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*Average Fire Damage from Increased Run-Off and Erosion
on the Southern California National Forests*

CHARLES C. BUCK, WALLACE L. FONS

AND

CLIVE M. COUNTRYMAN

1948

California Forest and Range Experiment Station
Berkeley, California

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AVERAGE FIRE DAMAGE FROM INCREASED RUN-OFF AND EROSION
ON THE SOUTHERN CALIFORNIA NATIONAL FORESTS

By

Charles C. Buck, Wallace L. Fons and Clive M. Countryman^{1/}

Effective management and planning of fire control activities on southern California watershed areas require both systematic appraisal of damages from current fires and comparable estimates of damage that can be expected from future fires. Watershed damages—those resulting from increased run-off and erosion following fire—constitute an important part of the total damage from fire on most southern California watersheds. They must therefore be determined and added to the other direct and indirect damages from fire to secure an adequate appraisal of total fire damage.

Estimates of run-off and erosion damage following fire have been derived from a special watershed damage study. These estimates have been published in a form suitable for current fire damage appraisals on individual watershed units of the four southern California national forests^{2/}. The purpose of this second paper is to present the same data in a form more convenient for use in predicting probable run-off and erosion damages expected from fires in the future or from those burning currently for which the locations of ultimate control lines are unknown.

The average damage rates in the tables that follow were calculated directly from the detailed figures given in the earlier publication. They are based on the assumption that, on the average, fires in each appraisal unit will be distributed among the upstream zones described in the earlier publication in proportion to their respective burnable areas. The average run-off and erosion damage rates given here are thus the weighted average upstream rates to which have been added the sum of the downstream rates for each appraisal unit. The area indicated for each appraisal unit is the net area that will suffer run-off and erosion damage from fire

Maps showing the locations of the individual appraisal units to which the fire damage estimates apply precede the tables.

^{1/} California Forest and Range Experiment Station, maintained by the Forest Service, U. S. Department of Agriculture at Berkeley, California in cooperation with the University of California.

^{2/} Fire damage from increased run-off and erosion, Angeles, San Bernardino, Cleveland, and Los Padres national forests; Charles C. Buck, Wallace L. Fons and Clive M. Countryman. 4 volumes, tables and maps, 1948.

FIRE DAMAGE APPRAISAL UNIT MAPS
AND TABLES
Cleveland National Forest

FIRE DAMAGE APPRAISAL UNIT MAPS

Descanso Ranger District

<u>No.</u>	<u>Name</u>
C-1	La Posta Creek
2	Kitchen Creek
3	Cottonwood Creek
4	Bear Valley
5	Barrett Lake
6	Skye Valley
7	Pine Valley Creek
8	Wilson Creek
9	Sweetwater River
10	Conejos Creek
11	El Capitan Reservoir
12	Boulder Creek
13	Cedar Creek
14	San Diego River
15	Featherstone Canyon
16	Wright Canyon
17	Mt. Gower

FIRE DAMAGE APPRAISAL UNIT MAPS

Palomar Ranger District

<u>No.</u>	<u>Name</u>
C-18	Roden Canyon
19	Black Canyon
20	Temescal Creek
21	Agua Caliente Creek
22	Puerta La Cruz Creek
23	West Fork San Luis Rey River
24	San Luis Rey River
25	Temecula Creek
26	Pechanga Creek

FIRE DAMAGE APPRAISAL UNIT MAPS

Trabuco Ranger District

<u>No.</u>	<u>Name</u>
C-27	San Mateo Creek
28	San Juan Creek
29	Trabuco Canyon
30	Santiago Creek
31	Sierra Canyon
32	Elsinore
33	Lee Lake
34	Corona

AVERAGE RUN-OFF AND EROSION DAMAGE EXPECTED FROM FUTURE FIRES ON WATERSHEDS OF CLEVELAND NATIONAL FOREST

Fire Damage Appraisal Unit	Area in Acres	Fire size class in acres															(d o l l a r s p e r a c r e)					50,001 to 100,000	100,001 to 200,000
		0 to 20	21 to 40	41 to 60	61 to 100	101 to 180	181 to 300	301 to 600	601 to 1000	1001 to 1750	1751 to 3000	3001 to 5000	5001 to 9000	9001 to 15,000	15,001 to 25,000	25,001 to 50,000							
C-1 LA POSTA CREEK	30,827	0.05	0.35	0.60	0.95	1.60	2.80	5.30	7.30	7.30	7.40	7.40	7.40	7.50	7.60	7.70							
C-2 KITCHEN CREEK	13,869	0.05	0.30	0.50	0.85	1.45	2.50	4.70	6.40	6.40	6.40	6.40	6.40	6.50									
C-3 COTTONWOOD CREEK	11,943	0.30	0.95	1.60	2.70	4.80	8.30	15.30	21.30	22.20	22.30	22.60	23.10	24.00									
C-4 BEAR VALLEY	12,550	0.40	1.50	2.60	4.20	7.30	12.50	23.30	32.20	32.40	32.40	32.40	32.40	32.40									
C-5 BARRETT LAKE	14,535	1.05	4.60	7.80	12.30	21.40	36.80	47.40	47.50	47.50	47.50	47.50	47.50	47.50									
C-6 SKYE VALLEY	5,846	0.55	2.45	4.25	6.75	11.70	20.20	26.10	26.60	27.00	27.40	27.40	27.40										
C-7 PINE VALLEY CREEK	50,559	0.80	2.85	4.80	7.70	13.20	22.90	42.30	59.50	60.00	61.00	61.00	61.50	61.50	61.50	62.00	62.50						
C-8 WILSON CREEK	6,327	1.60	6.50	11.10	17.50	30.50	52.50	68.00	68.50	68.50	68.50	68.50	68.50										
C-9 SWEETWATER RIVER	58,966	1.15	4.30	7.20	11.50	20.00	34.70	64.50	90.00	92.00	92.50	93.00	93.00	93.00	93.50	94.00	95.00						
C-10 CONEJOS CREEK	34,042	0.80	3.65	6.30	10.00	17.30	29.80	55.00	76.00	76.50	76.50	76.50	76.50	76.50	76.50	76.50							
C-11 EL CAPITAN RESERVOIR	15,155	1.70	7.90	13.70	21.70	37.50	64.00	82.00	82.50	82.50	82.50	82.50	82.50	82.50	82.50								
C-12 BOULDER CREEK	12,684	2.05	9.40	16.10	25.40	44.20	76.00	76.50	77.00	77.00	77.00	77.00	77.00	77.00									
C-13 CEDAR CREEK	16,493	1.05	4.45	7.60	12.00	20.80	35.80	66.00	92.50	93.00	93.50	93.50	93.50	94.00	94.00								
C-14 SAN DIEGO RIVER	24,899	1.55	6.80	11.80	18.60	32.30	55.50	71.00	71.50	71.50	71.50	71.50	71.50	71.50	71.50								
C-15 FEATHERSTONE CANYON	2,019	0.80	3.65	6.30	10.10	17.50	30.00	55.00	76.20	76.50	76.50												
C-16 WRIGHT CANYON	1,236	2.25	10.35	17.80	28.20	48.80	64.50	64.50	64.50	65.00													
C-17 MT. GOWER	6,076	1.65	7.60	13.00	20.70	35.70	46.90	47.00	47.10	47.10	47.10	47.20	47.30										
C-18 RODEN CANYON	13,267	0.60	2.30	3.90	6.30	11.10	18.80	24.40	24.70	24.90	25.10	25.40	26.00	27.10									
C-19 BLACK CANYON	9,756	1.00	4.40	7.40	12.10	20.90	27.30	27.40	27.50	27.60	27.80	28.20	28.90	29.60									
C-20 TEMESCAL CREEK	18,797	0.30	1.15	1.95	3.15	5.40	9.30	16.90	22.90	23.10	23.20	23.40	23.90	24.60	25.70								
C-21 AGUA CALIENTE CREEK	26,706	0.00	0.00	0.00	0.05	0.15	0.20	0.40	0.60	0.95	1.50	1.80	1.80	1.80	1.80								
C-22 PUERTA LA CRUZ CREEK	18,619	0.00	0.00	0.00	0.00	0.10	0.15	0.20	0.35	0.50	0.60	0.60	0.60	0.60	0.60								
C-23 WEST FORK SAN LUIS REY RIVER ...	19,580	0.05	0.15	0.20	0.30	0.50	0.80	1.40	2.40	3.00	3.00	3.00	3.00	3.00	3.00								
C-24 SAN LUIS REY RIVER	60,752	0.35	1.00	1.65	2.65	4.55	7.90	13.90	21.20	24.40	26.10	26.30	26.30	26.40	26.50	26.70	26.90						
C-25 TEMECULA CREEK	49,996	0.15	0.40	0.70	1.05	1.95	3.40	6.00	9.70	11.80	12.20	12.30	12.50	12.70	13.10	14.60							

Fire Damage Appraisal Unit	Area in Acres	Fire size class in acres (d o l l a r s p e r a c r e)																
		0 to 20	21 to 40	41 to 60	61 to 100	101 to 180	181 to 300	301 to 600	601 to 1000	1001 to 1750	1751 to 3000	3001 to 5000	5001 to 9000	9001 to 15,000	15,001 to 25,000	25,001 to 50,000	50,001 to 100,000	100,001 to 200,000
C-26 PECHANGA CREEK	5,777	0.10	0.35	0.60	1.10	2.00	3.30	6.10	8.60	8.90	9.30	10.00	10.80					
C-27 SAN MATEO CREEK	52,748	0.00	0.05	0.10	0.20	0.35	0.60	1.15	2.10	2.70	3.05	3.10	3.10	3.15	3.20	3.30	3.35	
C-28 SAN JUAN CREEK	50,702	0.40	1.05	1.65	2.55	4.40	7.20	12.10	13.00	13.00	13.20	13.30	13.50	13.90	14.60	16.00	17.10	
C-29 TRABUCO CANYON	15,892	0.30	0.80	1.35	2.20	4.05	6.95	9.30	9.80	10.20	10.80	11.90	13.70	16.90	19.60			
C-30 SANTIAGO CREEK	39,827	2.15	7.40	12.80	20.50	36.00	64.00	82.50	83.50	83.50	84.00	84.50	86.00	88.50	93.00	103.00		
C-31 SIERRA CANYON	13,544	0.65	2.20	3.80	6.00	10.30	18.00	23.50	24.30	25.40	26.40	27.10	28.40	31.40				
C-32 ELSINORE	7,590	4.50	14.70	26.75	45.60	75.00	99.00	120.00	139.00	155.00	155.00	155.00	155.00					
C-33 LEE LAKE	15,764	1.80	7.40	13.60	21.40	36.60	61.50	78.50	79.00	79.50	80.00	80.50	80.50	80.50	80.50			
C-34 CORONA	24,429	4.60	16.50	28.70	49.20	85.10	141.00	180.00	186.00	195.00	211.00	236.00	253.00	253.00	253.00			

FIRE DAMAGE APPRAISAL UNIT MAPS
AND TABLES
San Bernardino National Forest

FIRE DAMAGE APPRAISAL UNIT MAPS

<u>No.</u>	<u>Name</u>
B-1	Reservoir Butte
2	Bautista Creek
3	Hemet Valley
4	San Jacinto River
5	Indian Creek
6	Poppet Creek
7	Palm Canyon
8	Tahquitz Creek
9	Blaisdell Canyon
10	Snow Creek
11	Cabezon Peak

(Continued on next page)

1948

SCALE IN MILES

FIRE DAMAGE APPRAISAL UNIT MAP

<u>No.</u>	<u>Name</u>	<u>No.</u>	<u>Name</u>
B-12	Whitewater River	B-32	Bailey Canyon
13	Stubby Canyon	33	Cable Canyon
14	Millard Canyon	34	Cajon Canyon
15	Hathaway Creek	35	Lone Pine Canyon
16	Banning Canyon	36	Sycamore Flat
17	Cherry Creek	37	Lytle Creek
18	Potato Creek	38	Duncan Canyon
19	Mill Creek Wash	39	San Sevaine Canyon
20	Mill Creek	40	Morse Canyon
21	Morton Canyon	41	Etiwanda Canyon
22	Santa Ana River	42	Day Guard Station
23	Big Bear Lake	43	Day Canyon
24	Oak Creek	44	Day Wash
25	Plunge Creek	45	Deer Canyon
26	Alder Creek	46	Alta Loma
27	City Creek	47	Cucamonga Canyon
28	Sand Creek	48	Frankish Canyon
29	Waterman-Strawberry Creeks	49	Deep Creek
30	Badger Canyon	50	West Fork
31	Devil Canyon	51	Summit Valley

AVERAGE RUN-OFF AND EROSION DAMAGE EXPECTED FROM FUTURE FIRES ON WATERSHEDS OF SAN BERNARDINO NATIONAL FOREST

Fire Damage Appraisal Unit	Area in Acres	Fire size class in acres (dollars per acre)															50,001 to 100,000	100,001 to 200,000
		0 to 20	21 to 40	41 to 60	61 to 100	101 to 180	181 to 300	301 to 600	601 to 1000	1001 to 1750	1751 to 3000	3001 to 5000	5001 to 9000	9001 to 15,000	15,001 to 25,000	25,001 to 50,000		
B-1 RESERVOIR BUTTE	5,672	0.20	1.05	1.70	2.75	4.70	8.00	14.80	21.60	25.10	27.60	27.60	27.60					
B-2 BAUTISTA CREEK	27,271	0.25	1.05	1.90	2.90	5.20	8.70	16.20	29.40	37.70	38.00	38.40	39.30	41.00	43.40	45.70		
B-3 HEMET VALLEY	29,009	0.20	0.85	1.40	2.25	3.90	6.75	12.50	22.80	38.80	50.50	50.50	50.50	50.50	50.50	50.50		
B-4 SAN JACINTO RIVER	37,175	0.20	1.00	1.70	2.80	4.85	8.40	15.80	28.60	47.70	63.00	64.50	65.00	65.50	67.00	70.50		
B-5 INDIAN CREEK	16,720	0.15	0.60	1.00	1.75	2.85	4.90	9.15	16.40	28.20	37.00	37.50	37.70	38.00	38.40			
B-6 POPPET CREEK	9,533	0.20	0.90	1.65	2.55	4.55	7.80	14.60	26.00	33.70	34.00	34.20	34.60	34.80				
B-7 PALM CANYON	38,416	0.00	0.00	0.00	0.00	0.05	0.05	0.15	0.25	0.45	0.80	1.15	1.45	1.60	1.85	2.45		
B-8 TAQUITZ CREEK	6,028	0.15	1.05	1.75	2.75	4.80	8.10	15.00	27.10	37.60	47.10	53.50	53.50					
B-9 HLAISDELL CANYON	2,020	0.00	0.00	0.00	0.00	0.00	0.10	0.15	0.20	0.25	0.25							
B-10 SNOW CREEK	4,767	0.00	0.05	0.10	0.15	0.30	0.55	1.00	1.50	1.90	2.10	2.55						
B-11 CABEZON PEAK	19,778	0.00	0.10	0.20	0.30	0.55	0.90	1.60	2.90	3.80	4.10	4.50	5.00	5.40	6.60			
B-12 WHITEWATER RIVER	13,865	0.00	0.10	0.20	0.30	0.50	0.85	1.60	3.00	5.20	7.20	8.10	9.90	13.90				
B-13 STUBBY CANYON	9,443	0.00	0.05	0.15	0.25	0.45	0.75	1.45	2.55	3.95	5.80	8.20	10.00	10.00				
B-14 MILLARD CANYON	9,922	0.05	0.25	0.45	0.85	1.40	2.40	4.50	6.50	6.70	7.10	7.50	8.30	9.10				
B-15 HATHAWAY CREEK	13,497	0.05	0.10	0.20	0.35	0.65	1.15	2.15	3.75	4.95	5.25	5.80	6.50	7.00				
B-16 BANNING CANYON	11,004	0.10	0.35	0.60	0.95	1.65	2.85	5.40	7.80	8.60	9.20	10.50	12.50	15.20				
B-17 CHERRY CREEK	1,498	1.15	5.00	8.60	13.70	23.80	41.00	54.00	58.00	60.50								
B-18 POTATO CREEK	4,251	0.70	3.45	6.00	9.40	16.20	27.80	51.50	71.50	72.00	74.00	75.00						
B-19 MILL CREEK WASH	2,670	2.00	9.00	15.60	24.60	42.50	73.00	135.00	187.00	188.00	188.00							
B-20 MILL CREEK	15,155	0.42	1.95	3.35	5.40	9.20	16.10	29.90	54.00	70.50	73.50	76.50	81.00	88.50	93.50			
B-21 MORTON CANYON	1,574	4.50	20.90	36.10	57.00	99.00	130.00	131.00	132.00	135.00								
B-22 SANTA ANA RIVER	48,986	0.15	0.90	1.50	2.30	4.10	7.00	13.20	23.90	41.00	55.00	58.00	58.50	59.00	61.00	66.00		
B-23 BIG BEAR LAKE	23,062	0.00	0.00	0.05	0.05	0.10	0.15	0.25	0.50	0.75	0.85	0.95	1.10	1.10	1.10			
B-24 OAK CREEK	2,342	4.85	22.20	38.40	60.40	76.80	77.60	79.30	82.20	86.80	90.10							
B-25 PLUNGE CREEK	10,822	1.00	4.10	7.00	11.30	19.60	33.60	61.50	84.00	84.50	84.50	85.50	86.50	88.00				

Fire Damage Appraisal Unit	Area in Acres	Fire size class in acres																
		(dollars per acre)																
		0 to 20	21 to 40	41 to 60	61 to 100	101 to 180	181 to 300	301 to 600	601 to 1000	1001 to 1750	1751 to 3000	3001 to 5000	5001 to 9000	9001 to 15,000	15,001 to 25,000	25,001 to 50,000	50,001 to 100,000	100,001 to 200,000
B-26 ALDER CREEK	1,997	3.80	14.70	27.00	43.00	75.50	125.00	181.00	242.00	281.00	281.00							
B-27 CITY CREEK	12,755	0.85	3.40	5.80	9.00	15.60	26.40	49.50	69.00	70.00	71.00	71.50	72.50	74.50				
B-28 SAND CREEK	6,176	3.80	17.40	32.00	51.00	88.00	151.00	200.00	219.00	250.00	272.00	272.00	272.00					
B-29 WATERMAN-STRAWBERRY CREEKS	8,948	6.80	21.80	37.30	59.50	102.00	179.00	248.00	265.00	270.00	280.00	294.00	335.00					
B-30 BADGER CANYON	2,483	2.05	8.40	15.30	23.70	42.00	70.50	91.00	95.00	97.00	97.50							
B-31 DEVIL CANYON	3,701	2.55	10.40	18.30	28.90	50.80	87.60	119.00	130.00	147.00	177.00	214.00						
B-32 BAILEY CANYON	2,025	1.85	7.70	13.20	21.50	37.10	63.50	83.00	87.00	89.50	90.00							
B-33 CABLE CANYON	3,700	1.35	6.60	11.40	18.00	31.20	53.50	99.00	137.00	142.00	151.00	162.00						
B-34 CAJON CANYON	32,478	0.35	1.20	2.20	3.50	6.00	10.50	19.20	34.90	46.70	52.00	58.00	62.00	65.00	70.00	78.00		
B-35 LONE PINE CANYON	9,623	0.20	1.00	1.70	2.80	4.80	8.80	15.40	22.00	23.00	23.70	24.70	26.40	27.90				
B-36 SYCAMORE FLAT	876	6.20	28.80	49.60	78.50	136.00	179.00	179.00	180.00									
B-37 LYTLE CREEK	15,386	0.75	3.10	5.50	8.70	15.40	26.20	47.80	67.50	71.50	75.00	77.00	80.50	86.00	89.50			
B-38 DUNCAN CANYON	1,606	3.05	14.20	24.00	38.70	67.00	89.00	91.00	95.00	104.00								
B-39 SAN SEVAINNE CANYON	1,222	3.05	14.10	24.40	38.60	67.00	111.00	152.00	171.00	186.00								
B-40 MORSE CANYON	1,647	1.65	7.40	12.60	20.20	35.00	60.00	78.50	83.00	94.00								
B-41 ETIWAANDA CANYON	2,035	2.30	10.40	18.10	28.60	49.50	85.00	110.00	117.00	127.00	140.00							
B-42 DAY GUARD STATION	652	1.55	7.20	12.60	19.80	34.20	46.00	50.00	54.00									
B-43 DAY CANYON	2,497	2.25	10.20	17.70	27.90	48.60	88.00	108.00	117.00	126.00	143.00							
B-44 DEER FRONT	1,197	1.70	7.80	13.40	21.20	36.80	63.50	82.50	87.00	92.50								
B-45 DEER CANYON	1,700	1.50	6.00	10.80	16.90	29.10	49.90	92.50	161.00	231.00								
B-46 ALTA LOMA	2,374	1.35	6.20	10.60	16.80	29.30	50.50	93.50	130.50	137.00	142.00							
B-47 CUCAWONGA CANYON	5,726	1.85	8.40	14.70	23.30	40.60	69.50	129.00	180.00	19.00	205.00	229.00	255.00					
B-48 FRANKISH CANYON	813	14.90	66.50	118.00	186.00	317.00	425.00	442.00	442.00									
B-49 DEEP CREEK	62,995	0.00	0.10	0.15	0.25	0.45	0.70	1.35	2.50	4.40	6.30	7.20	7.30	7.30	7.30	7.50	7.60	
B-50 WEST FORK	29,398	0.10	0.35	0.60	0.95	1.65	2.80	5.10	9.40	14.40	16.70	16.90	17.10	17.40	18.00	18.60		
B-51 SUMMIT VALLEY	15,714	0.05	0.10	0.20	0.30	0.50	0.95	1.70	3.10	4.80	5.90	6.00	6.10	6.40				

FIRE DAMAGE APPRAISAL UNIT MAPS
AND TABLES
Angeles National Forest

FIRE DAMAGE APPRAISAL UNIT MAPS

<u>No.</u>	<u>Name</u>	<u>No.</u>	<u>Name</u>
A-1	San Antonio Canyon	A-36	Mt. Lukens
2	Thompson Creek	37	Blanchard Canyon
3	Lower Thompson Creek	38	Haines Canyon
4	Liveoak Creek	39	Zachu Canyon
5	Bradford Avenue	40	Tujunga Reservoir
6	Marshall Creek	41	Tujunga Canyon
7	San Dimas Reservoir	42	Little Tujunga Canyon
8	San Dimas Canyon	43	Pacoima Creek
9	Johnstone Peak	44	Lopez Canyon
10	Dalton Reservoir	45	May Canyon
11	Dalton Canyon	46	Wilson Canyon
12	Little Dalton Canyon	47	Sombrero Canyon
13	Glendora	48	Grapevine
14	East Fork San Gabriel River	49	Sheep Creek
15	North Fork San Gabriel River	50	Mescal Creek
16	Bear Creek	51	Big Rock Creek
17	West Fork San Gabriel River	52	Pearblossom
18	San Gabriel Reservoir No. 1	53	Little Rock Creek
19	Morris Reservoir	54	Little Rock Wash
20	Lower San Gabriel Canyon	55	Hunt Creek
21	Roberts Canyon	56	Amargosa Creek
22	Fish Canyon	57	Fairmont
23	Duarte	58	Soledad Canyon
24	Sawpit Canyon	59	Newhall Creek
25	Monrovia Canyon	60	Sierra Pelona
26	Ruby Canyon	61	Mint Canyon
27	Santa Anita Canyon	62	Boquet Reservoir
28	Clamshell Canyon	63	Boquet Canyon
29	Little Santa Anita Canyon	64	Dry Canyon
30	Sierra Madre	65	San Francisquito Canyon
31	Eaton Canyon	66	Elizabeth Lake Reservoir
32	Rubio-Las Flores	67	Elizabeth Lake Canyon
33	West Ravine	68	Castaic Valley
34	Arroyo Seco	69	Castaic Creek
35	Flint Canyon	70	Piru Creek

AVERAGE RUN-OFF AND EROSION DAMAGE EXPECTED FROM FUTURE FIRES ON WATERSHEDS OF ANGELES NATIONAL FOREST

Fire Damage Appraisal Unit	Area in Acres	Fire size class in acres																		(dollars per acre)			
		0 to 20	21 to 40	41 to 60	61 to 100	101 to 180	181 to 300	301 to 600	601 to 1000	1001 to 1750	1751 to 3000	3001 to 5000	5001 to 9000	9001 to 15,000	15,001 to 25,000	25,001 to 50,000	50,001 to 100,000	100,001 to 200,000					
A-1 SAN ANTONIO CANYON	9,544	0.90	3.30	5.90	9.70	18.00	31.60	55.00	75.50	79.00	89.00	103.00	128.00	149.00									
A-2 THOMPSON CREEK	2,534	1.50	5.00	8.70	14.60	26.20	42.60	53.50	56.00	59.50	67.50												
A-3 LOWER THOMPSON CREEK	1,016	4.65	21.60	37.20	59.00	76.00	79.50	86.50	99.00	107.00													
A-4 LIVEOAK CREEK	1,321	1.70	7.00	12.80	20.30	35.00	60.00	79.00	83.50	90.50													
A-5 BRADFORD AVENUE	496	4.95	22.80	39.30	62.00	81.50	88.50	108.00															
A-6 MARSHALL CREEK	1,409	8.10	36.00	61.00	100.00	129.00	134.00	143.00	159.00	186.00													
A-7 SAN DIMAS RESERVOIR	10,458	3.70	14.50	24.10	38.00	68.60	114.00	150.00	151.00	153.00	156.00	161.00	169.00	180.00									
A-8 SAN DIMAS CANYON	1,166	6.30	26.60	47.60	74.00	98.00	113.00	119.00	123.00	128.00													
A-9 JOHNSTONE PEAK	2,867	3.70	16.50	27.50	44.70	77.80	103.00	106.00	109.00	110.00	110.00												
A-10 DALTON RESERVOIR	2,906	5.50	23.00	39.80	65.00	111.00	146.00	148.00	151.00	155.00	166.00												
A-11 DALTON CANYON	2,054	1.95	8.25	14.60	23.40	40.20	53.50	56.50	62.00	70.50	81.50												
A-12 LITTLE DALTON CANYON	2,061	10.50	36.80	63.00	114.00	196.00	254.00	261.00	273.00	292.00	317.00												
A-13 GLENDORA	1,915	5.60	25.10	43.20	68.00	118.00	163.00	187.00	207.00	207.00	207.00												
A-14 EAST FORK SAN GABRIEL RIVER ...	31,079	3.70	16.70	28.70	45.30	79.00	134.00	250.00	345.00	346.00	346.00	346.00	347.00	347.00	348.00	349.00							
A-15 NORTH FORK SAN GABRIEL RIVER ..	9,863	1.65	5.80	9.50	16.00	28.60	48.70	93.90	125.00	135.00	141.00	143.00	146.00	150.00									
A-16 BEAR CREEK	25,468	3.90	18.00	31.00	49.00	85.00	146.00	270.00	372.00	372.00	372.00	373.00	373.00	373.00	373.00	373.00							
A-17 WEST FORK SAN GABRIEL RIVER ...	23,388	10.60	47.70	82.20	130.00	226.00	387.00	496.00	501.00	504.00	504.00	504.00	505.00	505.00									
A-18 SAN GABRIEL RESERVOIR NO. 1 ...	7,878	7.80	26.80	51.50	82.00	140.00	231.00	291.00	294.00	297.00	302.00	307.00	320.00										
A-19 MORRIS RESERVOIR	5,575	5.70	18.70	32.00	53.50	93.50	159.00	206.00	208.00	209.00	209.00	209.00	209.00										
A-20 LOWER SAN GABRIEL CANYON	1,732	3.70	15.00	25.70	43.30	80.00	104.00	116.00	129.00	149.00													
A-21 ROBERTS CANYON	4,595	4.10	18.00	30.80	49.50	87.00	115.00	116.00	118.00	120.00	122.00	124.00											
A-22 FISH CANYON	4,518	5.25	23.60	40.60	65.00	112.00	148.00	150.00	152.00	154.00	156.00	159.00											
A-23 DUARTE	3,149	6.40	30.60	52.50	83.50	145.00	193.00	201.00	212.00	217.00	217.00	217.00											
A-24 SAWPIT CANYON	2,086	12.00	55.00	94.50	150.00	259.00	342.00	346.00	351.00	358.00	368.00												
A-25 MONROVIA CANYON	2,150	7.40	31.50	56.00	87.00	113.00	114.00	116.00	120.00	126.00	134.00												

Fire Damage Appraisal Unit	Area in Acres	Fire size class in acres																(dollars per acre)					100,001 to 200,000																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
		0 to 20	21 to 40	41 to 60	61 to 100	101 to 180	181 to 300	301 to 600	600 to 1000	1001 to 1750	1751 to 3000	3001 to 5000	5001 to 9000	9001 to 15,000	15,001 to 25,000	25,001 to 50,000	50,001 to 100,000																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
A-26 RUBY CANYON	627	19.70	90.50	156.00	247.00	428.00	594.00	709.00	819.00																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											

Fire Damage Appraisal Unit	Area in Acres	Fire size class in acres (dollars per acre)															15,001 to 25,000	25,001 to 50,000	50,001 to 100,000	100,001 to 200,000
		0 to 20	21 to 40	41 to 60	61 to 100	101 to 150	151 to 300	301 to 600	600 to 1000	1001 to 1750	1751 to 3000	3001 to 5000	5001 to 9000	9001 to 15,000	15,001 to 25,000	25,001 to 50,000				
		0	21	41	61	101	151	301	600	1001	1751	3001	5001	9001	15,001	25,001				
A-52 PEARRLOSSOM	11,606	0.00	0.00	0.00	0.05	0.05	0.10	0.25	0.50	0.80	1.05	1.10	1.10	1.10						
A-53 LITTLE ROCK CREEK	33,261	0.21	0.96	1.65	2.65	4.60	7.90	14.65	26.50	33.90	34.50	34.80	35.10	35.30	35.60	36.10				
A-54 LITTLE ROCK WASH	5,955	0.00	0.00	0.05	0.05	0.10	0.20	0.45	0.65	0.80	0.95	1.25								
A-55 RUNT CREEK	5,273	0.00	0.00	0.00	0.00	0.05	0.10	0.15	0.35	0.50	0.80	1.15	1.45							
A-56 AMARGOSA CREEK	17,810	0.00	0.05	0.05	0.10	0.20	0.35	0.75	1.30	0.95	2.35	2.55	2.85	3.40	4.10					
A-57 FAIRMONT	30,538	0.00	0.05	0.10	0.15	0.25	0.45	0.85	1.50	2.60	3.25	3.35	3.45	3.70	4.05	4.50				
A-58 SOLEDAD CANYON	71,041	0.05	0.10	0.15	0.20	0.40	0.75	1.75	3.00	5.10	7.00	9.50	11.30	12.50	14.30	18.20	26.35			
A-59 NERHAL CREEK	10,554	0.35	0.90	1.50	2.40	4.20	7.20	13.90	24.00	31.90	36.00	37.40	40.20	43.60						
A-60 SIERRA PELONA	1,690	0.05	0.30	0.50	0.85	1.50	2.50	4.65	6.60	7.10										
A-61 MINT CANYON	13,098	0.00	0.05	0.10	0.15	0.30	0.45	0.80	1.20	1.50	2.10	2.90	3.85	5.50	7.60					
A-62 BOQUET RESERVOIR	7,821	0.15	0.55	0.95	1.50	2.65	4.40	7.80	13.60	19.00	22.20	27.50	40.50							
A-63 BOQUET CANYON	33,760	0.00	0.05	0.10	0.20	0.35	0.60	1.10	1.65	1.95	2.30	2.55	3.10	3.75	5.50	8.00				
A-64 DRY CANYON	2,995	1.95	9.10	15.80	24.90	43.00	56.50	57.00	57.00	57.50	59.50									
A-65 SAN FRANCISQUITO CANYON	30,816	0.05	0.10	0.20	0.50	0.55	0.95	1.70	2.90	4.00	4.65	4.90	5.20	5.90	6.80	8.20				
A-66 ELIZABETH LAKE RESERVOIR	5,669	0.20	0.55	0.90	1.45	2.45	4.10	7.20	11.00	11.40	12.00	12.40	12.60							
A-67 ELIZABETH LAKE CANYON	40,160	0.05	0.15	0.30	0.50	0.90	1.50	2.80	4.30	5.40	6.00	6.20	6.80	7.80	9.40	13.60				
A-68 CASTAIC VALLEY	22,043	0.10	0.25	0.40	0.60	1.00	1.65	2.90	4.90	8.10	10.40	10.60	10.80	11.20	12.10					
A-69 CASTAIC CREEK	52,802	0.00	0.10	0.20	0.50	0.50	0.80	1.60	2.80	3.70	4.10	4.30	4.50	4.80	5.50	6.90	8.10			
A-70 PINO CREEK	357,921	0.00	0.05	0.05	0.10	0.15	0.30	0.50	0.90	1.30	1.75	2.10	2.15	2.20	2.20	2.20	2.30	2.30	2.30	2.30

1/ For fires greater than 200,000 acres use \$2.45 per acre.

FIRE DAMAGE APPRAISAL UNIT MAPS
AND TABLES
Los Padres National Forest

FIRE DAMAGE APPRAISAL UNIT MAPS

<u>No.</u>	<u>Name</u>	<u>No.</u>	<u>Name</u>
P-1	Piru Creek	P-36	Glen Anne Canyon
2	Hopper Canyon	37	Elwood Canyon
3	Fairview	38	Winchester Canyon
4	Pole Canyon	39	Tecolote Canyon
5	Sespe Creek	40	Eagle Canyon
6	Lower Sespe Creek	41	Dos Pueblos Canyon
7	Boulder Creek	42	Las Varas Canyon
8	Santa Paula Creek	43	Gato Canyon
9	San Antonio Creek	44	Las Yeguas Canyon
10	Matilija Creek	45	Canada del Capitan
11	Kennedy Canyon	46	Canada del Corral
12	Coyote Creek	47	Canada del Refugio
13	Los Sauces Creek	48	Tajiquas Creek
14	Rincon Creek	49	Arroyo Quemado
15	Carpinteria Creek	50	Arroyo Hondo
16	Franklin Canyon	51	Gaviota
17	Santa Monica Canyon	52	Juncal Reservoir
18	Arroyo Parida	53	Gibraltar Reservoir
19	Toro Canyon	54	Lower Santa Ynez Canyon
20	Ficay Canyon	55	Ballard Creek
21	Romero Canyon	56	Santa Aqueda Creek
22	West Romero Canyon	57	La Zaca Creek
23	San Ysidro Canyon	58	Sisquoc River
24	Oak Creek	59	Upper Cuyama River
25	Hot Springs Canyon	60	Cuyama Valley
26	Cold Springs Canyon	61	Lower Cuyama River
27	Sycamore Canyon	62	Alamo Creek
28	Mission Canyon	63	Huasna River
29	San Roque Canyon	64	Arroyo Grande Creek
30	Atascadero Creek	65	Lopez Canyon
31	San Antonio Creek	66	Pismo Creek
32	Maria Ygnacio Creek	67	San Luis Obispo Creek
33	San Jose Creek	68	San Bernardo and Chorro Creek
34	San Pedro Canyon	69	Morro Creek
35	Bartlett Canyon	70	Toro Creek

LOS PADRES NATIONAL FOREST

FIRE DAMAGE APPRAISAL UNITS

1948

LEGEND

- P-21 UNIT NUMBER
- UNIT BOUNDARY
- FOREST BOUNDARY
- STREAM

AVERAGE RUN-OFF AND EROSION DAMAGE EXPECTED FROM FUTURE FIRES ON WATERSHEDS OF LOS PADRES NATIONAL FOREST

Fire Damage Appraisal Unit	Area in Acres	Fire size class in acres																(dollars per acre)			
		0 to 20	21 to 40	41 to 60	61 to 100	101 to 180	181 to 300	301 to 600	601 to 1000	1001 to 1750	1751 to 3000	3001 to 5000	5001 to 9000	9001 to 15,000	15,001 to 25,000	25,001 to 50,000	50,001 to 100,000				
P-1 PIRU CREEK	257,721	0.00	0.05	0.05	0.10	0.15	0.30	0.50	0.90	1.30	1.75	2.10	2.15	2.20	2.20	2.20	2.30	2.30	2.30	2.30	2.30
P-2 HOPPER CANYON	14,400	0.75	2.25	3.65	5.80	10.30	17.40	26.80	26.90	26.90	27.00	27.20	27.50	28.40							
P-3 FAIRVIEW	2,516	1.40	6.45	11.00	17.45	30.30	52.00	72.50	80.50	80.50	80.50										
P-4 POLE CANYON	5,035	0.70	3.20	5.30	8.70	15.10	25.00	34.80	36.30	38.10	41.60	47.20	51.00								
P-5 SESPE CREEK	151,244	0.15	0.55	0.90	1.50	2.60	4.60	8.40	11.80	12.30	12.40	12.40	12.40	12.40	12.40	12.40	12.40	12.40	12.40	12.40	12.40
P-6 LOWER SESPE CREEK	4,115	0.40	1.70	3.10	4.80	8.40	14.30	26.00	36.90	37.90	39.60	40.90									
P-7 BOULDER CREEK	9,325	0.90	3.55	5.90	9.50	16.50	28.90	52.50	72.00	73.50	75.50	77.00	77.00	77.00	77.00	77.00	77.00	77.00	77.00	77.00	77.00
P-8 SANTA PAULA CREEK	24,632	0.75	2.15	3.55	5.70	9.60	16.70	30.60	41.00	42.60	43.10	43.80	45.10	47.40	53.50						
P-9 SAN ANTONIO CREEK	15,186	0.80	2.75	4.60	7.40	13.50	23.10	44.40	61.00	61.50	62.50	63.50	66.00	70.50	73.00						
P-10 MATILAJA CREEK	49,306	1.70	6.40	10.80	17.00	29.90	51.50	96.00	132.00	133.00	134.00	134.00	134.00	135.00	136.00	141.00					
P-11 KENNEDY CANYON	3,023	0.45	1.35	2.25	3.60	6.30	10.50	20.00	28.00	28.70	28.70	28.70	28.70								
P-12 COYOTE CREEK	17,992	0.60	2.00	3.45	5.90	10.00	17.20	30.70	42.50	43.70	44.00	44.10	44.40	44.70	45.00						
P-13 LOS SAUCES CREEK	2,933	0.35	1.30	2.40	4.20	8.20	13.30	16.70	17.10	17.70	19.40										
P-14 RINCON CREEK	8,735	1.10	2.30	6.20	10.50	16.90	25.00	29.40	30.20	30.20	30.30	30.50	31.00								
P-15 CARPINTERIA CREEK	8,128	1.50	5.50	10.50	16.80	28.70	49.30	90.50	125.00	125.00	129.00	132.00	143.00								
P-16 FRANKLIN CANYON	1,217	22.40	103.00	177.00	280.00	356.00	363.00	377.00	388.00	388.00											
P-17 SANTA MONICA CANYON	2,390	3.30	12.50	23.50	37.70	65.00	110.00	144.00	149.00	155.00	166.00										
P-18 ARROYO PARIDA	2,159	3.40	15.40	26.70	42.20	73.00	96.50	98.00	101.00	105.00	112.00										
P-19 TORO CANYON	1,329	2.25	9.90	15.50	24.20	39.20	59.00	63.50	81.50	109.00											
P-20 FICAY CANYON	634	6.70	29.30	51.50	81.50	105.00	114.00	126.00	138.00												
P-21 ROMERO CANYON	1,254	2.50	10.30	17.10	28.20	48.70	82.00	108.00	120.00	133.00											
P-22 WEST ROMERO CANYON	693	16.20	75.00	125.00	199.00	253.00	258.00	267.00	275.00												
P-23 SAN YSIDRO CANYON	2,009	9.80	41.30	71.00	114.00	198.00	263.00	278.00	303.00	342.00	390.00										
P-24 OAK CREEK	251	37.40	172.00	297.00	367.00	402.00	470.00														
P-25 HOT SPRINGS CANYON	496	35.00	89.00	137.00	278.00	396.00	435.00	453.00													

1/ For fires greater than 200,000 acres use \$2.45 per acre.

Fire Damage Appraisal Unit	Area in Acres	Fire size class in acres																		(dollars per acre)					100,001 to 200,000
		0 to 20	21 to 40	41 to 60	61 to 100	101 to 180	181 to 300	301 to 600	601 to 1000	1001 to 1750	1751 to 3000	3001 to 5000	5001 to 9000	9001 to 15,000	15,001 to 25,000	25,001 to 50,000	50,001 to 100,000								
P-26 COLD SPRINGS CANYON	2,386	9.80	42.10	74.50	116.00	205.00	270.00	277.00	288.00	305.00	337.00														
P-27 SYCAMORE CANYON	885	28.90	133.00	230.00	276.00	279.00	284.00	296.00	321.00																
P-28 MISSION CANYON	3,743	14.40	52.00	102.00	163.00	278.00	367.00	376.00	388.00	405.00	434.00	472.00													
P-29 SAN ROQUE CANYON	3,092	7.10	32.80	56.00	89.00	155.00	202.00	203.00	204.00	207.00	210.00	213.00													
P-30 ATASCADERO CREEK	472	10.90	50.00	86.50	104.00	106.00	110.00	119.00																	
P-31 SAN ANTONIO CREEK	2,956	4.65	16.50	29.00	48.70	84.00	111.00	115.00	120.00	128.00	153.00														
P-32 MARIA YGNACIO CREEK	3,422	4.20	16.70	30.90	47.80	82.50	114.00	117.00	121.00	128.00	138.00	151.00													
P-33 SAN JOSE CREEK	4,208	7.20	32.00	53.00	85.50	148.00	196.00	201.00	202.00	204.00	206.00	212.00													
P-34 SAN PEDRO CANYON	1,766	2.30	9.50	17.10	26.60	46.80	79.00	102.00	107.00	115.00	120.00														
P-35 BARTLETT CANYON	1,566	2.05	8.00	14.90	23.70	40.70	53.50	54.50	55.50	58.50															
P-36 GLEN ANNE CANYON	1,725	1.00	3.65	6.25	10.20	18.80	31.10	39.80	42.50	49.80															
P-37 ELWOOD CANYON	1,781	0.40	2.00	3.40	5.60	9.60	12.80	13.60	15.00	17.00	19.00														
P-38 WINCHESTER CANYON	577	1.45	6.70	11.60	14.20	14.90	16.10	20.20																	
P-39 TECOLATE CANYON	2,677	0.75	2.40	4.10	6.80	11.80	14.50	14.80	14.90	15.00	15.30														
P-40 EAGLE CANYON	1,881	0.30	1.25	2.10	3.45	4.70	5.00	5.30	5.50	5.80	6.20														
P-41 DOS PUERLOS CANYON	4,049	0.25	0.90	1.50	2.50	4.50	7.50	9.80	9.90	10.10	10.40	10.90													
P-42 LAS VARAS CANYON	1,233	0.40	1.85	3.10	4.90	6.20	6.40	6.60	6.80	7.20															
P-43 GATO CANYON	1,965	0.25	0.75	1.25	2.05	3.65	3.80	3.95	4.20	4.30	4.50														
P-44 LAS YEGUAS CANYON	915	0.00	0.10	0.20	0.30	0.50	0.90	1.65	3.45																
P-45 CANADA DEL CAPITAN	3,526	0.00	0.05	0.15	0.20	0.45	0.65	0.70	0.70	0.75	0.85	1.00													
P-46 CANADA DEL CORRAL	3,904	0.05	0.30	0.50	0.80	1.35	2.35	3.15	3.45	4.00	4.85	6.30													
P-47 CANADA DEL REFUGIO	3,652	0.45	1.55	2.80	4.80	9.10	12.90	18.00	21.50	23.30	23.50	23.70													
P-48 TAJIQUAS CREEK	2,861	0.10	0.30	0.65	0.95	1.65	2.75	3.50	3.75	4.15	5.25														
P-49 ARROYO QUEMADO	1,440	0.15	0.45	1.00	1.60	2.70	3.85	4.90	6.70	10.10															
P-50 ARROYO HONDO	2,317	0.05	0.25	0.40	0.65	1.15	1.95	2.55	2.65	2.80	3.05														
P-51 CAVIOTA	5,421	0.35	1.40	3.00	5.50	11.00	12.00	12.80	13.40	14.20	14.80	14.80													

Fire Damage Appraisal Unit	Area in Acres	Fire size class in acres																
		(dollars per acre)																
		0 to 20	21 to 40	41 to 60	61 to 100	101 to 180	181 to 300	301 to 600	601 to 1000	1001 to 1750	1751 to 3000	3001 to 5000	5001 to 9000	9001 to 15,000	15,001 to 25,000	25,001 to 50,000	50,001 to 100,000	100,001 to 200,000
P-52 JUNCAL RESERVOIR	8,630	1.70	7.90	13.60	21.40	37.20	63.50	118.00	163.00	163.00	164.00	164.00	164.00					
P-53 GIBALTAR RESERVOIR	126,908	0.95	4.35	7.50	11.90	20.60	35.40	65.50	90.00	90.50	90.50	90.50	90.50	90.50	90.50	90.50	90.50	91.00
P-54 LOWER SANTA YNEZ CANYON ..	146,656	0.05	0.15	0.30	0.50	1.00	1.70	3.10	5.60	7.20	7.70	8.00	8.00	8.00	8.00	8.00	8.10	8.20
P-55 BALLARD CREEK	17,122	0.10	0.35	0.60	0.90	1.60	2.70	4.20	6.10	7.60	8.00	8.00	8.20	8.50	8.80			
P-56 SANTA AGUEDA CREEK	18,213	0.05	0.20	0.30	0.50	0.90	1.50	2.80	5.20	6.50	7.20	7.80	7.80	7.90				
P-57 LA ZACA CREEK	13,008	0.05	0.20	0.40	0.60	1.10	1.80	3.30	5.90	8.00	8.40	8.50	8.60	9.00				
P-58 SISQUOC RIVER	270,034	0.10	0.35	0.60	0.95	1.65	2.80	5.20	7.20	7.40	7.60	7.70	7.70	7.80	7.80	7.90	8.40	9.50 ^{1/}
P-59 UPPER CUYAMA RIVER	118,301	0.00	0.00	0.00	0.05	0.10	0.20	0.50	0.80	1.25	1.60	1.75	1.90	2.00	2.00	2.00	2.05	2.05
P-60 CUYAMA VALLEY	122,282	0.00	0.00	0.10	0.15	0.30	0.55	1.00	1.55	2.15	2.45	2.45	2.45	2.45	2.45	2.50	2.50	2.55
P-61 LOWER CUYAMA RIVER	94,122	0.00	0.05	0.10	0.15	0.30	0.55	0.95	1.30	1.35	1.35	1.40	1.40	1.45	1.55	1.70	2.20	
P-62 ALAMO CREEK	53,777	0.00	0.10	0.20	0.30	0.55	1.00	1.80	2.55	2.65	2.65	2.70	2.75	2.85	3.10	3.50	3.90	
P-63 HUASNA RIVER	68,188	0.05	0.10	0.20	0.35	0.60	1.05	1.70	2.15	2.15	2.15	2.15	2.25	2.30	2.45	2.75	3.30	
P-64 ARROYO GRANDE CREEK	11,247	0.80	2.10	3.25	4.85	8.30	13.60	14.40	14.50	14.90	15.20	15.70	16.70	18.00				
P-65 LOPEZ CANYON	19,348	0.50	1.80	3.00	4.75	8.10	11.20	11.70	11.90	12.00	12.20	12.40	13.10	14.20	15.70			
P-66 PISMO CREEK	4,716	0.60	1.50	2.35	3.50	5.60	7.20	8.90	9.90	10.20	10.80	12.20						
P-67 SAN LUIS OBISPO CREEK	7,397	0.45	1.75	2.80	4.40	7.40	12.30	19.40	20.80	22.40	25.30	29.80	39.90					
P-68 SAN BERNARDO AND CHORRO ..	8,123	0.05	0.30	0.50	0.80	1.40	2.45	3.10	3.15	3.25	3.40	3.80	4.25					
P-69 MORRO CREEK	8,461	0.10	0.40	0.80	1.50	2.65	3.90	4.60	4.70	4.90	5.30	5.90	7.60					
P-70 TORO CREEK	6,145	0.10	0.45	0.90	1.70	2.70	4.15	6.70	6.80	6.90	7.00	7.30	7.70					

^{1/} For fires greater than 200,000 acres use \$11.10 per acre.