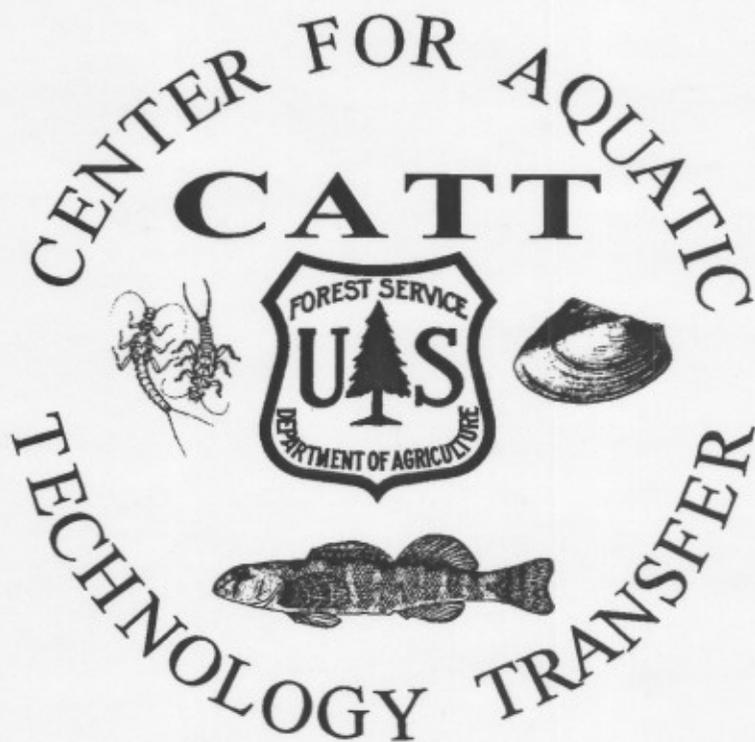


**Current Condition of Streams on the Glenwood Ranger District,
George Washington - Jefferson National Forest, Virginia**



Center for Aquatic Technology Transfer
134 Cheatham Hall
Virginia Polytechnic Institute and State University
Blacksburg, VA 24061-0321

November 1996

User's Guide - Stream Summaries are organized alphabetically by U. S. Geological Survey Topographic Quadrangle. Each Stream Summary contains: 1) synopsis of stream characteristics , 2) percent pools and riffles graph, 3) LWD size graph, 4) LWD distribution graph, and 5) boxplot of riparian measurements.

Stream: Chestnut Run

District: Glenwood

Quadrangle: Arnold Valley

Sample Date: 06/20/96

Downstream Starting Point: USFS Boundary along Rt.618

Total Distance Surveyed: 0.46 miles

Percent of Total Area - Pools: 20.8%

Number of Pools: 55

Number of Pools per mile: 120

Total Pool Area: 3,827.3 sq. ft.

Mean Pool Area: 103.4 sq. ft.

Correction Factor: 1.05

Mean Maximum Depth: 1.0'

Mean Average Depth: 0.8'

Percent of Total Area - Riffles: 79.2%

Number of Riffles: 54

Number of Riffles per mile: 117

Total Riffle Area: 14,603.6 sq. ft.

Mean Riffle Area: 310.7 sq. ft.

Correction Factor: 1.06

Mean Maximum Depth: 0.6'

Mean Average Depth: 0.3'

Number of Large Woody Debris Pieces per Mile: 291.3

Wood < 15' and < 14": 121.7

Wood < 15' and > 14": 39.1

Wood > 15' and < 14": 84.8

Wood > 15' and > 14": 45.7

Mean Channel Width: 16.2'

Mean Riparian Width: 66.2'

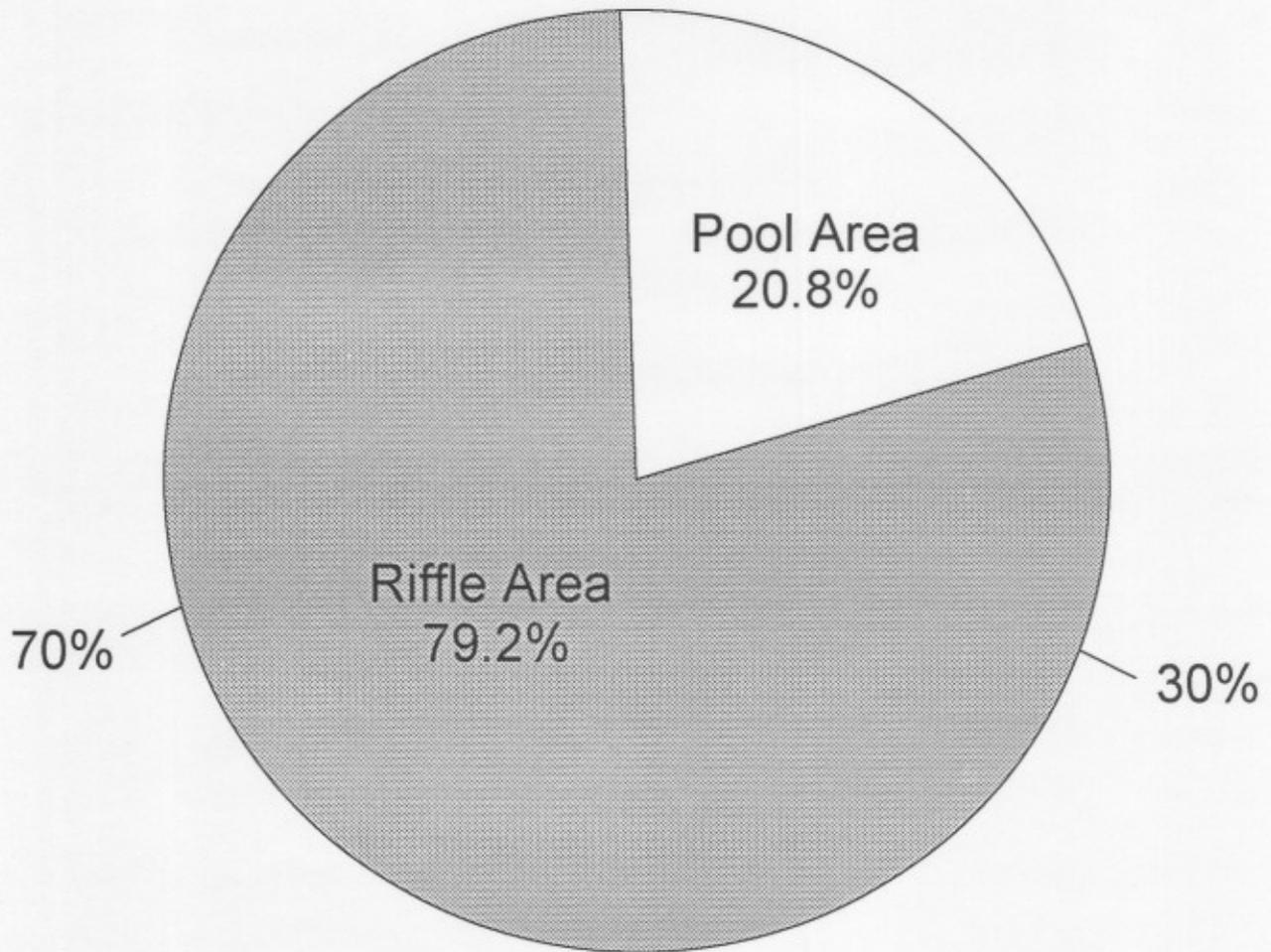
Mean Maximum Riparian Distance (either side): 41.2'

Mean Minimum Riparian Distance (either side): 8.8'

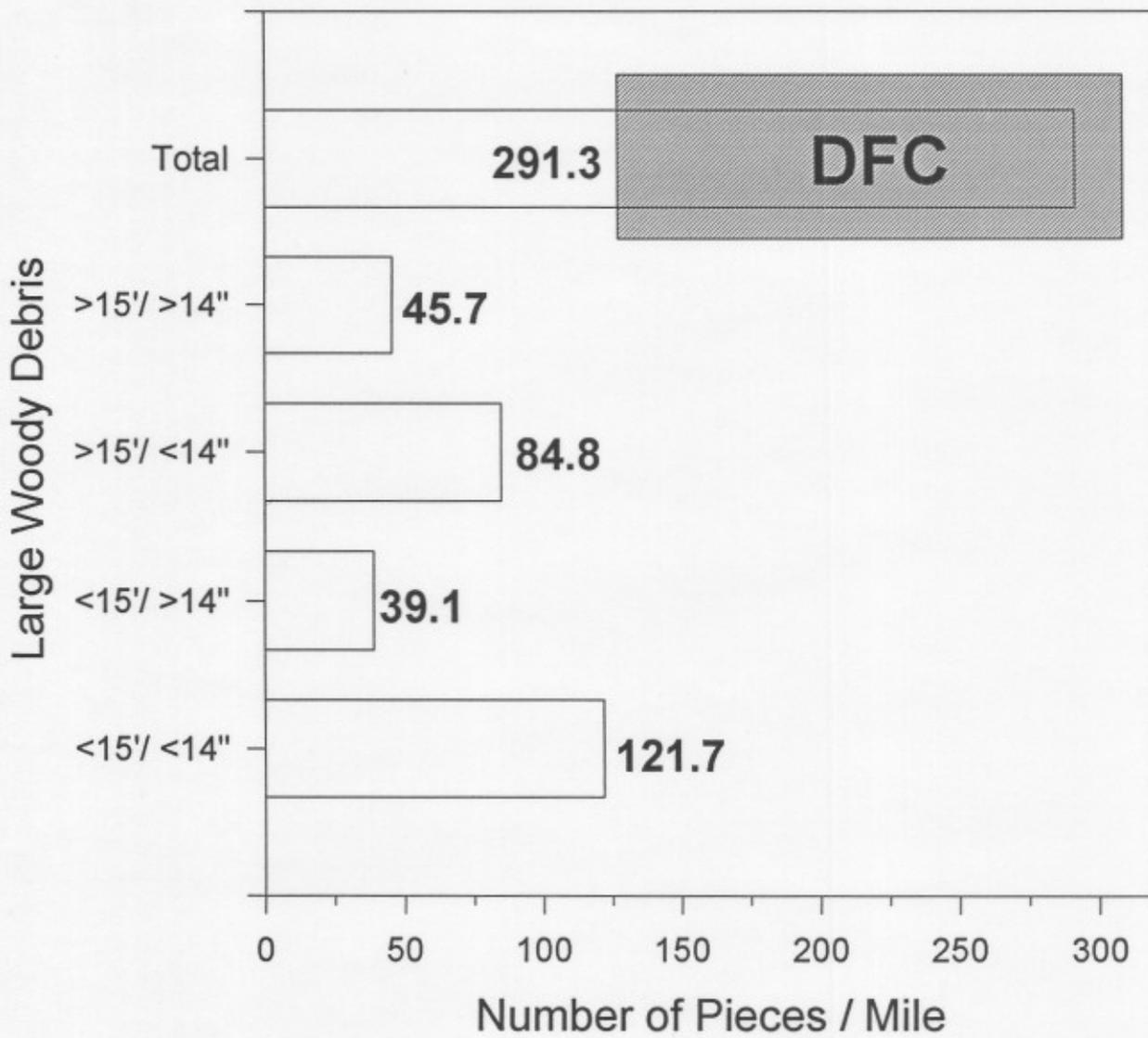
Maximum Riparian Width (Total): 88.0'

Minimum Riparian Width (Total): 39.5'

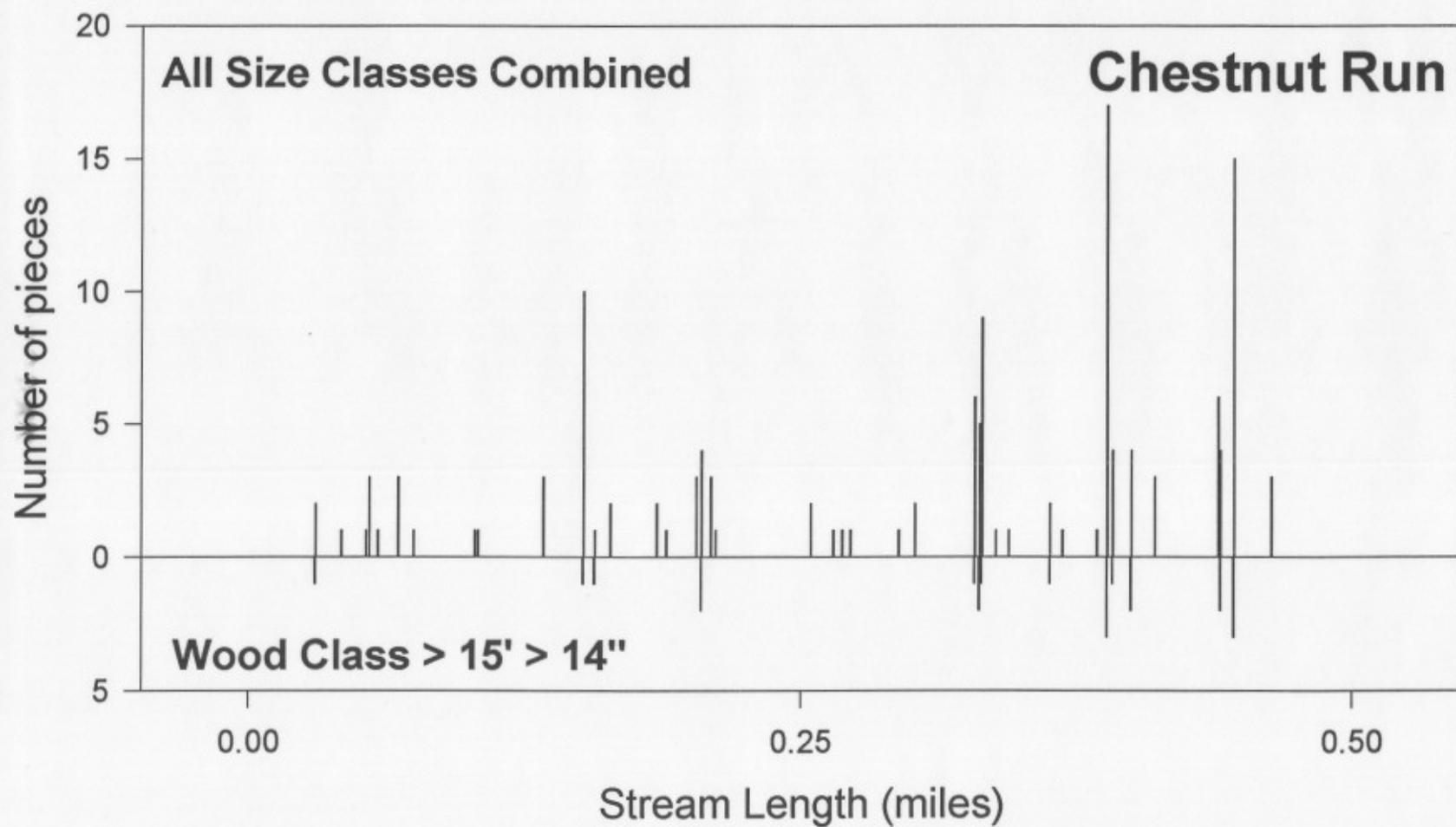
Chestnut Run
DFC: 30 - 70% of the Total Stream Area
in Pool Habitat



Chestnut Run



Large Woody Debris Distribution



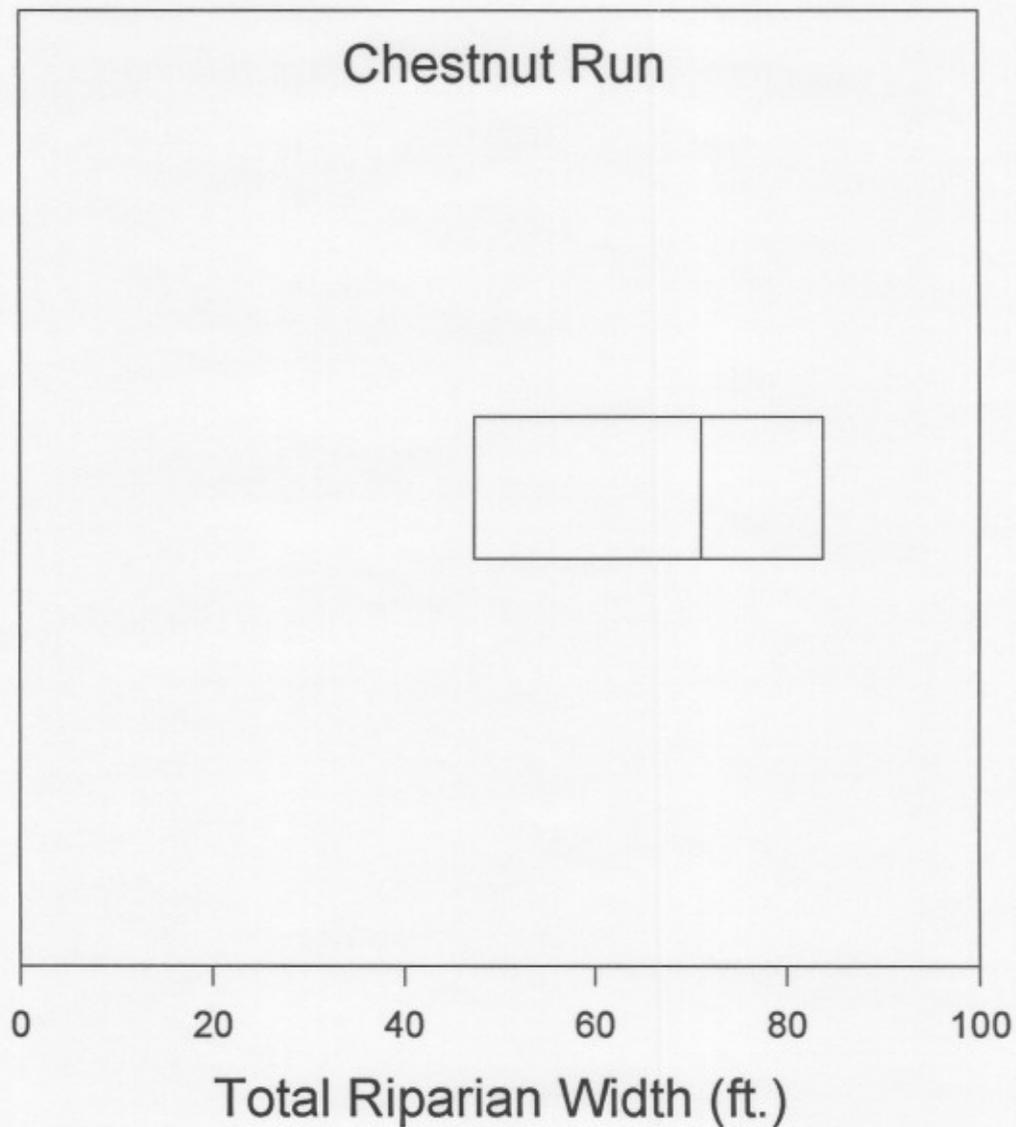
Riparian Width

Stream: Chestnut Run

Number of measurements: 3

Mean width: 66.2 Std Dev: 24.6

Max: 88.0 Min: 39.5



Box plot of total riparian width. The box encloses 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: Middle Creek

District: Glenwood

Quadrangle: Arnold Valley

Sample Date: 07/02/96

Downstream Starting Point: Confluence with Jennings Creek

Total Distance Surveyed: 1.07 miles

Percent of Total Area - Pools: 26.2%

Number of Pools: 68

Number of Pools per mile: 64

Total Pool Area: 19,700.76 sq. ft.

Mean Pool Area: 289.7 sq. ft.

Correction Factor: 1.01

Mean Maximum Depth: 1.7'

Mean Average Depth: 1.1'

Percent of Total Area - Riffles: 73.8%

Number of Riffles: 105

Number of Riffles per mile: 101

Total Riffle Area: 55,533.9 sq. ft.

Mean Riffle Area: 528.9 sq. ft.

Correction Factor: 1.02

Mean Maximum Depth: 0.7'

Mean Average Depth: 0.3'

Number of Large Woody Debris Pieces per Mile: 87.9

Wood < 15' and < 14": 30.8

Wood < 15' and > 14": 6.5

Wood > 15' and < 14": 34.6

Wood > 15' and > 14": 15.9

Mean Channel Width: 26.1'

Mean Riparian Width: 50.0'

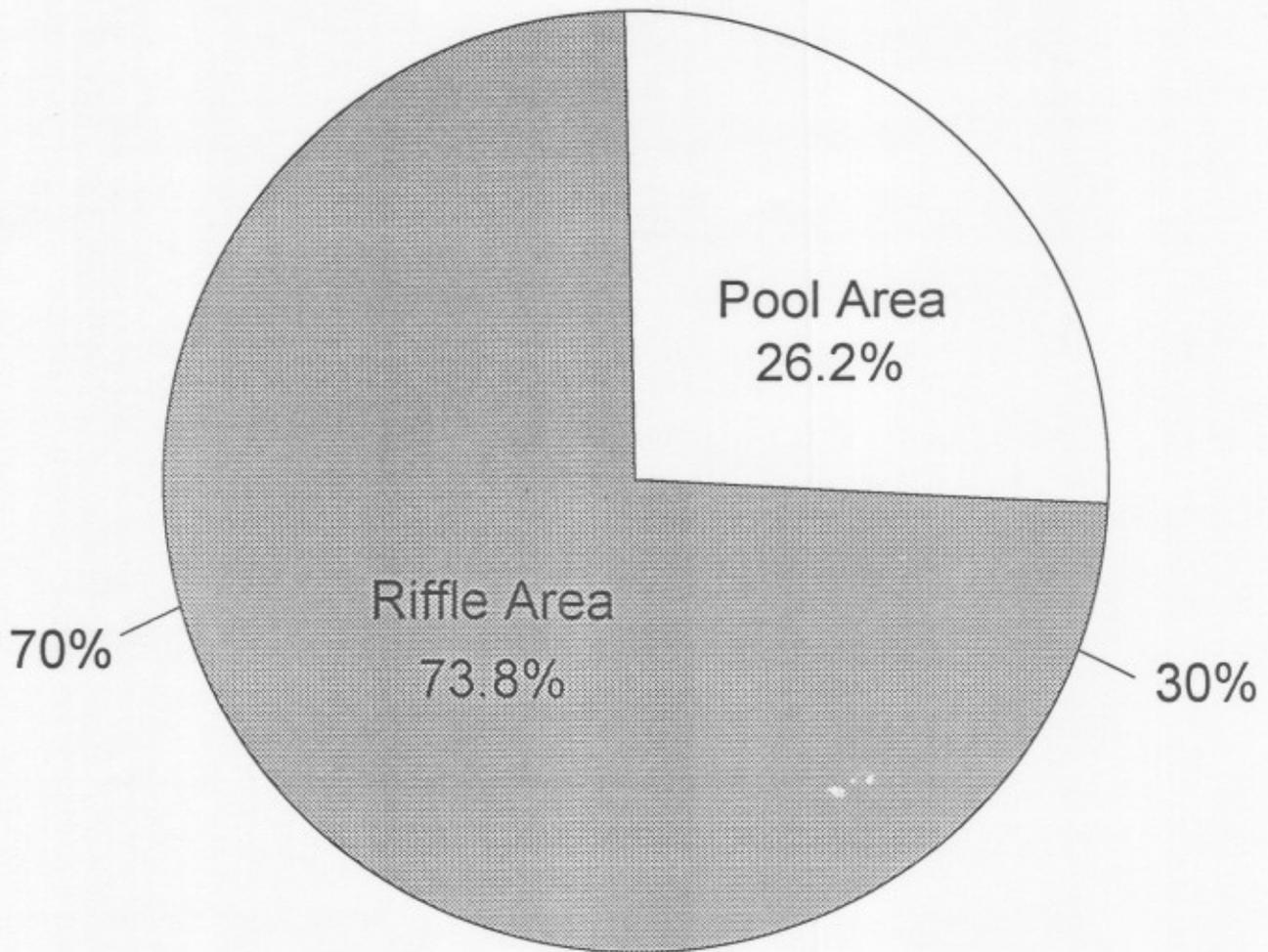
Mean Maximum Riparian Distance (either side): 13.9'

Mean Minimum Riparian Distance (either side): 10.0'

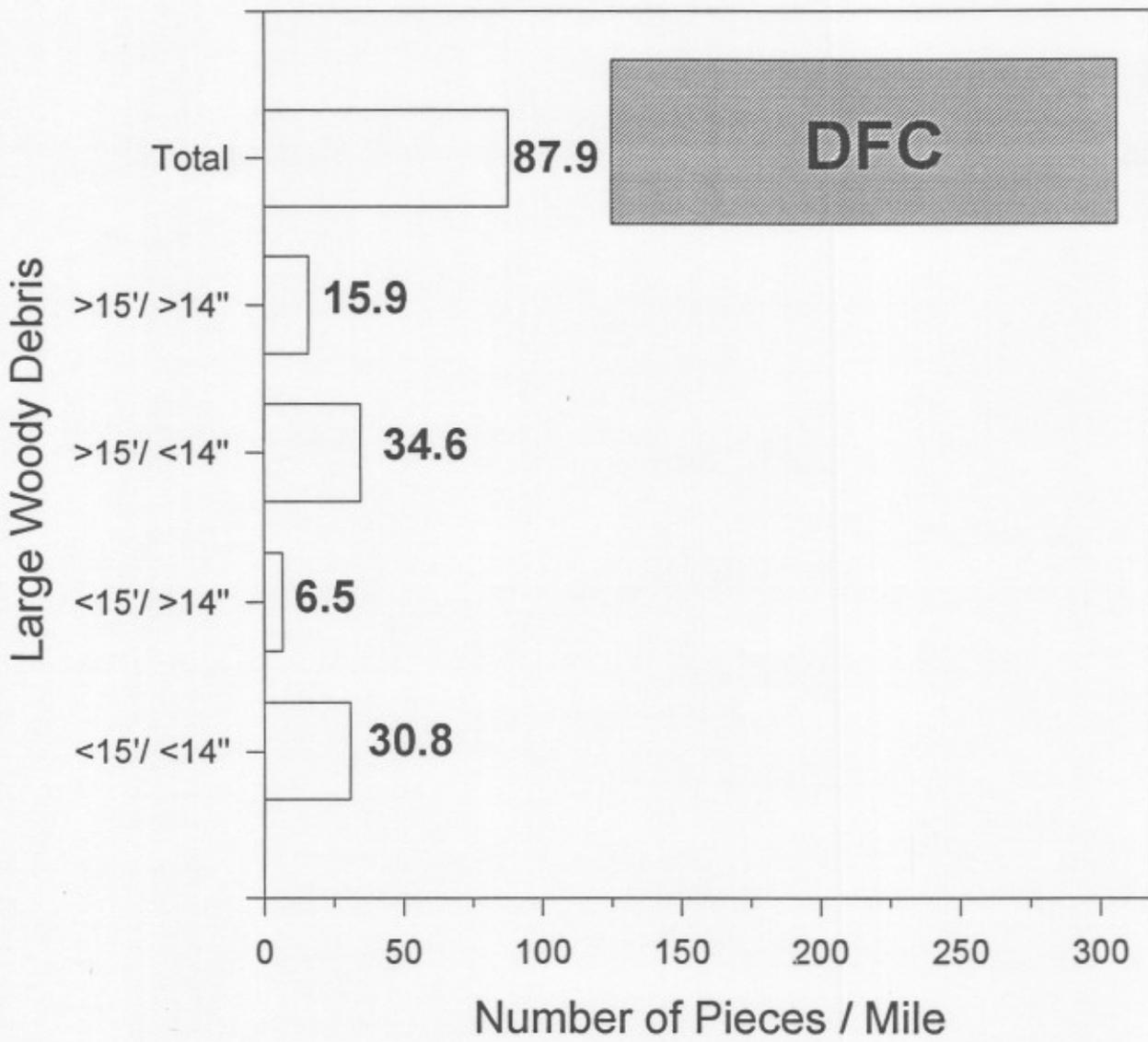
Maximum Riparian Width (Total): 65.3'

Minimum Riparian Width (Total): 35.0'

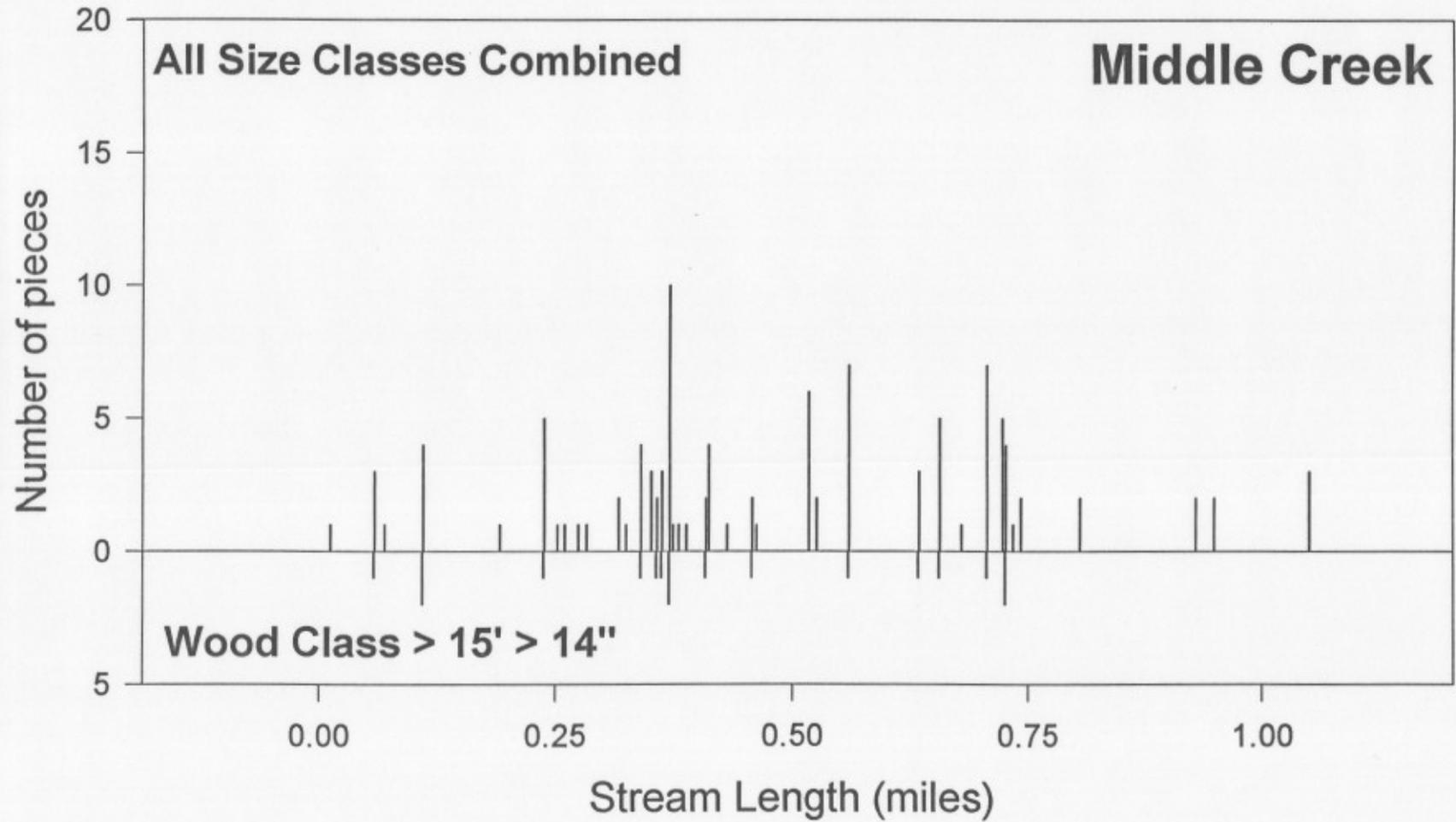
Middle Creek
DFC: 30 - 70% of the Total Stream Area
in Pool Habitat



Middle Creek



Large Woody Debris Distribution



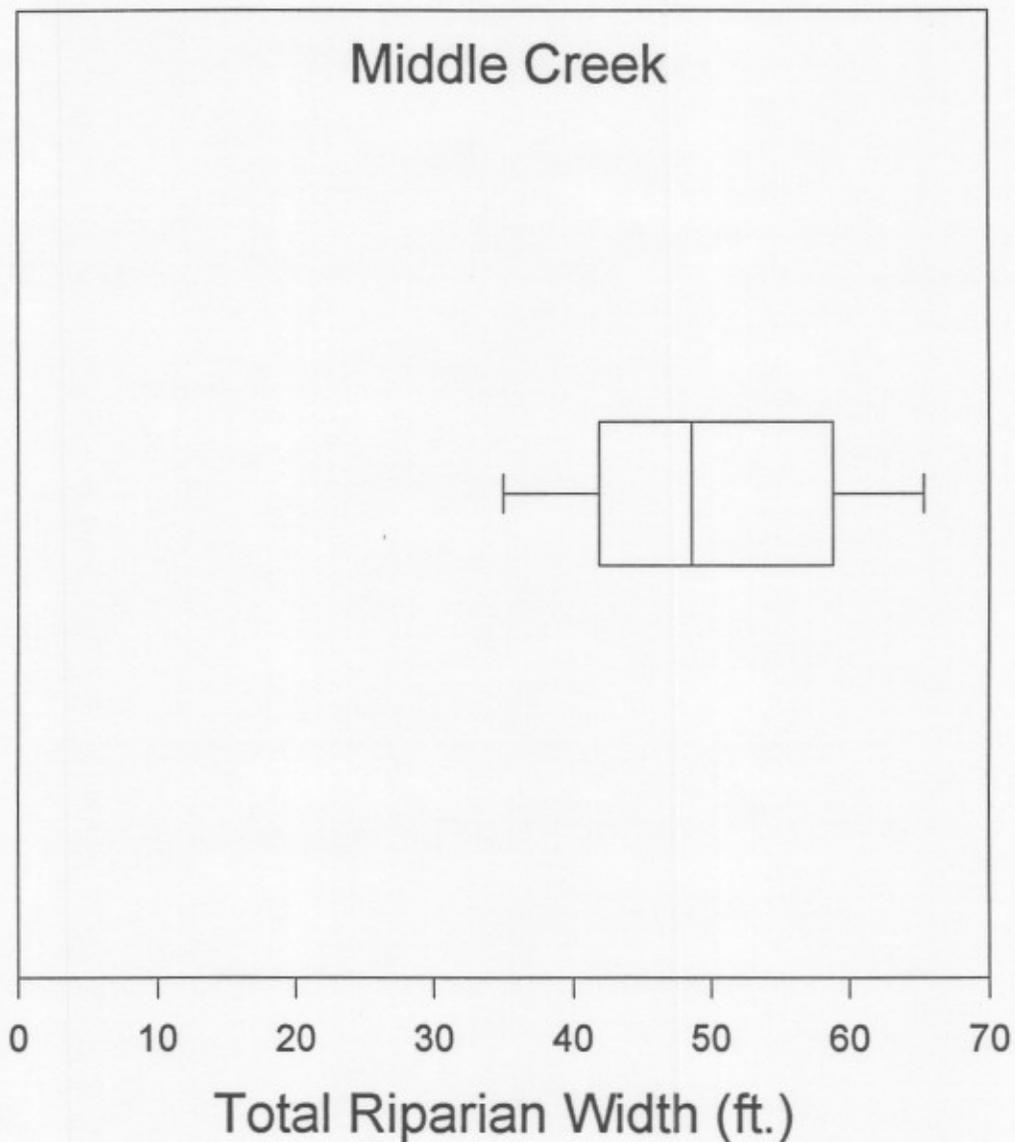
Riparian Width

Stream: Middle Creek

Number of measurements: 5

Mean width: 50.0 Std Dev: 11.6

Max: 65.3 Min: 35.0



Box plot of total riparian width. The box encloses 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: Sprouts Run

District: Glenwood

Quadrangle: Arnold Valley

Sample Date: 08/05/96

Downstream Starting Point: USFS Bound. @ Wilson Mtn. Trail

Total Distance Surveyed: 1.25 miles

Percent of Total Area - Pools: 24.2%

Number of Pools: 140

Number of Pools per mile: 112

Total Pool Area: 15,953.2 sq. ft. \pm 844.7

Mean Pool Area: 114.0 sq. ft.

Correction Factor: 0.99

Mean Maximum Depth: 1.2'

Mean Average Depth: 0.8'

Percent of Total Area - Riffles: 75.8%

Number of Riffles: 147

Number of Riffles per mile: 118

Total Riffle Area: 49,838.9 sq. ft. \pm 2,178.8

Mean Riffle Area: 339.0 sq. ft.

Correction Factor: 1.04

Mean Maximum Depth: 0.7'

Mean Average Depth: 0.3'

Number of Large Woody Debris Pieces per Mile: 170.4

Wood < 15' and < 14": 68

Wood < 15' and > 14": 6.4

Wood > 15' and < 14": 72.8

Wood > 15' and > 14": 23.2

Mean Channel Width: 15.9'

Mean Riparian Width: 62.5'

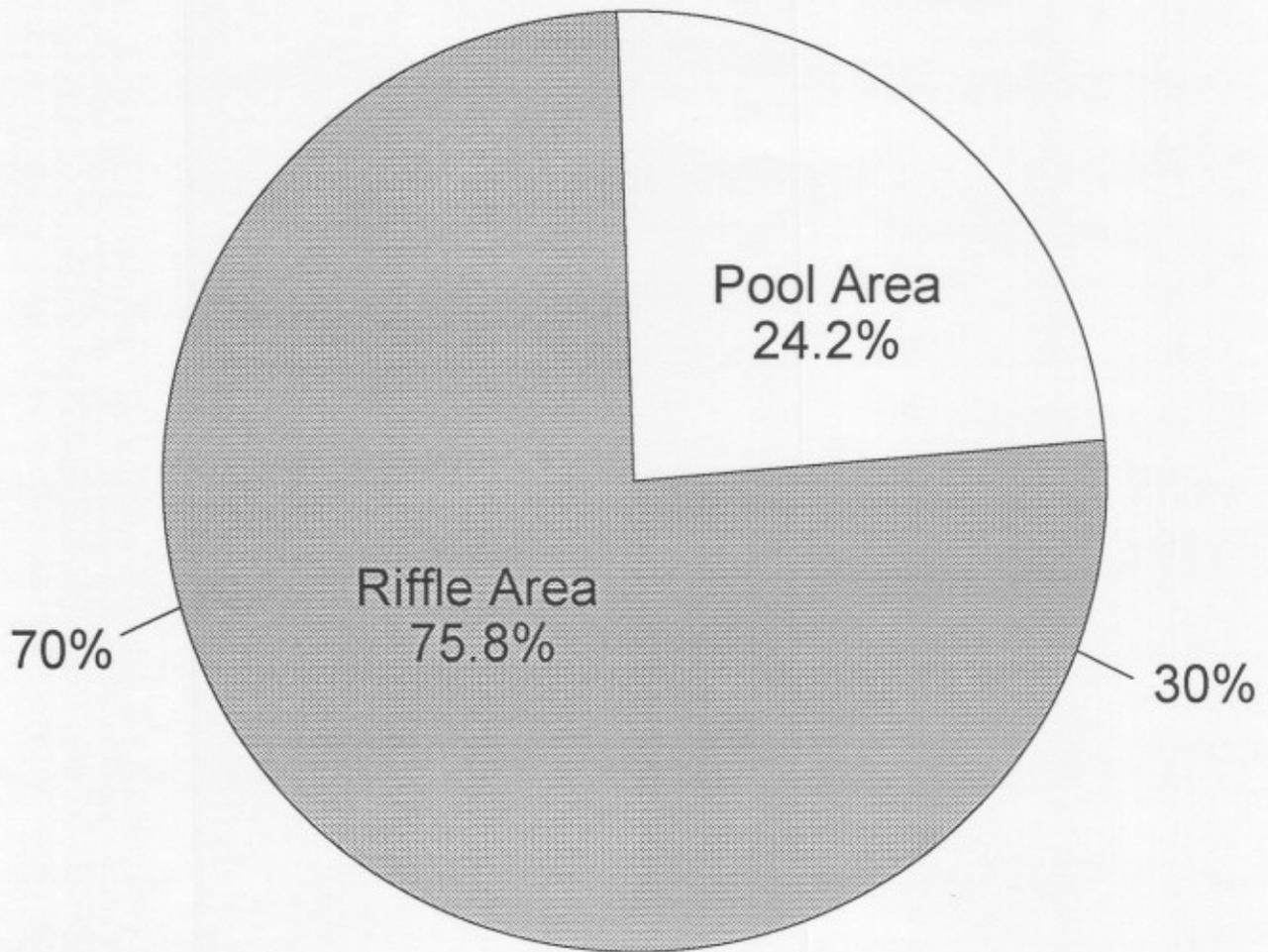
Mean Maximum Riparian Distance (either side): 31.7'

Mean Minimum Riparian Distance (either side): 14.9'

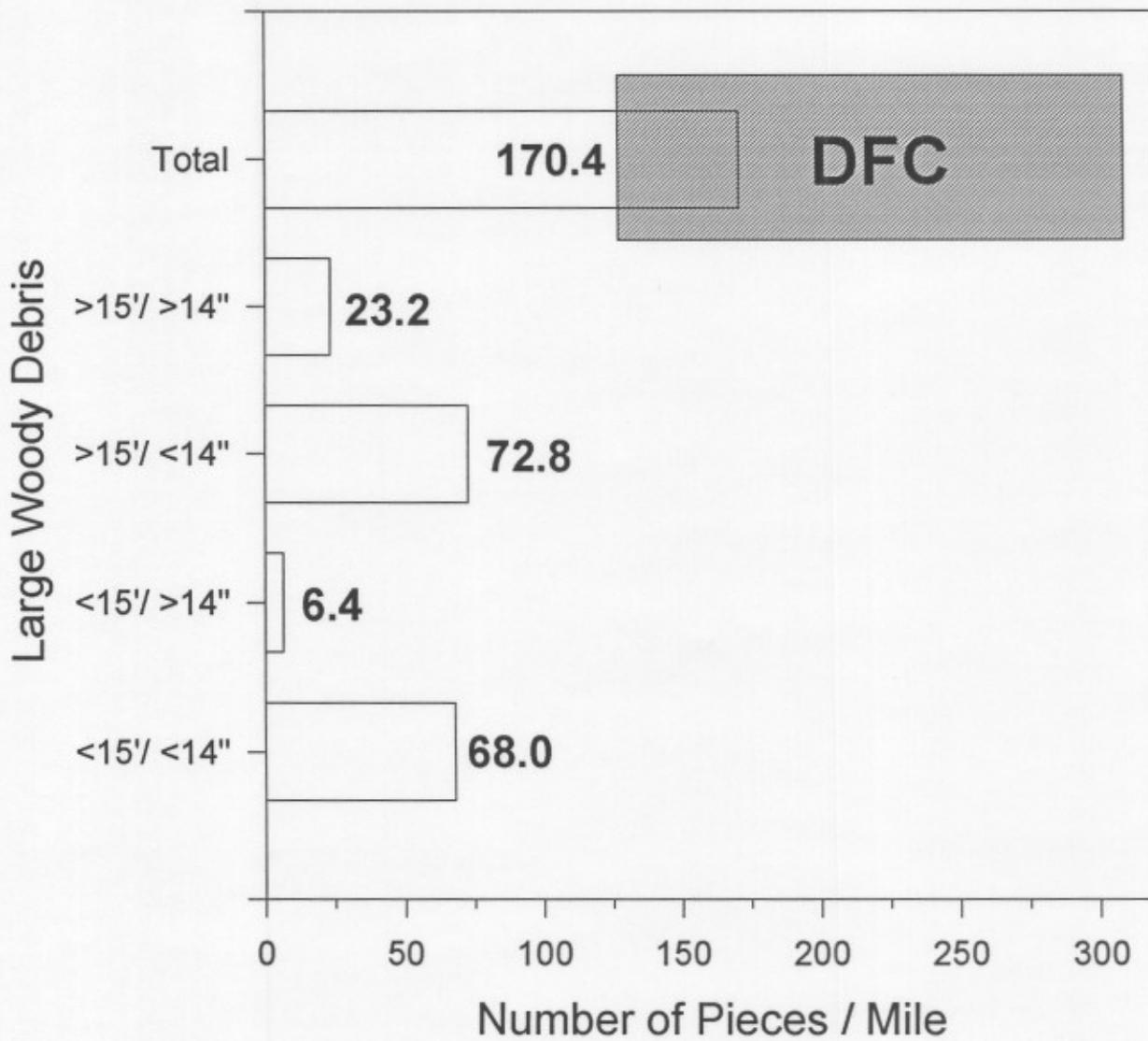
Maximum Riparian Width (Total): 113.6'

Minimum Riparian Width (Total): ~~38.8'~~

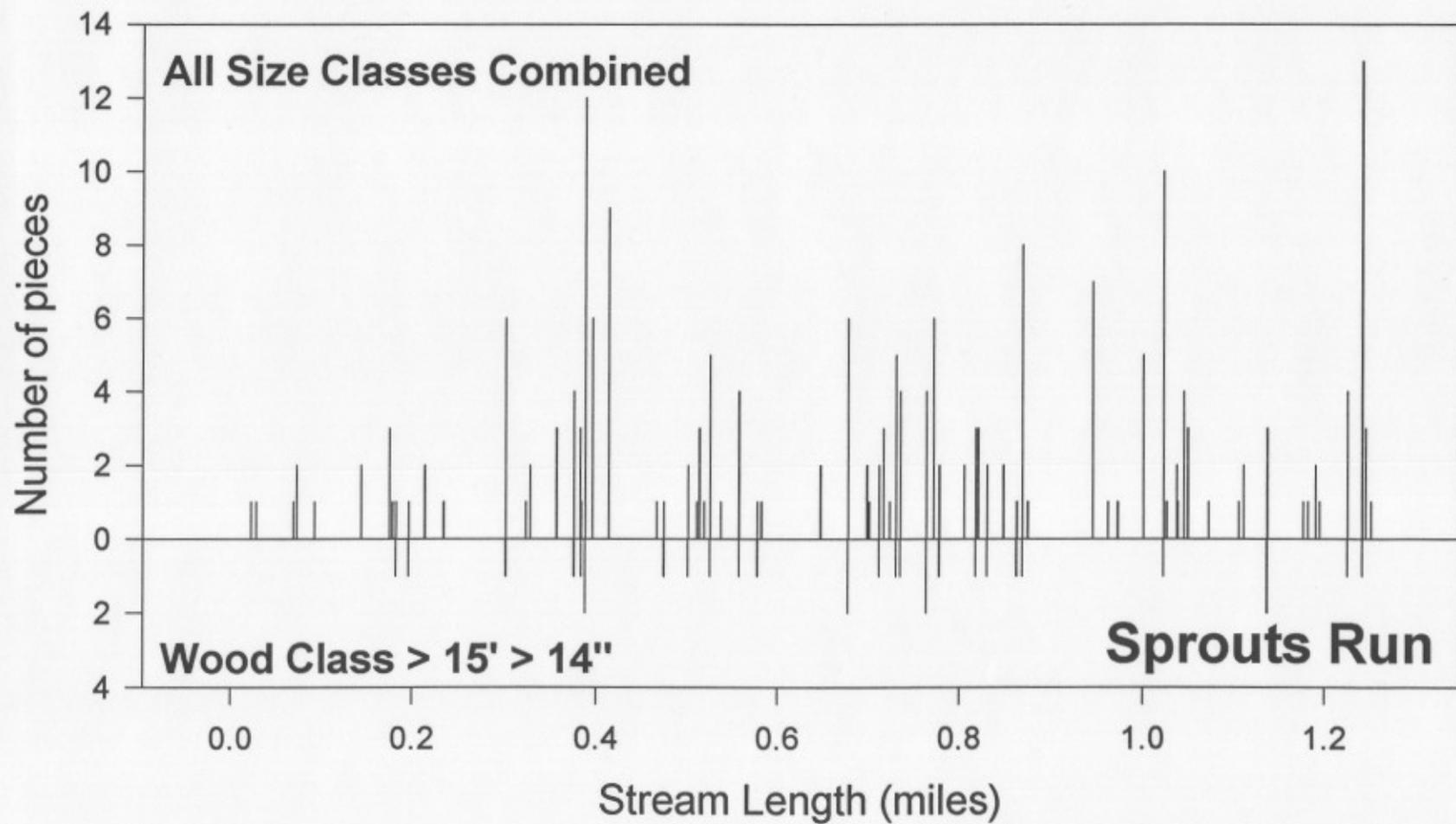
Sprouts Run
DFC: 30 - 70% of the Total Stream Area
in Pool Habitat



Sprouts Run



Large Woody Debris Distribution



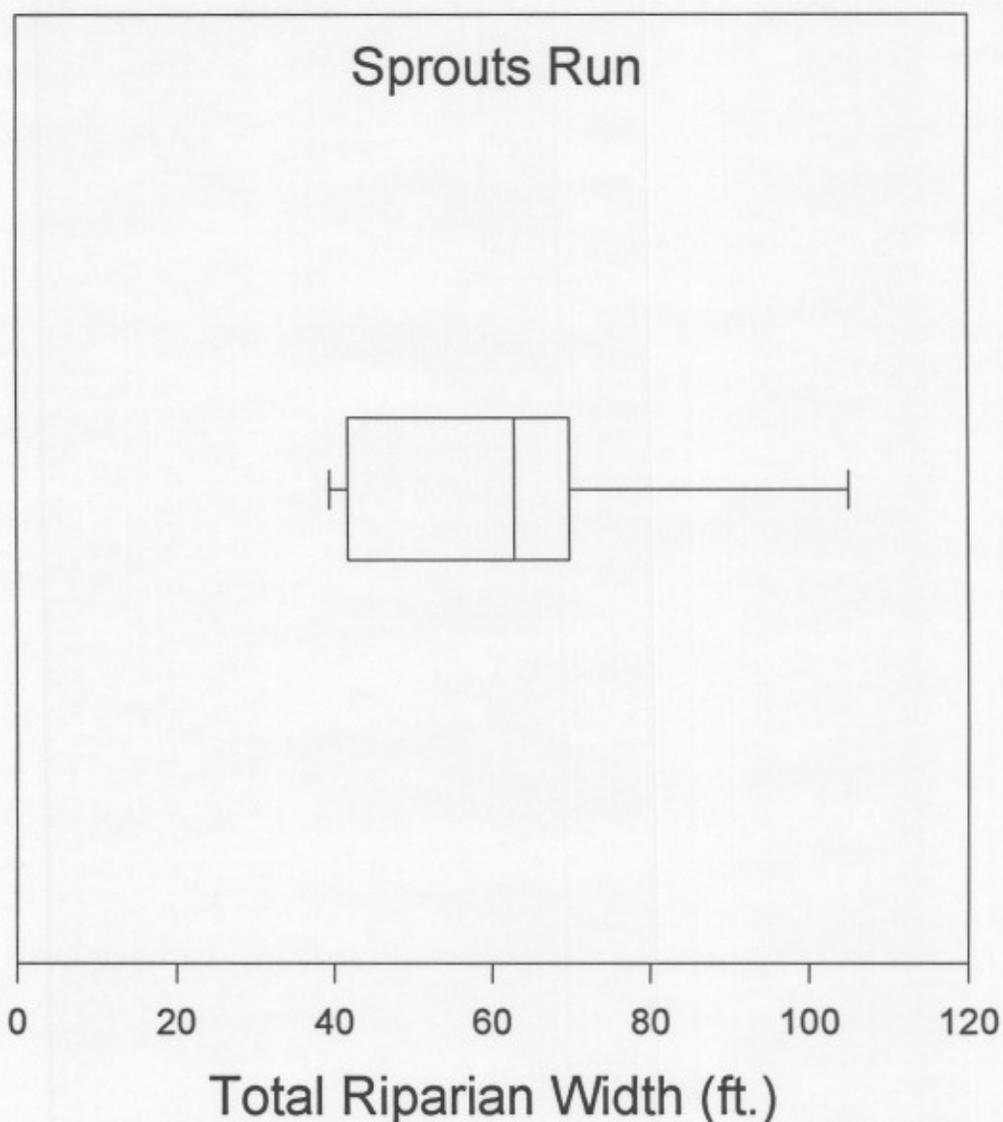
Riparian Width

Stream: Sprouts Run

Number of measurements: 7

Mean width: 62.5 Std Dev: 26.2

Max: 113.6 Min: 38.8



Box plot of total riparian width. The box encloses 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: Yellowstone Creek

District: Glenwood

Quadrangle: Arnold Valley

Sample Date: 07/03/96

Downstream Starting Point: USFS Boundary

Total Distance Surveyed: 0.65 miles

Percent of Total Area - Pools: 52.2%

Number of Pools: 84

Number of Pools per mile: 129

Total Pool Area: 11,337.65 sq. ft.

Mean Pool Area: 135.0 sq. ft.

Correction Factor: 0.99

Mean Maximum Depth: 1.1'

Mean Average Depth: 0.8'

Percent of Total Area - Riffles: 47.8%

Number of Riffles: 86

Number of Riffles per mile: 132

Total Riffle Area: 10,386.7 sq. ft.

Mean Riffle Area: 120.8 sq. ft.

Correction Factor: 0.97

Mean Maximum Depth: 0.4'

Mean Average Depth: 0.2'

Number of Large Woody Debris Pieces per Mile: 101.5

Wood < 15' and < 14": 24.6

Wood < 15' and > 14": 12.3

Wood > 15' and < 14": 33.8

Wood > 15' and > 14": 30.8

Mean Channel Width: 12.9'

Mean Riparian Width: 27.3'

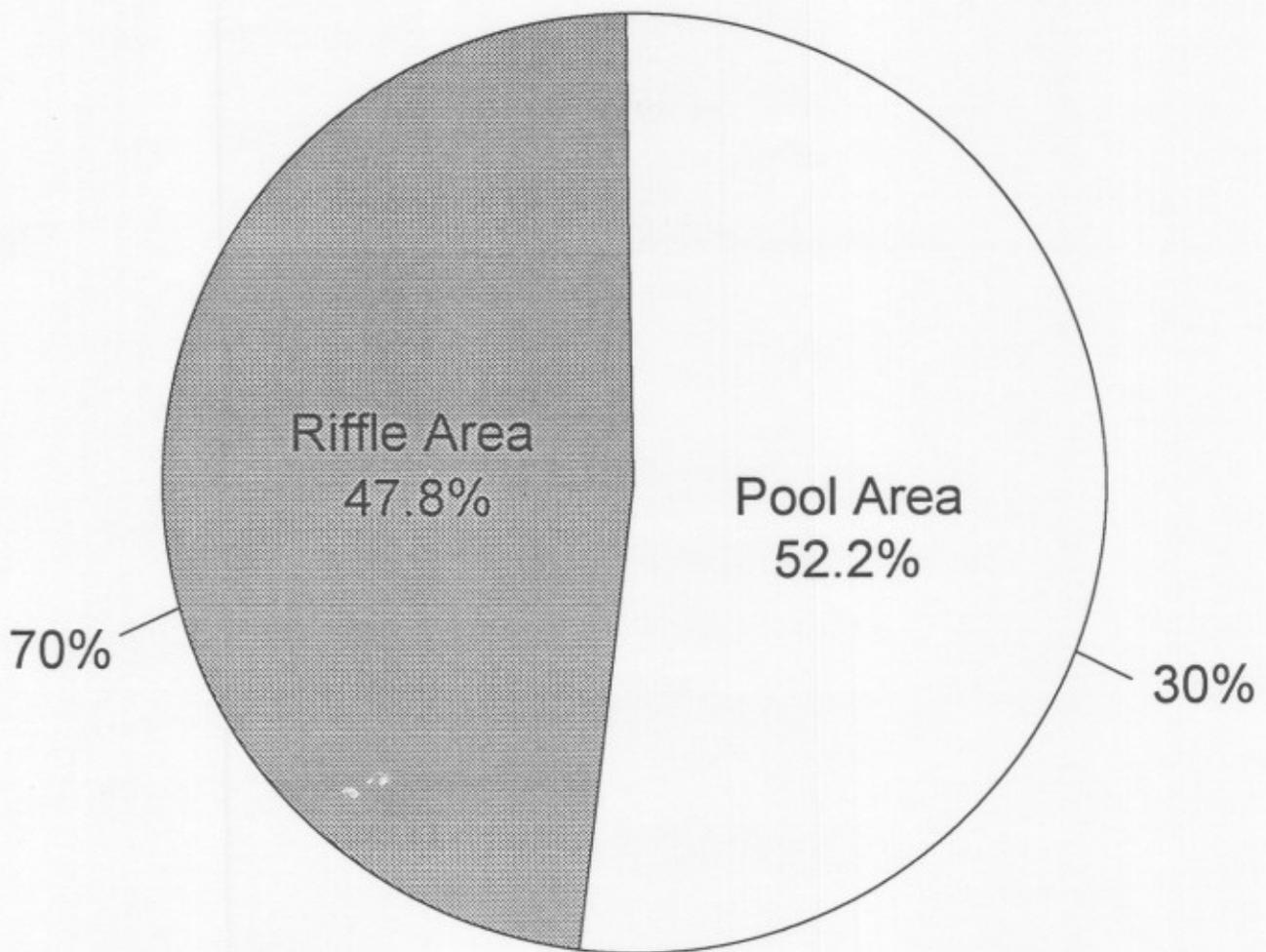
Mean Maximum Riparian Distance (either side): 12.8'

Mean Minimum Riparian Distance (either side): 1.5'

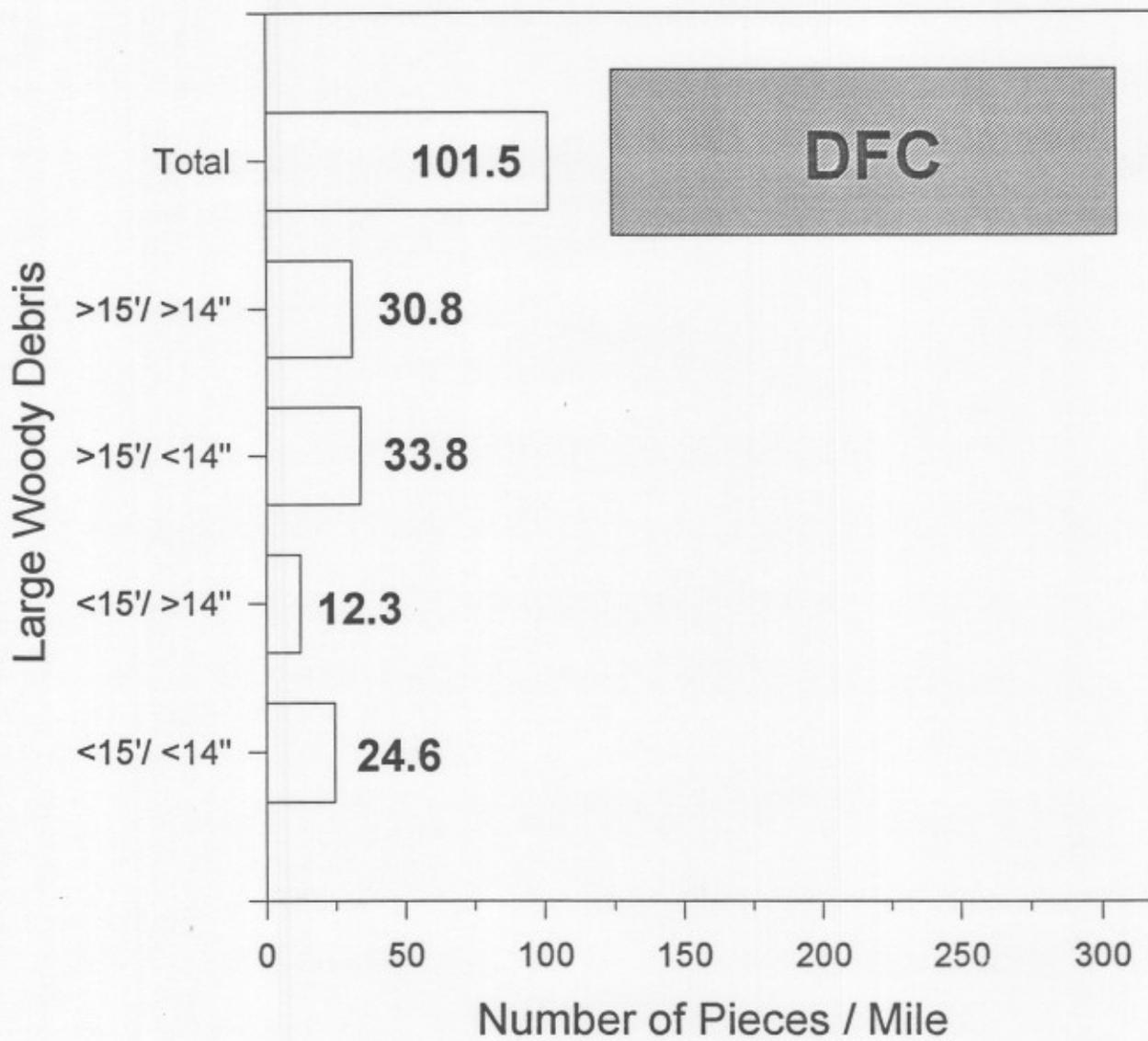
Maximum Riparian Width (Total): 109.0'

Minimum Riparian Width (Total): 21.0'

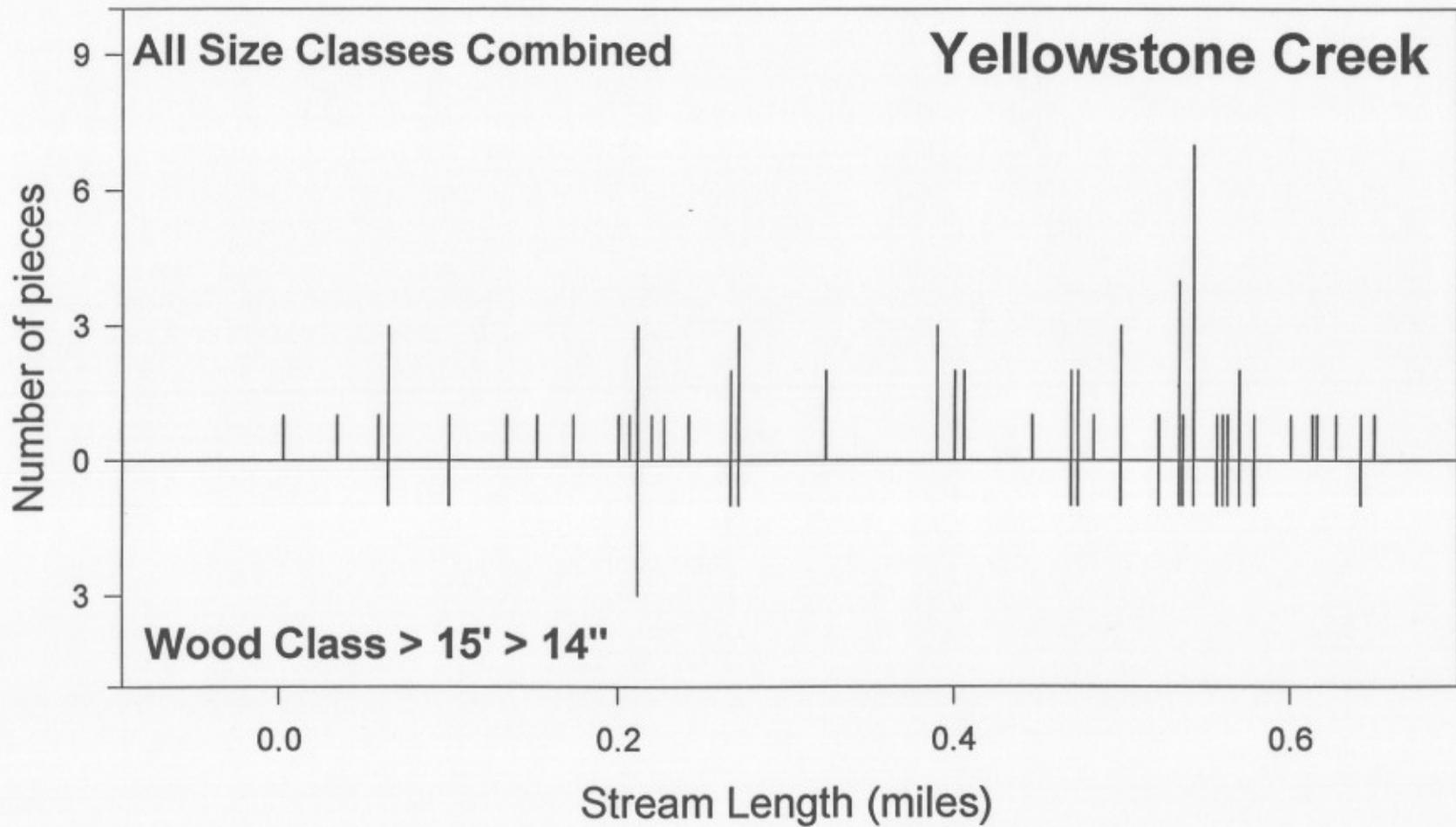
Yellowstone Creek
DFC: 30 - 70% of the Total Stream Area
in Pool Habitat



Yellowstone Creek



Large Woody Debris Distribution



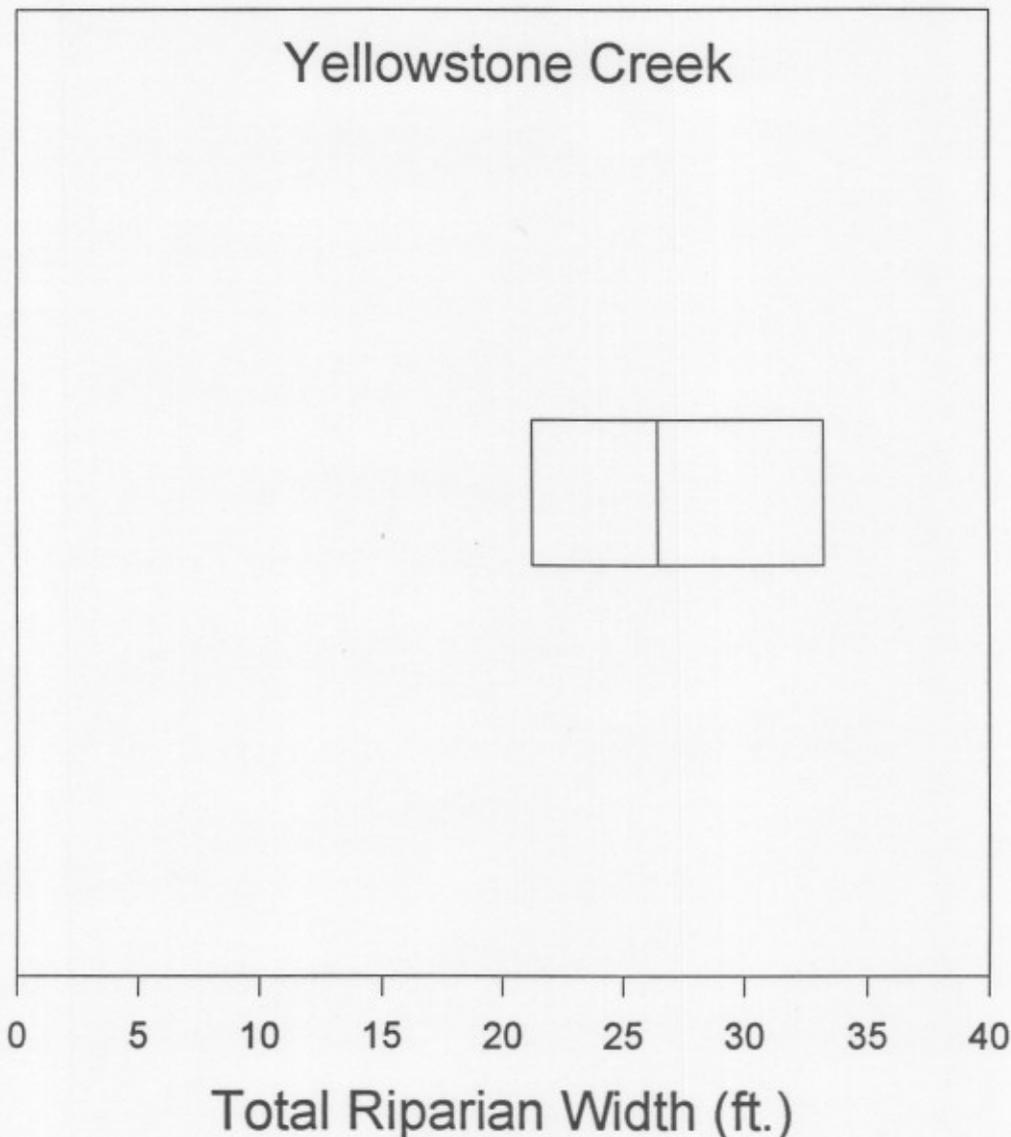
Riparian Width

Stream: Yellowstone Creek

Number of measurements: 4

Mean width: 27.3 Std Dev: 7.1

Max: 35.1 Min: 21.0



Box plot of total riparian width. The box encloses 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: Cove Creek

District: Glenwood

Quadrangle: Buchanan

Sample Date: 07/30/96

Downstream Starting Point:

Total Distance Surveyed: 0.57 miles

Percent of Total Area - Pools: 64.4%

Number of Pools: 82

Number of Pools per mile: 144

Total Pool Area: 14,898.6 sq. ft.

Mean Pool Area: 181.7 sq. ft.

Correction Factor: 1.07

Mean Maximum Depth: 0.9'

Mean Average Depth: 0.6'

Percent of Total Area - Riffles: 35.6%

Number of Riffles: 70

Number of Riffles per mile: 123

Total Riffle Area: 8,212.4 sq. ft.

Mean Riffle Area: 122.6 sq. ft.

Correction Factor: 1.02

Mean Maximum Depth: 0.3'

Mean Average Depth: 0.1'

Number of Large Woody Debris Pieces per Mile: 28.1

Wood < 15' and < 14": 10.5

Wood < 15' and > 14": 3.5

Wood > 15' and < 14": 5.3

Wood > 15' and > 14": 8.8

Mean Channel Width: 19.6'

Mean Riparian Width: 86.0'

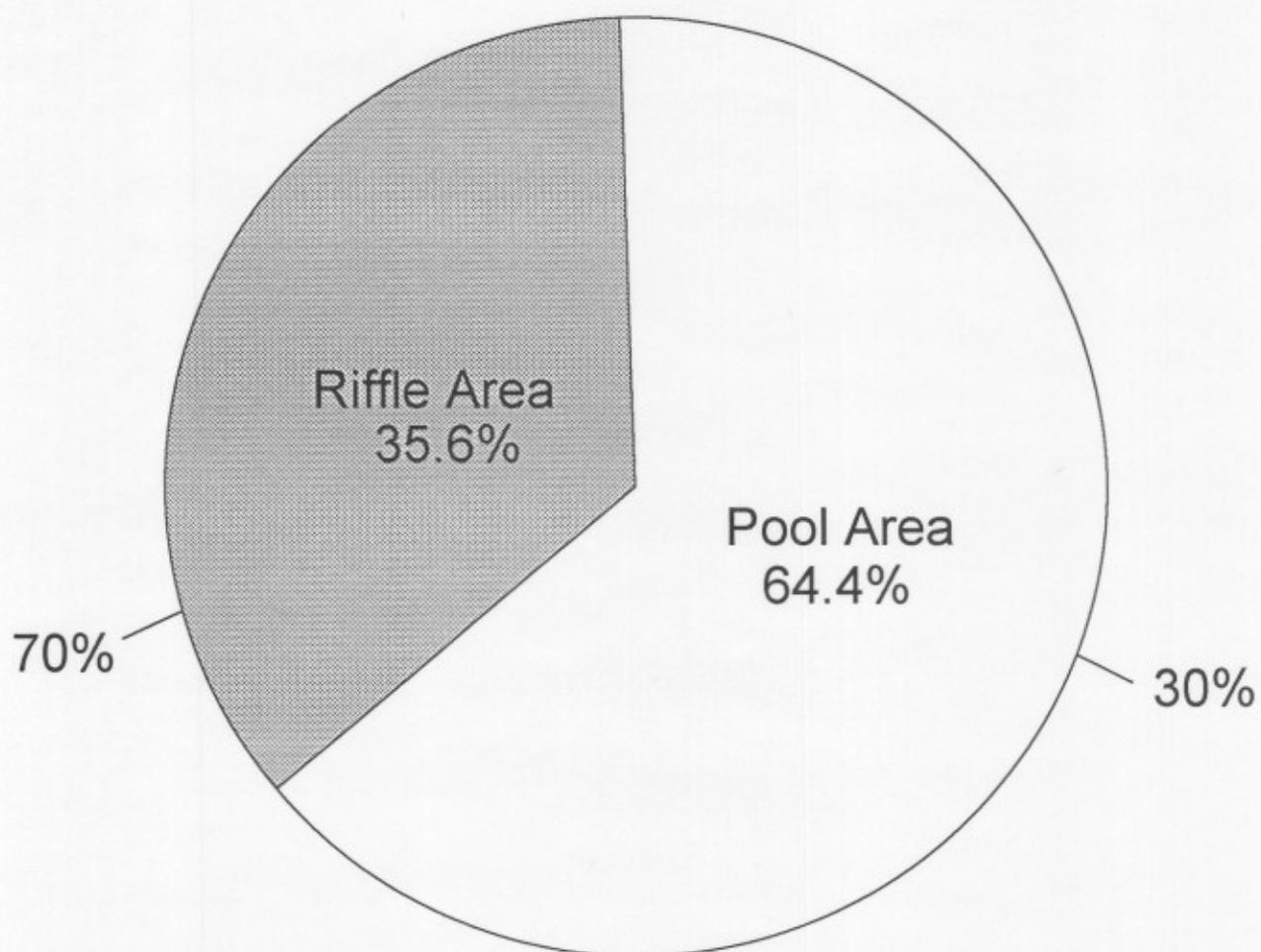
Mean Maximum Riparian Distance (either side): 45.0'

Mean Minimum Riparian Distance (either side): 21.4'

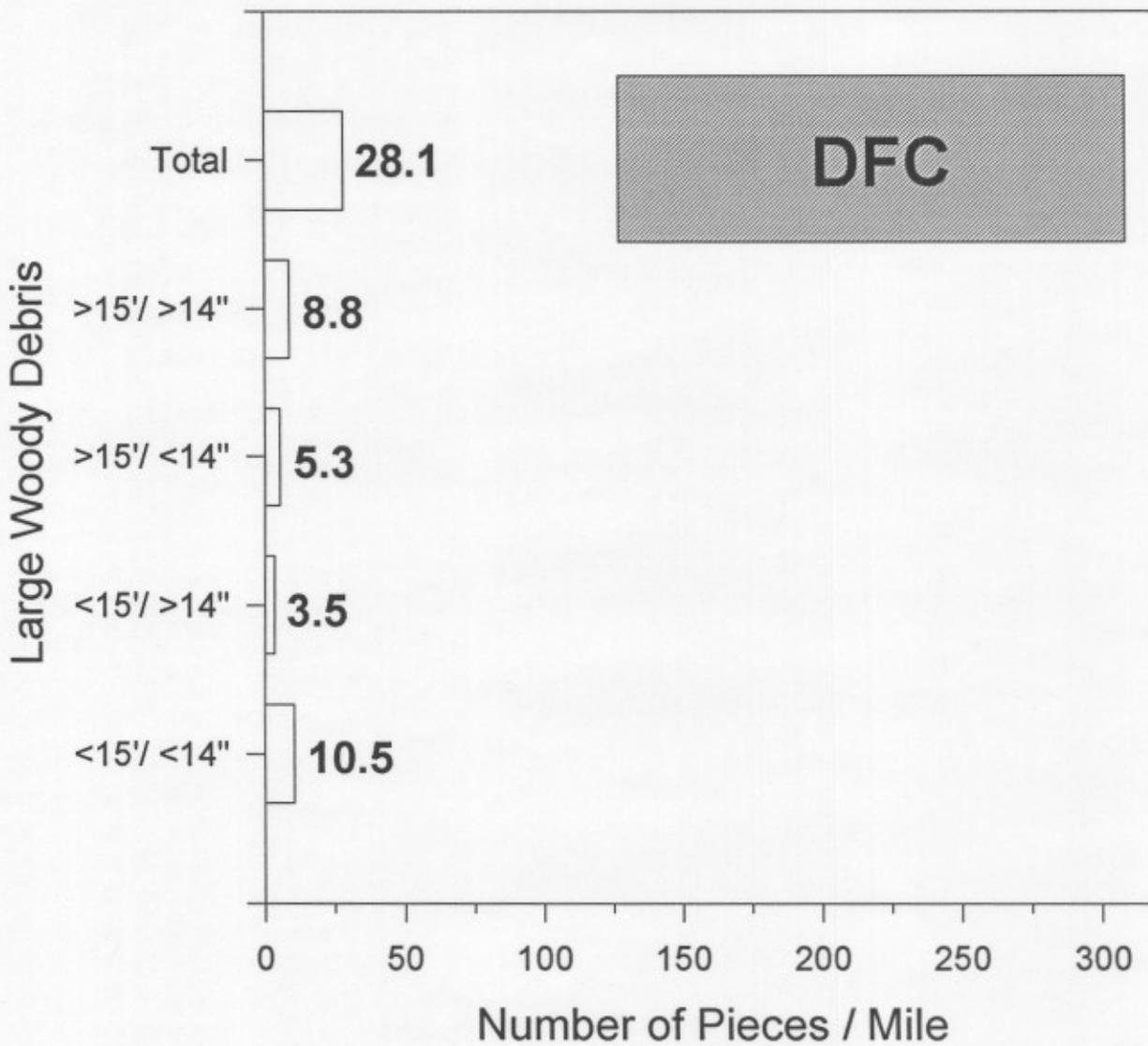
Maximum Riparian Width (Total): 117.2'

Minimum Riparian Width (Total): 25.5'

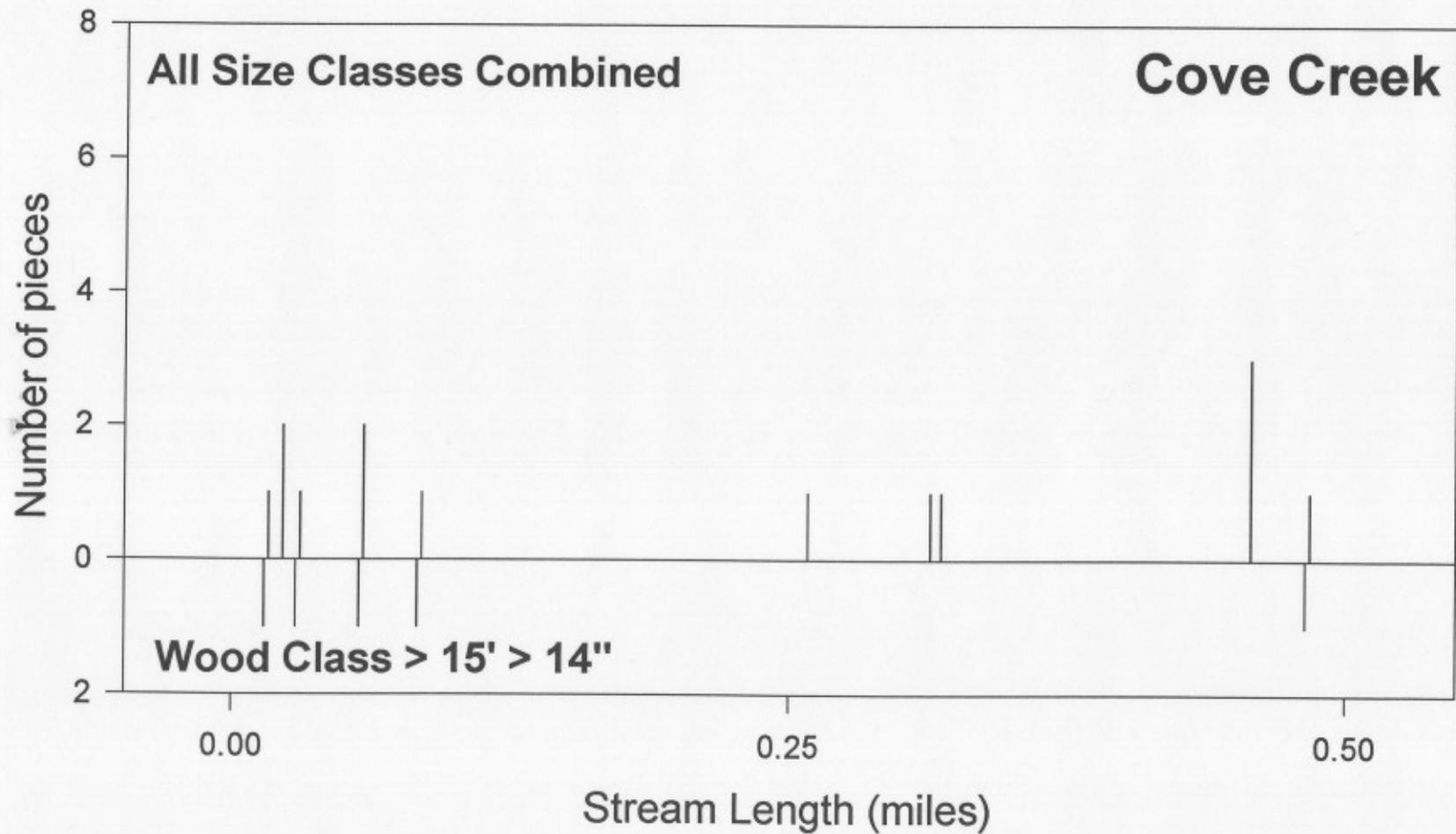
Cove Creek
DFC: 30 - 70% of the Total Stream Area
in Pool Habitat



Cove Creek



Large Woody Debris Distribution



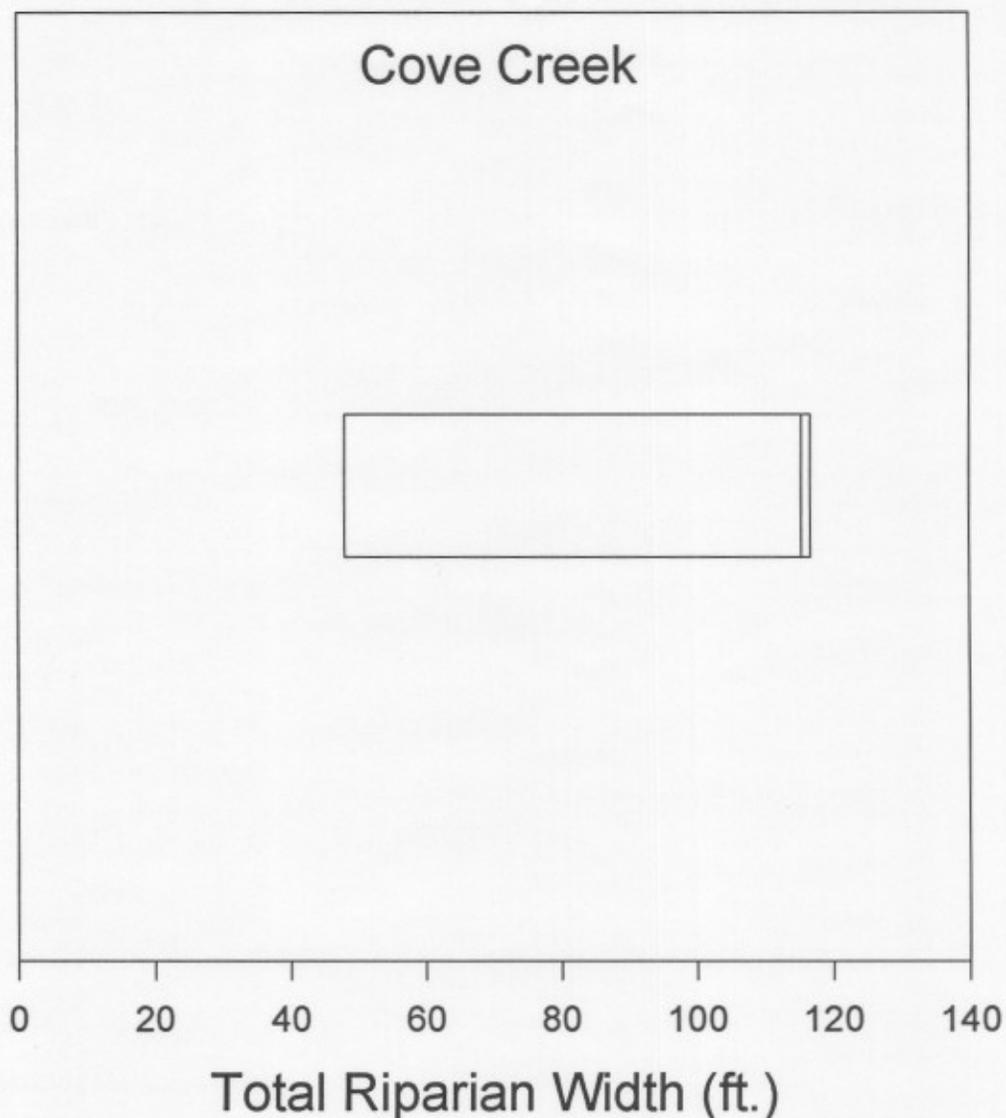
Riparian Width

Stream: Cove Creek

Number of measurements: 3

Mean width: 86.0 Std Dev: 52.4

Max: 117.2 Min: 25.5



Box plot of total riparian width. The box encloses 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: Little Cove Creek

District: Glenwood

Quadrangle: Buchanan

Sample Date: 07/26/96

Downstream Starting Point:

Total Distance Surveyed: 0.73 miles

Percent of Total Area - Pools: 40.6%

Number of Pools: 127

Number of Pools per mile: 174

Total Pool Area: 7,553.2 sq. ft.

Mean Pool Area: 59.5 sq. ft.

Correction Factor: 1.01

Mean Maximum Depth: 0.7'

Mean Average Depth: 0.4'

Percent of Total Area - Riffles: 59.4%

Number of Riffles: 125

Number of Riffles per mile: 171

Total Riffle Area: 11,019.5 sq. ft.

Mean Riffle Area: 91.1 sq. ft.

Correction Factor: 1.01

Mean Maximum Depth: 0.2'

Mean Average Depth: 0.1'

Number of Large Woody Debris Pieces per Mile: 53.4

Wood < 15' and < 14": 24.7

Wood < 15' and > 14": 5.5

Wood > 15' and < 14": 15.0

Wood > 15' and > 14": 8.2

Mean Channel Width: 11.0'

Mean Riparian Width: 58.8'

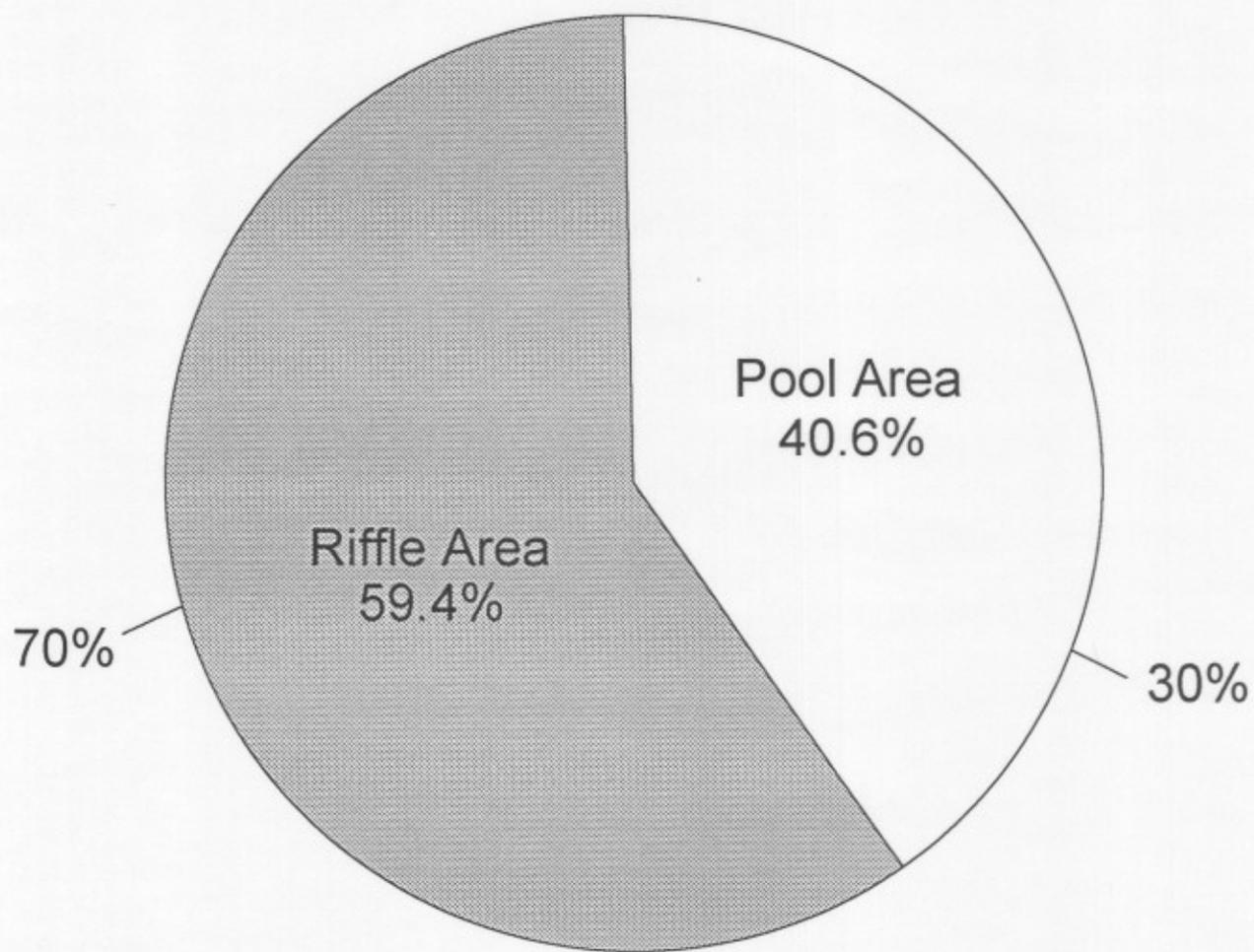
Mean Maximum Riparian Distance (either side): 34.9'

Mean Minimum Riparian Distance (either side): 12.9'

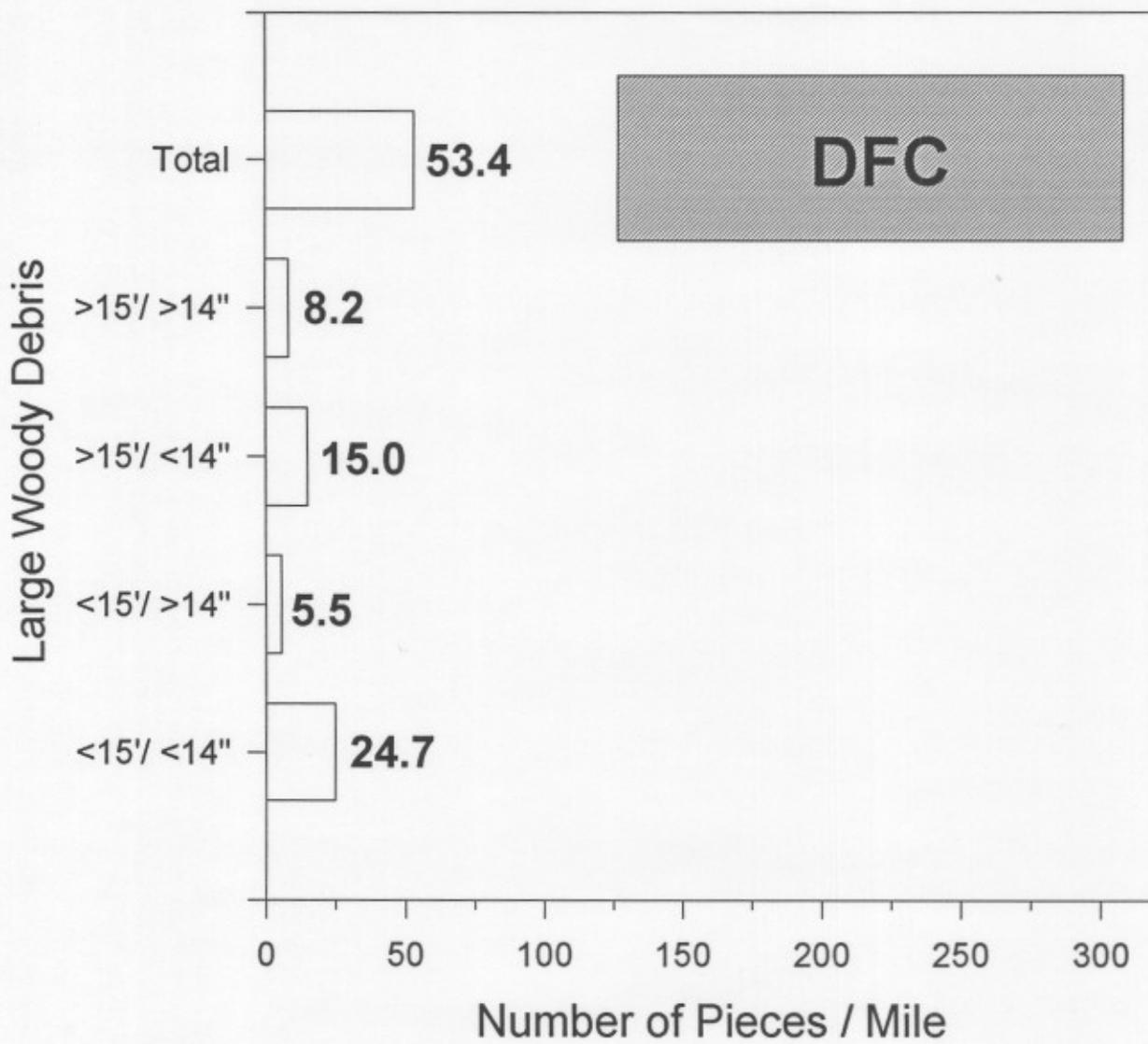
Maximum Riparian Width (Total): 72.8'

Minimum Riparian Width (Total): 38.8'

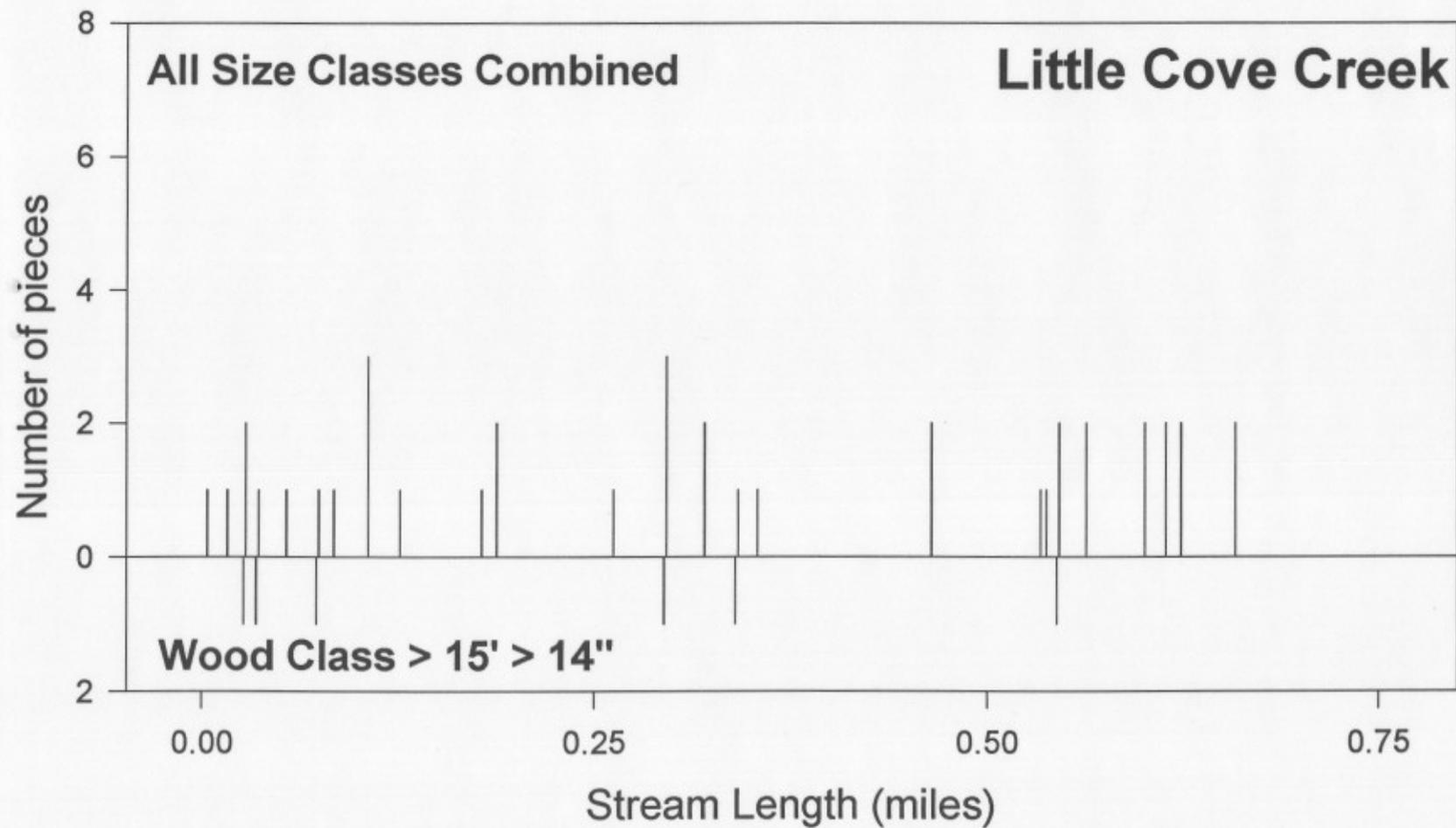
**Little Cove Creek
DFC: 30 - 70% of the Total Stream Area
in Pool Habitat**



Little Cove Creek



Large Woody Debris Distribution



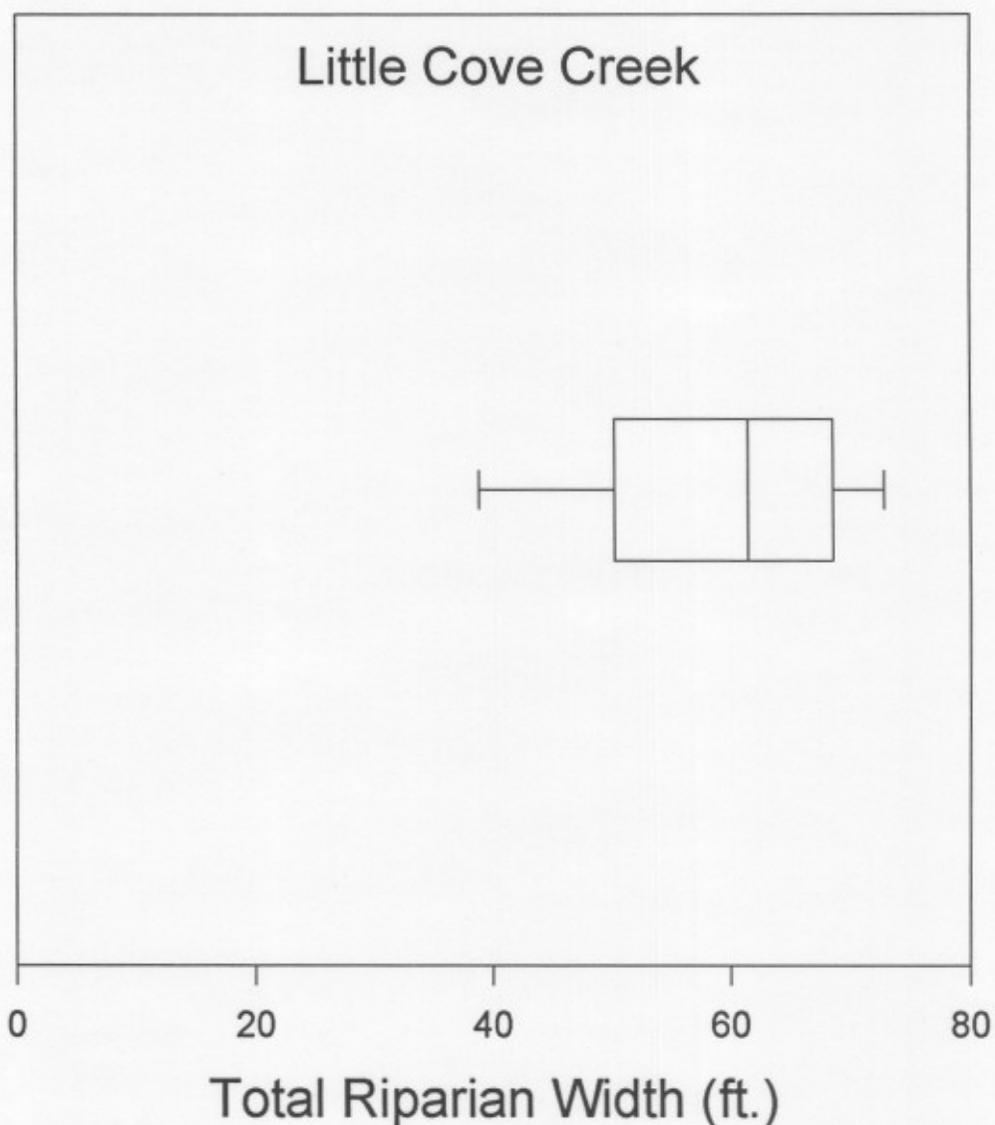
Riparian Width

Stream: Little Cove Creek

Number of measurements: 5

Mean width: 58.8 Std Dev: 13.2

Max: 72.8 Min: 38.8



Box plot of total riparian width. The box encloses 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: McCoglin Branch

District: Glenwood

Quadrangle: Montvale

Sample Date: 07/1/96

Downstream Starting Point: Confluence with McFalls Creek

Total Distance Surveyed: 0.3 miles

Percent of Total Area - Pools: 22.2%

Number of Pools: 31

Number of Pools per mile: 107

Total Pool Area: 1,665.4 sq. ft.

Mean Pool Area: 55.5 sq. ft.

Correction Factor: 0.97

Mean Maximum Depth: 0.9'

Mean Average Depth: 0.7'

Percent of Total Area - Riffles: 77.8%

Number of Riffles: 40

Number of Riffles per mile: 138

Total Riffle Area: 5,814.7 sq. ft.

Mean Riffle Area: 153.0 sq. ft.

Correction Factor: 0.99

Mean Maximum Depth: 0.4'

Mean Average Depth: 0.2'

Number of Large Woody Debris Pieces per Mile: 243.4

Wood < 15' and < 14": 100.0

Wood < 15' and > 14": 30.0

Wood > 15' and < 14": 66.7

Wood > 15' and > 14": 46.7

Mean Channel Width: 14.7'

Mean Riparian Width: 85.4'

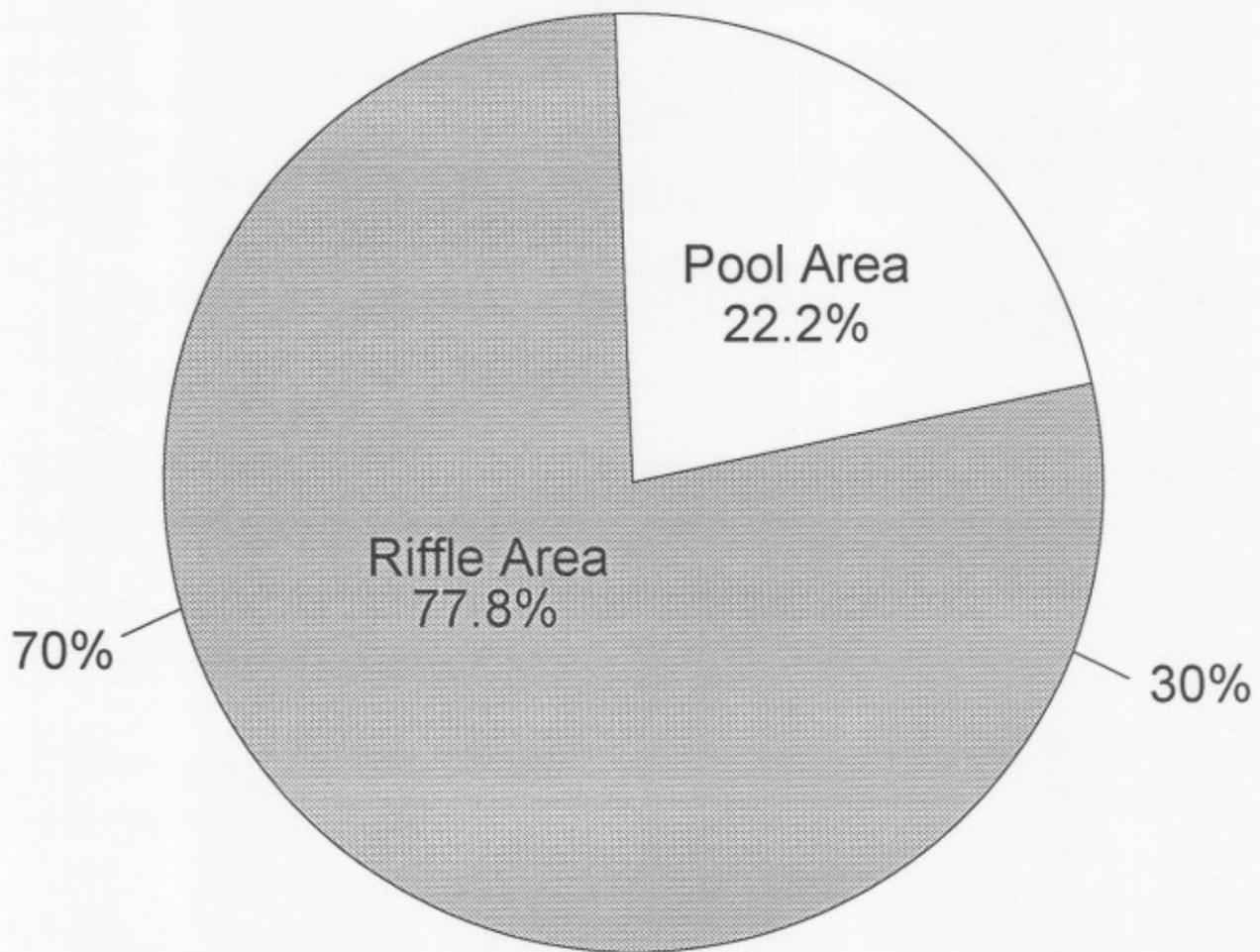
Mean Maximum Riparian Distance (either side): 49.8'

Mean Minimum Riparian Distance (either side): 20.9'

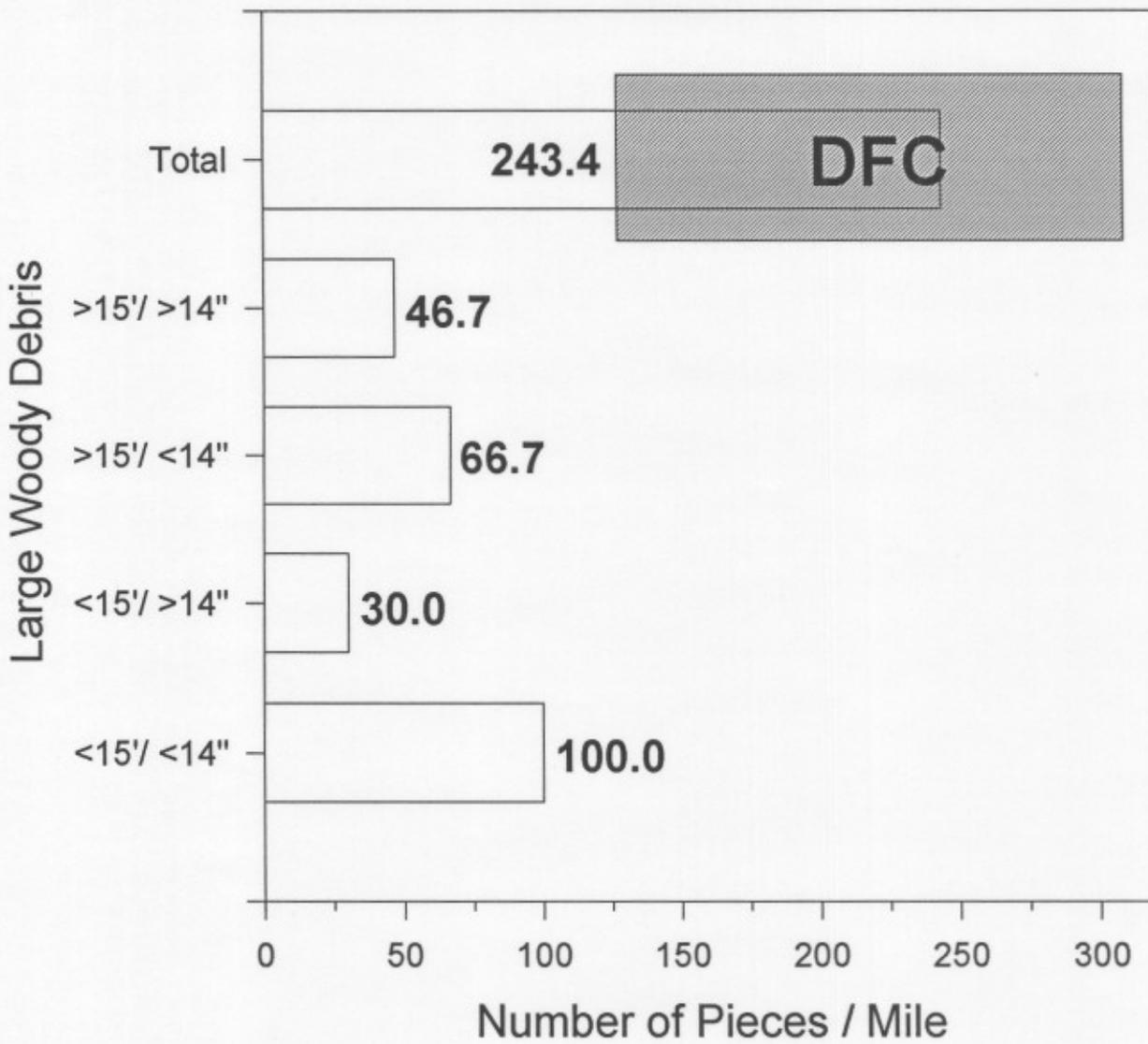
Maximum Riparian Width (Total): 108.6'

Minimum Riparian Width (Total): 62.1'

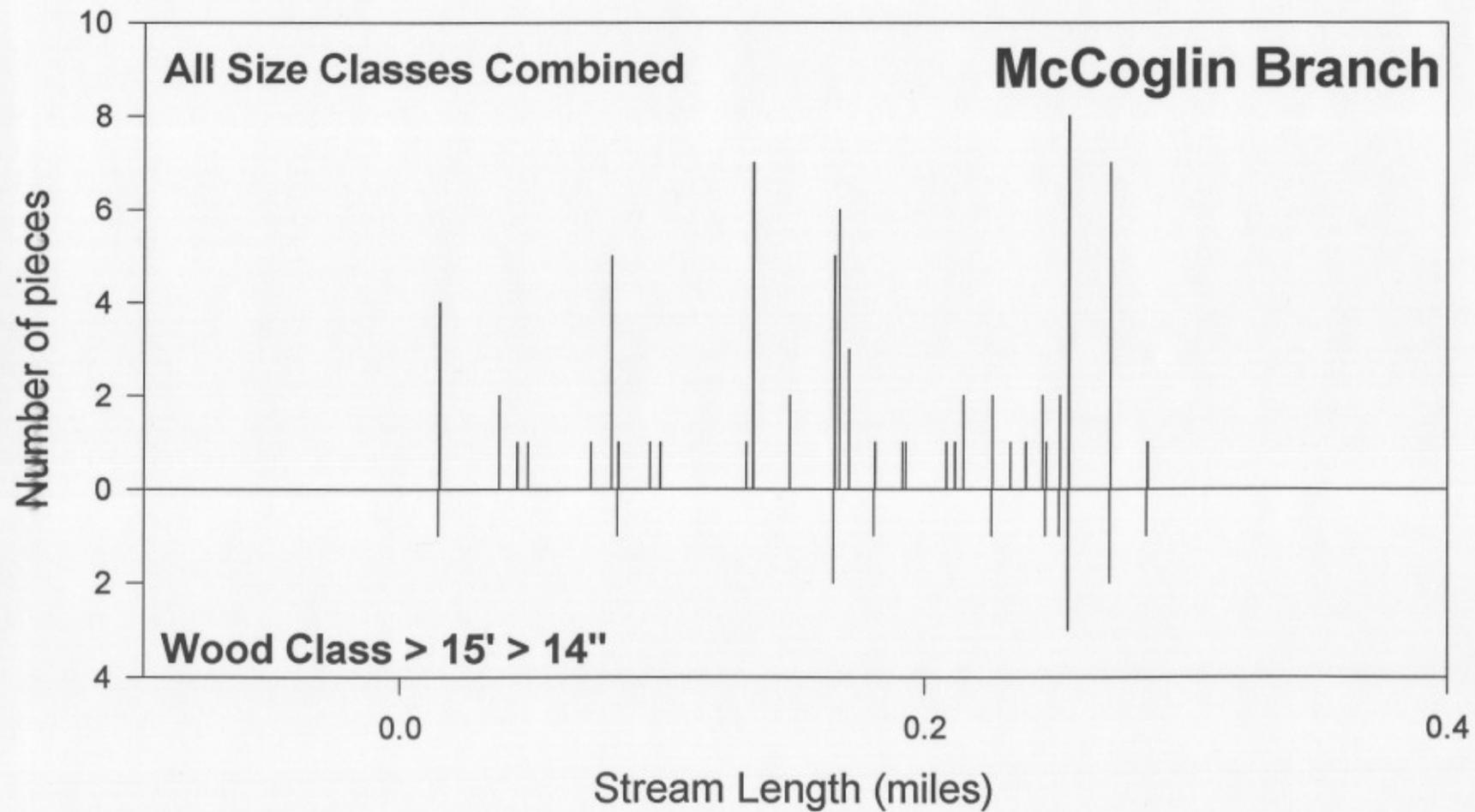
McCoglin Branch
DFC: 30 - 70% of the Total Stream Area
in Pool Habitat



McCoglin Branch



Large Woody Debris Distribution



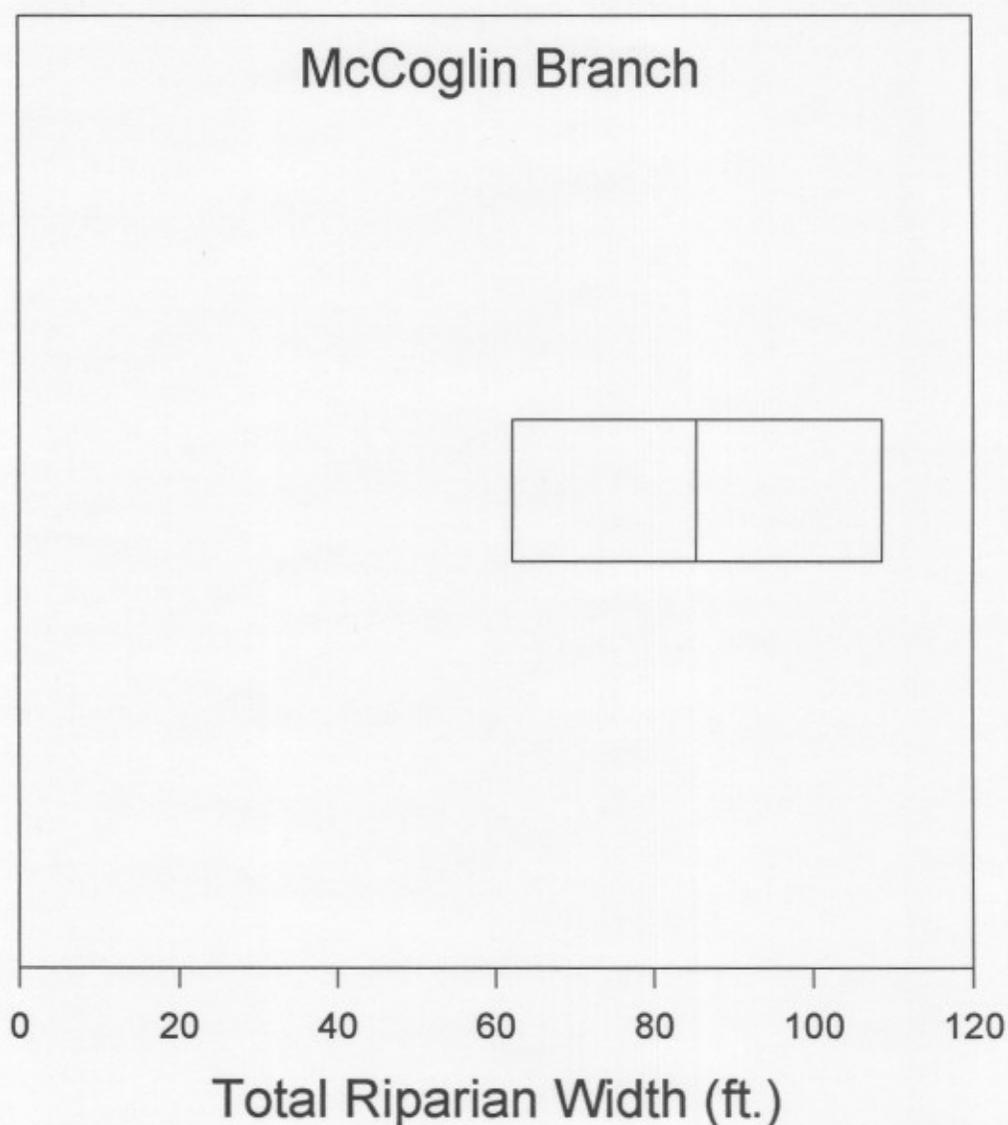
Riparian Width

Stream: McCoglin Branch

Number of measurements: 2

Mean width: 85.4 Std Dev: 32.9

Max: 108.6 Min: 62.1



Box plot of total riparian width. The box encloses 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: McFalls Creek

District: Glenwood

Quadrangle: Montvale

Sample Date: 07/1/96

Downstream Starting Point: USFS Boundary off Rt.618

Total Distance Surveyed: 0.68 miles

Percent of Total Area - Pools: 28.6%

Number of Pools: 47

Number of Pools per mile: 69

Total Pool Area: 16,549.8 sq. ft.

Mean Pool Area: 376.1 sq. ft.

Correction Factor: 1.05

Mean Maximum Depth: 1.3'

Mean Average Depth: 1.1'

Percent of Total Area - Riffles: 71.4%

Number of Riffles: 54

Number of Riffles per mile: 79

Total Riffle Area: 41,272.8 sq. ft.

Mean Riffle Area: 793.7 sq. ft.

Correction Factor: 0.97

Mean Maximum Depth: 0.6'

Mean Average Depth: 0.3'

Number of Large Woody Debris Pieces per Mile: 103.0

Wood < 15' and < 14": 32.4

Wood < 15' and > 14": 7.4

Wood > 15' and < 14": 42.6

Wood > 15' and > 14": 20.6

Mean Channel Width: 27.0'

Mean Riparian Width: 155.5'

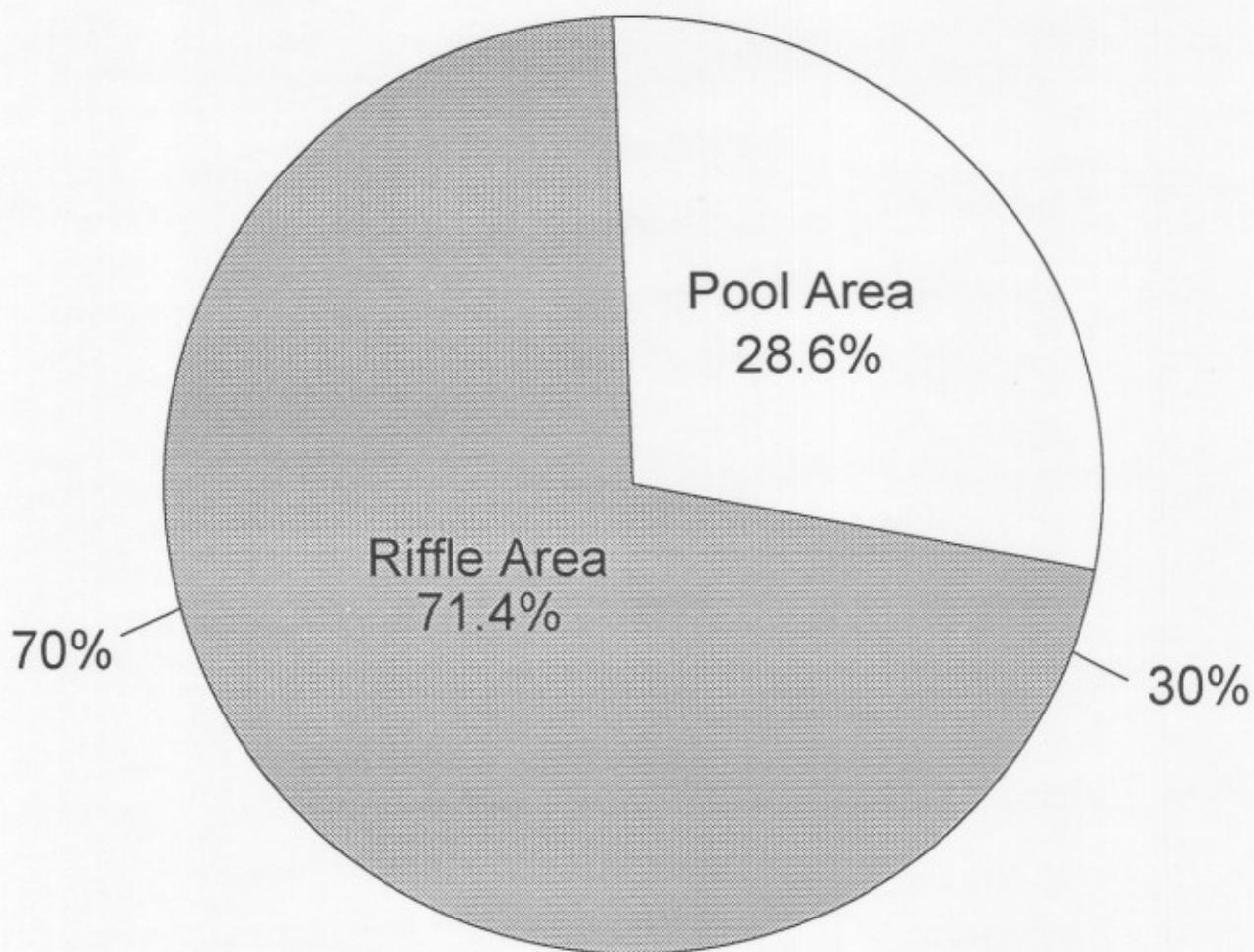
Mean Maximum Riparian Distance (either side): 120.0'

Mean Minimum Riparian Distance (either side): 8.5'

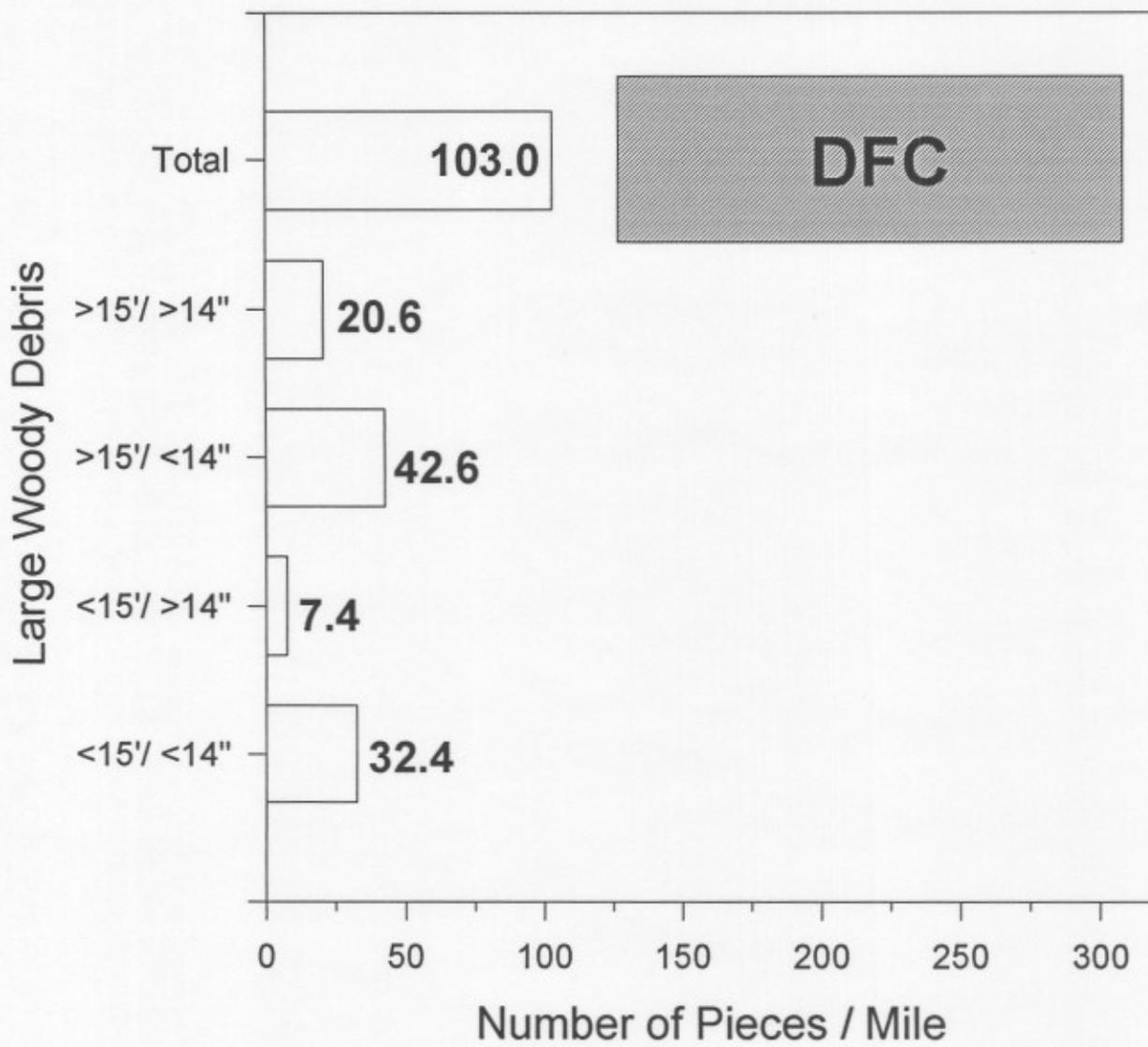
Maximum Riparian Width (Total): 160.0'

Minimum Riparian Width (Total): 151.0'

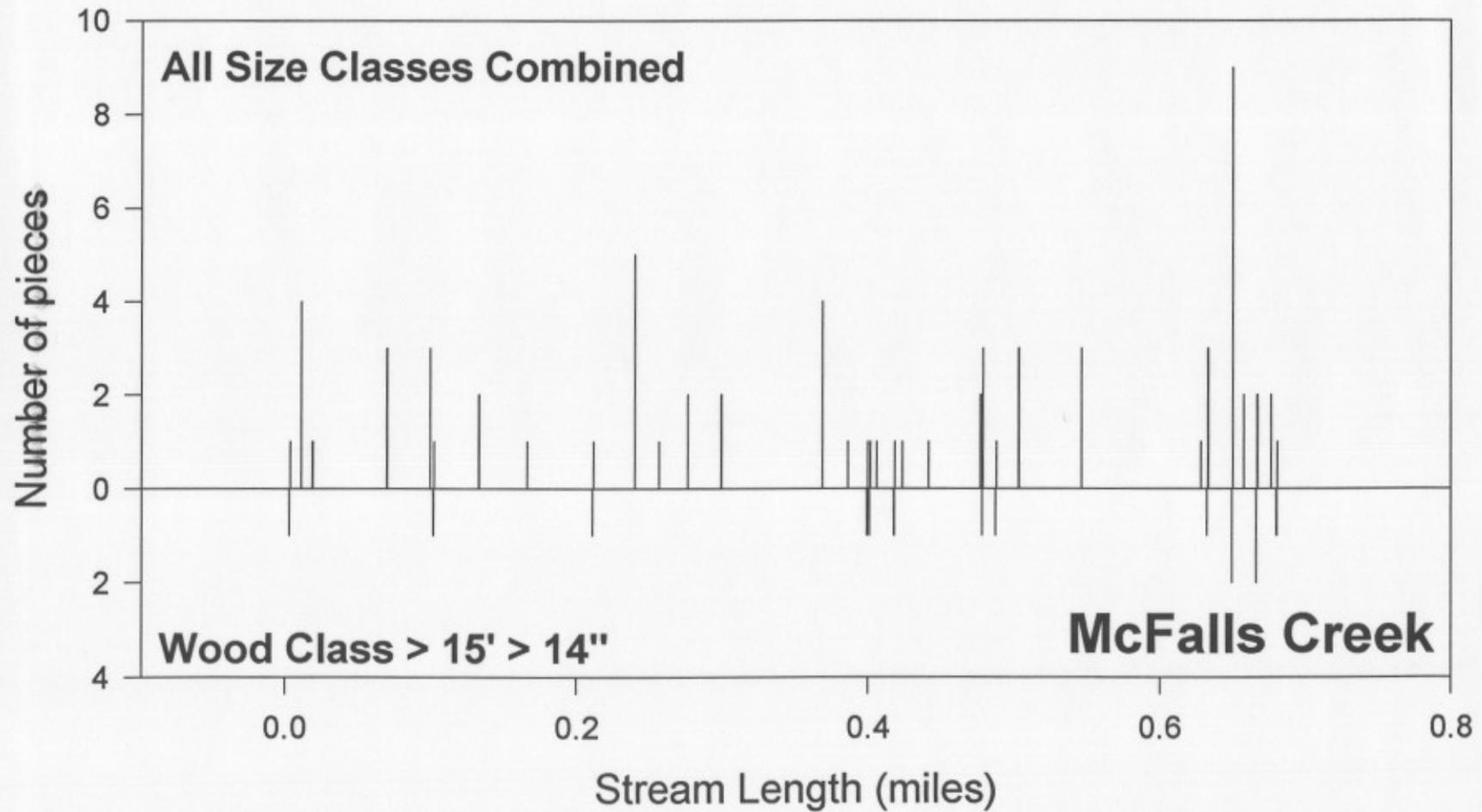
**McFalls Creek
DFC: 30 - 70% of the Total Stream Area
in Pool Habitat**



McFalls Creek



Large Woody Debris Distribution



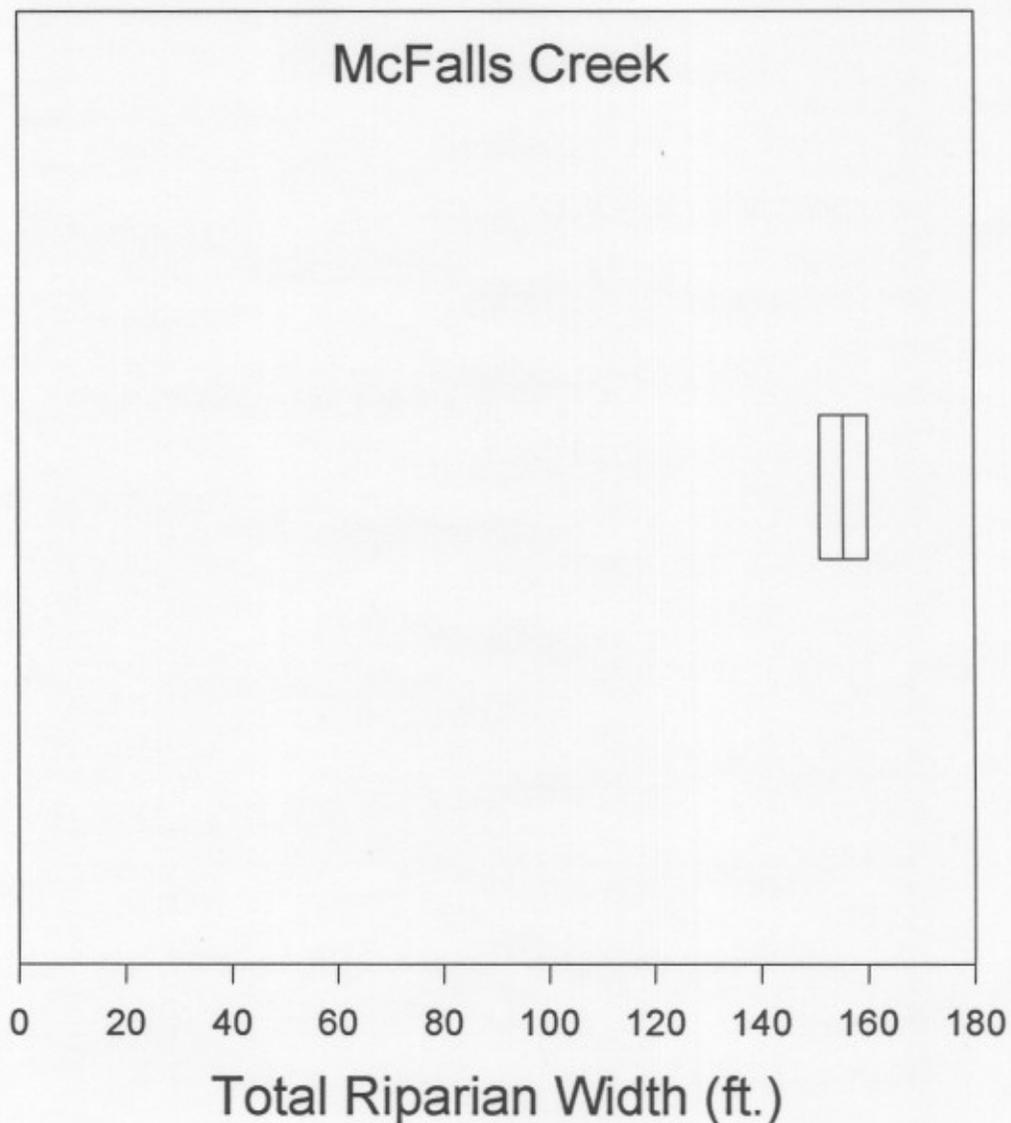
Riparian Width

Stream: McFalls Creek

Number of measurements: 2

Mean width: 155.5 Std Dev: 6.4

Max: 151.0 Min: 160.0



Box plot of total riparian width. The box encloses 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: East Fork of Elk Creek

District: Glenwood

Quadrangle: Snowden/Arnold Valley

Sample Date: 07/09/96

Downstream Starting Point: USFS Boundary

Total Distance Surveyed: 4.24 miles

Percent of Total Area - Pools: 36.7%

Number of Pools: 378

Number of Pools per mile: 89.0

Total Pool Area: 80,667.99 sq. ft.

Mean Pool Area: 213.4 sq. ft.

Correction Factor: 1.01

Mean Maximum Depth: 1.2'

Mean Average Depth: 0.7'

Percent of Total Area - Riffles: 63.3%

Number of Riffles: 394

Number of Riffles per mile: 93

Total Riffle Area: 139,131 sq. ft.

Mean Riffle Area: 353.1 sq. ft.

Correction Factor: 0.95

Mean Maximum Depth: 0.6'

Mean Average Depth: 0.3'

Number of Large Woody Debris Pieces per Mile: 50.0

Wood < 15' and < 14": 17.9

Wood < 15' and > 14": 5.7

Wood > 15' and < 14": 17.7

Wood > 15' and > 14": 8.7

Mean Channel Width: 26.1'

Mean Riparian Width: 73.7'

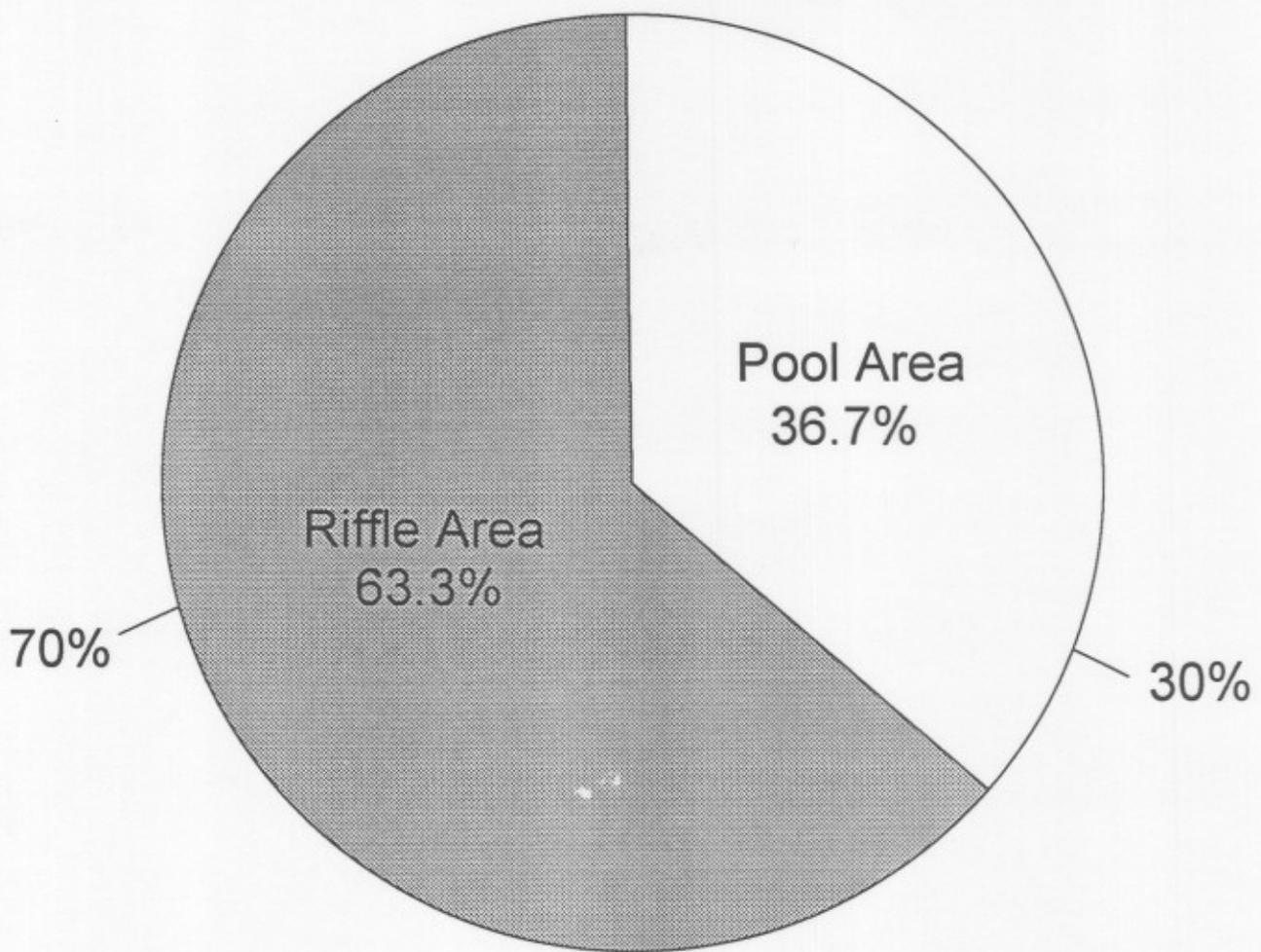
Mean Maximum Riparian Distance (either side): 35.2'

Mean Minimum Riparian Distance (either side): 12.4'

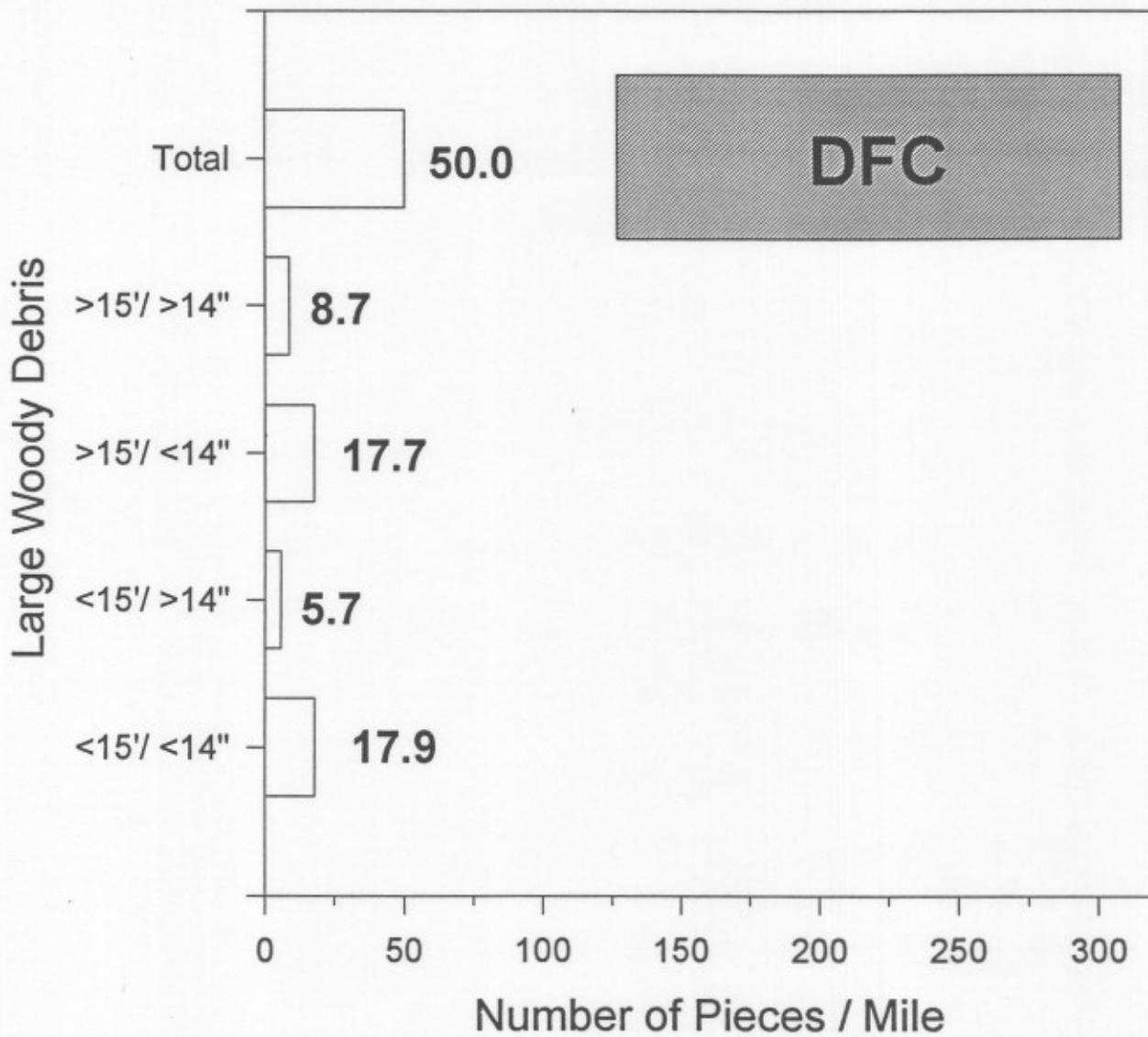
Maximum Riparian Width (Total): 197.0'

Minimum Riparian Width (Total): 31.8'

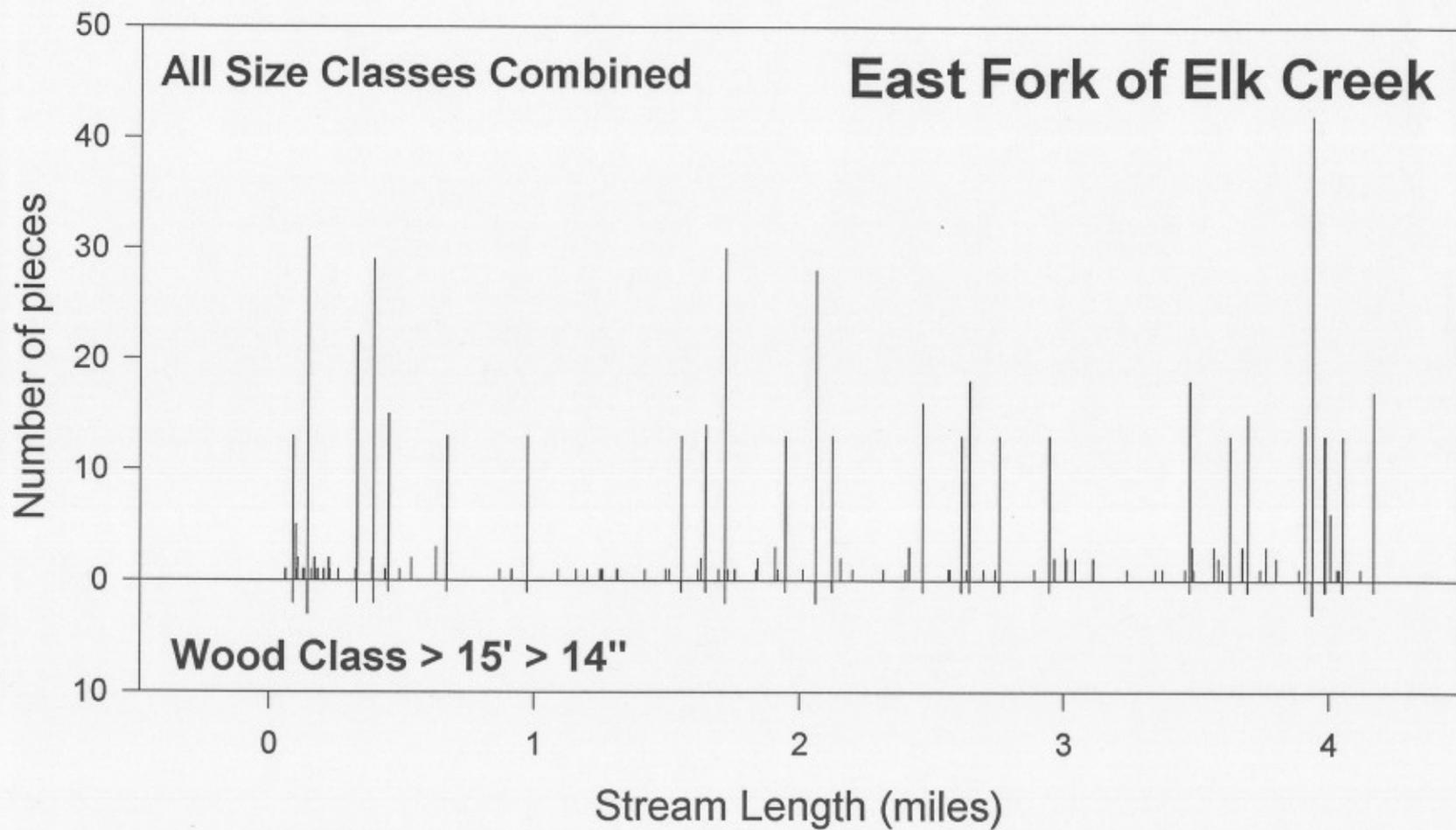
East Fork of Elk Creek
DFC: 30 - 70% of the Total Stream Area
in Pool Habitat



East Fork of Elk Creek



Large Woody Debris Distribution



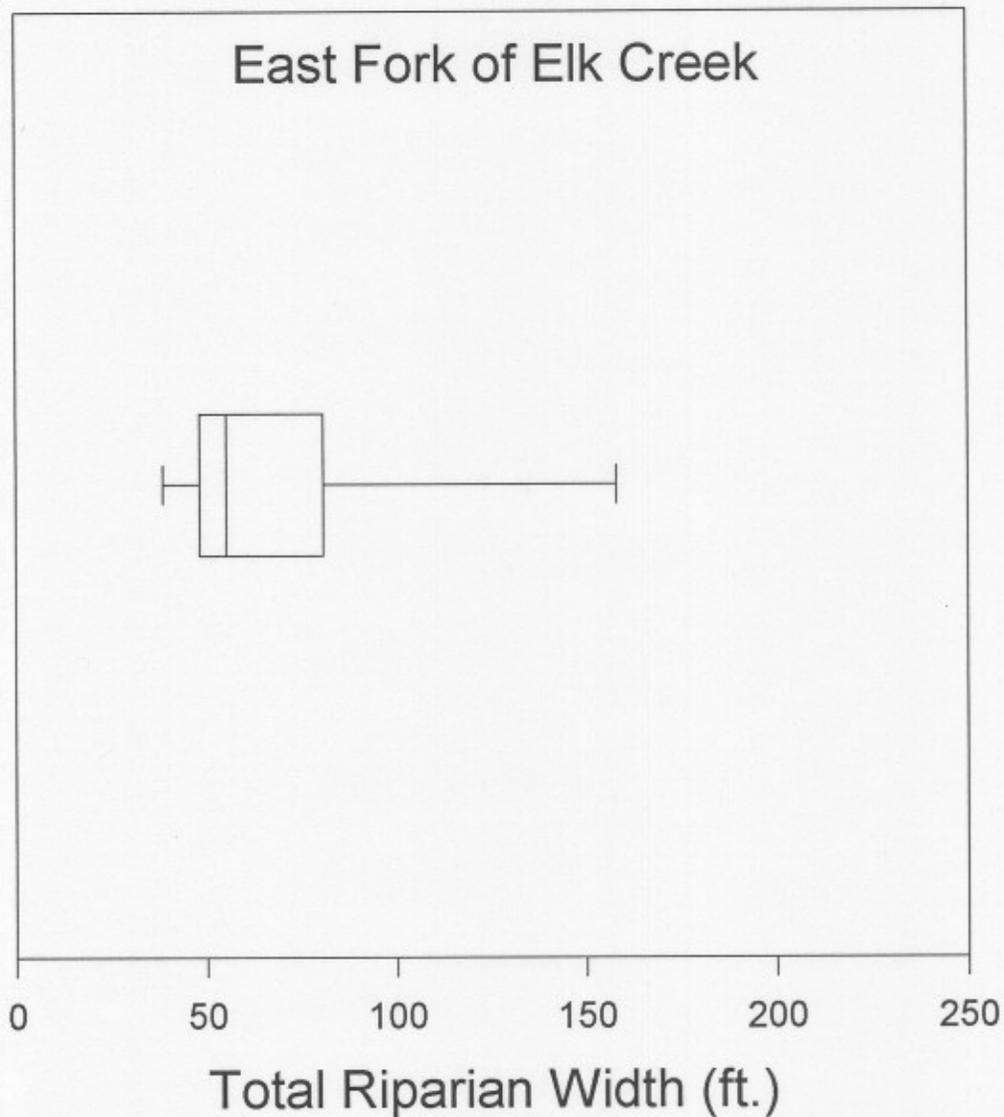
Riparian Width

Stream: East Fork of Elk Creek

Number of measurements: 19

Mean width: 73.7 Std Dev: 48.7

Max: 197.0 Min: 31.8



Box plot of total riparian width. The box encloses 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.