



**California Department of Fish and Game**  
**Petaluma River Watershed**  
**Stream Habitat Assessment Reports**  
**Unnamed Tributary #2**  
**To Lynch Creek**  
*Surveyed 2007*



## STREAM INVENTORY REPORT

### **Unnamed Tributary #2 to Lynch Creek**

*Surveyed Summer 2007*

*Report Completed March 2008*

#### WATERSHED OVERVIEW

The map and tables are located at the end of this report. Graphs were not produced for Unnamed Tributary #2 to Lynch Creek.

Unnamed Tributary #2 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 #2 to Lynch Creek's legal description at the confluence with Lynch Creek is T06N R07W S35. Its location is 38°19' 10.2" north latitude and 122° 35' 33.1" west longitude, LLID number 1225928383192. Unnamed Tributary #2 to Lynch Creek is an ephemeral stream according to the USGS Glen Ellen 7.5 minute quadrangle. Unnamed Tributary #2 to Lynch Creek drains a watershed of approximately 0.07 square miles (48 acres). Elevations range from about 1,348 feet at the mouth of the creek to 1,886 feet in the headwater areas. Mixed conifer forest dominates the watershed. The watershed is entirely privately owned. Vehicle access exists via Sonoma Mountain Road.

#### HABITAT INVENTORY RESULTS AND DISCUSSION

The habitat inventory of 7/30/2007 was conducted by J. Hanson (WSP/AmeriCorps), H. Fett (DFG). The total length of the stream surveyed was 2,539 feet.

Stream flow was not measured on Unnamed Tributary #2 to Lynch Creek.

Unnamed Tributary #2 to Lynch Creek is an A3 channel type for the entire 2,539 feet of the stream surveyed (Reach 1). The suitability of an A3 channel type for fish habitat improvement structures is described in the Lynch Creek report.

The water temperatures recorded on the survey day 7/30/2007 was 62 degrees Fahrenheit. Air temperature was 72 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 27% flatwater units, 68% dry units, 2% riffle units and 3% culvert units. There were no pools recorded for unnamed tributary #2 to Lynch Creek.

The shelter rating in the flatwater habitats was 0.

No low gradient riffles were recorded for unnamed tributary #2 to Lynch Creek.

The mean percent canopy density for the stream was 59%. In general, revegetation projects are considered when canopy density is less than 80.

The percentage of right and left bank covered with vegetation was 37% and 40%, 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 done for unnamed tributary #2 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.

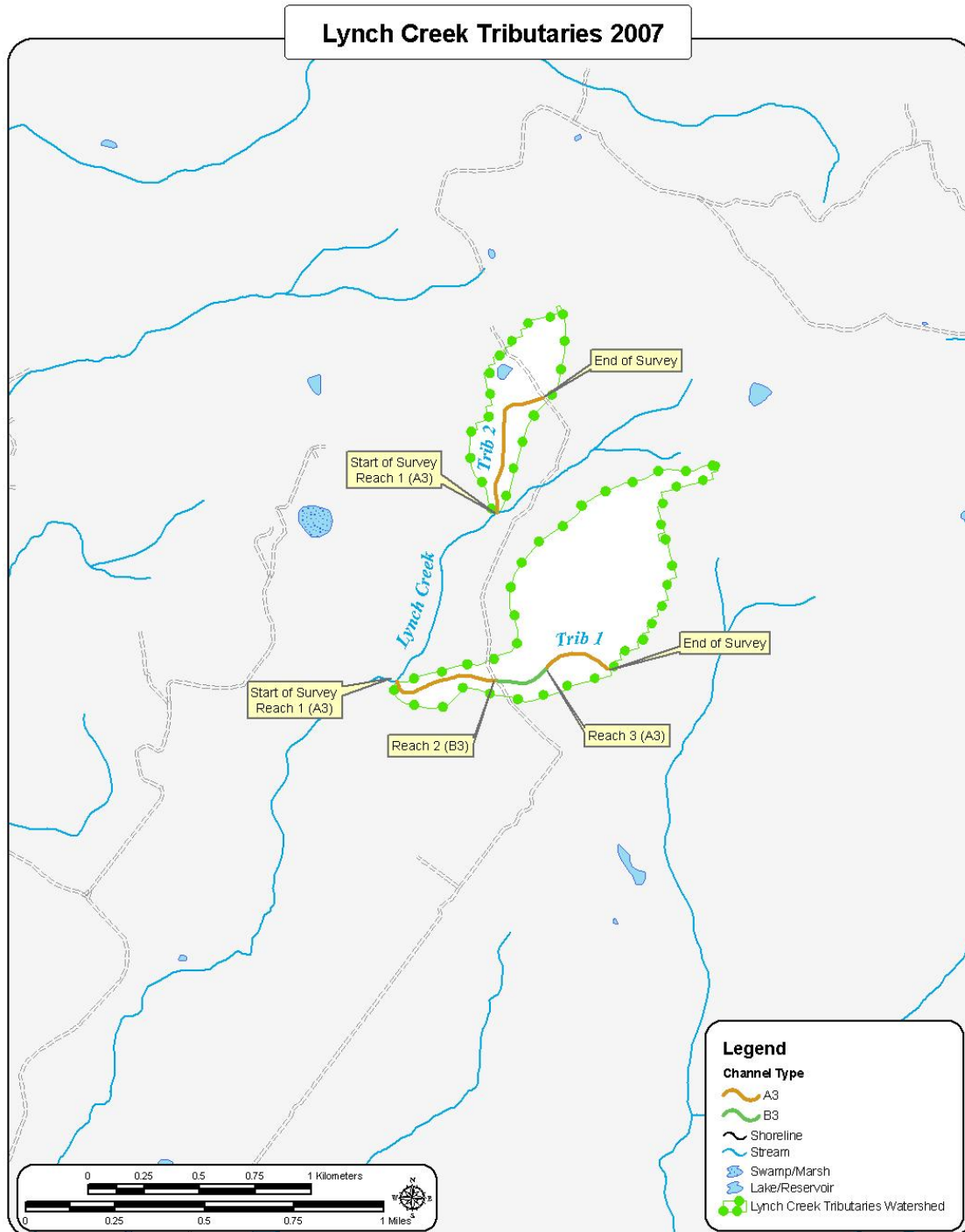
### COMMENTS AND LANDMARKS:

Position (ft)	Habitat Unit	Comments
0	0001.00	Start of Survey: Start of Survey at confluence with Lynch Creek
1061	0009.00	Fish Passage: (Culvert) Culvert located on private gravel service road. The culvert is 20 feet long, 6 feet wide and 3.7 feet height. The culvert is metal but not rusted, it is partially crushed to an oval shape but otherwise appears in good condition.
1081	0010.00	General Comment: Erosion Site: 400 feet into unit there was bank erosion located on the left bank 5 feet in depth, 20 feet in length and 117 feet wide. Bank is a nearly vertical cliff of bare soil. Streambed partially covered by a collapsed eroding wall for 30 feet.
1081	0010.00	Tributaries: Dry tributary with some debris in creek bed.

*Unnamed Tributary #2 To Lynch Creek 2007*

Position (ft)	Habitat Unit	Comments
1081	0010.00	Erosion Site: (Bank) 230 feet into unit an erosion site is located on the right bank. Its dimensions are 20 feet in depth, 25 feet long and 50 feet wide. The channel is very entrenched at site.
2489	0011.00	Fish Passage: (Culvert) Culvert located on Sonoma Mountain Road is 50 feet long and 3.5 feet in diameter. There is some barbed wire in the stream near the inlet of the culvert that may cause future problems.
2539	0011.00	End of Survey: End of survey at Sonoma Mountain Road. Beyond Sonoma Mountain Road there is a small dry channel.

Unnamed Tributary #2 To Lynch Creek 2007



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Prepared by: Scott Webb, December 2007

Unnamed Tributary #2 To Lynch Creek 2007

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

**Stream Name:** Unnamed Tributary #2 to Lynch Creek

**LLID:** 1225928383192

**Drainage:** Petaluma River

**Survey Dates:** 7/30/2007 to 7/30/2007

**Confluence Location: Quad:** GLEN ELLEN

**Legal Description:** T06NR07WS35

**Latitude:** 38:19:10.2N

**Longitude:** 122:35:33.1W

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	18.2	35	70	2.8									
4	0	DRY	36.4	433	1733	68.3									
4	2	FLATWATER	36.4	174	696	27.4	3.0	0.3	0.8	376	1503	136	542		0
1	1	RIFFLE	9.1	40	40	1.6	2.0	0.1	0.2	28	28	3	3		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>		
11	3				2539						1531		545		

Unnamed Tributary #2 To Lynch Creek 2007

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

**Stream Name:** Unnamed Tributary #2 to Lynch Creek

**LLID:** 1225928383192      **Drainage:** Petaluma River

**Survey Dates:** 7/30/2007 to 7/30/2007

**Confluence Location: Quad:** GLEN ELLEN

**Legal Description:** T06NR07WS35

**Latitude:** 38:19:10.2N

**Longitude:** 122:35:33.1W

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	HGR	9.1	40	40	1.6	2.0	0.1	0.2	28	28	3	3		0	61
4	2	SRN	36.4	174	696	27.4	3.0	0.3	0.9	376	1503	136	542		0	57
4	0	DRY	36.4	433	1733	68.3										62
2	0	CUL	18.2	35	70	2.8										
<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>			
11	3				2539					1531			545			

**Tables 3 and 4 show pool information and are not included in this report because there were no pools recorded for unnamed tributary #2 to Lynch Creek.**



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

**Stream Name:** Unnamed Tributary #2 to Lynch Creek

**LLID:** 1225928383192 **Drainage:** Petaluma River

**Survey Dates:** 7/30/2007 to 7/30/2007

**Confluence Location: Quad:** GLEN ELLEN

**Legal Description:** T06NR07WS35

**Latitude:** 38:19:10.2N

**Longitude:** 122:35:33.1W

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	HGR	0	0	0	0	0	0	0	0	0
4	2	SRN	0	0	0	0	0	0	0	0	0
2	0	CUL									
7	3	TOTAL	0	0	0	0	0	0	0	0	0

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

**Stream Name:** Unnamed Tributary #2 to Lynch Creek

**LLID:** 1225928383192

**Drainage:** Petaluma River

**Survey Dates:** 7/30/2007 to 7/30/2007

**Confluence Location: Quad:** GLEN ELLEN

**Legal Description:** T06NR07WS35

**Latitude:** 38:19:10.2N

**Longitude:** 122:35:33.1W

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	HGR	0	0	0	0	100	0	0
4	2	SRN	0	0	0	50	50	0	0
2	0	CUL	0	0	0	0	0	0	0

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

**Stream Name:** Unnamed Tributary #2 to Lynch Creek

**LLID:** 1225928383192

**Drainage:** Petaluma River

**Survey Dates:** 7/30/2007 to 7/30/2007

**Confluence Location: Quad:** GLEN ELLEN

**Legal Description:** T06NR07WS35

**Latitude:** 38:19:10.2N

**Longitude:** 122:35:33.1W

Mean Percent Canopy	Mean Percent Conifer	Mean Percent Hardwood	Mean Percent Open Units	Mean Right Bank % Cover	Mean Left Bank % Cover
59	0	100	0	37	40

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 8 - Fish Habitat Inventory Data Summary**

Stream Name: Unnamed Tributary #2 to Lynch Creek      LLID: 1225928383192      Drainage: Petaluma River  
 Survey Dates: 7/30/2007 to 7/30/2007      Survey Length (ft.): 2539      Main Channel (ft.): 2539      Side Channel (ft.): 0  
 Confluence Location: Quad GLEN ELLEN      Legal      T06NR07WS35      Latitude 38:19:10.2N      Longitude 122:35:33.1W

**Summary of Fish Habitat Elements By Stream**

**STREAM REACH: 1**

Channel Type: A3	Canopy Density (%): 59.3	Pools by Stream Length (%): 0.0
Reach Length (ft.): 2539	Coniferous Component (%): 0.0	Pool Frequency (%): 0.0
Riffle/Flatwater Mean Width (ft.): 2.7	Hardwood Component (%): 100.0	Residual Pool Depth (%):
BFW:	Dominant Bank Vegetation: Grass	< 2 Feet Deep:
Range (ft.): 14 to 14	Vegetative Cover (%): 38.3	2 to 2.9 Feet Deep:
Mean (ft.): 14	Dominant Shelter:	3 to 3.9 Feet Deep:
Std. Dev.: 0	Dominant Bank Substrate Type: Sand/Silt/Clay	>= 4 Feet Deep:
Base Flow (cfs): NA	Occurrence of LWD (%): 0.0	Mean Max Residual Pool Depth (ft.):
Water (F): 62 - 62    Air (F): 72 - 72	LWD per 100 ft.:	Mean Pool Shelter Rating:
Dry Channel (ft.): 1733	Riffles: 0	
	Pools:	
	Flat: 1	
Pool Tail Substrate (%): Silt/Clay:    Sand:    Gravel:    Sm Cobble:    Lg Cobble:    Boulder:    Bedrock:		
Embeddedness Values (%): 1.    2.    3.    4.    5.0.0		

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

**Stream Name:** Unnamed Tributary #2 to Lynch Creek      **LLID:** 1225928383192      **Drainage:** Petaluma River  
**Survey Dates:** 7/30/2007 to 7/30/2007  
**Confluence Location: Quad:** GLEN ELLEN      **Legal Description:** T06NR07WS35      **Latitude:** 38:19:10.2N      **Longitude:** 122:35:33.1W

**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	0	0	0.0
Boulder	0	0	0.0
Cobble/Gravel	0	0	0.0
Sand/Silt/Clay	3	3	100.0

**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	3	3	100.0
Brush	0	0	0.0
Hardwood Trees	0	0	0.0
Coniferous Trees	0	0	0.0
No Vegetation	0	0	0.0

**Total Stream Cobble Embeddedness**      NA

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

**Stream Name:** Unnamed Tributary #2 to Lynch Creek

**LLID:** 1225928383192

**Drainage:** Petaluma River

**Survey Dates:** 7/30/2007 to 7/30/2007

**Confluence Location: Quad:** GLEN ELLEN

**Legal Description:** T06NR07WS35

**Latitude:** 38:19:10.2N

**Longitude:** 122:35:33.1W

	<b>Riffles</b>	<b>Flatwater</b>	<b>Pools</b>
UNDERCUT BANKS (%)	0	0	
SMALL WOODY DEBRIS (%)	0	0	
LARGE WOODY DEBRIS (%)	0	0	
ROOT MASS (%)	0	0	
TERRESTRIAL VEGETATION (%)	0	0	
AQUATIC VEGETATION (%)	0	0	
WHITEWATER (%)	0	0	
BOULDERS (%)	0	0	
BEDROCK LEDGES (%)	0	0	