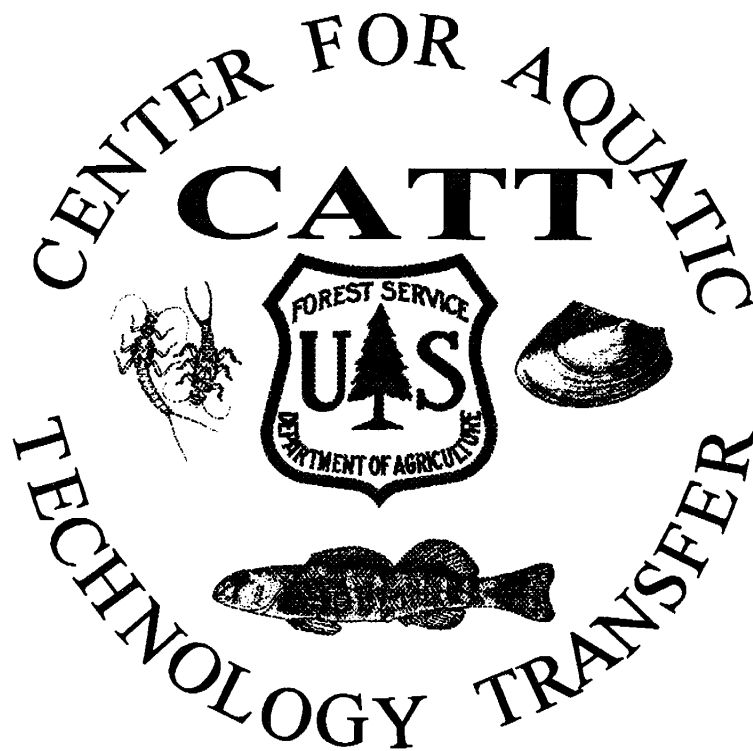


**Summary of Basinwide Surveys in Peak and Indian Grave Creek, Blacksburg
Ranger District, George Washington - Jefferson National Forest**



United States Department of Agriculture Forest Service
Center for Aquatic Technology Transfer
Department of Fisheries and Wildlife Sciences
Virginia Tech, Blacksburg, VA 24061-0321

Stream: Peak Creek

District: Old Wythe Ranger District

Quadrangle: Pulaski

Sample Date: 11/04/98

Downstream Starting Point: Crickett Hollow

Total Distance Surveyed: 1.29 kilometers

Percent of Total Area - Pools: 85.2%

Number of Pools: 25

Number of Pools per kilometer: 19

Total Pool Area: 9,934.16 sq. meters \pm 462.5

Mean Pool Area: 397.36 sq. meters

Correction Factor: 1.05

Mean Maximum Depth: 65.0 cm

Mean Average Depth: 45.2 cm

Mean Average Residual Pool Depth: 32.9 cm

Percent of Total Area - Riffles: 14.8%

Number of Riffles: 15

Number of Riffles per kilometer: 12

Total Riffle Area: 1,732.14 sq. meters \pm 302.9

Mean Riffle Area: 115.5 sq. meters

Correction Factor: 0.83

Mean Maximum Depth: 27.3 cm

Mean Average Depth: 17.7

Number of Large Woody Debris Pieces per kilometer: 149.0

Wood < 5 m and < 55 cm: 81.5

Wood < 5 m and > 55 cm: 2.3

Wood > 5 m and < 55 cm: 54.3

Wood > 5 m and > 55 cm: 10.9

Mean Channel Width: 8.1 m

Mean Riparian Width: 41.8 m

Mean Maximum Riparian Distance (either side): 27.8 m

Mean Minimum Riparian Distance (either side): 5.4 m

Maximum Riparian Width (Total): 64.5 m

Minimum Riparian Width (Total): 24.0 m

Peak Creek Continued.

Percent of Pool Habitat Surveyed as Glides: 6.6%

Rosgen's Channel Type Frequency:

Channel Type A:

Channel Type B: 50.0%

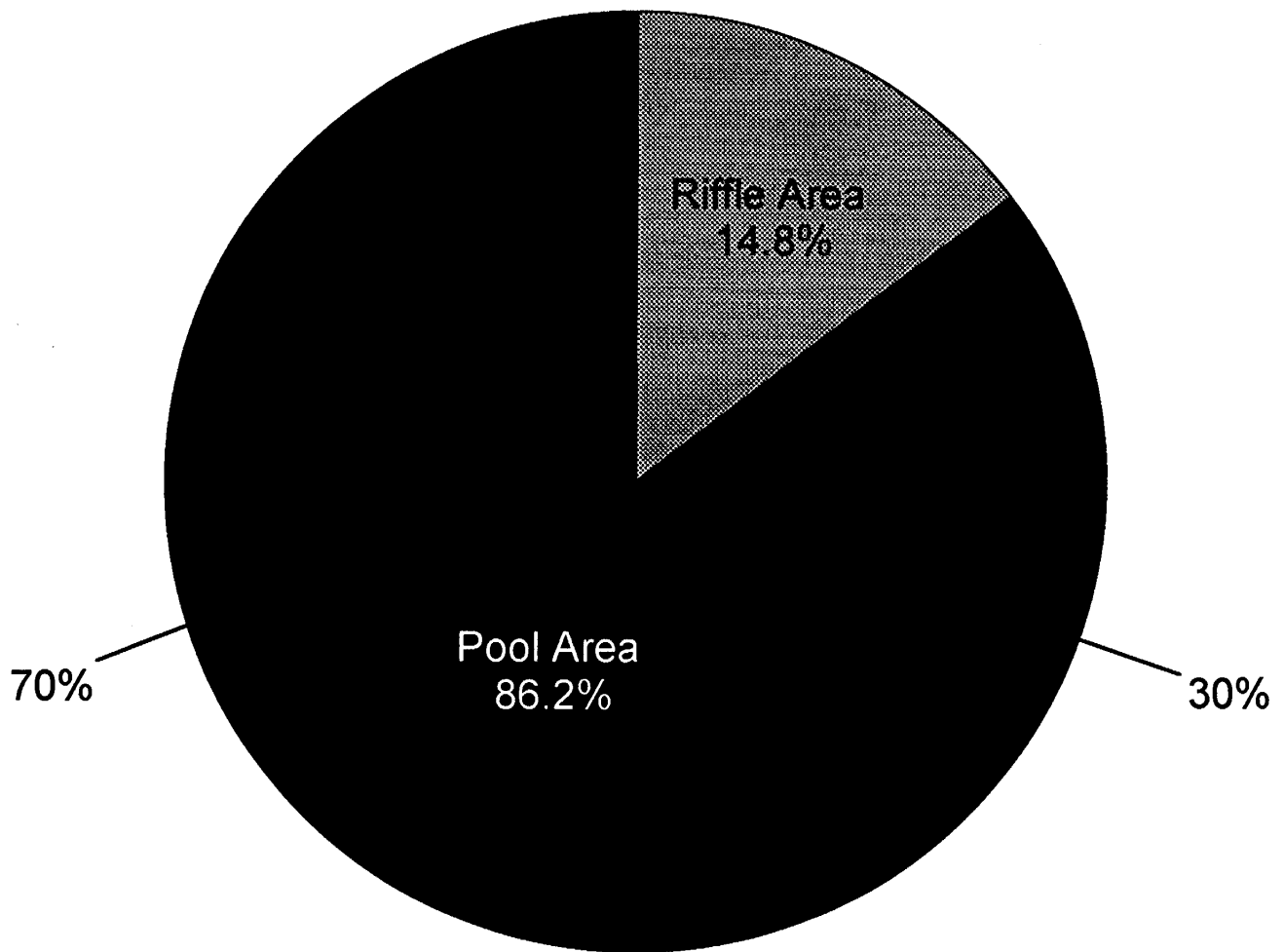
Channel Type C: 50.0%

Channel Type D:

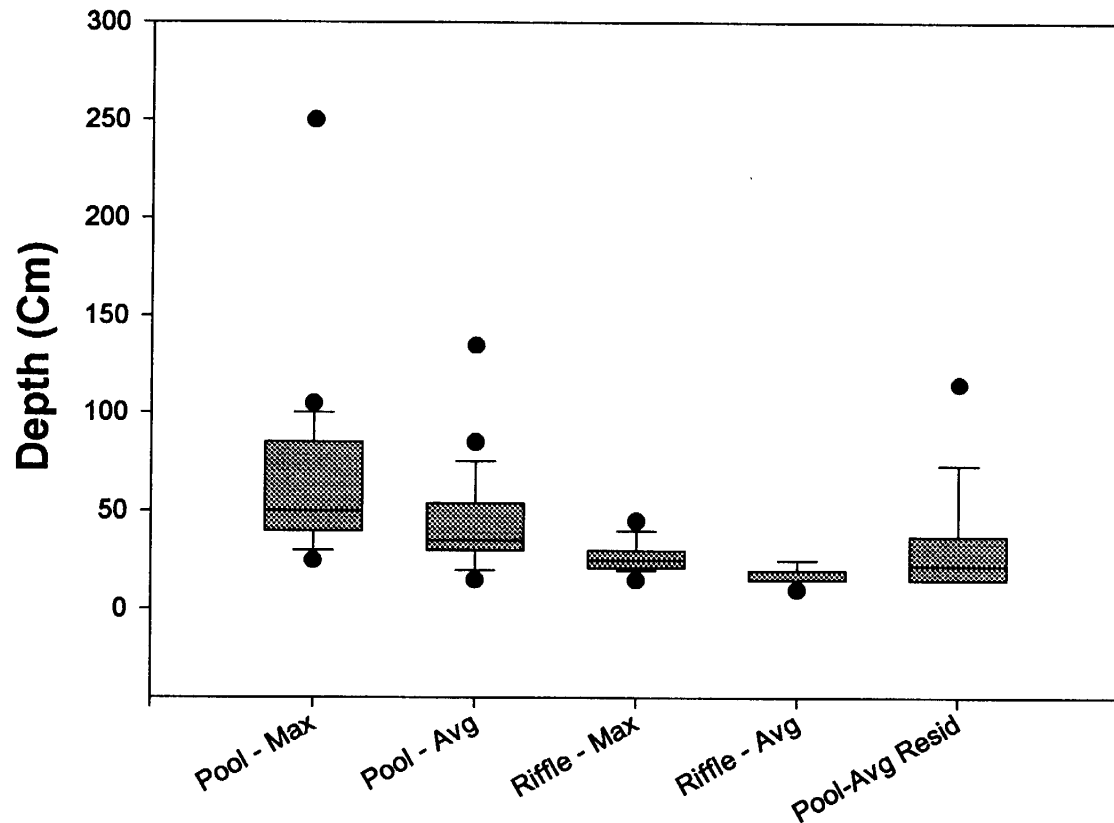
Percent Pools with \geq 35% Embeddedness: 24.0%

Average Channel Gradient: N/A

**Peak Creek
Pool:Riffle Ratio
DFC: 30 - 70% of the Stream Area
in Pool Habitat**

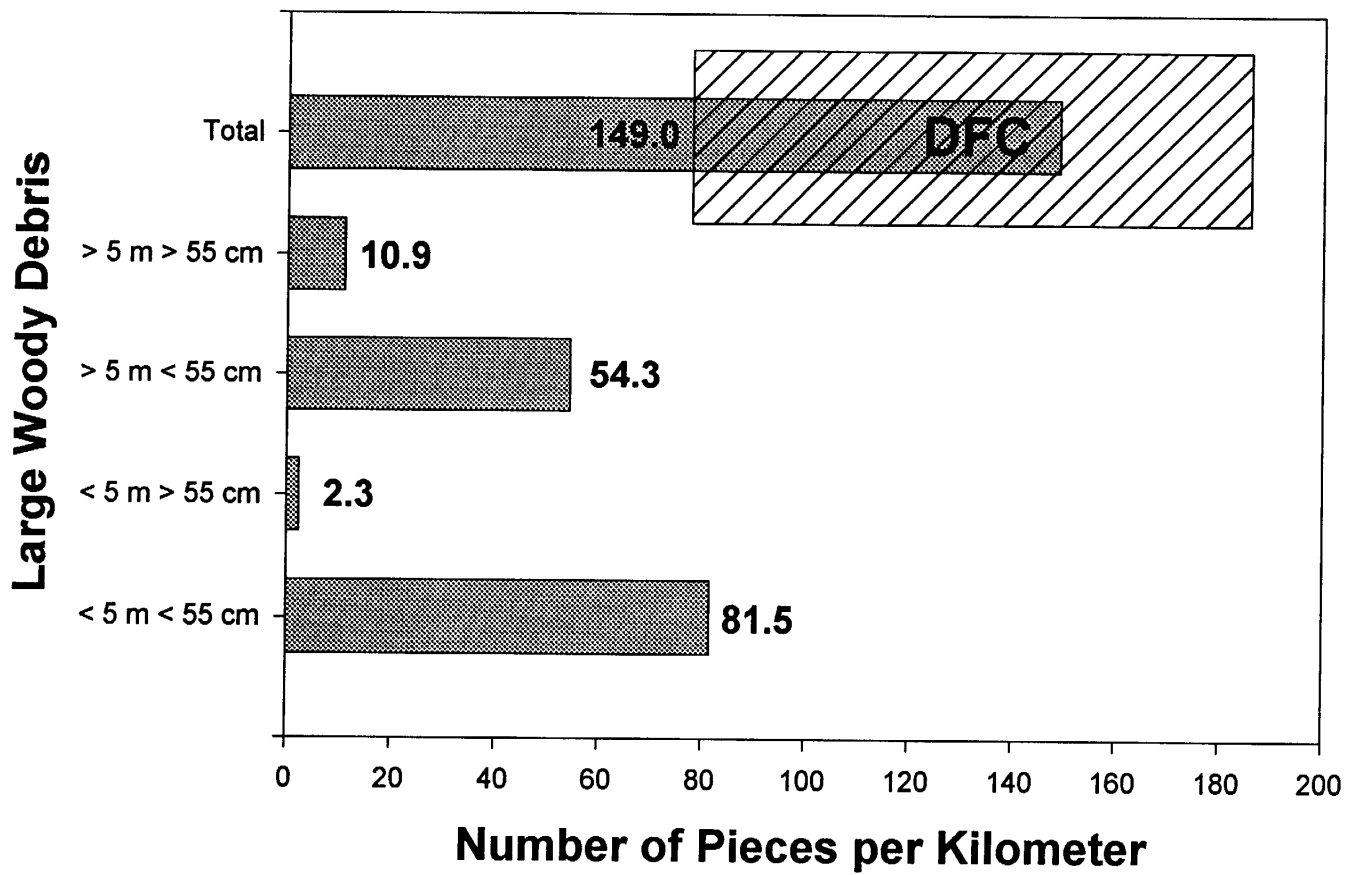


Peak Creek

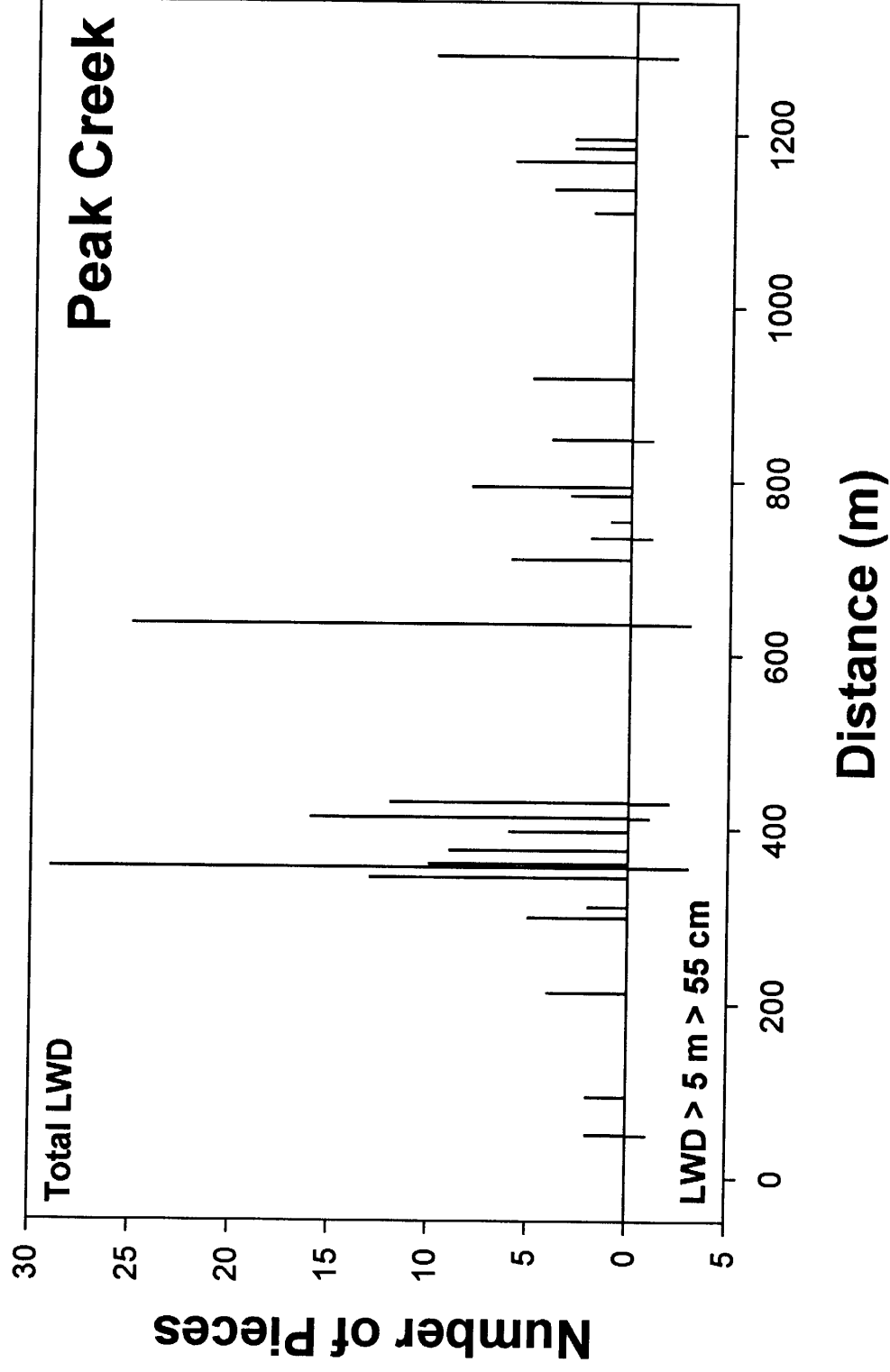


Box plots representing maximum and average depths for pools and riffles, and average residual pool depths for this stream. The boxes enclose the middle 50% of the observations, the bar in the center of the boxes represent the median, and the capped lines extending above and below the boxes represent the 90% and 10% quantiles.

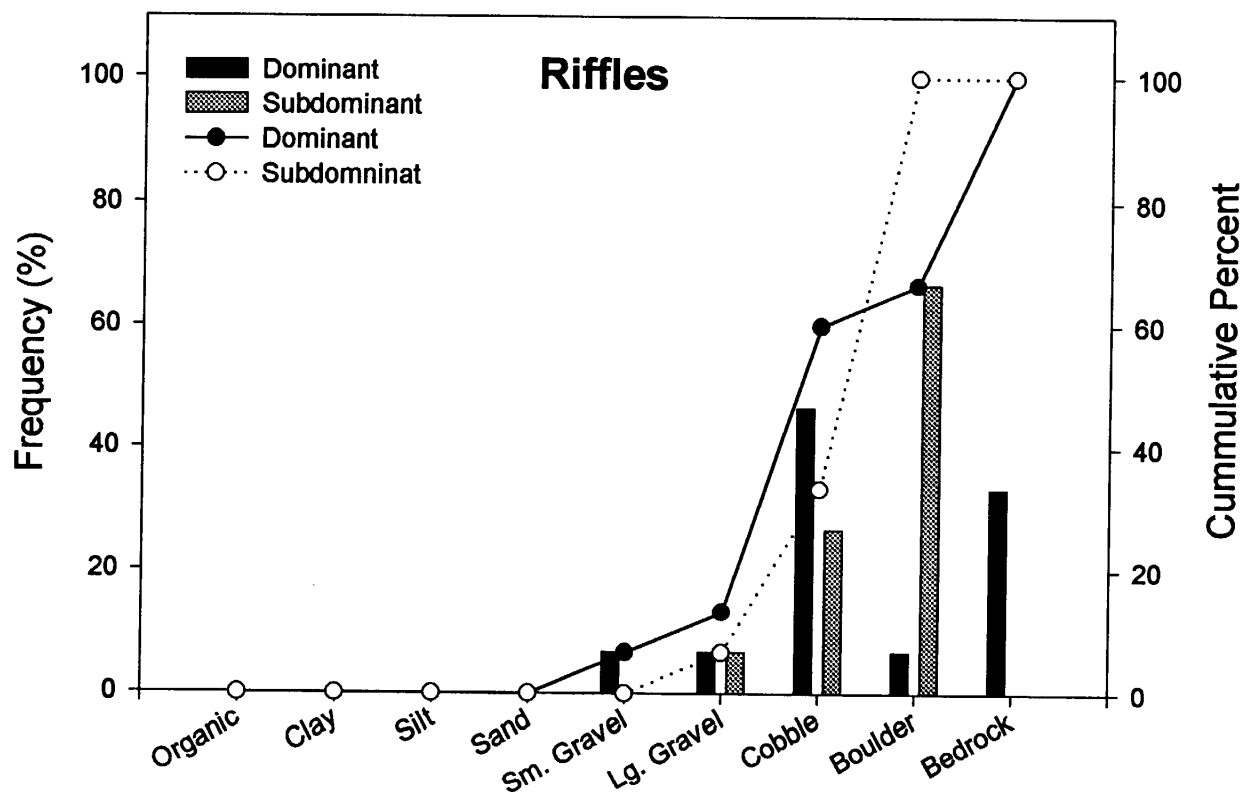
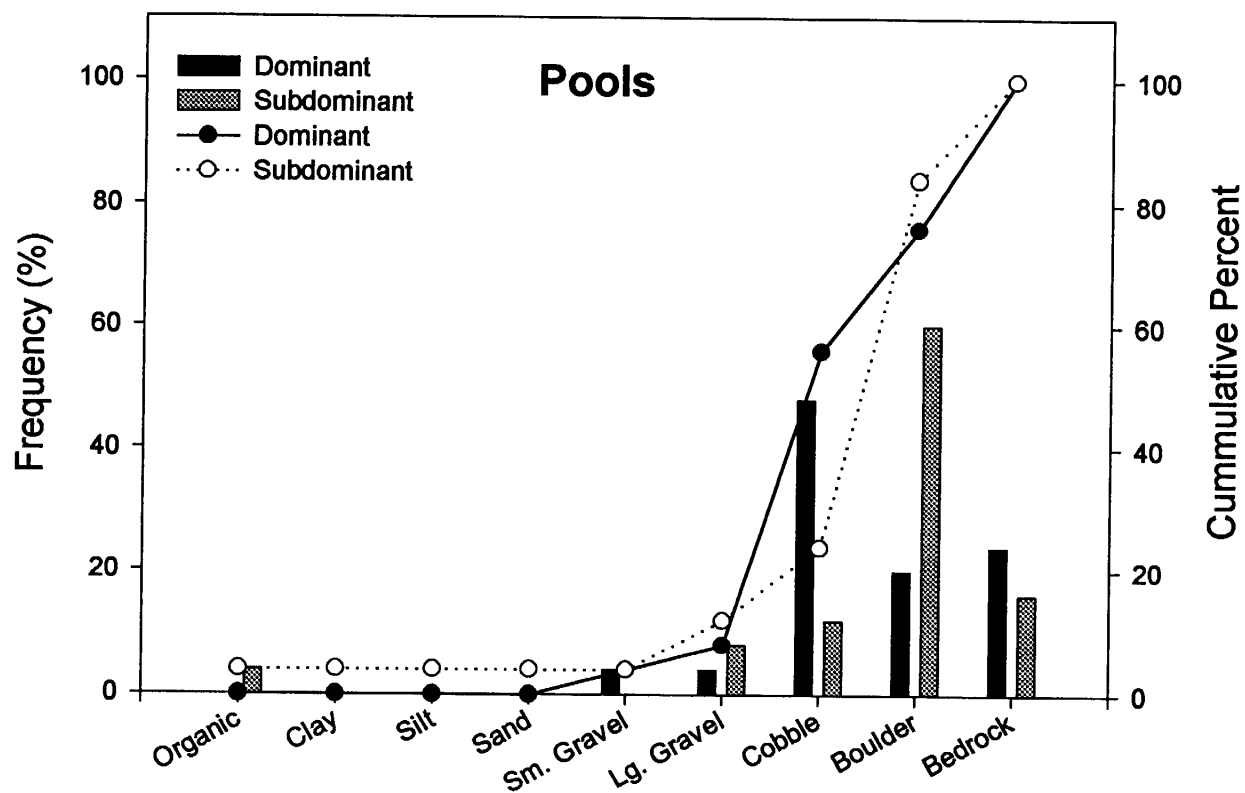
Peak Creek



Distribution and Abundance of Large Woody Debris



Peak Creek Substrate Composition



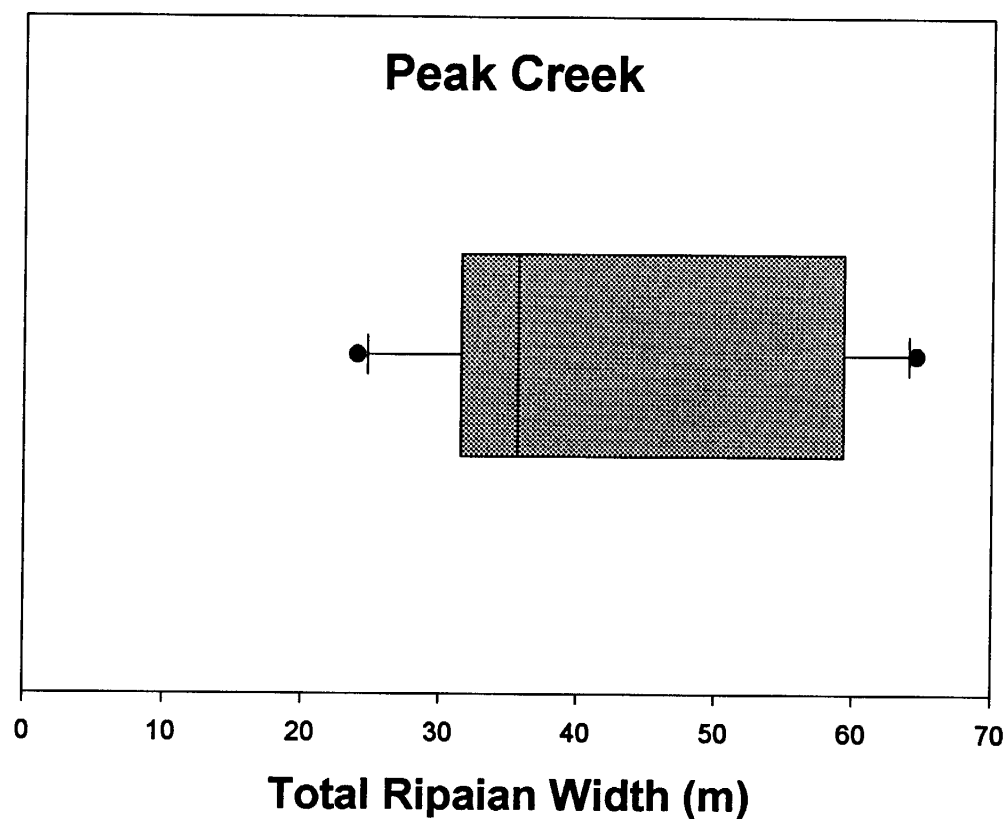
Riparian Width

Stream: Peak Creek

Number of Measurements: 6

Mean Width: 41.8 Std Dev: 16.4

Max: 64.5 Min: 24.0



Box plot of total riparian width. The box enclose the middle 50% of the observations, the bar in the center of the box represents the median, and the capped lines extending above and below the box represent the 90% and 10% quantiles.

Stream: Indian Grave Creek

District: Old Wythe Ranger District

Quadrangle: Pulaski

Sample Date: 11/04/98

Downstream Starting Point: Confluence with Peak Creek

Total Distance Surveyed: 3.18 kilometers

Percent of Total Area - Pools: 75.0%

Number of Pools: 141

Number of Pools per kilometer: 44

Total Pool Area: 7,151.6 sq. meters \pm 796.5

Mean Pool Area: 50.7 sq. meters

Correction Factor: 1.07

Mean Maximum Depth: 37.3 cm

Mean Average Depth: 20.5 cm

Mean Average Residual Pool Depth: 15.5 cm

Percent of Total Area - Riffles: 25.0%

Number of Riffles: 104

Number of Riffles per kilometer: 33

Total Riffle Area: 2,387.7 sq. meters \pm 273.5

Mean Riffle Area: 23.0 sq. meters

Correction Factor: 1.14

Mean Maximum Depth: 11.3 cm

Mean Average Depth: 5.1 cm

Number of Large Woody Debris Pieces per kilometer: 119.9

Wood < 5 m and < 55 cm: 64.5

Wood < 5 m and > 55 cm: 10.4

Wood > 5 m and < 55 cm: 36.5

Wood > 5 m and > 55 cm: 8.5

Mean Channel Width: 6.6 m

Mean Riparian Width: 36.8 m

Mean Maximum Riparian Distance (either side): 26.9 m

Mean Minimum Riparian Distance (either side): 3.3 m

Maximum Riparian Width (Total): 67.5 m

Indian Grave Creek Continued.

Percent of Pool Habitat Surveyed as Glides: 4%

Rosgen's Channel Type Frequency:

Channel Type A: 29.8%

Channel Type B: 51.8%

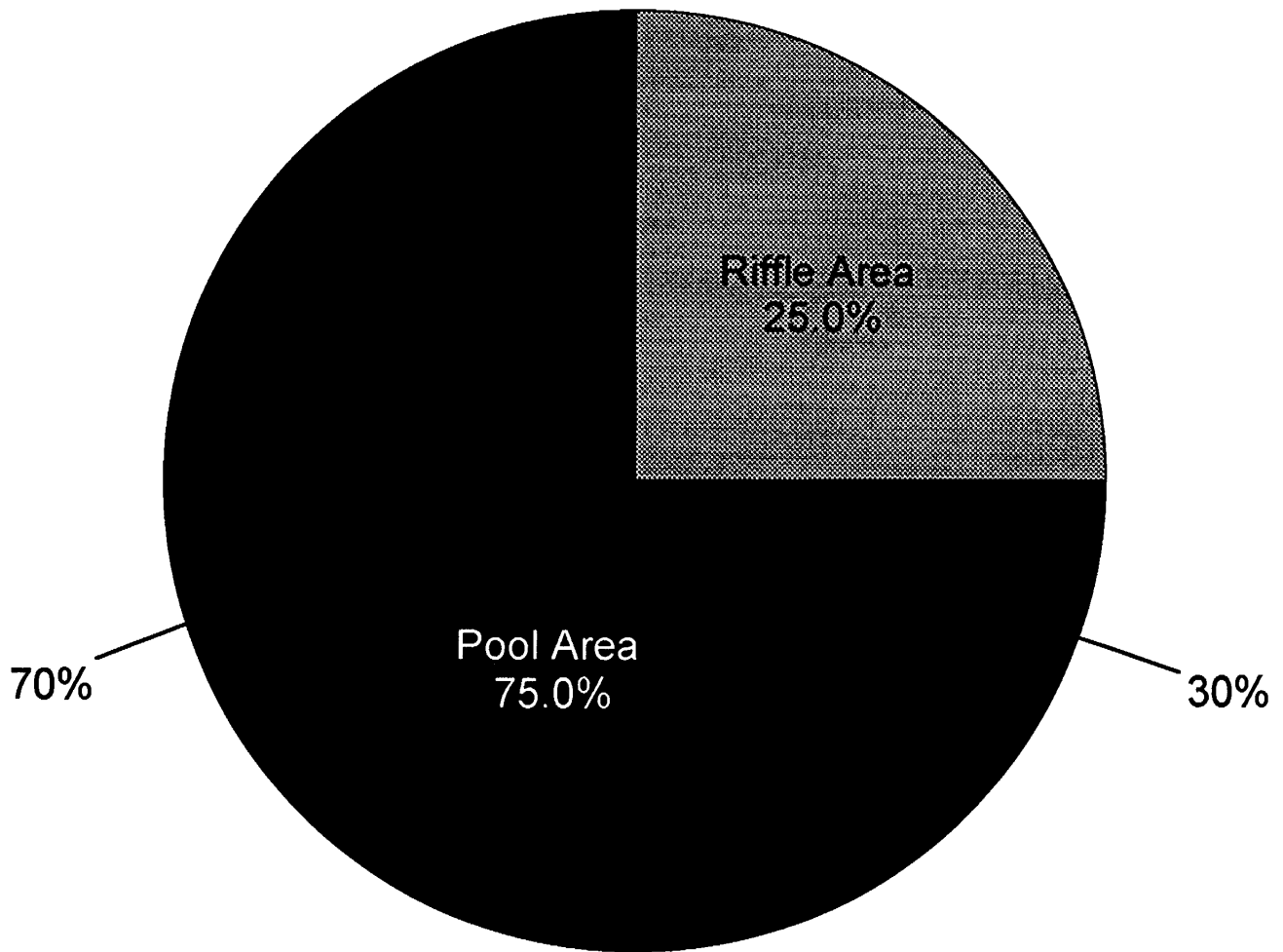
Channel Type C: 18.4%

Channel Type D:

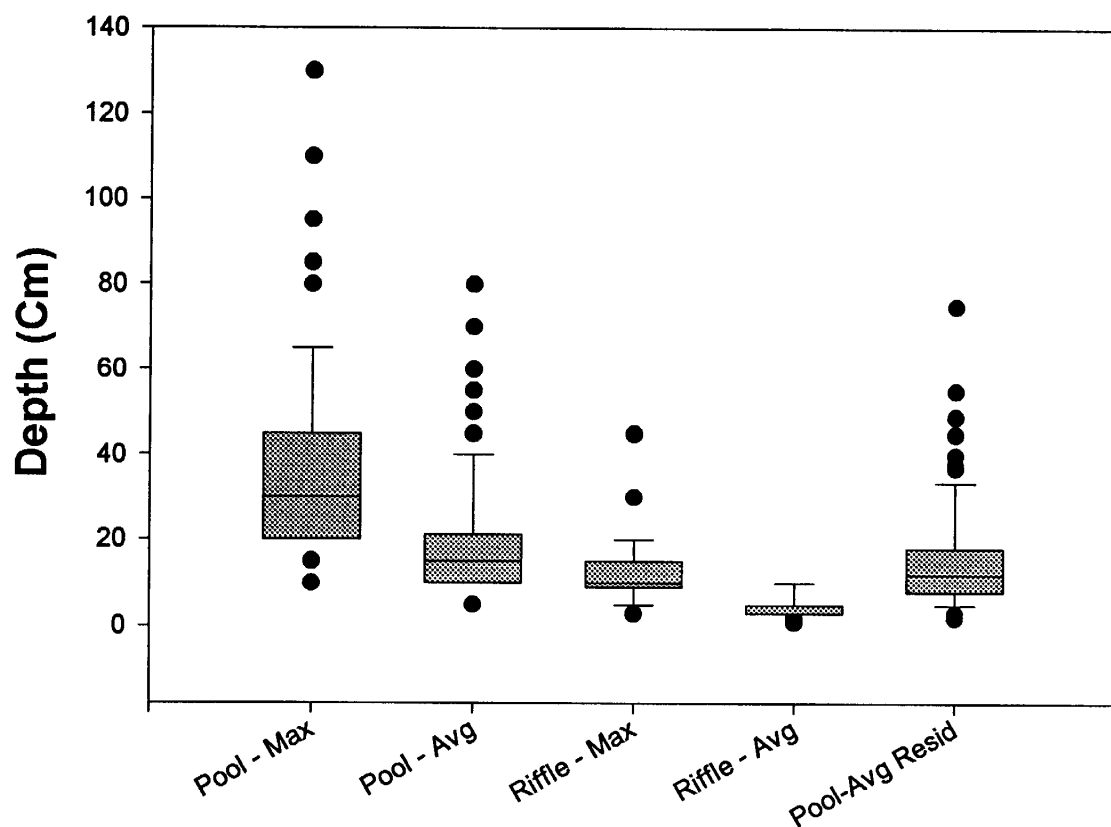
Percent Pools with \geq 35% Embeddedness: 5%

Average Channel Gradient: N/A

**Indian Grave Creek
Pool:Riffle Ratio
DFC: 30 - 70% of the Stream Area
in Pool Habitat**

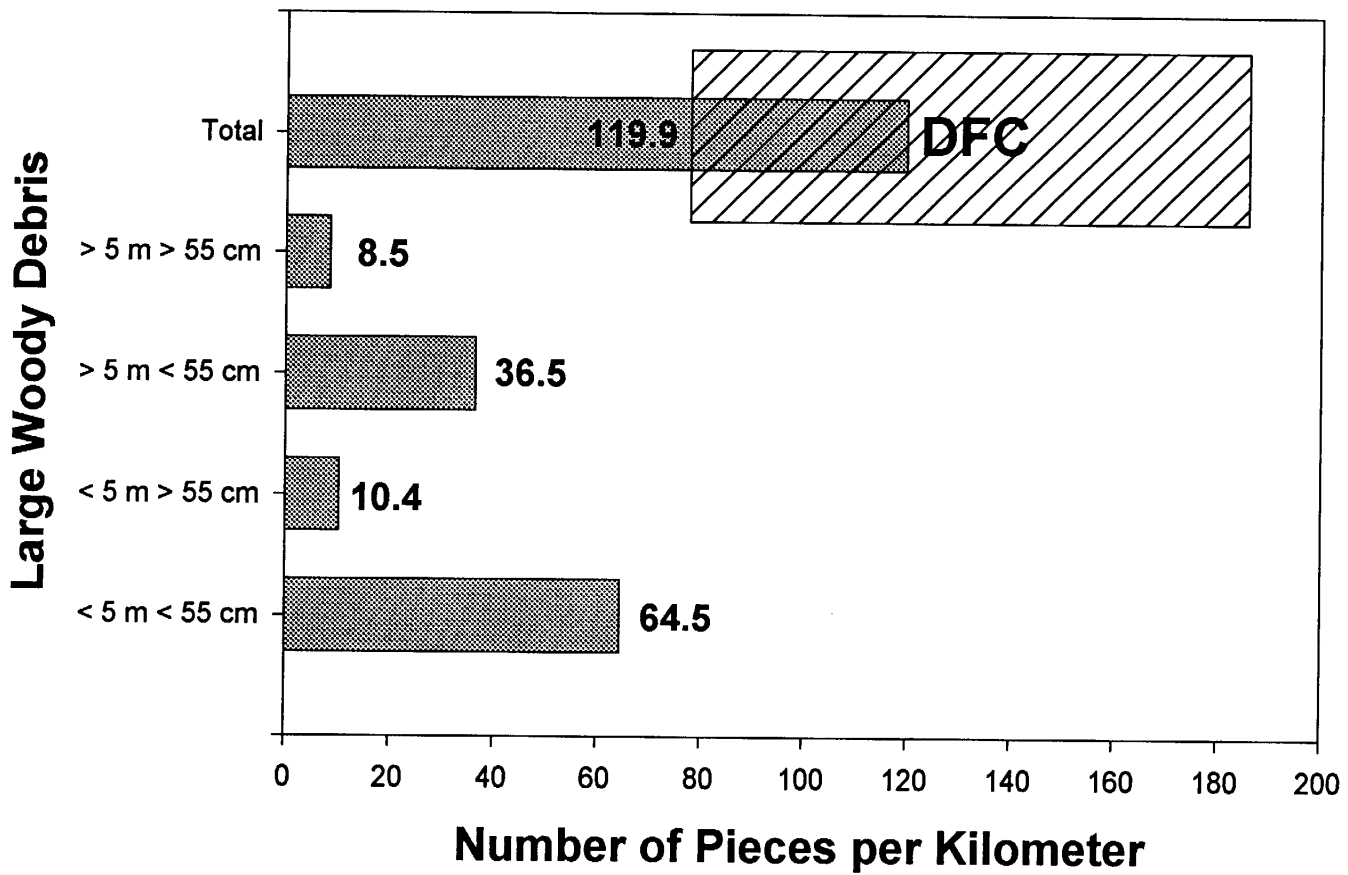


Indian Grave Creek

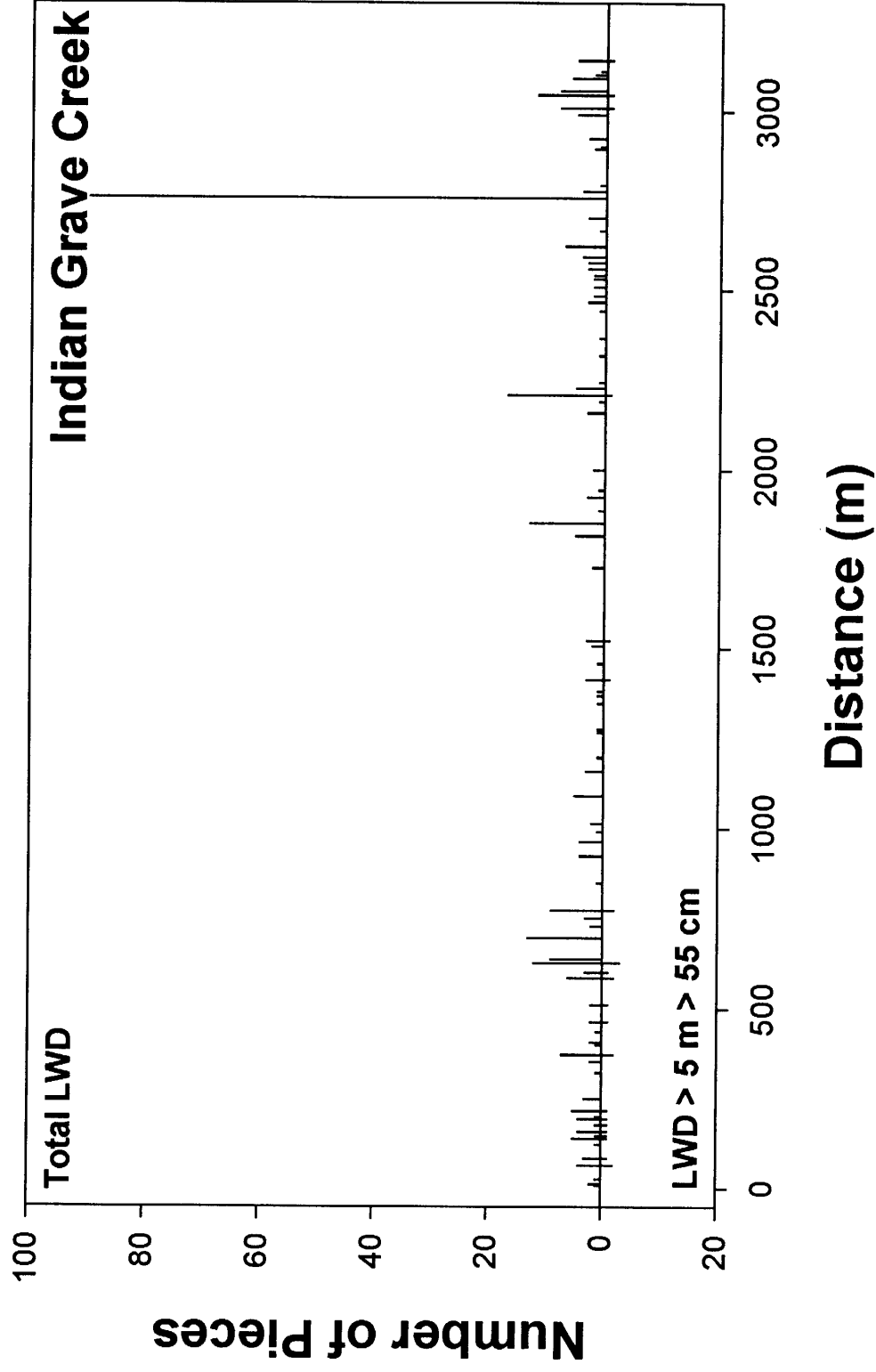


Box plots representing maximum and average depths for pools and riffles, and average residual pool depths for this stream. The boxes enclose the middle 50% of the observations, the bar in the center of the boxes represent the median, and the capped lines extending above and below the boxes represent the 90% and 10% quantiles.

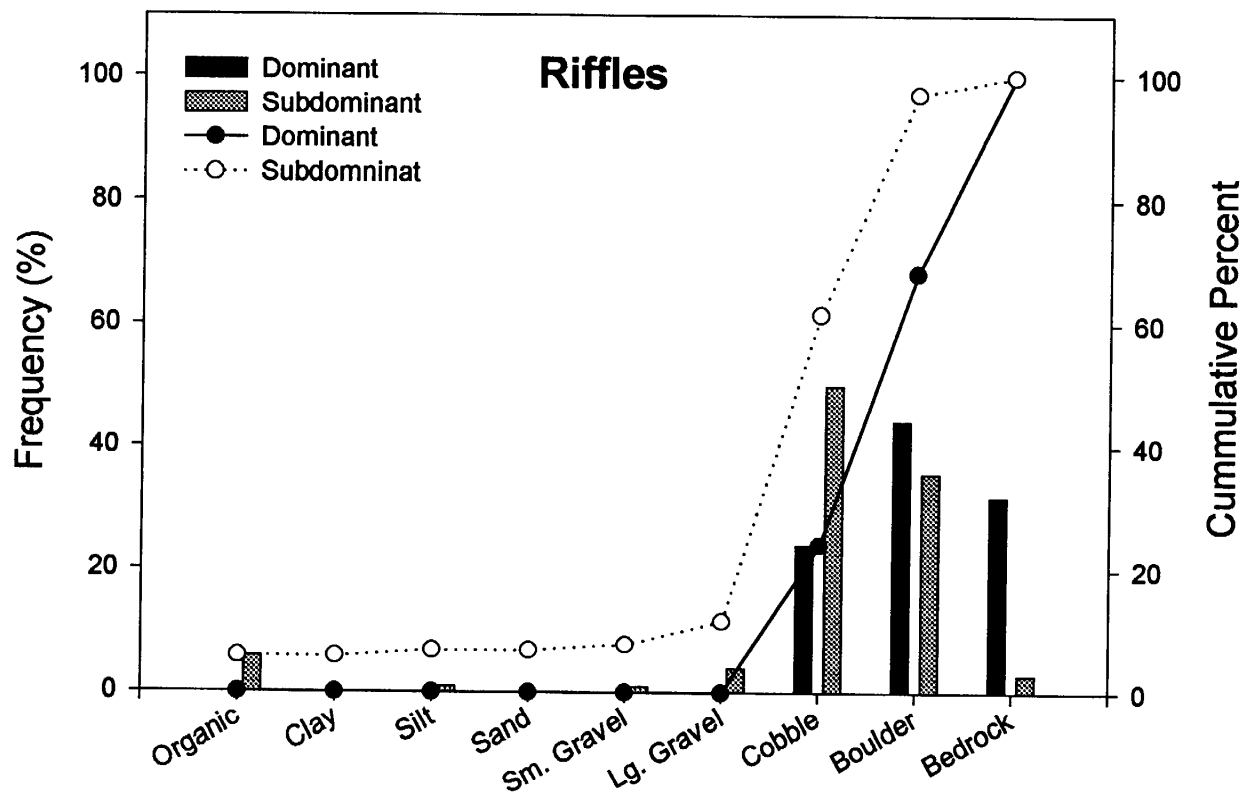
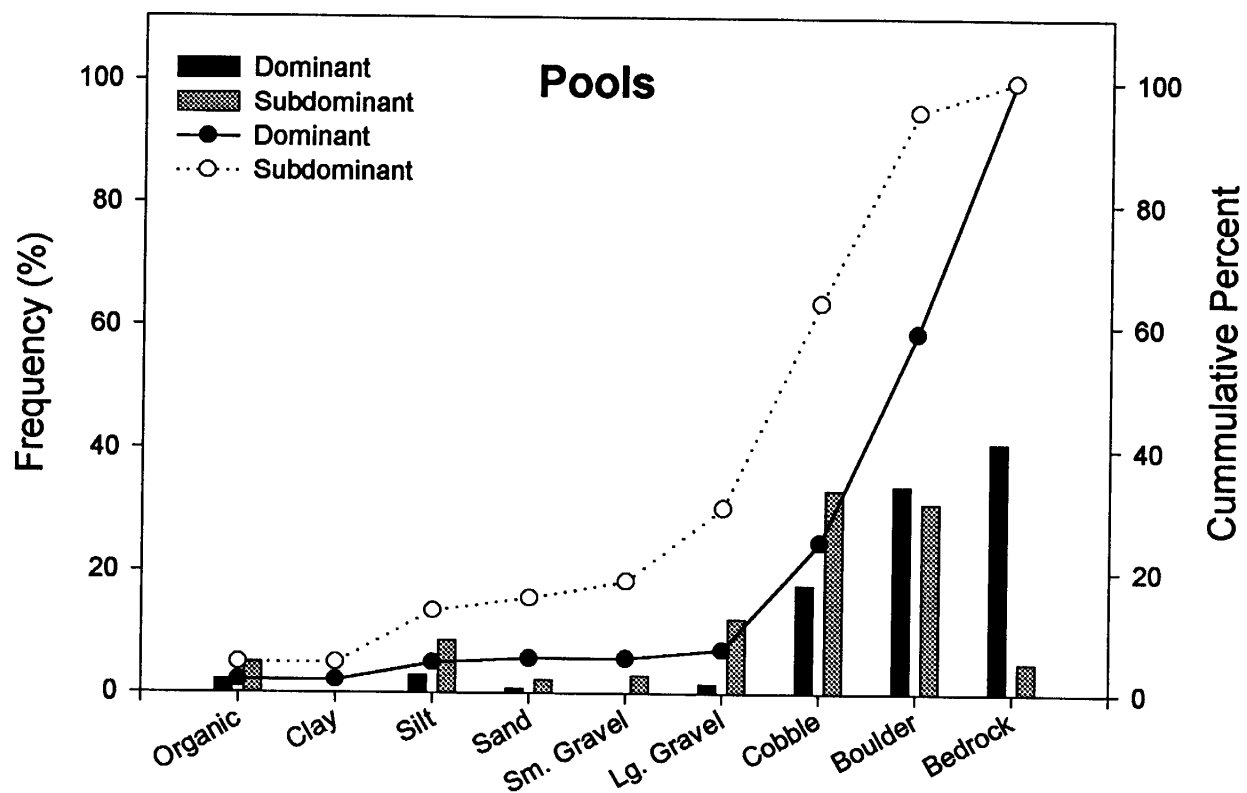
Indian Grave Creek



Distribution and Abundance of Large Woody Debris



Indian Grave Creek Substrate Composition



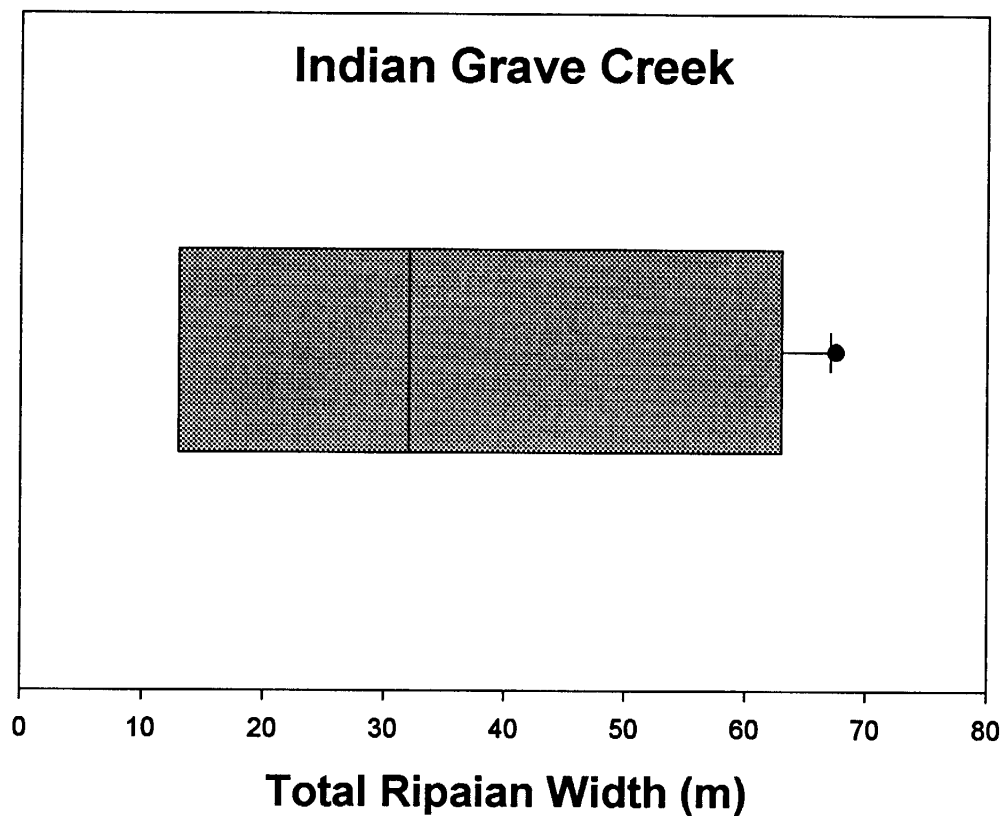
Riparian Width

Stream: Indian Grave Creek

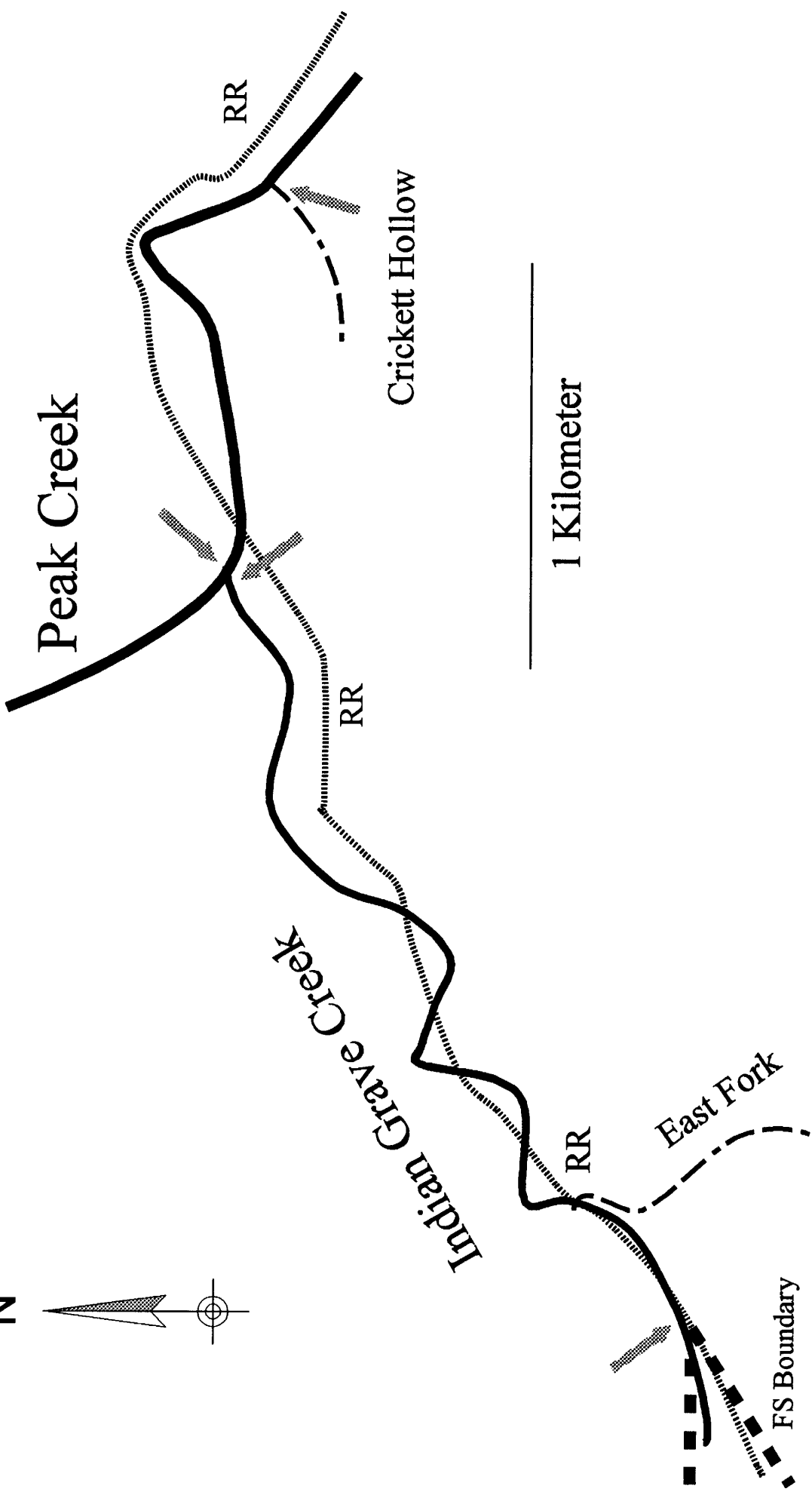
Number of Measurements: 6

Mean Width: 36.8m Std Dev: 25.9

Max: 67.5m Min: 13.0m



Box plot of total riparian width. The box enclose the middle 50% of the observations, the bar in the center of the box represents the median, and the capped lines extending above and below the box represent the 90% and 10% quantiles.



Peak Creek

RR

Crickett Hollow

RR

Indian Grave Creek

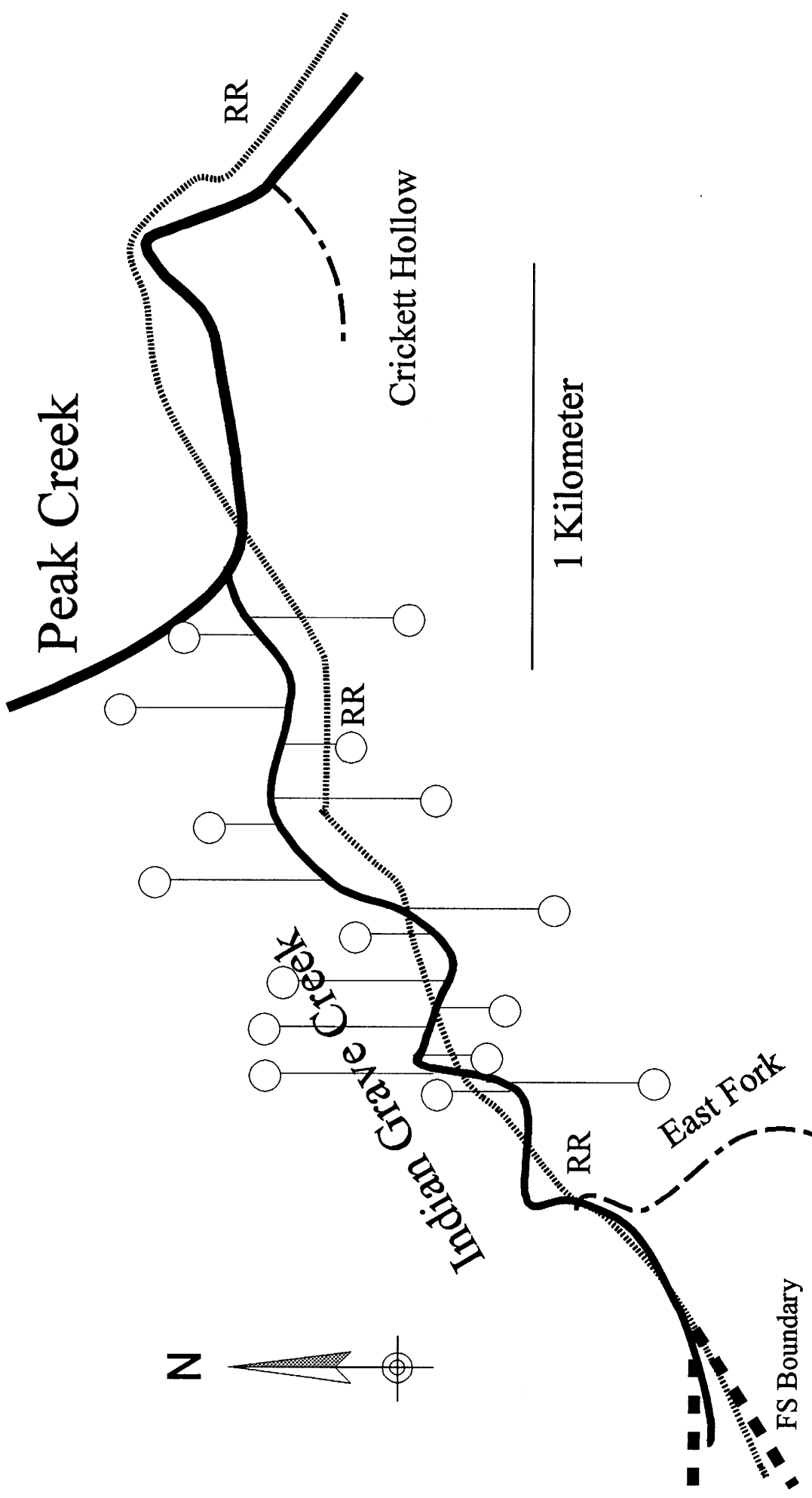
RR

East Fork

FS Boundary

1 Kilometer

Indian Grave Creek Electrofishing Sites



Indian Grave Electrofishing Summary

Unit	#	Distance	Common Name	Scientific Name
P	10	192.5	bluehead chub	<i>Nocomis leptcephalus</i>
			mountain redbelly dace	<i>Phoxinus oreas</i>
			white sucker	<i>Catostomus commersoni</i>
			rosyside dace	<i>Clinostomus funduloides</i>
R	10	207.4	None	
P	20	340.5	stoneroller	<i>Campostoma anomalum</i>
			rock bass	<i>Ambloplites rupestris</i>
			creek chub	<i>Semotilus atromaculatus</i>
			bluehead chub	<i>Nocomis leptcephalus</i>
			saffron shiner	<i>Notropis rubricroceus</i>
			rosyside dace	<i>Clinostomus funduloides</i>
R	20	436.3	None	
P	30	510.3	stoneroller	<i>Campostoma anomalum</i>
			mountain redbelly dace	<i>Phoxinus oreas</i>
R	30	638.0	None	
P	40	771.9	bluehead chub	<i>Nocomis leptcephalus</i>
			white sucker	<i>Catostomus commersoni</i>
			bluegill	<i>Lepomis macrochirus</i>
			stoneroller	<i>Campostoma anomalum</i>
			saffron shiner	<i>Notropis rubricroceus</i>
			rosyside dace	<i>Clinostomus funduloides</i>
			mountain redbelly dace	<i>Phoxinus oreas</i>
P	50	957.0	saffron shiner	<i>Notropis rubricroceus</i>
			bluehead chub	<i>Nocomis leptcephalus</i>
R	40	1004.8	None	

Electrofishing Summary Continued.

Unit	#	Distance	Common Name	Scientific Name
P	60	1225.7	rock bass	<i>Ambloplites rupestris</i>
			largemouth bass	<i>Micropterus salmoides</i>
			bluehead chub	<i>Nocomis leptcephalus</i>
			white sucker	<i>Catostomus commersoni</i>
			stoneroller	<i>Campostoma anomalum</i>
			bluegill	<i>Lepomis macrochirus</i>
			white shiner	<i>Luxilus albeolus</i>
			marginated madtom	<i>Noturus insignis</i>
R	50	1362.1	None	
P	70	1442.3	rosyside dace	<i>Clinostomus funduloides</i>
			saffron shiner	<i>Notropis rubricroceus</i>
			mountain redbelly dace	<i>Phoxinus oreas</i>
R	60	1583.7	saffron shiner	<i>Notropis rubricroceus</i>
P	80	1705.0	rock bass	<i>Ambloplites rupestris</i>
			fantail darter	<i>Etheostoma flabellare</i>
			white sucker	<i>Catostomus commersoni</i>
			saffron shiner	<i>Notropis rubricroceus</i>
			smallmouth bass	<i>Micropterus dolomieu</i>
P	90	1944.3	rock bass	<i>Ambloplites rupestris</i>
			bluegill	<i>Lepomis macrochirus</i>
			white sucker	<i>Catostomus commersoni</i>
R	70	1960.1	None	

Appendix 1a. Substrate classification criteria.

SUBSTRATE CLASSES

1	organic debris
2	clay
3	silt
4 silt- 2mm	sand
5 2-10mm	small gravel
6 1-10cm	large gravel
7 11-30cm	cobble
8 30cm	boulder
9	bedrock

Appendix 1b. Large woody debris (LWD) classification criteria.

LWD SIZE CLASSES

- 1 < 5 m (length) and < 55 cm (diameter)
- 2 < 5 m (length) and > 55 cm (diameter)
- 3 > 5 m (length) and < 55 cm (diameter)
- 4 > 5 m (length) and > 55 cm (diameter)