH	10537	3	In Right	wet
SCH	10562	1	Out Right	wet
SCH	10623	1.5	In Right	fed by underground
UNGR	10684			
SCH	10850		In Right	dry
SCH	10954	0.5	In Left	very difficult to determine main channel
UNGR	11020			
SCH	11066		In Right	dry
SCH	11106		Out Right	dry
UNGR	11279			
UNGR	11402			



Distribution and abundance of LWD, distribution of substrates, and distribution of Rosgen's channel types (Rosgen 1996) in stream section 000590 through 000595, summer 2006. LWD, substrate, and channel type were recorded for each habitat unit in the stream. X-axis indicates distance upstream from confluence with the South Fork Little Red River. Vertical bars on (A) indicate total count of LWD; open circles represent the amount of the total LWD that was >5 m in length, >55 cm in diameter (size 4). Closed circles on (B) are dominant substrates, open circles are subdominant substrates. See Appendix A for substrate sizes. See Appendix A for channel type descriptions from (C).

Photos taken on stream section 000590 through 000595, during BVET habitat survey, summer 2006. Distance is meters from start of survey.

Unit Type	Unit Number	Distance (m)	Comments
TRIB		221.9	DRY
P	8	385.8	
R	8	408.3	
P	13	632.4	
FORD		709.5	1 road two fords, dirt road 1342
P	16	913.4	
TRIB		1015.6	unamed trib NHDID 001644, dry
TRIB		1184.2	WET, feeds into pool
R	18	1207.6	
FORD		1557.8	atv trail
FORD		1881.8	unknown trail not on map
R	29	2233.5	
RN	38	2873.9	
SEEP		2902.7	off of cliff
FORD		3046.2	horse tracks and atv mainly trail
TRIB		3466.4	atv trail crosses ten meters upstream of trib NHDID 001635
R	48	3651.9	atv trail runs parallel to stream has been marked for efish team
TRIB		4267	blocked up by beaver dam, NHDID 004424
R	58	4350.7	atv trail parallel on right of stream stilll
SEEP		4756.9	multiple seeps on right bank
R	68	5502.8	5488.7 side pool on left
TRIB		5749	wet NHDID 004376
SCH		6172.8	wet
TRIB		6339.2	dry
R	78	6364.5	
TRIB		6743.4	dry NHDID 004427
R	88	7082.6	rosgen transitioning from b to an a
TRIB		7160.3	dry
SCH		7202.5	dry
TRIB		7478.9	dry, NHDID 004402
R	98	7901.9	
TRIB		8281.2	dry nhdid004343
TRIB		8345.1	dry nhdid 004364
TRIB		8737.4	nhdid 001636 dry
R	108	9548.4	rosgen is borderline B and C
TRIB		10274	unnamed
R	118	10420	

<b>Stream:</b>	Brushy Fork headwater section - 11010014000596
District	Bayou
USGS Quadrangle	Lost Corner
6 <sup>th</sup> Level HUC	110100140302
Survey Date	06/02/06
Downstream Starting Point	confluence with 000595 West Prong Brushy Fork
Total Distance Surveyed (km)	0.8

	<b>Pools</b>	<b>Riffles</b>
Percent of Total Stream Area	38	62
Total Area (m <sup>2</sup> )	180 ± 15	292 ± 251
Correction Factor Applied	0.89	1.58
Number of Paired Samples	5	3
Total Count	26	13
Number per km	33	16
Mean Area (m <sup>2</sup> )	7	22
Mean Maximum Depth (cm)	27	12
Mean Average Depth (cm)	15	4
Mean Residual Depth (cm)	10	--
Percent Inventoried as Glides	12	--
Percent Inventoried as Runs	--	0
Percent Inventoried as Cascades	--	0
Percent with >35% Fines	0	0

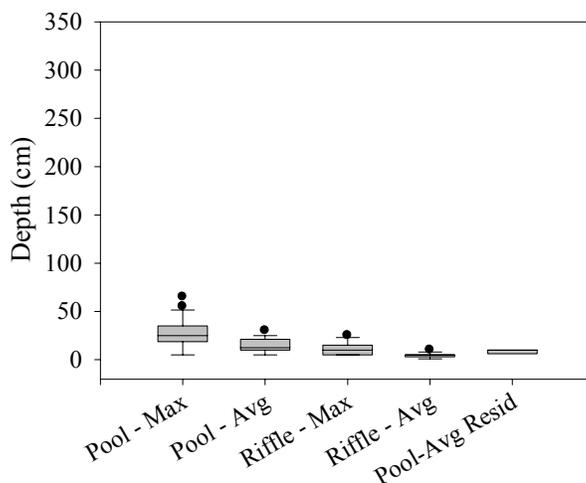
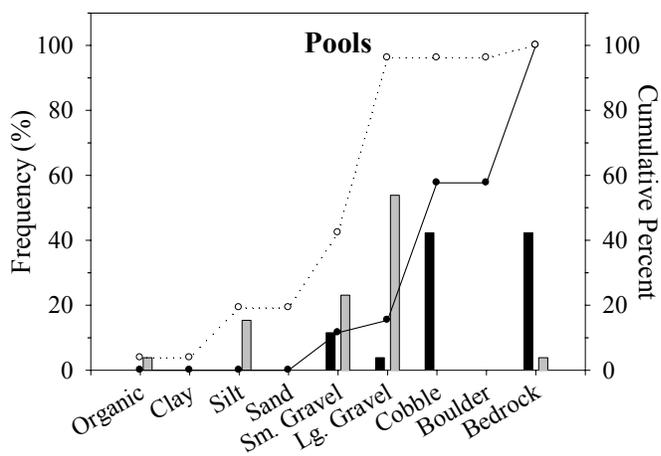
<b>Large Woody Debris Size</b>	<b>Pieces per km</b>
< 5 m long, 10 cm - 55 cm diameter	1
< 5 m long, > 55 cm diameter	4
> 5 m long, 10 cm - 55 cm diameter	6
> 5 m long, > 55 cm diameter	0
Total:	11

<b>Riparian Width</b>	<b>Total Width* (m)</b>	<b>Left &amp; Right Width ** (m)</b>
Mean	5	1
Maximum	6	1
75th Percentile	6	1
25th Percentile	5	0.3
Minimum	3	0.2

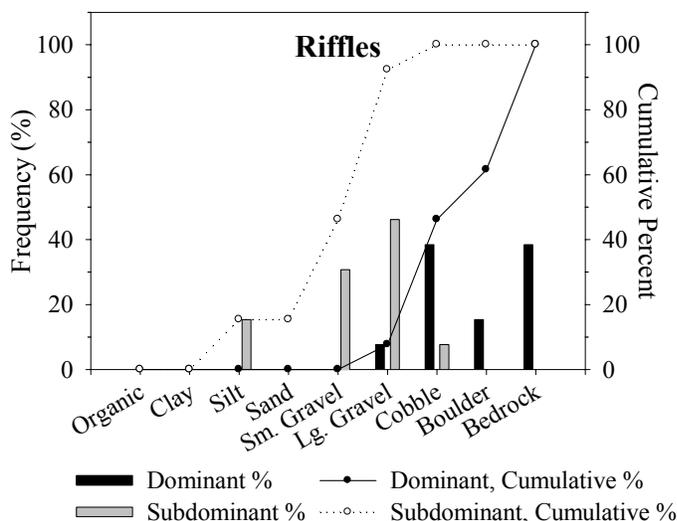
\*Left riparian, right riparian, and bankfull channel widths were added together for calculations

\*\*Left and right riparian measurements were grouped (not added) together for calculations

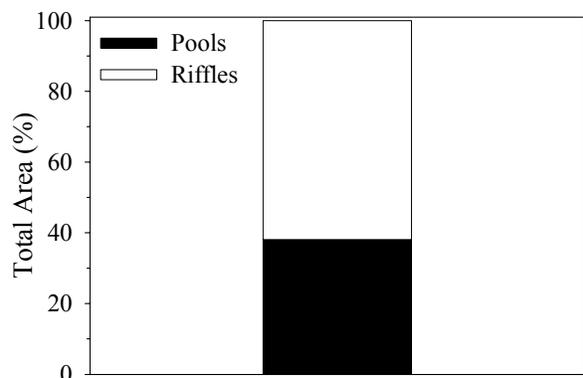
<b>Rosen's Channel Type</b>	<b>Frequency (%)</b>	<b>Other Stream Attributes</b>	
A	0	Mean Bankfull Channel Width (m)	4
B	100	Mean Channel Gradient (%)	2
C	0	Median Water Temperature (C)	18
D	0		
E	0		
F	0		
G	0		



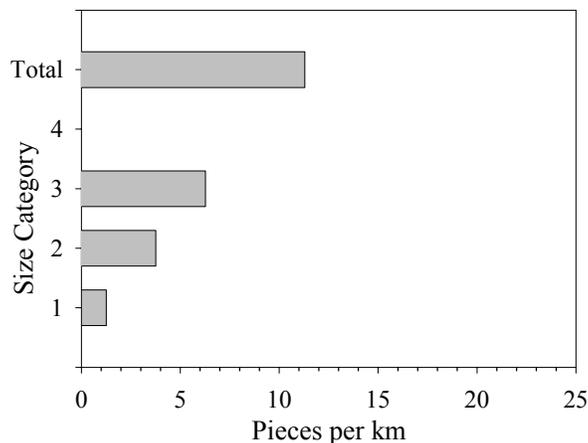
Maximum and average depths and residual pool depths for pools and riffles in stream section 000596, summer 2006. The top and bottom of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data.



Frequency (percent) and cumulative percent of dominant and subdominant substrate occurrence for pools and riffles in stream section 000596, summer 2006.



Estimated area of stream section 000596 in pools and riffles as calculated using BVET techniques, summer 2006.

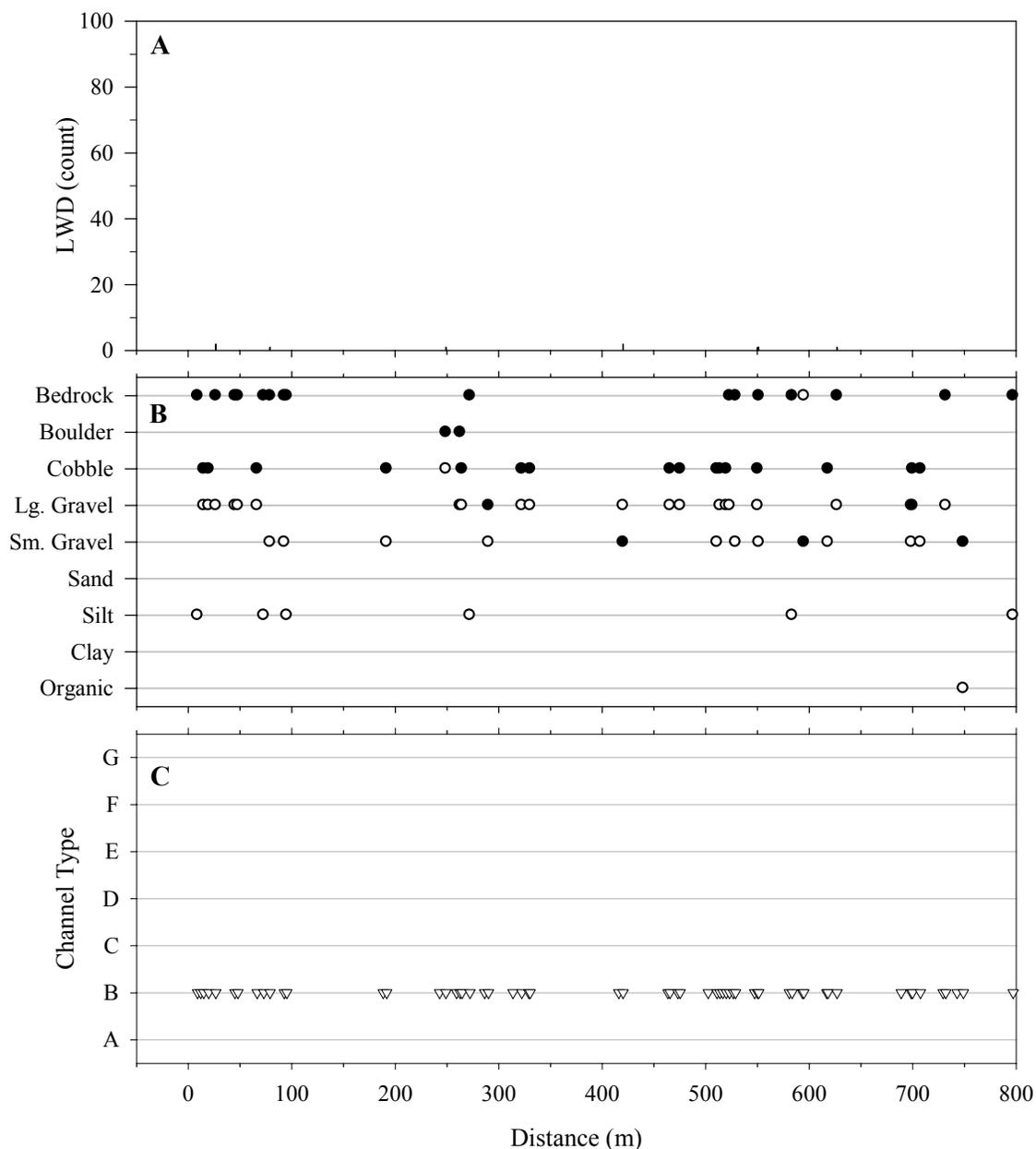


LWD per kilometer in stream section 000596, summer 2006. Y-axis labels are LWD size classes described below.

- Size 1: < 5 m long, 10-55 cm diameter
- Size 2: < 5 m long, > 55 cm diameter
- Size 3: > 5 m long, 10-55 cm diameter
- Size 4: > 5 m long, > 55 cm diameter

Stream features found on stream section 000596, BVET habitat survey, summer 2006. Distance is meters from start of survey.

<b>Feature</b>	<b>Distance (m)</b>	<b>Width (m)</b>	<b>In/Out</b>	<b>Comments</b>
NHD_ID	8.9			11010014000596
UNGR	11.9			
UNGR	188.3			
UNGR	242.8			
UNGR	259.4			
UNGR	286.4			
TRIB	297	2.5	In Left	dry
UNGR	313.9			
UNGR	329.1			
UNGR	415.9			
UNGR	463.6			
UNGR	473.2			
UNGR	502.3			
UNGR	516.6			
UNGR	526.7			
UNGR	547.3			
TRIB	572.5	1	In Left	dry
UNGR	580.7			
UNGR	593.6			
UNGR	617			
UNGR	689			
UNGR	729.4			
UNGR	742.9			
TRIB	754.9	1.5	In Right	dry



Distribution and abundance of LWD, distribution of substrates, and distribution of Rosgen's channel types (Rosgen 1996) in stream section 000596, summer 2006. LWD, substrate, and channel type were recorded for each habitat unit in the stream. X-axis indicates distance upstream from confluence with 000595. Vertical bars on (A) indicate total count of LWD; open circles represent the amount of the total LWD that was >5 m in length, >55 cm in diameter (size 4). Closed circles on (B) are dominant substrates, open circles are subdominant substrates. See Appendix A for substrate sizes. See Appendix A for channel type descriptions from (C).

Photos taken on stream section 000596, during BVET habitat survey, summer 2006. Distance is meters from start of survey.

<b>Unit Type</b>	<b>Unit Number</b>	<b>Distance (m)</b>	<b>Comments</b>
R	3	45.1	low entrenchment, due to bedrock
R	8	510.9	
TRIB		572.5	dry
R	13	797.1	

<b>Stream:</b>	North Prong Brushy Fork - 11010014001637-1638
District	Bayou
USGS Quadrangle	Lost Corner
6 <sup>th</sup> Level HUC	110100140302
Survey Date	06/02/06
Downstream Starting Point	Confluence with Brushy Fork
Total Distance Surveyed (km)	4.3

	<b>Pools</b>	<b>Riffles</b>
Percent of Total Stream Area	52	48
Total Area (m <sup>2</sup> )	3491 ± 1052	3230 ± 1125
Correction Factor Applied	1.09	1.16
Number of Paired Samples	7	4
Total Count	35	24
Number per km	8	6
Mean Area (m <sup>2</sup> )	100	135
Mean Maximum Depth (cm)	45	27
Mean Average Depth (cm)	30	12
Mean Residual Depth (cm)	30	--
Percent Inventoried as Glides	20	--
Percent Inventoried as Runs	--	8
Percent Inventoried as Cascades	--	0
Percent with >35% Fines	23	13

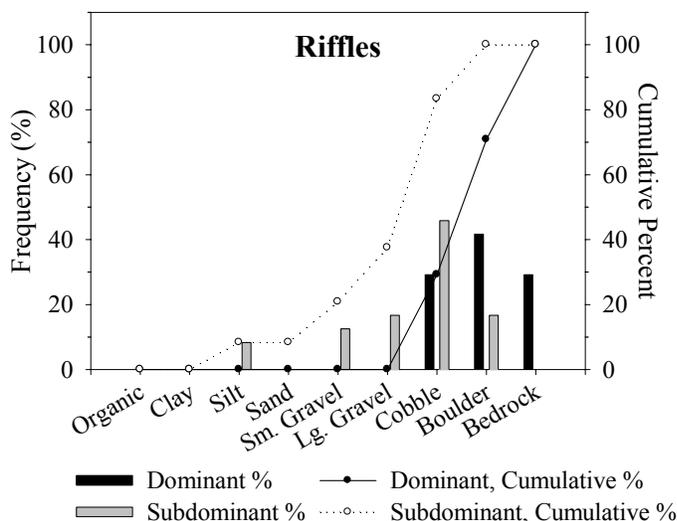
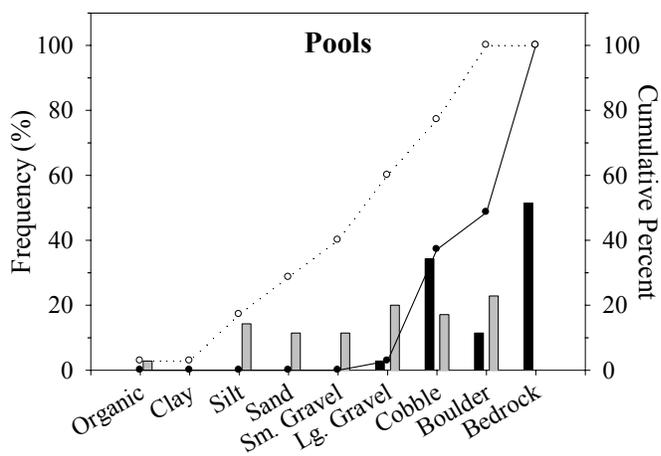
<b>Large Woody Debris Size</b>	<b>Pieces per km</b>
< 5 m long, 10 cm - 55 cm diameter	1
< 5 m long, > 55 cm diameter	0
> 5 m long, 10 cm - 55 cm diameter	1
> 5 m long, > 55 cm diameter	0
Total:	2

<b>Riparian Width</b>	<b>Total Width* (m)</b>	<b>Left &amp; Right Width ** (m)</b>
Mean	7	1
Maximum	8	2
75th Percentile	8	1
25th Percentile	7	0
Minimum	5	0.3

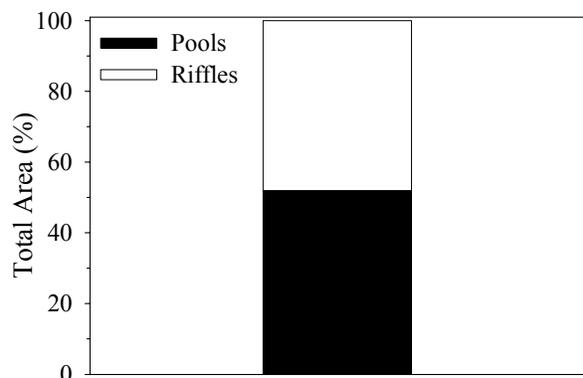
\*Left riparian, right riparian, and bankfull channel widths were added together for calculations

\*\*Left and right riparian measurements were grouped (not added) together for calculations

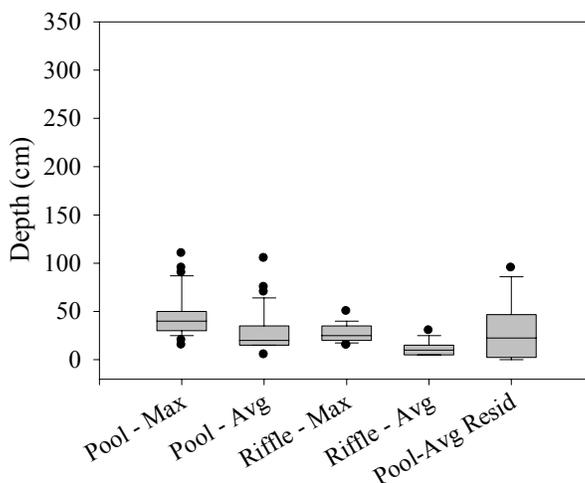
<b>Rosen's Channel Type</b>	<b>Frequency (%)</b>	<b>Other Stream Attributes</b>	
A	0	Mean Bankfull Channel Width (m)	6
B	100	Mean Channel Gradient (%)	4
C	0	Median Water Temperature (C)	18.5
D	0		
E	0		
F	0		
G	0		



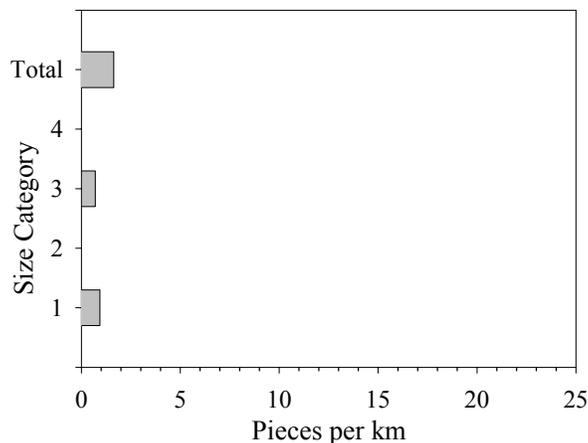
Frequency (percent) and cumulative percent of dominant and subdominant substrate occurrence for pools and riffles in stream section 001637 through 001638, summer 2006.



Estimated area of stream section 001637 through 001638 in pools and riffles as calculated using BVET techniques, summer 2006.



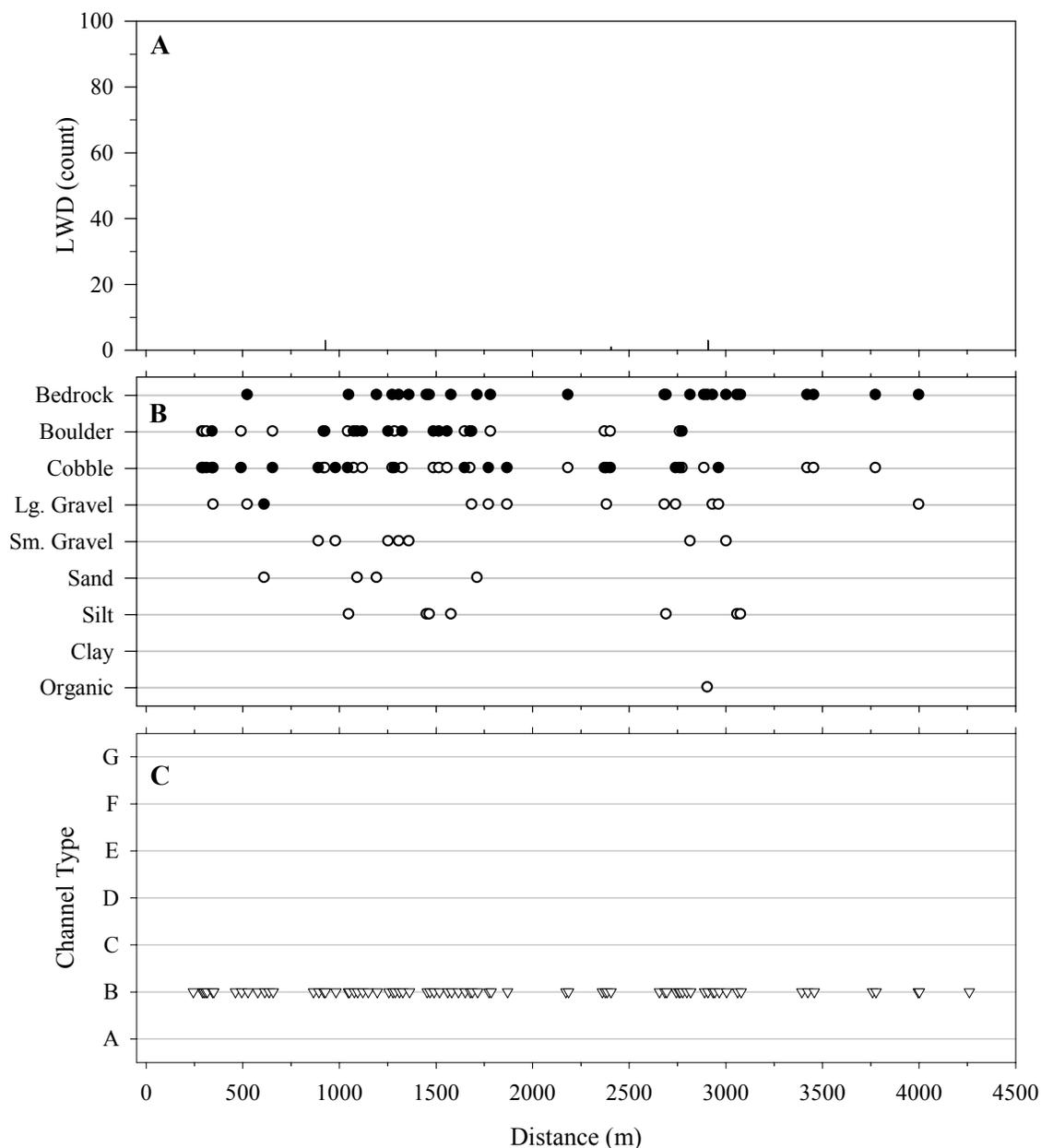
Maximum and average depths and residual pool depths for pools and riffles in stream section 001637 through 001638, summer 2006. The top and bottom of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data.



LWD per kilometer in stream section 001637 through 001638, summer 2006. Y-axis labels are LWD size classes described below.  
 Size 1: < 5 m long, 10-55 cm diameter  
 Size 2: < 5 m long, > 55 cm diameter  
 Size 3: > 5 m long, 10-55 cm diameter  
 Size 4: > 5 m long, > 55 cm diameter

Stream features found on stream section 001637 through 001638, BVET habitat survey, summer 2006. Distance is meters from start of survey.

<b>Feature</b>	<b>Distance (m)</b>	<b>Width (m)</b>	<b>In/Out</b>	<b>Comments</b>
UNGR	244			
NHD_ID	244			11010014001637
UNGR	307.6			
UNGR	461.8			
UNGR	577.9			
UNGR	635.7			
UNGR	865.9			
UNGR	1149			
TRIB	1222.9	1	In Right	Possible sidestream.
UNGR	1616			
TRIB	1993	1	In Right	Small and dry.
UNGR	2172			
TRIB	2289	1.5	In Right	Barbed wire fence across tributary.
UNGR	2360.9			
NHD_ID	2360.9			11010014001638
SCH	2409	2	In Left	Dry.
UNGR	2656			
SCH	2747	2	Out Right	Dry
UNGR	2758			
UNGR	2799			
SEEP	2908	1.5	In Left	Bedrock
UNGR	2943			
UNGR	3393			
TRIB	3411	1	In Left	Dry and overgrown.
TRIB	3437	1.5	In Right	Dry.
UNGR	3760			
TRIB	3778	2	In Left	Dry.
TRIB	3974	2	In Right	Dry and steep.
UNGR	3996			
UNGR	4260			



Distribution and abundance of LWD, distribution of substrates, and distribution of Rosgen's channel types (Rosgen 1996) in stream section 001637 through 001638, summer 2006. LWD, substrate, and channel type were recorded for each habitat unit in the stream. X-axis indicates distance upstream from confluence with Brushy Fork. Vertical bars on (A) indicate total count of LWD; open circles represent the amount of the total LWD that was >5 m in length, >55 cm in diameter (size 4). Closed circles on (B) are dominant substrates, open circles are subordinate substrates. See Appendix A for substrate sizes. See Appendix A for channel type descriptions from (C).

Photos taken on stream section 001637 through 001638, during BVET habitat survey, summer 2006. Distance is meters from start of survey.

<b>Unit Type</b>	<b>Unit Number</b>	<b>Distance (m)</b>	<b>Comments</b>
R	5	1077.6	
R	10	1327.5	
RN	15	1775	Not a good place for Rosgen.
TRIB		1993	Small and dry.
TRIB		2289	Barbed wire fence across tributary.
R	20	2890.7	
SEEP		2908	Bedrock

<b>Stream:</b>	West Prong Brushy Fork - 11010014001640 & 1642
District	Bayou
USGS Quadrangle	Lost Corner
6 <sup>th</sup> Level HUC	110100140302
Survey Date	06/05/06
Downstream Starting Point	confluence of 000596 and 001640
Total Distance Surveyed (km)	1.2

	<b>Pools</b>	<b>Riffles</b>
Percent of Total Stream Area	37	63
Total Area (m <sup>2</sup> )	910 ± NC	NC ± NC
Correction Factor Applied	1.43	0.89
Number of Paired Samples	2	1
Total Count	12	6
Number per km	10	5
Mean Area (m <sup>2</sup> )	76	262
Mean Maximum Depth (cm)	39	18
Mean Average Depth (cm)	24	7
Mean Residual Depth (cm)	3	--
Percent Inventoried as Glides	42	--
Percent Inventoried as Runs	--	0
Percent Inventoried as Cascades	--	0
Percent with >35% Fines	0	0

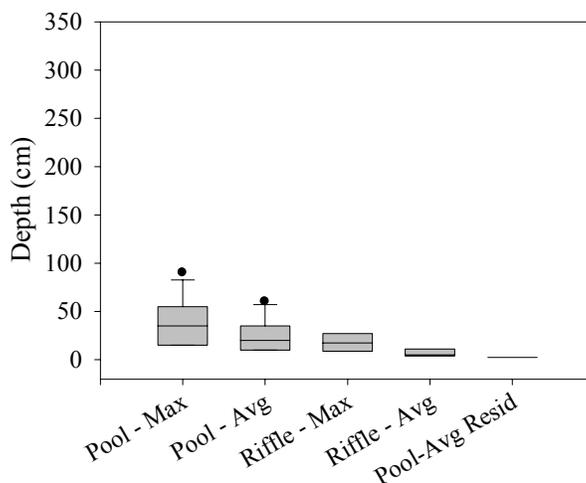
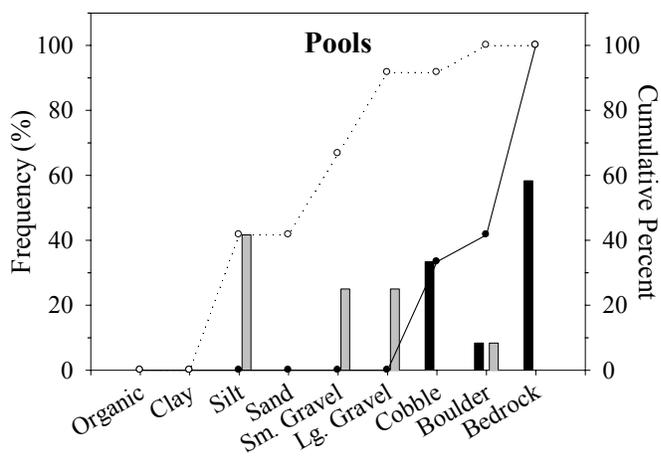
<b>Large Woody Debris Size</b>	<b>Pieces per km</b>
< 5 m long, 10 cm - 55 cm diameter	0
< 5 m long, > 55 cm diameter	0
> 5 m long, 10 cm - 55 cm diameter	0
> 5 m long, > 55 cm diameter	0
Total:	0

<b>Riparian Width</b>	<b>Total Width* (m)</b>	<b>Left &amp; Right Width ** (m)</b>
Mean	6	0
Maximum	6	1
75th Percentile	6	0
25th Percentile	6	0
Minimum	6	0.4

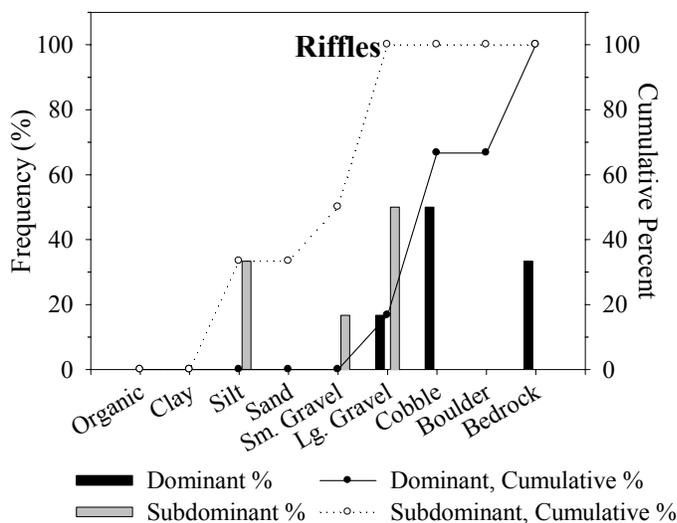
\*Left riparian, right riparian, and bankfull channel widths were added together for calculations

\*\*Left and right riparian measurements were grouped (not added) together for calculations

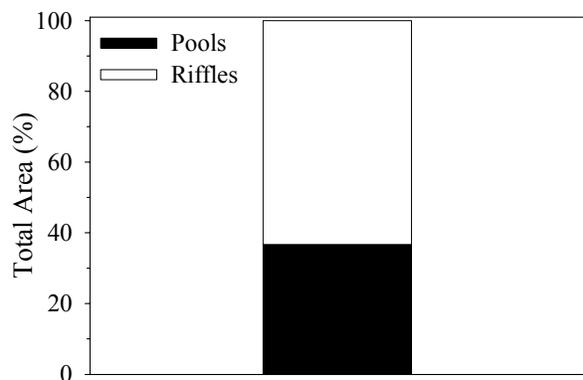
<b>Rosen's Channel Type</b>	<b>Frequency (%)</b>	<b>Other Stream Attributes</b>	
A	0	Mean Bankfull Channel Width (m)	5
B	0	Mean Channel Gradient (%)	1
C	0	Median Water Temperature (C)	22
D	0		
E	0		
F	100		
G	0		



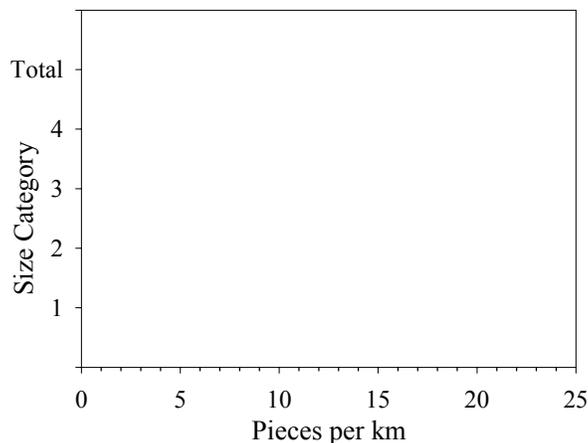
Maximum and average depths and residual pool depths for pools and riffles in stream section 001640 through 001642, summer 2006. The top and bottom of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data.



Frequency (percent) and cumulative percent of dominant and subdominant substrate occurrence for pools and riffles in stream section 001640 through 001642, summer 2006.



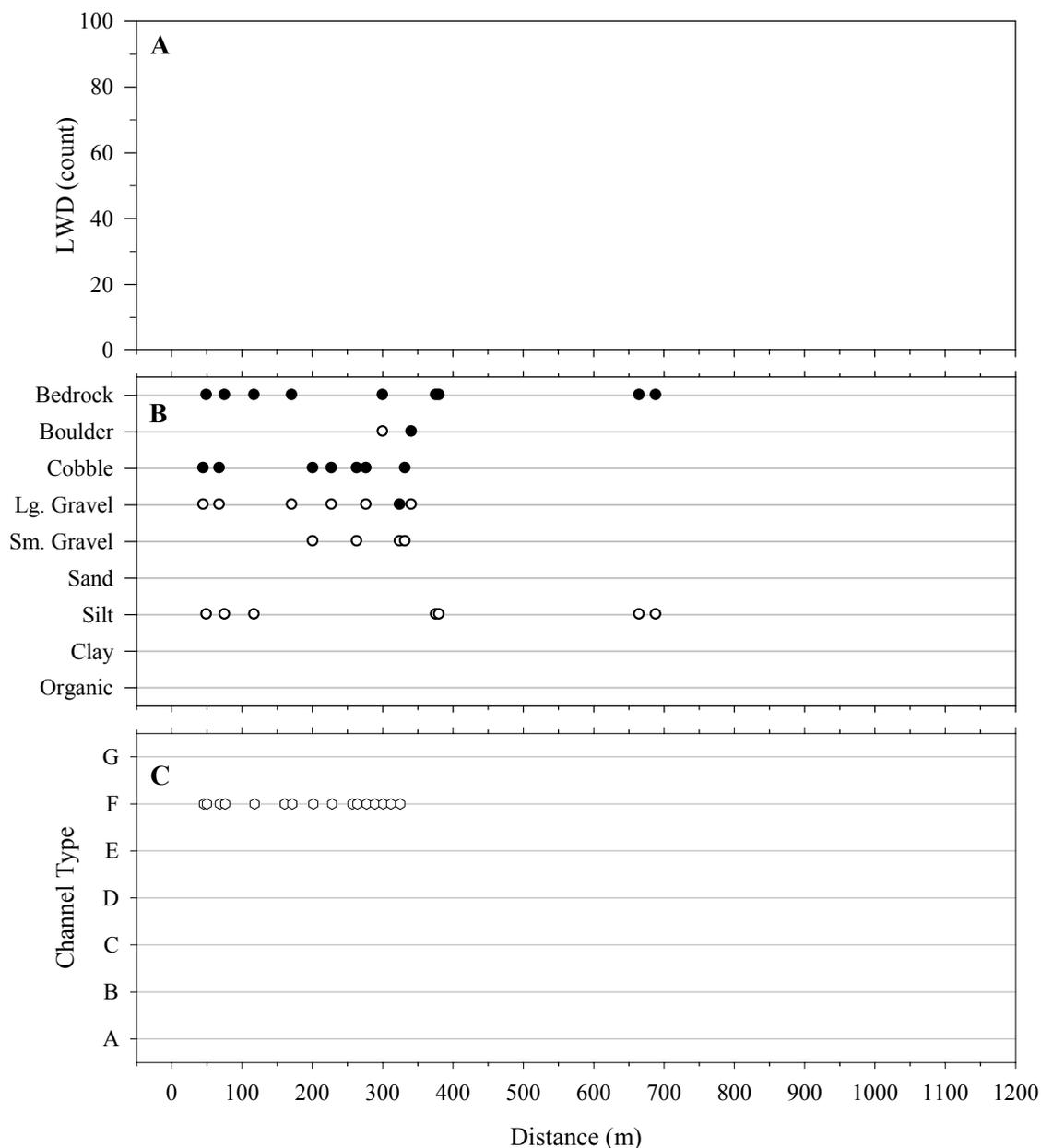
Estimated area of stream section 001640 through 001642 in pools and riffles as calculated using BVET techniques, summer 2006.



LWD per kilometer in stream section 001640 through 001642, summer 2006. Y-axis labels are LWD size classes described below.  
 Size 1: < 5 m long, 10-55 cm diameter  
 Size 2: < 5 m long, > 55 cm diameter  
 Size 3: > 5 m long, 10-55 cm diameter  
 Size 4: > 5 m long, > 55 cm diameter

Stream features found on stream section 001640 through 001642, BVET habitat survey, summer 2006. Distance is meters from start of survey.

<b>Feature</b>	<b>Distance (m)</b>	<b>Width (m)</b>	<b>In/Out</b>	<b>Comments</b>
NHD_ID	45.7			11010014001640
UNGR	160.6			
UNGR	256.9			
UNGR	289			
UNGR	311.7			
NHD_ID	376.3			11010014001642
TRIB	380.9	2.5	In Left	1641
TRIB	606	2	In Left	cold water, spring next to stream
UNGR	1188.9			



Distribution and abundance of LWD, distribution of substrates, and distribution of Rosgen's channel types (Rosgen 1996) in stream section 001640 through 001642, summer 2006. LWD, substrate, and channel type were recorded for each habitat unit in the stream. X-axis indicates distance upstream from confluence with 000596. Vertical bars on (A) indicate total count of LWD; open circles represent the amount of the total LWD that was >5 m in length, >55 cm in diameter (size 4). Closed circles on (B) are dominant substrates, open circles are subdominant substrates. See Appendix A for substrate sizes. See Appendix A for channel type descriptions from (C).

Photos taken on stream section 001640 through 001642, during BVET habitat survey, summer 2006. Distance is meters from start of survey.

<b>Unit Type</b>	<b>Unit Number</b>	<b>Distance (m)</b>	<b>Comments</b>
R	4	324.9	
TRIB		606	

<b>Stream:</b>	UT West Prong Brushy Fork - 11010014001641
District	Bayou
USGS Quadrangle	Lost Corner
6 <sup>th</sup> Level HUC	110100140302
Survey Date	06/05/06
Downstream Starting Point	Confluence with 001640
Total Distance Surveyed (km)	1.1

	<b>Pools</b>	<b>Riffles</b>
Percent of Total Stream Area	16	84
Total Area (m <sup>2</sup> )	140 ± 63	737 ± NC
Correction Factor Applied	0.97	1.34
Number of Paired Samples	3	2
Total Count	15	13
Number per km	14	12
Mean Area (m <sup>2</sup> )	9	57
Mean Maximum Depth (cm)	50	23
Mean Average Depth (cm)	36	7
Mean Residual Depth (cm)	26	--
Percent Inventoried as Glides	7	--
Percent Inventoried as Runs	--	0
Percent Inventoried as Cascades	--	0
Percent with >35% Fines	27	0

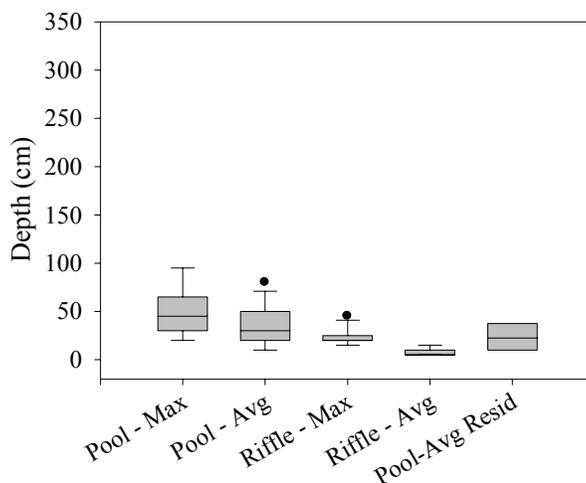
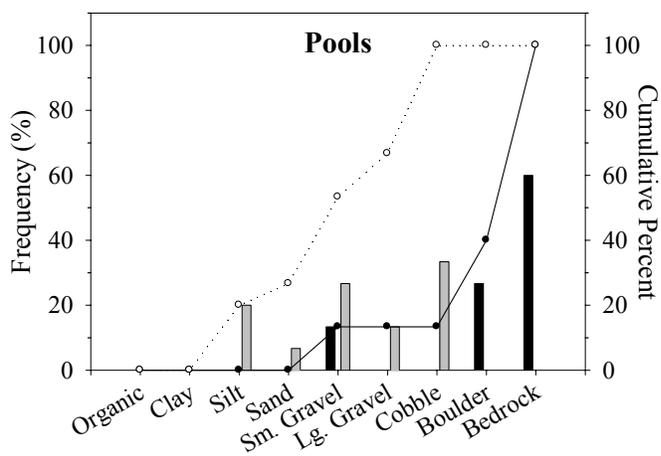
<b>Large Woody Debris Size</b>	<b>Pieces per km</b>
< 5 m long, 10 cm - 55 cm diameter	1
< 5 m long, > 55 cm diameter	0
> 5 m long, 10 cm - 55 cm diameter	3
> 5 m long, > 55 cm diameter	0
Total:	4

<b>Riparian Width</b>	<b>Total Width* (m)</b>	<b>Left &amp; Right Width ** (m)</b>
Mean	5	0.5
Maximum	7	1
75th Percentile	6	1
25th Percentile	4	0.2
Minimum	4	0.0

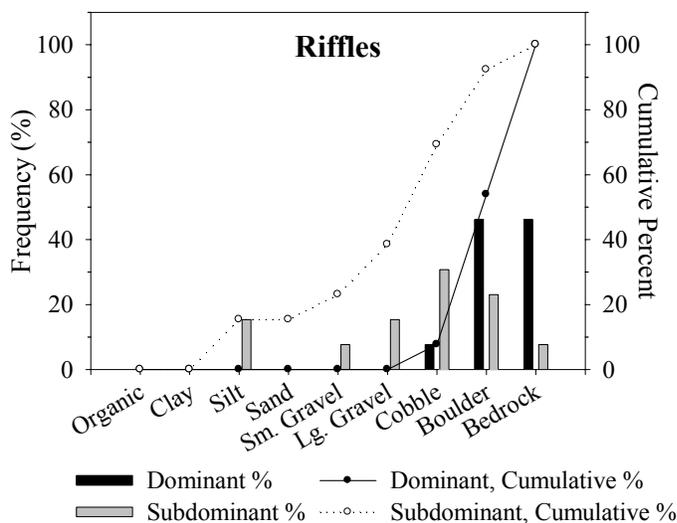
\*Left riparian, right riparian, and bankfull channel widths were added together for calculations

\*\*Left and right riparian measurements were grouped (not added) together for calculations

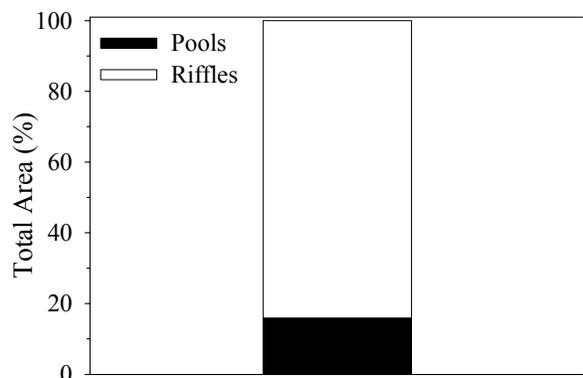
<b>Rosen's Channel Type</b>	<b>Frequency (%)</b>	<b>Other Stream Attributes</b>	
A	0	Mean Bankfull Channel Width (m)	4
B	100	Mean Channel Gradient (%)	3
C	0	Median Water Temperature (C)	17.5
D	0		
E	0		
F	0		
G	0		



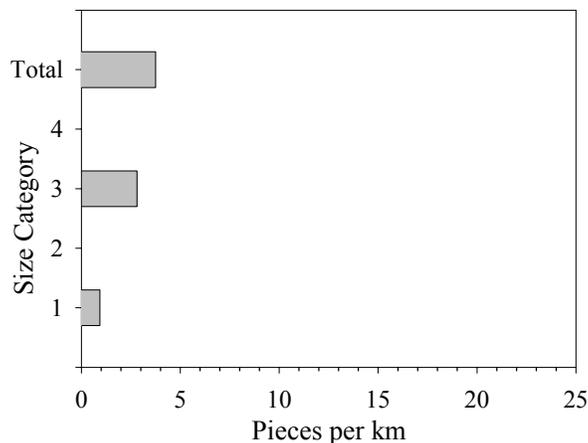
Maximum and average depths and residual pool depths for pools and riffles in stream section 001641, summer 2006. The top and bottom of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data.



Frequency (percent) and cumulative percent of dominant and subdominant substrate occurrence for pools and riffles in stream section 001641, summer 2006.



Estimated area of stream section 001641 in pools and riffles as calculated using BVET techniques, summer 2006.

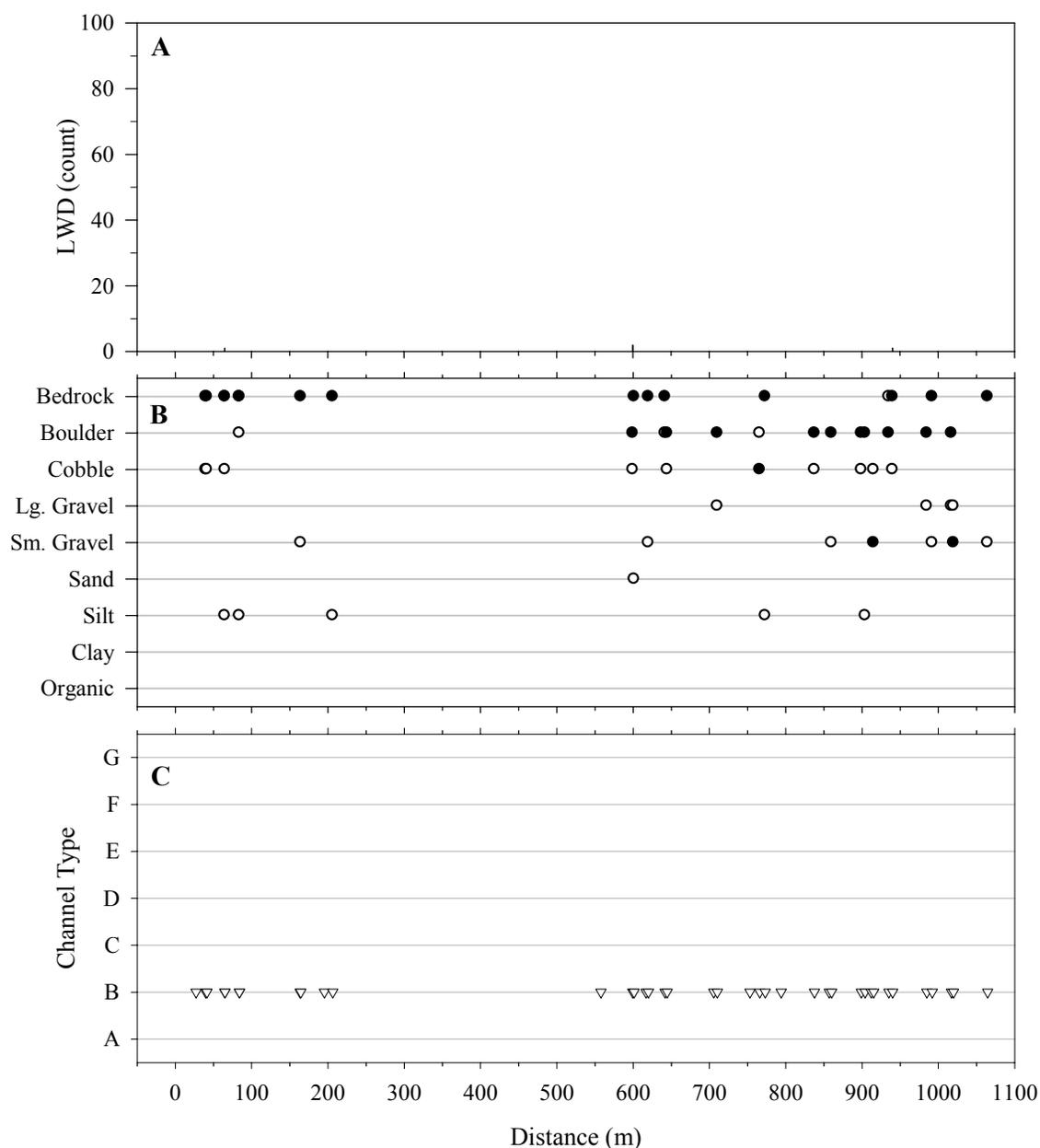


LWD per kilometer in stream section 001641, summer 2006. Y-axis labels are LWD size classes described below.

- Size 1: < 5 m long, 10-55 cm diameter
- Size 2: < 5 m long, > 55 cm diameter
- Size 3: > 5 m long, 10-55 cm diameter
- Size 4: > 5 m long, > 55 cm diameter

Stream features found on stream section 001641, BVET habitat survey, summer 2006. Distance is meters from start of survey.

<b>Feature</b>	<b>Distance (m)</b>	<b>Width (m)</b>	<b>In/Out</b>	<b>Comments</b>
NHD_ID	27			11010014001641
UNGR	27			
SCH	83.9	2	In Right	Dry, main channel appears to go left
OTR	106.5			Rusty metal box on right
UNGR	163.5			Photo of main channel
UNGR	195.4			
TRIB	205.6	2	In Right	Dry with pools
SCH	262	2	Out Right	Dry
SCH	267	1	In Right	Dry
UNGR	557.8			
UNGR	616.9			
UNGR	705.5			
TRIB	726.9	1.5	In Right	004312, dry
UNGR	753			
UNGR	794			
UNGR	857			
TRIB	868	1	In Right	Almost dry-trickle of water
UNGR	912			
TRIB	1064.9	1	In Left	Mostly dry



Distribution and abundance of LWD, distribution of substrates, and distribution of Rosgen's channel types (Rosgen 1996) in stream section 001641, summer 2006. LWD, substrate, and channel type were recorded for each habitat unit in the stream. X-axis indicates distance upstream from confluence with 001640. Vertical bars on (A) indicate total count of LWD; open circles represent the amount of the total LWD that was >5 m in length, >55 cm in diameter (size 4). Closed circles on (B) are dominant substrates, open circles are subdominant substrates. See Appendix A for substrate sizes. See Appendix A for channel type descriptions from (C).

Photos taken on stream section 001641, during BVET habitat survey, summer 2006. Distance is meters from start of survey.

<b>Unit Type</b>	<b>Unit Number</b>	<b>Distance (m)</b>	<b>Comments</b>
OTR		106.5	Rusty metal box on right
UNGR		163.5	Photo of main channel
R	4	206.3	Probably no fish. (none sighted)
TRIB		726.9	004312, dry
R	8	837.6	Fish present-picture of darter
R	9	899	
TRIB		1064.9	Mostly dry

<b>Stream:</b>	Unnamed Trib of Brushy Fork - 11010014004364
District	Bayou
USGS Quadrangle	Lost Corner
6 <sup>th</sup> Level HUC	110100140302
Survey Date	06/01/06
Downstream Starting Point	Confluence of Brushy Fork
Total Distance Surveyed (km)	0.6

	<b>Pools</b>	<b>Riffles</b>
Percent of Total Stream Area	78	22
Total Area (m <sup>2</sup> )	138 ± 138	38 ± NC
Correction Factor Applied	0.87	1.00
Number of Paired Samples	3	1
Total Count	14	3
Number per km	23	5
Mean Area (m <sup>2</sup> )	10	13
Mean Maximum Depth (cm)	29	10
Mean Average Depth (cm)	16	5
Mean Residual Depth (cm)	14	--
Percent Inventoried as Glides	0	--
Percent Inventoried as Runs	--	0
Percent Inventoried as Cascades	--	0
Percent with >35% Fines	0	0

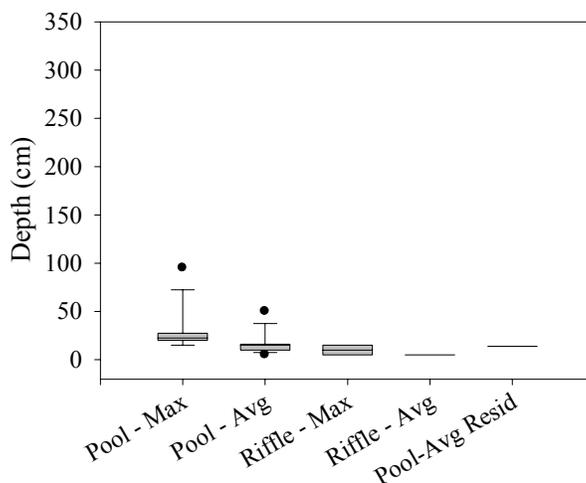
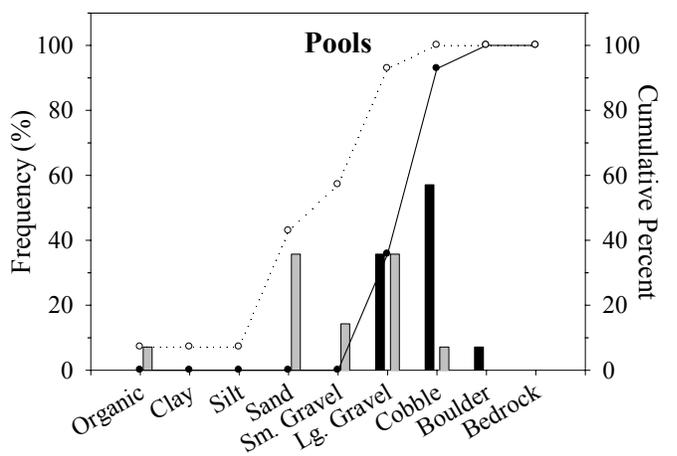
<b>Large Woody Debris Size</b>	<b>Pieces per km</b>
< 5 m long, 10 cm - 55 cm diameter	2
< 5 m long, > 55 cm diameter	3
> 5 m long, 10 cm - 55 cm diameter	2
> 5 m long, > 55 cm diameter	0
Total:	7

<b>Riparian Width</b>	<b>Total Width* (m)</b>	<b>Left &amp; Right Width ** (m)</b>
Mean	9	2
Maximum	9	2
75th Percentile	9	2
25th Percentile	9	1
Minimum	9	1

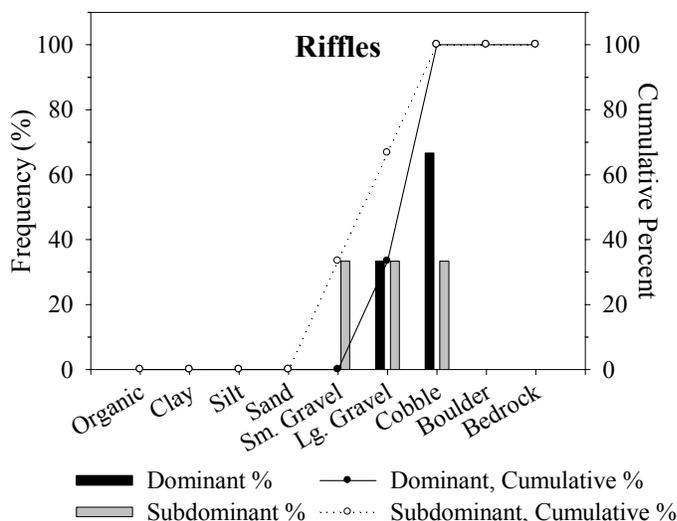
\*Left riparian, right riparian, and bankfull channel widths were added together for calculations

\*\*Left and right riparian measurements were grouped (not added) together for calculations

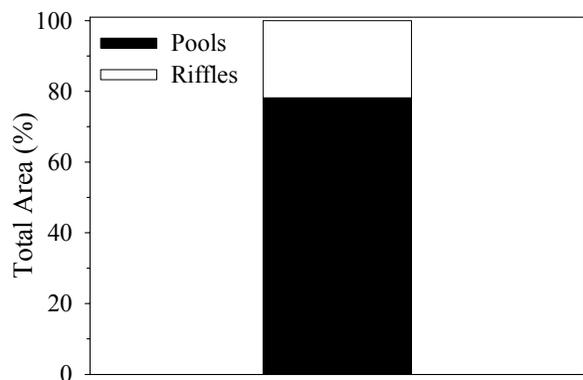
<b>Rosgen's Channel Type</b>	<b>Frequency (%)</b>	<b>Other Stream Attributes</b>	
A	0	Mean Bankfull Channel Width (m)	6
B	100	Mean Channel Gradient (%)	5
C	0	Median Water Temperature (C)	20
D	0		
E	0		
F	0		
G	0		



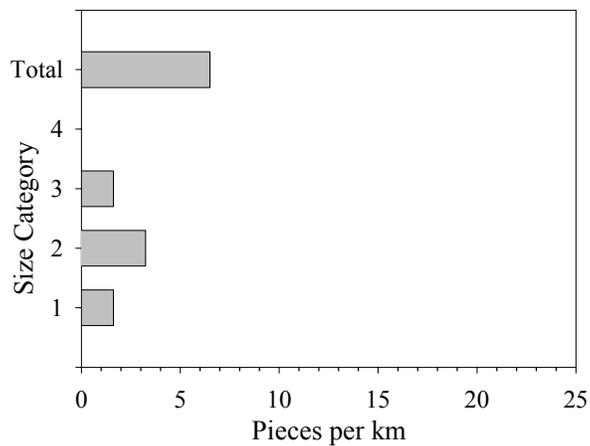
Maximum and average depths and residual pool depths for pools and riffles in stream section 004364, summer 2006. The top and bottom of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data.



Frequency (percent) and cumulative percent of dominant and subdominant substrate occurrence for pools and riffles in stream section 004364, summer 2006.



Estimated area of stream section 004364 in pools and riffles as calculated using BVET techniques, summer 2006.

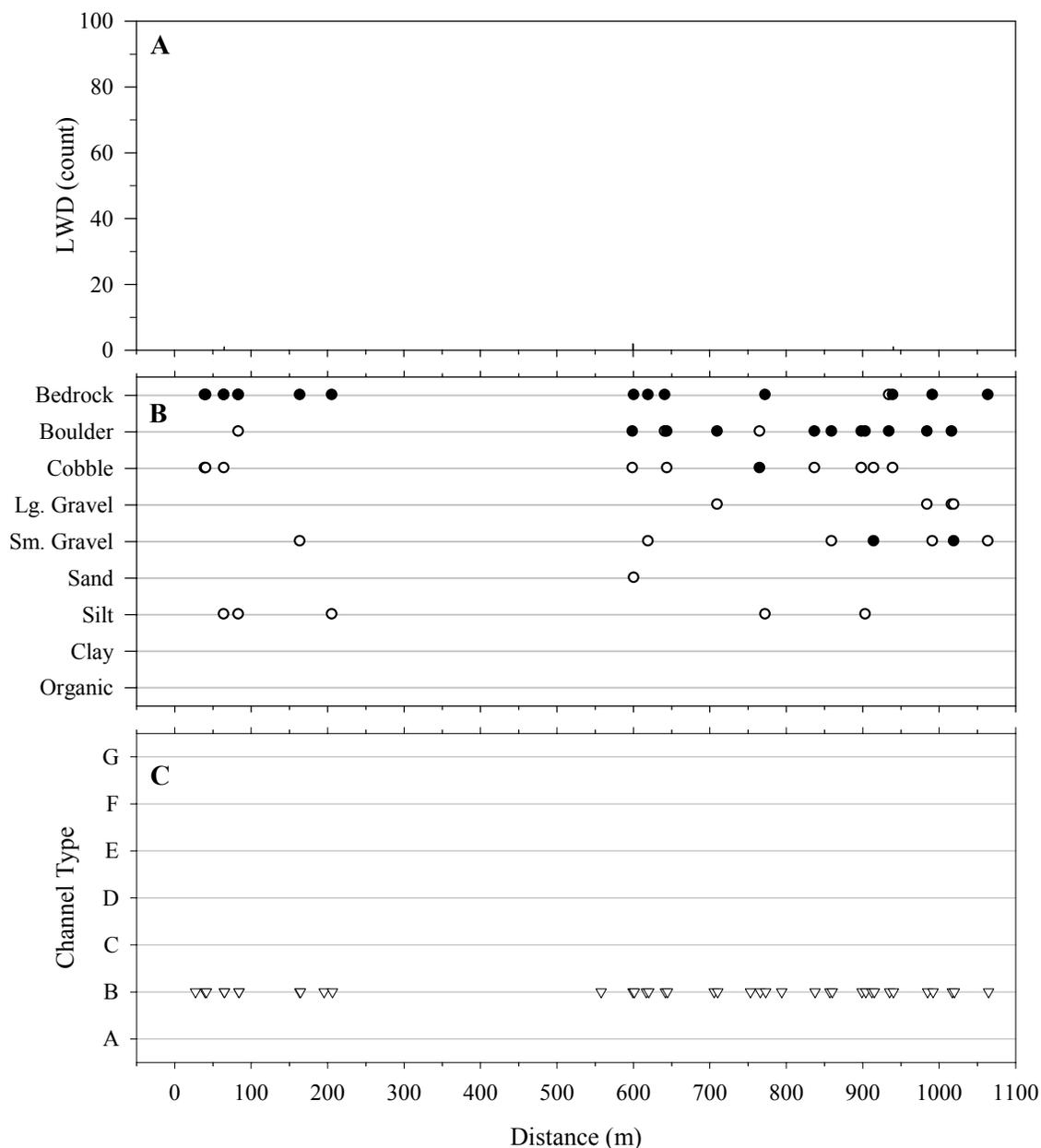


LWD per kilometer in stream section 004364, summer 2006. Y-axis labels are LWD size classes described below.

- Size 1: < 5 m long, 10-55 cm diameter
- Size 2: < 5 m long, > 55 cm diameter
- Size 3: > 5 m long, 10-55 cm diameter
- Size 4: > 5 m long, > 55 cm diameter

Stream features found on stream section 004364, BVET habitat survey, summer 2006. Distance is meters from start of survey.

<b>Feature</b>	<b>Distance (m)</b>	<b>Width (m)</b>	<b>In/Out</b>	<b>Comments</b>
UNGR	156.7			
NHD_ID	165.4			11010014004364
UNGR	307.2			
UNGR	394.9			
UNGR	448.1			
UNGR	461.7			
UNGR	468.3			
UNGR	476			
UNGR	486.8			
UNGR	519			
UNGR	534.6			
UNGR	589.5			
UNGR	611.4			
FALL	614.6			5m perch



Distribution and abundance of LWD, distribution of substrates, and distribution of Rosgen's channel types (Rosgen 1996) in stream section 004364, summer 2006. LWD, substrate, and channel type were recorded for each habitat unit in the stream. X-axis indicates distance upstream from confluence with Brushy Fork. Vertical bars on (A) indicate total count of LWD; open circles represent the amount of the total LWD that was >5 m in length, >55 cm in diameter (size 4). Closed circles on (B) are dominant substrates, open circles are subdominant substrates. See Appendix A for substrate sizes. See Appendix A for channel type descriptions from (C).

Photos taken on stream section 004364, during BVET habitat survey, summer 2006. Distance is meters from start of survey.

<b>Unit Type</b>	<b>Unit Number</b>	<b>Distance (m)</b>	<b>Comments</b>
R	3	505.1	
P	14	614.6	water moccasin, 5m perch on fall
FALL		614.6	5m perch

<b>Stream:</b>	Unnamed Trib of Brushy Fork - 11010014004427
District	Bayou
USGS Quadrangle	Lost Corner
6 <sup>th</sup> Level HUC	110100140302
Survey Date	06/05/06
Downstream Starting Point	confluence with Brushy Fork
Total Distance Surveyed (km)	0.8

	<b>Pools</b>	<b>Riffles</b>
Percent of Total Stream Area	NC	NC
Total Area (m <sup>2</sup> )	349 ± 0	NC ± NC
Correction Factor Applied	1.00*	NC
Number of Paired Samples	7	0
Total Count	13	6
Number per km	15	7
Mean Area (m <sup>2</sup> )	27	NC
Mean Maximum Depth (cm)	35	5
Mean Average Depth (cm)	17	5
Mean Residual Depth (cm)	13	--
Percent Inventoried as Glides	0	--
Percent Inventoried as Runs	--	0
Percent Inventoried as Cascades	--	0
Percent with >35% Fines	0	0

\*No visual estimates; all pools measured

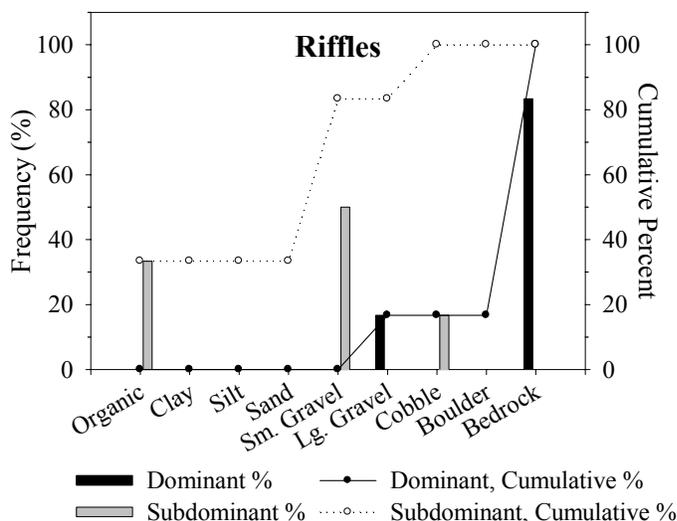
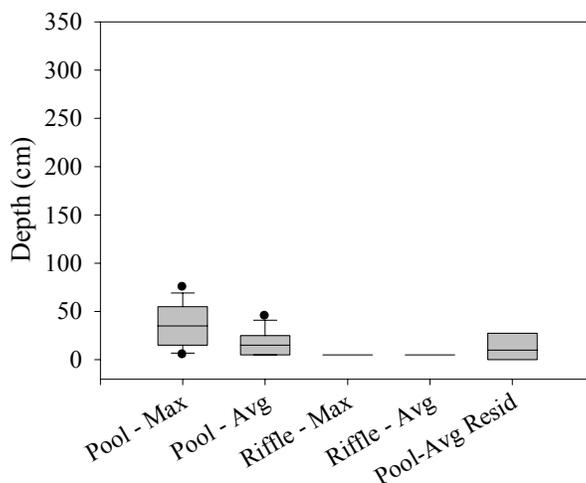
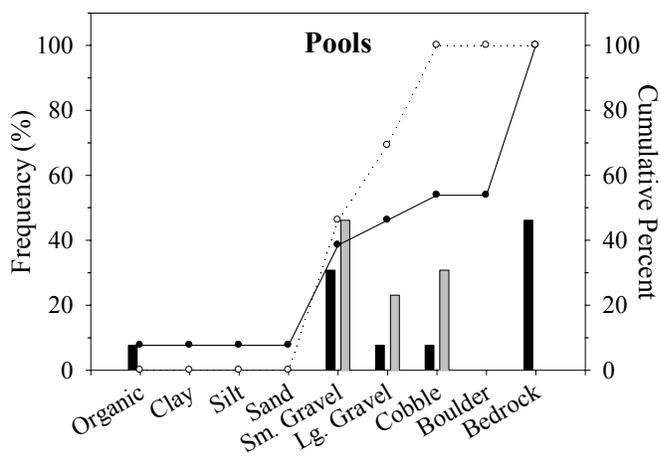
<b>Large Woody Debris Size</b>	<b>Pieces per km</b>
< 5 m long, 10 cm - 55 cm diameter	12
< 5 m long, > 55 cm diameter	0
> 5 m long, 10 cm - 55 cm diameter	1
> 5 m long, > 55 cm diameter	0
Total:	13

<b>Riparian Width</b>	<b>Total Width* (m)</b>	<b>Left &amp; Right Width ** (m)</b>
Mean	NA	NA
Maximum	NA	NA
75th Percentile	NA	NA
25th Percentile	NA	NA
Minimum	NA	NA

\*Left riparian, right riparian, and bankfull channel widths were added together for calculations

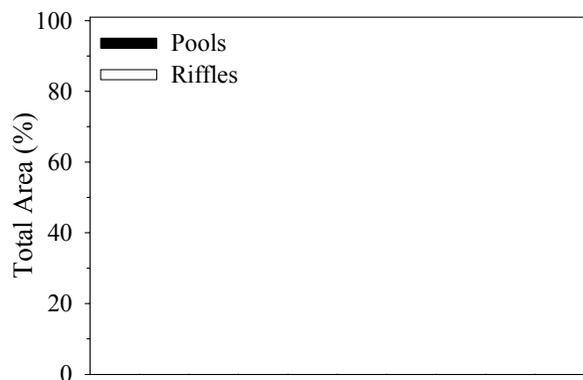
\*\*Left and right riparian measurements were grouped (not added) together for calculations

<b>Rosgen's Channel Type</b>	<b>Frequency (%)</b>	<b>Other Stream Attributes</b>	
A	NA	Mean Bankfull Channel Width (m)	NA
B	NA	Mean Channel Gradient (%)	NA
C	NA	Median Water Temperature (C)	NA
D	NA		
E	NA		
F	NA		
G	NA		

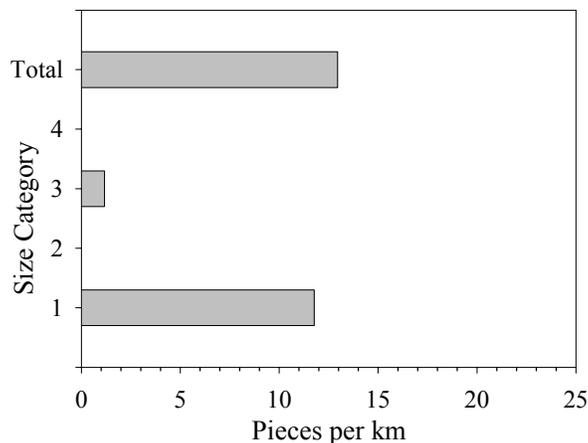


Maximum and average depths and residual pool depths for pools and riffles in stream section 004427, summer 2006. The top and bottom of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data.

Frequency (percent) and cumulative percent of dominant and subdominant substrate occurrence for pools and riffles in stream section 004427, summer 2006.



Estimated area of stream section 004427 in pools and riffles as calculated using BVET techniques, summer 2006.

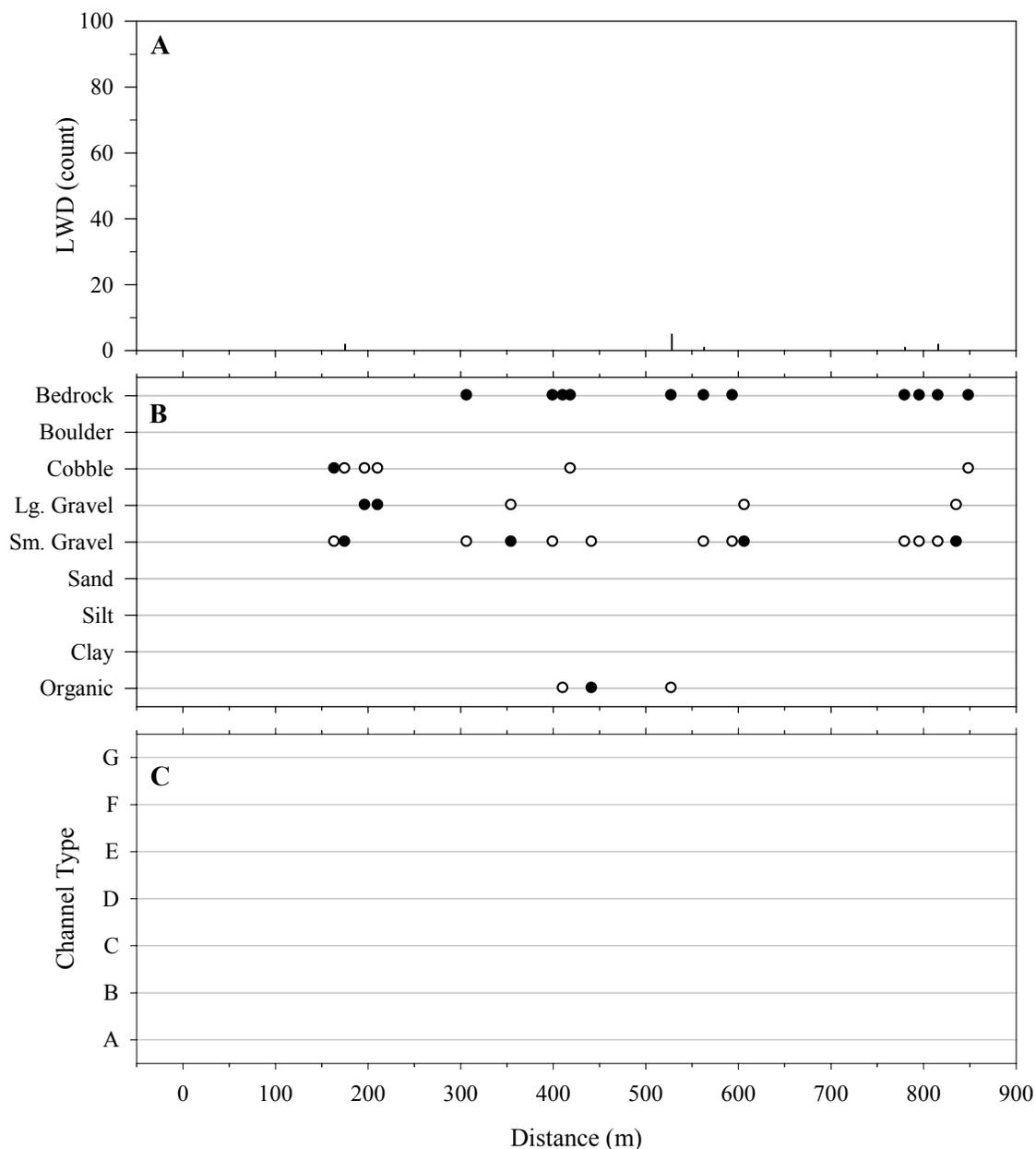


LWD per kilometer in stream section 004427, summer 2006. Y-axis labels are LWD size classes described below.

- Size 1: < 5 m long, 10-55 cm diameter
- Size 2: < 5 m long, > 55 cm diameter
- Size 3: > 5 m long, 10-55 cm diameter
- Size 4: > 5 m long, > 55 cm diameter

Stream features found on stream section 004427, BVET habitat survey, summer 2006. Distance is meters from start of survey.

<b>Feature</b>	<b>Distance (m)</b>	<b>Width (m)</b>	<b>In/Out</b>	<b>Comments</b>
UNGR	159			
NHD_ID	159			11010014004427
UNGR	170			
FALL	173			fall
UNGR	190			
UNGR	306			
UNGR	352			
UNGR	394			
UNGR	432			
UNGR	551			
TRIB	707		In Right	dry, stair step bedrock
UNGR	831			
TRIB	834	1	In Right	
TRIB	911		In Right	dry
OTR	942			forest boundary



Distribution and abundance of LWD, distribution of substrates, and distribution of Rosgen's channel types (Rosgen 1996) in stream section 004427, summer 2006. LWD, substrate, and channel type were recorded for each habitat unit in the stream. X-axis indicates distance upstream from confluence with Brushy Fork. Vertical bars on (A) indicate total count of LWD; open circles represent the amount of the total LWD that was >5 m in length, >55 cm in diameter (size 4). Closed circles on (B) are dominant substrates, open circles are subdominant substrates. See Appendix A for substrate sizes. See Appendix A for channel type descriptions from (C).

Photos taken on stream section 004427, during BVET habitat survey, summer 2006. Distance is meters from start of survey.

<b>Unit Type</b>	<b>Unit Number</b>	<b>Distance (m)</b>	<b>Comments</b>
FALL		173	fall
R	2	411	
TRIB		707	dry, stair step bedrock
TRIB		911	dry

<b>Stream:</b>	Lewis Prong - 11110201000118-0121 & 1197
District	Pleasant Hill
USGS Quadrangle	Oark & Ozone
6 <sup>th</sup> Level HUC	111102010603
Survey Date	06/16/06
Downstream Starting Point	Ozark Highlands Recreation Trail ford just north of private land and Trib 001203
Total Distance Surveyed (km)	6.1

	<b>Pools</b>	<b>Riffles</b>
Percent of Total Stream Area	69	31
Total Area (m <sup>2</sup> )	11264 ± 2460	5105 ± 3723
Correction Factor Applied	1.05	1.35
Number of Paired Samples	14	5
Total Count	147	50
Number per km	24	8
Mean Area (m <sup>2</sup> )	77	102
Mean Maximum Depth (cm)	37	17
Mean Average Depth (cm)	16	10
Mean Residual Depth (cm)	6	--
Percent Inventoried as Glides	55	--
Percent Inventoried as Runs	--	0
Percent Inventoried as Cascades	--	0
Percent with >35% Fines	0	0

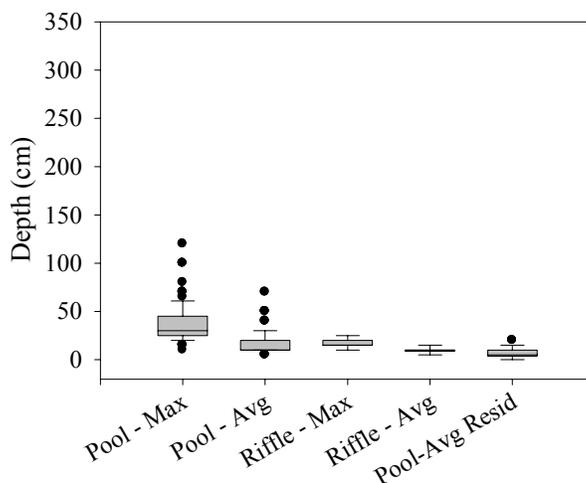
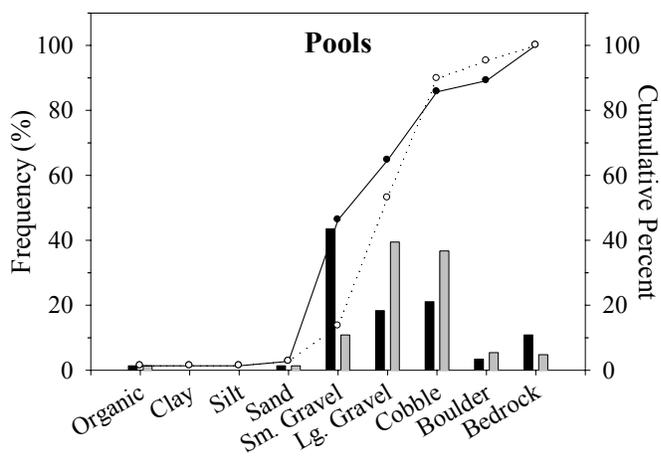
<b>Large Woody Debris Size</b>	<b>Pieces per km</b>
< 5 m long, 10 cm - 55 cm diameter	0
< 5 m long, > 55 cm diameter	0
> 5 m long, 10 cm - 55 cm diameter	0
> 5 m long, > 55 cm diameter	0
Total:	0

<b>Riparian Width</b>	<b>Total Width* (m)</b>	<b>Left &amp; Right Width ** (m)</b>
Mean	22	6
Maximum	44	26
75th Percentile	24	8
25th Percentile	14	1
Minimum	10	1

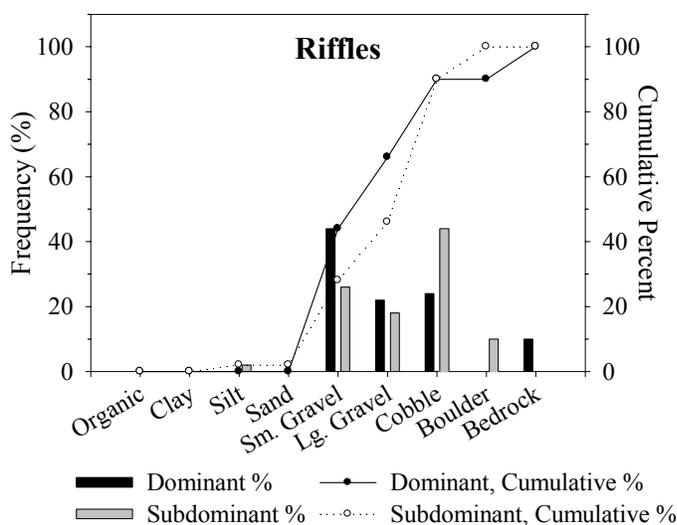
\*Left riparian, right riparian, and bankfull channel widths were added together for calculations

\*\*Left and right riparian measurements were grouped (not added) together for calculations

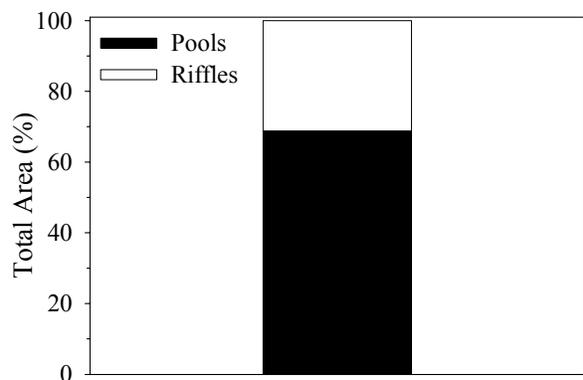
<b>Rosgen's Channel Type</b>	<b>Frequency (%)</b>	<b>Other Stream Attributes</b>	
A	0	Mean Bankfull Channel Width (m)	10
B	100	Mean Channel Gradient (%)	4
C	0	Median Water Temperature (C)	20
D	0		
E	0		
F	0		
G	0		



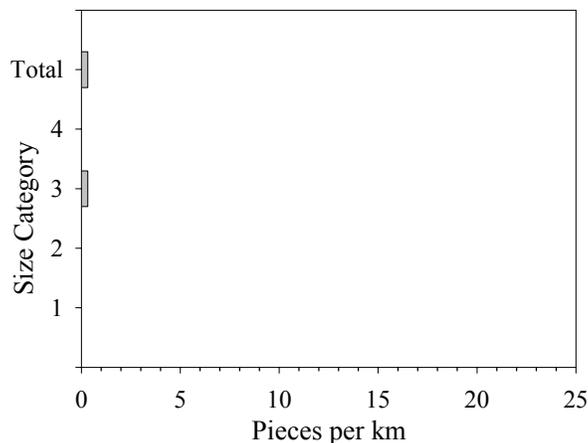
Maximum and average depths and residual pool depths for pools and riffles in stream section 000118 through 001197, summer 2006. The top and bottom of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data.



Frequency (percent) and cumulative percent of dominant and subdominant substrate occurrence for pools and riffles in stream section 000118 through 001197, summer 2006.



Estimated area of stream section 000118 through 001197 in pools and riffles as calculated using BVET techniques, summer 2006.



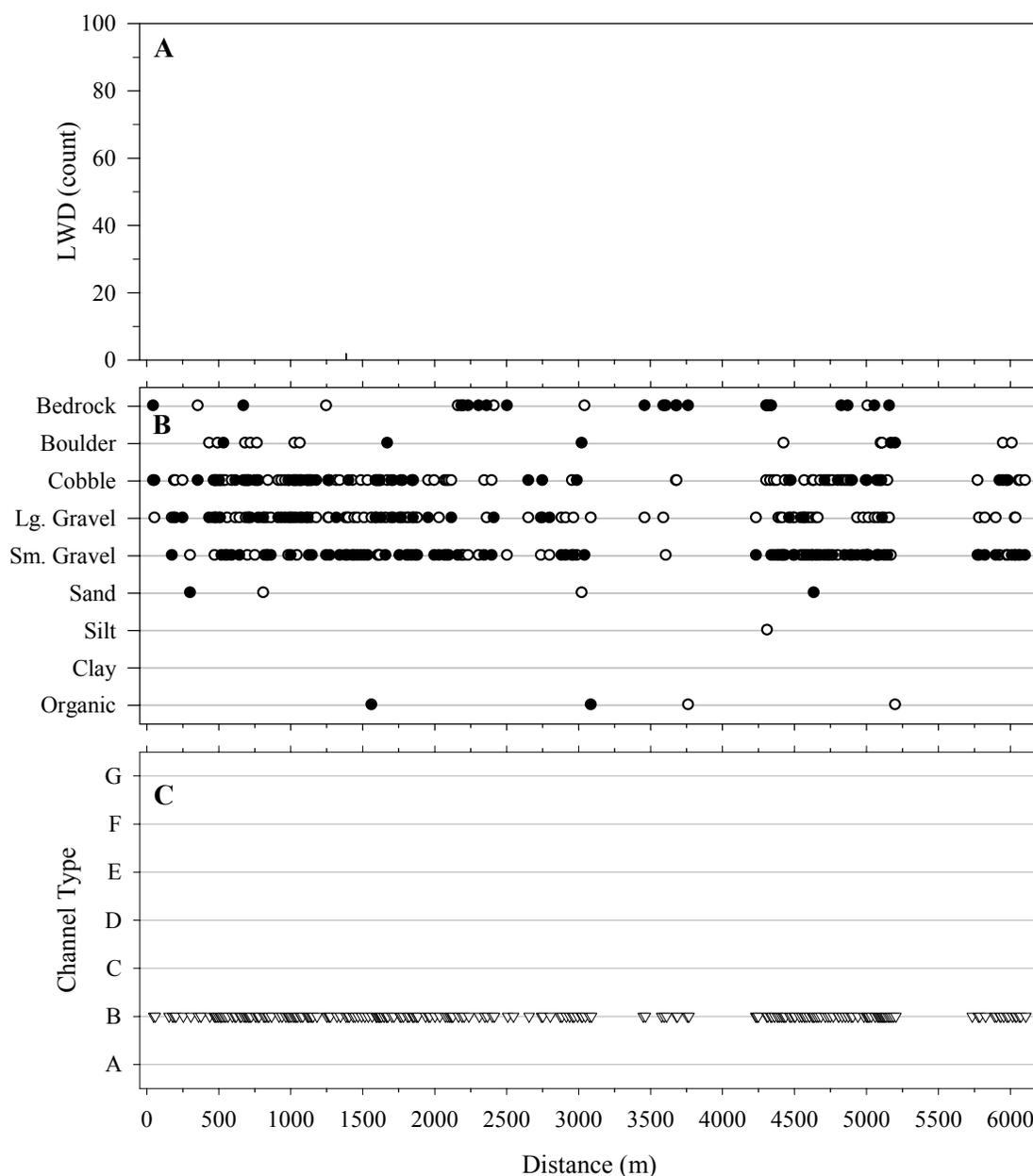
LWD per kilometer in stream section 000118 through 001197, summer 2006. Y-axis labels are LWD size classes described below.  
 Size 1: < 5 m long, 10-55 cm diameter  
 Size 2: < 5 m long, > 55 cm diameter  
 Size 3: > 5 m long, 10-55 cm diameter  
 Size 4: > 5 m long, > 55 cm diameter

Stream features found on stream section 000118 through 001197, BVET habitat survey, summer 2006. Distance is meters from start of survey.

Feature	Distance (m)	Width (m)	In/Out	Comments
NHD_ID	47.9			11110201000118
SCH	101	2	In Right	dry
UNGR	155			
TRIB	161	2	In Left	dry-Probably 001891.
SCH	210	2	Out Right	dry
UNGR	376			
TRIB	594	2	In Left	dry
UNGR	612			
UNGR	657			
TRIB	725	3	In Left	001202 Sie Hollow-dry for 500m, few isolated pools.
NHD_ID	725			11110201000119
UNGR	774			
UNGR	981			
UNGR	1155			
TRIB	1265	2	In Right	dry.
TRIB	1375	1	In Right	overhead.
TRIB	1495	1.5	In Right	dry
SCH	1602	2	In Right	dry
UNGR	1628			
UNGR	1648			
UNGR	1670			
SCH	1711	3	Out Right	dry
UNGR	1881			
UNGR	1937			
UNGR	1967			
FORD	1983			Ozark Highlands National Recreational Trail
UNGR	2114			
UNGR	2127			
SCH	2252	3	In Left	
SCH	2416	3	In Left	dry
SCH	2520	5	Out Left	dry
UNGR	2548			
TRIB	2620	2	In Left	dry 001201
TRIB	2626	2	In Right	dry
NHD_ID	2656			11110201000120
UNGR	2873			
UNGR	2938			
SLID	3009	10	In Right	dirt
UNGR	3020			

Feature table continued.

Feature	Distance (m)	Width (m)	In/Out	Comments
SCH	3048	3	In Right	dry
UNGR	3075			
UNGR	3449			
NHD_ID	3449			11110201000121
TRIB	3463	5	In Left	001198 Turner Hollow dry
FORD	3573			in left, Possibly Ozark Highlands Trail
UNGR	3578			
TRIB	3645	4	In Right	000122 Waterfall Hollow, dry
FORD	3645			Ozark Highlands National Recreational Trail
NHD_ID	3681			11110201001197
TRIB	3717	4	In Right	Sidechannel of Waterfall Hollow, dry
UNGR	3756			
SCH	3950	2	In Right	dry
SCH	4019	3	Out Right	dry
SCH	4049	2	In Right	dry
SCH	4132	3	Out Right	dry
UNGR	4231			
UNGR	4248			
TRIB	4337	2	In Left	dry
SCH	4461	3	In Left	dry
UNGR	4534			
TRIB	4608	2	In Right	dry
FORD	4695			ATV trail
UNGR	4809			
SCH	4878	3	In Right	dry
TRIB	4967	1.5	In Right	dry
UNGR	5034			
UNGR	5095			
UNGR	5122			
UNGR	5137			
UNGR	5189			
TRIB	5435	2.5	In Left	001859, dry
TRIB	5723	2	In Right	dry
UNGR	5735			
UNGR	5892			
UNGR	5933			
TRIB	5942	3	In Right	dry
TRIB	6107	2.5	In Left	dry



Distribution and abundance of LWD, distribution of substrates, and distribution of Rosgen's channel types (Rosgen 1996) in stream section 000118 through 001197, summer 2006. LWD, substrate, and channel type were recorded for each habitat unit in the stream. X-axis indicates distance upstream from Ozark Highland Trail ford north of tributary 001203. Vertical bars on (A) indicate total count of LWD; open circles represent the amount of the total LWD that was >5 m in length, >55 cm in diameter (size 4). Closed circles on (B) are dominant substrates, open circles are subdominant substrates. See Appendix A for substrate sizes. See Appendix A for channel type descriptions from (C).

Photos taken on stream section 000118 through 001197, during BVET habitat survey, summer 2006. Distance is meters from start of survey.

<b>Unit Type</b>	<b>Unit Number</b>	<b>Distance (m)</b>	<b>Comments</b>
R	3	469	
TRIB		725	001202 Sie Hollow-dry for 500m, few isolated pools.
R	13	1434	
FORD		1983	Ozark Highlands National Recreational Trail
SCH		2252	
R	23	2507	
TRIB		2620	dry 001201
SLID		3009	dirt
TRIB		3463	001198 Turner Hollow dry
TRIB		3645	000122 Waterfall Hollow, dry
R	33	4667	
R	43	5151	

<b>Stream:</b>	Panther Creek - 11110201000123
District	Pleasant Hill
USGS Quadrangle	Oark
6 <sup>th</sup> Level HUC	111102010603
Survey Date	06/16/06
Downstream Starting Point	end of private land as best determined
Total Distance Surveyed (km)	4.8

	<b>Pools</b>	<b>Riffles</b>
Percent of Total Stream Area	67	33
Total Area (m <sup>2</sup> )	4228 ± 573	2089 ± 426
Correction Factor Applied	0.99	1.23
Number of Paired Samples	15	5
Total Count	147	49
Number per km	31	10
Mean Area (m <sup>2</sup> )	29	43
Mean Maximum Depth (cm)	34	17
Mean Average Depth (cm)	24	9
Mean Residual Depth (cm)	18	--
Percent Inventoried as Glides	11	--
Percent Inventoried as Runs	--	0
Percent Inventoried as Cascades	--	0
Percent with >35% Fines	1	2

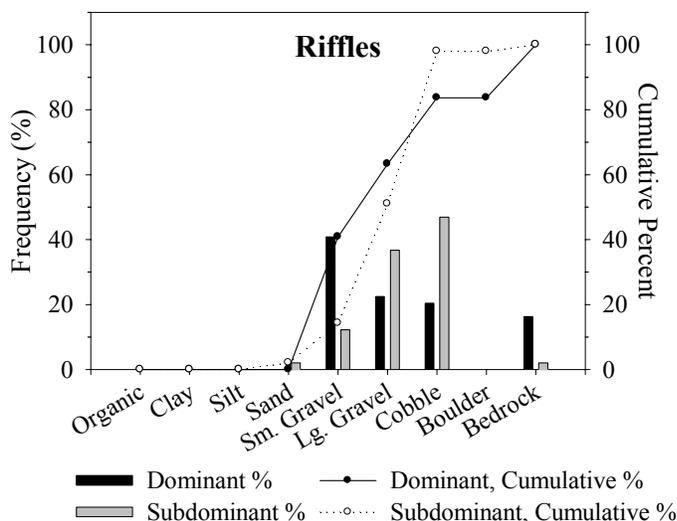
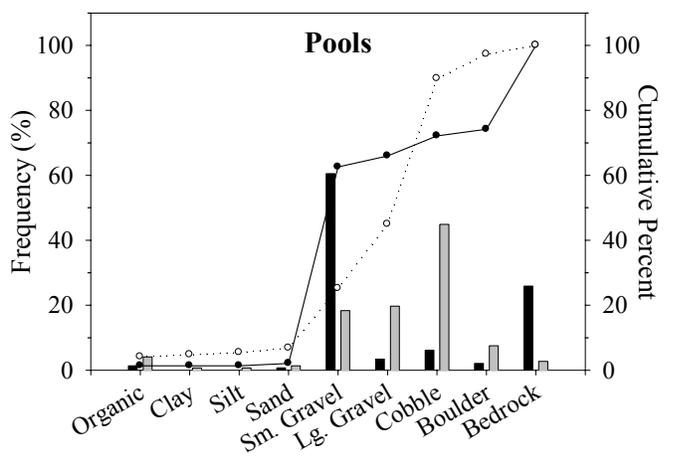
<b>Large Woody Debris Size</b>	<b>Pieces per km</b>
< 5 m long, 10 cm - 55 cm diameter	3
< 5 m long, > 55 cm diameter	0
> 5 m long, 10 cm - 55 cm diameter	6
> 5 m long, > 55 cm diameter	0
Total:	9

<b>Riparian Width</b>	<b>Total Width* (m)</b>	<b>Left &amp; Right Width ** (m)</b>
Mean	9	1
Maximum	11	3
75th Percentile	10	1
25th Percentile	9	1
Minimum	5	0.1

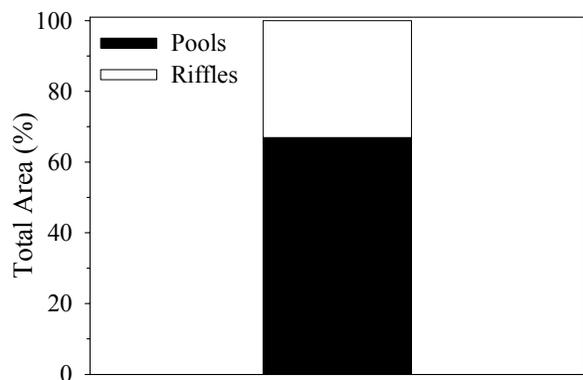
\*Left riparian, right riparian, and bankfull channel widths were added together for calculations

\*\*Left and right riparian measurements were grouped (not added) together for calculations

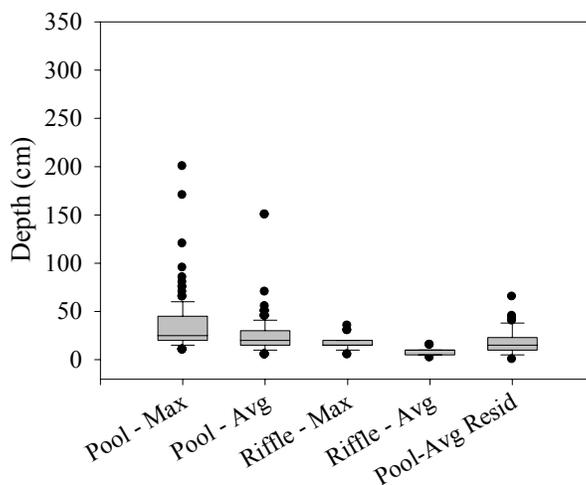
<b>Rosen's Channel Type</b>	<b>Frequency (%)</b>	<b>Other Stream Attributes</b>	
A	0	Mean Bankfull Channel Width (m)	7
B	100	Mean Channel Gradient (%)	4
C	0	Median Water Temperature (C)	20
D	0		
E	0		
F	0		
G	0		



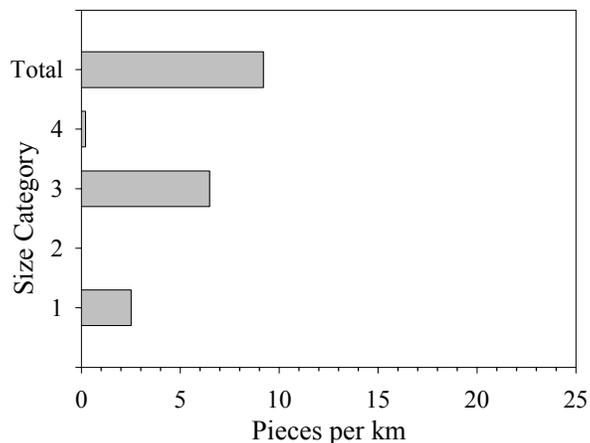
Frequency (percent) and cumulative percent of dominant and subdominant substrate occurrence for pools and riffles in stream section 000123, summer 2006.



Estimated area of stream section 000123 in pools and riffles as calculated using BVET techniques, summer 2006.



Maximum and average depths and residual pool depths for pools and riffles in stream section 000123, summer 2006. The top and bottom of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data.



LWD per kilometer in stream section 000123, summer 2006. Y-axis labels are LWD size classes described below.

- Size 1: < 5 m long, 10-55 cm diameter
- Size 2: < 5 m long, > 55 cm diameter
- Size 3: > 5 m long, 10-55 cm diameter
- Size 4: > 5 m long, > 55 cm diameter

Stream features found on stream section 000123, BVET habitat survey, summer 2006. Distance is meters from start of survey.

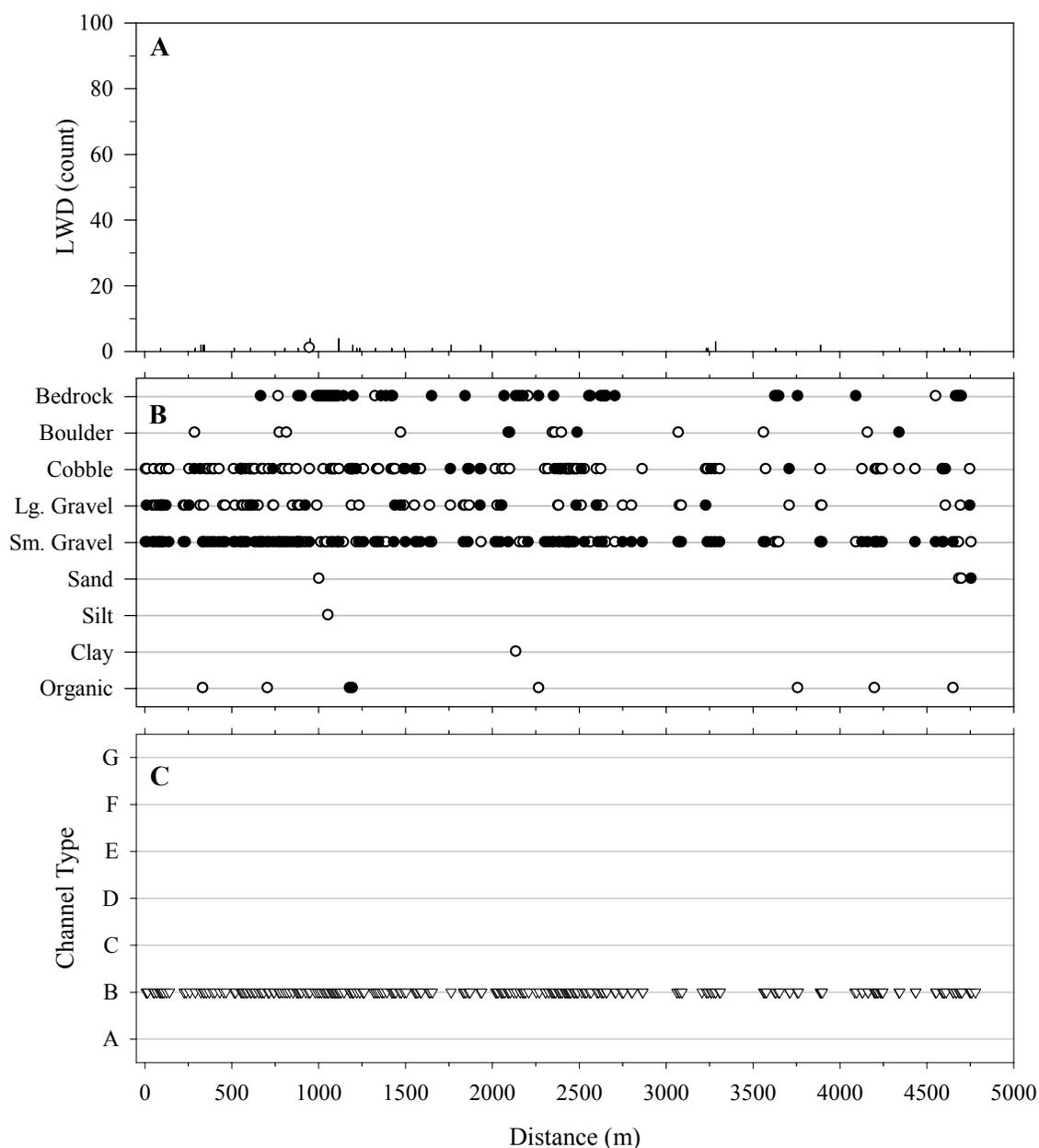
Feature	Distance (m)	Width (m)	In/Out	Comments
NHD_ID	8			11110201000123
SCH	24.3	0.6	In Right	dry
SCH	152.2		Out Right	dry
TRIB	212		In Right	dry picture 292
SCH	292.1	1.1	In Right	wet
FORD	294.8			pic 293 294, unknown trail
SEEP	364.3	5	In Left	wet
SCH	378.1		Out Right	dry
FORD	521.5			picture 298 299, unknown trail
UNGR	671.9			
FORD	848.8			picture 300,301, unknown trail
OTR	863.4			spring picture 302
UNGR	900.8			
UNGR	942.2			
UNGR	979.4			
SEEP	1063.7	0.1	In Right	
UNGR	1129.5			
SEEP	1130.8	2	In Left	
UNGR	1179			
UNGR	1254.8			
UNGR	1316.8			
UNGR	1375.7			
SEEP	1417.7	1.5	In Right	
TRIB	1434.3		In Right	picture 304
UNGR	1467.2			
SEEP	1498.7	0.7	In Right	
UNGR	1584.6			
TRIB	1591.7		In Right	picture 306
UNGR	1634.8			
UNGR	1832.5			
TRIB	1920	0.7	In Left	picture 307
TRIB	1934.7		In Right	picture 308
UNGR	2019.1			
UNGR	2027.4			
UNGR	2062.9			
UNGR	2089.9			
SEEP	2116.7	1.5	In Right	
UNGR	2122.9			
UNGR	2174.4			

Feature table continued.

<b>Feature</b>	<b>Distance (m)</b>	<b>Width (m)</b>	<b>In/Out</b>	<b>Comments</b>
UNGR	2190.9			
UNGR	2251.9			
SEEP	2302.2	7	In Left	wet
UNGR	2305.8			
TRIB	2324.5	2	In Left	pic 309
UNGR	2342.5			
TRIB	2342.6		In Left	pic 310
UNGR	2417.4			
UNGR	2529.9			
UNGR	2541.3			
TRIB	2565.5		In Left	picture 312
TRIB	2666.6		In Left	picture 213
UNGR	2705.3			
UNGR	2745.2			
UNGR	2799.9			
UNGR	2863			
TRIB	2926.6		In Right	picture 314
UNGR	3061.5			
TRIB	3182.4		In Left	picture 315
UNGR	3206.6			
UNGR	3257.9			
UNGR	3274.3			
UNGR	3306.9			
TRIB	3326.9		In Left	picture 316
TRIB	3405.5		In Right	picture 317
UNGR	3561.4			
UNGR	3571.9			
TRIB	3604.3		In Right	pic 318
UNGR	3625.9			
TRIB	3652.3		In Left	picture 319
UNGR	3708.9			
UNGR	3754.4			
UNGR	3886.3			
TRIB	3896.7		In Left	picture 320
TRIB	3964.9		In Right	picture 320
UNGR	4085.4			
UNGR	4128.2			
UNGR	4161.9			
UNGR	4198.5			

Feature table continued.

<b>Feature</b>	<b>Distance (m)</b>	<b>Width (m)</b>	<b>In/Out</b>	<b>Comments</b>
TRIB	4224.7		In Right	picture 322
UNGR	4234.1			
UNGR	4245.6			
TRIB	4306.3		In Right	picture 323
TRIB	4307.3		In Left	picture 324
UNGR	4340.8			
UNGR	4434.6			
SCH	4475.2		In Right	picture 326
FALL	4488	5	In Right	picture 326
UNGR	4549.9			
UNGR	4590.6			
UNGR	4651.1			
FALL	4661.8			picture 327
UNGR	4668.1			
UNGR	4748.1			
UNGR	4756.4			
UNGR	4780.8			



Distribution and abundance of LWD, distribution of substrates, and distribution of Rosgen's channel types (Rosgen 1996) in stream section 000123, summer 2006. LWD, substrate, and channel type were recorded for each habitat unit in the stream. X-axis indicates distance upstream from Forest Service Boundary. Vertical bars on (A) indicate total count of LWD; open circles represent the amount of the total LWD that was >5 m in length, >55 cm in diameter (size 4). Closed circles on (B) are dominant substrates, open circles are subdominant substrates. See Appendix A for substrate sizes. See Appendix A for channel type descriptions from (C).

Photos taken on stream section 000123, during BVET habitat survey, summer 2006. Distance is meters from start of survey.

<b>Unit Type</b>	<b>Unit Number</b>	<b>Distance (m)</b>	<b>Comments</b>
R	1	13.5	picture 291
TRIB		212	dry picture 292
FORD		294.8	pic 293 294, unknown trail
FORD		521.5	picture 298 299, unknown trail
FORD		848.8	picture 300,301, unknown trail
OTR		863.4	spring picture 302
TRIB		1434.3	picture 304
R	33	1555.4	picture 305
TRIB		1591.7	picture 306
TRIB		1920	picture 307
TRIB		1934.7	picture 308
TRIB		2324.5	pic 309
TRIB		2342.6	pic 310
TRIB		2565.5	picture 312
TRIB		2666.6	picture 213
TRIB		2926.6	picture 314
TRIB		3182.4	picture 315
TRIB		3326.9	picture 316
TRIB		3405.5	picture 317
TRIB		3604.3	pic 318
TRIB		3652.3	picture 319
TRIB		3896.7	picture 320
TRIB		3964.9	picture 320
TRIB		4224.7	picture 322
TRIB		4306.3	picture 323
TRIB		4307.3	picture 324
SCH		4475.2	picture 326
FALL		4488	picture 326
FALL		4661.8	picture 327

<b>Stream:</b>	Bear Branch - 11110201000307-0310
District	Pleasant Hill
USGS Quadrangle	Oark
6 <sup>th</sup> Level HUC	111102010605
Survey Date	06/19/06
Downstream Starting Point	Confluence with 11110201000109 Mulberry Creek.
Total Distance Surveyed (km)	9.6

	<b>Pools</b>	<b>Riffles</b>
Percent of Total Stream Area	59	41
Total Area (m <sup>2</sup> )	15093 ± 2524	10464 ± 1335
Correction Factor Applied	1.02	1.09
Number of Paired Samples	20	12
Total Count	212	127
Number per km	22	13
Mean Area (m <sup>2</sup> )	71	82
Mean Maximum Depth (cm)	40	15
Mean Average Depth (cm)	18	9
Mean Residual Depth (cm)	10	--
Percent Inventoried as Glides	60	--
Percent Inventoried as Runs	--	0
Percent Inventoried as Cascades	--	0
Percent with >35% Fines	1	0

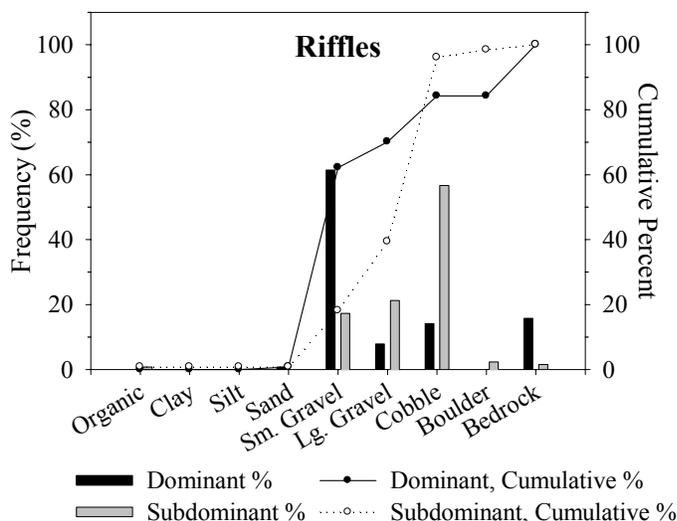
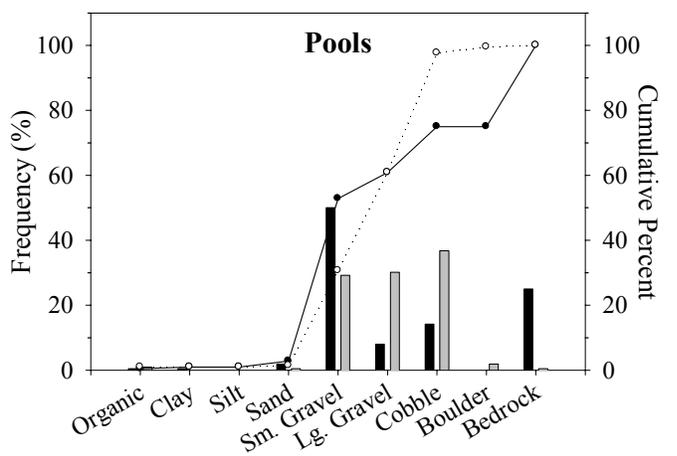
<b>Large Woody Debris Size</b>	<b>Pieces per km</b>
< 5 m long, 10 cm - 55 cm diameter	5
< 5 m long, > 55 cm diameter	0
> 5 m long, 10 cm - 55 cm diameter	7
> 5 m long, > 55 cm diameter	1
Total:	12

<b>Riparian Width</b>	<b>Total Width* (m)</b>	<b>Left &amp; Right Width ** (m)</b>
Mean	19	5
Maximum	53	22
75th Percentile	22	8
25th Percentile	10	1
Minimum	9	0.4

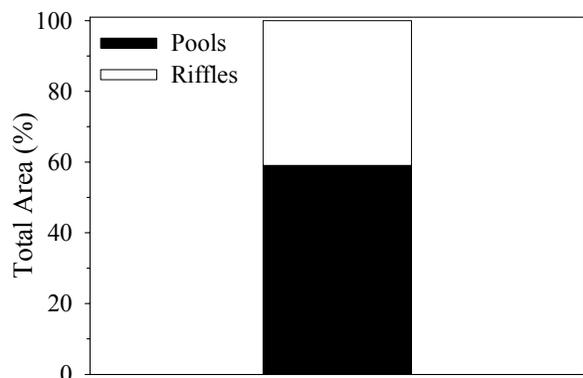
\*Left riparian, right riparian, and bankfull channel widths were added together for calculations

\*\*Left and right riparian measurements were grouped (not added) together for calculations

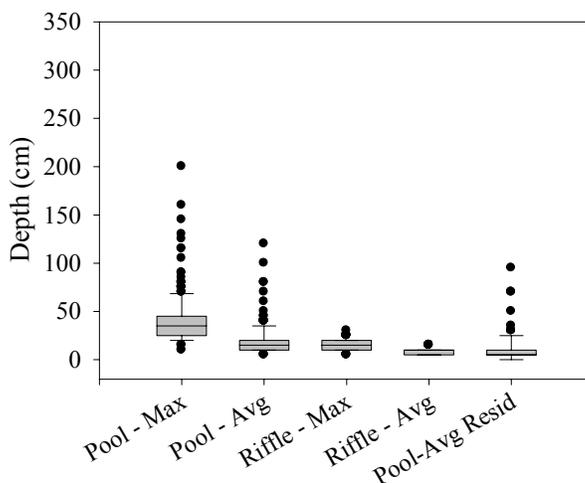
<b>Rosen's Channel Type</b>	<b>Frequency (%)</b>	<b>Other Stream Attributes</b>	
A	0	Mean Bankfull Channel Width (m)	8
B	100	Mean Channel Gradient (%)	4
C	0	Median Water Temperature (C)	17
D	0		
E	0		
F	0		
G	0		



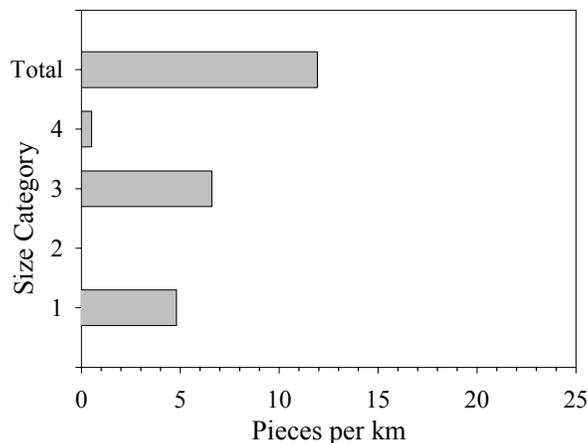
Frequency (percent) and cumulative percent of dominant and subdominant substrate occurrence for pools and riffles in stream section 000307 through 000310, summer 2006.



Estimated area of stream section 000307 through 000310 in pools and riffles as calculated using BVET techniques, summer 2006.



Maximum and average depths and residual pool depths for pools and riffles in stream section 000307 through 000310, summer 2006. The top and bottom of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data.



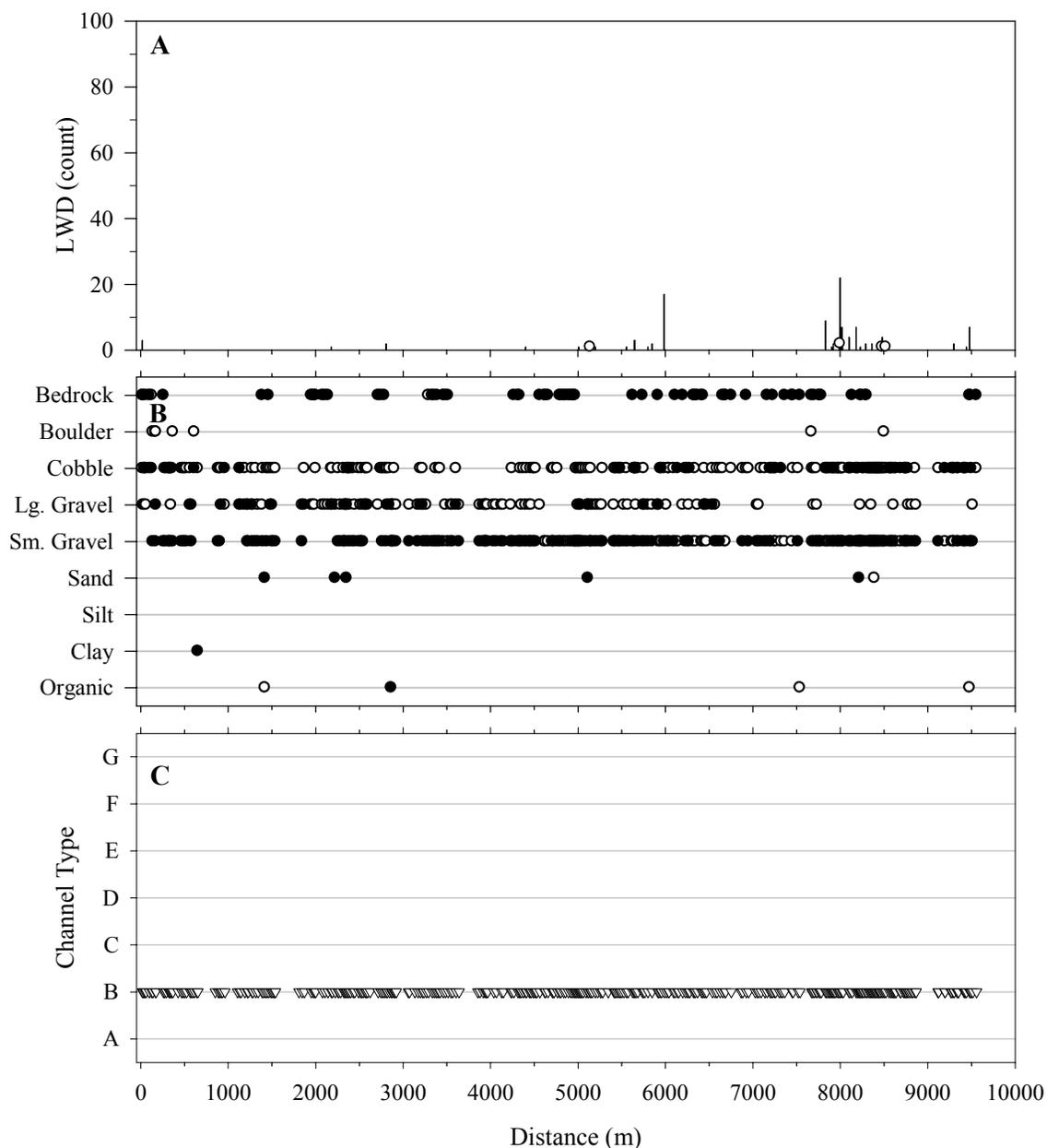
LWD per kilometer in stream section 000307 through 000310, summer 2006. Y-axis labels are LWD size classes described below.  
 Size 1: < 5 m long, 10-55 cm diameter  
 Size 2: < 5 m long, > 55 cm diameter  
 Size 3: > 5 m long, 10-55 cm diameter  
 Size 4: > 5 m long, > 55 cm diameter

Stream features found on stream section 000307 through 000310, BVET habitat survey, summer 2006. Distance is meters from start of survey.

Feature	Distance (m)	Width (m)	In/Out	Comments
NHD_ID	19			11110201000307
SCH	31	1	In Right	dry
SCH	126	2	In Right	dry
SCH	325	1.5	In Right	wet.
UNGR	427			
UNGR	591			
NHD_ID	613			11110201000308
UNGR	640			
UNGR	851			
UNGR	935			
UNGR	1105			
SCH	1501	3	In Left	Major, mostly dry.
UNGR	1533			
SCH	1808	4	Out Left	dry
UNGR	1808			
TRIB	2041	1	In Right	flowing;
TRIB	2257	4	In Left	dry, possible trib 002127
UNGR	2266			
FORD	2376			ATVs seen earlier on trail; follows stream roughly (henceforth Bear Branch ATV Tr, likely follows most of the stream but we did not survey the trail.)
UNGR	2624			
FORD	2633			Bear Branch ATV Tr
SCH	2846	2.5	In Left	dry
UNGR	2910			
UNGR	3060			
UNGR	3133			
TRIB	3506	2.5	In Right	dry, 002159
FORD	3713			Bear Branch ATV Tr
UNGR	3855			
SCH	4476	4	In Left	barely flowing.
TRIB	4500	3	In Right	001155, dry
NHD_ID	4504			11110201000309
UNGR	4530			
SCH	4937	2.5	In Left	dry
SCH	5029	3	In Left	dry
SCH	5045	4	In Right	dry
SCH	5282	3	In Left	mostly dry

Feature table continued.

Feature	Distance (m)	Width (m)	In/Out	Comments
UNGR	5345			
TRIB	5895	3	In Left	dry, 002243
SCH	6019	3	In Left	dry
SCH	6047	3	Out Left	dry
FORD	6131			Bear Branch ATV Tr
UNGR	6154			
FORD	6228			Bear Branch ATV Tr
FORD	6520			Bear Branch ATV Tr
SCH	6729	2.5	In Right	mostly dry
TRIB	6767	2.5	In Left	dry, 002252
UNGR	6866			
FORD	7022			Bear Branch ATV Tr
UNGR	7027			
TRIB	7091	4	In Left	almost dry, 001156
NHD_ID	7093			11110201000310
FORD	7147			Bear Branch ATV Tr
UNGR	7302			
UNGR	7342			
SLID	7429	13	In Right	dirt and rock.
TRIB	7549	2	In Right	unnamed, dry
UNGR	7892			
UNGR	7912			
SCH	7934	2	In Right	dry
UNGR	8223			
TRIB	8258	1	In Right	dry
UNGR	8622			
FORD	8653			Bear Branch ATV Tr
UNGR	8686			
UNGR	8724			
TRIB	8750	2.5	In Right	dry, possibly 002296
UNGR	8798			
UNGR	8833			
TRIB	9017	2	In Right	dry, another possible.
UNGR	9115			
UNGR	9195			
UNGR	9265			
UNGR	9336			
UNGR	9431			



Distribution and abundance of LWD, distribution of substrates, and distribution of Rosgen's channel types (Rosgen 1996) in stream section 000307 through 000310, summer 2006. LWD, substrate, and channel type were recorded for each habitat unit in the stream. X-axis indicates distance upstream from confluence with 000109. Vertical bars on (A) indicate total count of LWD; open circles represent the amount of the total LWD that was >5 m in length, >55 cm in diameter (size 4). Closed circles on (B) are dominant substrates, open circles are subdominant substrates. See Appendix A for substrate sizes. See Appendix A for channel type descriptions from (C).

Photos taken on stream section 000307 through 000310, during BVET habitat survey, summer 2006. Distance is meters from start of survey.

<b>Unit Type</b>	<b>Unit Number</b>	<b>Distance (m)</b>	<b>Comments</b>
R	8	359	
R	18	2077	
R	28	2805	
TRIB		3506	dry, 002159
R	38	3549	
R	48	4377	
TRIB		4500	001155, dry
SCH		4937	dry
R	58	4978	No label on flags-Dan has marker.
R	68	5452	
TRIB		5895	dry, 002243
R	78	5987	
R	88	6625	ATV trail on left messes up Rosgen.
TRIB		6767	dry, 002252
R	98	7697	
R	108	8182	
R	118	8577	

<b>Stream:</b>	Washita Creek - 11110201000441-0444
District	Pleasant Hill
USGS Quadrangle	Oark
6 <sup>th</sup> Level HUC	111102010605
Survey Date	06/19/06
Downstream Starting Point	250 m up from confluence of 001145
Total Distance Surveyed (km)	6.5

	<b>Pools</b>	<b>Riffles</b>
Percent of Total Stream Area	53	47
Total Area (m <sup>2</sup> )	11348 ± 675	10120 ± 2140
Correction Factor Applied	1.07	1.02
Number of Paired Samples	11	6
Total Count	80	65
Number per km	12	10
Mean Area (m <sup>2</sup> )	142	156
Mean Maximum Depth (cm)	55	24
Mean Average Depth (cm)	33	12
Mean Residual Depth (cm)	23	--
Percent Inventoried as Glides	48	--
Percent Inventoried as Runs	--	2
Percent Inventoried as Cascades	--	0
Percent with >35% Fines	0	0

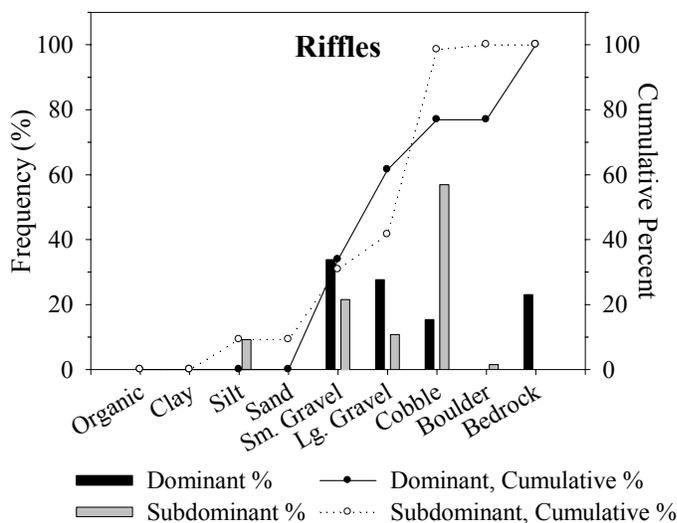
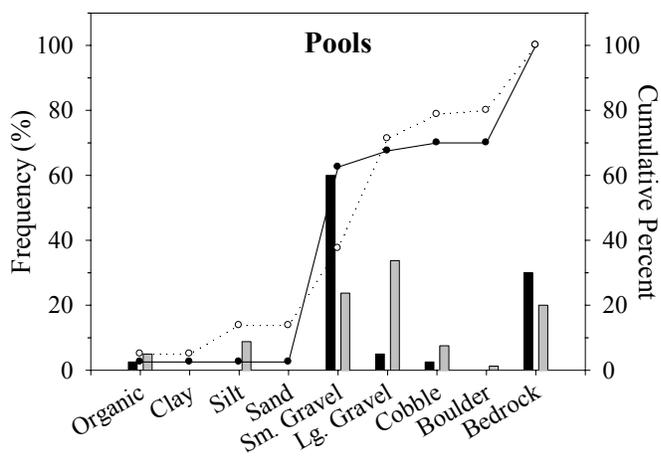
<b>Large Woody Debris Size</b>	<b>Pieces per km</b>
< 5 m long, 10 cm - 55 cm diameter	10
< 5 m long, > 55 cm diameter	1
> 5 m long, 10 cm - 55 cm diameter	11
> 5 m long, > 55 cm diameter	1
Total:	22

<b>Riparian Width</b>	<b>Total Width* (m)</b>	<b>Left &amp; Right Width ** (m)</b>
Mean	12	1
Maximum	17	4
75th Percentile	15	1
25th Percentile	10	1
Minimum	7	0.0

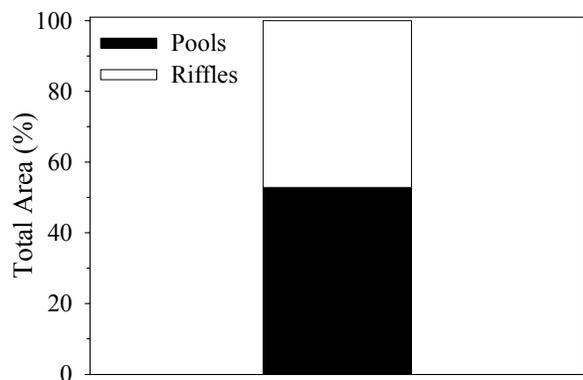
\*Left riparian, right riparian, and bankfull channel widths were added together for calculations

\*\*Left and right riparian measurements were grouped (not added) together for calculations

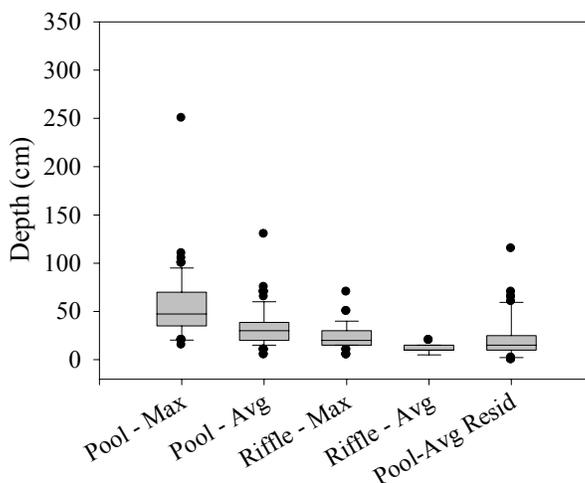
<b>Rosen's Channel Type</b>	<b>Frequency (%)</b>	<b>Other Stream Attributes</b>	
A	0	Mean Bankfull Channel Width (m)	10
B	100	Mean Channel Gradient (%)	3
C	0	Median Water Temperature (C)	20
D	0		
E	0		
F	0		
G	0		



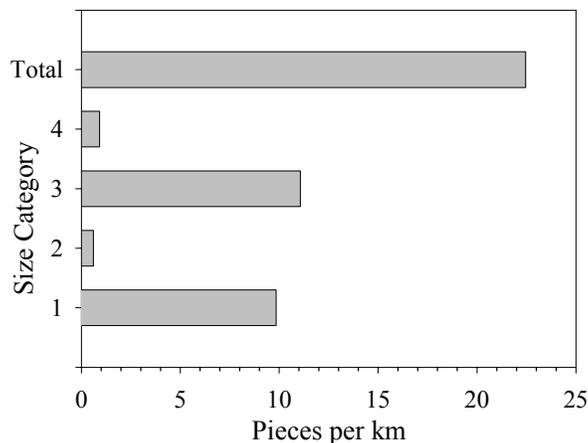
Frequency (percent) and cumulative percent of dominant and subdominant substrate occurrence for pools and riffles in stream section 000441 through 000444, summer 2006.



Estimated area of stream section 000441 through 000444 in pools and riffles as calculated using BVET techniques, summer 2006.



Maximum and average depths and residual pool depths for pools and riffles in stream section 000441 through 000444, summer 2006. The top and bottom of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data.



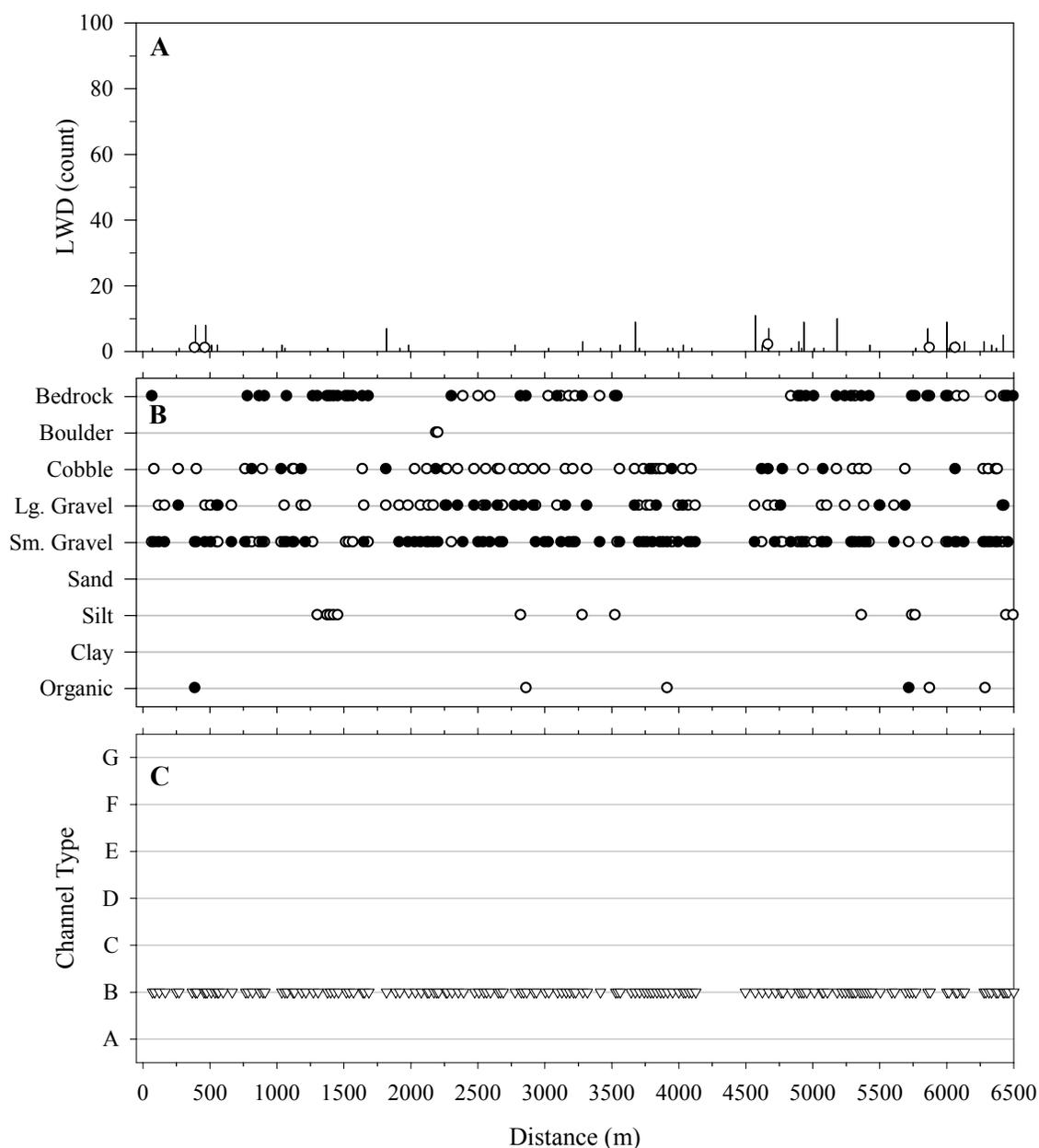
LWD per kilometer in stream section 000441 through 000444, summer 2006. Y-axis labels are LWD size classes described below.  
 Size 1: < 5 m long, 10-55 cm diameter  
 Size 2: < 5 m long, > 55 cm diameter  
 Size 3: > 5 m long, 10-55 cm diameter  
 Size 4: > 5 m long, > 55 cm diameter

Stream features found on stream section 000441 through 000444, BVET habitat survey, summer 2006. Distance is meters from start of survey.

Feature	Distance (m)	Width (m)	In/Out	Comments
NHD_ID	71.2			11110201000441
SCH	74	2	In Left	wet
UNGR	249			
UNGR	368.4			
UNGR	456.3			
UNGR	478.3			
UNGR	538.2			
UNGR	598.2			
SCH	865.2	1	In Left	dry
SCH	947	1	In Right	wet
SCH	977.9	1	Out Left	dry
SCH	1187	1	Out Right	dry
SEEP	1687	7	In Right	small flow
SEEP	1706	3	In Right	moderate flow
SEEP	1718	3	In Right	high flow
TRIB	1787	1.5	In Left	wet, unnamed
SCH	1809	1	In Left	dry
UNGR	1887			
SCH	1906.3	1	Out Left	dry
FORD	1991			trail, low use
SCH	2310	0.5	In Left	wet
TRIB	2505	2	Out Right	wet, 001146
NHD_ID	2508			11110201000442
FORD	2640			gravel, dirt road FS 1435
OTR	2727			gas pipeline
SCH	3003	6	Out Right	dry
TRIB	3363	1.5	In Right	dry,unnamed
SCH	3494	0.75	In Right	little flow
SCH	3570	2	Out Right	dry
TRIB	3595	1	In Right	dry, 001149
UNGR	3644			
TRIB	3664	1	In Left	dry, unnamed
NHD_ID	3707			11110201000443
UNGR	4051			
TRIB	4128	1.5	In Left	dry, unnamed
SCH	4154	2	In Right	dry
SCH	4266	2	Out Right	drt
UNGR	4497			
TRIB	4919	3	In Left	2207

Feature table continued.

<b>Feature</b>	<b>Distance (m)</b>	<b>Width (m)</b>	<b>In/Out</b>	<b>Comments</b>
SCH	4987.6	1.5	In Right	wet
SCH	5006.8	2	Out Left	dry
SCH	5020	2	Out Right	dry
TRIB	5089	2	In Left	002207? dry
UNGR	5220			
SCH	5272	1.5	In Right	dry
UNGR	5272			
TRIB	5445.5	2	In Right	unnamed, dry
UNGR	5445.5			
NHD_ID	5504.9			11110201000444
TRIB	5507	2	In Right	dry, wet 50m up, coon hollow, 001150
UNGR	5590			
TRIB	5822	1	Out Right	dry, unnamed
UNGR	6119			
TRIB	6239	0.5	In Right	dry
TRIB	6500	3	In Left	wet, 002221



Distribution and abundance of LWD, distribution of substrates, and distribution of Rosgen's channel types (Rosgen 1996) in stream section 000441 through 000444, summer 2006. LWD, substrate, and channel type were recorded for each habitat unit in the stream. X-axis indicates distance upstream from confluence of 001145. Vertical bars on (A) indicate total count of LWD; open circles represent the amount of the total LWD that was >5 m in length, >55 cm in diameter (size 4). Closed circles on (B) are dominant substrates, open circles are subdominant substrates. See Appendix A for substrate sizes. See Appendix A for channel type descriptions from (C).

Photos taken on stream section 000441 through 000444, during BVET habitat survey, summer 2006. Distance is meters from start of survey.

<b>Unit Type</b>	<b>Unit Number</b>	<b>Distance (m)</b>	<b>Comments</b>
R	9	1036.7	bankfull max/avg: 45/30
R	12	1379.3	bankfull max/avg: 35/30
TRIB		1787	wet, unnamed
FORD		1991	trail, low use
R	19	2124	bankfull max/avg: 50/30
TRIB		2505	wet, 001146
FORD		2640	gravel, dirt road FS 1435
R	29	3003.5	bankfull max/avg: 45/20
TRIB		3363	dry,unnamed
R	39	3836.7	bankfull max/avg: 35/25
TRIB		4128	dry, unnamed
SCH		4154	dry
TRIB		4919	2207
R	49	5011.4	bankfull max/avg: 30/20
TRIB		5089	002207? dry
TRIB		5445.5	unnamed, dry
TRIB		5507	dry, wet 50m up, coon hollow, 001150
TRIB		6500	wet, 002221

<b>Stream:</b>	Turner Hollow - 11110201001198 & 1200
District	Pleasant Hill
USGS Quadrangle	Fallsville
6 <sup>th</sup> Level HUC	111102010603
Survey Date	06/16/06
Downstream Starting Point	confluence of Lewis Prong 000121
Total Distance Surveyed (km)	1.8

	<b>Pools</b>	<b>Riffles</b>
Percent of Total Stream Area	69	31
Total Area (m <sup>2</sup> )	796 ± 72	363 ± 1023
Correction Factor Applied	0.93	0.68
Number of Paired Samples	3	3
Total Count	17	11
Number per km	9	6
Mean Area (m <sup>2</sup> )	47	33
Mean Maximum Depth (cm)	31	13
Mean Average Depth (cm)	19	7
Mean Residual Depth (cm)	14	--
Percent Inventoried as Glides	24	--
Percent Inventoried as Runs	--	0
Percent Inventoried as Cascades	--	0
Percent with >35% Fines	0	0

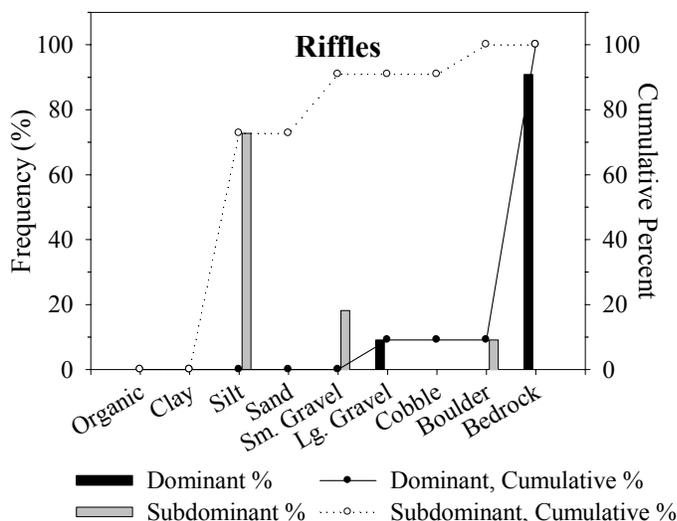
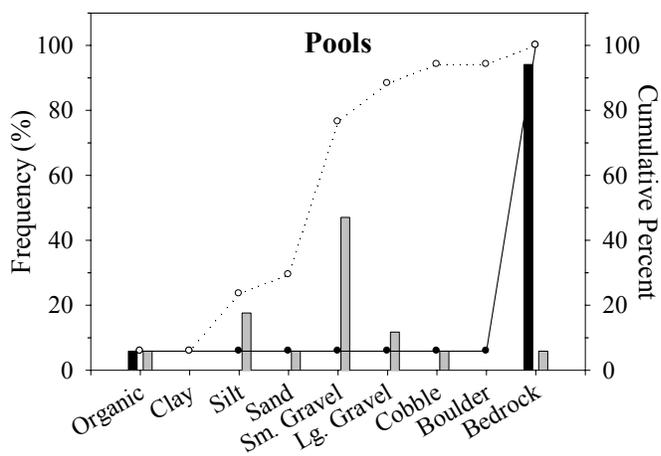
<b>Large Woody Debris Size</b>	<b>Pieces per km</b>
< 5 m long, 10 cm - 55 cm diameter	2
< 5 m long, > 55 cm diameter	0
> 5 m long, 10 cm - 55 cm diameter	1
> 5 m long, > 55 cm diameter	0
Total:	3

<b>Riparian Width</b>	<b>Total Width* (m)</b>	<b>Left &amp; Right Width ** (m)</b>
Mean	9	1
Maximum	12	1
75th Percentile	11	1
25th Percentile	8	0.2
Minimum	5	0.1

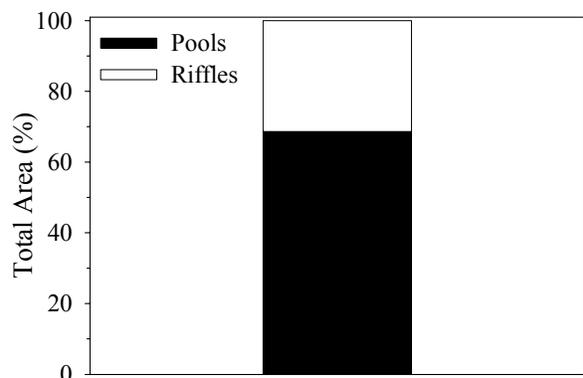
\*Left riparian, right riparian, and bankfull channel widths were added together for calculations

\*\*Left and right riparian measurements were grouped (not added) together for calculations

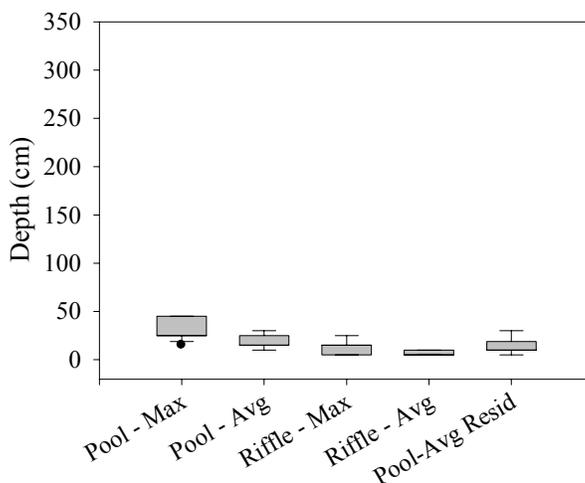
<b>Rosen's Channel Type</b>	<b>Frequency (%)</b>	<b>Other Stream Attributes</b>	
A	0	Mean Bankfull Channel Width (m)	8
B	100	Mean Channel Gradient (%)	4
C	0	Median Water Temperature (C)	NA
D	0		
E	0		
F	0		
G	0		



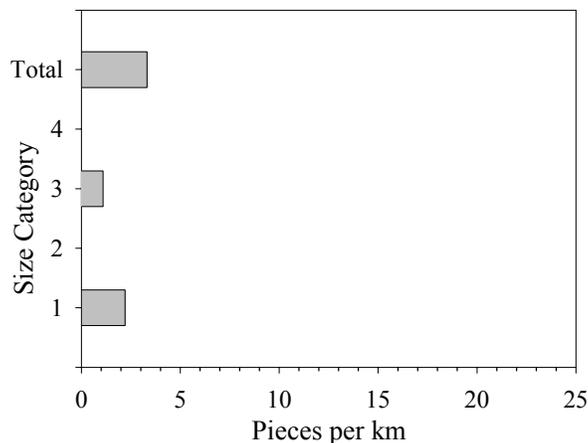
Frequency (percent) and cumulative percent of dominant and subdominant substrate occurrence for pools and riffles in stream section 001198 through 001200, summer 2006.



Estimated area of stream section 001198 through 001200 in pools and riffles as calculated using BVET techniques, summer 2006.



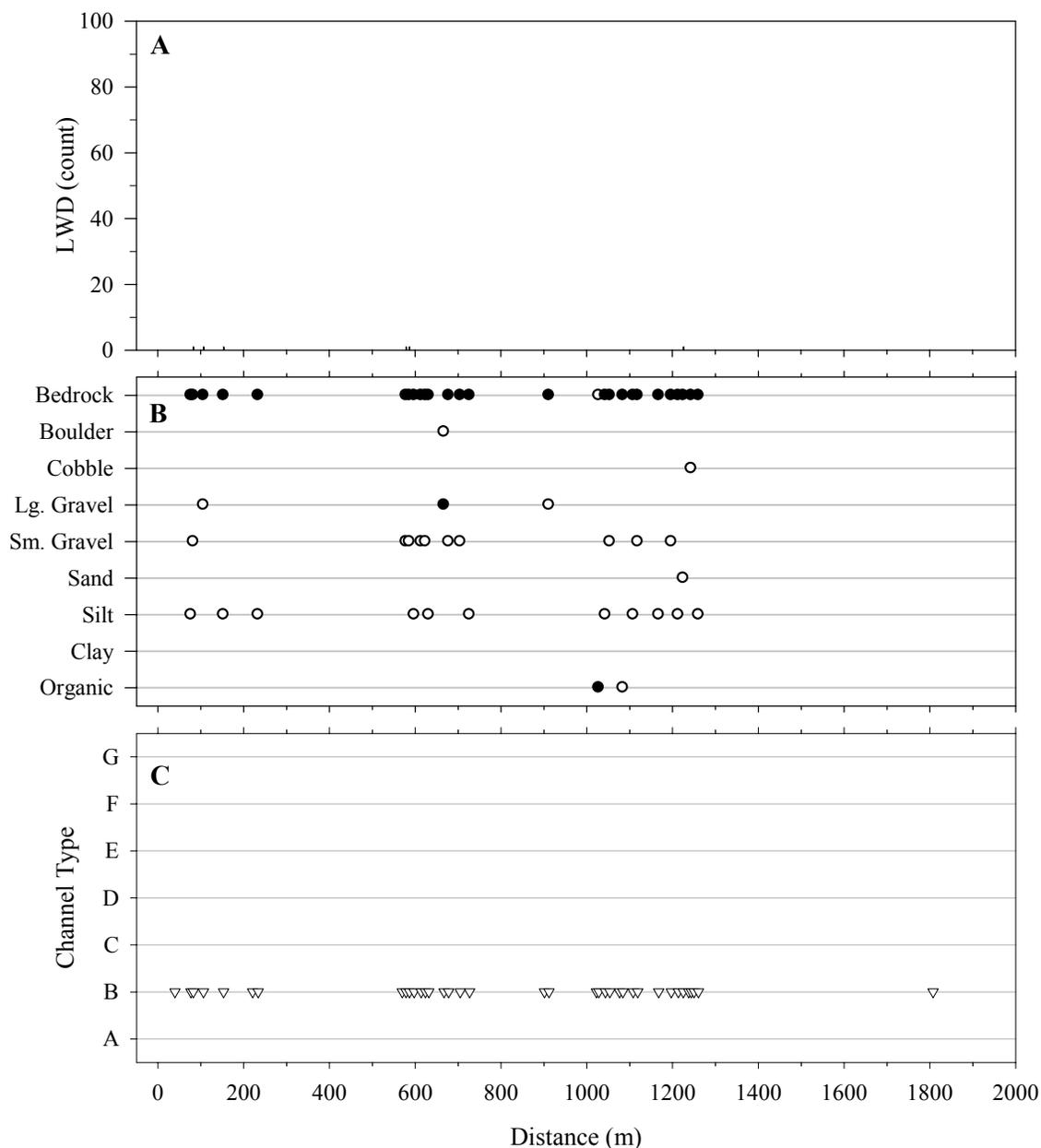
Maximum and average depths and residual pool depths for pools and riffles in stream section 001198 through 001200, summer 2006. The top and bottom of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data.



LWD per kilometer in stream section 001198 through 001200, summer 2006. Y-axis labels are LWD size classes described below.  
 Size 1: < 5 m long, 10-55 cm diameter  
 Size 2: < 5 m long, > 55 cm diameter  
 Size 3: > 5 m long, 10-55 cm diameter  
 Size 4: > 5 m long, > 55 cm diameter

Stream features found on stream section 001198 through 001200, BVET habitat survey, summer 2006. Distance is meters from start of survey.

<b>Feature</b>	<b>Distance (m)</b>	<b>Width (m)</b>	<b>In/Out</b>	<b>Comments</b>
UNGR	39.4			
NHD_ID	77.2			11110201001198
TRIB	152.9	0.5	In Right	WET unnamed
FORD	160.3			atv / ozark trail
UNGR	221			
TRIB	257.5	2	In Left	dry, unnamed
SCH	298	2	Out Right	dry
UNGR	569.6			
UNGR	901.4			
NHD_ID	911.6			11110201001200
TRIB	918.5	2	In Left	wet, trib 001199
UNGR	1022.2			
UNGR	1076.1			
UNGR	1237.7			
UNGR	1250			
FORD	1305			unused atv trail
TRIB	1417.6	1	In Left	dry
SCH	1455.2	1	In Left	dry
SCH	1535.7	2	Out Left	dry
UNGR	1807.4			



Distribution and abundance of LWD, distribution of substrates, and distribution of Rosgen's channel types (Rosgen 1996) in stream section 001198 through 001200, summer 2006. LWD, substrate, and channel type were recorded for each habitat unit in the stream. X-axis indicates distance upstream from confluence with Lewis Prong 000121. Vertical bars on (A) indicate total count of LWD; open circles represent the amount of the total LWD that was >5 m in length, >55 cm in diameter (size 4). Closed circles on (B) are dominant substrates, open circles are subdominant substrates. See Appendix A for substrate sizes. See Appendix A for channel type descriptions from (C).

Photos taken on stream section 001198 through 001200, during BVET habitat survey, summer 2006. Distance is meters from start of survey.

<b>Unit Type</b>	<b>Unit Number</b>	<b>Distance (m)</b>	<b>Comments</b>
R	1	77.2	bankfull depth max/avg: 30/25
TRIB		152.9	WET unnamed
FORD		160.3	atv / ozark trail
TRIB		257.5	dry, unnamed
R	5	623.6	bankfull depth max/avg: 30/15
TRIB		918.5	wet, trib 001199
R	10	1167.6	bankfull depth max/avg: 20/5
FORD		1305	unused atv trail
TRIB		1417.6	dry

<b>Stream:</b>	Unnamed Trib of Turner Hollow - 11110201001199
District	Pleasant Hill
USGS Quadrangle	Fallsville
6 <sup>th</sup> Level HUC	111102010603
Survey Date	06/16/06
Downstream Starting Point	confluence of Turner Hollow
Total Distance Surveyed (km)	2.1

	<b>Pools</b>	<b>Riffles</b>
Percent of Total Stream Area	57	43
Total Area (m <sup>2</sup> )	839 ± 129	634 ± 342
Correction Factor Applied	0.86	1.27
Number of Paired Samples	6	3
Total Count	21	8
Number per km	10	4
Mean Area (m <sup>2</sup> )	40	79
Mean Maximum Depth (cm)	33	24
Mean Average Depth (cm)	17	9
Mean Residual Depth (cm)	14	--
Percent Inventoried as Glides	19	--
Percent Inventoried as Runs	--	0
Percent Inventoried as Cascades	--	0
Percent with >35% Fines	0	0

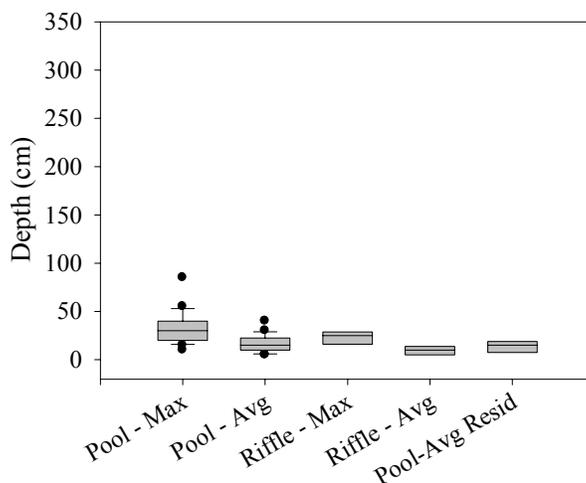
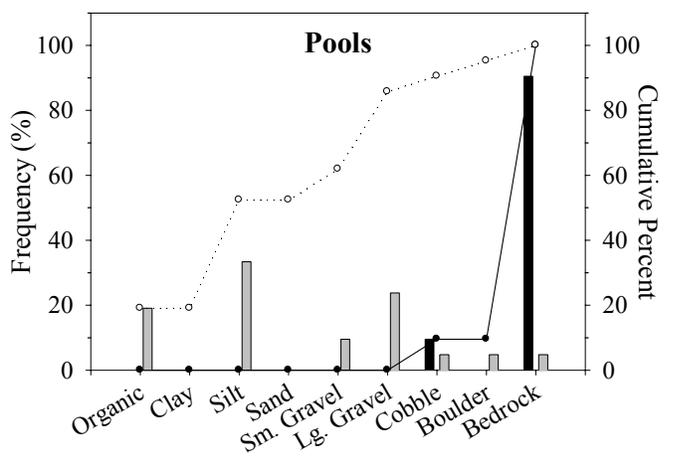
<b>Large Woody Debris Size</b>	<b>Pieces per km</b>
< 5 m long, 10 cm - 55 cm diameter	2
< 5 m long, > 55 cm diameter	0
> 5 m long, 10 cm - 55 cm diameter	1
> 5 m long, > 55 cm diameter	0
Total:	3

<b>Riparian Width</b>	<b>Total Width* (m)</b>	<b>Left &amp; Right Width ** (m)</b>
Mean	6	1
Maximum	7	1
75th Percentile	7	1
25th Percentile	6	0.4
Minimum	5	0.3

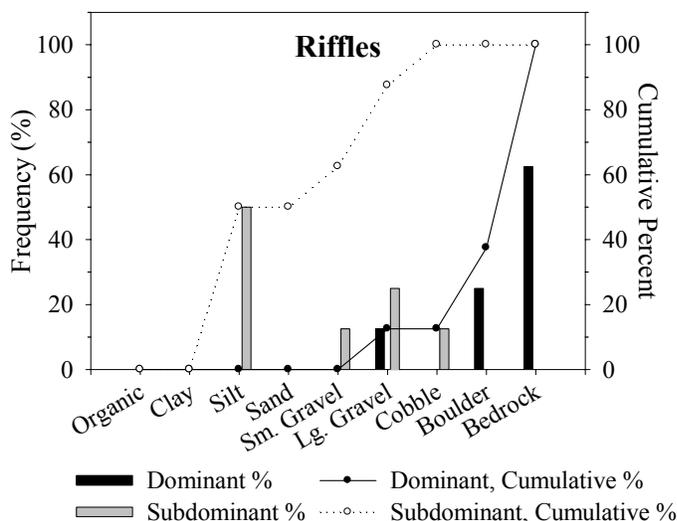
\*Left riparian, right riparian, and bankfull channel widths were added together for calculations

\*\*Left and right riparian measurements were grouped (not added) together for calculations

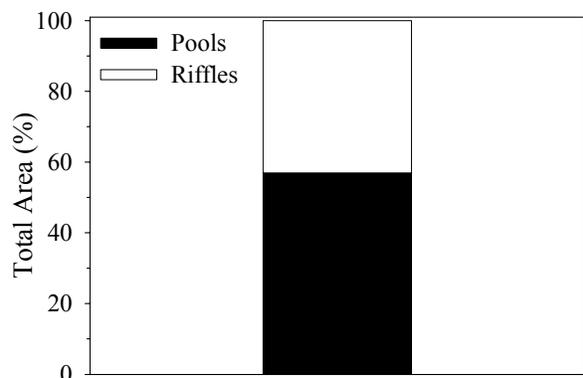
<b>Rosen's Channel Type</b>	<b>Frequency (%)</b>	<b>Other Stream Attributes</b>	
A	0	Mean Bankfull Channel Width (m)	5
B	100	Mean Channel Gradient (%)	3
C	0	Median Water Temperature (C)	NA
D	0		
E	0		
F	0		
G	0		



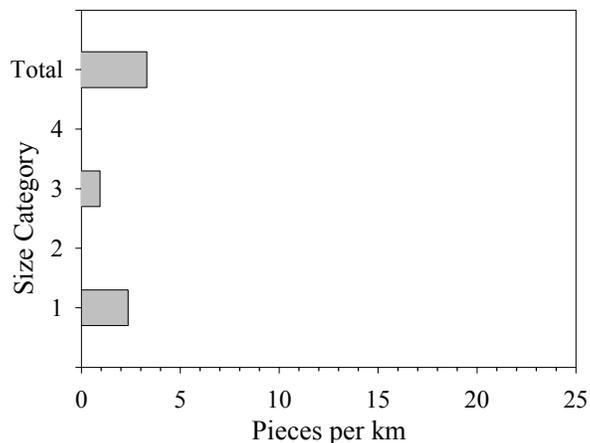
Maximum and average depths and residual pool depths for pools and riffles in stream section 001199, summer 2006. The top and bottom of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data.



Frequency (percent) and cumulative percent of dominant and subdominant substrate occurrence for pools and riffles in stream section 001199, summer 2006.



Estimated area of stream section 001199 in pools and riffles as calculated using BVET techniques, summer 2006.

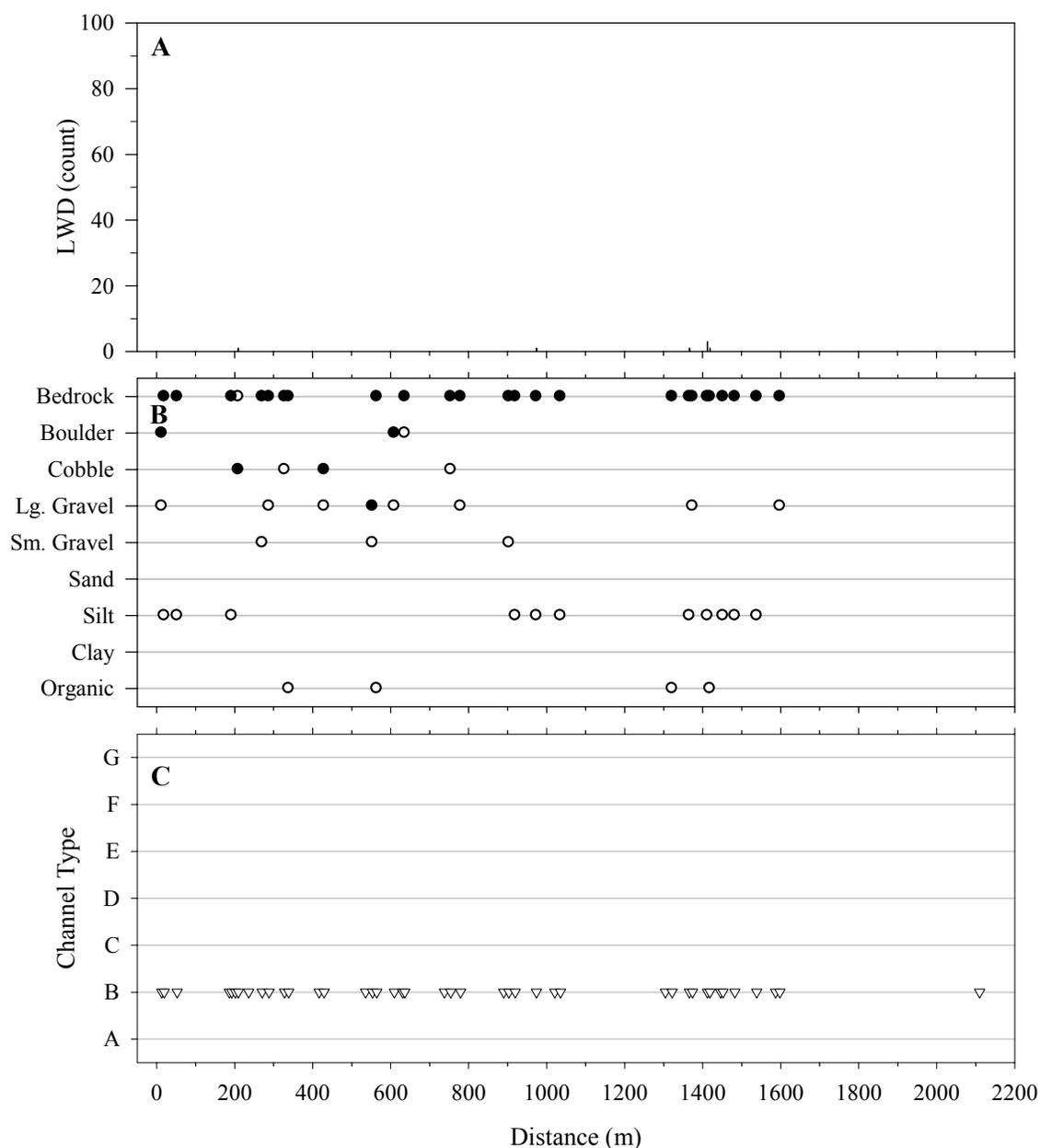


LWD per kilometer in stream section 001199, summer 2006. Y-axis labels are LWD size classes described below.

- Size 1: < 5 m long, 10-55 cm diameter
- Size 2: < 5 m long, > 55 cm diameter
- Size 3: > 5 m long, 10-55 cm diameter
- Size 4: > 5 m long, > 55 cm diameter

Stream features found on stream section 001199, BVET habitat survey, summer 2006. Distance is meters from start of survey.

Feature	Distance (m)	Width (m)	In/Out	Comments
NHD_ID	12.9			11110201001199
TRIB	153.2	2	In Left	dry
UNGR	186			126.1m fish in standing pool
UNGR	201.8			
UNGR	235.8			
UNGR	416.5			
TRIB	517.3	1	In Left	dry, unnamed
UNGR	536			
UNGR	631.1			
UNGR	737.7			
UNGR	890.1			
TRIB	945.5	0.75	In Left	dry, unnamed
UNGR	1021.1			
TRIB	1126	1	In Right	dry, unnamed
UNGR	1304.3			
UNGR	1445.9			
UNGR	1586.9			
TRIB	1635	1	In Left	dry, unnamed
TRIB	1694.3	0.5	In Right	dry, unnamed
SCH	1813	2	In Left	dry
SCH	1870	3	Out Left	dry
UNGR	2110			end survey , dry for 500m, no sign of water returning



Distribution and abundance of LWD, distribution of substrates, and distribution of Rosgen's channel types (Rosgen 1996) in stream section 001199, summer 2006. LWD, substrate, and channel type were recorded for each habitat unit in the stream. X-axis indicates distance upstream from confluence with Turner Hollow. Vertical bars on (A) indicate total count of LWD; open circles represent the amount of the total LWD that was >5 m in length, >55 cm in diameter (size 4). Closed circles on (B) are dominant substrates, open circles are subdominant substrates. See Appendix A for substrate sizes. See Appendix A for channel type descriptions from (C).

Photos taken on stream section 001199, during BVET habitat survey, summer 2006. Distance is meters from start of survey.

<b>Unit Type</b>	<b>Unit Number</b>	<b>Distance (m)</b>	<b>Comments</b>
R	1	12.9	bankfull depth max/avg: 35/30
TRIB		153.2	dry
R	5	609.4	bankfull depth max/avg: 30/20
TRIB		945.5	dry, unnamed
R	6	973.9	bankfull depth max/avg: 30/20
TRIB		1126	dry, unnamed
TRIB		1635	dry, unnamed

<b>Stream:</b>	Unnamed Trib of Panther Creek - 11110201001205
District	Pleasant Hill
USGS Quadrangle	Oark
6 <sup>th</sup> Level HUC	111102010603
Survey Date	06/19/06
Downstream Starting Point	at culvert on forest service road 1418
Total Distance Surveyed (km)	1.0

	<b>Pools</b>	<b>Riffles</b>
Percent of Total Stream Area	82	18
Total Area (m <sup>2</sup> )	175 ± 97	38 ± NC
Correction Factor Applied	0.97	0.86
Number of Paired Samples	3	1
Total Count	18	6
Number per km	18	6
Mean Area (m <sup>2</sup> )	10	6
Mean Maximum Depth (cm)	22	8
Mean Average Depth (cm)	13	3
Mean Residual Depth (cm)	9	--
Percent Inventoried as Glides	6	--
Percent Inventoried as Runs	--	0
Percent Inventoried as Cascades	--	0
Percent with >35% Fines	0	0

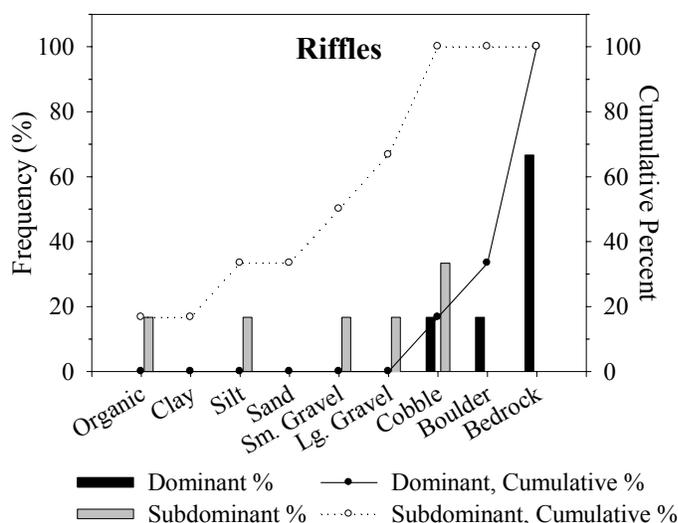
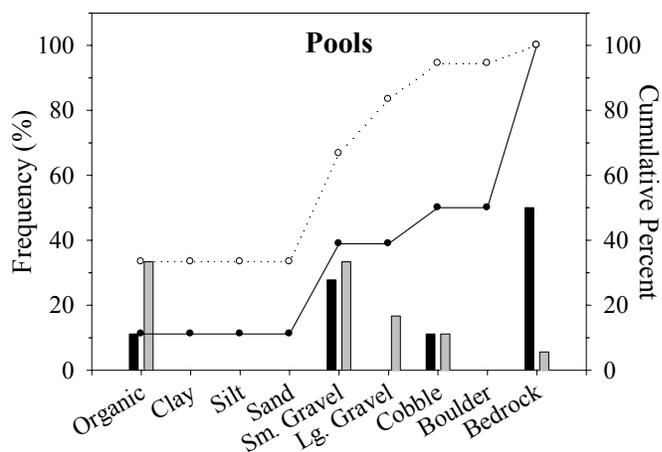
<b>Large Woody Debris Size</b>	<b>Pieces per km</b>
< 5 m long, 10 cm - 55 cm diameter	0
< 5 m long, > 55 cm diameter	0
> 5 m long, 10 cm - 55 cm diameter	1
> 5 m long, > 55 cm diameter	0
Total:	1

<b>Riparian Width</b>	<b>Total Width* (m)</b>	<b>Left &amp; Right Width ** (m)</b>
Mean	7	1
Maximum	7	1
75th Percentile	7	1
25th Percentile	7	1
Minimum	7	0.5

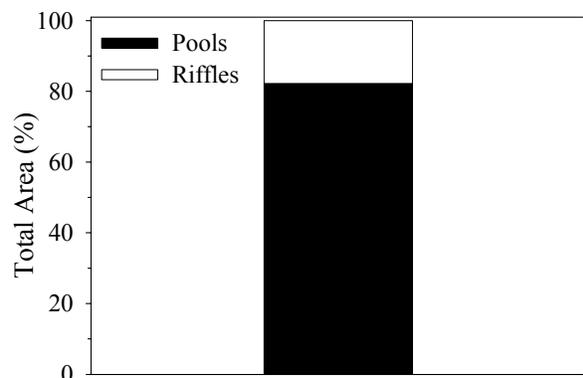
\*Left riparian, right riparian, and bankfull channel widths were added together for calculations

\*\*Left and right riparian measurements were grouped (not added) together for calculations

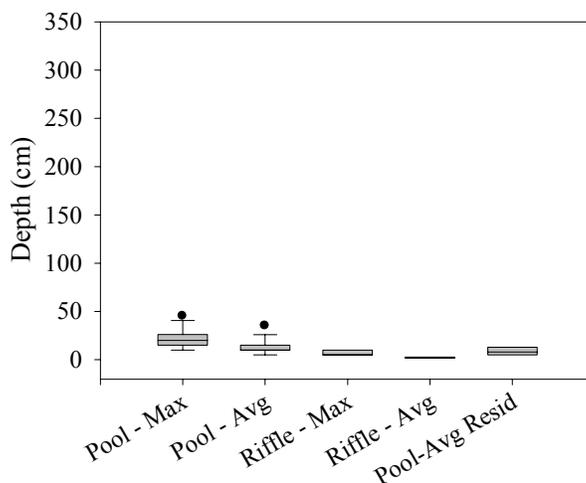
<b>Rosen's Channel Type</b>	<b>Frequency (%)</b>	<b>Other Stream Attributes</b>	
A	NA	Mean Bankfull Channel Width (m)	6
B	NA	Mean Channel Gradient (%)	4
C	NA	Median Water Temperature (C)	17
D	NA		
E	NA		
F	NA		
G	NA		



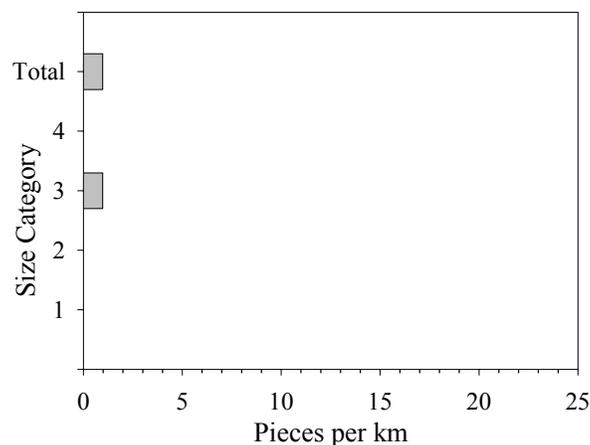
Frequency (percent) and cumulative percent of dominant and subdominant substrate occurrence for pools and riffles in stream section 001205, summer 2006.



Estimated area of stream section 001205 in pools and riffles as calculated using BVET techniques, summer 2006.



Maximum and average depths and residual pool depths for pools and riffles in stream section 001205, summer 2006. The top and bottom of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data.

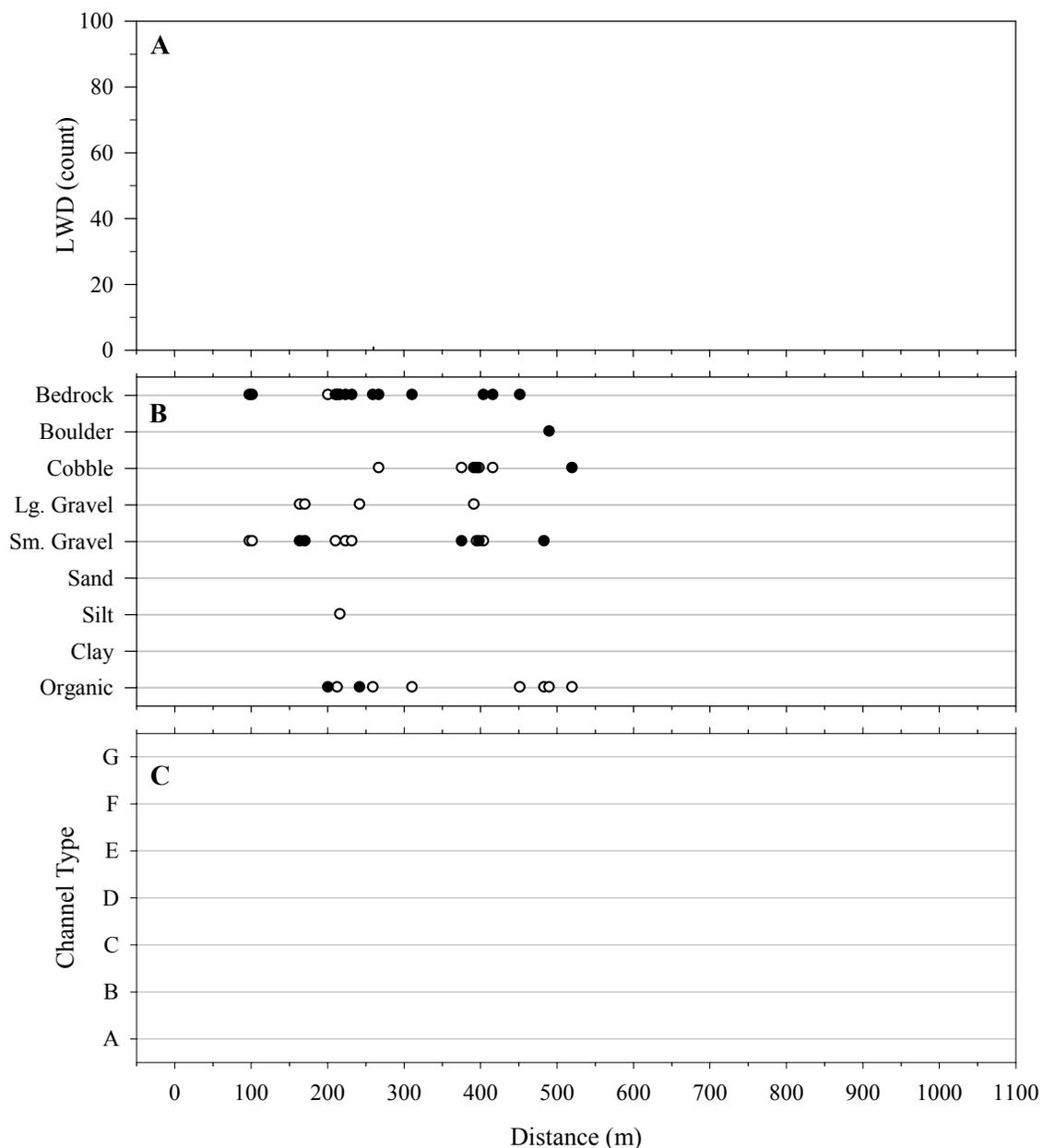


LWD per kilometer in stream section 001205, summer 2006. Y-axis labels are LWD size classes described below.

- Size 1: < 5 m long, 10-55 cm diameter
- Size 2: < 5 m long, > 55 cm diameter
- Size 3: > 5 m long, 10-55 cm diameter
- Size 4: > 5 m long, > 55 cm diameter

Stream features found on stream section 001205, BVET habitat survey, summer 2006. Distance is meters from start of survey.

Feature	Distance (m)	Width (m)	In/Out	Comments
V	7.9	1.6		picture 329, gravel road 1418, metal corrugated pipe arch culvert with 0 cm perch
NHD_ID	92.3			11110201001205
UNGR	92.3			
TRIB	139.1		In Left	picture 330
UNGR	159.9			
UNGR	189			
UNGR	236.8			
UNGR	250.2			
UNGR	301.9			
UNGR	367.9			
TRIB	405.8		In Left	picture 332
UNGR	449			
TRIB	473.4		In Right	picture 333
UNGR	482.9			
UNGR	517.6			
UNGR	1022.6			



Distribution and abundance of LWD, distribution of substrates, and distribution of Rosgen's channel types (Rosgen 1996) in stream section 001205, summer 2006. LWD, substrate, and channel type were recorded for each habitat unit in the stream. X-axis indicates distance upstream from culvert of Forest Service Road 1418. Vertical bars on (A) indicate total count of LWD; open circles represent the amount of the total LWD that was >5 m in length, >55 cm in diameter (size 4). Closed circles on (B) are dominant substrates, open circles are subdominant substrates. See Appendix A for substrate sizes. See Appendix A for channel type descriptions from (C).

Photos taken on stream section 001205, during BVET habitat survey, summer 2006. Distance is meters from start of survey.

<b>Unit Type</b>	<b>Unit Number</b>	<b>Distance (m)</b>	<b>Comments</b>
V		7.9	picture 329, gravel road 1418, metal corrugated pipe arch culvert with 0 cm perch
TRIB		139.1	picture 330
R	4	392.2	picture 331
TRIB		405.8	picture 332
TRIB		473.4	picture 333

<b>Stream:</b>	Unnamed Trib of Panther Creek - 11110201001990
District	Pleasant Hill
USGS Quadrangle	Oark
6 <sup>th</sup> Level HUC	111102010603
Survey Date	06/19/06
Downstream Starting Point	confluence to Panther Creek
Total Distance Surveyed (km)	1.0

	<b>Pools</b>	<b>Riffles</b>
Percent of Total Stream Area	NC	NC
Total Area (m <sup>2</sup> )	22 ± NC	NC ± NC
Correction Factor Applied	0.90	NC
Number of Paired Samples	2	0
Total Count	3	1
Number per km	3	1
Mean Area (m <sup>2</sup> )	7	NC
Mean Maximum Depth (cm)	22	5
Mean Average Depth (cm)	14	2
Mean Residual Depth (cm)	NC	--
Percent Inventoried as Glides	0	--
Percent Inventoried as Runs	--	0
Percent Inventoried as Cascades	--	0
Percent with >35% Fines	33	0

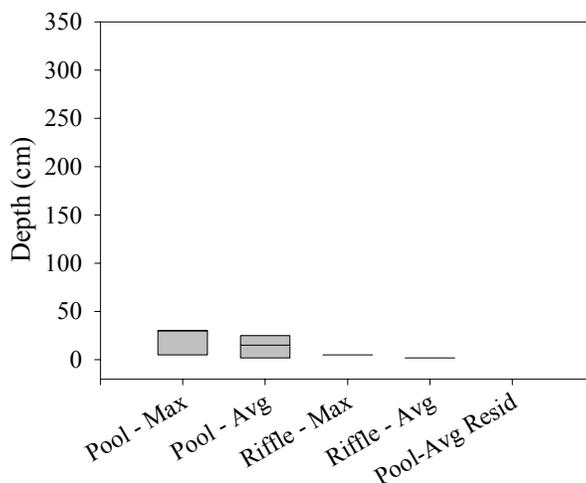
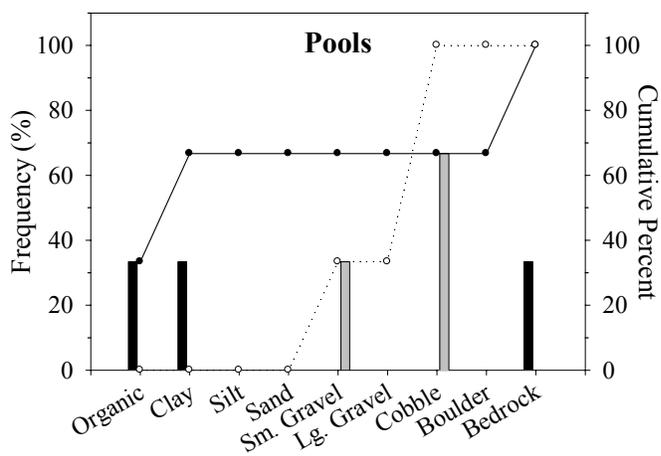
<b>Large Woody Debris Size</b>	<b>Pieces per km</b>
< 5 m long, 10 cm - 55 cm diameter	0
< 5 m long, > 55 cm diameter	0
> 5 m long, 10 cm - 55 cm diameter	0
> 5 m long, > 55 cm diameter	0
Total:	0

<b>Riparian Width</b>	<b>Total Width* (m)</b>	<b>Left &amp; Right Width ** (m)</b>
Mean	NA	NA
Maximum	NA	NA
75th Percentile	NA	NA
25th Percentile	NA	NA
Minimum	NA	NA

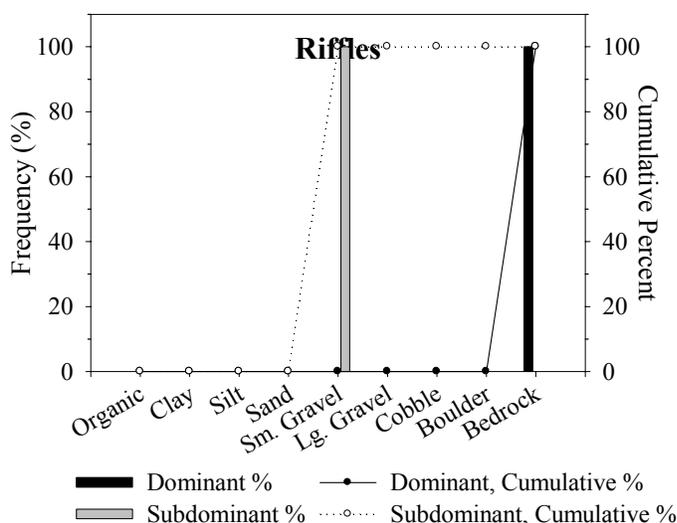
\*Left riparian, right riparian, and bankfull channel widths were added together for calculations

\*\*Left and right riparian measurements were grouped (not added) together for calculations

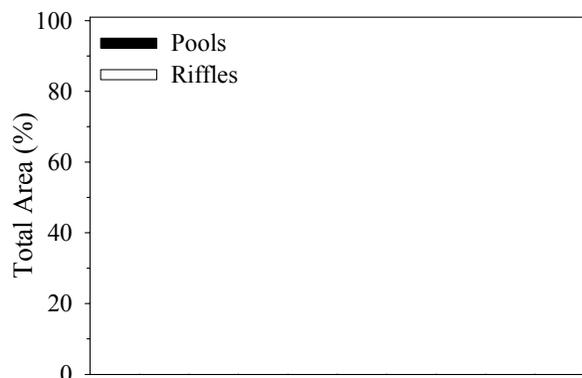
<b>Rosen's Channel Type</b>	<b>Frequency (%)</b>	<b>Other Stream Attributes</b>	
A	NA	Mean Bankfull Channel Width (m)	NA
B	NA	Mean Channel Gradient (%)	NA
C	NA	Median Water Temperature (C)	NA
D	NA		
E	NA		
F	NA		
G	NA		



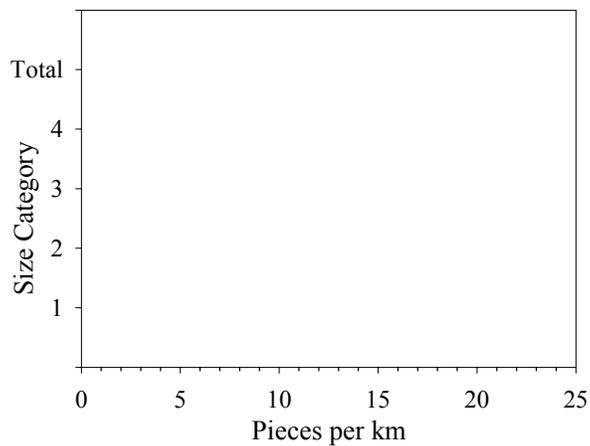
Maximum and average depths and residual pool depths for pools and riffles in stream section 001990, summer 2006. The top and bottom of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data.



Frequency (percent) and cumulative percent of dominant and subdominant substrate occurrence for pools and riffles in stream section 001990, summer 2006.



Estimated area of stream section 001990 in pools and riffles as calculated using BVET techniques, summer 2006.

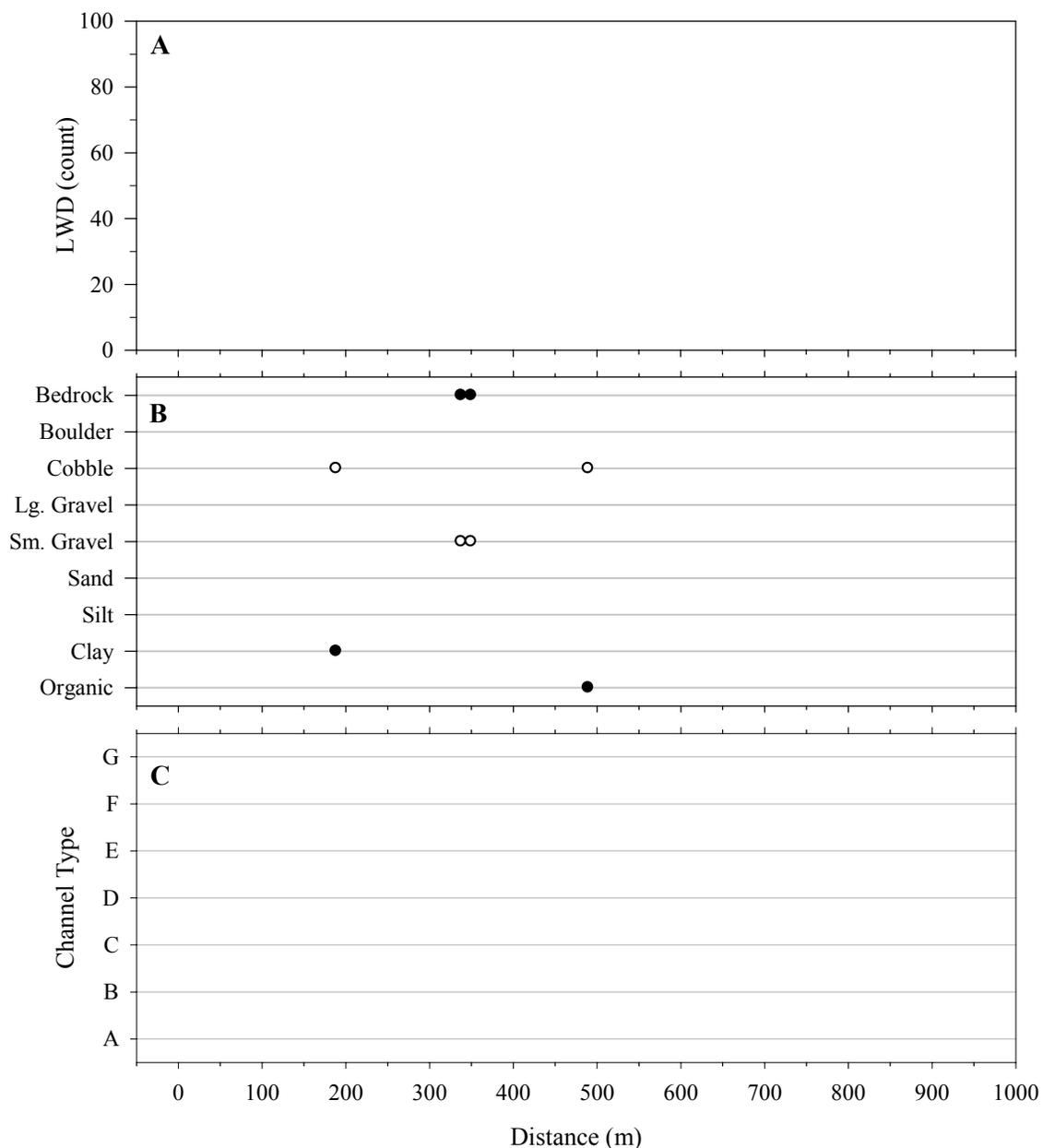


LWD per kilometer in stream section 001990, summer 2006. Y-axis labels are LWD size classes described below.

- Size 1: < 5 m long, 10-55 cm diameter
- Size 2: < 5 m long, > 55 cm diameter
- Size 3: > 5 m long, 10-55 cm diameter
- Size 4: > 5 m long, > 55 cm diameter

Stream features found on stream section 001990, BVET habitat survey, summer 2006. Distance is meters from start of survey.

<b>Feature</b>	<b>Distance (m)</b>	<b>Width (m)</b>	<b>In/Out</b>	<b>Comments</b>
NHD_ID	81.3			11110201001990
UNGR	81.3			
V	89.5	1.65		picture 335, gravel road 1418, double metal corrugated pipe arch culvert with 0 cm perch and 0.5 m height
UNGR	182.7			
UNGR	334.2			
FALL	386			picture 336 337, two waterfalls in a row, 23 m height
UNGR	486.1			
UNGR	989			



Distribution and abundance of LWD, distribution of substrates, and distribution of Rosgen's channel types (Rosgen 1996) in stream section 001990, summer 2006. LWD, substrate, and channel type were recorded for each habitat unit in the stream. X-axis indicates distance upstream from confluence with Panther Creek. Vertical bars on (A) indicate total count of LWD; open circles represent the amount of the total LWD that was >5 m in length, >55 cm in diameter (size 4). Closed circles on (B) are dominant substrates, open circles are subdominant substrates. See Appendix A for substrate sizes. See Appendix A for channel type descriptions from (C).

Photos taken on stream section 001990, during BVET habitat survey, summer 2006. Distance is meters from start of survey.

<b>Unit Type</b>	<b>Unit Number</b>	<b>Distance (m)</b>	<b>Comments</b>
V		89.5	picture 335, gravel road 1418, double metal corrugated pipe arch culvert with 0 cm perch and 0.5 m height
FALL		386	picture 336 337, two waterfalls in a row, 23 m height

<b>Stream:</b>	Unnamed Trib of Panther Creek - 11110201002004
District	Pleasant Hill
USGS Quadrangle	Oark
6 <sup>th</sup> Level HUC	111102010603
Survey Date	06/19/06
Downstream Starting Point	confluence with Panther Creek
Total Distance Surveyed (km)	0.7

	<b>Pools</b>	<b>Riffles</b>
Percent of Total Stream Area	NC	NC
Total Area (m <sup>2</sup> )	14 ± NC	NC ± NC
Correction Factor Applied	1.23	NC
Number of Paired Samples	2	0
Total Count	4	0
Number per km	6	0
Mean Area (m <sup>2</sup> )	4	NC
Mean Maximum Depth (cm)	8	NC
Mean Average Depth (cm)	4	NC
Mean Residual Depth (cm)	NC	--
Percent Inventoried as Glides	0	--
Percent Inventoried as Runs	--	NC
Percent Inventoried as Cascades	--	NC
Percent with >35% Fines	0	NC

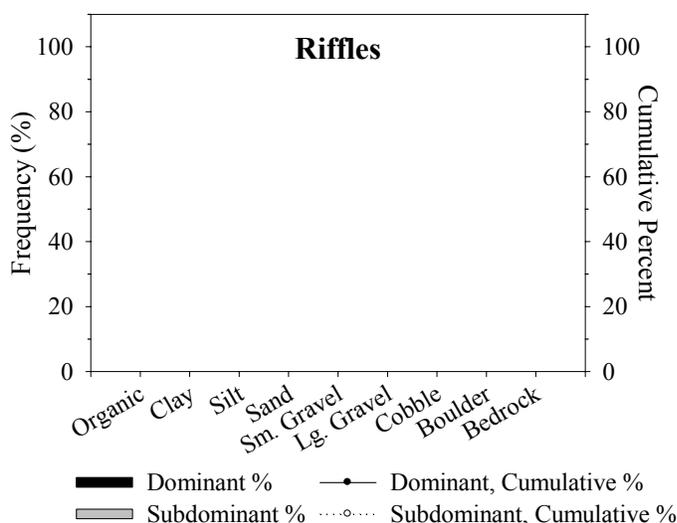
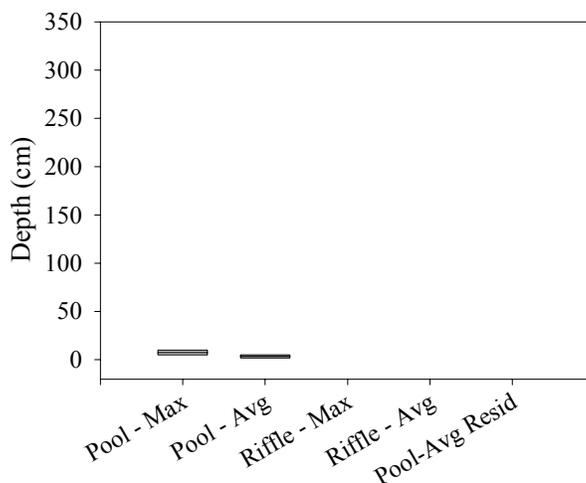
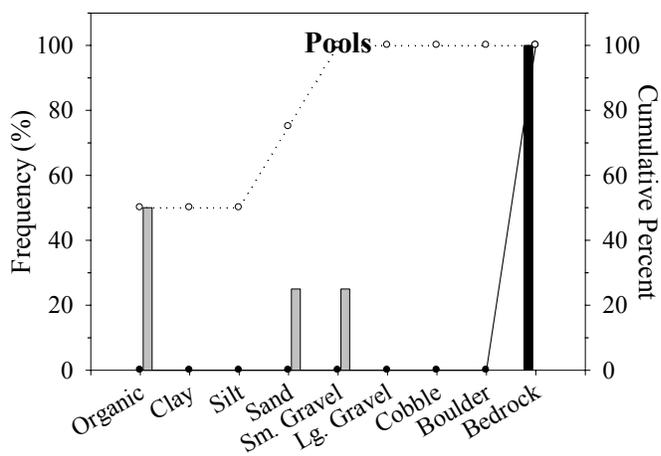
<b>Large Woody Debris Size</b>	<b>Pieces per km</b>
< 5 m long, 10 cm - 55 cm diameter	0
< 5 m long, > 55 cm diameter	0
> 5 m long, 10 cm - 55 cm diameter	0
> 5 m long, > 55 cm diameter	0
Total:	0

<b>Riparian Width</b>	<b>Total Width* (m)</b>	<b>Left &amp; Right Width ** (m)</b>
Mean	NA	NA
Maximum	NA	NA
75th Percentile	NA	NA
25th Percentile	NA	NA
Minimum	NA	NA

\*Left riparian, right riparian, and bankfull channel widths were added together for calculations

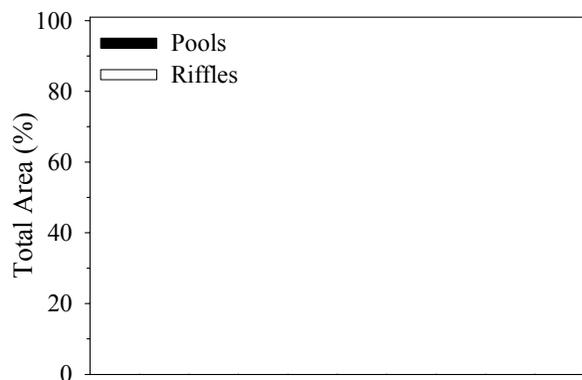
\*\*Left and right riparian measurements were grouped (not added) together for calculations

<b>Rosen's Channel Type</b>	<b>Frequency (%)</b>	<b>Other Stream Attributes</b>	
A	NA	Mean Bankfull Channel Width (m)	NA
B	NA	Mean Channel Gradient (%)	NA
C	NA	Median Water Temperature (C)	NA
D	NA		
E	NA		
F	NA		
G	NA		

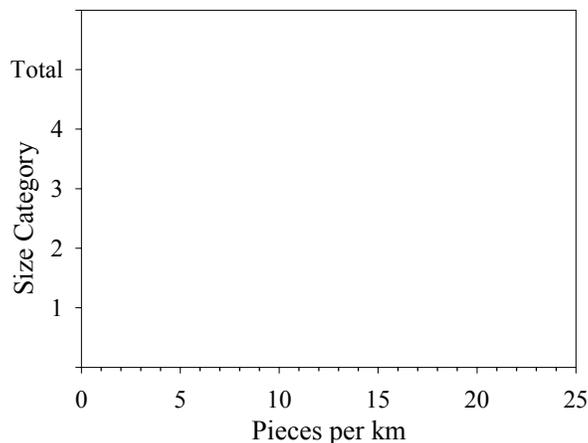


Maximum and average depths and residual pool depths for pools and riffles in stream section 002004, summer 2006. The top and bottom of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data.

Frequency (percent) and cumulative percent of dominant and subdominant substrate occurrence for pools and riffles in stream section 002004, summer 2006.



Estimated area of stream section 002004 in pools and riffles as calculated using BVET techniques, summer 2006.

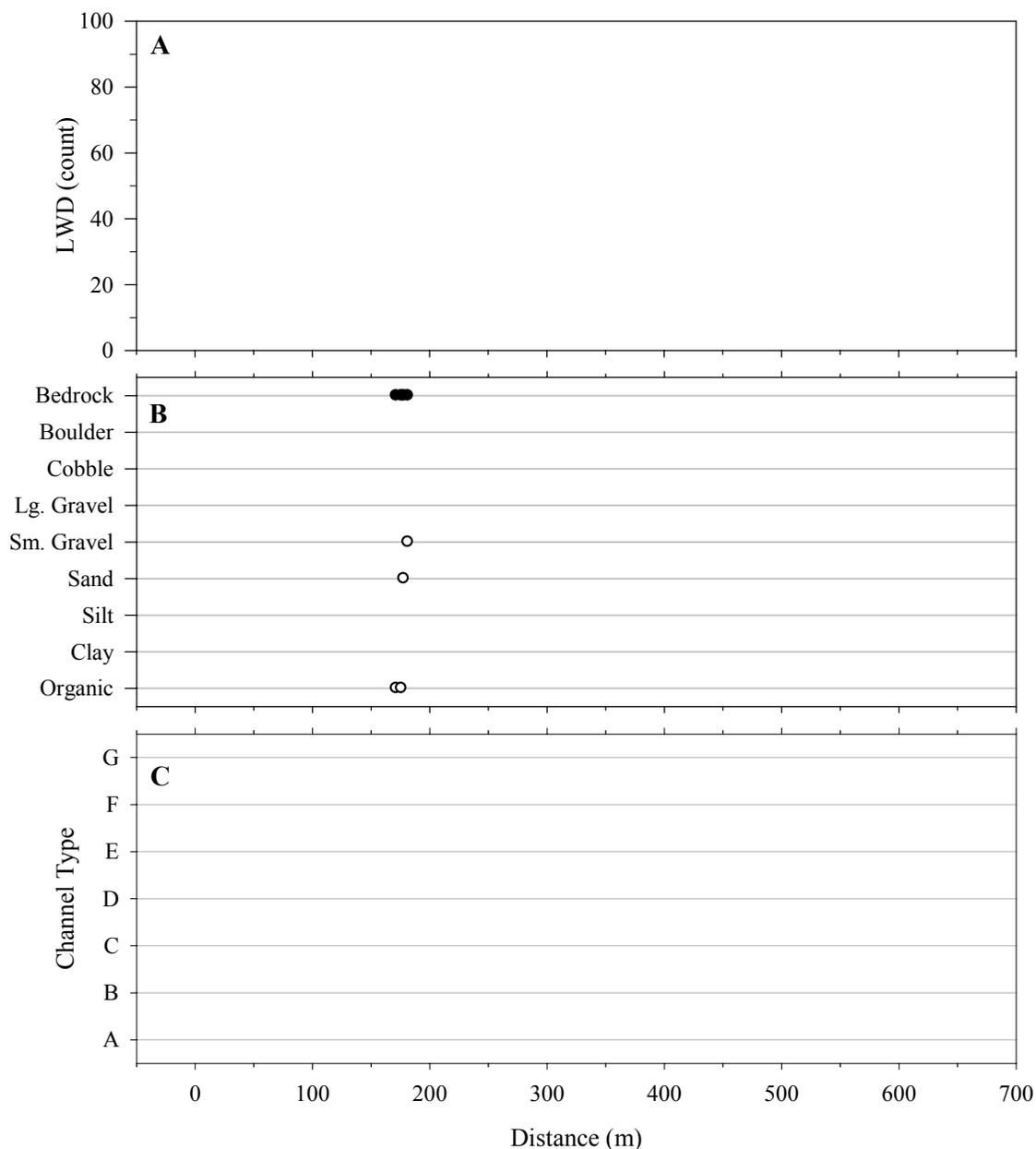


LWD per kilometer in stream section 002004, summer 2006. Y-axis labels are LWD size classes described below.

- Size 1: < 5 m long, 10-55 cm diameter
- Size 2: < 5 m long, > 55 cm diameter
- Size 3: > 5 m long, 10-55 cm diameter
- Size 4: > 5 m long, > 55 cm diameter

Stream features found on stream section 002004, BVET habitat survey, summer 2006. Distance is meters from start of survey.

<b>Feature</b>	<b>Distance (m)</b>	<b>Width (m)</b>	<b>In/Out</b>	<b>Comments</b>
NHD_ID	39.1			11110201002004
UNGR	39.1			
V	51.2	1.45		picture 334, gravel road 1418, metal corrugated pipe arch culvert with 30 cm perch and 0.65 m height
UNGR	169.3			
UNGR	174.3			
UNGR	179.6			
UNGR	681			



Distribution and abundance of LWD, distribution of substrates, and distribution of Rosgen's channel types (Rosgen 1996) in stream section 002004, summer 2006. LWD, substrate, and channel type were recorded for each habitat unit in the stream. X-axis indicates distance upstream from confluence with Panther Creek. Vertical bars on (A) indicate total count of LWD; open circles represent the amount of the total LWD that was >5 m in length, >55 cm in diameter (size 4). Closed circles on (B) are dominant substrates, open circles are subdominant substrates. See Appendix A for substrate sizes. See Appendix A for channel type descriptions from (C).

Photos taken on stream section 002004, during BVET habitat survey, summer 2006. Distance is meters from start of survey.

<b>Unit Type</b>	<b>Unit Number</b>	<b>Distance (m)</b>	<b>Comments</b>
V		51.2	picture 334, gravel road 1418, metal corrugated pipe arch culvert with 30 cm perch and 0.65 m height

## **Electrofishing Results**

Table 3. Species captured by backpack electrofishing reaches on the Bayou, Buffalo, and Pleasant Hill Ranger Districts, summer 2006.

Family	Species	Common Name	Abbreviation
Catostomidae	<i>Erimyzon oblongus</i>	Creek chubsucker	CCS
	<i>Hypentelium nigricans</i>	Northern hogsucker	NH
	<i>Moxostoma duquesnei</i>	Black redhorse	BR
Centrarchidae	<i>Ambloplites ariommus</i>	Shadow bass	SB
	<i>Centrarchid spp.</i>	Hybrid sunfish (Longear/Green)	Cs
	<i>Lepomis cyanellus</i>	Green sunfish	GS
	<i>Lepomis macrochirus</i>	Bluegill	BG
	<i>Lepomis megalotis</i>	Longear sunfish	LS
	<i>Micropterus dolomieu</i>	Smallmouth bass	SMB
	Cyprinidae	<i>Campostoma anomalum</i>	Central stoneroller
<i>Cyprinella galactura</i>		Whitetail shiner	WS
<i>Cyprinid spp.</i>		Notropis species	Ns
<i>Necomis biguttatus</i>		Hornyhead chub	HC
<i>Notropis boops</i>		Bigeye shiner	BS
<i>Notropis nubilus</i>		Ozark minnow	OM
<i>Phoxinus erythrogaster</i>		Southern redbelly dace	SRD
<i>Pimephales notatus</i>		Bluntnose minnow	BM
<i>Semotilus atromaculatus</i>		Creek chub	CC
Esocidae		<i>Esox americanus</i>	Grass pickeral
Fundulidae	<i>Fundulus catenatus</i>	Northern studfish	NSF
	<i>Fundulus olivaceus</i>	Blackspotted topminnow	BT
Ictaluridae	<i>Noturus albater</i>	Ozark madtom	OMT
	<i>Noturus exilis</i>	Slender madtom	SM
Percidae	<i>Etheostoma blennoides</i>	Greenside darter	GD
	<i>Etheostoma caeruleum</i>	Rainbow darter	RD
	<i>Etheostoma flabellare</i>	Fantail darter	FD
	<i>Etheostoma punctulatum</i>	Stippled darter	SD
	<i>Etheostoma spectabile</i>	Orangethroat darter	OD
	<i>Etheostoma whipplei</i>	Redfin darter	RFD
	<i>Percid spp.</i>	Etheostoma species	Es

Table 4a. Presence of Catostomidae and Centrarchidae species in reaches on the Bayou, Buffalo, and Pleasant Hill Ranger Districts, summer 2006 (refer to Table 3 for species abbreviations; see Appendix B for species counts).

Reach	Stream Name	CCS	NH	BR	SB	Cs	GS	BG	LS	SMB
<b>110100050304</b>										
000314	Richland Creek		X		X		X		X	X
000318	Richland Creek						X		X	X
000320	Richland Creek								X	
000322	Richland Creek					X	X		X	X
000330	Richland Creek									
<b>110100050308</b>										
000511	Falling Water Creek		X							
000512	Falling Water Creek		X						X	X
000513	Falling Water Creek								X	
000515	Falling Water Creek		X		X				X	X
000517	Falling Water Creek						X		X	
<b>110100050309</b>										
000946	Bobtail Creek						X	X	X	
<b>110100140301</b>										
000461	South Fork Little Red River			X					X	
000462	South Fork Little Red River									
000463	South Fork Little Red River	X					X		X	X
<b>110100140302</b>										
000590	Brushy Fork	X							X	
000592	Brushy Fork	X					X		X	
000593	Brushy Fork	X					X		X	
000596	Brushy Fork (headwater)									
001640	West Prong Brushy Fork						X			
001641	West Prong Brushy Fork									
<b>111102010603</b>										
000118	Lewis Prong									
000119	Lewis Prong									
000123	Panther Creek									
001198	Turner Hollow									
001205	UT of Panther Creek									
<b>111102010605</b>										
000307	Bear Branch									
000309	Bear Branch						X			
000441	Washita Creek									
000442	Washita Creek									
Total Reaches:		4	4	1	2	1	10	1	14	6

Table 4b. Presence of Cyprinidae species in reaches on the Bayou, Buffalo, and Pleasant Hill Ranger Districts, summer 2006 (refer to Table 3 for species abbreviations; see Appendix B for species counts).

Reach	Stream Name	CSR	WS	Ns	HC	BS	OM	SRD	BM	CC
<b>110100050304</b>										
000314	Richland Creek	X	X		X	X				
000318	Richland Creek	X				X				
000320	Richland Creek	X				X				X
000322	Richland Creek	X				X				
000330	Richland Creek	X						X		X
<b>110100050308</b>										
000511	Falling Water Creek	X	X	X						X
000512	Falling Water Creek	X	X	X	X	X	X			X
000513	Falling Water Creek	X	X	X						X
000515	Falling Water Creek	X	X	X	X	X	X			X
000517	Falling Water Creek	X								X
<b>110100050309</b>										
000946	Bobtail Creek	X						X	X	X
<b>110100140301</b>										
000461	South Fork Little Red River	X				X			X	X
000462	South Fork Little Red River	X				X				X
000463	South Fork Little Red River	X				X			X	X
<b>110100140302</b>										
000590	Brushy Fork					X			X	X
000592	Brushy Fork	X				X			X	X
000593	Brushy Fork	X				X				X
000596	Brushy Fork (headwater)									
001640	West Prong Brushy Fork	X								X
001641	West Prong Brushy Fork									X
<b>111102010603</b>										
000118	Lewis Prong	X								X
000119	Lewis Prong	X								X
000123	Panther Creek									X
001198	Turner Hollow	X								X
001205	UT of Panther Creek									
<b>111102010605</b>										
000307	Bear Branch									X
000309	Bear Branch	X								X
000441	Washita Creek	X								X
000442	Washita Creek	X								X
Total Reaches:		23	5	4	3	12	2	2	5	24

Table 4c. Presence of Esocidae, Fundulidae, and Ictaluridae species in reaches on the Bayou, Buffalo, and Pleasant Hill Ranger Districts, summer 2006 (refer to Table 3 for species abbreviations; see Appendix B for species counts).

Reach	Stream Name	GP	NSF	BT	OMT	SM
<b>110100050304</b>						
000314	Richland Creek		X			X
000318	Richland Creek					X
000320	Richland Creek		X			X
000322	Richland Creek					
000330	Richland Creek					
<b>110100050308</b>						
000511	Falling Water Creek					X
000512	Falling Water Creek					X
000513	Falling Water Creek					
000515	Falling Water Creek					X
000517	Falling Water Creek					X
<b>110100050309</b>						
000946	Bobtail Creek					
<b>110100140301</b>						
000461	South Fork Little Red River	X				
000462	South Fork Little Red River				X	X
000463	South Fork Little Red River			X		X
<b>110100140302</b>						
000590	Brushy Fork					X
000592	Brushy Fork			X		X
000593	Brushy Fork					X
000596	Brushy Fork (headwater)					
001640	West Prong Brushy Fork					
001641	West Prong Brushy Fork					
<b>111102010603</b>						
000118	Lewis Prong					X
000119	Lewis Prong					X
000123	Panther Creek				X	
001198	Turner Hollow					
001205	UT of Panther Creek					
<b>111102010605</b>						
000307	Bear Branch				X	X
000309	Bear Branch				X	
000441	Washita Creek				X	X
000442	Washita Creek				X	X
Total Reaches:		1	2	2	6	17

Table 4d. Presence of Percidae species in reaches on the Bayou, Buffalo, and Pleasant Hill Ranger Districts, summer 2006 (refer to Table 3 for species abbreviations; see Appendix B for species counts).

Reach	Stream Name	GD	RD	FD	SD	OD	RFD	Es
<b>110100050304</b>								
000314	Richland Creek	X	X			X		
000318	Richland Creek	X				X		
000320	Richland Creek	X				X		
000322	Richland Creek	X				X		
000330	Richland Creek					X		
<b>110100050308</b>								
000511	Falling Water Creek	X	X		X	X		
000512	Falling Water Creek	X	X		X	X		
000513	Falling Water Creek		X			X		
000515	Falling Water Creek	X	X			X		
000517	Falling Water Creek					X		
<b>110100050309</b>								
000946	Bobtail Creek					X		
<b>110100140301</b>								
000461	South Fork Little Red River		X					
000462	South Fork Little Red River	X	X					
000463	South Fork Little Red River	X	X				X	
<b>110100140302</b>								
000590	Brushy Fork	X	X		X	X	X	
000592	Brushy Fork	X	X		X			
000593	Brushy Fork	X	X		X	X	X	
000596	Brushy Fork (headwater)							
001640	West Prong Brushy Fork				X		X	
001641	West Prong Brushy Fork						X	
<b>111102010603</b>								
000118	Lewis Prong	X		X		X		X
000119	Lewis Prong				X	X	X	
000123	Panther Creek							
001198	Turner Hollow					X	X	
001205	UT of Panther Creek						X	
<b>111102010605</b>								
000307	Bear Branch			X		X	X	
000309	Bear Branch				X	X	X	
000441	Washita Creek	X		X	X	X	X	
000442	Washita Creek					X	X	
Total Reaches:		14	11	3	9	20	12	1

Table 5. Number of pools sampled, number of riffles sampled, and count of fish species captured per reach on the Bayou, Buffalo, and Pleasant Hill Ranger Districts, summer 2006.

Reach	Stream Name	# Pools	# Riffles	Species Count
<b>110100050304</b>				
000314	Richland Creek	1	1	14
000318	Richland Creek	1	0	8
000320	Richland Creek	0	1	8
000322	Richland Creek	1	0	8
000330	Richland Creek	1	0	4
<b>110100050308</b>				
000511	Falling Water Creek	1	1	10
000512	Falling Water Creek	1	0	15
000513	Falling Water Creek	0	1	7
000515	Falling Water Creek	1	1	15
000517	Falling Water Creek	1	1	6
<b>110100050309</b>				
000946	Bobtail Creek	2	2	8
<b>110100140301</b>				
000461	South Fork Little Red River	1	0	8
000462	South Fork Little Red River	0	1	7
000463	South Fork Little Red River	1	1	13
<b>110100140302</b>				
000590	Brushy Fork	0	1	11
000592	Brushy Fork	1	0	12
000593	Brushy Fork	1	2	12
000596	Brushy Fork (headwater)	1	1	0
001640	West Prong Brushy Fork	1	0	5
001641	West Prong Brushy Fork	1	1	2
<b>111102010603</b>				
000118	Lewis Prong	1	1	7
000119	Lewis Prong	1	1	6
000123	Panther Creek	1	1	2
001198	Turner Hollow	1	0	4
001205	UT of Panther Creek	1	1	1
<b>111102010605</b>				
000307	Bear Branch	1	1	6
000309	Bear Branch	1	1	7
000441	Washita Creek	1	1	9
000442	Washita Creek	1	1	6

## **Pebble Count Results**

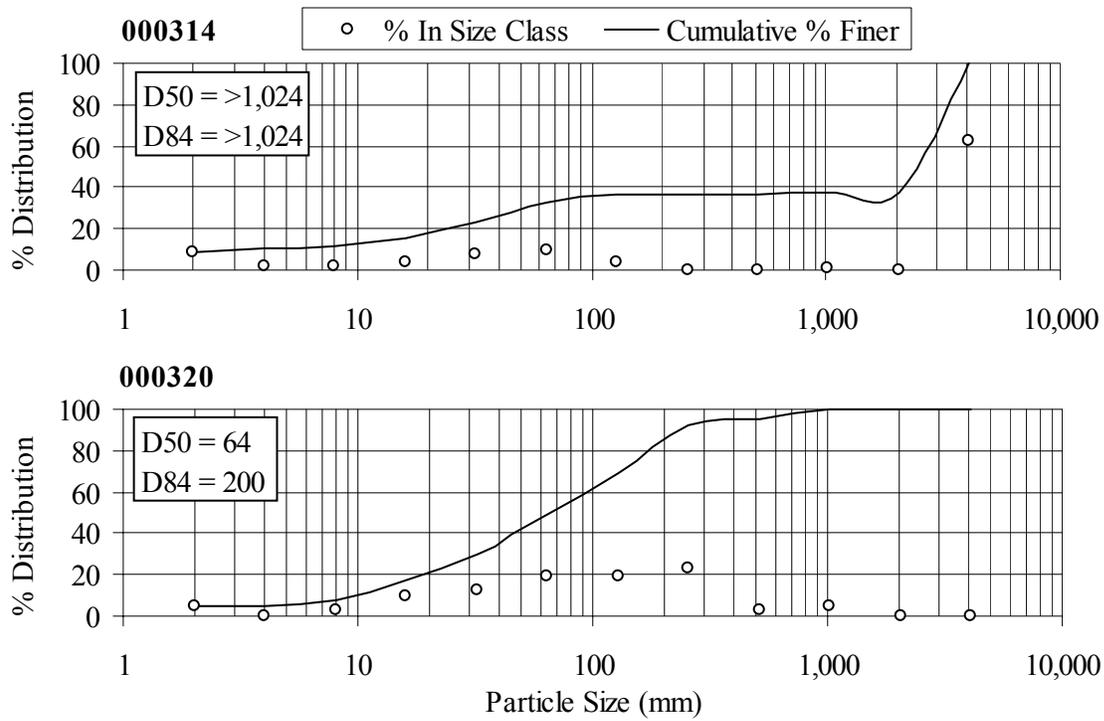


Figure 8. Distributions of substrate as percent in size class and cumulative percent finer for a riffle habitat unit in reach 000314 and 000320 of Richland Creek.

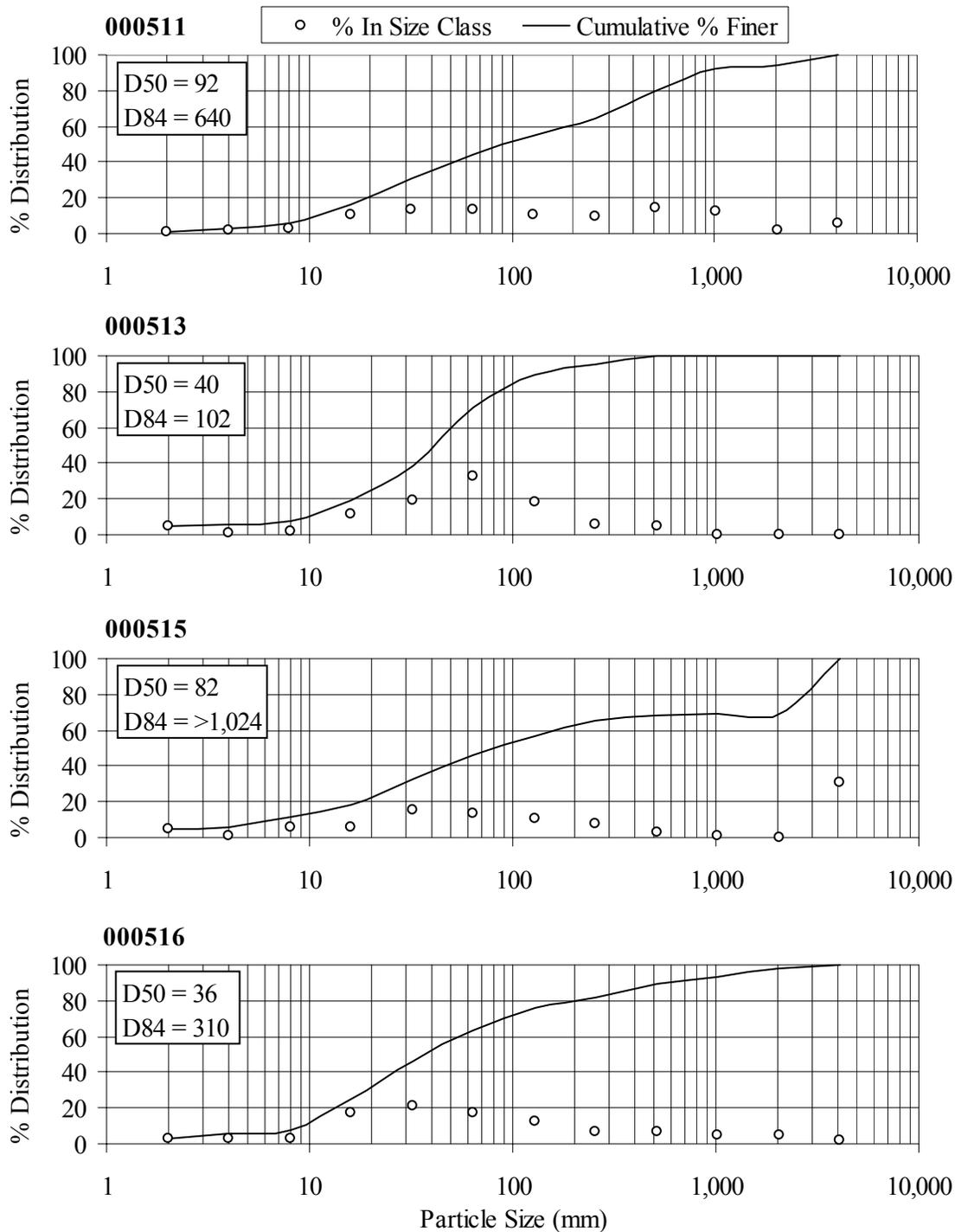


Figure 9. Distributions of substrate as percent in size class and cumulative percent finer for a riffle habitat unit in reach 000511, 000513, 000515, and 000516 of Falling Water Creek.

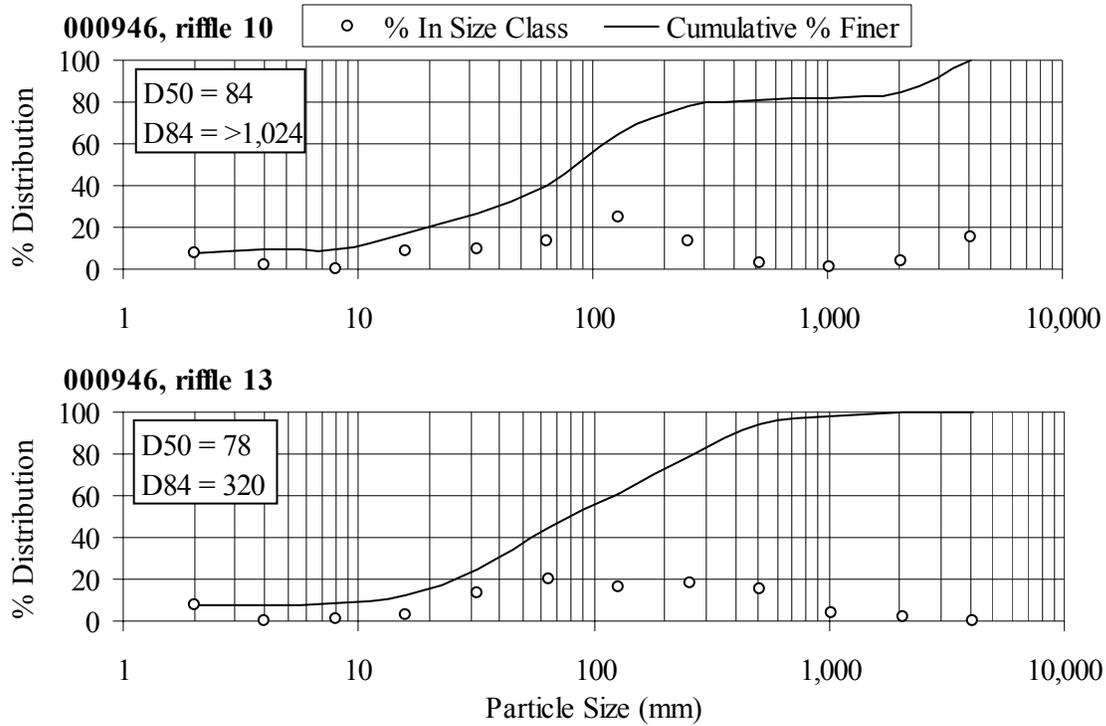


Figure 10. Distributions of substrate as percent in size class and cumulative percent finer for two riffle habitat units in reach 000946 of Bobtail Creek.

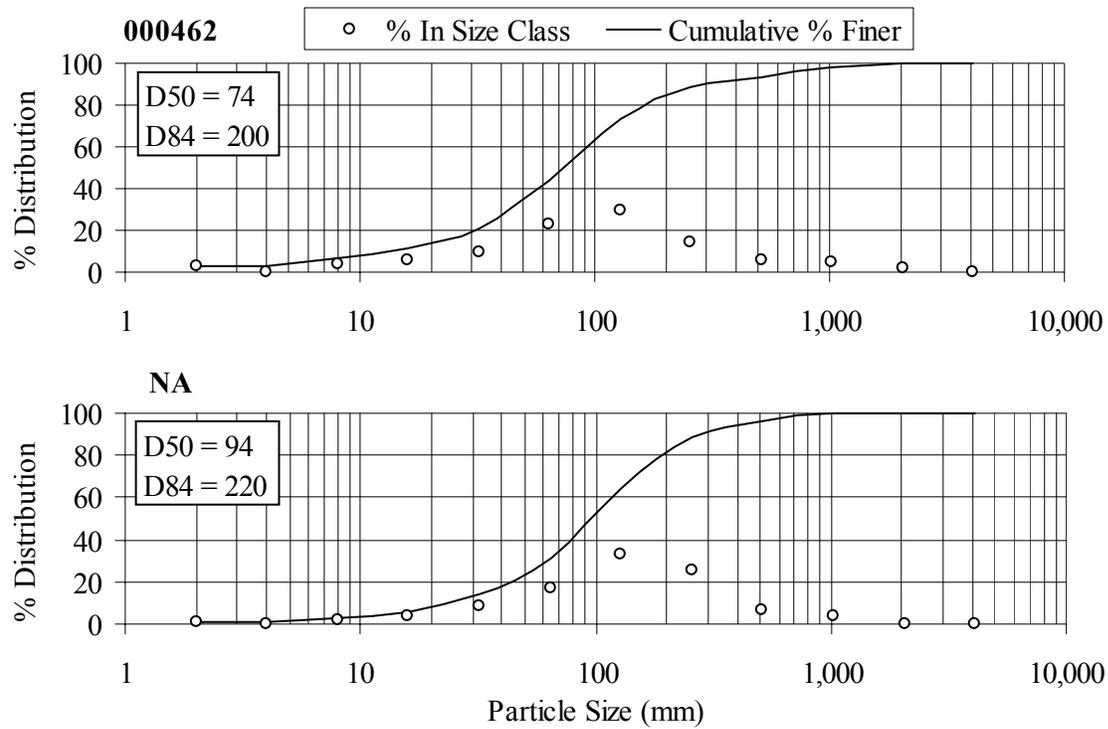


Figure 11. Distributions of substrate as percent in size class and cumulative percent finer for a riffle habitat unit in reach 000462 and an unknown reach of South Fork Little Red.

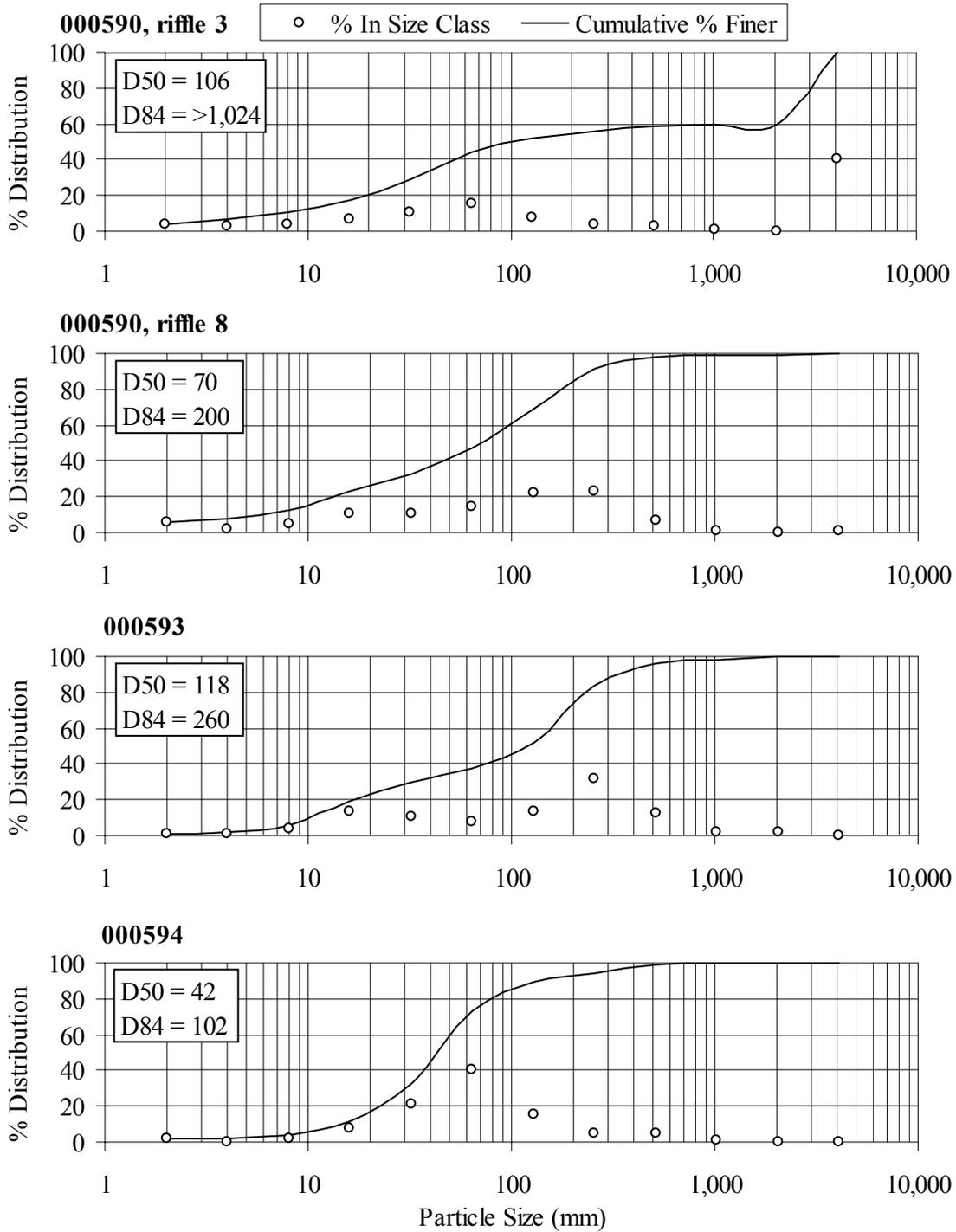


Figure 12. Distributions of substrate as percent in size class and cumulative percent finer for two riffle habitat units in reach 000590 and a riffle habitat unit in reach 000593 and 000594 of Brushy Fork.

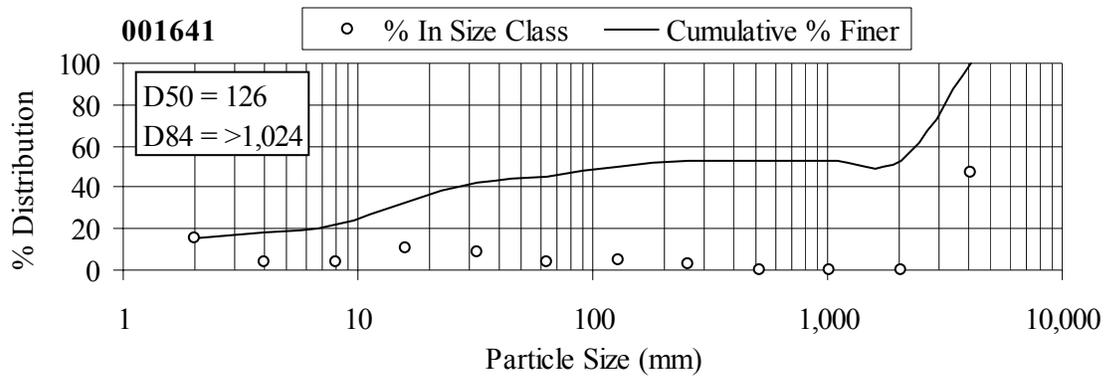


Figure 13. Distributions of substrate as percent in size class and cumulative percent finer for a riffle habitat unit in reach 001641 of an Unnamed Tributary of West Prong Brushy Fork.

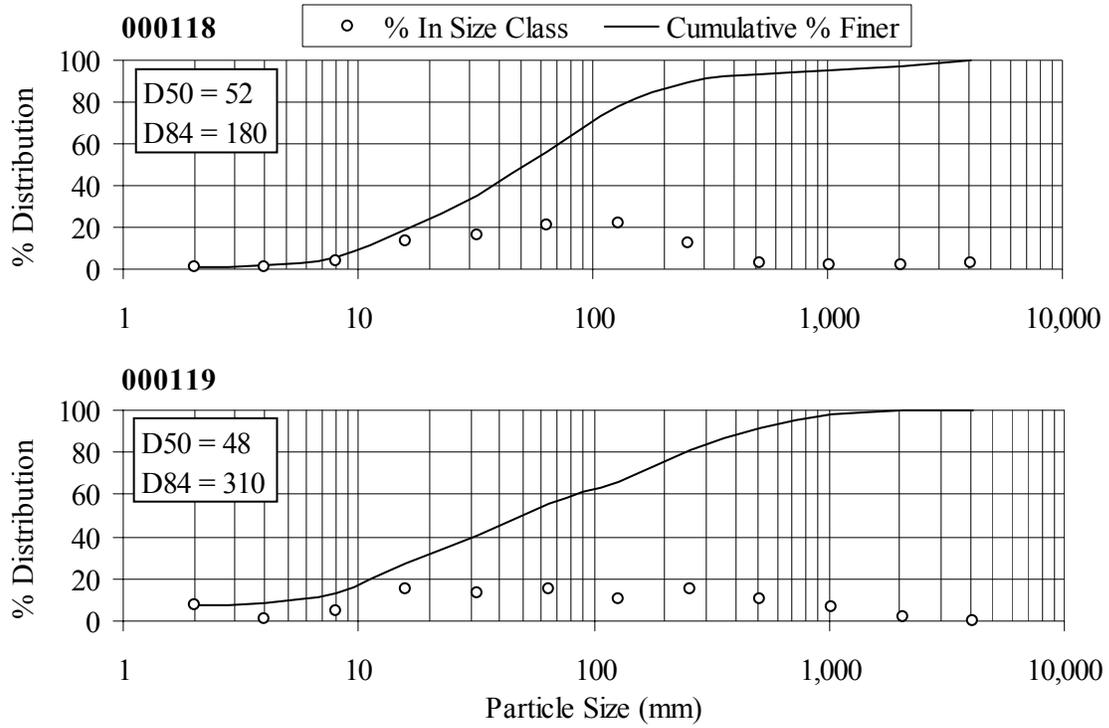


Figure 14. Distributions of substrate as percent in size class and cumulative percent finer for a riffle habitat unit in reach 000118 and 000119 of Lewis Prong.

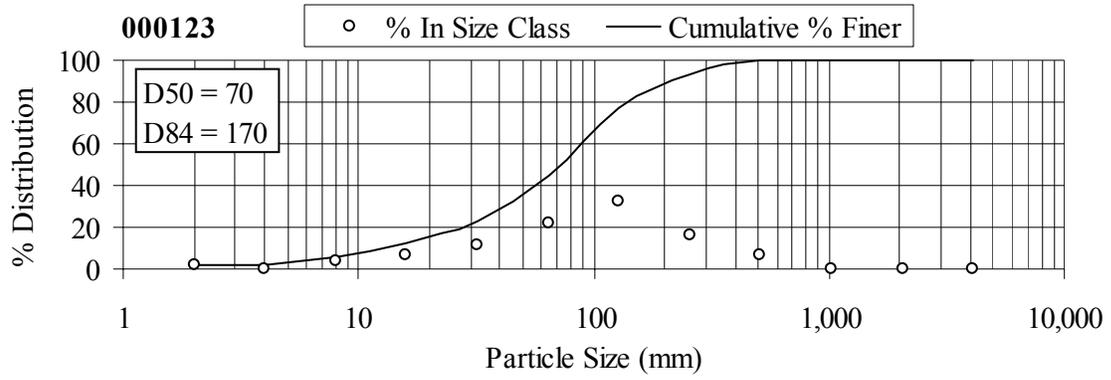


Figure 15. Distributions of substrate as percent in size class and cumulative percent finer for a riffle habitat unit in reach 000123 of Panther Creek.

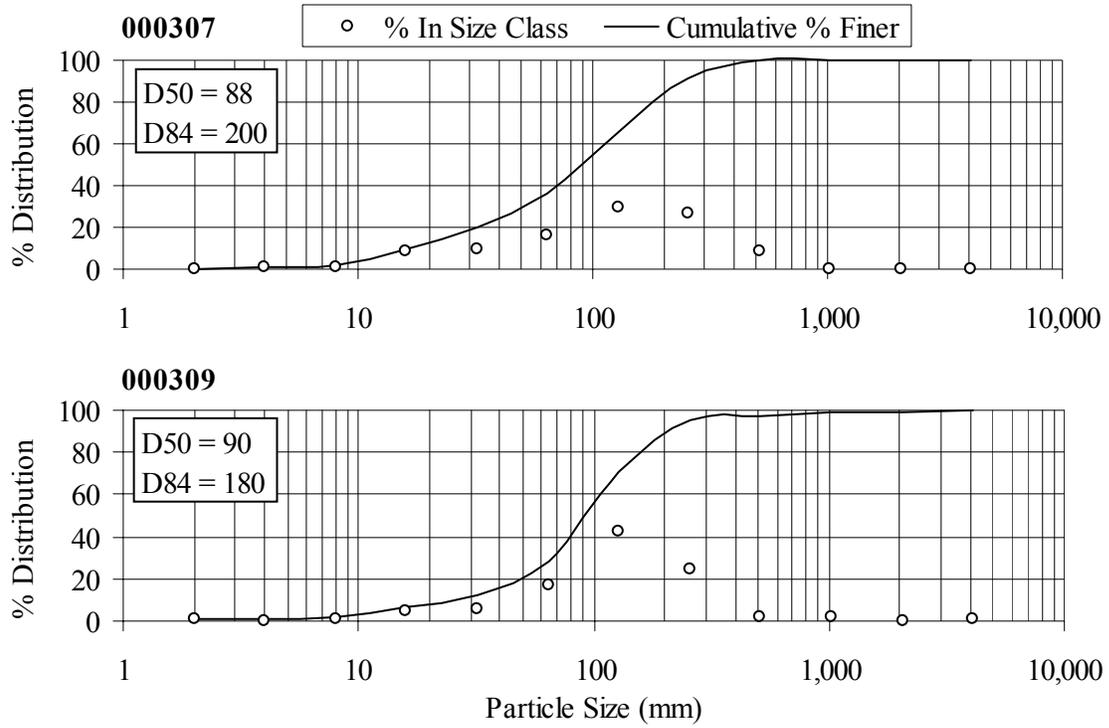


Figure 16. Distributions of substrate as percent in size class and cumulative percent finer for a riffle habitat unit in reach 000307 and 000309 of Bear Branch.

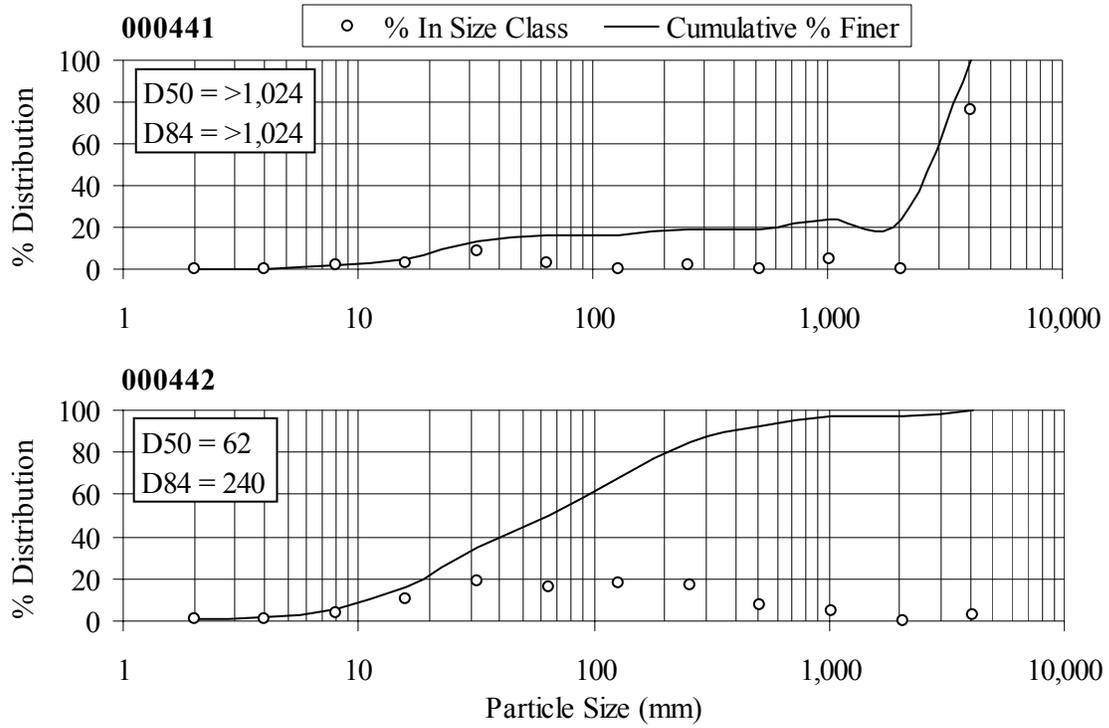


Figure 17. Distributions of substrate as percent in size class and cumulative percent finer for a riffle habitat unit in reach 000441 and 000442 of Washita Creek.

**Appendix A: Categories used during BVET inventories**

Table 6. Size classes used to categorize large woody debris during BVET habitat surveys on the Ozark NF summer 2006. Woody debris < 1.0 m in length or < 10 cm in diameter was omitted.

Category	Length (m)	Diameter (cm)
1	1-5	10-55
2	1-5	>55
3	>5	10-55
4	>5	>55
	rootwad	rootwad

Table 7. Size classes used to categorize substrate particles during BVET habitat surveys on the Ozark NF summer 2006. Size was visually estimated on the intermediate axis (b-axis).

Type	Number	Size / Description
Organic matter	1	Leaves, detritus, etc.
Clay	2	Sticky, holds form when rolled into a ball
Silt	3	Slippery, does not hold form when rolled into a ball
Sand	4	Silt – 2 mm, gritty does not hold form when rolled into a ball
Small gravel	5	3 – 16 mm, sand to fingernail
Large gravel	6	17 – 64 mm, fingernail to fist
Cobble	7	65 – 256 mm, fist to head
Boulder	8	> 256 mm, bigger than head
Bedrock	9	

Table 8. Substrate size classes used for pebble count data analysis. Bedrock was grouped in the very large boulder size class. Diameter was measured on the intermediate axis.

Size Class	Size Range (mm)
Sand	0 - 2
Very Fine Gravel	2 - 4
Fine Gravel	4 - 8
Medium Gravel	8 - 16
Coarse Gravel	16 - 32
Very Coarse Gravel	32 - 64
Small Cobble	64 - 128
Large Cobble	128 - 256
Small Boulder	256 - 512
Medium Boulder	512-1024
Large Boulder	1024-2048
Very Large Boulder	2048-4096

## Appendix B: Electrofishing Data

### Stream Index:

<b>Stream</b>	<b>Reach</b>	<b>Unit</b>	<b>Page</b>	<b>Stream</b>	<b>Reach</b>	<b>Unit</b>	<b>Page</b>
Richland Creek	000314	Glide 32	173	Brushy Fork	000593	Riffle 48	197
Richland Creek	000314	Riffle 27	174	Brushy Fork	000593	Glide 97	198
Richland Creek	000318	Pool 135	175	Brushy Fork	000593	Riffle 95	199
Richland Creek	000320	Riffle 97	176	Brushy Fork	000596	Riffle 3	200
Richland Creek	000322	Pool 191	177	Brushy Fork	000596	Pool 3	201
Richland Creek	000330	Pool 268	178	West Prong Brushy Fork	001640	Pool 10	202
Falling Water Creek	000511	Pool 4	179	UT West Prong Brushy Fork	001641	Pool 4	203
Falling Water Creek	000511	Riffle 4	180	UT West Prong Brushy Fork	001641	Riffle 4	204
Falling Water Creek	000512	Glide 45	181	Lewis Prong	000118	Pool 3	205
Falling Water Creek	000513	Riffle 14	182	Lewis Prong	000118	Riffle 3	206
Falling Water Creek	000515	Pool 60	183	Lewis Prong	000119	Riffle 20	207
Falling Water Creek	000515	Riffle 39	184	Lewis Prong	000119	Pool 80	208
Falling Water Creek	000517	Pool 108	185	Panther Creek	000123	Pool 1	209
Falling Water Creek	000517	Riffle 71	186	Panther Creek	000123	Riffle 1	210
Bobtail Creek	000946	Riffle 10	187	Turner Hollow	001198	Pool 5	211
Bobtail Creek	000946	Pool 19	188	UT of Panther Creek	001205	Pool 9	212
Bobtail Creek	000946	Riffle 13 or 14	189	UT of Panther Creek	001205	Riffle 4	213
Bobtail Creek	000946	Pool 23 or 24	190	Bear Branch	000307	Glide 8	214
South Fork Little Red	000461	Pool 31	191	Bear Branch	000307	Riffle 8	215
South Fork Little Red	000462	Riffle 36	192	Bear Branch	000309	Pool 88	216
South Fork Little Red	000463	Pool NA	193	Bear Branch	000309	Riffle 58	217
South Fork Little Red	000463	Riffle NA	194	Washita Creek	000441	Riffle 12	218
Brushy Fork	000590	Riffle 8	195	Washita Creek	000441	Glide 18	219
Brushy Fork	000592	Pool 48	196	Washita Creek	000442	Riffle 29	220
				Washita Creek	000442	Pool 33	221

Stream	Richland Creek
NHD-ID	11010005000314
Unit Type	Glide
Unit Num	32 (estimated)
Date	06/13/06
District	Buffalo
Quad	Moore
Num Shockers	2
Shock Time (sec)	895 & 1072
Shock Settings	250V AC
Crew	colin krause, dan nuckols, john whipple, keith whalen, scott smith, jessica wakefield
Comments	could not find flagging; pool is located at a right river bend when facing upstream; gps 15 505560E 3961443N; 3 pools up from Falling Water Creek confluence

Species Name	Adult Count	Age-0 Count	Voucher Count	Comments
northern hogsucker	1	0	0	
shadow bass	2	0	0	
green sunfish	2	0	0	
longear sunfish	31	0	0	
smallmouth bass	5	0	0	
central stoneroller	109	0	0	
whitetail shiner	1	0	0	
hornyhead chub	3	0	0	
bigeye shiner	18	0	0	
slender madtom	3	0	0	
greenside darter	9	0	0	
rainbow darter	20	0	0	
orangethroat darter	1	0	0	

Stream	Richland Creek
NHD-ID	11010005000314
Unit Type	Riffle
Unit Num	27 (estimated)
Date	06/13/06
District	Buffalo
Quad	Moore
Num Shockers	2
Shock Time (sec)	573 & 471
Shock Settings	250V AC
Crew	colin krause, dan nuckols, john whipple, keith whalen, scott smith, jessica wakefield
Comments	could not find flagging; riffle is all bedrock and is next unit above shocked pool; gps 15 505519E 3961469N

Species Name	Adult Count	Age-0 Count	Voucher Count	Comments
central stoneroller	122	5	0	
whitetail shiner	2	0	0	
bigeye shiner	20	12	0	
northern studfish	1	0	0	
slender madtom	4	0	0	
greenside darter	25	0	0	
rainbow darter	73	0	0	
orangethroat darter	9	0	0	

Stream	Richland Creek
NHD-ID	11010005000318
Unit Type	Pool
Unit Num	135
Date	06/13/06
District	Buffalo
Quad	Moore
Num Shockers	2
Shock Time (sec)	601 & 735
Shock Settings	350V AC
Crew	colin krause, dan nuckols, john whipple, keith whalen, scott smith, jessica wakefield
Comments	gps 15 501798E 3959164N

Species Name	Adult Count	Age-0 Count	Voucher Count	Comments
green sunfish	3	0	0	
longear sunfish	10	0	0	
smallmouth bass	1	0	0	
central stoneroller	82	0	0	
bigeye shiner	30	0	0	
slender madtom	3	0	0	
greenside darter	2	0	0	
orangethroat darter	15	0	0	

Stream	Richland Creek
NHD-ID	11010005000320
Unit Type	Riffle
Unit Num	97
Date	06/13/06
District	Buffalo
Quad	Moore
Num Shockers	2
Shock Time (sec)	825 & 1330
Shock Settings	300V AC
Crew	colin krause, dan nuckols, john whipple, keith whalen, scott smith, jessica wakefield
Comments	gps 15 501066E 3958949N

Species Name	Adult Count	Age-0 Count	Voucher Count	Comments
longear sunfish	1	0	0	
central stoneroller	47	3	0	
bigeye shiner	32	4	0	
creek chub	4	0	0	
northern studfish	1	0	0	
slender madtom	36	0	0	
greenside darter	1	0	0	
orangethroat darter	89	0	0	

Stream	Richland Creek
NHD-ID	11010005000322
Unit Type	Pool
Unit Num	191
Date	06/13/06
District	Buffalo
Quad	Moore
Num Shockers	2
Shock Time (sec)	1134 & 1183
Shock Settings	350V AC
Crew	colin krause, dan nuckols, john whipple, keith whalen, scott smith, jessica wakefield
Comments	

Species Name	Adult Count	Age-0 Count	Voucher Count	Comments
hybrid sunfish	4	0	0	longear/green hybrid sunfish
green sunfish	1	0	0	
longear sunfish	32	0	0	
smallmouth bass	1	1	0	
central stoneroller	1	5	0	
bigeye shiner	6	4	0	
greenside darter	3	0	0	
orangethroat darter	12	1	0	

Stream	Richland Creek
NHD-ID	11010005000330
Unit Type	Pool
Unit Num	268
Date	06/15/06
District	Buffalo
Quad	Sandgap
Num Shockers	2
Shock Time (sec)	619 & 627
Shock Settings	400V AC
Crew	Ernie Stanley, Dan Nuckols, Zak Slagle, Scott Smith, Patrick Reynolds, Pedro Ardapple
Comments	

Species Name	Adult Count	Age-0 Count	Voucher Count	Comments
central stoneroller	6	0	0	
southern redbelly dace	63	4	0	
creek chub	7	0	0	
orangethroat darter	22	0	0	

Stream	Falling Water Creek
NHD-ID	11010005000511
Unit Type	Pool
Unit Num	4
Date	06/12/06
District	Buffalo & Bayou
Quad	Moore
Num Shockers	1
Shock Time (sec)	418
Shock Settings	350V AC
Crew	colin krause, dan nuckols, john whipple, scott smith, jessica wakefield
Comments	pool isolated, dry up and downstream

Species Name	Adult Count	Age-0 Count	Voucher Count	Comments
northern hogsucker	0	6	0	
central stoneroller	11	0	0	
creek chub	4	0	0	
rainbow darter	1	0	0	
unknown	0	33	0	unknown species off the yolk

Stream	Falling Water Creek
NHD-ID	11010005000511
Unit Type	Riffle
Unit Num	4
Date	06/12/06
District	Buffalo & Bayou
Quad	Moore
Num Shockers	1
Shock Time (sec)	699
Shock Settings	250V AC
Crew	colin krause, dan nuckols, john whipple, scott smith, jessica wakefield
Comments	

Species Name	Adult Count	Age-0 Count	Voucher Count	Comments
central stoneroller	102	0	0	
whitetail shiner	1	0	0	
notropis sp	11	0	0	probably bigeye shiner
creek chub	1	0	0	
slender madtom	7	0	0	
greenside darter	8	0	0	
rainbow darter	42	0	0	
stippled darter	2	0	0	
orangethroat darter	9	0	0	

Stream	Falling Water Creek
NHD-ID	11010005000512
Unit Type	Glide
Unit Num	45
Date	06/12/06
District	Buffalo & Bayou
Quad	Moore
Num Shockers	2
Shock Time (sec)	498 & 598
Shock Settings	350V AC
Crew	colin krause, dan nuckols, john whipple, scott smith, jessica wakefield
Comments	

Species Name	Adult Count	Age-0 Count	Voucher Count	Comments
northern hogsucker	2	2	0	
longear sunfish	8	0	0	
smallmouth bass	1	0	0	
central stoneroller	81	0	0	
whitetail shiner	5	0	0	
notropis sp	68	0	43	43 were vouchered, determined to be Ozark Minnow 33 and Bigeye Shiner 10
horneyhead chub	1	0	0	
bigeye shiner	10	0	0	adult count added after positive ID in lab
ozark minnow	33	0	0	adult count added after positive ID in lab
creek chub	1	0	0	
slender madtom	2	0	0	
greenside darter	19	0	0	
rainbow darter	12	0	0	
stippled darter	1	0	0	
orange throat darter	9	0	0	

Stream	Falling Water Creek
NHD-ID	11010005000513
Unit Type	Riffle
Unit Num	14
Date	06/12/06
District	Buffalo & Bayou
Quad	Moore
Num Shockers	1
Shock Time (sec)	102
Shock Settings	350V AC
Crew	colin krause, dan nuckols, john whipple, scott smith, jessica wakefield
Comments	measured data for riffle 15 was recorded, it's possible that Riffle 15 was shocked and when the unit was flagged for

Species Name	Adult Count	Age-0 Count	Voucher Count	Comments
longear sunfish	1	0	0	
central stoneroller	7	0	0	
whitetail shiner	1	0	0	
notropis sp	0	5	0	
creek chub	1	0	0	
rainbow darter	12	0	0	
orangethroat darter	10	0	0	

Stream	Falling Water Creek
NHD-ID	11010005000515
Unit Type	Pool
Unit Num	60
Date	06/12/06
District	Buffalo & Bayou
Quad	Smyrna
Num Shockers	2
Shock Time (sec)	491 & 581
Shock Settings	350V AC
Crew	colin krause, dan nuckols, john whipple, scott smith, jessica wakefield
Comments	

Species Name	Adult Count	Age-0 Count	Voucher Count	Comments
northern hogsucker	2	0	0	
shadow bass	1	0	0	
longear sunfish	8	0	0	
smallmouth bass	3	0	0	
whitetail shiner	12	0	0	
notropis sp	17	1	18	18 were vouchered, determined to be Ozark Minnow 9 and Bigeye Shiner 8, the 18th fish was age-0 and not identified
hornyhead chub	2	0	0	
bigeye shiner	8	0	0	adult count added after positive ID in lab
ozark minnow	9	0	0	adult count added after positive ID in lab
slender madtom	2	0	0	
greenside darter	6	0	0	
orangethroat darter	3	0	0	

Stream	Falling Water Creek
NHD-ID	11010005000515
Unit Type	Riffle
Unit Num	39
Date	06/12/06
District	Buffalo & Bayou
Quad	Smyrna
Num Shockers	2
Shock Time (sec)	519 & 1295
Shock Settings	350V AC
Crew	colin krause, dan nuckols, john whipple, scott smith, jessica wakefield
Comments	

Species Name	Adult Count	Age-0 Count	Voucher Count	Comments
northern hogsucker	0	2	0	
smallmouth bass	2	0	0	
central stoneroller	71	0	0	
whitetail shiner	1	0	0	
notropis sp	53	2	0	Voucher identified in lab to be Ozark Minnow 23 & Bigeye Shiner 28. No voucher count recorded in field.
creek chub	3	0	0	
slender madtom	13	0	0	
greenside darter	21	0	0	
rainbow darter	56	0	0	Lab ID voucher Rainbow Darter 21. No voucher count recorded in field.
orangethroat darter	24	0	0	Lab ID voucher Orange Throat Darter 16. No voucher count recorded in field.

Stream	Falling Water Creek
NHD-ID	11010005000517
Unit Type	Pool
Unit Num	108
Date	06/12/06
District	Buffalo & Bayou
Quad	Smyrna
Num Shockers	2
Shock Time (sec)	848 & 1030
Shock Settings	350V AC
Crew	colin krause, dan nuckols, john whipple, scott smith, jessica wakefield
Comments	

Species Name	Adult Count	Age-0 Count	Voucher Count	Comments
green sunfish	3	0	0	
longear sunfish	23	0	0	
central stoneroller	83	0	0	
creek chub	13	0	0	
slender madtom	12	0	0	
orangethroat darter	17	0	0	

Stream	Falling Water Creek
NHD-ID	11010005000517
Unit Type	Riffle
Unit Num	71
Date	06/12/06
District	Buffalo & Bayou
Quad	Smyrna
Num Shockers	2
Shock Time (sec)	238 & 611
Shock Settings	350V AC
Crew	colin krause, dan nuckols, john whipple, scott smith, jessica wakefield
Comments	

Species Name	Adult Count	Age-0 Count	Voucher Count	Comments
central stoneroller	31	0	0	
creek chub	21	3	0	
slender madtom	4	0	0	
orangethroat darter	48	0	16	Voucher identified in lab to be 14 Orangethroat Darter; voucher count of 16 was possibly a miscount in the field

Stream	Bobtail Creek
NHD-ID	11010005000946
Unit Type	Riffle
Unit Num	10
Date	06/15/06
District	Buffalo
Quad	Moore
Num Shockers	
Shock Time (sec)	262
Shock Settings	300V AC
Crew	Ernie Stanley, Dan Nuckols, Zak Slagle, Scott Smith, Patrick Reynolds, Pedro Ardapple
Comments	riffle length 7m, 171 meters upstream of first atv crossing

Species Name	Adult Count	Age-0 Count	Voucher Count	Comments
southern redbelly dace	5	0	0	
creek chub	9	0	0	
orangethroat darter	5	0	0	

Stream	Bobtail Creek
NHD-ID	11010005000946
Unit Type	Pool
Unit Num	19
Date	06/15/06
District	Buffalo
Quad	Moore
Num Shockers	2
Shock Time (sec)	404 & 1355
Shock Settings	300V AC
Crew	Ernie Stanley, Dan Nuckols, Zak Slagle, Scott Smith, Patrick Reynolds, Pedro Ardapple
Comments	pool length 24m

Species Name	Adult Count	Age-0 Count	Voucher Count	Comments
green sunfish	7	0	0	
central stoneroller	241	2	0	
southern redbelly dace	14	0	0	
bluntnose minnow	1	0	0	
creek chub	114	0	0	
orangethroat darter	27	0	0	

Stream	Bobtail Creek
NHD-ID	11010005000946
Unit Type	Riffle
Unit Num	13 or 14
Date	06/15/06
District	Buffalo
Quad	Moore
Num Shockers	1
Shock Time (sec)	750
Shock Settings	300V AC
Crew	Ernie Stanley, Dan Nuckols, Zak Slagle, Scott Smith, Patrick Reynolds, Pedro Ardapple
Comments	47m up from 2nd ATV crossing; Unit # 13 or 14 estimated in office based on 47m upstream of Ford at 2133m

Species Name	Adult Count	Age-0 Count	Voucher Count	Comments
green sunfish	1	0	0	
central stoneroller	32	0	0	
southern redbelly dace	16	0	0	
creek chub	25	1	0	
orangethroat darter	34	0	0	

Stream	Bobtail Creek
NHD-ID	11010005000946
Unit Type	Pool
Unit Num	23 or 24
Date	06/15/06
District	Buffalo
Quad	Moore
Num Shockers	2
Shock Time (sec)	426 & 500
Shock Settings	300V AC
Crew	Ernie Stanley, Dan Nuckols, Zak Slagle, Scott Smith, Patrick Reynolds, Pedro Ardapple
Comments	Ford at 2133m

Species Name	Adult Count	Age-0 Count	Voucher Count	Comments
green sunfish	4	0	0	
bluegill	1	0	0	positive id dan nuckols
longear sunfish	1	0	0	
central stoneroller	128	2	0	
southern redbelly dace	30	0	0	
creek chub	52	0	0	
orangethroat darter	40	0	0	

Stream	South Fork Little Red
NHD-ID	11010014000461
Unit Type	Pool
Unit Num	31
Date	06/07/06
District	Bayou
Quad	Rex
Num Shockers	2
Shock Time (sec)	580
Shock Settings	300V AC
Crew	colin krause, zak slagle, john whipple, scott smith, jessica wakefield
Comments	

Species Name	Adult Count	Age-0 Count	Voucher Count	Comments
black redhorse	1	0	0	
longear sunfish	3	3	0	
central stoneroller	5	0	0	
bigeye shiner	5	0	0	
bluntnose minnow	1	0	0	
creek chub	1	0	0	
grass pickeral	1	0	0	
rainbow darter	5	0	4	field comment: some could be orange throat darter. lab comment: 4 vouchers could not be identified because of small fish size

Stream	South Fork Little Red
NHD-ID	11010014000462
Unit Type	Riffle
Unit Num	36
Date	06/08/06
District	Bayou
Quad	Rex
Num Shockers	1
Shock Time (sec)	171
Shock Settings	300V AC
Crew	colin krause, dan nuckols, john whipple, zak slagle, scott smith, dwayne rambo, jessica wakefield
Comments	

Species Name	Adult Count	Age-0 Count	Voucher Count	Comments
central stoneroller	3	0	0	
bigeye shiner	19	0	0	
ozark madtom	1	0	0	
creek chub	1	0	0	
slender madtom	6	0	0	
greenside darter	6	0	0	
rainbow darter	23	0	0	

Stream	South Fork Little Red
NHD-ID	11010014000463
Unit Type	Pool
Unit Num	NA
Date	06/08/06
District	Bayou
Quad	Rex
Num Shockers	2
Shock Time (sec)	345 & 644
Shock Settings	400V AC
Crew	colin krause, dan nuckols, john whipple, zak slagle, scott smith, dwayne rambo, jessica wakefield
Comments	could not find flagged section, selected suitable unit to shock; GPS 15 522859E 3935599N

Species Name	Adult Count	Age-0 Count	Voucher Count	Comments
green sunfish	4	0	0	
longear sunfish	22	16	0	
smallmouth bass	1	0	0	
bigeye shiner	11	0	0	
creek chub	4	0	0	
blackspotted topminnow	1	0	0	
slender madtom	1	0	0	
greenside darter	1	0	0	
rainbow darter	12	0	0	

Stream	South Fork Little Red
NHD-ID	11010014000463
Unit Type	Riffle
Unit Num	NA
Date	06/08/06
District	Bayou
Quad	Lost Corner
Num Shockers	2
Shock Time (sec)	728 & 328
Shock Settings	350V AC
Crew	colin krause, dan nuckols, john whipple, zak slagle, scott smith, dwayne rambo, jessica wakefield
Comments	could not find flagged section, selected suitable unit to shock; gps 15 521729E 3936236N

Species Name	Adult Count	Age-0 Count	Voucher Count	Comments
creek chubsucker	1	0	0	
green sunfish	1	0	0	
longear sunfish	1	0	0	
central stoneroller	2	0	0	
bigeye shiner	77	0	0	
bluntnose minnow	1	0	0	
creek chub	3	0	0	
slender madtom	13	0	0	
greenside darter	2	0	0	
rainbow darter	32	0	0	
redfin darter	2	0	0	

Stream	Brushy Fork
NHD-ID	11010014000590
Unit Type	Riffle
Unit Num	8
Date	06/07/06
District	Bayou
Quad	Rex
Num Shockers	1
Shock Time (sec)	879
Shock Settings	400V AC
Crew	john whipple, colin krause, dwayne rambo, scott smith
Comments	gps for unit 8: 15 524849E 3933284N

Species Name	Adult Count	Age-0 Count	Voucher Count	Comments
creek chubsucker	1	0	0	
longear sunfish	4	0	0	
bigeye shiner	6	0	0	
bluntnose minnow	1	0	0	
creek chub	2	0	0	
slender madtom	5	0	0	
greensided darter	2	0	0	
rainbow darter	18	0	1	vouchers could not be identified because of small fish size
stippled darter	6	0	0	
orangethroat darter	2	0	2	vouchers could not be identified because of small fish size
redfin darter	4	0	0	

Stream	Brushy Fork
NHD-ID	11010014000592
Unit Type	Pool
Unit Num	48
Date	06/07/06
District	Bayou
Quad	Lost Corner
Num Shockers	1
Shock Time (sec)	956
Shock Settings	400V AC
Crew	john whipple, colin krause, dwayne rambo, scott smith
Comments	

Species Name	Adult Count	Age-0 Count	Voucher Count	Comments
creek chubsucker	1	0	0	
green sunfish	2	0	0	
longear sunfish	11	0	0	
central stoneroller	39	0	0	could be bigscale stoneroller, need lateral line scale count, use riffle 48 voucher
bigeye shiner	24	0	0	
bluntnose minnow	2	0	0	
creek chub	17	0	0	
blackspotted topminnow	1	0	0	
slender madtom	3	0	0	
greenside darter	5	0	0	
rainbow darter	8	0	0	
stippled darter	4	0	0	

Stream	Brushy Fork
NHD-ID	11010014000593
Unit Type	Riffle
Unit Num	48
Date	06/07/06
District	Bayou
Quad	Lost Corner
Num Shockers	1
Shock Time (sec)	1438
Shock Settings	400V AC
Crew	john whipple, colin krause, dwayne rambo, scott smith
Comments	

Species Name	Adult Count	Age-0 Count	Voucher Count	Comments
central stoneroller	21	0	3	could be bigscale stoneroller, need lateral line scale count. Voucher's identified in lab as Central Stoneroller
bigeye shiner	16	0	0	
creek chub	9	0	0	
slender madtom	15	0	0	
greenside darter	1	0	0	
rainbow darter	21	0	0	
stippled darter	1	0	0	
orangethroat darter	4	0	4	no vouchers for this count found in lab samples
redfin darter	4	0	0	

Stream	Brushy Fork
NHD-ID	11010014000593
Unit Type	Glide
Unit Num	97
Date	06/07/06
District	Bayou
Quad	Lost Corner
Num Shockers	1
Shock Time (sec)	319
Shock Settings	350V
Crew	D. Nuckols, Z. Slagle, Jessica
Comments	

Species Name	Adult Count	Age-0 Count	Voucher Count	Comments
creek chubsucker	1	0	0	
green sunfish	0	2	0	
longear sunfish	1	1	0	
bigeye shiner	2	1	1	voucher identified in lab as Bigeye shiner
creek chub	28	0	0	
slender madtom	1	0	0	
rainbow darter	1	0	0	
rainbow darter	2	0	2	rainbow darter female? Vouchers could not be identified because of small fish size
redfin darter	4	0	0	

Stream	Brushy Fork
NHD-ID	11010014000593
Unit Type	Riffle
Unit Num	95
Date	06/07/06
District	Bayou
Quad	Lost Corner
Num Shockers	1
Shock Time (sec)	421
Shock Settings	350V
Crew	D. Nuckols, Z. Slagle, Jessica
Comments	didn't see flagged unit, Shocked riffle where trib 004402 enters 000593

Species Name	Adult Count	Age-0 Count	Voucher Count	Comments
green sunfish	0	3	0	
bigeye shiner	5	0	2	lower caudal clipped, voucher identified as Bigeye shiner 2
creek chub	14	0	0	
slender madtom	4	1	0	
greenside darter	1	0	0	
rainbow darter	33	0	0	
stippled darter	8	0	0	
redfin darter	8	0	0	

Stream	Brushy Fork
NHD-ID	11010014000596
Unit Type	Riffle
Unit Num	3
Date	06/06/06
District	Bayou
Quad	Lost Corner
Num Shockers	1
Shock Time (sec)	NA
Shock Settings	300V DC
Crew	D. Nuckols, K. Whalen, J. Whipple, Z. Slagle, Jessica
Comments	

Species Name	Adult Count	Age-0 Count	Voucher Count	Comments
NO FISH	0	0	0	NO FISH

Stream	Brushy Fork
NHD-ID	11010014000596
Unit Type	Pool
Unit Num	3
Date	06/06/06
District	Bayou
Quad	Lost Corner
Num Shockers	1
Shock Time (sec)	NA
Shock Settings	300V DC
Crew	D. Nuckols, K. Whalen, J. Whipple, Z. Slagle, Jessica
Comments	

Species Name	Adult Count	Age-0 Count	Voucher Count	Comments
NO FISH	0	0	0	NO FISH

Stream	West Prong Brushy Fork
NHD-ID	11010014001640
Unit Type	Pool
Unit Num	10
Date	06/06/06
District	Bayou
Quad	Lost Corner
Num Shockers	1
Shock Time (sec)	217
Shock Settings	300V DC
Crew	D. Nuckols, K. Whalen, J. Whipple, Z. Slagle, Jessica
Comments	

Species Name	Adult Count	Age-0 Count	Voucher Count	Comments
green sunfish	1	0	0	
central stoneroller	2	0	0	
creek chub	3	0	0	
stippled darter	1	0	0	
redfin darter	1	1	1	2 fish, 1 vouchered. Voucher ID in lab to be Redfin darter

Stream	Unnamed Trib of West Prong Brushy Fork
NHD-ID	11010014001641
Unit Type	Pool
Unit Num	4
Date	06/06/06
District	Bayou
Quad	Lost Corner
Num Shockers	1
Shock Time (sec)	75
Shock Settings	300V DC
Crew	D. Nuckols, K. Whalen, J. Whipple, Z. Slagle, Jessica
Comments	small pool very turbid

Species Name	Adult Count	Age-0 Count	Voucher Count	Comments
creek chub	1	0	0	
redfin darter	2	0	0	

Stream	Unnamed Trib of West Prong Brushy Fork
NHD-ID	11010014001641
Unit Type	Riffle
Unit Num	4
Date	06/06/06
District	Bayou
Quad	Lost Corner
Num Shockers	1
Shock Time (sec)	211
Shock Settings	300V DC
Crew	D. Nuckols, K. Whalen, J. Whipple, Z. Slagle, Jessica
Comments	very shallow barely flowing

Species Name	Adult Count	Age-0 Count	Voucher Count	Comments
redfin darter	1	0	0	

Stream	Lewis Prong
NHD-ID	11110201000118
Unit Type	Pool
Unit Num	3
Date	06/20/06
District	Pleasant Hill
Quad	Oark
Num Shockers	2
Shock Time (sec)	41 & 156
Shock Settings	450V AC
Crew	colin, dan, keith, ernie, zak, john, jill, michael
Comments	

Species Name	Adult Count	Age-0 Count	Voucher Count	Comments
creek chub	0	14	0	
etheostoma sp	0	2	0	

Stream	Lewis Prong
NHD-ID	11110201000118
Unit Type	Riffle
Unit Num	3
Date	06/20/06
District	Pleasant Hill
Quad	Oark
Num Shockers	2
Shock Time (sec)	379 & 269
Shock Settings	450V AC
Crew	colin, dan, keith, ernie, zak, john, jill, michael
Comments	

Species Name	Adult Count	Age-0 Count	Voucher Count	Comments
central stoneroller	7	0	0	
creek chub	4	0	0	
slender madtom	14	0	0	
greenside darter	1	0	0	
fantail darter	1	0	0	
orangethroat darter	28	0	0	

Stream	Lewis Prong
NHD-ID	11110201000119
Unit Type	Riffle
Unit Num	20
Date	06/20/06
District	Pleasant Hill
Quad	Oark
Num Shockers	1
Shock Time (sec)	182
Shock Settings	600V DC
Crew	colin, dan, keith, ernie, zak, john, jill, michael
Comments	

Species Name	Adult Count	Age-0 Count	Voucher Count	Comments
NO FISH	0	0	0	no fish

Stream	Lewis Prong
NHD-ID	11110201000119
Unit Type	Pool
Unit Num	80
Date	06/20/06
District	Pleasant Hill
Quad	Oark
Num Shockers	2
Shock Time (sec)	432 & 232
Shock Settings	NA
Crew	colin, dan, keith, ernie, zak, john, jill, michael
Comments	

Species Name	Adult Count	Age-0 Count	Voucher Count	Comments
central stoneroller	5	0	0	
creek chub	14	0	0	
slender madtom	6	0	0	
stippled darter	1	0	0	
orangethroat darter	38	0	0	
redfin darter	3	0	0	

Stream	Panther Creek
NHD-ID	11110201000123
Unit Type	Pool
Unit Num	1
Date	06/16/06
District	Pleasant hill
Quad	Oark
Num Shockers	1
Shock Time (sec)	76
Shock Settings	400V AC
Crew	NA
Comments	

Species Name	Adult Count	Age-0 Count	Voucher Count	Comments
creek chub	0	1	0	
ozark madtom	1	0	0	

Stream	Panther Creek
NHD-ID	11110201000123
Unit Type	Riffle
Unit Num	1
Date	06/16/06
District	Pleasant hill
Quad	Oark
Num Shockers	1
Shock Time (sec)	31
Shock Settings	400V AC
Crew	NA
Comments	

Species Name	Adult Count	Age-0 Count	Voucher Count	Comments
NO FISH	0	0	0	

Stream	Turner Hollow
NHD-ID	11110201001198
Unit Type	Pool
Unit Num	5
Date	06/20/06
District	Pleasant Hill
Quad	Fallsville
Num Shockers	1
Shock Time (sec)	676
Shock Settings	450V AC
Crew	d.nuckols z.slagel, j.christoperson, c.kraus, j.whalen, m.omelia, j.whipple, e.stanley
Comments	

Species Name	Adult Count	Age-0 Count	Voucher Count	Comments
central stoneroller	10	0	0	
creek chub	47	2	0	
orangethroat darter	76	0	0	
redfin darter	2	0	0	

Stream	Unnamed Trib of Panther Creek
NHD-ID	11110201001205
Unit Type	Pool
Unit Num	9
Date	06/16/06
District	Pleasant Hill
Quad	Oark
Num Shockers	1
Shock Time (sec)	66
Shock Settings	400V AC
Crew	NA
Comments	

Species Name	Adult Count	Age-0 Count	Voucher Count	Comments
redfin darter	3	0	0	

Stream	Unnamed Trib of Panther Creek
NHD-ID	11110201001205
Unit Type	Riffle
Unit Num	4
Date	06/16/06
District	Pleasant Hill
Quad	Oark
Num Shockers	NA
Shock Time (sec)	NA
Shock Settings	NA
Crew	NA
Comments	unit was dry

Species Name	Adult Count	Age-0 Count	Voucher Count	Comments
NO FISH	0	0	0	DRY

Stream	Bear Branch
NHD-ID	11110201000307
Unit Type	Glide
Unit Num	8
Date	06/21/06
District	Pleasant Hill
Quad	Oark
Num Shockers	1
Shock Time (sec)	387
Shock Settings	400V AC
Crew	d.nuckols, c.krause, j.whipple, j.christopherson, e.stanley, z.slagel, m.o'melia
Comments	

Species Name	Adult Count	Age-0 Count	Voucher Count	Comments
creek chub	12	0	0	
ozark madtom	8	0	4	anal fin ray counts were never more than 16, leading to an Ozark madtom identification, but counts were not absolutely positive so vouchers are listed as Noturus Sp.
slender madtom	9	0	3	anal fin ray counts were never more than 16, leading to an Ozark madtom identification, but counts were not absolutely positive so vouchers are listed as Noturus Sp.
fantail darter	4	0	0	
orangethroat darter	62	0	0	
redfin darter	2	0	0	

Stream	Bear Branch
NHD-ID	11110201000307
Unit Type	Riffle
Unit Num	8
Date	06/21/06
District	Pleasant Hill
Quad	Oark
Num Shockers	NA
Shock Time (sec)	NA
Shock Settings	NA
Crew	d.nuckols, c.krause, j.whipple, j.christopherson, e.stanley, z.slagel, m.o'melia
Comments	

Species Name	Adult Count	Age-0 Count	Voucher Count	Comments
NO FISH	0	0	0	NO FISH

Stream	Bear Branch
NHD-ID	11110201000309
Unit Type	Pool
Unit Num	88
Date	06/21/06
District	Pleasant Hill
Quad	Oark
Num Shockers	2
Shock Time (sec)	360 & 358
Shock Settings	400V AC
Crew	d.nuckols, c.krause, j.whipple, j.christopherson, e.stanley, z.slagel, m.o'melia
Comments	

Species Name	Adult Count	Age-0 Count	Voucher Count	Comments
green sunfish	1	0	0	
central stoneroller	10	0	0	
creek chub	25	0	0	
ozark madtom	1	0	0	
stippled darter	3	0	0	
orangethroat darter	5	0	0	
redfin darter	4	0	0	

Stream	Bear Branch
NHD-ID	11110201000309
Unit Type	Riffle
Unit Num	58
Date	06/21/06
District	Pleasant Hill
Quad	Oark
Num Shockers	1
Shock Time (sec)	163
Shock Settings	400V AC
Crew	d.nuckols, c.krause, j.whipple, j.christopherson, e.stanley, z.slagel, m.o'melia
Comments	

Species Name	Adult Count	Age-0 Count	Voucher Count	Comments
NO FISH	0	0	0	No fish

Stream	Washita Creek
NHD-ID	11110201000441
Unit Type	Riffle
Unit Num	12
Date	06/21/06
District	Pleasant Hill
Quad	Oark
Num Shockers	2
Shock Time (sec)	518 & 510
Shock Settings	400V AC
Crew	d.nuckols,c.kraus,e.stanley,j.whipple,j.christopherson,z.slagel,m.omelia
Comments	Substrate is mostly Bedrock

Species Name	Adult Count	Age-0 Count	Voucher Count	Comments
central stoneroller	425	0	0	
creek chub	10	0	0	
ozark madtom	3	0	0	
slender madtom	2	0	0	
greenside darter	3	0	0	
fantail darter	11	0	0	
orangethroat darter	93	0	0	
redfin darter	3	0	0	

Stream	Washita Creek
NHD-ID	11110201000441
Unit Type	Glide
Unit Num	18
Date	06/21/06
District	Pleasant Hill
Quad	Oark
Num Shockers	2
Shock Time (sec)	216 & 275
Shock Settings	400V AC
Crew	d.nuckols,c.kraus,e.stanley,j.whipple,j.christopherson,z.slagel,m.omelia
Comments	

Species Name	Adult Count	Age-0 Count	Voucher Count	Comments
central stoneroller	199	0	0	
creek chub	7	0	0	
ozark madtom	1	0	0	
slender madtom	3	0	0	
fantail darter	5	0	0	
stippled darter	2	0	0	
orangethroat darter	40	0	0	
redfin darter	1	0	0	

Stream	Washita Creek
NHD-ID	11110201000442
Unit Type	Riffle
Unit Num	29
Date	06/21/06
District	Pleasant Hill
Quad	Oark
Num Shockers	2
Shock Time (sec)	850 & 415
Shock Settings	400V AC
Crew	d.nuckols,c.kraus,e.stanley,j.whipple,j.christopherson,z.slagel,m.omelia
Comments	

Species Name	Adult Count	Age-0 Count	Voucher Count	Comments
central stoneroller	1	0	0	
creek chub	6	5	0	
ozark madtom	1	0	0	
orangethroat darter	38	0	0	
redfin darter	24	0	0	

Stream	Washita Creek
NHD-ID	11110201000442
Unit Type	Pool
Unit Num	33
Date	06/21/06
District	Pleasant Hill
Quad	Oark
Num Shockers	1
Shock Time (sec)	458
Shock Settings	400V AC
Crew	d.nuckols,c.kraus,e.stanley,j.whipple,j.christopherson,z.slagel,m.omelia
Comments	Alot of silt from ford 1 unit upstream

Species Name	Adult Count	Age-0 Count	Voucher Count	Comments
central stoneroller	2	0	0	
creek chub	10	8	0	
ozark madtom	3	0	0	
slender madtom	3	0	0	
orangethroat darter	3	0	0	
redfin darter	3	0	0	