



**California Department of Fish and Game**  
**Petaluma River Watershed**  
**Stream Habitat Assessment Reports**  
**Unnamed Tributary #1**  
**To Lynch Creek**  
*Surveyed 2007*



## STREAM INVENTORY SUB-REPORT

### **Unnamed Tributary #1 to Lynch Creek**

*Surveyed Summer 2007*

*Report Completed March 2008*

#### WATERSHED OVERVIEW

Tables, graphs and map are located at the end of this report for Unnamed Tributary #1 to Lynch Creek.

Unnamed Tributary #1 to Lynch Creek is a tributary to Lynch Creek, which is a tributary to Petaluma River, which is a tributary to the Pacific Ocean, located in Sonoma County, California. Unnamed Tributary #1 to Lynch Creek's legal description at the confluence with Lynch Creek is T05N R07W S02. Its location is 38°18'45.3" north latitude and 122°35'50.8" west longitude, LLID number 1225973383156. Unnamed Tributary #1 to Lynch Creek is an ephemeral stream according to the USGS Glen Ellen 7.5 minute quadrangle. Unnamed Tributary #1 to Lynch Creek drains a watershed of approximately 0.23 square miles. Summer base runoff was not measured. Elevations range from about 984 feet at the mouth of the creek to 1975 feet in the headwater areas. Grassland or Herbaceous dominates the watershed. The watershed is entirely privately owned. Vehicle access exists via Sonoma Mountain Rd.

#### HABITAT INVENTORY RESULTS AND DISCUSSION

The habitat inventory of 7/31/2007 to 7/31/2007 was conducted by J. Hanson (WSP/Americorp) and H. Fett (DFG). The total length of the stream surveyed was 3,742 feet.

Stream flow was not measured on Unnamed Tributary #1 to Lynch Creek.

Unnamed Tributary #1 to Lynch Creek is an A3 channel type for 1,776 feet of the stream surveyed (Reach 1), a B3 channel type for 881 feet of the stream surveyed (Reach 2), an A3 channel type for 1,085 feet of the stream surveyed (Reach 3),. The suitability of an A3 and B3 channel type for fish habitat improvement structures is described in the Lynch Creek Stream Inventory Report.

The water temperatures recorded on the survey day 7/31/2007, ranged from 61 to 65 degrees Fahrenheit. Air temperatures ranged from 75 to 76 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 46% flatwater units, 22% riffle units, 1% pool units, 30% dry units, 1% culvert units. The pools are relatively shallow, with only 1 of the 5 pools having a maximum residual depth greater than 2 feet.

## Unnamed Tributary #1 to Lynch Creek

Five of the 5 pool tail-outs measured had embeddedness ratings of 1 or 2. Zero 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. In Unnamed Tributary #1 to Lynch Creek, sediment sources should be mapped and rated according to their potential sediment yields, and control measures should be taken.

The mean shelter rating for pools was 20. The shelter rating in the flatwater habitats was 2. A pool shelter rating of approximately 100 is desirable.

100 percent of the low gradient riffles measured had small cobble as the dominant substrate. This is generally considered good for spawning salmonids.

The mean percent canopy density for the stream was 87%. In general, revegetation projects are considered when canopy density is less than 80.

The percentage of right and left bank covered with vegetation was 26% for both banks, respectively. In areas of stream bank erosion, or where bank vegetation is not at acceptable levels, the planting of endemic species of coniferous and hardwood trees, in conjunction with bank stabilization is recommended.

## BIOLOGICAL INVENTORY RESULTS

No biological inventory was completed for unnamed tributary #1 to Lynch Creek.

## RECOMMENDATIONS

See the recommendations section of the Lynch Creek report for all recommendations of the Lynch Creek watershed including unnamed tributaries #1 and #2.

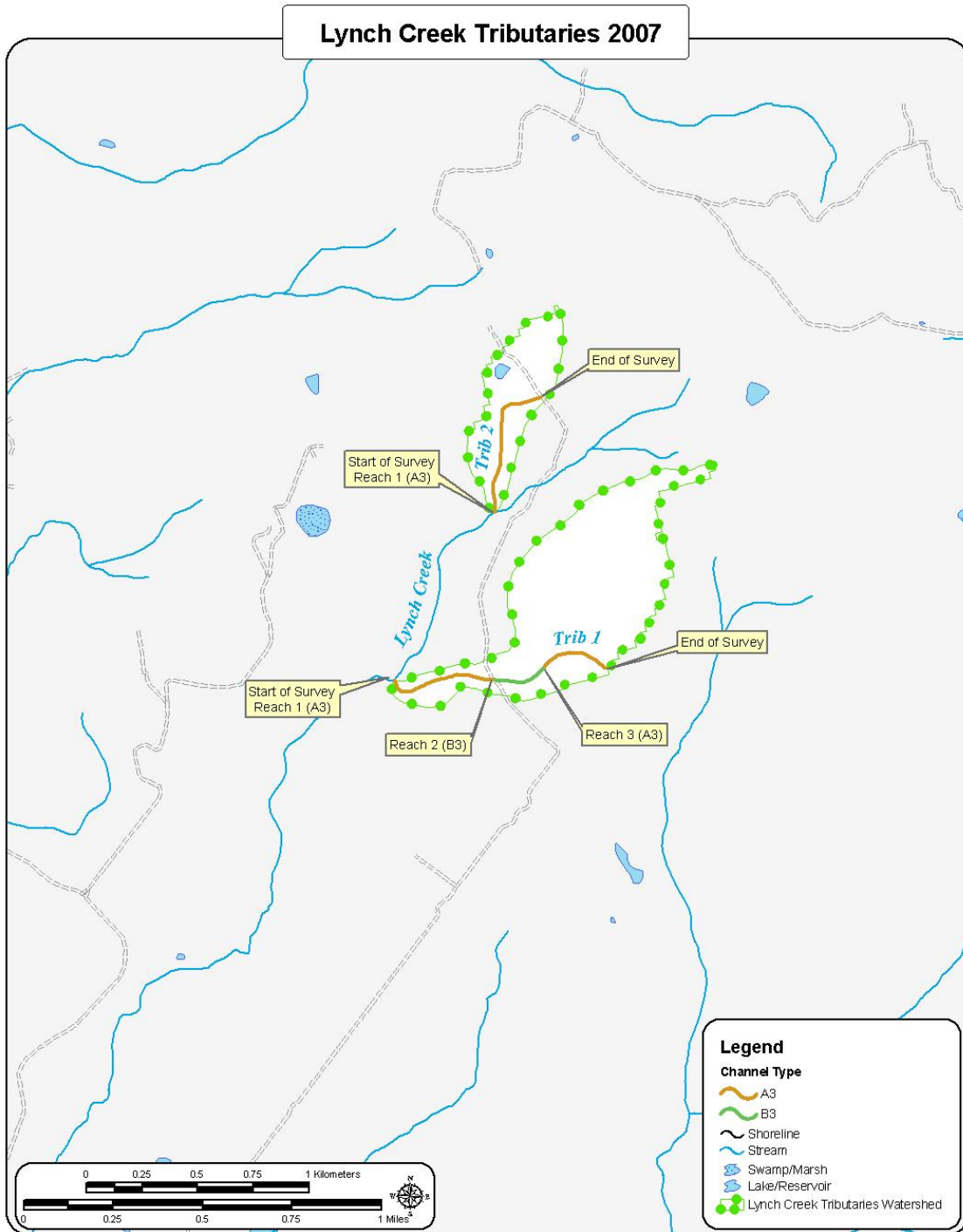
## COMMENTS AND LANDMARKS:

<u>Position</u>	<u>Habitat Unit #</u>	<u>Comments</u>
0	0001.00	Start of Survey: Start of Survey at confluence with Lynch Creek. Channel Type A3- Reach 1

Unnamed Tributary #1 to Lynch Creek

<u>Position</u>	<u>Habitat Unit #</u>	<u>Comments</u>
0	0001.00	General Comment: Approximate flow of tributary was 60-70% of mainstem Lynch Creek flow. A temperature of 64° F was taken upstream from the tributary on Lynch Creek. The temperature was 63° F downstream from the tributary. The temperature of unnamed tributary #1 was 63° F.
386	0003.00	Structures: Steep gradient of creek may impede fish passage.
652	0007.00	Structures: 200 Feet into the unit there is an old large wooden structure supporting 1 foot diameter pipe 15 feet above the creek.
1389	0012.00	Structures: 4.5 foot bedrock chute.
1689	0015.00	Fish Passage: (Culvert) Culvert #1 is located on walking path and is 20 feet before culvert #2. Culvert #1 is 20 feet long by 4 feet in diameter. There is a 3 foot drop from outlet of culvert to the water surface and a 5 foot downcut
1746	0017.00	Fish Passage: (Culvert) Culvert #2 is located on the Sonoma Mountain Road and is 30 feet long and 3.5 feet in diameter. There is no down cutting or a drop between culvert and the water surface.
1776	0018.00	General Comment: There was a channel type change from an A3 to B3. Reach 1 to reach 2.
2516	0021.00	Tributaries: A tributary flows into unit 63 feet into unit. The tributary is flowing but is not accessible to fish. A temperature of 65° F was taken upstream and of 63° F downstream. The tributary was measured at 66° F.
2657	0022.00	General Comment: The channel type changes back from B3 to A3. Reach 2 to Reach 3.
2657	0022.00	Tributaries: 662 feet into unit on the right bank is a dry tributary.
3742	0022.00	End of Survey: End of Survey WP 30: 38.31325N, 122.58775W

Unnamed Tributary #1 to Lynch Creek



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Prepared by: Scott Webb, December 2007

Unnamed Tributary #1 to Lynch Creek

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

**Stream Name:** Unnamed Tributary #1 to Lynch Creek

**LLID:** 1225973383156

**Drainage:** Petaluma River

**Survey Dates:** 7/31/2007 to 7/31/2007

**Confluence Location: Quad:** GLEN ELLEN

**Legal Description:** T05NR07WS02

**Latitude:** 38:18:45.3N

**Longitude:** 122:35:50.8W

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
2	0	CULVERT	9.1	25	50	1.3									
2	0	DRY	9.1	554	1109	29.6									
9	3	FLATWATER	40.9	191	1723	46.0	3.7	0.5	0.9	408	3675	197	1773		2
5	5	POOL	22.7	9	46	1.2	6.2	0.9	1.7	57	286	64	320	57	20
4	3	RIFFLE	18.2	204	814	21.8	4.3	0.2	0.5	384	1534	57	230		0
<b>Total Units</b>	<b>Total Units Fully Measured</b>				<b>Total Length (ft.)</b>						<b>Total Area (sq.ft.)</b>		<b>Total Volume (cu.ft.)</b>		
22	11				3742						5495		2323		

Unnamed Tributary #1 to Lynch Creek

**Table 2 - Summary of Habitat Types and Measured Parameters**

**Stream Name:** Unnamed Tributary #1 to Lynch Creek

**LLID:** 1225973383156

**Drainage:** Petaluma River

**Survey Dates:** 7/31/2007 to 7/31/2007

**Confluence Location: Quad:** GLEN ELLEN

**Legal Description:** T05NR07WS02

**Latitude:** 38:18:45.3N

**Longitude:** 122:35:50.8W

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	Mean Canopy (%)
1	1	LGR	4.5	540	540	14.4	4.0	0.1	0.2	756	756	76	76		0	89
1	1	HGR	4.5	191	191	5.1	4.0	0.2	0.5	306	306	61	61		0	90
2	1	CAS	9.1	42	83	2.2	5.0	0.4	0.7	89	179	36	71		0	94
1	1	RUN	4.5	37	37	1.0	4.0	0.6	1.1	104	104	62	62		0	80
8	2	SRN	36.4	211	1686	45.1	4.0	0.4	0.8	561	4485	264	2116		3	82
1	1	LSR	4.5	9	9	0.2	5.0	0.5	1.1	45	45	32	32	23	70	99
4	4	PLP	18.2	9	37	1.0	6.0	1.0	2.9	60	241	72	289	66	8	92
2	0	DRY	9.1	554	1109	29.6										63
2	0	CUL	9.1	25	50	1.3										
<b>Total Units</b>	<b>Total Units Fully Measured</b>				<b>Total Length (ft.)</b>						<b>Total Area (sq.ft.)</b>		<b>Total Volume (cu.ft.)</b>			
22	11				3742						6115		2706			

Unnamed Tributary #1 to Lynch Creek

**Table 3 - Summary of Pool Habitat types**

**Stream Name:** Unnamed Tributary #1 to Lynch Creek

**LLID:** 1225973383156

**Drainage:** Petaluma River

**Survey Dates:** 7/31/2007 to 7/31/2007

**Confluence Location: Quad:** GLEN ELLEN

**Legal Description:** T05NR07WS02

**Latitude:** 38:18:45.3N

**Longitude:** 122:35:50.8W

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
5	5	SCOUR	100	9	46	100	6.2	0.9	57	286	57	287	20
<b>Total Units</b>	<b>Total Units Fully Measured</b>				<b>Total Length (ft.)</b>					<b>Total Area (sq.ft.)</b>		<b>Total Volume (cu.ft.)</b>	
5	5				46					286		287	



Unnamed Tributary #1 to Lynch Creek

**Table 4 - Summary of Maximum Residual Pool Depths by Pool**

**Stream Name:** Unnamed Tributary #1 to Lynch Creek

**LLID:** 1225973383156

**Drainage:** Petaluma River

**Survey Dates:** 7/31/2007 to 7/31/2007

**Confluence Location: Quad:** GLEN ELLEN

**Legal Description:** T05NR07WS02

**Latitude:** 38:18:45.3N

**Longitude:** 122:35:50.8W

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	PLP	80	0	0	3	75	1	25	0	0	0	0
1	LSR	20	0	0	1	100	0	0	0	0	0	0
Total Units			Total < 1 Foot Max Resid. Depth	Total < 1 Foot % Occurrence	Total 1< 2 Feet Max Resid. Depth	Total 1< 2 Feet % Occurrence	Total 2< 3 Feet Max Resid. Depth	Total 2< 3 Feet % Occurrence	Total 3< 4 Feet Max Resid. Depth	Total 3< 4 Feet % Occurrence	Total >= 4 Feet Max Resid. Depth	Total >= 4 Feet % Occurrence
5			0	0	4	80	1	20	0	0	0	0

Mean Maximum Residual Pool Depth (ft.): 2

Unnamed Tributary #1 to Lynch Creek

**Table 5 - Summary of Mean Percent Cover by Habitat Type**

**Stream Name:** Unnamed Tributary #1 to Lynch Creek

**LLID:** 1225973383156

**Drainage:** Petaluma River

**Survey Dates:** 7/31/2007 to 7/31/2007

**Confluence Location: Quad:** GLEN ELLEN

**Legal Description:** T05NR07WS02

**Latitude:** 38:18:45.3N

**Longitude:** 122:35:50.8W

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
1	1	LGR	0	0	0	0	0	0	0	0	0
1	1	HGR	0	0	0	0	0	0	0	0	0
2	1	CAS	0	0	0	0	0	0	0	0	0
1	1	RUN	0	0	0	0	0	0	0	0	0
8	2	SRN	0	0	8	0	0	0	0	43	0
13	6	TOTAL RIFFLE	0	0	8	0	0	0	0	43	0
1	1	LSR	0	0	0	80	0	0	0	20	0
4	4	PLP	0	0	0	0	0	13	3	85	0
5	5	TOTAL POOL	0	0	0	80	0	13	3	105	0
2	0	CUL									
46	35	TOTAL	0	0	16	80	0	13	3	148	0

Unnamed Tributary #1 to Lynch Creek

**Table 6 - Summary of Dominant Substrates by Habitat Type**

**Stream Name:** Unnamed Tributary #1 to Lynch Creek

**LLID:** 1225973383156

**Drainage:** Petaluma River

**Survey Dates:** 7/31/2007 to 7/31/2007

<b>Confluence Location: Quad:</b> GLEN ELLEN			<b>Legal Description:</b> T05NR07WS02			<b>Latitude:</b> 38:18:45.3N		<b>Longitude:</b> 122:35:50.8W	
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
1	1	LGR	0	0	0	100	0	0	0
1	1	HGR	0	0	0	0	100	0	0
2	1	CAS	0	0	0	0	0	100	0
1	1	RUN	0	0	0	100	0	0	0
8	2	SRN	0	0	0	50	50	0	0
1	1	LSR	0	0	0	100	0	0	0
4	4	PLP	25	0	50	0	0	25	0
2	0	CUL	0	0	0	0	0	0	0

Unnamed Tributary #1 to Lynch Creek

**Table 7 - Summary of Mean Percent Canopy for Entire Stream**

**Stream Name:** Unnamed Tributary #1 to Lynch Creek

**LLID:** 1225973383156

**Drainage:** Petaluma River

**Survey Dates:** 7/31/2007 to 7/31/2007

**Confluence Location: Quad:** GLEN ELLEN

**Legal Description:** T05NR07WS02

**Latitude:** 38:18:45.3N

**Longitude:** 122:35:50.8W

Mean Percent Canopy	Mean Percent Conifer	Mean Percent Hardwood	Mean Percent Open Units	Mean Right Bank % Cover	Mean Left Bank % Cover
87	0	100	0	26	26

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.

Unnamed Tributary #1 to Lynch Creek

**Table 8 - Fish Habitat Inventory Data Summary**

Stream Name: Unnamed Tributary #1 to Lynch Creek      LLID: 1225973383156      Drainage: Petaluma River  
 Survey Dates: 7/31/2007 to 7/31/2007      Survey Length (ft.): 3742      Main Channel (ft.): 3742      Side Channel (ft.): 0  
 Confluence Location: Quad GLEN ELLEN      Legal T05NR07WS02      Latitude 38:18:45.3N      Longitude 122:35:50.8W

**Summary of Fish Habitat Elements By Stream**

**STREAM REACH: 1**

Channel Type: A3	Canopy Density (%): 84.5	Pools by Stream Length (%): 2.1
Reach Length (ft.): 1776	Coniferous Component (%): 0.0	Pool Frequency (%): 23.5
Riffle/Flatwater Mean Width (ft.): 4.3	Hardwood Component (%): 100.0	Residual Pool Depth (%):
BFW:	Dominant Bank Vegetation: Hardwood Trees	< 2 Feet Deep: 75.0
Range (ft.): 15 to 25	Vegetative Cover (%): 22.1	2 to 2.9 Feet Deep: 25.0
Mean (ft.): 20.9	Dominant Shelter: Boulders	3 to 3.9 Feet Deep: 0.0
Std. Dev.: 4.9	Dominant Bank Substrate Type: Sand/Silt/Clay	>= 4 Feet Deep: 0.0
Base Flow (cfs): NA	Occurrence of LWD (%): 2.1	Mean Max Residual Pool Depth (ft.): 1.8
Water (F): 61 - 63    Air (F): 75 - 76	LWD per 100 ft.:	Mean Pool Shelter Rating: 8
Dry Channel (ft.): 24	Riffles: 1	
	Pools: 3	
	Flat: 1	
Pool Tail Substrate (%): Silt/Clay: 0.0    Sand: 0.0    Gravel: 100.    Sm Cobble: 0.0    Lg Cobble: 0.0    Boulder: 0.0    Bedrock: 0.0		
Embeddedness Values (%): 1. 50.0    2. 50.0    3. 0.0    4. 0.0    5. 0.0		

**STREAM REACH: 2**

Channel Type: B3	Canopy Density (%): 93.0	Pools by Stream Length (%): 1.0
Reach Length (ft.): 881	Coniferous Component (%): 0.0	Pool Frequency (%): 25.0
Riffle/Flatwater Mean Width (ft.): 3.7	Hardwood Component (%): 100.0	Residual Pool Depth (%):
BFW:	Dominant Bank Vegetation: Hardwood Trees	< 2 Feet Deep: 100.0
Range (ft.): 14 to 15	Vegetative Cover (%): 33.8	2 to 2.9 Feet Deep: 0.0
Mean (ft.): 14.75	Dominant Shelter: Root masses	3 to 3.9 Feet Deep: 0.0
Std. Dev.: 0.4	Dominant Bank Substrate Type: Sand/Silt/Clay	>= 4 Feet Deep: 0.0
Base Flow (cfs):	Occurrence of LWD (%): 0.0	Mean Max Residual Pool Depth (ft.): 1.1
Water (F): 61 - 65    Air (F): 75 - 75	LWD per 100 ft.:	Mean Pool Shelter Rating: 70
Dry Channel (ft.): 0	Riffles: 1	
	Pools: 11	
	Flat: 7	
Pool Tail Substrate (%): Silt/Clay: 0.0    Sand: 0.0    Gravel: 0.0    Sm Cobble: 100.    Lg Cobble: 0.0    Boulder: 0.0    Bedrock: 0.0		
Embeddedness Values (%): 1. 100.0    2. 0.0    3. 0.0    4. 0.0    5. 0.0		

Unnamed Tributary #1 to Lynch Creek

**Summary of Fish Habitat Elements By Stream**

**STREAM REACH: 3**

Channel Type: A3	Canopy Density (%):	Pools by Stream Length (%): 0.0
Reach Length (ft.): 1085	Coniferous Component (%):	Pool Frequency (%): 0.0
Riffle/Flatwater Mean Width (ft.):	Hardwood Component (%):	Residual Pool Depth (%):
BFW:	Dominant Bank Vegetation:	< 2 Feet Deep:
Range (ft.): 14 to 14	Vegetative Cover (%):	2 to 2.9 Feet Deep:
Mean (ft.): 14	Dominant Shelter:	3 to 3.9 Feet Deep:
Std. Dev.: 0	Dominant Bank Substrate Type:	>= 4 Feet Deep:
Base Flow (cfs): NA	Occurrence of LWD (%):	Mean Max Residual Pool Depth (ft.):
Water (F): 65 - 65 Air (F): 75 - 75	LWD per 100 ft.:	Mean Pool Shelter Rating:
Dry Channel (ft.): 1085	Riffles:	
	Pools:	
	Flat:	
Pool Tail Substrate (%): Silt/Clay: Sand: Gravel: Sm Cobble: Lg Cobble: Boulder: Bedrock:		
Embeddedness Values (%): 1. 2. 3. 4. 5.		

Unnamed Tributary #1 to Lynch Creek

**Table 9 -Mean Percentage of Dominant Substrate and Vegetation**

**Stream Name:** Unnamed Tributary #1 to Lynch Creek

**LLID:** 1225973383156

**Drainage:** Petaluma River

**Survey Dates:** 7/31/2007 to 7/31/2007

**Confluence Location: Quad:** GLEN ELLEN

**Legal Description:** T05NR07WS02

**Latitude:** 38:18:45.3N

**Longitude:** 122:35:50.8W

**Mean Percentage of Dominant Stream Bank Substrate**

Dominant Class of Substrate	Number of Units Right Bank	Number of Units Left Bank	Total Mean Percentage (%)
Bedrock	1	2	13.6
Boulder	0	0	0.0
Cobble/Gravel	1	0	4.5
Sand/Silt/Clay	9	9	81.8

**Mean Percentage of Dominant Stream Bank Vegetation**

Dominant Class of Vegetation	Number of Units Right Bank	Number of Units Left Bank	Total Mean Percentage (%)
Grass	5	1	27.3
Brush	0	1	4.5
Hardwood Trees	5	7	54.5
Coniferous Trees	0	0	0.0
No Vegetation	1	2	13.6

**Total Stream Cobble Embeddedness** 1

Unnamed Tributary #1 to Lynch Creek

**Table 10 - Mean Percent of Shelter Cover Types For Entire System**

**Stream Name:** Unnamed Tributary #1 to Lynch Creek

**LLID:** 1225973383156

**Drainage:** Petaluma River

**Survey Dates:** 7/31/2007 to 7/31/2007

**Confluence Location: Quad:** GLEN ELLEN

**Legal Description:** T05NR07WS02

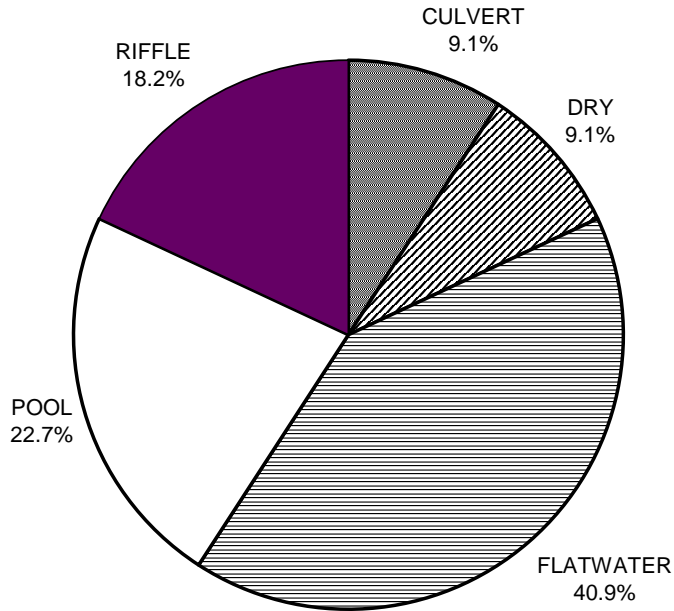
**Latitude:** 38:18:45.3N

**Longitude:** 122:35:50.8W

	Riffles	Flatwater	Pools
UNDERCUT BANKS (%)	0	0	0
SMALL WOODY DEBRIS (%)	0	0	0
LARGE WOODY DEBRIS (%)	0	5	0
ROOT MASS (%)	0	0	16
TERRESTRIAL VEGETATION (%)	0	0	0
AQUATIC VEGETATION (%)	0	0	10
WHITEWATER (%)	0	0	2
BOULDERS (%)	0	28	72
BEDROCK LEDGES (%)	0	0	0

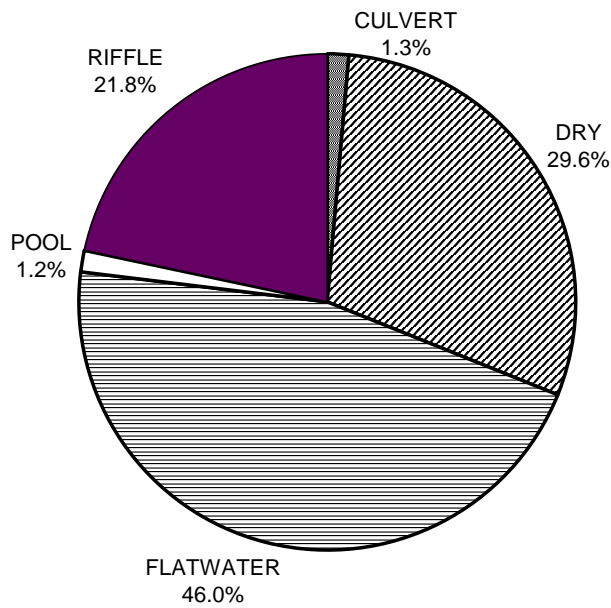


**Unnamed Tributary #1 to Lynch Creek 2007  
HABITAT TYPES BY PERCENT OCCURRENCE**



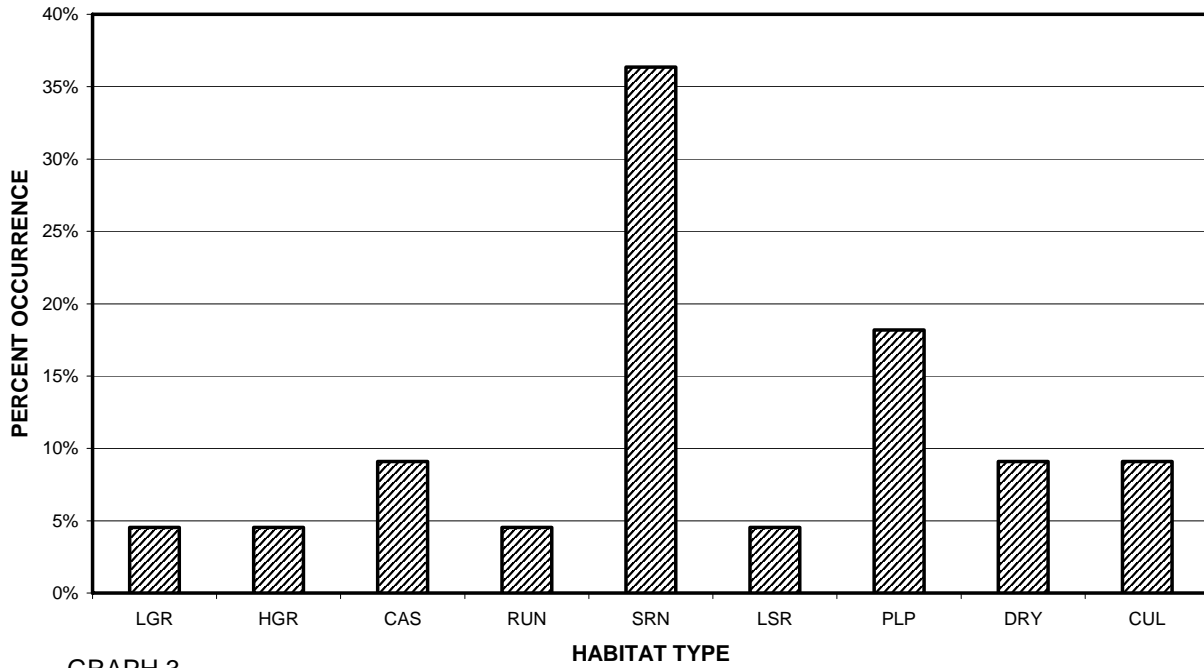
GRAPH 1

**Unnamed Tributary #1 to Lynch Creek 2007  
HABITAT TYPES BY PERCENT TOTAL LENGTH**



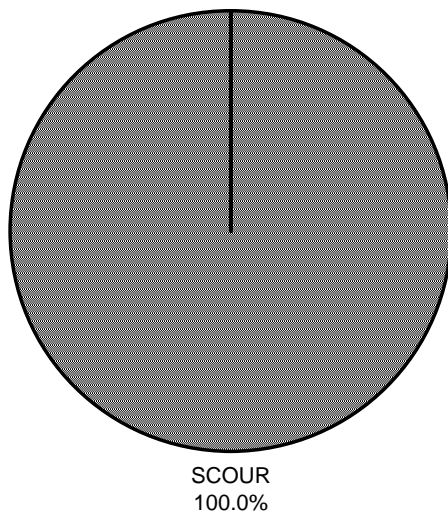
GRAPH 2

**Unnamed Tributary #1 to Lynch Creek 2007  
HABITAT TYPES BY PERCENT OCCURRENCE**



GRAPH 3

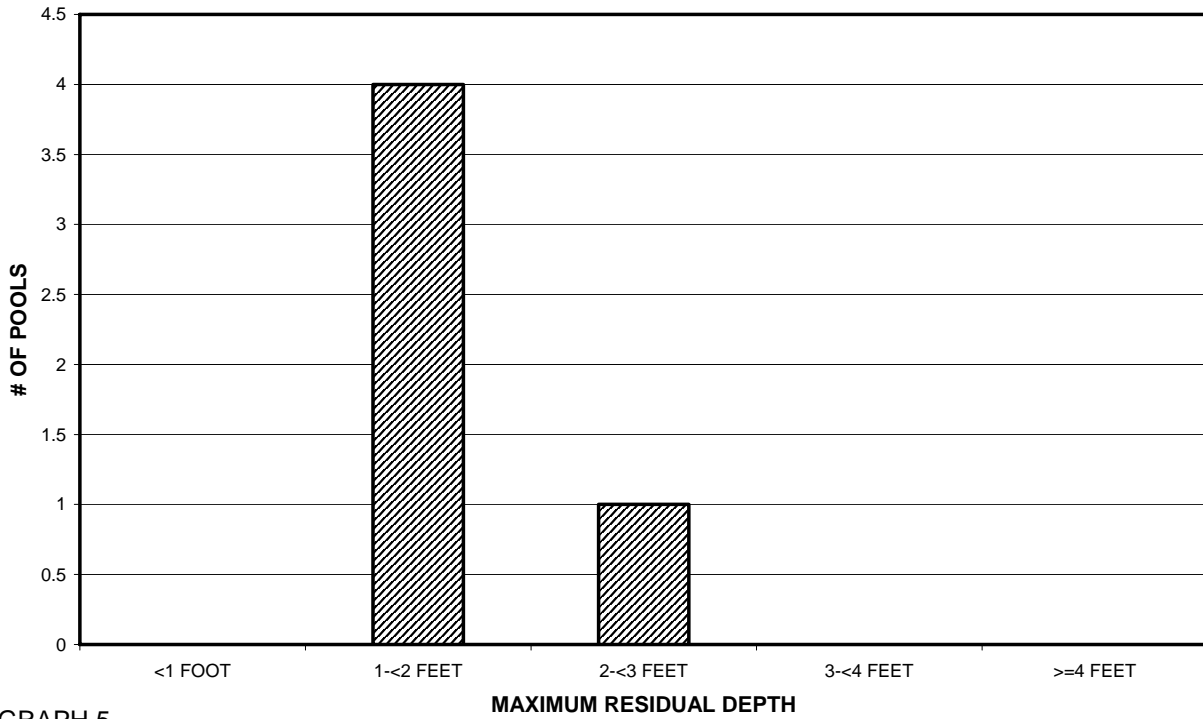
**Unnamed Tributary #1 to Lynch Creek 2007  
POOL TYPES BY PERCENT OCCURRENCE**



GRAPH 4

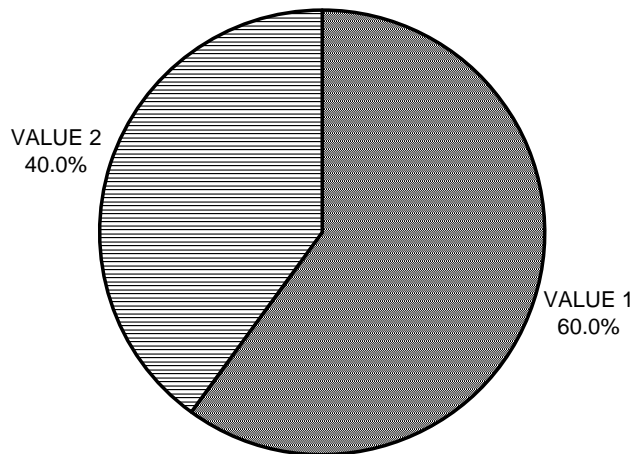
Unnamed Tributary #1 to Lynch Creek

**Unnamed Tributary #1 to Lynch Creek 2007  
MAXIMUM DEPTH IN POOLS**



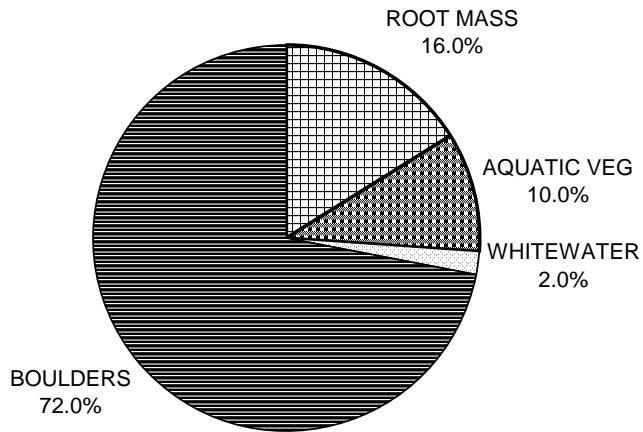
GRAPH 5

**Unnamed Tributary #1 to Lynch Creek 2007  
PERCENT EMBEDDEDNESS**



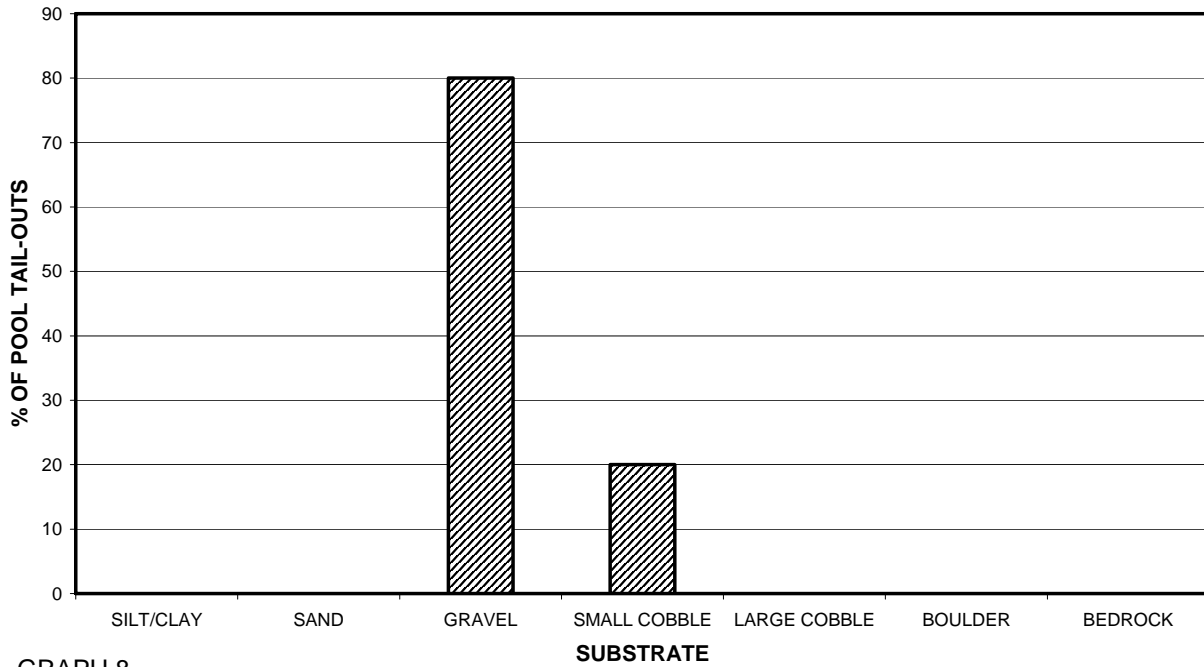
GRAPH 6

### Unnamed Tributary #1 to Lynch Creek 2007 MEAN PERCENT COVER TYPES IN POOLS



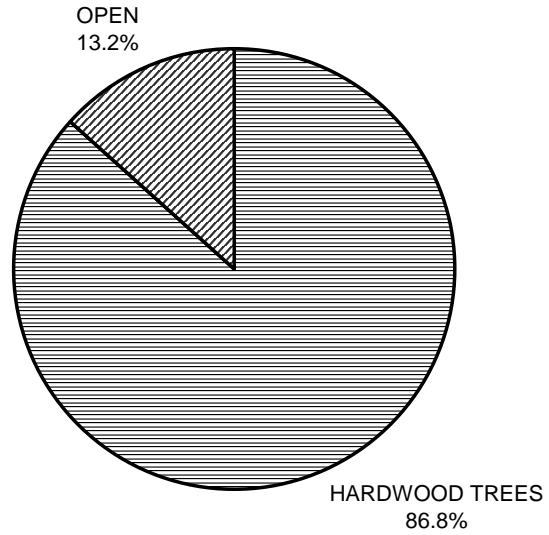
GRAPH 7

### Unnamed Tributary #1 to Lynch Creek 2007 SUBSTRATE COMPOSITION IN POOL TAIL-OUTS



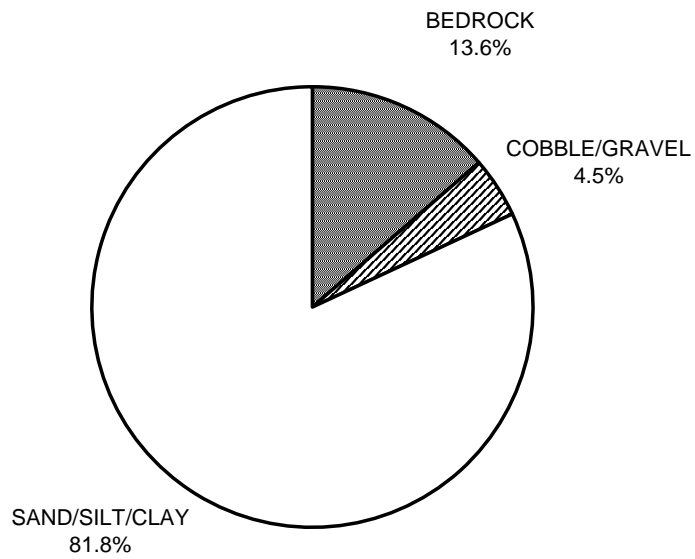
GRAPH 8

**Unnamed Tributary #1 to Lynch Creek 2007  
MEAN PERCENT CANOPY**



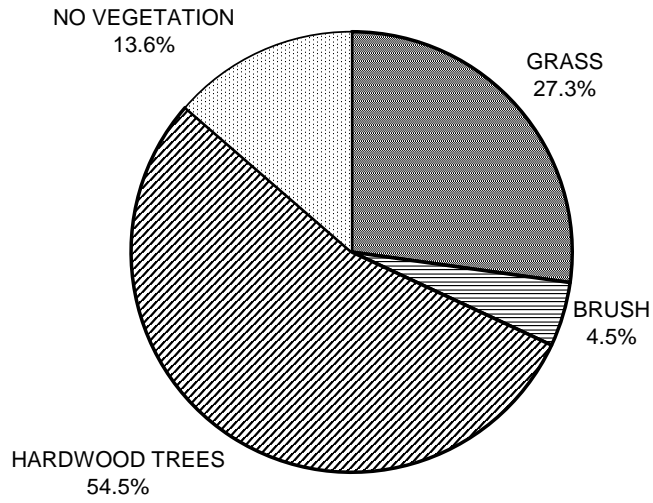
GRAPH 9

**Unnamed Tributary #1 to Lynch Creek 2007  
DOMINANT BANK COMPOSITION IN SURVEY REACH**



GRAPH 10

**Unnamed Tributary #1 to Lynch Creek 2007  
DOMINANT BANK VEGETATION IN SURVEY REACH**



GRAPH 11