Station Fire Hydrologic Analysis (based on Rowe, 1949)

M. Moore 10/21/2009 5:14 PM

Antelope Valley Basin — **Drainage Area** 21.36 mi^2 — Table 101

(Little Rock Reservior and Little Rock Creek) — **Mean annual Ppt** 12 **in**

events per year	Tr	1 - year	2 - year	3 - year	7 - year	15 - year	30 - year	70 - year (normal)
		cfsm						
0.461	**2.2**	8.58	5.75	4.88	4.08	3.77	3.6	3.56
0.1968	**5.1**	17.5	14	12.6	11.1	10.6	10.2	9.95
0.0965	**10.4**	24.3	20.3	18.6	16.7	15.9	15.5	15
0.0414	**24.2**	47.8	41.9	39.3	36.5	34.7	33.7	33
0.0192	**52.1**	62.8	56.4	53.7	49.6	47.8	46.4	45.5
0.01	**100.0**	152	123	117	111	108	105	105

years after burn		1	2	3	4	5	6	7	8	10 (normal)
sediment	(yd^3/mi^2)	8,840	1,450	1,010	800	610	450	340	215	215
rate	(T/mi^2)	15,912	2,610	1,818	1,440	1,098	810	612	387	387

Little Rock Creek - 6th Field — **Drainage Area** 33 mi^2

events per year	Tr	1 - year	2 - year	3 - year	7 - year	15 - year	30 - year	70 - year (normal)
		cfs						
0.461	**2.2**	125	121	120	119	118	118	**118**
0.1968	**5.1**	340	335	334	332	331	330	**330**
0.0965	**10.4**	510	505	502	500	499	498	**497**
0.0414	**24.2**	1,114	1,106	1,103	1,099	1,097	1,095	**1,094**
0.0192	**52.1**	1,532	1,524	1,520	1,515	1,512	1,510	**1,509**
0.01	**100.0**	3,545	3,506	3,498	3,490	3,486	3,482	**3,482**

Station Fire severity	acres
unburned	18,795
low	1,575
moderate	826
high	31
total	21,226

years after burn		1	2	3	4	5	6	7	8	10 (normal)
sediment	(yd^3/yr)	18,672	8,783	8,194	7,913	7,659	7,445	7,298	7,131	**7,131**
rate	(T/yr)	33,609	15,810	14,750	14,244	13,786	13,401	13,136	12,835	**12,835**
	increase %	162%	23%	15%	11%	7%	4%	2%	0%	0%

Little Rock Reservoir - 6th Field — **Drainage Area** 37.6 mi^2

events per year	Tr	1 - year	2 - year	3 - year	7 - year	15 - year	30 - year	70 - year (normal)
		cfs						
0.461	**2.2**	167	148	143	137	135	134	**134**
0.1968	**5.1**	424	401	392	382	378	376	**374**
0.0965	**10.4**	626	599	588	575	570	567	**564**
0.0414	**24.2**	1,339	1,299	1,282	1,263	1,251	1,245	**1,240**
0.0192	**52.1**	1,825	1,782	1,764	1,737	1,725	1,716	**1,710**
0.01	**100.0**	4,259	4,065	4,025	3,985	3,965	3,945	**3,945**

Station Fire severity	acres
unburned	18,310
low	1,473
moderate	3,859
high	406
total	24,048

years after burn		1	2	3	4	5	6	7	8	10 (normal)
annual	(yd3/yr)	65,555	16,308	13,376	11,977	10,711	9,645	8,912	8,079	8,079
sediment	(T/yr)	117,998	29,355	24,077	21,558	19,279	17,360	16,041	14,541	**14,541**
	increase %	711%	102%	66%	48%	33%	19%	10%	0%	0%

Little Rock Reservoir - sub A — **Drainage Area** 27.6 mi^2

events per year	Tr							70 (normal)
		cfs						
0.461	**2.2**	132	113	107	102	99	98	98
0.1968	**5.1**	324	301	292	282	278	276	274
0.0965	**10.4**	475	449	437	425	419	417	413

Station Fire severity	acres
unburned	11,896
low	1,474

0.0414	**24.2**	1,008	968	951	933	921	914	909		moderate	3,853
0.0192	**52.1**	1,369	1,326	1,308	1,281	1,269	1,260	1,254		high	410
0.01	**100.0**	3,206	3,013	2,973	2,933	2,913	2,893	2,893		total	17,633

										10
years after burn		**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**(normal)**
annual	**(yd3/yr)**	63,371	14,149	11,219	9,820	8,554	7,489	6,756	5,924	5,924
sediment	**(T/yr)**	114,067	25,469	20,194	17,676	15,398	13,480	12,161	10,662	**10,662**
	increase %	970%	139%	89%	66%	44%	26%	14%	0%	0%