

Statistics

REASON LOST

REASON	PERCENTAGE
Disoriented	35.80
Poor adult judgement	19.90
Poor adult supervision	19.70
Darkness	11.00
Hunting	5.50
Underestimated distance	2.20
Misguided by passersby	1.60
Fog	1.60
Snow	1.10
Fishing	1.10
Emotionally upset	0.50

REASON STRANDED

REASON	PERCENTAGE
darkness	24.50
poor adult judgement	22.20
snow	21.50
underestimate distance	11.40
steep terrain	6.60
mud slide	4.80
vehicle problem	3.00
disoriented	1.80
hunting	1.20
flood	1.20
avalanche	0.60
drugs	0.60
fog	0.60

METHOD OF FINDING

	PRIMARY		SECONDARY	
METHOD	NUMBER	%	NUMBER	%
Visual contact	76	21.40	0	0.00
Got self out	74	20.80	0	0.00
Voice contact	57	26.00	0	0.00
Helicopter	50	14.00	5	7.80
No one found	43	12.10	0	0.00
Clues, tracks	19	5.30	7	10.80
Victim created signal	11	3.10	3	4.60
Informant	10	2.80	21	32.20
Clues, vehicle	9	2.50	29	44.60
Non searcher found	4	1.10	0	0.00
Clues, clothes, gear	2	0.60	0	0.00
Probing	1	0.30	0	0.00
Total	356	100.00	65	100.00
Total, all clues	8.40	55.40		

RESCUE TECHNIQUES

Yosemite | Colorado | New Mexico | Eastern U.S.

ACTIVITY	Number	%	Number	%	Number	%	Number	%
Assist or own power	78	0	39	0	51	0	48	0
Carry out-foot	70	25	42	45	14	44	27	77
Rock/scree evac	33	12	29	31	5	16	9	26
Animal evac	47	17	6	6	4	12	0	0
Water evac	7	3	2	2	6	19	8	23
Vehicle evac	19	7	27	29	22	69	19	54
Aircraft evac	112	41	54	58	18	56	1	3
Other	17	6	8	9	1	3	5	14
Total	276	100	93	100	32	100	35	100

BEHAVIOUR CHARACTERISTICS

CHARACTERISTIC	CHILDREN	HIKERS	HUNTERS	ELDERLY
Not concealed (good weather)	75	82	83	58
Not concealed (bad weather)	57	60	66	10
Go upwards (slope)	36	8	0	0
Stay at same elevation (slope)	9	4	24	25
Go downwards (slope)	55	88	76	75
Survive (good weather)	95	87	91	58
Survive (bad weather)	29	30	50	2
Use a path or trail	71	73	59	48
Dressed brightly	44	73	37	46

SUBJECT BEHAVIOUR

PLACE LOST	SUBJECT BEHAVIOUR	PERCENT
Known Location		
	Followed a road, pathway or trail	34
	Went cross-country	33
	Went down drainage or path of least resistance	25
	Found in hazardous area	8
En Route		
	Stayed on path or trail, maybe wrong one	22
	Left main trail; shortcut	34
	Left main trail; headed for sights, sounds of civilization	22
	Left main trail; became lost in heavy brush	5
	Victim of hazardous areas	11
	Medical problem near or on trail	5
Wilderness		
	Found and stayed on travel aids	62
	Remained in heavy bush, brush or timber	23
	Headed for sights/sounds of civilization	4
	Victims of hazardous areas	4

DETECTABILITY

GROUP	GOOD WEATHER	BAD WEATHER
	%	%
Small Children (1-6)	90	75
Children (6-12)	65	10
Hunters	83	66
Hikers	75	67
Misc. Outdoor Persons	75	50
Elderly	59	10

POD TABLE

SWEEP SEQUENCE	DAY	1st NIGHT	2nd NIGHT	ALL NIGHT
	SWEEPS	SWEEP	SWEEP	SWEEPS
20	92	81	81	81
60	71	52	52	52
100	53	35	35	35
20+20	99	98	97	97
20+60	96	95	91	91
20+100	96	91	88	88
60+20	96	96	91	91
60+60	91	86	77	77
60+100	86	78	68	68
100+20	96	94	88	88
100+60	86	81	68	68
100+100	78	69	57	57
20+20+20	99	99	99	99
20+20+60	99	99	99	98
20+20+100	99	99	98	98
20+60+20	99	99	99	98
20+60+20	99	99	99	98
20+60+60	99	98	97	96
20+60+100	99	97	96	94
20+100+20	99	99	99	98
20+100+60	99	97	96	94
20+100+100	98	96	94	92
60+20+20	99	99	99	98
60+20+60	99	99	97	96
60+20+100	99	98	96	94
60+60+20	99	99	98	96
60+60+60	98	96	93	89
60+60+100	96	93	89	85
60+100+20	99	98	97	94
60+100+60	96	93	91	85

60+100+100	94	90	85	79
100+20+20	99	99	99	98
100+20+60	99	97	96	94
100+20+100	99	97	94	92
100+60+20	99	98	97	94
100+60+60	96	94	91	85
100+60+100	94	90	85	79
100+100+20	98	97	96	92
100+100+20	98	97	96	92
100+100+60	94	91	87	79
100+100+100	90	85	80	72

This POD table was determined by experiments conducted by Jon Wartes in 1974, using the ESAR group. The formula for computing cumulative POD was derived from this information. The search patterns were standard Type II and Type III.

GROUND SEARCH MAN HOURS - TYPE II/III (1 Sq Mi)

POD	SPACING	NO. OF SEARCHERS	HOURS	SEARCHER HOURS
5	190	27.8	3.5	97.2
10	180	29.3	3.5	102.7
15	170	30.1	3.5	108.7
20	160	33.0	3.5	115.5
25	150	35.2	3.5	123.2
30	140	37.7	3.5	132.0
35	130	40.6	3.5	142.2
40	120	44.0	3.5	154.0
45	110	48.0	3.5	168.0
50	100	53.0	3.5	185.5
55	90	58.7	3.5	205.3
60	80	66.0	3.5	231.0
65	70	75.4	3.5	264.0
70	60	88.0	3.5	308.0
75	50	105.6	3.5	369.6
80	40	132.0	3.5	462.0
85	30	176.0	3.5	616.0
85	30	176.0	3.5	616.0
90	20	264.0	3.5	924.0
95	10	528.0	3.5	1848.0

This table was determined by experiments conducted by Jon Wartes in 1974, using the ESAR group in Seattle. The search patterns were standard Type II and Type III.

PROBABILITY ZONES - Hilly Terrain

GROUP	MEDIAN	A	B	C	MAXIMUM ZONE
		25%	50%	75%	89%
CHILDREN 1-6		0.1 up	0.5 up	1.5 up	1.6 up
	0.3 dn	0.4 dn	0.5 dn	1.4 dn	2.6 dn
					92%
CHILDREN 7+		1.0 dn	0.5 up	2.0 up	2.6 up
	1.6 dn	2.0 dn	2.1 dn	4.0 dn	4.1 dn
					90%
ELDERLY		0.5 dn	0.0	0.4 up	1.0 up
	1.2 dn	1.8 dn	2.4 dn	2.6 dn	3.0 dn
					83%
HIKERS		2.0 dn	0.6 dn	0.4 up	4.0 up
	2.5 dn	3.0 dn	3.6 dn	6.1 dn	6.0 dn
					93%
HUNTERS		1.8 dn	0.7 dn	0.8 up	3.0 up
	2.0 dn	2.8 dn	3.1 dn	4.0 dn	6.0 dn
					84%
MISC		0.6 dn	0.0	1.4 up	2.5 up
	1.6 dn	1.6 dn	3.0 dn	3.1 dn	3.2 dn

PROBABILITY ZONES - Flat Terrain

GROUP	MEDIAN	A	B	C	MAXIMUM ZONE
		25%	50%	75%	92%
CHILDREN 1-6	1.2	0.1-1.6	0.6-1.7	0.5-2.1	0-2.2
					92%
CHILDREN 7+	1.2	0.8-1.2	0.7-2.0	0.2-2.2	0-3.0
					93%
ELDERLY	1.0	0.8-1.0	0.7-1.2	0.1-1.3	0-3.0
					94%
HIKERS	2.0	1.4-2.4	1.0-3.2	0.2-3.3	0-4.0
					89%
HUNTERS	1.6	1.0-1.6	0.9-2.2	0.1-2.3	0-3.0
					89%
MISC	1.6	1.1-1.6	0.5-1.8	0.1-2.8	0-4.0

Excerpted from Analysis of Lost Person Behaviour, published by Bill Syrotuck in 1976.

HIKER DETECTABILITY

HIKER DETECTABILITY Yosemite 80-82 Colorado 80-81

	Number	%	Number	%
Unknown	2	7	0	0
Conscious	10	37	11	50
Cooperative	14	52	13	59
Verbal response	10	37	9	41
Mobile	11	41	14	64
Visual sighting	9	33	3	14
Prone position	1	4	0	0
Dark clothing	1	4	0	0
Hidden from view	0	0	3	14
Other	0	0	0	0

ROUTES HIKERS FOLLOW

ROUTE FOLLOWED Yosemite 80-82 Colorado 80-81

	Number	%	Number	%
Unknown	0	0	0	0
Path/trail/road	12	37	17	55
Natural drainage	13	41	11	35
Natural clearings	1	3	1	3
Toward landmark	3	9	4	13
Toward civilization	0	9	10	32
Over major obstacle	1	3	2	7
Wandered about	6	19	5	16
Cross country	8	25	8	26
Other	0	0	1	3

REASON HIKER LOST

REASON HIKER LOST Yosemite 80-82 Colorado 80-81

	Number	%	Number	%
Unknown	0	0	0	0
Poor supervision	2	5	7	22
Accidental supervision	5	13	10	31
Intentional separation	12	31	10	31
Took short cut	3	8	2	6
Poor/no map	9	23	9	28
Disoriented	16	41	15	47
Poor trail/markings	3	8	2	6
Misjudge time/ distance	9	23	11	34
Other	5	13	2	6