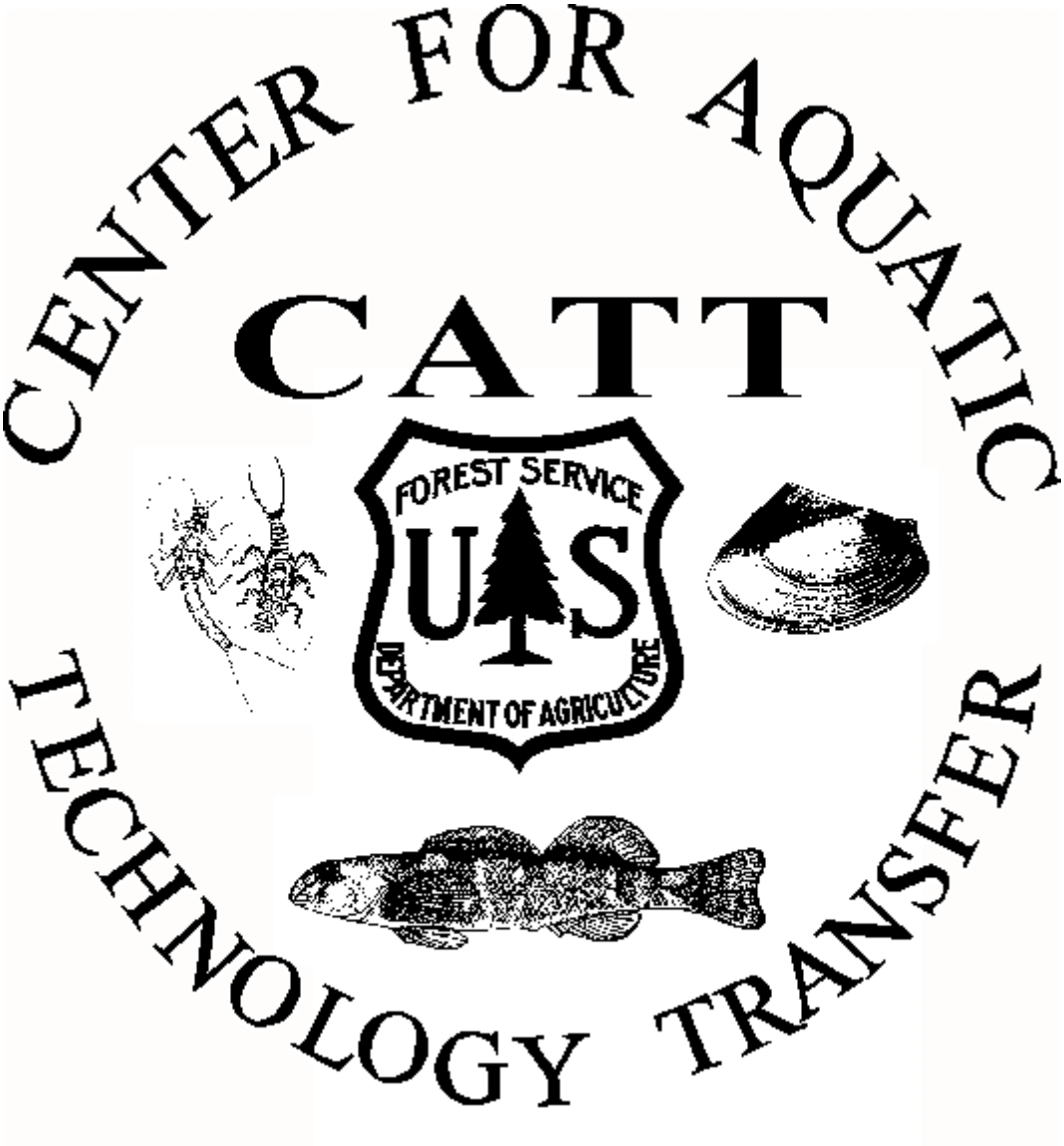
Current Condition of Streams in the Shenandoah River Drainage of the Lee Ranger District, George Washington-Jefferson National Forest, Virginia



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United States Department of Agriculture
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Table of Contents

Introduction

Throughout the summer of 2001 we conducted stream habitat surveys on Shenandoah River drainage streams within the Lee Ranger District, George Washington-Jefferson National Forest (GWJNF), Virginia, to quantify stream habitat conditions. Over 140 kilometers (88 miles) of stream habitat (40 streams) was classified and inventoried between 28 May and 23 August 2001, using Basinwide Visual Estimation Techniques (BVET) (Dolloff et. al 1993). In addition, we completed two habitat surveys in summer 2002. We were unable to complete surveys on three streams due to small stream size or stream access problems.

We modified standard BVET methods to measure stream habitat parameters identified in the GWJNF forest plan. Included in the forest plan is an outline of the desired-future-condition (DFC) for all the streams within the GWJNF based on physical habitat. The pertinent DFCs for the GWJNF include woody debris loading of 78 to 186 pieces per kilometer and 30 to 70 percent of the total stream habitat in pools. We were able to estimate woody debris loading and percentage of pool and riffle area using BVET habitat survey techniques. In addition, we were able to map the distribution of large woody debris and Rosgen's channel type, and to estimate habitat unit depths, substrates, and the width of the riparian area in all streams surveyed.

The purpose of this report is to describe the current condition of Lee Ranger District streams in a format useful to the Lee Ranger District and the GWJNF. The enclosed report is intended to provide baseline information for Lee Ranger District managers involved in habitat improvement projects or land use decisions.

Methods

Surveys began at confluences for streams confined within National Forest boundaries and at the downstream USFS boundary for all other streams. Surveys were terminated when we encountered an upstream USFS boundary, or when the wetted channel was < 1 m average wetted width for > 500 m.

Two-stage visual estimation techniques were used to quantify habitat and DFCs in selected Lee Ranger District streams. During the first stage, all habitat units were classified and a number of habitat characteristics were estimated for each habitat unit. 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 in the stream with > 12% gradient, high velocity, and exposed bedrock or boulders) were grouped with riffles for data analysis. Braids (areas in the stream where multiple channels occur

regardless of habitat type) were recorded during the survey but their area was not included in data analysis (braids were encountered in only three streams).

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), and substrate composition for each habitat unit, and determined if pool substrates were embedded. 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 (see table on next page). Dominant substrate (covered greatest amount of surface area in habitat unit) and subdominant substrate (covered 2nd greatest amount of surface area in habitat unit) were visually estimated. Substrate was considered to be embedded if larger size substrate was embedded by smaller size substrate over greater than 35% of the surface area of the stream bed in a given habitat unit.

The second crew member classified and inventoried large woody debris (LWD) within the stream channel, determined the Rosgen's channel type associated with each habitat unit, and recorded data on a Husky Hunter data logger. LWD was assigned to one of four size classes (see table on next page). All woody debris less than 1 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 10th unit for each habitat type). The wetted width of each systematically selected habitat unit was measured with a meter tape across at least three transects. In each of the systematically selected (second stage) riffles we also estimated the bankfull stream channel width and riparian width as described by Harrelson et al. (1994), and measured channel gradient. We estimated bankfull channel width by measuring the width of the bankfull channel perpendicular to flow. We estimated riparian width by measuring from the edge of the bankfull channel to the intersection with the nearest landform at a predetermined flood stage. The flood stage was calculated from a formula specific to Virginia streams, based on watershed area. Gradient was estimated by using a clinometer to site from the downstream to the upstream end of the selected riffle.

We used the ratio of measured to estimated area to develop a calibration ratio, which allowed us to correct visual estimates and estimate stream area with 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.

Size classes used to categorize large woody debris during BVET habitat surveys on the Lee Ranger District, summer 2001. Woody debris < 1.0 m in length or < 10 cm in diameter were omitted.

Size Class	Length (m)	Diameter (cm)
1	< 5	10-55
2	< 5	> 55
3	> 5	10-55
4	> 5	> 55

Size classes used to categorize substrate particles during BVET habitat surveys on the Lee Ranger District, summer 2001. Size was visually estimated on the intermediate axis (b-axis).

Size Class	Name	Size (mm)	Description
1	Organic	--	Dead organic matter, leaves, detritus, etc.
2	Clay	< .00024	Sticky
3	Silt	.00024-.0039	Slippery
4	Sand	.0039-2	Gritty
5	Small Gravel	2-10	Sand to thumbnail
6	Large Gravel	11-100	Thumbnail to fist
7	Cobble	101-300	Fist to head
8	Boulder	>300	Larger than head
9	Bedrock	--	Solid parent material

User's Guide

Stream summaries are organized in alphabetical order by stream drainage (North Fork and South Fork Shenandoah River), then by U. S. Geological Survey (USGS) 1:24,000 Topographic Quadrangle, and then by stream name. The upper right hand corner of each page in the 'Stream Summaries' section contains the stream drainage and USGS quadrangle name for the selected stream.

Data for each stream section were collected, analyzed, and presented separately. Each stream or stream section summary contains:

1. a synopsis of stream characteristics;
2. boxplots of maximum and average depth for pools and riffles, and average residual pool depth;
3. LWD per kilometer graph;
4. LWD distribution graph;
5. substrate composition graph for pools and riffles;
6. boxplot of riparian measurements;
7. percent pools and riffles graph; and
8. distribution of Rosgen's channel type graph.

GWJNF's DFCs are indicated on all pertinent graphs.

We also included two summary tables (see next two pages) that summarize data pertinent to DFCs. The tables allow managers to quickly assess the present condition of Lee Ranger District streams relative to pertinent DFCs.

Summary Table: North Fork Shenandoah Drainage Streams

Summary of percent of total stream area in pools and total LWD per km for all streams surveyed in the North Fork Shenandoah drainage Lee Ranger District, GWJNF during summer 2001. **a** = percent area in pools ≤ 30%, **b** = percent area in pools ≥ 70%, **c** = total LWD per km ≤ 78 pieces, **d** = total LWD per km ≥ 186 pieces. Asterisk = stream survey perfomed in 2002. Small indicates stream was less than 1.0 m wide at survey starting point. NA indicates could not be calculated. Access indicates the crew could not find an access point to the stream.

Drainage	Quadrangle	Stream Name	% Pools	LWD per km
NF	Conicville	Big Stony Creek[d]	60	261
NF	Conicville	Riles Run	60	160
NF	Edinburg	Edinburg Gap Run[a,d]	15	233
NF	Edinburg	Tasker Gap[a]	16	136
NF	Edinburg	Unnamed Tributary[a]	13	110
NF	Elkton West	Fridley Run	33	90
NF	Elkton West	Left Fork Fridley Run[c]	40	78
NF	Hamburg	Big Run[a,d]	13	200
NF	Hamburg	Duncan Hollow[d]	45	215
NF	Hamburg	Mountain Run[a]	28	109
NF	Hamburg	Passage Creek (upper)	38	133
NF	Orkney Springs	Anderson Run[a,c]	19	75
NF	Orkney Springs	Bean Run (lower)[a,c]	14	63
NF	Orkney Springs	Bean Run (upper)[a,d]	22	186
NF	Orkney Springs	Bear Run*	32	79
NF	Orkney Springs	Beetle Run (lower)[c]	57	19
NF	Orkney Springs	Beetle Run (upper)[c]	NA	22
NF	Orkney Springs	Capon Run*	access	access
NF	Orkney Springs	Unnamed Stream[a,c]	15	19
NF	Orkney Springs	Falls Run[a]	16	142
NF	Rileyville	Peters Mill Run	45	113
NF	Strasburg	Passage Creek[b,c]	78	71
NF	Strasburg	Little Passage Creek (lower)[a,c]	29	18
NF	Timberville	Hottinger Hollow[b,c]	79	48
NF	Timberville	Sour Run*	access	access
NF	Timberville	Spring Run	dry	dry
NF	Timberville	Hawks Cave Run[a,c]	20	22
NF	Toms Brook	Duncan Gap	small	small
NF	Toms Brook	Mine Run[a]	26	105
NF	Toms Brook	Mill Run[a]	23	79
NF	Wardensville	Cove Run[a]	30	103
NF	Wardensville	Paddy Run	41	91
NF	Wolf Gap	Laurel Run[a,d]	24	217
NF	Wolf Gap	Little Stony Creek[a]	29	97
NF	Wolf Gap	Mill Creek[c]	31	78
NF	Wolf Gap	Poplar Run[c]	34	61
NF	Woodstock	Cedar Creek	34	185
NF	Woodstock	Cove Run[a,d]	19	259
NF	Woodstock	Narrow Passage[a]	24	148
NF	Woodstock	Sulfer Springs Gap[a,c]	13	46

Summary Table: South Fork Shenandoah Drainage Streams

Summary of percent of total stream area in pools and total LWD per kilometer for streams surveyed in the South Fork Shenandoah drainage, Lee Ranger District, GWJNF during summer 2001. **a** = percent area in pools ≤ 30%, **b** = percent area in pools ≥ 70%, **c** = total LWD per km ≤ 78 pieces, **d** = total LWD per km ≥ 186 pieces. Asterisk = stream survey performed in 2002.

Drainage	Quadrangle	Stream Name	% Pools	LWD per km
SF	Elkton West	Boone Run[a]	27	166
SF	Hamburg	Browns Run[a,d]*	11	238
SF	Stanley	Kettle Hollow[c]	32	74
SF	Tenth Legion	Cub Run[a,c]	23	74
SF	Tenth Legion	Morgan Run[a,d]	24	227
SF	Tenth Legion	Pitt Spring Run[a,c]	19	73
SF	Tenth Legion	Roaring Run[a,c]	22	60

Index of Stream Summaries

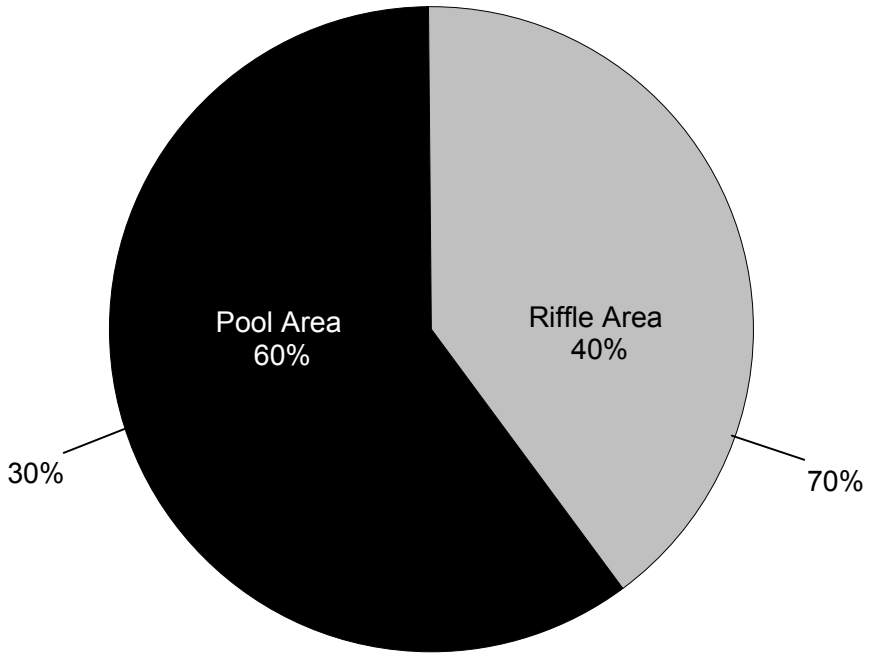
North Fork Shenandoah Drainage

South Fork Shenandoah Drainage

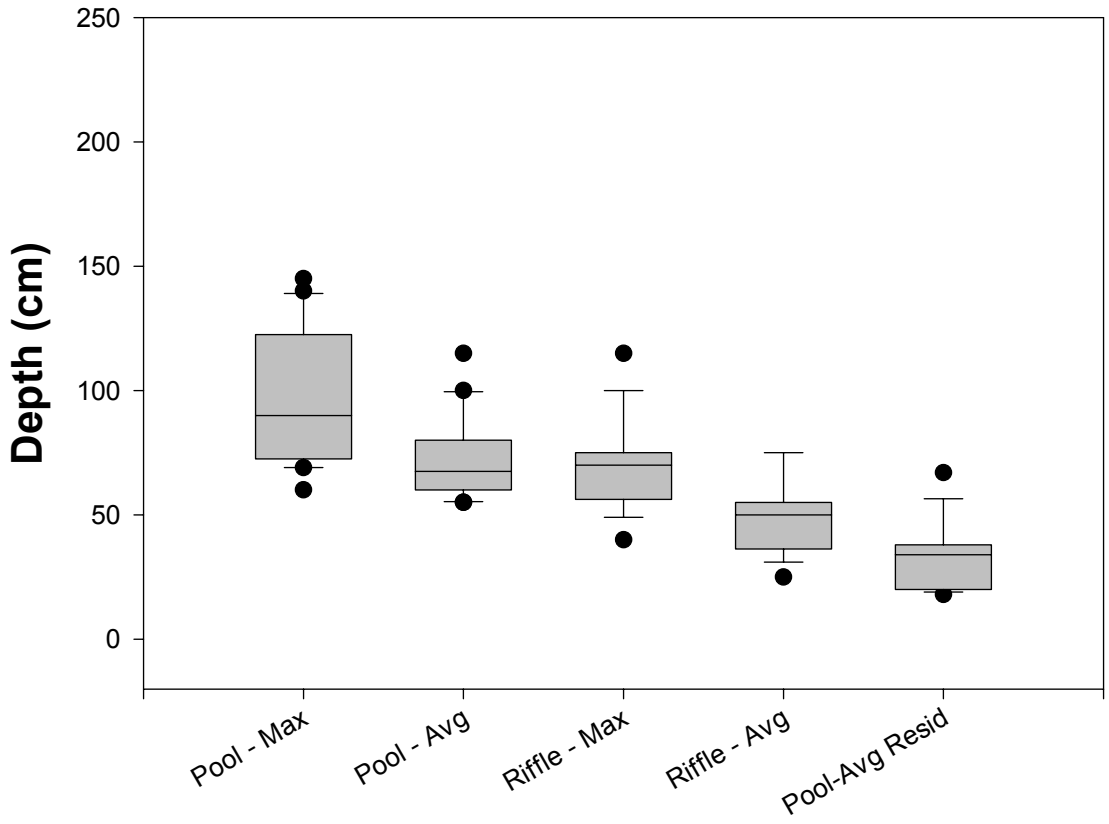
Stream Summaries

Stream:	**Big Stony Creek**
District:	Lee
Quadrangle:	Conicville
Survey Date:	06/28/01
Downstream Starting Point:	Forest boundary
Total Distance Surveyed (km):	1.4
Percent of Total Area Pools:	**60**
Number of Pools:	16
Number of Pools per km:	12
Total Pool Area (m^2):	11265±1567
Mean Pool Area (m^2):	704
Correction Factor:	0.81
Mean Maximum Depth (cm):	98
Mean Average Depth (cm):	73
Mean Residual Pool Depth (cm):	34
Percent of Total Area Riffles:	**40**
Number of Riffles:	11
Number of Riffles per km:	8
Total Riffle Area (m^2):	7448±3298
Mean Riffle Area (m^2):	677
Correction Factor:	0.98
Mean Maximum Depth (cm):	70
Mean Average Depth (cm):	49
Number of LWD pieces per km:	**261**
LWD < 5 m, < 55 cm:	111
LWD < 5 m, > 55 cm:	9
LWD > 5 m, < 55 cm:	120
LWD > 5 m, > 55 cm:	21
Mean Channel Width (m):	**37**
Mean Riparian Width (m) (Total*):	**150**
Maximum Riparian Width (Total):	168
75th Percentile (Total)	168
25th Percentile (Total)	140
Minimum Riparian Width (Total):	114
Mean Riparian Width (m) (Left, Right):**	**56**
Maximum Riparian Width (Left, Right):	115
75th Percentile (Left, Right)	100
25th Percentile (Left, Right)	12
Minimum Riparian Width (Left, Right):	4
Percent of Pool Habitat Surveyed as Glides:	**13**
Rosgen's Channel Type Frequency (%):	
Type A:	0
Type B:	100
Type C:	0
Type D:	0
Type E:	0
Type F:	0
Type G:	0
Percent Pools with > 35% Embeddedness:	**44**
Average Channel Gradient (%):	**30**

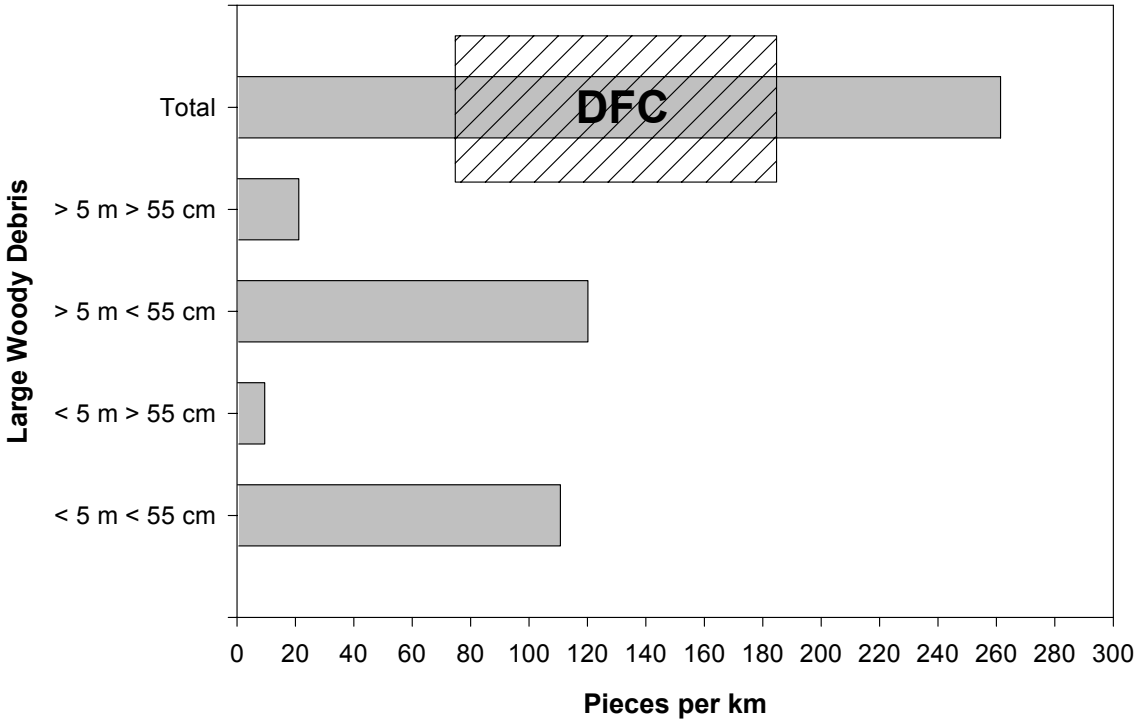
*Calculation sums left riparian + right riparian + stream channel
**Calculation pools left and right riparian measurements, does not sum them



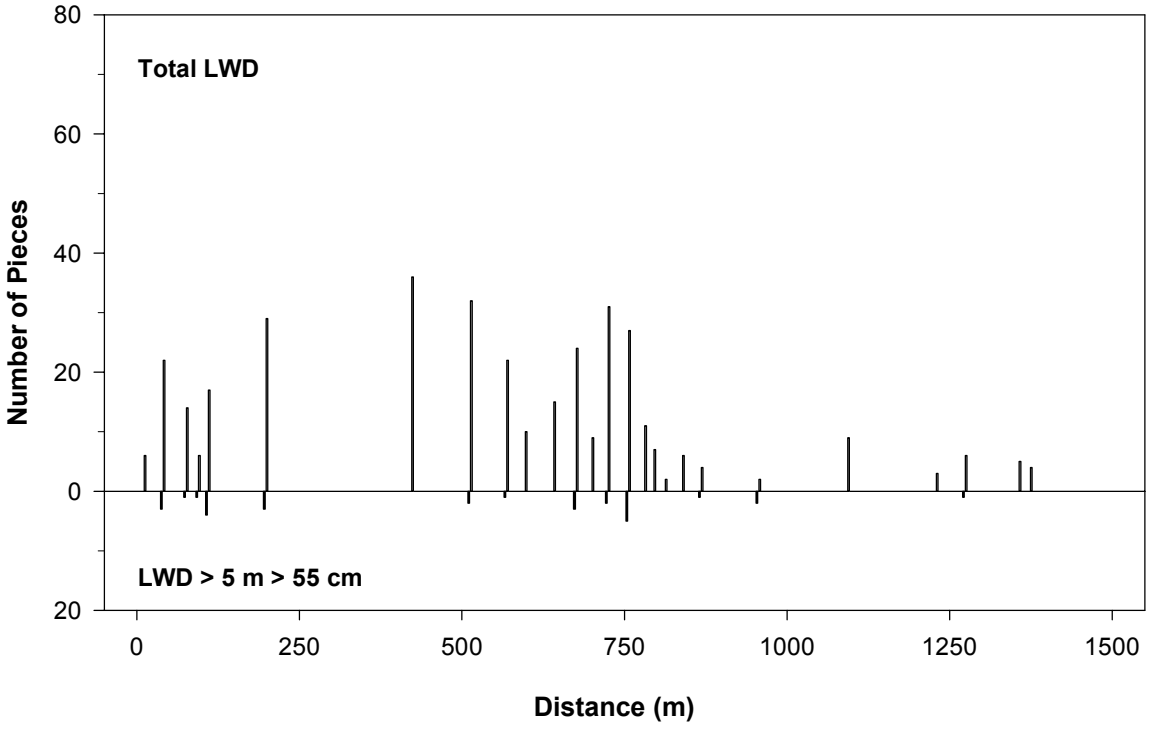
Estimated area of Big Stony Creek in pools and riffles as calculated using BVET techniques, summer 2001.



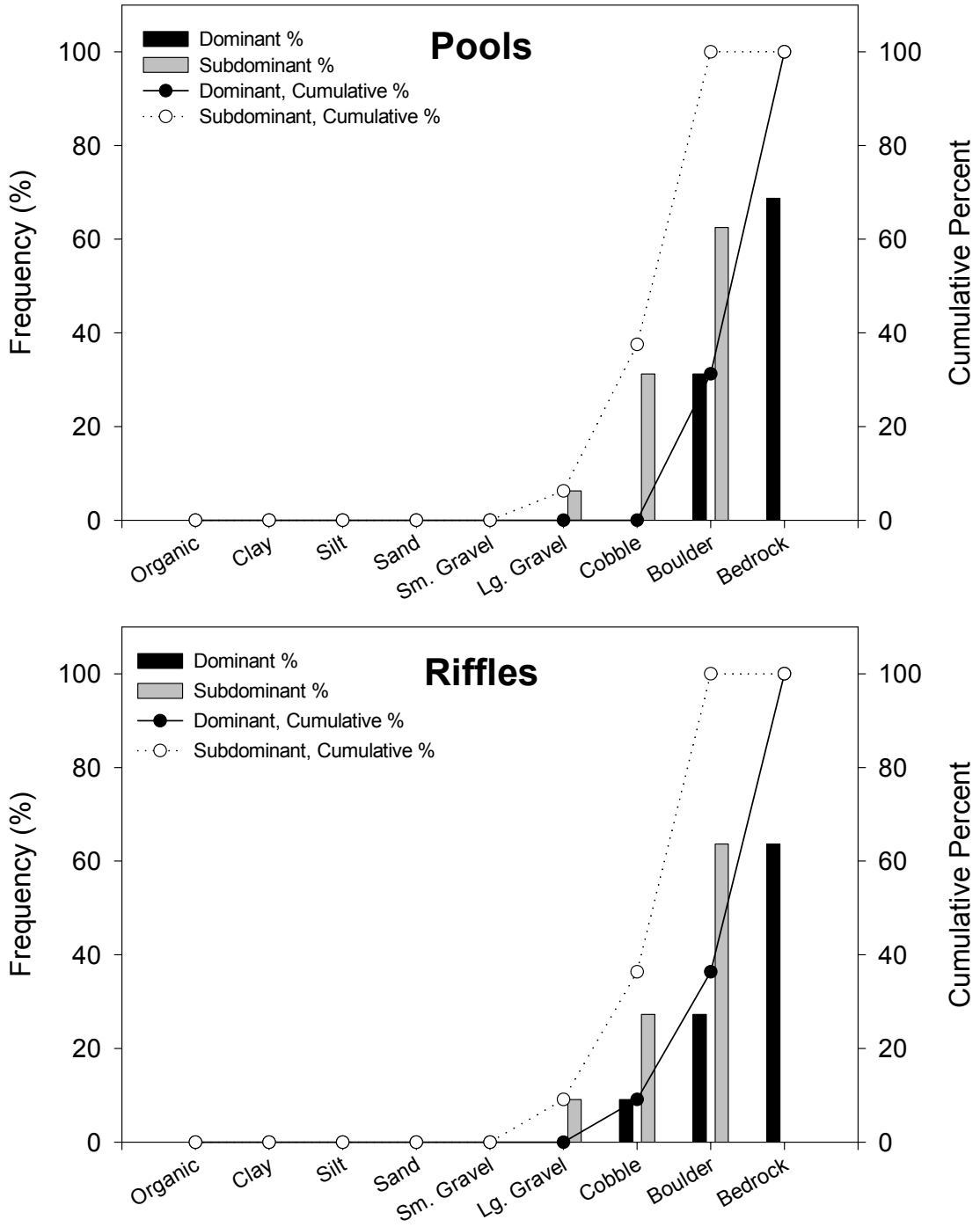
Maximum and average depths and residual pool depths for pools and riffles in Big Stony Creek, summer 2001. The top and bottom of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data.



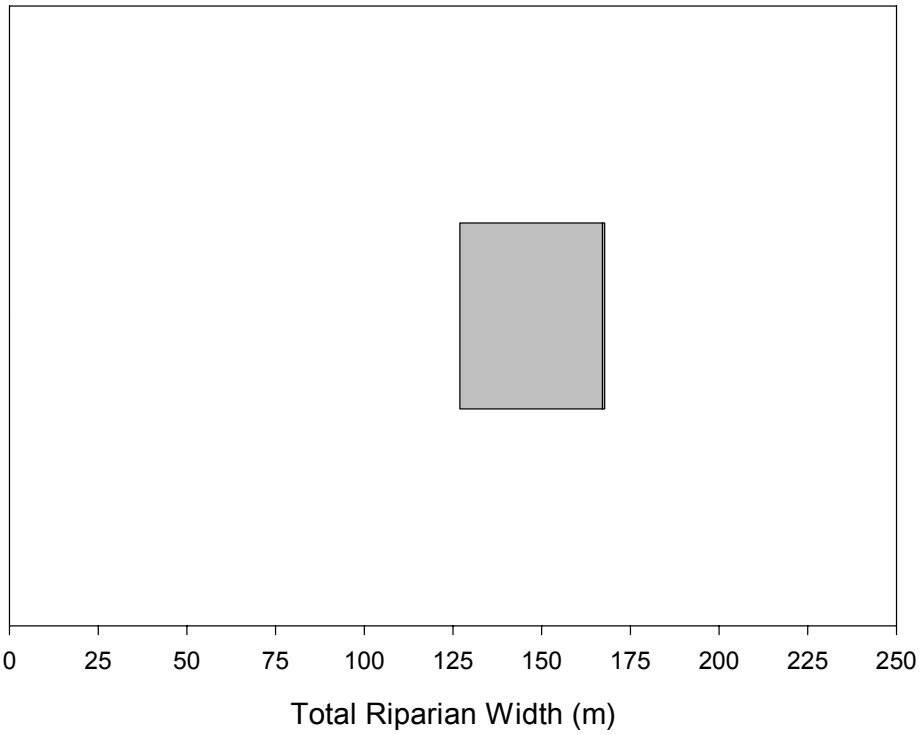
LWD per kilometer in Big Stony Creek, summer 2001. Y-axis labels are LWD size classes with the first number indicating length and the second number indicating diameter.



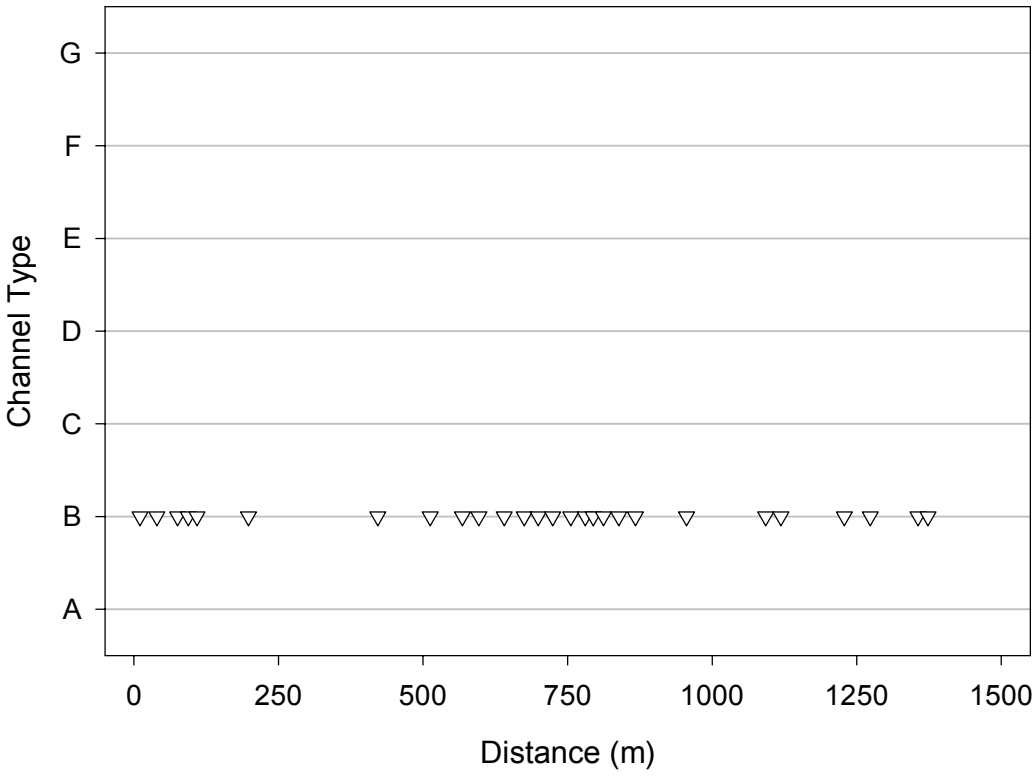
Distribution and abundance of LWD in each habitat unit of Big Stony Creek, summer 2001. Bars below the x-axis represent the amount of the total LWD that was >5 m in length, >55 cm in diameter. X-axis indicates distance upstream from Forest boundary.



Frequency (percent) and cumulative percent of dominant and subdominant substrate occurrence for pools and riffles in Big Stony Creek, summer 2001.



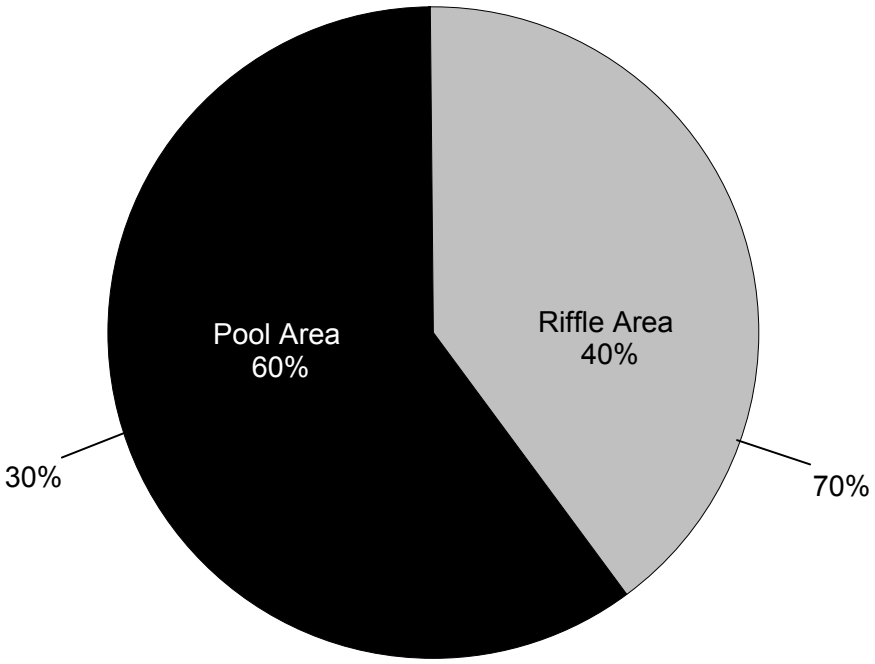
Total riparian widths (left riparian width+right riparian width+wetted channel width) for Big Stony Creek, summer 2001. The left and right of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data. Sample size = 3.



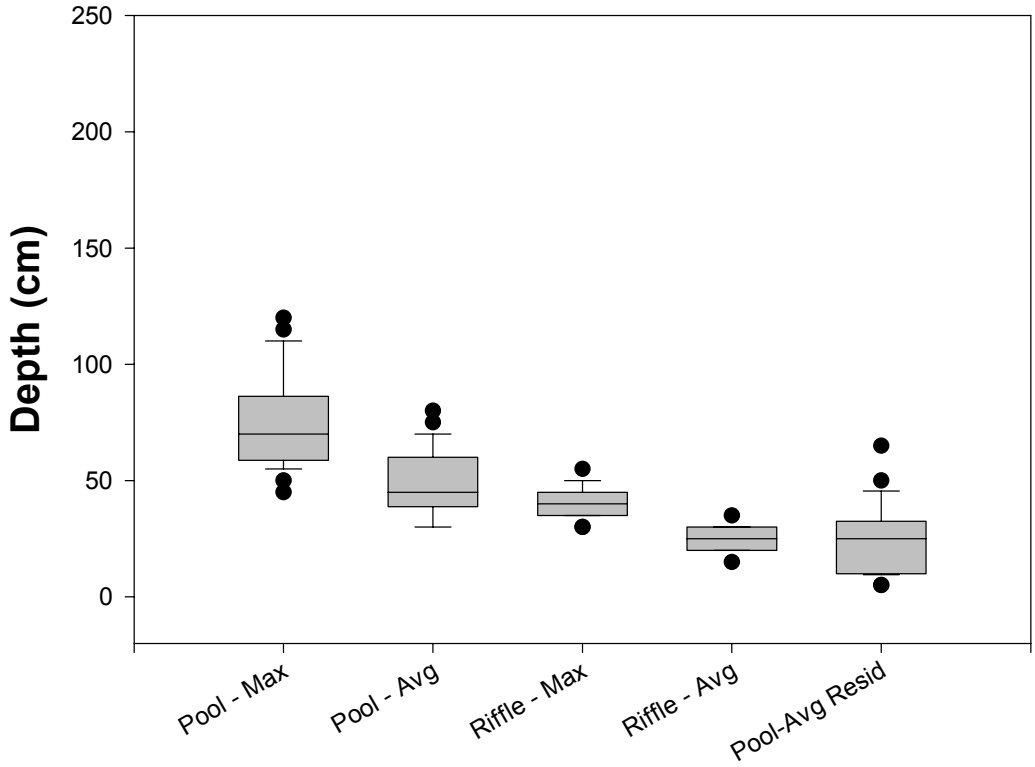
Rosgen's channel classification for each habitat unit in Big Stony Creek, summer 2001. X-axis indicates distance upstream from Forest boundary.

Stream:	**Riles Run**
District:	Lee
Quadrangle:	Conicville
Survey Date:	08/15/01
Downstream Starting Point:	Confluence w/ Big Stony Cr
Total Distance Surveyed (km):	2.0
Percent of Total Area Pools:	**60**
Number of Pools:	25
Number of Pools per km:	13
Total Pool Area (m^2):	8263 ± 946
Mean Pool Area (m^2):	331
Correction Factor:	0.95
Mean Maximum Depth (cm):	75
Mean Average Depth (cm):	48
Mean Residual Pool Depth (cm):	25
Percent of Total Area Riffles:	**40**
Number of Riffles:	25
Number of Riffles per km:	13
Total Riffle Area (m^2):	5457 ± 1743
Mean Riffle Area (m^2):	218
Correction Factor:	0.98
Mean Maximum Depth (cm):	41
Mean Average Depth (cm):	25
Number of LWD pieces per km:	**160**
LWD < 5 m, < 55 cm:	111
LWD < 5 m, > 55 cm:	3
LWD > 5 m, < 55 cm:	43
LWD > 5 m, > 55 cm:	3
Mean Channel Width (m):	**10**
Mean Riparian Width (m) (Total*):	**74**
Maximum Riparian Width (Total):	140
75th Percentile (Total)	85
25th Percentile (Total)	61
Minimum Riparian Width (Total):	22
Mean Riparian Width (m) (Left, Right):**	**32**
Maximum Riparian Width (Left, Right):	131
75th Percentile (Left, Right)	51
25th Percentile (Left, Right)	2
Minimum Riparian Width (Left, Right):	1
Percent of Pool Habitat Surveyed as Glides:	**4**
Rosgen's Channel Type Frequency (%):	
Type A:	0
Type B:	100
Type C:	0
Type D:	0
Type E:	0
Type F:	0
Type G:	0
Percent Pools with > 35% Embeddedness:	**52**
Average Channel Gradient (%):	**5**

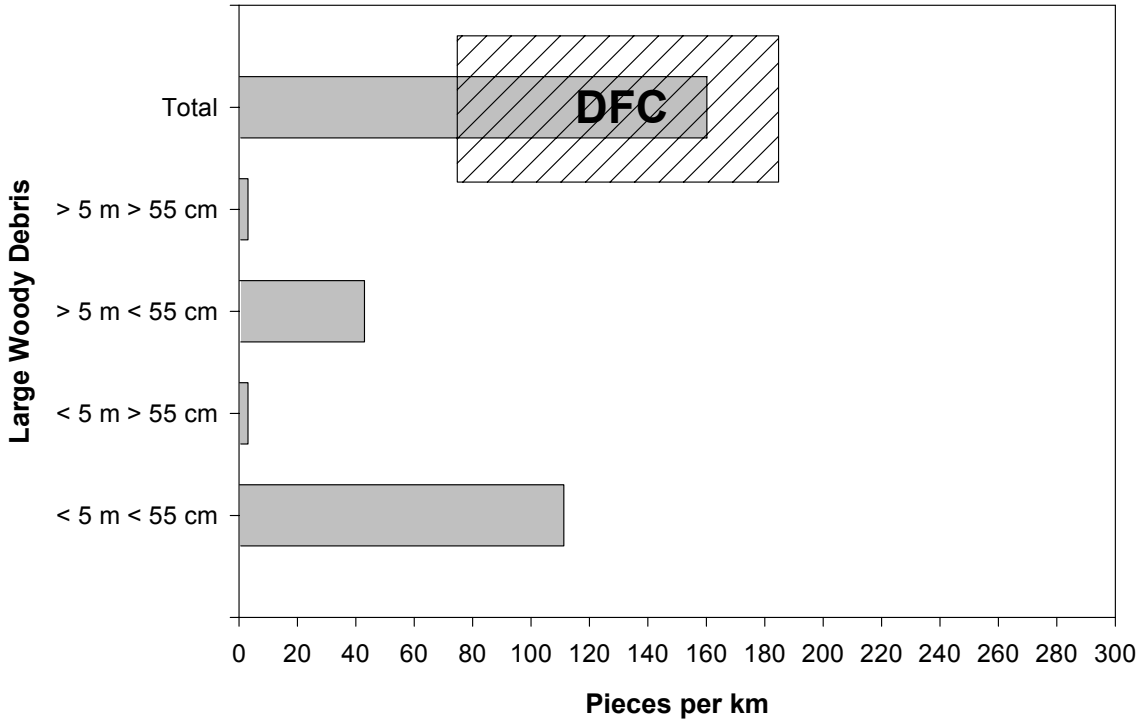
*Calculation sums left riparian + right riparian + stream channel
**Calculation pools left and right riparian measurements, does not sum them



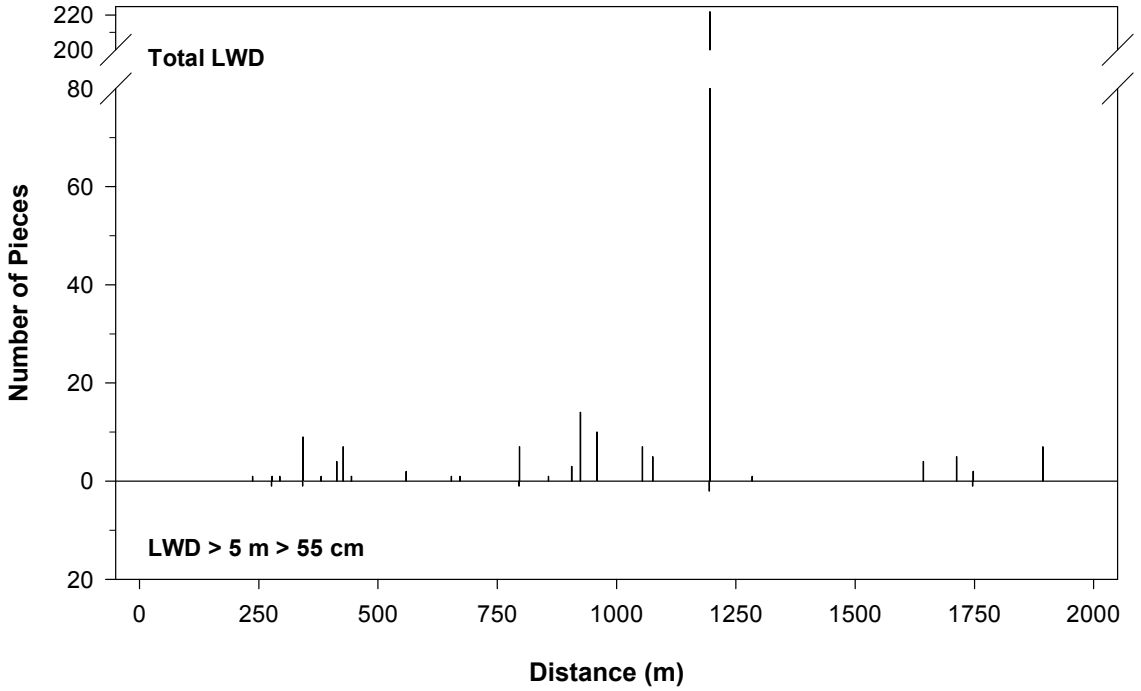
Estimated area of Riles Run in pools and riffles as calculated using BVET techniques, summer 2001.



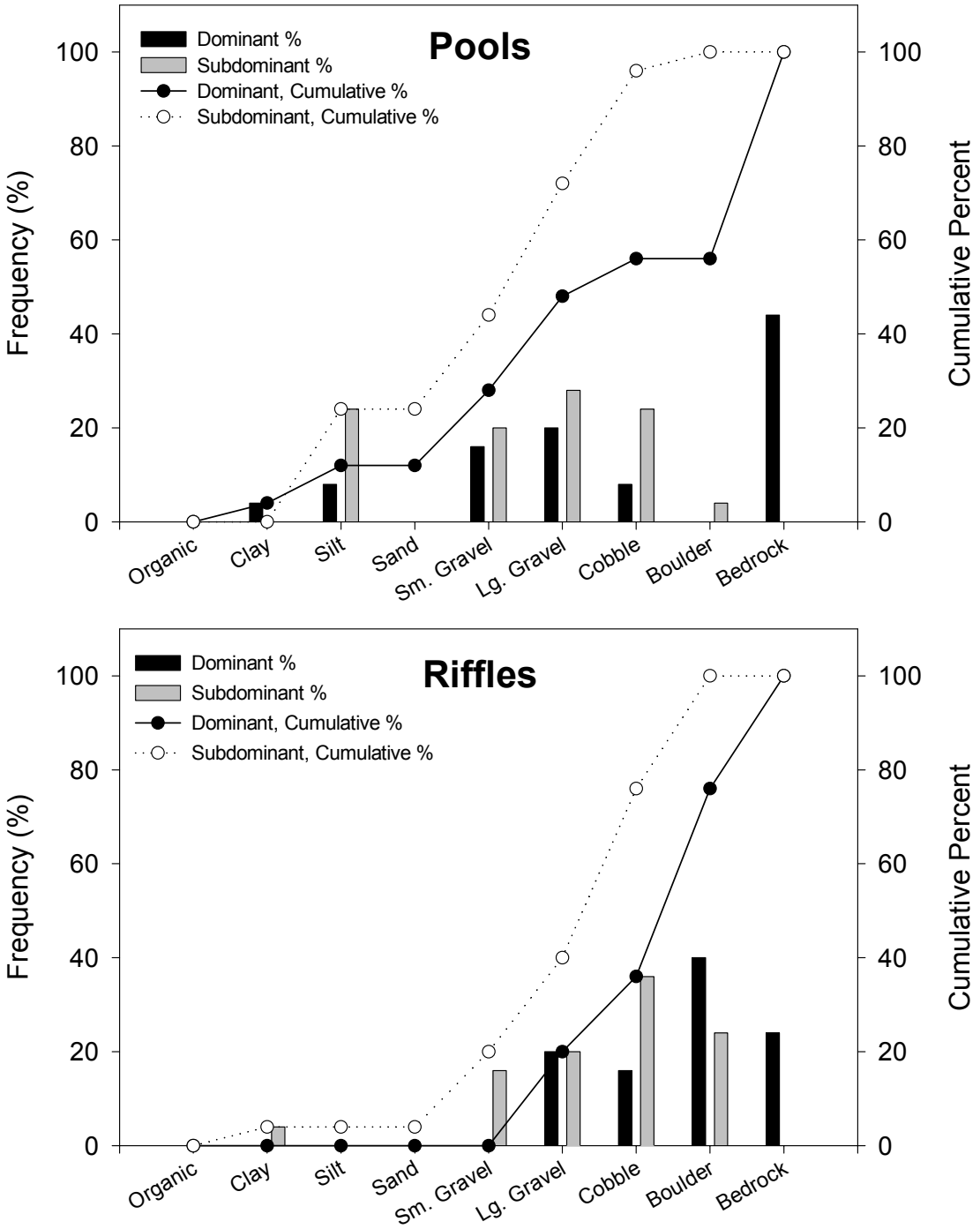
Maximum and average depths and residual pool depths for pools and riffles in Riles Run, summer 2001. The top and bottom of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data.



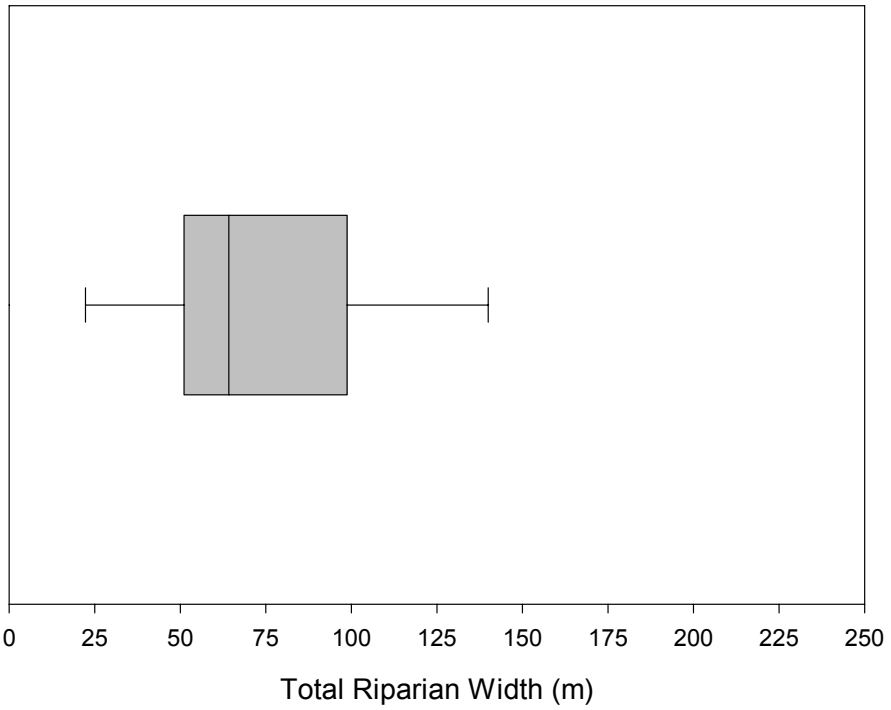
LWD per kilometer in Riles Run, summer 2001. Y-axis labels are LWD size classes with the first number indicating length and the second number indicating diameter.



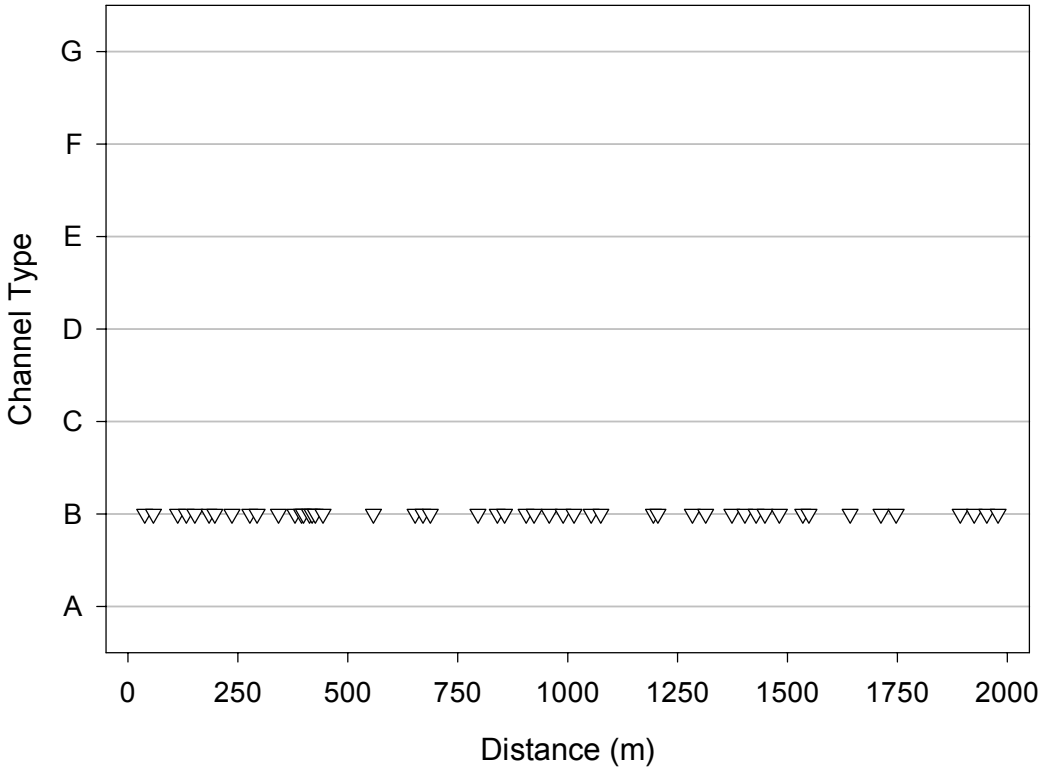
Distribution and abundance of LWD in each habitat unit of Riles Run, summer 2001. Bars below the x-axis represent the amount of the total LWD that was >5 m in length, >55 cm in diameter. X-axis indicates distance upstream from confluence with Big Stony Creek.



Frequency (percent) and cumulative percent of dominant and subdominant substrate occurrence for pools and riffles in Riles Run, summer 2001.



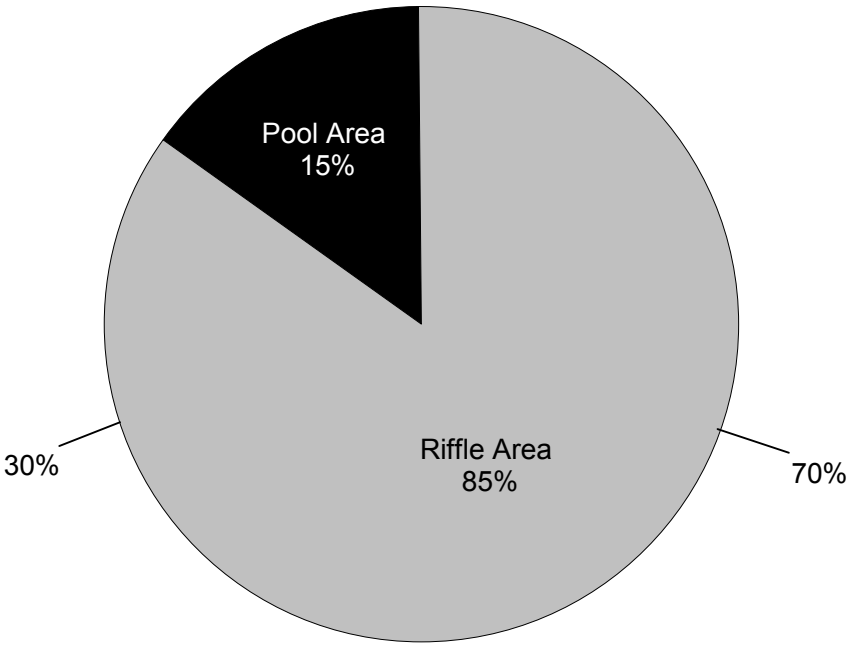
Total riparian widths (left riparian width+right riparian width+wetted channel width) for Riles Run, summer 2001. The left and right of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data. Sample size = 4.



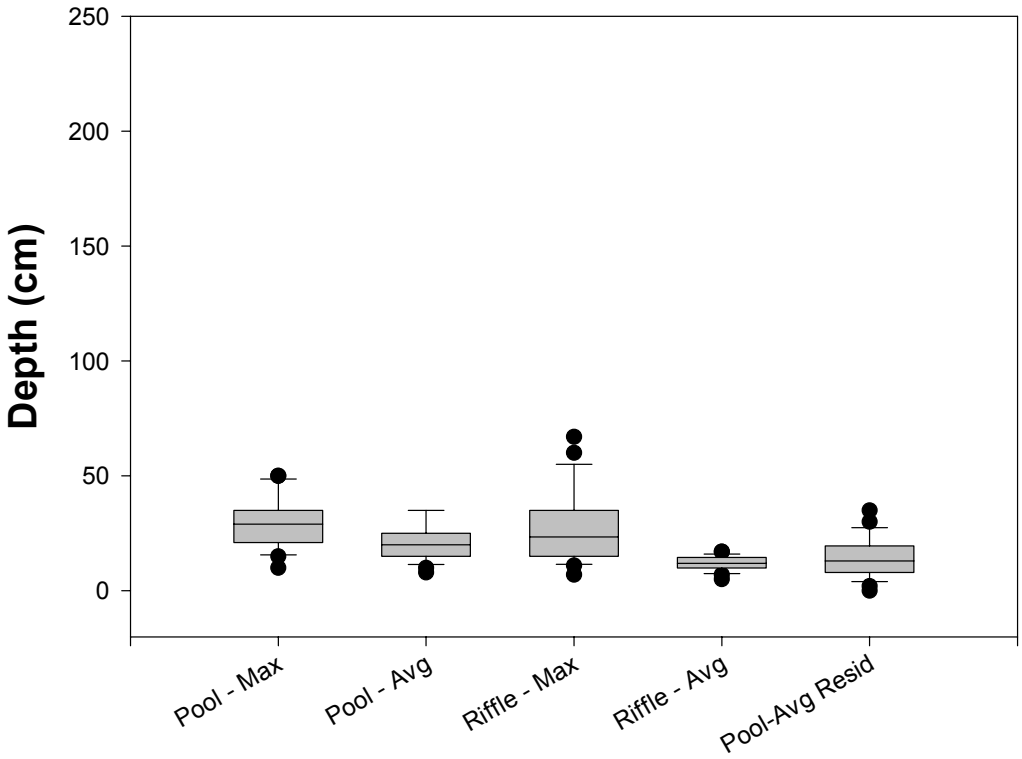
Rosgen's channel classification for each habitat unit in Riles Run, summer 2001. X-axis indicates distance upstream from confluence with Big Stoney Creek.

Stream:	**Edinburg Gap Run**
District:	Lee
Quadrangle:	Edinburg
Survey Date:	06/20/01
Downstream Starting Point:	Forest boundary
Total Distance Surveyed (km):	1.2
Percent of Total Area Pools:	**15**
Number of Pools:	22
Number of Pools per km:	19
Total Pool Area (m^2):	323 ± 1613
Mean Pool Area (m^2):	15
Correction Factor:	1.30
Mean Maximum Depth (cm):	30
Mean Average Depth (cm):	21
Mean Residual Pool Depth (cm):	14
Percent of Total Area Riffles:	**85**
Number of Riffles:	20
Number of Riffles per km:	17
Total Riffle Area (m^2):	1871 ± 1751
Mean Riffle Area (m^2):	94
Correction Factor:	0.93
Mean Maximum Depth (cm):	28
Mean Average Depth (cm):	12
Number of LWD pieces per km:	**233**
LWD < 5 m, < 55 cm:	86
LWD < 5 m, > 55 cm:	7
LWD > 5 m, < 55 cm:	130
LWD > 5 m, > 55 cm:	9
Mean Channel Width (m):	**3**
Mean Riparian Width (m) (Total*):	**7**
Maximum Riparian Width (Total):	8
75th Percentile (Total)	7
25th Percentile (Total)	7
Minimum Riparian Width (Total):	6
Mean Riparian Width (m) (Left, Right):**	**2**
Maximum Riparian Width (Left, Right):	3
75th Percentile (Left, Right)	3
25th Percentile (Left, Right)	1
Minimum Riparian Width (Left, Right):	1
Percent of Pool Habitat Surveyed as Glides:	**9**
Rosgen's Channel Type Frequency (%):	
Type A:	14
Type B:	38
Type C:	48
Type D:	0
Type E:	0
Type F:	0
Type G:	0
Percent Pools with > 35% Embeddedness:	**9**
Average Channel Gradient (%):	**9**

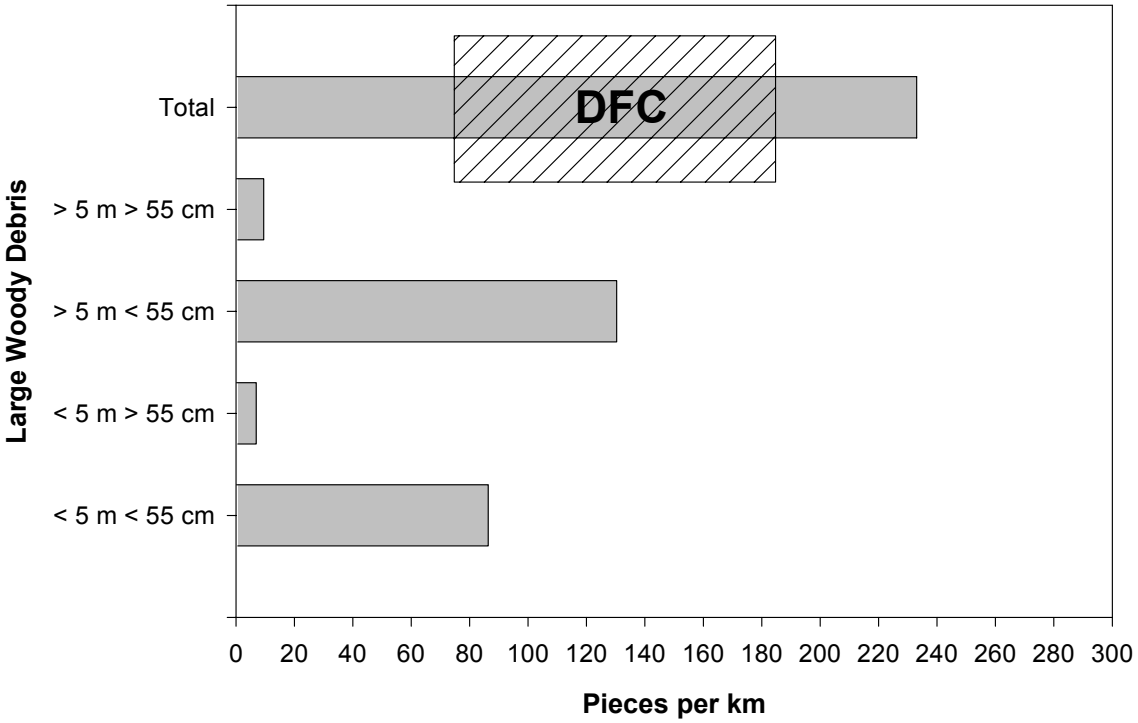
*Calculation sums left riparian + right riparian + stream channel
**Calculation pools left and right riparian measurements, does not sum them



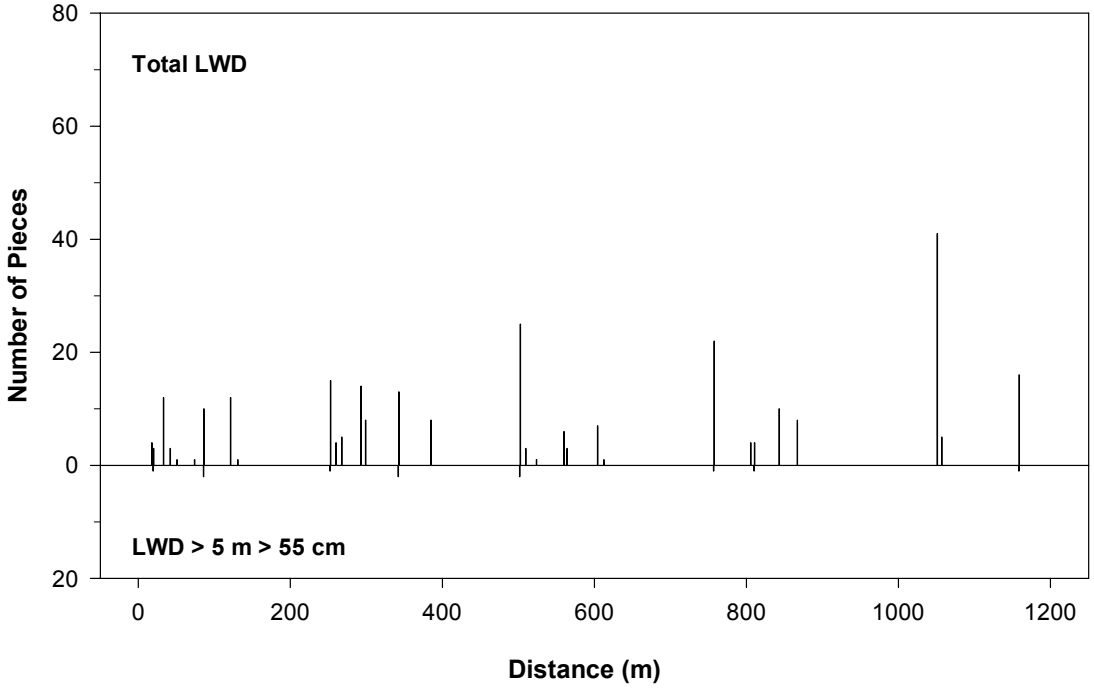
Estimated area of Edinburg Gap Run in pools and riffles as calculated using BVET techniques, summer 2001.



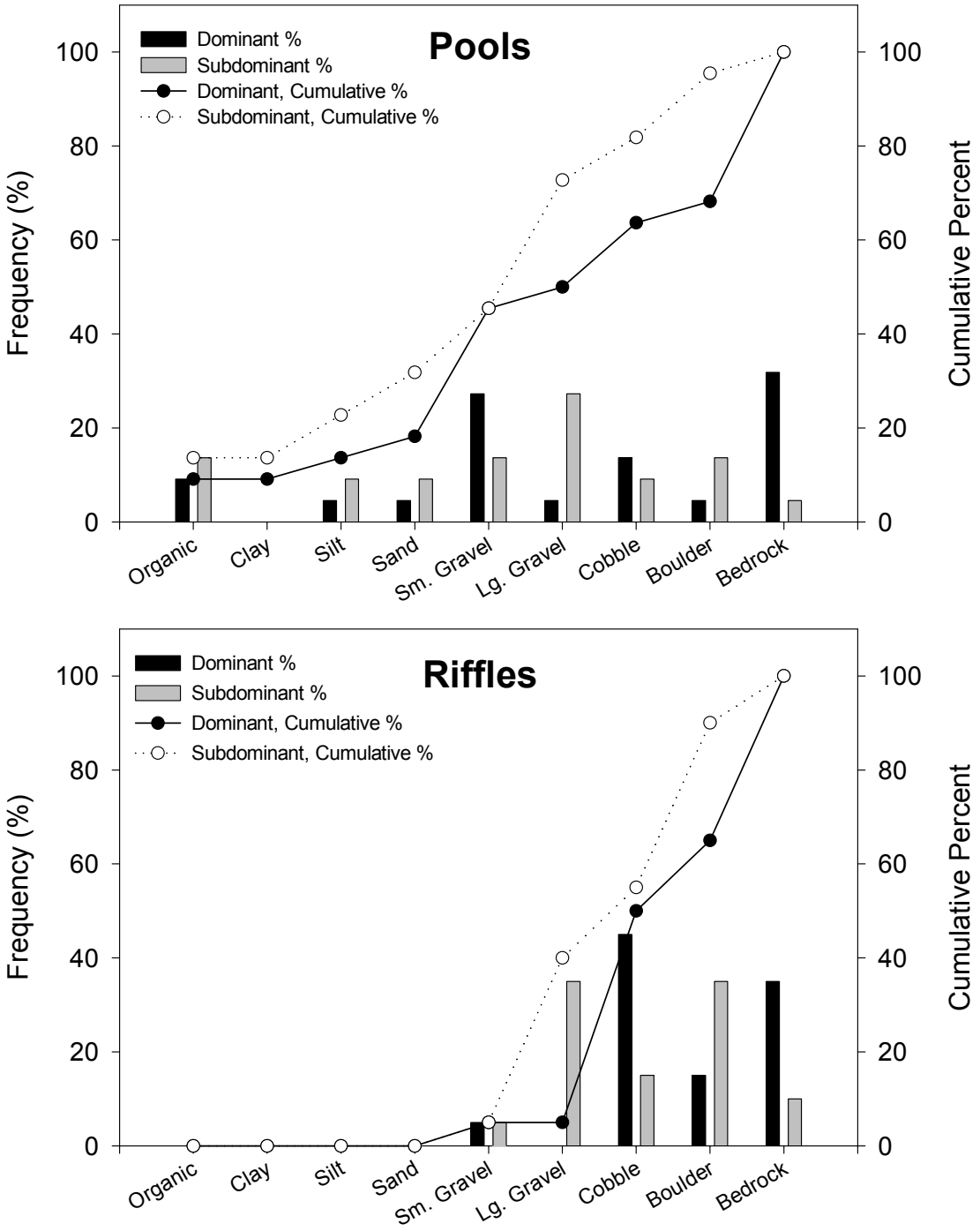
Maximum and average depths and residual pool depths for pools and riffles in Edinburg Gap Run, summer 2001. The top and bottom of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data.



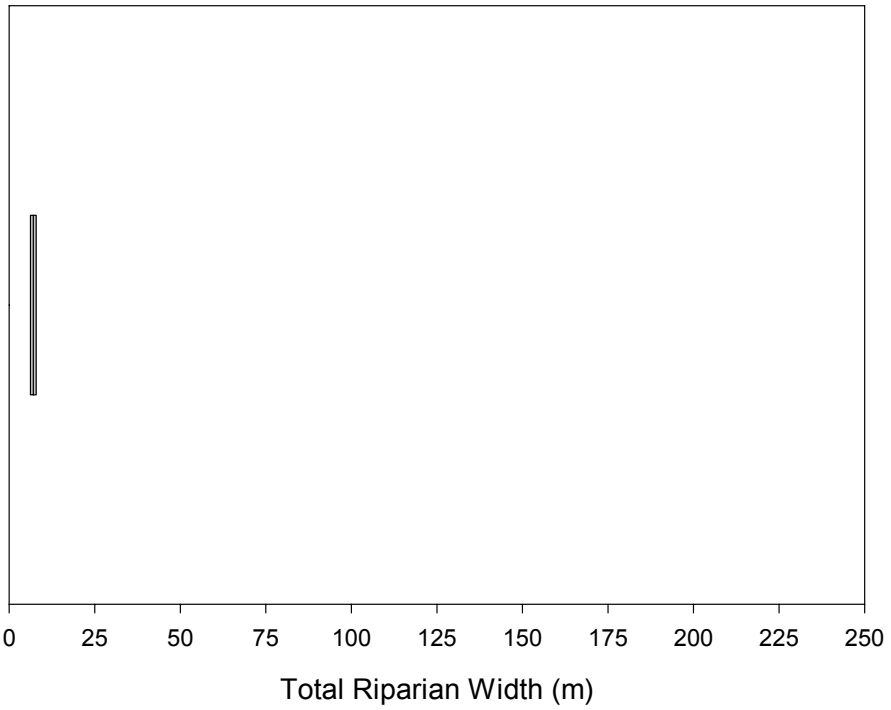
LWD per kilometer in Edinburg Gap Run, summer 2001. Y-axis labels are LWD size classes with the first number indicating length and the second number indicating diameter.



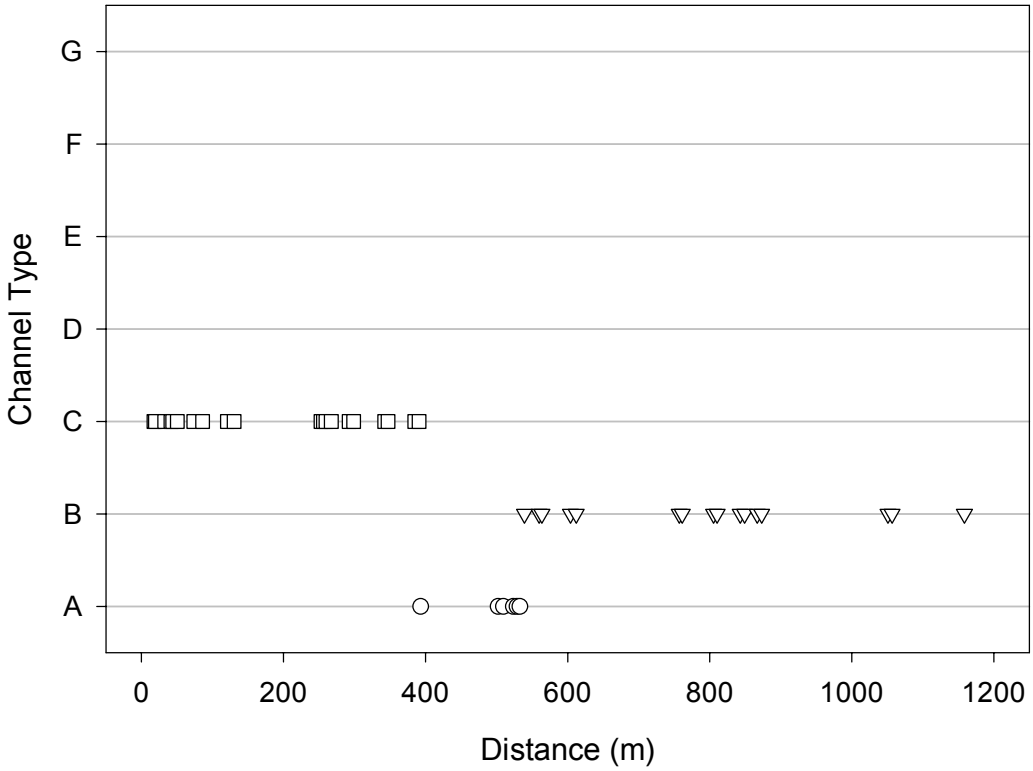
Distribution and abundance of LWD in each habitat unit of Edinburg Gap Run, summer 2001. Bars below the x-axis represent the amount of the total LWD that was >5 m in length, >55 cm in diameter. X-axis indicates distance upstream from Forest boundary.



Frequency (percent) and cumulative percent of dominant and subdominant substrate occurrence for pools and riffles in Edinburg Gap Run, summer 2001.



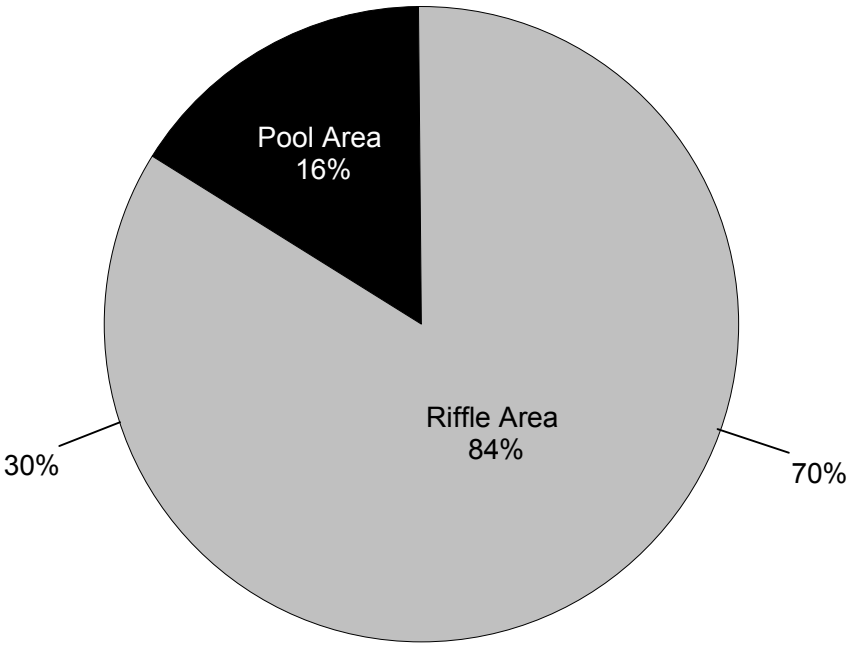
Total riparian widths (left riparian width+right riparian width+wetted channel width) for Edinburg Gap Run, summer 2001. The left and right of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data. Sample size = 2.



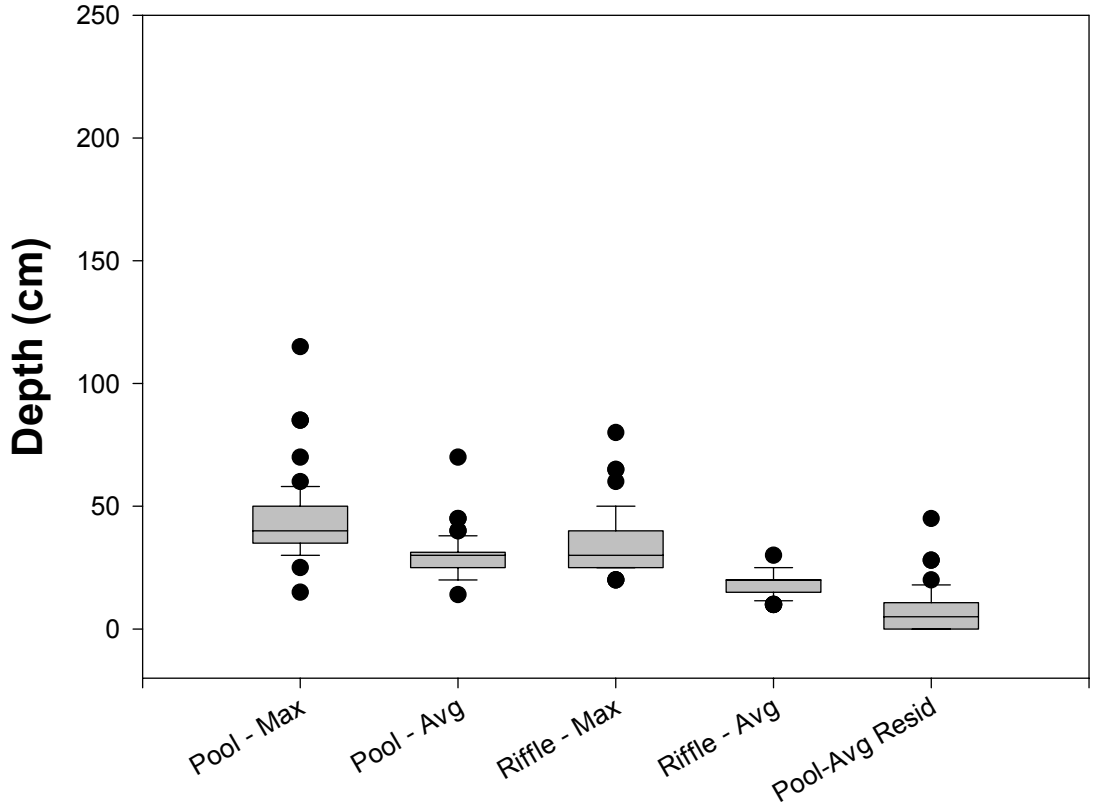
Rosgen's channel classification for each habitat unit in Edinburg Gap Run, summer 2001. X-axis indicates distance upstream from Forest boundary.

Stream:	**Taskers Gap**
District:	Lee
Quadrangle:	Edinburg
Survey Date:	08/17/01
Downstream Starting Point:	Forest boundary
Total Distance Surveyed (km):	1.7
Percent of Total Area Pools:	**16**
Number of Pools:	49
Number of Pools per km:	29
Total Pool Area (m^2):	1071 ± 128
Mean Pool Area (m^2):	22
Correction Factor:	0.93
Mean Maximum Depth (cm):	44
Mean Average Depth (cm):	29
Mean Residual Pool Depth (cm):	8
Percent of Total Area Riffles:	**84**
Number of Riffles:	48
Number of Riffles per km:	28
Total Riffle Area (m^2):	5518 ± 260
Mean Riffle Area (m^2):	115
Correction Factor:	1.00
Mean Maximum Depth (cm):	34
Mean Average Depth (cm):	18
Number of LWD pieces per km:	**136**
LWD < 5 m, < 55 cm:	38
LWD < 5 m, > 55 cm:	0
LWD > 5 m, < 55 cm:	82
LWD > 5 m, > 55 cm:	16
Mean Channel Width (m):	**4**
Mean Riparian Width (m) (Total*):	**13**
Maximum Riparian Width (Total):	17
75th Percentile (Total)	14
25th Percentile (Total)	12
Minimum Riparian Width (Total):	11
Mean Riparian Width (m) (Left, Right):**	**4**
Maximum Riparian Width (Left, Right):	9
75th Percentile (Left, Right)	6
25th Percentile (Left, Right)	2
Minimum Riparian Width (Left, Right):	1
Percent of Pool Habitat Surveyed as Glides:	**27**
Rosgen's Channel Type Frequency (%):	
Type A:	48
Type B:	52
Type C:	0
Type D:	0
Type E:	0
Type F:	0
Type G:	0
Percent Pools with > 35% Embeddedness:	**94**
Average Channel Gradient (%):	**6**

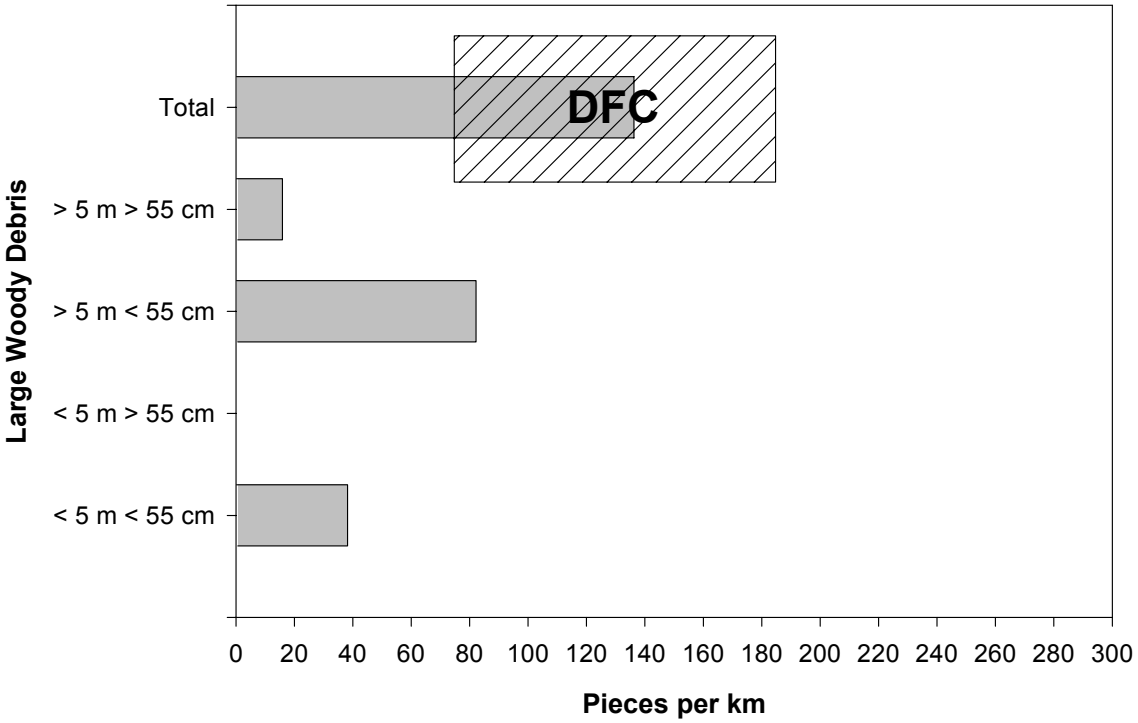
*Calculation sums left riparian + right riparian + stream channel
**Calculation pools left and right riparian measurements, does not sum them



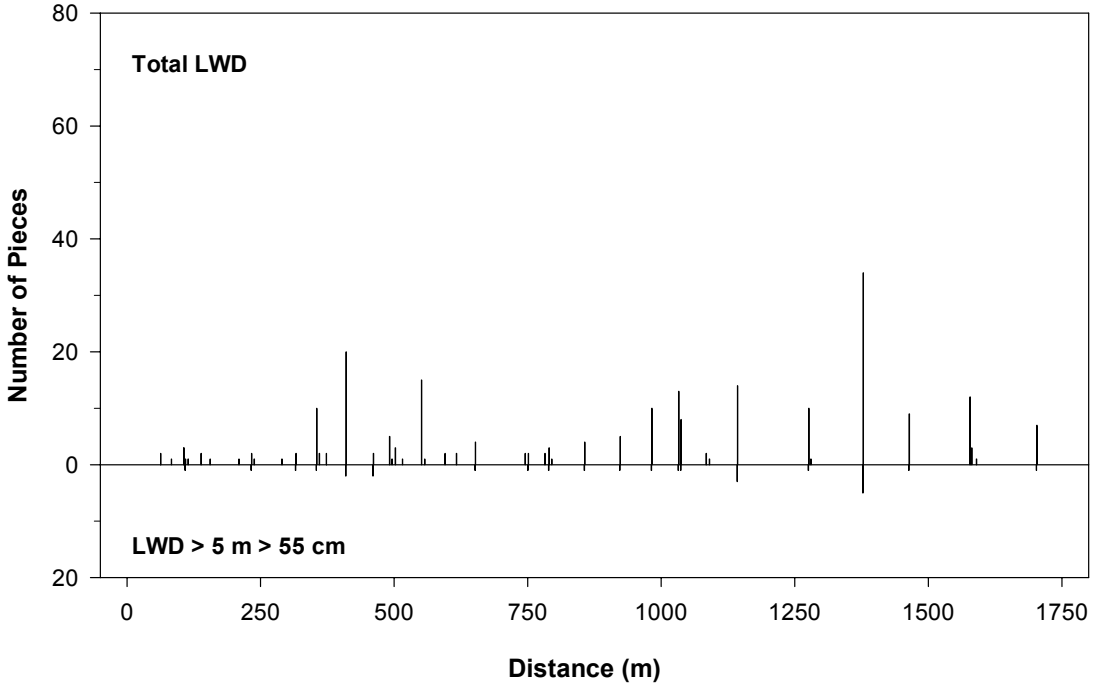
Estimated area of Taskers Gap in pools and riffles as calculated using BVET techniques, summer 2001.



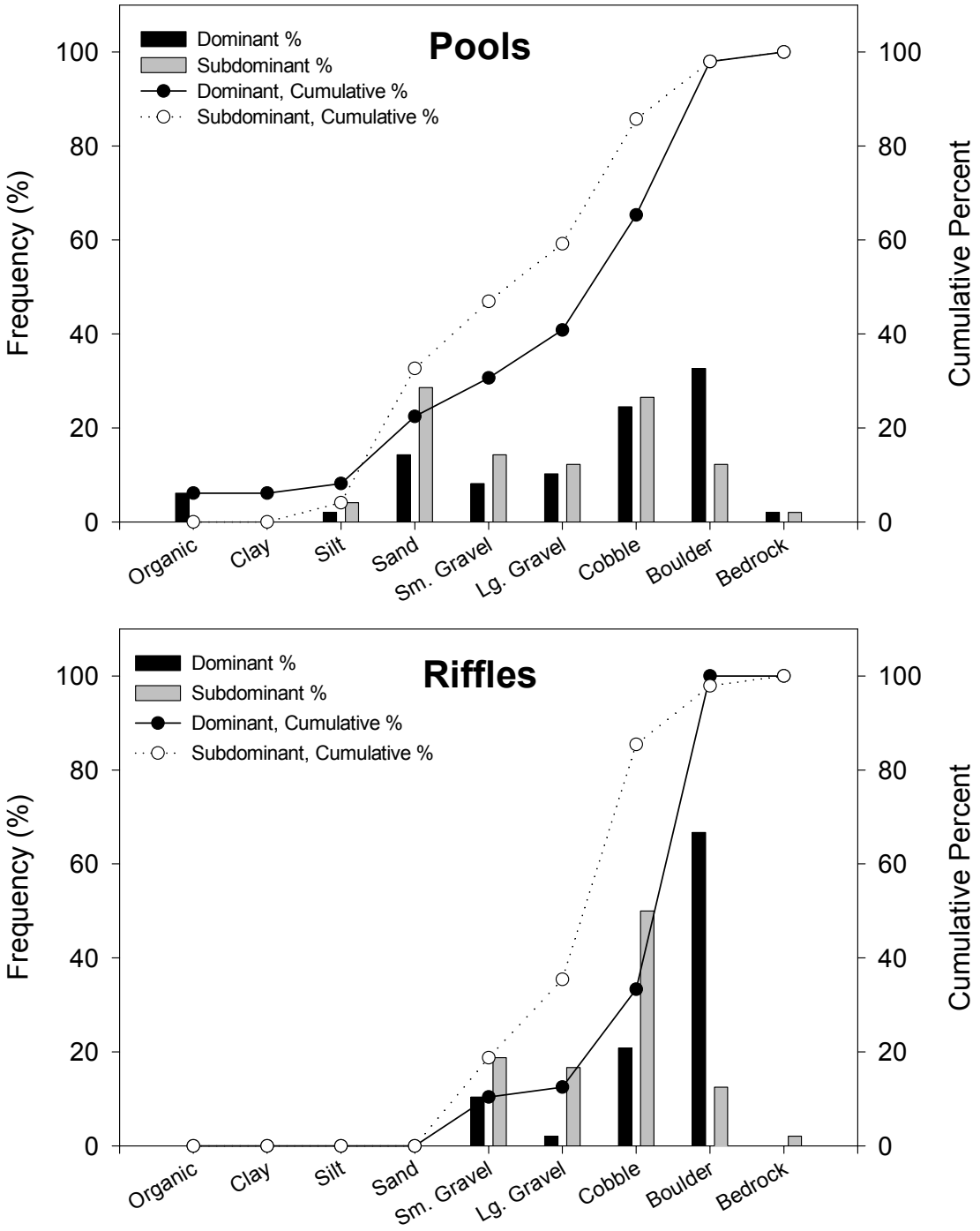
Maximum and average depths and residual pool depths for pools and riffles in Taskers Gap, summer 2001. The top and bottom of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data.



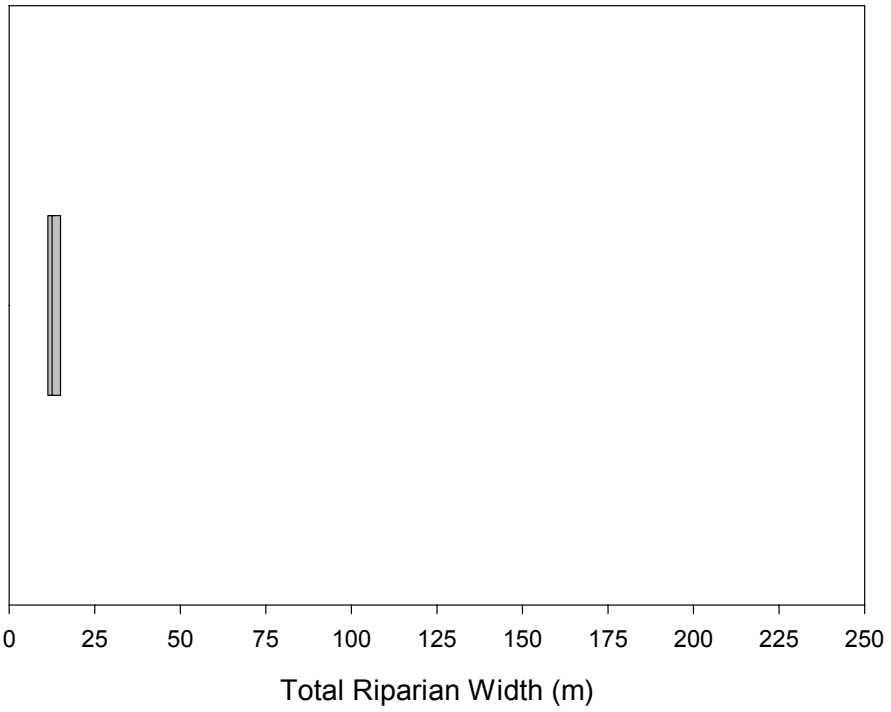
LWD per kilometer in Taskers Gap, summer 2001. Y-axis labels are LWD size classes with the first number indicating length and the second number indicating diameter.



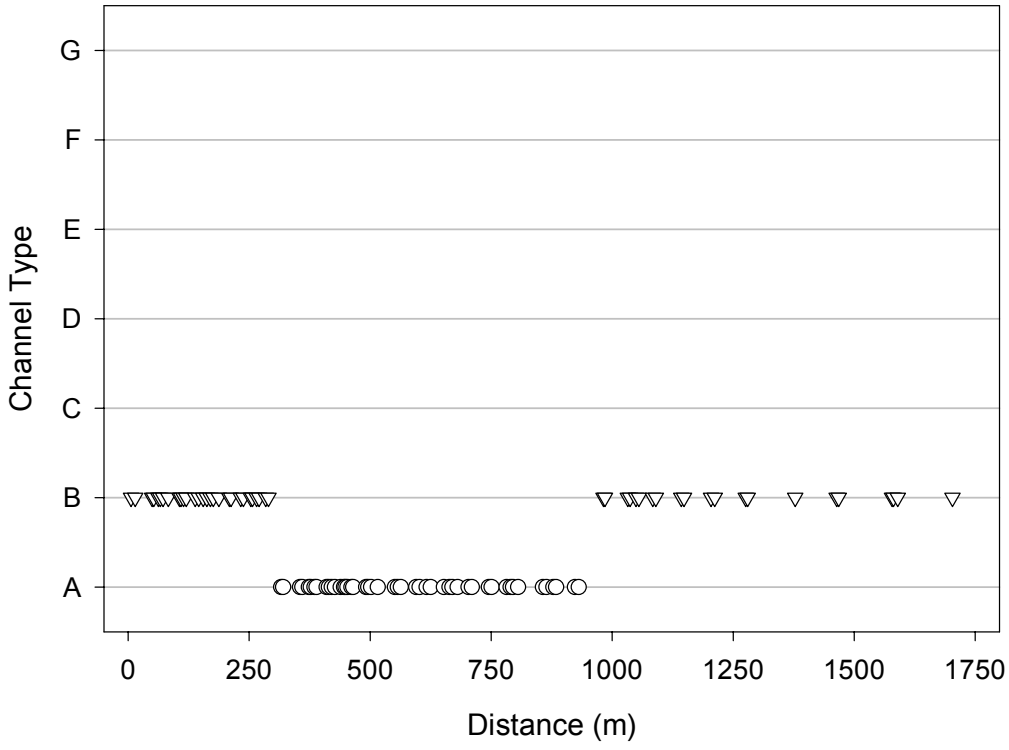
Distribution and abundance of LWD in each habitat unit of Taskers Gap, summer 2001. Bars below the x-axis represent the amount of the total LWD that was >5 m in length, >55 cm in diameter. X-axis indicates distance upstream from Forest boundary.



Frequency (percent) and cumulative percent of dominant and subdominant substrate occurrence for pools and riffles in Taskers Gap, summer 2001.



Total riparian widths (left riparian width+right riparian width+wetted channel width) for Taskers Gap, summer 2001. The left and right 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. Sample size = 4.

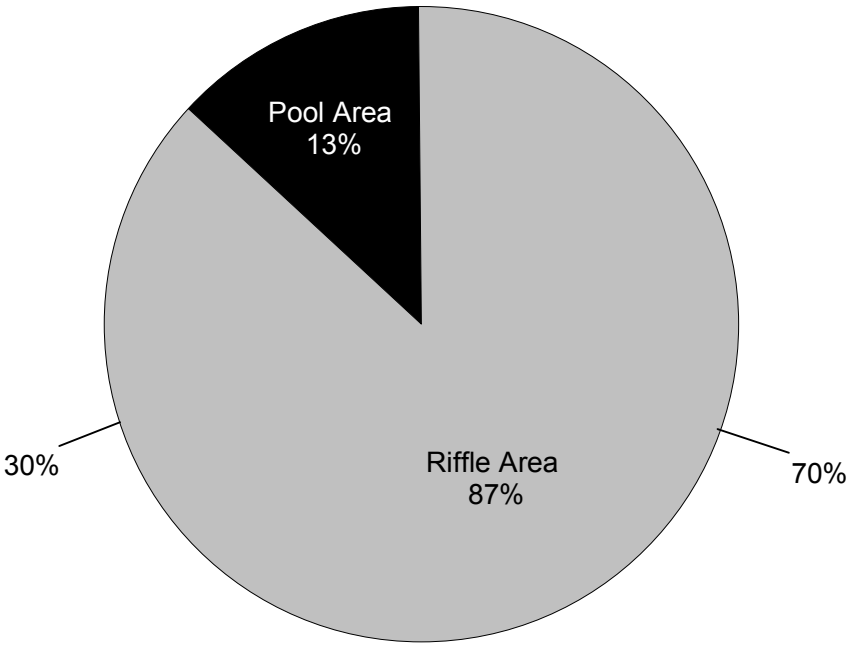


Rosgen's channel classification for each habitat unit in Taskers Gap, summer 2001. X-axis indicates distance upstream from Forest boundary.

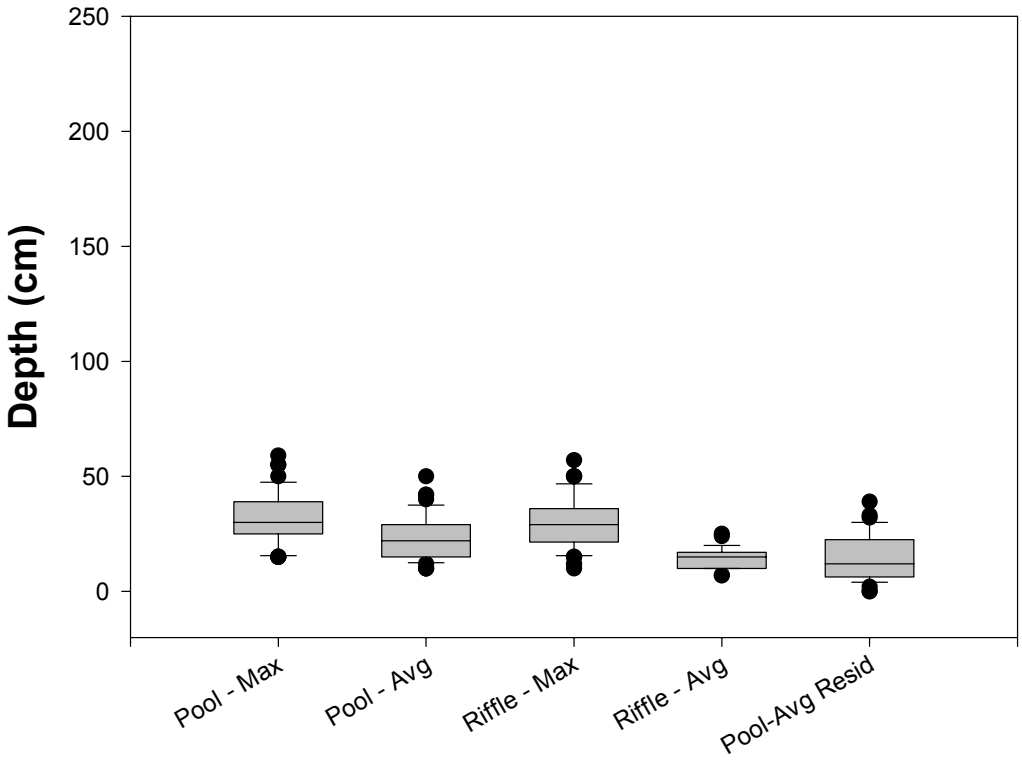
Stream:	**unnamed tributary to Passage Creek (runs beside 657)**
District:	Lee
Quadrangle:	Edinburg
Survey Date:	06/20/01
Downstream Starting Point:	Forest boundary.
Total Distance Surveyed (km):	2.6
Percent of Total Area Pools:	**13**
Number of Pools:	40
Number of Pools per km:	15
Total Pool Area (m^2):	734 ± 137
Mean Pool Area (m^2):	18
Correction Factor:	0.82
Mean Maximum Depth (cm):	32
Mean Average Depth (cm):	23
Mean Residual Pool Depth (cm):	15
Percent of Total Area Riffles:	**87**
Number of Riffles:	36
Number of Riffles per km:	14
Total Riffle Area (m^2):	4957 ± 514
Mean Riffle Area (m^2):	138
Correction Factor:	1.02
Mean Maximum Depth (cm):	30
Mean Average Depth (cm):	15
Number of LWD pieces per km:	**110**
LWD < 5 m, < 55 cm:	37
LWD < 5 m, > 55 cm:	55
LWD > 5 m, < 55 cm:	8
LWD > 5 m, > 55 cm:	10
Mean Channel Width (m):	**5**
Mean Riparian Width (m) (Total*):	**17**
Maximum Riparian Width (Total):	22
75th Percentile (Total)	20
25th Percentile (Total)	14
Minimum Riparian Width (Total):	10
Mean Riparian Width (m) (Left, Right):**	**6**
Maximum Riparian Width (Left, Right):	16
75th Percentile (Left, Right)	9
25th Percentile (Left, Right)	2
Minimum Riparian Width (Left, Right):	1
Percent of Pool Habitat Surveyed as Glides:	**8**
Rosgen's Channel Type Frequency (%):	
Type A:	0
Type B:	70
Type C:	30
Type D:	0
Type E:	0
Type F:	0
Type G:	0
Percent Pools with > 35% Embeddedness:	**18**
Average Channel Gradient (%):	**6**

*Calculation sums left riparian + right riparian + stream channel

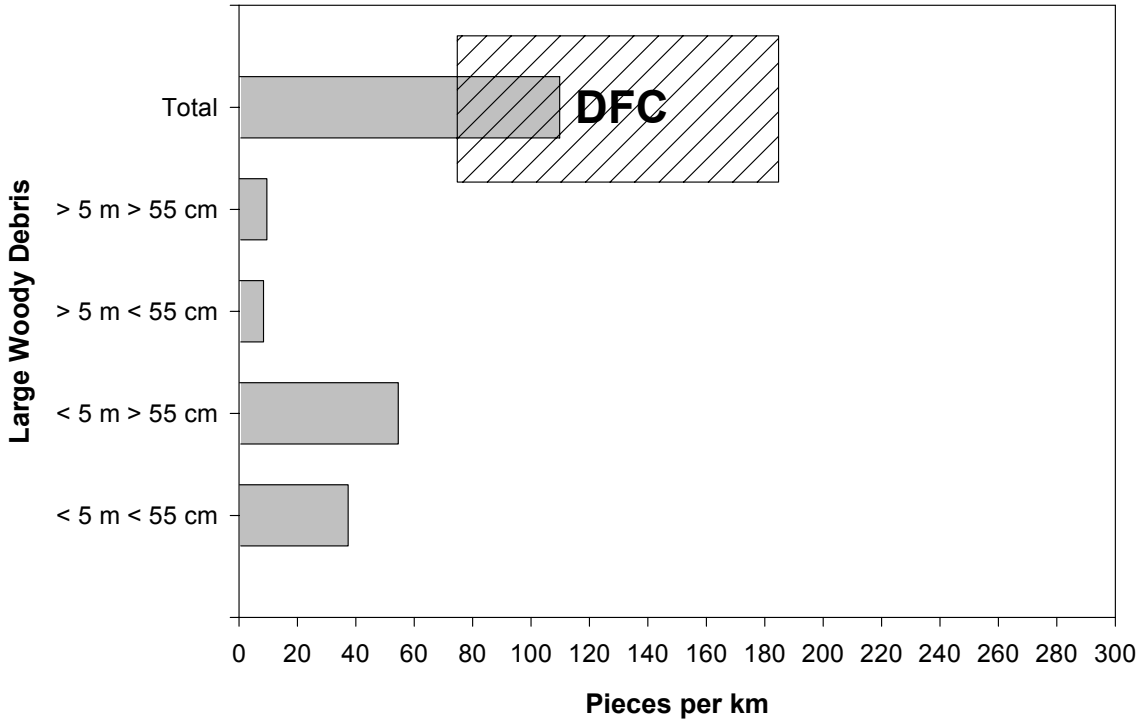
**Calculation pools left and right riparian measurements, does not sum them



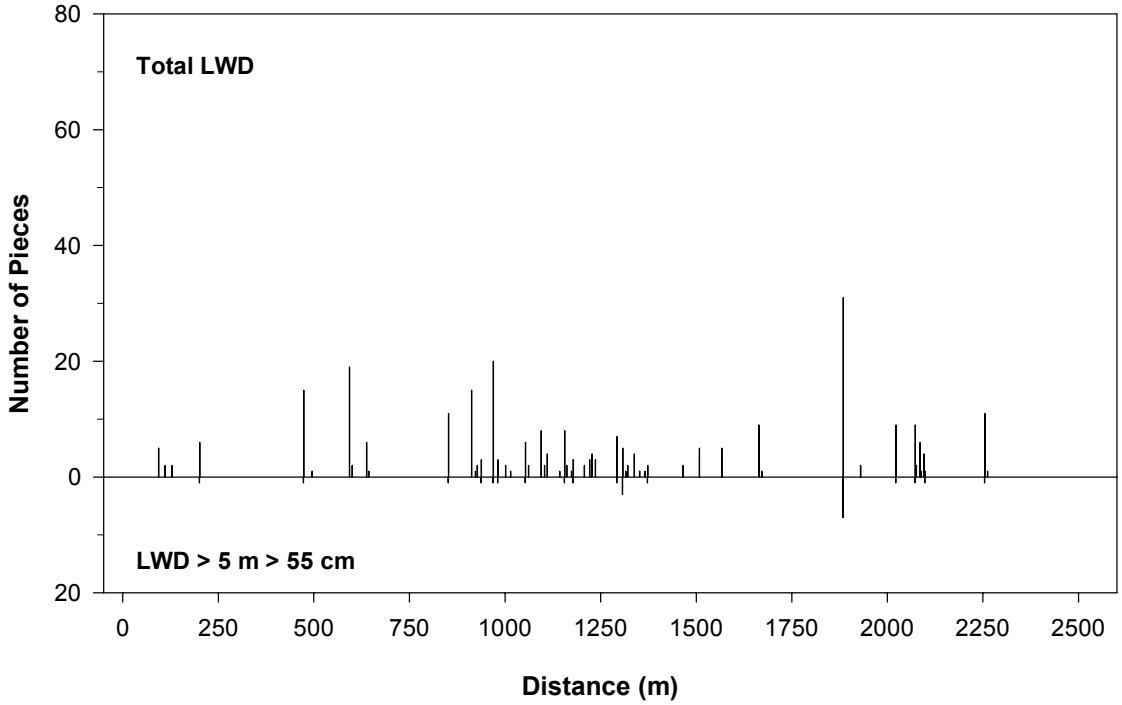
Estimated area of unnamed tributary to Passage Creek in pools and riffles as calculated using BVET techniques, summer 2001.



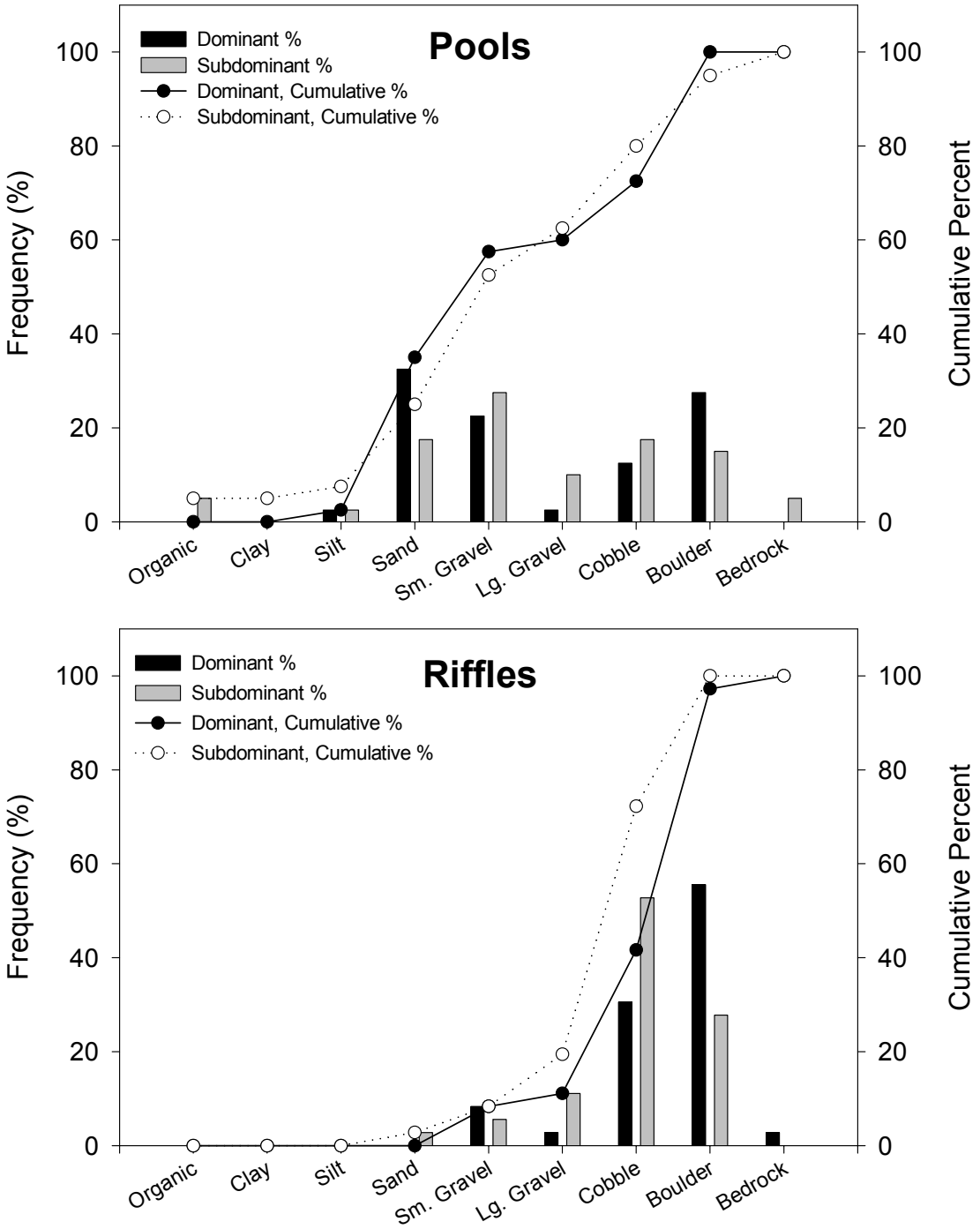
Maximum and average depths and residual pool depths for pools and riffles in unnamed tributary to Passage Creek, summer 2001. The top and bottom of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data.



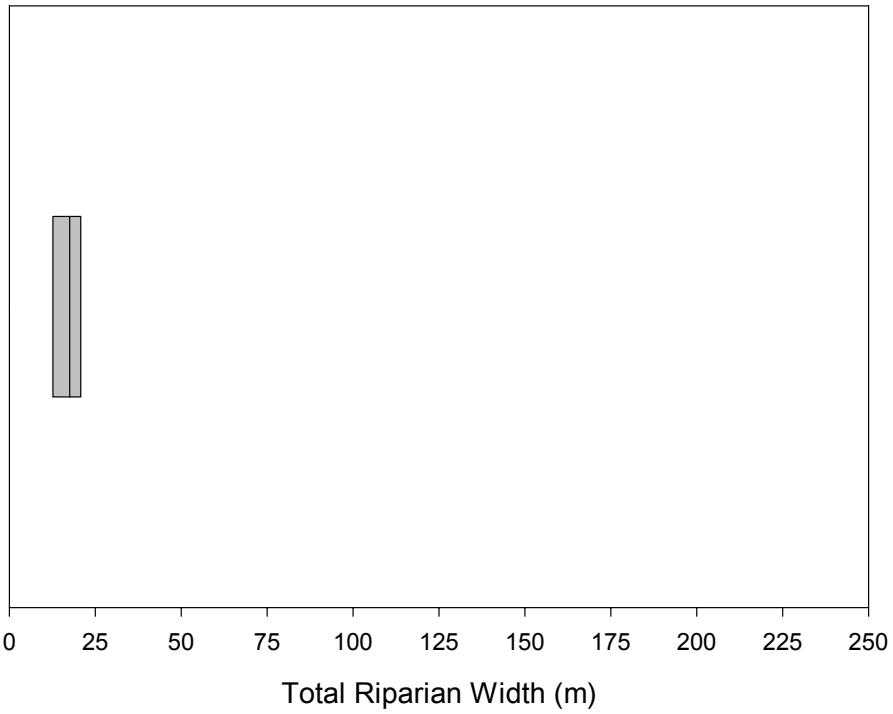
LWD per kilometer in unnamed tributary to Passage Creek, summer 2001. Y-axis labels are LWD size classes with the first number indicating length and the second number indicating diameter.



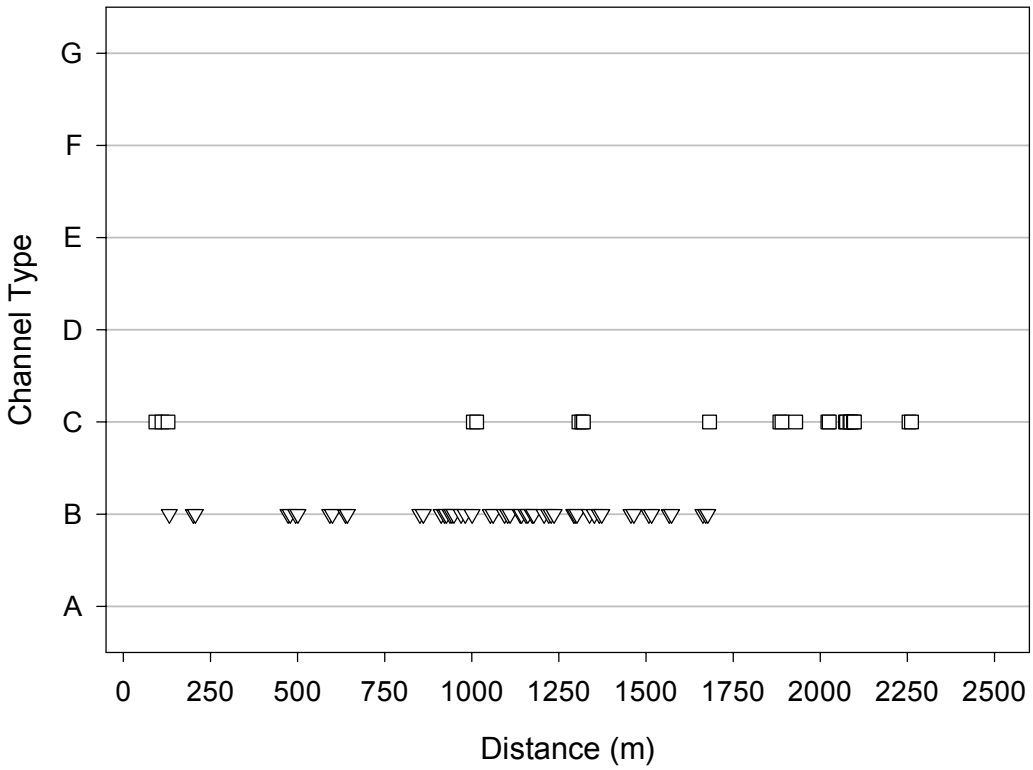
Distribution and abundance of LWD in each habitat unit of unnamed tributary to Passage Creek, summer 2001. Bars below the x-axis represent the amount of the total LWD that was >5 m in length, >55 cm in diameter. X-axis indicates distance upstream from Forest boundary on SR 675.



Frequency (percent) and cumulative percent of dominant and subdominant substrate occurrence for pools and riffles in unnamed tributary to Passage Creek, summer 2001.



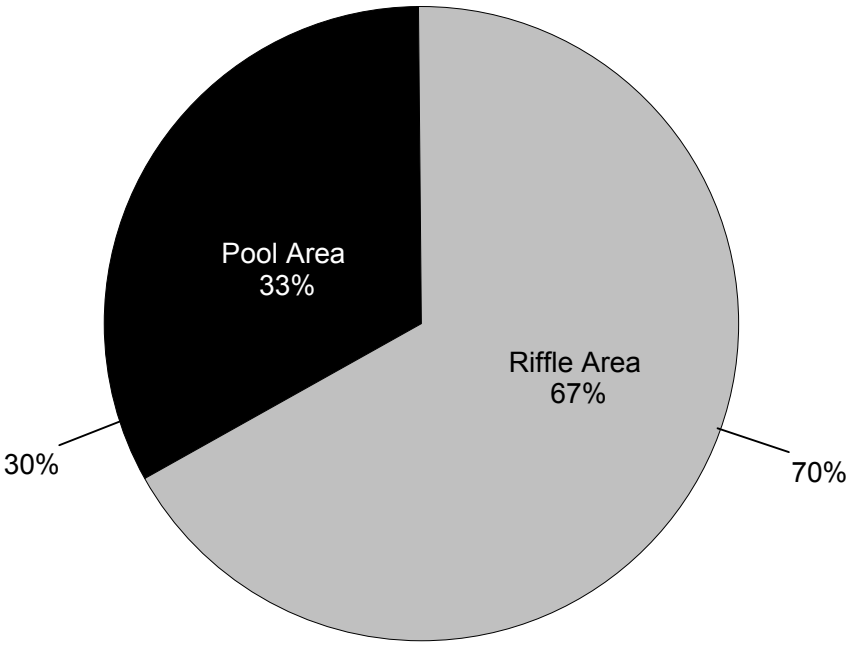
Total riparian widths (left riparian width+right riparian width+wetted channel width) for unnamed tributary to Passage Creek, summer 2001. The left and right of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data. Sample size = 4.



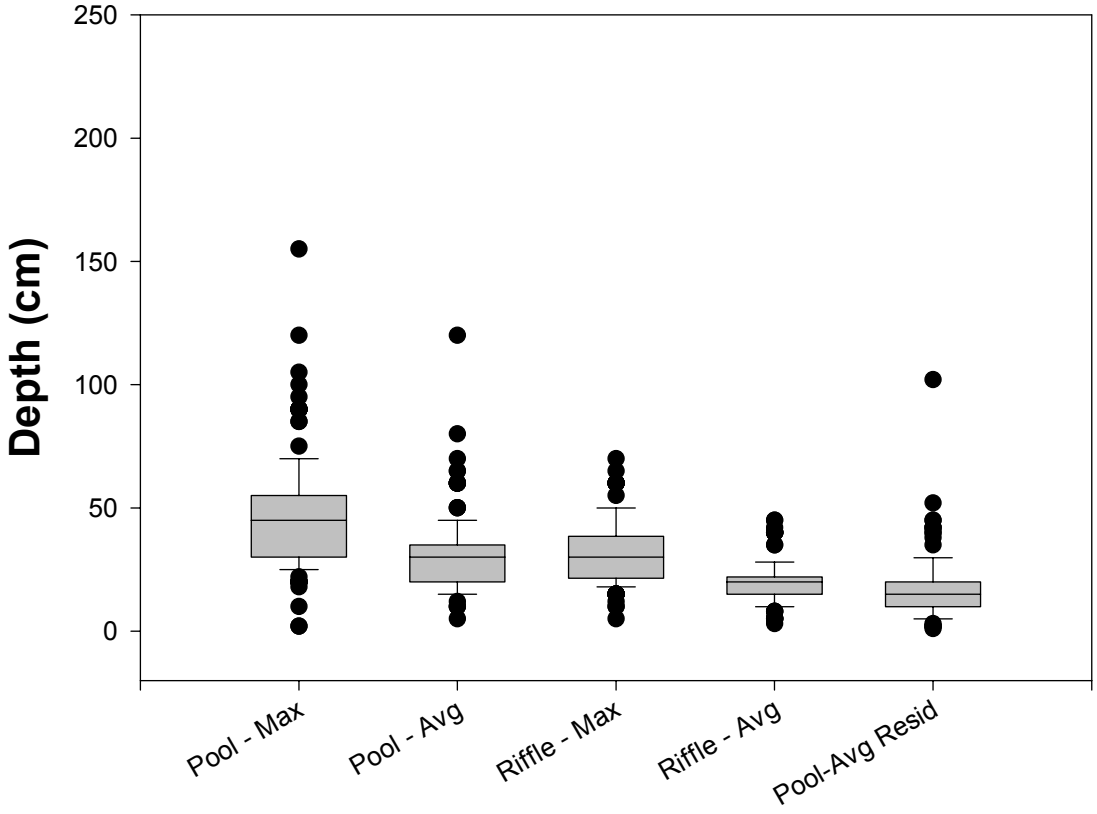
Rosgen's channel classification for each habitat unit in unnamed tributary to Passage Creek, summer 2001. X-axis indicates distance upstream from Forest boundary on SR 675.

Stream:	**Fridley Run**
District:	Lee
Quadrangle:	Elkton West
Survey Date:	06/27/01
Downstream Starting Point:	Forest boundary
Total Distance Surveyed (km):	4.3
Percent of Total Area Pools:	**33**
Number of Pools:	157
Number of Pools per km:	37
Total Pool Area (m^2):	4569 ± 282
Mean Pool Area (m^2):	29
Correction Factor:	0.99
Mean Maximum Depth (cm):	45
Mean Average Depth (cm):	30
Mean Residual Pool Depth (cm):	17
Percent of Total Area Riffles:	**67**
Number of Riffles:	147
Number of Riffles per km:	34
Total Riffle Area (m^2):	9136 ± 630
Mean Riffle Area (m^2):	62
Correction Factor:	1.07
Mean Maximum Depth (cm):	31
Mean Average Depth (cm):	19
Number of LWD pieces per km:	**90**
LWD < 5 m, < 55 cm:	37
LWD < 5 m, > 55 cm:	1
LWD > 5 m, < 55 cm:	47
LWD > 5 m, > 55 cm:	5
Mean Channel Width (m):	**6**
Mean Riparian Width (m) (Total*):	**18**
Maximum Riparian Width (Total):	68
75th Percentile (Total)	16
25th Percentile (Total)	12
Minimum Riparian Width (Total):	8
Mean Riparian Width (m) (Left, Right):**	**6**
Maximum Riparian Width (Left, Right):	58
75th Percentile (Left, Right)	6
25th Percentile (Left, Right)	2
Minimum Riparian Width (Left, Right):	1
Percent of Pool Habitat Surveyed as Glides:	**35**
Rosgen's Channel Type Frequency (%):	
Type A:	82
Type B:	18
Type C:	0
Type D:	0
Type E:	0
Type F:	0
Type G:	0
Percent Pools with > 35% Embeddedness:	**97**
Average Channel Gradient (%):	**5**

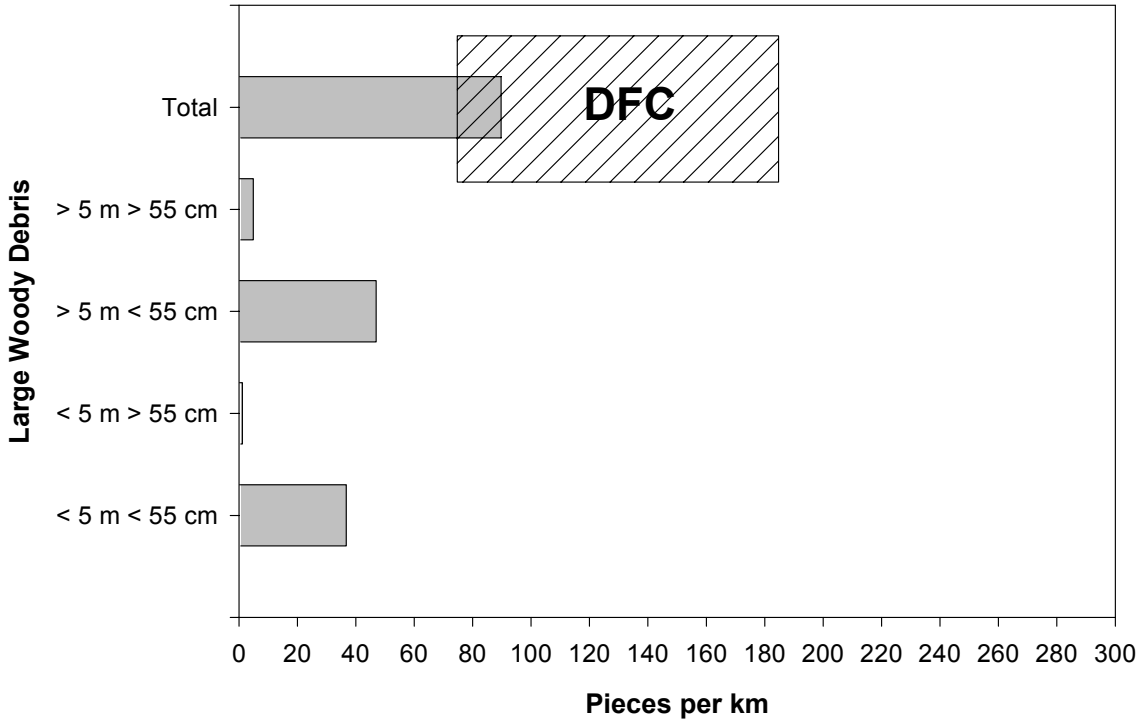
*Calculation sums left riparian + right riparian + stream channel
**Calculation pools left and right riparian measurements, does not sum them



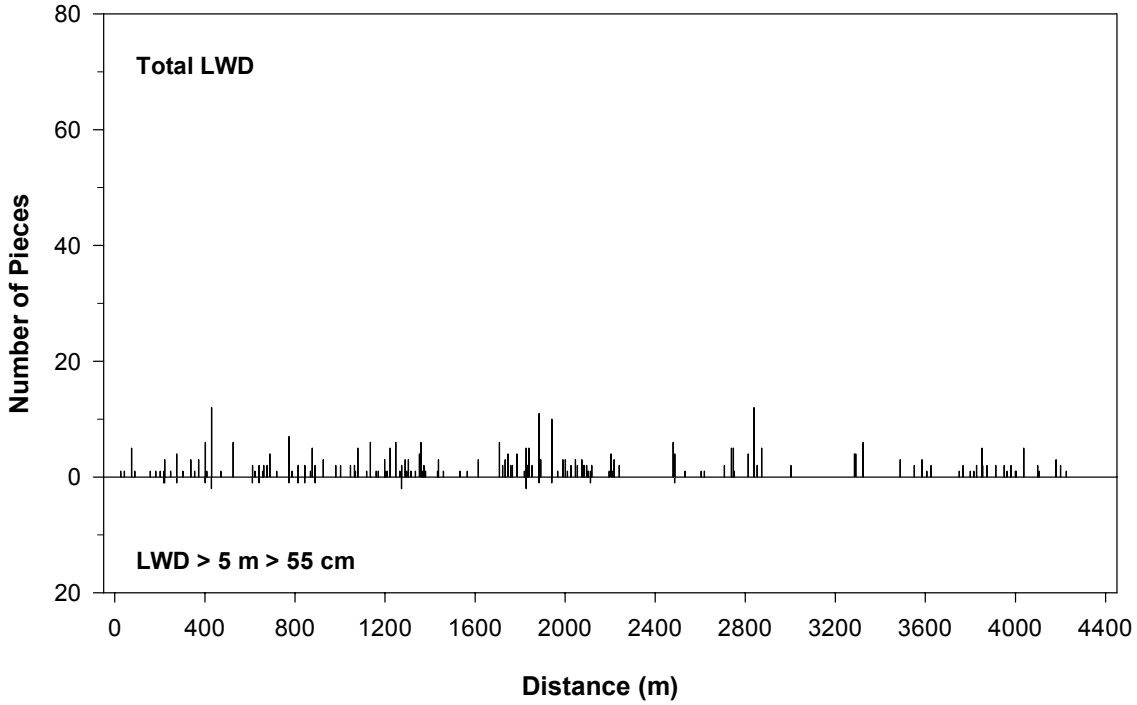
Estimated area of Fridley Run in pools and riffles as calculated using BVET techniques, summer 2001.



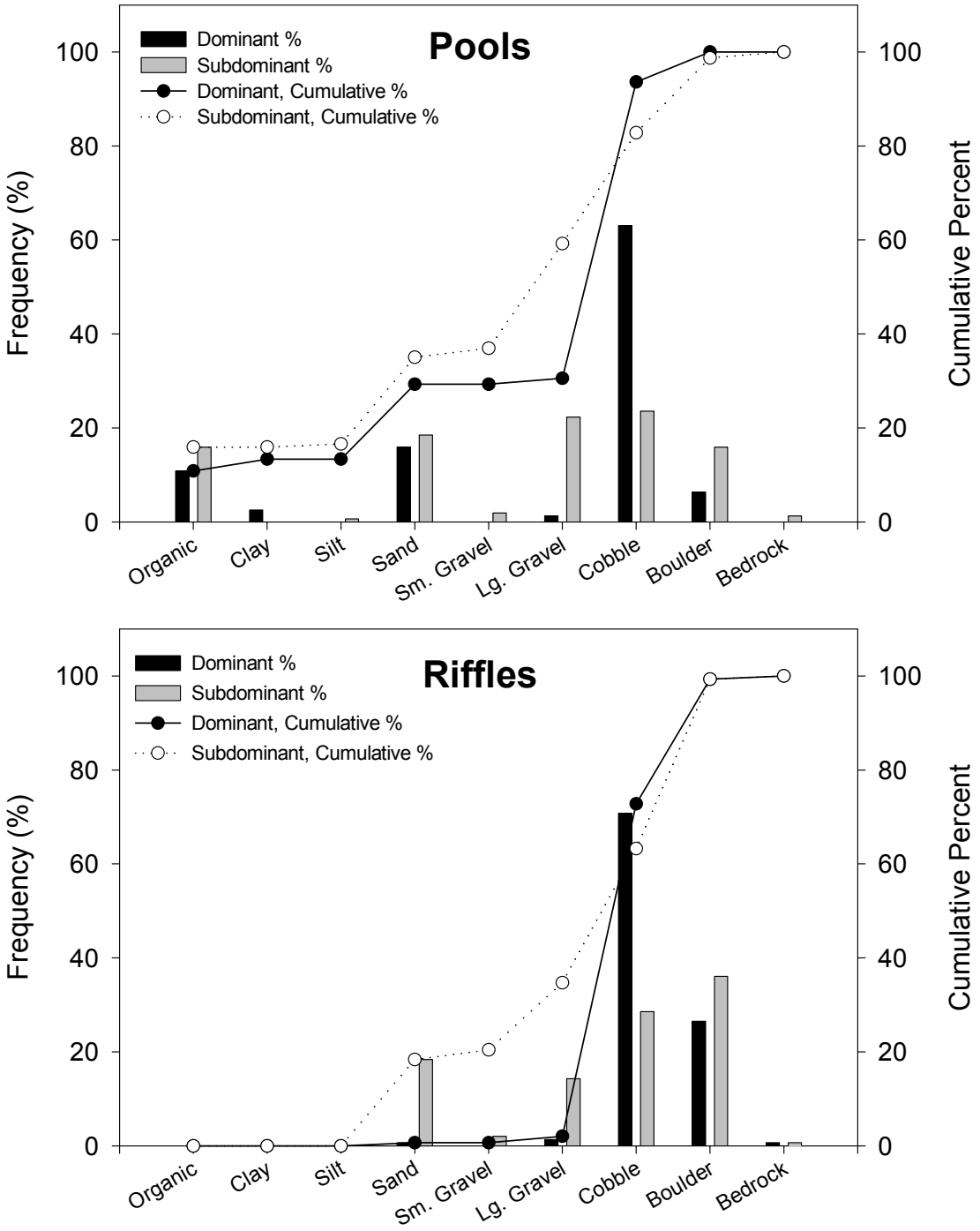
Maximum and average depths and residual pool depths for pools and riffles in Fridley Run, summer 2001. The top and bottom of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data.



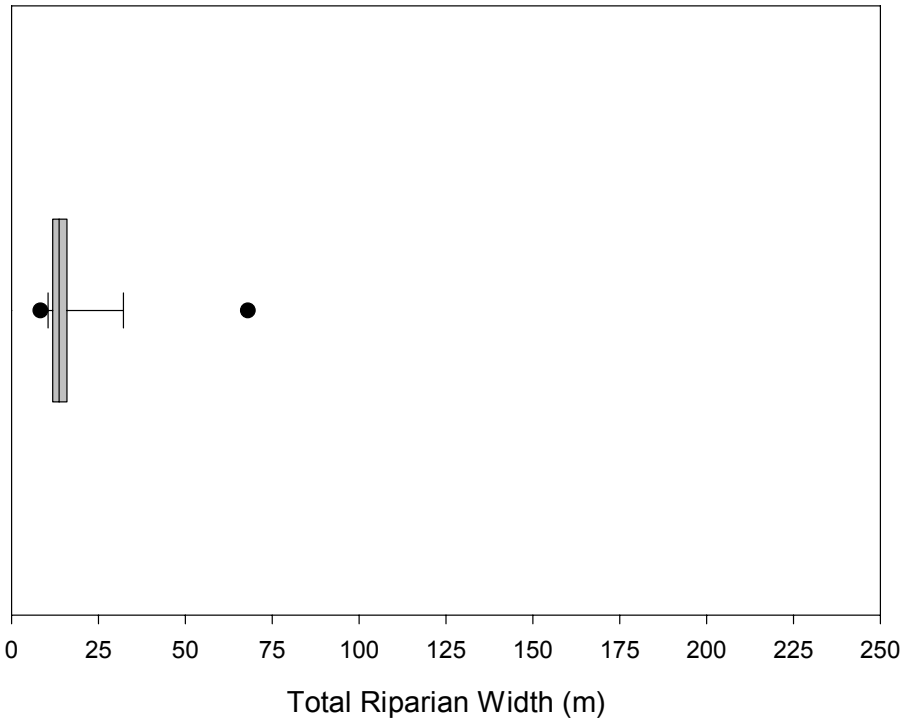
LWD per kilometer in Fridley Run, summer 2001. Y-axis labels are LWD size classes with the first number indicating length and the second number indicating diameter.



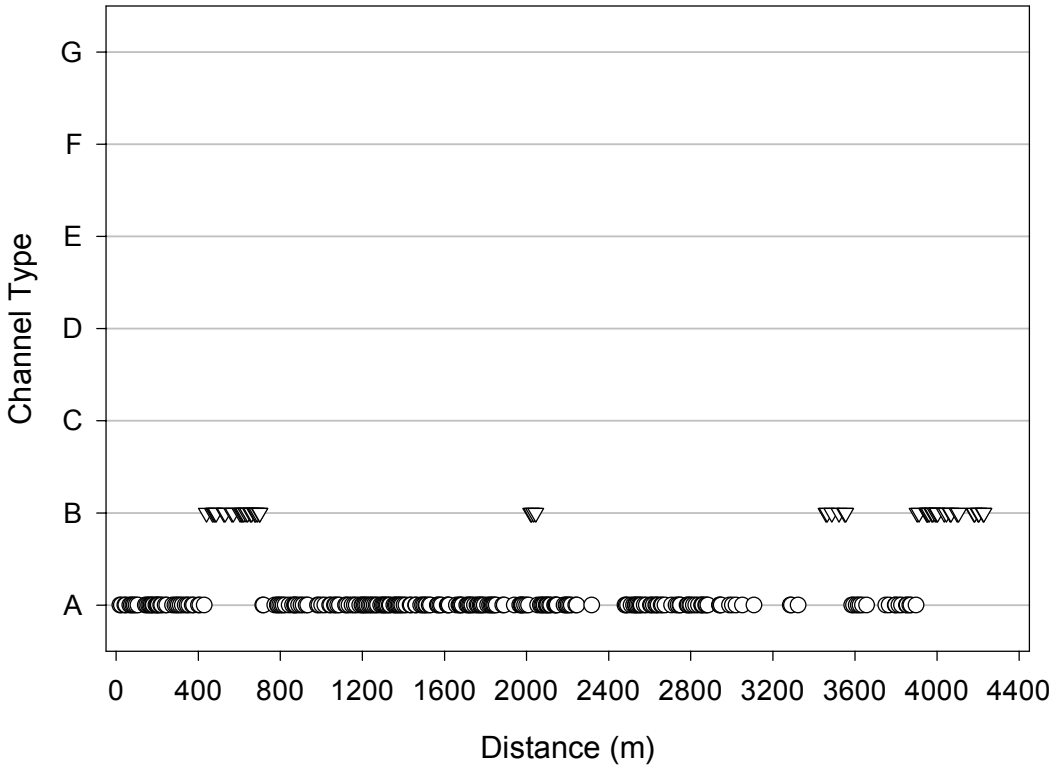
Distribution and abundance of LWD in each habitat unit of Fridley Run, summer 2001. Bars below the x-axis represent the amount of the total LWD that was >5 m in length, >55 cm in diameter. X-axis indicates distance upstream from Forest boundary.



Frequency (percent) and cumulative percent of dominant and subdominant substrate occurrence for pools and riffles in Fridley Run, summer 2001.



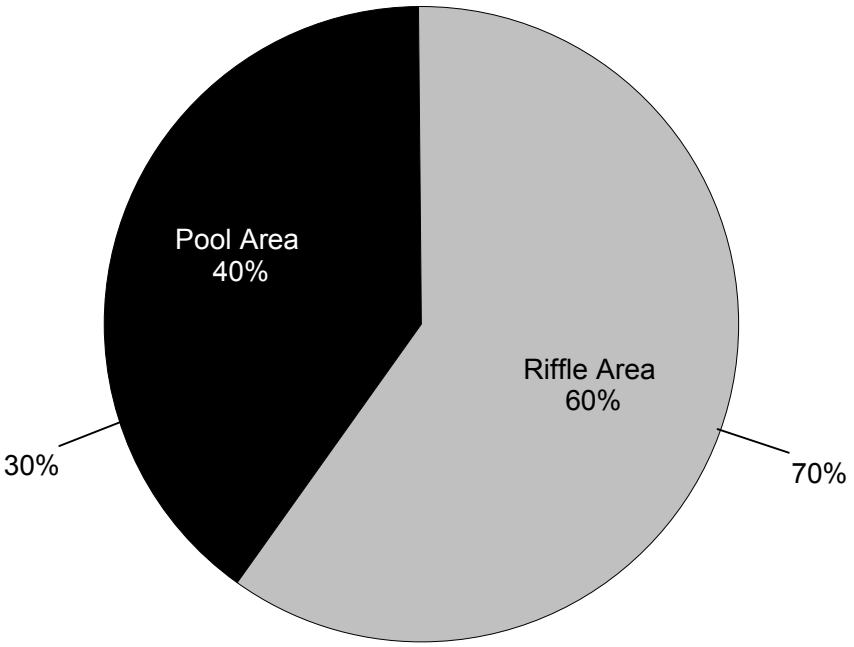
Total riparian widths (left riparian width+right riparian width+wetted channel width) for Fridley Run, summer 2001. The left and right of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data. Sample size = 11.



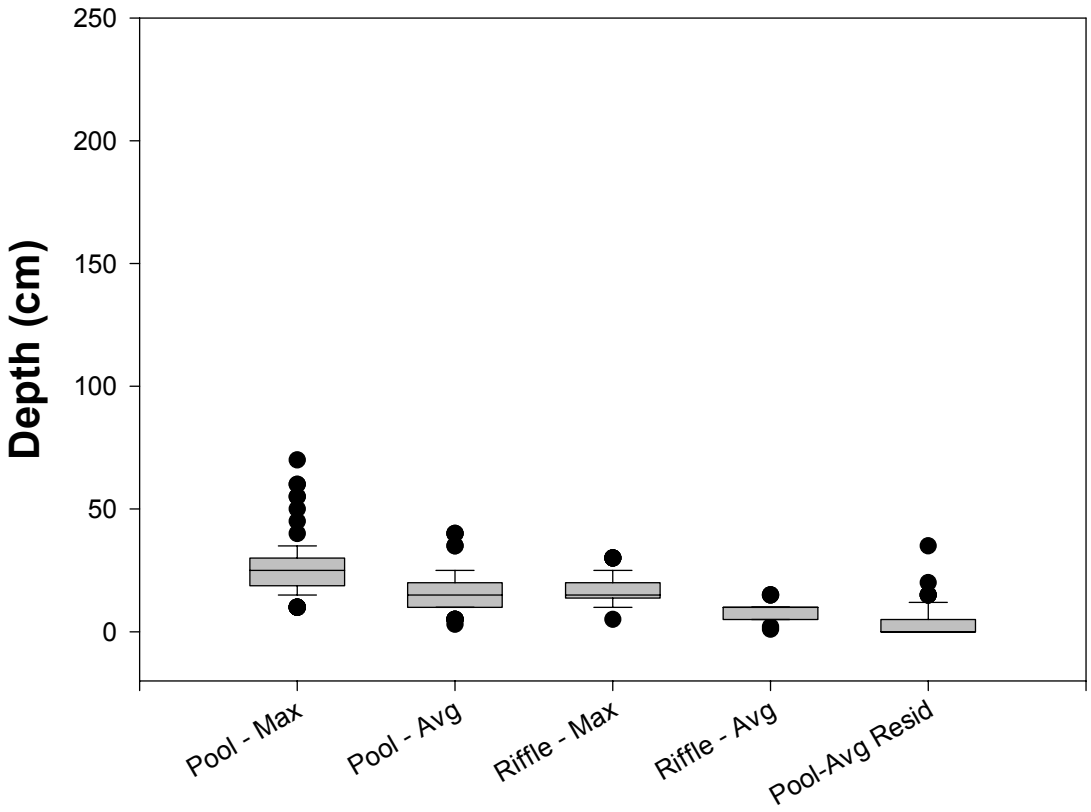
Rosgen's channel classification for each habitat unit in Fridley Run, summer 2001. X-axis indicates distance upstream from Forest boundary.

Stream:	**unnamed tributary of Mountain Run**
District:	Lee
Quadrangle:	Elkton West/Tenth Legion
Survey Date:	06/28/01
Downstream Starting Point:	Confluence w/ Mountain Run
Total Distance Surveyed (km):	0.8
Percent of Total Area Pools:	**40**
Number of Pools:	85
Number of Pools per km:	107
Total Pool Area (m^2):	800 ± 150
Mean Pool Area (m^2):	9
Correction Factor:	1.24
Mean Maximum Depth (cm):	26
Mean Average Depth (cm):	16
Mean Residual Pool Depth (cm):	4
Percent of Total Area Riffles:	**60**
Number of Riffles:	57
Number of Riffles per km:	72
Total Riffle Area (m^2):	1222 ± 113
Mean Riffle Area (m^2):	21
Correction Factor:	1.48
Mean Maximum Depth (cm):	17
Mean Average Depth (cm):	8
Number of LWD pieces per km:	**78**
LWD < 5 m, < 55 cm:	26
LWD < 5 m, > 55 cm:	6
LWD > 5 m, < 55 cm:	30
LWD > 5 m, > 55 cm:	15
Mean Channel Width (m):	**5**
Mean Riparian Width (m) (Total*):	**16**
Maximum Riparian Width (Total):	27
75th Percentile (Total)	17
25th Percentile (Total)	11
Minimum Riparian Width (Total):	10
Mean Riparian Width (m) (Left, Right):**	**5**
Maximum Riparian Width (Left, Right):	14
75th Percentile (Left, Right)	6
25th Percentile (Left, Right)	4
Minimum Riparian Width (Left, Right):	2
Percent of Pool Habitat Surveyed as Glides:	**0**
Rosgen's Channel Type Frequency (%):	
Type A:	100
Type B:	0
Type C:	0
Type D:	0
Type E:	0
Type F:	0
Type G:	0
Percent Pools with > 35% Embeddedness:	**73**
Average Channel Gradient (%):	**12**

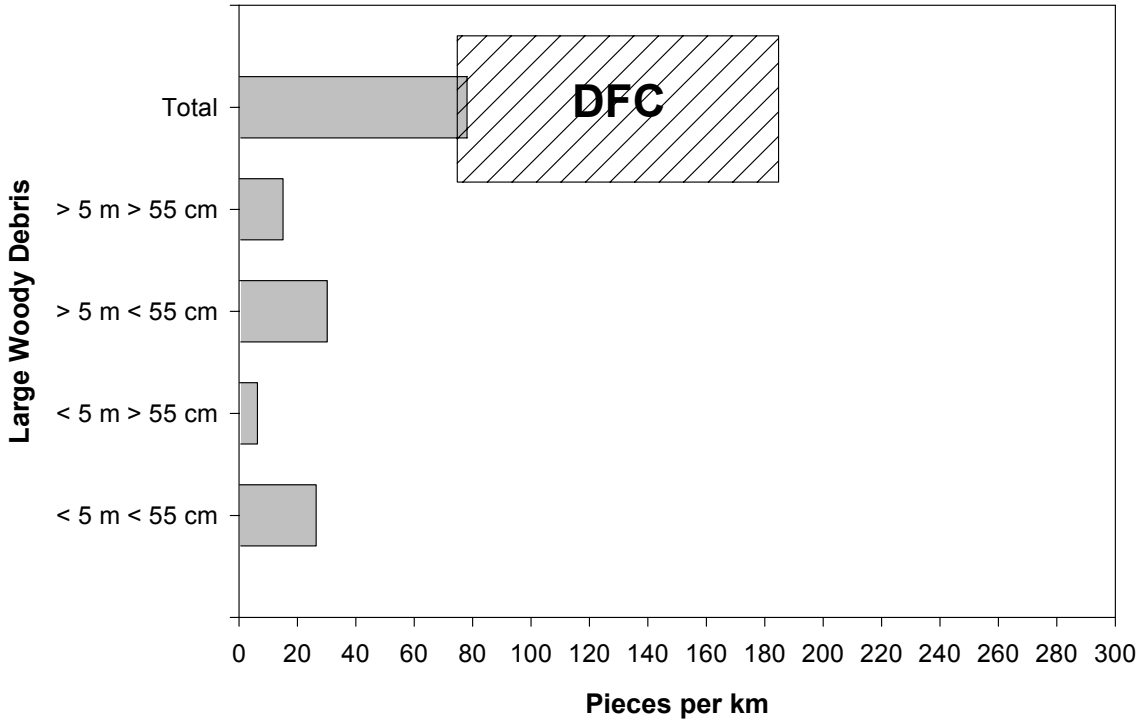
*Calculation sums left riparian + right riparian + stream channel
**Calculation pools left and right riparian measurements, does not sum them



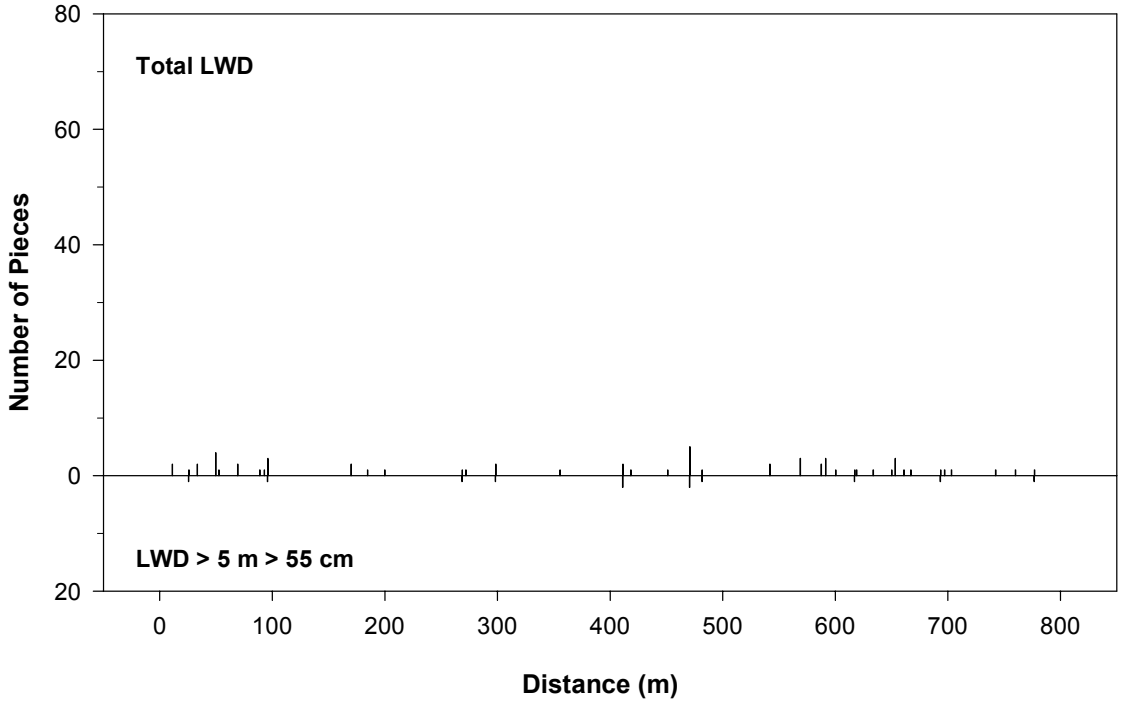
Estimated area of unnamed tributary of Mountain Run in pools and riffles as calculated using BVET techniques, summer 2001.



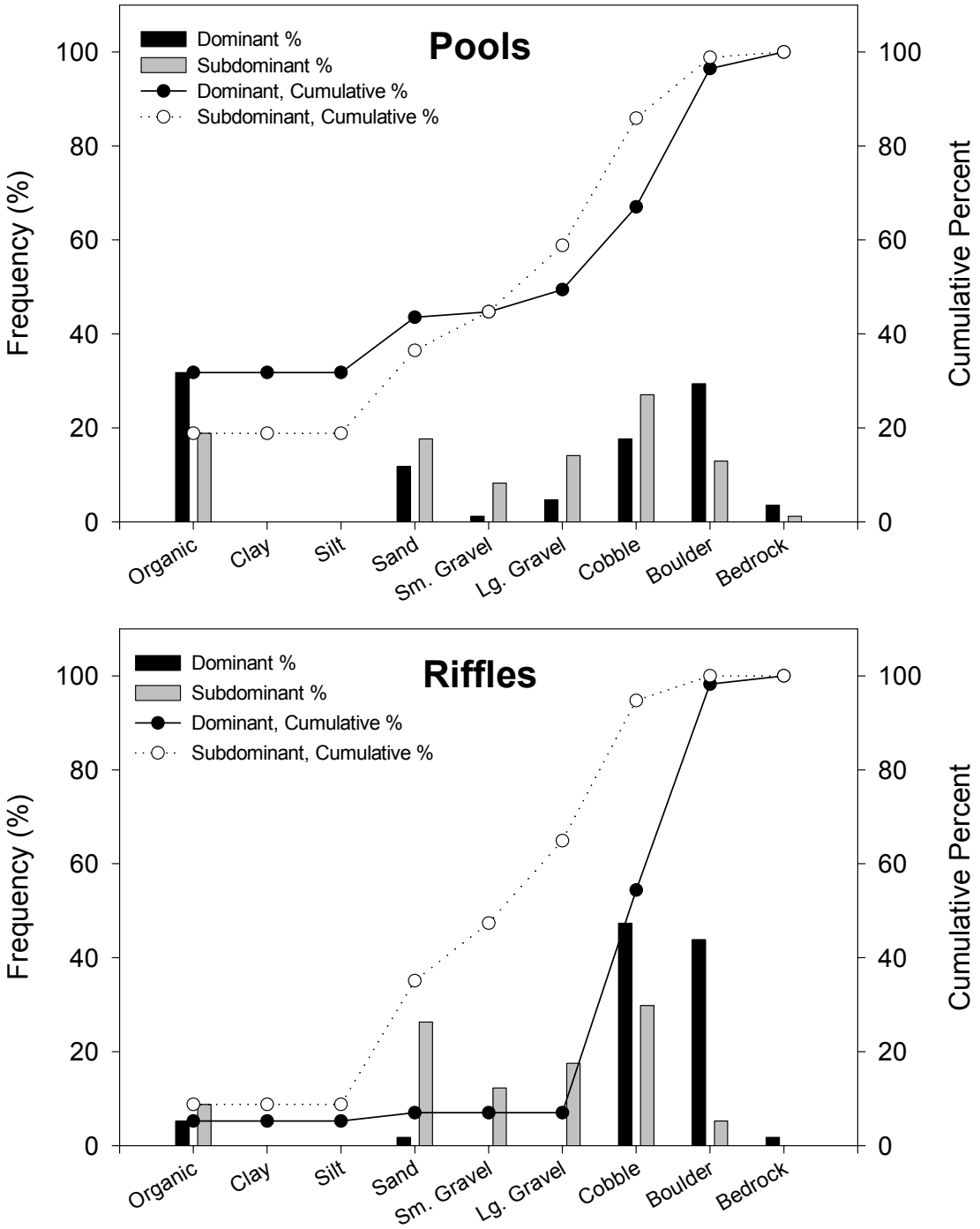
Maximum and average depths and residual pool depths for pools and riffles in unnamed tributary of Mountain Run, summer 2001. The top and bottom of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data.



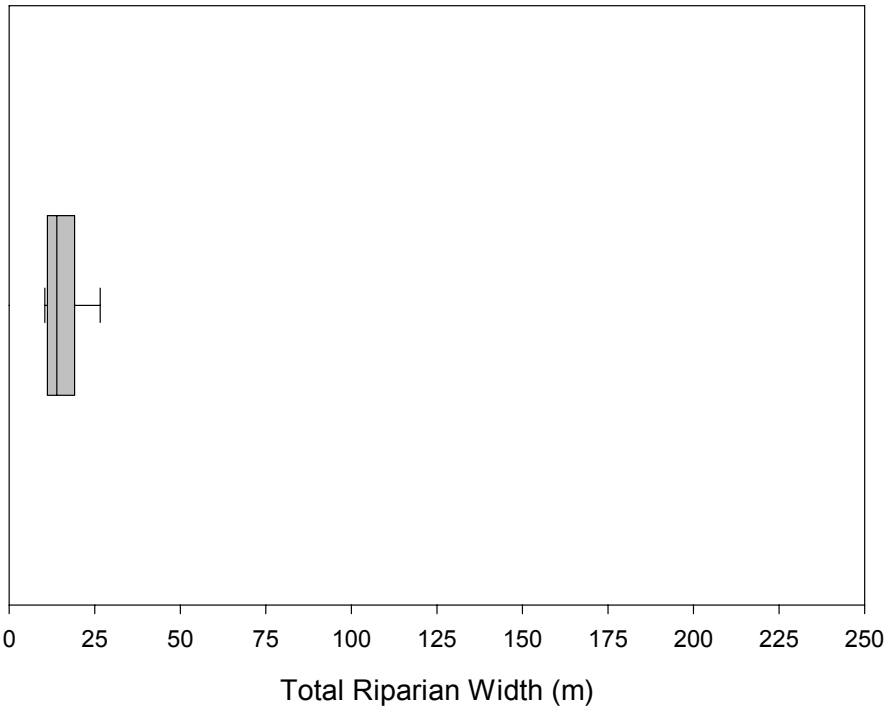
LWD per kilometer in unnamed tributary of Mountain Run, summer 2001. Y-axis labels are LWD size classes with the first number indicating length and the second number indicating diameter.



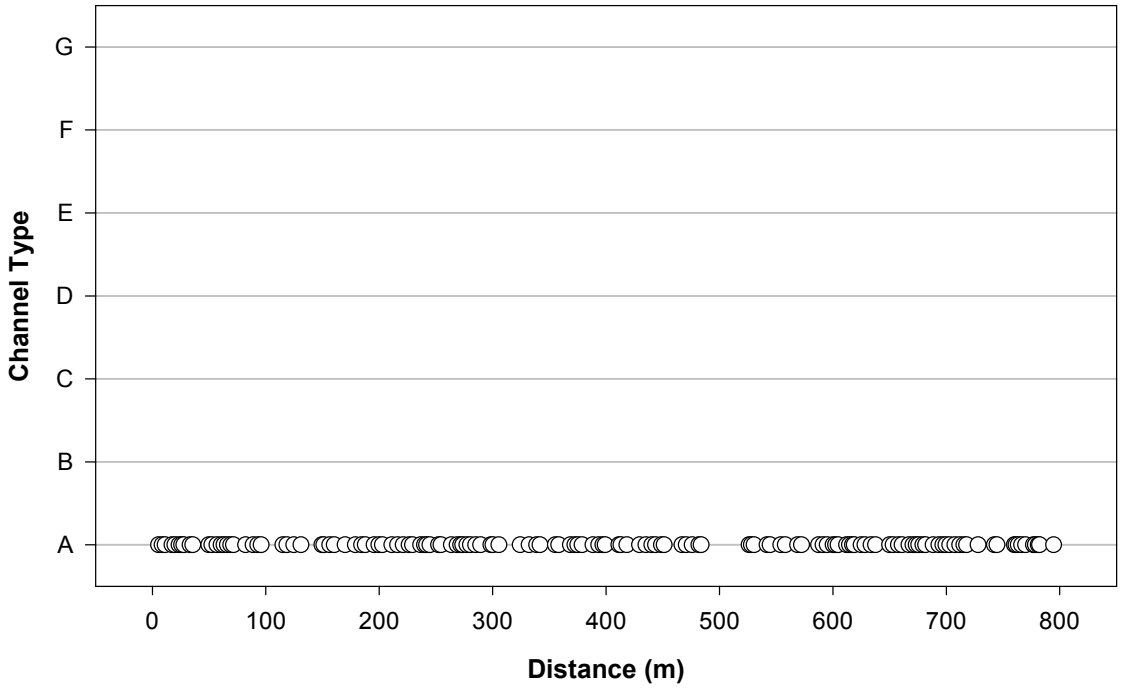
Distribution and abundance of LWD in each habitat unit of unnamed tributary of Mountain Run, summer 2001. Bars below the x-axis represent the amount of the total LWD that was >5 m in length, >55 cm in diameter. X-axis indicates distance upstream from confluence w/ Mtn. Run and LF Fridley's Run.



Frequency (percent) and cumulative percent of dominant and subdominant substrate occurrence for pools and riffles in unnamed tributary of Mountain Run, summer 2001.



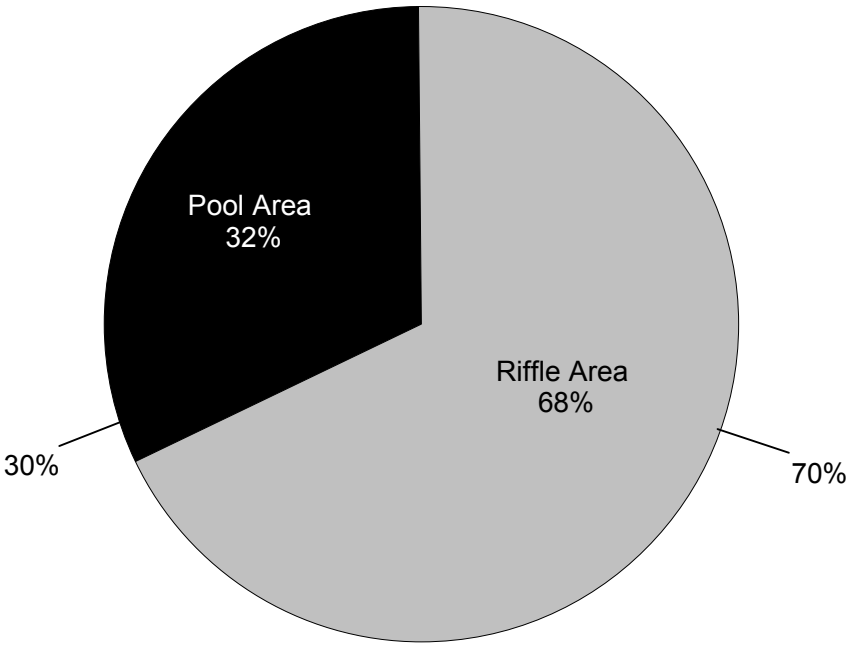
Total riparian widths (left riparian width+right riparian width+wetted channel width) for unnamed tributary of Mountain Run, summer 2001. The left and right of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data. Sample size = 5.



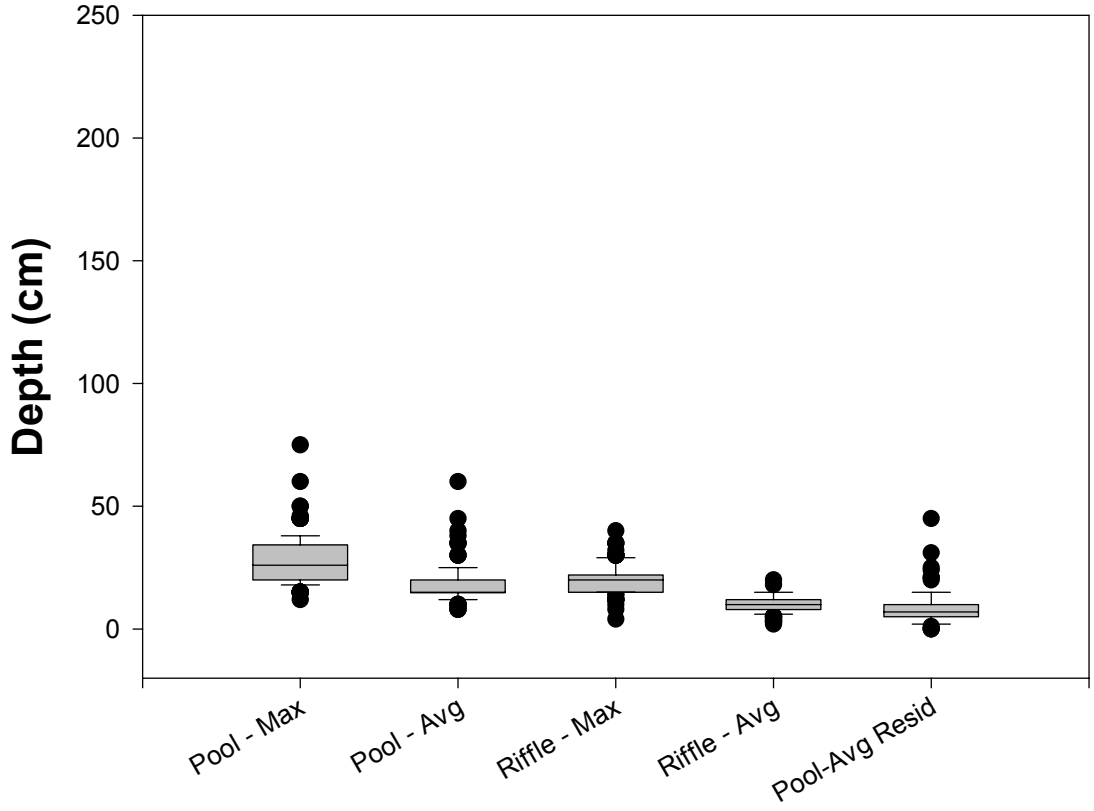
Rosgen's channel classification for each habitat unit in unnamed tributary of Mountain Run, summer 2001. X-axis indicates distance upstream from confluence w/ Mountain Run.

Stream:	**Big Run**
District:	Lee
Quadrangle:	Hamburg
Survey Date:	06/14/01
Downstream Starting Point:	Forest boundary
Total Distance Surveyed (km):	4.0
Percent of Total Area Pools:	**13**
Number of Pools:	126
Number of Pools per km:	32
Total Pool Area (m^2):	1370 ± 71
Mean Pool Area (m^2):	11
Correction Factor:	1.11
Mean Maximum Depth (cm):	28
Mean Average Depth (cm):	18
Mean Residual Pool Depth (cm):	8
Percent of Total Area Riffles:	**87**
Number of Riffles:	118
Number of Riffles per km:	30
Total Riffle Area (m^2):	9162 ± 591
Mean Riffle Area (m^2):	78
Correction Factor:	1.10
Mean Maximum Depth (cm):	20
Mean Average Depth (cm):	10
Number of LWD pieces per km:	**200**
LWD < 5 m, < 55 cm:	70
LWD < 5 m, > 55 cm:	2
LWD > 5 m, < 55 cm:	118
LWD > 5 m, > 55 cm:	10
Mean Channel Width (m):	**4**
Mean Riparian Width (m) (Total*):	**22**
Maximum Riparian Width (Total):	57
75th Percentile (Total)	22
25th Percentile (Total)	15
Minimum Riparian Width (Total):	11
Mean Riparian Width (m) (Left, Right):**	**9**
Maximum Riparian Width (Left, Right):	28
75th Percentile (Left, Right)	14
25th Percentile (Left, Right)	3
Minimum Riparian Width (Left, Right):	1
Percent of Pool Habitat Surveyed as Glides:	**33**
Rosgen's Channel Type Frequency (%):	
Type A:	25
Type B:	75
Type C:	0
Type D:	0
Type E:	0
Type F:	0
Type G:	0
Percent Pools with > 35% Embeddedness:	**93**
Average Channel Gradient (%):	**7**

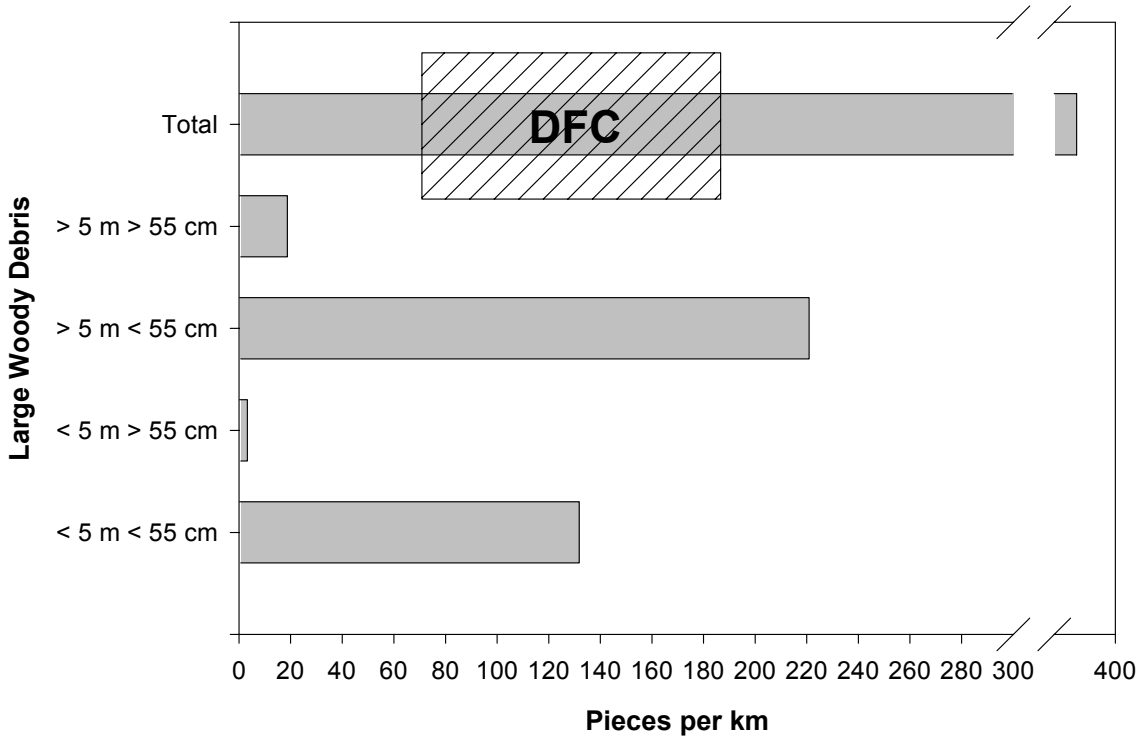
*Calculation sums left riparian + right riparian + stream channel
**Calculation pools left and right riparian measurements, does not sum them



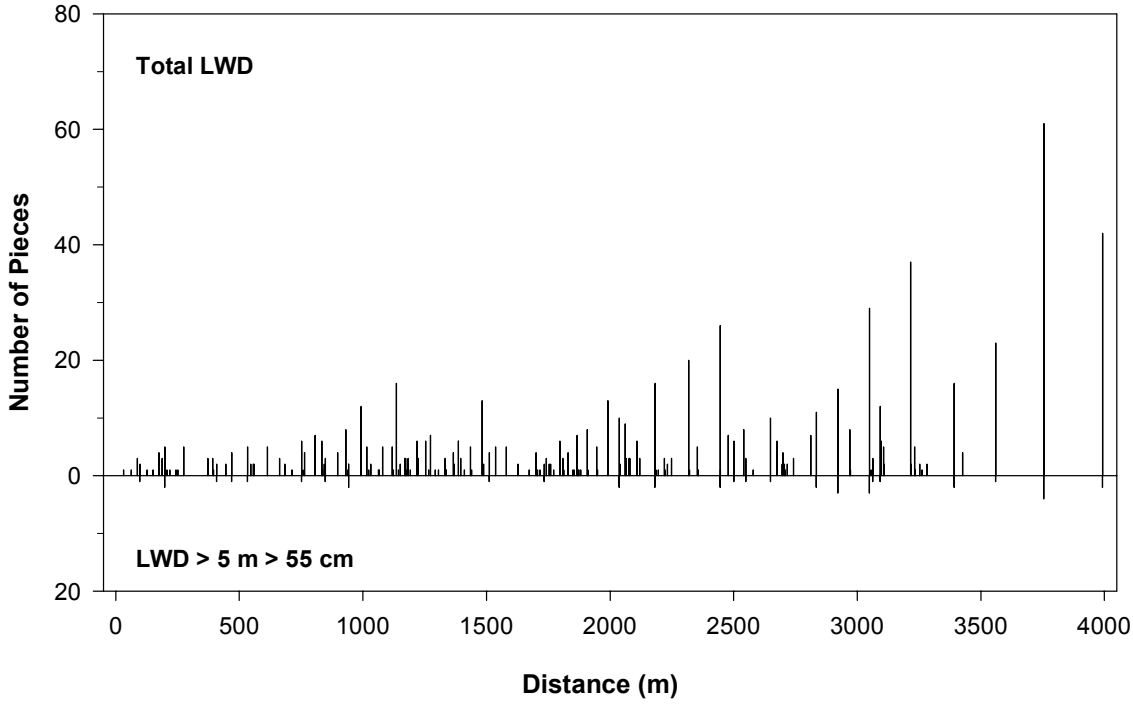
Estimated area of Big Run in pools and riffles as calculated using BVET techniques, summer 2001.



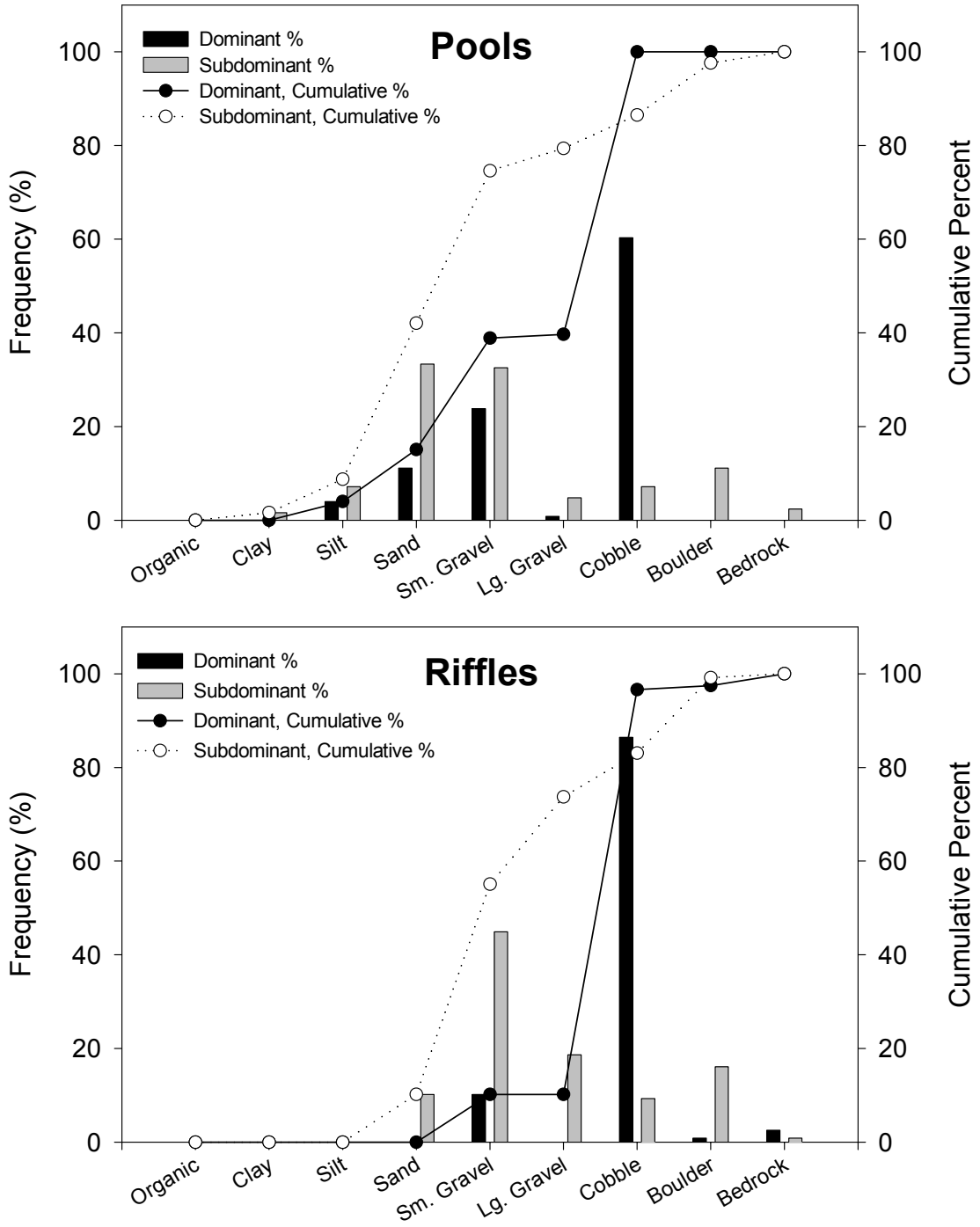
Maximum and average depths and residual pool depths for pools and riffles in Big Run, summer 2001. The top and bottom of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data.



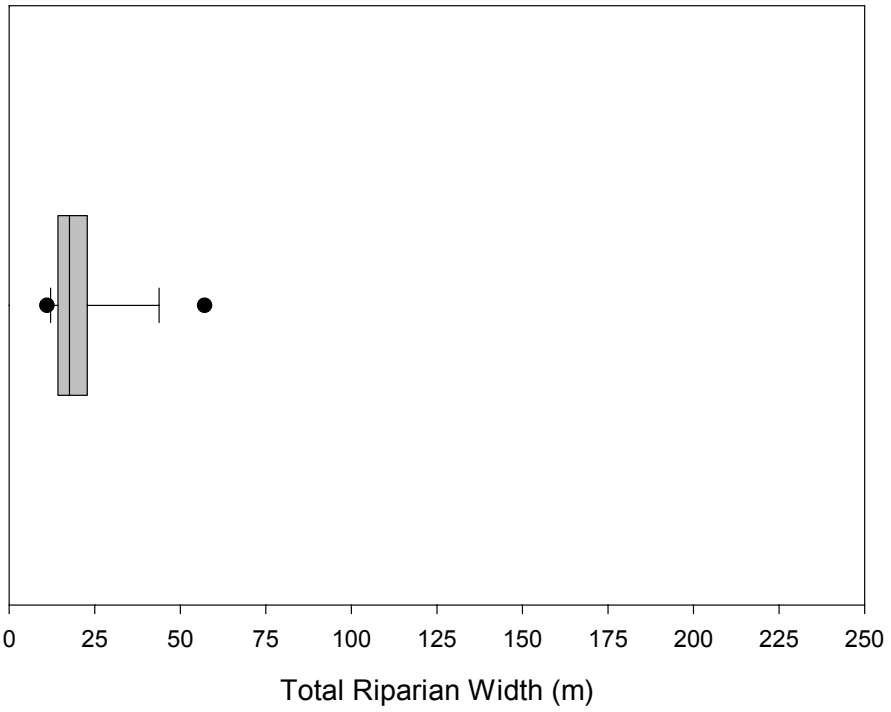
LWD per kilometer in Big Run, summer 2001. Y-axis labels are LWD size classes with the first number indicating length and the second number indicating diameter.



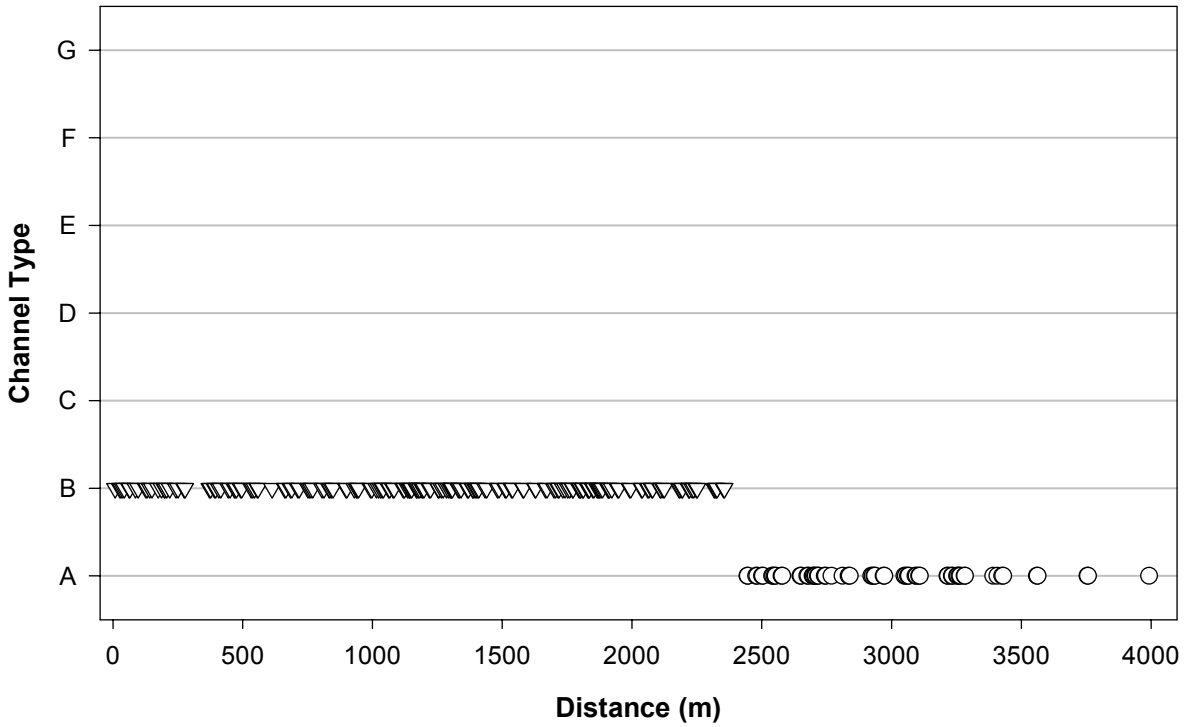
Distribution and abundance of LWD in each habitat unit of Big Run, summer 2001. Bars below the x-axis represent the amount of the total LWD that was >5 m in length, >55 cm in diameter. X-axis indicates distance upstream from Forest boundary.



Frequency (percent) and cumulative percent of dominant and subdominant substrate occurrence for pools and riffles in Big Run, summer 2001.



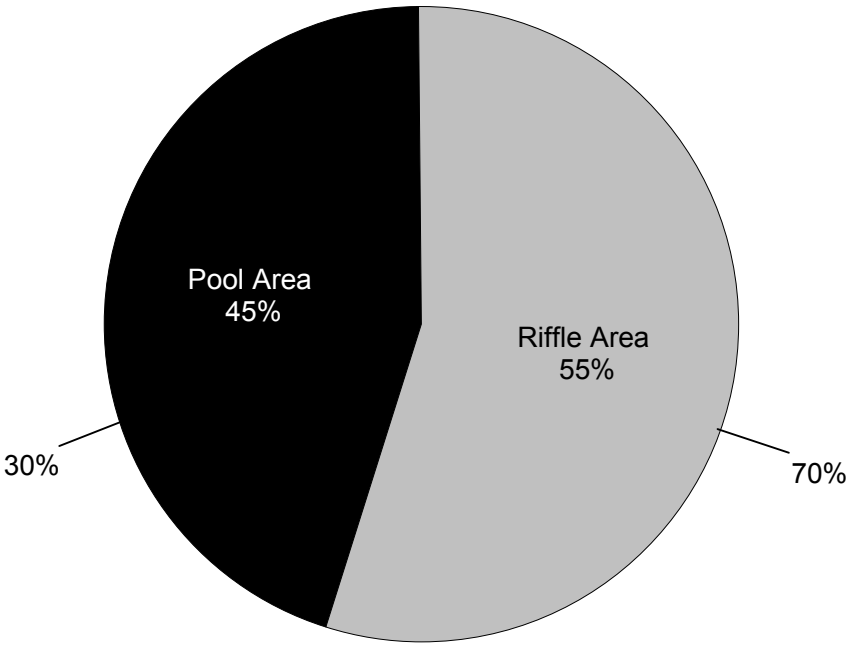
Total riparian widths (left riparian width+right riparian width+wetted channel width) for Big Run, summer 2001. The left and right of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data. Sample size = 11.



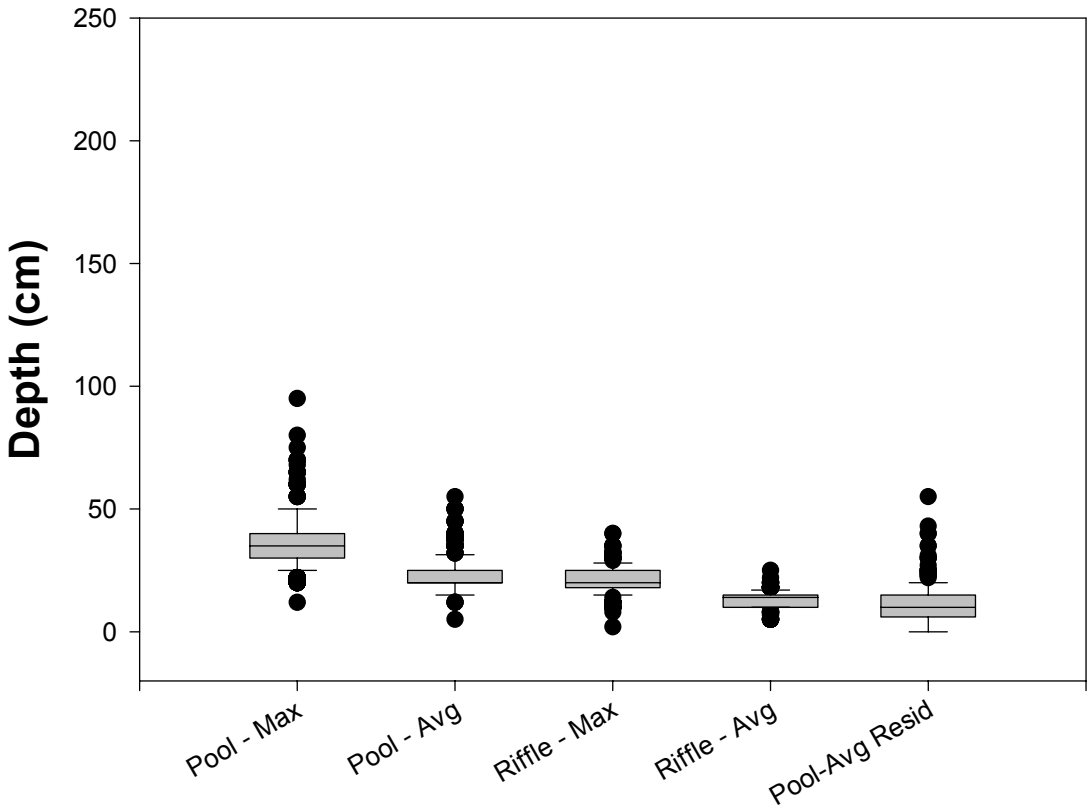
Rosgen's channel classification for each habitat unit in Big Run, summer 2001. X-axis indicates distance upstream from Forest boundary.

Stream:	**Duncan Hollow**
District:	Lee
Quadrangle:	Hamburg
Survey Date:	05/29/01
Downstream Starting Point:	Forest boundary
Total Distance Surveyed (km):	6.5
Percent of Total Area Pools:	**45**
Number of Pools:	390
Number of Pools per km:	60
Total Pool Area (m^2):	8102 ± 630
Mean Pool Area (m^2):	21
Correction Factor:	1.06
Mean Maximum Depth (cm):	36
Mean Average Depth (cm):	23
Mean Residual Pool Depth (cm):	10
Percent of Total Area Riffles:	**55**
Number of Riffles:	324
Number of Riffles per km:	49
Total Riffle Area (m^2):	9994 ± 414
Mean Riffle Area (m^2):	31
Correction Factor:	1.10
Mean Maximum Depth (cm):	21
Mean Average Depth (cm):	13
Number of LWD pieces per km:	**215**
LWD < 5 m, < 55 cm:	110
LWD < 5 m, > 55 cm:	2
LWD > 5 m, < 55 cm:	98
LWD > 5 m, > 55 cm:	5
Mean Channel Width (m):	**4**
Mean Riparian Width (m) (Total*):	**30**
Maximum Riparian Width (Total):	113
75th Percentile (Total)	40
25th Percentile (Total)	19
Minimum Riparian Width (Total):	10
Mean Riparian Width (m) (Left, Right):**	**13**
Maximum Riparian Width (Left, Right):	108
75th Percentile (Left, Right)	17
25th Percentile (Left, Right)	4
Minimum Riparian Width (Left, Right):	1
Percent of Pool Habitat Surveyed as Glides:	**17**
Rosgen's Channel Type Frequency (%):	
Type A:	1
Type B:	92
Type C:	7
Type D:	
Type E:	
Type F:	
Type G:	
Percent Pools with > 35% Embeddedness:	**98**
Average Channel Gradient (%):	**5**

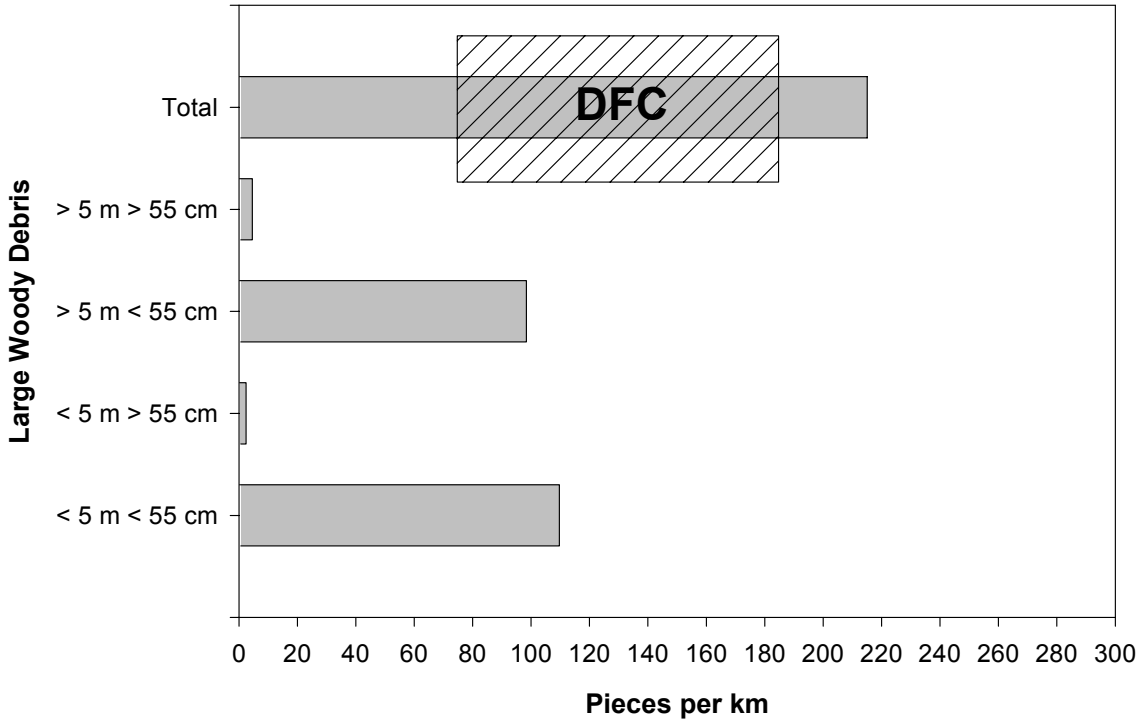
*Calculation sums left riparian + right riparian + stream channel
**Calculation pools left and right riparian measurements, does not sum them



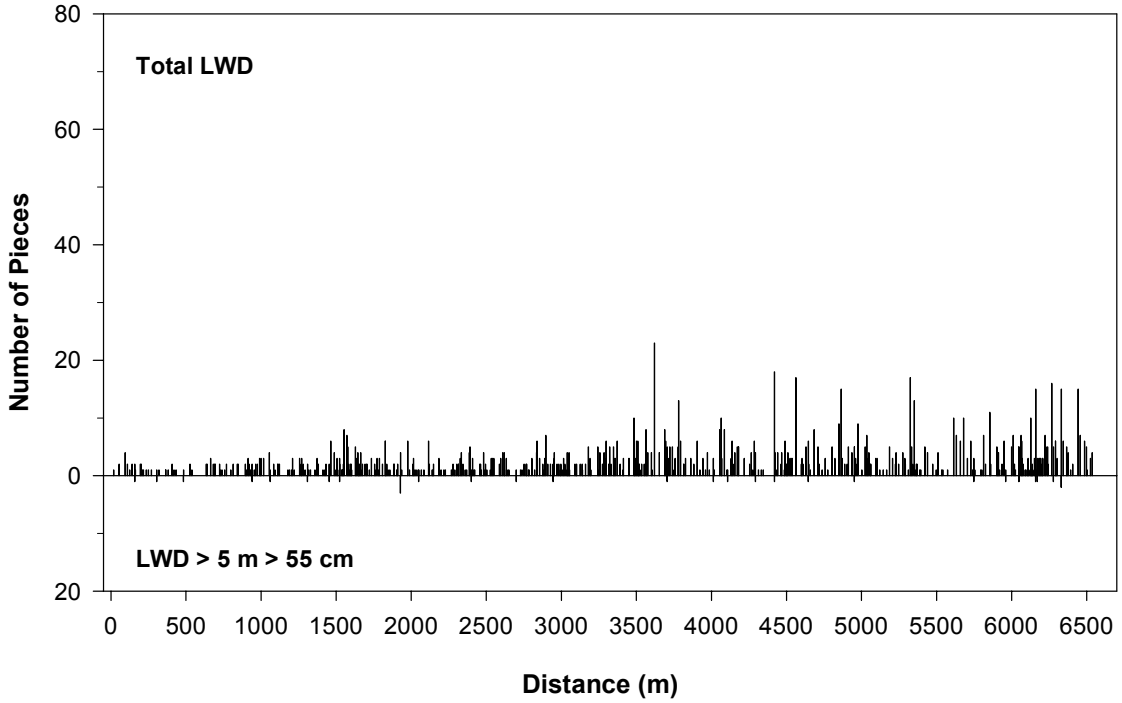
Estimated area of Duncan Hollow in pools and riffles as calculated using BVET techniques, summer 2001.



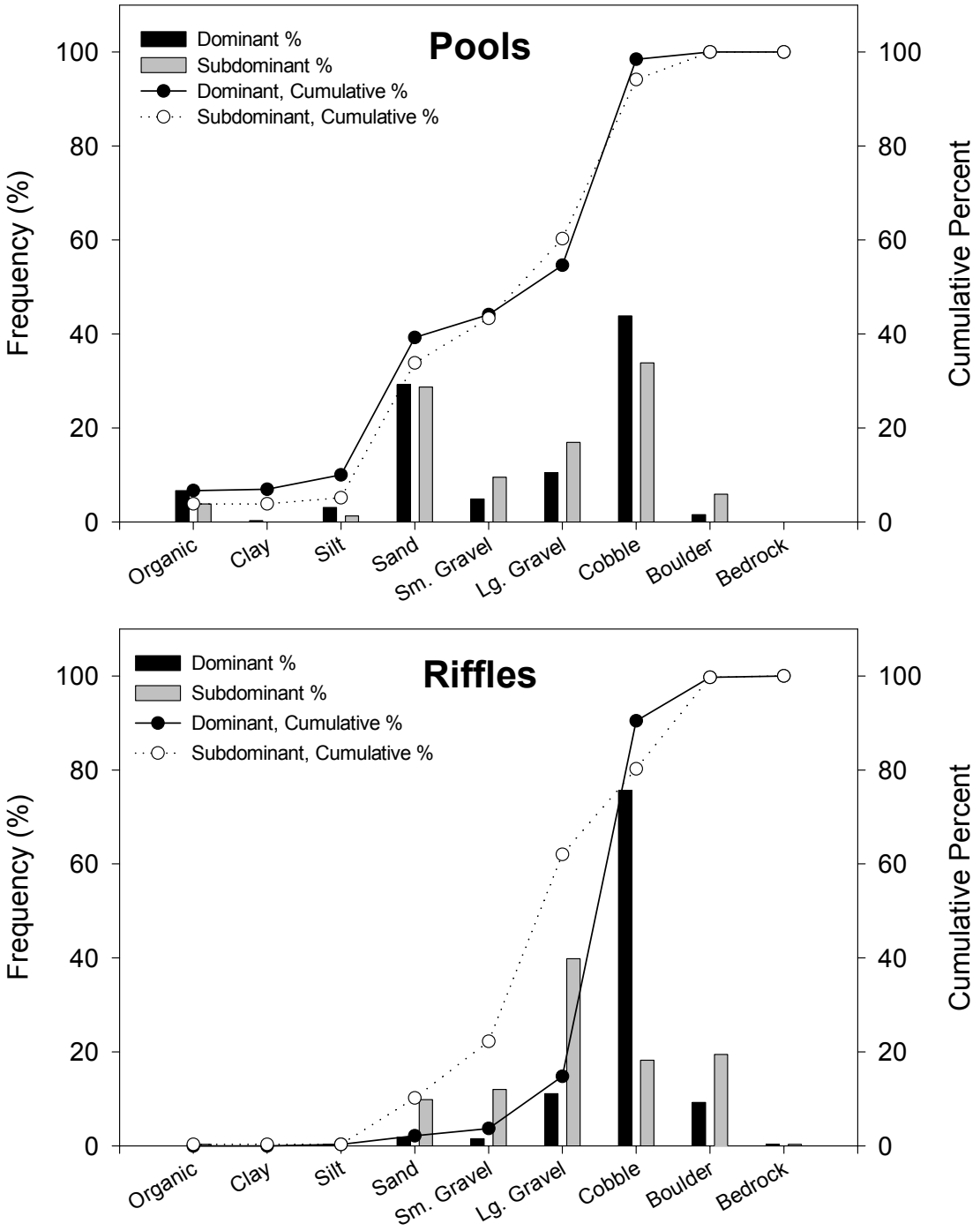
Maximum and average depths and residual pool depths for pools and riffles in Duncan Hollow, summer 2001. The top and bottom of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data.



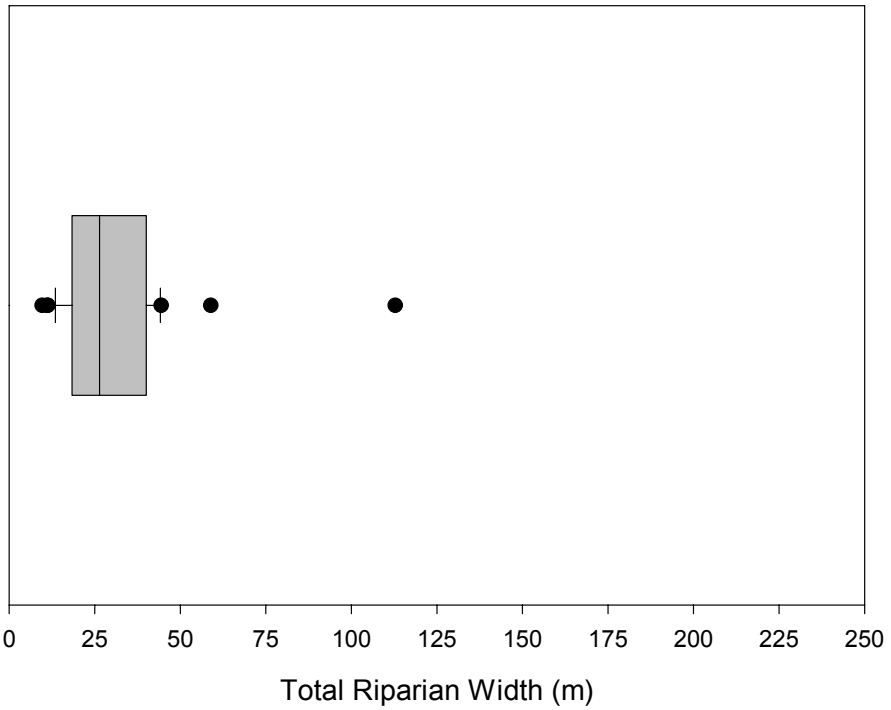
LWD per kilometer in Duncan Hollow, summer 2001. Y-axis labels are LWD size classes with the first number indicating length and the second number indicating diameter.



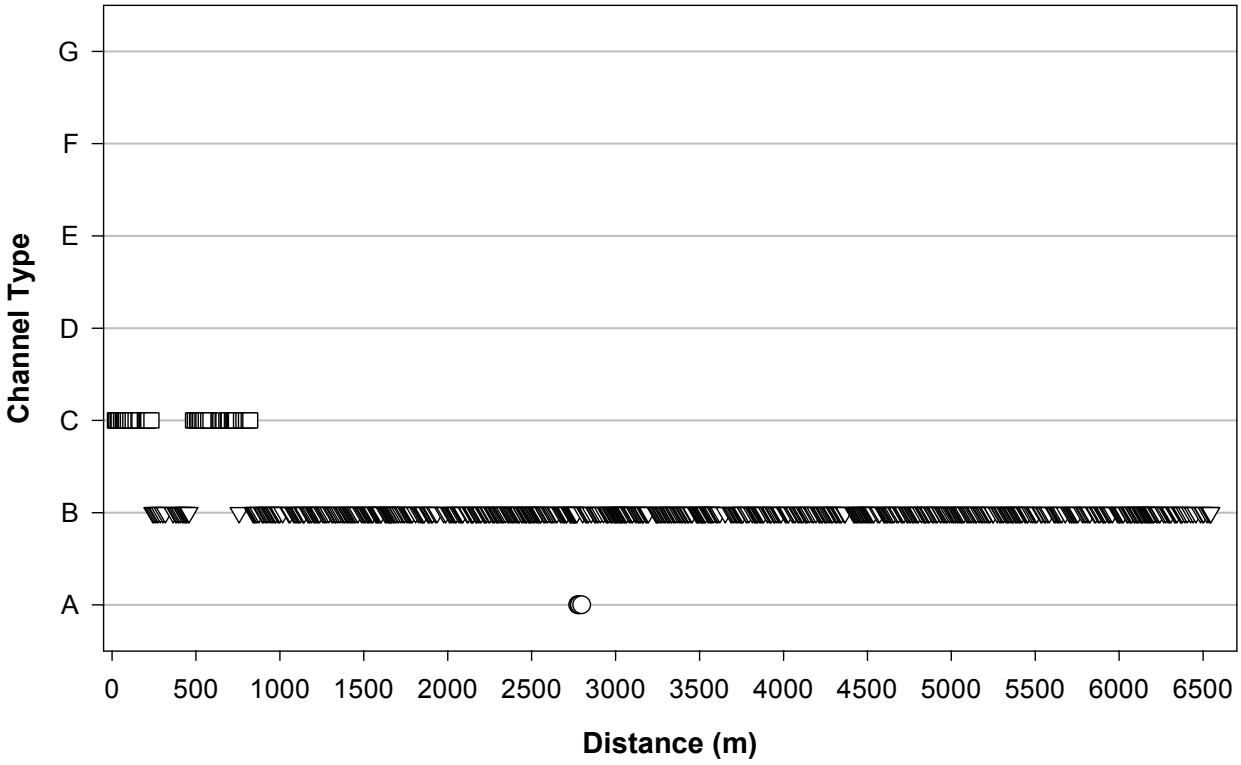
Distribution and abundance of LWD in each habitat unit of Duncan Hollow, summer 2001. Bars below the x-axis represent the amount of the total LWD that was >5 m in length, >55 cm in diameter. X-axis indicates distance upstream from Forest boundary.



Frequency (percent) and cumulative percent of dominant and subdominant substrate occurrence for pools and riffles in Duncan Hollow, summer 2001.



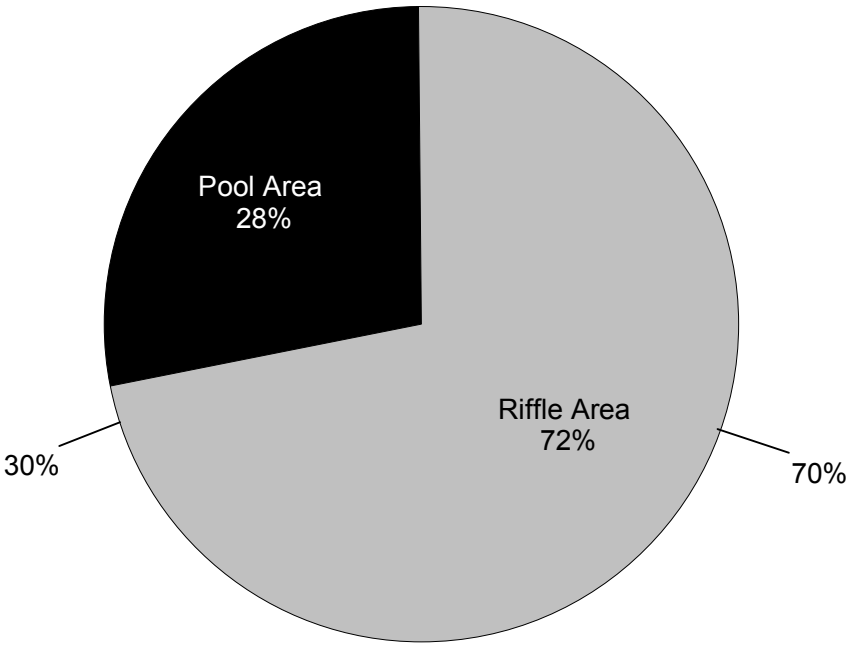
Total riparian widths (left riparian width+right riparian width+wetted channel width) for Duncan Hollow, summer 2001. The left and right of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data. Sample size = 31.



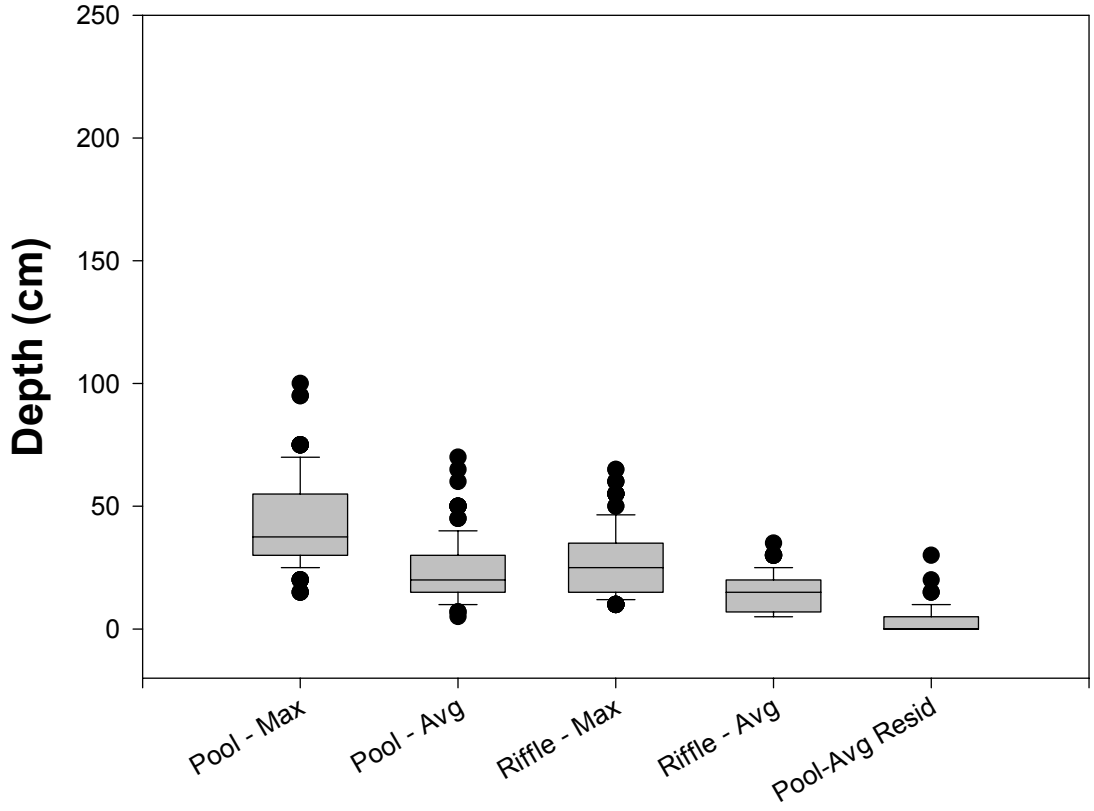
Rosgen's channel classification for each habitat unit in Duncan Hollow, summer 2001. X-axis indicates distance upstream from Forest boundary.

Stream:	**Mountain Run**
District:	Lee
Quadrangle:	Hamburg
Survey Date:	05/29/01
Downstream Starting Point:	Forest boundary
Total Distance Surveyed (km):	2.8
Percent of Total Area Pools:	**28**
Number of Pools:	119
Number of Pools per km:	42
Total Pool Area (m^2):	2594 ± 588
Mean Pool Area (m^2):	22
Correction Factor:	0.89
Mean Maximum Depth (cm):	43
Mean Average Depth (cm):	24
Mean Residual Pool Depth (cm):	4
Percent of Total Area Riffles:	**72**
Number of Riffles:	153
Number of Riffles per km:	54
Total Riffle Area (m^2):	6518 ± 793
Mean Riffle Area (m^2):	43
Correction Factor:	0.86
Mean Maximum Depth (cm):	28
Mean Average Depth (cm):	14
Number of LWD pieces per km:	**109**
LWD < 5 m, < 55 cm:	68
LWD < 5 m, > 55 cm:	9
LWD > 5 m, < 55 cm:	27
LWD > 5 m, > 55 cm:	5
Mean Channel Width (m):	**4**
Mean Riparian Width (m) (Total*):	**25**
Maximum Riparian Width (Total):	75
75th Percentile (Total)	30
25th Percentile (Total)	11
Minimum Riparian Width (Total):	8
Mean Riparian Width (m) (Left, Right):**	**10**
Maximum Riparian Width (Left, Right):	41
75th Percentile (Left, Right)	12
25th Percentile (Left, Right)	2
Minimum Riparian Width (Left, Right):	0
Percent of Pool Habitat Surveyed as Glides:	**8**
Rosgen's Channel Type Frequency (%):	
Type A:	32
Type B:	68
Type C:	0
Type D:	0
Type E:	0
Type F:	0
Type G:	0
Percent Pools with > 35% Embeddedness:	**57**
Average Channel Gradient (%):	**4**

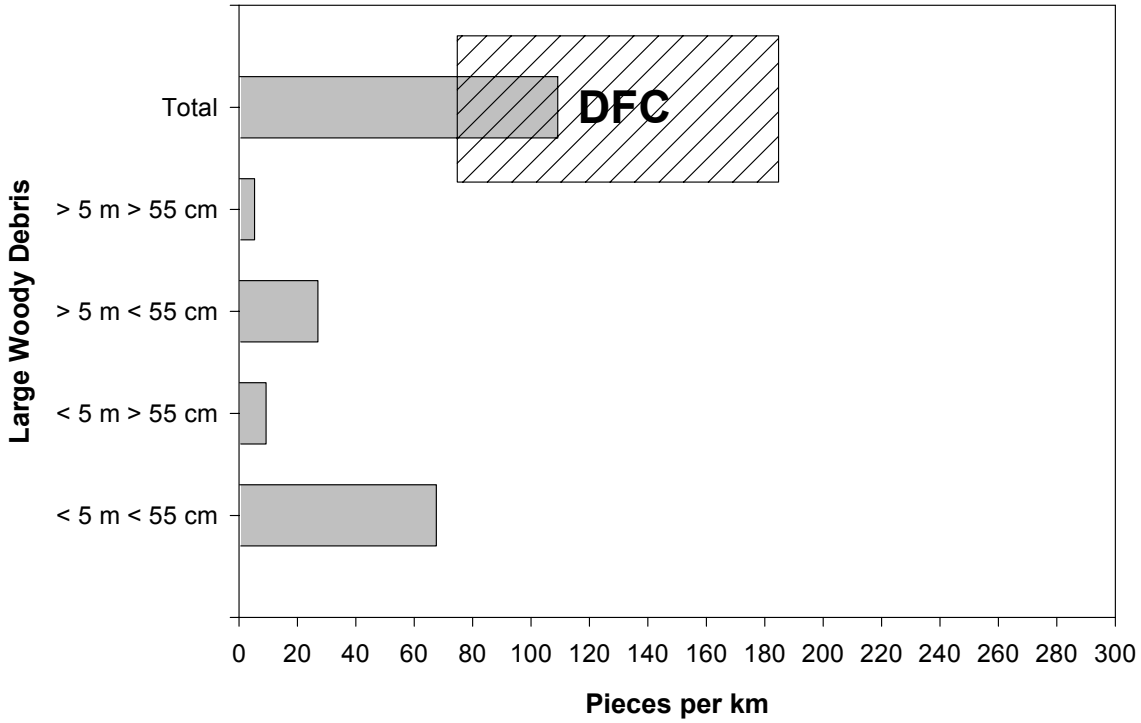
*Calculation sums left riparian + right riparian + stream channel
**Calculation pools left and right riparian measurements, does not sum them



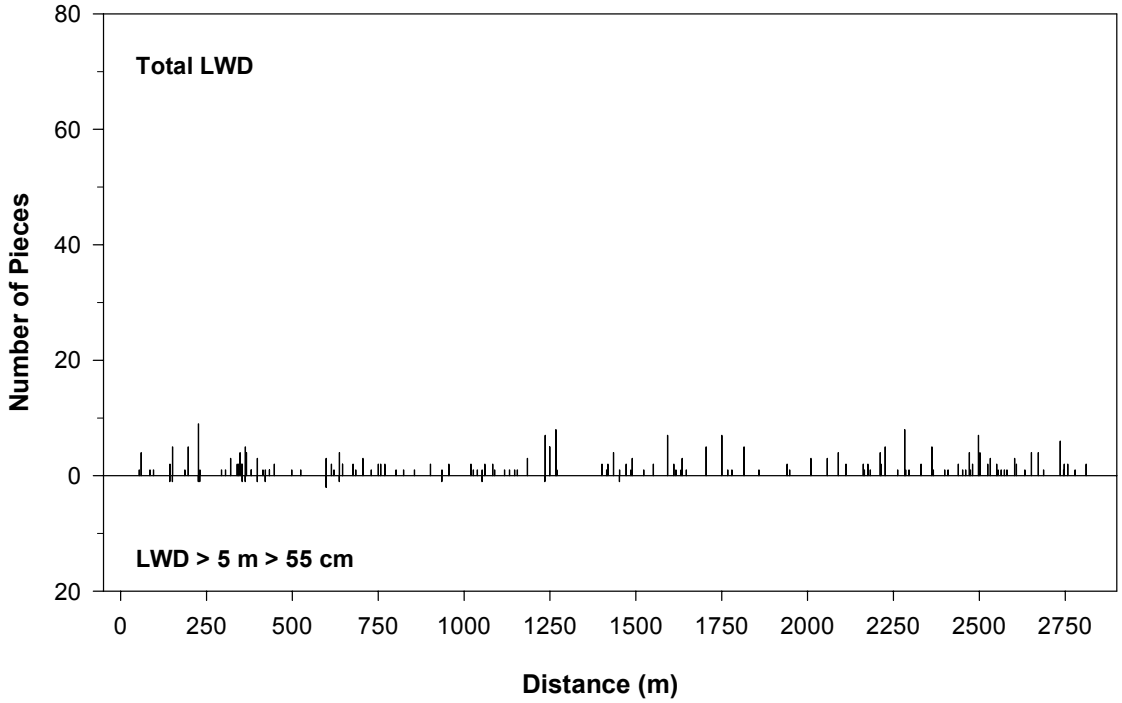
Estimated area of Mountain Run in pools and riffles as calculated using BVET techniques, summer 2001.



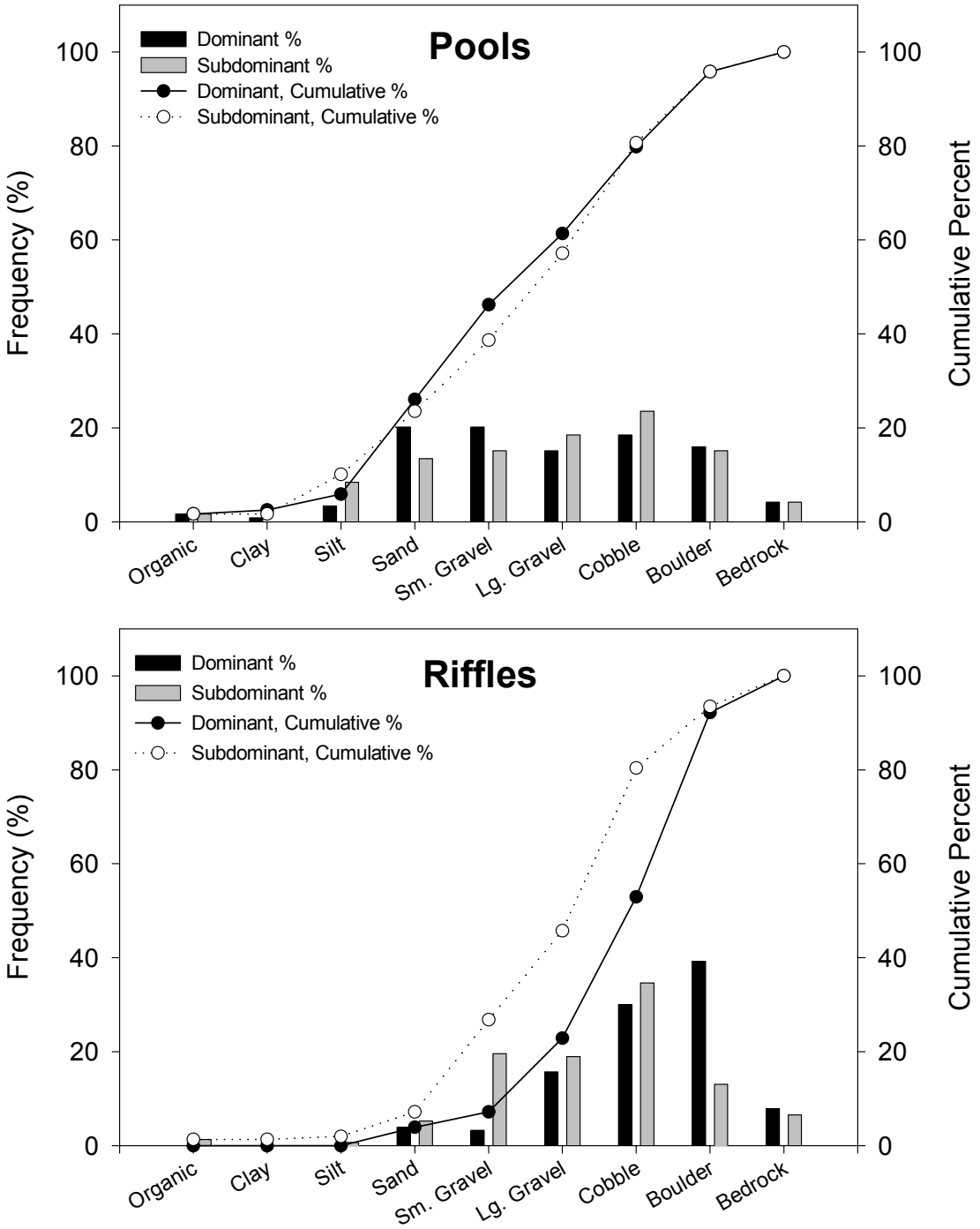
Maximum and average depths and residual pool depths for pools and riffles in Mountain Run, summer 2001. The top and bottom of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data.



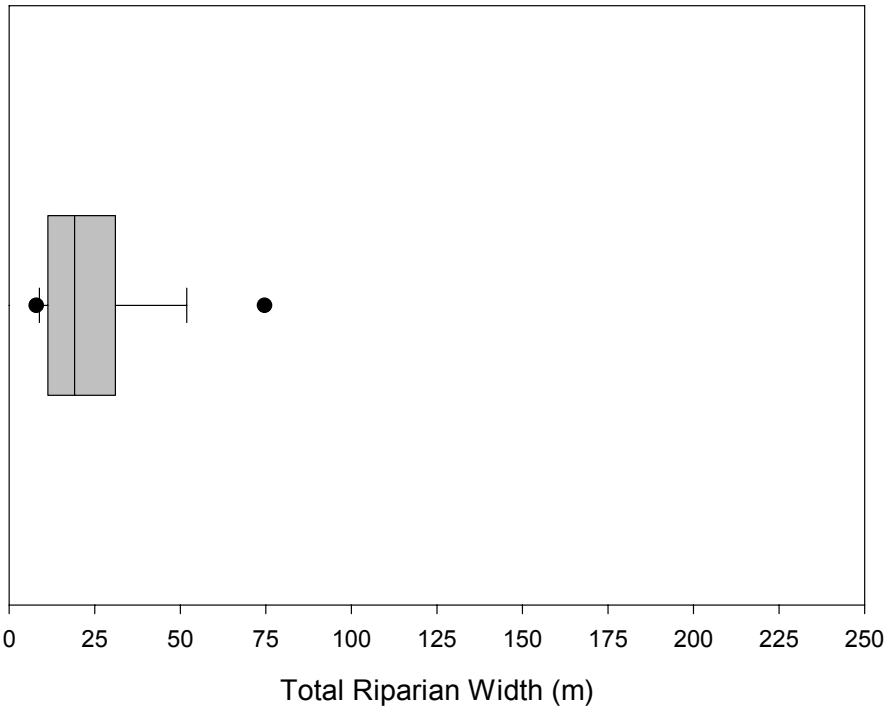
LWD per kilometer in Mountain Run, summer 2001. Y-axis labels are LWD size classes with the first number indicating length and the second number indicating diameter.



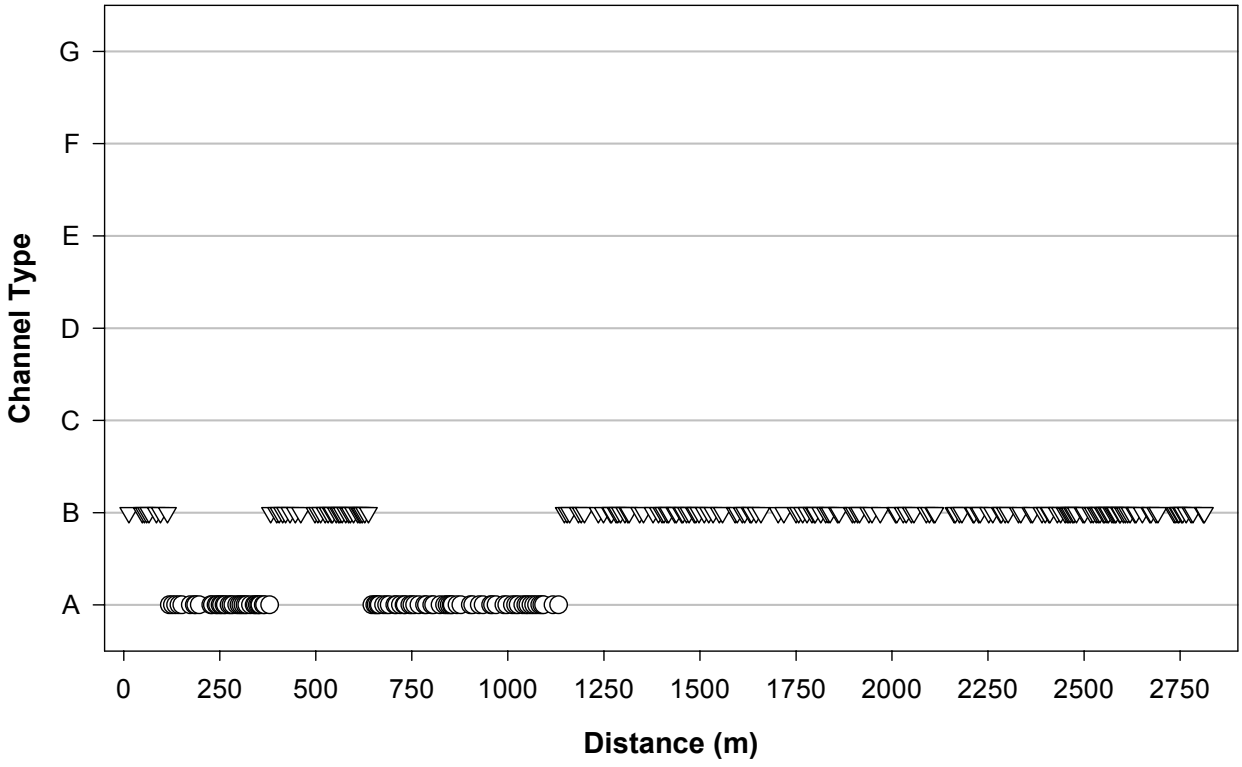
Distribution and abundance of LWD in each habitat unit of Mountain Run, summer 2001. Bars below the x-axis represent the amount of the total LWD that was >5 m in length, >55 cm in diameter. X-axis indicates distance upstream from Forest boundary.



Frequency (percent) and cumulative percent of dominant and subdominant substrate occurrence for pools and riffles in Mountain Run, summer 2001.



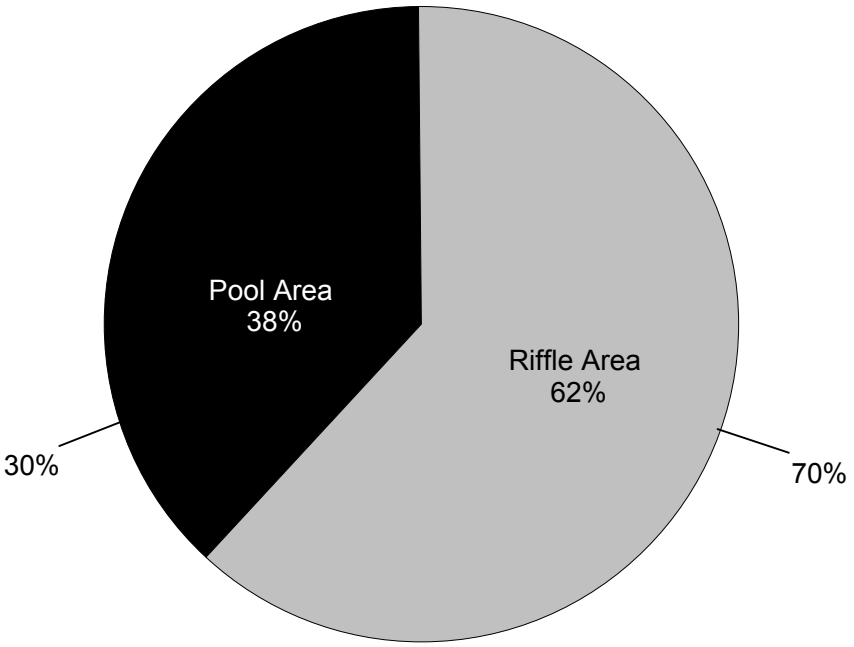
Total riparian widths (left riparian width+right riparian width+wetted channel width) for Mountain Run, summer 2001. The left and right of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data. Sample size = 15.



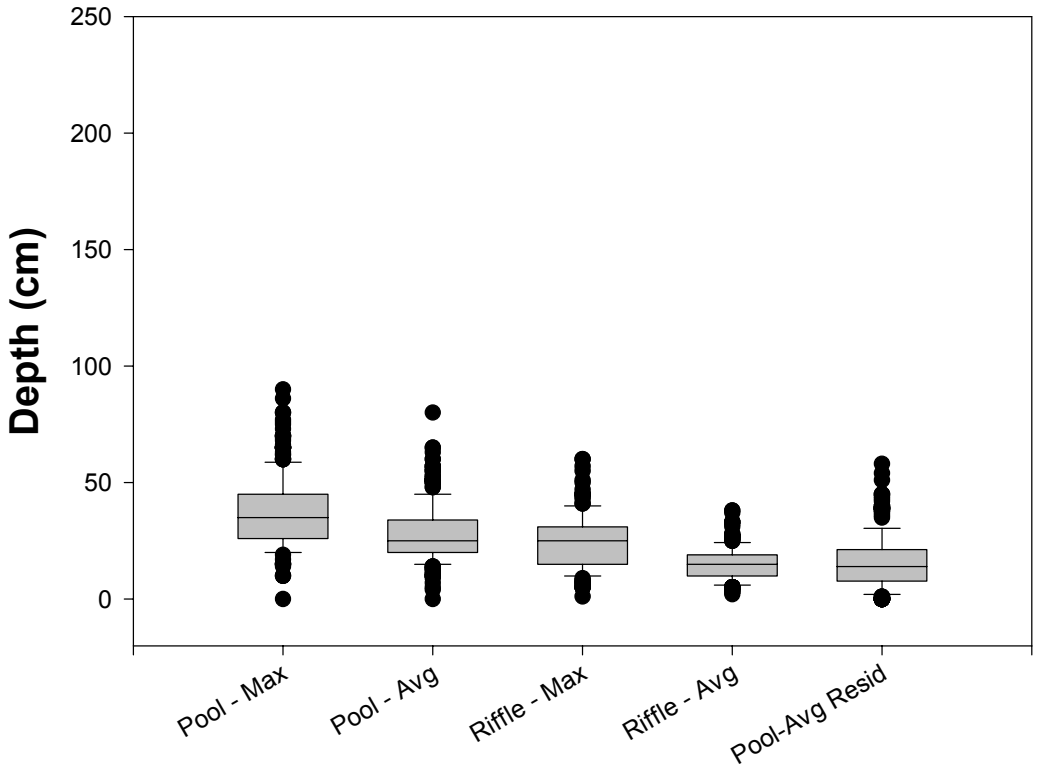
Rosgen's channel classification for each habitat unit in Mountain Run, summer 2001. X-axis indicates distance upstream from Forest boundary.

Stream:	**Passage Creek (upper)**
District:	Lee
Quadrangle:	Hamburg
Survey Date:	05/30/01
Downstream Starting Point:	Forest boundary
Total Distance Surveyed (km):	10.3
Percent of Total Area Pools:	**38**
Number of Pools:	382
Number of Pools per km:	37
Total Pool Area (m^2):	12676 ± 603
Mean Pool Area (m^2):	33
Correction Factor:	1.03
Mean Maximum Depth (cm):	37
Mean Average Depth (cm):	28
Mean Residual Pool Depth (cm):	16
Percent of Total Area Riffles:	**62**
Number of Riffles:	323
Number of Riffles per km:	31
Total Riffle Area (m^2):	20481 ± 1425
Mean Riffle Area (m^2):	63
Correction Factor:	1.04
Mean Maximum Depth (cm):	25
Mean Average Depth (cm):	15
Number of LWD pieces per km:	**133**
LWD < 5 m, < 55 cm:	45
LWD < 5 m, > 55 cm:	50
LWD > 5 m, < 55 cm:	15
LWD > 5 m, > 55 cm:	22
Mean Channel Width (m):	**4**
Mean Riparian Width (m) (Total*):	**30**
Maximum Riparian Width (Total):	93
75th Percentile (Total)	33
25th Percentile (Total)	18
Minimum Riparian Width (Total):	12
Mean Riparian Width (m) (Left, Right):**	**12**
Maximum Riparian Width (Left, Right):	85
75th Percentile (Left, Right)	14
25th Percentile (Left, Right)	4
Minimum Riparian Width (Left, Right):	0
Percent of Pool Habitat Surveyed as Glides:	**12**
Rosgen's Channel Type Frequency (%):	
Type A:	0
Type B:	17
Type C:	82
Type D:	0
Type E:	0
Type F:	0
Type G:	0
Percent Pools with > 35% Embeddedness:	**49**
Average Channel Gradient (%):	**4**

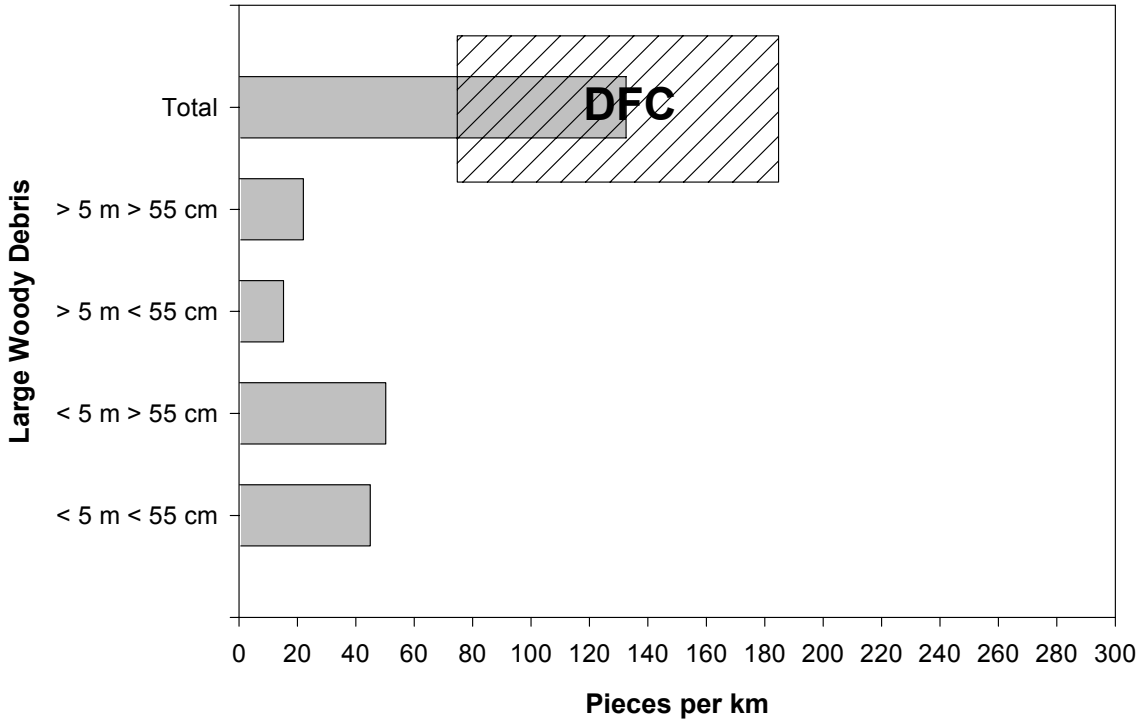
*Calculation sums left riparian + right riparian + stream channel
**Calculation pools left and right riparian measurements, does not sum them



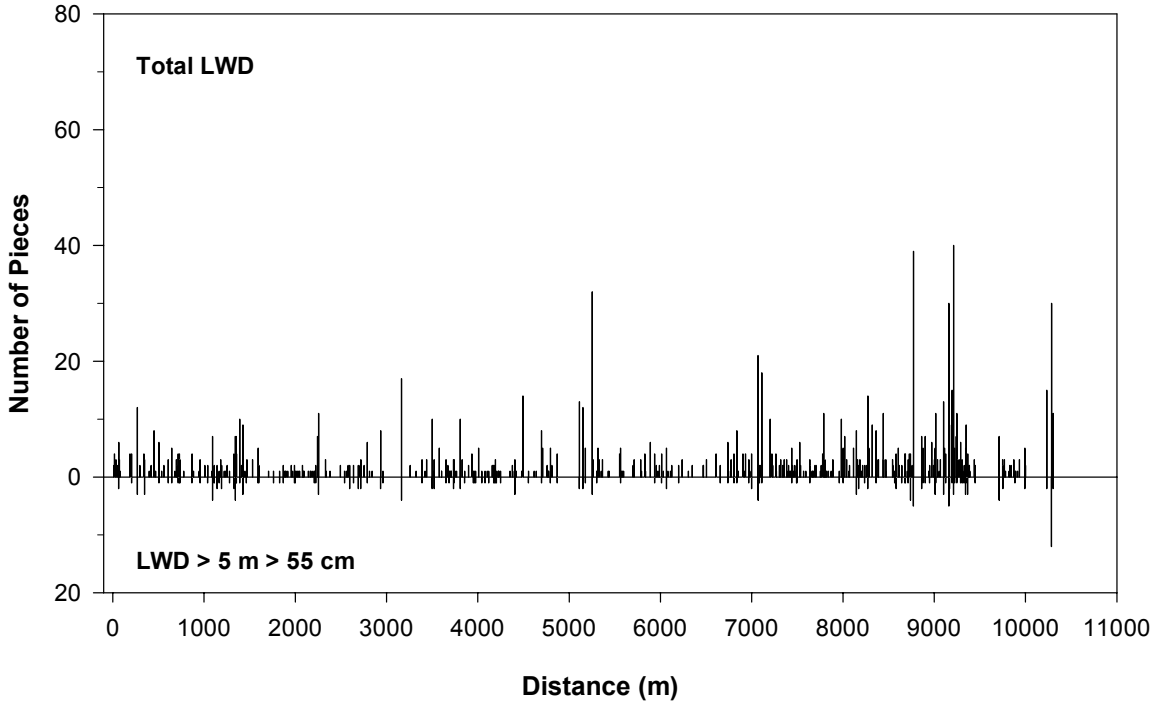
Estimated area of Passage Creek (upper) in pools and riffles as calculated using BVET techniques, summer 2001.



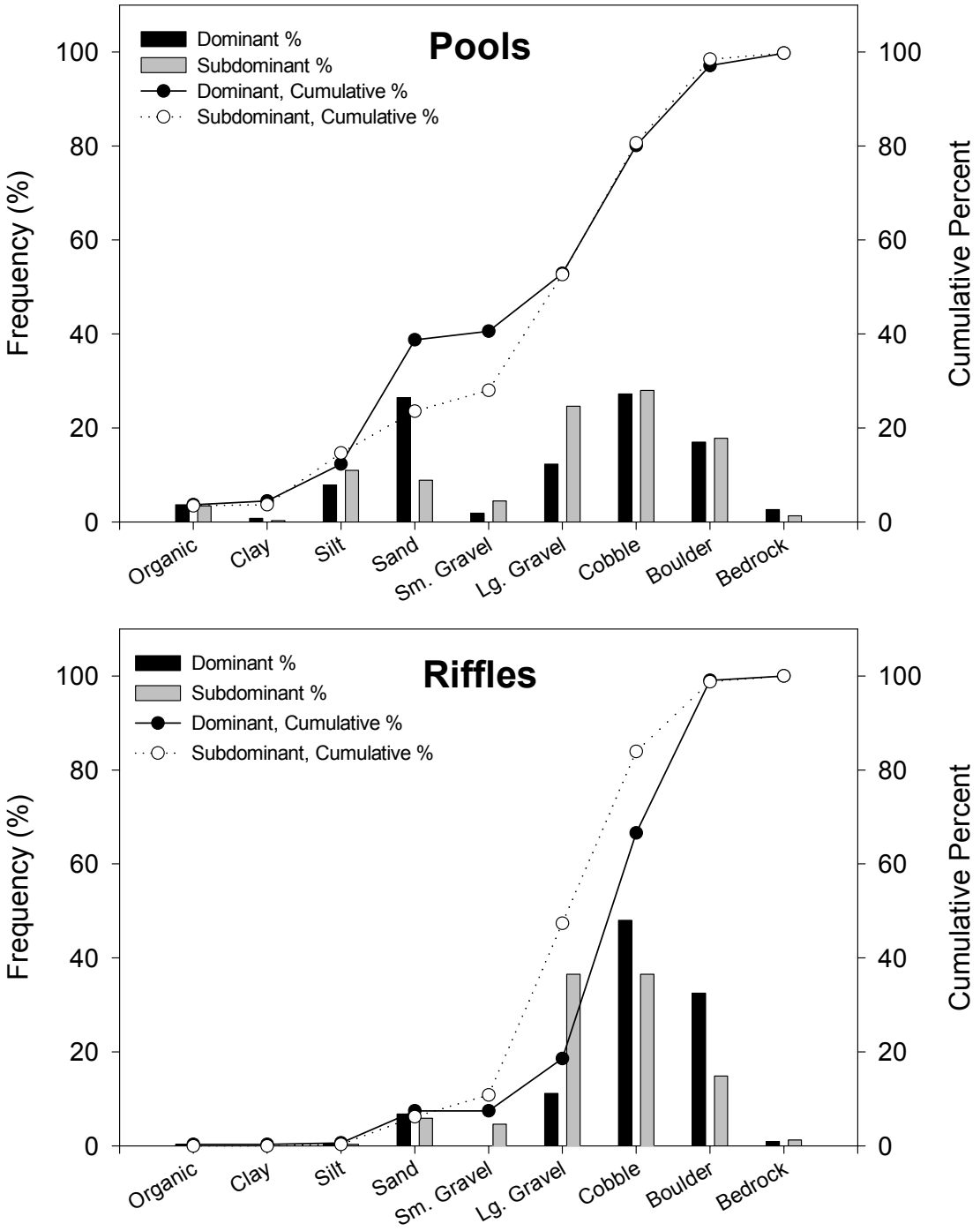
Maximum and average depths and residual pool depths for pools and riffles in Passage Creek (upper), summer 2001. The top and bottom of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data.



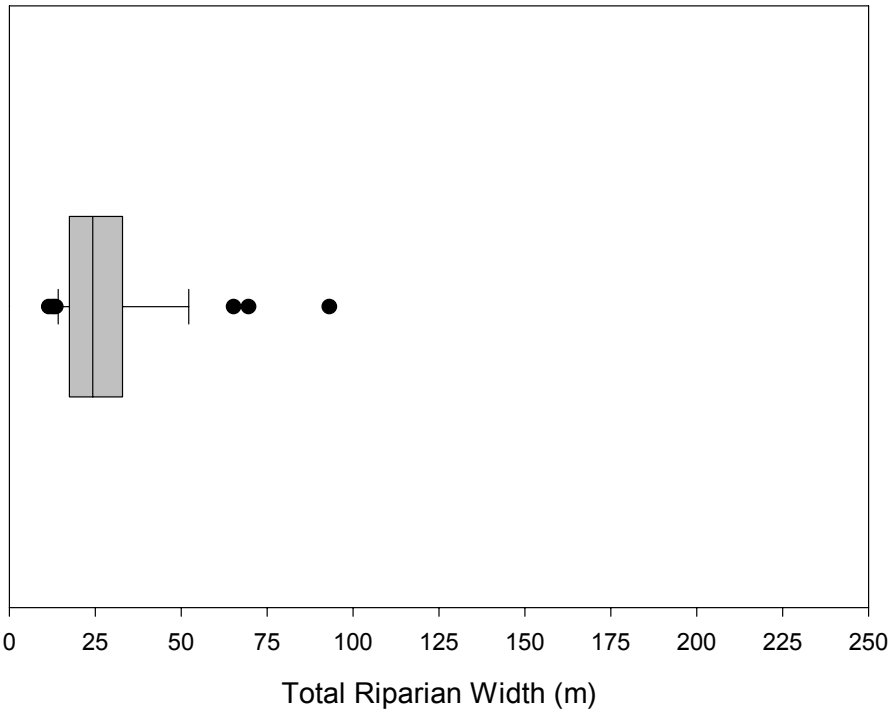
LWD per kilometer in Passage Creek upper, summer 2001. Y-axis labels are LWD size classes with the first number indicating length and the second number indicating diameter.



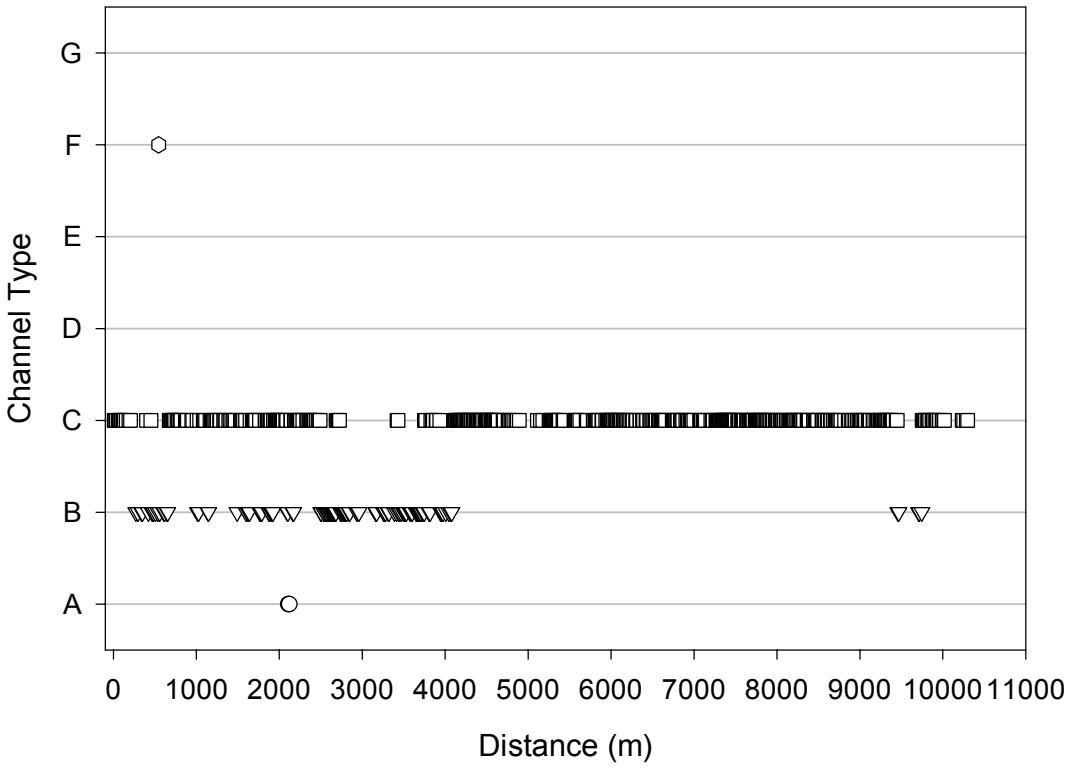
Distribution and abundance of LWD in each habitat unit of Passage Creek upper, summer 2001. Bars below the x-axis represent the amount of the total LWD that was >5 m in length, >55 cm in diameter. X-axis indicates distance upstream from Forest boundary.



Frequency (percent) and cumulative percent of dominant and subdominant substrate occurrence for pools and riffles in Passage Creek upper, summer 2001.



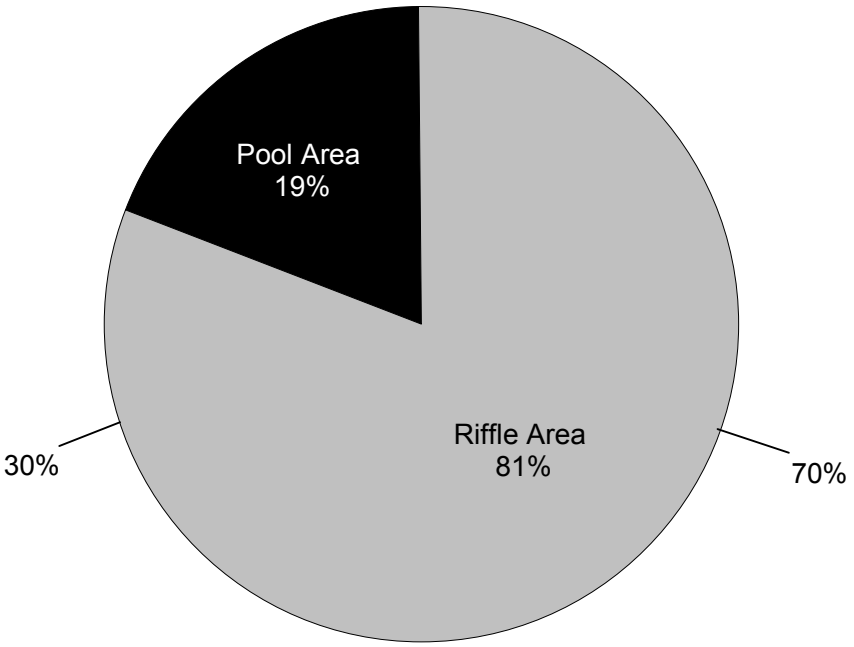
Total riparian widths (left riparian width+right riparian width+wetted channel width) for Passage Creek upper, summer 2001. The left and right of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data. Sample size = 33.



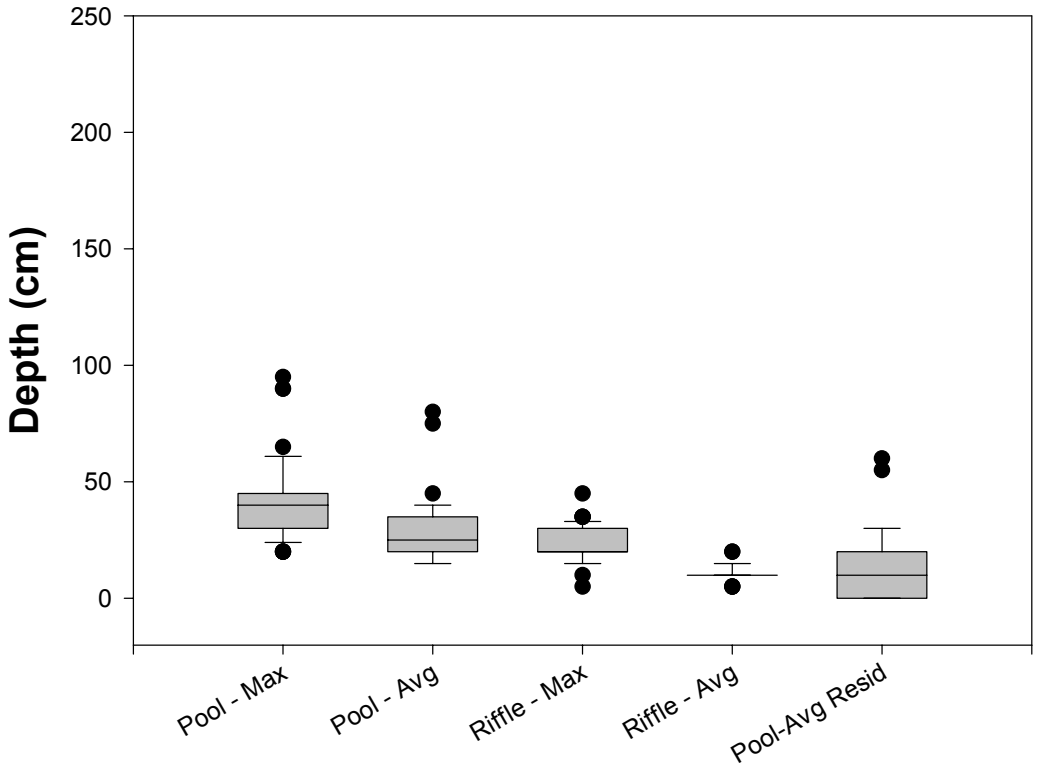
Rosgen's channel classification for each habitat unit in Passage Creek upper, summer 2001. X-axis indicates distance upstream from Forest boundary.

Stream:	**Anderson Run**
District:	Lee
Quadrangle:	Orkney Springs
Survey Date:	08/14/01
Downstream Starting Point:	Forest boundary
Total Distance Surveyed (km):	1.3
Percent of Total Area Pools:	**19**
Number of Pools:	43
Number of Pools per km:	34
Total Pool Area (m^2):	367 ± 738
Mean Pool Area (m^2):	9
Correction Factor:	1.05
Mean Maximum Depth (cm):	41
Mean Average Depth (cm):	29
Mean Residual Pool Depth (cm):	13
Percent of Total Area Riffles:	**81**
Number of Riffles:	39
Number of Riffles per km:	31
Total Riffle Area (m^2):	1612 ± 322
Mean Riffle Area (m^2):	41
Correction Factor:	1.09
Mean Maximum Depth (cm):	23
Mean Average Depth (cm):	11
Number of LWD pieces per km:	**75**
LWD < 5 m, < 55 cm:	45
LWD < 5 m, > 55 cm:	19
LWD > 5 m, < 55 cm:	7
LWD > 5 m, > 55 cm:	4
Mean Channel Width (m):	**4**
Mean Riparian Width (m) (Total*):	**12**
Maximum Riparian Width (Total):	22
75th Percentile (Total)	14
25th Percentile (Total)	9
Minimum Riparian Width (Total):	5
Mean Riparian Width (m) (Left, Right):**	**4**
Maximum Riparian Width (Left, Right):	9
75th Percentile (Left, Right)	6
25th Percentile (Left, Right)	2
Minimum Riparian Width (Left, Right):	1
Percent of Pool Habitat Surveyed as Glides:	**26**
Rosgen's Channel Type Frequency (%):	
Type A:	37
Type B:	52
Type C:	11
Type D:	0
Type E:	0
Type F:	0
Type G:	0
Percent Pools with > 35% Embeddedness:	**88**
Average Channel Gradient (%):	**7**

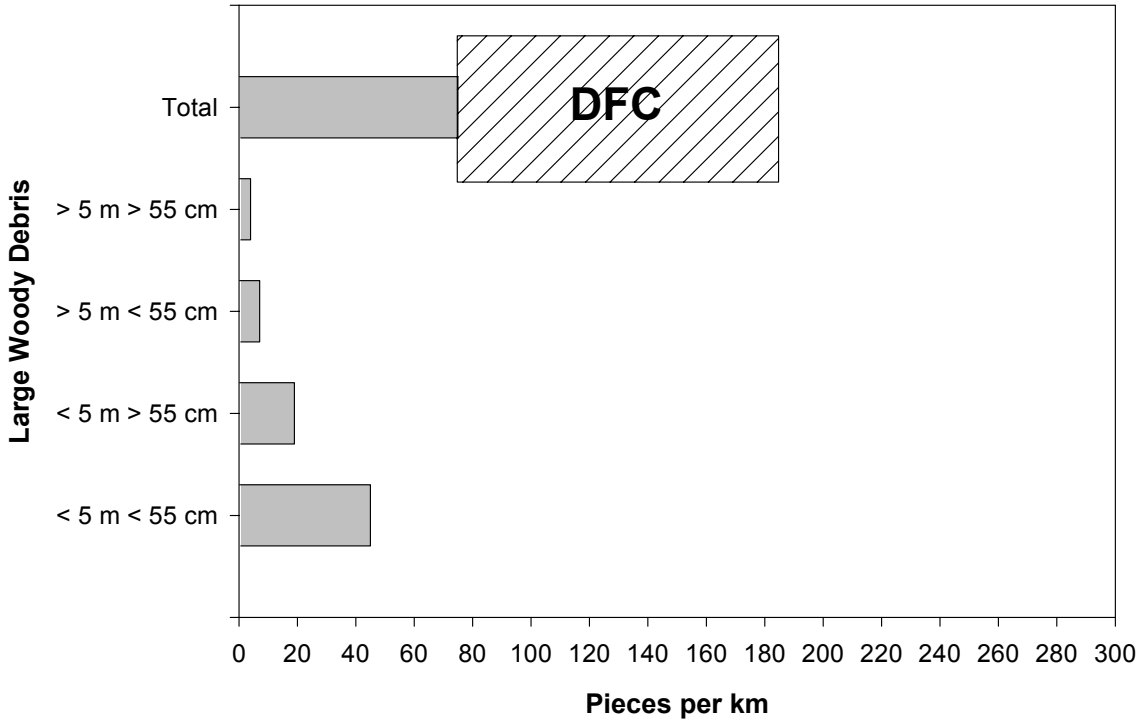
*Calculation sums left riparian + right riparian + stream channel
**Calculation pools left and right riparian measurements, does not sum them



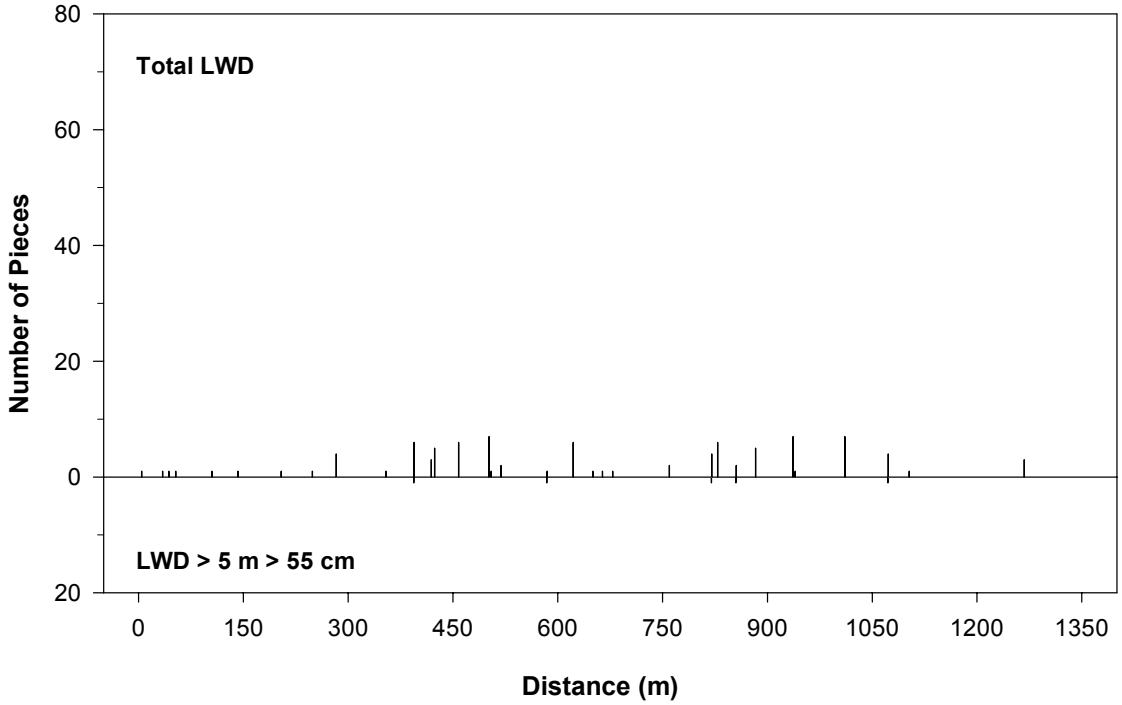
Estimated area of Anderson Run in pools and riffles as calculated using BVET techniques, summer 2001.



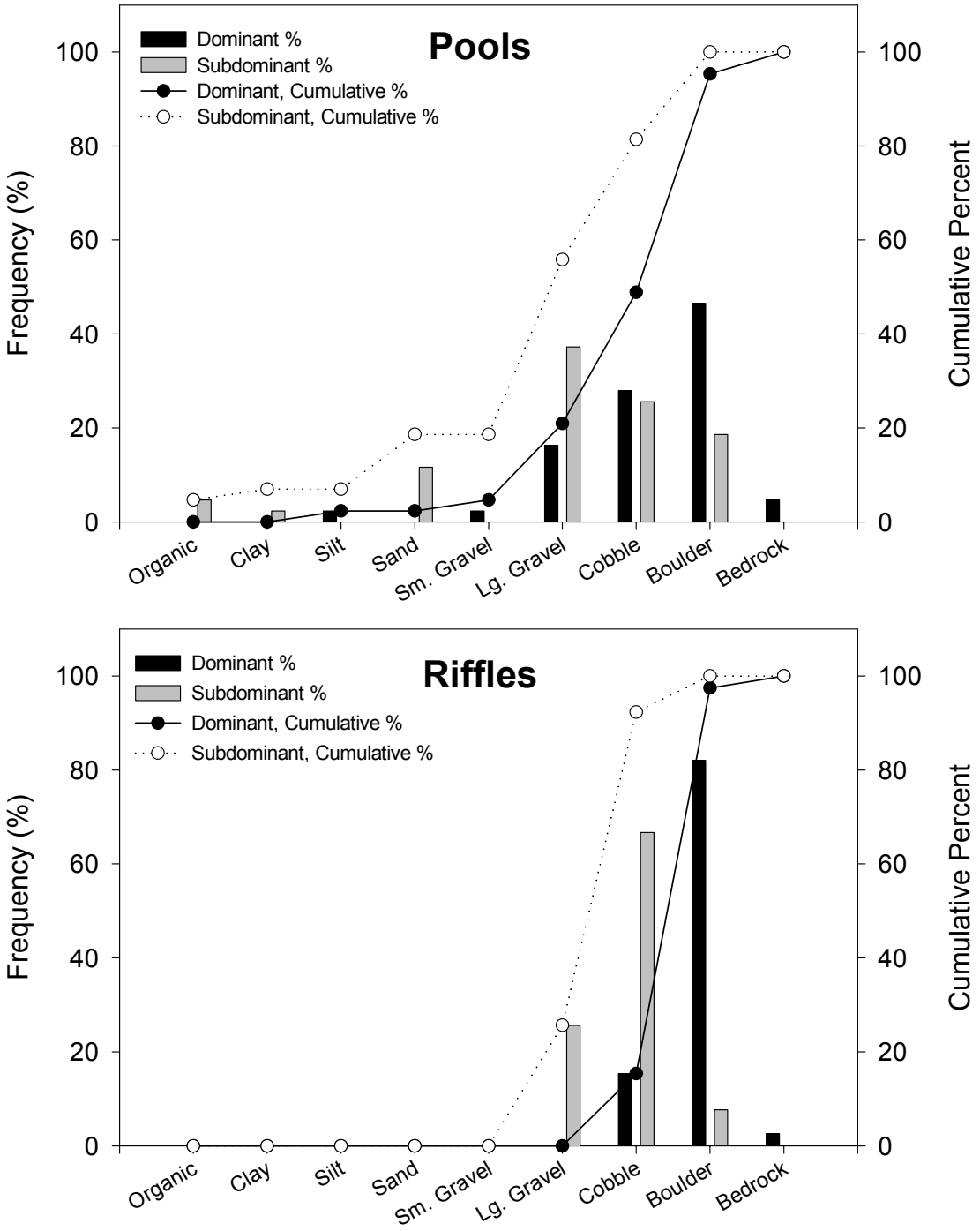
Maximum and average depths and residual pool depths for pools and riffles in Anderson Run, summer 2001. The top and bottom of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data.



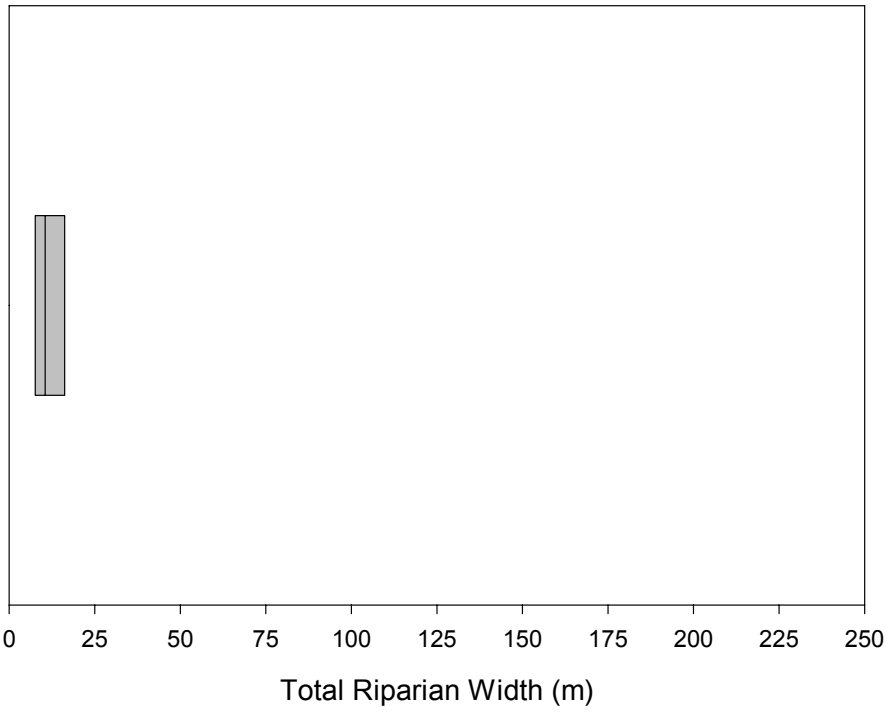
LWD per kilometer in Anderson Run, summer 2001. Y-axis labels are LWD size classes with the first number indicating length and the second number indicating diameter.



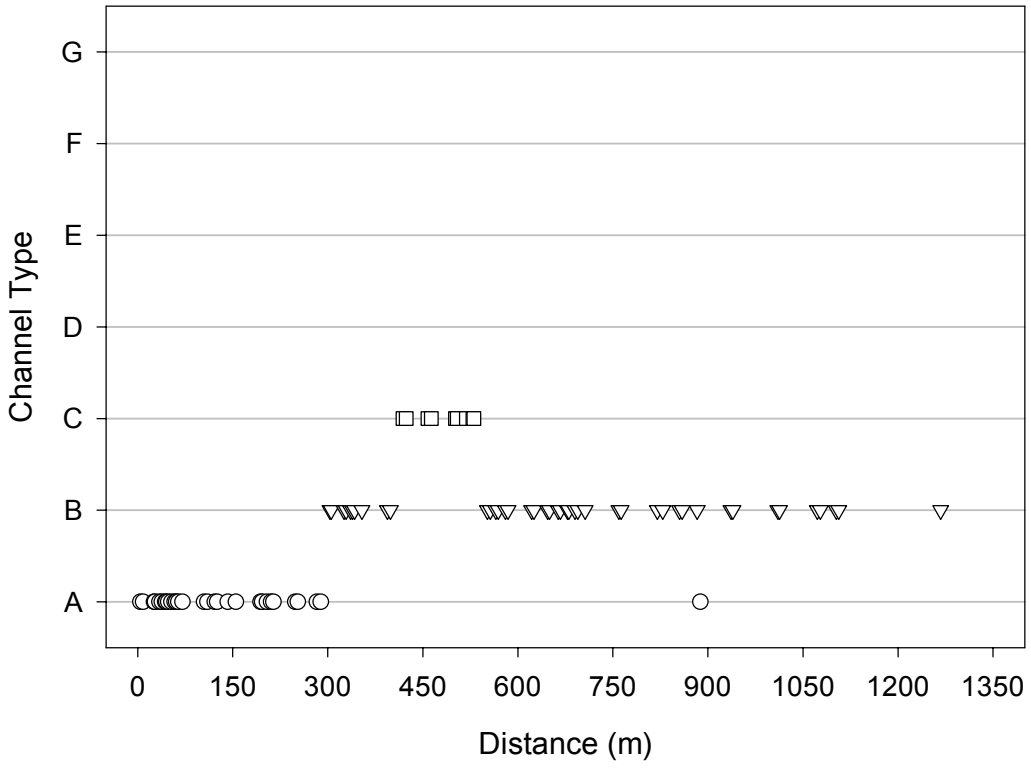
Distribution and abundance of LWD in each habitat unit of Anderson Run, summer 2001. Bars below the x-axis represent the amount of the total LWD that was >5 m in length, >55 cm in diameter. X-axis indicates distance upstream from Forest boundary.



Frequency (percent) and cumulative percent of dominant and subdominant substrate occurrence for pools and riffles in Anderson Run, summer 2001.



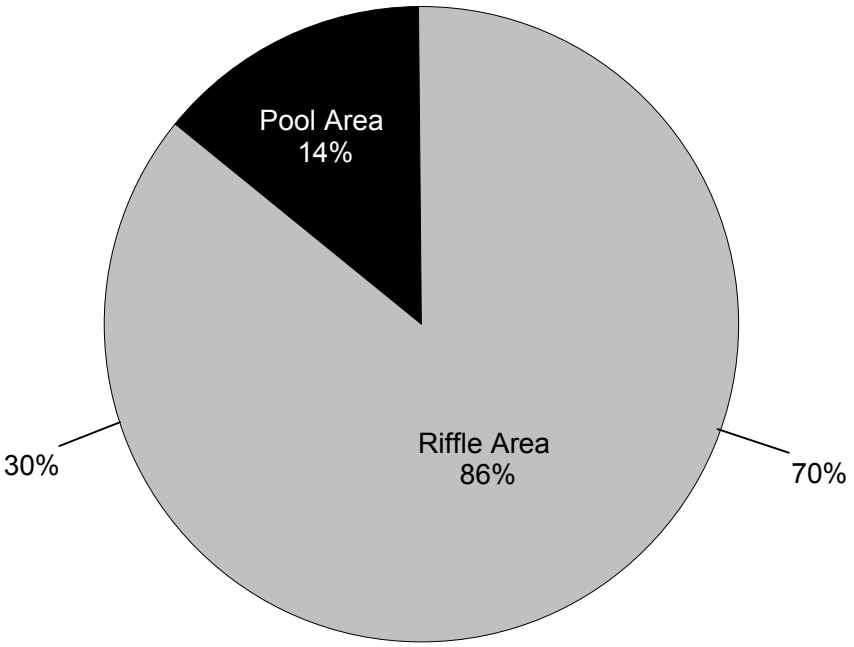
Total riparian widths (left riparian width+right riparian width+wetted channel width) for Anderson Run, summer 2001. The left and right of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data. Sample size = 4.



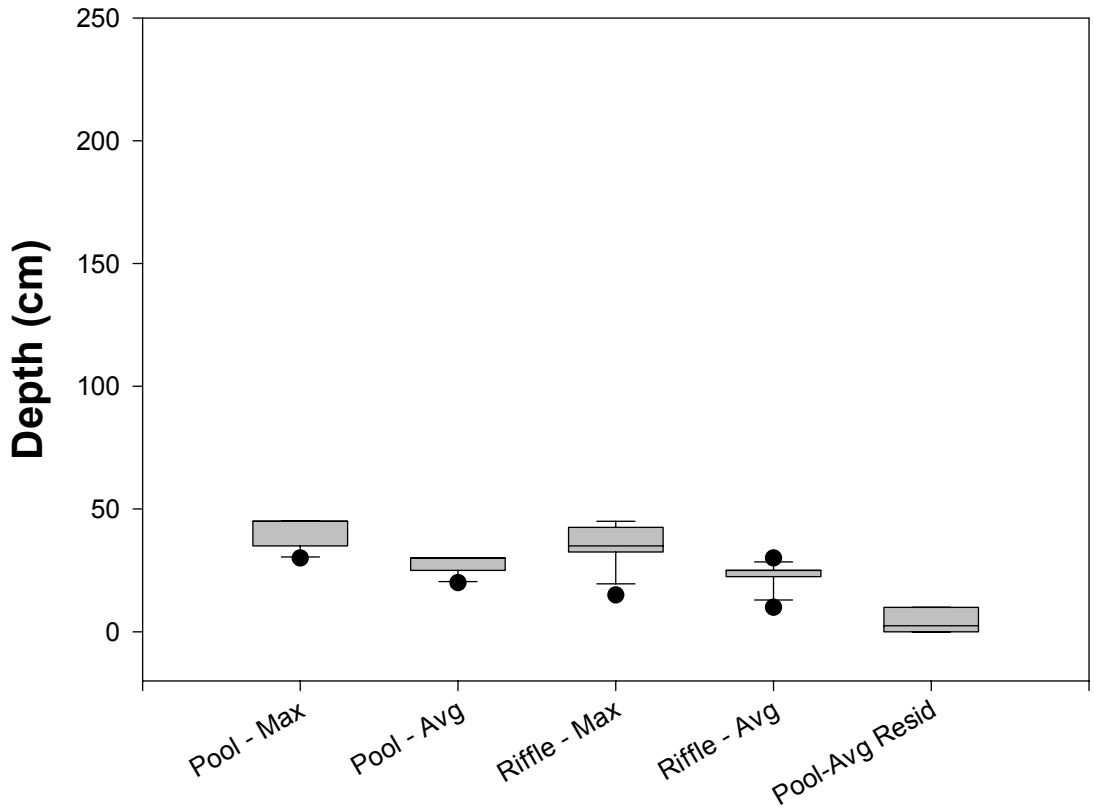
Rosgen's channel classification for each habitat unit in Anderson Run, summer 2001. X-axis indicates distance upstream from Forest boundary.

Stream:	**Bean Run (lower)**
District:	Lee
Quadrangle:	Orkney Springs
Survey Date:	08/15/01
Downstream Starting Point:	Bull/Bear/Bean junction
Total Distance Surveyed (km):	0.3
Percent of Total Area Pools:	**14**
Number of Pools:	6
Number of Pools per km:	20
Total Pool Area (m^2):	138 ± NA
Mean Pool Area (m^2):	23
Correction Factor:	0.95
Mean Maximum Depth (cm):	41
Mean Average Depth (cm):	28
Mean Residual Pool Depth (cm):	4
Percent of Total Area Riffles:	**86**
Number of Riffles:	8
Number of Riffles per km:	27
Total Riffle Area (m^2):	845 ± NA
Mean Riffle Area (m^2):	106
Correction Factor:	0.93
Mean Maximum Depth (cm):	35
Mean Average Depth (cm):	23
Number of LWD pieces per km:	**63**
LWD < 5 m, < 55 cm:	13
LWD < 5 m, > 55 cm:	33
LWD > 5 m, < 55 cm:	10
LWD > 5 m, > 55 cm:	7
Mean Channel Width (m):	**7**
Mean Riparian Width (m) (Total*):	**31**
Maximum Riparian Width (Total):	31
75th Percentile (Total)	31
25th Percentile (Total)	31
Minimum Riparian Width (Total):	31
Mean Riparian Width (m) (Left, Right):**	**12**
Maximum Riparian Width (Left, Right):	14
75th Percentile (Left, Right)	13
25th Percentile (Left, Right)	12
Minimum Riparian Width (Left, Right):	11
Percent of Pool Habitat Surveyed as Glides:	**0**
Rosgen's Channel Type Frequency (%):	
Type A:	0
Type B:	0
Type C:	100
Type D:	0
Type E:	0
Type F:	0
Type G:	0
Percent Pools with > 35% Embeddedness:	**100**
Average Channel Gradient (%):	**3**

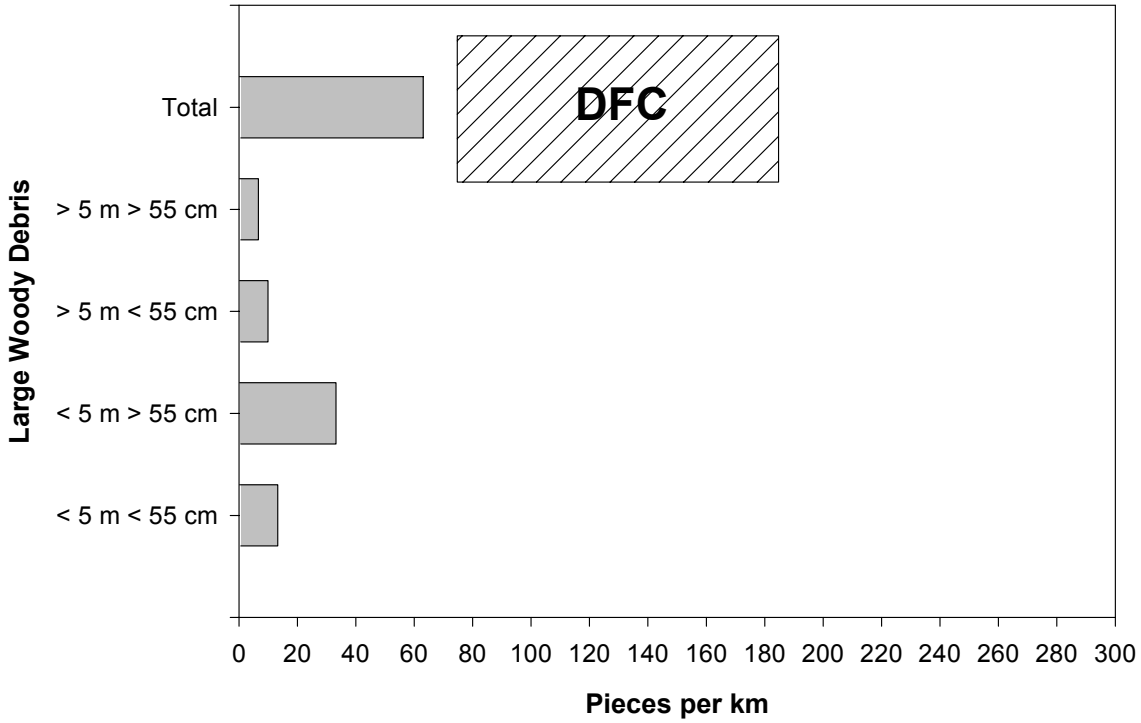
*Calculation sums left riparian + right riparian + stream channel
**Calculation pools left and right riparian measurements, does not sum them



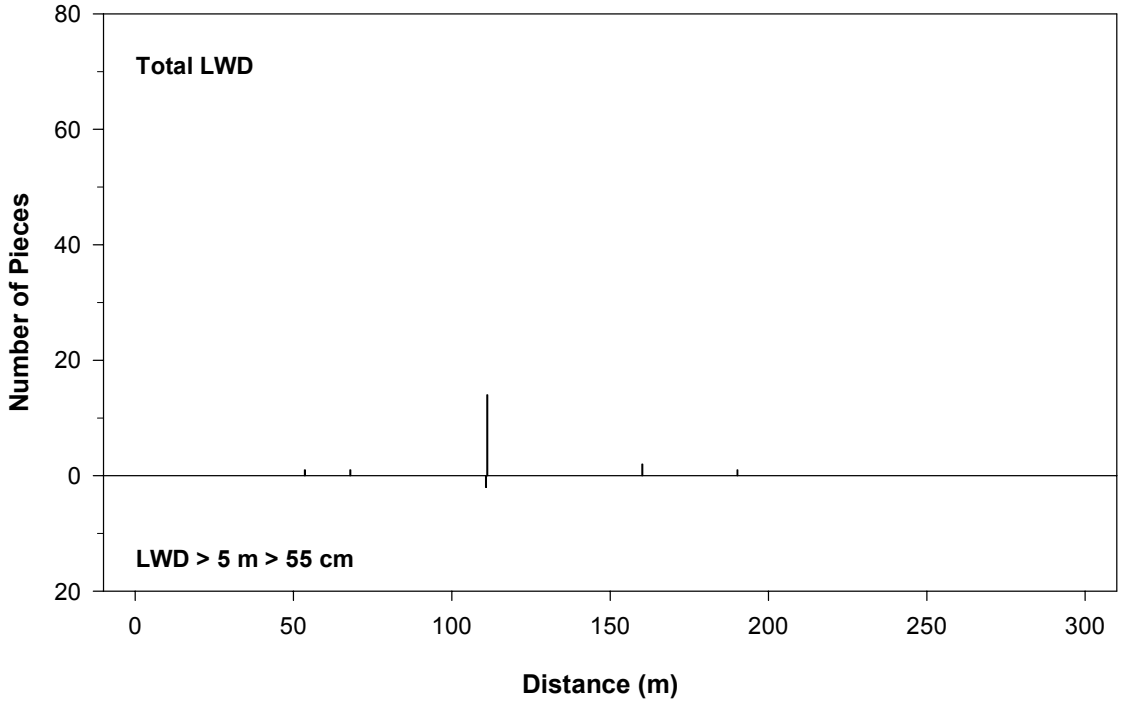
Estimated area of Bean Run (lower) in pools and riffles as calculated using BVET techniques, summer 2001.



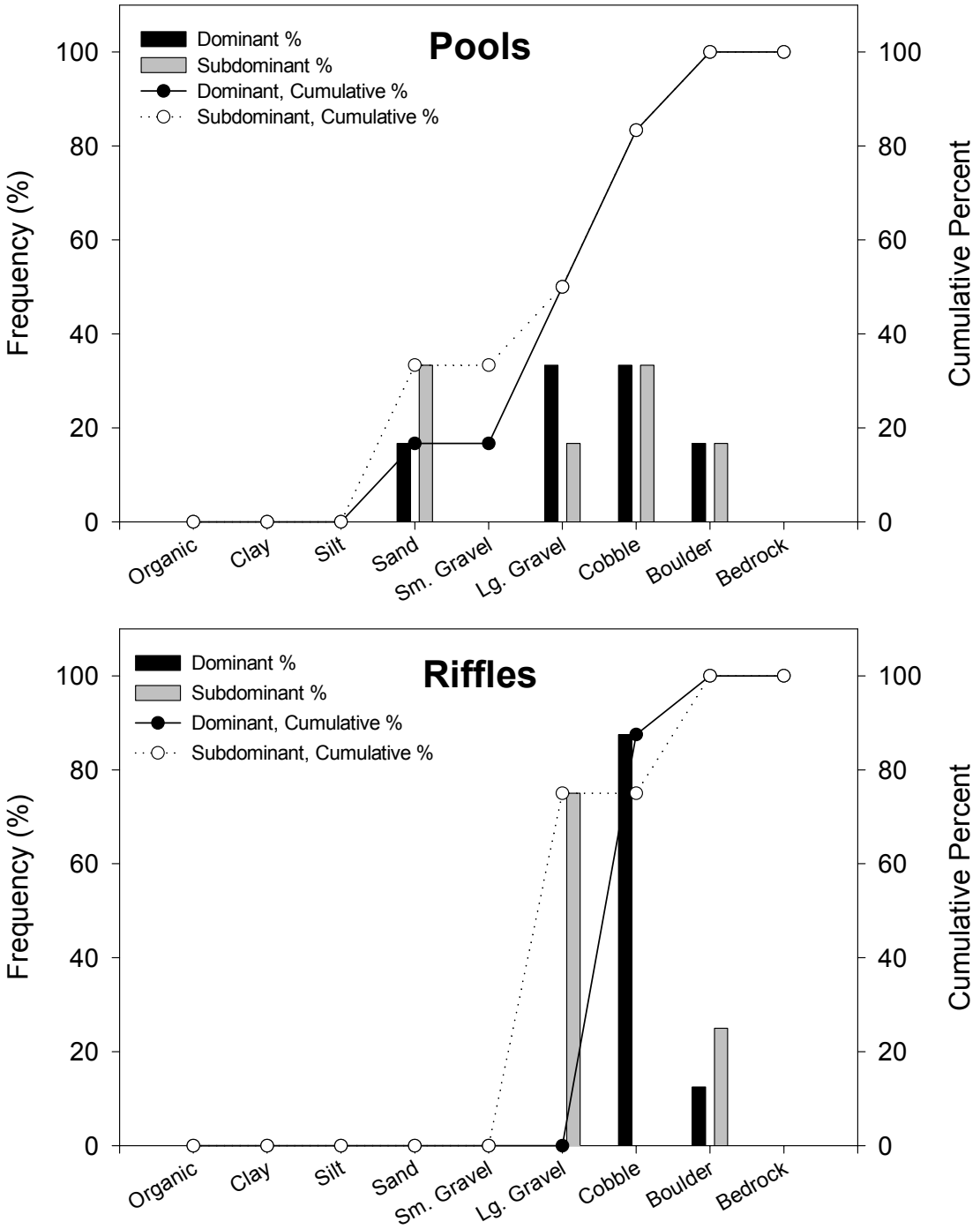
Maximum and average depths and residual pool depths for pools and riffles in Bean Run (lower), summer 2001. The top and bottom of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data.



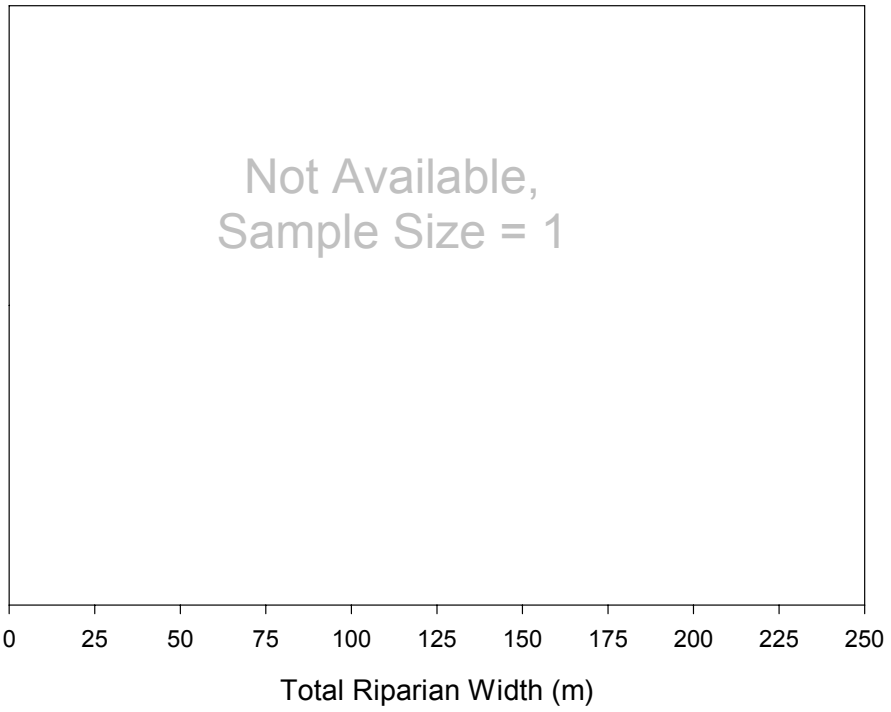
LWD per kilometer in Bean Run (lower), summer 2001. Y-axis labels are LWD size classes with the first number indicating length and the second number indicating diameter.



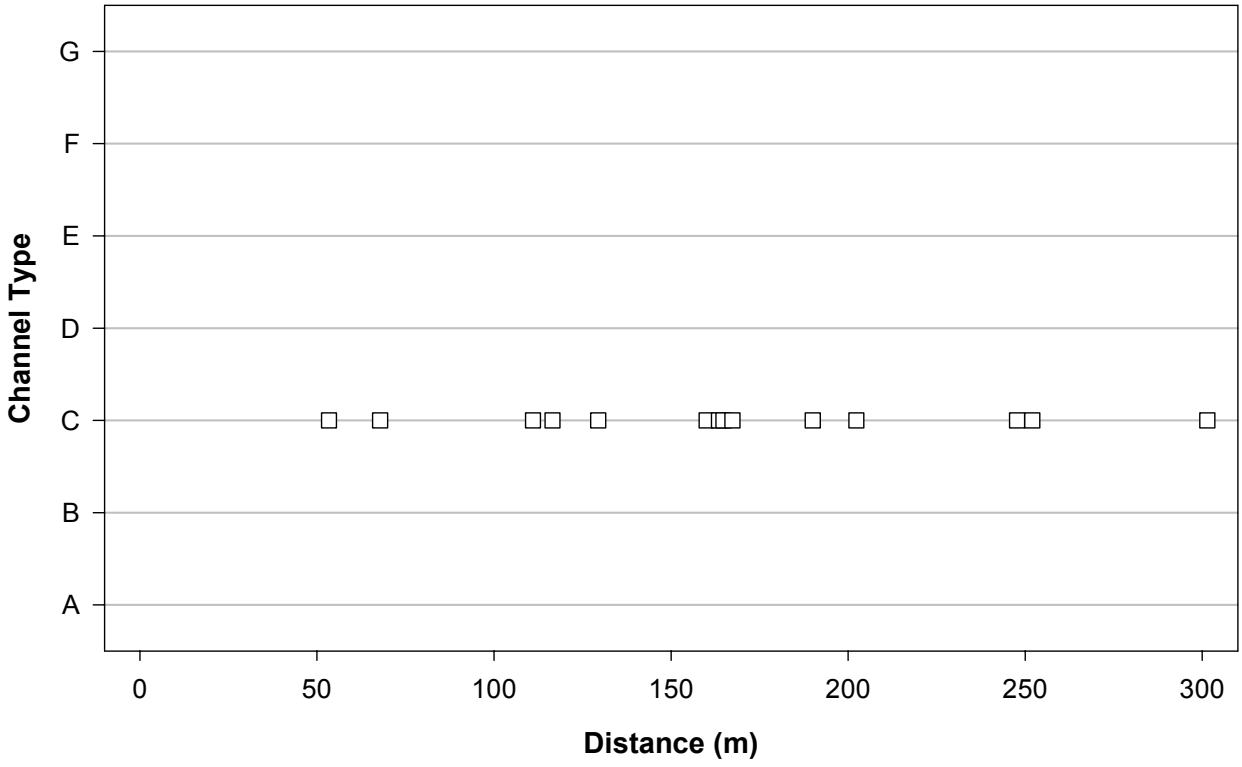
Distribution and abundance of LWD in each habitat unit of Bean Run (lower), summer 2001. Bars below the x-axis represent the amount of the total LWD that was >5 m in length, >55 cm in diameter. X-axis indicates distance upstream from Bull/Bear/Bean junction.



Frequency (percent) and cumulative percent of dominant and subdominant substrate occurrence for pools and riffles in Bean Run (lower), summer 2001.



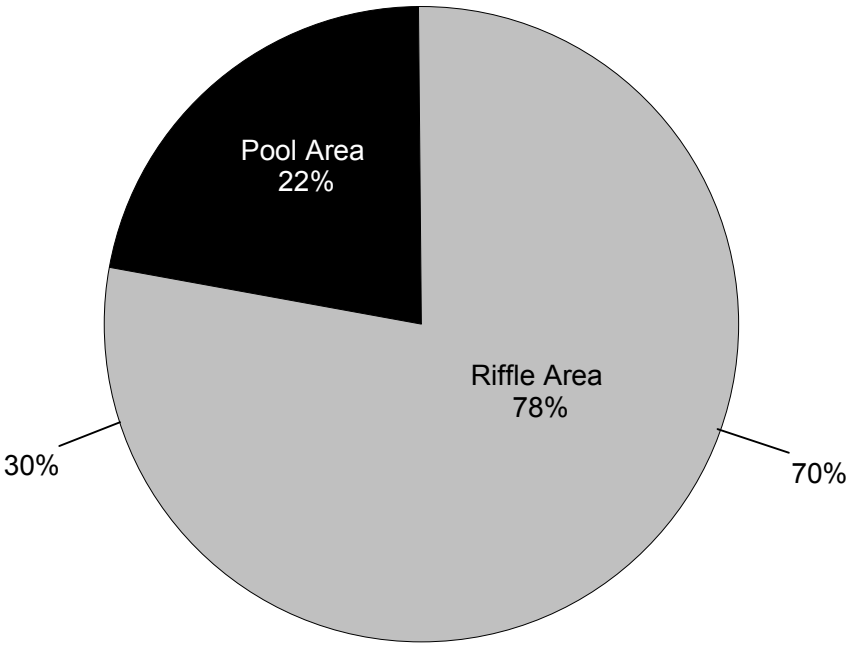
Total riparian widths (left riparian width+right riparian width+wetted channel width) for Bean Run (lower), summer 2001. The left and right of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data. Sample size = 1.



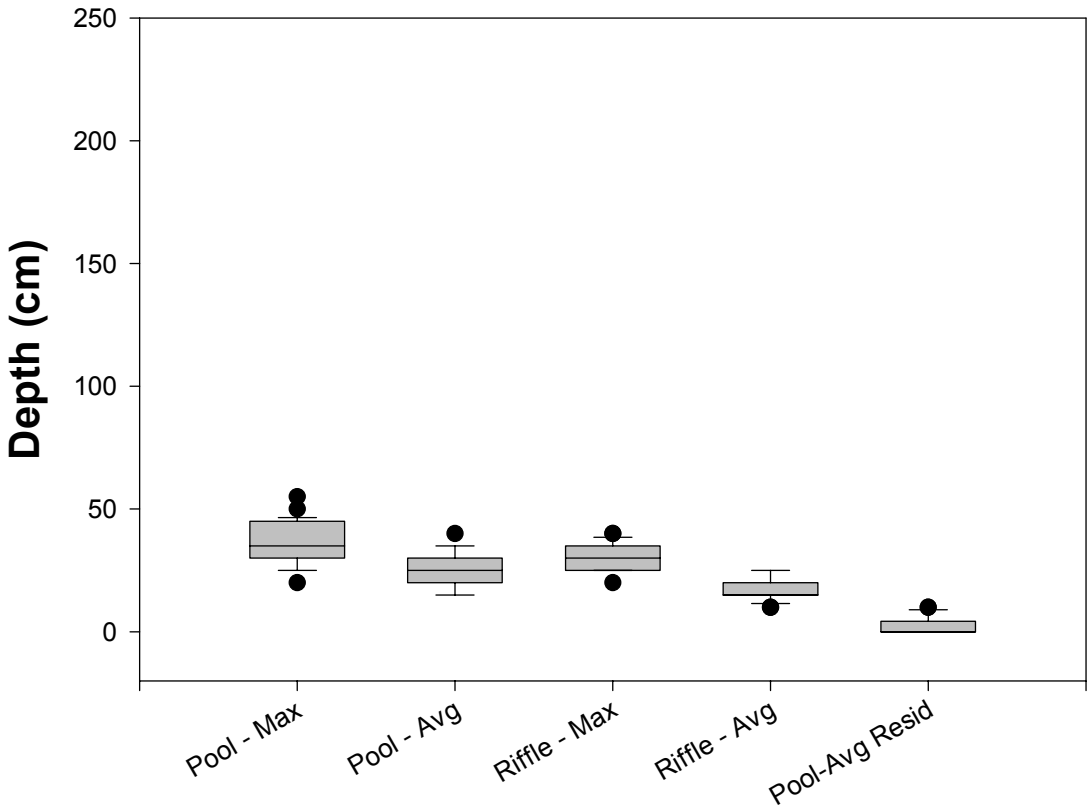
Rosgen's channel classification for each habitat unit in Bean Run (lower), summer 2001. X-axis indicates distance upstream from Bull/Bear/Bean junction.

Stream:	**Bean Run (upper)**
District:	Lee
Quadrangle:	Orkney Springs
Survey Date:	08/18/01
Downstream Starting Point:	Forest boundary
Total Distance Surveyed (km):	0.6
Percent of Total Area Pools:	**22**
Number of Pools:	22
Number of Pools per km:	39
Total Pool Area (m^2):	264 ± 37
Mean Pool Area (m^2):	12
Correction Factor:	0.84
Mean Maximum Depth (cm):	36
Mean Average Depth (cm):	25
Mean Residual Pool Depth (cm):	2
Percent of Total Area Riffles:	**78**
Number of Riffles:	18
Number of Riffles per km:	32
Total Riffle Area (m^2):	944 ± 1213
Mean Riffle Area (m^2):	52
Correction Factor:	1.04
Mean Maximum Depth (cm):	29
Mean Average Depth (cm):	18
Number of LWD pieces per km:	**186**
LWD < 5 m, < 55 cm:	70
LWD < 5 m, > 55 cm:	77
LWD > 5 m, < 55 cm:	11
LWD > 5 m, > 55 cm:	29
Mean Channel Width (m):	**5**
Mean Riparian Width (m) (Total*):	**55**
Maximum Riparian Width (Total):	72
75th Percentile (Total)	66
25th Percentile (Total)	47
Minimum Riparian Width (Total):	34
Mean Riparian Width (m) (Left, Right):**	**25**
Maximum Riparian Width (Left, Right):	42
75th Percentile (Left, Right)	34
25th Percentile (Left, Right)	16
Minimum Riparian Width (Left, Right):	14
Percent of Pool Habitat Surveyed as Glides:	**5**
Rosgen's Channel Type Frequency (%):	
Type A:	0
Type B:	0
Type C:	100
Type D:	0
Type E:	0
Type F:	0
Type G:	0
Percent Pools with > 35% Embeddedness:	**95**
Average Channel Gradient (%):	**7**

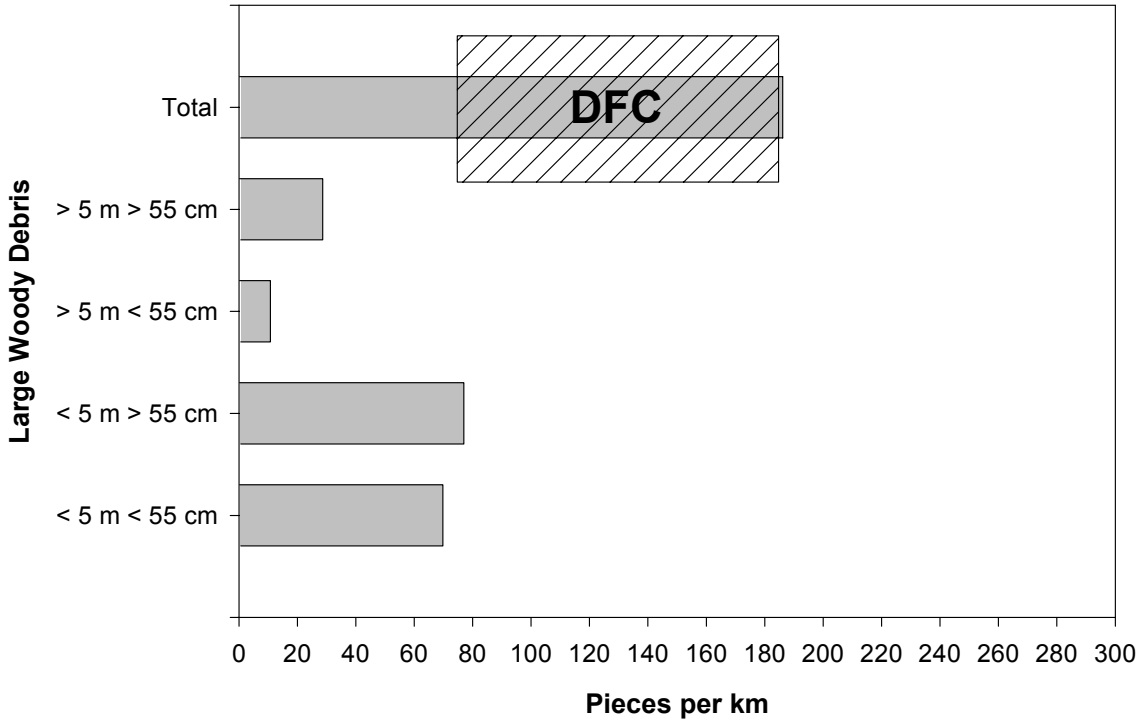
*Calculation sums left riparian + right riparian + stream channel
**Calculation pools left and right riparian measurements, does not sum them



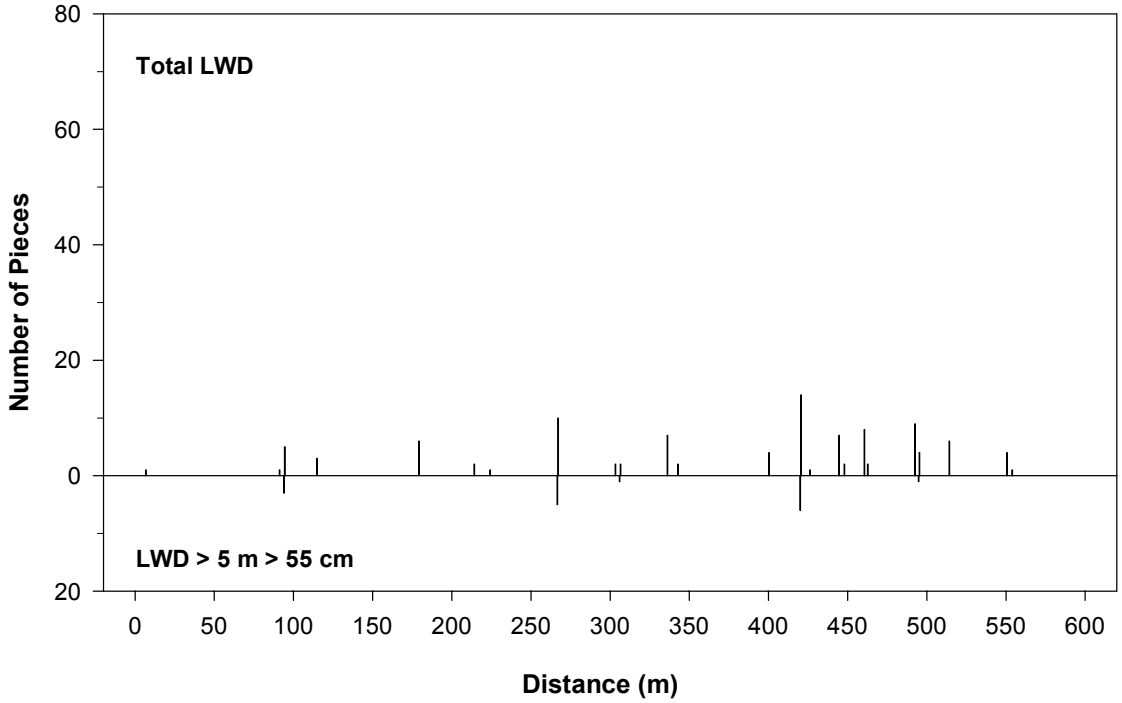
Estimated area of Bean Run (upper) in pools and riffles as calculated using BVET techniques, summer 2001.



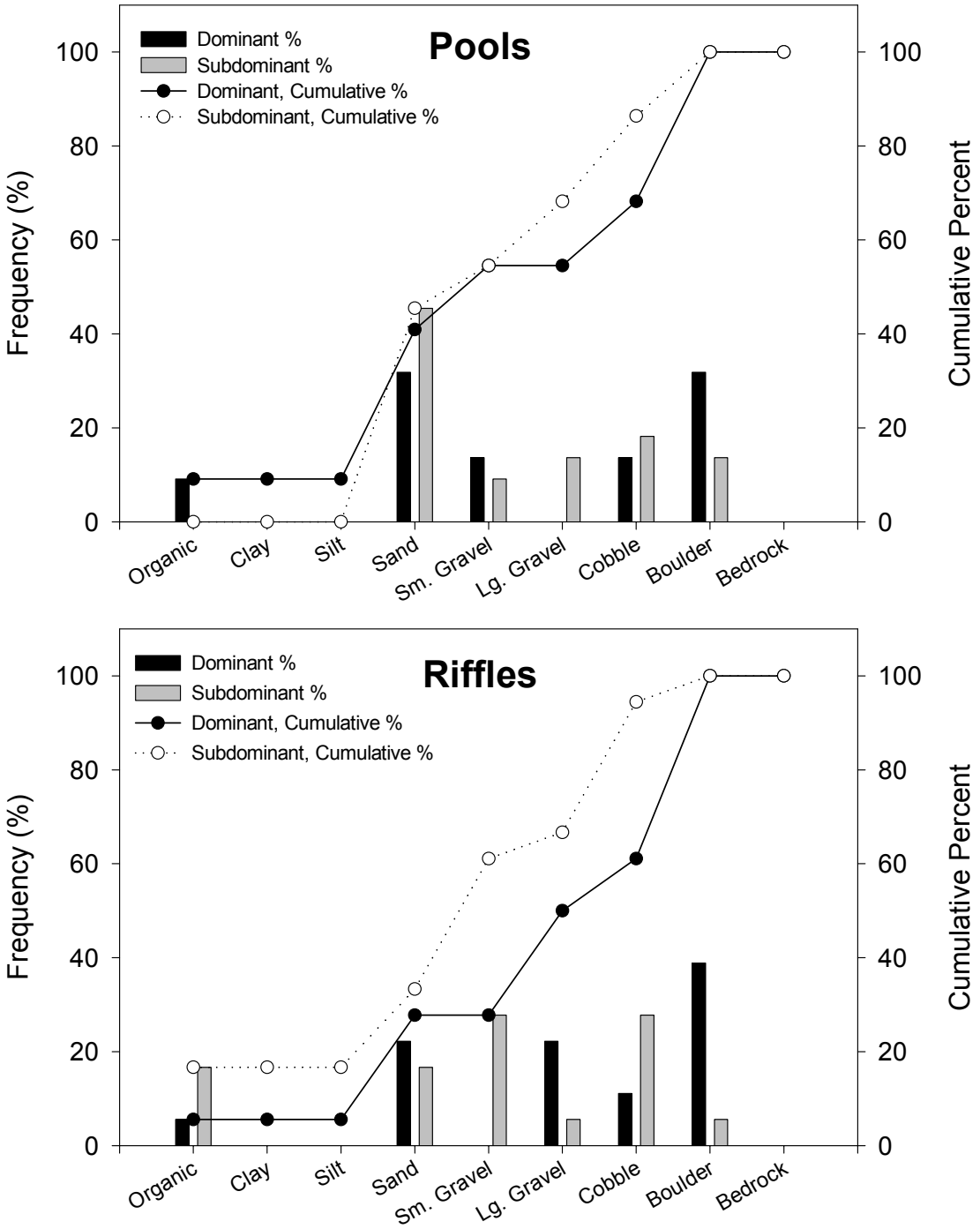
Maximum and average depths and residual pool depths for pools and riffles in Bean Run (upper), summer 2001. The top and bottom of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data.



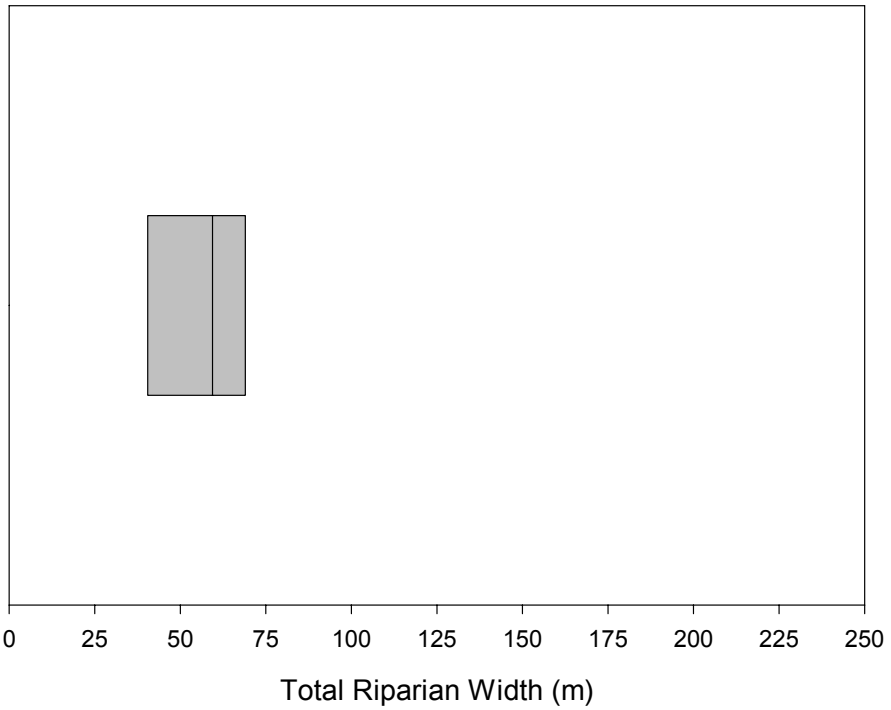
LWD per kilometer in Bean Run (upper), summer 2001. Y-axis labels are LWD size classes with the first number indicating length and the second number indicating diameter.



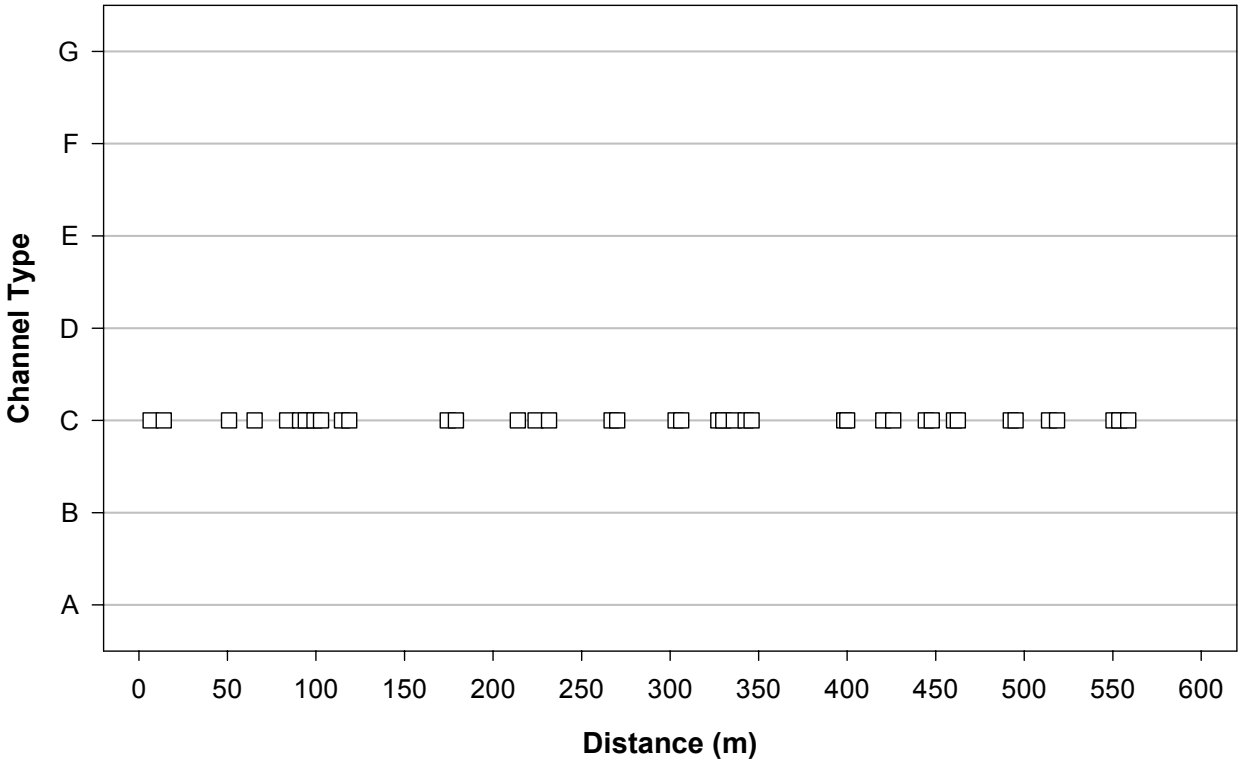
Distribution and abundance of LWD in each habitat unit of Bean Run (upper), summer 2001. Bars below the x-axis represent the amount of the total LWD that was >5 m in length, >55 cm in diameter. X-axis indicates distance upstream from Forest boundary.



Frequency (percent) and cumulative percent of dominant and subdominant substrate occurrence for pools and riffles in Bean Run (upper), summer 2001.



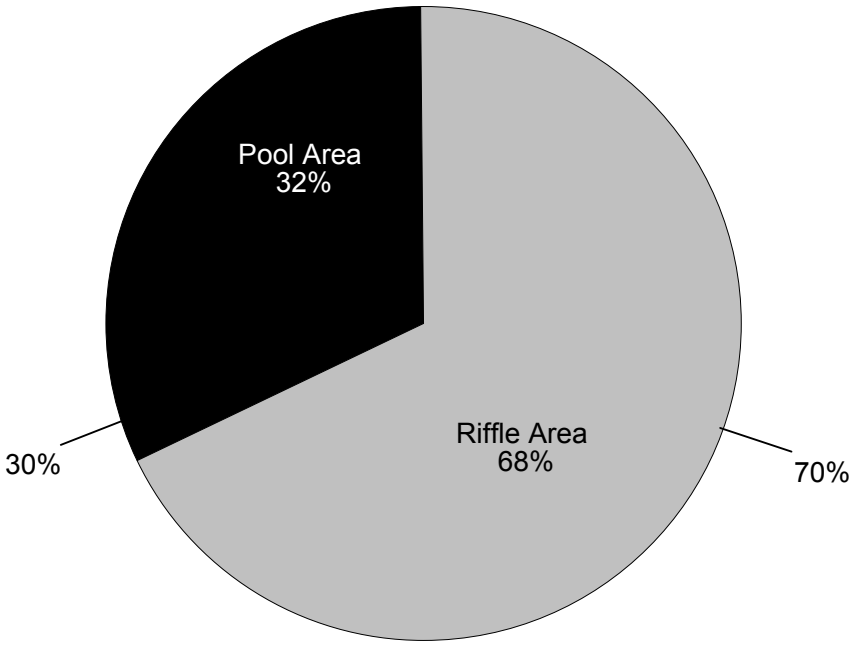
Total riparian widths (left riparian width+right riparian width+wetted channel width) for Bean Run (upper), summer 2001. The left and right of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data. Sample size = 3.



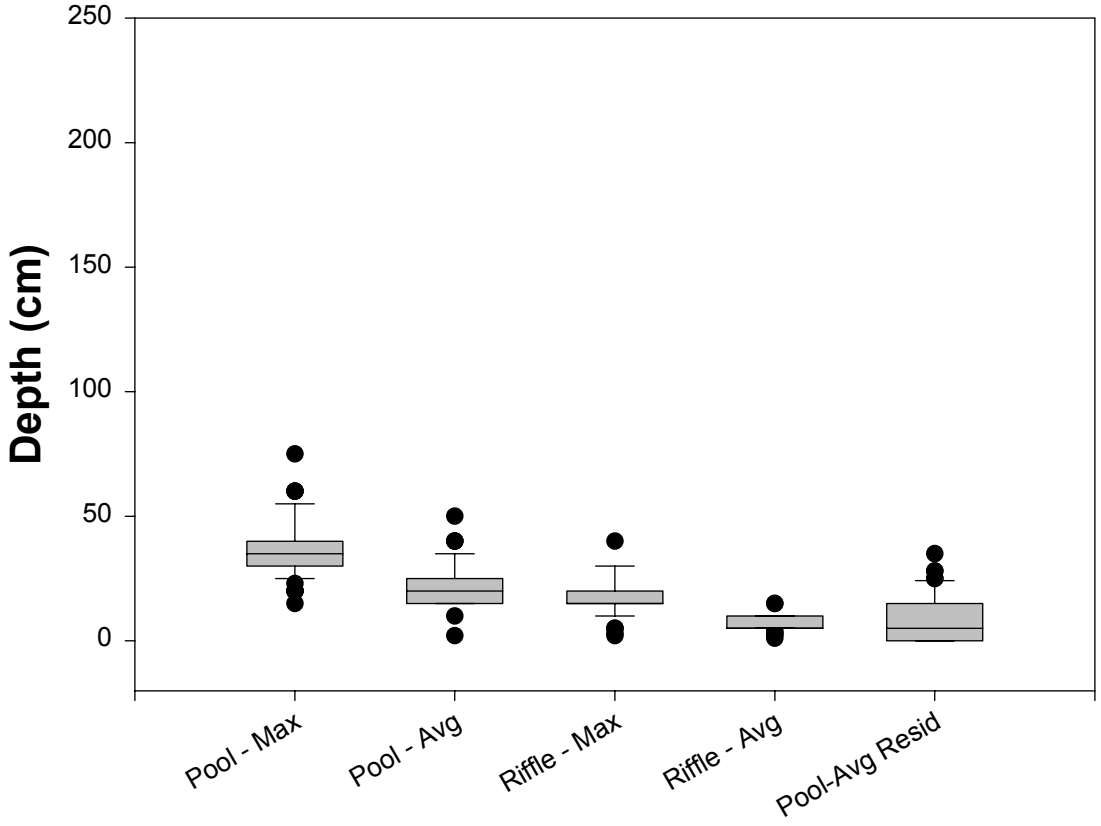
Rosgen's channel classification for each habitat unit in Bean Run (upper), summer 2001. X-axis indicates distance upstream from Forest boundary.

Stream:	**Bear Run**
District:	Lee
Quadrangle:	Orkney Springs
Survey Date:	06/25/02
Downstream Starting Point:	Forest boundary at confluence w/ Bean Run
Total Distance Surveyed (km):	2.4
Percent of Total Area Pools:	**32**
Number of Pools:	62
Number of Pools per km:	26
Total Pool Area (m^2):	949
Mean Pool Area (m^2):	15
Correction Factor:	1.00
Mean Maximum Depth (cm):	36
Mean Average Depth (cm):	22
Mean Residual Pool Depth (cm):	9
Percent of Total Area Riffles:	**68**
Number of Riffles:	55
Number of Riffles per km:	23
Total Riffle Area (m^2):	2047
Mean Riffle Area (m^2):	37
Correction Factor:	1.05
Mean Maximum Depth (cm):	17
Mean Average Depth (cm):	7
Number of LWD pieces per km:	**79**
LWD < 5 m, < 55 cm:	26
LWD < 5 m, > 55 cm:	12
LWD > 5 m, < 55 cm:	23
LWD > 5 m, > 55 cm:	19
Mean Channel Width (m):	**5**
Mean Riparian Width (m) (Total*):	**11**
Maximum Riparian Width (Total):	12
75th Percentile (Total)	12
25th Percentile (Total)	12
Minimum Riparian Width (Total):	10
Mean Riparian Width (m) (Left, Right):**	**3**
Maximum Riparian Width (Left, Right):	8
75th Percentile (Left, Right)	5
25th Percentile (Left, Right)	1
Minimum Riparian Width (Left, Right):	1
Percent of Pool Habitat Surveyed as Glides:	**6**
Rosgen's Channel Type Frequency (%):	
Type A:	100
Type B:	0
Type C:	0
Type D:	0
Type E:	0
Type F:	0
Type G:	0
Percent Pools with > 35% Embeddedness:	**29**
Average Channel Gradient (%):	**7**

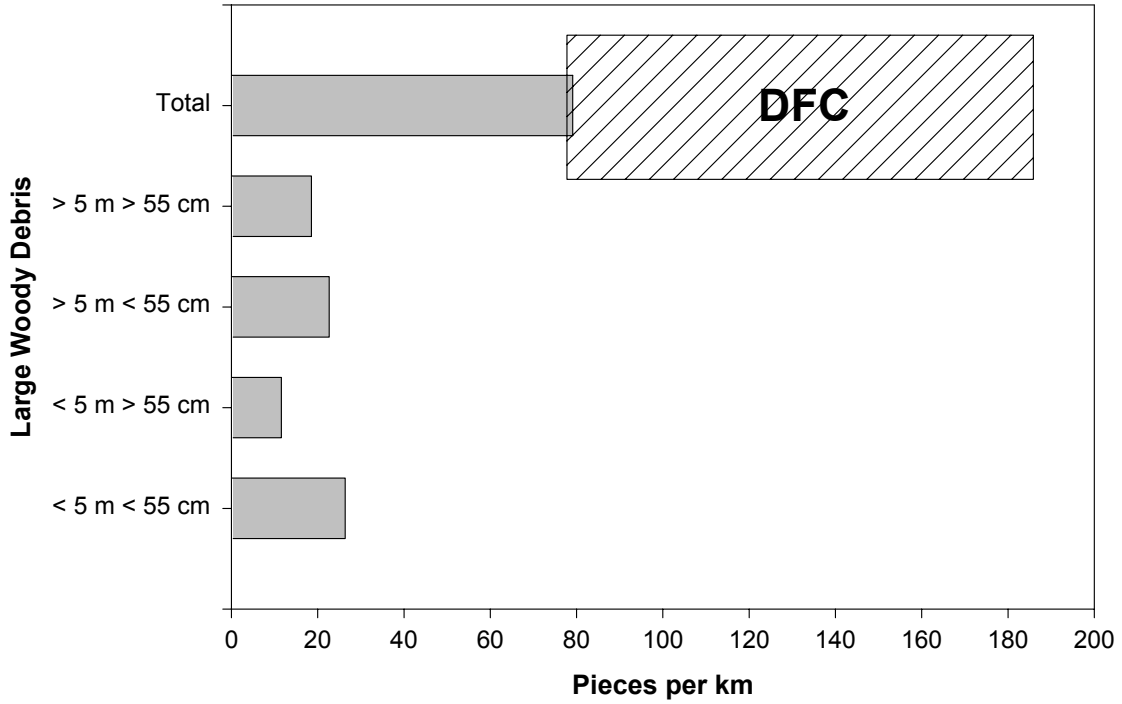
*Calculation sums left riparian + right riparian + stream channel
**Calculation pools left and right riparian measurements, does not sum them



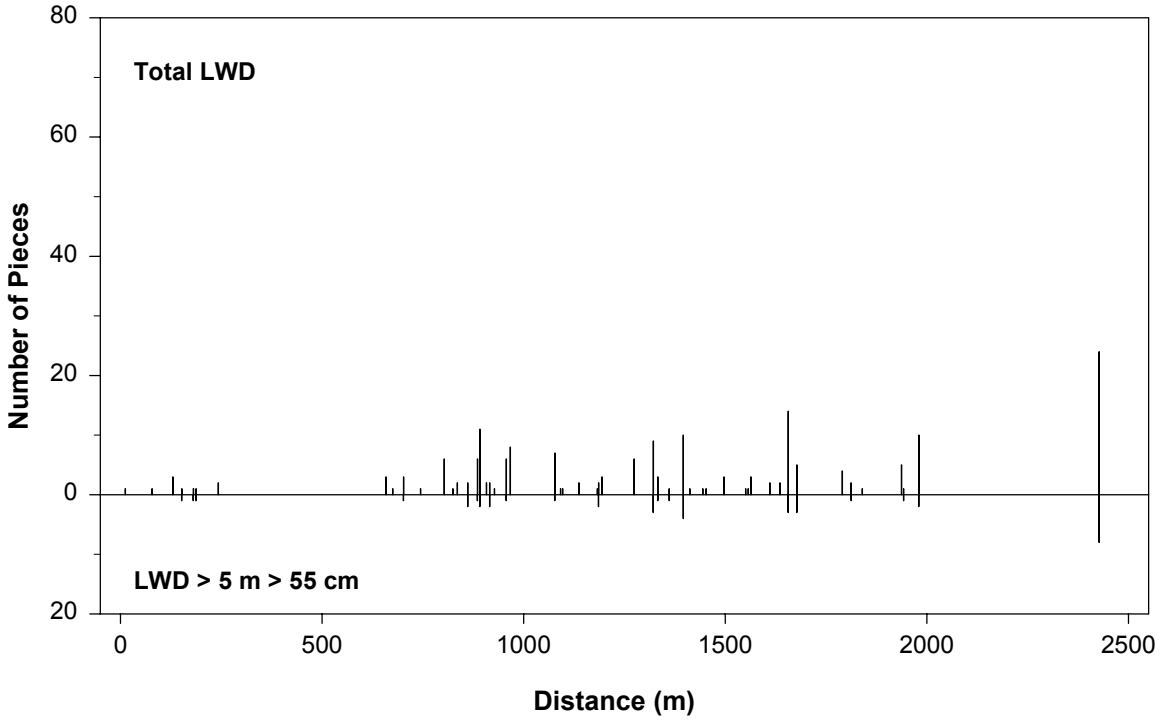
Estimated area of Bear Run in pools and riffles as calculated using BVET techniques, summer 2001.



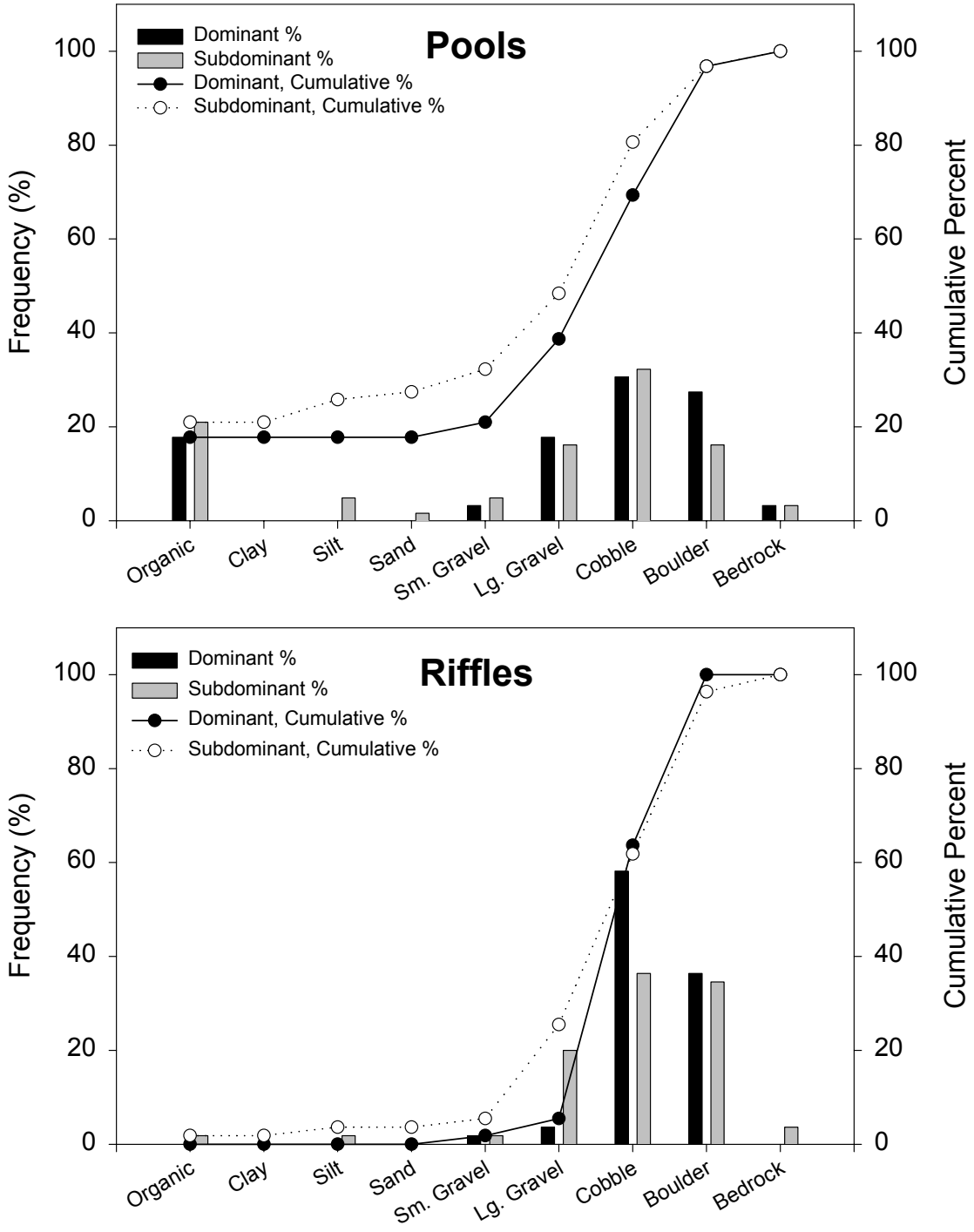
Maximum and average depths and residual pool depths for pools and riffles in Bear Run, summer 2001. The top and bottom of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data.



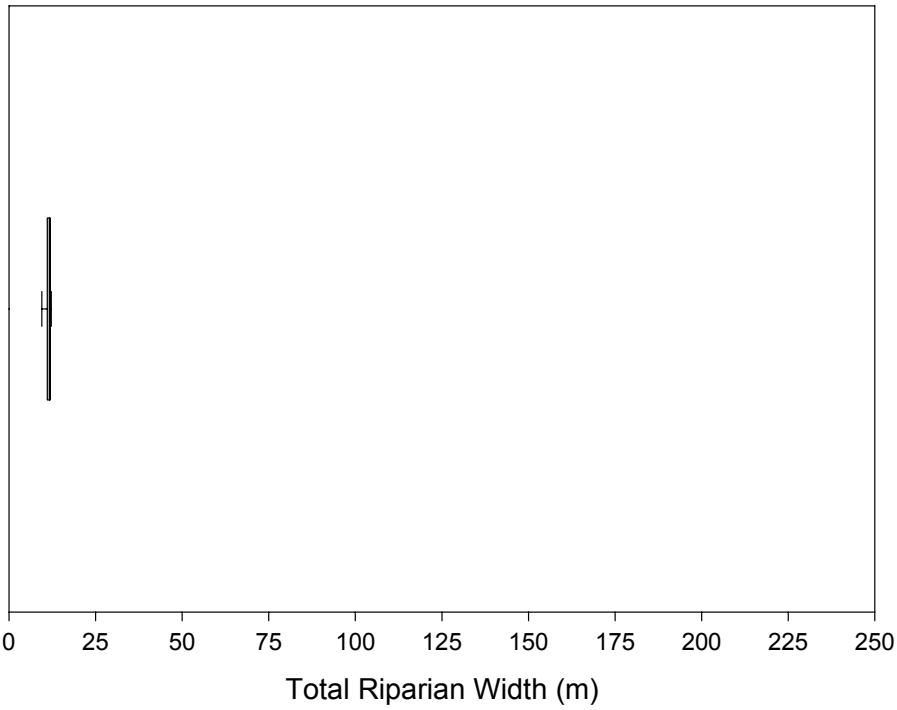
LWD per kilometer in Bear Run, summer 2001. Y-axis labels are LWD size classes with the first number indicating length and the second number indicating diameter.



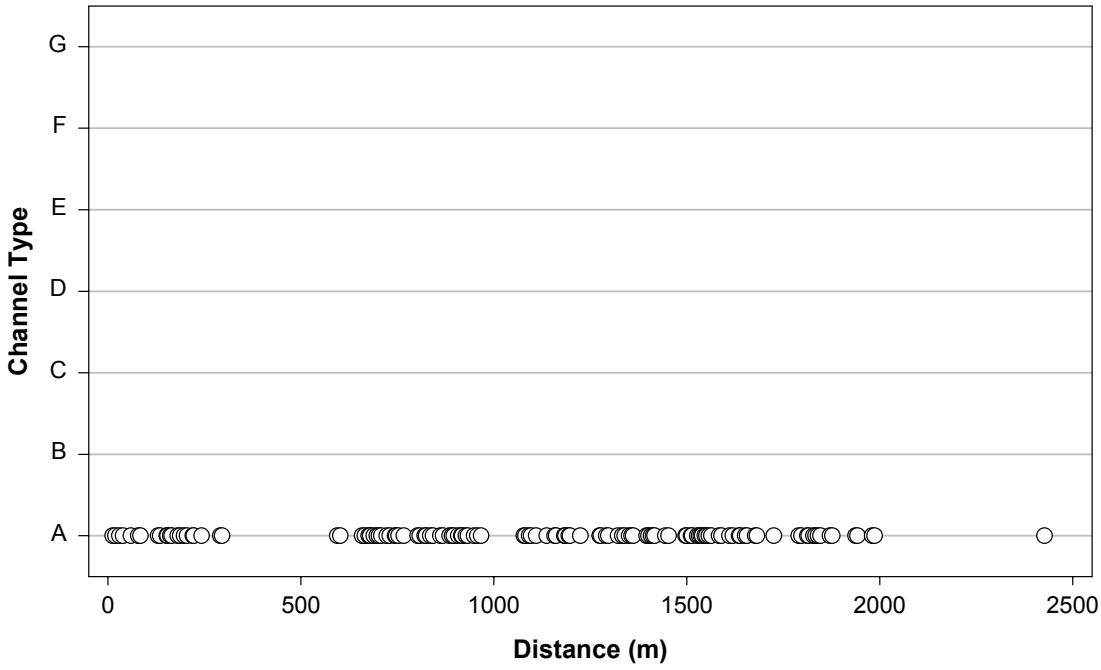
Distribution and abundance of LWD in each habitat unit of Bear Run, summer 2001. Bars below the x-axis represent the amount of the total LWD that was >5 m in length, >55 cm in diameter. X-axis indicates distance upstream from Forest boundary.



Frequency (percent) and cumulative percent of dominant and subdominant substrate occurrence for pools and riffles in Bear Run, summer 2001.



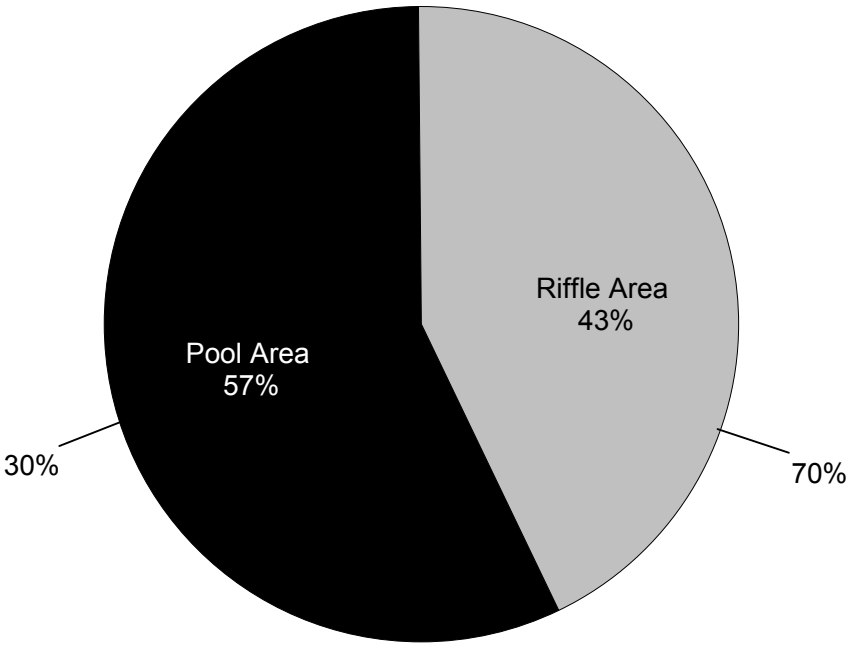
Total riparian widths (left riparian width+right riparian width+wetted channel width) for Bear Run, summer 2001. The left and right of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data. Sample size = 6.



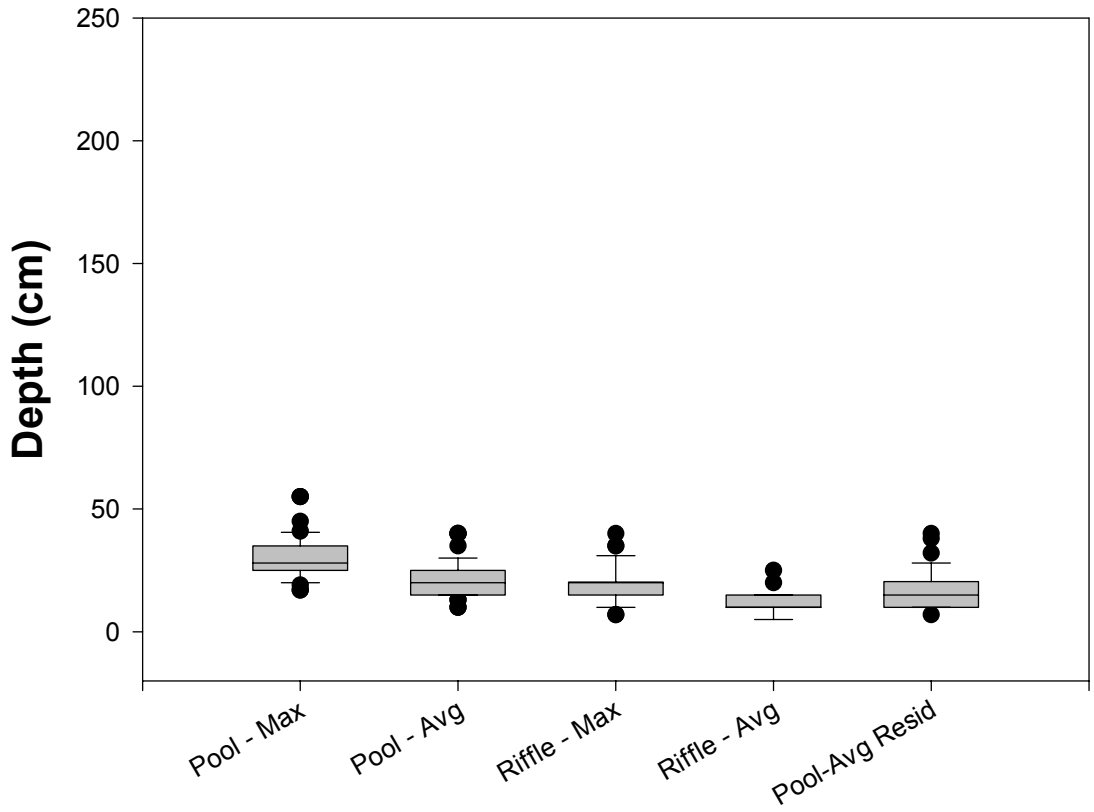
Rosgen's channel classification for each habitat unit in Bear Run, summer 2001. X-axis indicates distance upstream from Forest boundary.

Stream:	**Beetle Run (lower)**
District:	Lee
Quadrangle:	Orkney Springs
Survey Date:	08/18/01
Downstream Starting Point:	Forest boundary
Total Distance Surveyed (km):	1.3
Percent of Total Area Pools:	**57**
Number of Pools:	50
Number of Pools per km:	38
Total Pool Area (m^2):	968 ± 173
Mean Pool Area (m^2):	19
Correction Factor:	0.99
Mean Maximum Depth (cm):	29
Mean Average Depth (cm):	21
Mean Residual Pool Depth (cm):	17
Percent of Total Area Riffles:	**43**
Number of Riffles:	33
Number of Riffles per km:	25
Total Riffle Area (m^2):	720 ± 216
Mean Riffle Area (m^2):	22
Correction Factor:	1.01
Mean Maximum Depth (cm):	19
Mean Average Depth (cm):	11
Number of LWD pieces per km:	**19**
LWD < 5 m, < 55 cm:	9
LWD < 5 m, > 55 cm:	8
LWD > 5 m, < 55 cm:	0
LWD > 5 m, > 55 cm:	2
Mean Channel Width (m):	**4**
Mean Riparian Width (m) (Total*):	**14**
Maximum Riparian Width (Total):	20
75th Percentile (Total)	20
25th Percentile (Total)	8
Minimum Riparian Width (Total):	7
Mean Riparian Width (m) (Left, Right):**	**5**
Maximum Riparian Width (Left, Right):	14
75th Percentile (Left, Right)	6
25th Percentile (Left, Right)	2
Minimum Riparian Width (Left, Right):	2
Percent of Pool Habitat Surveyed as Glides:	**18**
Rosgen's Channel Type Frequency (%):	
Type A:	0
Type B:	100
Type C:	0
Type D:	0
Type E:	0
Type F:	0
Type G:	0
Percent Pools with > 35% Embeddedness:	**44**
Average Channel Gradient (%):	**3**

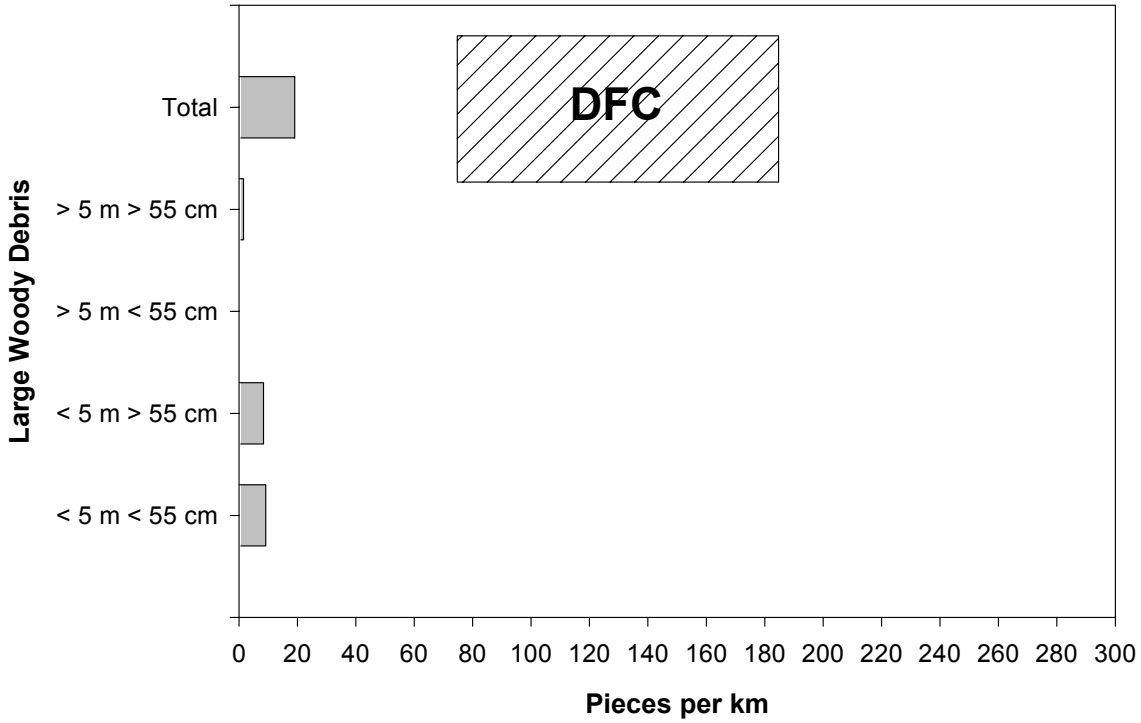
*Calculation sums left riparian + right riparian + stream channel
**Calculation pools left and right riparian measurements, does not sum them



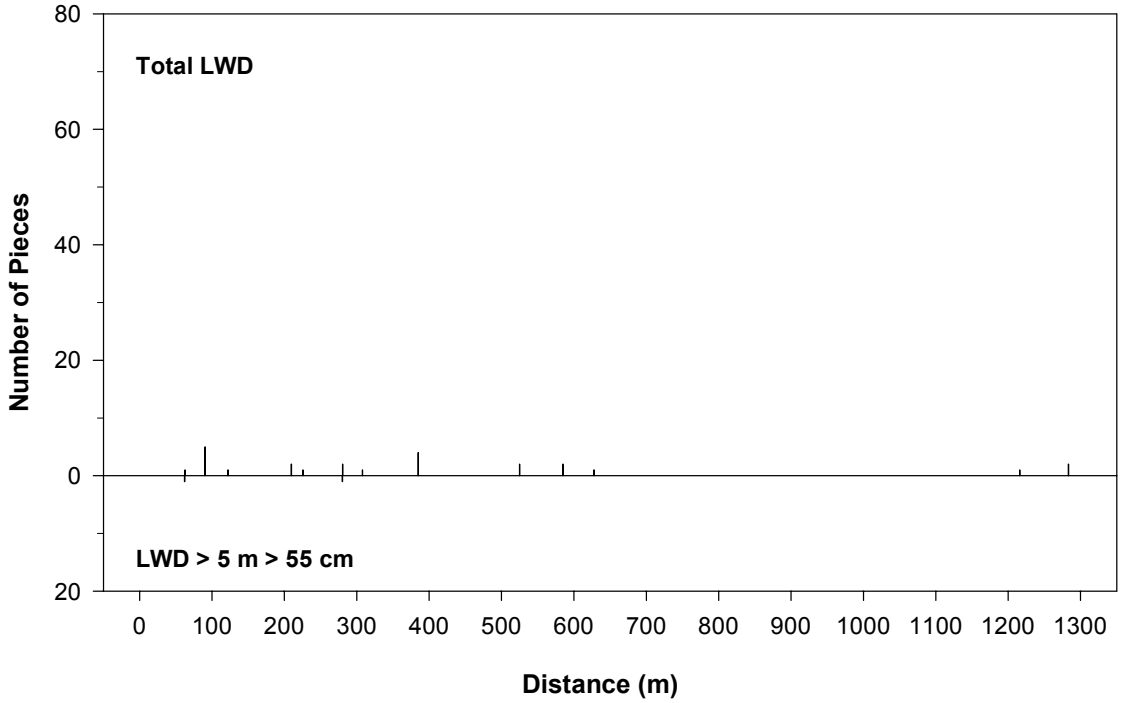
Estimated area of Beetle Run (lower) in pools and riffles as calculated using BVET techniques, summer 2001.



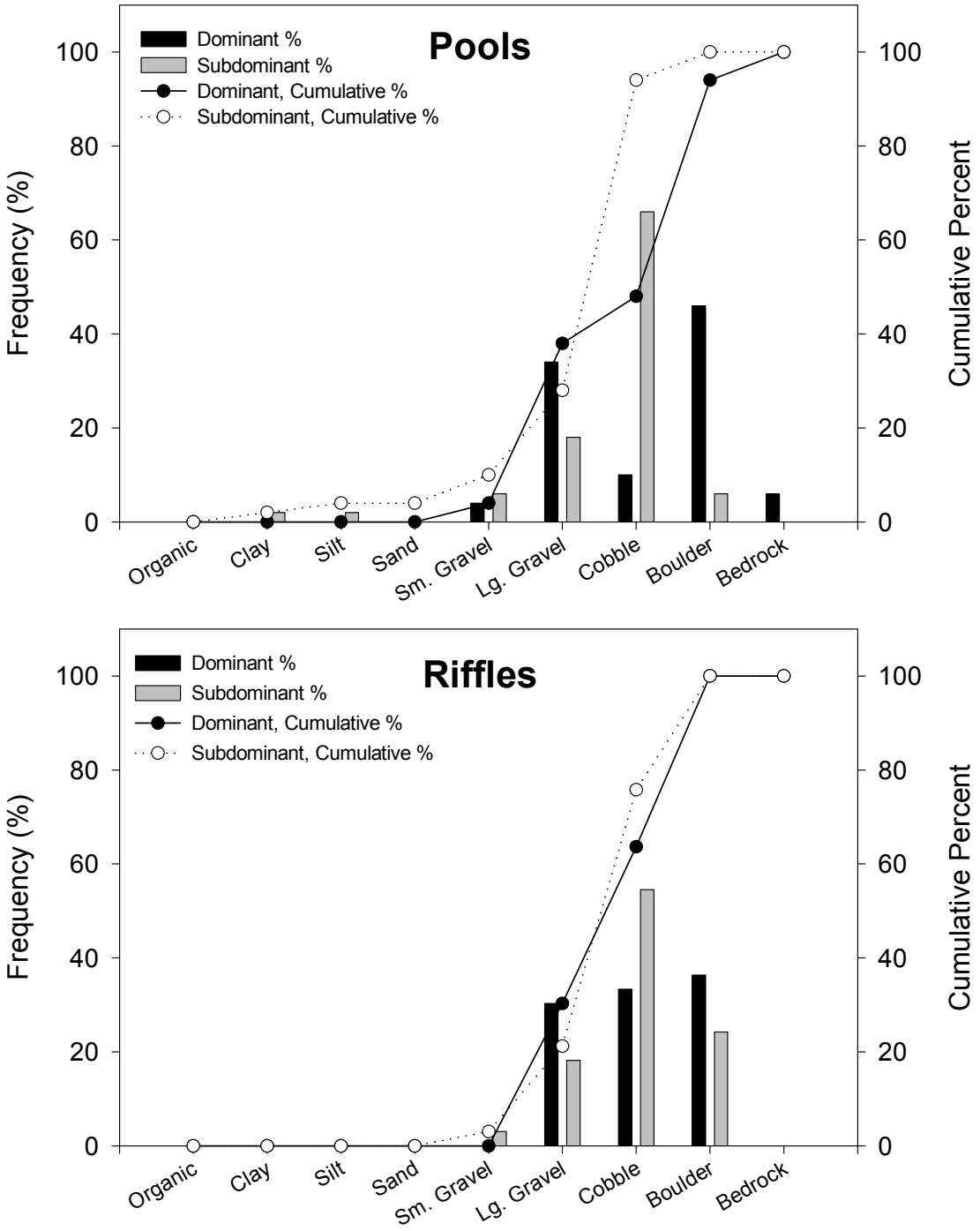
Maximum and average depths and residual pool depths for pools and riffles in Beetle Run (lower), summer 2001. The top and bottom of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data.



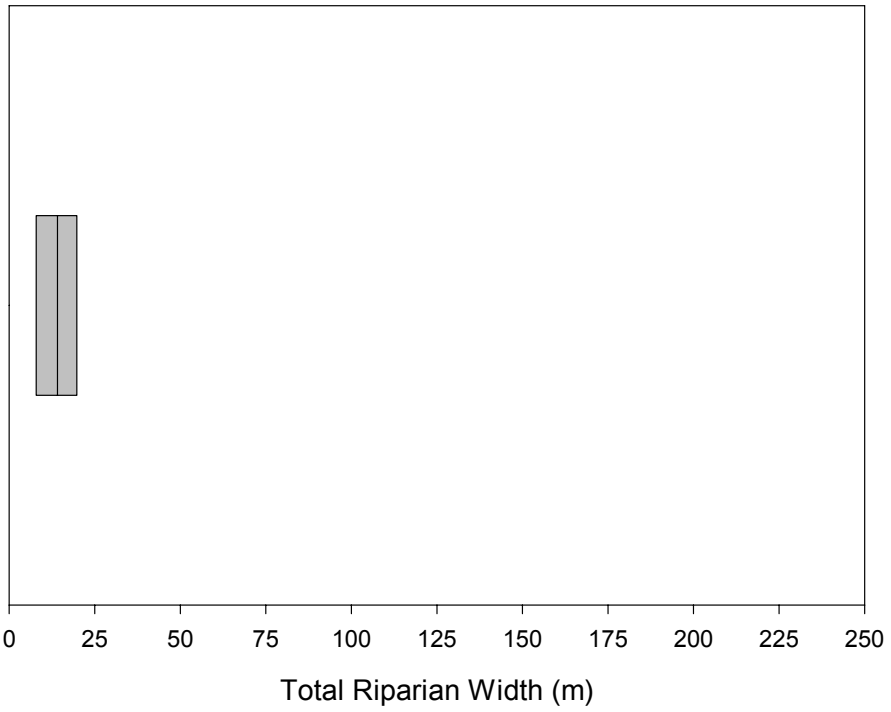
LWD per kilometer in Beetle Run (lower), summer 2001. Y-axis labels are LWD size classes with the first number indicating length and the second number indicating diameter.



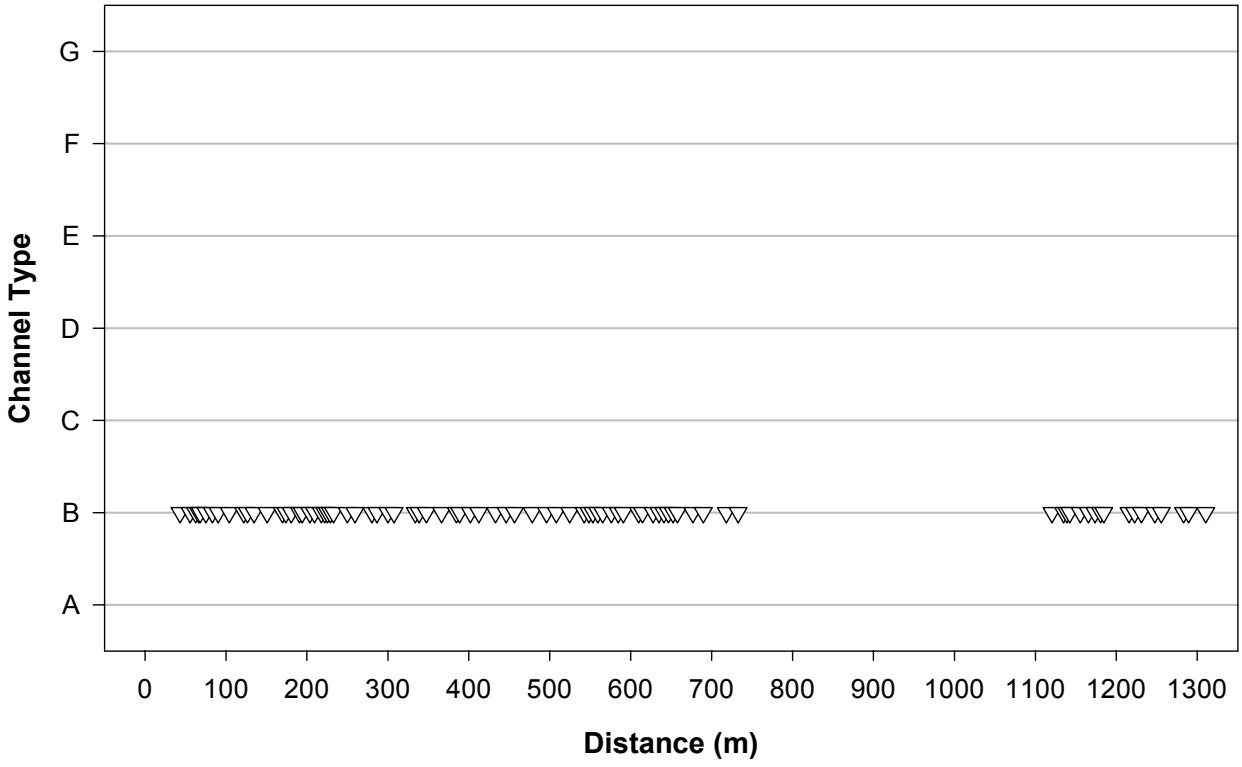
Distribution and abundance of LWD in each habitat unit of Beetle Run (lower), summer 2001. Bars below the x-axis represent the amount of the total LWD that was >5 m in length, >55 cm in diameter. X-axis indicates distance upstream from Forest boundary.



Frequency (percent) and cumulative percent of dominant and subdominant substrate occurrence for pools and riffles in Beetle Run (lower), summer 2001.



Total riparian widths (left riparian width+right riparian width+wetted channel width) for Beetle Run (lower), summer 2001. The left and right 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. Sample size = 4.



Rosgen's channel classification for each habitat unit in Beetle Run (lower), summer 2001. X-axis indicates distance upstream from Forest boundary.

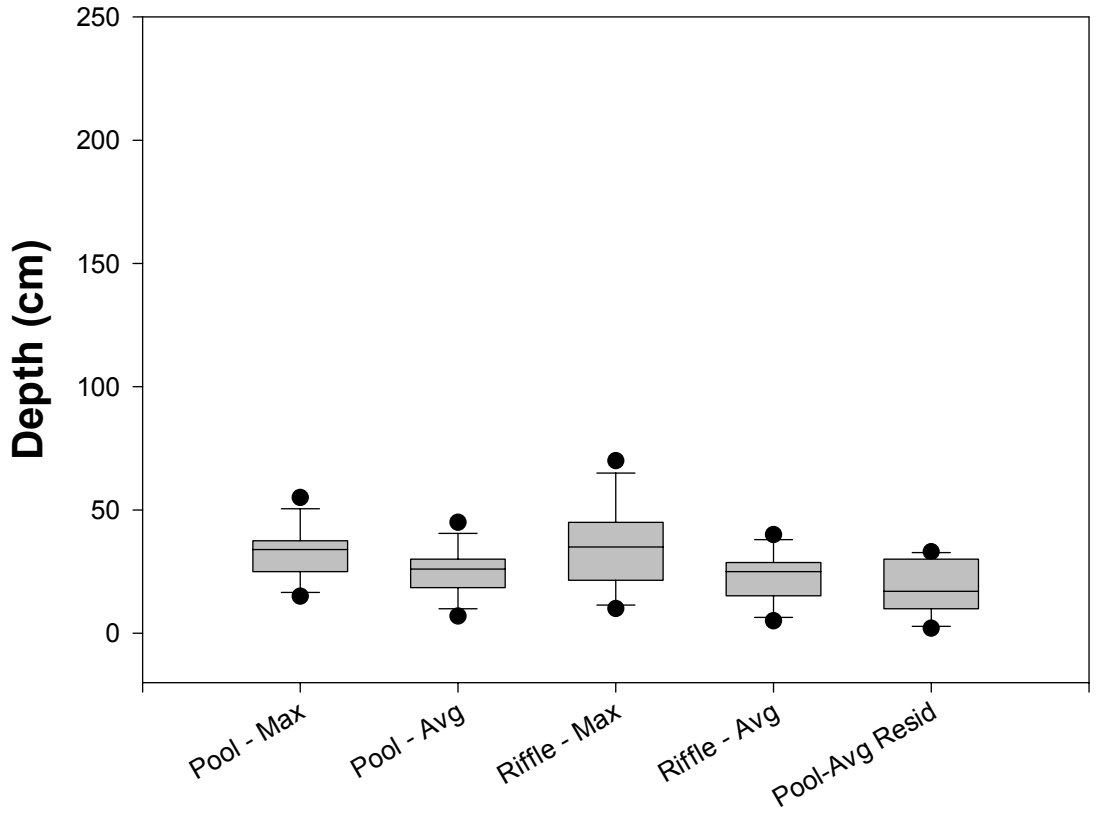
Stream:	**Beetle Run (upper)**
District:	Lee
Quadrangle:	Orkney Springs
Survey Date:	08/18/01
Downstream Starting Point:	Forest boundary
Total Distance Surveyed (km):	0.4
Percent of Total Area Pools:	**NA**
Number of Pools:	8
Number of Pools per km:	19
Total Pool Area (m^2):	138 ± NA
Mean Pool Area (m^2):	17
Correction Factor:	1.00
Mean Maximum Depth (cm):	33
Mean Average Depth (cm):	25
Mean Residual Pool Depth (cm):	NA
Percent of Total Area Riffles:	**NA**
Number of Riffles:	7
Number of Riffles per km:	17
Total Riffle Area (m^2):	NA ± NA
Mean Riffle Area (m^2):	NA
Correction Factor:	NA
Mean Maximum Depth (cm):	37
Mean Average Depth (cm):	23
Number of LWD pieces per km:	**22**
LWD < 5 m, < 55 cm:	14
LWD < 5 m, > 55 cm:	7
LWD > 5 m, < 55 cm:	0
LWD > 5 m, > 55 cm:	0
Mean Channel Width (m):	**NA**
Mean Riparian Width (m) (Total*):	**NA**
Maximum Riparian Width (Total):	0
75th Percentile (Total)	NA
25th Percentile (Total)	NA
Minimum Riparian Width (Total):	0
Mean Riparian Width (m) (Left, Right):**	**NA**
Maximum Riparian Width (Left, Right):	0
75th Percentile (Left, Right)	NA
25th Percentile (Left, Right)	NA
Minimum Riparian Width (Left, Right):	0
Percent of Pool Habitat Surveyed as Glides:	**38**
Rosgen's Channel Type Frequency (%):	
Type A:	0
Type B:	100
Type C:	0
Type D:	0
Type E:	0
Type F:	0
Type G:	0
Percent Pools with > 35% Embeddedness:	**50**
Average Channel Gradient (%):	**NA**

*Calculation sums left riparian + right riparian + stream channel
**Calculation pools left and right riparian measurements, does not sum them

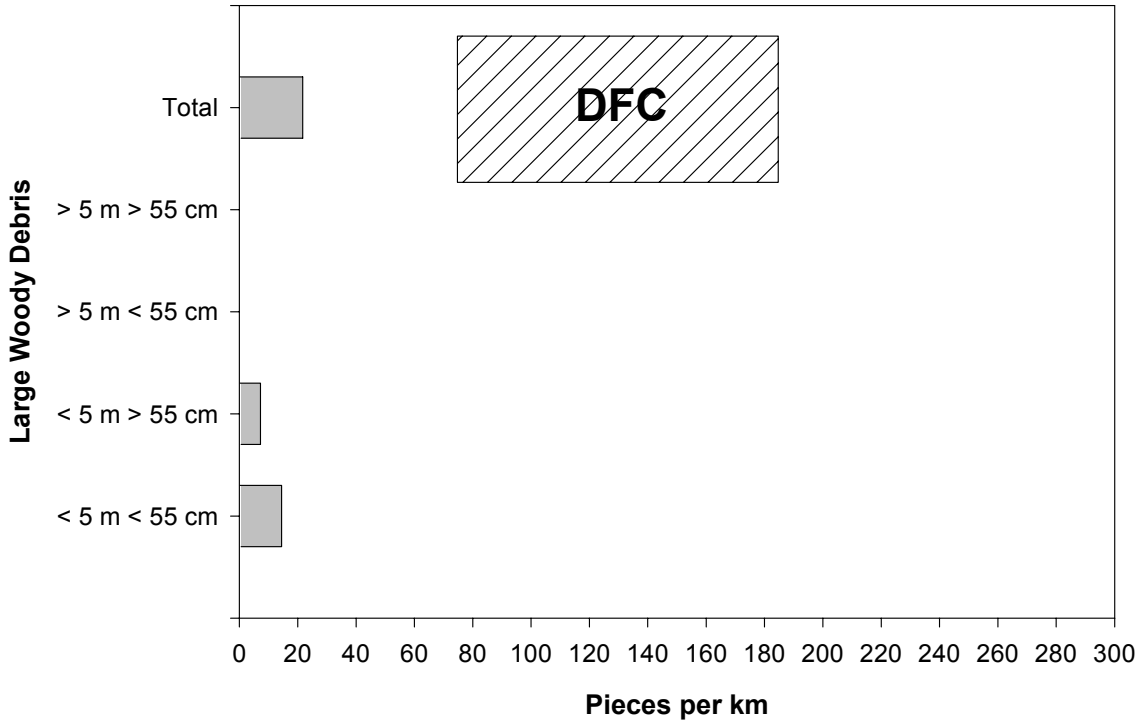
Figure not available,

not enough paired samples to calculate pool and riffle area

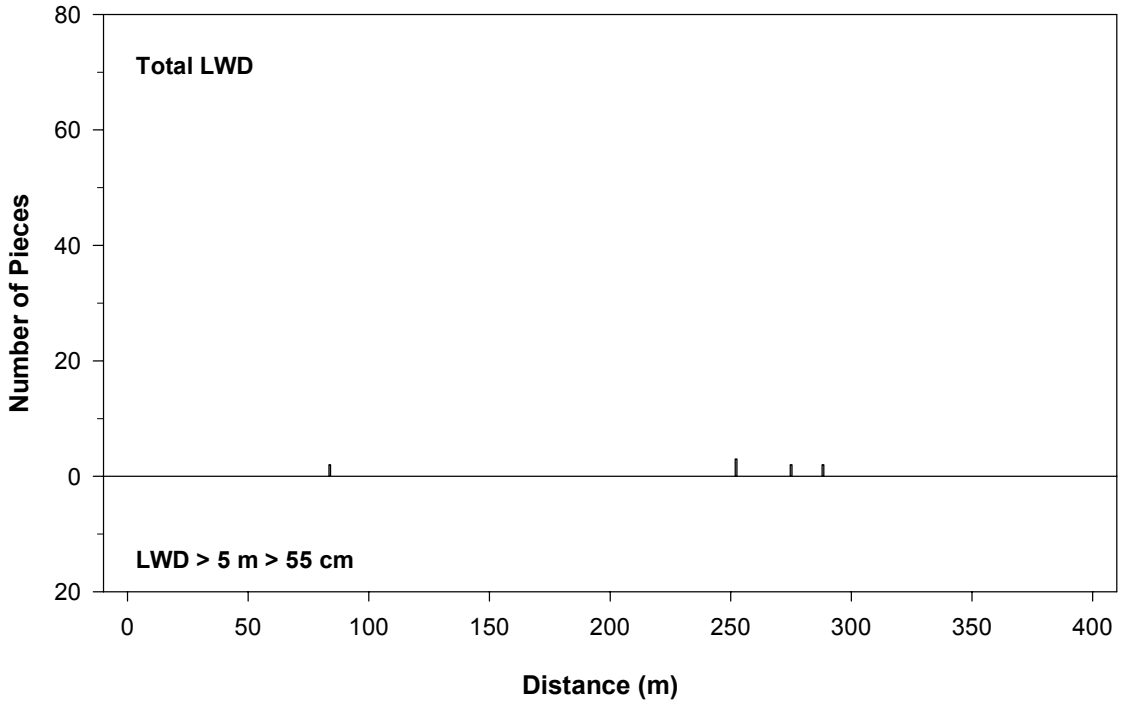
Estimated area of Beetle Run (upper) in pools and riffles as calculated using BVET techniques, summer 2001.



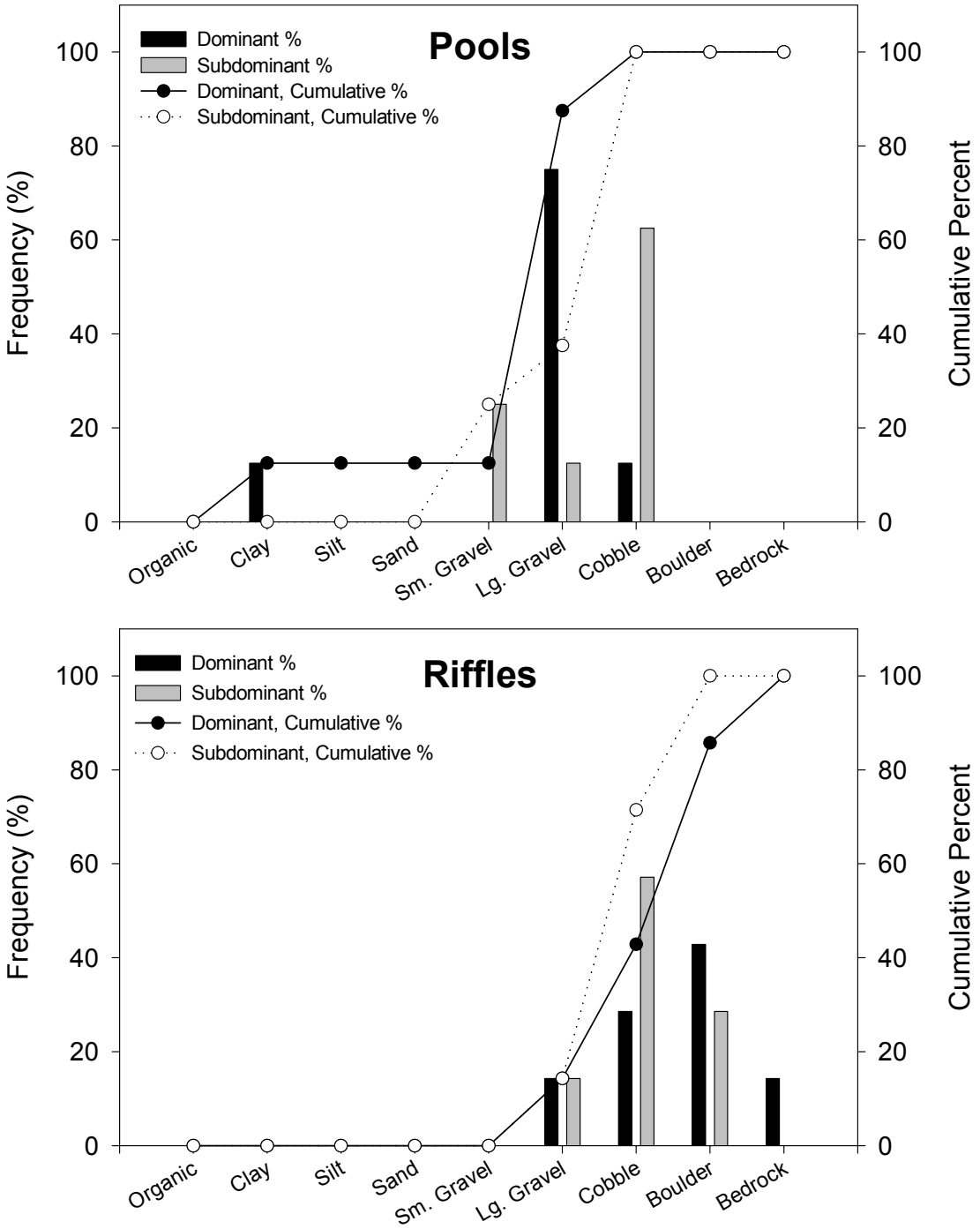
Maximum and average depths and residual pool depths for pools and riffles in Beetle Run (upper), summer 2001. The top and bottom of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data.



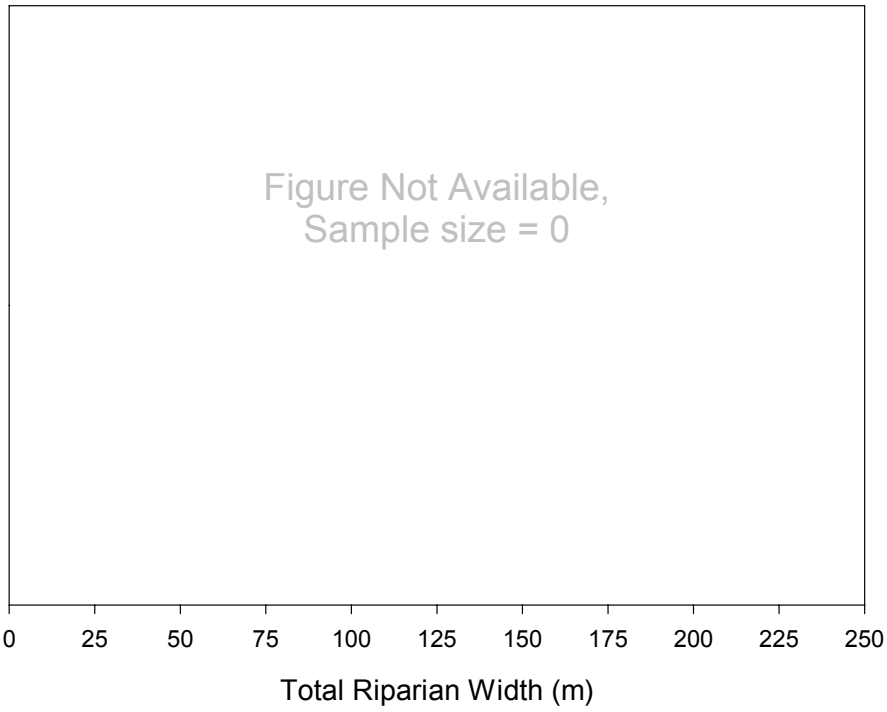
LWD per kilometer in Beetle Run (upper), summer 2001. Y-axis labels are LWD size classes with the first number indicating length and the second number indicating diameter.



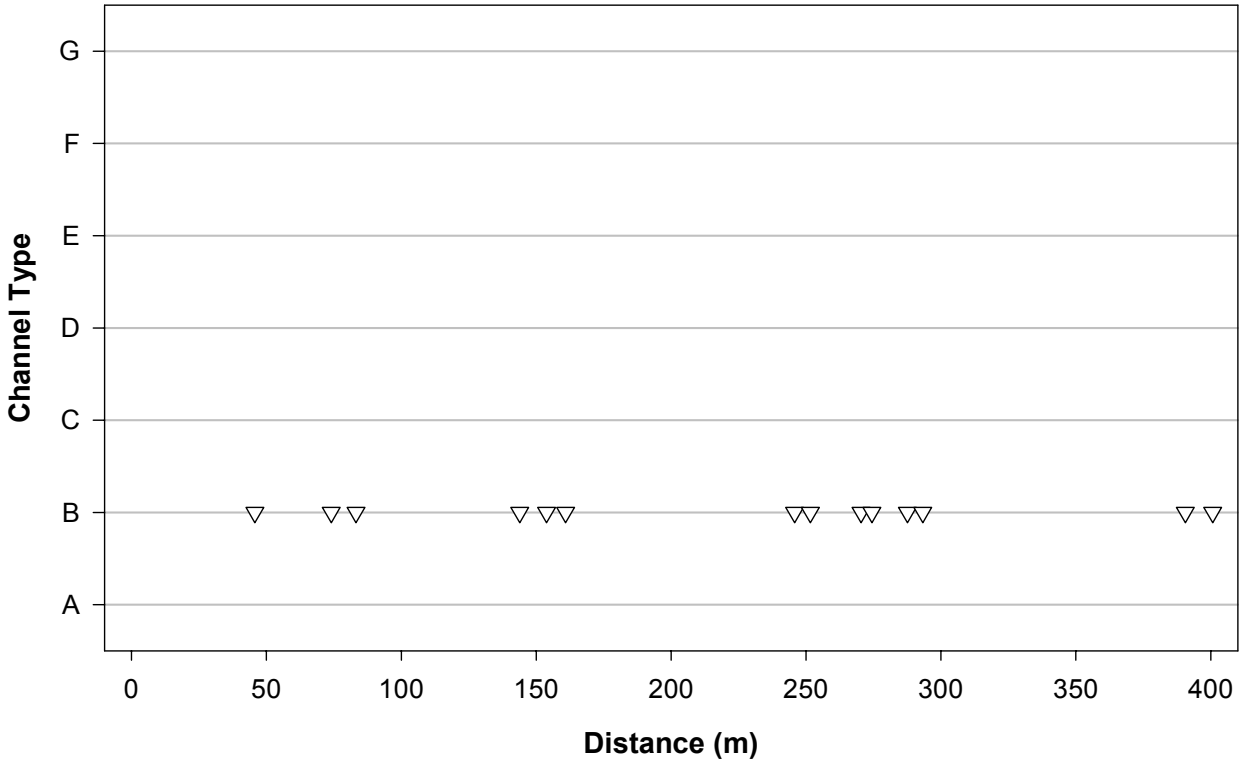
Distribution and abundance of LWD in each habitat unit of Beetle Run (upper), summer 2001. Bars below the x-axis represent the amount of the total LWD that was >5 m in length, >55 cm in diameter. X-axis indicates distance upstream from Forest boundary.



Frequency (percent) and cumulative percent of dominant and subdominant substrate occurrence for pools and riffles in Beetle Run (upper), summer 2001.



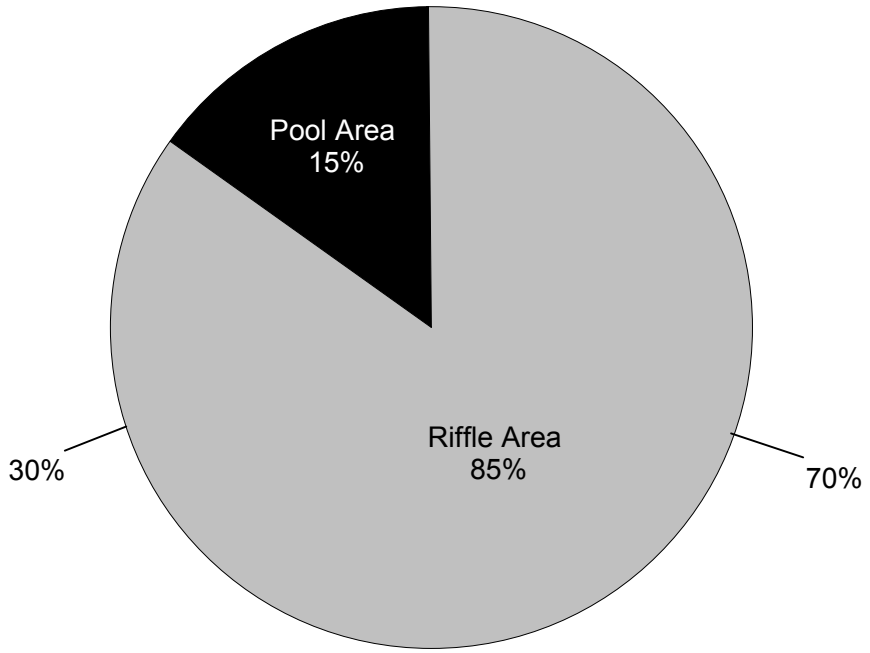
Total riparian widths (left riparian width+right riparian width+wetted channel width) for Beetle Run upper, summer 2001. The left and right of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data. Sample size = 0.



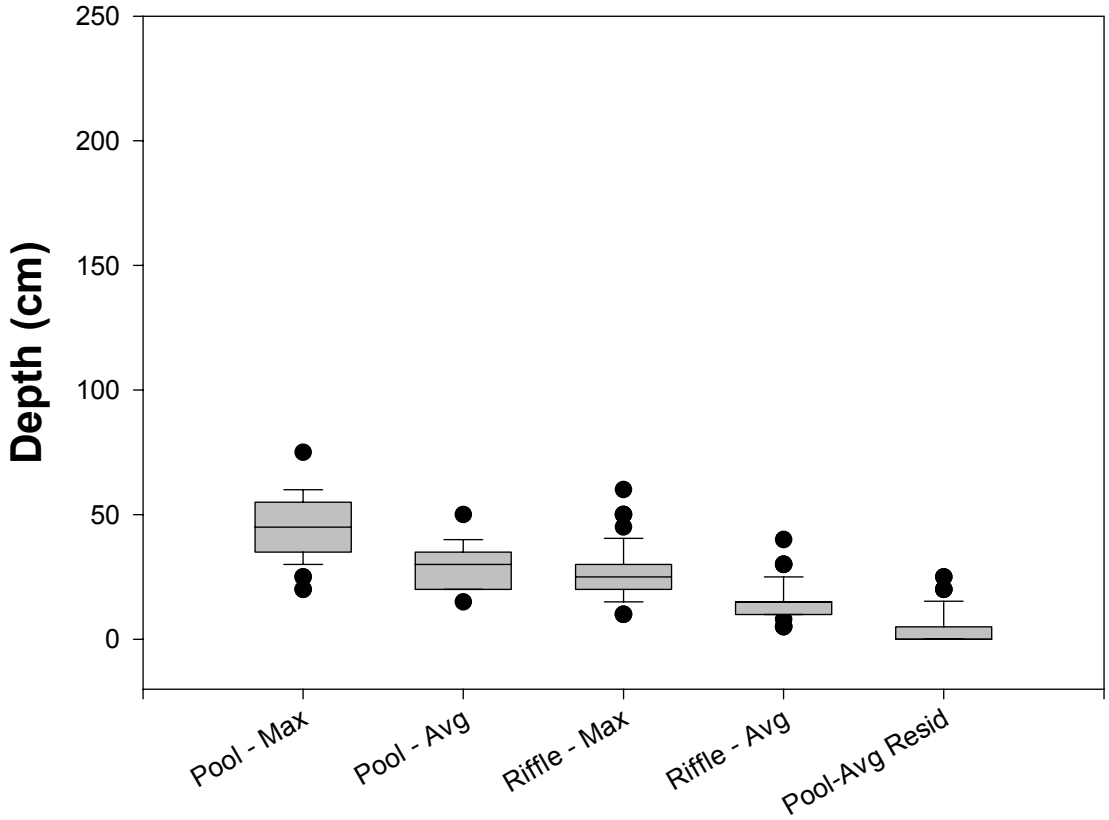
Rosgen's channel classification for each habitat unit in Beetle Run upper, summer 2001. X-axis indicates distance upstream from Forest boundary.

Stream:	**unnamed tributary of Stony Creek**
District:	Lee
Quadrangle:	Orkney Springs
Survey Date:	08/14/01
Downstream Starting Point:	Forest boundary
Total Distance Surveyed (km):	1.8
Percent of Total Area Pools:	**15**
Number of Pools:	57
Number of Pools per km:	31
Total Pool Area (m^2):	507 ± 128
Mean Pool Area (m^2):	9
Correction Factor:	0.80
Mean Maximum Depth (cm):	45
Mean Average Depth (cm):	29
Mean Residual Pool Depth (cm):	4
Percent of Total Area Riffles:	**85**
Number of Riffles:	55
Number of Riffles per km:	30
Total Riffle Area (m^2):	2835 ± 172
Mean Riffle Area (m^2):	52
Correction Factor:	0.91
Mean Maximum Depth (cm):	26
Mean Average Depth (cm):	14
Number of LWD pieces per km:	**19**
LWD < 5 m, < 55 cm:	8
LWD < 5 m, > 55 cm:	9
LWD > 5 m, < 55 cm:	2
LWD > 5 m, > 55 cm:	0
Mean Channel Width (m):	**3**
Mean Riparian Width (m) (Total*):	**9**
Maximum Riparian Width (Total):	12
75th Percentile (Total)	10
25th Percentile (Total)	6
Minimum Riparian Width (Total):	6
Mean Riparian Width (m) (Left, Right):**	**3**
Maximum Riparian Width (Left, Right):	7
75th Percentile (Left, Right)	3
25th Percentile (Left, Right)	1
Minimum Riparian Width (Left, Right):	1
Percent of Pool Habitat Surveyed as Glides:	**7**
Rosgen's Channel Type Frequency (%):	
Type A:	0
Type B:	100
Type C:	0
Type D:	0
Type E:	0
Type F:	0
Type G:	0
Percent Pools with > 35% Embeddedness:	**70**
Average Channel Gradient (%):	**7**

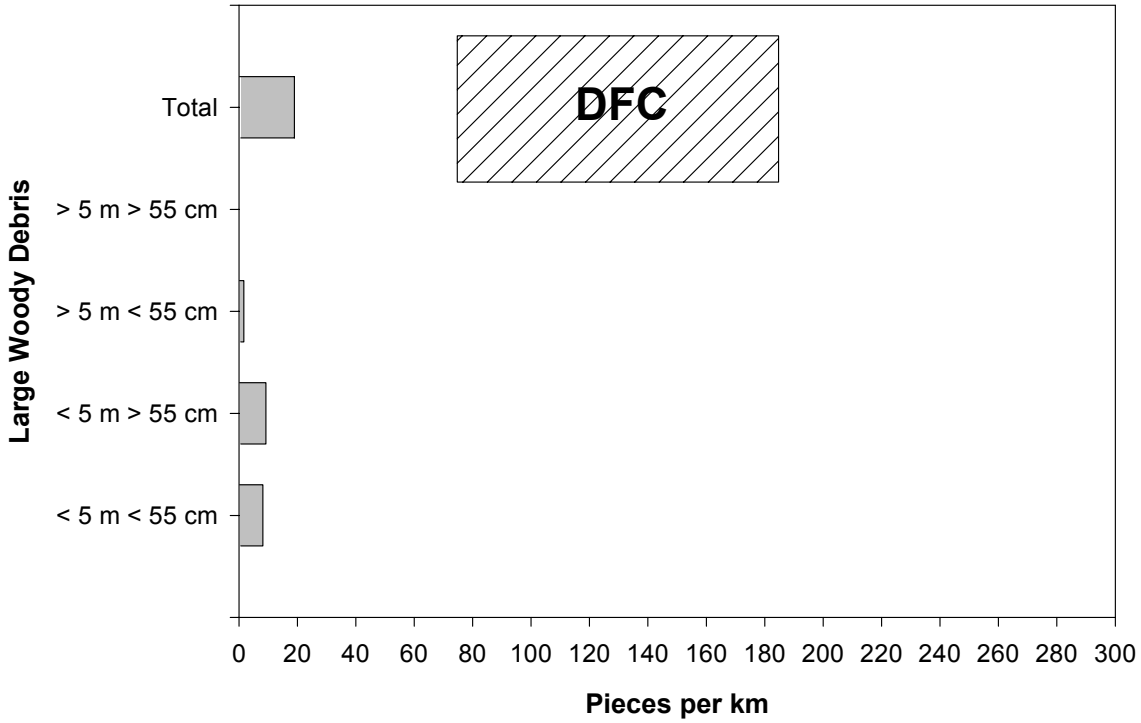
*Calculation sums left riparian + right riparian + stream channel
**Calculation pools left and right riparian measurements, does not sum them



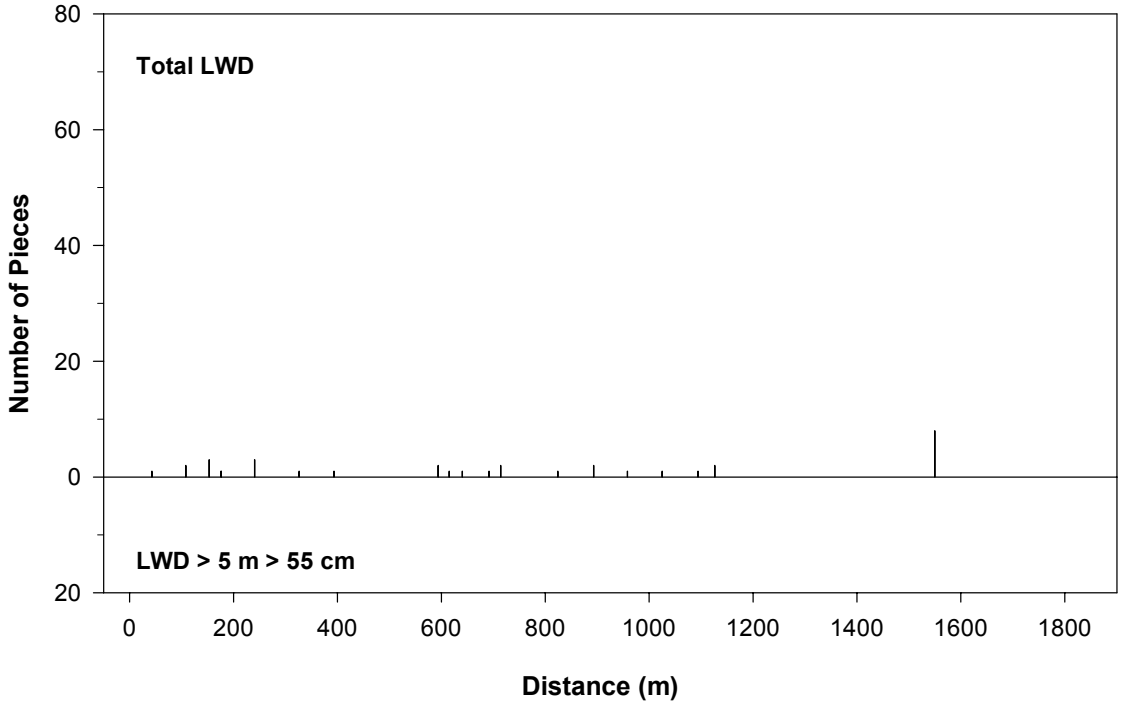
Estimated area of unnamed tributary of Stony Creek in pools and riffles as calculated using BVET techniques, summer 2001.



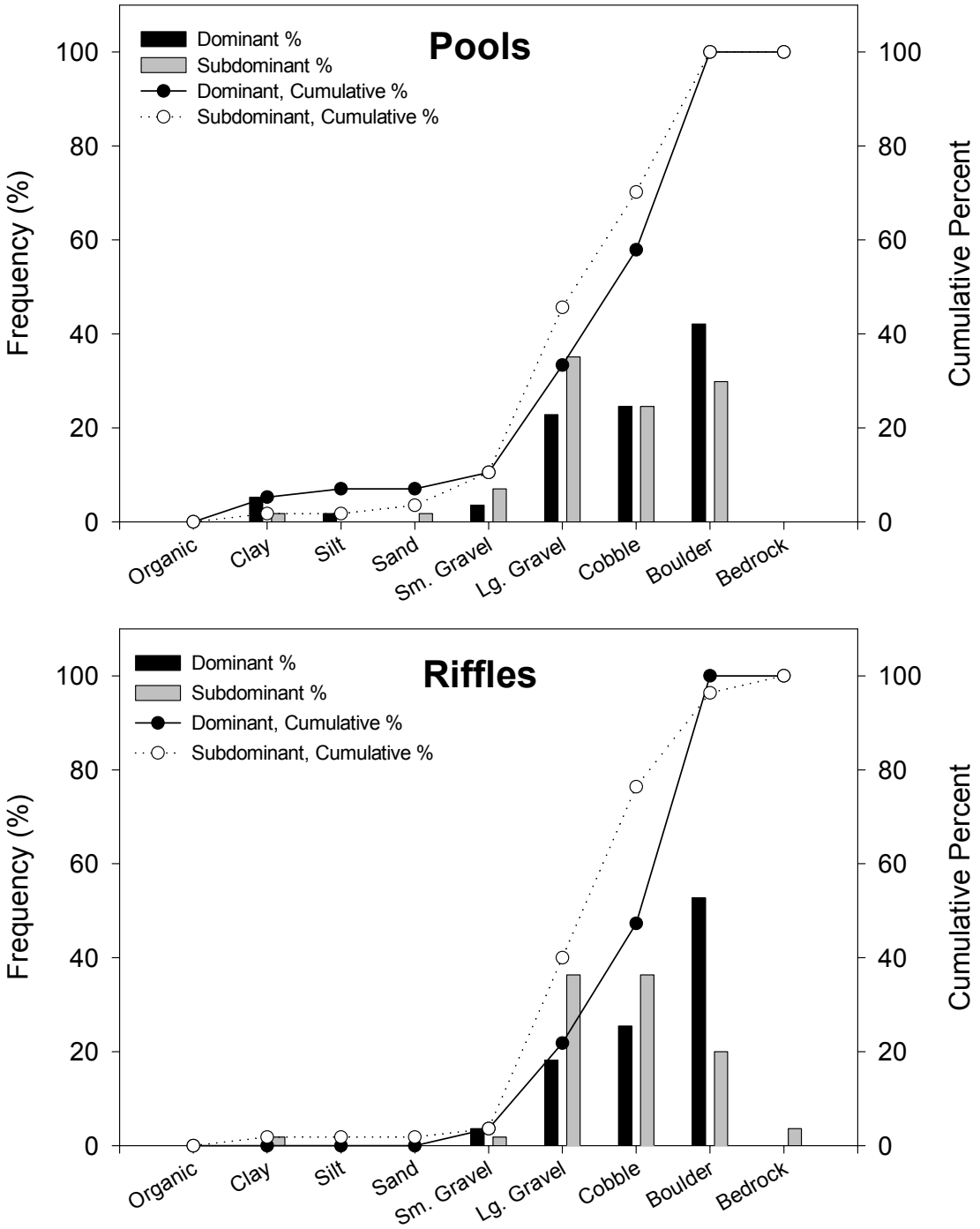
Maximum and average depths and residual pool depths for pools and riffles in unnamed tributary of Stony Creek, summer 2001. The top and bottom of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data.



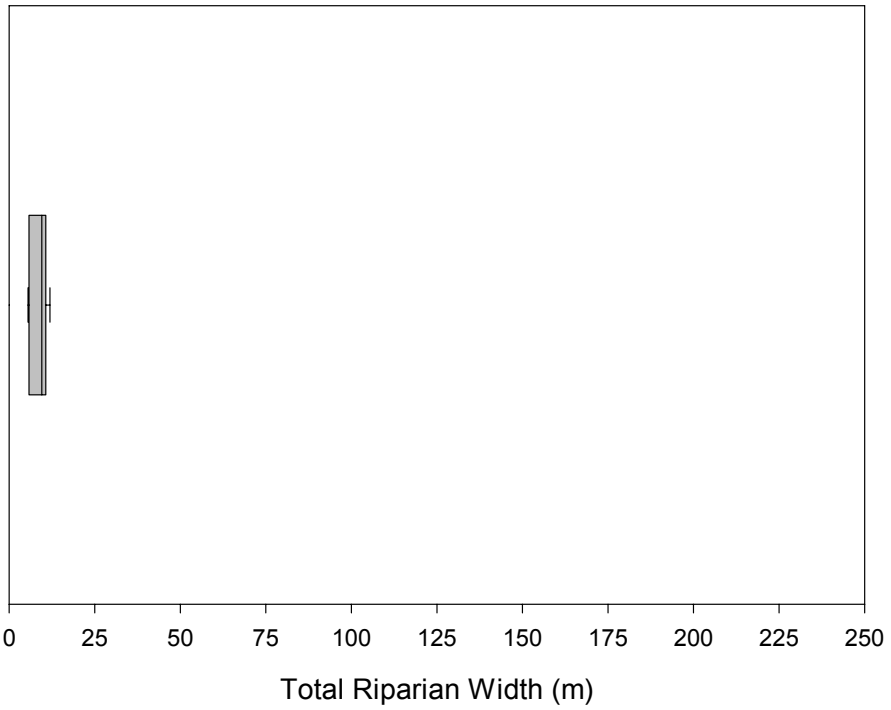
LWD per kilometer in unnamed tributary of Stony Creek, summer 2001. Y-axis labels are LWD size classes with the first number indicating length and the second number indicating diameter.



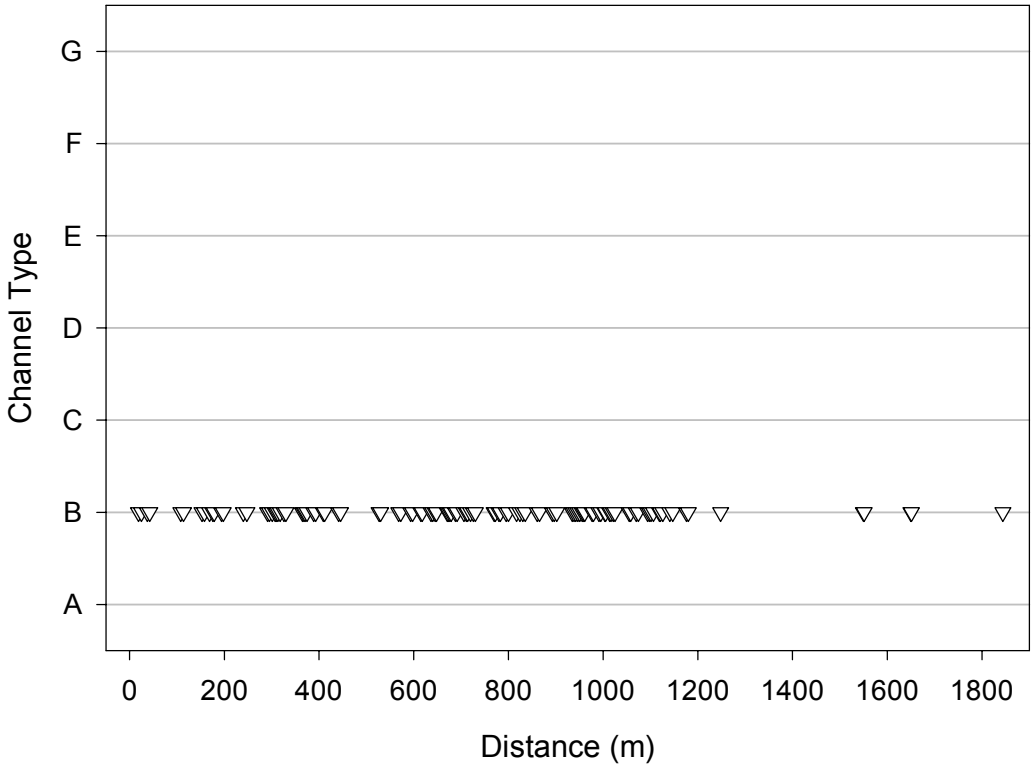
Distribution and abundance of LWD in each habitat unit of unnamed tributary of Stony Creek, summer 2001. Bars below the x-axis represent the amount of the total LWD that was >5 m in length, >55 cm in diameter. X-axis indicates distance upstream from Forest boundary.



Frequency (percent) and cumulative percent of dominant and subdominant substrate occurrence for pools and riffles in unnamed tributary of Stony Creek, summer 2001.



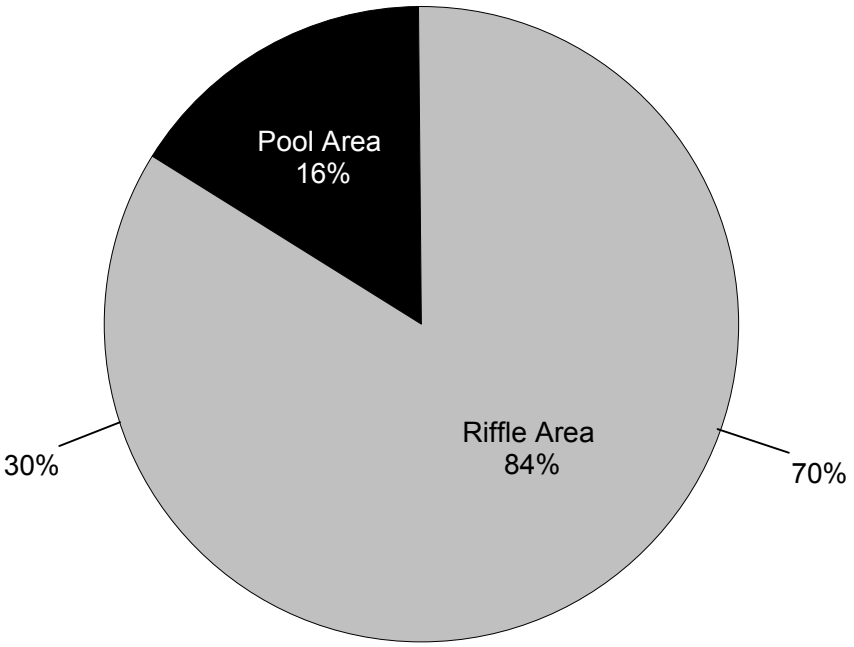
Total riparian widths (left riparian width+right riparian width+wetted channel width) for unnamed tributary of Stony Creek, summer 2001. The left and right of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data. Sample size = 5.



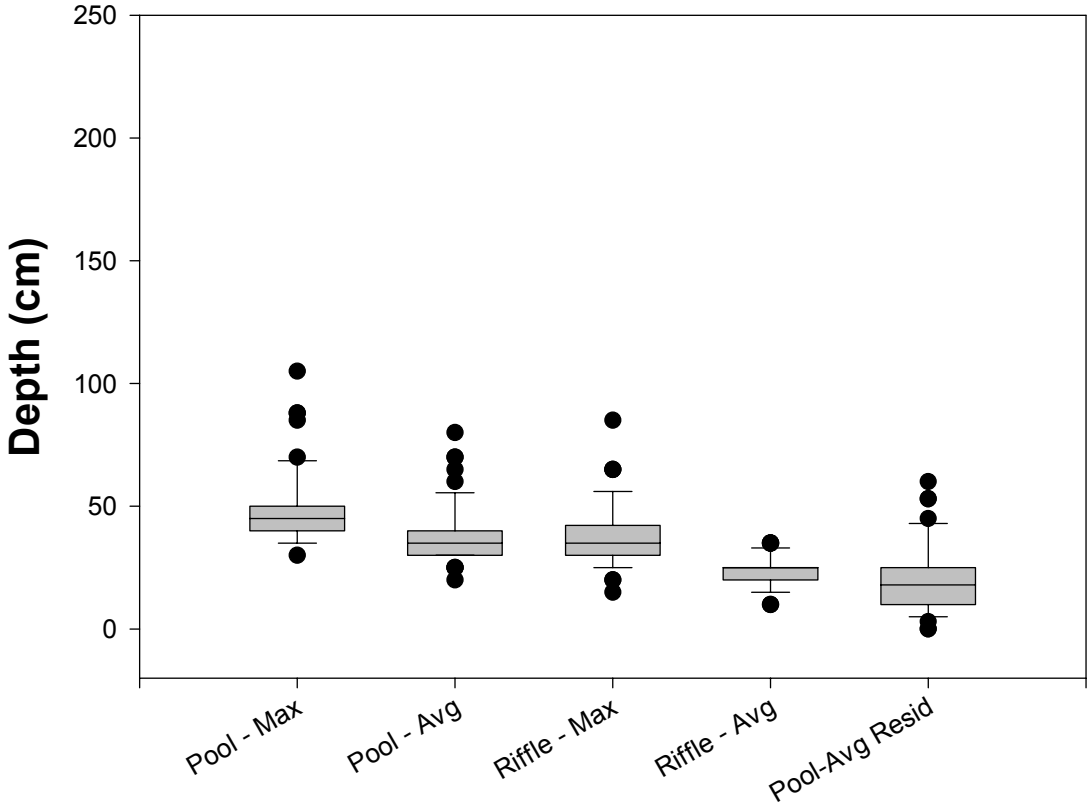
Rosgen's channel classification for each habitat unit in unnamed tributary of Stony Creek, summer 2001. X-axis indicates distance upstream from Forest boundary.

Stream:	**Falls Run**
District:	Lee
Quadrangle:	Orkney Springs
Survey Date:	08/16/01
Downstream Starting Point:	Forest boundary
Total Distance Surveyed (km):	1.6
Percent of Total Area Pools:	**16**
Number of Pools:	48
Number of Pools per km:	30
Total Pool Area (m^2):	577 ± 176
Mean Pool Area (m^2):	12
Correction Factor:	0.84
Mean Maximum Depth (cm):	49
Mean Average Depth (cm):	37
Mean Residual Pool Depth (cm):	20
Percent of Total Area Riffles:	**84**
Number of Riffles:	39
Number of Riffles per km:	24
Total Riffle Area (m^2):	3044 ± 12
Mean Riffle Area (m^2):	78
Correction Factor:	0.88
Mean Maximum Depth (cm):	37
Mean Average Depth (cm):	23
Number of LWD pieces per km:	**142**
LWD < 5 m, < 55 cm:	33
LWD < 5 m, > 55 cm:	55
LWD > 5 m, < 55 cm:	28
LWD > 5 m, > 55 cm:	26
Mean Channel Width (m):	**3**
Mean Riparian Width (m) (Total*):	**13**
Maximum Riparian Width (Total):	23
75th Percentile (Total)	16
25th Percentile (Total)	8
Minimum Riparian Width (Total):	8
Mean Riparian Width (m) (Left, Right):**	**5**
Maximum Riparian Width (Left, Right):	15
75th Percentile (Left, Right)	4
25th Percentile (Left, Right)	2
Minimum Riparian Width (Left, Right):	1
Percent of Pool Habitat Surveyed as Glides:	**10**
Rosgen's Channel Type Frequency (%):	
Type A:	3
Type B:	97
Type C:	0
Type D:	0
Type E:	0
Type F:	0
Type G:	0
Percent Pools with > 35% Embeddedness:	**25**
Average Channel Gradient (%):	**9**

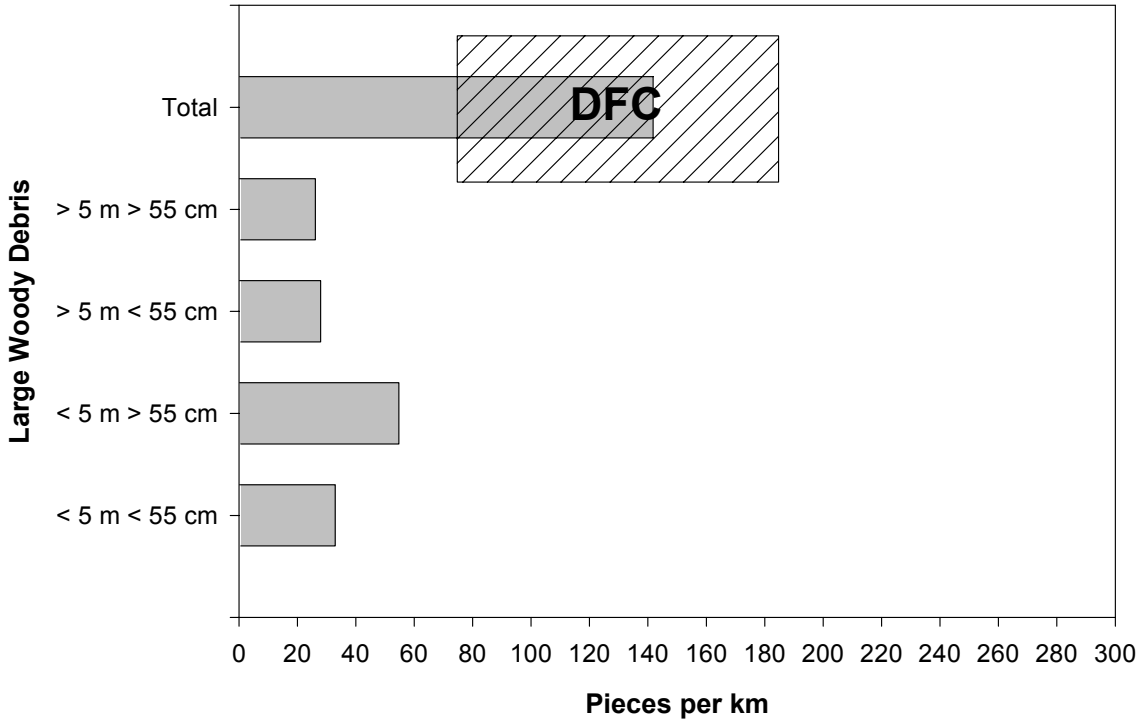
*Calculation sums left riparian + right riparian + stream channel
**Calculation pools left and right riparian measurements, does not sum them



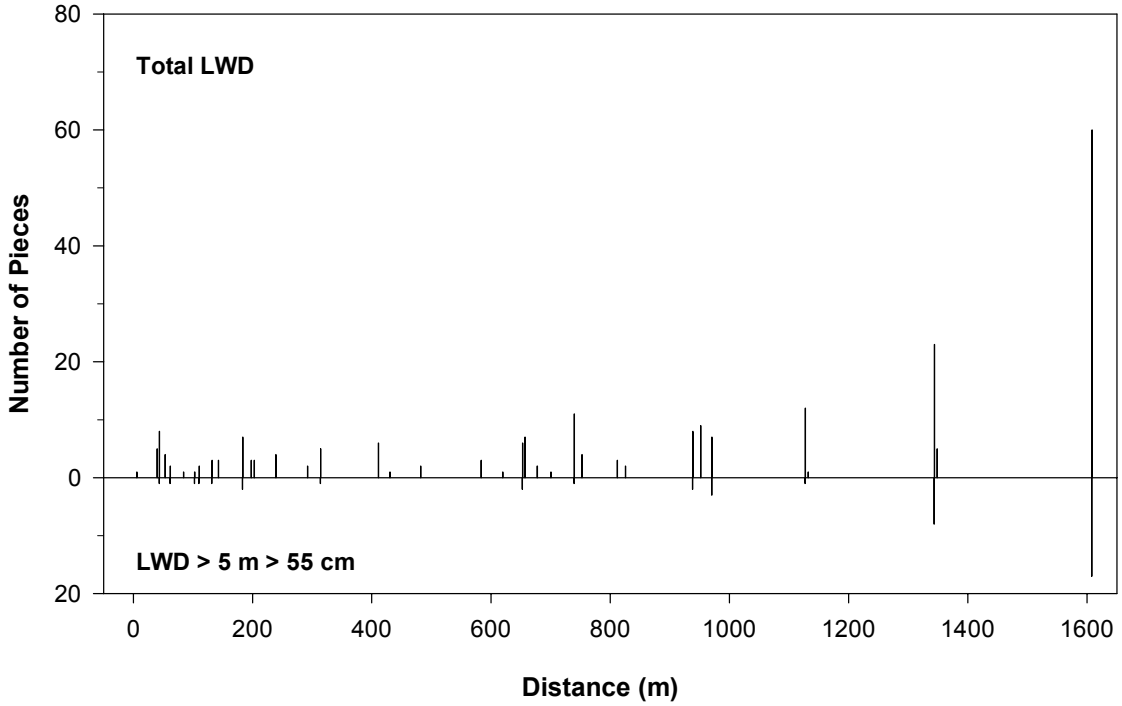
Estimated area of Falls Run in pools and riffles as calculated using BVET techniques, summer 2001.



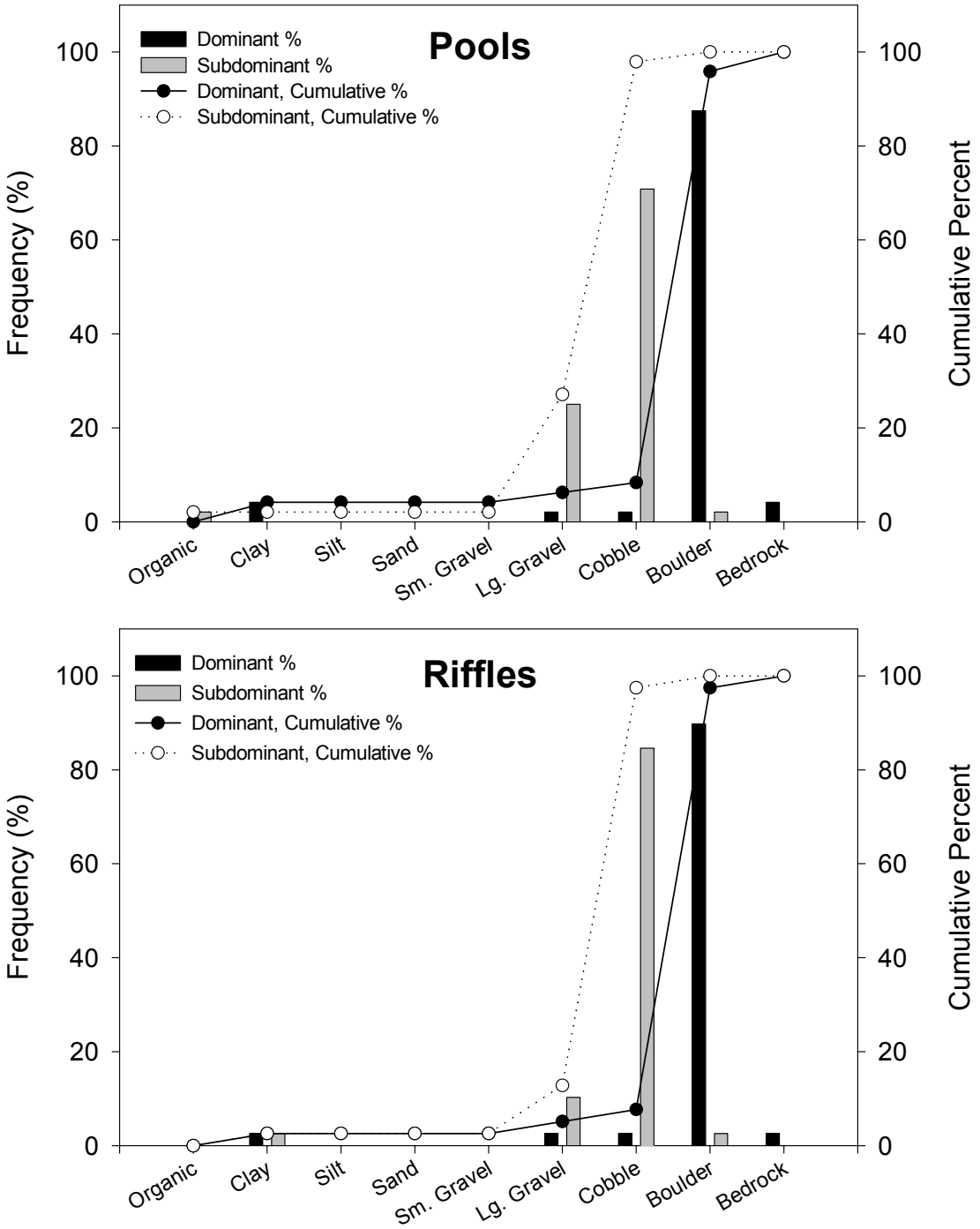
Maximum and average depths and residual pool depths for pools and riffles in Falls Run, summer 2001. The top and bottom of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data.



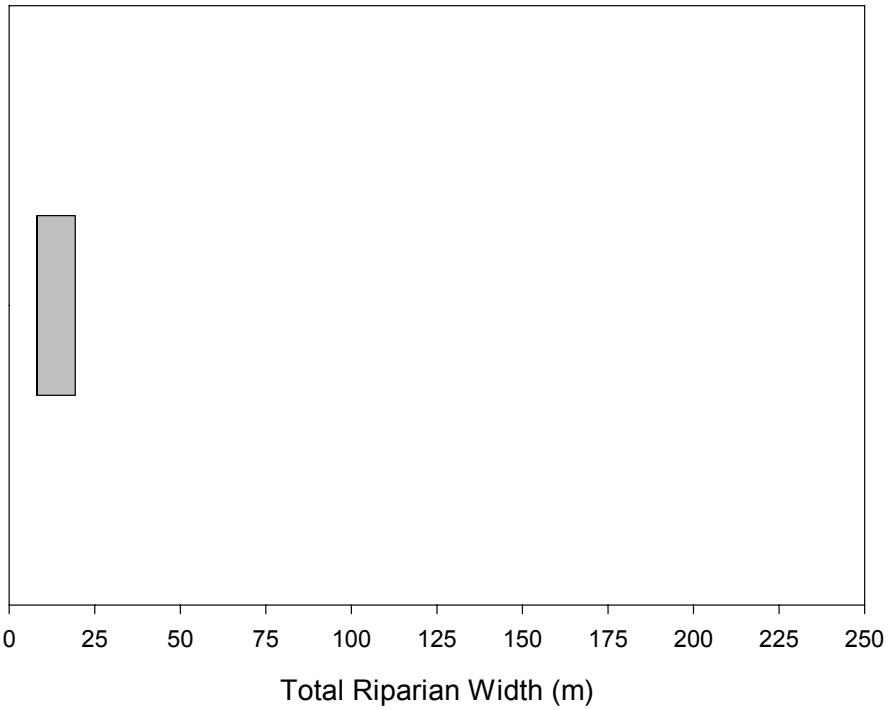
LWD per kilometer in Falls Run, summer 2001. Y-axis labels are LWD size classes with the first number indicating length and the second number indicating diameter.



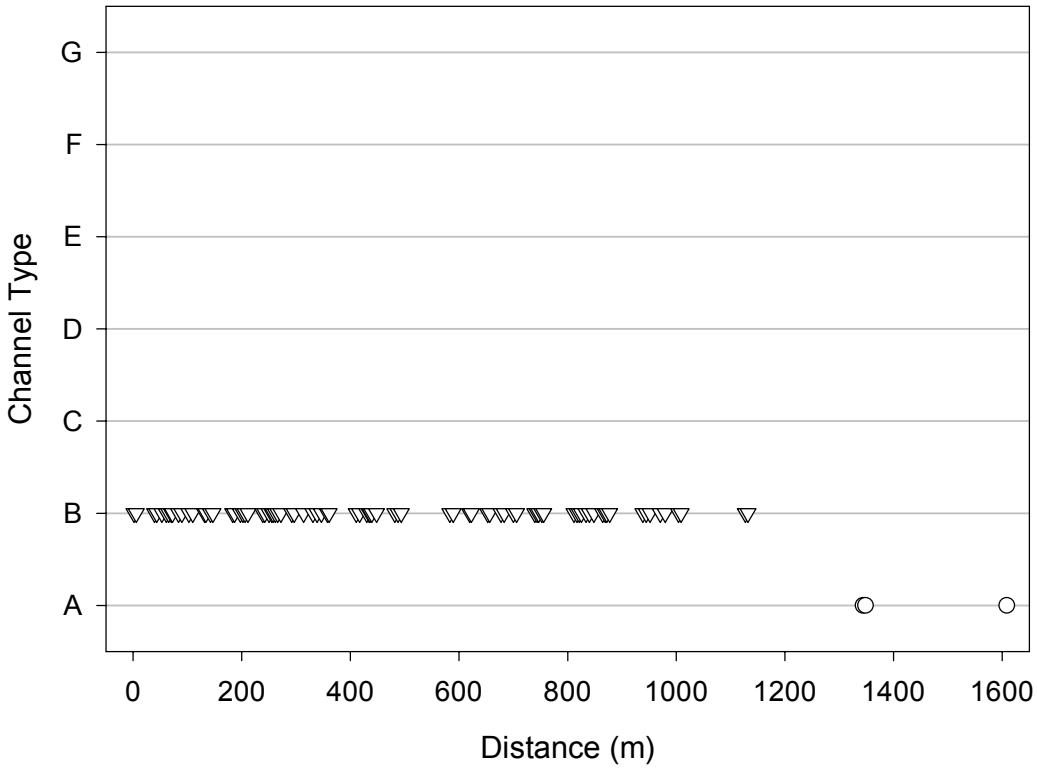
Distribution and abundance of LWD in each habitat unit of Falls Run, summer 2001. Bars below the x-axis represent the amount of the total LWD that was >5 m in length, >55 cm in diameter. X-axis indicates distance upstream from Forest boundary.



Frequency (percent) and cumulative percent of dominant and subdominant substrate occurrence for pools and riffles in Falls Run, summer 2001.



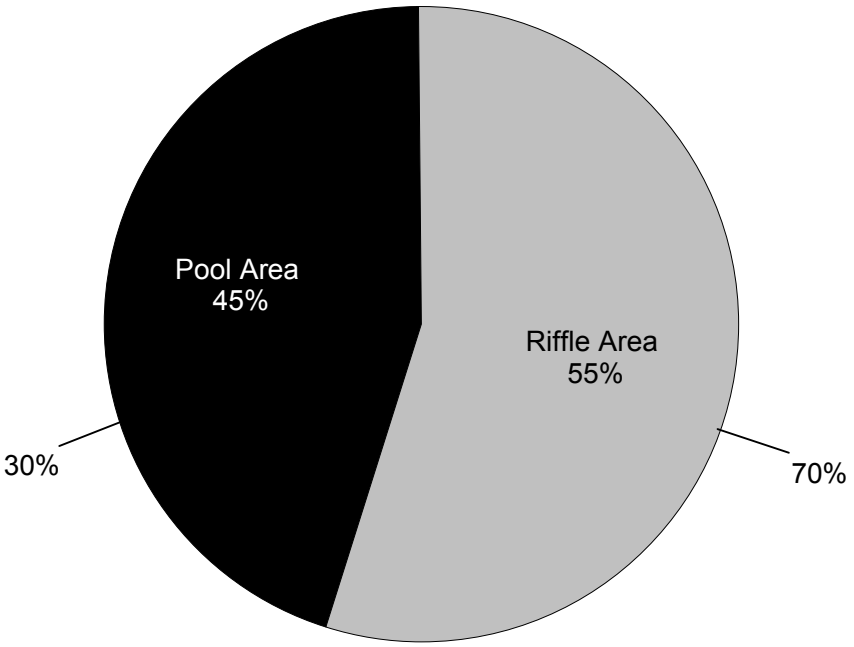
Total riparian widths (left riparian width+right riparian width+wetted channel width) for Falls Run, summer 2001. The left and right of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data. Sample size = 3.



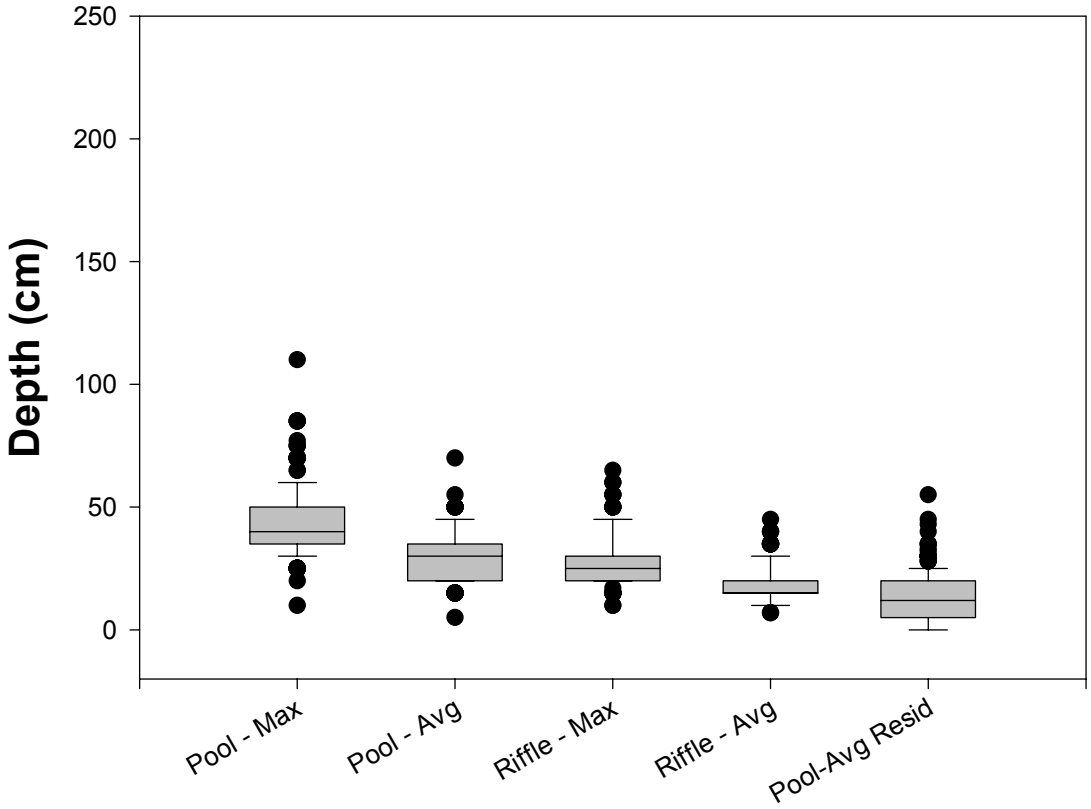
Rosgen's channel classification for each habitat unit in Falls Run, summer 2001. X-axis indicates distance upstream from Forest boundary.

Stream:	**Peters Mill Run**
District:	Lee
Quadrangle:	Rileyville/Edinburg
Survey Date:	05/31/01
Downstream Starting Point:	Forest boundary
Total Distance Surveyed (km):	7.4
Percent of Total Area Pools:	**45**
Number of Pools:	302
Number of Pools per km:	41
Total Pool Area (m^2):	11614 ± 983
Mean Pool Area (m^2):	38
Correction Factor:	1.04
Mean Maximum Depth (cm):	44
Mean Average Depth (cm):	30
Mean Residual Pool Depth (cm):	13
Percent of Total Area Riffles:	**55**
Number of Riffles:	259
Number of Riffles per km:	35
Total Riffle Area (m^2):	14094 ± 800
Mean Riffle Area (m^2):	54
Correction Factor:	0.98
Mean Maximum Depth (cm):	28
Mean Average Depth (cm):	18
Number of LWD pieces per km:	**113**
LWD < 5 m, < 55 cm:	53
LWD < 5 m, > 55 cm:	8
LWD > 5 m, < 55 cm:	37
LWD > 5 m, > 55 cm:	15
Mean Channel Width (m):	**5**
Mean Riparian Width (m) (Total*):	**57**
Maximum Riparian Width (Total):	106
75th Percentile (Total)	78
25th Percentile (Total)	37
Minimum Riparian Width (Total):	11
Mean Riparian Width (m) (Left, Right):**	**26**
Maximum Riparian Width (Left, Right):	77
75th Percentile (Left, Right)	40
25th Percentile (Left, Right)	10
Minimum Riparian Width (Left, Right):	1
Percent of Pool Habitat Surveyed as Glides:	**31**
Rosgen's Channel Type Frequency (%):	
Type A:	20
Type B:	20
Type C:	60
Type D:	0
Type E:	0
Type F:	0
Type G:	0
Percent Pools with > 35% Embeddedness:	**79**
Average Channel Gradient (%):	**5**

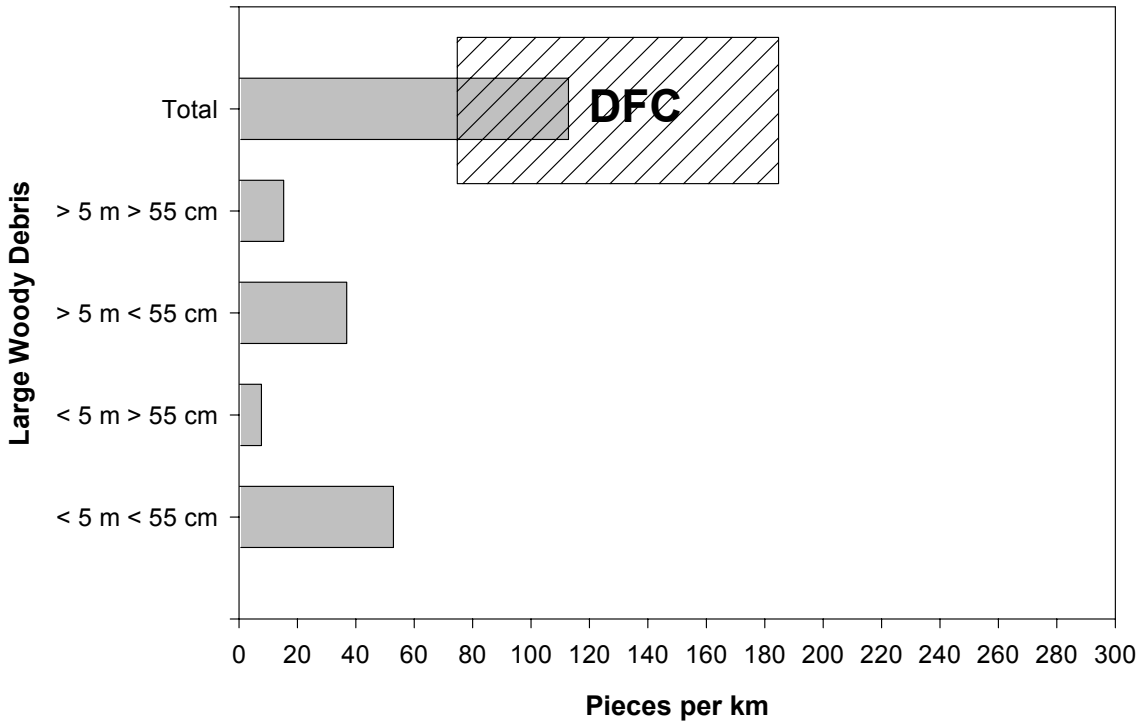
*Calculation sums left riparian + right riparian + stream channel
**Calculation pools left and right riparian measurements, does not sum them



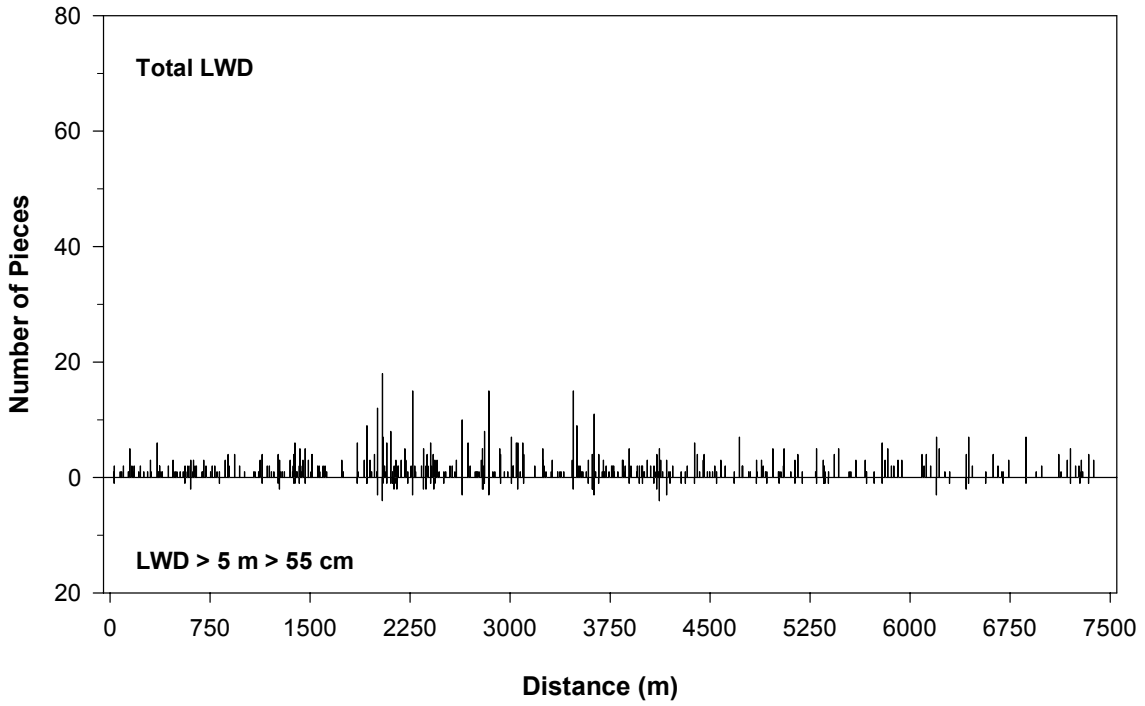
Estimated area of Peters Mill Run in pools and riffles as calculated using BVET techniques, summer 2001.



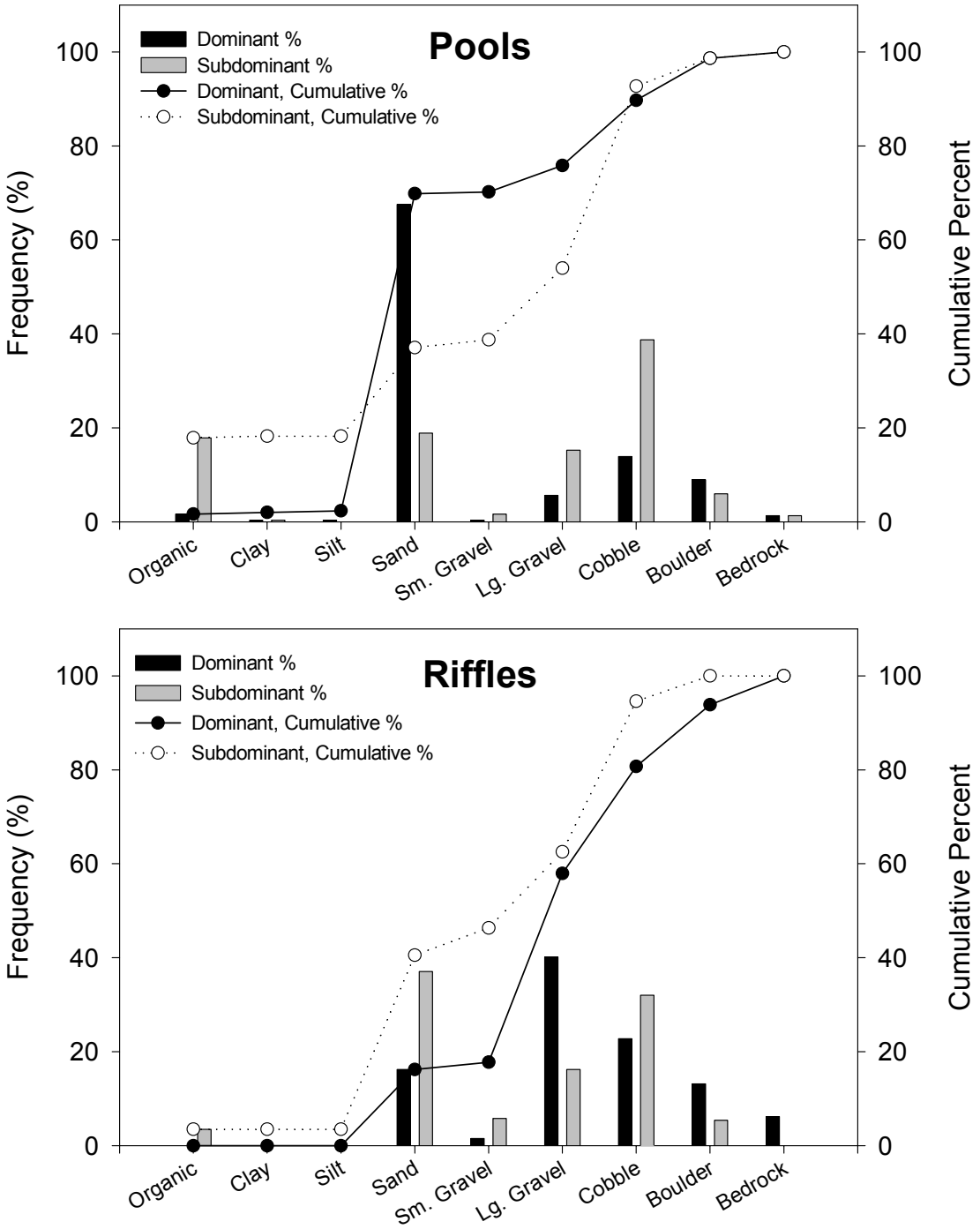
Maximum and average depths and residual pool depths for pools and riffles in Peters Mill Run, summer 2001. The top and bottom of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data.



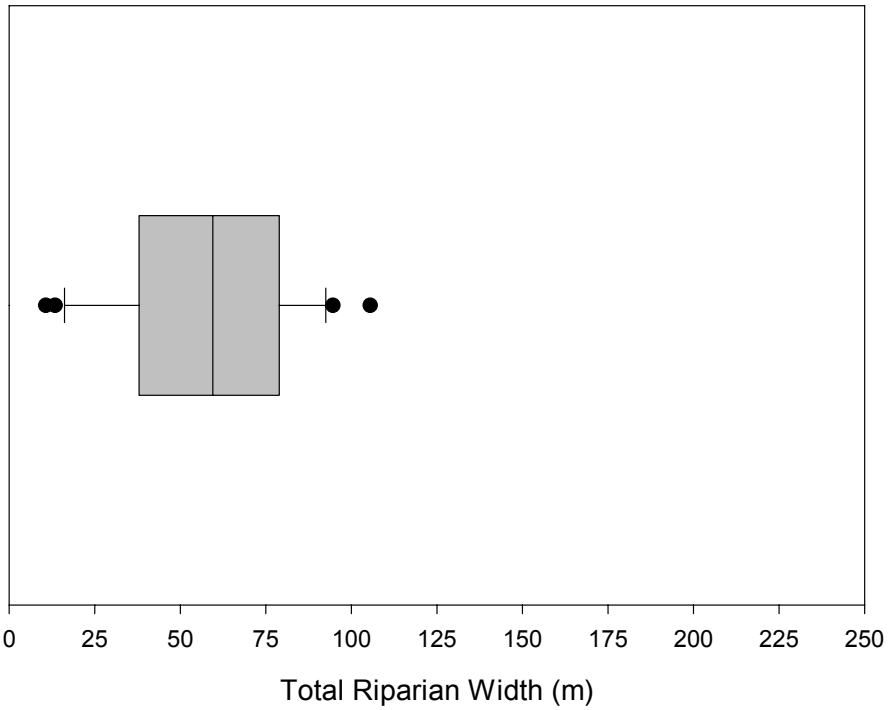
LWD per kilometer in Peters Mill Run, summer 2001. Y-axis labels are LWD size classes with the first number indicating length and the second number indicating diameter.



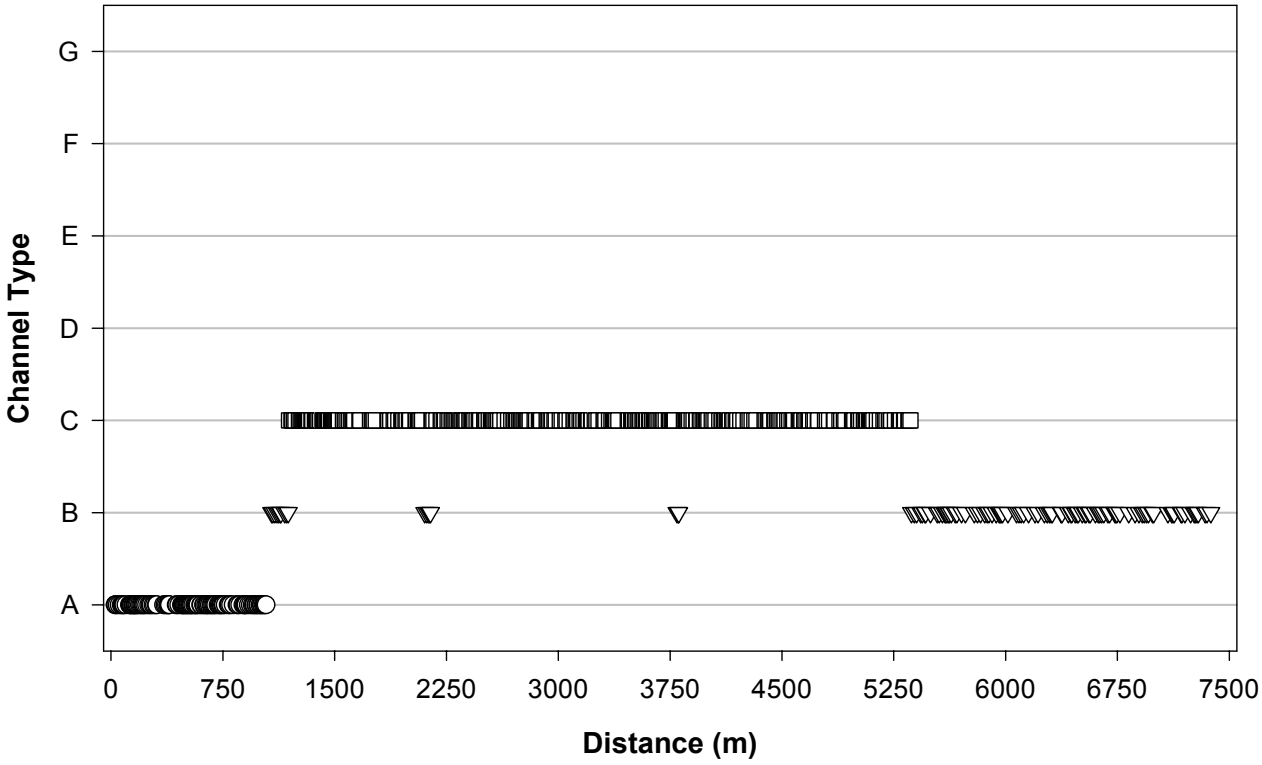
Distribution and abundance of LWD in each habitat unit of Peters Mill Run, summer 2001. Bars below the x-axis represent the amount of the total LWD that was >5 m in length, >55 cm in diameter. X-axis indicates distance upstream from Forest boundary.



Frequency (percent) and cumulative percent of dominant and subdominant substrate occurrence for pools and riffles in Peters Mill Run, summer 2001.



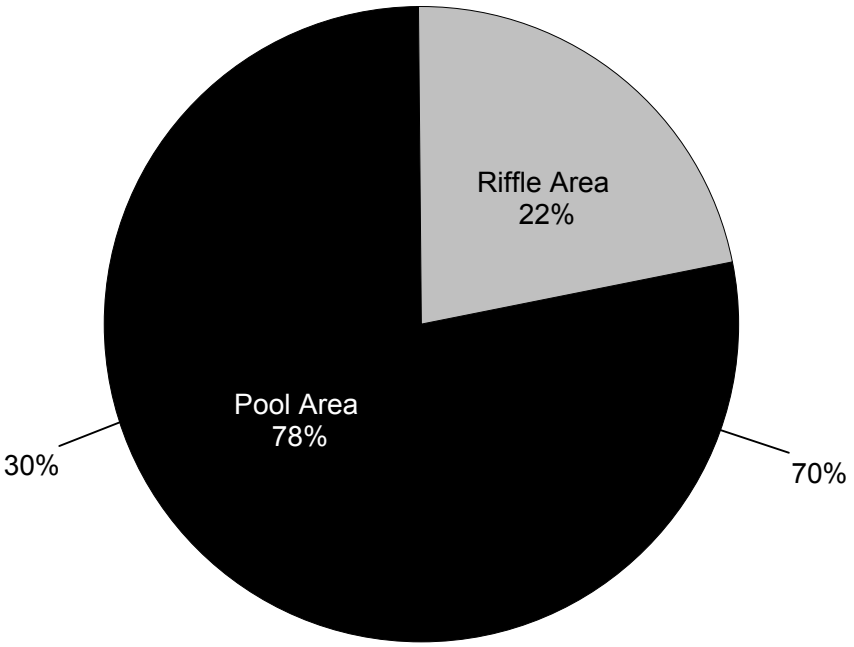
Total riparian widths (left riparian width+right riparian width+wetted channel width) for Peters Mill Run, summer 2001. The left and right of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data. Sample size = 25.



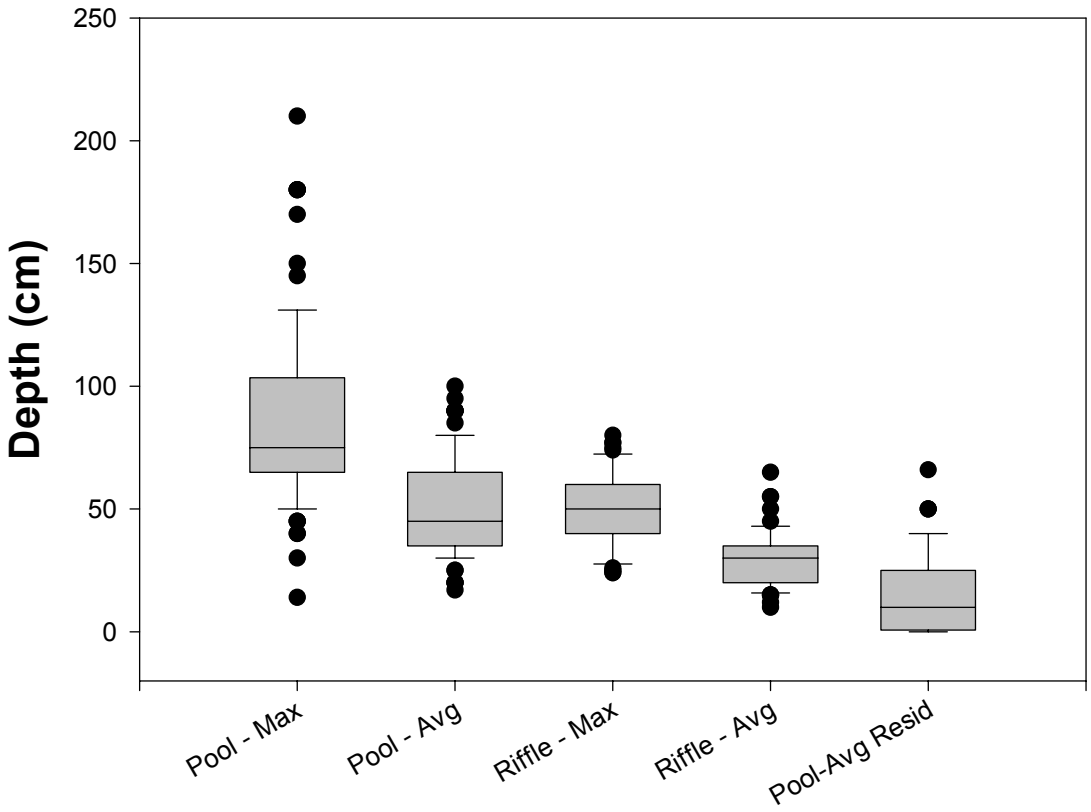
Rosgen's channel classification for each habitat unit in Peters Mill Run, summer 2001. X-axis indicates distance upstream from Forest boundary.

Stream:	**Passasge Creek (lower)**
District:	Lee
Quadrangle:	Strasburg
Survey Date:	06/13/01
Downstream Starting Point:	Forest boundary
Total Distance Surveyed (km):	6.8
Percent of Total Area Pools:	**78**
Number of Pools:	85
Number of Pools per km:	13
Total Pool Area (m^2):	66733 ± 6067
Mean Pool Area (m^2):	785
Correction Factor:	0.77
Mean Maximum Depth (cm):	86
Mean Average Depth (cm):	5
Mean Residual Pool Depth (cm):	16
Percent of Total Area Riffles:	**22**
Number of Riffles:	50
Number of Riffles per km:	7
Total Riffle Area (m^2):	18650 ± 1690
Mean Riffle Area (m^2):	373
Correction Factor:	1.01
Mean Maximum Depth (cm):	49
Mean Average Depth (cm):	29
Number of LWD pieces per km:	**71**
LWD < 5 m, < 55 cm:	38
LWD < 5 m, > 55 cm:	1
LWD > 5 m, < 55 cm:	28
LWD > 5 m, > 55 cm:	4
Mean Channel Width (m):	**16**
Mean Riparian Width (m) (Total*):	**116**
Maximum Riparian Width (Total):	204
75th Percentile (Total)	150
25th Percentile (Total)	59
Minimum Riparian Width (Total):	45
Mean Riparian Width (m) (Left, Right):**	**50**
Maximum Riparian Width (Left, Right):	140
75th Percentile (Left, Right)	60
25th Percentile (Left, Right)	12
Minimum Riparian Width (Left, Right):	4
Percent of Pool Habitat Surveyed as Glides:	**42**
Rosgen's Channel Type Frequency (%):	
Type A:	0
Type B:	30
Type C:	49
Type D:	0
Type E:	0
Type F:	21
Type G:	00
Percent Pools with > 35% Embeddedness:	**84**
Average Channel Gradient (%):	**3**

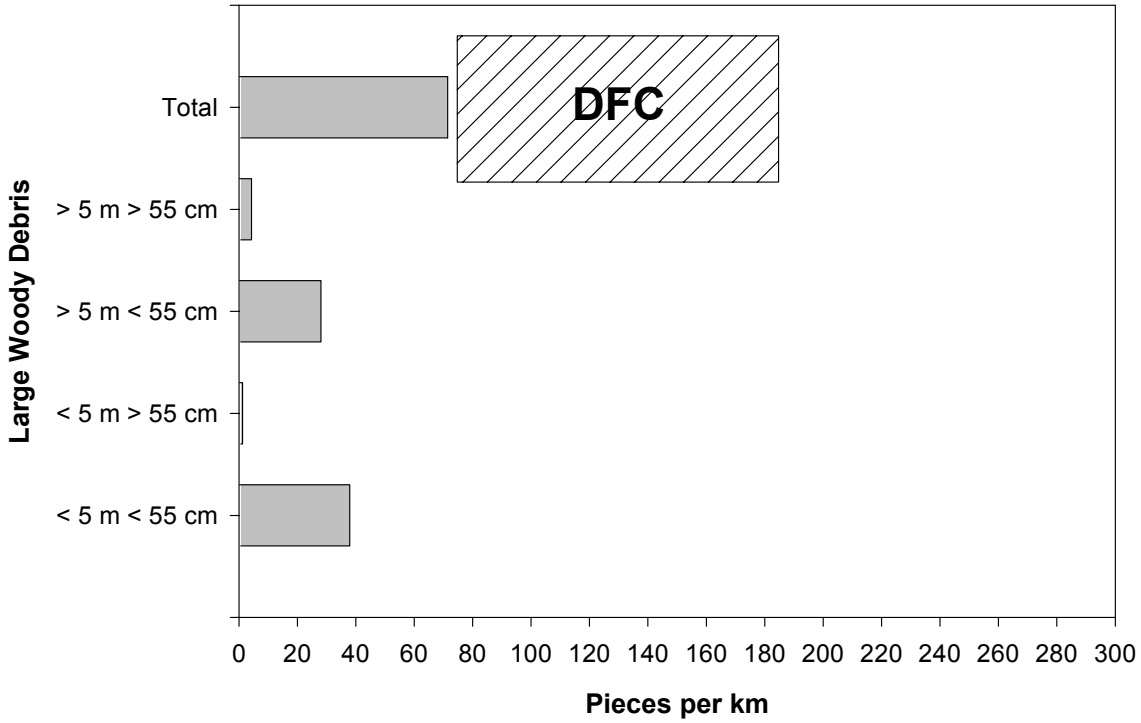
*Calculation sums left riparian + right riparian + stream channel
**Calculation pools left and right riparian measurements, does not sum them



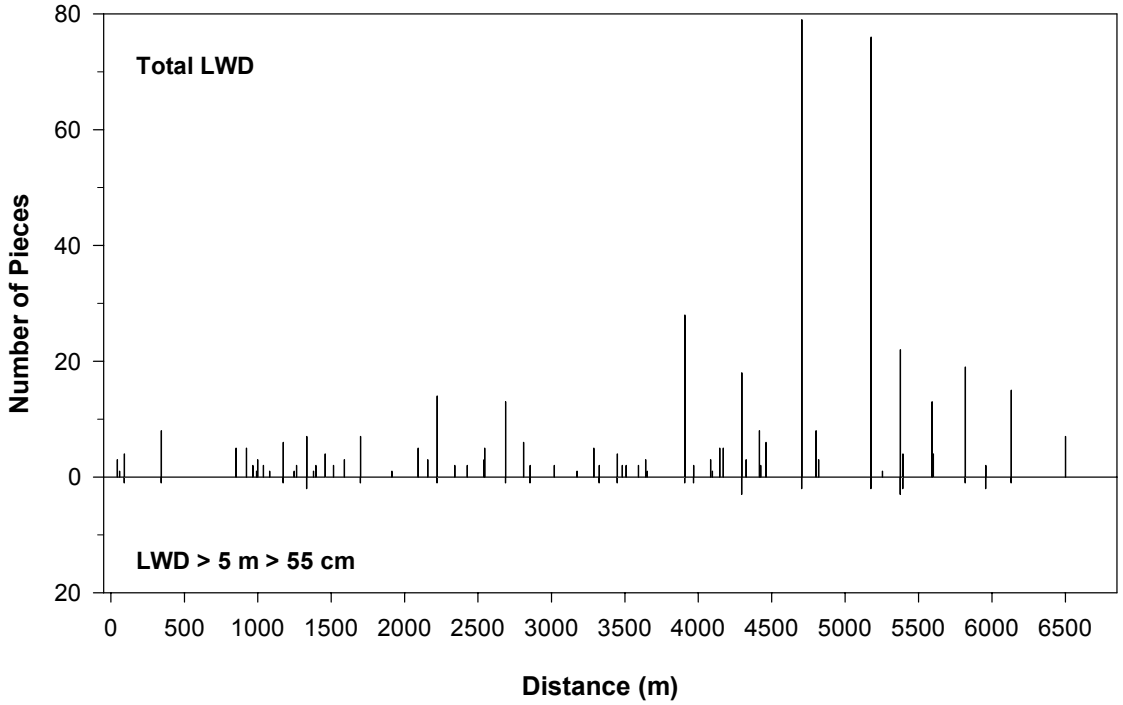
Estimated area of Passage Creek (lower), in pools and riffles as calculated using BVET techniques, summer 2001.



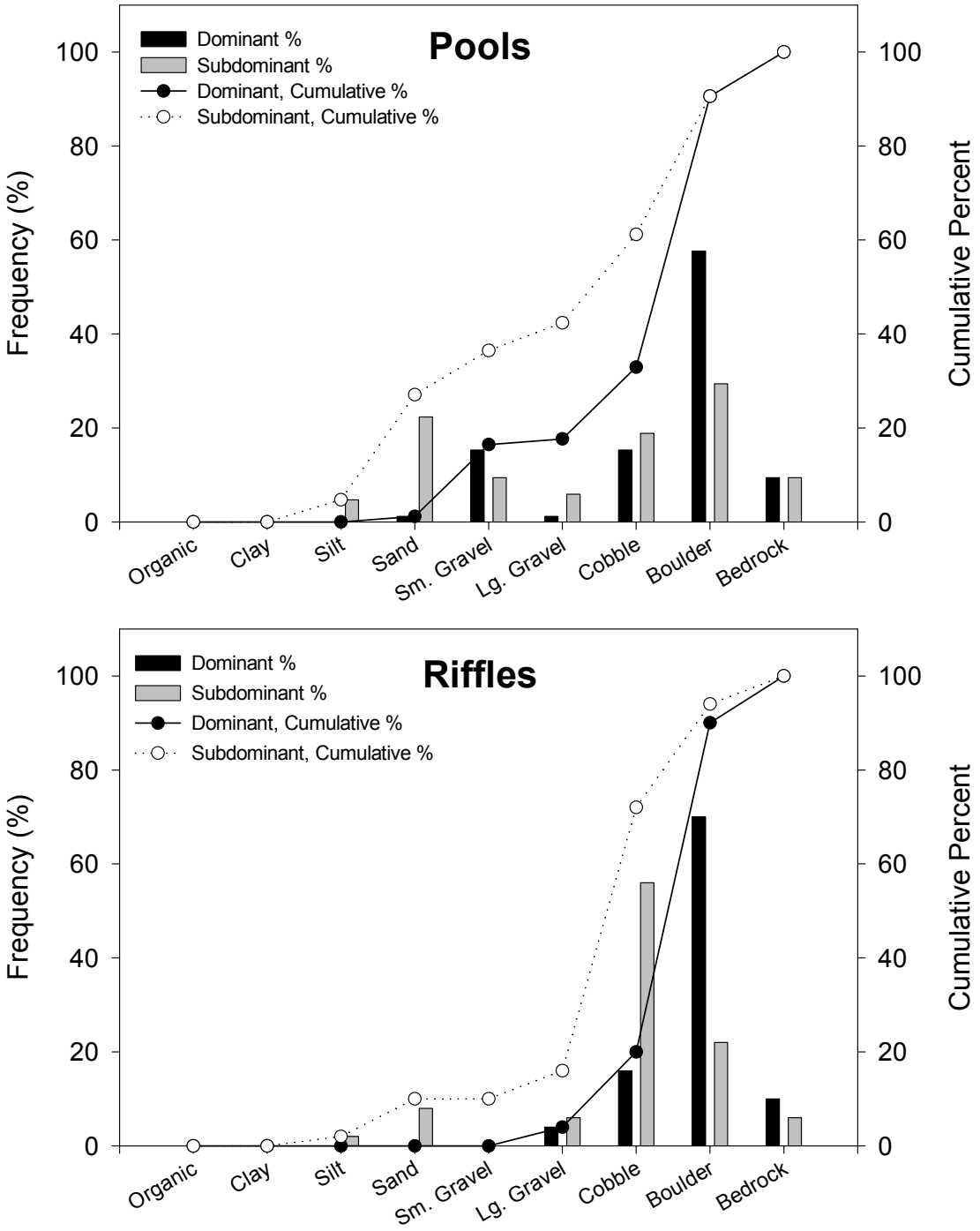
Maximum and average depths and residual pool depths for pools and riffles in Passage Creek (lower), summer 2001. The top and bottom of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data.



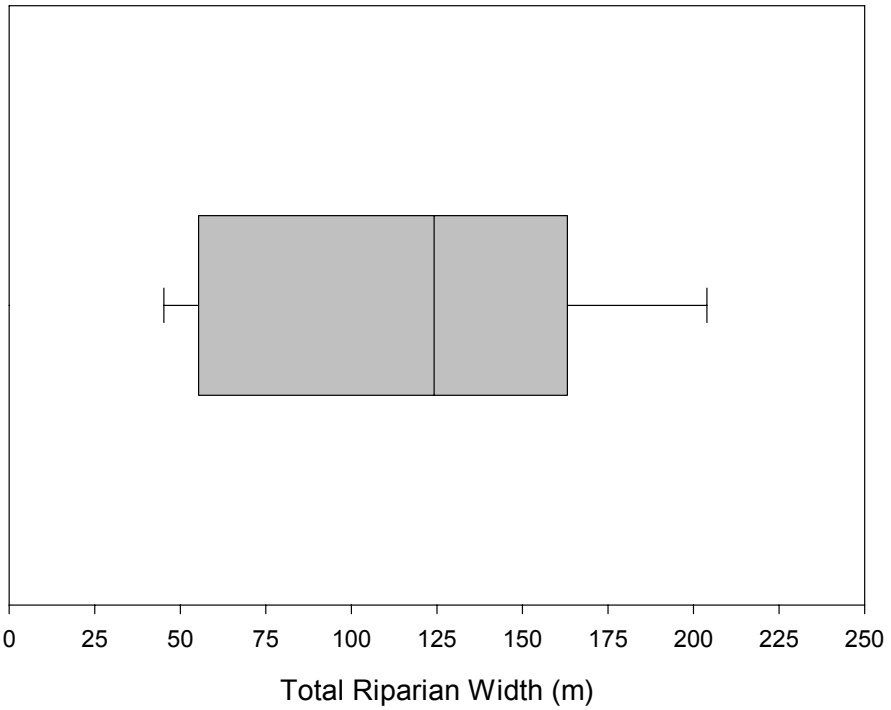
LWD per kilometer in Passage Creek (lower), summer 2001. Y-axis labels are LWD size classes with the first number indicating length and the second number indicating diameter.



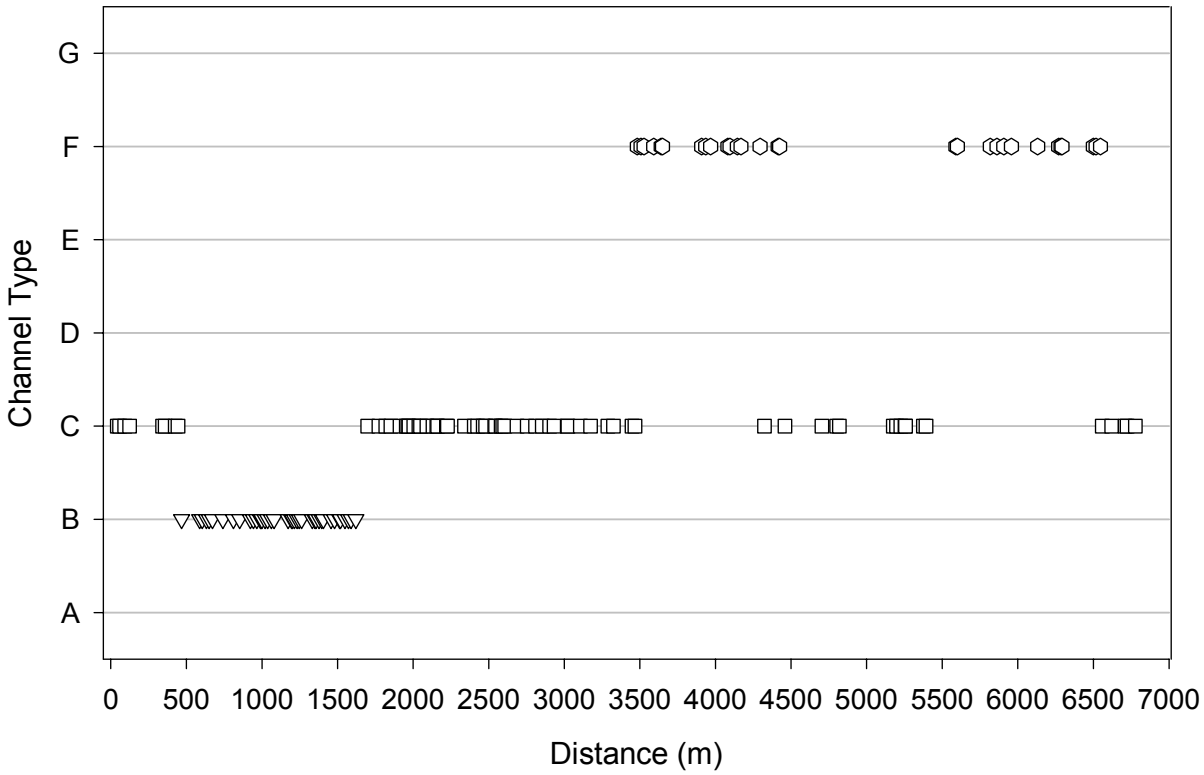
Distribution and abundance of LWD in each habitat unit of Passage Creek (lower), summer 2001. Bars below the x-axis represent the amount of the total LWD that was >5 m in length, >55 cm in diameter. X-axis indicates distance upstream from Forest boundary.



Frequency (percent) and cumulative percent of dominant and subdominant substrate occurrence for pools and riffles in Passage Creek (lower), summer 2001.



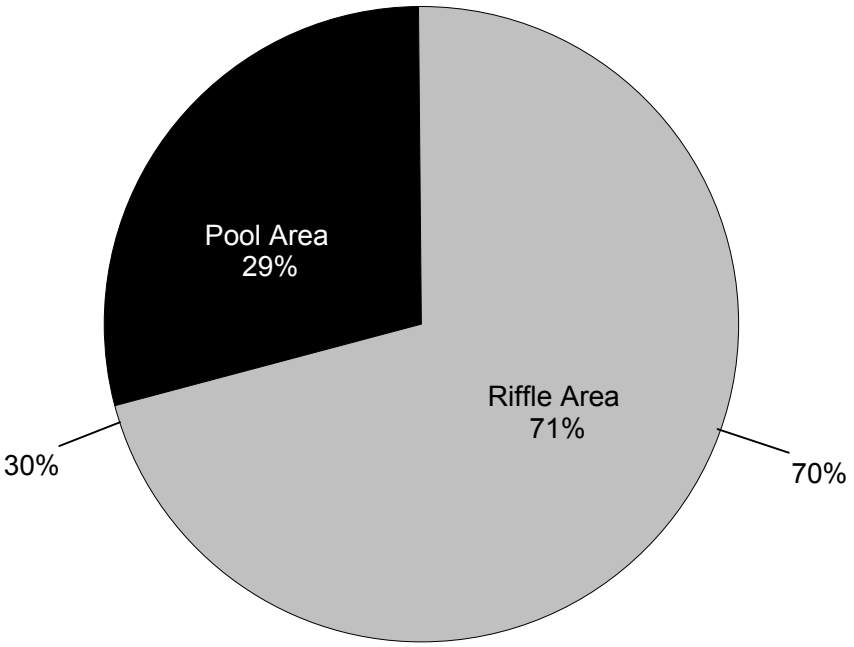
Total riparian widths (left riparian width+right riparian width+wetted channel width) for Passage Creek (lower), summer 2001. The left and right of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data. Sample size = 5.



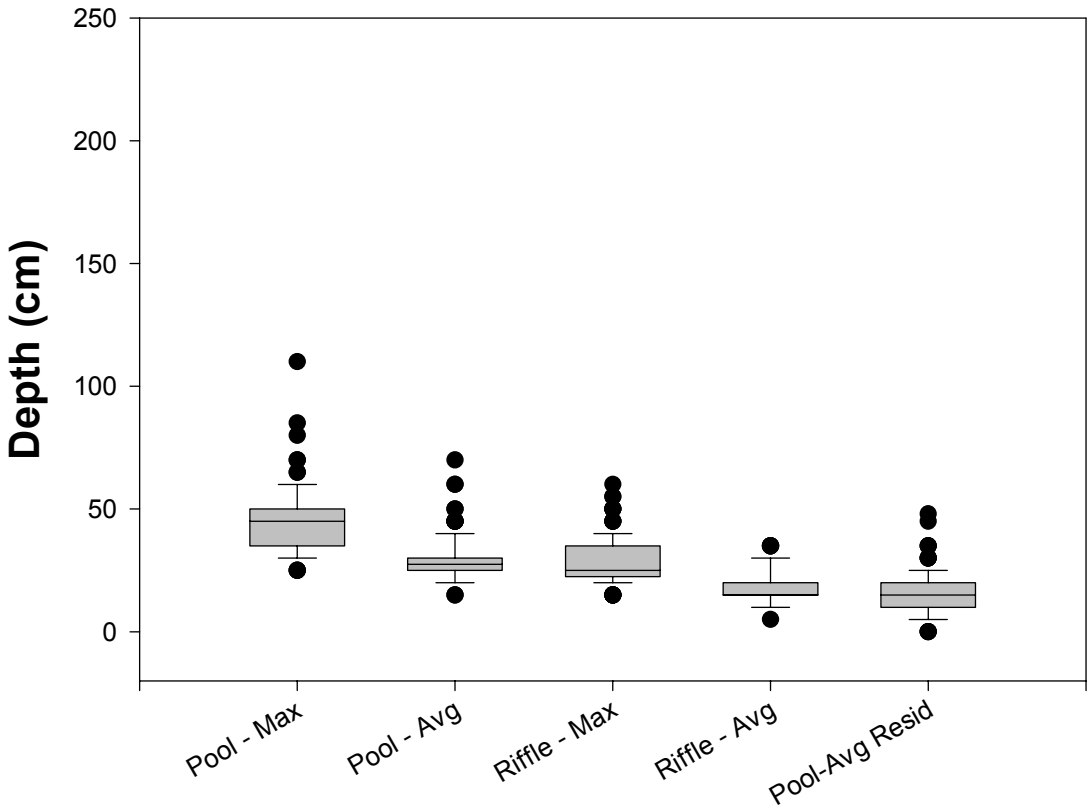
Rosgen's channel classification for each habitat unit in Passage Creek (lower), summer 2001. X-axis indicates distance upstream from Forest boundary.

Stream:	**Little Passage Creek**
District:	Lee
Quadrangle:	Strasburg/Toms Brook
Survey Date:	08/08/01
Downstream Starting Point:	Forest boundary
Total Distance Surveyed (km):	5.1
Percent of Total Area Pools:	**29**
Number of Pools:	131
Number of Pools per km:	26
Total Pool Area (m^2):	4929 ± 679
Mean Pool Area (m^2):	38
Correction Factor:	0.86
Mean Maximum Depth (cm):	45
Mean Average Depth (cm):	29
Mean Residual Pool Depth (cm):	15
Percent of Total Area Riffles:	**71**
Number of Riffles:	121
Number of Riffles per km:	24
Total Riffle Area (m^2):	12291 ± 1404
Mean Riffle Area (m^2):	102
Correction Factor:	0.88
Mean Maximum Depth (cm):	29
Mean Average Depth (cm):	18
Number of LWD pieces per km:	**186**
LWD < 5 m, < 55 cm:	135
LWD < 5 m, > 55 cm:	6
LWD > 5 m, < 55 cm:	41
LWD > 5 m, > 55 cm:	4
Mean Channel Width (m):	**6**
Mean Riparian Width (m) (Total*):	**67**
Maximum Riparian Width (Total):	110
75th Percentile (Total)	89
25th Percentile (Total)	53
Minimum Riparian Width (Total):	15
Mean Riparian Width (m) (Left, Right):**	**31**
Maximum Riparian Width (Left, Right):	92
75th Percentile (Left, Right)	44
25th Percentile (Left, Right)	7
Minimum Riparian Width (Left, Right):	1
Percent of Pool Habitat Surveyed as Glides:	**8**
Rosgen's Channel Type Frequency (%):	
Type A:	0
Type B:	29
Type C:	71
Type D:	0
Type E:	0
Type F:	0
Type G:	00
Percent Pools with > 35% Embeddedness:	**89**
Average Channel Gradient (%):	**4**

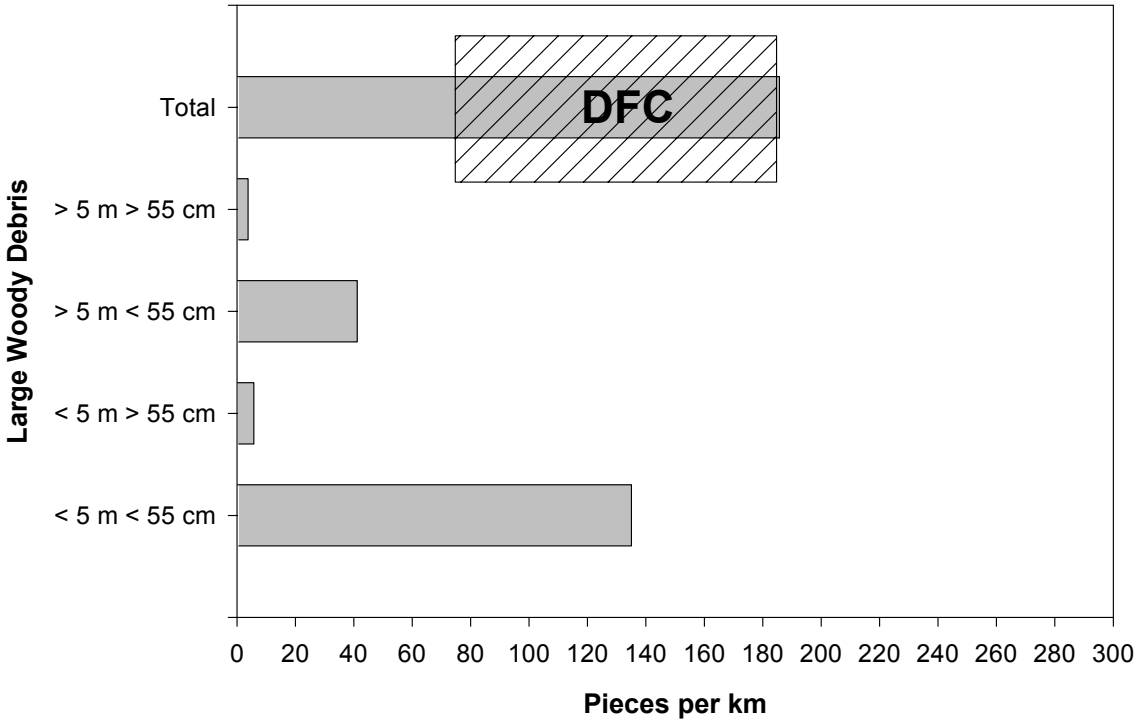
*Calculation sums left riparian + right riparian + stream channel
**Calculation pools left and right riparian measurements, does not sum them



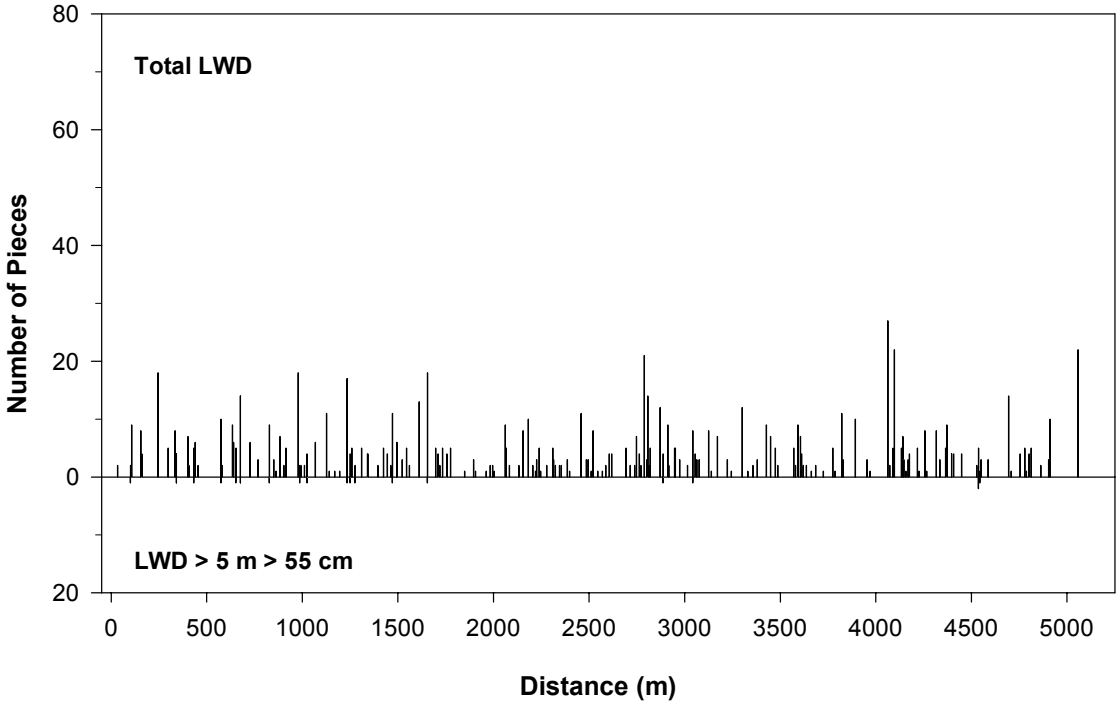
Estimated area of Little Passage Creek in pools and riffles as calculated using BVET techniques, summer 2001.



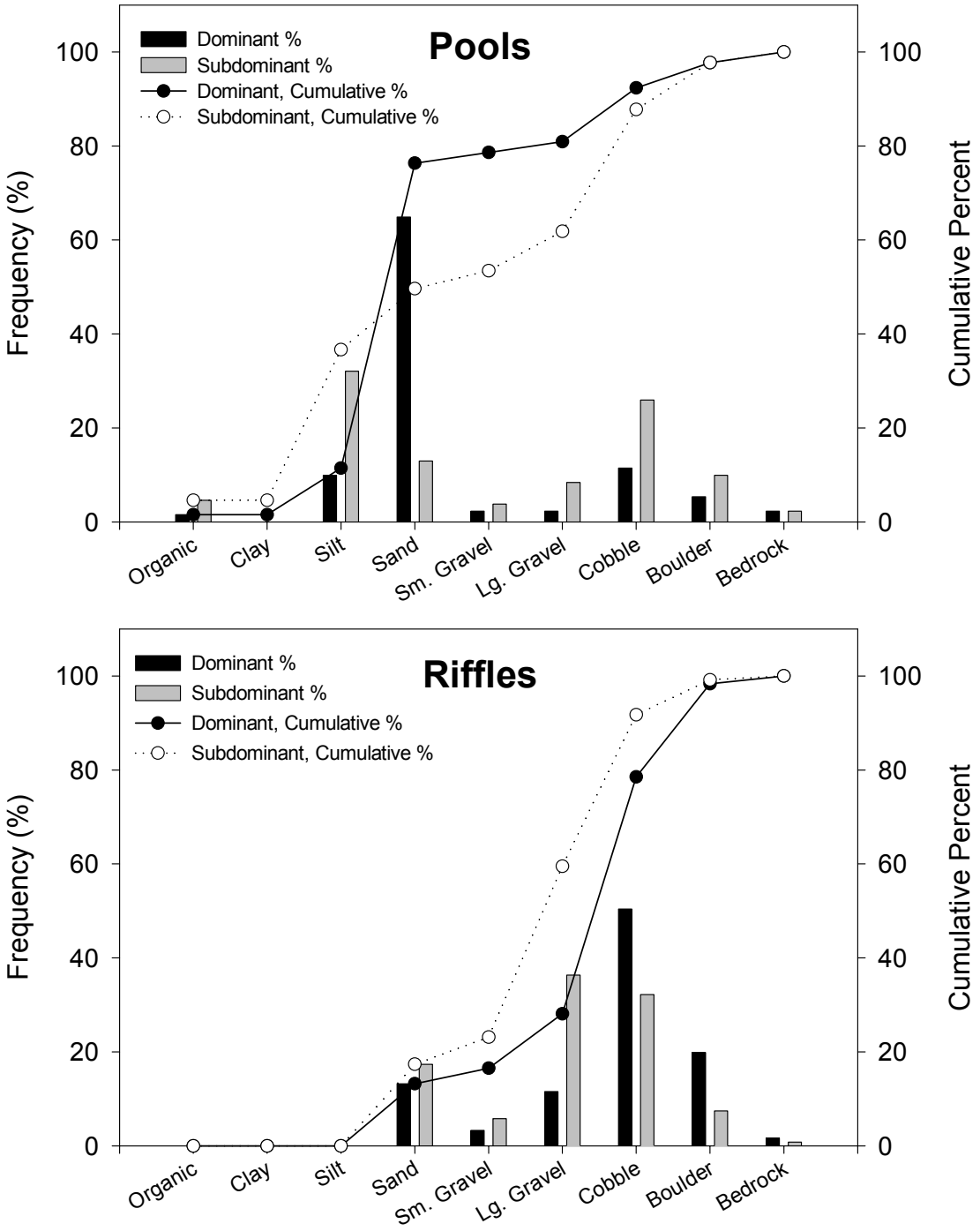
Maximum and average depths and residual pool depths for pools and riffles in Little Passage Creek, summer 2001. The top and bottom of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data.



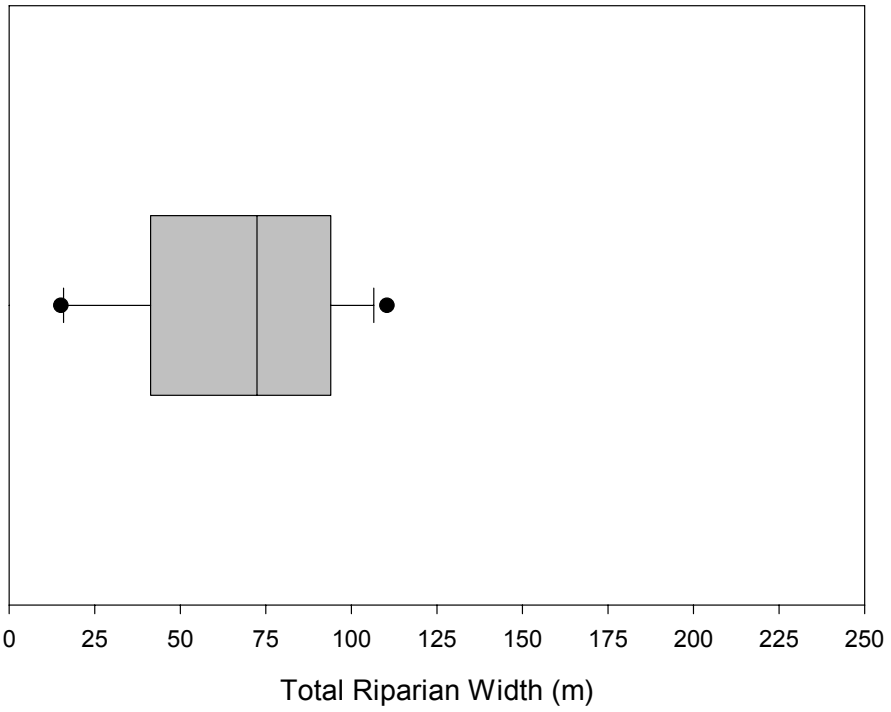
LWD per kilometer in Little Passage Creek, summer 2001. Y-axis labels are LWD size classes with the first number indicating length and the second number indicating diameter.



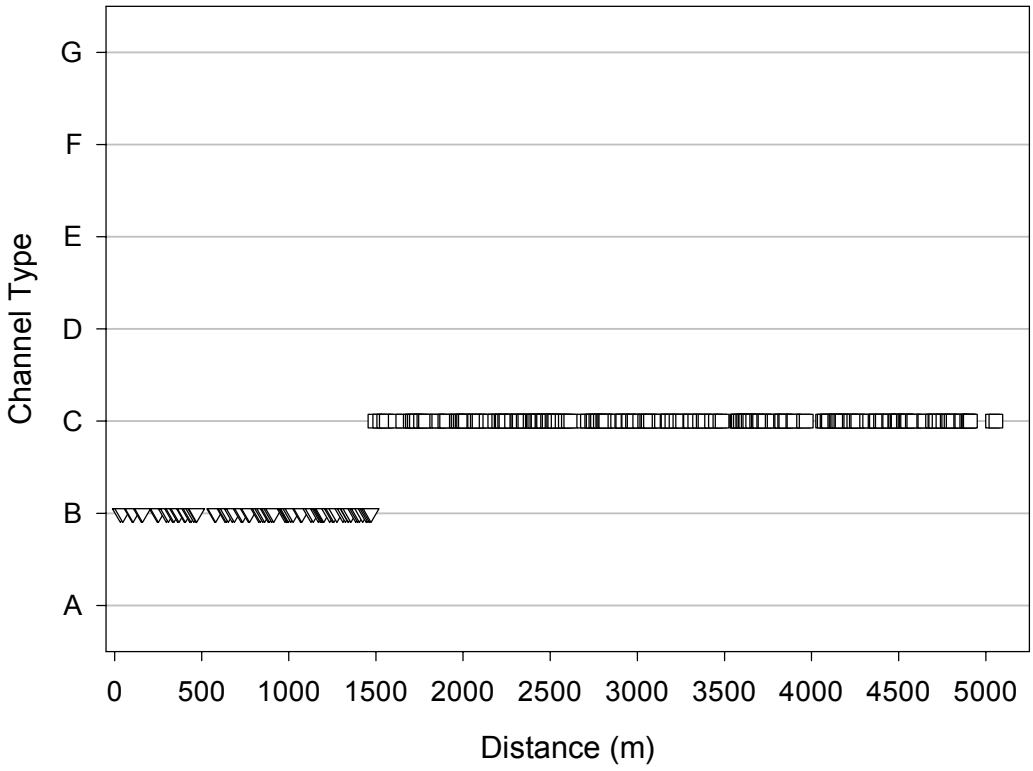
Distribution and abundance of LWD in each habitat unit of Little Passage Creek, summer 2001. Bars below the x-axis represent the amount of the total LWD that was >5 m in length, >55 cm in diameter. X-axis indicates distance upstream from Forest boundary.



Frequency (percent) and cumulative percent of dominant and subdominant substrate occurrence for pools and riffles in Little Passage Creek, summer 2001.



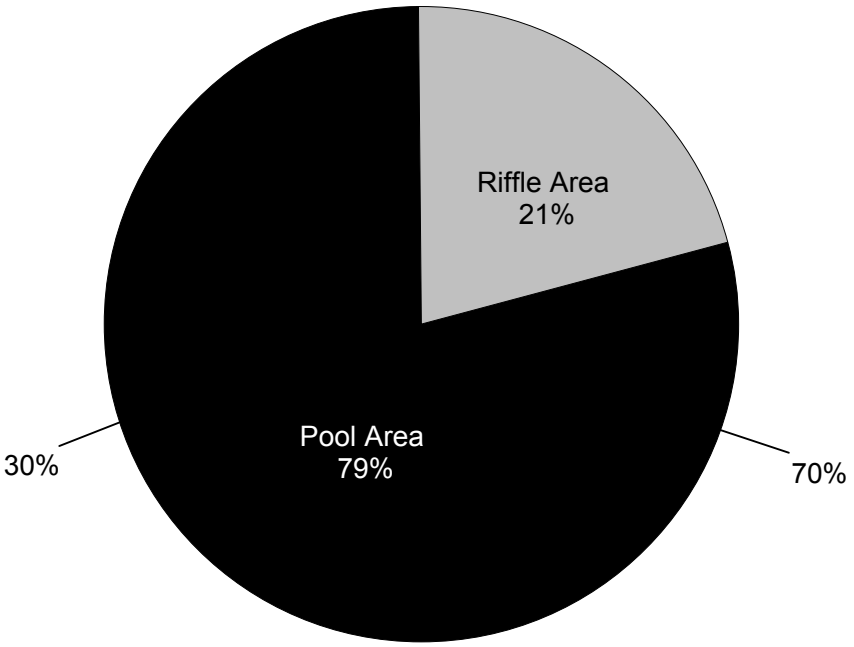
Total riparian widths (left riparian width+right riparian width+wetted channel width) for Little Passage Creek, summer 2001. The left and right of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data. Sample size = 12_.



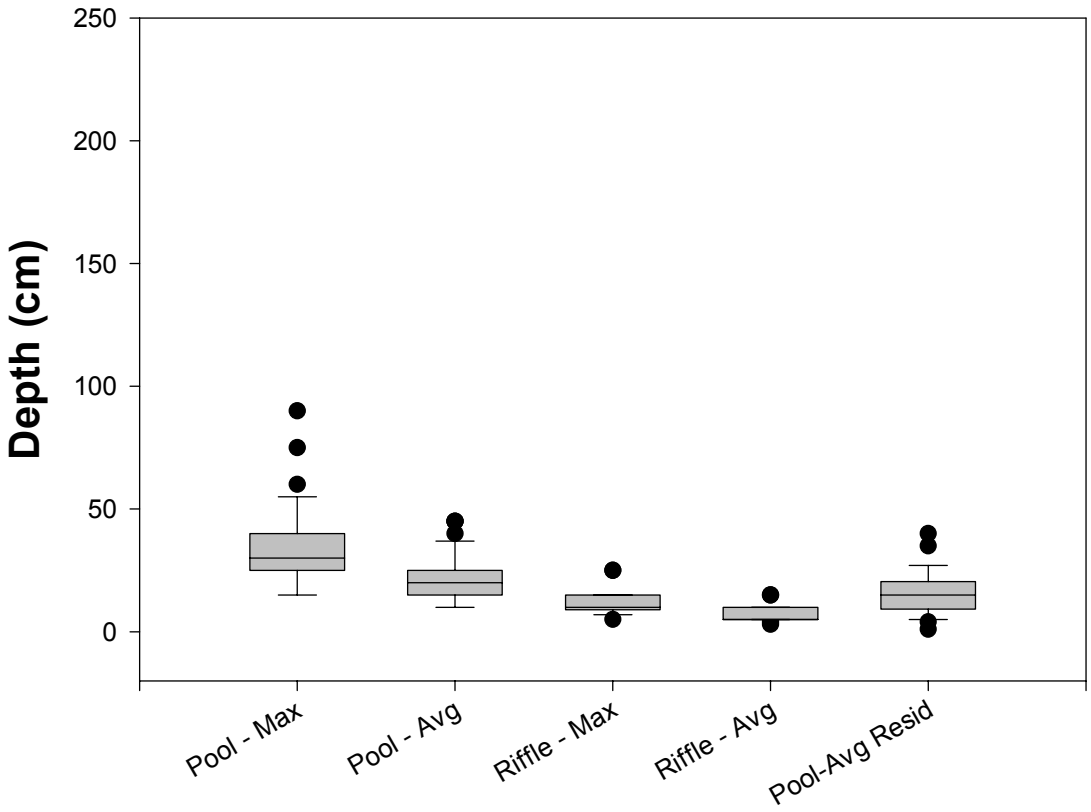
Rosgen's channel classification for each habitat unit in Little Passage Creek, summer 2001. X-axis indicates distance upstream from Forest boundary.

Stream:	**Hottinger Hollow**
District:	Lee
Quadrangle:	Timberville
Survey Date:	08/06/01
Downstream Starting Point:	Forest boundary
Total Distance Surveyed (km):	1.1
Percent of Total Area Pools:	**79**
Number of Pools:	38
Number of Pools per km:	33
Total Pool Area (m^2):	2776 ± 606
Mean Pool Area (m^2):	73
Correction Factor:	1.25
Mean Maximum Depth (cm):	35
Mean Average Depth (cm):	22
Mean Residual Pool Depth (cm):	16
Percent of Total Area Riffles:	**21**
Number of Riffles:	26
Number of Riffles per km:	23
Total Riffle Area (m^2):	755 ± 269
Mean Riffle Area (m^2):	29
Correction Factor:	1.23
Mean Maximum Depth (cm):	12
Mean Average Depth (cm):	7
Number of LWD pieces per km:	**48**
LWD < 5 m, < 55 cm:	10
LWD < 5 m, > 55 cm:	1
LWD > 5 m, < 55 cm:	17
LWD > 5 m, > 55 cm:	21
Mean Channel Width (m):	**5**
Mean Riparian Width (m) (Total*):	**41**
Maximum Riparian Width (Total):	65
75th Percentile (Total)	48
25th Percentile (Total)	31
Minimum Riparian Width (Total):	22
Mean Riparian Width (m) (Left, Right):**	**18**
Maximum Riparian Width (Left, Right):	45
75th Percentile (Left, Right)	20
25th Percentile (Left, Right)	9
Minimum Riparian Width (Left, Right):	8
Percent of Pool Habitat Surveyed as Glides:	**37**
Rosgen's Channel Type Frequency (%):	
Type A:	0
Type B:	0
Type C:	100
Type D:	0
Type E:	0
Type F:	0
Type G:	00
Percent Pools with > 35% Embeddedness:	**16**
Average Channel Gradient (%):	**2**

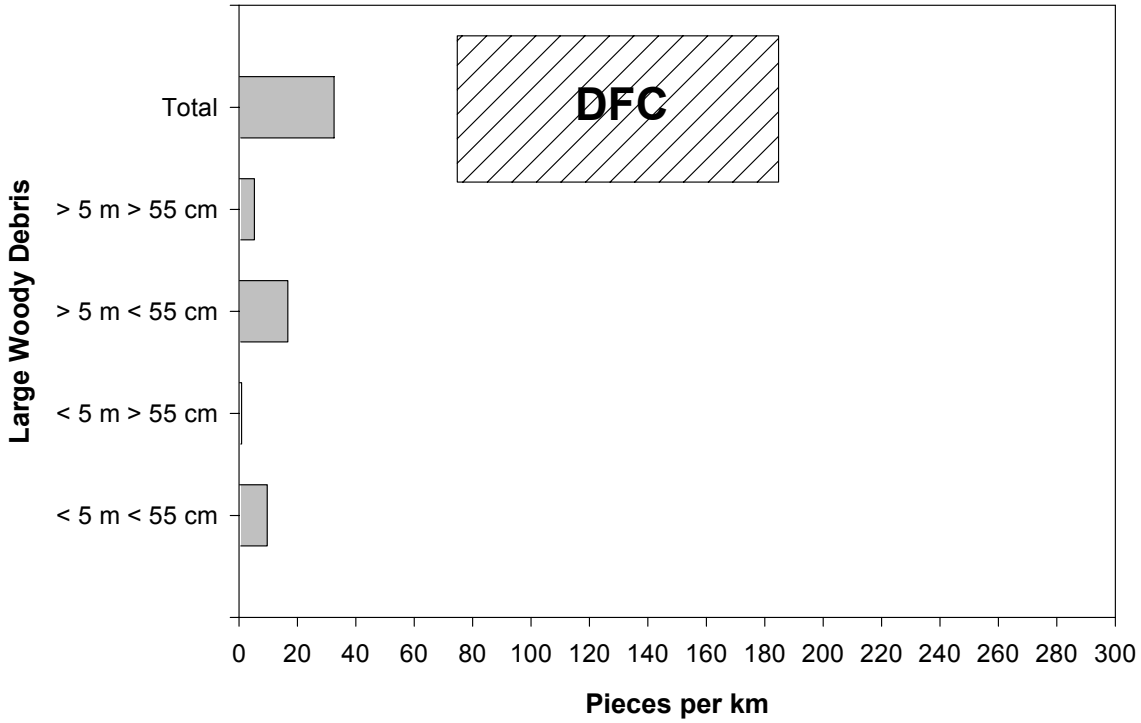
*Calculation sums left riparian + right riparian + stream channel
**Calculation pools left and right riparian measurements, does not sum them



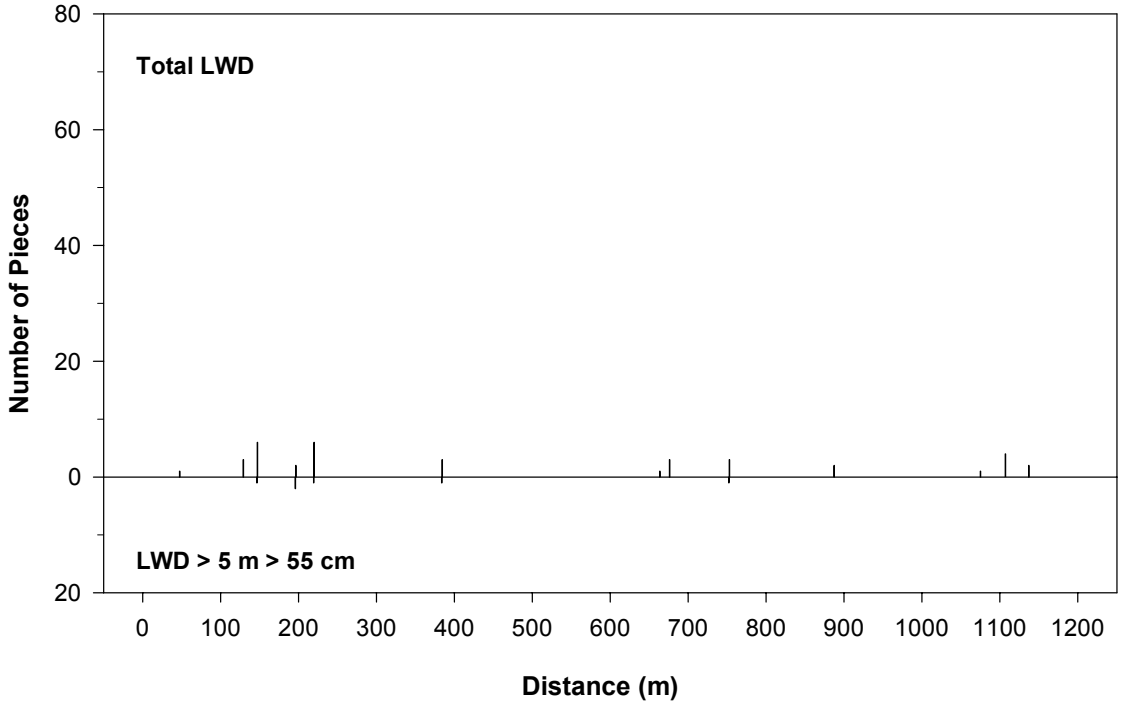
Estimated area of Hottinger Hollow in pools and riffles as calculated using BVET techniques, summer 2001.



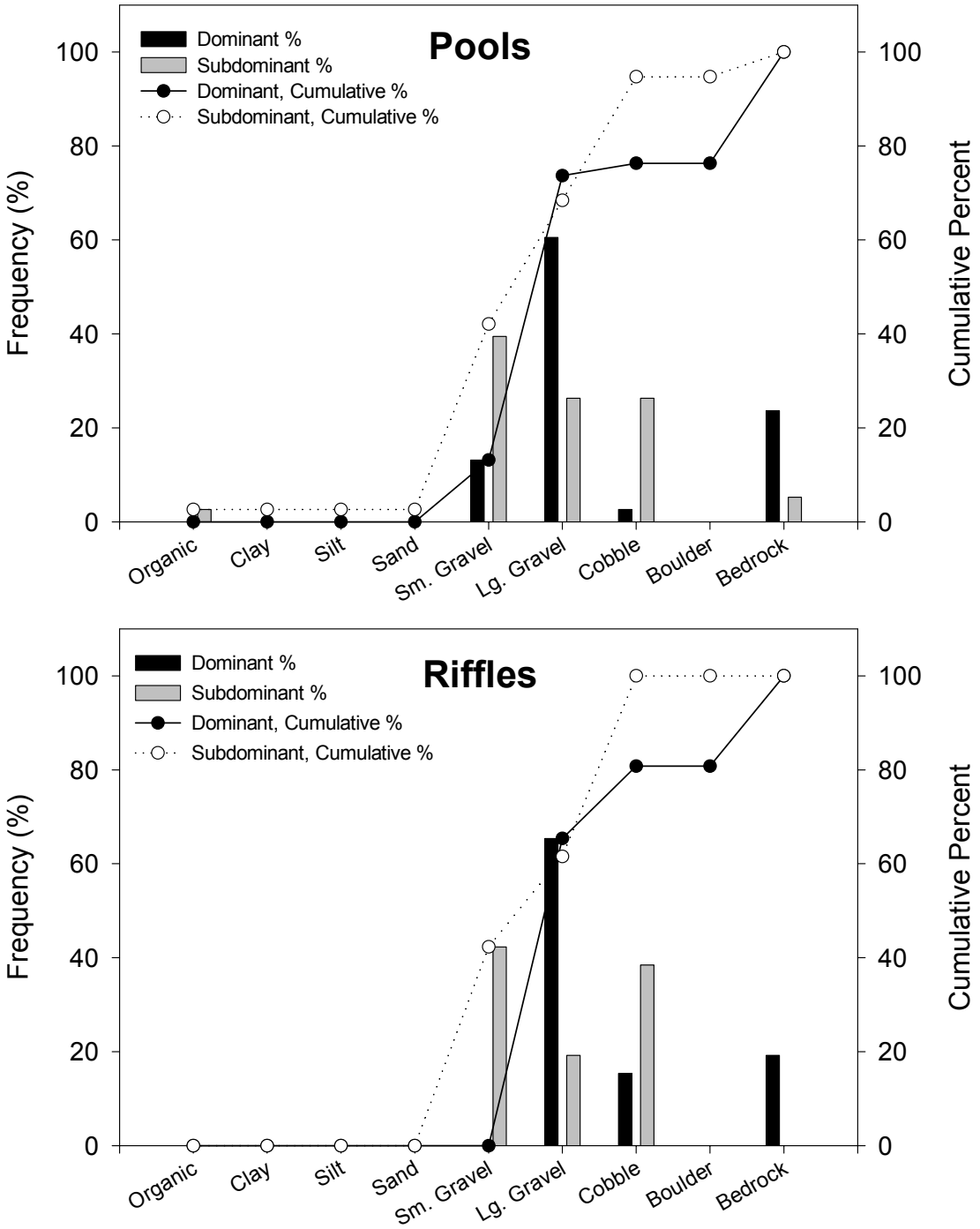
Maximum and average depths and residual pool depths for pools and riffles in Hottinger Hollow, summer 2001. The top and bottom of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data.



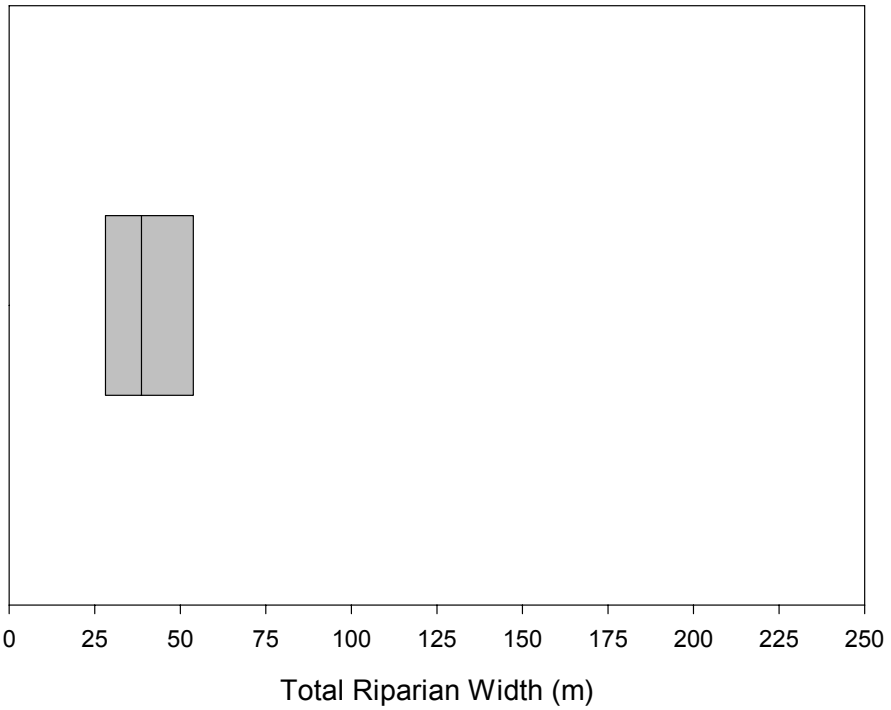
LWD per kilometer in Hottinger Hollow, summer 2001. Y-axis labels are LWD size classes with the first number indicating length and the second number indicating diameter.



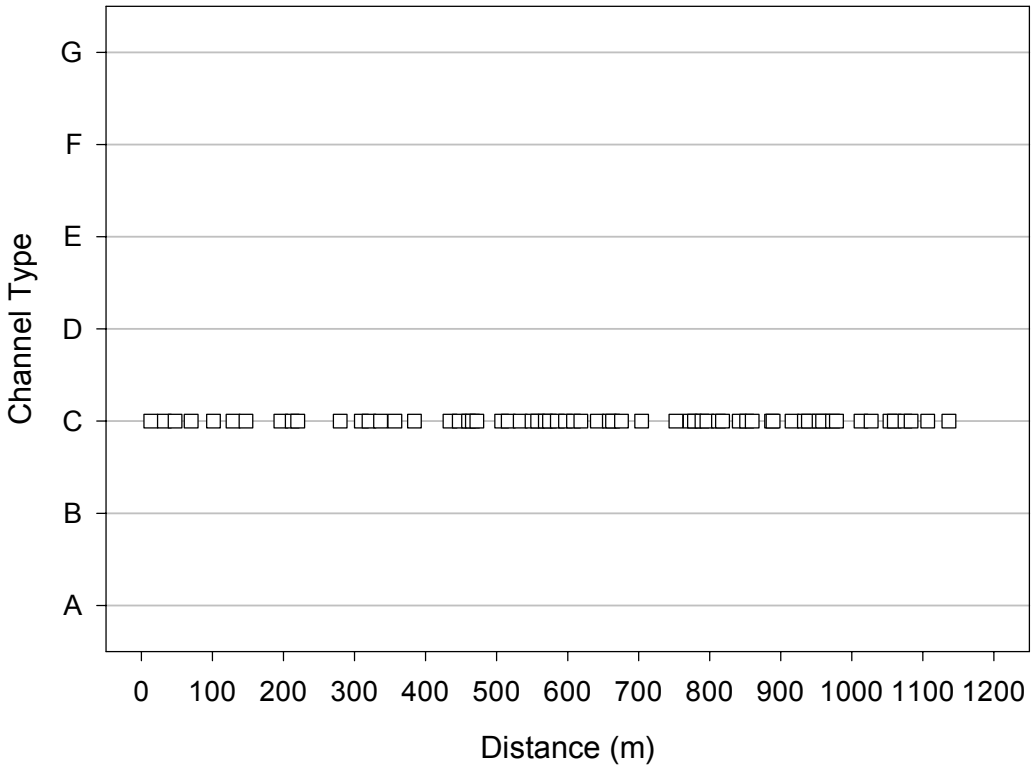
Distribution and abundance of LWD in each habitat unit of Hottinger Hollow, summer 2001. Bars below the x-axis represent the amount of the total LWD that was >5 m in length, >55 cm in diameter. X-axis indicates distance upstream from Forest boundary.



Frequency (percent) and cumulative percent of dominant and subdominant substrate occurrence for pools and riffles in Hottinger Hollow, summer 2001.



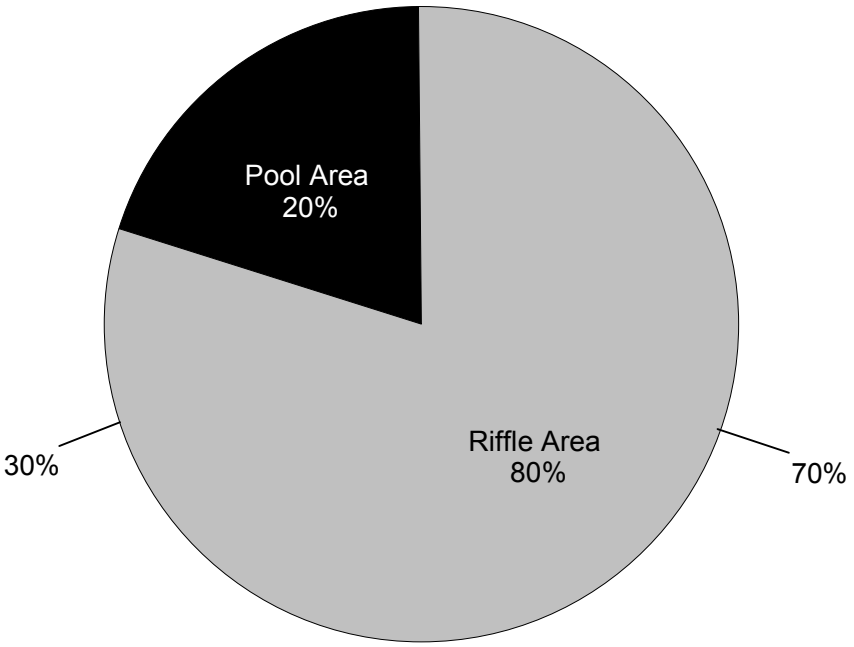
Total riparian widths (left riparian width+right riparian width+wetted channel width) for Hottinger Hollow, summer 2001. The left and right of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data. Sample size = 4.



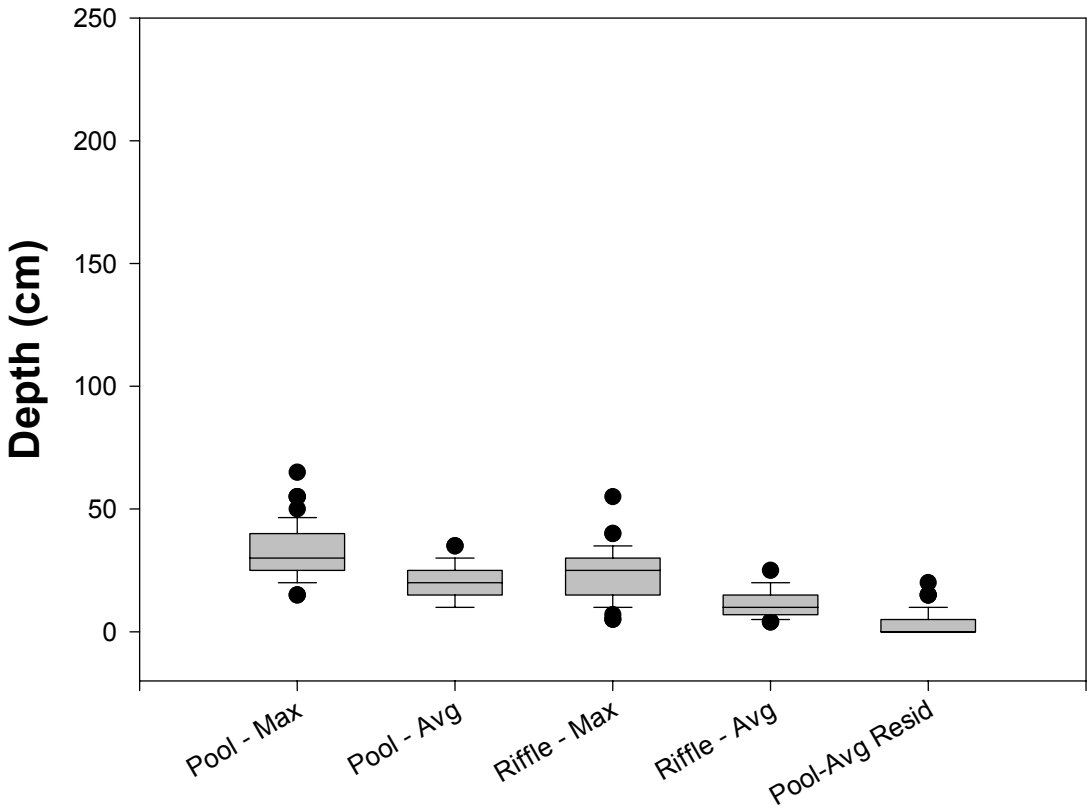
Rosgen's channel classification for each habitat unit in Hottinger Hollow, summer 2001. X-axis indicates distance upstream from Forest boundary.

Stream:	**Hawks Cave Run**
District:	Lee
Quadrangle:	Timberville
Survey Date:	08/08/01
Downstream Starting Point:	Forest boundary
Total Distance Surveyed (km):	1.2
Percent of Total Area Pools:	**20**
Number of Pools:	52
Number of Pools per km:	42
Total Pool Area (m^2):	534 ± 125
Mean Pool Area (m^2):	10
Correction Factor:	0.95
Mean Maximum Depth (cm):	33
Mean Average Depth (cm):	21
Mean Residual Pool Depth (cm):	3
Percent of Total Area Riffles:	**80**
Number of Riffles:	49
Number of Riffles per km:	40
Total Riffle Area (m^2):	2189 ± 681
Mean Riffle Area (m^2):	45
Correction Factor:	0.91
Mean Maximum Depth (cm):	23
Mean Average Depth (cm):	12
Number of LWD pieces per km:	**22**
LWD < 5 m, < 55 cm:	10
LWD < 5 m, > 55 cm:	11
LWD > 5 m, < 55 cm:	1
LWD > 5 m, > 55 cm:	1
Mean Channel Width (m):	**5**
Mean Riparian Width (m) (Total*):	**10**
Maximum Riparian Width (Total):	13
75th Percentile (Total)	12
25th Percentile (Total)	8
Minimum Riparian Width (Total):	7
Mean Riparian Width (m) (Left, Right):**	**3**
Maximum Riparian Width (Left, Right):	10
75th Percentile (Left, Right)	3
25th Percentile (Left, Right)	0
Minimum Riparian Width (Left, Right):	0
Percent of Pool Habitat Surveyed as Glides:	**10**
Rosgen's Channel Type Frequency (%):	
Type A:	7
Type B:	93
Type C:	0
Type D:	0
Type E:	0
Type F:	0
Type G:	00
Percent Pools with > 35% Embeddedness:	**54**
Average Channel Gradient (%):	**6**

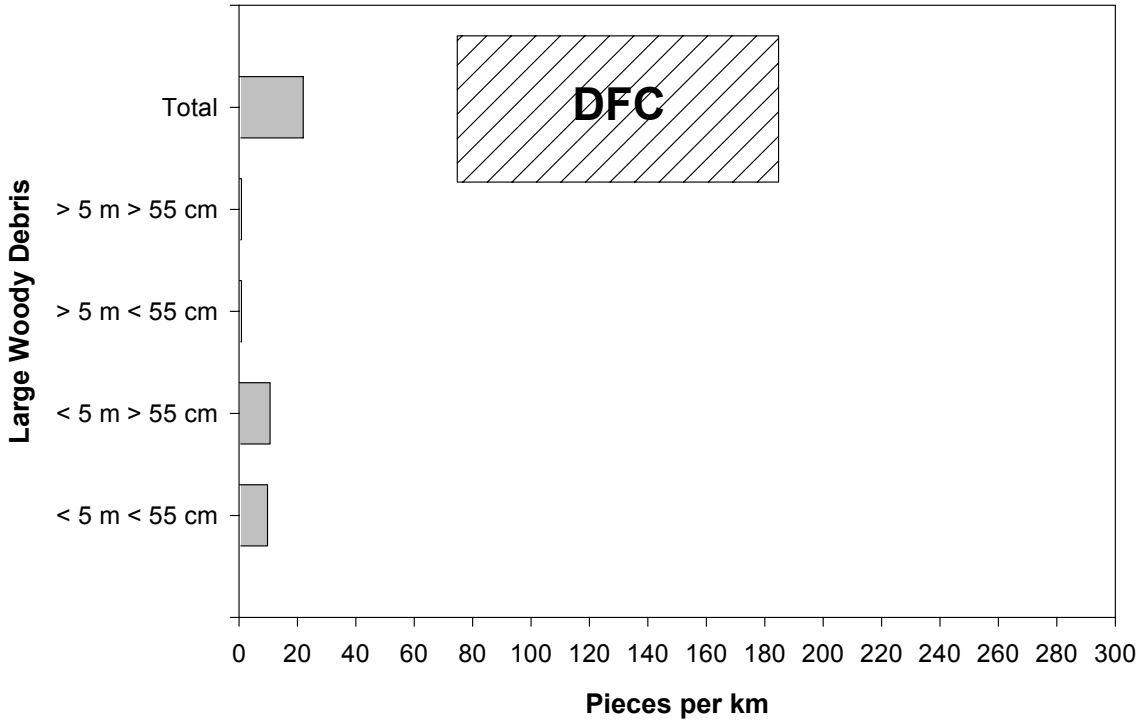
*Calculation sums left riparian + right riparian + stream channel
**Calculation pools left and right riparian measurements, does not sum them



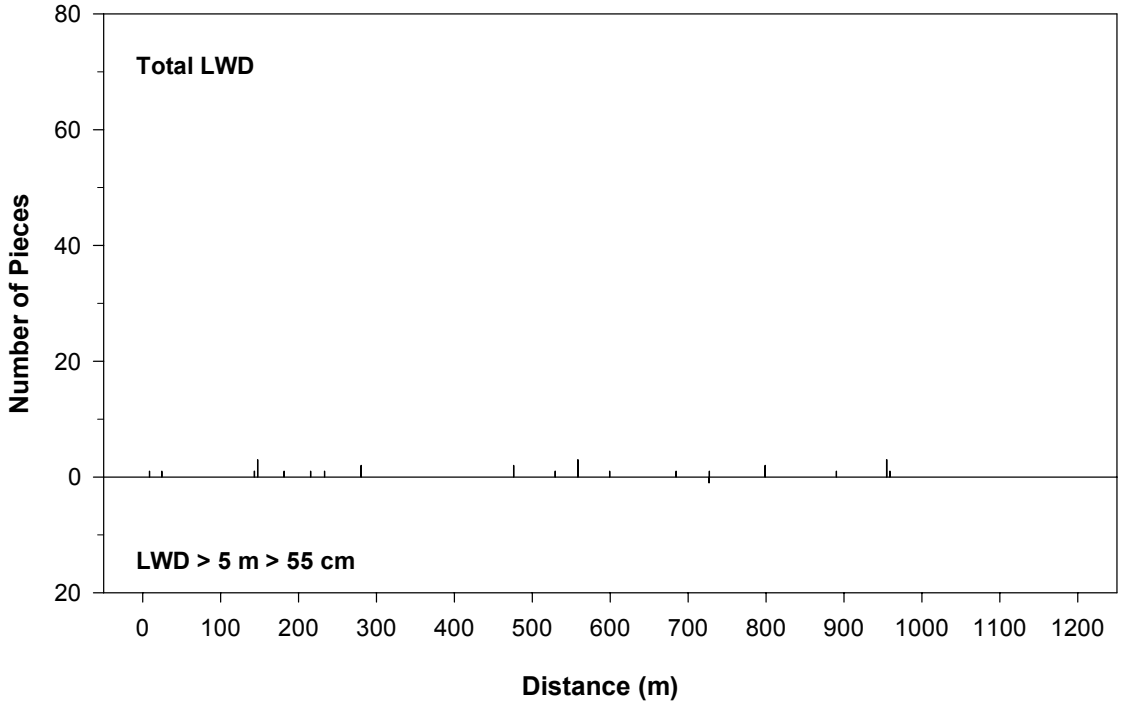
Estimated area of Hawks Cave Run in pools and riffles as calculated using BVET techniques, summer 2001.



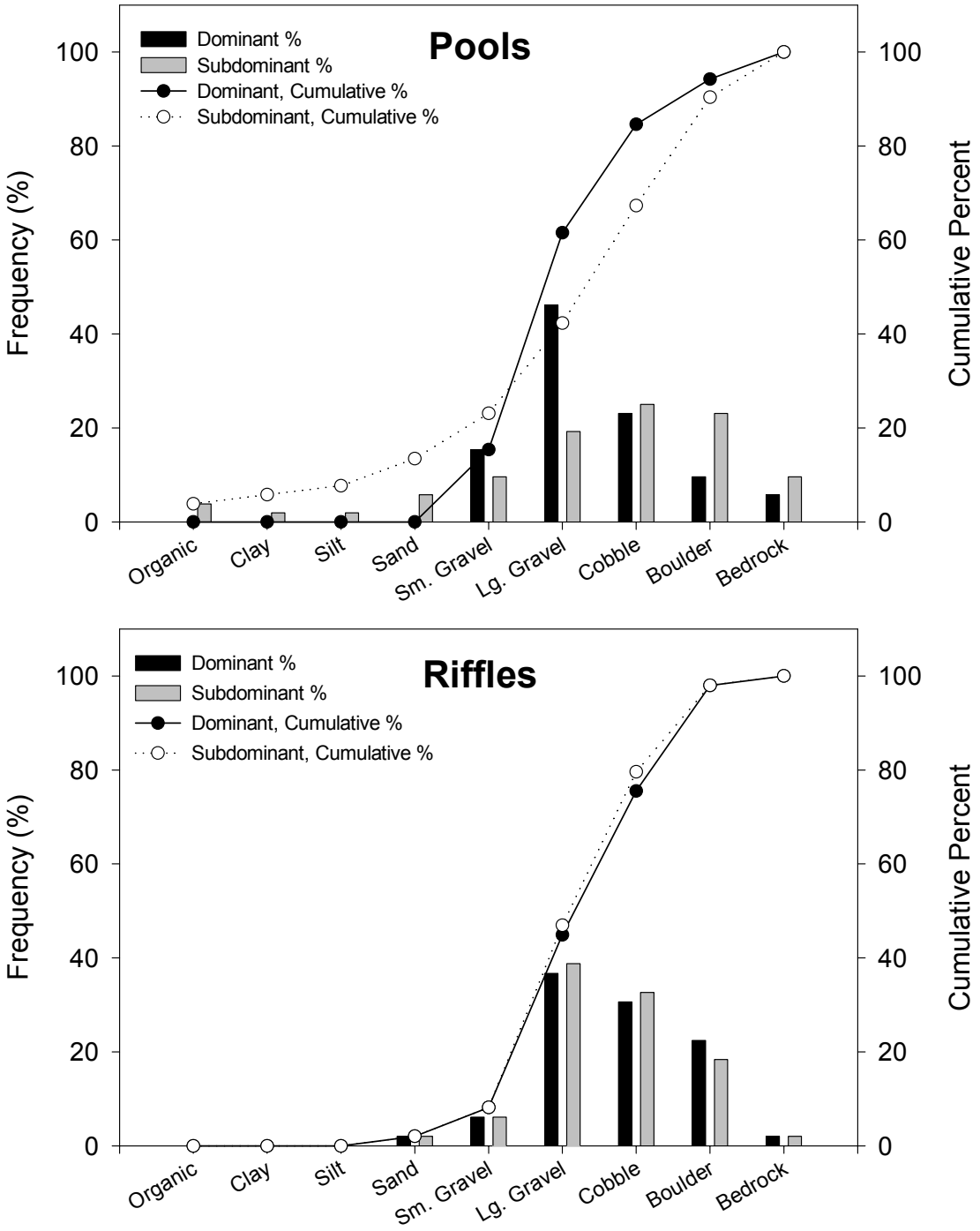
Maximum and average depths and residual pool depths for pools and riffles in Hawks Cave Run, summer 2001. The top and bottom of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data.



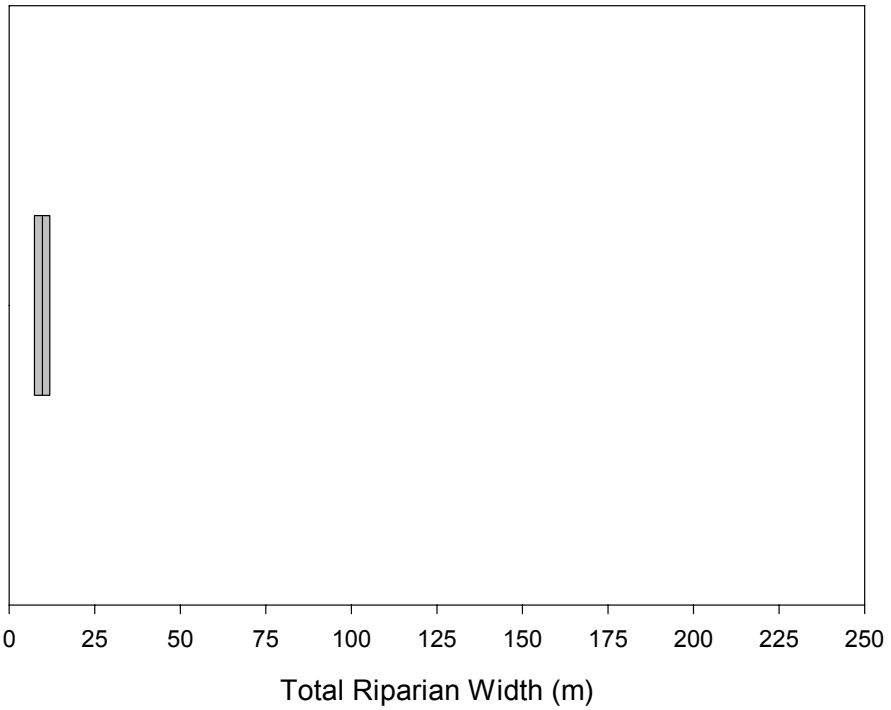
LWD per kilometer in Hawks Cave Run, summer 2001. Y-axis labels are LWD size classes with the first number indicating length and the second number indicating diameter.



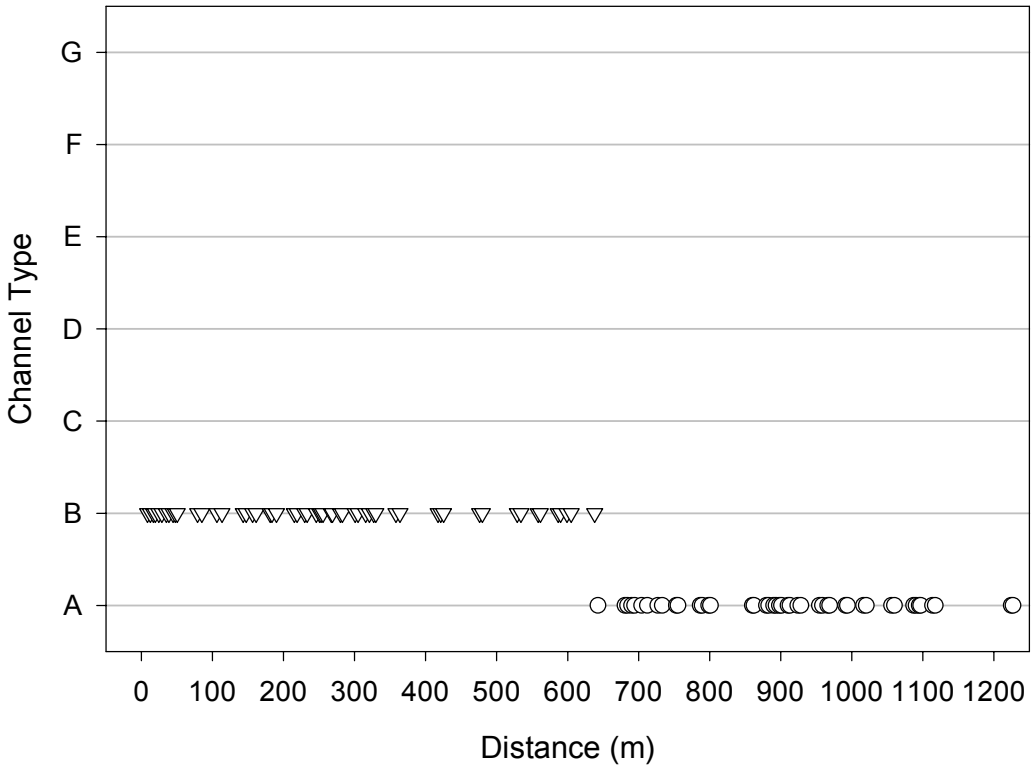
Distribution and abundance of LWD in each habitat unit of Hawks Cave Run, summer 2001. Bars below the x-axis represent the amount of the total LWD that was >5 m in length, >55 cm in diameter. X-axis indicates distance upstream from Forest boundary.



Frequency (percent) and cumulative percent of dominant and subdominant substrate occurrence for pools and riffles in Hawks Cave Run, summer 2001.



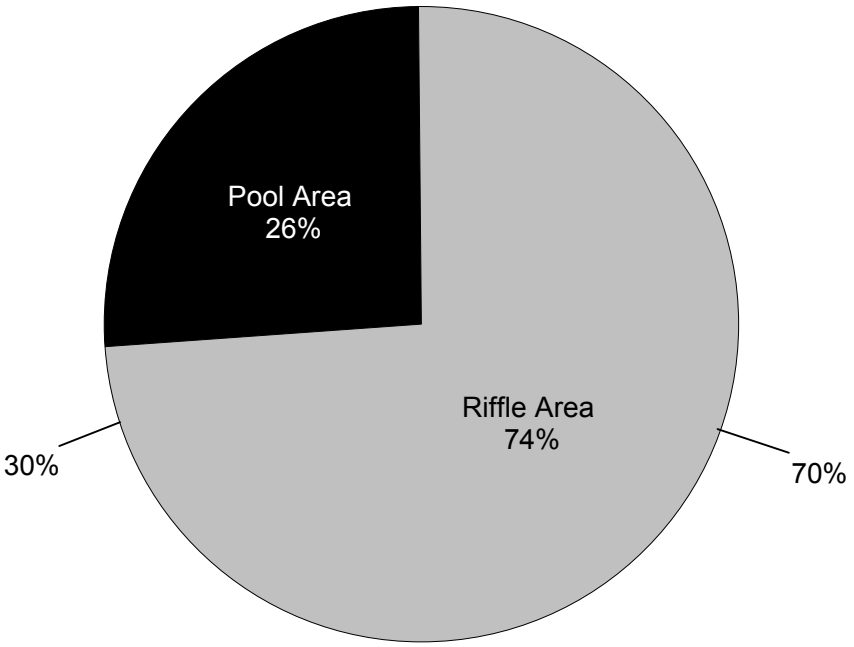
Total riparian widths (left riparian width+right riparian width+wetted channel width) for Hawks Cave Run, summer 2001. The left and right of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data. Sample size = 4.



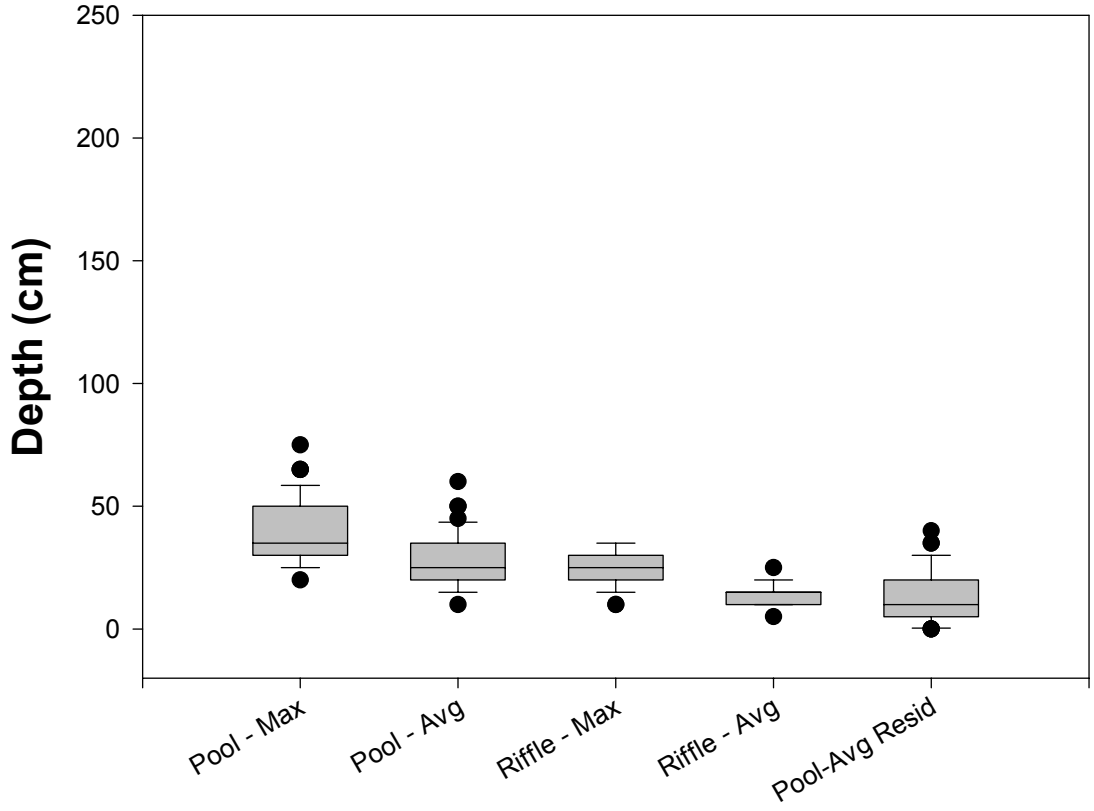
Rosgen's channel classification for each habitat unit in Hawks Cave Run, summer 2001. X-axis indicates distance upstream from Forest boundary.

Stream:	**Mine Run**
District:	Lee
Quadrangle:	Toms Brook
Survey Date:	08/14/01
Downstream Starting Point:	Forest boundary
Total Distance Surveyed (km):	1.1
Percent of Total Area Pools:	**26**
Number of Pools:	38
Number of Pools per km:	34
Total Pool Area (m^2):	1038 ± 94
Mean Pool Area (m^2):	27
Correction Factor:	0.93
Mean Maximum Depth (cm):	40
Mean Average Depth (cm):	28
Mean Residual Pool Depth (cm):	13
Percent of Total Area Riffles:	**74**
Number of Riffles:	38
Number of Riffles per km:	34
Total Riffle Area (m^2):	3014 ± 323
Mean Riffle Area (m^2):	79
Correction Factor:	1.14
Mean Maximum Depth (cm):	24
Mean Average Depth (cm):	14
Number of LWD pieces per km:	**105**
LWD < 5 m, < 55 cm:	69
LWD < 5 m, > 55 cm:	2
LWD > 5 m, < 55 cm:	24
LWD > 5 m, > 55 cm:	11
Mean Channel Width (m):	**5**
Mean Riparian Width (m) (Total*):	**14**
Maximum Riparian Width (Total):	24
75th Percentile (Total)	16
25th Percentile (Total)	9
Minimum Riparian Width (Total):	9
Mean Riparian Width (m) (Left, Right):**	**4**
Maximum Riparian Width (Left, Right):	14
75th Percentile (Left, Right)	4
25th Percentile (Left, Right)	2
Minimum Riparian Width (Left, Right):	2
Percent of Pool Habitat Surveyed as Glides:	**13**
Rosgen's Channel Type Frequency (%):	
Type A:	61
Type B:	39
Type C:	0
Type D:	0
Type E:	0
Type F:	0
Type G:	0
Percent Pools with > 35% Embeddedness:	**79**
Average Channel Gradient (%):	**5**

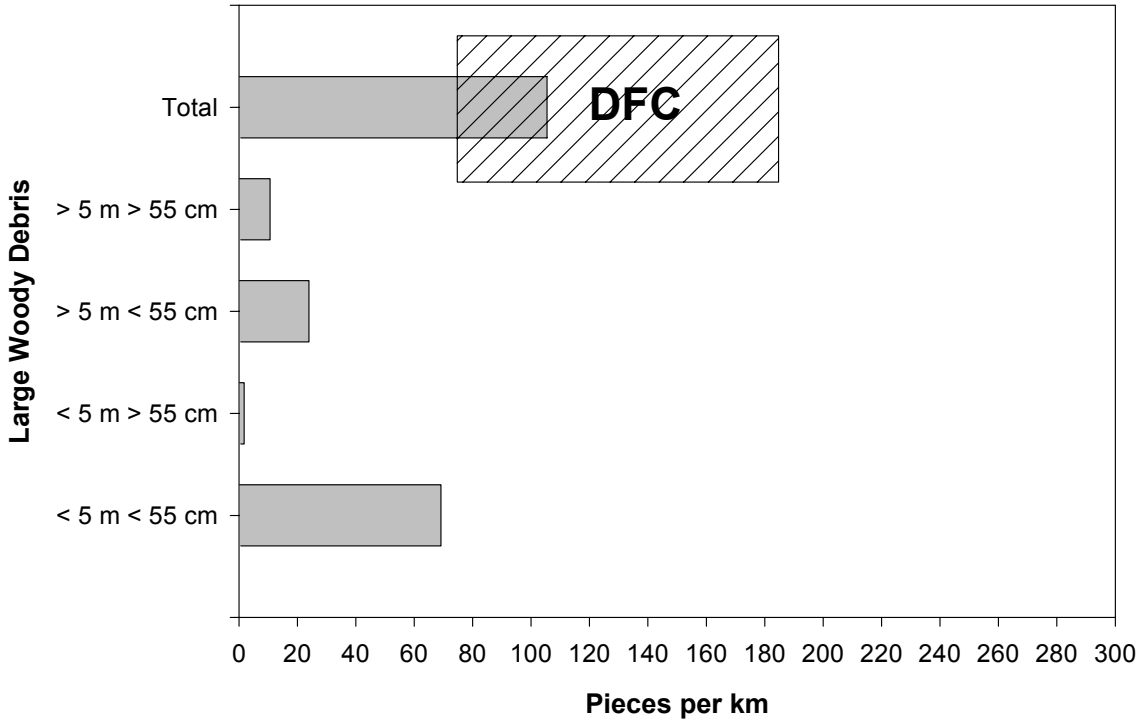
*Calculation sums left riparian + right riparian + stream channel
**Calculation pools left and right riparian measurements, does not sum them



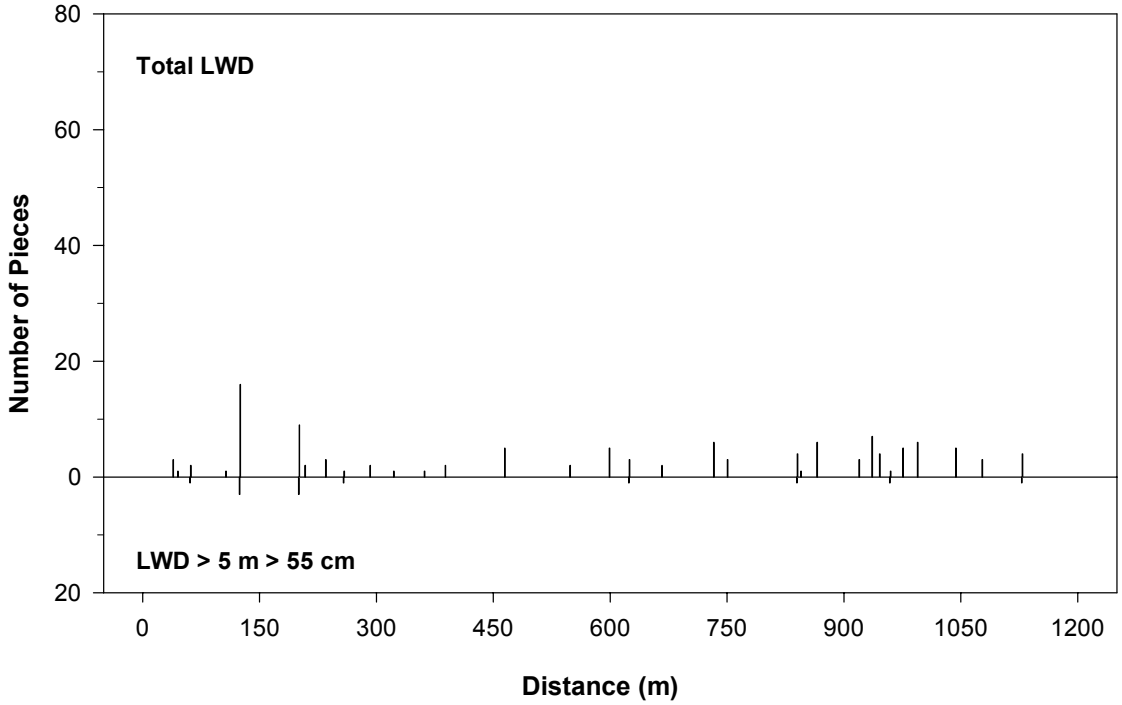
Estimated area of Mine Run in pools and riffles as calculated using BVET techniques, summer 2001.



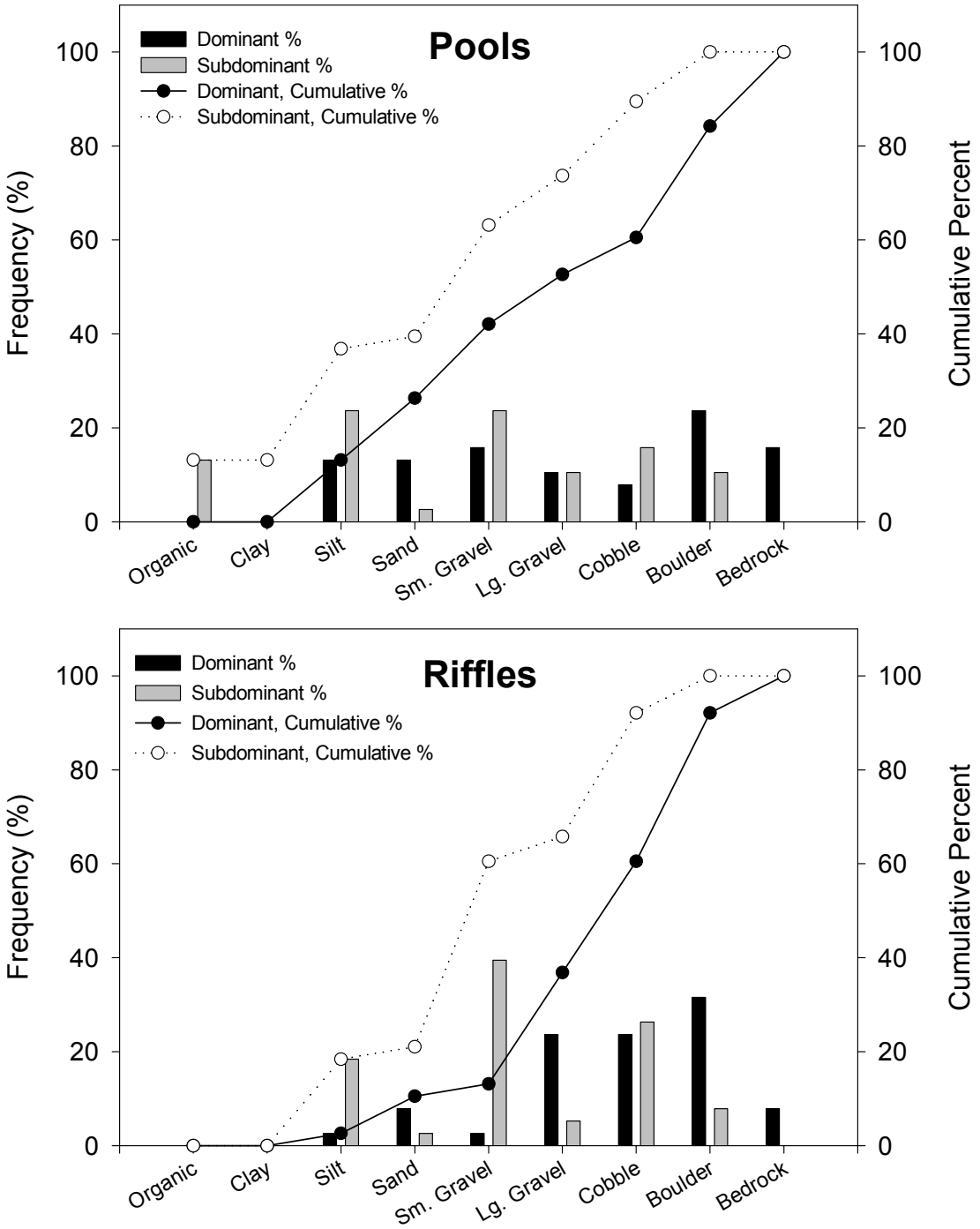
Maximum and average depths and residual pool depths for pools and riffles in Mine Run, summer 2001. The top and bottom of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data.



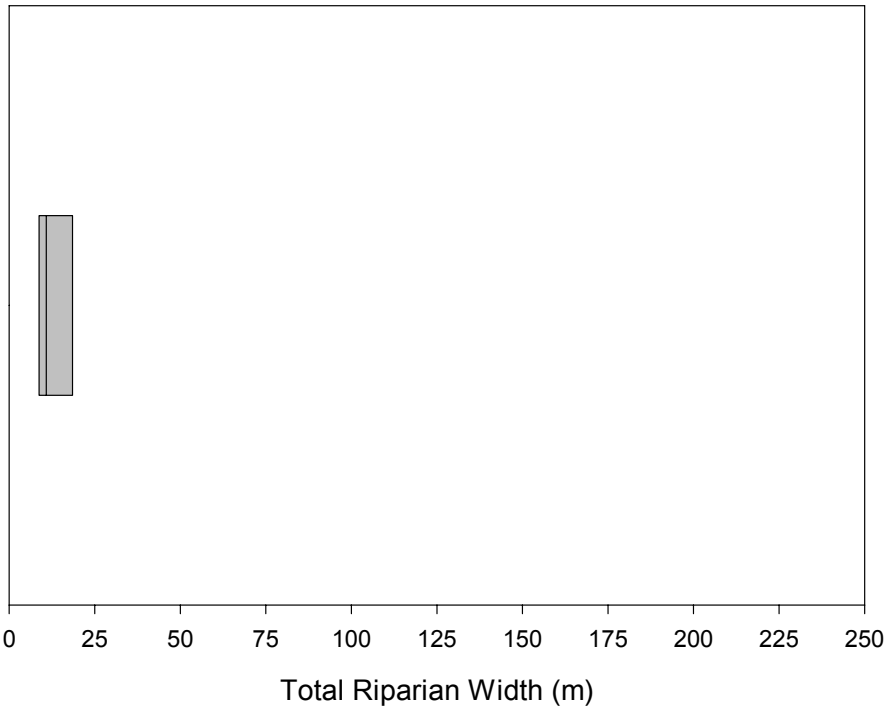
LWD per kilometer in Mine Run, summer 2001. Y-axis labels are LWD size classes with the first number indicating length and the second number indicating diameter.



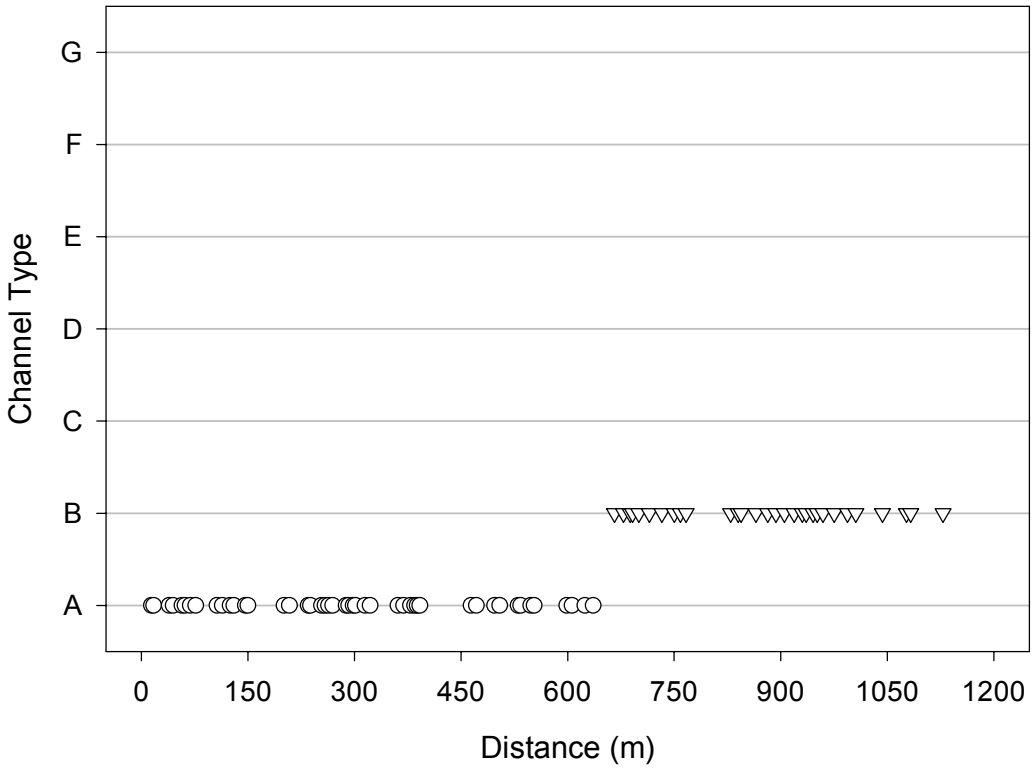
Distribution and abundance of LWD in each habitat unit of Mine Run, summer 2001. Bars below the x-axis represent the amount of the total LWD that was >5 m in length, >55 cm in diameter. X-axis indicates distance upstream from Forest boundary.



Frequency (percent) and cumulative percent of dominant and subdominant substrate occurrence for pools and riffles in Mine Run, summer 2001.



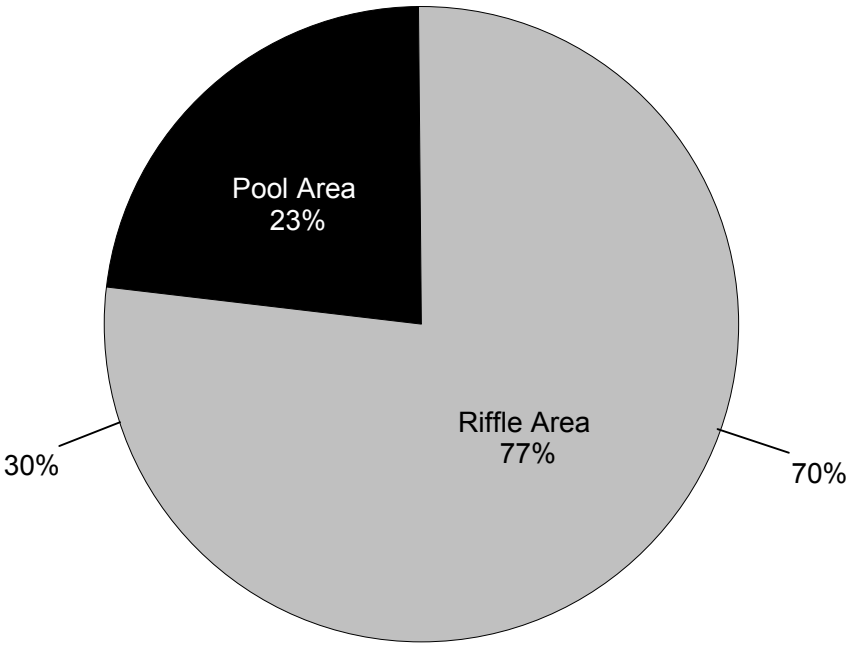
Total riparian widths (left riparian width+right riparian width+wetted channel width) for Mine Run, summer 2001. The left and right of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data. Sample size = 4.



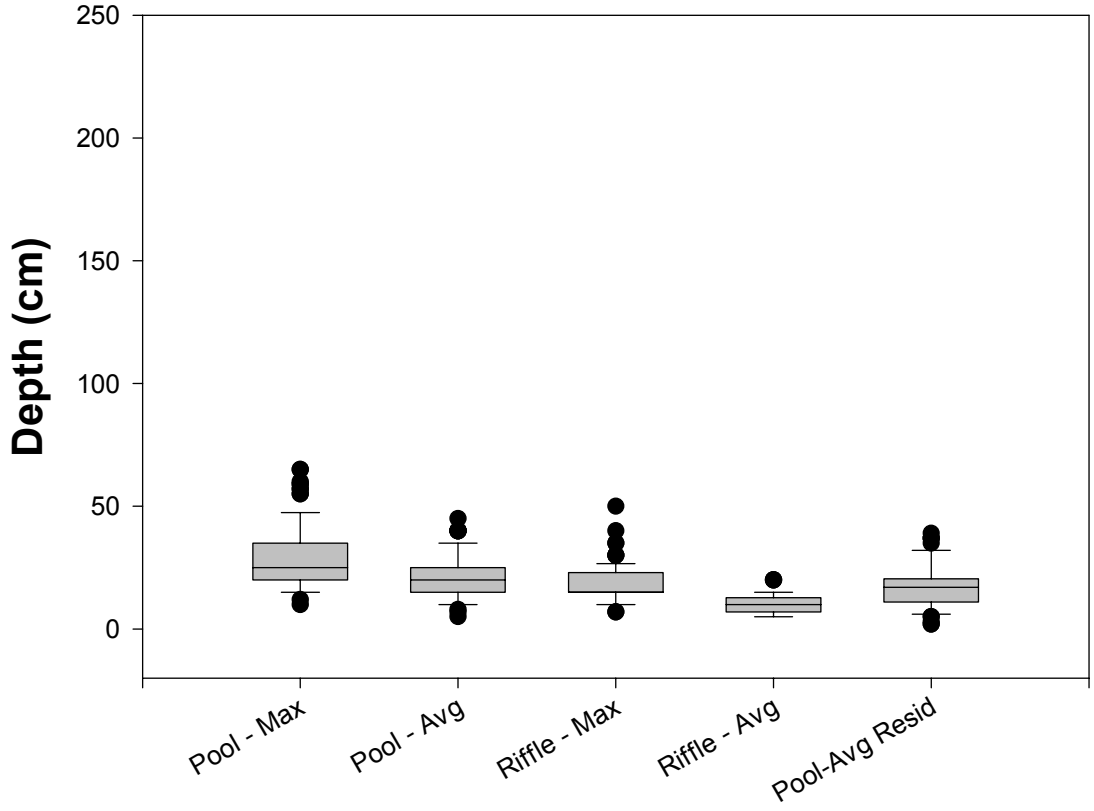
Rosgen's channel classification for each habitat unit in Mine Run, summer 2001. X-axis indicates distance upstream from Forest boundary.

Stream:	**Mill Run**
District:	Lee
Quadrangle:	Toms Brook/Strasburg
Survey Date:	08/17/01
Downstream Starting Point:	Forest boundary
Total Distance Surveyed (km):	3.5
Percent of Total Area Pools:	**23**
Number of Pools:	91
Number of Pools per km:	26
Total Pool Area (m^2):	1267 ± 184
Mean Pool Area (m^2):	14
Correction Factor:	0.87
Mean Maximum Depth (cm):	29
Mean Average Depth (cm):	23
Mean Residual Pool Depth (cm):	21
Percent of Total Area Riffles:	**77**
Number of Riffles:	69
Number of Riffles per km:	20
Total Riffle Area (m^2):	4320 ± 657
Mean Riffle Area (m^2):	63
Correction Factor:	0.92
Mean Maximum Depth (cm):	18
Mean Average Depth (cm):	10
Number of LWD pieces per km:	**79**
LWD < 5 m, < 55 cm:	25
LWD < 5 m, > 55 cm:	32
LWD > 5 m, < 55 cm:	7
LWD > 5 m, > 55 cm:	14
Mean Channel Width (m):	**3**
Mean Riparian Width (m) (Total*):	**17**
Maximum Riparian Width (Total):	33
75th Percentile (Total)	24
25th Percentile (Total)	10
Minimum Riparian Width (Total):	5
Mean Riparian Width (m) (Left, Right):**	**7**
Maximum Riparian Width (Left, Right):	28
75th Percentile (Left, Right)	8
25th Percentile (Left, Right)	2
Minimum Riparian Width (Left, Right):	1
Percent of Pool Habitat Surveyed as Glides:	**20**
Rosgen's Channel Type Frequency (%):	
Type A:	15
Type B:	48
Type C:	37
Type D:	0
Type E:	0
Type F:	0
Type G:	00
Percent Pools with > 35% Embeddedness:	**79**
Average Channel Gradient (%):	**6**

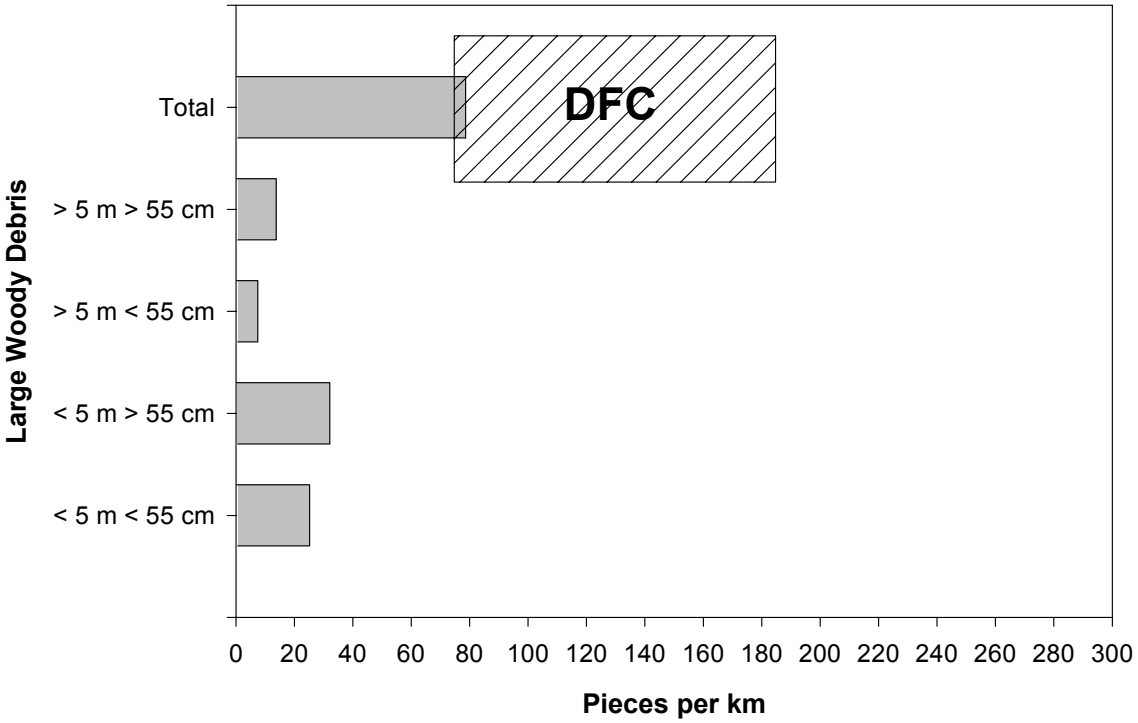
*Calculation sums left riparian + right riparian + stream channel
**Calculation pools left and right riparian measurements, does not sum them



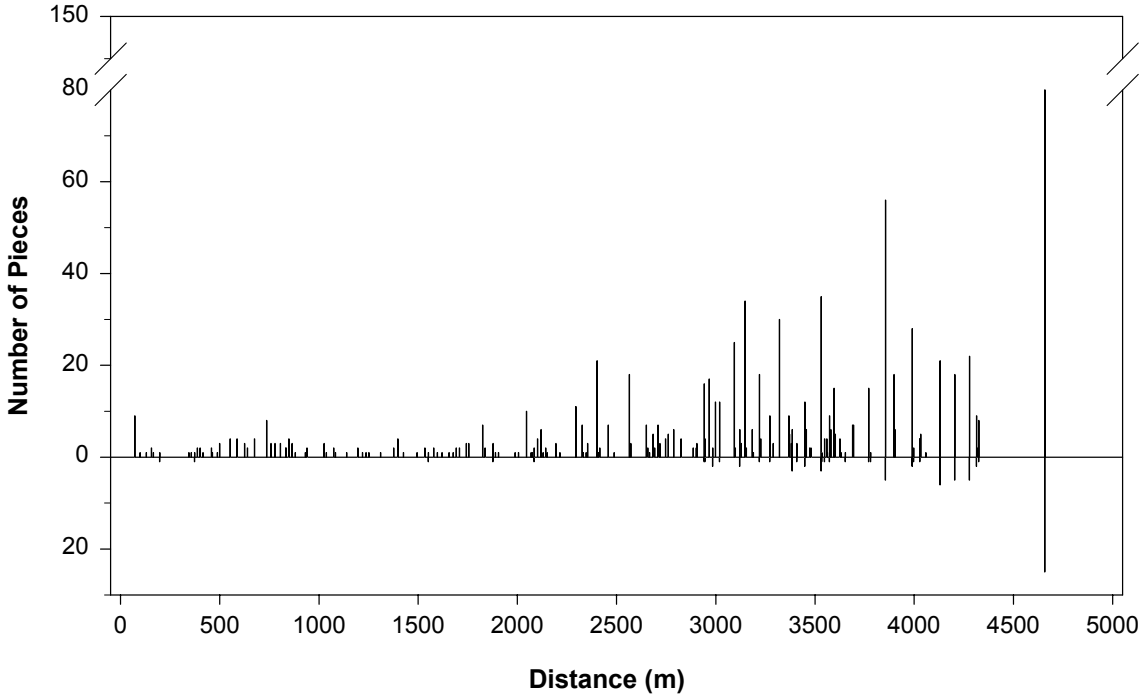
Estimated area of Mill Run in pools and riffles as calculated using BVET techniques, summer 2001.



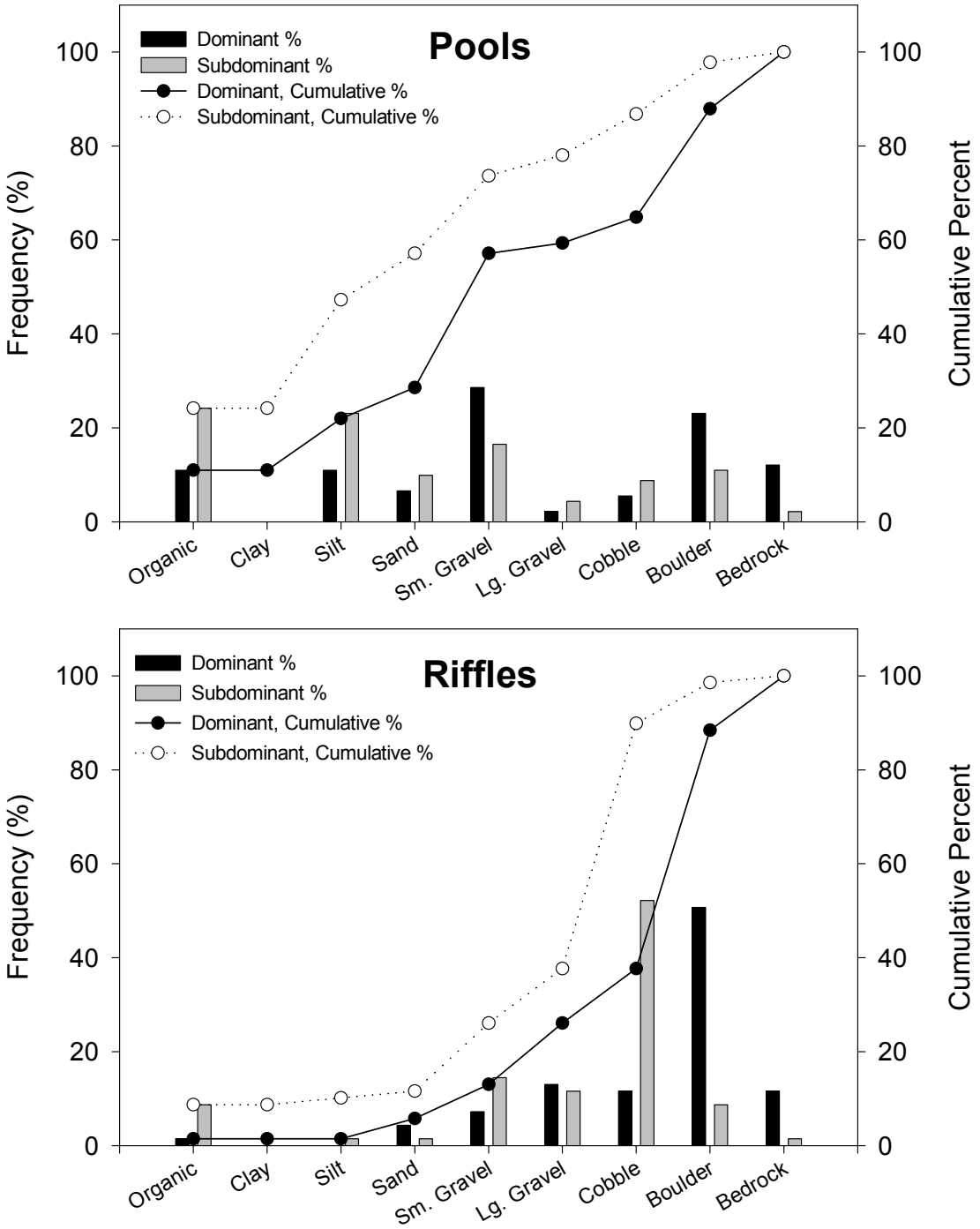
Maximum and average depths and residual pool depths for pools and riffles in Mill Run, summer 2001. The top and bottom of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data.



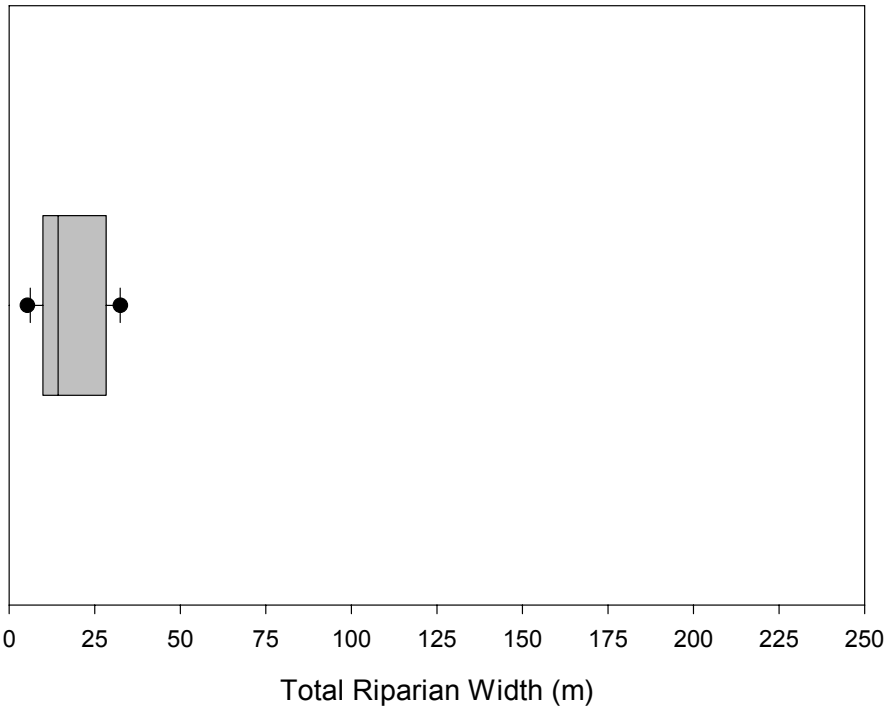
LWD per kilometer in Mill Run, summer 2001. Y-axis labels are LWD size classes with the first number indicating length and the second number indicating diameter.



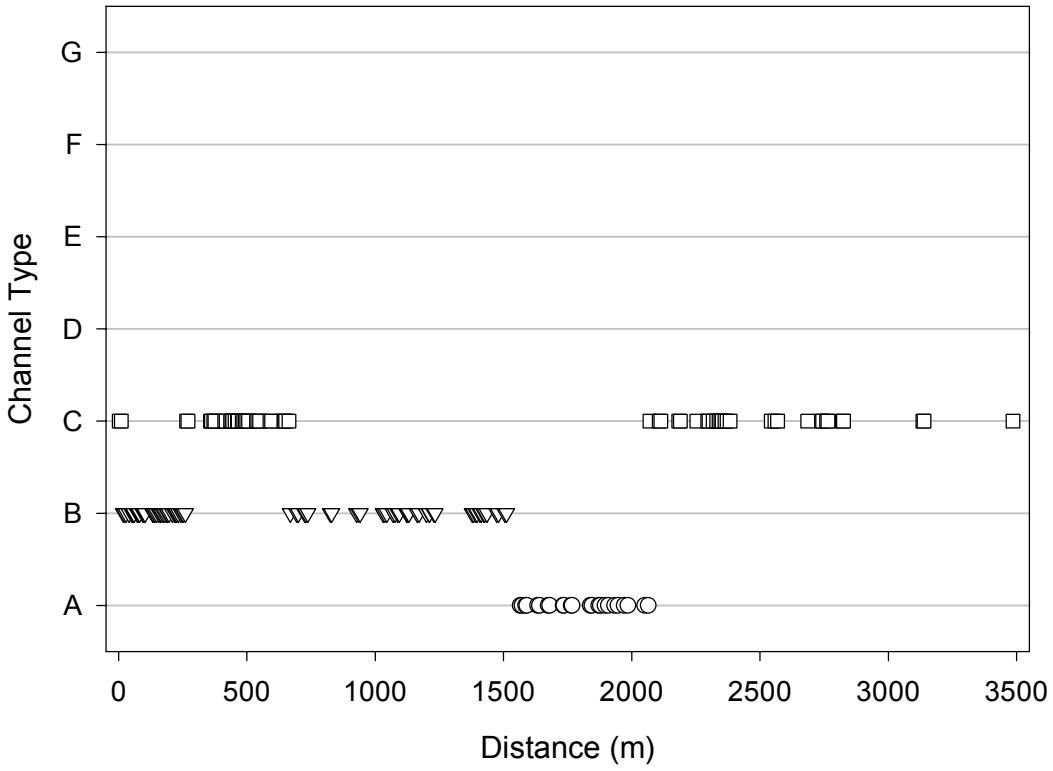
Distribution and abundance of LWD in each habitat unit of Mill Run, summer 2001. Bars below the x-axis represent the amount of the total LWD that was >5 m in length, >55 cm in diameter. X-axis indicates distance upstream from Forest boundary.



Frequency (percent) and cumulative percent of dominant and subdominant substrate occurrence for pools and riffles in Mill Run, summer 2001.



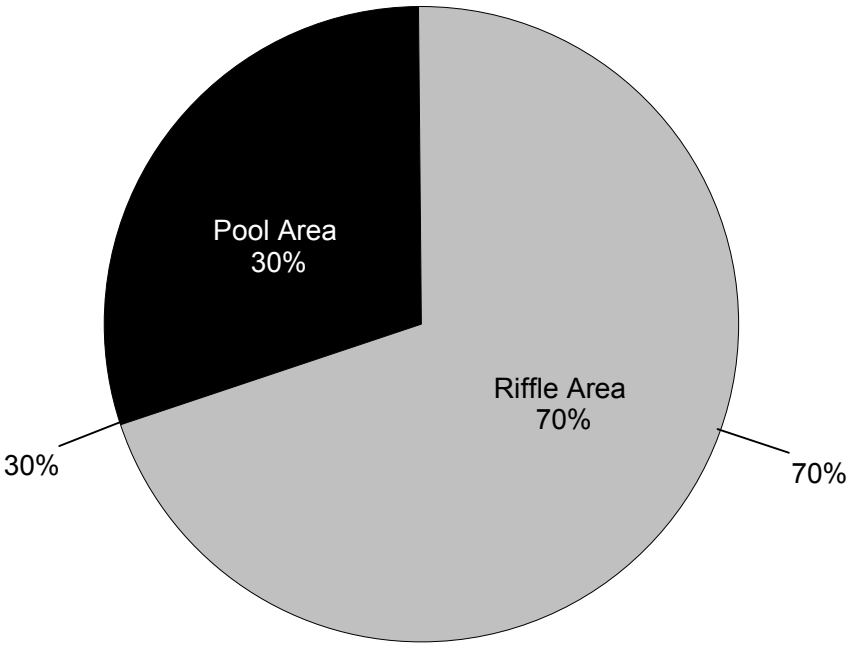
Total riparian widths (left riparian width+right riparian width+wetted channel width) for Mill Run, summer 2001. The left and right of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data. Sample size = 7.



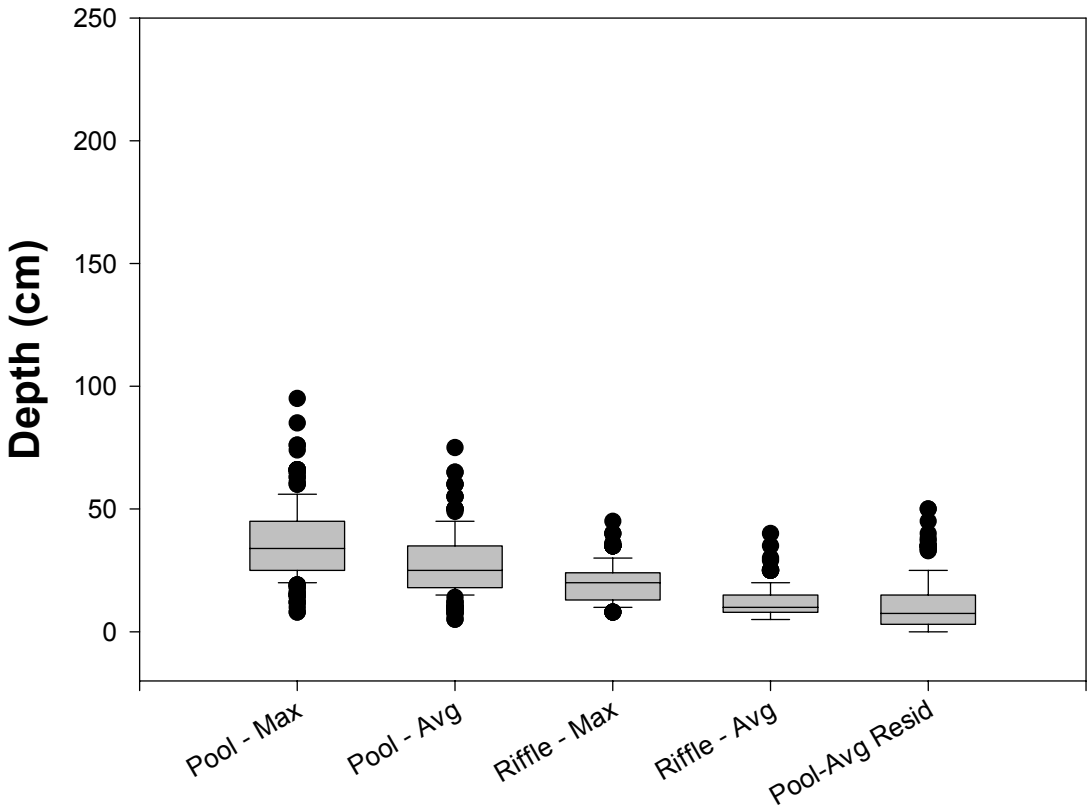
Rosgen's channel classification for each habitat unit in Mill Run, summer 2001. X-axis indicates distance upstream from Forest boundary.

Stream:	**Cove Run**
District:	Lee
Quadrangle:	Wardensville
Survey Date:	05/29/01
Downstream Starting Point:	Confluence w/ Paddy Run
Total Distance Surveyed (km):	4.4
Percent of Total Area Pools:	**30**
Number of Pools:	208
Number of Pools per km:	47
Total Pool Area (m^2):	4057 ± 545
Mean Pool Area (m^2):	20
Correction Factor:	0.92
Mean Maximum Depth (cm):	36
Mean Average Depth (cm):	27
Mean Residual Pool Depth (cm):	11
Percent of Total Area Riffles:	**70**
Number of Riffles:	212
Number of Riffles per km:	4
Total Riffle Area (m^2):	9384 ± 1159
Mean Riffle Area (m^2):	44
Correction Factor:	1.13
Mean Maximum Depth (cm):	19
Mean Average Depth (cm):	13
Number of LWD pieces per km:	**103**
LWD < 5 m, < 55 cm:	46
LWD < 5 m, > 55 cm:	21
LWD > 5 m, < 55 cm:	18
LWD > 5 m, > 55 cm:	18
Mean Channel Width (m):	**4**
Mean Riparian Width (m) (Total*):	**39**
Maximum Riparian Width (Total):	77
75th Percentile (Total)	5
25th Percentile (Total)	25
Minimum Riparian Width (Total):	13
Mean Riparian Width (m) (Left, Right):**	**17**
Maximum Riparian Width (Left, Right):	45
75th Percentile (Left, Right)	26
25th Percentile (Left, Right)	9
Minimum Riparian Width (Left, Right):	1
Percent of Pool Habitat Surveyed as Glides:	**0**
Rosgen's Channel Type Frequency (%):	
Type A:	5
Type B:	94
Type C:	0
Type D:	0
Type E:	0
Type F:	0
Type G:	0
Percent Pools with > 35% Embeddedness:	**100**
Average Channel Gradient (%):	**3**

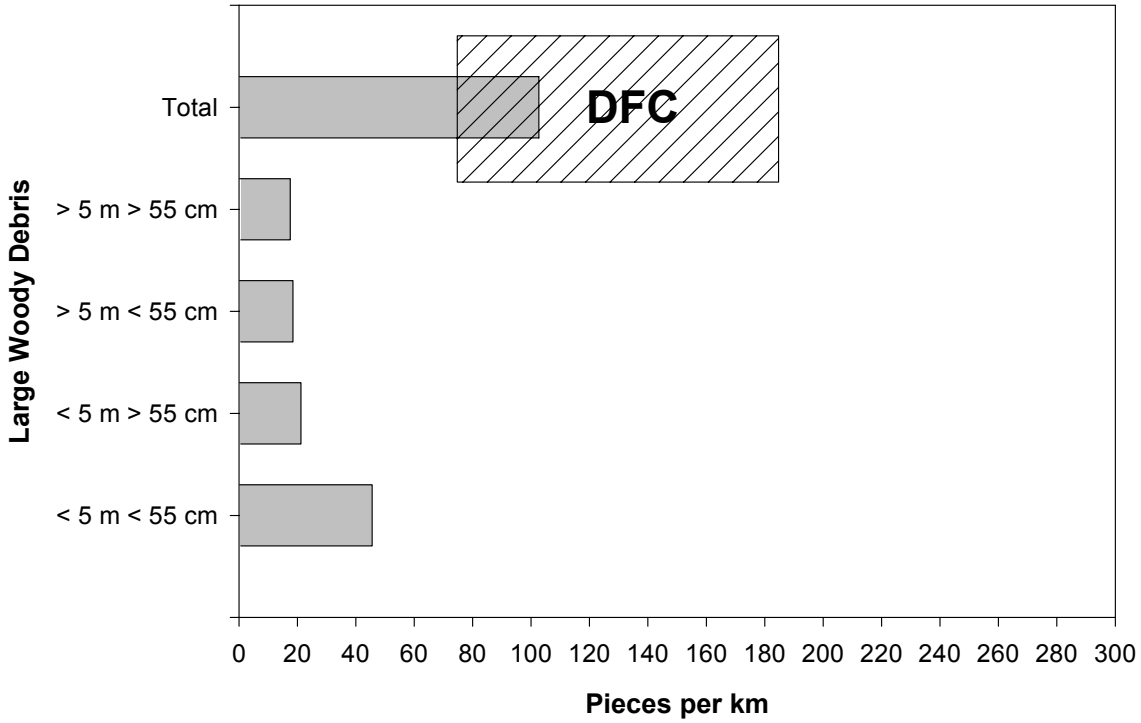
*Calculation sums left riparian + right riparian + stream channel
**Calculation pools left and right riparian measurements, does not sum them



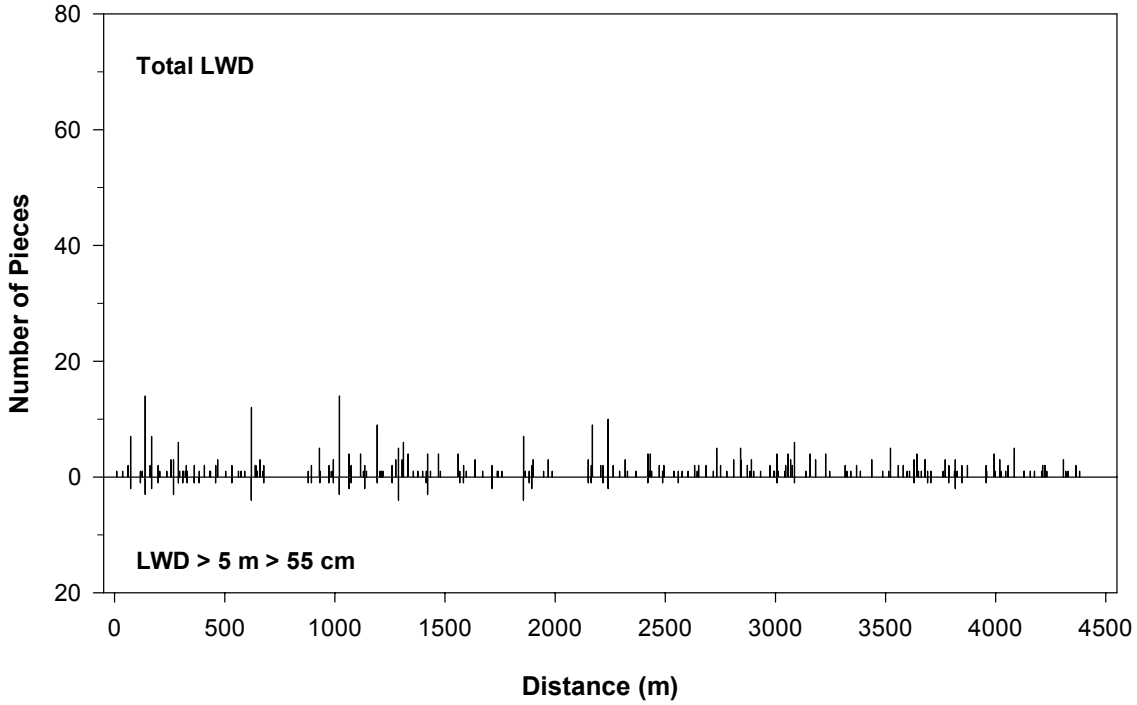
Estimated area of Cove Run (Vance) in pools and riffles as calculated using BVET techniques, summer 2001.



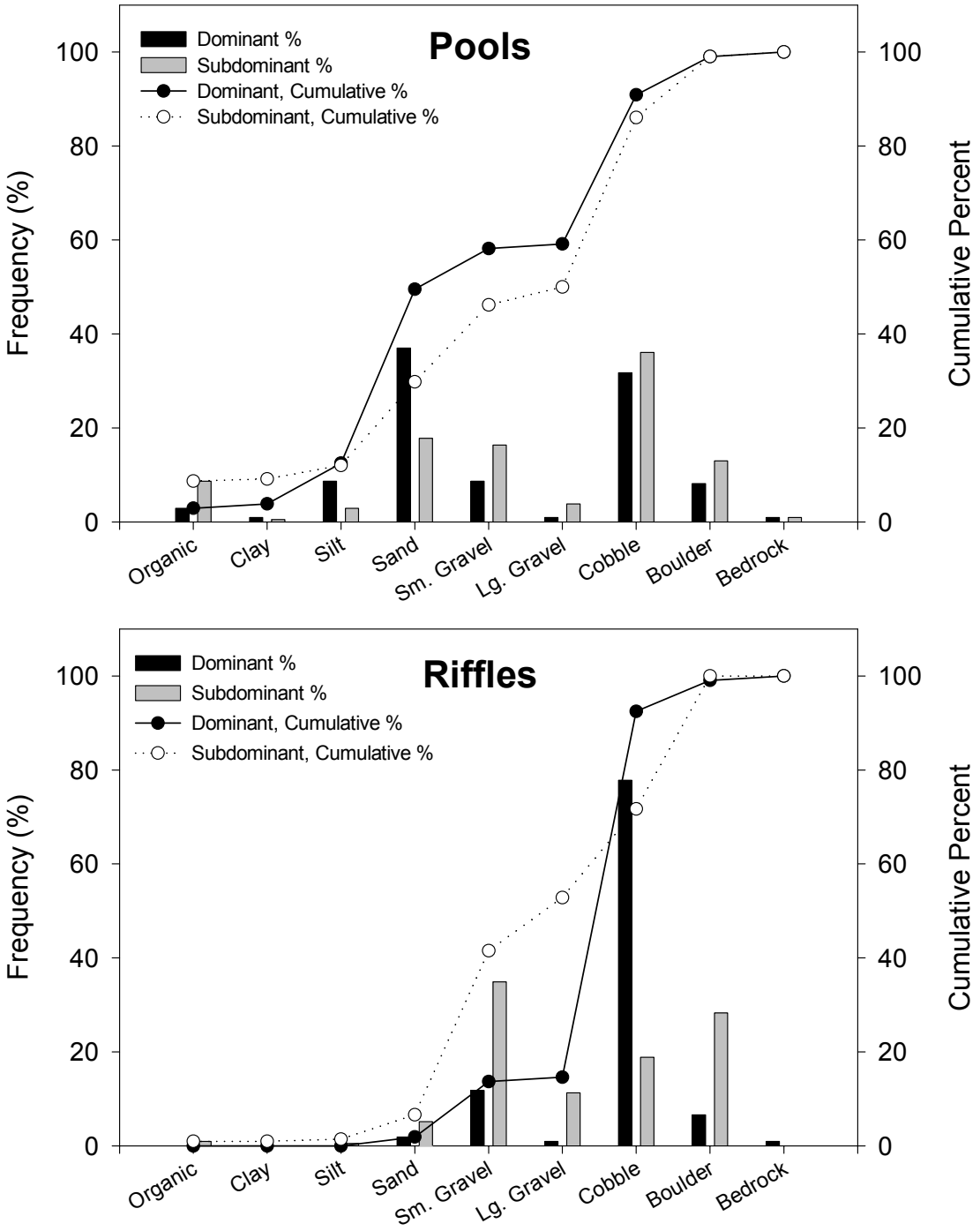
Maximum and average depths and residual pool depths for pools and riffles in Cove Run (Vance), summer 2001. The top and bottom of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data.



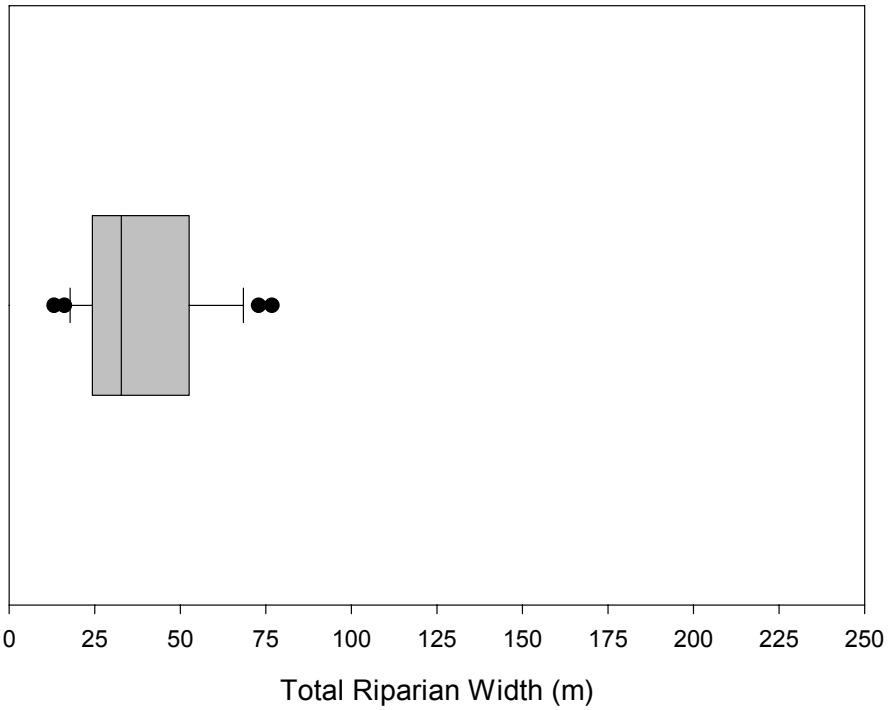
LWD per kilometer in Cove Run (Vance), summer 2001. Y-axis labels are LWD size classes with the first number indicating length and the second number indicating diameter.



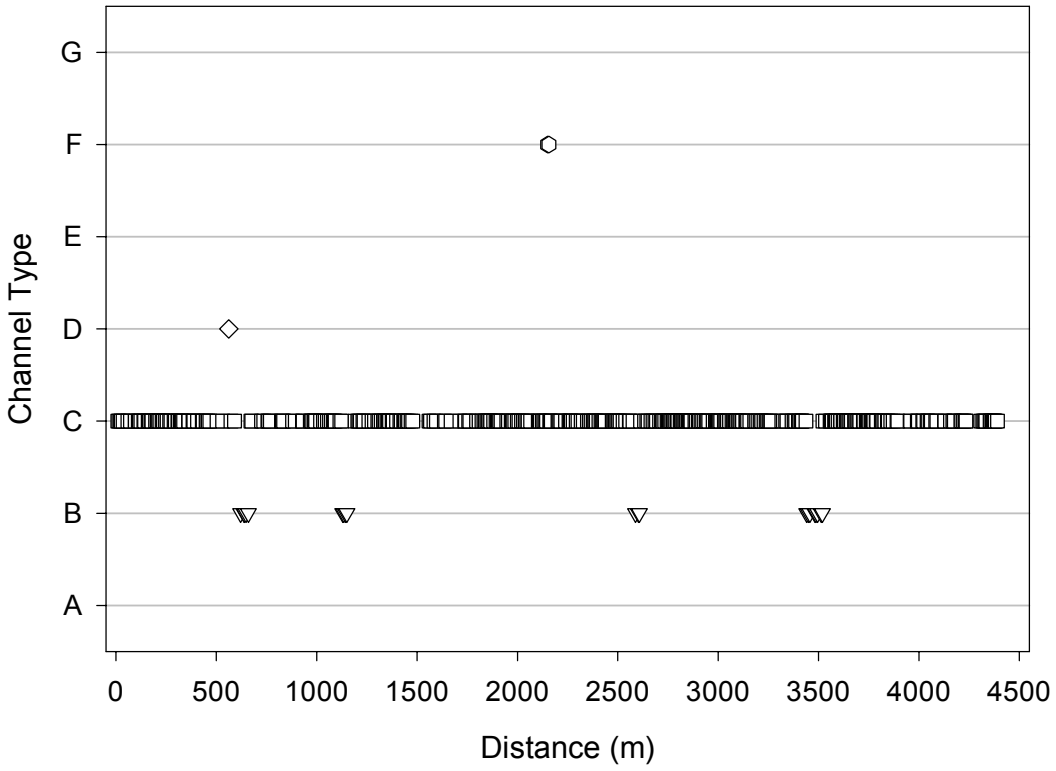
Distribution and abundance of LWD in each habitat unit of Cove Run (Vance), summer 2001. Bars below the x-axis represent the amount of the total LWD that was >5 m in length, >55 cm in diameter. X-axis indicates distance upstream of confluence with Paddy Run.



Frequency (percent) and cumulative percent of dominant and subdominant substrate occurrence for pools and riffles in Cove Run (Vance), summer 2001.



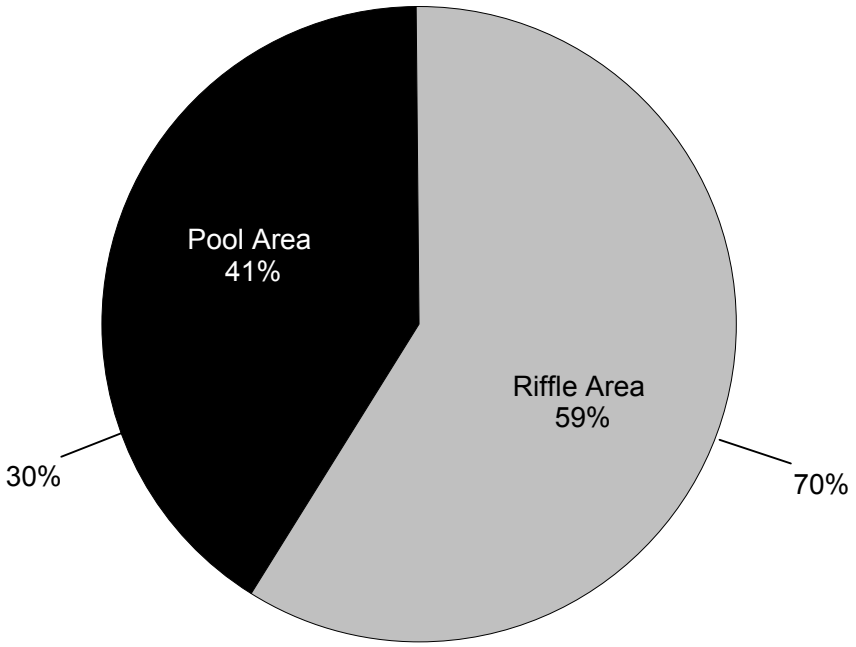
Total riparian widths (left riparian width+right riparian width+wetted channel width) for Cove Run (Vance), summer 2001. The left and right of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data. Sample size = 21.



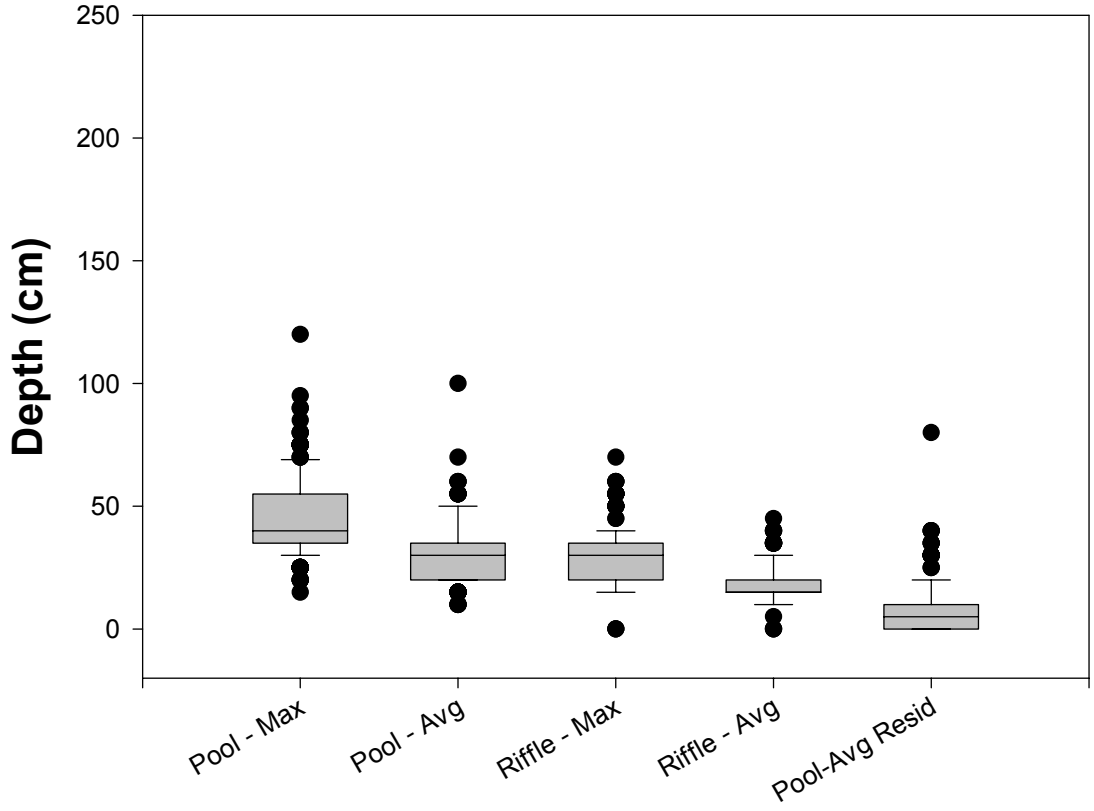
Rosgen's channel classification for each habitat unit in Cove Run (Vance), summer 2001. X-axis indicates distance upstream of confluence with Paddy Run.

Stream:	**Paddy Run**
District:	Lee
Quadrangle:	Wardensville
Survey Date:	05/29/01
Downstream Starting Point:	Forest boundary
Total Distance Surveyed (km):	6.7
Percent of Total Area Pools:	**41**
Number of Pools:	248
Number of Pools per km:	37
Total Pool Area (m^2):	13088 ± 1398
Mean Pool Area (m^2):	53
Correction Factor:	0.90
Mean Maximum Depth (cm):	45
Mean Average Depth (cm):	31
Mean Residual Pool Depth (cm):	7
Percent of Total Area Riffles:	**59**
Number of Riffles:	277
Number of Riffles per km:	42
Total Riffle Area (m^2):	18939 ± 2547
Mean Riffle Area (m^2):	68
Correction Factor:	0.95
Mean Maximum Depth (cm):	29
Mean Average Depth (cm):	17
Number of LWD pieces per km:	**91**
LWD < 5 m, < 55 cm:	43
LWD < 5 m, > 55 cm:	2
LWD > 5 m, < 55 cm:	37
LWD > 5 m, > 55 cm:	10
Mean Channel Width (m):	**6**
Mean Riparian Width (m) (Total*):	**51**
Maximum Riparian Width (Total):	84
75th Percentile (Total)	63
25th Percentile (Total)	34
Minimum Riparian Width (Total):	14
Mean Riparian Width (m) (Left, Right):**	**23**
Maximum Riparian Width (Left, Right):	75
75th Percentile (Left, Right)	28
25th Percentile (Left, Right)	9
Minimum Riparian Width (Left, Right):	1
Percent of Pool Habitat Surveyed as Glides:	**7**
Rosgen's Channel Type Frequency (%):	
Type A:	0
Type B:	30
Type C:	70
Type D:	0
Type E:	0
Type F:	0
Type G:	0
Percent Pools with > 35% Embeddedness:	**58**
Average Channel Gradient (%):	**6**

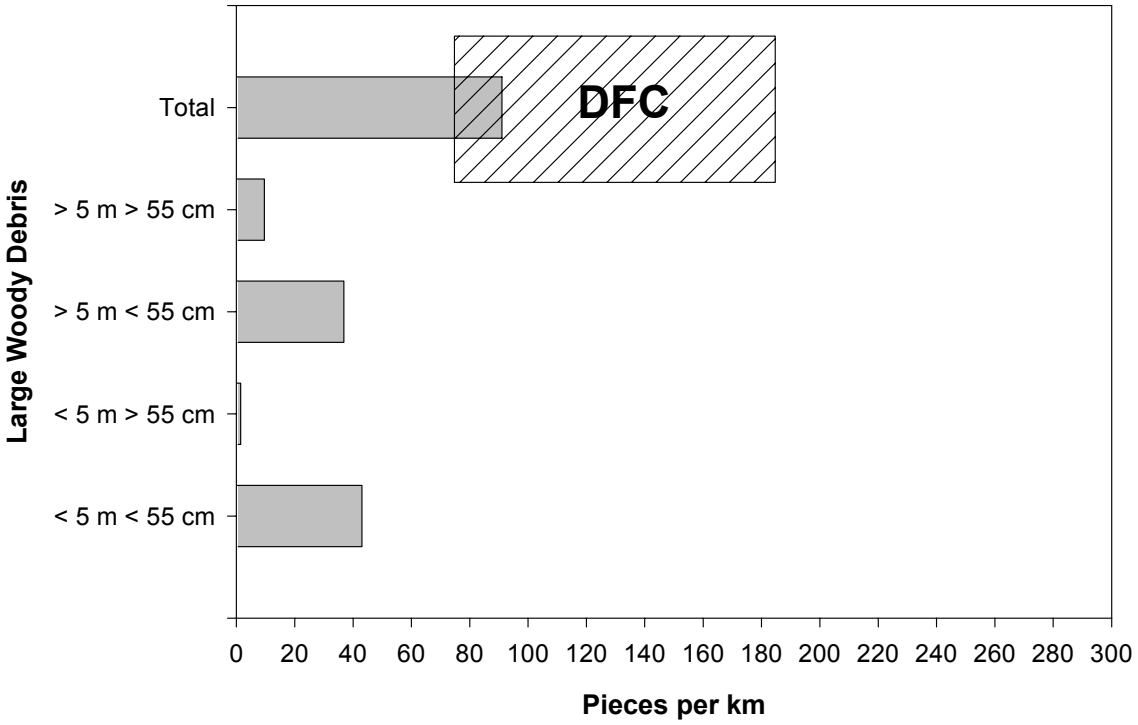
*Calculation sums left riparian + right riparian + stream channel
**Calculation pools left and right riparian measurements, does not sum them



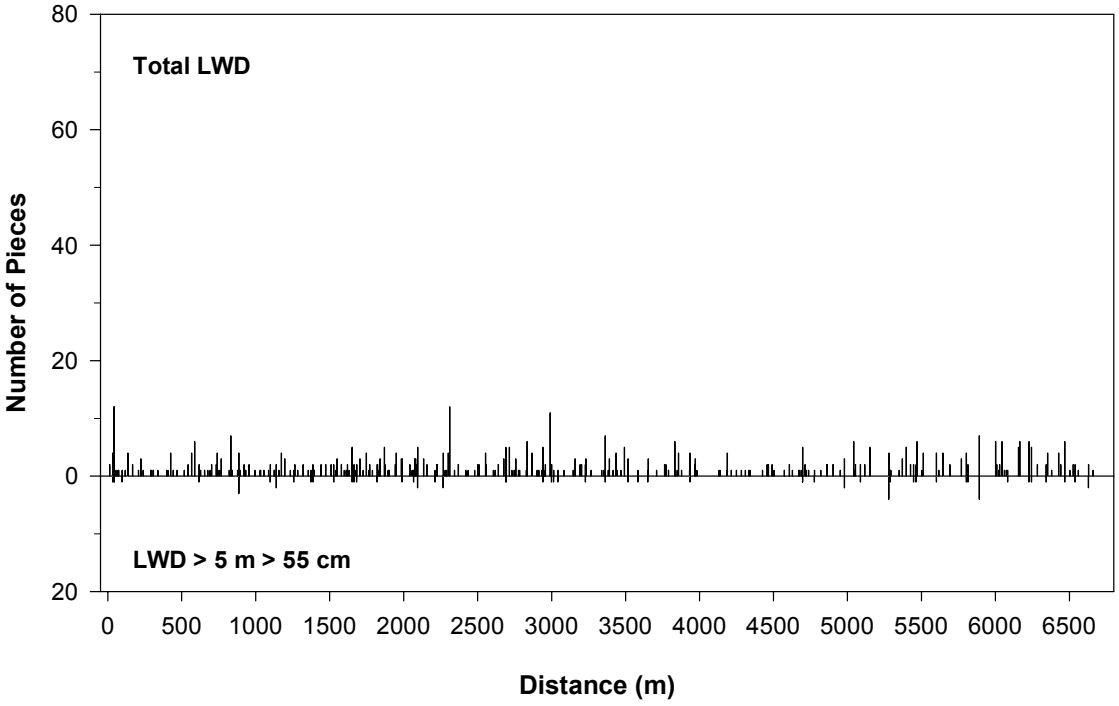
Estimated area of Paddy Run in pools and riffles as calculated using BVET techniques, summer 2001.



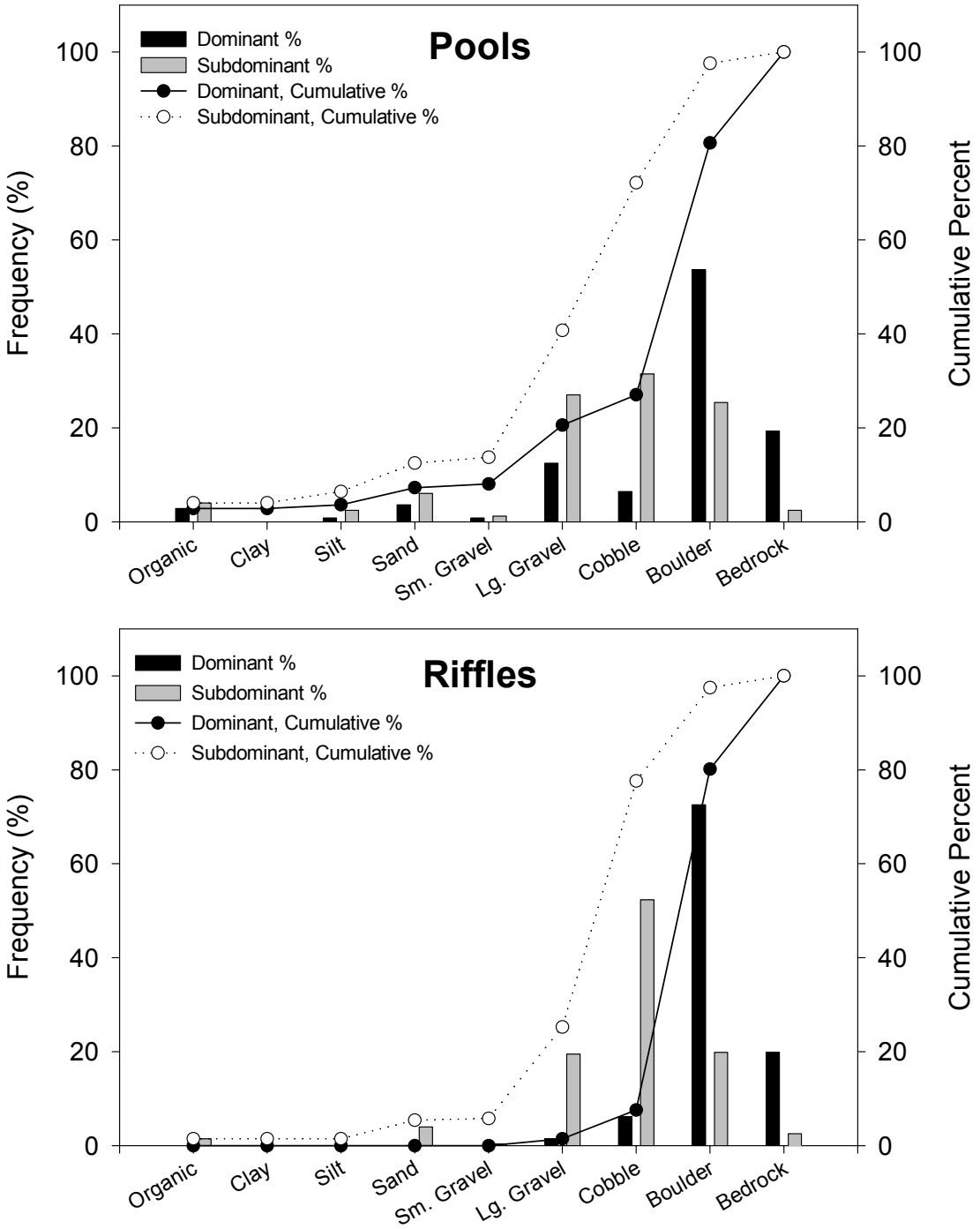
Maximum and average depths and residual pool depths for pools and riffles in Paddy Run, summer 2001. The top and bottom of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data.



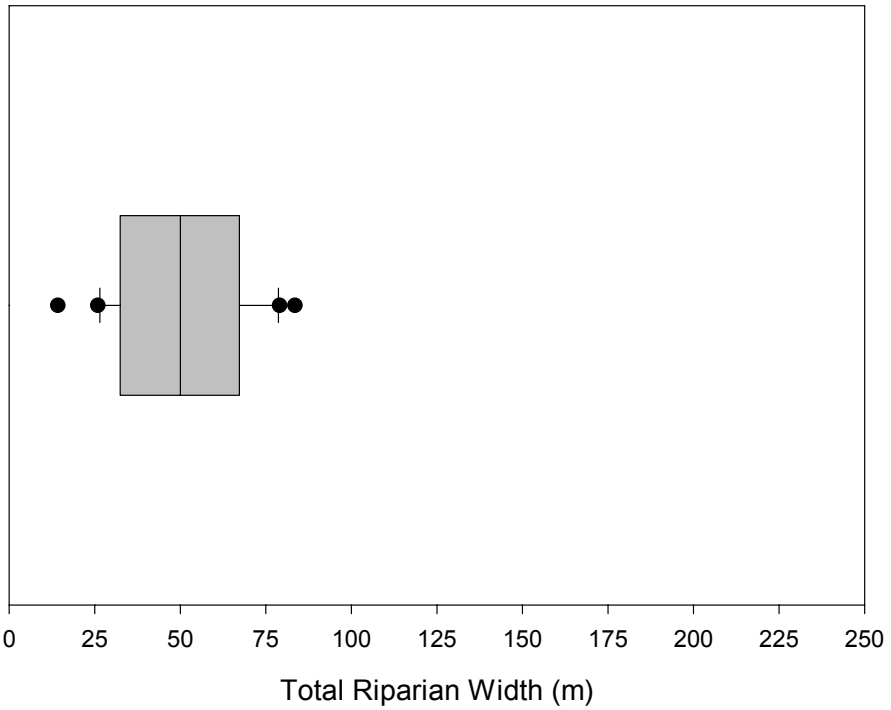
LWD per kilometer in Paddy Run, summer 2001. Y-axis labels are LWD size classes with the first number indicating length and the second number indicating diameter.



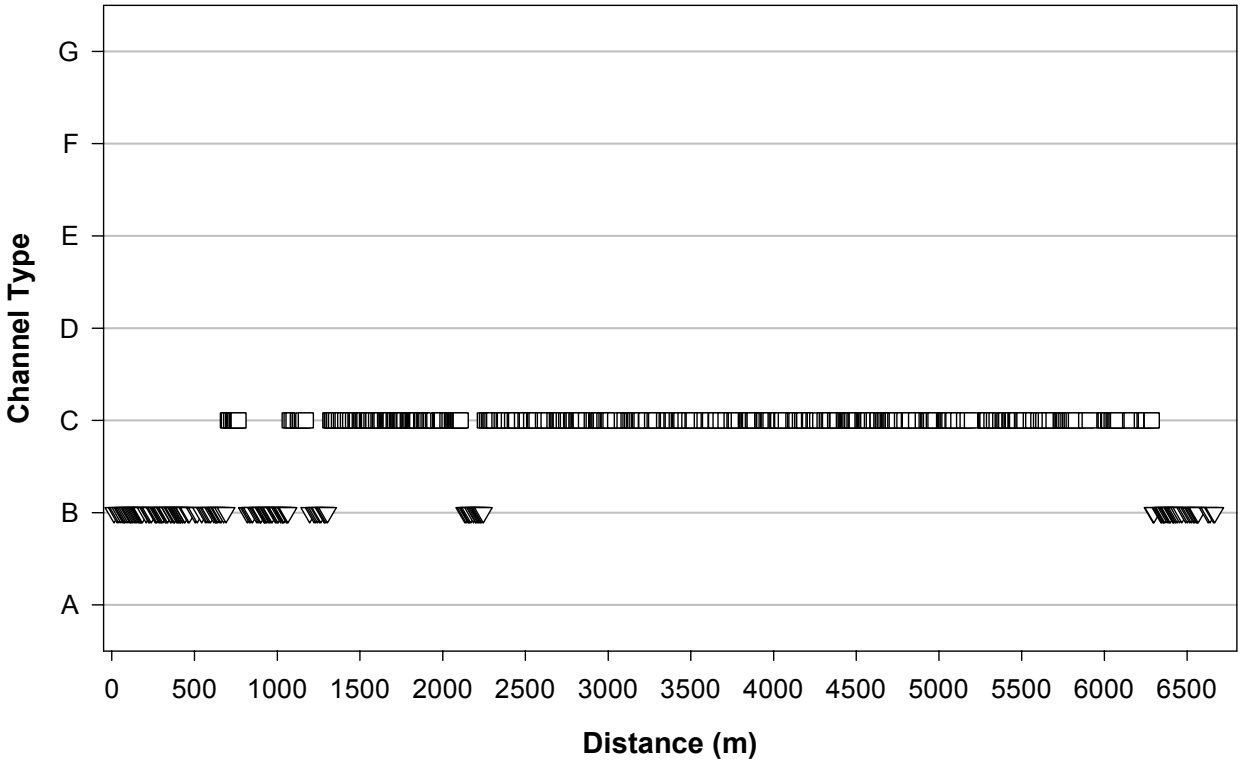
Distribution and abundance of LWD in each habitat unit of Paddy Run, summer 2001. Bars below the x-axis represent the amount of the total LWD that was >5 m in length, >55 cm in diameter. X-axis indicates distance upstream from Forest boundary.



Frequency (percent) and cumulative percent of dominant and subdominant substrate occurrence for pools and riffles in Paddy Run, summer 2001.



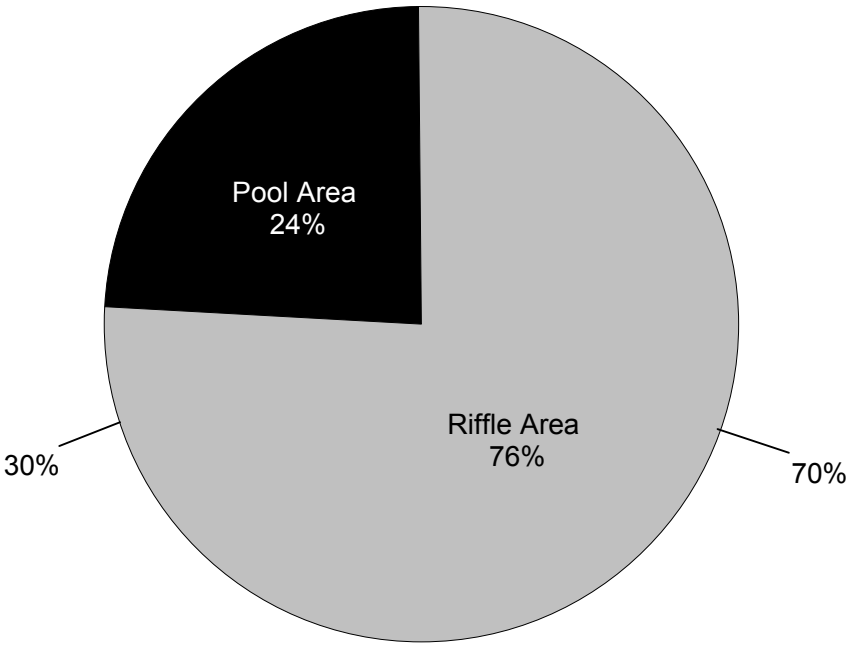
Total riparian widths (left riparian width+right riparian width+wetted channel width) for Paddy Run, summer 2001. The left and right of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data. Sample size = 27.



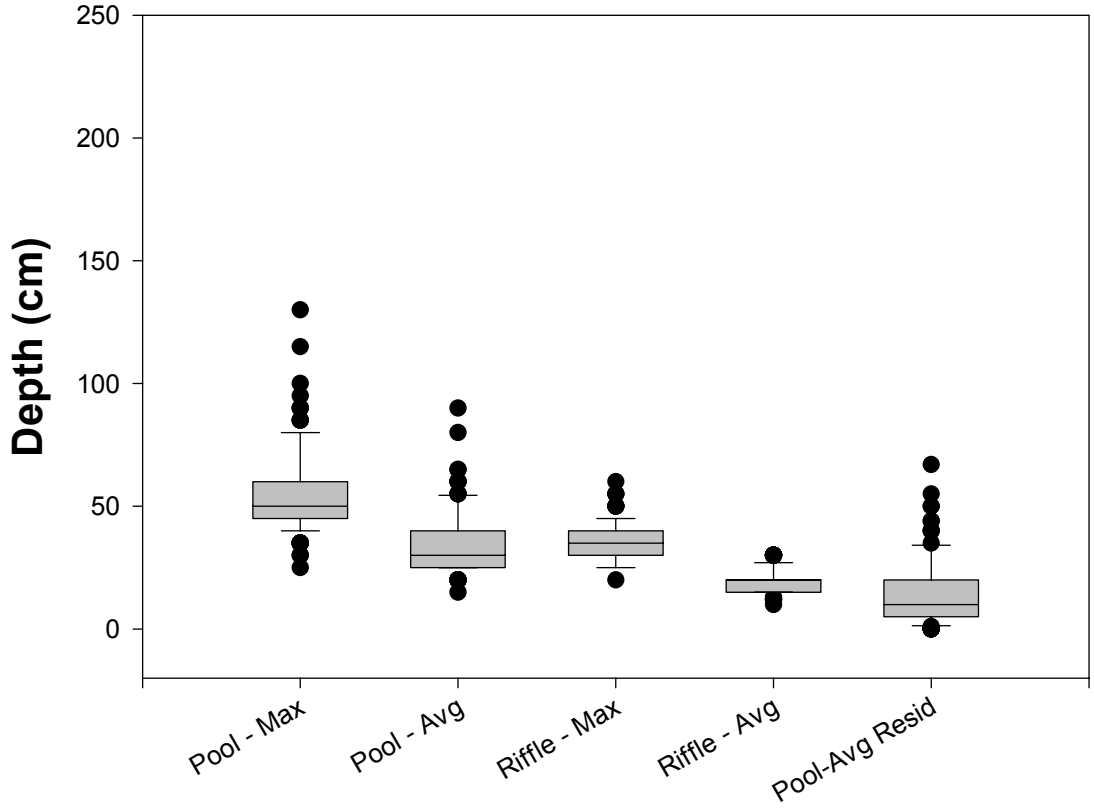
Rosgen's channel classification for each habitat unit in Paddy Run, summer 2001. X-axis indicates distance upstream from Forest boundary.

Stream:	**Laurel Run**
District:	Lee
Quadrangle:	Wolf Gap
Survey Date:	08/06/01
Downstream Starting Point:	Forest boundary
Total Distance Surveyed (km):	4.7
Percent of Total Area Pools:	**24**
Number of Pools:	116
Number of Pools per km:	25
Total Pool Area (m^2):	3793 ± 1484
Mean Pool Area (m^2):	33
Correction Factor:	1.02
Mean Maximum Depth (cm):	55
Mean Average Depth (cm):	35
Mean Residual Pool Depth (cm):	15
Percent of Total Area Riffles:	**76**
Number of Riffles:	102
Number of Riffles per km:	22
Total Riffle Area (m^2):	11735 ± 2011
Mean Riffle Area (m^2):	115
Correction Factor:	1.21
Mean Maximum Depth (cm):	36
Mean Average Depth (cm):	19
Number of LWD pieces per km:	**217**
LWD < 5 m, < 55 cm:	111
LWD < 5 m, > 55 cm:	8
LWD > 5 m, < 55 cm:	80
LWD > 5 m, > 55 cm:	18
Mean Channel Width (m):	**5**
Mean Riparian Width (m) (Total*):	**17**
Maximum Riparian Width (Total):	23
75th Percentile (Total)	22
25th Percentile (Total)	12
Minimum Riparian Width (Total):	9
Mean Riparian Width (m) (Left, Right):**	**5**
Maximum Riparian Width (Left, Right):	16
75th Percentile (Left, Right)	8
25th Percentile (Left, Right)	2
Minimum Riparian Width (Left, Right):	1
Percent of Pool Habitat Surveyed as Glides:	**8**
Rosgen's Channel Type Frequency (%):	
Type A:	44
Type B:	53
Type C:	2
Type D:	0
Type E:	0
Type F:	0
Type G:	0
Percent Pools with > 35% Embeddedness:	**65**
Average Channel Gradient (%):	**7**

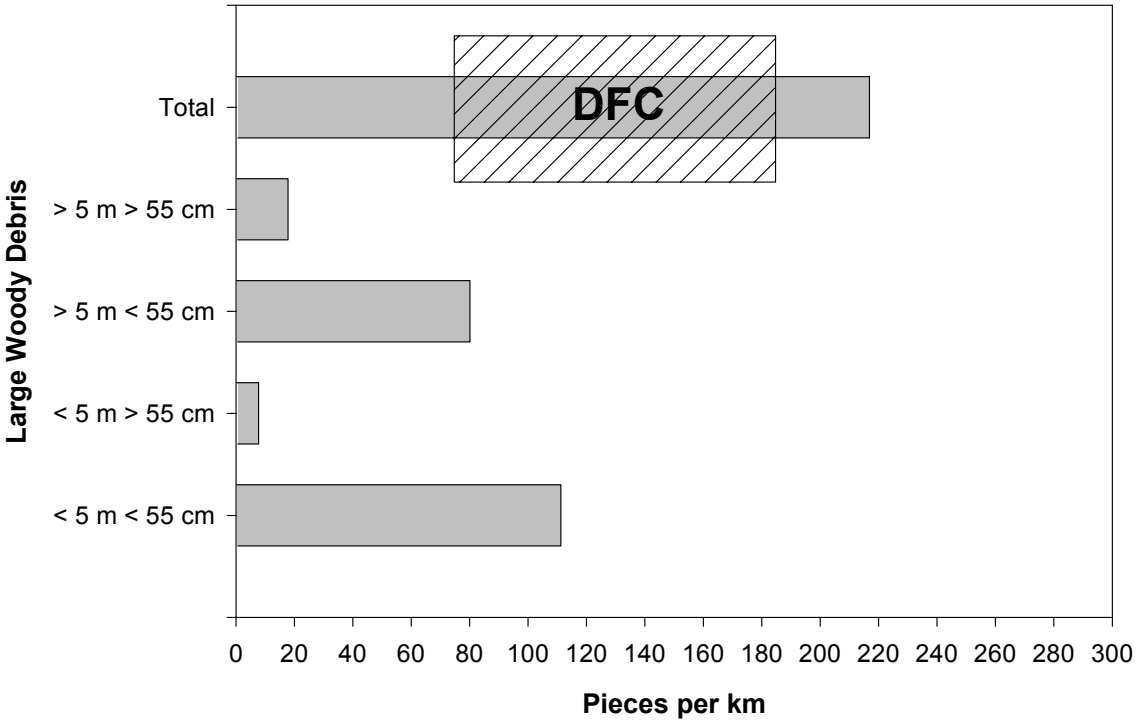
*Calculation sums left riparian + right riparian + stream channel
**Calculation pools left and right riparian measurements, does not sum them



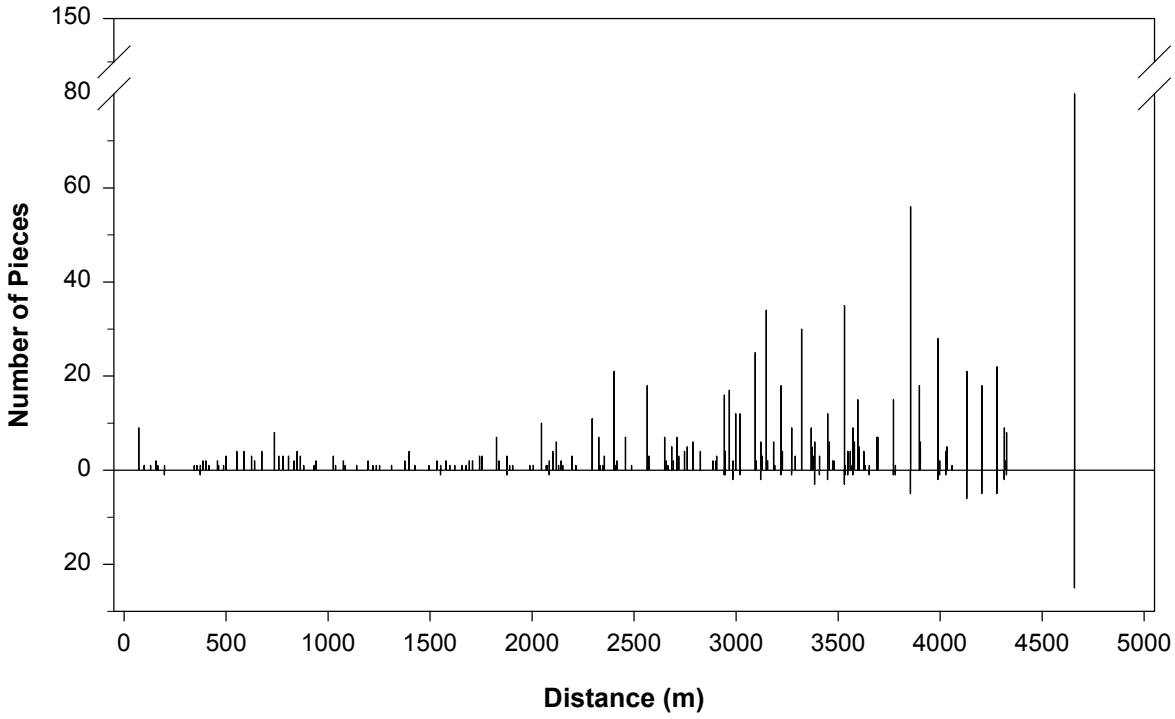
Estimated area of Laurel Run in pools and riffles as calculated using BVET techniques, summer 2001.



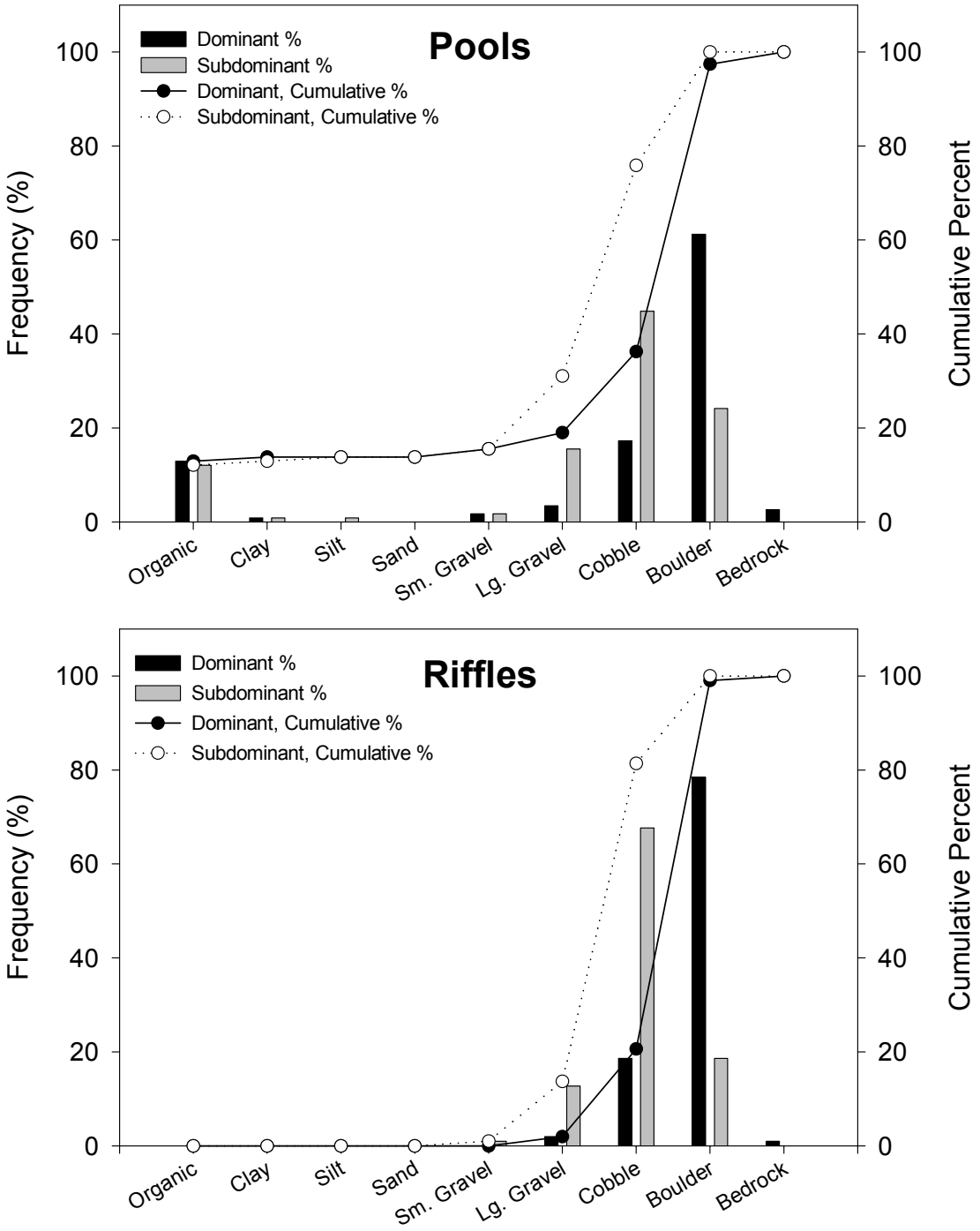
Maximum and average depths and residual pool depths for pools and riffles in Laurel Run, summer 2001. The top and bottom of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data.



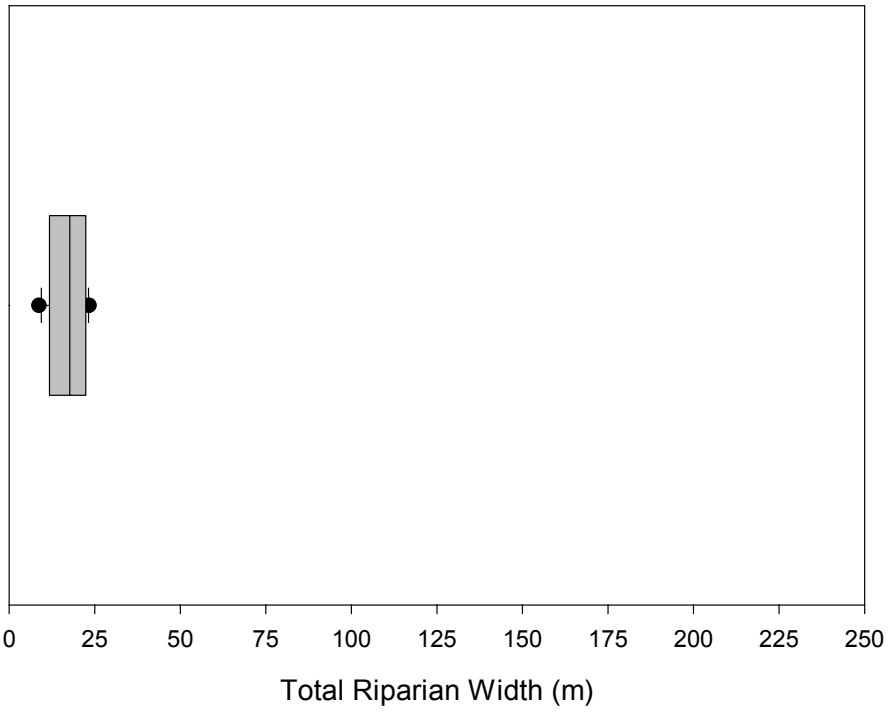
LWD per kilometer in Laurel Run, summer 2001. Y-axis labels are LWD size classes with the first number indicating length and the second number indicating diameter.



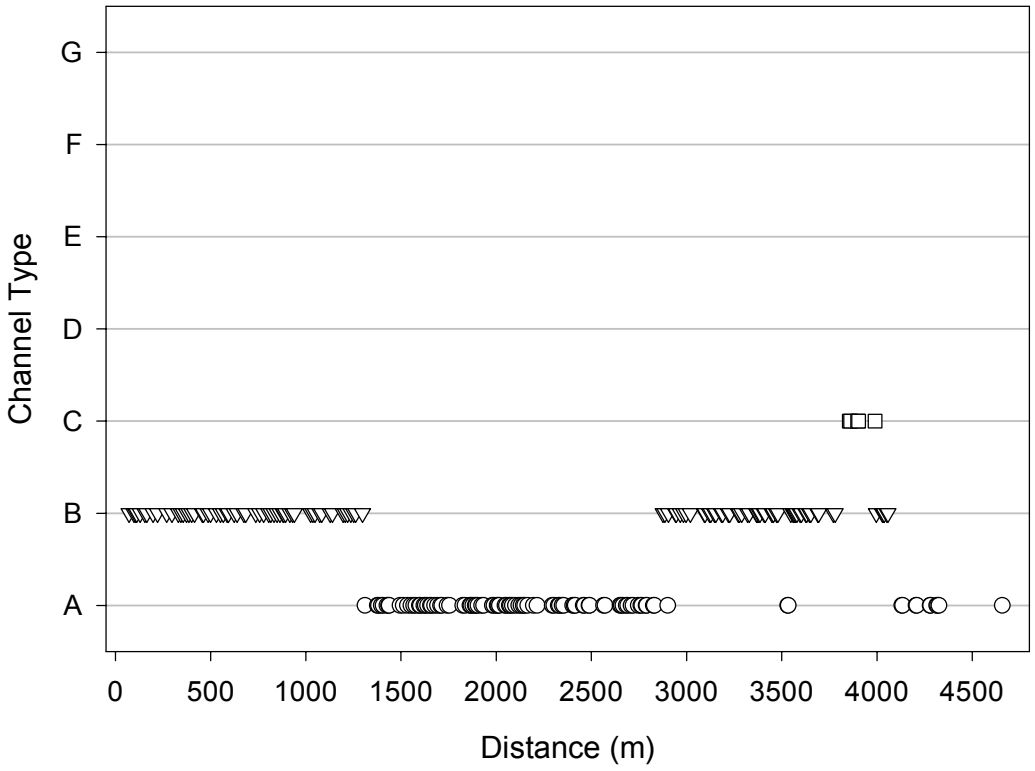
Distribution and abundance of LWD in each habitat unit of Laurel Run, summer 2001. Bars below the x-axis represent the amount of the total LWD that was >5 m in length, >55 cm in diameter. X-axis indicates distance upstream from Forest boundary.



Frequency (percent) and cumulative percent of dominant and subdominant substrate occurrence for pools and riffles in Laurel Run, summer 2001.



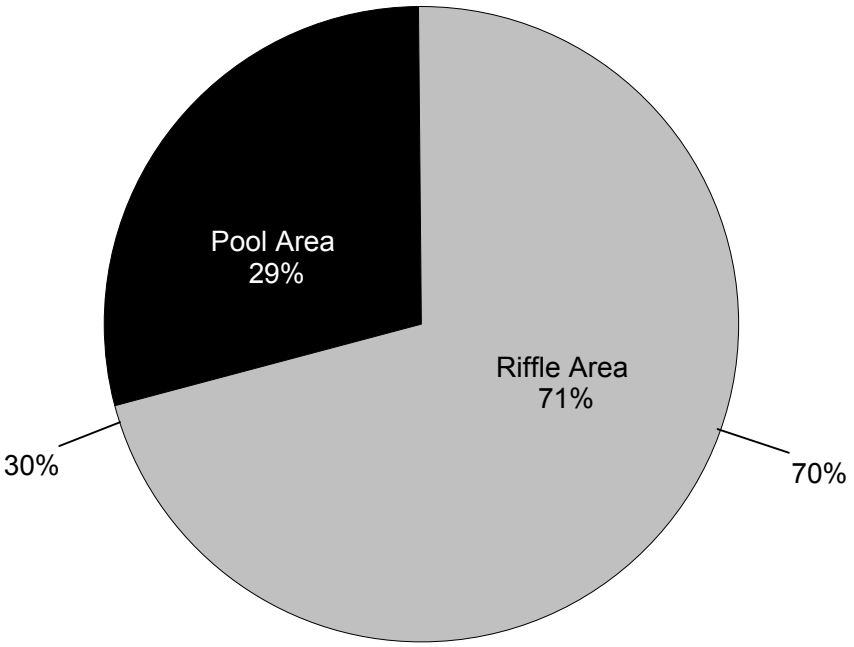
Total riparian widths (left riparian width+right riparian width+wetted channel width) for Laurel Run, summer 2001. The left and right of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data. Sample size = 9.



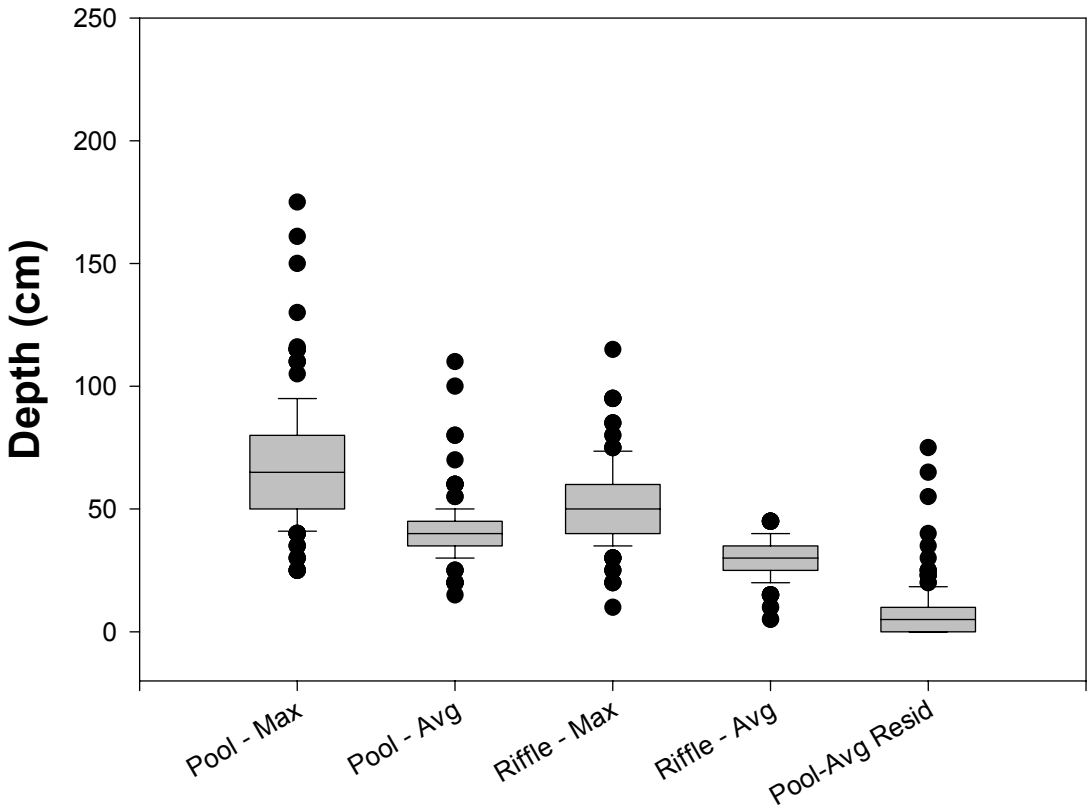
Rosgen's channel classification for each habitat unit in Laurel Run, summer 2001. X-axis indicates distance upstream from Forest boundary.

Stream:	**Little Stony Creek**
District:	Lee
Quadrangle:	Wolf Gap
Survey Date:	06/27/01
Downstream Starting Point:	Forest boundary
Total Distance Surveyed (km):	6.4
Percent of Total Area Pools:	**29**
Number of Pools:	168
Number of Pools per km:	26
Total Pool Area (m^2):	10626 ± 1009
Mean Pool Area (m^2):	63
Correction Factor:	1.19
Mean Maximum Depth (cm):	68
Mean Average Depth (cm):	40
Mean Residual Pool Depth (cm):	7
Percent of Total Area Riffles:	**71**
Number of Riffles:	149
Number of Riffles per km:	23
Total Riffle Area (m^2):	25668 ± 2684
Mean Riffle Area (m^2):	171
Correction Factor:	1.37
Mean Maximum Depth (cm):	51
Mean Average Depth (cm):	29
Number of LWD pieces per km:	**97**
LWD < 5 m, < 55 cm:	34
LWD < 5 m, > 55 cm:	25
LWD > 5 m, < 55 cm:	23
LWD > 5 m, > 55 cm:	15
Mean Channel Width (m):	**9**
Mean Riparian Width (m) (Total*):	**23**
Maximum Riparian Width (Total):	57
75th Percentile (Total)	27
25th Percentile (Total)	16
Minimum Riparian Width (Total):	10
Mean Riparian Width (m) (Left, Right):**	**7**
Maximum Riparian Width (Left, Right):	32
75th Percentile (Left, Right)	10
25th Percentile (Left, Right)	2
Minimum Riparian Width (Left, Right):	1
Percent of Pool Habitat Surveyed as Glides:	**17**
Rosgen's Channel Type Frequency (%):	
Type A:	3
Type B:	71
Type C:	27
Type D:	0
Type E:	0
Type F:	0
Type G:	0
Percent Pools with > 35% Embeddedness:	**70**
Average Channel Gradient (%):	**5**

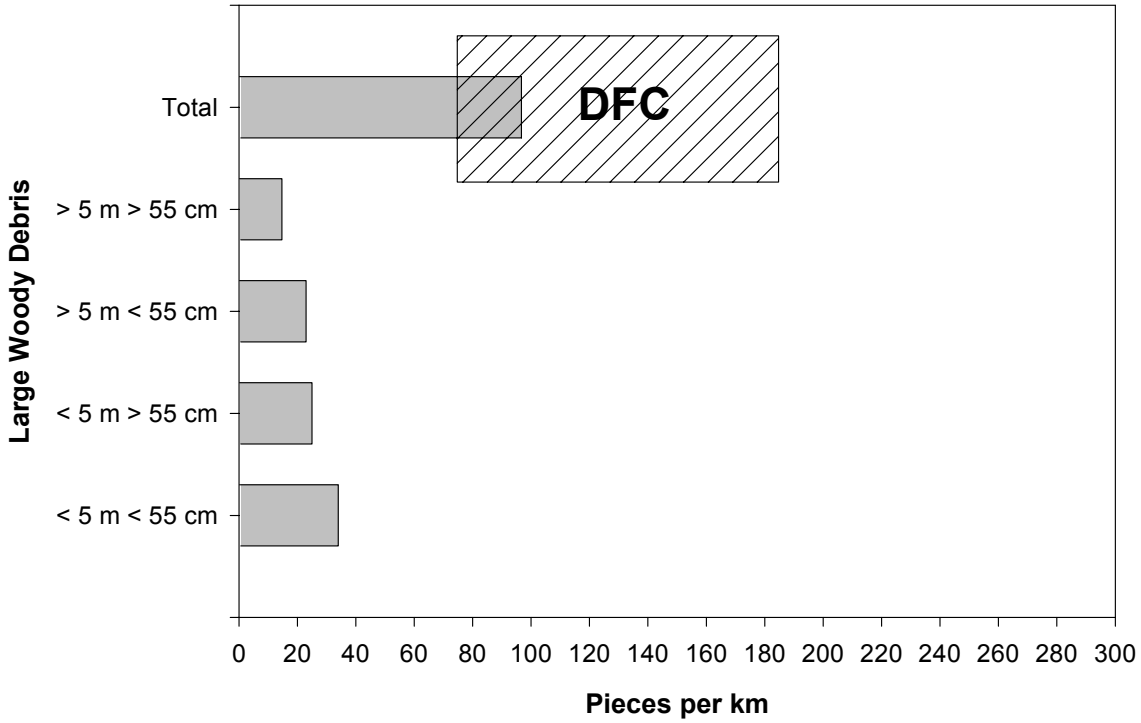
*Calculation sums left riparian + right riparian + stream channel
**Calculation pools left and right riparian measurements, does not sum them



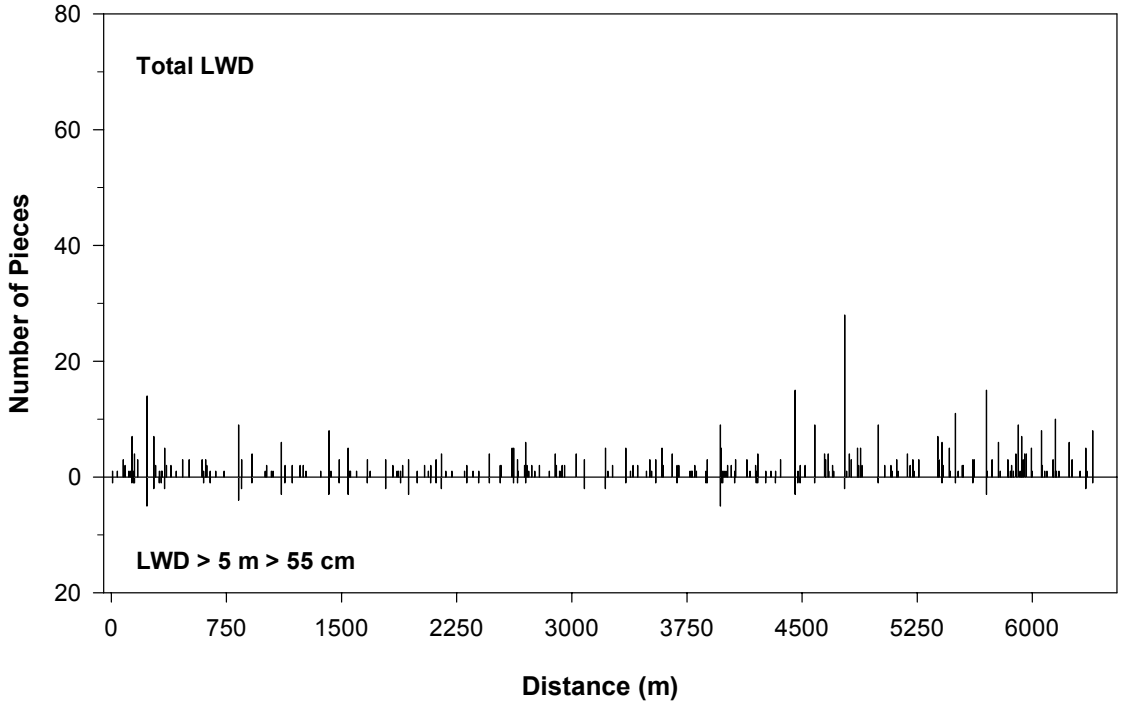
Estimated area of Little Stony Creek in pools and riffles as calculated using BVET techniques, summer 2001.



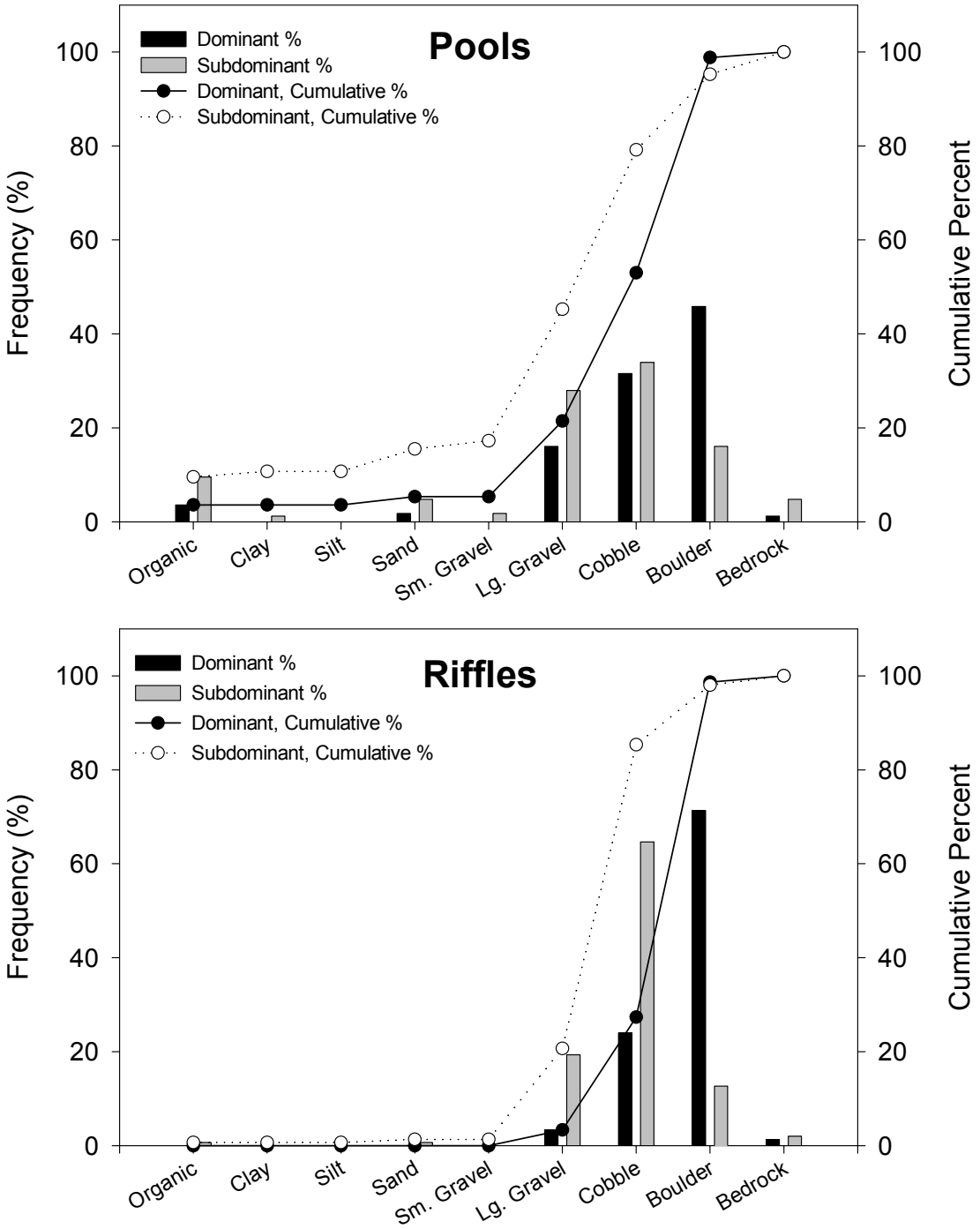
Maximum and average depths and residual pool depths for pools and riffles in Little Stony Creek, summer 2001. The top and bottom of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data.



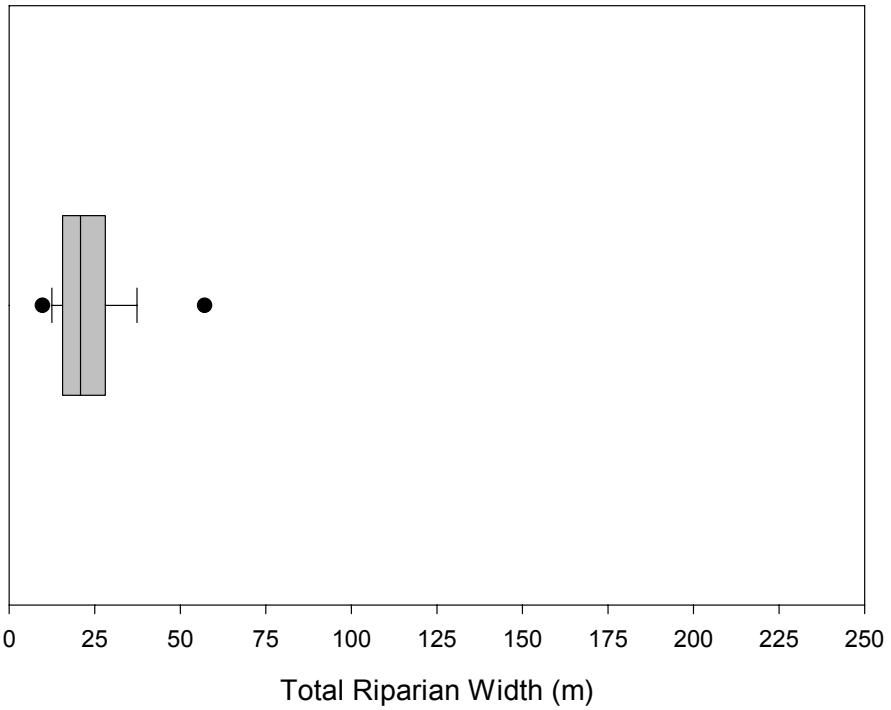
LWD per kilometer in Little Stony Creek, summer 2001. Y-axis labels are LWD size classes with the first number indicating length and the second number indicating diameter.



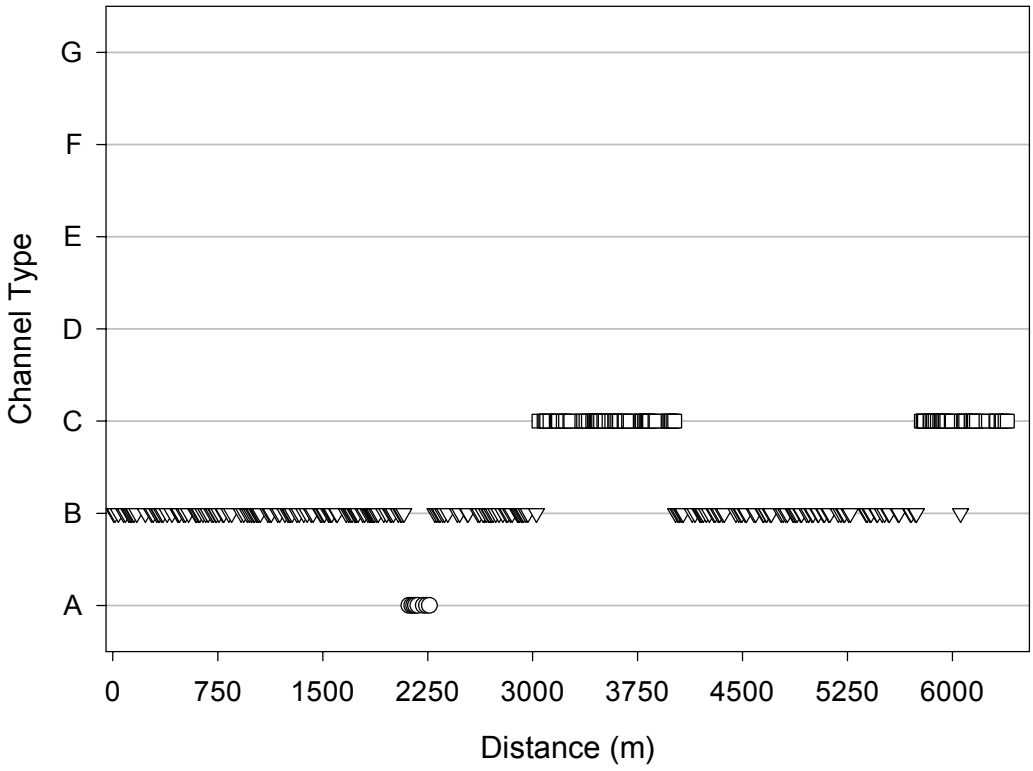
Distribution and abundance of LWD in each habitat unit of Little Stony Creek, summer 2001. Bars below the x-axis represent the amount of the total LWD that was >5 m in length, >55 cm in diameter. X-axis indicates distance upstream from Forest boundary.



Frequency (percent) and cumulative percent of dominant and subdominant substrate occurrence for pools and riffles in Little Stony Creek, summer 2001.



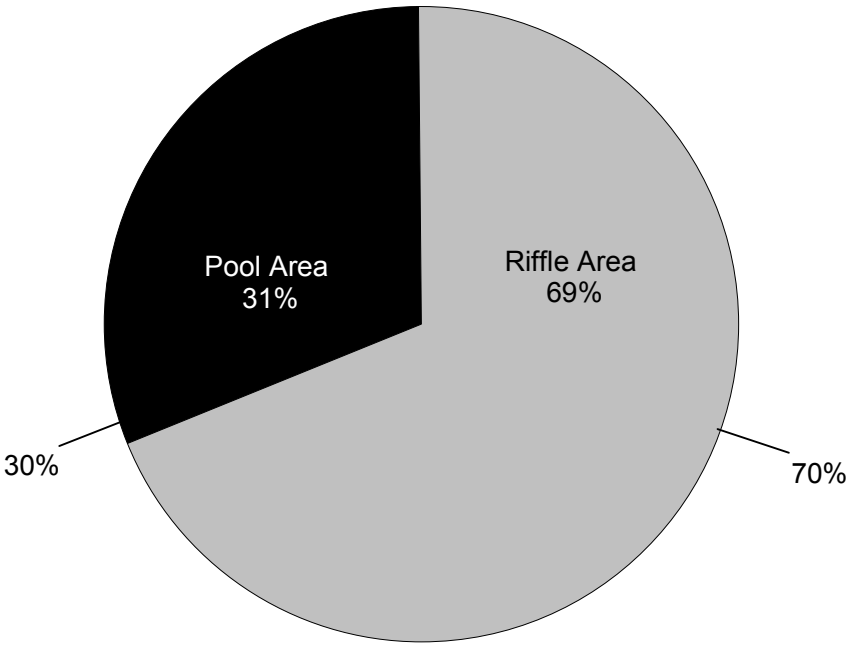
Total riparian widths (left riparian width+right riparian width+wetted channel width) for Little Stony Creek, summer 2001. The left and right of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data. Sample size = 14.



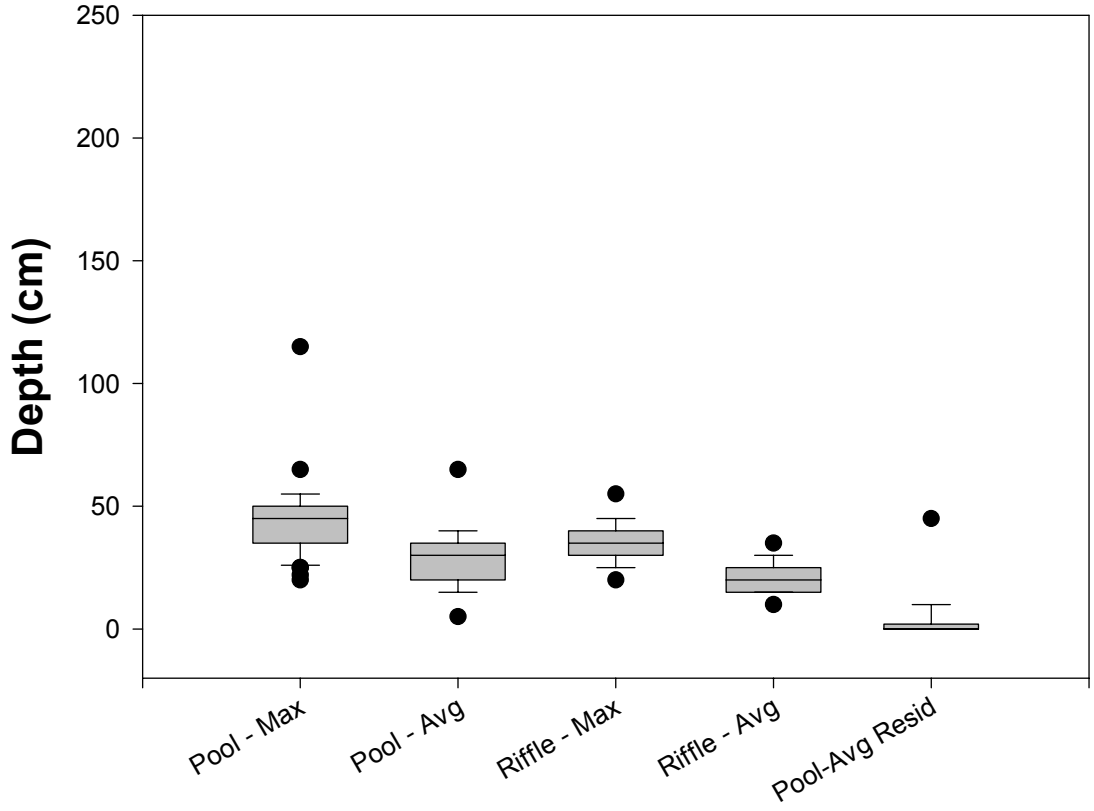
Rosgen's channel classification for each habitat unit in Little Stony Creek, summer 2001. X-axis indicates distance upstream from Forest boundary.

Stream:	**Mill Creek**
District:	Lee
Quadrangle:	Wolf Gap
Survey Date:	06/26/01
Downstream Starting Point:	Confluence w/Little Stony Creek
Total Distance Surveyed (km):	0.8
Percent of Total Area Pools:	**31**
Number of Pools:	33
Number of Pools per km:	41
Total Pool Area (m^2):	782 ± 92
Mean Pool Area (m^2):	24
Correction Factor:	1.23
Mean Maximum Depth (cm):	45
Mean Average Depth (cm):	30
Mean Residual Pool Depth (cm):	3
Percent of Total Area Riffles:	**69**
Number of Riffles:	34
Number of Riffles per km:	42
Total Riffle Area (m^2):	1727 ± 338
Mean Riffle Area (m^2):	51
Correction Factor:	0.93
Mean Maximum Depth (cm):	34
Mean Average Depth (cm):	21
Number of LWD pieces per km:	**78**
LWD < 5 m, < 55 cm:	31
LWD < 5 m, > 55 cm:	14
LWD > 5 m, < 55 cm:	10
LWD > 5 m, > 55 cm:	24
Mean Channel Width (m):	**6**
Mean Riparian Width (m) (Total*):	**44**
Maximum Riparian Width (Total):	77
75th Percentile (Total)	61
25th Percentile (Total)	28
Minimum Riparian Width (Total):	6
Mean Riparian Width (m) (Left, Right):**	**18**
Maximum Riparian Width (Left, Right):	39
75th Percentile (Left, Right)	27
25th Percentile (Left, Right)	10
Minimum Riparian Width (Left, Right):	1
Percent of Pool Habitat Surveyed as Glides:	**0**
Rosgen's Channel Type Frequency (%):	
Type A:	0
Type B:	15
Type C:	85
Type D:	0
Type E:	0
Type F:	0
Type G:	0
Percent Pools with > 35% Embeddedness:	**100**
Average Channel Gradient (%):	**9**

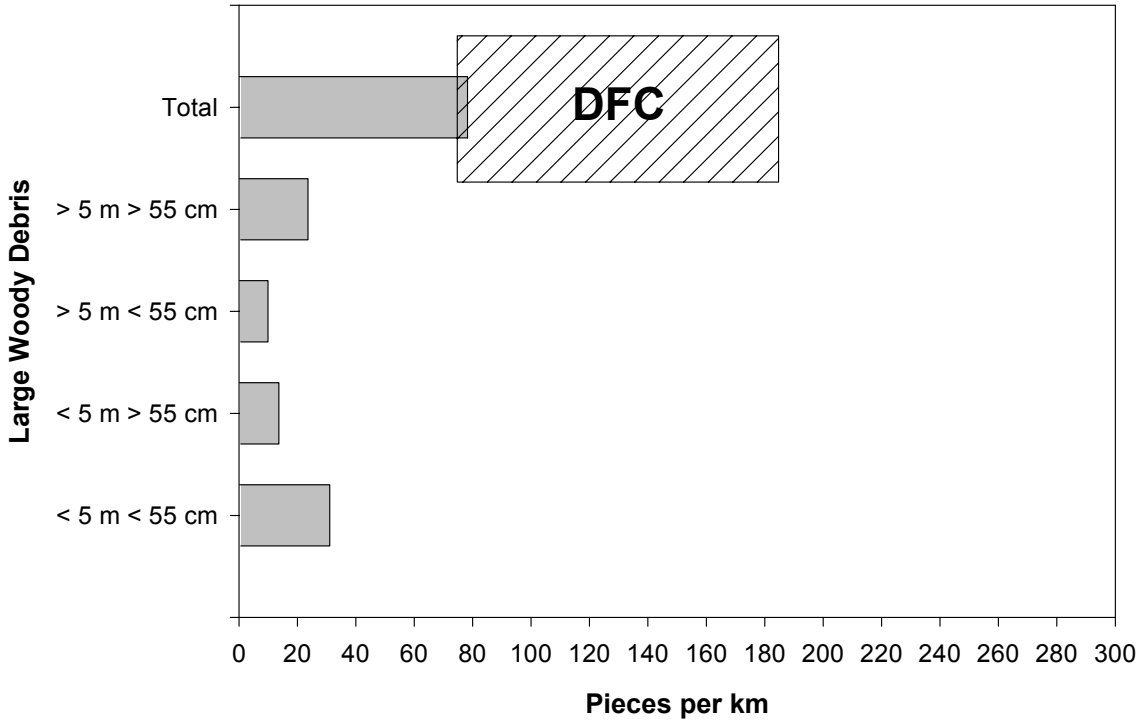
*Calculation sums left riparian + right riparian + stream channel
**Calculation pools left and right riparian measurements, does not sum them



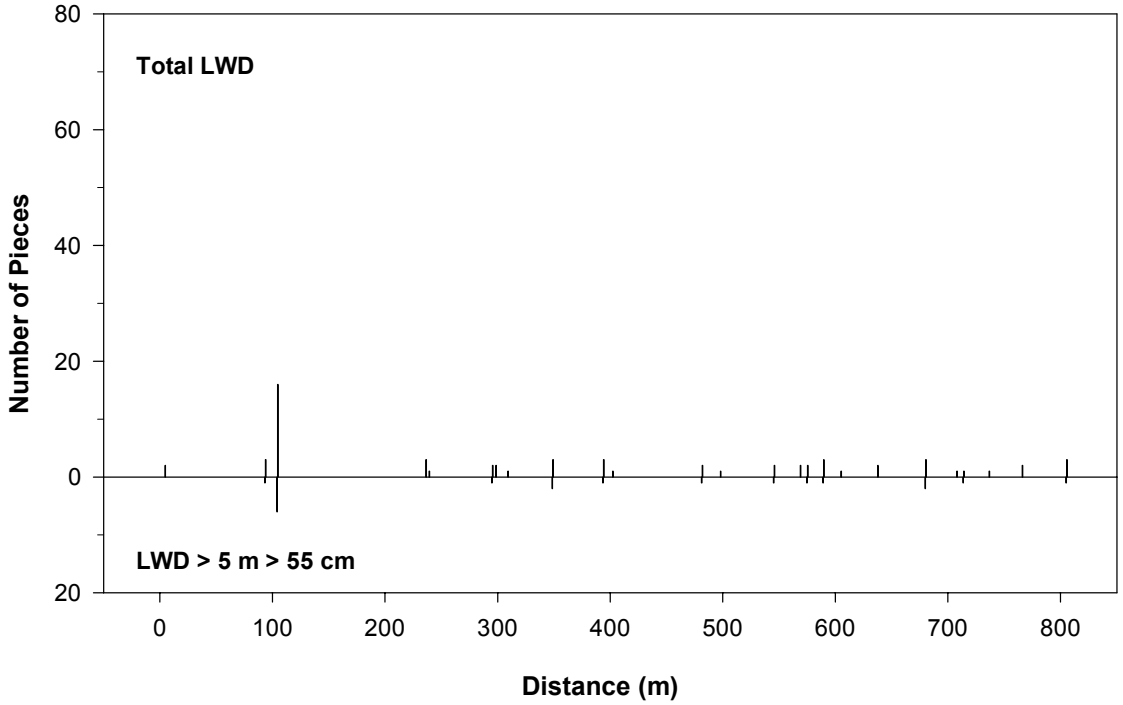
Estimated area of Mill Creek in pools and riffles as calculated using BVET techniques, summer 2001.



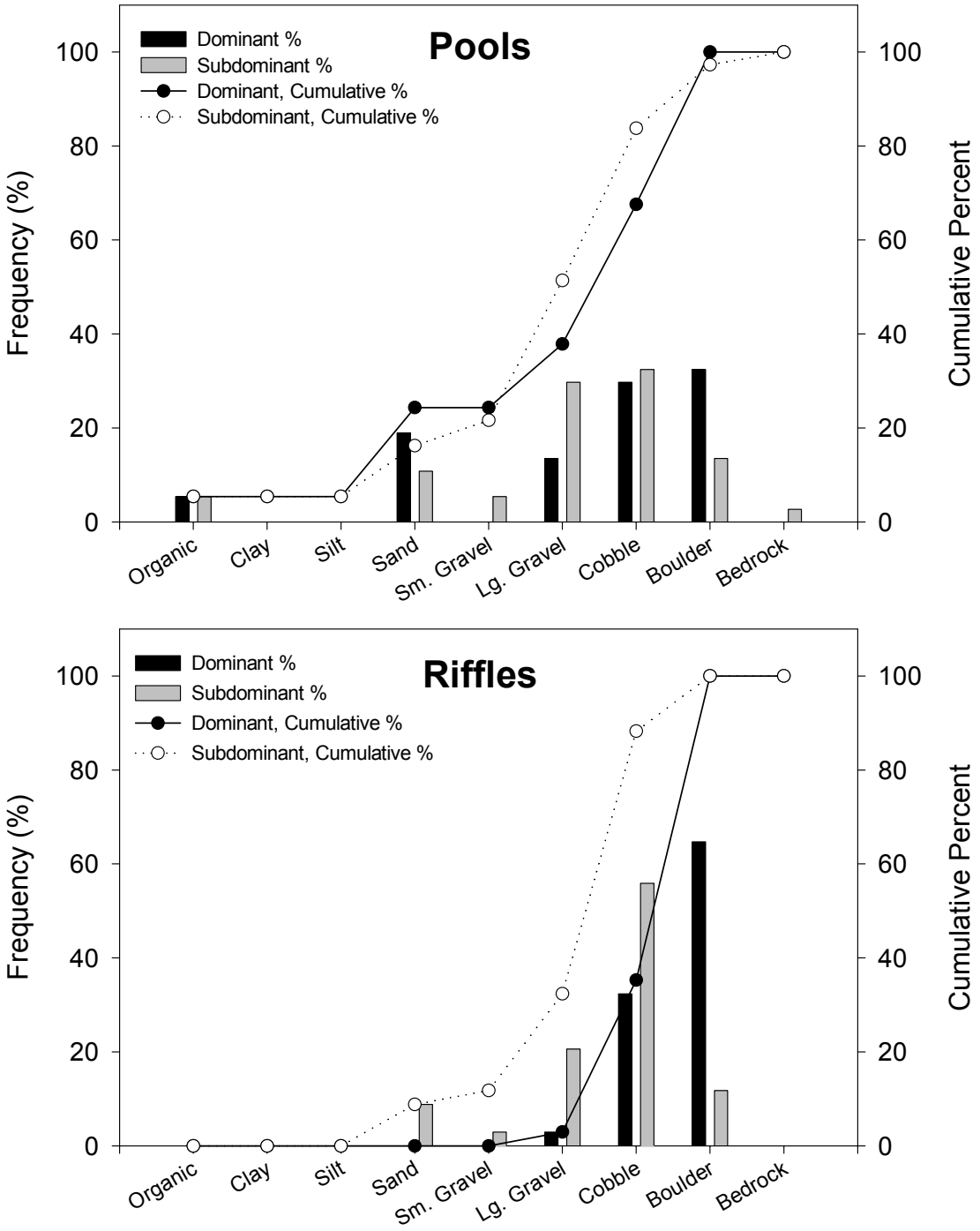
Maximum and average depths and residual pool depths for pools and riffles in Mill Creek, summer 2001. The top and bottom of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data.



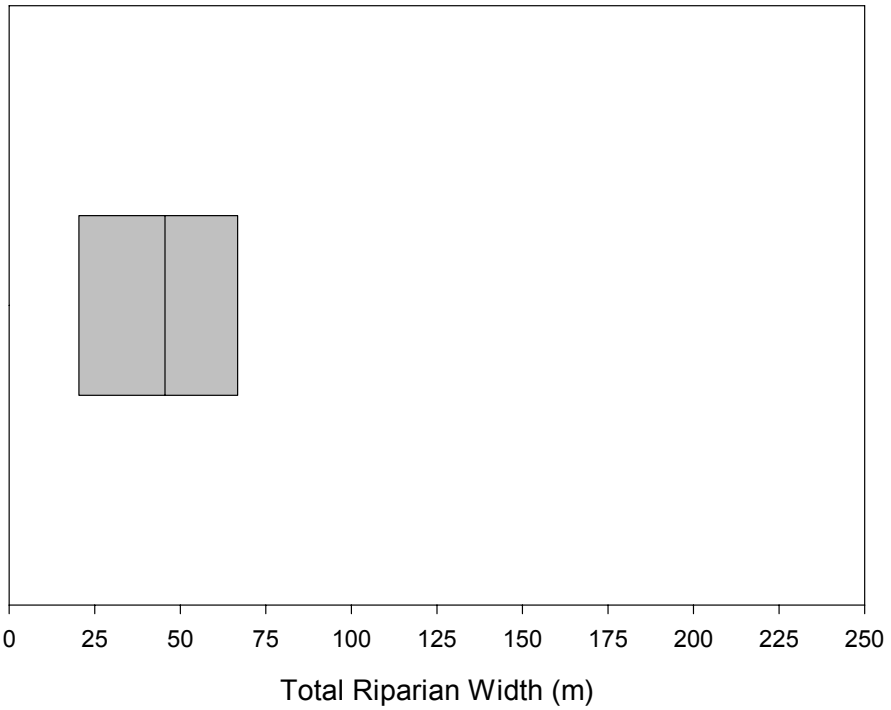
LWD per kilometer in Mill Creek, summer 2001. Y-axis labels are LWD size classes with the first number indicating length and the second number indicating diameter.



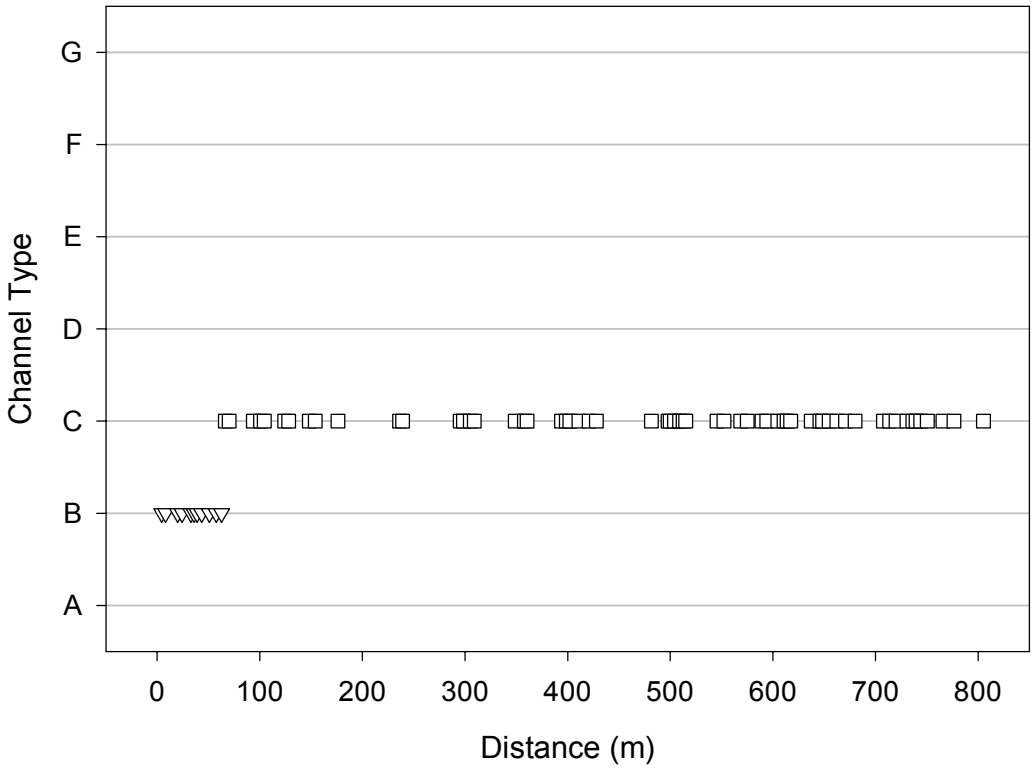
Distribution and abundance of LWD in each habitat unit of Mill Creek, summer 2001. Bars below the x-axis represent the amount of the total LWD that was >5 m in length, >55 cm in diameter. X-axis indicates distance upstream from confluence w/Little Stony Creek.



Frequency (percent) and cumulative percent of dominant and subdominant substrate occurrence for pools and riffles in Mill Creek, summer 2001.



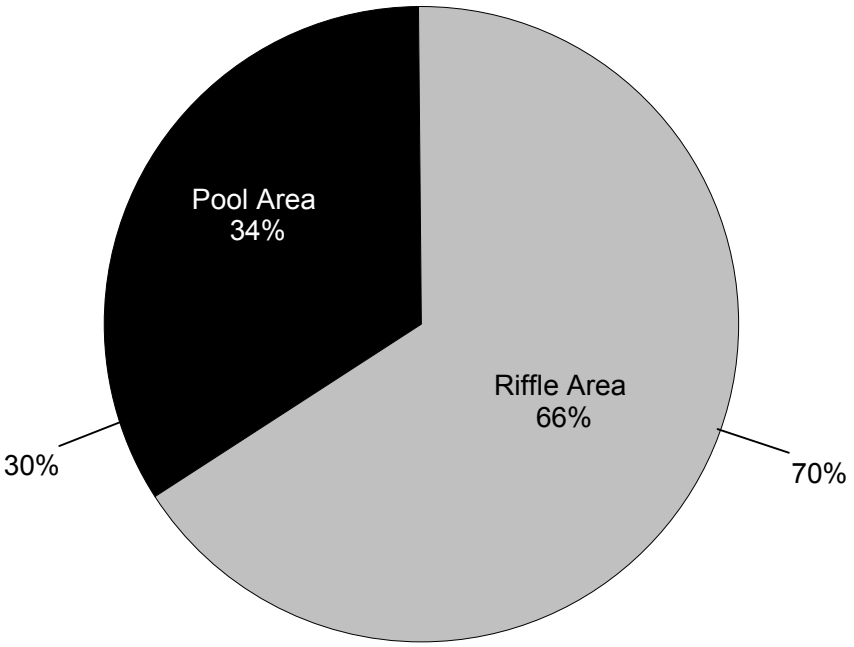
Total riparian widths (left riparian width+right riparian width+wetted channel width) for Mill Creek, summer 2001. The left and right of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data. Sample size = 4.



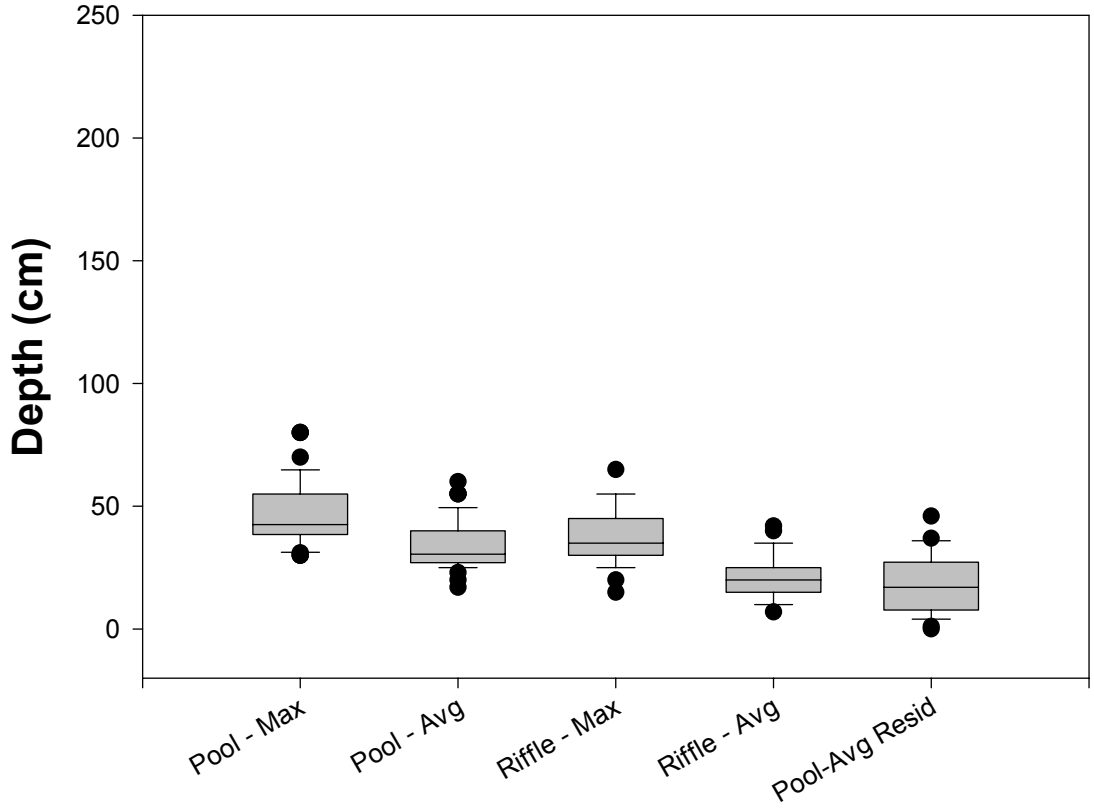
Rosgen's channel classification for each habitat unit in Mill Creek, summer 2001. X-axis indicates distance upstream from confluence w/Little Stony Creek.

Stream:	**Poplar Run**
District:	Lee
Quadrangle:	Wolf Gap
Survey Date:	06/26/01
Downstream Starting Point:	Forest boundary
Total Distance Surveyed (km):	1.3
Percent of Total Area Pools:	**34**
Number of Pools:	36
Number of Pools per km:	29
Total Pool Area (m^2):	1410 ± 274
Mean Pool Area (m^2):	39
Correction Factor:	1.18
Mean Maximum Depth (cm):	47
Mean Average Depth (cm):	34
Mean Residual Pool Depth (cm):	17
Percent of Total Area Riffles:	**66**
Number of Riffles:	28
Number of Riffles per km:	22
Total Riffle Area (m^2):	2769 ± 1533
Mean Riffle Area (m^2):	99
Correction Factor:	1.09
Mean Maximum Depth (cm):	38
Mean Average Depth (cm):	22
Number of LWD pieces per km:	**61**
LWD < 5 m, < 55 cm:	30
LWD < 5 m, > 55 cm:	0
LWD > 5 m, < 55 cm:	23
LWD > 5 m, > 55 cm:	8
Mean Channel Width (m):	**4**
Mean Riparian Width (m) (Total*):	**48**
Maximum Riparian Width (Total):	76
75th Percentile (Total)	64
25th Percentile (Total)	34
Minimum Riparian Width (Total):	17
Mean Riparian Width (m) (Left, Right):**	**22**
Maximum Riparian Width (Left, Right):	67
75th Percentile (Left, Right)	33
25th Percentile (Left, Right)	4
Minimum Riparian Width (Left, Right):	2
Percent of Pool Habitat Surveyed as Glides:	**6**
Rosgen's Channel Type Frequency (%):	
Type A:	0
Type B:	100
Type C:	0
Type D:	0
Type E:	0
Type F:	0
Type G:	0
Percent Pools with > 35% Embeddedness:	**36**
Average Channel Gradient (%):	**4**

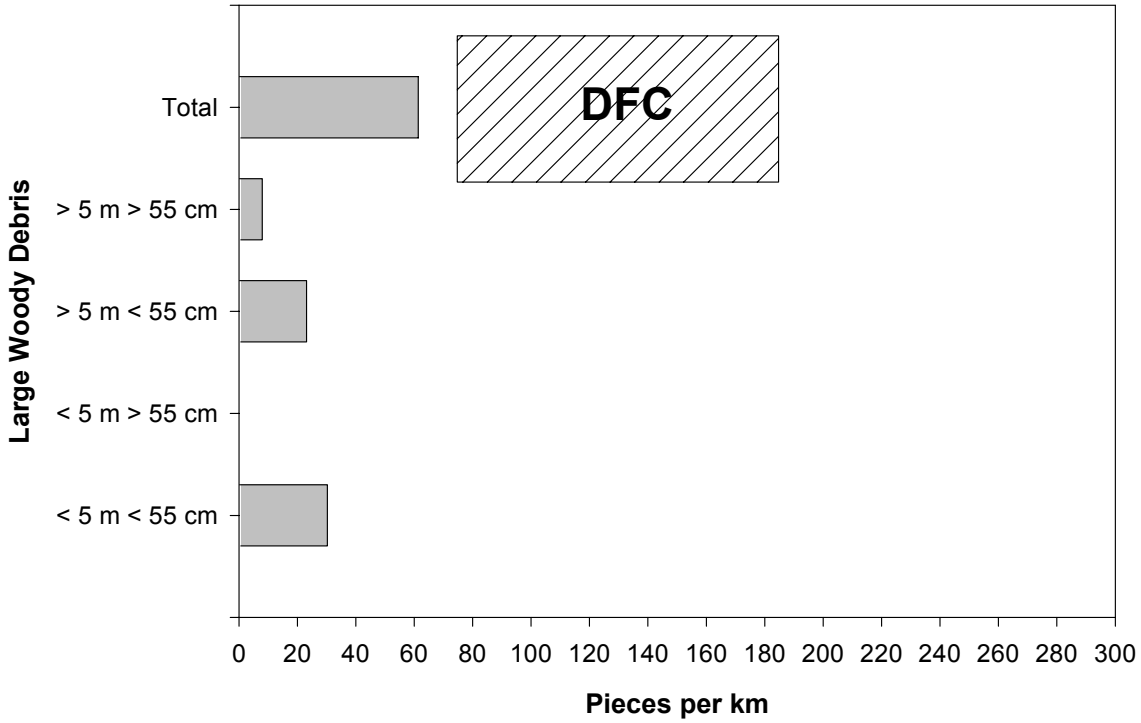
*Calculation sums left riparian + right riparian + stream channel
**Calculation pools left and right riparian measurements, does not sum them



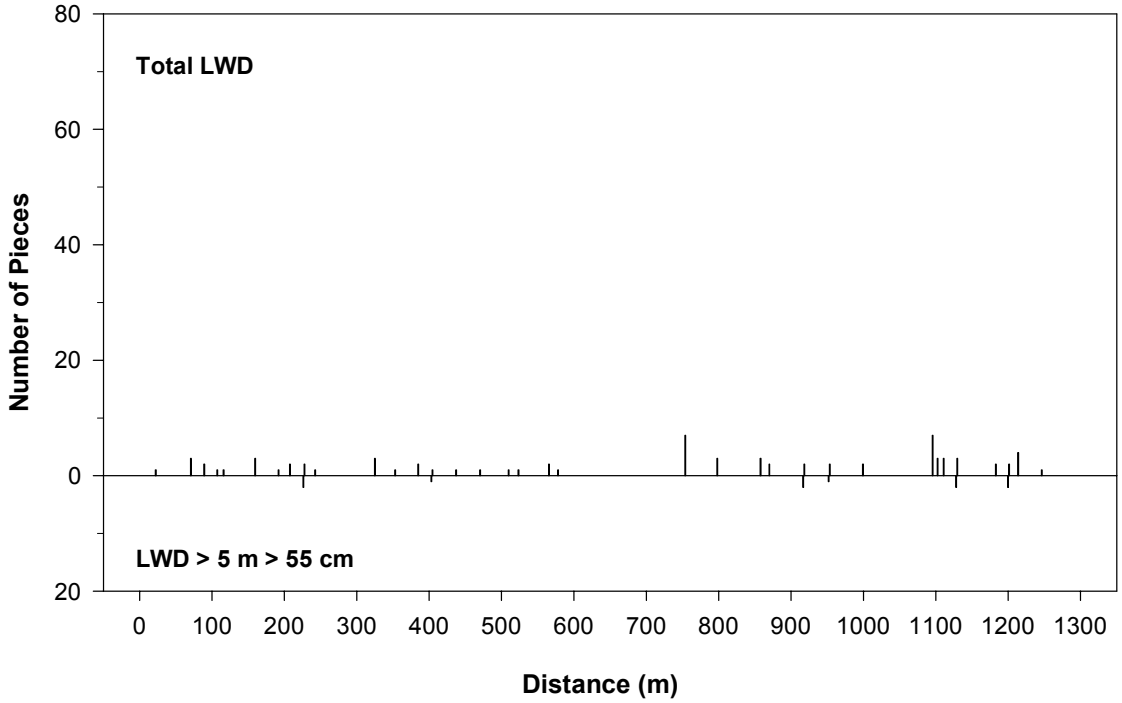
Estimated area of Poplar Run in pools and riffles as calculated using BVET techniques, summer 2001.



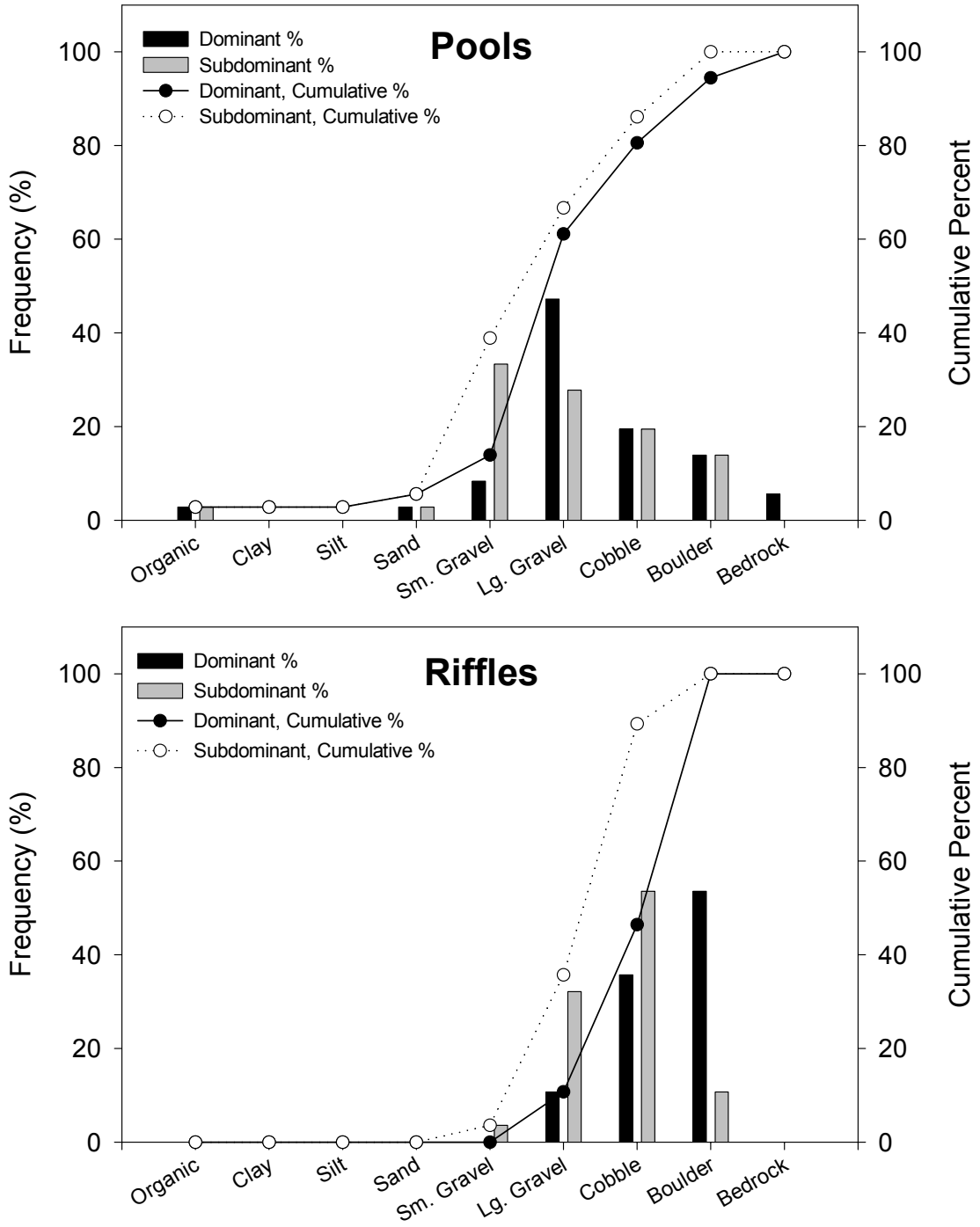
Maximum and average depths and residual pool depths for pools and riffles in Poplar Run, summer 2001. The top and bottom of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data.



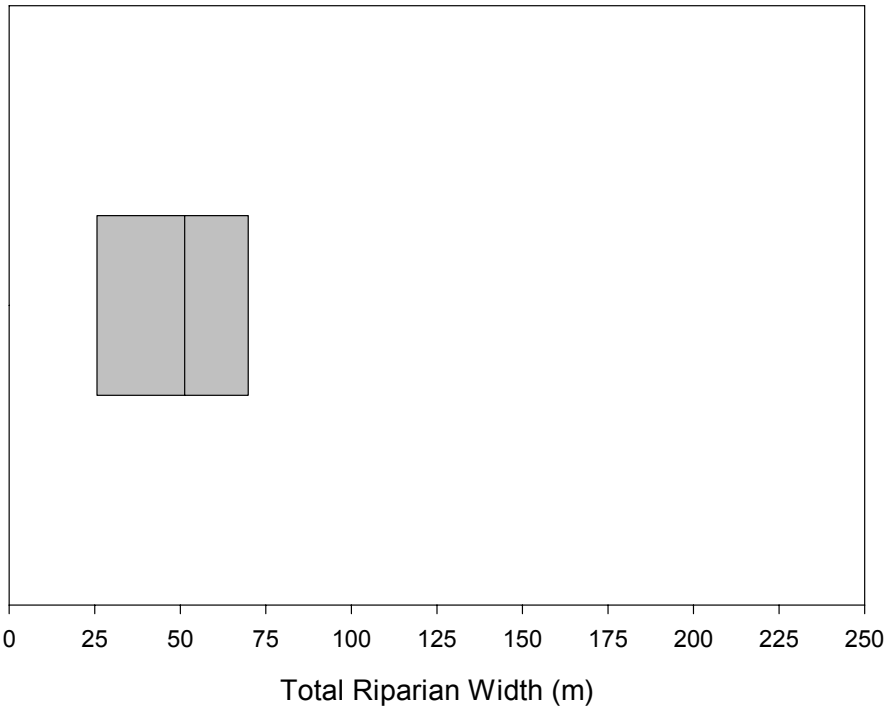
LWD per kilometer in Poplar Run, summer 2001. Y-axis labels are LWD size classes with the first number indicating length and the second number indicating diameter.



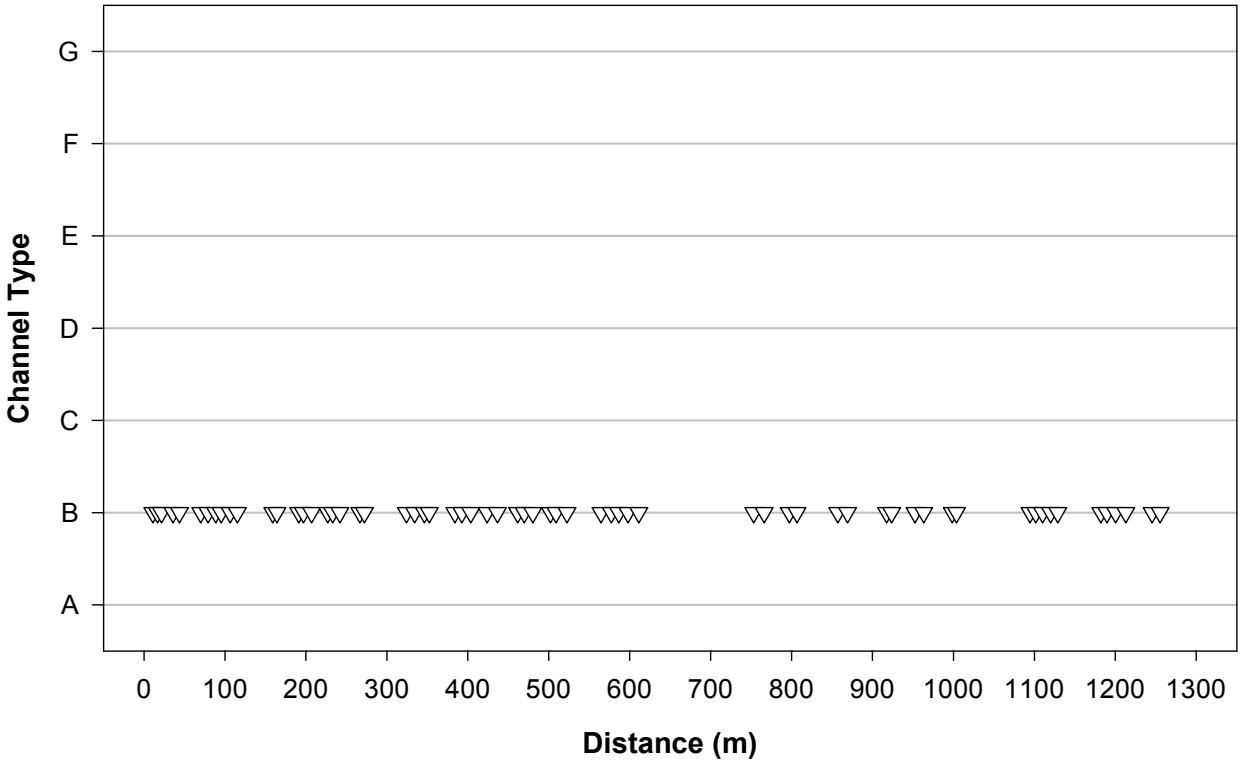
Distribution and abundance of LWD in each habitat unit of Poplar Run, summer 2001. Bars below the x-axis represent the amount of the total LWD that was >5 m in length, >55 cm in diameter. X-axis indicates distance upstream from Forest boundary.



Frequency (percent) and cumulative percent of dominant and subdominant substrate occurrence for pools and riffles in Poplar Run, summer 2001.



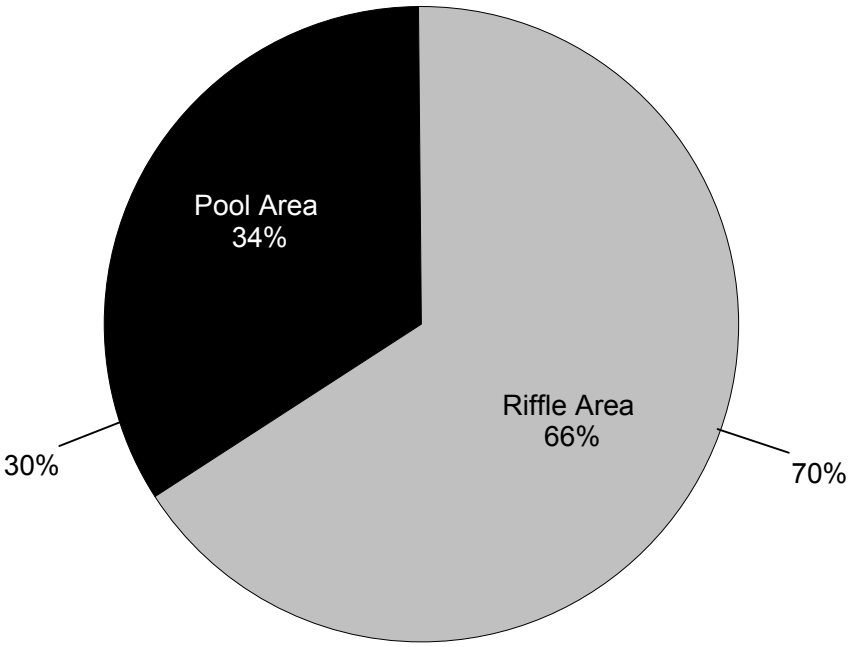
Total riparian widths (left riparian width+right riparian width+wetted channel width) for Poplar Run, summer 2001. The left and right of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data. Sample size = 3.



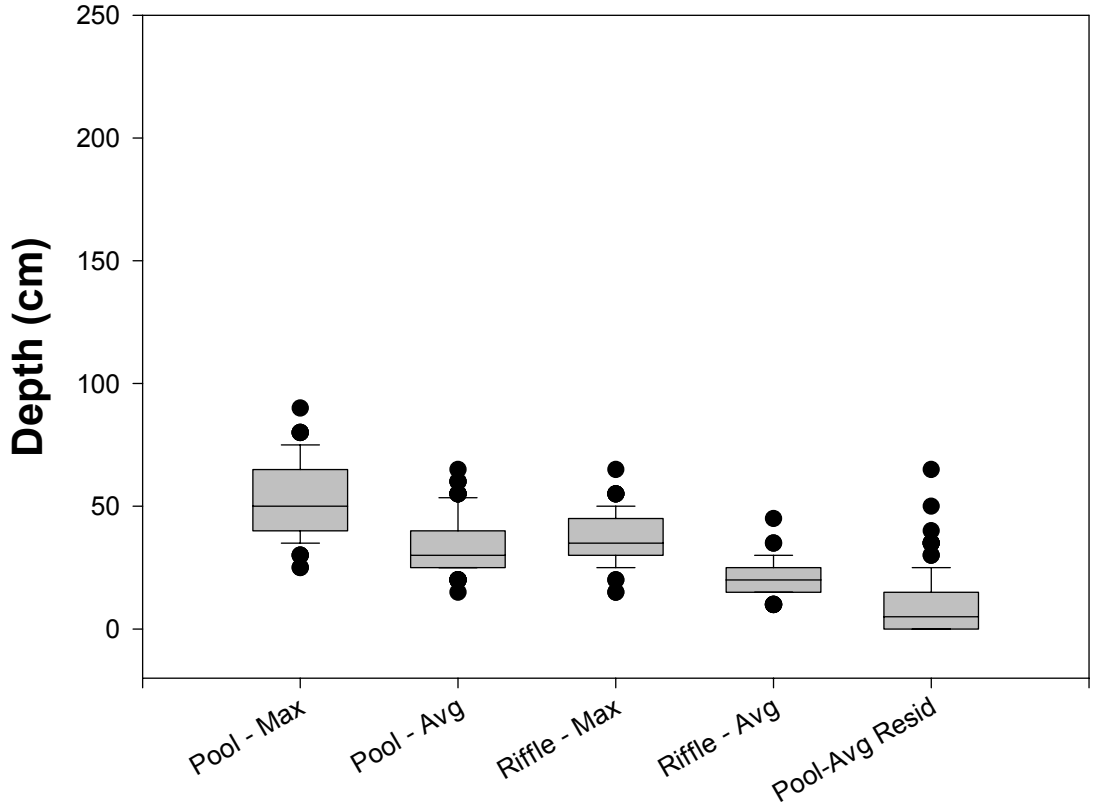
Rosgen's channel classification for each habitat unit in Poplar Run, summer 2001. X-axis indicates distance upstream from Forest boundary.

Stream:	**Cedar Creek**
District:	Lee
Quadrangle:	Woodstock
Survey Date:	06/25/01
Downstream Starting Point:	Forest boundary
Total Distance Surveyed (km):	4.0
Percent of Total Area Pools:	**34**
Number of Pools:	99
Number of Pools per km:	25
Total Pool Area (m^2):	6132 ± 612
Mean Pool Area (m^2):	62
Correction Factor:	1.07
Mean Maximum Depth (cm):	52
Mean Average Depth (cm):	35
Mean Residual Pool Depth (cm):	11
Percent of Total Area Riffles:	**66**
Number of Riffles:	98
Number of Riffles per km:	24
Total Riffle Area (m^2):	11722 ± 728
Mean Riffle Area (m^2):	120
Correction Factor:	1.06
Mean Maximum Depth (cm):	37
Mean Average Depth (cm):	21
Number of LWD pieces per km:	**185**
LWD < 5 m, < 55 cm:	93
LWD < 5 m, > 55 cm:	71
LWD > 5 m, < 55 cm:	5
LWD > 5 m, > 55 cm:	15
Mean Channel Width (m):	**7**
Mean Riparian Width (m) (Total*):	**57**
Maximum Riparian Width (Total):	148
75th Percentile (Total)	71
25th Percentile (Total)	28
Minimum Riparian Width (Total):	15
Mean Riparian Width (m) (Left, Right):**	**25**
Maximum Riparian Width (Left, Right):	88
75th Percentile (Left, Right)	36
25th Percentile (Left, Right)	7
Minimum Riparian Width (Left, Right):	1
Percent of Pool Habitat Surveyed as Glides:	**5**
Rosgen's Channel Type Frequency (%):	
Type A:	0
Type B:	27
Type C:	73
Type D:	0
Type E:	0
Type F:	0
Type G:	0
Percent Pools with > 35% Embeddedness:	**81**
Average Channel Gradient (%):	**5**

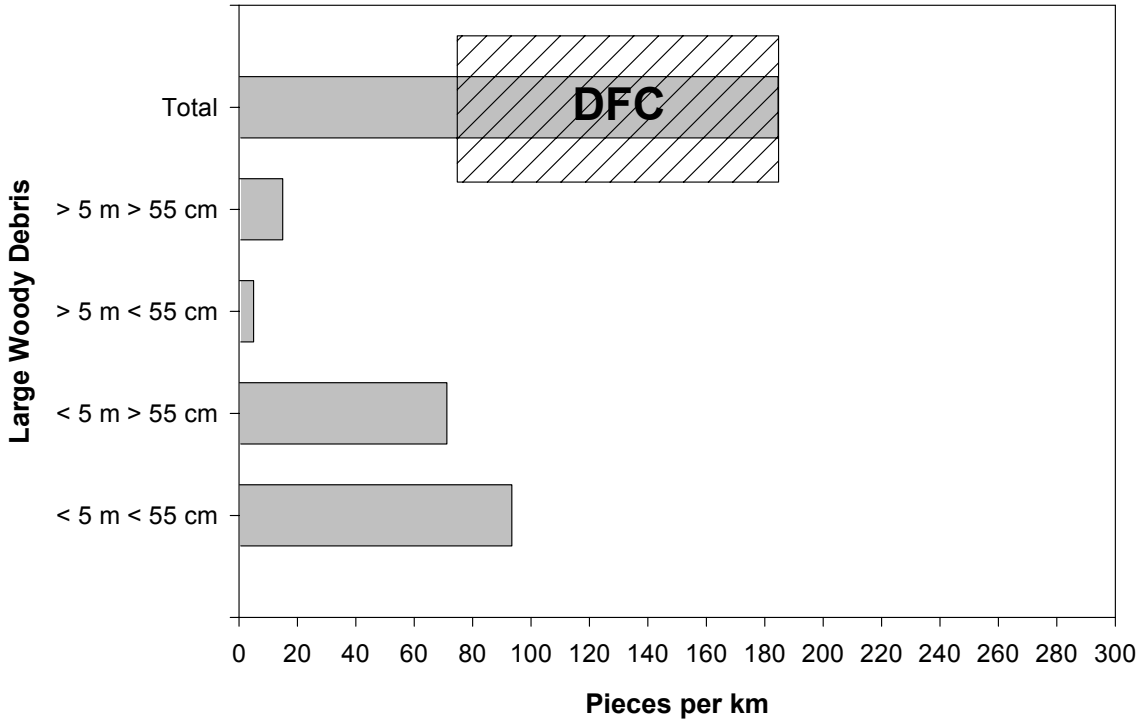
*Calculation sums left riparian + right riparian + stream channel
**Calculation pools left and right riparian measurements, does not sum them



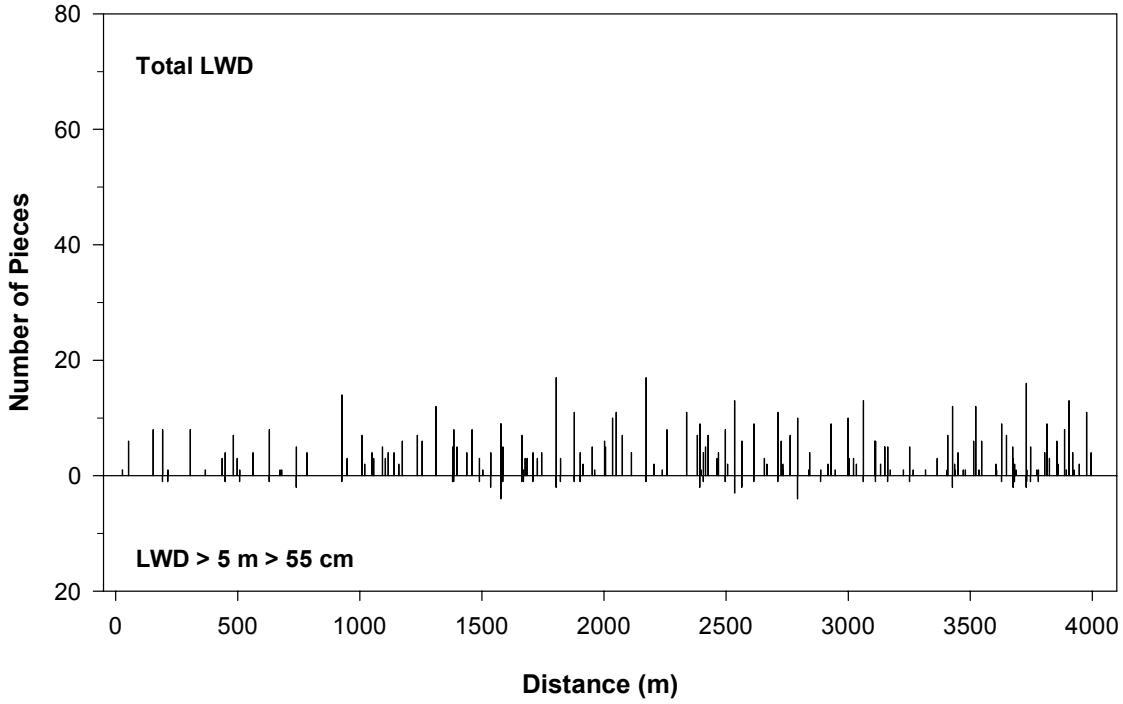
Estimated area of Cedar Creek in pools and riffles as calculated using BVET techniques, summer 2001.



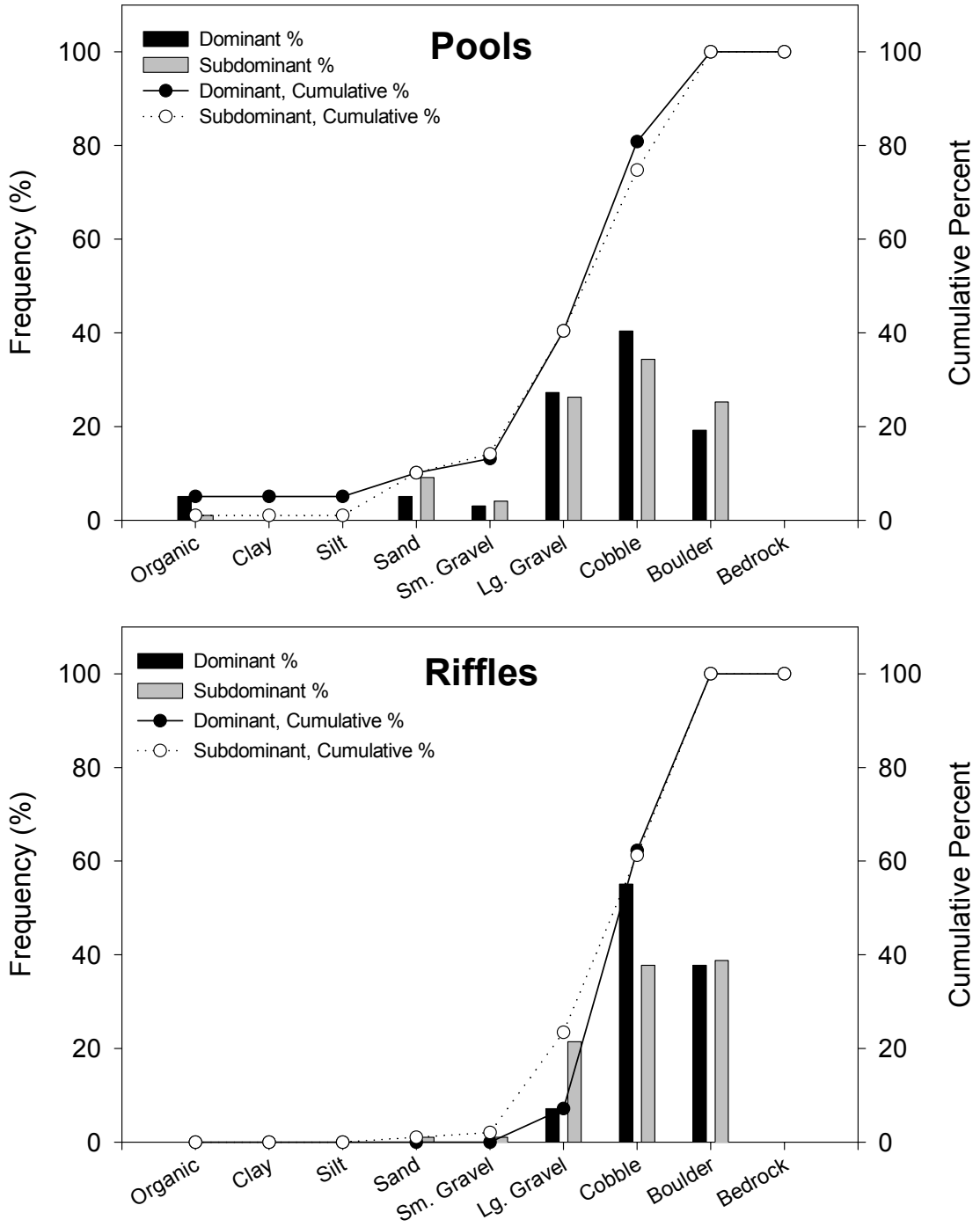
Maximum and average depths and residual pool depths for pools and riffles in Cedar Creek, summer 2001. The top and bottom of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data.



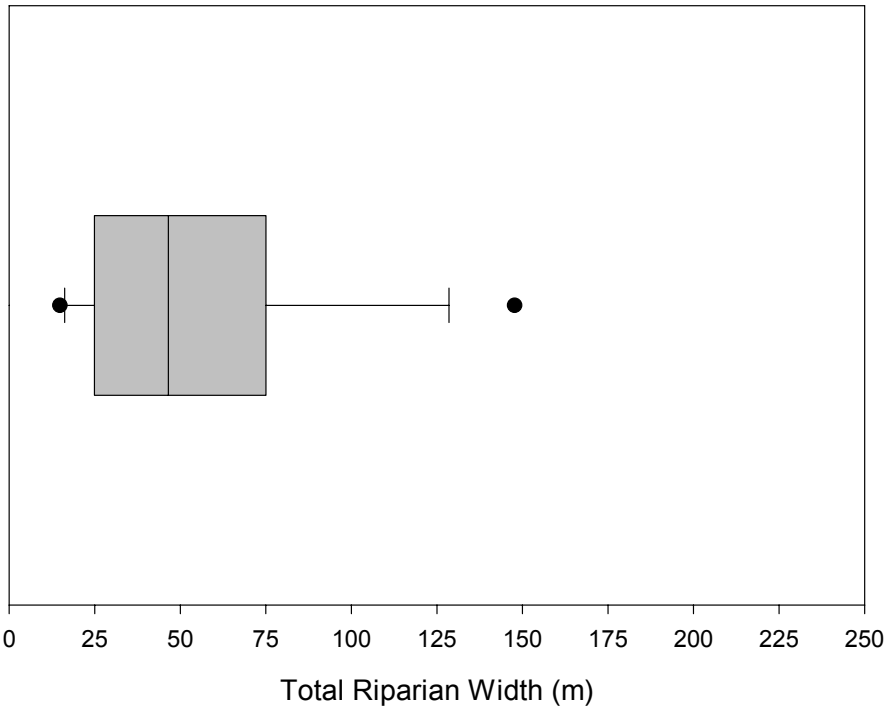
LWD per kilometer in Cedar Creek, summer 2001. Y-axis labels are LWD size classes with the first number indicating length and the second number indicating diameter.



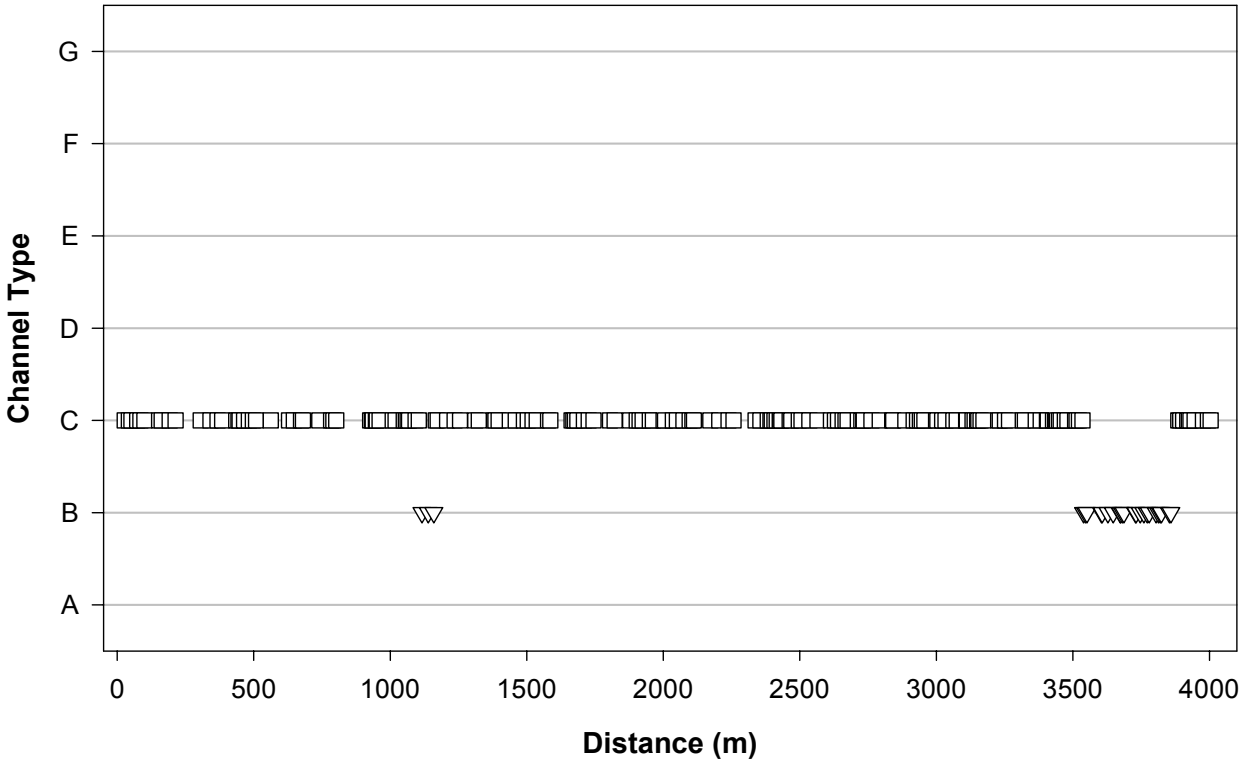
Distribution and abundance of LWD in each habitat unit of Cedar Creek, summer 2001. Bars below the x-axis represent the amount of the total LWD that was >5 m in length, >55 cm in diameter. X-axis indicates distance upstream from Forest boundary.



Frequency (percent) and cumulative percent of dominant and subdominant substrate occurrence for pools and riffles in Cedar Creek, summer 2001.



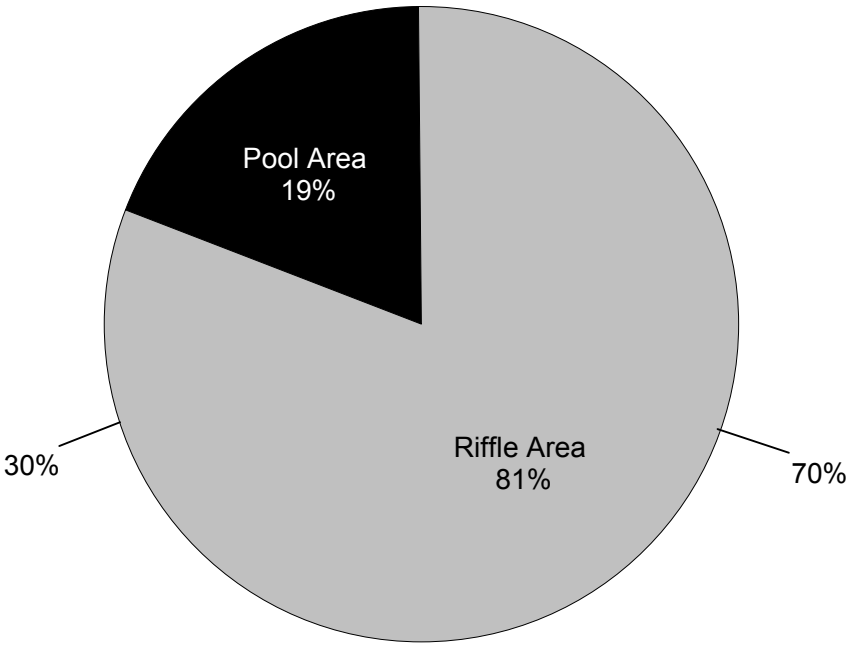
Total riparian widths (left riparian width+right riparian width+wetted channel width) for Cedar Creek, summer 2001. The left and right of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data. Sample size = 8.



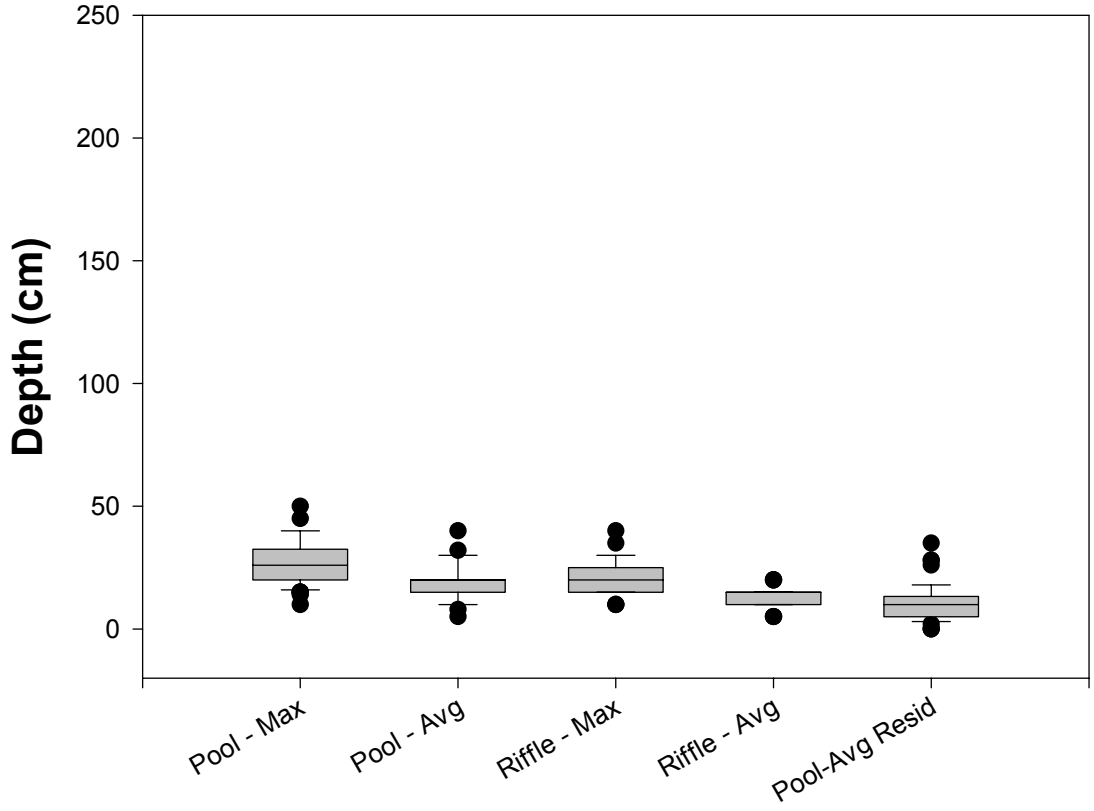
Rosgen's channel classification for each habitat unit in Cedar Creek, summer 2001. X-axis indicates distance upstream from Forest boundary.

Stream:	**Cove Run**
District:	Lee
Quadrangle:	Woodstock
Survey Date:	07/31/01
Downstream Starting Point:	Forest boundary
Total Distance Surveyed (km):	2.9
Percent of Total Area Pools:	**19**
Number of Pools:	61
Number of Pools per km:	21
Total Pool Area (m^2):	1255 ± 114
Mean Pool Area (m^2):	21
Correction Factor:	1.05
Mean Maximum Depth (cm):	28
Mean Average Depth (cm):	19
Mean Residual Pool Depth (cm):	11
Percent of Total Area Riffles:	**81**
Number of Riffles:	53
Number of Riffles per km:	18
Total Riffle Area (m^2):	5393 ± 1406
Mean Riffle Area (m^2):	102
Correction Factor:	1.10
Mean Maximum Depth (cm):	21
Mean Average Depth (cm):	13
Number of LWD pieces per km:	**259**
LWD < 5 m, < 55 cm:	134
LWD < 5 m, > 55 cm:	6
LWD > 5 m, < 55 cm:	96
LWD > 5 m, > 55 cm:	22
Mean Channel Width (m):	**4**
Mean Riparian Width (m) (Total*):	**36**
Maximum Riparian Width (Total):	68
75th Percentile (Total)	38
25th Percentile (Total)	26
Minimum Riparian Width (Total):	21
Mean Riparian Width (m) (Left, Right):**	**16**
Maximum Riparian Width (Left, Right):	50
75th Percentile (Left, Right)	19
25th Percentile (Left, Right)	10
Minimum Riparian Width (Left, Right):	2
Percent of Pool Habitat Surveyed as Glides:	**44**
Rosgen's Channel Type Frequency (%):	
Type A:	4
Type B:	72
Type C:	25
Type D:	0
Type E:	0
Type F:	0
Type G:	0
Percent Pools with > 35% Embeddedness:	**57**
Average Channel Gradient (%):	**5**

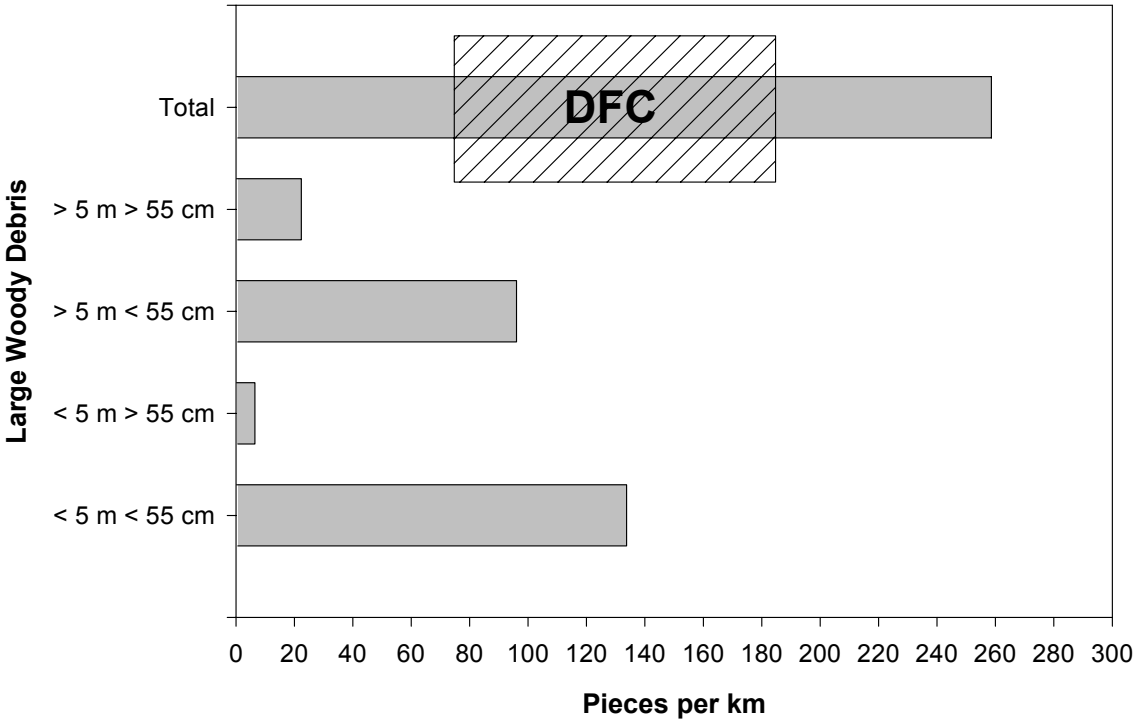
*Calculation sums left riparian + right riparian + stream channel
**Calculation pools left and right riparian measurements, does not sum them



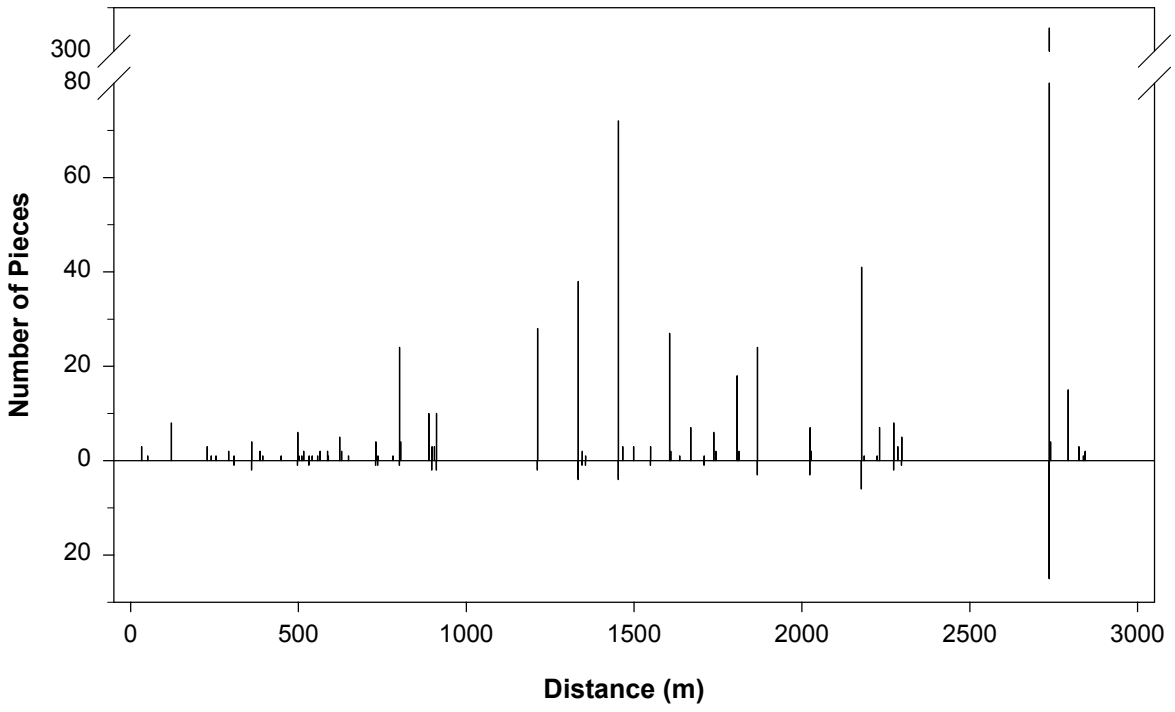
Estimated area of Cove Run in pools and riffles as calculated using BVET techniques, summer 2001.



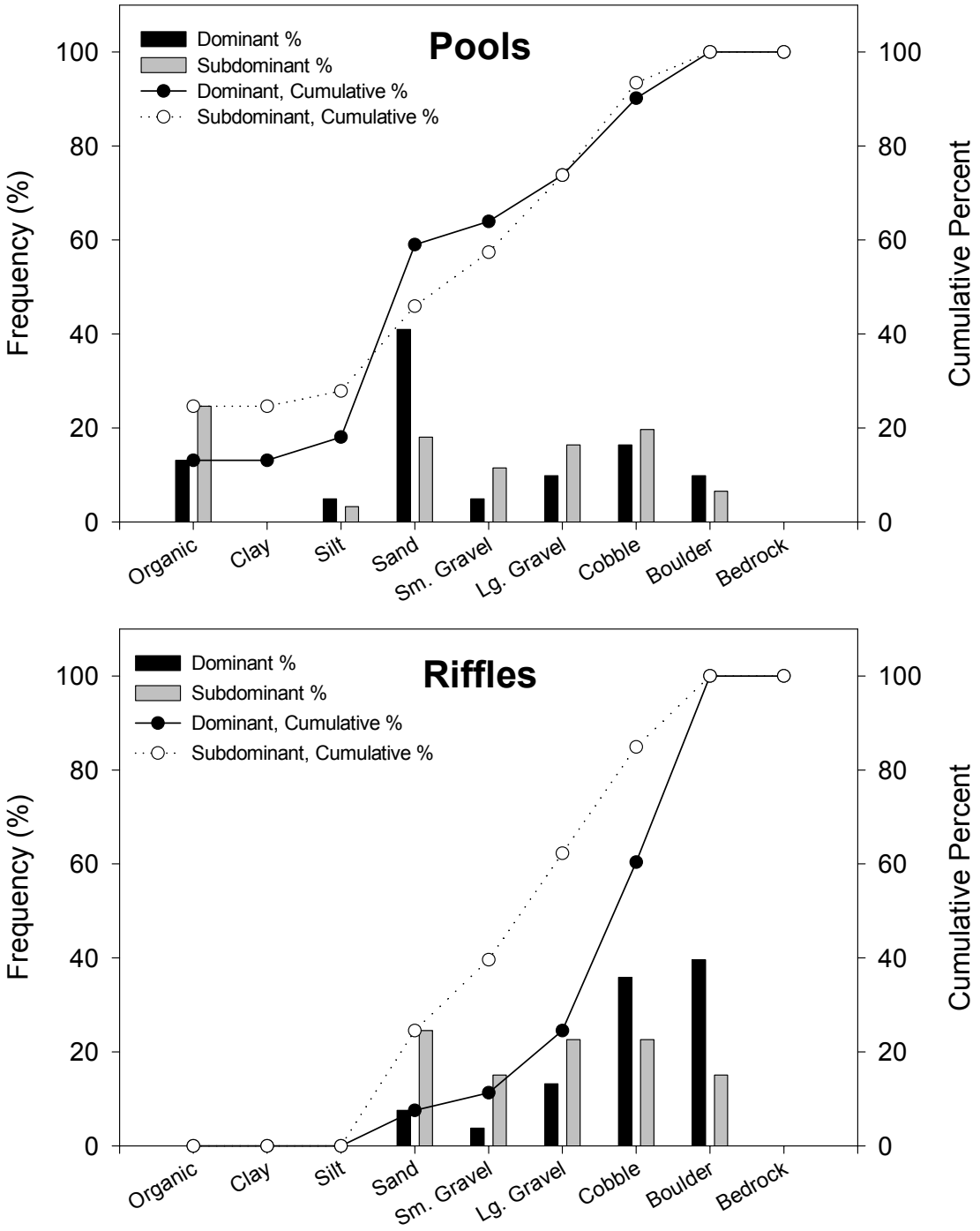
Maximum and average depths and residual pool depths for pools and riffles in Cove Run, summer 2001. The top and bottom of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data.



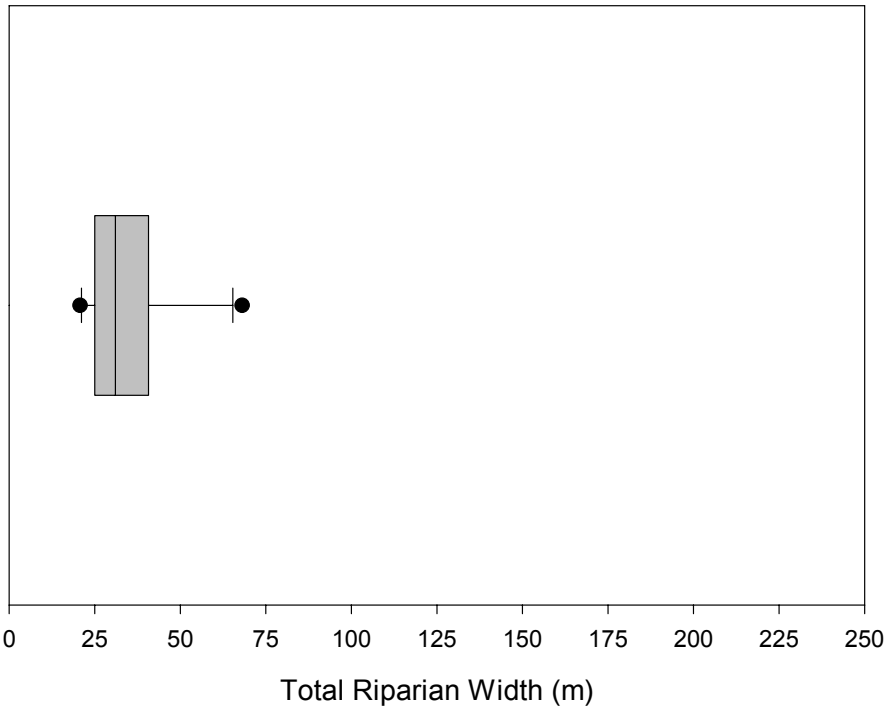
LWD per kilometer in Cove Run, summer 2001. Y-axis labels are LWD size classes with the first number indicating length and the second number indicating diameter.



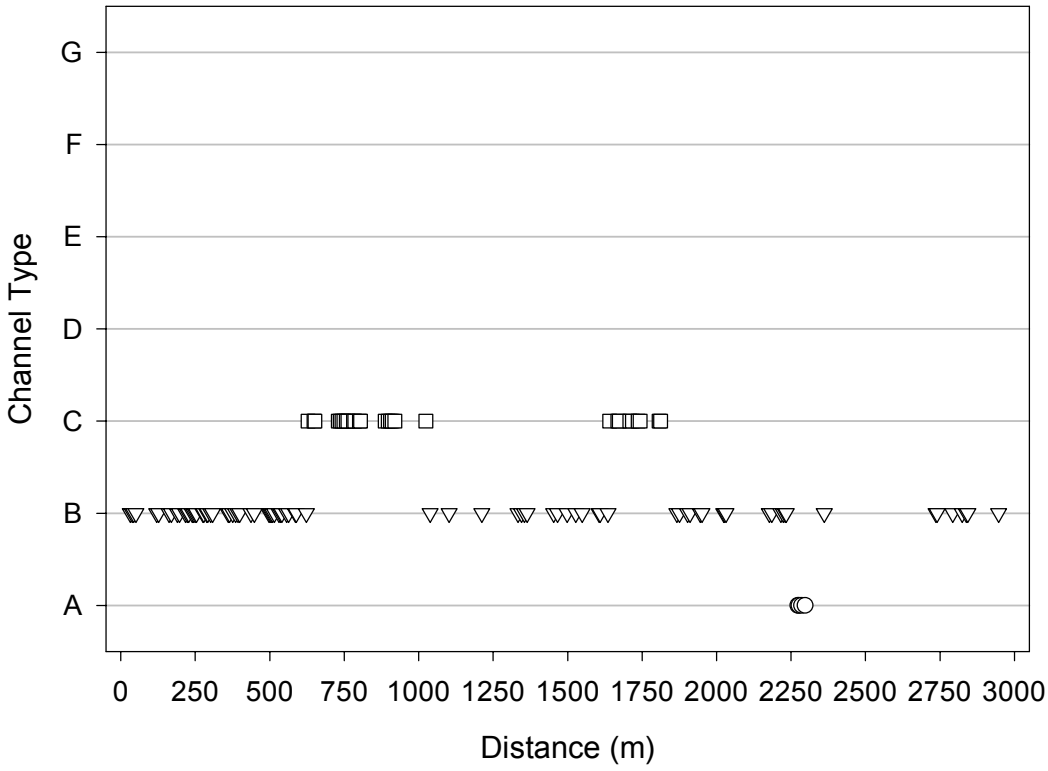
Distribution and abundance of LWD in each habitat unit of Cove Run, summer 2001. Bars below the x-axis represent the amount of the total LWD that was >5 m in length, >55 cm in diameter. X-axis indicates distance upstream from Forest boundary.



Frequency (percent) and cumulative percent of dominant and subdominant substrate occurrence for pools and riffles in Cove Run, summer 2001.



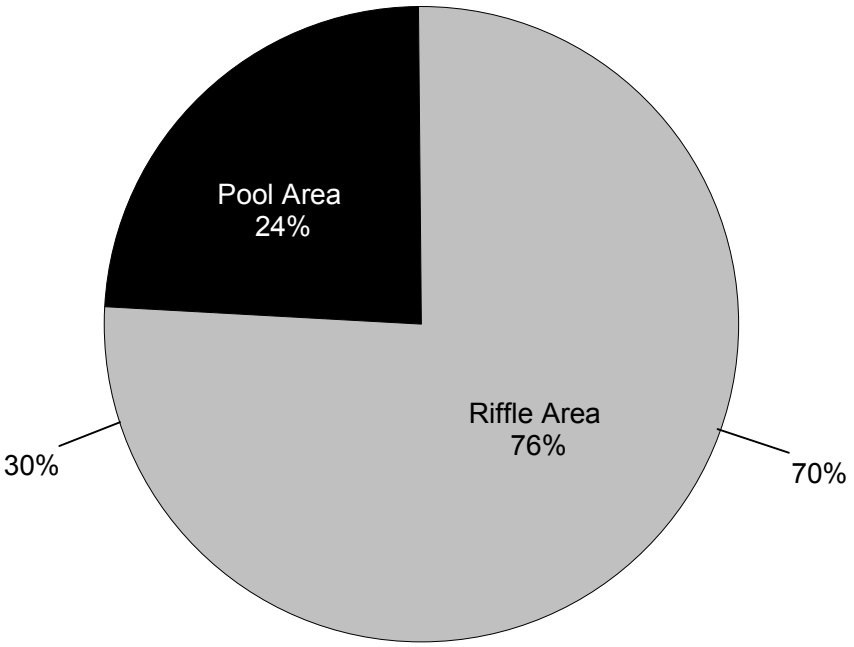
Total riparian widths (left riparian width+right riparian width+wetted channel width) for Cove Run, summer 2001. The left and right of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data. Sample size = 6.



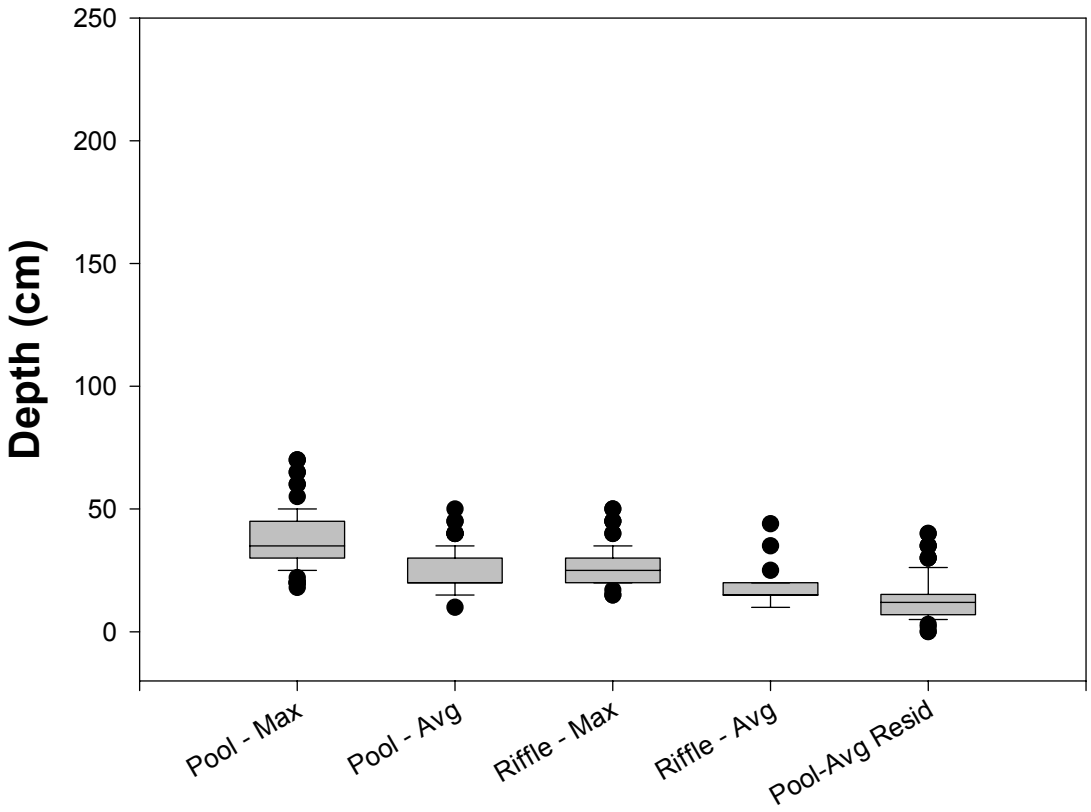
Rosgen's channel classification for each habitat unit in Cove Run, summer 2001. X-axis indicates distance upstream from Forest boundary.

Stream:	**Narrow Passage**
District:	Lee
Quadrangle:	Woodstock
Survey Date:	08/02/01
Downstream Starting Point:	Forest boundary
Total Distance Surveyed (km):	2.8
Percent of Total Area Pools:	**24**
Number of Pools:	97
Number of Pools per km:	34
Total Pool Area (m^2):	2065 ± 241
Mean Pool Area (m^2):	21
Correction Factor:	0.90
Mean Maximum Depth (cm):	37
Mean Average Depth (cm):	24
Mean Residual Pool Depth (cm):	14
Percent of Total Area Riffles:	**76**
Number of Riffles:	83
Number of Riffles per km:	29
Total Riffle Area (m^2):	6610 ± 394
Mean Riffle Area (m^2):	80
Correction Factor:	1.01
Mean Maximum Depth (cm):	27
Mean Average Depth (cm):	16
Number of LWD pieces per km:	**148**
LWD < 5 m, < 55 cm:	71
LWD < 5 m, > 55 cm:	1
LWD > 5 m, < 55 cm:	63
LWD > 5 m, > 55 cm:	12
Mean Channel Width (m):	**5**
Mean Riparian Width (m) (Total*):	**23**
Maximum Riparian Width (Total):	63
75th Percentile (Total)	22
25th Percentile (Total)	16
Minimum Riparian Width (Total):	11
Mean Riparian Width (m) (Left, Right):**	**9**
Maximum Riparian Width (Left, Right):	37
75th Percentile (Left, Right)	12
25th Percentile (Left, Right)	3
Minimum Riparian Width (Left, Right):	0
Percent of Pool Habitat Surveyed as Glides:	**8**
Rosgen's Channel Type Frequency (%):	
Type A:	3
Type B:	59
Type C:	38
Type D:	0
Type E:	0
Type F:	0
Type G:	0
Percent Pools with > 35% Embeddedness:	**67**
Average Channel Gradient (%):	**5**

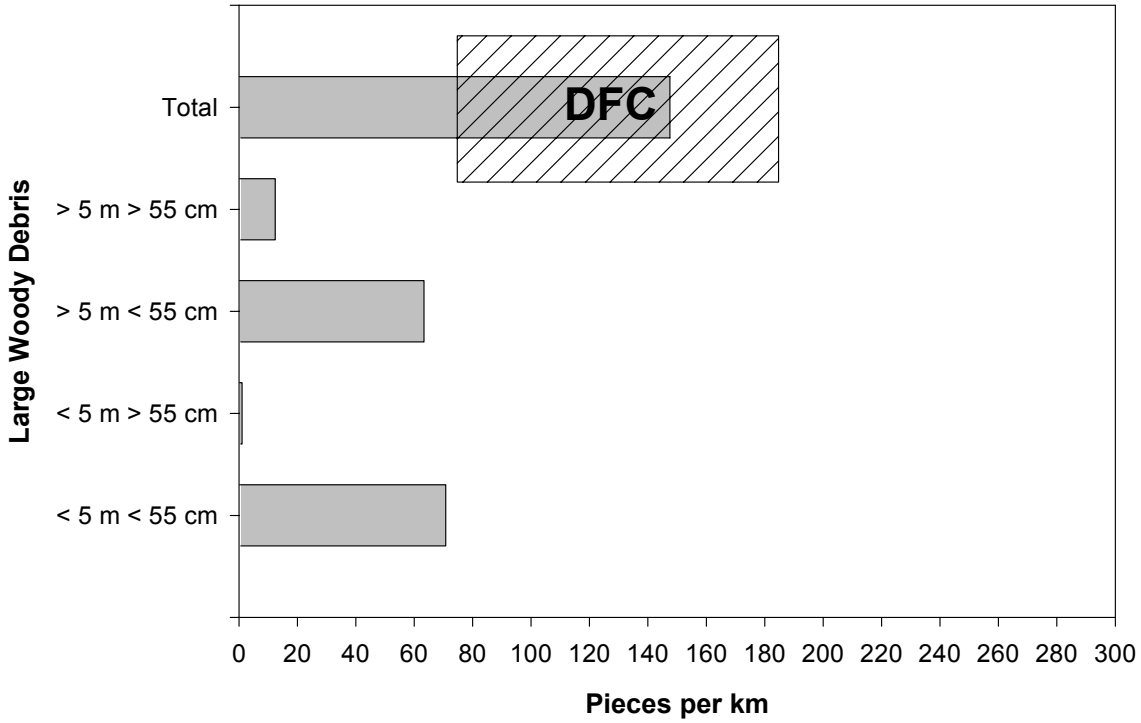
*Calculation sums left riparian + right riparian + stream channel
**Calculation pools left and right riparian measurements, does not sum them



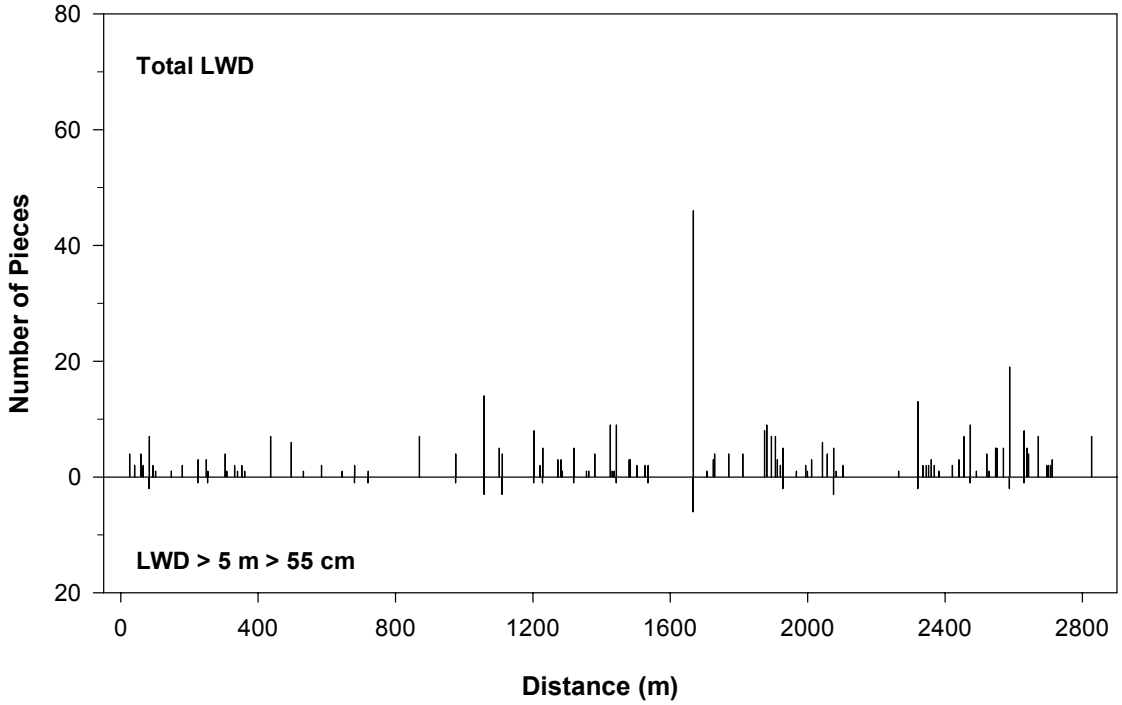
Estimated area of Narrow Passage in pools and riffles as calculated using BVET techniques, summer 2001.



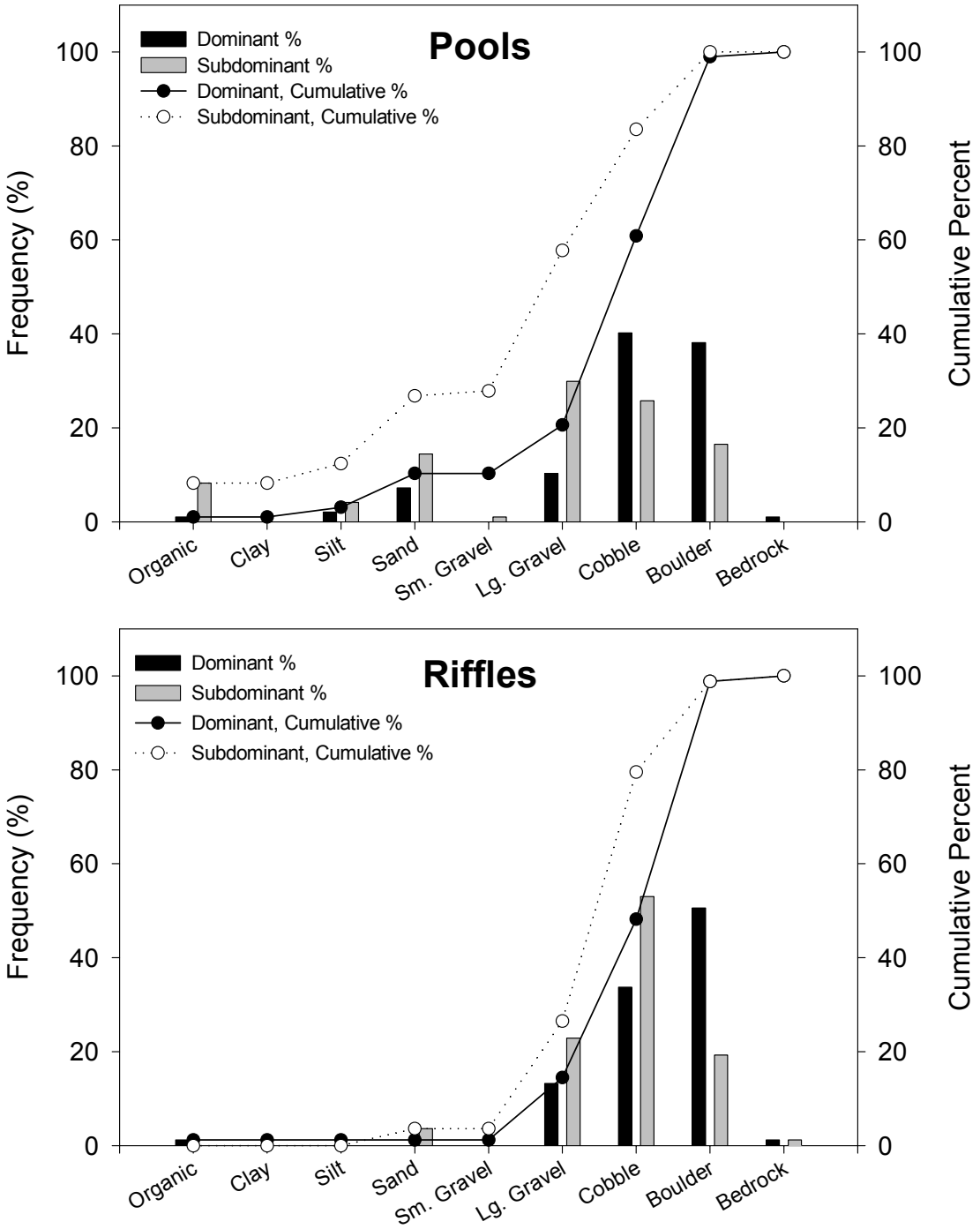
Maximum and average depths and residual pool depths for pools and riffles in Narrow Passage, summer 2001. The top and bottom of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data.



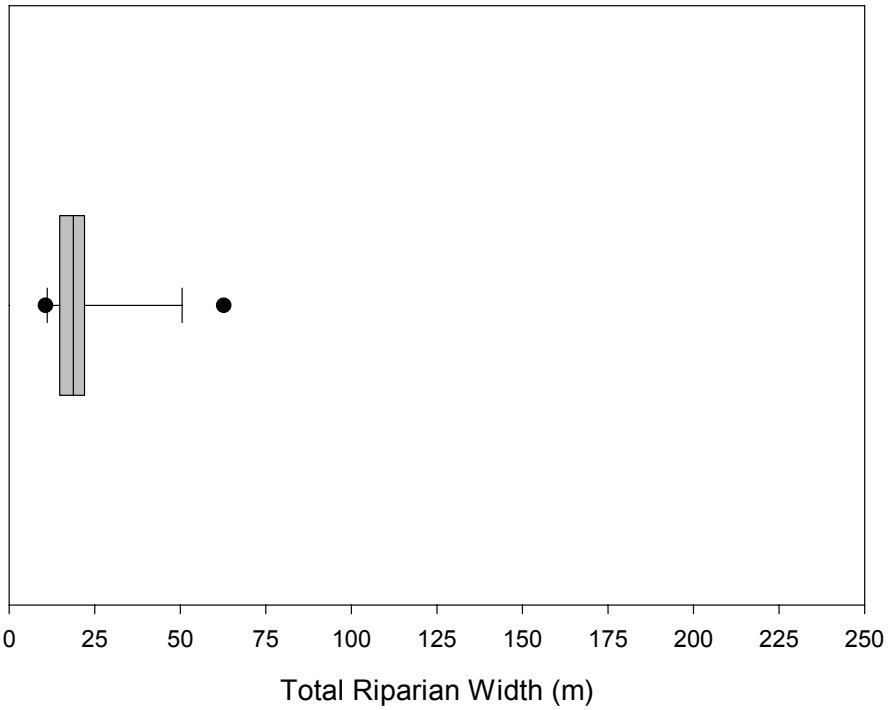
LWD per kilometer in Narrow Passage, summer 2001. Y-axis labels are LWD size classes with the first number indicating length and the second number indicating diameter.



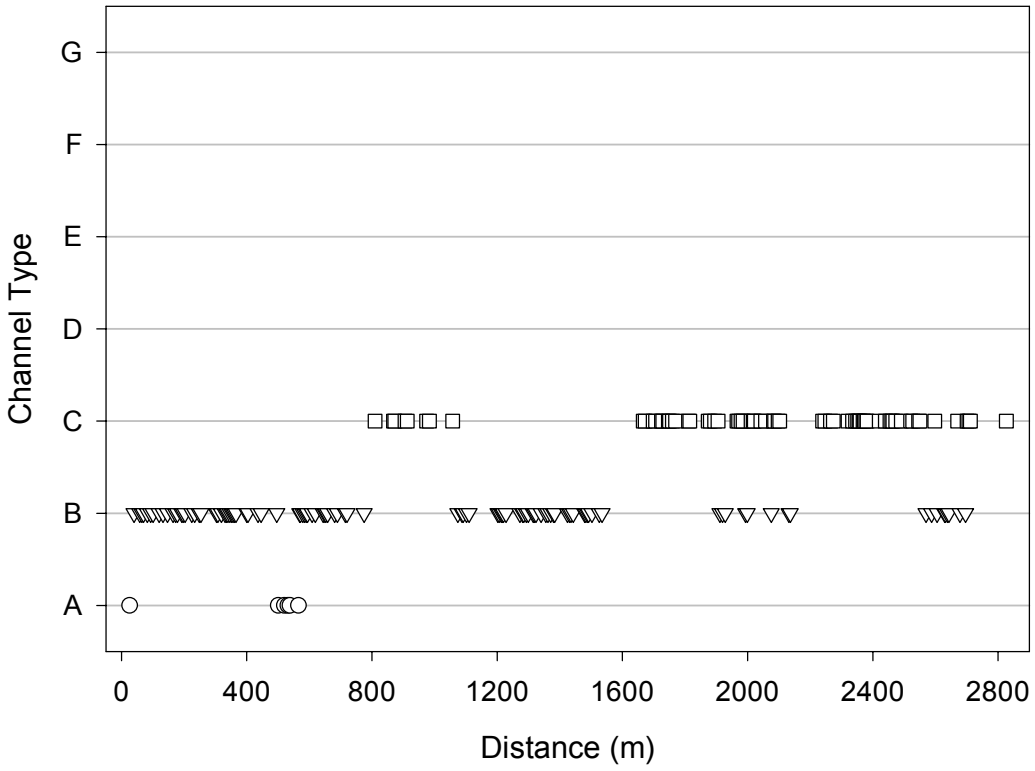
Distribution and abundance of LWD in each habitat unit of Narrow Passage, summer 2001. Bars below the x-axis represent the amount of the total LWD that was >5 m in length, >55 cm in diameter. X-axis indicates distance upstream from Forest boundary.



Frequency (percent) and cumulative percent of dominant and subdominant substrate occurrence for pools and riffles in Narrow Passage, summer 2001.



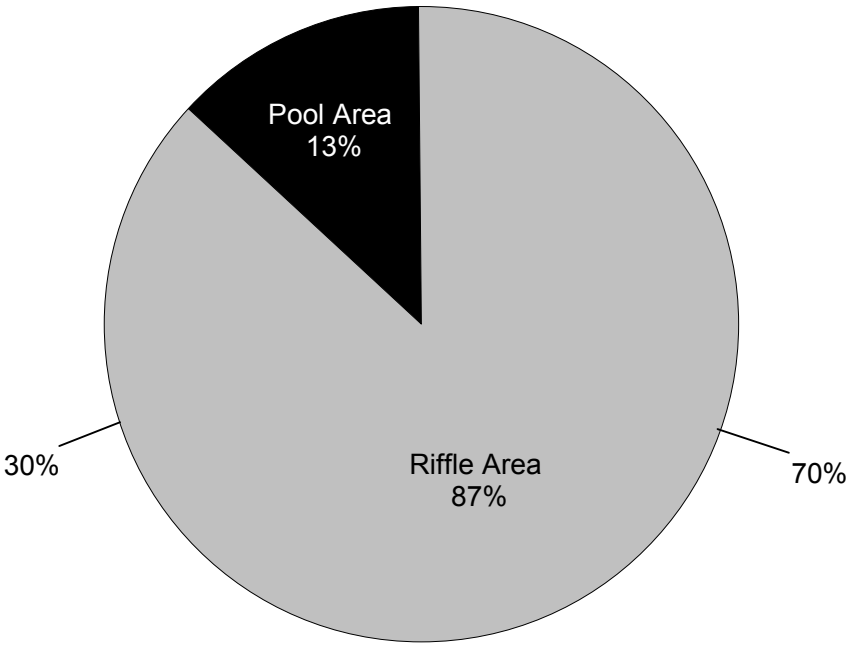
Total riparian widths (left riparian width+right riparian width+wetted channel width) for Narrow Passage, summer 2001. The left and right of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data. Sample size = 8.



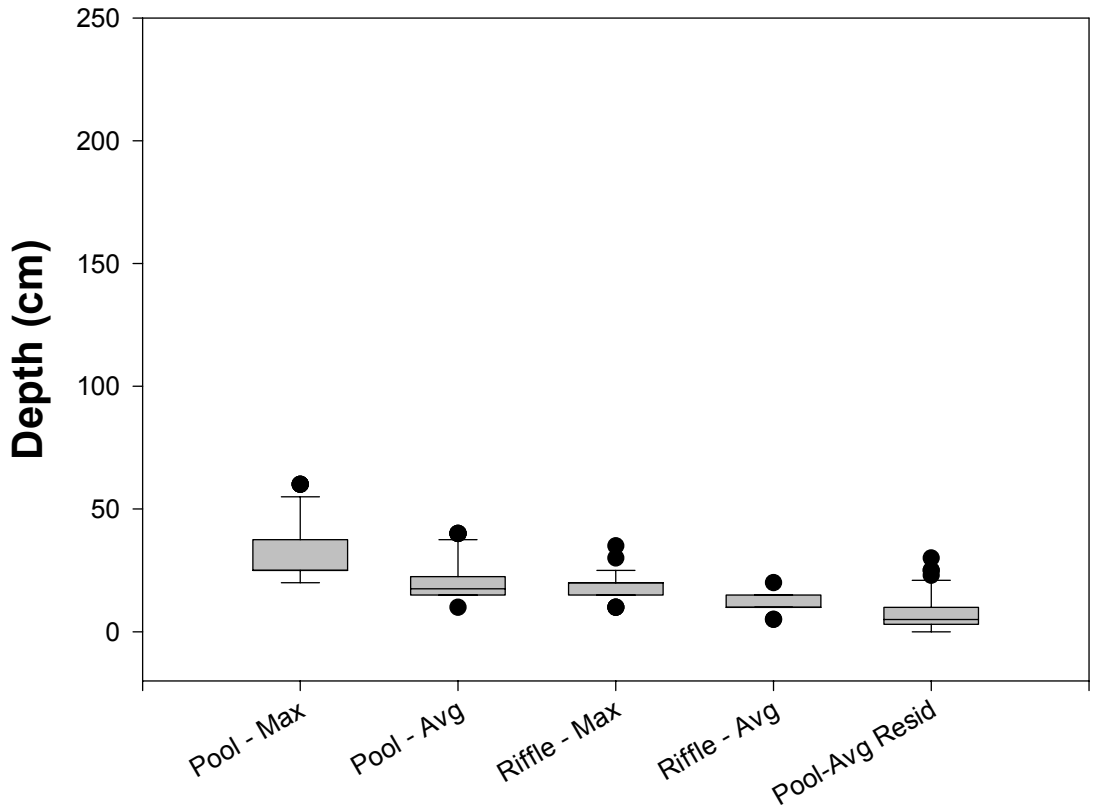
Rosgen's channel classification for each habitat unit in Narrow Passage, summer 2001. X-axis indicates distance upstream from Forest boundary.

Stream:	**Sulphur Springs Gap**
District:	Lee
Quadrangle:	Woodstock
Survey Date:	08/06/01
Downstream Starting Point:	Forest boundary
Total Distance Surveyed (km):	1.4
Percent of Total Area Pools:	**13**
Number of Pools:	40
Number of Pools per km:	28
Total Pool Area (m^2):	451 ± 56
Mean Pool Area (m^2):	11
Correction Factor:	0.97
Mean Maximum Depth (cm):	33
Mean Average Depth (cm):	21
Mean Residual Pool Depth (cm):	8
Percent of Total Area Riffles:	**87**
Number of Riffles:	41
Number of Riffles per km:	29
Total Riffle Area (m^2):	2948 ± 451
Mean Riffle Area (m^2):	72
Correction Factor:	1.09
Mean Maximum Depth (cm):	19
Mean Average Depth (cm):	12
Number of LWD pieces per km:	**46**
LWD < 5 m, < 55 cm:	37
LWD < 5 m, > 55 cm:	2
LWD > 5 m, < 55 cm:	6
LWD > 5 m, > 55 cm:	0
Mean Channel Width (m):	**4**
Mean Riparian Width (m) (Total*):	**10**
Maximum Riparian Width (Total):	13
75th Percentile (Total)	11
25th Percentile (Total)	8
Minimum Riparian Width (Total):	7
Mean Riparian Width (m) (Left, Right):**	**3**
Maximum Riparian Width (Left, Right):	8
75th Percentile (Left, Right)	3
25th Percentile (Left, Right)	2
Minimum Riparian Width (Left, Right):	1
Percent of Pool Habitat Surveyed as Glides:	**5**
Rosgen's Channel Type Frequency (%):	
Type A:	94
Type B:	6
Type C:	0
Type D:	0
Type E:	0
Type F:	0
Type G:	0
Percent Pools with > 35% Embeddedness:	**65**
Average Channel Gradient (%):	**6**

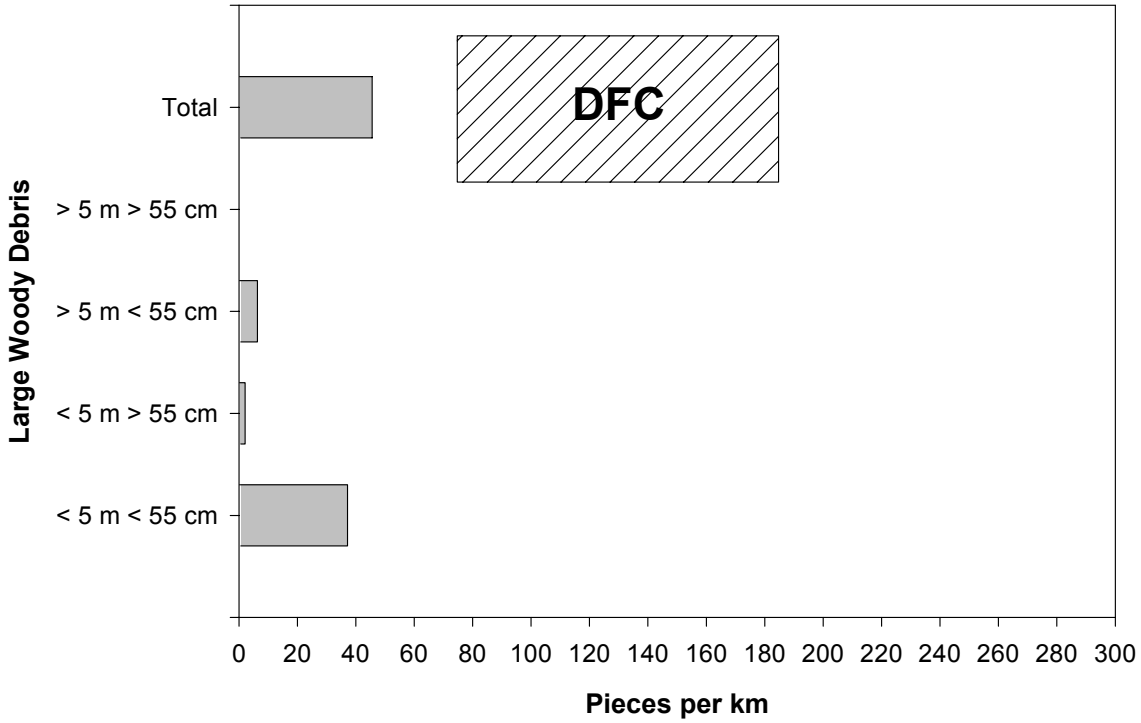
*Calculation sums left riparian + right riparian + stream channel
**Calculation pools left and right riparian measurements, does not sum them



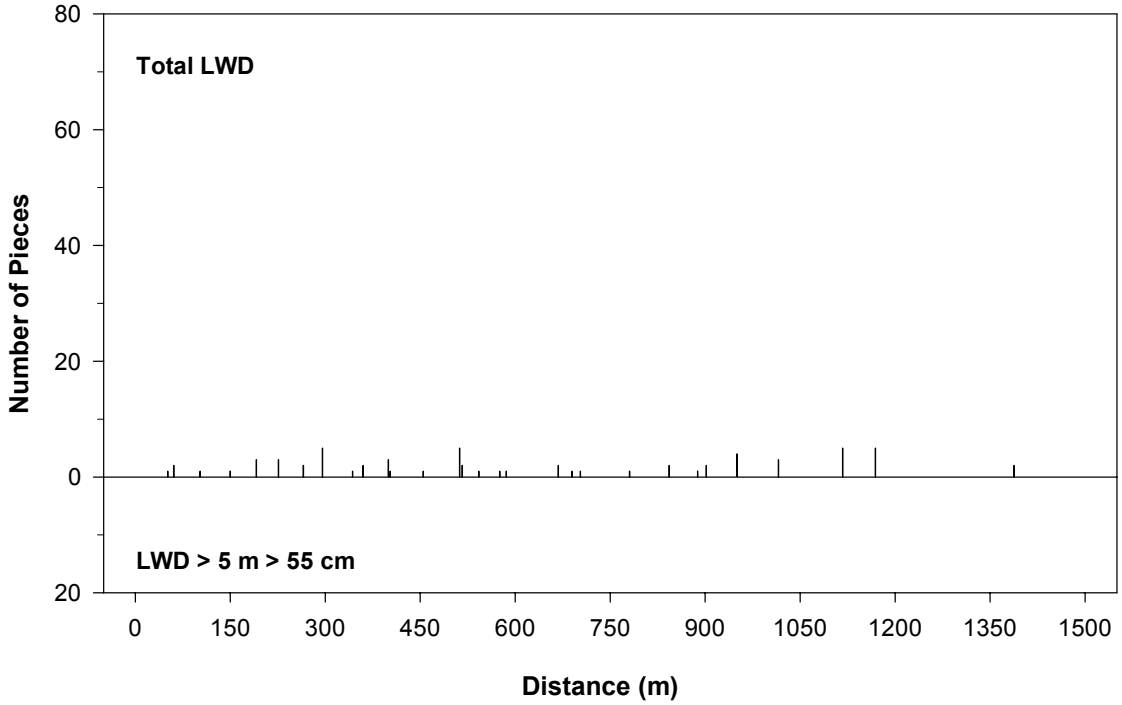
Estimated area of Sulphur Springs Gap in pools and riffles as calculated using BVET techniques, summer 2001.



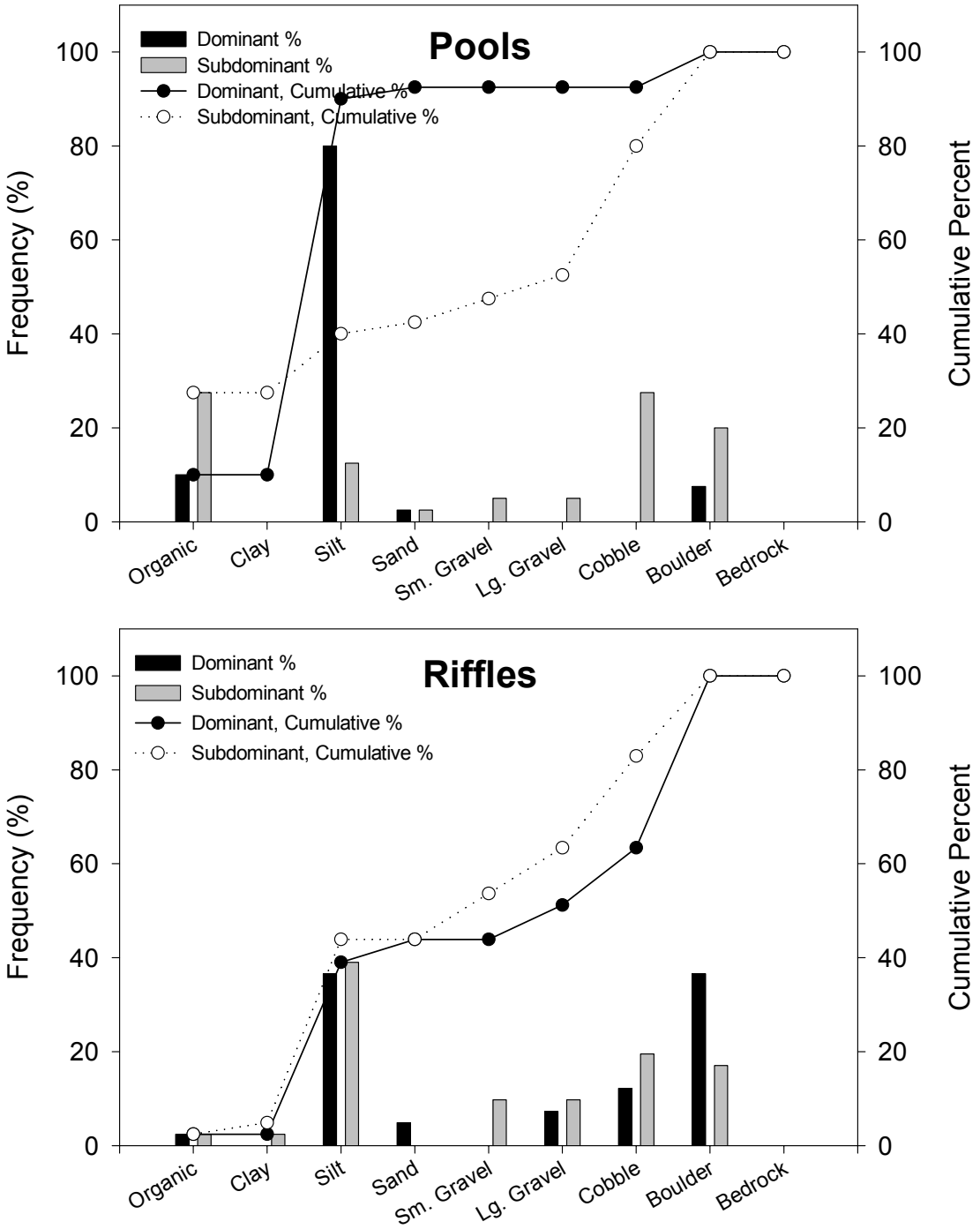
Maximum and average depths and residual pool depths for pools and riffles in Sulphur Springs Gap, summer 2001. The top and bottom of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data.



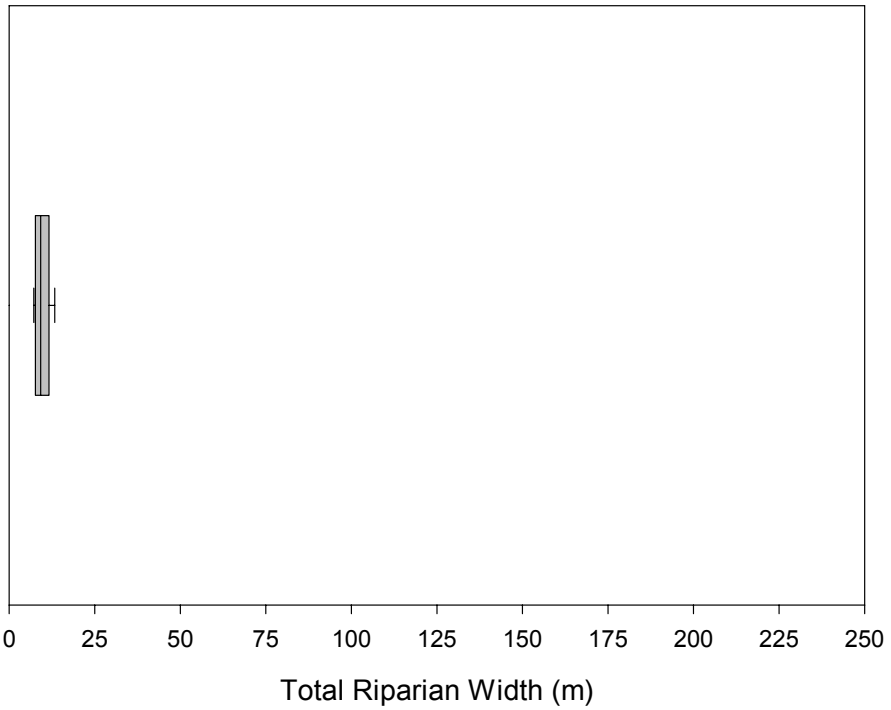
LWD per kilometer in Sulphur Springs Gap, summer 2001. Y-axis labels are LWD size classes with the first number indicating length and the second number indicating diameter.



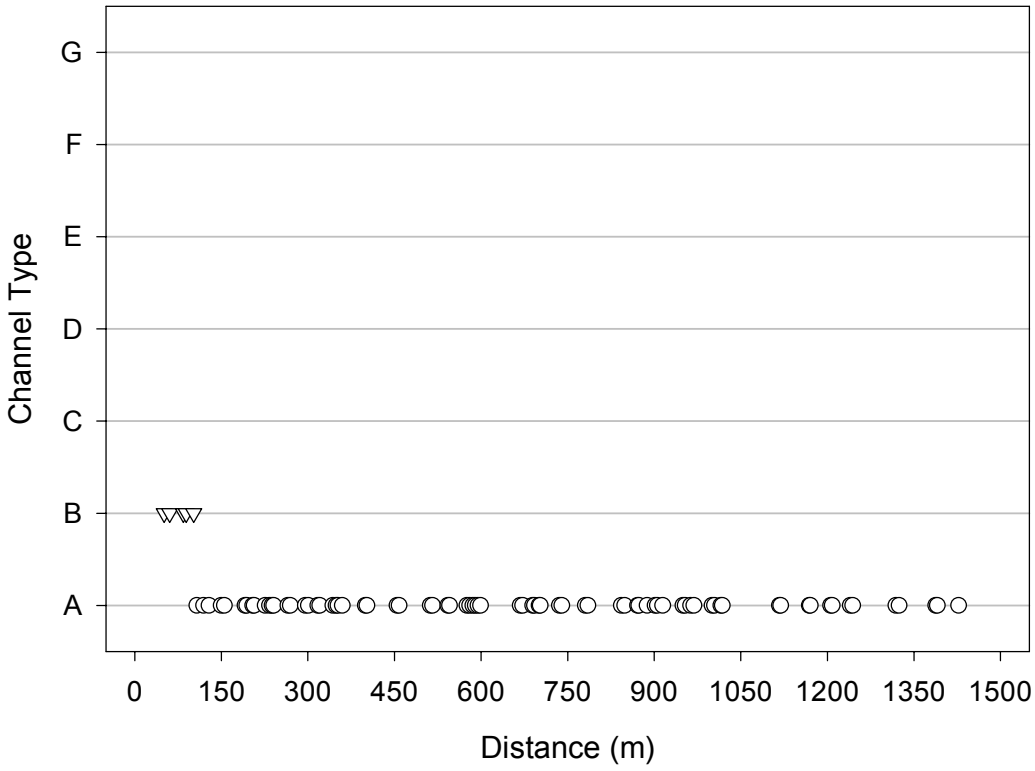
Distribution and abundance of LWD in each habitat unit of Sulphur Springs Gap, summer 2001. Bars below the x-axis represent the amount of the total LWD that was >5 m in length, >55 cm in diameter. X-axis indicates distance upstream from Forest boundary.



Frequency (percent) and cumulative percent of dominant and subdominant substrate occurrence for pools and riffles in Sulphur Springs Gap, summer 2001.



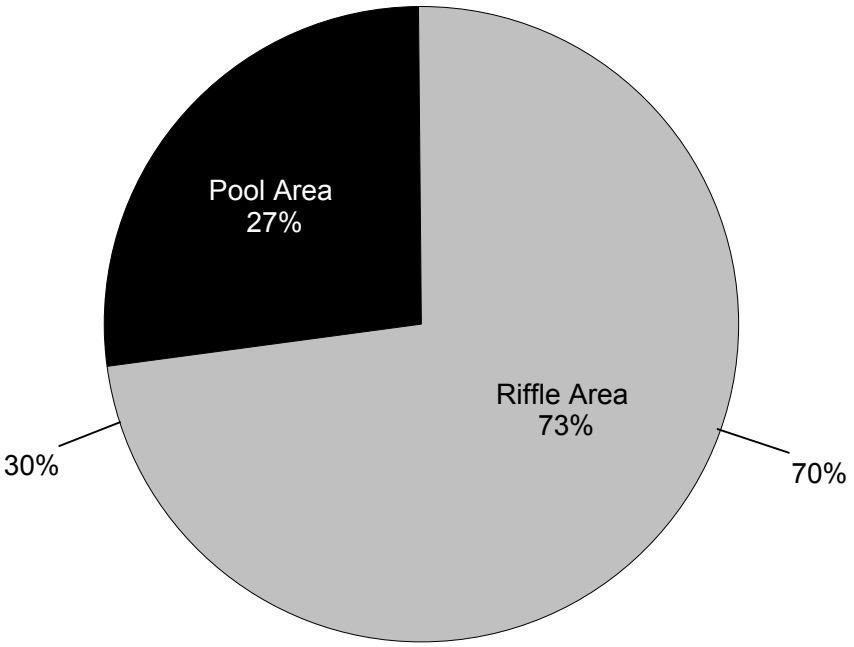
Total riparian widths (left riparian width+right riparian width+wetted channel width) for Sulphur Springs Gap, summer 2001. The left and right of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data. Sample size = 5.



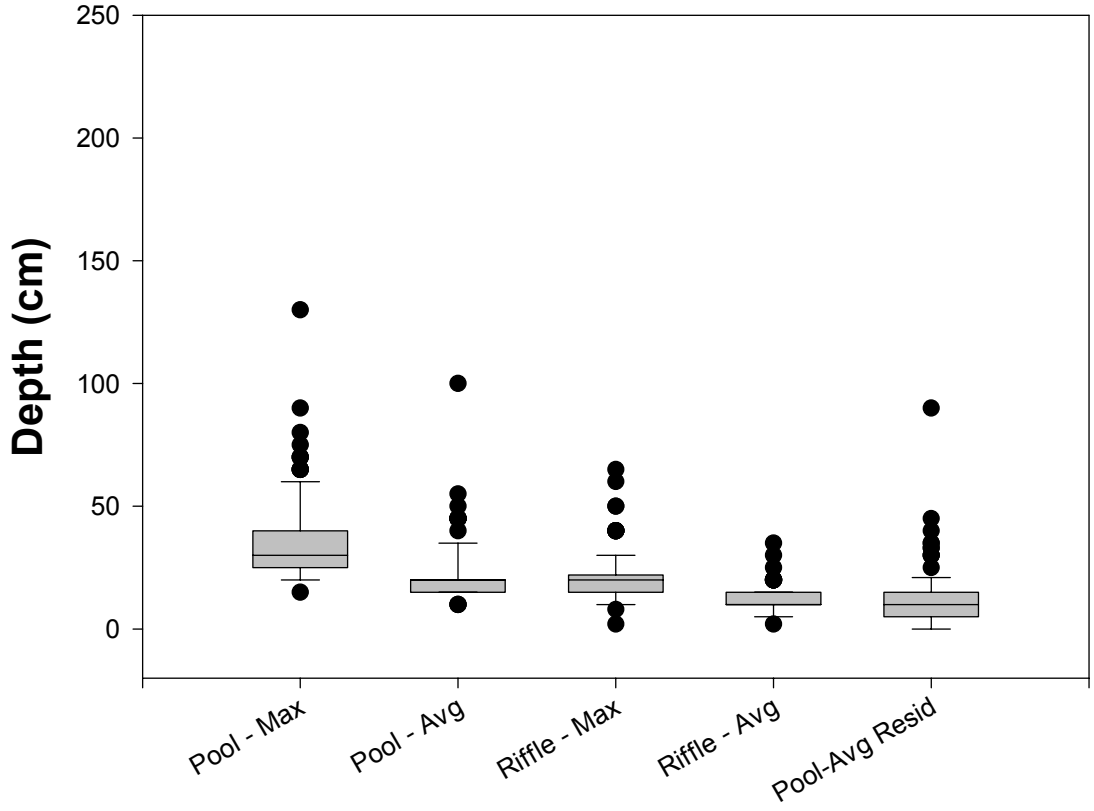
Rosgen's channel classification for each habitat unit in Sulphur Springs Gap, summer 2001. X-axis indicates distance upstream from Forest boundary.

Stream:	**Boone Run**
District:	Lee
Quadrangle:	Elkton West
Survey Date:	07/17/01
Downstream Starting Point:	Forest boundary
Total Distance Surveyed (km):	3.2
Percent of Total Area Pools:	**27**
Number of Pools:	125
Number of Pools per km:	39
Total Pool Area (m^2):	2290 ± 238
Mean Pool Area (m^2):	18
Correction Factor:	1.08
Mean Maximum Depth (cm):	36
Mean Average Depth (cm):	22
Mean Residual Pool Depth (cm):	11
Percent of Total Area Riffles:	**73**
Number of Riffles:	123
Number of Riffles per km:	38
Total Riffle Area (m^2):	6316 ± 288
Mean Riffle Area (m^2):	51
Correction Factor:	1.08
Mean Maximum Depth (cm):	20
Mean Average Depth (cm):	12
Number of LWD pieces per km:	**166**
LWD < 5 m, < 55 cm:	73
LWD < 5 m, > 55 cm:	7
LWD > 5 m, < 55 cm:	73
LWD > 5 m, > 55 cm:	13
Mean Channel Width (m):	**4**
Mean Riparian Width (m) (Total*):	**16**
Maximum Riparian Width (Total):	29
75th Percentile (Total)	19
25th Percentile (Total)	12
Minimum Riparian Width (Total):	9
Mean Riparian Width (m) (Left, Right):**	**6**
Maximum Riparian Width (Left, Right):	23
75th Percentile (Left, Right)	9
25th Percentile (Left, Right)	2
Minimum Riparian Width (Left, Right):	1
Percent of Pool Habitat Surveyed as Glides:	**40**
Rosgen's Channel Type Frequency (%):	
Type A:	56
Type B:	44
Type C:	0
Type D:	0
Type E:	0
Type F:	0
Type G:	0
Percent Pools with > 35% Embeddedness:	**100**
Average Channel Gradient (%):	**9**

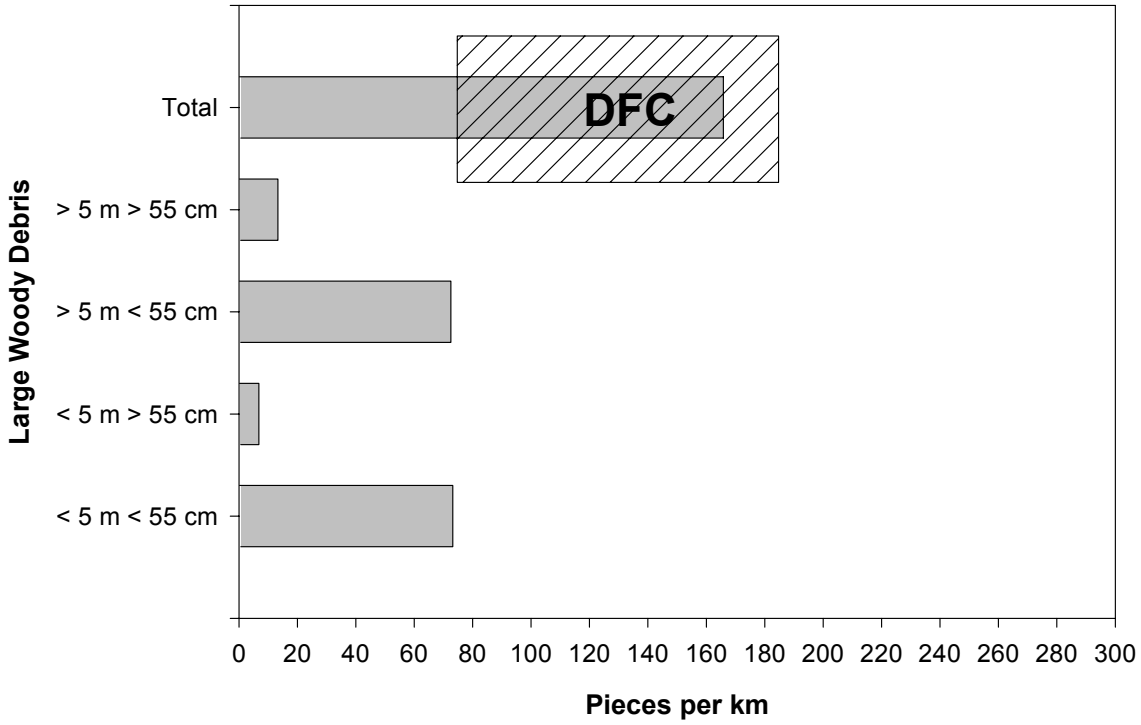
*Calculation sums left riparian + right riparian + stream channel
**Calculation pools left and right riparian measurements, does not sum them



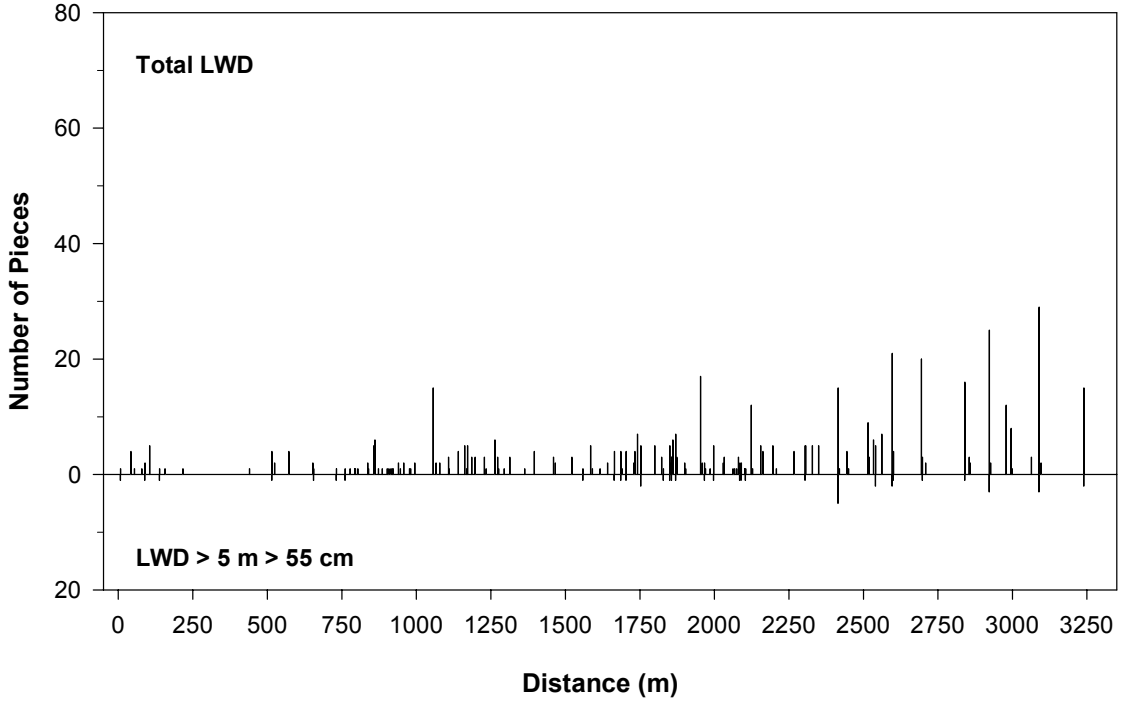
Estimated area of Boone Run in pools and riffles as calculated using BVET techniques, summer 2001.



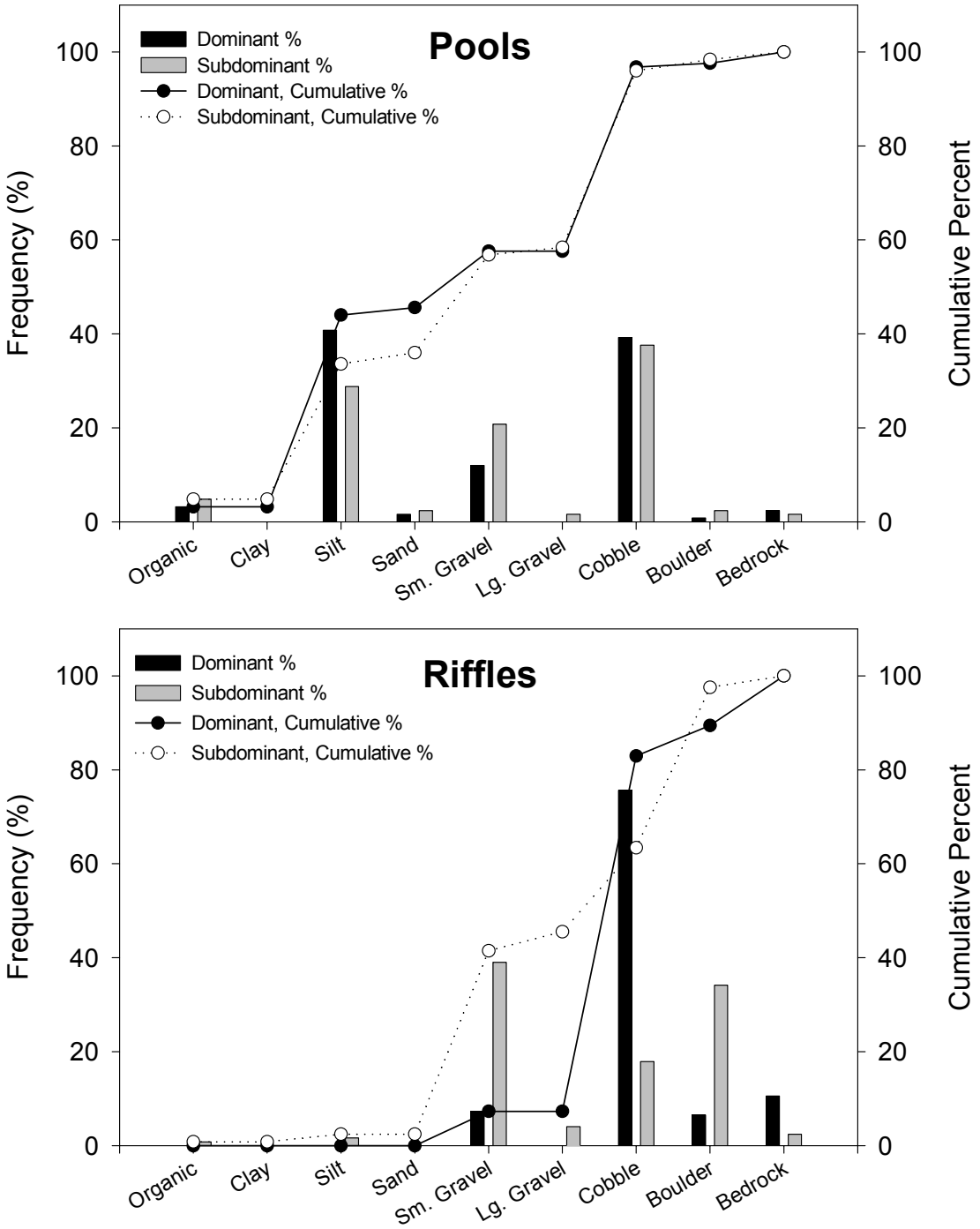
Maximum and average depths and residual pool depths for pools and riffles in Boone Run, summer 2001. The top and bottom of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data.



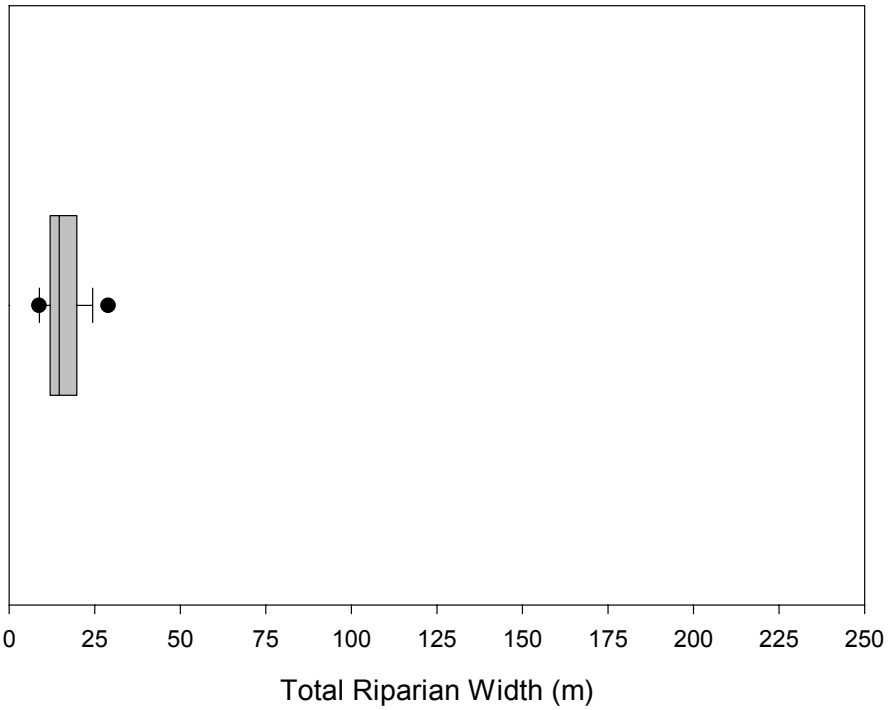
LWD per kilometer in Boone Run, summer 2001. Y-axis labels are LWD size classes with the first number indicating length and the second number indicating diameter.



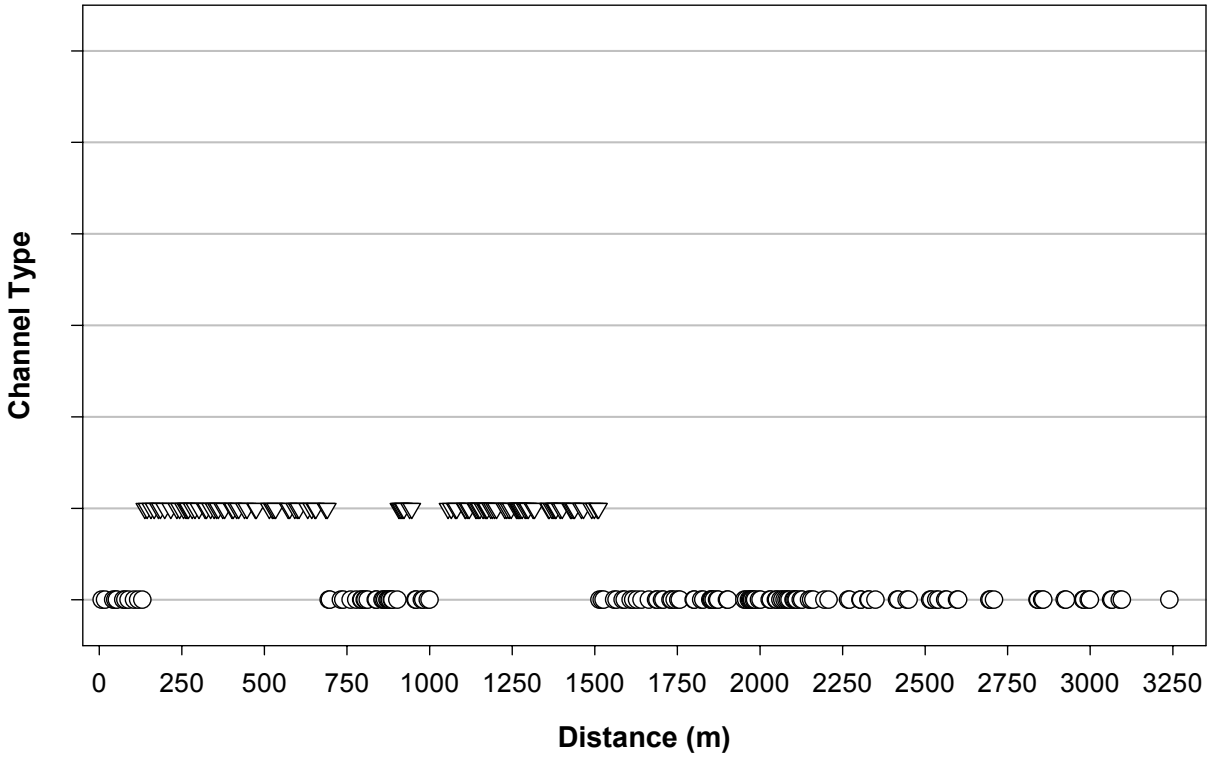
Distribution and abundance of LWD in each habitat unit of Boone Run, summer 2001. Bars below the x-axis represent the amount of the total LWD that was >5 m in length, >55 cm in diameter. X-axis indicates distance upstream from Forest boundary.



Frequency (percent) and cumulative percent of dominant and subdominant substrate occurrence for pools and riffles in Boone Run, summer 2001.

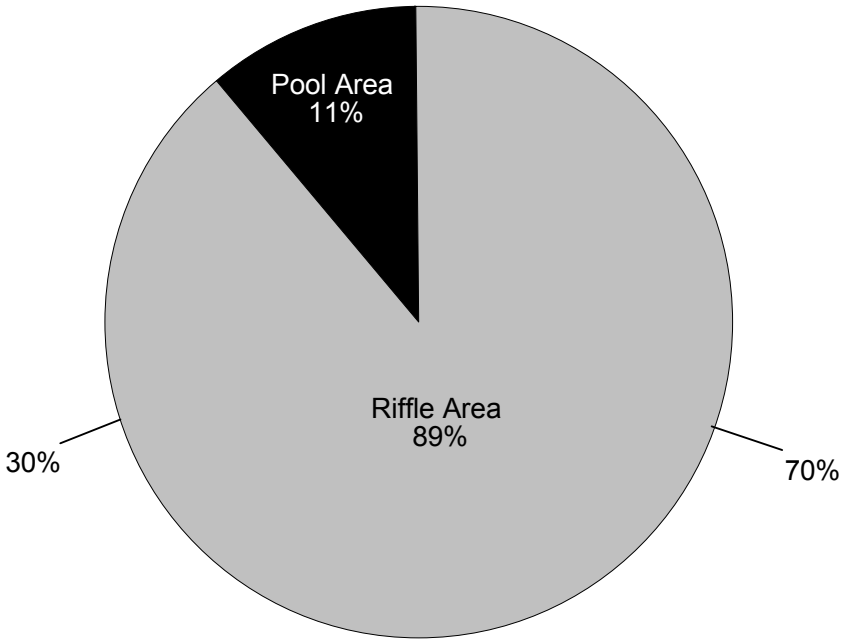


Total riparian widths (left riparian width+right riparian width+wetted channel width) for Boone Run, summer 2001. The left and right of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data. Sample size = 11.

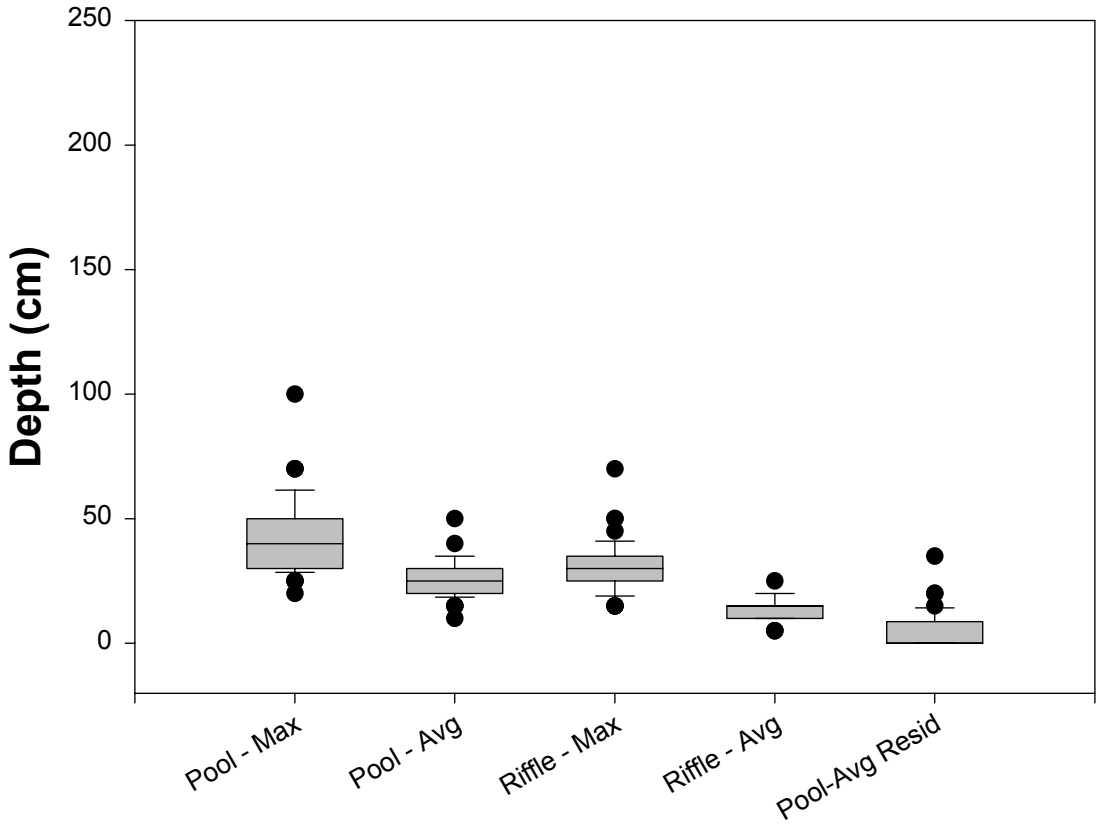


Rosgen's channel classification for each habitat unit in Boone Run, summer 2001. X-axis indicates distance upstream from Forest boundary.

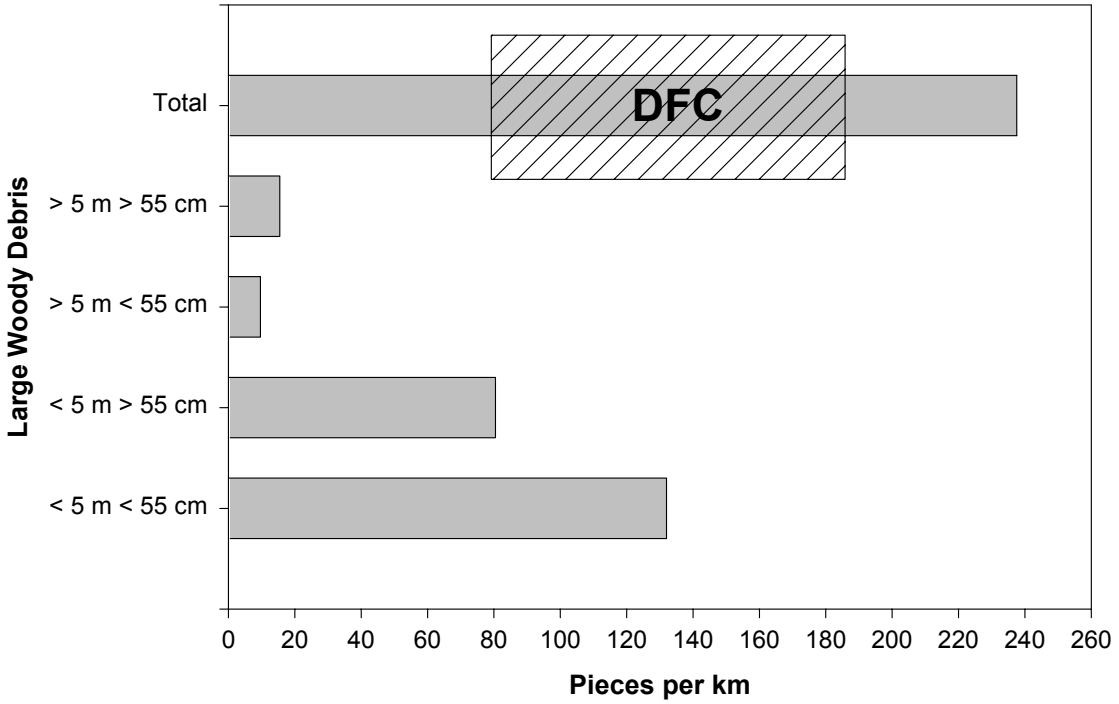
Stream:	**Browns Run**
District:	Lee
Quadrangle:	Hamburg
Survey Date:	06/04/02
Downstream Starting Point:	Forest boundary
Total Distance Surveyed (km):	2.9
Percent of Total Area Pools:	**11**
Number of Pools:	42
Number of Pools per km:	14
Total Pool Area (m^2):	952 ± 261
Mean Pool Area (m^2):	23
Correction Factor:	0.95
Mean Maximum Depth (cm):	43
Mean Average Depth (cm):	26
Mean Residual Pool Depth (cm):	5
Percent of Total Area Riffles:	**89**
Number of Riffles:	43
Number of Riffles per km:	15
Total Riffle Area (m^2):	7930 ± 6787
Mean Riffle Area (m^2):	184
Correction Factor:	0.95
Mean Maximum Depth (cm):	30
Mean Average Depth (cm):	14
Number of LWD pieces per km:	**238**
LWD < 5 m, < 55 cm:	132
LWD < 5 m, > 55 cm:	80
LWD > 5 m, < 55 cm:	10
LWD > 5 m, > 55 cm:	15
Mean Channel Width (m):	**6**
Mean Riparian Width (m) (Total*):	**10**
Maximum Riparian Width (Total):	10
75th Percentile (Total)	10
25th Percentile (Total)	9
Minimum Riparian Width (Total):	9
Mean Riparian Width (m) (Left, Right):**	**2**
Maximum Riparian Width (Left, Right):	4
75th Percentile (Left, Right)	3
25th Percentile (Left, Right)	1
Minimum Riparian Width (Left, Right):	1
Percent of Pool Habitat Surveyed as Glides:	**14**
Rosgen's Channel Type Frequency (%):	
Type A:	100
Type B:	0
Type C:	0
Type D:	0
Type E:	0
Type F:	0
Type G:	0
Percent Pools with > 35% Embeddedness:	**10**
Average Channel Gradient (%):	**13**



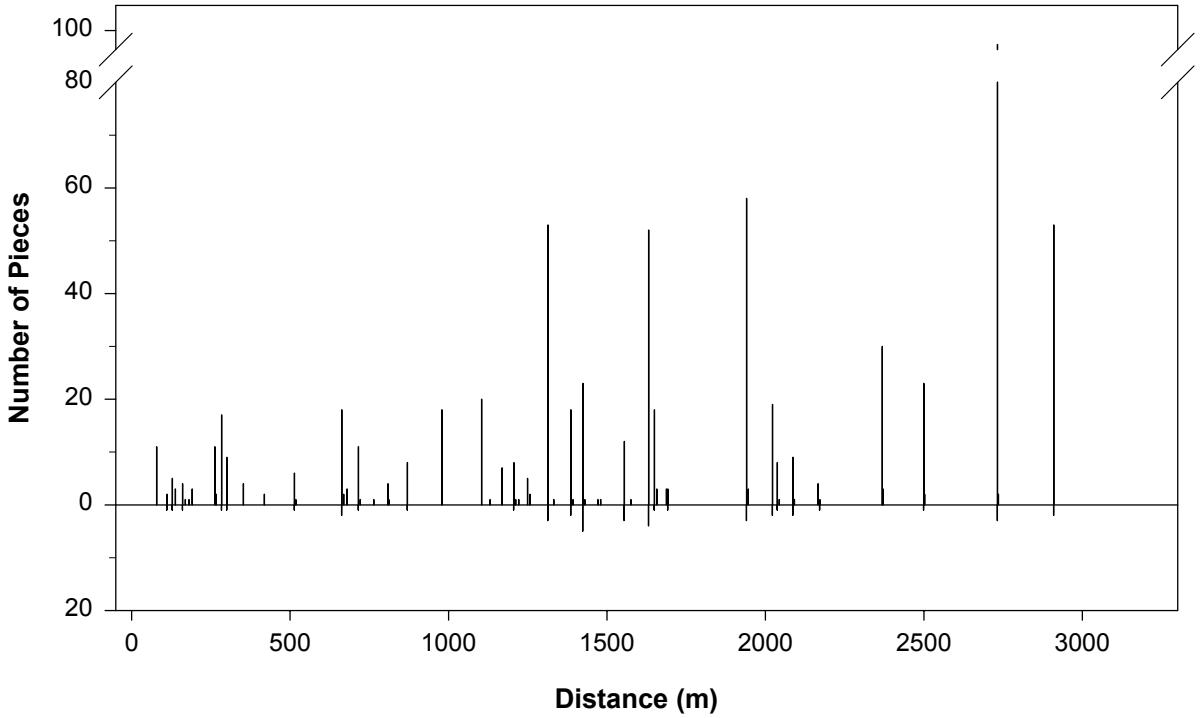
Estimated area of Browns Run in pools and riffles as calculated using BVET techniques, summer 2002.



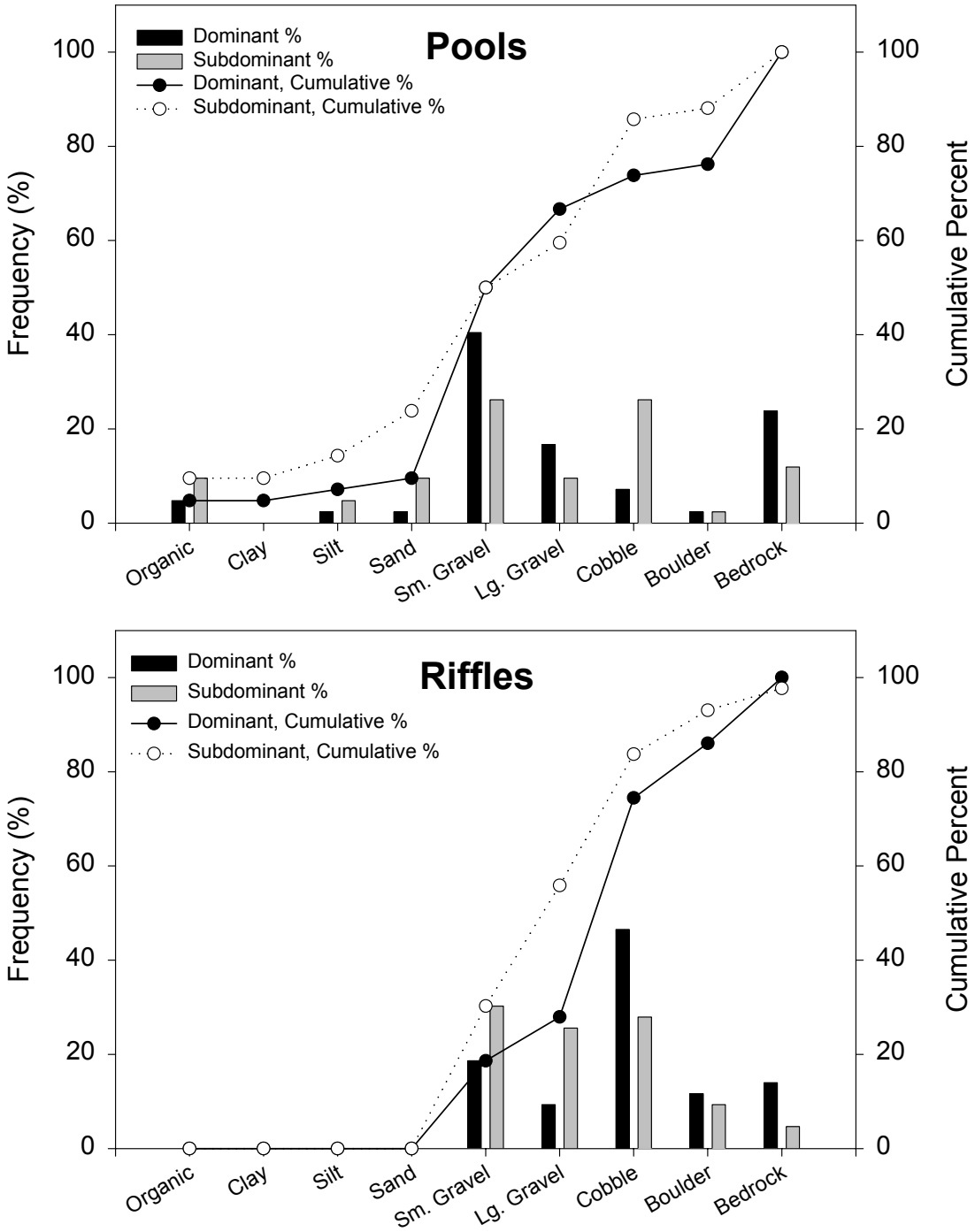
Maximum and average depths and residual pool depths for pools and riffles in Browns Run, summer 2002. The top and bottom of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data.



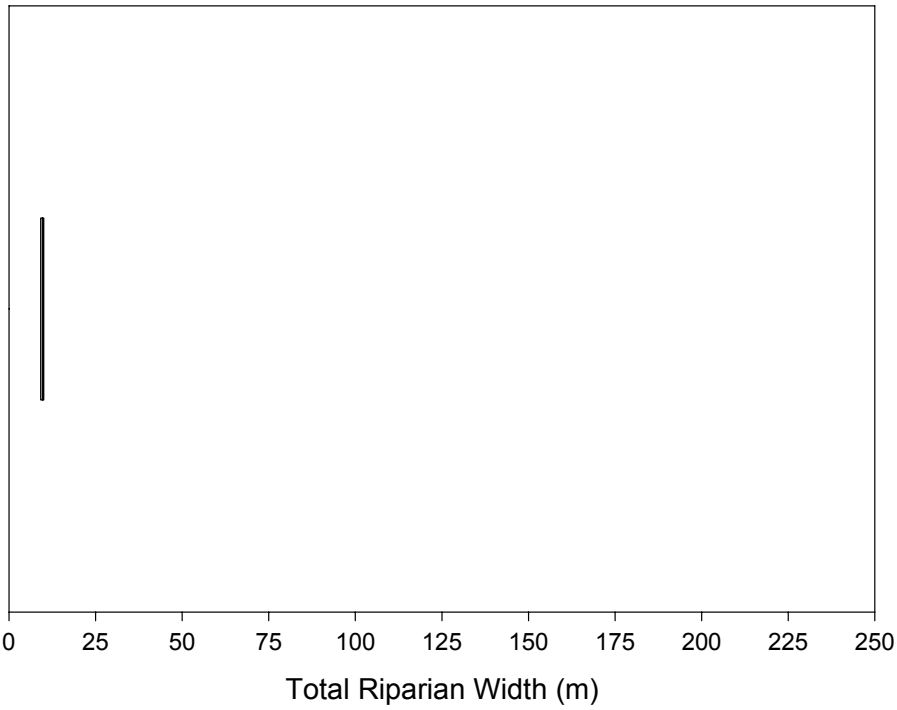
LWD per kilometer in Browns Run, summer 2002. Y-axis labels are LWD size classes with the first number indicating length and the second number indicating diameter.



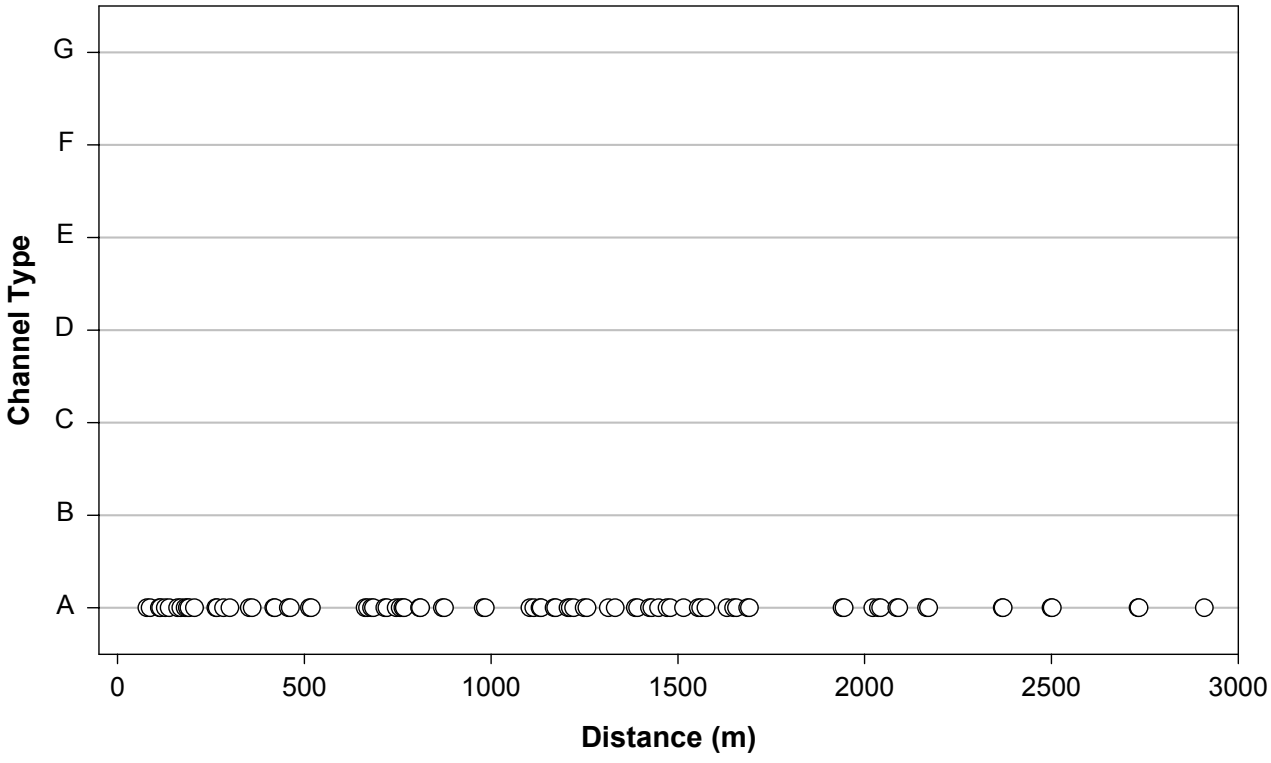
Distribution and abundance of LWD in each habitat unit of Browns Run, summer 2002. Bars below the x-axis represent the amount of the total LWD that was >5 m in length, >55 cm in diameter. X-axis indicates distance upstream from Forest boundary.



Frequency (percent) and cumulative percent of dominant and subdominant substrate occurrence for pools and riffles in Browns Run, summer 2002.



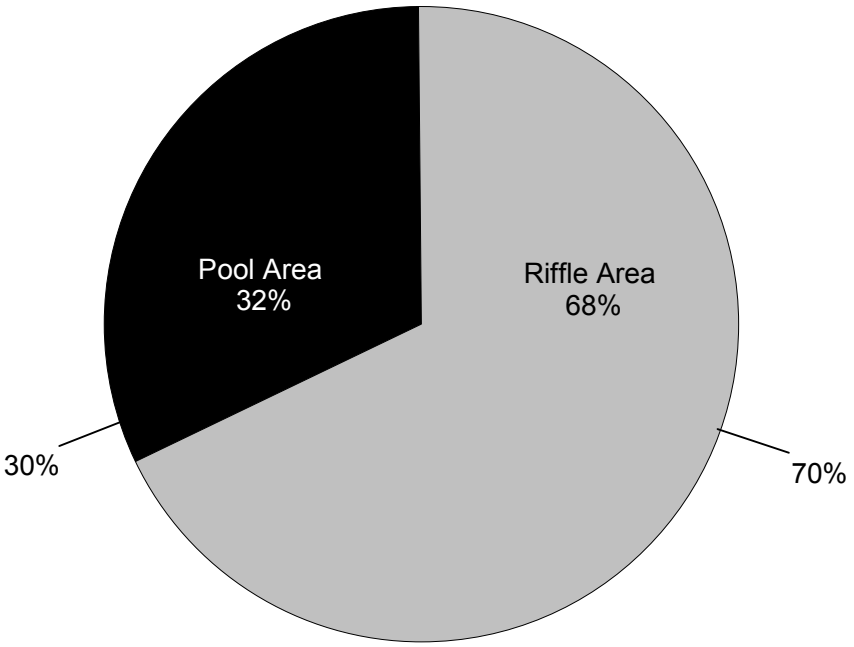
Total riparian widths (left riparian width+right riparian width+wetted channel width) for Browns Run, summer 2002. The left and right of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data. Sample size = 3.



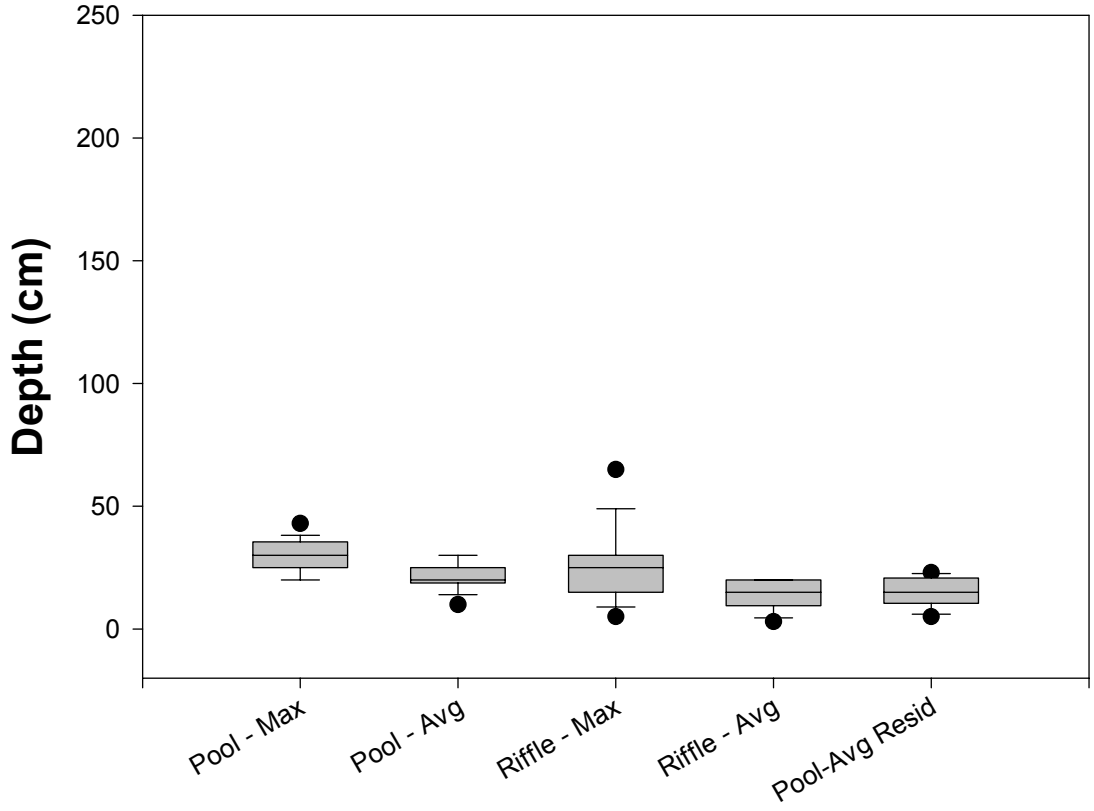
Rosgen's channel classification for each habitat unit in Browns Run, summer 2002. X-axis indicates distance upstream from Forest boundary.

Stream:	**Kettle Hollow**
District:	Lee
Quadrangle:	Stanley
Survey Date:	08/18/01
Downstream Starting Point:	Forest boundary
Total Distance Surveyed (km):	0.6
Percent of Total Area Pools:	**32**
Number of Pools:	12
Number of Pools per km:	23
Total Pool Area (m^2):	114 ± 68
Mean Pool Area (m^2):	9
Correction Factor:	1.00
Mean Maximum Depth (cm):	30
Mean Average Depth (cm):	22
Mean Residual Pool Depth (cm):	15
Percent of Total Area Riffles:	**68**
Number of Riffles:	13
Number of Riffles per km:	23
Total Riffle Area (m^2):	241 ± 3
Mean Riffle Area (m^2):	19
Correction Factor:	1.05
Mean Maximum Depth (cm):	25
Mean Average Depth (cm):	14
Number of LWD pieces per km:	**74**
LWD < 5 m, < 55 cm:	20
LWD < 5 m, > 55 cm:	36
LWD > 5 m, < 55 cm:	7
LWD > 5 m, > 55 cm:	11
Mean Channel Width (m):	**2**
Mean Riparian Width (m) (Total*):	**19**
Maximum Riparian Width (Total):	26
75th Percentile (Total)	26
25th Percentile (Total)	16
Minimum Riparian Width (Total):	6
Mean Riparian Width (m) (Left, Right):**	**9**
Maximum Riparian Width (Left, Right):	18
75th Percentile (Left, Right)	14
25th Percentile (Left, Right)	3
Minimum Riparian Width (Left, Right):	2
Percent of Pool Habitat Surveyed as Glides:	**8**
Rosgen's Channel Type Frequency (%):	
Type A:	100
Type B:	0
Type C:	0
Type D:	0
Type E:	0
Type F:	0
Type G:	0
Percent Pools with > 35% Embeddedness:	**69**
Average Channel Gradient (%):	**4**

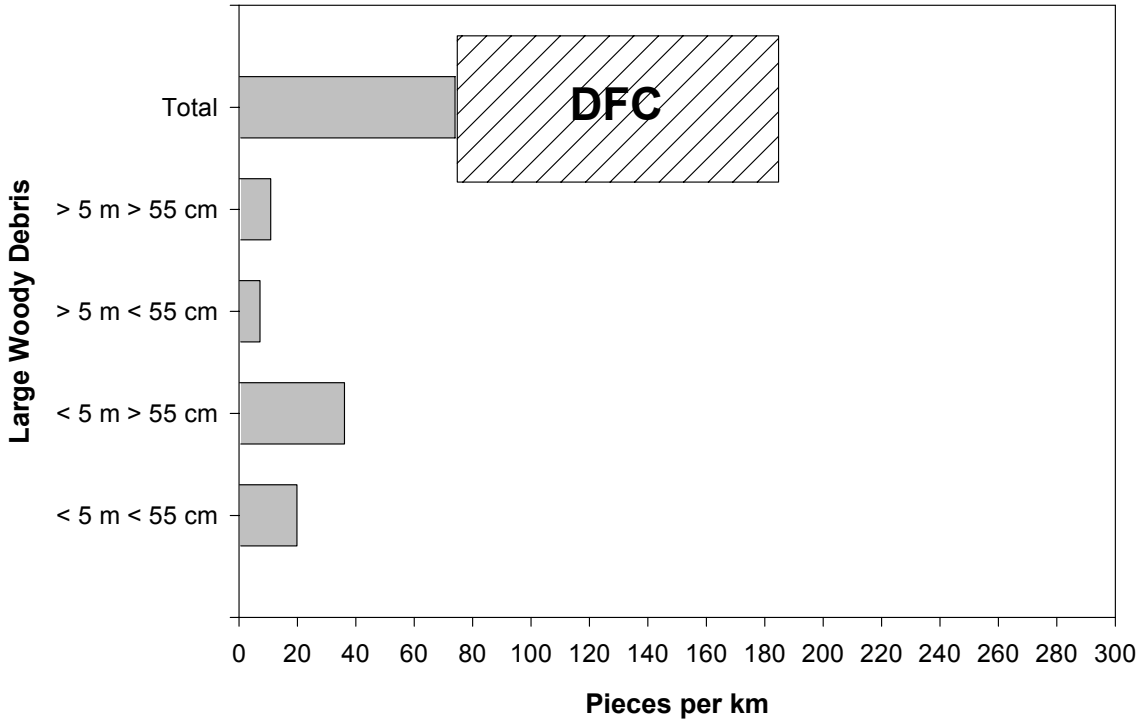
*Calculation sums left riparian + right riparian + stream channel
**Calculation pools left and right riparian measurements, does not sum them



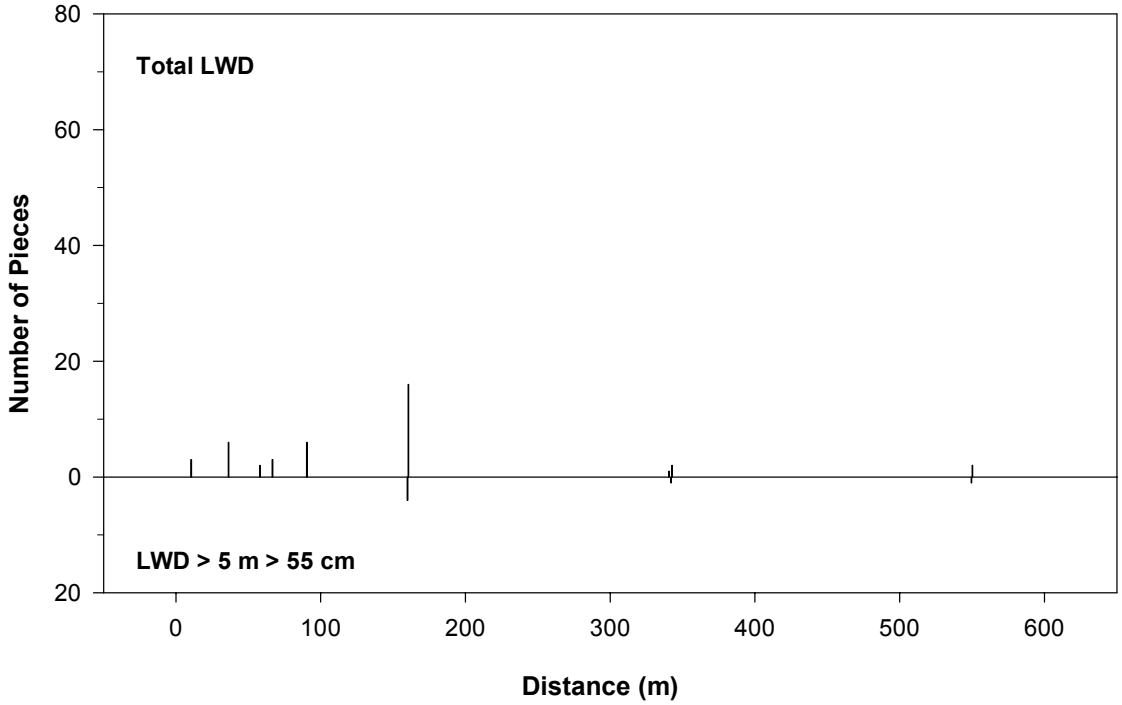
Estimated area of Kettle Hollow in pools and riffles as calculated using BVET techniques, summer 2001.



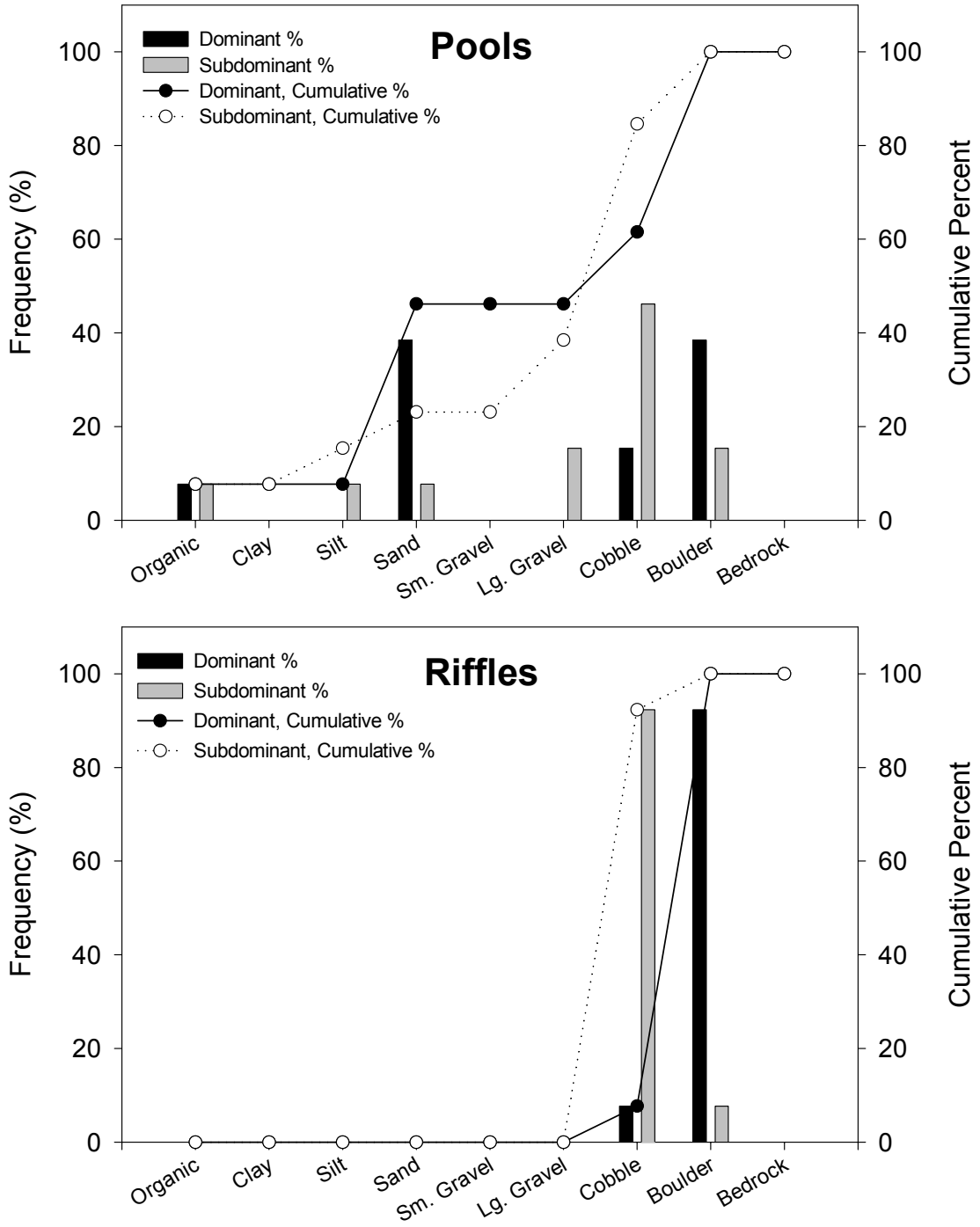
Maximum and average depths and residual pool depths for pools and riffles in Kettle Hollow, summer 2001. The top and bottom of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data.



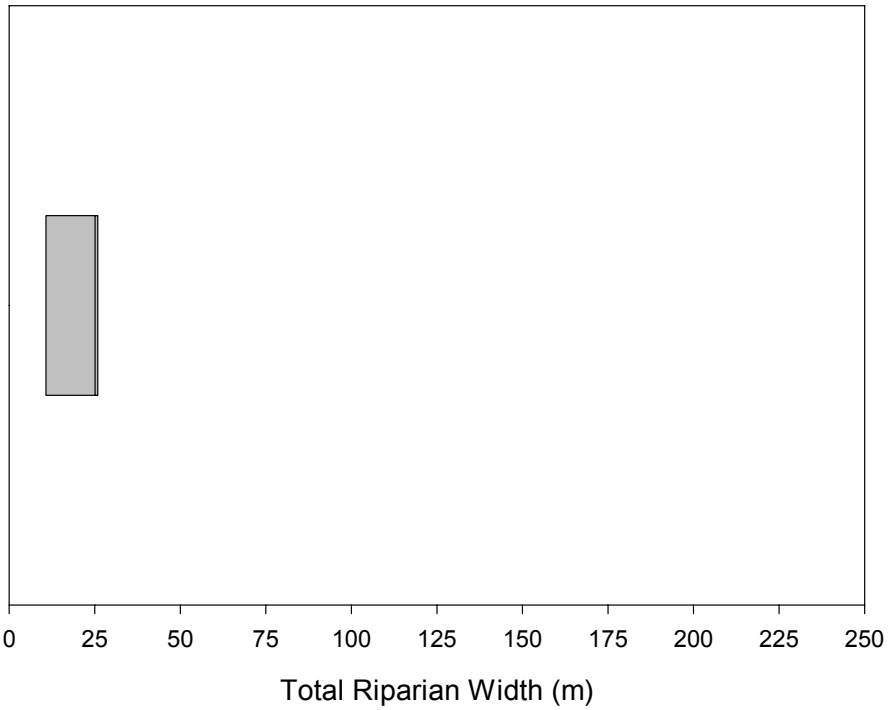
LWD per kilometer in Kettle Hollow, summer 2001. Y-axis labels are LWD size classes with the first number indicating length and the second number indicating diameter.



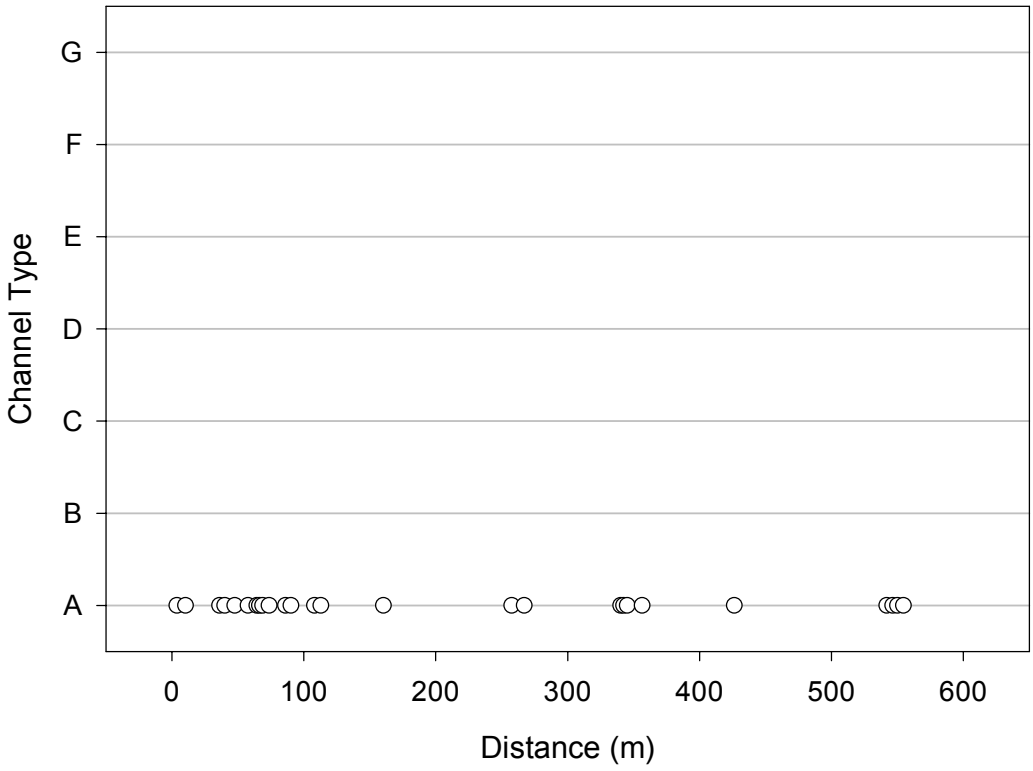
Distribution and abundance of LWD in each habitat unit of Kettle Hollow, summer 2001. Bars below the x-axis represent the amount of the total LWD that was >5 m in length, >55 cm in diameter. X-axis indicates distance upstream from Forest boundary.



Frequency (percent) and cumulative percent of dominant and subdominant substrate occurrence for pools and riffles in Kettle Hollow, summer 2001.



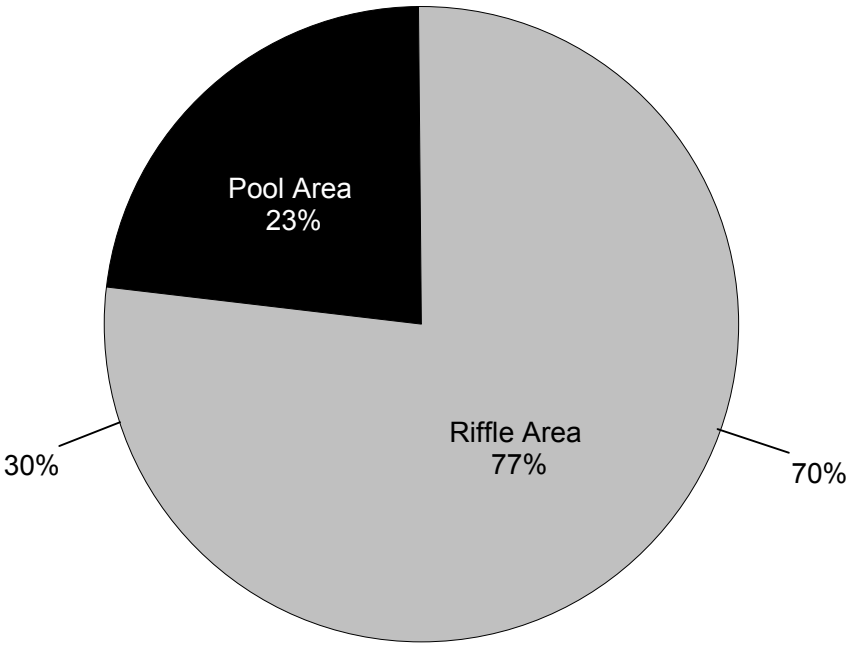
Total riparian widths (left riparian width+right riparian width+wetted channel width) for Kettle Hollow, summer 2001. The left and right of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data. Sample size = 3.



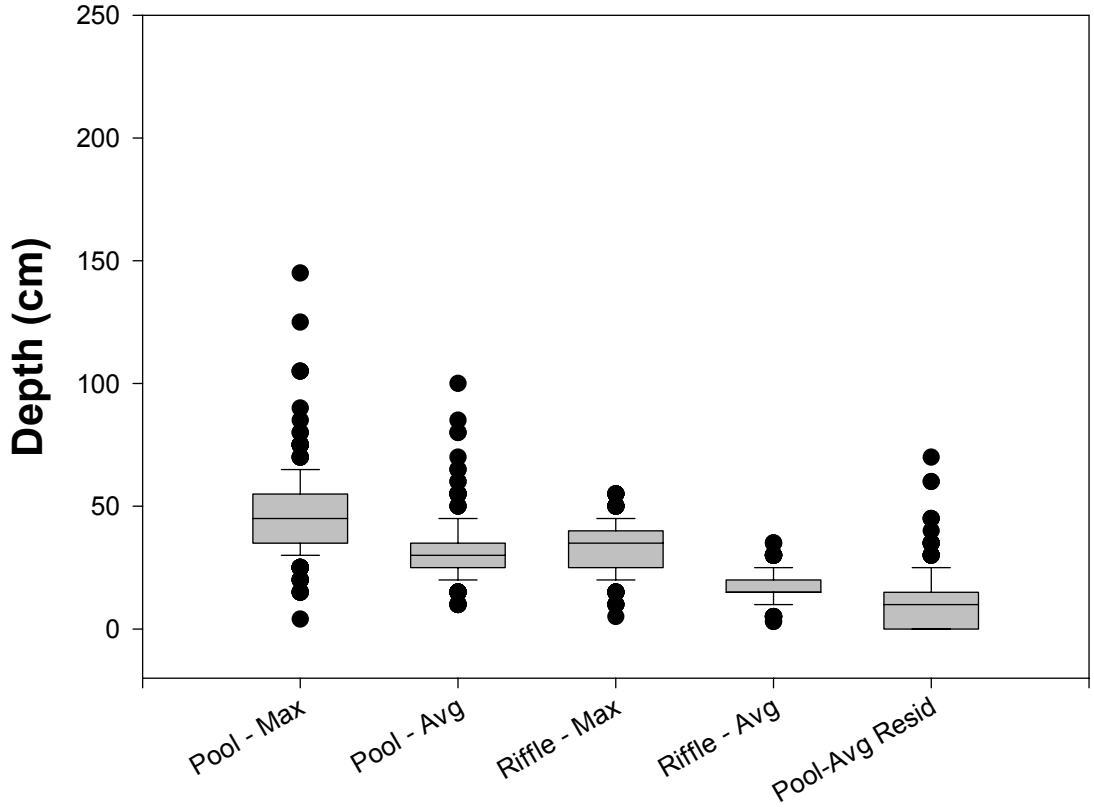
Rosgen's channel classification for each habitat unit in Kettle Hollow, summer 2001. X-axis indicates distance upstream from Forest boundary.

Stream:	**Cub Run**
District:	Lee
Quadrangle:	Tenth Legion
Survey Date:	07/17/01
Downstream Starting Point:	Forest boundary
Total Distance Surveyed (km):	12.4
Percent of Total Area Pools:	**23**
Number of Pools:	264
Number of Pools per km:	21
Total Pool Area (m^2):	11824 ± 896
Mean Pool Area (m^2):	45
Correction Factor:	1.08
Mean Maximum Depth (cm):	48
Mean Average Depth (cm):	32
Mean Residual Pool Depth (cm):	11
Percent of Total Area Riffles:	**77**
Number of Riffles:	238
Number of Riffles per km:	19
Total Riffle Area (m^2):	39747 ± 4489
Mean Riffle Area (m^2):	167
Correction Factor:	1.07
Mean Maximum Depth (cm):	33
Mean Average Depth (cm):	18
Number of LWD pieces per km:	**74**
LWD < 5 m, < 55 cm:	34
LWD < 5 m, > 55 cm:	1
LWD > 5 m, < 55 cm:	35
LWD > 5 m, > 55 cm:	4
Mean Channel Width (m):	**7**
Mean Riparian Width (m) (Total*):	**41**
Maximum Riparian Width (Total):	86
75th Percentile (Total)	50
25th Percentile (Total)	29
Minimum Riparian Width (Total):	11
Mean Riparian Width (m) (Left, Right):**	**17**
Maximum Riparian Width (Left, Right):	64
75th Percentile (Left, Right)	22
25th Percentile (Left, Right)	5
Minimum Riparian Width (Left, Right):	1
Percent of Pool Habitat Surveyed as Glides:	**7**
Rosgen's Channel Type Frequency (%):	
Type A:	2
Type B:	93
Type C:	5
Type D:	0
Type E:	0
Type F:	0
Type G:	0
Percent Pools with > 35% Embeddedness:	**78**
Average Channel Gradient (%):	**4**

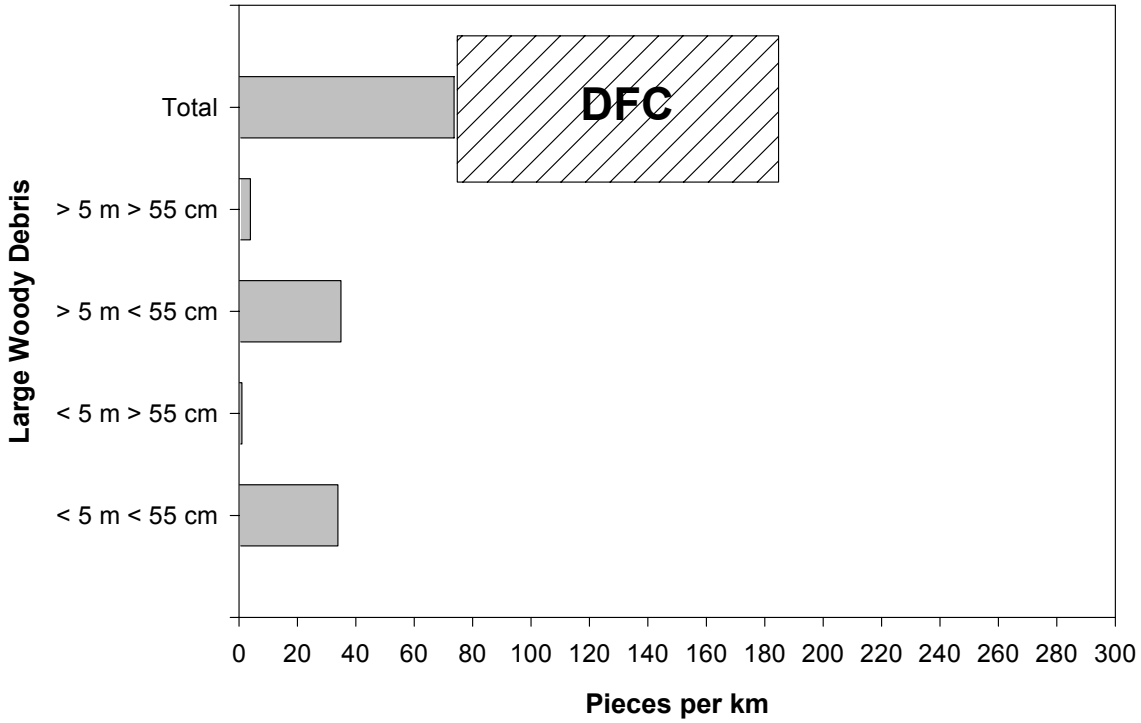
*Calculation sums left riparian + right riparian + stream channel
**Calculation pools left and right riparian measurements, does not sum them



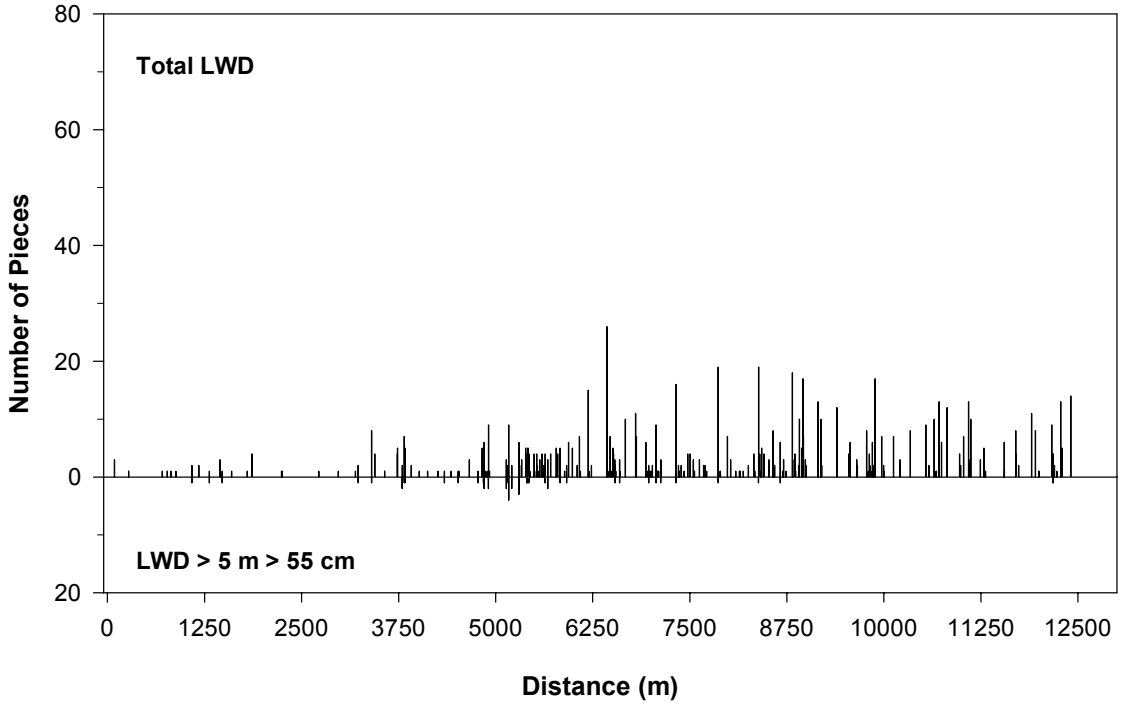
Estimated area of Cub Run in pools and riffles as calculated using BVET techniques, summer 2001.



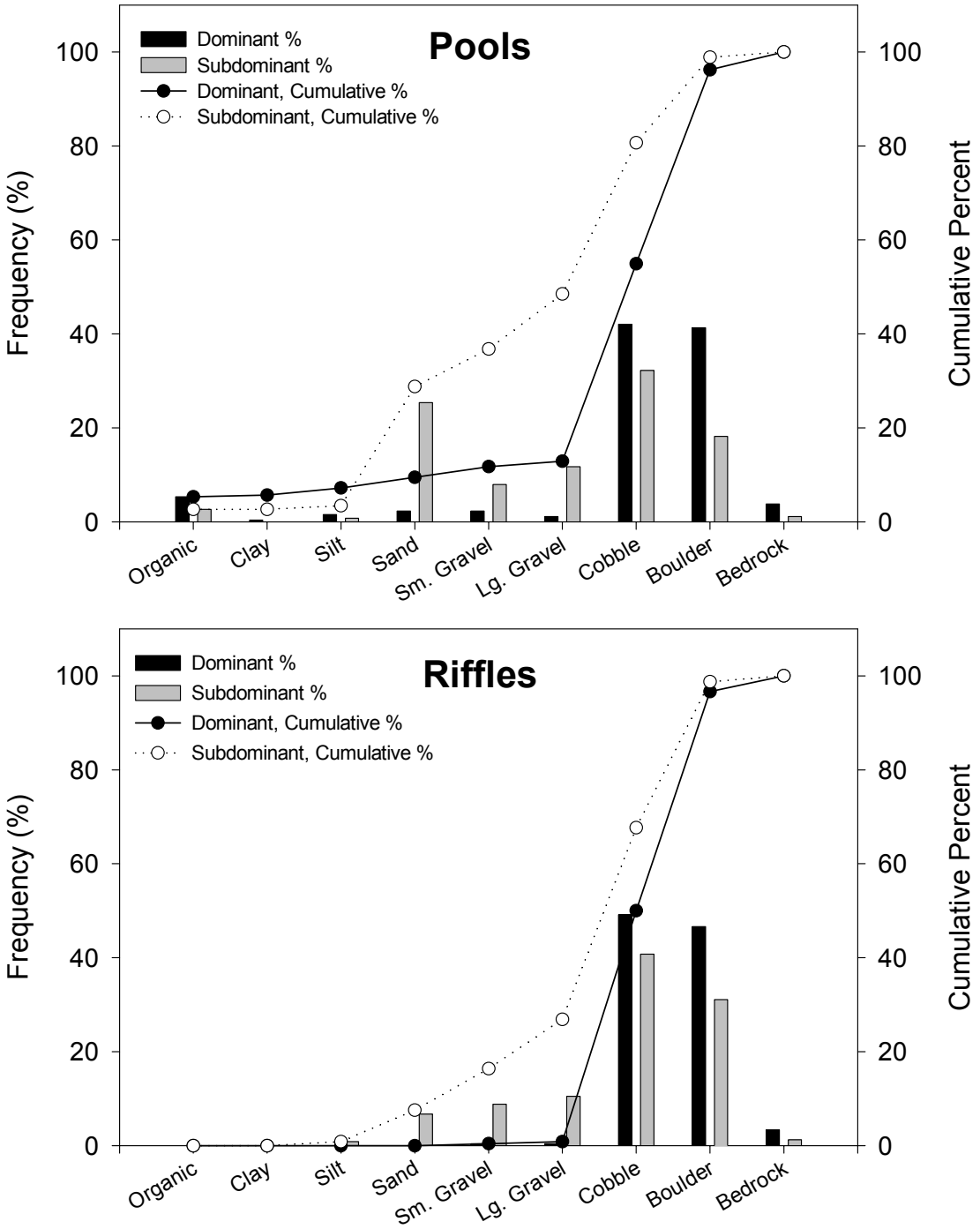
Maximum and average depths and residual pool depths for pools and riffles in Cub Run, summer 2001. The top and bottom of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data.



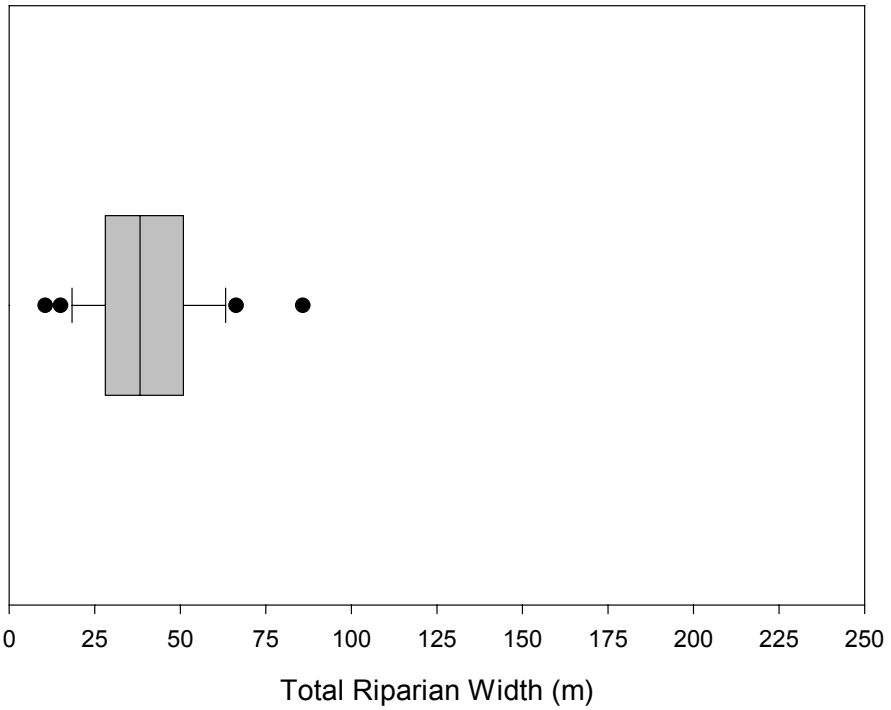
LWD per kilometer in Cub Run, summer 2001. Y-axis labels are LWD size classes with the first number indicating length and the second number indicating diameter.



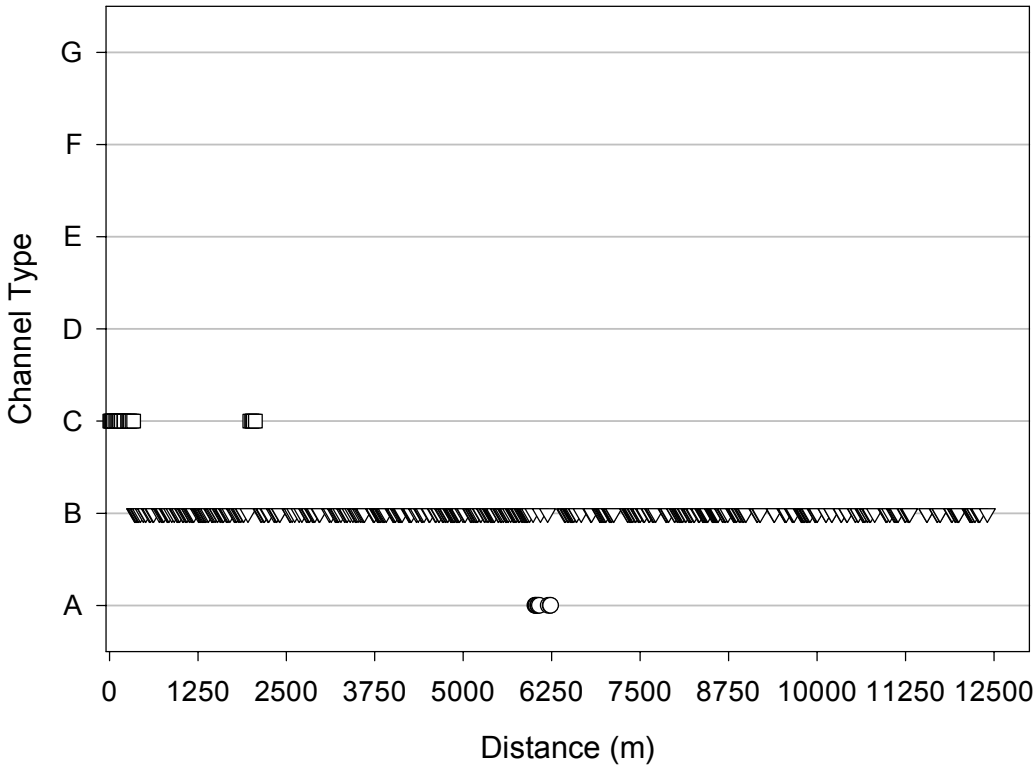
Distribution and abundance of LWD in each habitat unit of Cub Run, summer 2001. Bars below the x-axis represent the amount of the total LWD that was >5 m in length, >55 cm in diameter. X-axis indicates distance upstream from Forest boundary.



Frequency (percent) and cumulative percent of dominant and subdominant substrate occurrence for pools and riffles in Cub Run, summer 2001.



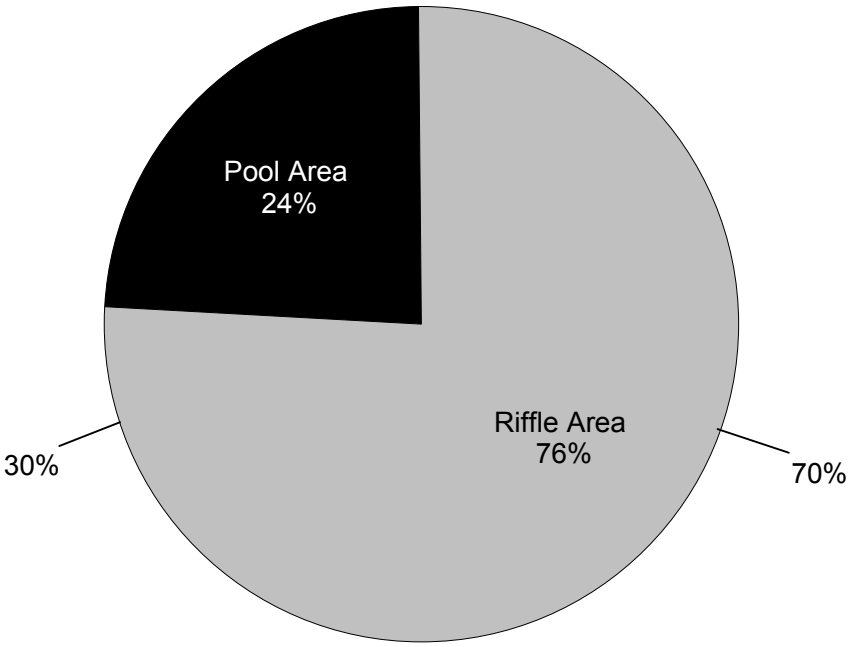
Total riparian widths (left riparian width+right riparian width+wetted channel width) for Cub Run, summer 2001. The left and right of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data. Sample size = 22.



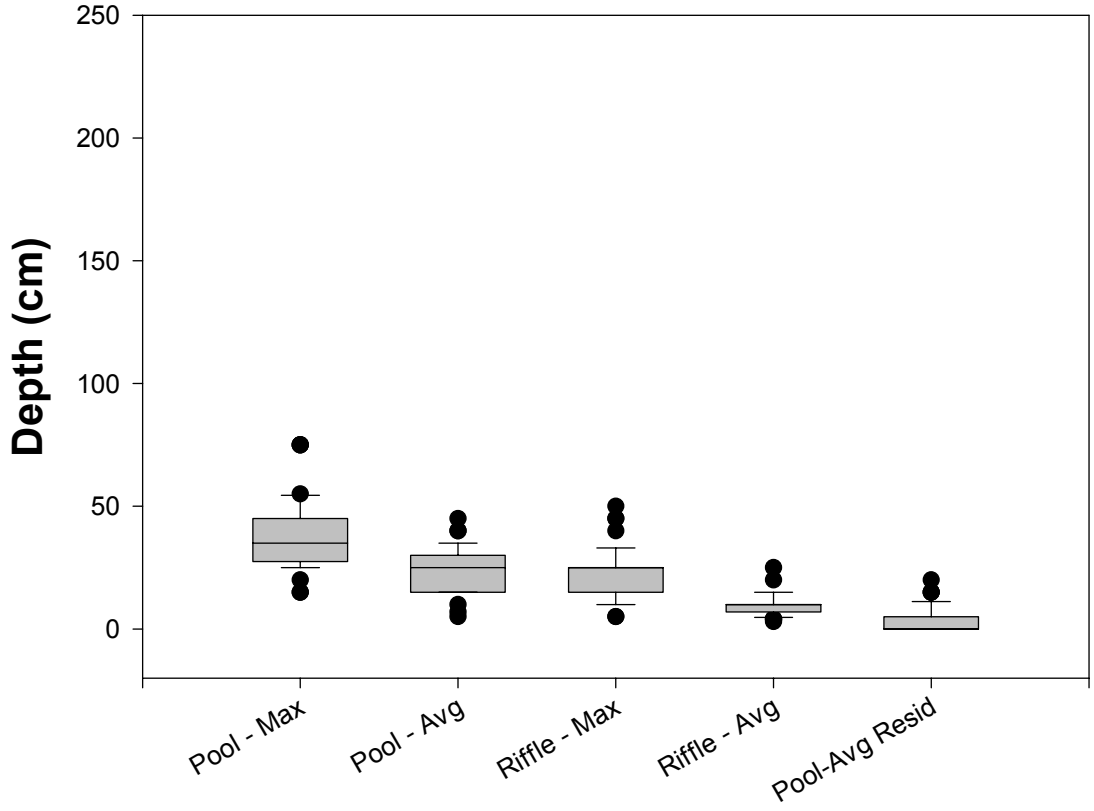
Rosgen's channel classification for each habitat unit in Cub Run, summer 2001. X-axis indicates distance upstream from Forest boundary.

Stream:	**Morgan Run**
District:	Lee
Quadrangle:	Tenth Legion
Survey Date:	07/19/01
Downstream Starting Point:	Confluence w/Cub Run
Total Distance Surveyed (km):	1.2
Percent of Total Area Pools:	**24**
Number of Pools:	36
Number of Pools per km:	31
Total Pool Area (m^2):	689 ± 205
Mean Pool Area (m^2):	19
Correction Factor:	1.08
Mean Maximum Depth (cm):	37
Mean Average Depth (cm):	24
Mean Residual Pool Depth (cm):	4
Percent of Total Area Riffles:	**76**
Number of Riffles:	42
Number of Riffles per km:	36
Total Riffle Area (m^2):	2145 ± 729
Mean Riffle Area (m^2):	51
Correction Factor:	0.86
Mean Maximum Depth (cm):	23
Mean Average Depth (cm):	10
Number of LWD pieces per km:	**227**
LWD < 5 m, < 55 cm:	110
LWD < 5 m, > 55 cm:	57
LWD > 5 m, < 55 cm:	33
LWD > 5 m, > 55 cm:	26
Mean Channel Width (m):	**4**
Mean Riparian Width (m) (Total*):	**27**
Maximum Riparian Width (Total):	44
75th Percentile (Total)	38
25th Percentile (Total)	16
Minimum Riparian Width (Total):	13
Mean Riparian Width (m) (Left, Right):**	**12**
Maximum Riparian Width (Left, Right):	35
75th Percentile (Left, Right)	15
25th Percentile (Left, Right)	5
Minimum Riparian Width (Left, Right):	1
Percent of Pool Habitat Surveyed as Glides:	**17**
Rosgen's Channel Type Frequency (%):	
Type A:	24
Type B:	33
Type C:	42
Type D:	0
Type E:	0
Type F:	0
Type G:	0
Percent Pools with > 35% Embeddedness:	**83**
Average Channel Gradient (%):	**8**

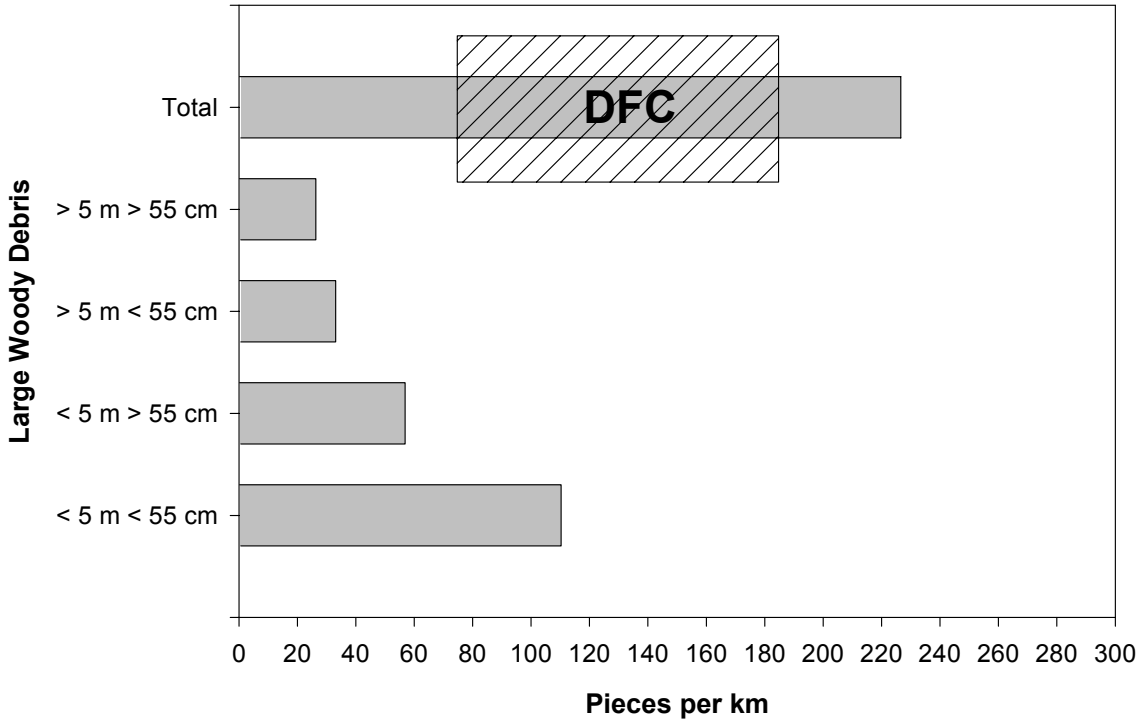
*Calculation sums left riparian + right riparian + stream channel
**Calculation pools left and right riparian measurements, does not sum them



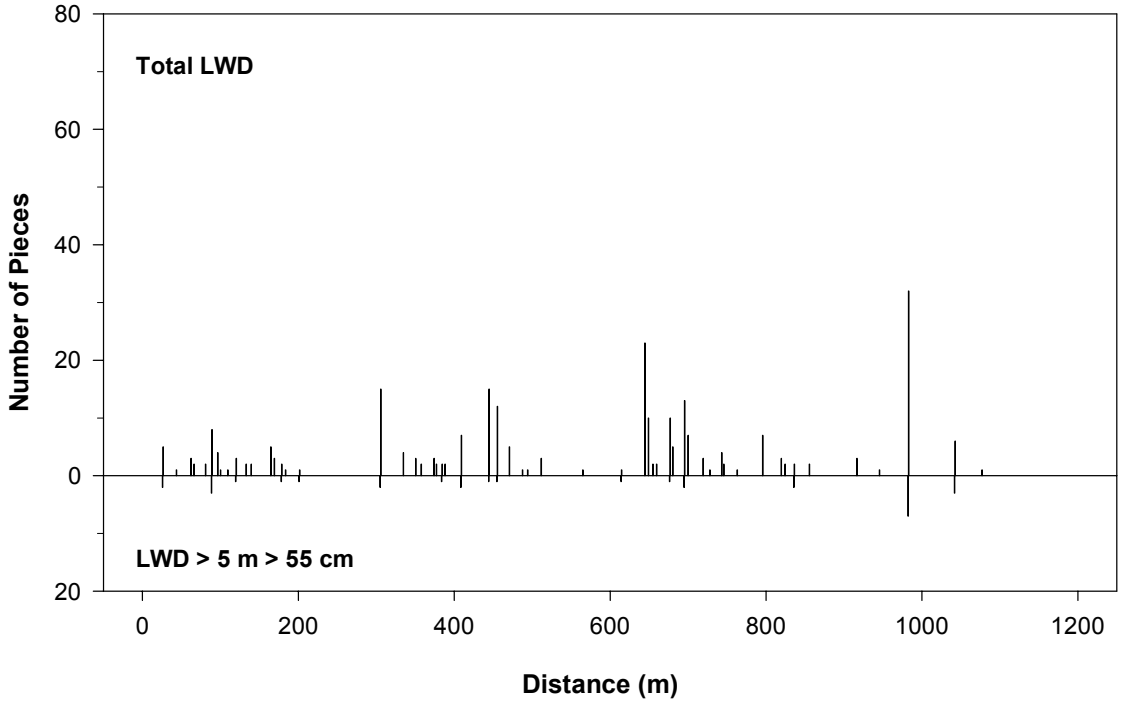
Estimated area of Morgan Run in pools and riffles as calculated using BVET techniques, summer 2001.



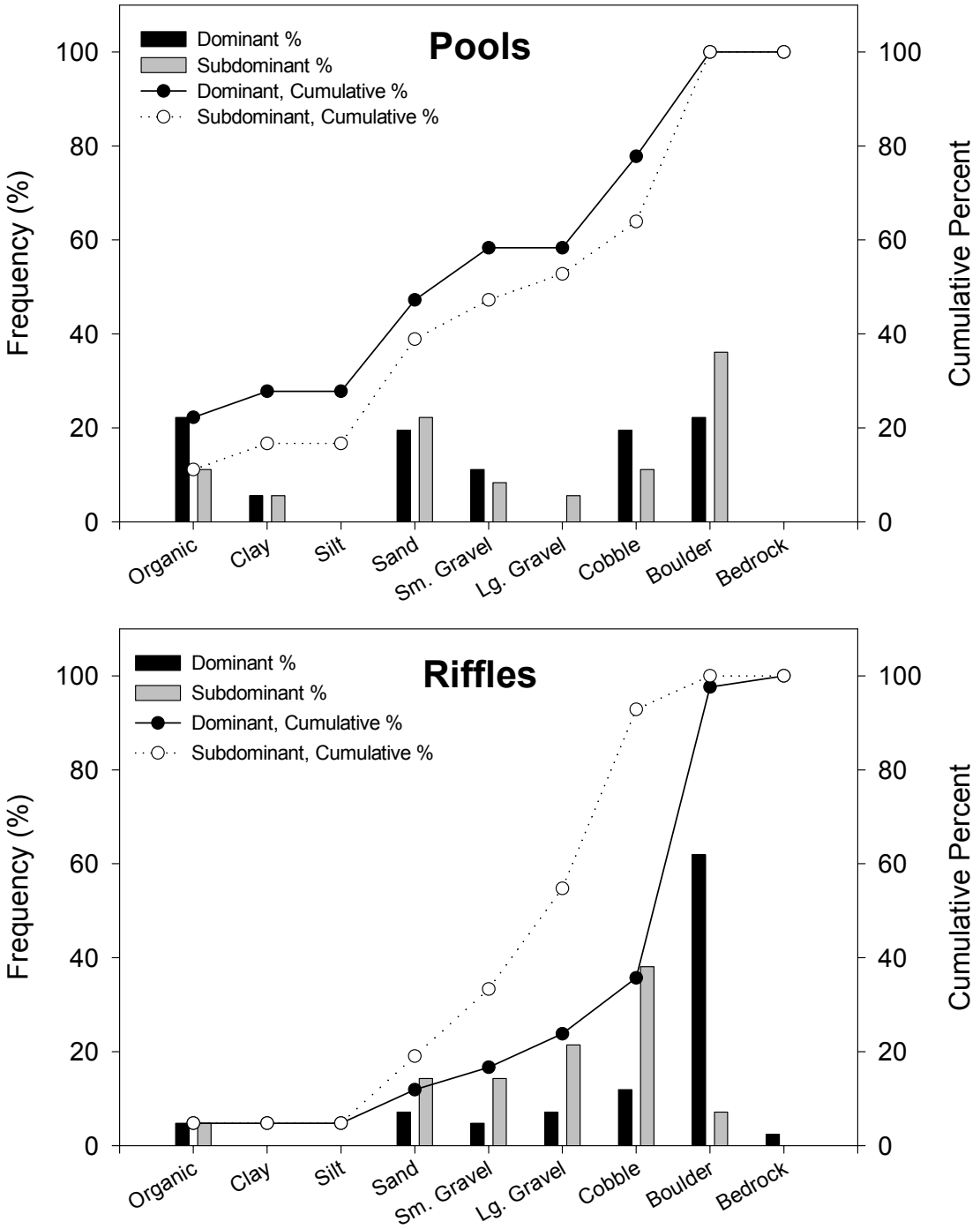
Maximum and average depths and residual pool depths for pools and riffles in Morgan Run, summer 2001. The top and bottom of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data.



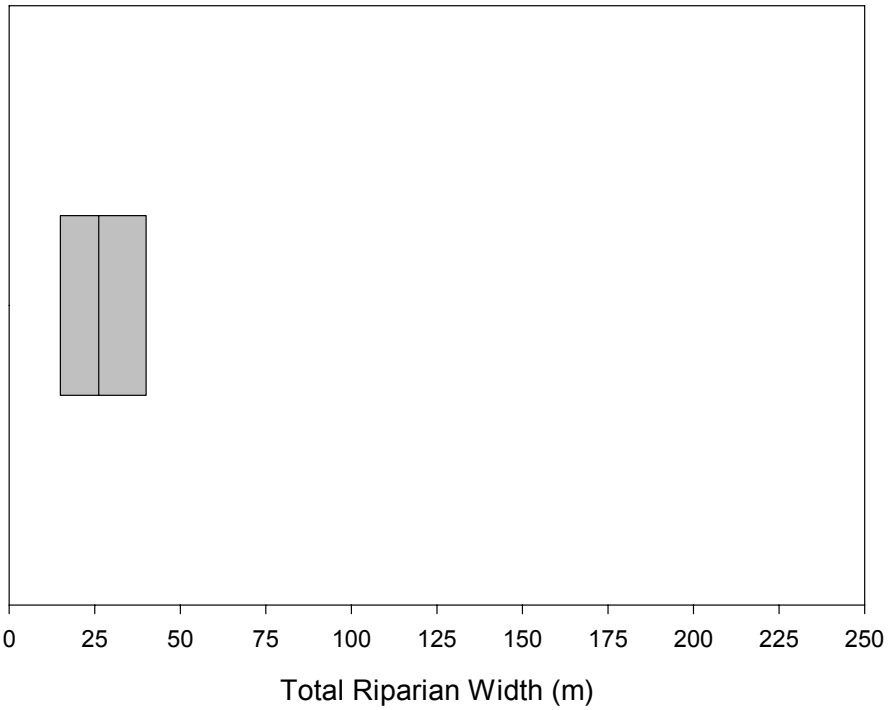
LWD per kilometer in Morgan Run, summer 2001. Y-axis labels are LWD size classes with the first number indicating length and the second number indicating diameter.



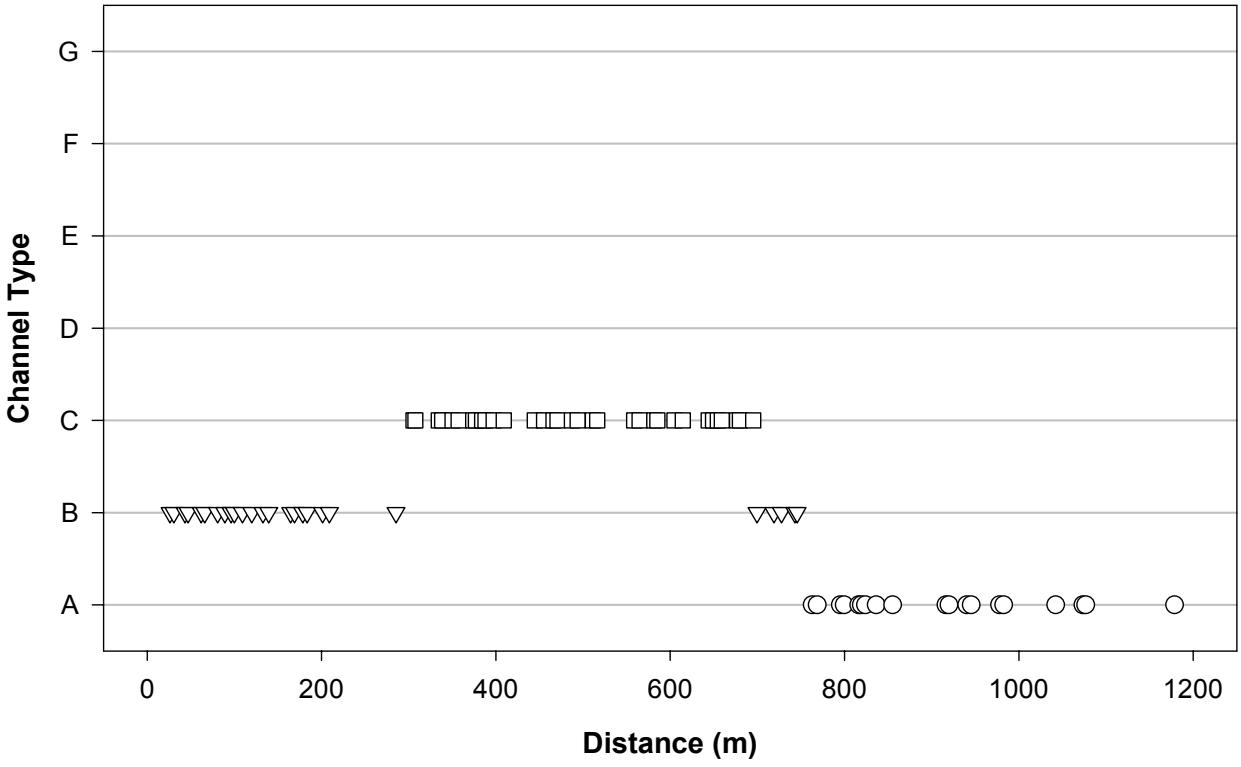
Distribution and abundance of LWD in each habitat unit of Morgan Run, summer 2001. Bars below the x-axis represent the amount of the total LWD that was >5 m in length, >55 cm in diameter. X-axis indicates distance upstream from confluence w/Cub Run.



Frequency (percent) and cumulative percent of dominant and subdominant substrate occurrence for pools and riffles in Morgan Run, summer 2001.



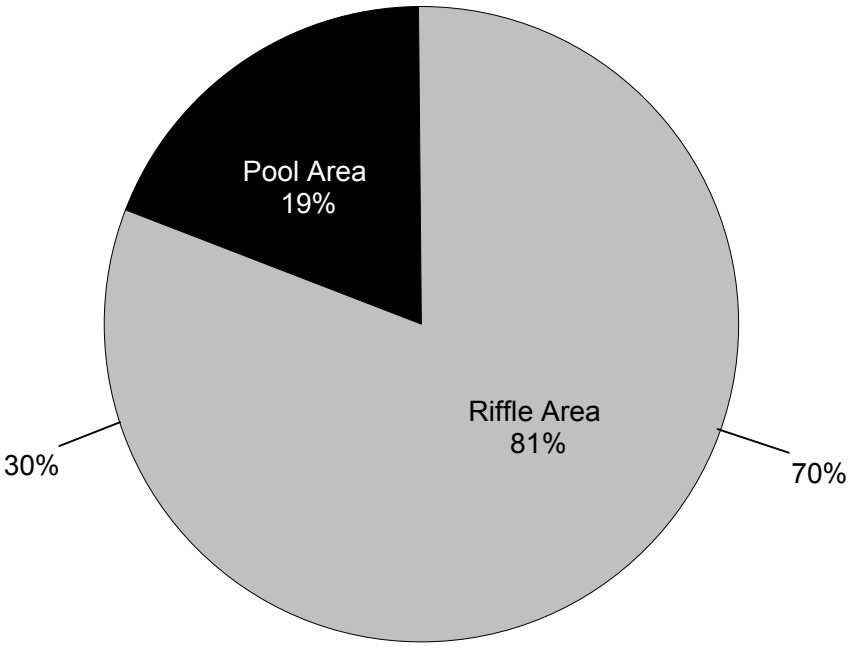
Total riparian widths (left riparian width+right riparian width+wetted channel width) for Morgan Run, summer 2001. The left and right of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data. Sample size = 4.



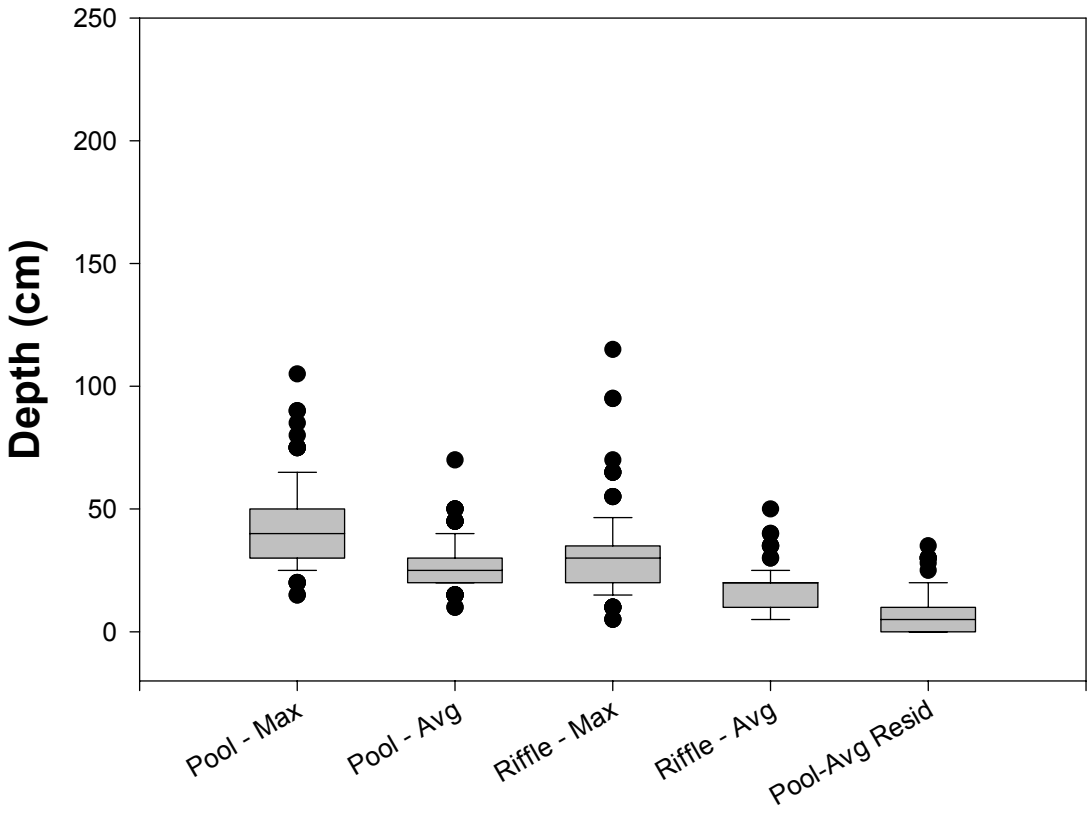
Rosgen's channel classification for each habitat unit in Morgan Run, summer 2001. X-axis indicates distance upstream from confluence w/Cub Run.

Stream:	**Pitt Spring Run**
District:	Lee
Quadrangle:	Tenth Legion
Survey Date:	08/07/01
Downstream Starting Point:	Confluence w/ Cub Run
Total Distance Surveyed (km):	4.6
Percent of Total Area Pools:	**19**
Number of Pools:	127
Number of Pools per km:	28
Total Pool Area (m^2):	2940 ± 187
Mean Pool Area (m^2):	23
Correction Factor:	0.90
Mean Maximum Depth (cm):	42
Mean Average Depth (cm):	27
Mean Residual Pool Depth (cm):	7
Percent of Total Area Riffles:	**81**
Number of Riffles:	124
Number of Riffles per km:	27
Total Riffle Area (m^2):	12196 ± 1946
Mean Riffle Area (m^2):	98
Correction Factor:	1.04
Mean Maximum Depth (cm):	31
Mean Average Depth (cm):	18
Number of LWD pieces per km:	**73**
LWD < 5 m, < 55 cm:	28
LWD < 5 m, > 55 cm:	28
LWD > 5 m, < 55 cm:	6
LWD > 5 m, > 55 cm:	11
Mean Channel Width (m):	**5**
Mean Riparian Width (m) (Total*):	**13**
Maximum Riparian Width (Total):	24
75th Percentile (Total)	15
25th Percentile (Total)	10
Minimum Riparian Width (Total):	7
Mean Riparian Width (m) (Left, Right):**	**4**
Maximum Riparian Width (Left, Right):	18
75th Percentile (Left, Right)	4
25th Percentile (Left, Right)	1
Minimum Riparian Width (Left, Right):	1
Percent of Pool Habitat Surveyed as Glides:	**23**
Rosgen's Channel Type Frequency (%):	
Type A:	72
Type B:	21
Type C:	7
Type D:	0
Type E:	0
Type F:	0
Type G:	0
Percent Pools with > 35% Embeddedness:	**91**
Average Channel Gradient (%):	**6**

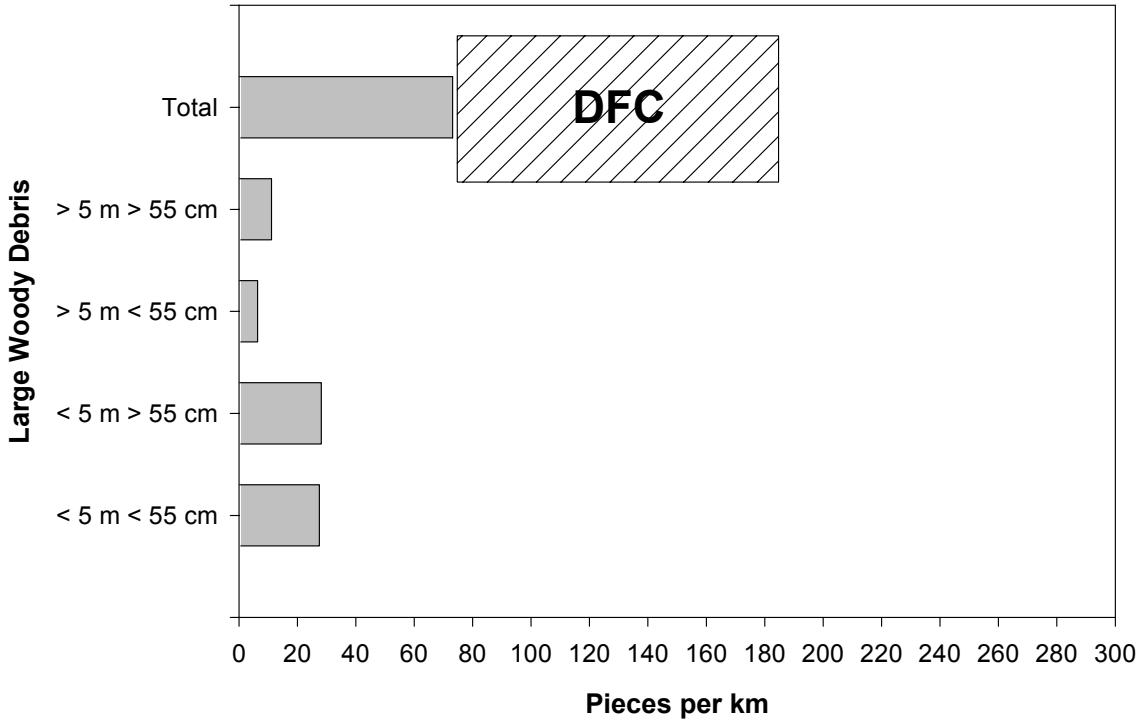
*Calculation sums left riparian + right riparian + stream channel
**Calculation pools left and right riparian measurements, does not sum them



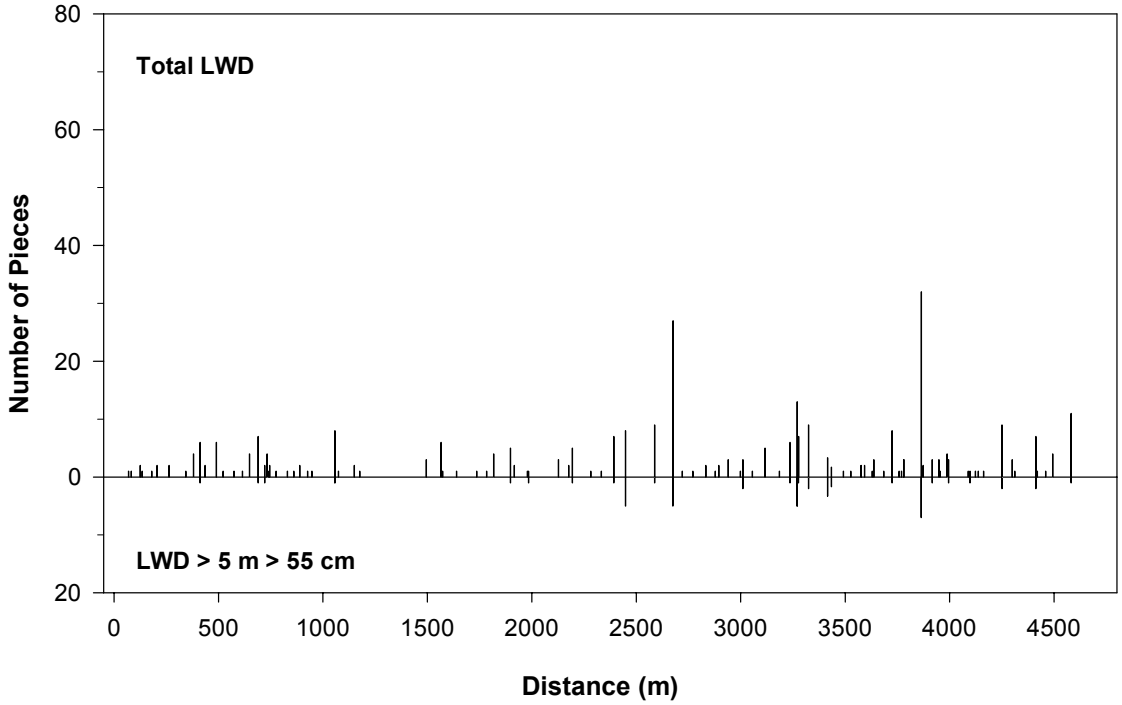
Estimated area of Pitt Spring Run in pools and riffles as calculated using BVET techniques, summer 2001.



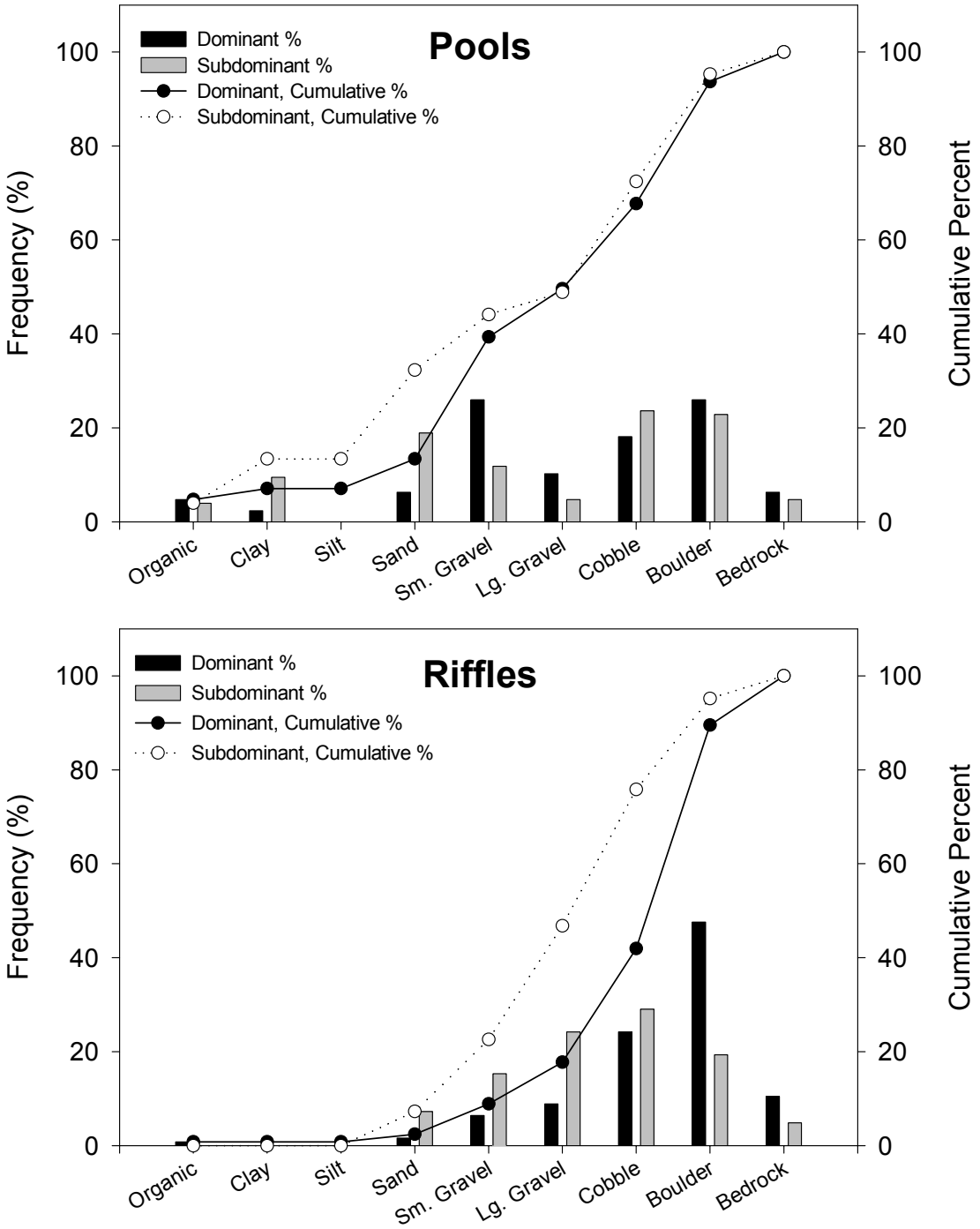
Maximum and average depths and residual pool depths for pools and riffles in Pitt Spring Run, summer 2001. The top and bottom of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data.



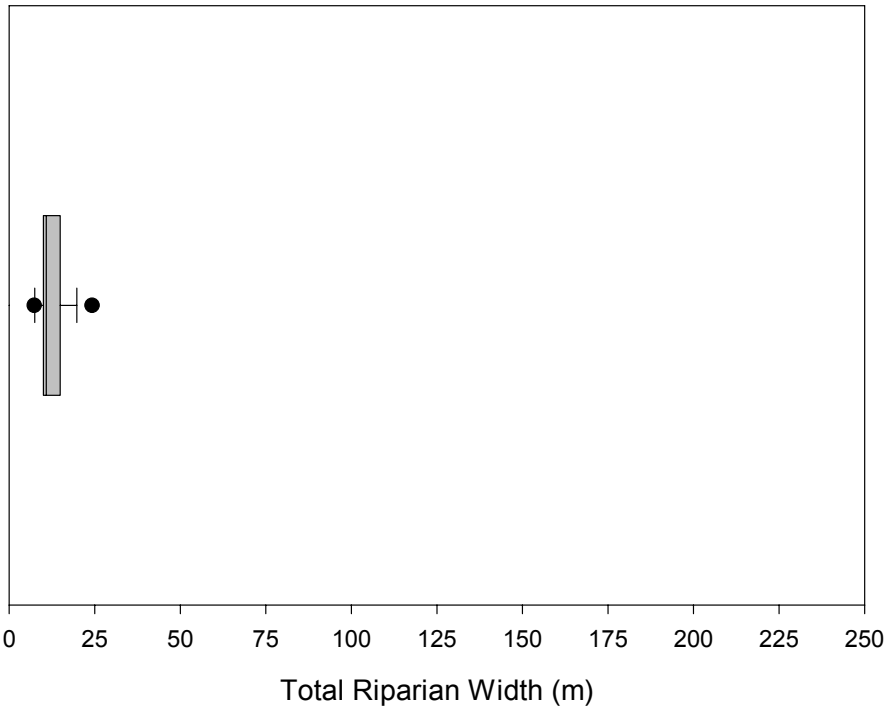
LWD per kilometer in Pitt Spring Run, summer 2001. Y-axis labels are LWD size classes with the first number indicating length and the second number indicating diameter.



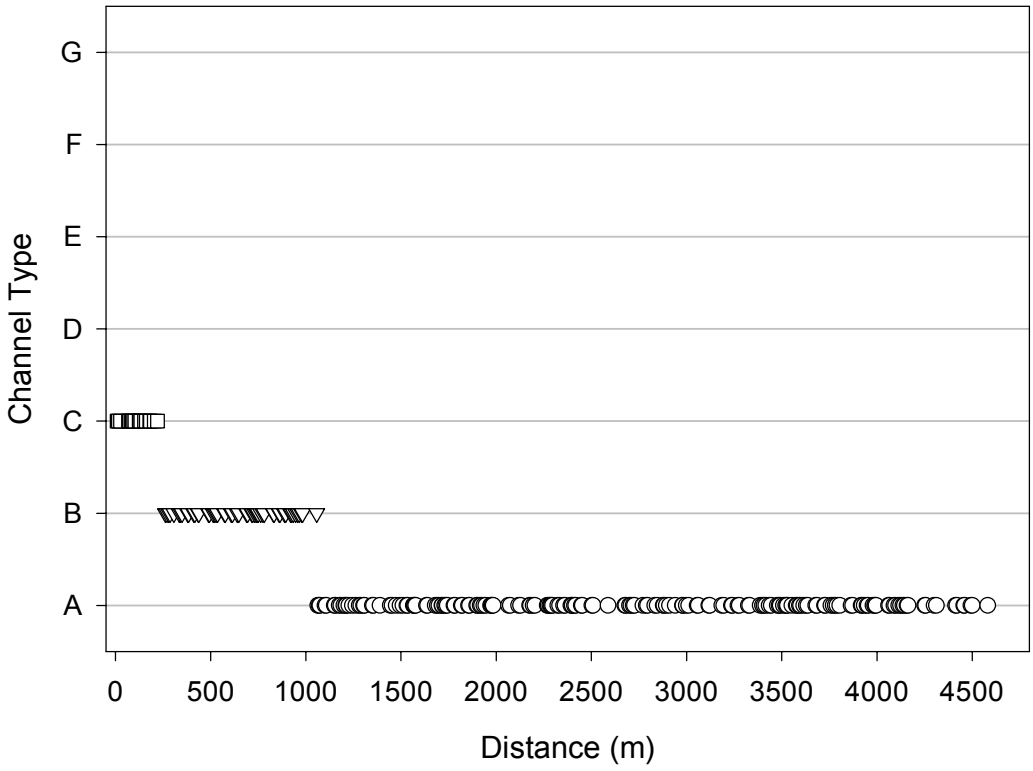
Distribution and abundance of LWD in each habitat unit of Pitt Spring Run, summer 2001. Bars below the x-axis represent the amount of the total LWD that was >5 m in length, >55 cm in diameter. X-axis indicates distance upstream of confluence with Cub Run.



Frequency (percent) and cumulative percent of dominant and subdominant substrate occurrence for pools and riffles in Pitt Spring Run, summer 2001.



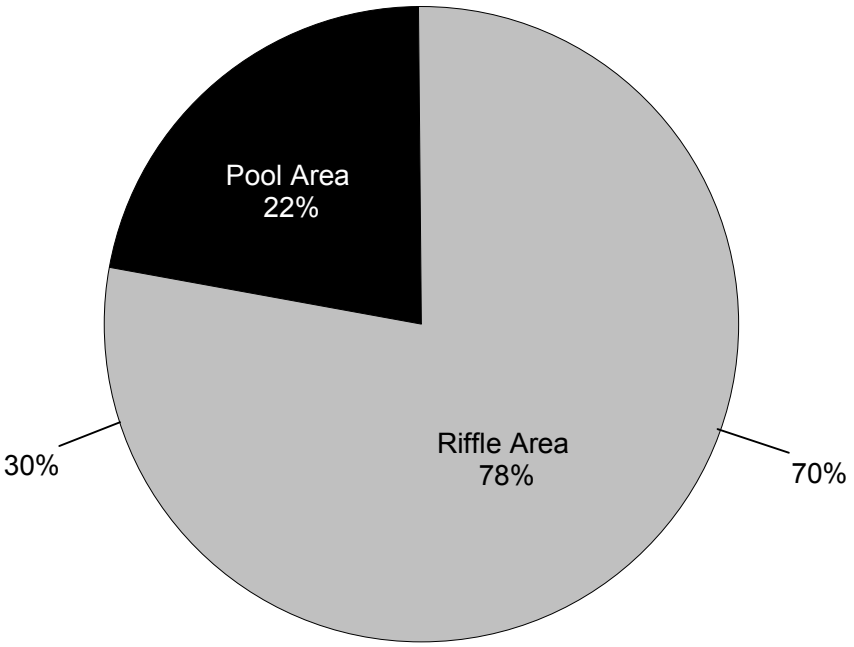
Total riparian widths (left riparian width+right riparian width+wetted channel width) for Pitt Spring Run, summer 2001. The left and right of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data. Sample size = 10.



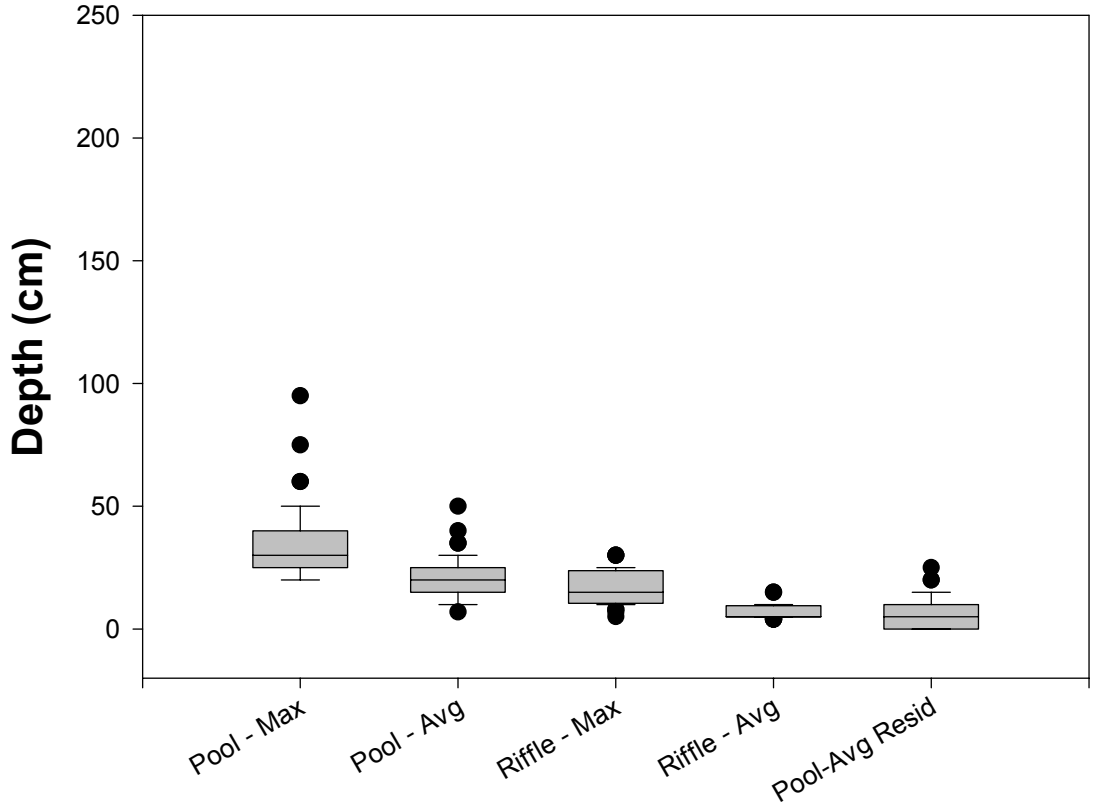
Rosgen's channel classification for each habitat unit in Pitt Spring Run, summer 2001. X-axis indicates distance upstream of confluence with Cub Run.

Stream:	**Roaring Run**
District:	Lee
Quadrangle:	Tenth Legion
Survey Date:	07/18/01
Downstream Starting Point:	Confluence w/Cub Run
Total Distance Surveyed (km):	2.0
Percent of Total Area Pools:	**22**
Number of Pools:	58
Number of Pools per km:	29
Total Pool Area (m^2):	1006 ± 105
Mean Pool Area (m^2):	17
Correction Factor:	0.97
Mean Maximum Depth (cm):	34
Mean Average Depth (cm):	20
Mean Residual Pool Depth (cm):	7
Percent of Total Area Riffles:	**78**
Number of Riffles:	55
Number of Riffles per km:	27
Total Riffle Area (m^2):	3599 ± 631
Mean Riffle Area (m^2):	65
Correction Factor:	1.02
Mean Maximum Depth (cm):	17
Mean Average Depth (cm):	7
Number of LWD pieces per km:	**60**
LWD < 5 m, < 55 cm:	26
LWD < 5 m, > 55 cm:	19
LWD > 5 m, < 55 cm:	6
LWD > 5 m, > 55 cm:	8
Mean Channel Width (m):	**5**
Mean Riparian Width (m) (Total*):	**16**
Maximum Riparian Width (Total):	23
75th Percentile (Total)	19
25th Percentile (Total)	12
Minimum Riparian Width (Total):	8
Mean Riparian Width (m) (Left, Right):**	**6**
Maximum Riparian Width (Left, Right):	11
75th Percentile (Left, Right)	9
25th Percentile (Left, Right)	2
Minimum Riparian Width (Left, Right):	1
Percent of Pool Habitat Surveyed as Glides:	**26**
Rosgen's Channel Type Frequency (%):	
Type A:	0
Type B:	29
Type C:	71
Type D:	0
Type E:	0
Type F:	0
Type G:	0
Percent Pools with > 35% Embeddedness:	**74**
Average Channel Gradient (%):	**5**

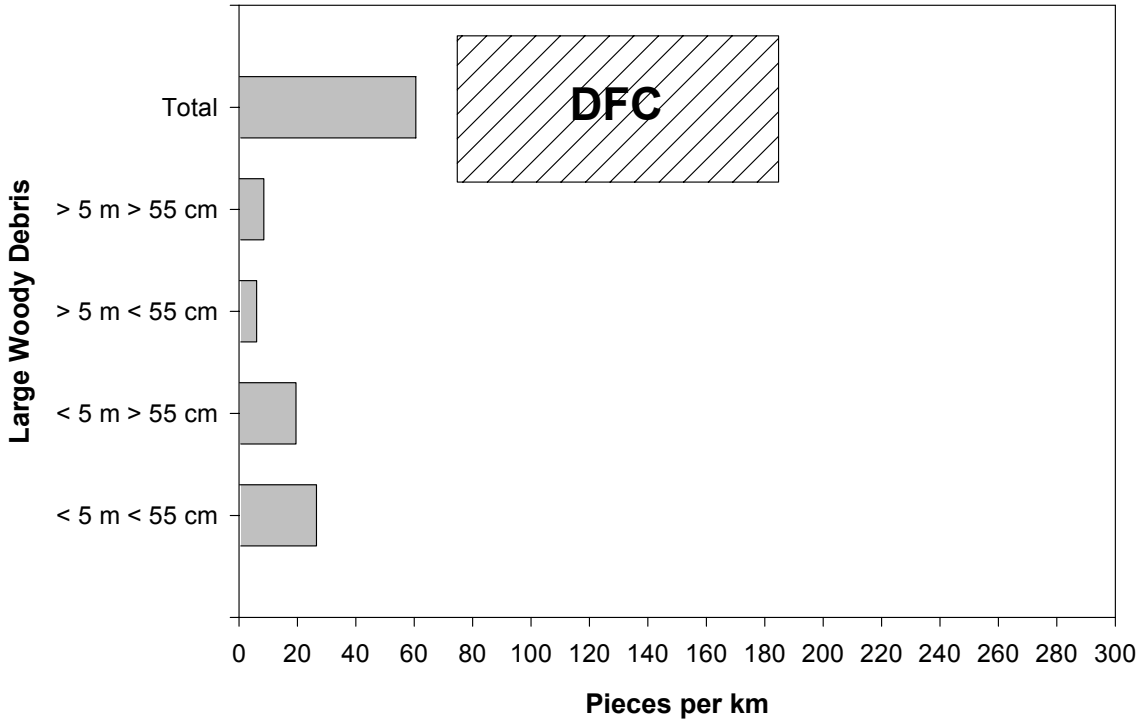
*Calculation sums left riparian + right riparian + stream channel
**Calculation pools left and right riparian measurements, does not sum them



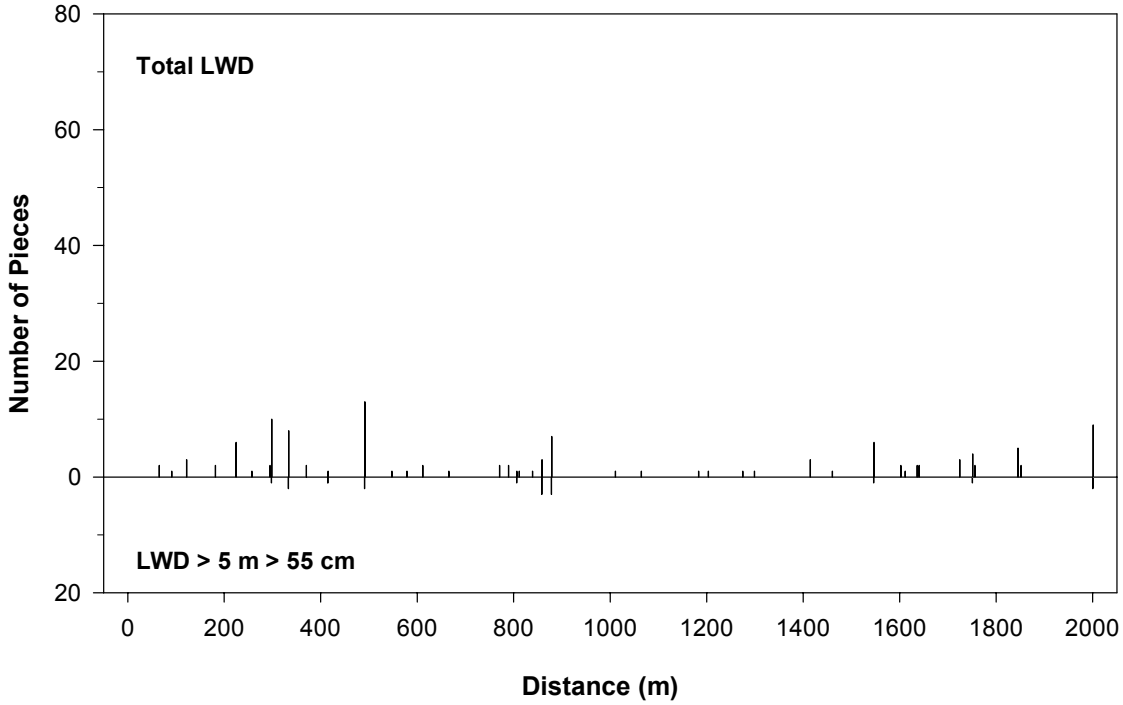
Estimated area of Roaring Run in pools and riffles as calculated using BVET techniques, summer 2001.



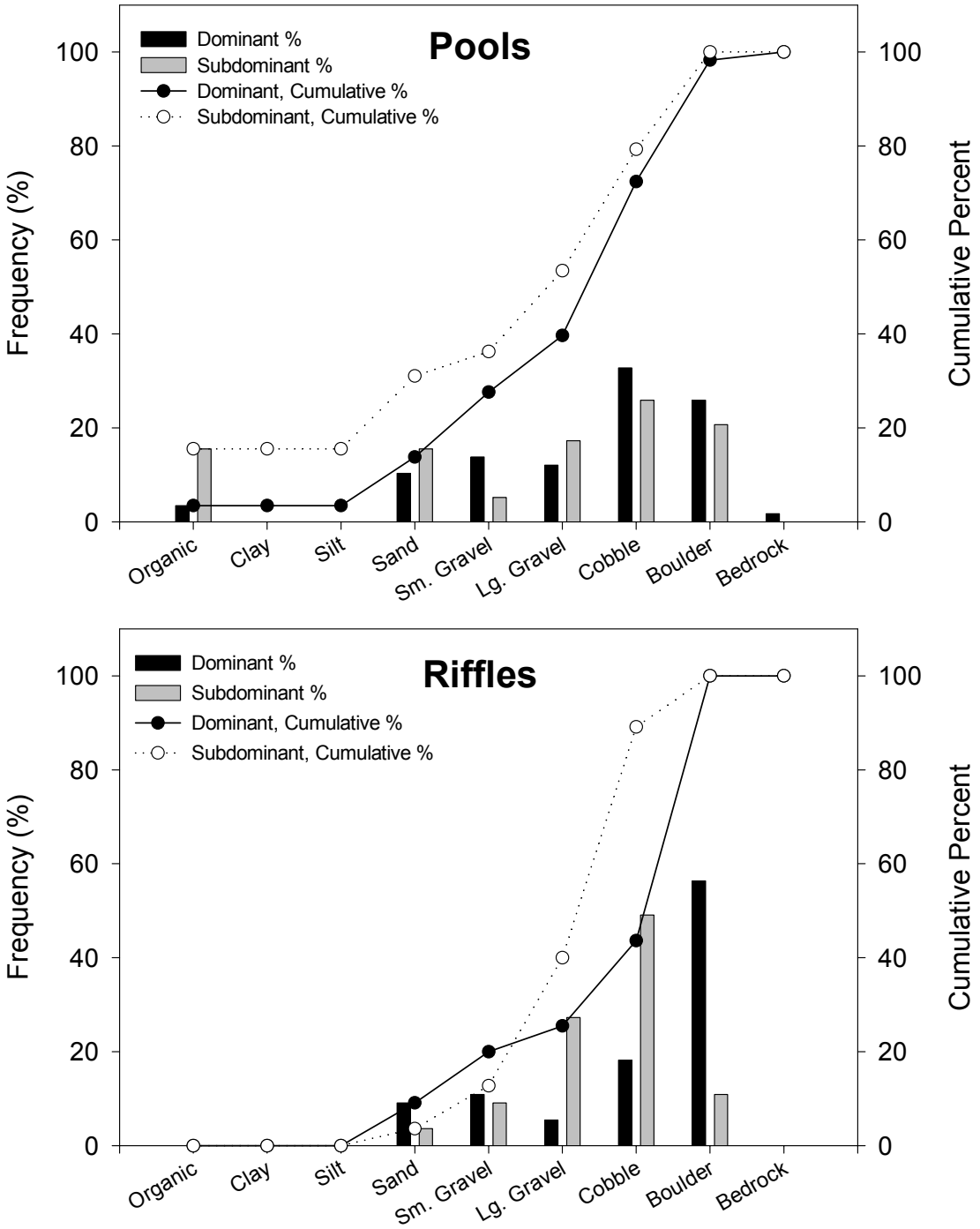
Maximum and average depths and residual pool depths for pools and riffles in Roaring Run, summer 2001. The top and bottom of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data.



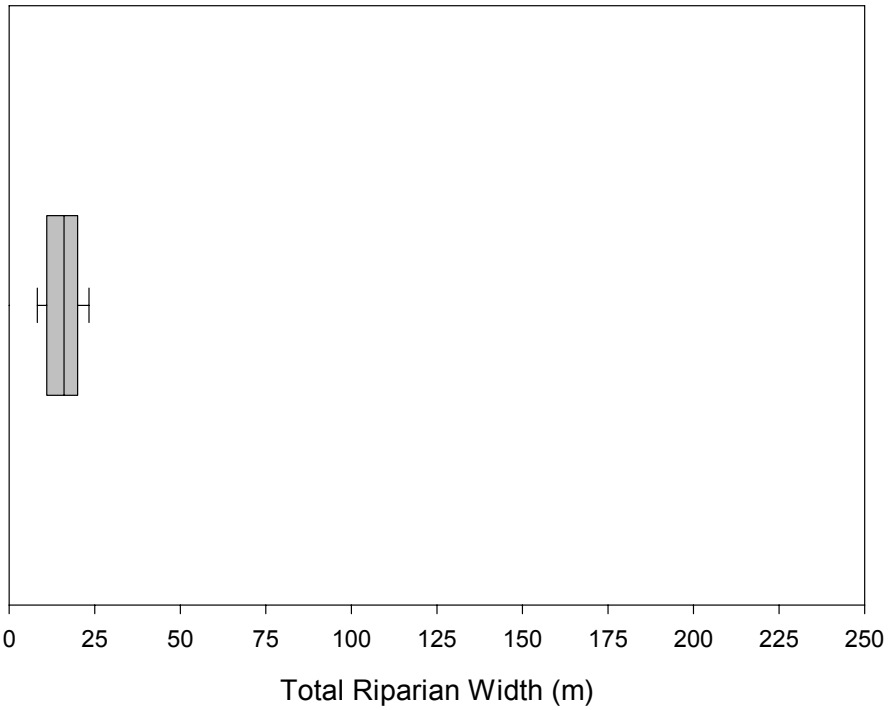
LWD per kilometer in Roaring Run, summer 2001. Y-axis labels are LWD size classes with the first number indicating length and the second number indicating diameter.



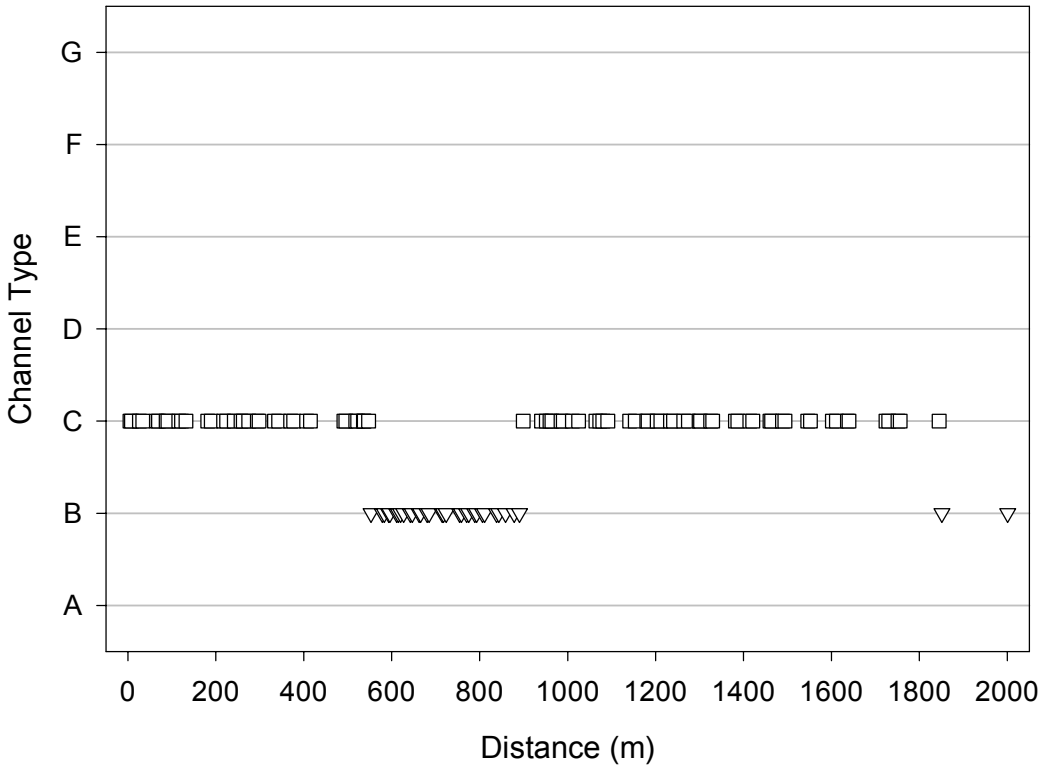
Distribution and abundance of LWD in each habitat unit of Roaring Run, summer 2001. Bars below the x-axis represent the amount of the total LWD that was >5 m in length, >55 cm in diameter. X-axis indicates distance upstream of confluence w/Cub Run.



Frequency (percent) and cumulative percent of dominant and subdominant substrate occurrence for pools and riffles in Roaring Run, summer 2001.



Total riparian widths (left riparian width+right riparian width+wetted channel width) for Roaring Run, summer 2001. The left and right 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. Sample size = 5.



Rosgen's channel classification for each habitat unit in Roaring Run, summer 2001. X-axis indicates distance upstream of confluence w/Cub Run.

Acknowledgements

We would like to thank the CATT summer field crew for collecting all of the data presented in this report. The field crew included Margie Brophy, Seth Coffman, Josh Duty, Eric Fitzpatrick, Chad Holbrook, Nate Johnson, John Romberg, Meg Runion, Kevin Simms, and Andrew Skelton. In addition, we thank Dawn Kirk all the persons from the Lee District that provided us with logistical assistance throughout the project.