

REACH 1

T23S-R10W-S7SE

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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: 10.0 range: 7.0-15.0

Channel Morphology (Percent Reach Length)

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

Channel Characteristics

<u>Type</u>	<u>Length(m)</u>	<u>Area (m2)</u>	<u>Dry Units</u>
Primary	855	3,299	0
Secondary	40	38	1

Channel Dimensions (m)

<u>Wetted</u>		<u>Active</u>		<u>Floodprone</u>	<u>First Terrace</u>
Width	3.4	Width	15.2	17.1	19.1
Depth	0.43	Height	0.9	1.9	3.6
		W:D ratio	17.1	Entrenchment	1.1

Stream Flow Type: MF Water Temp: 15.0-15.0°C
 Avg. Unit Gradient: 1.1% Habitat Units/100m: 4.9

Riparian, Bank, and Wood Summary

	<u>Primary</u>	<u>Secondary</u>
Land Use:	MT	
Riparian Vegetation:	M15	C30

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding	1%	Reach avg: 94%
Undercut Banks	1%	Range: 81-100

Large Woody Debris

	<u>Total</u>	<u>Total/100m</u>
All pieces (≥3m x 0.15m)	54	6.3
Volume (m ³)	109	12.8
Key pieces (≥10m x 0.6m)	8	0.9

HABITAT UNIT SUMMARY

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HABITAT DETAIL

Habitat Type	Number Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Total Area (m ²)	Large Boulders (>0.5m)	Substrate Percent Wetted Area					
							S/O	Snd	Grvl	Cbbl	Bldr	Bdrk
CASCADE/BEDROCK	4	23	1.4	0.14	44	3	0	0	0	3	3	95
CASCADE/BOULDERS	1	13	4.6	0.17	60	20	0	0	20	30	50	0
DRY UNITS	1	20	0.3	0.10	6	0	0	0	50	40	10	0
POOL-LATERAL SCOUR	15	419	3.8	0.74	1,617	53	2	4	51	14	9	19
POOL-PLUNGE	2	25	9.3	0.95	256	0	0	3	30	3	0	65
POOL-STRAIGHT SCOUR	2	45	5.6	0.75	255	0	0	8	35	8	0	50
RAPID/BEDROCK	2	48	2.7	0.14	139	2	0	0	0	0	5	95
RAPID/BOULDERS	6	95	2.8	0.18	272	67	0	0	23	41	28	8
RIFFLE	9	204	3.3	0.21	687	0	0	1	61	8	3	27
STEP/BEAVER-DAM <i>Structure</i>	1	1	0.8	0.10	0	0	0	0	100	0	0	0
STEP/BEDROCK	1	1	0.8	0.10	1	0	0	0	0	0	0	100
Total:	44	895	3.4	0.43	3,337	145	Avg: 1	2	40	14	9	34

HABITAT SUMMARY

Habitat Group	No. Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Wetted Area (m ²)	Percent	Large Number	Boulders #/100m ²
Dammed & BW Pools	0	0	-	-	0	0.00	0	0.0
Scour Pools	19	490	4.6	0.77	2,128	63.76	53	2.5
Glides	0	0	-	-	0	0.00	0	0.0
Riffles	9	204	3.3	0.21	687	20.57	0	0.0
Rapids	8	144	2.7	0.17	411	12.32	69	16.8
Cascades	5	37	2.0	0.15	104	3.13	23	22.1
Step/Falls	2	2	0.8	0.10	1	0.04	0	0.0
Dry	1	20	0.3	0.10	6	0.18	0	0.0

POOL SUMMARY

	<u>Total</u>	<u>#/Km</u>
All Pools	19	21.2
Pools ≥1m deep:	4	4.5
Complex pools (LWD pieces ≥3):	5	5.6
Pool Frequency (channel widths/pool):	3.1	
Residual pool depth (avg)	0.69m	

STREAM SUMMARY

WEST FK MILLICOMA UP #2 (PRE)

Number Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Total Area (m ²)	Substrate						Total Large Boulder
					Percent Wetted Area						
					S/O	Sand	Grvl	Cbbl	Bldr	Bdrk	
44	895	3.4	0.43	3,337	1	2	40	14	9	34	145

Habitat Group	Wetted Area	
	(m ²)	Percent
Scour Pool	2,128	63.8
Backwater Pools	0	0.0
Glide	0	0.0
Riffle	687	20.6
Rapid	411	12.3
Cascade	104	3.1
Step	1	**.*
Dry	6	0.2

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RIPARIAN ZONE VEGETATION SUMMARY

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

Total hardwoods/1000 ft	163
Total conifers/1000 ft	366
Total conifers >20" dbh/1000 ft	41
Total conifers >35" dbh/1000 ft	0

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	1.0	0.0	0.0	0.3	0.0	0.3	1.0
15-30cm	1.3	1.0	0.0	0.0	1.0	0.0	2.3	1.0
30-50cm	1.3	0.3	1.0	0.0	0.3	0.3	2.7	0.7
50-90cm	0.3	0.0	0.3	0.0	0.0	0.0	0.7	0.0
>90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total/100m ²	3.0	2.3	1.3	0.0	1.7	0.3	2.0	0.9

Canopy closure and ground cover

	Zone 1 0-10 meters		Zone 2 10-20 meters		Zone 3 20-30 meters	
	(%)		(%)		(%)	
Canopy closure	63		58		75	
Shrub cover	13		21		35	
Grass/forb cover	82		53		57	

Predominant landform in each zone

	Zone 1 0-10 meters		Zone 2 10-20 meters		Zone 3 20-30 meters	
	Hillslope	33		17		50
High terrace	67		50		50	
Low terrace	0		0		0	
Floodplain	0		0		0	
Wetland/meadow	0		0		0	
Stream channel	0		0		0	
Roadbed/Railroad	0		33		0	
Riprap	0		0		0	
Surface slope (%)	25		11		32	

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	163
Total conifers/1000 ft	366
Total conifers >20" dbh/1000 ft	41

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	0.3	1.0
15-30cm	2.3	1.0
30-50cm	2.7	0.7
50-90cm	0.7	0.0
>90cm	0.0	0.0

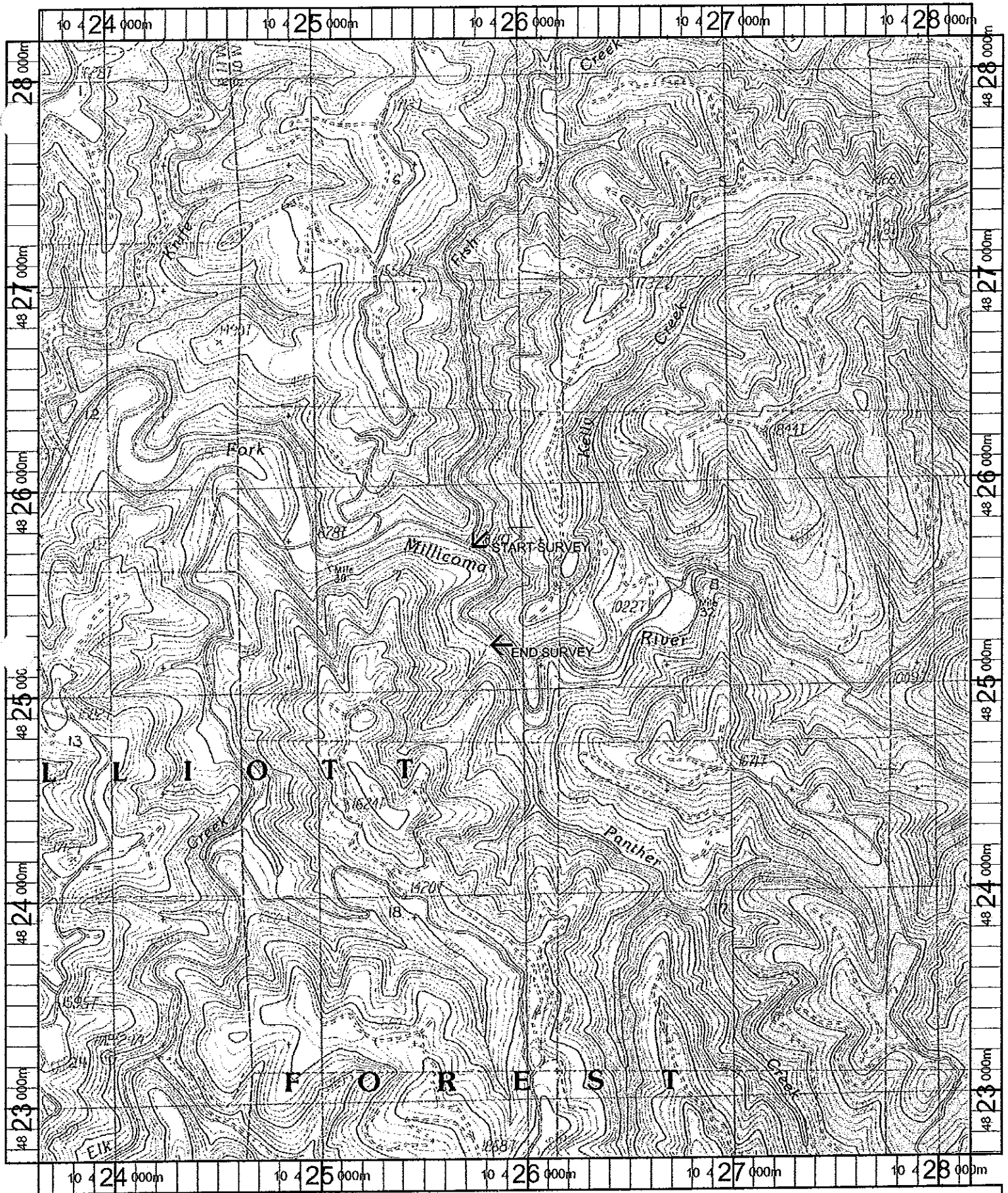
RIPARIAN ZONE VEGETATION

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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	
11	LF	1	HS	40.0	60	40	60	Conifer	0	0	0	0	0	
								Hardwood	0	3	1	0	0	
11	LF	2	RB	0.0	50	0	30	Conifer	0	0	0	0	0	
								Hardwood	0	0	0	0	0	4000 ROAD
11	LF	3	HS	70.0	70	50	50	Conifer	1	1	0	0	0	
								Hardwood	0	0	0	0	0	
11	RT	1	HT	25.0	60	20	80	Conifer	0	1	1	1	0	
								Hardwood	0	0	0	0	0	
11	RT	2	HT	5.0	60	0	80	Conifer	0	0	0	0	0	
								Hardwood	0	0	0	0	0	
11	RT	3	HT	5.0	80	0	100	Conifer	0	0	0	0	0	
								Hardwood	0	0	1	0	0	ALDER
17	LF	1	HT	10.0	90	20	80	Conifer	0	0	0	0	0	
								Hardwood	2	0	0	0	0	
17	LF	2	RB	0.0	60	20	20	Conifer	0	0	1	0	0	
								Hardwood	0	0	0	0	0	
17	LF	3	HS	60.0	60	30	40	Conifer	0	1	0	0	0	
								Hardwood	0	0	0	0	0	
17	RT	1	HT	5.0	80	0	70	Conifer	0	2	3	0	0	
								Hardwood	0	0	0	0	0	
17	RT	2	HT	5.0	60	50	50	Conifer	0	0	1	0	0	
								Hardwood	0	0	0	0	0	
17	RT	3	HT	5.0	80	50	50	Conifer	0	0	1	0	0	
								Hardwood	0	0	0	0	0	
23	LF	1	HT	10.0	70	0	100	Conifer	0	1	0	0	0	
								Hardwood	0	0	0	0	0	
23	LF	2	HT	5.0	70	25	70	Conifer	0	0	1	1	0	
								Hardwood	0	0	0	0	0	
23	LF	3	HT	0.0	60	10	70	Conifer	0	0	0	0	0	
								Hardwood	0	0	0	0	0	
23	RT	1	HS	60.0	20	0	100	Conifer	0	0	0	0	0	
								Hardwood	1	0	0	0	0	
23	RT	2	HS	50.0	50	30	70	Conifer	0	0	0	0	0	
								Hardwood	0	0	0	0	0	
23	RT	3	HS	50.0	100	70	30	Conifer	0	1	0	0	0	
								Hardwood	0	0	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