

REACH 1

T23S-R11W-S7NE

REACH 1

Valley and Channel Summary

Valley Characteristics (Percent Reach Length)

<u>Narrow Valley Floor</u>		<u>Broad Valley Floor</u>	
Steep V-shape	0	Constraining Terraces	100
Moderate V-shape	0	Multiple Terraces	0
Open V-shape	0	Wide Floodplain	0

Valley Width Index avg: 3.3 range: 2.0-4.0

Channel Morphology (Percent Reach Length)

<u>Constrained</u>		<u>Unconstrained</u>	
Hillslope	0	Single Channel	0
Bedrock	0	Multiple Channel	0
Terrace	0	Braided Channel	0
Alt. Terrace/Hill	100		
Landuse	0		

Channel Characteristics

<u>Type</u>	<u>Length(m)</u>	<u>Area (m2)</u>	<u>Dry Units</u>
Primary	601	6,027	0
Secondary	0	0	0

Channel Dimensions (m)

	<u>Wetted</u>		<u>Active</u>		<u>Floodprone</u>		<u>First Terrace</u>
Width	9.8	Width	16.5		20.2		23.9
Depth	0.52	Height	0.7		1.4		3.3
		W:D ratio	23.2	Entrenchment	1.2		

Stream Flow Type: LF Water Temp: 12.0-12.0°C  
 Avg. Unit Gradient: 1.1% Habitat Units/100m: 5.5

Riparian, Bank, and Wood Summary

	<u>Primary</u>	<u>Secondary</u>
Land Use:	MT	
Riparian Vegetation:	C90	D15

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding	3%	Reach avg: 77%
Undercut Banks	0%	Range: 61- 94

Large Woody Debris

	<u>Total</u>	<u>Total/100m</u>
All pieces ( $\geq 3m \times 0.15m$ )	50	8.3
Volume (m <sup>3</sup> )	97	16.2
Key pieces ( $\geq 10m \times 0.6m$ )	7	1.2

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HABITAT DETAIL

Habitat Type	Number Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Total Area (m <sup>2</sup> )	Large Boulders (#>0.5m)	Substrate Percent Wetted Area					
							S/O	Snd	Grvl	Cbbl	Bldr	Bdrk
POOL-LATERAL SCOUR	8	212	10.0	0.85	2,109	45	6	15	31	5	11	32
POOL-PLUNGE	3	45	12.5	1.00	598	9	6	20	29	8	12	25
POOL-STRAIGHT SCOUR	4	88	9.3	0.83	826	5	6	19	24	6	0	45
RAPID/BEDROCK	2	41	10.3	0.20	460	10	0	8	18	15	10	50
RAPID/BOULDERS	4	51	8.4	0.30	421	70	0	8	21	22	33	16
RIFFLE	5	110	9.8	0.27	1,070	22	0	11	32	12	8	37
RIFFLE W/ POCKETS	1	28	12.0	0.40	336	32	0	10	20	10	60	0
STEP/BEDROCK	5	25	8.6	0.12	203	4	0	0	0	4	8	88
STEP/LOG	1	0	10.0	0.01	4	0	0	20	40	0	0	40
<b>Total:</b>	<b>33</b>	<b>601</b>	<b>9.8</b>	<b>0.52</b>	<b>6,027</b>	<b>197</b>	<b>Avg: 3</b>	<b>12</b>	<b>23</b>	<b>9</b>	<b>12</b>	<b>41</b>

HABITAT SUMMARY

Habitat Group	No. Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Wetted Area (m <sup>2</sup> )	Percent	Large Boulders Number	#/100m <sup>2</sup>
Dammed & BW Pools	0	0	-	-	0	0.00	0	0.0
Scour Pools	15	345	10.3	0.87	3,532	58.61	59	1.7
Glides	0	0	-	-	0	0.00	0	0.0
Riffles	6	138	10.2	0.29	1,406	23.33	54	3.8
Rapids	6	93	9.0	0.27	881	14.62	80	9.1
Cascades	0	0	-	-	0	0.00	0	0.0
Step/Falls	6	26	8.8	0.10	207	3.44	4	1.9
Dry	0	0	-	-	0	0.00	0	0.0

POOL SUMMARY

All Pools	<u>Total</u>	<u>#/Km</u>
	15	25.0
Pools ≥1m deep:	4	6.7
Complex pools (LWD pieces≥3):	4	6.7
Pool Frequency (channel widths/pool):	2.4	
Residual pool depth (avg)	0.62m	

STREAM SUMMARY

WF MILLICOMA UP #2 PRE-TX (62)

Number Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Total Area (m <sup>2</sup> )	Substrate Percent Wetted Area						Total Large Boulder
					S/O	Sand	Grvl	Cbbl	Bldr	Bdrk	
33	601	9.8	0.52	6,027	3	12	23	9	12	41	197

Wetted Area

Habitat Group	(m <sup>2</sup> )	Percent
Scour Pool	3,532	58.6
Backwater Pools	0	0.0
Glide	0	0.0
Riffle	1,406	23.3
Rapid	881	14.6
Cascade	0	0.0
Step	207	3.4
Dry	0	0.0

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RIPARIAN ZONE VEGETATION SUMMARY

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Summary of Riparian Zone (0-30m) (3 transects)

Total hardwoods/1000 ft	183
Total conifers/1000 ft	366
Total conifers >20" dbh/1000 ft	244
Total conifers >35" dbh/1000 ft	122

Average number of trees in a 5-meter wide band

Diameter class (cm)	Zone 1 0-10 meters		Zone 2 10-20 meters		Zone 3 20-30 meters		Zones 1-3 0-30 meters	
	Conifer	Hardwood	Conifer	Hardwood	Conifer	Hardwood	Conifer	Hardwood
3-15cm	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.3
15-30cm	1.3	0.7	0.0	0.7	0.0	0.7	1.3	2.0
30-50cm	0.7	0.0	0.0	0.0	0.0	0.3	0.7	0.3
50-90cm	0.7	0.0	0.3	0.0	1.0	0.3	2.0	0.3
>90cm	0.7	0.0	1.3	0.0	0.0	0.0	2.0	0.0
Total/100m <sup>2</sup>	3.3	1.0	1.7	0.7	1.0	1.3	2.0	1.0

Canopy closure and ground cover

	Zone 1 0-10 meters		Zone 2 10-20 meters		Zone 3 20-30 meters	
	(%)		(%)		(%)	
Canopy closure	60		65		58	
Shrub cover	18		24		28	
Grass/forb cover	62		61		49	

Predominant landform in each zone

	Zone 1 0-10 meters		Zone 2 10-20 meters		Zone 3 20-30 meters	
Hillslope	50		33		50	
High terrace	50		50		33	
Low terrace	0		0		0	
Floodplain	0		0		0	
Wetland/meadow	0		0		0	
Stream channel	0		0		0	
Roadbed/Railroad	0		17		17	
Riprap	0		0		0	
Surface slope (%)	33		26		23	

Summary of Riparian Zone (0-30m) for all reaches ( 3 transects)

Summary of riparian zone (0-100ft) extrapolated to 1,000 feet along stream

Total hardwoods/1000 ft	183
Total conifers/1000 ft	366
Total conifers >20" dbh/1000 ft	244

Average number of trees in a 5-meter wide band

<u>Diameter</u> <u>class (cm)</u>	<u>Zones 1-3</u>	
	<u>Conifer</u>	<u>Hardwood</u>
3-15cm	0.0	0.3
15-30cm	1.3	2.0
30-50cm	0.7	0.3
50-90cm	2.0	0.3
>90cm	2.0	0.0

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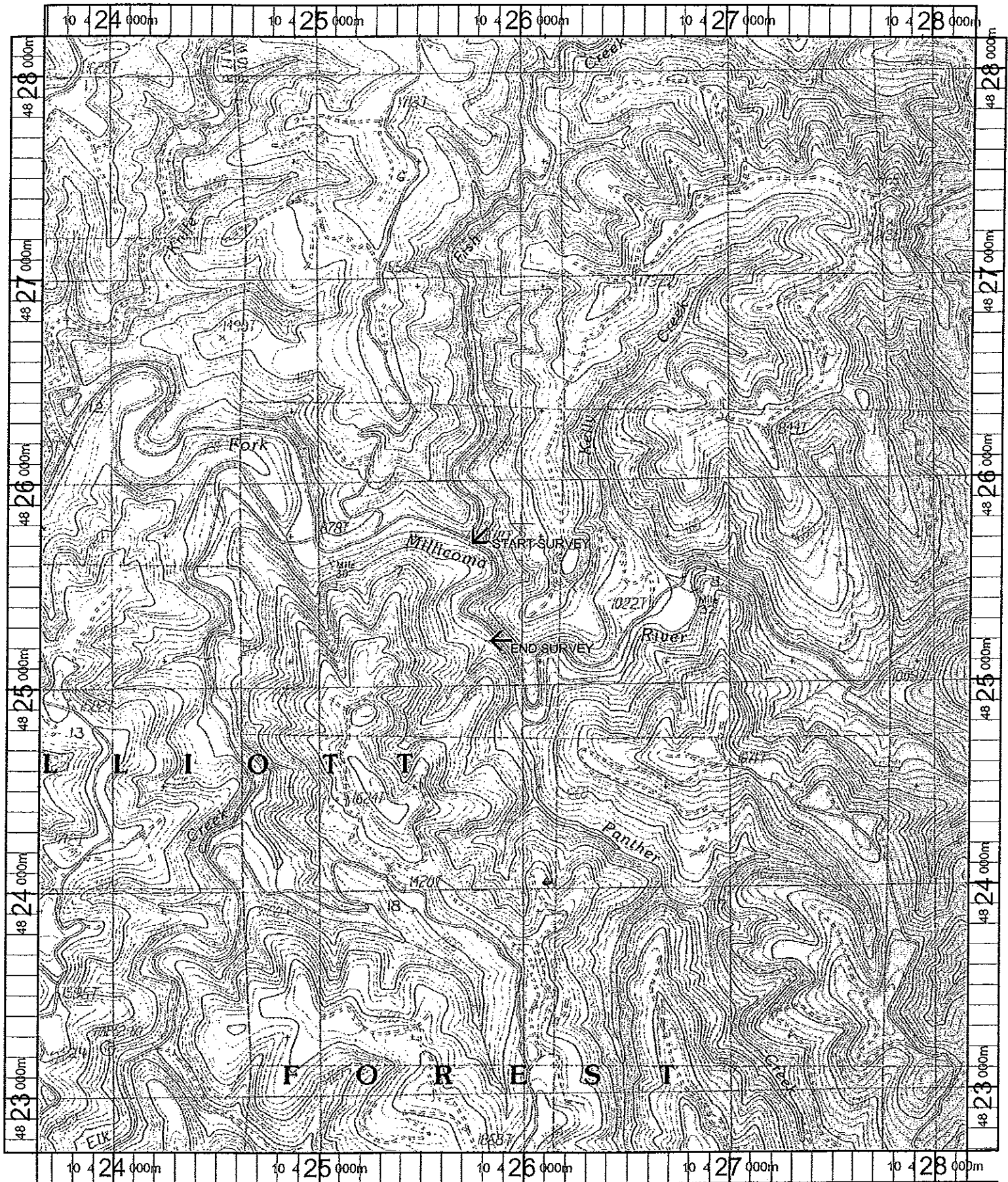
RIPARIAN ZONE VEGETATION

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VEGETATION DETAIL

Unit	Side	Zone	Surface	Slope	Cover (percent)				Diameter class (cm)					Notes
					Canopy	Shrub	Grass		3-15	15-30	30-50	50-90	>90	
7	LF	1	HS	60.0	70	70	20	Conifer	0	0	0	0	0	
								Hardwood	1	2	0	0	0	
7	LF	2	RB	60.0	80	80	20	Conifer	0	0	0	0	0	
								Hardwood	0	1	0	0	0	
7	LF	3	HS	60.0	80	80	20	Conifer	0	0	0	0	0	
								Hardwood	0	1	0	0	0	
7	RT	1	HS	40.0	80	0	50	Conifer	0	2	1	1	2	
								Hardwood	0	0	0	0	0	
7	RT	2	HS	10.0	90	0	70	Conifer	0	0	0	1	1	
								Hardwood	0	0	0	0	0	
7	RT	3	HS	10.0	80	5	65	Conifer	0	0	0	1	0	
								Hardwood	0	0	0	0	0	
14	LF	1	HT	20.0	70	20	70	Conifer	0	0	0	0	0	
								Hardwood	0	0	0	0	0	
14	LF	2	HT	17.0	50	10	60	Conifer	0	0	0	0	0	
								Hardwood	0	0	0	0	0	
14	LF	3	RB	0.0	20	5	20	Conifer	0	0	0	0	0	
								Hardwood	0	0	0	0	0	
14	RT	1	HT	10.0	80	0	80	Conifer	0	2	0	0	0	
								Hardwood	0	0	0	0	0	
14	RT	2	HT	5.0	70	5	85	Conifer	0	0	0	0	0	
								Hardwood	0	0	0	0	0	
14	RT	3	HT	5.0	60	5	80	Conifer	0	0	0	1	0	
								Hardwood	0	0	1	1	0	
20	LF	1	HT	10.0	40	5	70	Conifer	0	0	1	0	0	
								Hardwood	0	0	0	0	0	
20	LF	2	HT	10.0	60	30	60	Conifer	0	0	0	0	3	
								Hardwood	0	0	0	0	0	
20	LF	3	HT	0.0	40	20	70	Conifer	0	0	0	0	0	
								Hardwood	0	0	0	0	0	
20	RT	1	HS	55.0	20	10	80	Conifer	0	0	0	1	0	
								Hardwood	0	0	0	0	0	
20	RT	2	HS	55.0	40	20	70	Conifer	0	0	0	0	0	
								Hardwood	0	1	0	0	0	
20	RT	3	HS	60.0	70	50	40	Conifer	0	0	0	1	0	
								Hardwood	0	1	0	0	0	



Name: ELK PEAK  
 Date: 11/8/100  
 Scale: 1 inch equals 2000 feet

Location: 10 425817 E 4825428 N  
 Caption: WF MILLICOMA #2 UPPER RESTORATION SITE - MILLICOMA BASIN