

STREAM INVENTORY REPORT

Elk Creek Unnamed tributary #7

WATERSHED OVERVIEW

Refer to the map of Elk Creek for the location of unnamed tributary.

Unnamed tributary #7 is a tributary to Elk Creek, tributary to South Fork Eel River, tributary to Eel River which drains to the Pacific Ocean, located in Humboldt County, California. Unnamed tributary #7 legal description at the confluence with Elk Creek is T2S R3E S26. Its location is 40.2682 north latitude and 123.7992 west longitude, LLID number 1237980402683. Unnamed tributary #7 is an intermittent stream according to the USGS Myers Flat 7.5 minute quadrangle. Unnamed tributary #7 drains a watershed of approximately 0.97 square miles. Elevations range from about 755 feet at the mouth of the creek to 1,600 feet in the headwater areas. Douglas fir and mixed hardwood dominate the upper watershed. The watershed is primarily privately owned by rural residents and is also managed for timber production. For vehicle access reference the Elk Creek 2007 stream report.

HABITAT INVENTORY RESULTS AND DISCUSSION

The habitat inventory of August 15, 2007 to August 16, 2007, was conducted by L. Lee, S. Truett, and S. Price (WSP). The total length of the stream surveyed was 1,120 feet.

Stream flow was not measured on unnamed tributary #7.

Unnamed tributary #7 is a B2 channel type for 1,120 feet of the stream surveyed (Reach 1). The suitability of B2 channel types for fish habitat improvement structures is described in the main body of this report.

The water temperatures recorded on the survey days August 15, 2007 to August 16, 2007, ranged from 52 to 54 degrees Fahrenheit. Air temperatures ranged from 54 to 64 degrees Fahrenheit. For a more complete and accurate water temperature profile 24-hour temperatures would need to be monitored throughout the warm summer months.

Based on the total length of this survey, Level II habitat units consisted of 72% riffle, 23% flatwater units, and 6% pool units. The pools are relatively shallow, with 0 of the 4 pools having a maximum residual depth greater than 2 feet.

Three of the 4 pool tail-outs measured had embeddedness ratings of 1 or 2. One of the pool tail-outs had embeddedness ratings of 3 or 4. Cobble embeddedness of 25% or less, a rating of 1, is considered best for the needs of salmon and steelhead.

The mean shelter rating for pools was 39. The shelter rating in the flatwater habitats was 35. A pool shelter rating of approximately 100 is desirable. Boulders are the dominant cover type in pools followed by terrestrial vegetation.

The mean percent canopy density for the stream was 98%. In general, revegetation projects are considered when canopy density is less than 80. The percentage of right and left bank covered with vegetation was high at 91% and 80%, respectively.

Elk Creek Unnamed Tributary #7

BIOLOGICAL INVENTORY RESULTS

Young-of-the-year salmonids were observed during the 2007 stream survey.

RECOMMENDATIONS

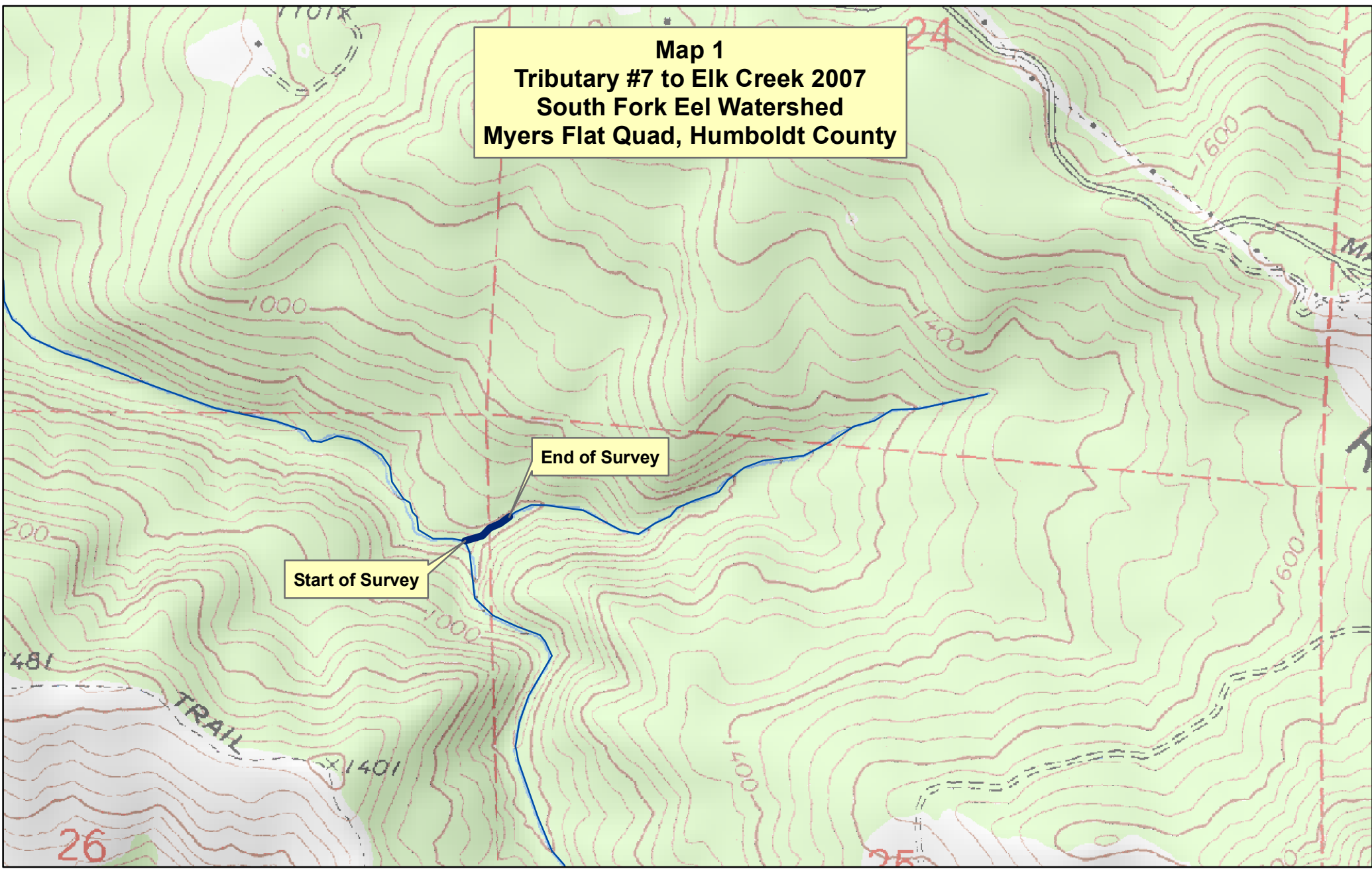
- 1) Unnamed tributary should be managed as an anadromous, natural production stream.
- 2) The limited water temperature available suggests that the maximum temperatures are within the acceptable range for juvenile salmonids. To establish more complete and meaningful temperature regime information, 24-hour monitoring during the July and August temperature extreme period should be performed for 3 to 5 years.

PROBLEM SITES AND LANDMARKS

The following landmarks and possible problem sites were noted. All distances are approximate and taken from the beginning of the survey reach.

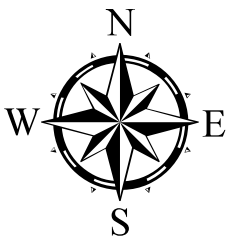
Position (ft.):	Habitat Units #:	Comments:
0	0001.00	Start of the survey at the confluence with Elk Creek.
771	0021.00	Young-of-the-year salmonids were observed up to this point of the tributary as well as a couple of 1+ and 2+ salmonids.
771	0021.00	There was a small left bank slide that was 30' long x 25' high.
1120	0026.00	End of survey due to a 7' boulder wall and the stream channel ran dry upstream of the boulder wall.

Map 1
Tributary #7 to Elk Creek 2007
South Fork Eel Watershed
Myers Flat Quad, Humboldt County




Start of Survey

End of Survey



Legend

 Reach 1, B2 Channel Type

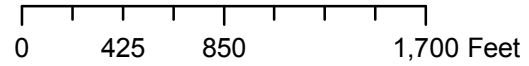


Table 1 - Summary of Riffle, Flatwater, and Pool Habitat Types

Stream Name: 1237980402683

LLID: 1237980402683 Drainage: Eel River - South Fork

Survey Dates: 8/15/2007 to 8/16/2007

Confluence Location: Quad: MYERS FLAT Legal Description: T02SR03ES26 Latitude: 40:16:06.0N Longitude: 123:47:53.0

Habitat Units	Units Fully Measured	Habitat Type	Habitat Occurrence (%)	Mean Length (ft.)	Total Length (ft.)	Total Length (%)	Mean Width (ft.)	Mean Depth (ft.)	Mean Max Depth (ft.)	Mean Area (sq.ft.)	Estimated Total Area (sq.ft.)	Mean Volume (cu.ft.)	Estimated Total Volume (cu.ft.)	Mean Residual Pool Vol (cu.ft.)	Mean Shelter Rating
9	5	FLATWATER	34.6	28	255	22.8	5.6	0.4	0.9	148	1336	68	610		35
4	4	POOL	15.4	16	64	5.7	6.6	0.5	1.1	99	394	77	307	49	39
13	2	RIFFLE	50.0	62	801	71.5	4.8	0.4	0.6	182	2366	66	853		53
Total Units	Total Units Fully Measured				Total Length (ft.)					Total Area (sq.ft.)			Total Volume (cu.ft.)		
26	11				1120					4096			1769		

Table 2 - Summary of Habitat Types and Measured Parameters

Stream Name: 1237980402683

LLID: 1237980402683

Drainage: Eel River - South Fork

Survey Dates: 8/15/2007 to 8/16/2007

Confluence Location: Quad: MYERS FLAT

Legal Description: T02SR03ES26

Latitude: 40:16:06.0N

Longitude: 123:47:53.0W

Habitat Units	Units Fully Measured	Habitat Type	Habitat Occurrence (%)	Mean Length (ft.)	Total Length (ft.)	Total Length (%)	Mean Width (ft.)	Mean Depth (ft.)	Max Depth (ft.)	Mean Area (sq.ft.)	Estimated Total Area (sq.ft.)	Mean Volume (cu.ft.)	Estimated Total Volume (cu.ft.)	Mean Residual Pool Vol (cu.ft.)	Mean Shelter Rating	Mean Canopy (%)
4	1	LGR	15.4	24	96	8.6	5	0.4	0.5	220	880	88	352		30	98
9	1	HGR	34.6	78	705	62.9	4	0.3	0.7	144	1296	43	389		75	97
5	3	RUN	19.2	17	83	7.4	6	0.3	0.8	82	412	27	133		23	98
4	2	SRN	15.4	43	172	15.4	5	0.6	1.2	248	990	129	518		53	95
4	4	MCP	15.4	16	64	5.7	7	0.5	1.4	99	394	77	307	49	39	98

Total Units
26

Total Units Fully Measured
11

Total Length (ft.)
1120

Total Area (sq.ft.)
3972

Total Volume (cu.ft.)
1698

Table 3 - Summary of Pool Types

Stream Name: 1237980402683

LLID: 1237980402683

Drainage: Eel River - South Fork

Survey Dates: 8/15/2007 to 8/16/2007

Confluence Location: Quad: MYERS FLAT

Legal Description: T02SR03ES26

Latitude: 40:16:06.0N

Longitude: 123:47:53.0W

Habitat Units	Units Fully Measured	Habitat Type	Habitat Occurrence (%)	Mean Length (ft.)	Total Length (ft.)	Total Length (%)	Mean Width (ft.)	Mean Residual Depth (ft.)	Mean Area (sq.ft.)	Estimated Total Area (sq.ft.)	Mean Residual Pool Vol (cu.ft.)	Estimated Total Resid.Vol. (cu.ft.)	Mean Shelter Rating
4	4	MAIN	100	16	64	100	6.6	0.5	99	394	49	195	39

Total Units	Total Units Fully Measured	Total Length (ft.)	Total Area (sq.ft.)	Total Volume (cu.ft.)
4	4	64	394	195

Table 4 - Summary of Maximum Residual Pool Depths By Pool Habitat Types

Stream Name: 1237980402683 LLID: 1237980402683 Drainage: Eel River - South Fork

Survey Dates: 8/15/2007 to 8/16/2007

Confluence Location: Quad: MYERS FLAT Legal Description: T02SR03ES26 Latitude: 40:16:06.0N Longitude: 123:47:53.0W

Habitat Units	Habitat Type	Habitat Occurrence (%)	< 1 Foot Maximum Residual Depth	< 1 Foot Percent Occurrence	1 < 2 Feet Maximum Residual Depth	1 < 2 Feet Percent Occurrence	2 < 3 Feet Maximum Residual Depth	2 < 3 Feet Percent Occurrence	3 < 4 Feet Maximum Residual Depth	3 < 4 Feet Percent Occurrence	>= 4 Feet Maximum Residual Depth	>= 4 Feet Percent Occurrence
4	MCP	100	2	50	2	50	0	0	0	0	0	0

Total Units	Total < 1 Foot Max Resid. Depth	Total < 1 Foot % Occurrence	Total 1< 2 Foot Max Resid. Depth	Total 1< 2 Foot % Occurrence	Total 2< 3 Foot Max Resid. Depth	Total 2< 3 Foot % Occurrence	Total 3< 4 Foot Max Resid. Depth	Total 3< 4 Foot % Occurrence	Total >= 4 Foot Max Resid. Depth	Total >= 4 Foot % Occurrence
4	2	50	2	50	0	0	0	0	0	0

Mean Maximum Residual Pool Depth (ft.): 1.1

Table 5 - Summary of Mean Percent Cover By Habitat Type

Stream Name: 1237980402683

LLID: 1237980402683

Drainage: Eel River - South Fork

Survey Dates: 8/15/2007 to 8/16/2007

Dry Units: 0

Confluence Location: Quad: MYERS FLAT

Legal Description: T02SR03ES26

Latitude: 40:16:06.0N

Longitude: 123:47:53.0W

Habitat Units	Units Fully Measured	Habitat Type	Mean % Undercut Banks	Mean % SWD	Mean % LWD	Mean % Root Mass	Mean % Terr. Vegetation	Mean % Aquatic Vegetation	Mean % White Water	Mean % Boulders	Mean % Bedrock Ledges
4	1	LGR	0	0	0	0	55	0	0	45	0
9	1	HGR	0	20	20	0	10	0	0	50	0
13	2	TOTAL RIFFLE	0	10	10	0	33	0	0	48	0
5	3	RUN	0	5	20	8	55	0	0	12	0
4	2	SRN	0	25	30	0	20	0	0	25	0
9	5	TOTAL FLAT	0	13	24	5	41	0	0	17	0
4	4	MCP	0	10	0	5	21	0	5	59	0
4	4	TOTAL POOL	0	10	0	5	21	0	5	59	0
26	11	TOTAL	0	11	13	4	32	0	2	38	0

Table 6 - Summary of Dominant Substrates By Habitat Type

Stream Name: 1237980402683

LLID: 1237980402683

Drainage: Eel River - South Fork

Survey Dates: 8/15/2007 to 8/16/2007

Dry Units: 0

Confluence Location: Quad: MYERS FLAT

Legal Description: T02SR03ES26

Latitude: 40:16:06.0N

Longitude: 123:47:53.0W

Habitat Units	Units Fully Measured	Habitat Type	% Total Silt/Clay Dominant	% Total Sand Dominant	% Total Gravel Dominant	% Total Small Cobble Dominant	% Total Large Cobble Dominant	% Total Boulder Dominant	% Total Bedrock Dominant
4	0	LGR	0	0	0	0	0	0	0
9	1	HGR	0	0	0	0	0	100	0
5	3	RUN	0	0	33	33	33	0	0
4	2	SRN	0	0	50	0	0	50	0
4	4	MCP	0	0	0	0	25	75	0

Table 7 - Summary of Mean Percent Canopy for Entire Stream

Stream Name: 1237980402683

LLID: 1237980402683

Drainage: Eel River - South Fork

Survey Dates: 8/15/2007 to 8/16/2007

Confluence Location: Quad: MYERS FLAT

Legal Description: T02SR03ES26

Latitude: 40:16:06.0N

Longitude: 123:47:53.0W

Mean Percent Canopy	Mean Percent Conifer	Mean Percent Hardwood	Mean Percent Open Units	Mean Right Bank % Cover	Mean Left Bank % Cover
98	3	97	0	91	80

Note: Mean percent conifer and hardwood for the entire reach are means of canopy components from units with canopy values greater than zero.

Open units represent habitat units with zero canopy cover.

Table 9 - Mean Percentage of Dominant Substrate and Vegetation

Stream Name: 1237980402683

LLID: 1237980402683

Drainage: Eel River - South Fork

Survey Dates: 8/15/2007 to 8/16/2007

Confluence Location: Quad: MYERS FLAT

Legal Description: T02SR03ES26

Latitude: 40:16:06.0N

Longitude: 123:47:53.0W

Mean Percentage of Dominant Stream Bank Substrate

Dominant Class of Substrate	Number of Units Right Bank	Number of Units Left Bank	Total Mean Percent (%)
Bedrock	0	2	9.1
Boulder	0	0	0.0
Cobble / Gravel	0	1	4.5
Sand / Silt / Clay	11	8	86.4

Mean Percentage of Dominant Stream Bank Vegetation

Dominant Class of Vegetation	Number of Units Right Bank	Number of Units Left Bank	Total Mean Percent (%)
Grass	0	1	4.5
Brush	1	1	9.1
Hardwood Trees	10	8	81.8
Coniferous Trees	0	1	4.5
No Vegetation	0	0	0.0

Total Stream Cobble Embeddedness Values: 2

Table 10 - Mean Percent of Shelter Cover Types For Entire Stream

StreamName: 1237980402683

LLID: 1237980402683

Drainage: Eel River - South Fork

Survey Dates: 8/15/2007 to 8/16/2007

Confluence Location: Quad: MYERS FLAT

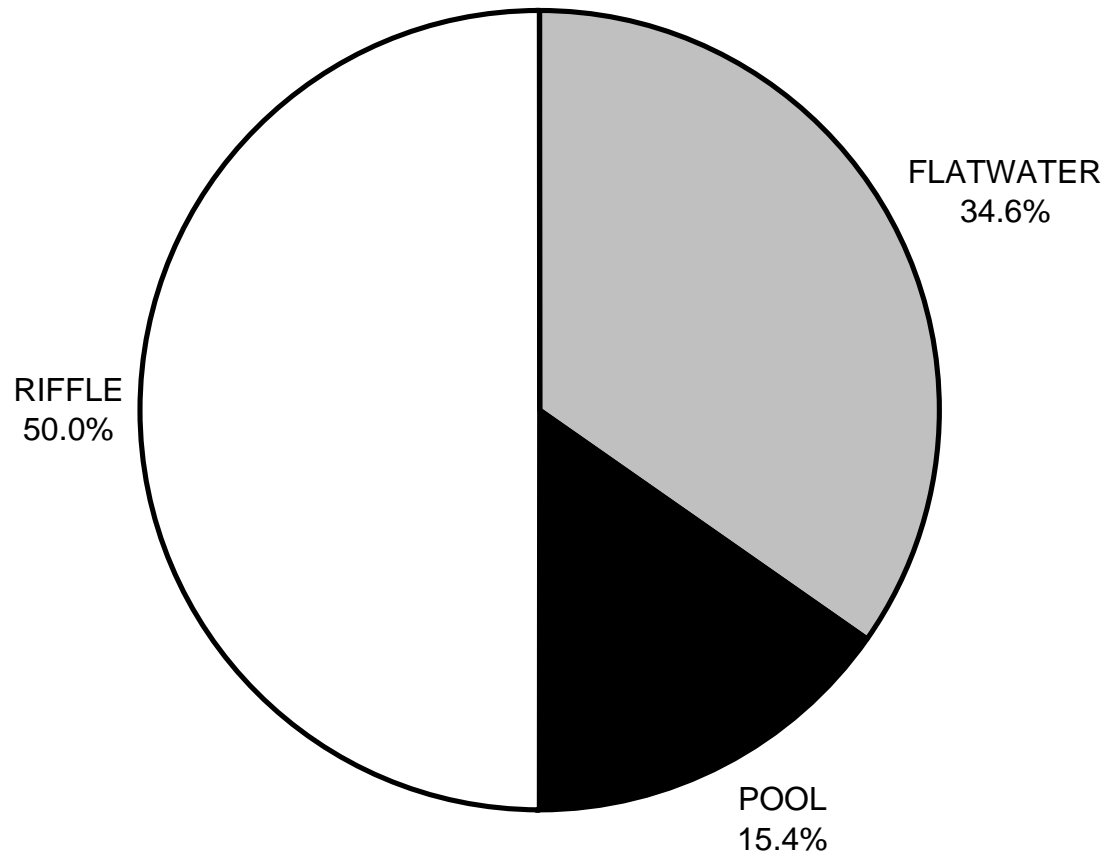
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Longitude: 123:47:53.0W

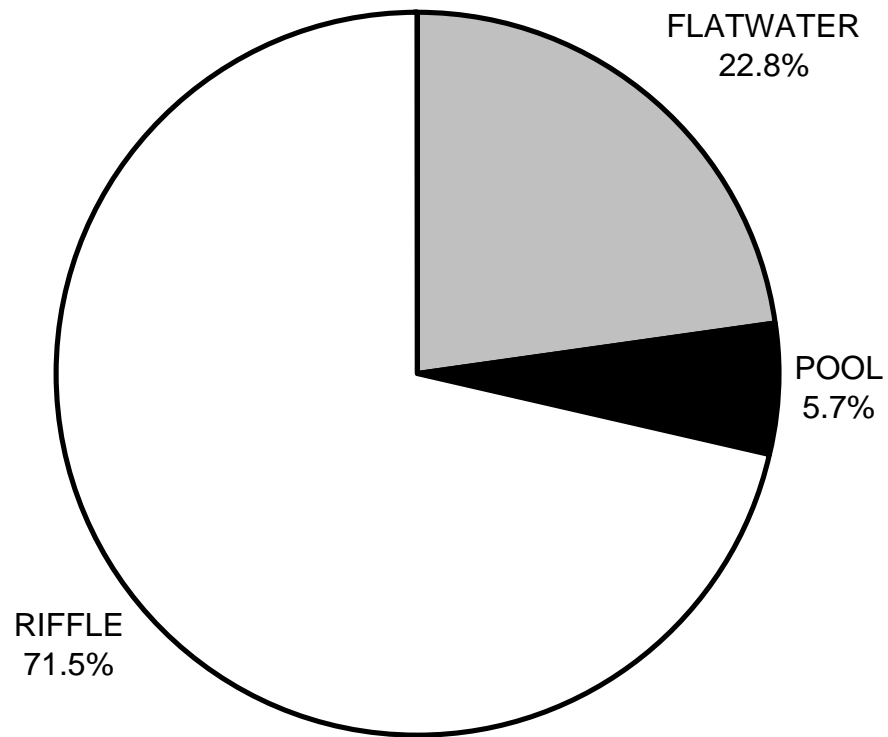
	Riffles	Flatwater	Pools
UNDERCUT BANKS (%)	0	0	0
SMALL WOODY DEBRIS (%)	10	13	10
LARGE WOODY DEBRIS (%)	10	24	0
ROOT MASS (%)	0	5	5
TERRESTRIAL VEGETATION (%)	33	41	21
AQUATIC VEGETATION (%)	0	0	0
WHITEWATER (%)	0	0	5
BOULDERS (%)	48	17	59
BEDROCK LEDGES (%)	0	0	0

1237980402683 2007
HABITAT TYPES BY PERCENT OCCURRENCE



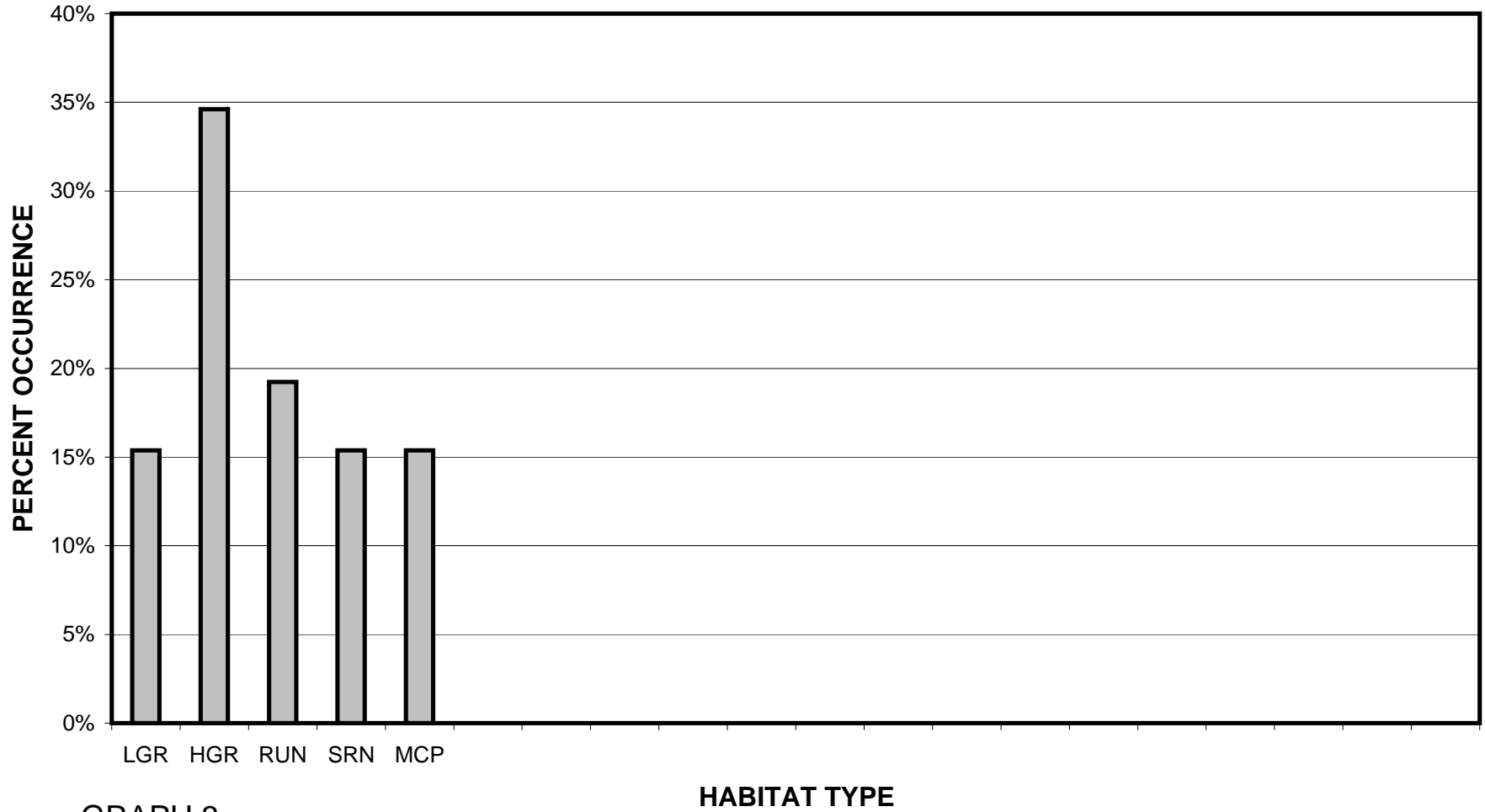
GRAPH 1

1237980402683 2007
HABITAT TYPES BY PERCENT TOTAL LENGTH



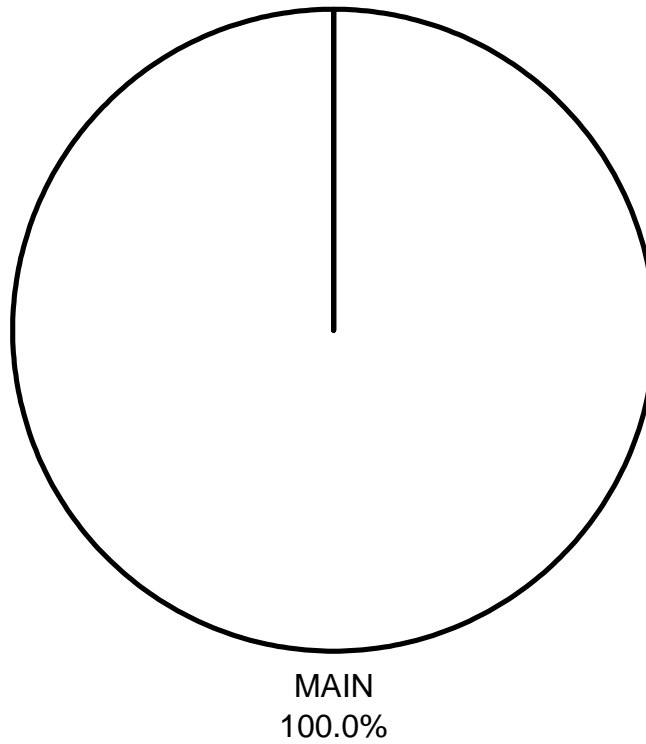
GRAPH 2

1237980402683 2007
HABITAT TYPES BY PERCENT OCCURRENCE



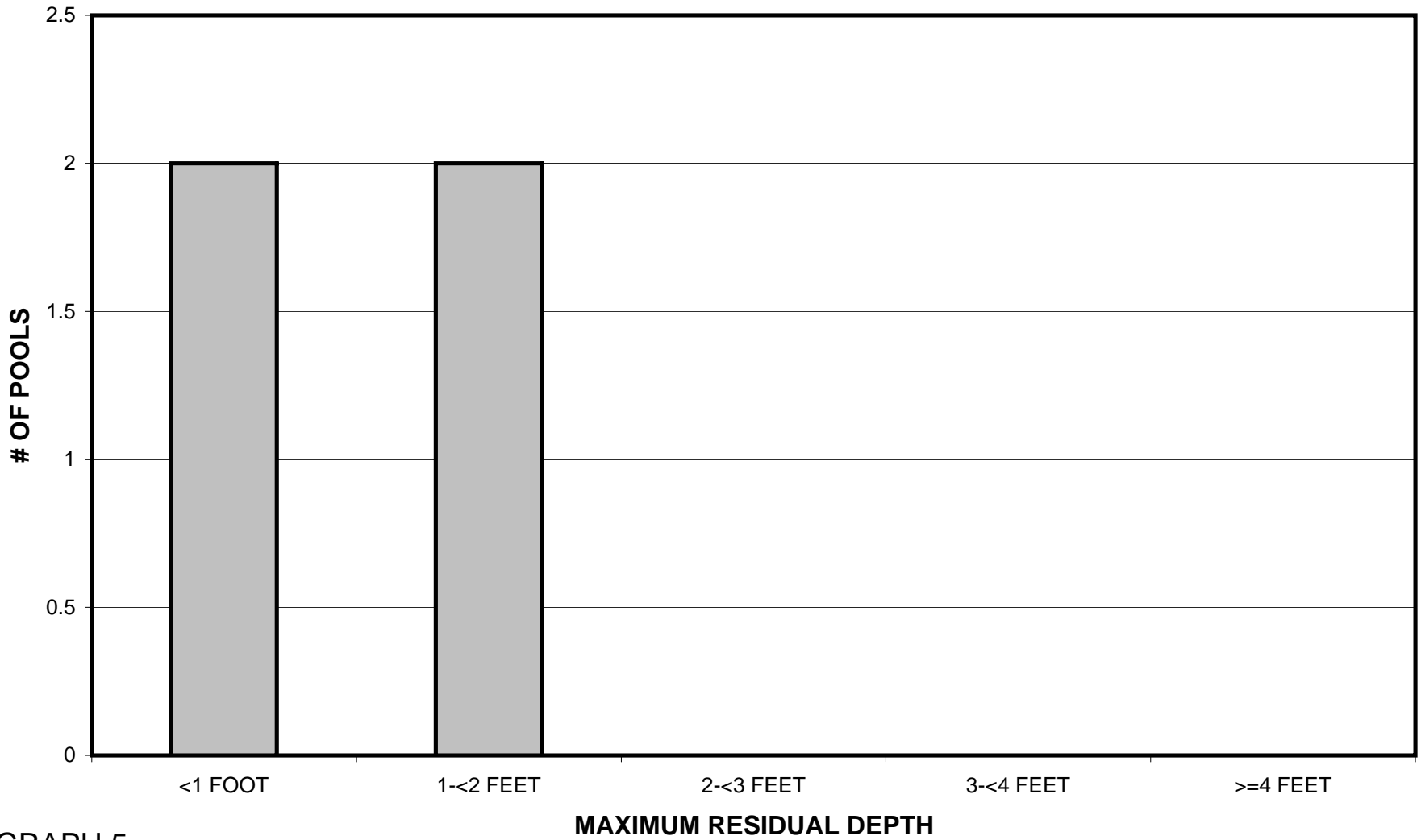
GRAPH 3

1237980402683 2007
POOL TYPES BY PERCENT OCCURRENCE



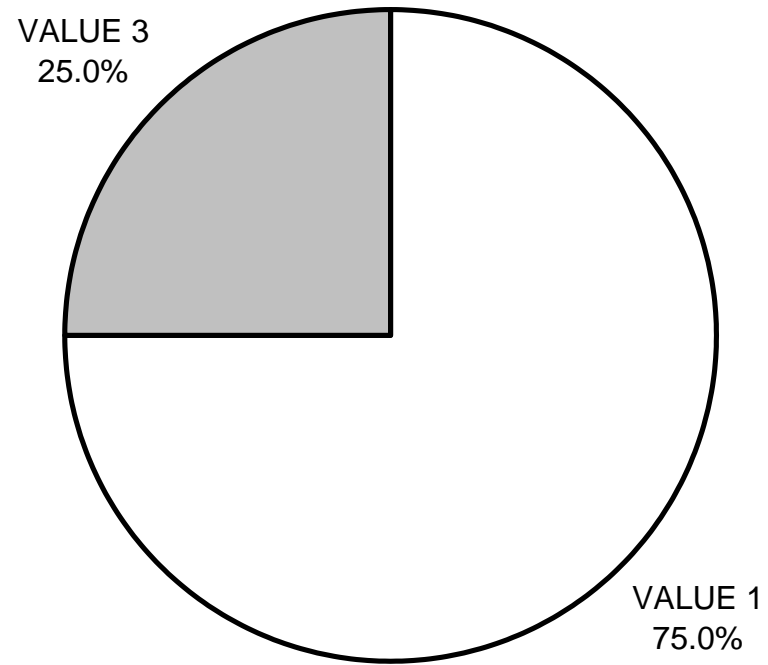
GRAPH 4

1237980402683 2007
MAXIMUM DEPTH IN POOLS



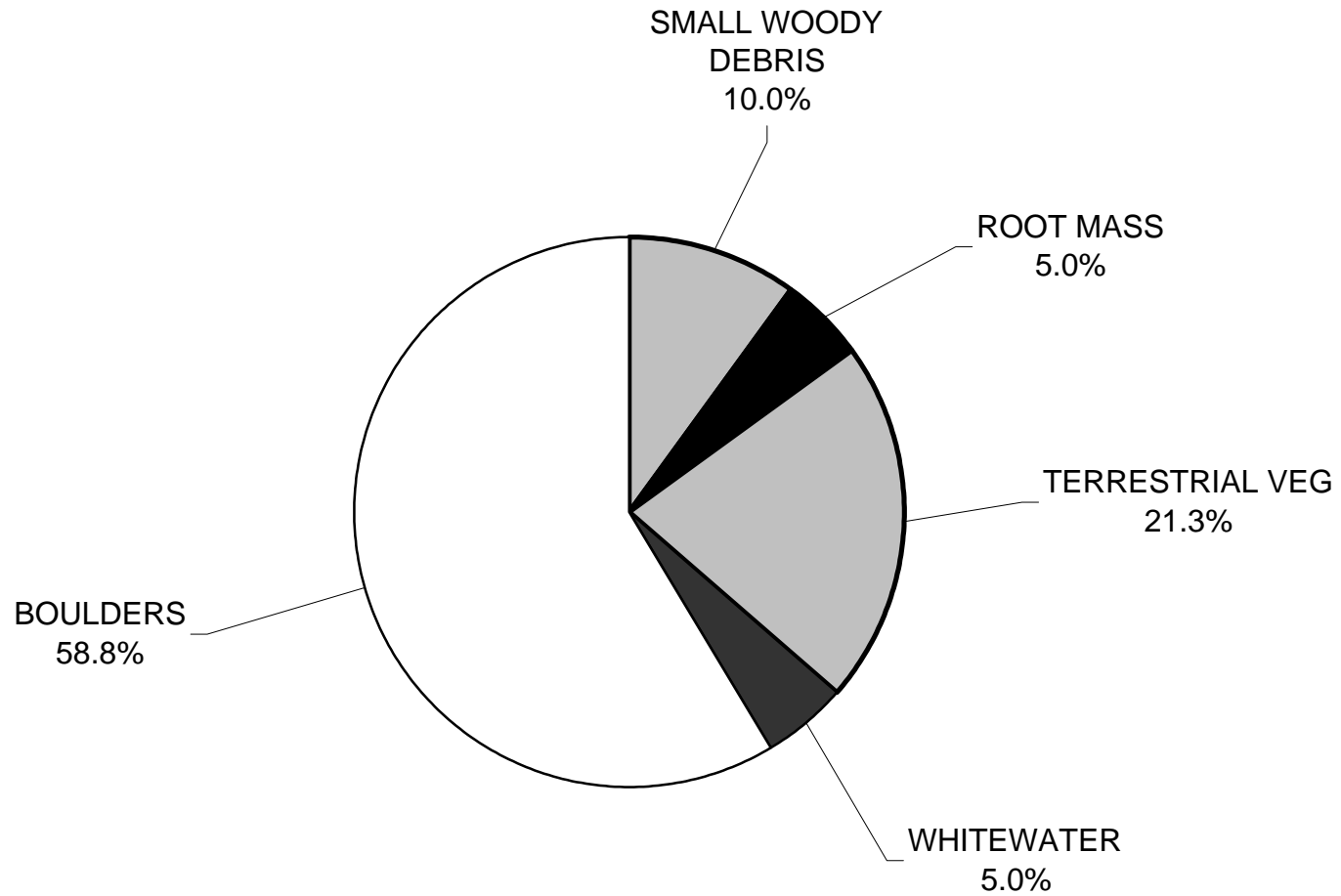
GRAPH 5

1237980402683 2007
PERCENT EMBEDDEDNESS



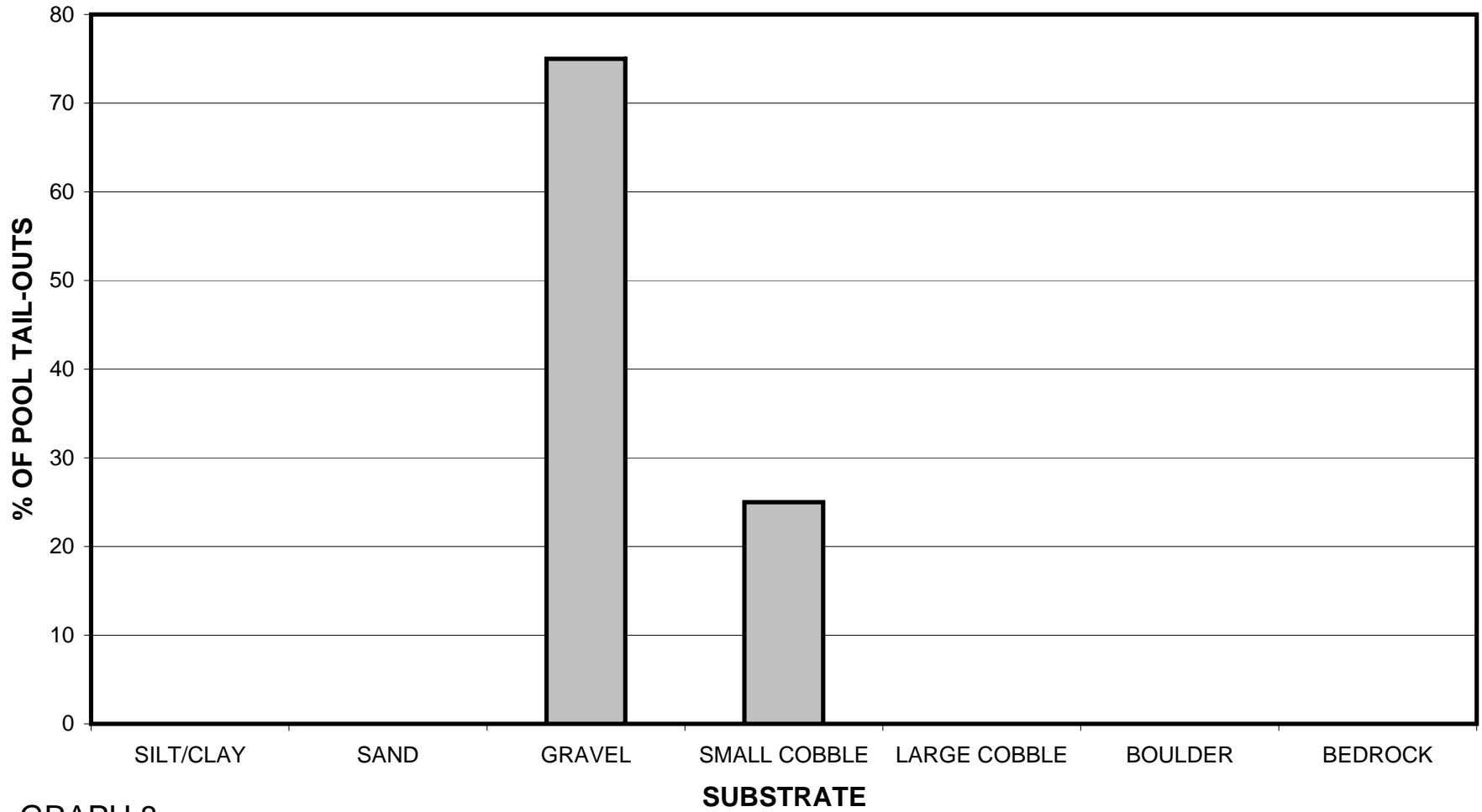
GRAPH 6

1237980402683 2007
MEAN PERCENT COVER TYPES IN POOLS



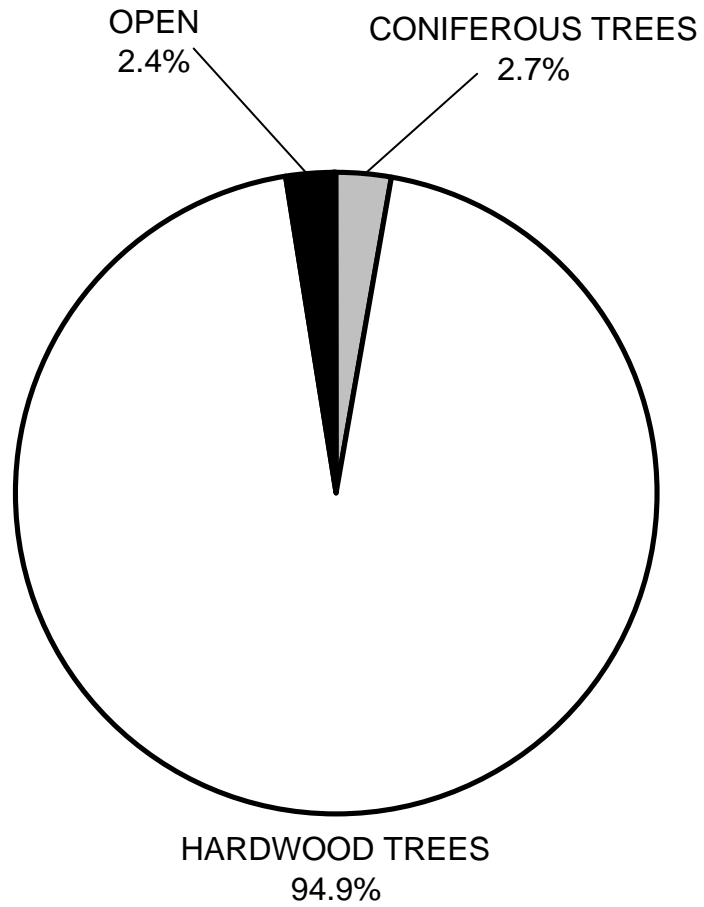
GRAPH 7

1237980402683 2007
SUBSTRATE COMPOSITION IN POOL TAIL-OUTS



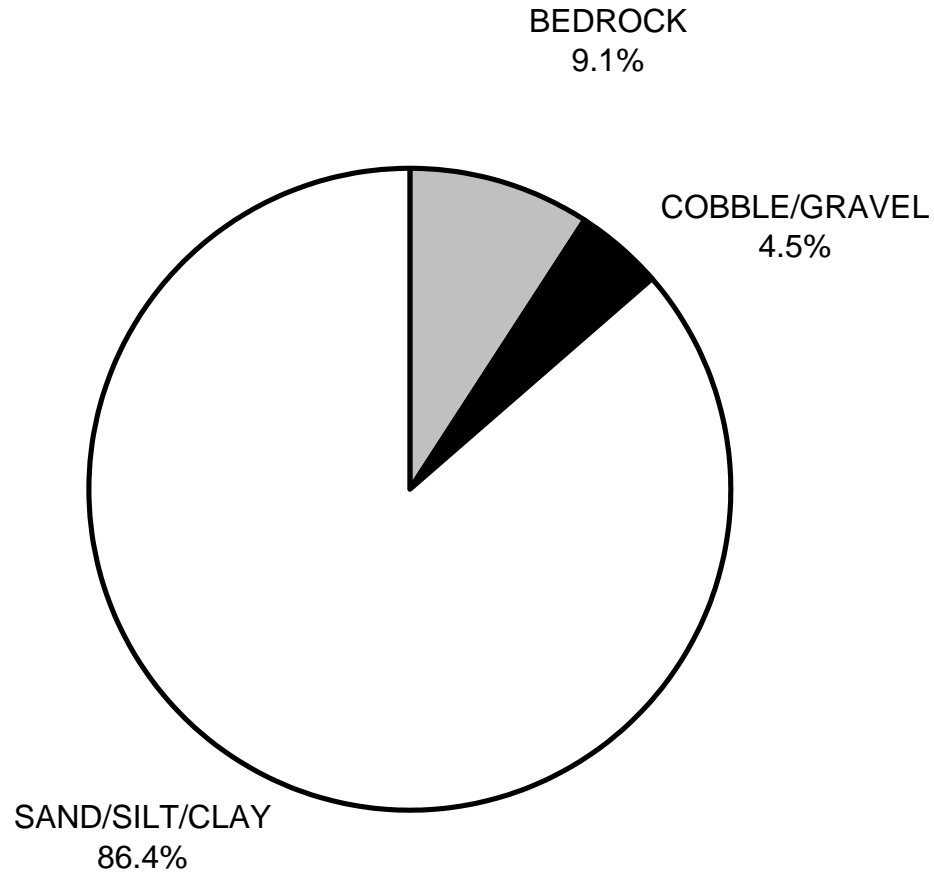
GRAPH 8

1237980402683 2007
MEAN PERCENT CANOPY



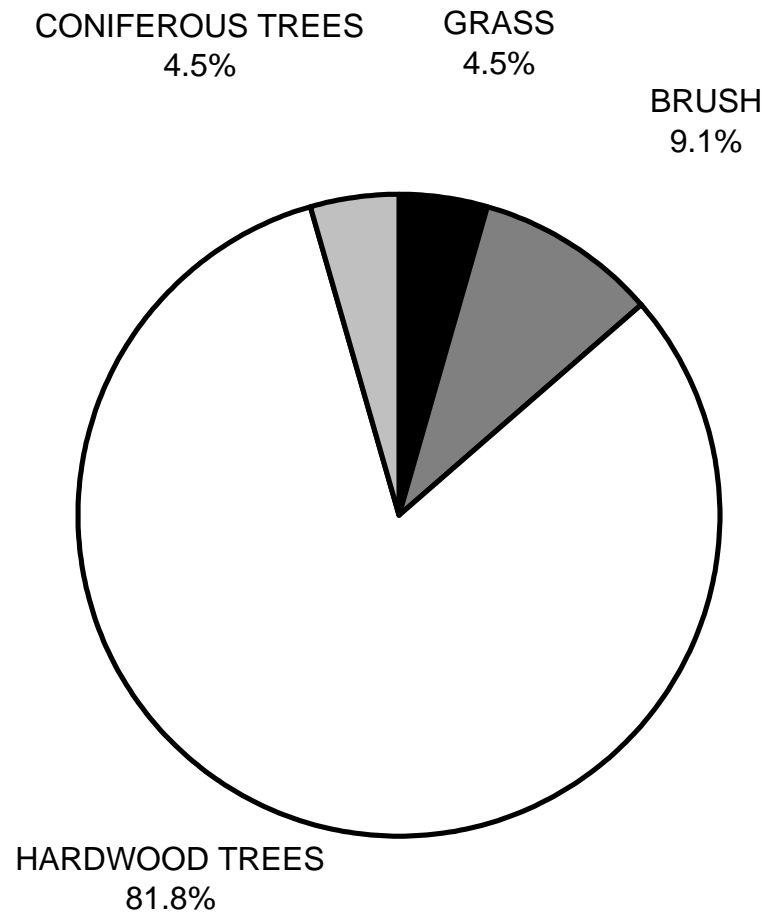
GRAPH 9

1237980402683 2007
DOMINANT BANK COMPOSITION IN SURVEY REACH



GRAPH 10

1237980402683 2007
DOMINANT BANK VEGETATION IN SURVEY REACH



GRAPH 11