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ASSESSING HYDROLOGIC EFFECTS OF LIVESTOCK MANAGEMENT
PROGRAMS ON BLM LAND IN COLORADO

FINAL REPORT TO

Department of Interior
Bureau of Land Management
Colorado State Office
1600 Broadway
Denver, Colorado 80202

CONTRACT NUMBER

CO-910-CT7-2170

BY

Martin M. Fogel
Louis H. Hekman, Jr.

December 15, 1977

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ASSESSING HYDROLOGIC EFFECTS OF LIVESTOCK MANAGEMENT
PROGRAMS ON BLM LAND IN COLORADO

INTRODUCTION

With this report, the contractor fulfills the first phase of Contract No. CO-910-CT7-2170 by providing the Bureau of Land Management (BLM) with a range of possible hydrologic effects of proposed grazing management systems in the Grand Junction Resource Area, Grand Junction, Colorado for 12 representative watersheds of BLM's choosing. While the original agreement was for 13 watersheds, data was received for only 12 watersheds. The predicted hydrologic effects are obtained from a time series of probable precipitation events coupled with estimates of storm runoff, peak discharge and sediment yield for both present and future conditions.

The Soil Conservation Service (SCS) method for estimating runoff and peak discharge and a modified Universal Soil Loss Equation (USLE) were used to transform storm precipitation into storm runoff, peak discharge and sediment yield. Watershed parameters for these relationships were estimated with the assistance and concurrence of a BLM hydrologist.

PROCEDURE

Effects of Elevation on Precipitation

To obtain relationships between elevation and selected precipitation variables, several climatological stations with daily precipitation records were chosen from the Grand Junction Resource Area with the help of the BLM hydrologist. The selected stations and their elevations are as follows:

Grand Junction	:	4855'
Colorado National Monument:		5280'
Rifle	:	5400'
Cedaredge	:	6180'
Bonham Reservoir	:	9835'

Since the Colorado National Monument and Rifle stations are located at relatively similar elevations, subsequent analyses used average values of these two stations. The two precipitation variables required for simulating a time series of events are precipitation depth and interarrival time.

A 6-month season, May through October, was chosen to represent the time of the year when changes in the hydrologic effects caused by changing the grazing management program would be most noticeable. In that time period storm durations were assumed to be less than one day so that each day in which rainfall was recorded was assumed to be a separate event. While this was not necessarily correct at all times, inspection of the National Weather Service hourly climatological data for Grand Junction showed that in only a relatively few times did effective precipitation carry over from one day to the next.

With a storm thus defined, data for the two distributions were extracted from National Weather Service records. At least 15 years of data were used in all cases. Gamma probability distributions were selected as being able to best fit the data. For the interarrival time distribution, a shifted gamma distribution was used to obtain a better fit. The shift was 1-day since the probability of a 1-day interarrival time was a constant for all elevations, 0.41. The mean and the variance for each of the two distributions were determined from the data (see Table 1).

The next step was to obtain a relationship between elevation and both the mean and variance for the two distributions. Regression analyses were made and in all four cases the model that gave the best fit was of the form

$$Y = b_0 + b_1 X + b_2 X^2 \quad (1)$$

in which X is elevation in thousands of feet and Y is either the mean or

variance. In all instances, the correlation coefficient was greater than 0.95. Values for the coefficients in the above equation are shown in Table 2 while Fig. 1 illustrates the relation between elevation and the means of the two distributions. Thus, for any elevation between 4,800 and 10,000 feet in the Grand Junction Resource Area, estimates can be made for the mean and variance of the two precipitation variables, precipitation depth and inter-arrival time. In turn, these estimates describe a particular gamma distribution

$$f(x) = \frac{\lambda (\lambda x)^{k-1} e^{-\lambda x}}{(k-1)!} \quad (2)$$

where λ = mean/variance and
 k = (mean)²/variance

Estimating Runoff

The SCS method for estimating runoff was used in this study (Soil Conservation Service, 1972). Storm runoff resulting from rainfall is expressed as

$$V = \frac{(R - A)^2}{(R - A) + S} \quad (3)$$

where V is runoff, R is storm precipitation, S is the potential maximum retention and A is the initial abstraction. All terms are expressed as depths, inches in this case. A runoff curve number (CN) is related to S by

$$\begin{aligned} \text{CN} &= \frac{1000}{10 + S} \quad \text{or} \\ S &= \frac{1000}{\text{CN}} - 10 \end{aligned} \quad (4)$$

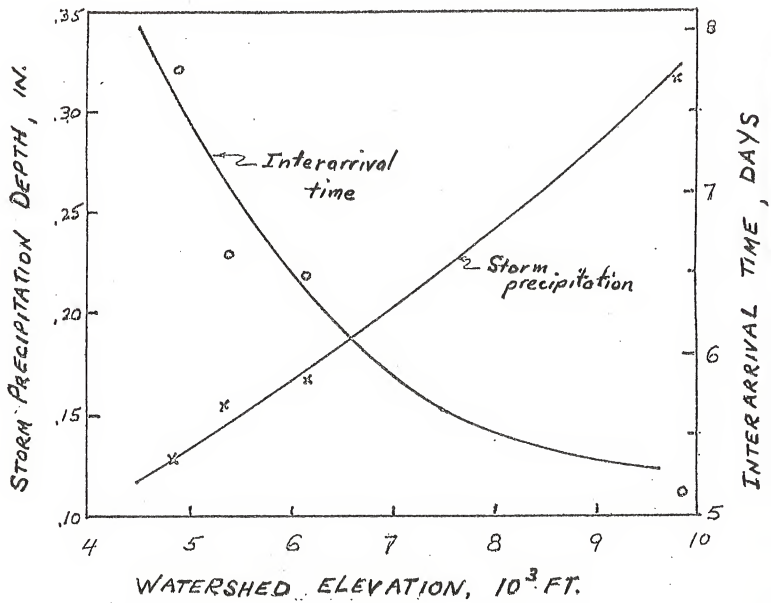


Fig. 1 Effect of elevation on means of storm precipitation and interarrival time

For this investigation A was assumed to be equal to 0.15 S rather than 0.2 S normally used by SCS. Studies in Arizona indicate that 0.15 is more representative of semi-arid conditions than the 0.2 used for vegetation grown under more humid conditions (Fogel, 1969).

Values for present and future curve numbers were determined by the Bureau of Land Management. It was assumed and agreed to by the BLM hydrologist, that these values were for the relatively dry antecedent moisture condition, AMC I. AMC II was assumed to be applicable when the previous 5-day rainfall ranged from 0.9 to 1.6 inches with AMC III applying when the 5-day antecedent rainfall was in excess of 1.6 inches. These values are midway between the dormant and growing season values recommended by the SCS. The rationale behind this choice is simply that it is believed that soil moisture losses from the 5,000 to 8,000 - foot BLM watersheds may be less than at lower elevations. This would also be true for less dense vegetation which is the existing situation in comparison to the SCS values developed under more humid conditions. Thus, it was reasoned that for the BLM watersheds, lower antecedent precipitation should have a similar affect on runoff as the higher values used by the SCS. Given the curve number for condition I, CN_1 , the curve numbers for conditions II and III, CN_2 and CN_3 are obtained from Table 3, taken directly from the SCS handbook.

Estimating Peak Discharge

The peak discharge equation used by the SCS is as follows:

$$Q = \frac{484 AV}{0.5 D + 0.6 T_c} \quad (5)$$

where Q is the peak discharge in cfs
A is watershed area in square miles,
V is runoff volume in inches,
D is duration of excess rainfall in hours and
 T_c is the time of concentration in hours.

For this study, D was assumed to be a constant equal to one hour. Inspection of the National Weather Service hourly precipitation data for Grand Junction indicated that a substantial part of what was deemed to be runoff - producing storms occurred in a one-or two-hour period. This, then, was assumed to be the time when runoff occurred, a period of relatively high intensity. Although fairly large rainfall amounts may be recorded for a 2-hour period, the time of maximum intensity would be somewhat less, and hence, the 1-hour duration of excess rainfall was assumed.

There are several methods for estimating the time of concentration, T_C , of a watershed. In this study, the upland method as presented by the SCS (Soil Conservation Service, 1972) was used. The method estimates flow velocities for various channel slopes and overland flow or channel conditions (see Fig. 2). In most instances, the channel was assumed to be in the form of an upland gully.

In estimating storm sediment yield from a particular sub-area within the watershed an estimate of peak discharge as well as runoff volume is needed. Equation 5 was used, but (T_C) for a sub-area was estimated as a fraction of the total time based on the ratio of sub-area to total area.

Estimating Sediment Yield

A modified form of the Universal Soil Loss Equation (Wischmeier and Smith, 1965) was used to relate runoff variables and watershed parameters to storm sediment yield. Proposed by Williams and Berndt (1972), the equation is

$$Z = 95 (LS) C K P (V \cdot Q)^{0.56} \quad (6)$$

where Z is the storm sediment yield in tons
LS is the slope length and gradient factor
C is the vegetal cover factor for undisturbed lands

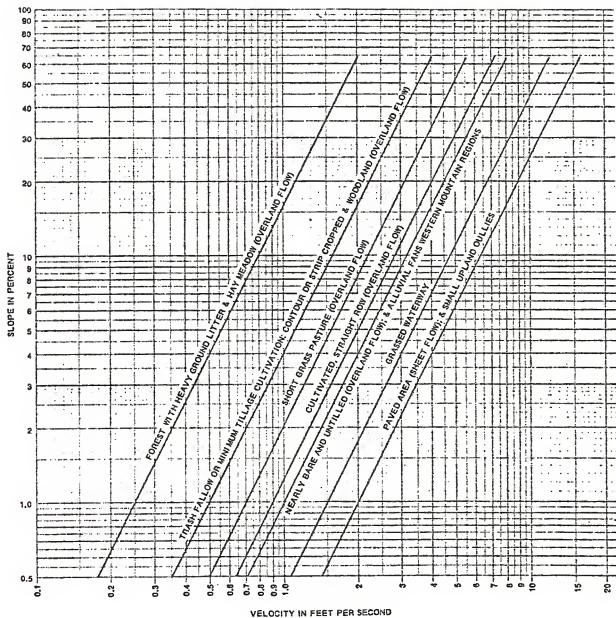


Fig. 2—Velocities for upland method of estimating T_c

K is the soil-erodibility factor
P is the erosion control practice factor
V is the volume of storm runoff in acre-feet
Q is the peak discharge in cubic feet per second.

Values for the topographic factor, LS, were obtained from Table 4 which was derived from information in Wischmeier and Smith (1965). The LS factor consists of determining both the steepness and the length of the slope. Both of these values vary considerably in rough terrain even for a small sub-area within the watershed. The use of average values has generally resulted in underestimating erosion losses. Wischmeier has recommended that the most severe value for the combination of length and gradient be used.

The vegetal factors were adapted from Wischmeier (1975) which uses cover density (CD) as a principal element in determining these values for a given type of vegetation (see Table 5). Thus, the C-factor changes from the present to the future situation, the result of estimated changes in cover density.

The soil-erodibility factor K was difficult to quantify with the type of information that was available. Fortunately, this value does not change from the present to the future. It was decided to relate K to the hydrologic soil group classification used by the SCS. Based on SCS national and regional technical notes, estimated K-values that were used in this study were 0.20, 0.35 and 0.30 for hydrologic soil group B, C, and D respectively. Weighted means were calculated for each soil type.

It should be mentioned that while values for the three parameters LS, C and K may depend on individual interpretation, in this particular case the BLM is interested in differences rather than absolute values.

Channel Erosion

A recent report prepared by the U.S. Forest Service for the Environmental Protection Agency (EPA) stated that "No model reviewed indicated quantitatively the contribution of channel material to total sediment production". (Environmental Protection Agency, 1977). There appears, however, to be a new approach to determining this elusive factor which has as its conceptual basis the ability of a stream to adjust its channel characteristics to imposed changes such as the ones being proposed by the BLM. The idea revolves around being able to predict a post-treatment sediment rating curve which is beyond the current state of the art.

Since the sediment rating curve approach (Flaxman, 1975) involves depth-integrated sampling for suspended sediment over a wide range of representative flows, this method is not applicable for this study as no data is available. However, some generalizations can be made using this approach. Regression analyses have found that the equation for sediment rating curves are of the form

$$Y = bQ^n \quad (7)$$

where Y is suspended sediment concentration in mg/l
Q is the instantaneous discharge in cfs
b and n are regression coefficients.

Limited data suggest that the coefficient n representing the slope of the regression line may change only slightly from pre- to post-treatment conditions. Also, it should be noted that SCS methodology results in linear hydrographs and an equal time base of the hydrograph for both pre- and post-treatment conditions. Then, if n is a constant, the ratio of suspended sediment concentrations becomes

$$\frac{Y_F}{Y_P} = \frac{b_F}{b_P} \left(\frac{Q_F}{Q_P} \right)^n \quad (8)$$

where the subscripts F and P refer to future and present conditions. Thus, an indication of the potential for channel erosion would be a ratio of discharges which could be represented by a ratio of peak discharges. It is beyond the scope of this study (as well as any other) to be able to quantify the change in channel erosion due to a change in a grazing management program.

Simulation

Standard Monte Carlo techniques were used to simulate precipitation events and interarrival times to produce a synthetic time series of 500 years of the May to October precipitation events (Hekman, Fogel and Duckstein, 1976). The purpose of running such a long time series is to be sure that all possible combinations, sequences and extreme events are considered. A flow chart of the simulation process is shown in Fig. 3.

It is well known that most of the annual sediment production results from flows occurring only 10 percent of the time. In this study, this could be interpreted to mean that most of the sediment is produced from 10 percent of the runoff - producing events which may be only a fraction of the precipitation occurrences. Thus, most of the sediment is produced by extreme events and a simulation methodology must be able to realistically generate such extremes. It also points out that analyses based on only a few years of data can be very misleading. The means and variances of the simulated precipitation amounts and interarrival times are shown in Table 6.

The next step in the simulation process is simply to transform each precipitation event to potential runoff and sediment yields using the previously described procedures. Tables 7 through 18 presents the data

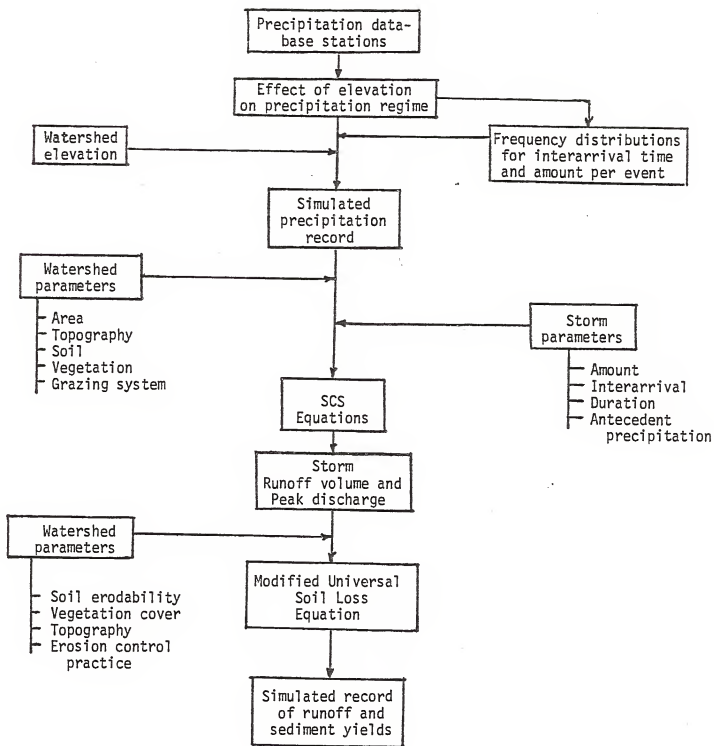


Fig. 3 Flow chart of simulation process.

and estimated parameter values used in estimating water and sediment yields for each of the 12 representative watersheds.

RESULTS

Synthetic Distribution

The results of the investigation are presented in the form of 5 distributions for each watershed. These distributions are

- Annual maximum runoff event
- Annual maximum peak discharge
- Annual maximum sediment event
- Total seasonal runoff volume
- Total seasonal sediment production

Table 19 presents the means for each of the above distributions, for both present and future conditions. Complete distributions are given in the appendix. No attempt was made to fit a known probability distribution to the synthetic data.

Discussion of Results

Any method for estimating water and sediment yields from rainfall data is only as good as the equation or model that relates input to output, the quality and quantity of the parameters that are required by the model, and the data inputs. In this approach, a straightforward, simplistic, available methodology was used to relate precipitation inputs and on-site watershed parameters to runoff volume, peak discharge and sediment yield.

Models with more data and parameter requirements would certainly improve the results. However, these requirements are usually not readily available. And besides, the additional cost of data collection for these models would probably exceed the value of the required information in most instances.

In an attempt to remove some of the variability in relating rainfall

to runoff, a time series of precipitation inputs was used. This in effect, added another variable to the SCS methodology since the lone parameter, S, now became a function of antecedent rainfall.

The results obtained by this study appear to be reasonable when compared to the only records available for any length of time. A 1971 report by the U.S. geological Survey (Lusby, Reid and Knipe, 1971) presents 18 years of hydrologic data for Badger Wash, a number of small, well-defined watersheds located about 25 miles from Grand Junction at an elevation of about 5000 feet.

The 13-year mean summer precipitation (April to October) for Badger Wash is 4.71 inches in comparison to the 5.44 inches estimated for the Little Salt Wash Watershed which has an average elevation of about 5050 feet. As expected, per unit area runoff from the much smaller Badger Watersheds was greater than the BLM watersheds. Under similar conditions a general rule of thumb is that the ratio of runoff from two watersheds is inversely proportional to the square root of the ratio of areas. Since the BLM watersheds average 8.1 square miles compared to 0.075 for the four paired Badger Watersheds, the per unit area runoff from the Badger Watersheds should be about 10 times greater than the BLM watersheds. The 13-year mean for the Badger Watersheds is 29 acre-feet per square miles as compared to 3.3 acre-feet per square mile for the 12 BLM watersheds.

Estimated sediment yields also appear to be reasonable. The average Badger Watershed yield was 3800 tons per square mile, four times, higher than the estimated 930 tons per square mile from the BLM watersheds. An explanation of why the ratio of sediment yields from the two sets of watersheds are less than the ratio of runoff estimates is that most of the sediment yields from semi-arid watersheds are the result of extreme storms which

is not necessarily true for water yields. Also, since all of the BLM watersheds are at elevations higher than the Badger Watersheds, the possibility of sediment-producing storms are greater for the BLM watersheds.

It must be noted that the sediment yield estimates made in this study are based not on field data but on watershed parameters that have not as yet been completely verified for Rocky Mountain conditions. As previously stated, however, the BLM is concerned with relative differences which are not influenced by parameters that do not change. In this case, only two of the parameters required in estimating water and sediment yields vary with the type of grazing management system that is in effect. Improved grazing systems are assumed to increase infiltration capacities and cover densities which result in changes in the runoff curve number (CN) and the vegetal cover factor (c). On the other hand soil and topographic factors, which may have at least an equal effect on runoff and sediment production, remain unchanged with a change in grazing system.

In summary, it is the conclusion of the contractors that the approach used for this study provides reasonable results at a minimum of cost. While errors may eventually be found in absolute values, determination of the hydrologic effects of proposed grazing management systems by comparing present and future conditions appears to be in line with observations.

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TABLE 1.

Statistical parameters of precipitation variables
at selected elevations

Station elevation, feet	Precipitation depth, inches		Interarrival time, days	
	Mean	Variance	Mean	Variance
4855	0.127	0.029	7.77	59.00
5340	.153	.040	6.61	52.55
6180	.166	.043	6.53	47.97
9830	.315	.153	5.22	32.74

TABLE 2.

Values for regression coefficients in equations
relating elevation to statistical parameters

Coefficient	Precipitation depth, inches		Interarrival time, days	
	Mean	Variance	Mean	Variance
b_0	0.0534	0.0996	15.43	123.07
b_1	.0057	-.0329	-2.21	-17.44
b_2	.0022	.0039	.12	.84

TABLE 3.

Table 3. Curve numbers (CN) and constants for the case $I_a = 0.2 S$

1		2		3		4		5		1		2		3		4		5		
CN for condi- tion II	CN for conditions I III	S values*	Curve* starts where P =	(inches)	(inches)	CN for condi- tion II	CN for conditions I III	S values*	Curve* starts where P =	(inches)	(inches)	CN for condi- tion II	CN for conditions I III	S values*	Curve* starts where P =	(inches)	(inches)			
100	100	100	0		0	60	40	78	6.67	1.33										
99	97	100	.101		.02	59	39	77	6.95	1.39										
98	94	99	.204		.04	58	38	76	7.24	1.45										
97	91	99	.309		.06	57	37	75	7.54	1.51										
96	89	99	.417		.08	56	36	75	7.86	1.57										
95	87	98	.526		.11	55	35	74	8.18	1.64										
94	85	98	.638		.13	54	34	73	8.52	1.70										
93	83	98	.753		.15	53	33	72	8.87	1.77										
92	81	97	.870		.17	52	32	71	9.23	1.85										
91	80	97	.989		.20	51	31	70	9.61	1.92										
90	78	96	1.11		.22	50	31	70	10.0	2.00										
89	76	96	1.24		.25	49	30	69	10.4	2.08										
88	75	95	1.36		.27	48	29	68	10.8	2.16										
87	73	95	1.49		.30	47	28	67	11.3	2.26										
86	72	94	1.63		.33	46	27	66	11.7	2.34										
85	70	94	1.76		.35	45	26	65	12.2	2.44										
84	68	93	1.90		.38	44	25	64	12.7	2.54										
83	67	93	2.05		.41	43	25	63	13.2	2.64										
82	66	92	2.20		.44	42	24	62	13.8	2.76										
81	64	92	2.34		.47	41	23	61	14.4	2.88										
80	63	91	2.50		.50	40	22	60	15.0	3.00										
79	62	91	2.66		.53	39	21	59	15.6	3.12										
78	60	90	2.82		.56	38	21	58	16.3	3.26										
77	59	89	2.99		.60	37	20	57	17.0	3.40										
76	58	89	3.16		.63	36	19	56	17.8	3.56										
75	57	88	3.33		.67	35	18	55	18.6	3.72										
74	55	88	3.51		.70	34	18	54	19.4	3.88										
73	54	87	3.70		.74	33	17	53	20.3	4.06										
72	53	86	3.89		.78	32	16	52	21.2	4.24										
71	52	86	4.08		.82	31	16	51	22.2	4.44										
70	51	85	4.28		.86	30	15	50	23.3	4.66										
69	50	84	4.49		.90															
68	48	84	4.70		.94	25	12	43	30.0	6.00										
67	47	83	4.92		.98	20	9	37	40.0	8.00										
66	46	82	5.15		1.03	15	6	30	56.7	11.34										
65	45	82	5.38		1.08	10	4	22	90.0	18.00										
64	44	81	5.62		1.12	5	2	13	190.0	38.00										
63	43	80	5.87		1.17	0	0	0	infinity	infinity										
62	42	79	6.13		1.23															
61	41	78	6.39		1.28															

*For CN in column 1.

Slope-Effect Table (Topographic Factor, Is)

Percent Slope	Slope Length in Feet															
	10	20	40	60	80	100	110	120	130	140	150	160	180	200		
0.2	0.04	0.05	0.06	0.07	0.08	0.08	0.08	0.09	0.09	0.09	0.09	0.09	0.10	0.10		
0.3	0.04	0.05	0.07	0.08	0.08	0.09	0.09	0.09	0.09	0.10	0.10	0.10	0.10	0.11		
0.4	0.05	0.06	0.07	0.08	0.09	0.09	0.10	0.10	0.10	0.10	0.11	0.11	0.11	0.11		
0.5	0.05	0.06	0.08	0.08	0.09	0.10	0.10	0.10	0.11	0.11	0.11	0.11	0.12	0.12		
1.0	0.06	0.08	0.10	0.11	0.12	0.13	0.13	0.14	0.14	0.14	0.15	0.15	0.15	0.16		
2.0	0.10	0.12	0.15	0.17	0.19	0.20	0.21	0.21	0.22	0.22	0.23	0.23	0.24	0.25		
3.0	0.14	0.18	0.22	0.25	0.27	0.29	0.30	0.30	0.31	0.32	0.32	0.33	0.34	0.35		
4.0	0.16	0.21	0.28	0.33	0.37	0.40	0.42	0.43	0.44	0.46	0.47	0.48	0.51	0.53		
5.0	0.17	0.24	0.34	0.41	0.48	0.54	0.56	0.59	0.61	0.63	0.66	0.68	0.72	0.76		
6.0	0.21	0.30	0.43	0.52	0.60	0.67	0.71	0.74	0.77	0.80	0.82	0.85	0.90	0.95		
8.0	0.31	0.44	0.63	0.77	0.89	0.99	1.04	1.09	1.13	1.17	1.21	1.25	1.33	1.40		
10.0	0.43	0.61	0.87	1.06	1.23	1.37	1.44	1.50	1.56	1.62	1.68	1.73	1.84	1.94		
12.0	0.57	0.81	1.14	1.40	1.61	1.80	1.89	1.98	2.06	2.14	2.21	2.28	2.42	2.55		
14.0	0.73	1.03	1.45	1.78	2.05	2.29	2.41	2.51	2.62	2.72	2.81	2.90	3.08	3.25		
16.0	0.90	1.27	1.80	2.20	2.54	2.84	2.98	3.11	3.24	3.36	3.48	3.59	3.81	4.01		
18.0	1.09	1.54	2.17	2.66	3.07	3.43	3.60	3.76	3.92	4.06	4.21	4.34	4.61	4.86		
20.0	1.29	1.82	2.58	3.16	3.65	4.08	4.28	4.47	4.65	4.83	5.00	5.16	5.47	5.77		
25.0	1.86	2.63	3.73	4.56	5.27	5.89	6.18	6.45	6.72	6.97	7.22	7.45	7.90	8.33		
30.0	2.52	3.56	5.03	6.16	7.11	7.95	8.34	8.71	9.07	9.41	9.74	10.06	10.67	11.25		
40.0	4.00	5.66	8.00	9.80	11.32	12.65	13.27	13.86	14.43	14.97	15.50	16.01	16.98	17.90		
50.0	5.64	7.97	11.27	13.81	15.94	17.82	18.69	19.53	20.32	21.09	21.83	22.55	23.91	25.21		
60.0	7.32	10.35	14.64	17.93	20.71	23.15	24.28	25.36	26.40	27.39	28.36	29.29	31.06	32.74		

Table 4 Continued

Percent Slope	Slope Length in Feet													
	300	400	500	600	700	800	900	1000	1100	1200	1300	1500	1700	2000
0.2	0.11	0.12	0.13	0.14	0.15	0.15	0.16	0.16	0.17	0.17	0.17	0.19	0.19	0.20
0.3	0.12	0.13	0.14	0.15	0.16	0.16	0.17	0.18	0.18	0.18	0.19	0.20	0.21	0.22
0.4	0.13	0.14	0.15	0.16	0.17	0.17	0.18	0.19	0.19	0.20	0.20	0.21	0.22	0.23
0.5	0.14	0.15	0.16	0.17	0.18	0.18	0.19	0.20	0.20	0.21	0.21	0.22	0.23	0.24
1.0	0.18	0.20	0.21	0.22	0.23	0.24	0.25	0.26	0.27	0.27	0.28	0.29	0.30	0.32
2.0	0.28	0.31	0.33	0.34	0.36	0.38	0.39	0.40	0.41	0.42	0.43	0.45	0.47	0.49
3.0	0.40	0.44	0.47	0.49	0.52	0.54	0.56	0.57	0.59	0.61	0.62	0.65	0.67	0.71
4.0	0.62	0.70	0.76	0.82	0.87	0.92	0.96	1.01	1.04	1.08	1.12	1.18	1.24	1.33
5.0	0.93	1.07	1.20	1.31	1.42	1.52	1.61	1.69	1.78	1.86	1.93	2.07	2.21	2.40
6.0	1.17	1.35	1.50	1.65	1.78	1.90	2.02	2.13	2.23	2.33	2.43	2.61	2.77	3.01
8.0	1.72	1.98	2.22	2.43	2.62	2.81	2.98	3.14	3.29	3.44	3.58	3.84	4.09	4.44
10.0	2.37	2.74	3.06	3.36	3.62	3.87	4.11	4.33	4.54	4.74	4.94	5.30	5.65	6.13
12.0	3.13	3.61	4.04	4.42	4.77	5.10	5.41	5.71	5.99	6.25	6.51	6.99	7.44	8.07
14.0	3.98	4.59	5.13	5.62	6.07	6.49	6.88	7.26	7.61	7.95	8.27	8.89	9.46	10.26
16.0	4.92	5.68	6.35	6.95	7.51	8.03	8.52	8.98	9.42	9.83	10.24	11.00	11.71	12.70
18.0	5.95	6.87	7.68	8.41	9.09	9.71	10.30	10.86	11.39	11.90	12.38	13.30	14.16	15.36
20.0	7.07	8.16	9.12	9.99	10.79	11.54	12.24	12.90	13.53	14.13	14.71	15.80	16.82	18.24
25.0	10.20	11.78	13.17	14.43	15.59	16.66	17.67	18.63	19.54	20.41	21.24	22.82	24.29	26.35
30.0	13.78	15.91	17.79	19.48	21.04	22.50	23.86	25.15	26.38	27.55	28.68	30.81	32.80	35.57

TABLE 5.

C - values for grassland, rangeland, woodland and idle land¹

vegetal Canopy	Percent Ground Cover					
	0	20	40	60	80	95-100
Grass	.26	.16	.11	.09	.03	.01
Brush	.34	.18	.13	.09	.04	.01
Mountain Shrub	.28	.17	.12	.08	.04	.003
Pinon - Juniper	.36	.20	.13	.06	.04	.003
Forest	.25	.14	.09	.06	.03	.003
Waste	.45	.24	.15	.09	.04	.01

¹Adapted from Wischmeier, W. H., Estimating the Soil Loss Equation's Cover and Management Factor for Undisturbed Areas. Agricultural Research Service, USDA, ARS - S - 40, 1975, pp. 118-124.

TABLE 6.

Statistical Parameters of Precipitation Variables
Used in Simulation

Watershed	Mean Elevation, Feet	Storm Precipitation, in.		Interarrival time, days		Total Seasonal Precipitation, in.	
		Mean	Variance	Mean	Variance	Mean	Variance
Mid Creek	8000	0.270	0.094	4.39	28.47	11.00	7.81
Older Gulch	7200	.231	.066	4.57	30.02	9.01	6.19
Gateway	6500	.206	.050	4.70	32.82	7.75	4.64
Cone Mountain	6400	.204	.050	4.88	34.17	7.41	4.05
N. Dry Fork	6300	.199	.046	4.80	33.04	7.34	3.48
Windy Creek	6100	.194	.045	4.78	32.77	7.20	3.84
Ashford Canyon	6050	.193	.045	4.87	34.44	7.04	4.05
Little Horsethief	6100	.192	.043	4.95	34.98	6.85	3.55
E. Salt Creek	5750	.183	.042	5.10	38.29	6.31	3.01
Lipan Wash	5650	.183	.041	5.13	37.52	6.31	3.34
Pollock Canyon	5650	.183	.040	5.06	38.17	6.40	3.25
Little Salt Wash	5050	.164	.034	5.31	40.41	5.44	2.24

TABLE 7. LIPAN WASH WATERSHED
DATA AND PARAMETERS FOR
ESTIMATING WATER AND SEDIMENT YIELD

A. Vegetation, Runoff Curve Number and Topographic Data

A _i	Veg	Soil	Area, sq. mi.	PCD	FCD	PCN ₁	FCN ₁	Land slope, %	Slope length, ft.
1	GR	5	5.814	62	68	70.0	65.8	5	800
2	GR	5	.107	62	68	70.0	73.0	20	300
3	SB	5	3.548	73	77	46.2	42.0	4	800
4	SB	5	1.908	73	77	46.2	48.3	35	200
5	PJ	5	1.225	67	72	57.3	52.0	4	800
6	PJ	5	.816	67	72	57.3	52.0	40	200
7	PJ	5	6.994	67	72	57.3	60.5	30	100
8	OA	5	.124	74	74	39.4	43.5	40	100
			Total	20,536					

B. Soils Data

Soil	Hyd. Soil group	% in group	K
5	B	10	0.20
5	C	10	.35
5	D	80	.30

C. Hydraulic Data for Main Watershed Channel

Reach	Length, ft.	Slope, %	Velocity, fps	Travel time, hr.
1	32,800	3	4	2.28
2	20,500	9	6	.95
				3.23 = T _c

D. Watershed Elevations

Ridge: 7300'
Outlet: 4800'
Average: 5650'

TABLE 7. LIPAN WASH (continued)

E. Watershed Parameters for Estimating Water Yield

A_i	PCN ₁	PCN ₂	PCN ₃	FCN ₁	FCN ₂	FCN ₃
1	70.0	85.0	94.0	65.8	81.6	92.0
2	70.0	85.0	94.0	73.0	87.0	95.0
3	46.2	66.2	82.2	42.0	62.0	79.0
4	46.2	66.2	88.3	48.3	68.2	84.0
5	57.3	75.3	88.3	52.0	71.0	86.0
6	57.3	75.3	88.3	52.0	71.0	86.0
7	57.3	75.3	88.3	60.5	78.3	90.3
8	39.4	59.4	77.4	43.5	63.5	80.5

F. Watershed Parameters for Estimating Sediment Yield

A_i	PC	FC	K	LS	P
1	0.084	0.054	0.30	1.52	1.0
2	.084	.054	0.30	7.07	1.0
3	.058	.047	0.30	.92	1.0
4	.058	.047	0.30	14.58	1.0
5	.053	.048	0.30	.92	1.0
6	.053	.048	0.30	17.90	1.0
7	.053	.048	0.30	7.95	1.0
8	.053	.052	0.30	12.65	1.0

TABLE 8, NORTH DRY FORK TRIBUTARY WATERSHED
DATA AND PARAMETERS FOR
ESTIMATING WATER AND SEDIMENT YIELD

A. Vegetation, Runoff Curve Number and Topographic Data

A_i	Veg	Soil	Area sq. mi.	PCD	FCD	PCN_1	FCN_1	Land slope	Slope length, ft.
1	SB	5	0.165	67	72	51.6	52.2	20	300
2	SB	12	.022	67	72	60.7	56.5	20	200
3	PJ	5	1.689	67	72	60.8	62.7	35	200
4	PJ	12	.220	67	72	72.2	70.0	25	200
5	W	5	.115	95	95	86.0	86.0	35	200
			2.211						

B. Soils Data

Soil	Hyd. Soil group	% in group	K
5	B	10	0.20
5	C	10	.35
5	D	80	.30
12	B	40	.20
12	C	15	.35
12	D	45	.30

C. Hydraulic Data for Main Watershed Channel

Reach	Length, ft.	Slope, %	Velocity fps	Travel time, hr.
1	11,200	8	6	0.52
2	7,600	16	8	.26
				0.78 = T_c

D. Watershed Elevations

Ridge: 7400'
Outlet: 5300'
Average: 6300'

TALBE 8. NORTH DRY FORK TRIBUTARY (continued)

E. Watershed Parameters for Estimating Water Yield

A_i	PCN ₁	PCN ₂	PCN ₃	FCN ₁	FCN ₂	FCN ₃
1	51.6	70.6	85.6	52.2	71.2	86.0
2	60.7	78.3	90.3	56.5	74.8	88.0
3	60.8	78.4	90.4	62.7	79.7	91.0
4	72.2	86.2	94.2	70.0	85.0	94.0
5	86.0	94.5	98.0	86.0	94.5	98.0

F. Watershed Parameters for Estimating Sediment Yield

A_i	PC	FC	K	LS	P
1	0.075	0.060	0.30	7.07	1.0
2	.075	.060	.27	5.77	1.0
3	.053	.048	.30	14.58	1.0
4	.053	.043	.27	8.33	1.0
5	.010	.010	.30	14.58	1.0

TABLE 9. GATEWAY WATERSHED
DATA AND PARAMETERS FOR
ESTIMATING WATER AND SEDIMENT YIELD

A. Vegetation, Runoff Curve Number and Topographic Data

A _i	Veg	Soil	Area sq. mi.	PCD	FCD	PCN ₁	FCN ₁	Land slope	Slope length, ft.
1	PJ	9	0.100	69	77	45.4	53.2	25	200
2	PJ	7	1.517	69	77	52.8	57.1	20	200
3	PJ	7	.532	61	66	56.1	61.3	20	400
4	PJ	7	.144	61	61	56.1	64.4	20	200
Total			2.293						

B. Soils Data

Soil	Hyd. Soil group	% in group	K
9	B	30	.20
9	C	5	.35
9	D	65	.30
7	B	100	.20

C. Hydraulic Data for Main Watershed Channel

Reach	Length, ft.	Slope %	Velocity fps	Travel time, hr.
1	19,200	8	6	0.89
2	7,200	24	10	0.20
				T.09 = T _c

D. Watershed Elevations

Ridge: 8100'
Outlet: 4900'
Average: 6500'

TABLE 9. GATEWAY WATERSHED (continued)

E. Watershed Parameters for Estimating Water Yield

A_i	PCN_1	PCN_2	PCN_3	FCN_1	FCN_2	FCN_3
1	45.4	65.4	82.0	53.2	72.2	86.2
2	52.8	71.8	86.0	57.1	75.1	88.1
3	56.1	74.6	88.0	61.3	78.7	90.7
4	56.1	74.6	88.0	64.4	81.2	92.0

F. Watershed Parameters for Estimating Sediment Yield

A_i	PC	FC	K	LS	P
1	0.051	0.046	.27	8.33	1.0
2	.051	.046	.20	5.77	1.0
3	.058	.054	.20	8.16	1.0
4	.058	.058	.20	5.77	1.0

TABLE 10. EAST SALT CREEK TRIBUTARY WATERSHED
DATA AND PARAMETERS FOR
ESTIMATING WATER AND SEDIMENT YIELD

A. Vegetation, Runoff Curve Number and Topographic Data

A _i	Veg	Soil	Area sq.mi.	PCD	FCD	PCN ₁	FCN ₁	Land slope	Slope length,ft.
1	SB	5	0.714	20	35	74.6	70.3	4	600
2	SB	6	1.006	20	35	64.2	66.0	5	800
Total			1.720						

B. Soils Data

Soil	Hyd. Soil group	% in group	K
5	B	10	0.20
5	C	10	.35
5	D	80	.30
6	B	85	.20
6	C	10	.35
6	D	5	.30

C. Hydraulic Data for Main Watershed Channel

Reach	Length, ft.	Slope %	Velocity fps	Travel time, hr.
1	14,400	3.5	4	1.00
2	3,200	31	12	.07
				1.07 = T _c

D. Watershed Elevations

Ridge: 6550
Outlet: 4950
Average: 5750

TABLE 10. EAST SALT CREEK TRIBUTARY (continued)

E. Watershed Parameters for Estimating Water Yield

A_i	PCN ₁	PCN ₂	PCN ₃	FCN ₁	FCN ₂	FCN ₃
1	74.6	87.8	95.0	70.3	85.2	94.0
2	64.2	81.1	92.0	64.2	81.1	92.0

F. Watershed Parameters for Estimating Sediment Yield

A_i	PC	FC	K	LS	P
1	.180	0.142	0.31	.82	1.0
2	.180	.142	.3	1.52	1.0

TABLE 11. LITTLE SALT WASH TRIBUTARY WATERSHED
DATA AND PARAMETERS FOR
ESTIMATING WATER AND SEDIMENT YIELD

A. Vegetation, Runoff Curve Number and Topographic Data

A_i	Veg	Soil	Area sq. mi.	PCD	FCD	PCN_i	FCN_i	Land slope	Slope length ft.
1	GW	5	0.243	48	54	83.9	85.3	3	400
2	SB	5	2.427	73.5	79.5	47.8	47.8	5	600
3	SB	5	.281	73.5	79.5	47.8	47.6	5	600
		Total	2.951						

B. Soils Data

Soil	Hyd. Soil group	% in group	K
5	B	10	0.20
5	C	10	.35
5	D	80	.30

C. Hydraulic Data for Main Watershed Channel

Reach	Length, ft.	Slope %	Velocity fps	Travel time, hr.
1	19,000	1.5	2.5	2.11
2	6,600	3.5	4	.46
				2.57 = T_c

D. Watershed Elevations

Ridge: 5300'
Outlet: 4800'
Average: 5050'

E. Watershed Parameters for Estimating Water Yield

A_i	PCN_1	PCN_2	PCN_3	FCN_1	FCN_2	FCN_3
1	83.9	93.5	98.0	85.3	94.2	98.0
2	47.8	67.8	83.8	47.8	67.8	83.8
3	47.8	67.8	83.8	47.6	67.6	83.6

F. Watershed Parameters for Estimating Sediment Yield

A_i	PC	FC	K	LS	P
1	0.114	0.102	0.30	0.44	1.0
2	.056	.040	.30	1.31	1.0
3	.056	.040	.30	1.31	1.0

TABLE 12. RAPID CREEK WATERSHED (continued)

D. Watershed Elevations

Ridge: 10,000'
 Outlet: 4,800'
 Average: 8,000'

E. Watershed Parameters for Estimating Water Yield

A _i	PCN ₁	PCN ₂	PCN ₃	FCN ₁	FCN ₂	FCN ₃
1	50.8	69.8	84.8	50.8	69.8	84.8
2	56.5	74.8	88.0	56.5	74.8	88.0
3	56.5	74.8	88.0	61.1	78.6	90.6
4	56.5	74.8	88.0	61.6	78.8	90.8
5	56.5	74.8	88.0	62.1	79.1	91.0
6	56.5	74.8	88.0	56.5	74.8	88.0
7	56.5	74.8	88.0	61.1	78.6	90.6
8	56.5	74.8	88.0	56.5	74.8	88.0
9	37.8	57.8	75.8	37.8	57.8	75.8
10	37.8	57.8	75.8	37.8	57.8	75.8
11	37.8	57.8	75.8	37.8	57.8	75.8
12	34.2	54.2	73.2	34.2	54.2	73.2
13	34.2	54.2	73.2	37.2	57.2	75.2
14	35.5	55.5	74.5	35.5	55.5	74.5
15	35.5	55.5	74.5	38.1	58.1	76.1
16	62.6	79.6	91.0	62.6	79.6	91.0
17	62.6	79.6	91.0	60.2	78.1	90.1

F. Watershed Parameters for Estimating Sediment Yield

A _i	PC	FC	K	LS	P
1	0.060	0.060	.29	0.27	1.0
2	.054	.050	.30	10.20	1.0
3	.054	.050	.30	17.90	1.0
4	.054	.050	.30	17.90	1.0
5	.054	.054	.30	17.90	1.0
6	.054	.054	.29	8.33	1.0
7	.054	.050	.27	8.33	1.0
8	.054	.050	.27	7.07	1.0
9	.003	.003	.31	10.20	1.0
10	.003	.003	.31	7.07	1.0
11	.003	.003	.31	7.07	1.0
12	.003	.003	.35	7.07	1.0
13	.003	.003	.35	17.36	1.0
14	.016	.016	.35	17.82	1.0
15	.016	.016	.35	14.58	1.0
16	.003	.003	.35	11.25	1.0
17	.003	.003	.35	11.25	1.0

TABLE 12. RAPID CREEK WATERSHED
DATA AND PARAMETERS FOR
ESTIMATING WATER AND SEDIMENT YIELD

A. Vegetation, Runoff Curve Number and Topographic Data

A _i	Veg	Soil	Area sq. mi.	PCD	FCD	PCN ₁	FCN ₁	Land slope	Slope length, ft.		
1	SB	2	3.838	72	72	50.8	50.8	1	1200		
2	PJ	5	.903	66	70	56.5	56.5	25	300		
3	PJ	5	3.006	66	70	56.5	61.1	40	200		
4	PJ	5	.441	66	70	56.5	61.6	40	200		
5	PJ	5	.258	66	66	56.5	62.1	40	200		
6	PJ	2	3.053	66	66	56.5	56.5	25	200		
7	PJ	2	1.802	66	70	56.5	61.1	25	200		
8	PJ	2	.436	66	70	56.5	56.5	20	300		
9	OA	11	.657	95	95	37.8	37.8	25	300		
10	OA	11	.709	95	95	37.8	37.8	20	300		
11	OA	11	.634	95	95	37.8	37.8	20	300		
12	OA	2	1.101	95	95	34.2	34.2	20	300		
13	OA	2	1.860	95	95	34.2	37.2	35	300		
14	BF	2	.262	93	93	35.5	35.5	50	100		
15	BF	2	.536	93	93	35.5	38.1	35	200		
16	CF	2	.193	97	97	62.6	62.6	30	200		
17	CF	2	1.080	97	97	62.6	60.2	30	200		
			Total	20.769							

B. Soils Data

Soil	Hyd. Soil group	% in group	K
2	C	100	0.35
5	B	10	.20
5	C	10	.35
5	D	80	.30
11	B	20	.20
11	C	50	.35
11	D	30	.30

C. Hydraulic Data for Main Watershed Channel

Reach	Length, ft.	Slope %	Velocity fps	Travel time, hr.
1	12,000	7	5.5	0.61
2	14,000	10	6.5	.60
3	13,600	19	9	.42
4	12,700	1.5	1.0	3.53
				5.15 = T _c

TABLE 13. LITTLE HORSETHIEF CREEK WATERSHED
DATA AND PARAMETERS FOR
ESTIMATING WATER AND SEDIMENT YIELD

A. Vegetation, Runoff Curve Number and Topographic Data

A _i	Veg	Soil	Area sq. mi.	PCD	FCD	PCN ₁	FCN ₁	Land slope	Slope length, ft.
1	FC	5	0.079	0	0	85.4	85.4	1	800
2	SB	5	.132	88	88	42.3	42.3	4	300
3	SB	5	.090	88	88	43.7	43.7	7	500
4	SB	11	.260	88	97	42.3	36.2	10	500
5	SB	11	.539	88	97	43.7	37.5	4	500
6	PJ	5	.908	66	73	61.2	55.3	50	100
7	PJ	11	.979	66	73	63.0	57.3	50	100
8	PJ	11	1.024	66	66	63.0	63.0	50	100
		Total	4.011						

B. Soils Data

Soil	Hyd. Soil group	% in group	K
5	B	10	.20
5	C	10	.35
5	D	80	.30
11	B	20	.20
11	C	50	.35
11	D	30	.30

C. Hydraulic Data for Main Watershed Channel

Reach	Length, ft.	Slope %	Velocity fps	Travel time, hr.
1	13,400	2	3	1.24
2	15,400	6.5	5	.86
3	4,200	12	7	.17
				2.27 = T _c

D. Watershed Elevations

Ridge: 7800'
Outlet: 4900'
Average: 6000'

TABLE 13. LITTLE HORSETHIEF CREEK (continued)

E. Watershed Parameters for Estimating Water Yield

A_i	PCN ₁	PCN ₂	PCN ₃	FCN ₁	FCN ₂	FCN ₃
1	85.4	94.2	98.0	85.4	94.2	98.0
2	42.3	62.3	79.3	42.3	62.3	79.3
3	43.7	63.7	80.7	43.7	63.7	80.7
4	42.3	62.3	79.3	36.2	56.2	75.0
5	43.7	63.7	80.7	37.5	57.5	75.5
6	61.2	78.1	90.1	55.3	74.3	88.0
7	63.0	80.0	91.0	57.3	75.3	88.3
8	63.0	80.0	91.0	63.0	80.0	91.0

F. Watershed Parameters for Estimating Sediment Yield

A_i	PC	FC	K	LS	P
1	0.260	0.260	0.30	0.24	1.0
2	.028	.028	.30	.62	1.0
3	.028	.028	.30	1.86	1.0
4	.028	.010	.31	3.06	1.0
5	.028	.010	.31	.76	1.0
6	.057	.047	.30	17.82	1.0
7	.057	.047	.31	17.82	1.0
8	.057	.057	.31	17.82	1.0

TABLE 14. GIBBLER GULCH WATERSHED
DATA AND PARAMETERS FOR
ESTIMATING WATER AND SEDIMENT YIELD

A. Vegetation, Runoff Curve Number and Topographic Data

A ₁	Veg	Soil	Area sq. mi.	PCD	FCD	PCN ₁	FCN ₁	Land slope	Slope length, ft.
1	GR	7	5.199	63	66	59.0	65.8	4	600
2	SB	7	.822	51.3	54.3	46.1	45.0	4	600
3	SB	7	2.122	51.3	54.3	46.1	51.1	4	600
4	SB	9	1.521	51.3	54.3	59.6	59.6	2	800
5	SB	9	1.799	51.3	54.3	59.6	55.6	2	800
6	PJ	7	8.546	68	71	45.9	51.9	20	200
7	PJ	9	2.456	68	71	61.7	62.3	20	200
8	PJ	9	2.163	68	71	61.7	57.5	8	400
9	CF	7	.255	53	56	47.5	57.8	12	200
Total			24.883						

B. Soils Data

Soil	Hyd. Soil group	% in group	K
7	B	100	0.20
9	B	30	.20
9	C	5	.35
9	D	65	.30

C. Hydraulic Data for Main Watershed Channel

Reach	Length, ft.	Slope %	Velocity fps	Travel time, hr.
1	25,000	1.5	2.5	2.06
2	20,000	2	3	1.85
3	37,000	5	5	2.78
				6.69 = T _c

D. Watershed Elevations

Ridge: 8700'
Outlet: 6100'
Average: 7200'

TABLE 14. GIBBLER GULCH (continued)

E. Watershed Parameters for Estimating Water Yield

A_i	PCN ₁	PCN ₂	PCN ₃	FCN ₁	FCN ₂	FCN ₃
1	59.0	77.0	89.0	65.8	81.9	92.0
2	46.1	66.1	82.1	45.0	65.0	82.0
3	46.1	66.1	82.1	51.1	70.1	85.1
4	59.6	77.6	89.6	59.6	77.6	89.6
5	59.6	77.6	89.6	55.6	74.3	88.0
6	45.9	65.9	82.0	51.9	70.9	85.9
7	61.7	78.4	90.4	62.3	79.3	91.0
8	61.7	78.4	90.4	57.5	77.5	88.5
9	47.5	67.5	83.5	57.8	77.8	88.8

F. Watershed Parameters for Estimating Sediment Yield

A_i	PC	FC	K	LS	P
1	0.085	0.080	0.20	0.82	1.0
2	.112	.101	.20	.82	1.0
3	.112	.101	.20	.82	1.0
4	.112	.101	.27	.38	1.0
5	.112	.101	.27	.38	1.0
6	.052	.049	.20	5.77	1.0
7	.052	.049	.27	5.77	1.0
8	.052	.049	.27	1.98	1.0
9	.098	.090	.20	2.55	1.0

TABLE 15. WINDY CREEK WATERSHED
DATA AND PARAMETERS FOR
ESTIMATING WATER AND SEDIMENT YIELD

A. Vegetation, Runoff Curve Number and Topographic Data

A _i	Veg	Soil	Area sq. mi.	PCD	FCD	PCN _i	FCN _i	Land slope, %	Slope Length, ft.
1	SL	8	2,146	57	60	83.9	87.1	4	300
2	SL	8	.183	57	60	87.5	87.1	6	500
3	GR	5	.416	51	54	75.3	76.7	10	400
4	GR	8	.356	51	54	75.3	75.3	6	500
5	PJ	2	.379	63	66	58.2	61.4	35	400
6	PJ	5	1.289	63	66	69.3	67.7	20	400
Total			4.771						

B. Soils Data

Soil	Hyd. Soil group	% in group	K
2	C	100	0.35
5	B	10	.20
5	C	10	.35
5	D	80	.30
8	B	75	.20
8	D	25	.30

C. Hydraulic Data for Main Watershed Channel

Reach	Length, ft.	Slope, %	Velocity fps	Travel time, hr.
1	18,800	2	3	1.74
2	8,400	10	6.5	.36
3	10,200	12	7	.40
				2.50 = T _c

D. Watershed Elevations

Ridge: 6700'
Outlet: 5200'
Average: 6100'

TABLE 15. WINDY CREEK WATERSHED (continued)

E. Watershed Parameters for Estimating Water Yield

A_1	PCN_1	PCN_2	PCN_3	FCN_1	FCN_2	FCN_3
1	83.9	93.5	98.0	87.1	95.1	98.1
2	87.5	95.5	98.5	87.1	95.1	98.1
3	75.3	88.3	95.3	76.7	89.4	96.0
4	75.3	88.3	95.3	75.3	88.3	95.3
5	58.2	76.2	89.0	61.4	78.7	90.7
6	69.3	84.2	93.2	67.7	83.7	93.0

F. Watershed Parameters for Estimating Sediment Yield

A_1	PC	FC	K	LS	P
1	0.075	0.090	0.23	.92	1.0
2	.075	.090	.23	1.65	1.0
3	.100	.096	.30	2.74	1.0
4	.100	.096	.23	1.50	1.0
5	.057	.054	.35	20.04	1.0
6	.057	.054	.30	8.16	1.0

TABLE 16. CONE MOUNTAIN WATERSHED
DATA AND PARAMETERS FOR
ESTIMATING WATER AND SEDIMENT YIELD

A. Vegetation, Runoff Curve Number and Topographic Data

A _i	Veg	Soil	Area sq. mi.	PCD	FCD	PCN _i	FCN _i	Land slope, %	Slope length, ft.
1	SB	5	0.056	60	70	57.7	54.2	6	400
2	SB	9	.094	60	70	49.1	50.0	6	400
3	PJ	5	.716	69	78	63.8	62.2	30	300
4	PJ	9	1.048	69	78	53.3	56.5	40	100
5	OA	9	.360	92	95	27.8	32.2	20	300
6	W	9	.014	5	5	83.2	83.2	30	200
Total			2,288						

B. Soils Data

Soil	Hyd. Soil group	% in group	K
5	B	10	0.20
5	C	10	.35
5	D	80	.30
9	B	30	.20
9	C	5	.35
9	D	65	.30

C. Hydraulic Data for Main Watershed Channel

Reach	Length, ft.	Slope, %	Velocity fps	Travel time, hr.
1	12,400	9	6	0.57
2	10,200	12	6.5	.44
3	4,500	24	10	.13
				$T_c = 1.14$

D. Watershed Elevations

Ridge: 7900'
Outlet: 4700'
Average: 6400'

TABLE 16. CONE MOUNTAIN WATERSHED (continued)

E. Watershed Parameters for Estimating Water Yield

A_1	PCN_1	PCN_2	PCN_3	FCN_1	FCN_2	FCN_3
1	57.7	75.7	88.7	54.2	73.2	87.2
2	49.1	68.6	84.0	50.0	69.0	84.0
3	63.8	80.8	91.8	62.2	79.2	91.0
4	53.3	72.3	86.3	56.5	74.8	88.0
5	27.8	46.8	66.8	32.2	52.2	71.2
6	83.2	93.2	98.0	83.2	93.2	98.0

F. Watershed Parameters for Estimating Sediment Yield

A_1	PC	FC	K	LS	P
1	0.060	0.050	0.30	1.35	1.0
2	.060	.050	.27	1.35	1.0
3	.051	.045	.30	13.78	1.0
4	.051	.045	.27	12.65	1.0
5	.016	.010	.27	7.07	1.0
6	.400	.400	.27	11.25	1.0

TABLE 17. ASHFORD CANYON WATERSHED
DATA AND PARAMETERS FOR
ESTIMATING WATER AND SEDIMENT YIELD

A. Vegetation, Runoff Curve Number and Topographic Data

A _i	Veg	Soil	Area sq. mi.	PCD	FCD	PCN ₁	FCN ₁	Land slope, %	Slope length, ft.
1	SB	5	0.070	84	89	45.9	45.6	10	500
2	SB	12	.104	84	89	36.5	41.5	10	500
3	OA	5	.316	93	95	35.7	37.2	40	300
4	OA	12	.022	93	95	24.1	32.2	40	300
5	PJ	5	.883	68	76	62.9	63.0	45	300
6	PJ	12	.583	68	76	50.2	57.0	45	300
Total			1.978						

B. Soils Data

Soil	Hyd. Soil group	% in group	K
5	B	10	0.20
5	C	10	.35
5	D	80	.30
12	B	40	.20
12	C	15	.35
12	D	45	.30

C. Hydraulic Data for Main Watershed Channel

Reach	Length, ft.	Slope, %	Velocity fps	Travel time, hr.
1	8,200	3.5	4.5	0.51
2	4,100	3.5	13.	.09
				0.60 = T _c

D. Watershed Elevations

Ridge: 7400'
Outlet: 5700'
Average: 6050'

TABLE 17. ASHFORD CANYON WATERSHED (continued)

E. Watershed Parameters for Estimating Water Yield

A_i	PCN ₁	PCN ₂	PCN ₃	FCN ₁	FCN ₂	FCN ₃
1	45.9	65.9	82.0	45.6	65.6	82.0
2	36.5	56.5	75.0	41.5	61.5	78.5
3	35.7	55.7	74.7	37.2	57.2	75.2
4	24.1	42.1	62.1	32.2	52.2	71.2
5	62.9	79.9	91.0	63.0	80.0	91.0
6	50.2	69.2	84.2	57.0	75.0	88.0

F. Watershed Parameters for Estimating Sediment Yield

A_i	PC	FC	K	LS	P
1	0.034	0.027	0.23	3.06	1.0
2	.034	.027	.27	3.06	1.0
3	.016	.010	.23	21.93	1.0
4	.016	.010	.27	21.93	1.0
5	.052	.044	.23	26.41	1.0
6	.052	.044	.27	26.41	1.0

TABLE 18. POLLOCK CANYON WATERSHED
DATA AND PARAMETERS FOR
ESTIMATING WATER AND SEDIMENT YIELD

A. Vegetation, Runoff Curve Number and Topographic Data

A _i	Veg	Soil	Area sq. mi.	PCD	PCD	PCN ₁	FCN ₁	Land slope, %	Slope length, ft.
1	SB	9	0.302	69	75	57.3	53.7	12	200
2	PJ	9	4.159	69	75	68.6	65.7	14	150
3	PJ	9	3.203	69	75	68.6	66.0	14	150
4	W	9	.382	95	95	89.5	89.5	40	100
5	W	9	.570	95	95	89.5	89.5	8	400
Total			9.186						

B. Soils Data

Soil	Hyd. Soil group	% in group	K
9	B	30	0.20
9	C	5	.35
9	D	65	.30

C. Hydraulic Data for Main Watershed Channel

Reach	Length, ft.	Slope, %	Velocity fps	Travel time, hr.
1	18,400	3	3.5	1.46
2	12,600	13	7.0	.50
				1.96 = T _c

D. Watershed Elevations

Ridge: 6800'
Outlet: 4500'
Average: 5650'

TABLE 18. POLLOCK CANYON WATERSHED (continued)

E. Watershed Parameters for Estimating Water Yield

A_i	PCN_1	PCN_2	PCN_3	FCN_1	FCN_2	FCN_3
1	57.3	75.3	88.3	53.7	72.7	86.7
2	68.6	84.6	93.6	65.7	81.9	92.0
3	68.6	84.6	93.6	66.0	82.0	92.0
4	89.5	96.5	99.0	89.5	96.5	99.0
5	89.5	96.5	99.0	89.5	96.5	99.0

F. Watershed Parameters for Estimating Sediment Yield

A_i	PC	FC	K	LS	P
1	0.067	0.052	0.27	2.55	1.0
2	.051	.045	.27	2.81	1.0
3	.051	.045	.27	2.81	1.0
4	.010	.010	.27	1.98	1.0
5	.010	.010	.27	12.65	1.0

TABLE 19.

SUMMARY OF RESULTS:
MEANS OF RUNOFF, PEAK DISCHARGE AND SEDIMENT YIELDS

Watershed	Total Runoff, Ac-ft/sq. mi.		Total Sediment, Tons/sq. mi.		Annual Max. Runoff, Ac-ft/sq. mi.		Annual Max. Disch. cfs/sq. mi.		Annual Max. Sediment Tons/sq. mi.	
	Present	Future	Present	Future	Present	Future	Present	Future	Present	Future
Lipan Wash	0.97	0.71	566	440	0.78	0.61	2.90	2.26	486	392
N. Dry Fork	2.99	3.09	356	361	1.75	1.84	16.41	17.28	268	272
Gateway	.69	1.26	52	89	.62	1.06	4.89	8.34	47	76
E. Salt Creek	2.93	2.20	109	67	2.13	1.71	16.90	13.59	82	54
Little Salt Wash	.98	1.20	19	21	.56	.65	2.49	2.87	12	12
Gibbler Gulch	2.37	3.18	962	1,146	1.87	2.41	3.76	4.84	786	919
Cone Mountain	1.18	1.17	364	332	.85	.85	6.50	6.50	236	214
Rapid Creek	4.11	4.96	5,537	7,446	2.99	3.47	7.54	8.75	4,168	5,244
Little Horsethief	1.35	1.06	482	306	.93	.70	4.54	3.43	401	255
Windy Creek	13.13	18.30	821	1,091	6.47	7.96	29.37	36.13	509	604
Ashford Canyon	.61	.71	185	187	.47	.56	5.01	5.87	147	149
Pollock Canyon	6.19	5.51	740	613	3.07	2.60	16.60	14.10	416	322

APPENDIX

Assessing Hydrologic Effects of Livestock Management Programs on BLM Land in Colorado

I. Watershed Summary Output

Ashford Canyon
Cone Mountain
East Salt Creek Tributary
Gateway
Gibbler Gulch
Little Horsethief Creek
Little Salt Wash Tributary
Lipan Wash
North Dry Fork Tributary
Pollock Canyon
Rapid Creek
Windy Creek

II. Computer Program Listing

***** ASHFORD CANYON WATERSHED *****

NSUBU	TIMEC	DUREX	CSINA	AM1	AM2	NSEA	NDAY	ELEV	ISEED
6	.60	1.00	.15	.90	1.60	500	184	6050.	11113

DATA CARD PRECIPITATION PARAMETER VALUES:
 LAM-P K-P LAM-I K-I FD1
 0.0000 0.0000 0.0000 0.0000 0.0000

VG-SL	AREA	PCN1	PCN2	PCN3	FCN1	FCN2	FCN3	PCVEG	FCVEG	K	LS
SB 05	.070	45.9	65.9	82.0	45.6	65.6	82.0	.034	.027	.23	3.06
SB 12	.104	36.5	56.5	75.0	41.5	61.5	78.5	.034	.027	.27	3.06
OA 05	.316	35.7	55.7	74.7	37.2	57.2	75.2	.016	.010	.23	21.93
OA 12	.022	24.1	42.1	62.1	32.2	52.2	71.2	.016	.010	.27	21.93
PJ 05	.883	62.9	79.9	91.0	63.0	80.0	91.0	.052	.044	.23	26.41
PJ 12	.583	50.2	69.2	84.2	57.0	75.0	88.0	.052	.044	.27	26.41

TOTAL WATERSHED AREA = 1.978 SQUARE MILES.

COMPUTED PRECIPITATION PARAMETER VALUES:
 LAM-P K-P LAM-I K-I FD1
 3.8890 .6549 .1332 .3573 .4100

DISPLAY PARAMETER VALUES FOR FREQUENCY DISTRIBUTION TABLES

	REGUN	REDUN	UTDEX
PEAK R.O.	1.00	.25	2.00
PEAK FLOW	5.00	.50	1.00
TOT. R.O.	2.00	.50	3.00
TOT. SED.	500.00	50.00	1.00
PEAK SED.	500.00	50.00	1.00

***** ASHFORD CANYON WATERSHED *****

FREQUENCY DISTRIBUTION OF EVENT INTERARRIVAL TIMES

INTERARRIVAL (DAYS),	OCCUR- RENCES	PDF	CDF
1	7548.	.415045	.415045
2	1954.	.107445	.522490
3	1394.	.076652	.599142
4	1074.	.059056	.658199
5	906.	.049819	.708017
6	779.	.042835	.750852
7	632.	.034752	.785604
8	563.	.030958	.816562
9	489.	.026889	.843451
10	391.	.021500	.864951
11	326.	.017926	.882877
12	261.	.014352	.897229
13	249.	.013692	.910920
14	217.	.011932	.922853
15	208.	.011437	.934290
16	148.	.008138	.942428
17	152.	.009358	.950786
18	141.	.007753	.958540
19	86.	.004729	.963268
20	108.	.005939	.969207
21	95.	.005224	.974431
22	56.	.003079	.977510
23	56.	.003079	.980589
24	33.	.001815	.982404
25	46.	.002529	.984933
26	44.	.002419	.987353
27	34.	.001870	.989222
28	28.	.001540	.990762
29	23.	.001265	.992027
30	19.	.001045	.993072
31 - 32	32.	.001760	.994831
33 - 34	24.	.001320	.996151
35 - 36	23.	.001265	.997416
37 - 38	8.	.000440	.997855
39 - 40	10.	.000550	.998405
41 - 42	4.	.000220	.998625
43 - 44	3.	.000165	.998790
45 - 46	5.	.000275	.999065
47 - 48	3.	.000165	.999230
49 - 50	4.	.000220	.999450
51 - 52	2.	.000110	.999560
53 - 54	7.	.000385	.999945
55 - 56	0.	0.000000	.999945
57 - 58	1.	.000055	1.000000

MEAN = 4.872 VARIANCE = 34.444

***** ASHFORD CANYON WATERSHED *****

FREQUENCY DISTRIBUTION OF PRECIPITATION / EVENT

INTERVAL (INCHES)	OCCUR- RENCES	PDF	CDF
.001 - .100	8026.	.441328	.441328
.101 - .200	4060.	.223249	.664577
.201 - .300	2274.	.125041	.789618
.301 - .400	1465.	.080556	.870175
.401 - .500	827.	.045475	.915649
.501 - .600	565.	.031068	.946717
.601 - .700	331.	.018201	.964918
.701 - .800	220.	.012097	.977015
.801 - .900	147.	.008083	.985098
.901 - 1.000	89.	.004894	.989992
1.001 - 1.100	53.	.002914	.992907
1.101 - 1.200	42.	.002309	.995216
1.201 - 1.300	32.	.001760	.996976
1.301 - 1.400	20.	.001100	.998075
1.401 - 1.500	15.	.000825	.998900
1.501 - 1.600	7.	.000385	.999285
1.601 - 1.700	4.	.000220	.999505
1.701 - 1.800	2.	.000110	.999615
1.801 - 1.900	2.	.000110	.999725
1.901 - 2.000	3.	.000165	.999890
2.001 - 2.100	1.	.000055	.999945
2.101 - 2.200	1.	.000055	1.000000
MEAN =	.193	VARIANCE =	.045

***** ASHFORD CANYON WATERSHED *****

FREQUENCY DISTRIBUTION OF PRECIPITATION / SEASON

INTERVAL (INCHES)	OCCUR- RENCES	PDF	CDF
1.501 - 2.000	2.	.004000	.004000
2.001 - 2.500	1.	.002000	.006000
2.501 - 3.000	2.	.004000	.010000
3.001 - 3.500	5.	.010000	.020000
3.501 - 4.000	11.	.022000	.042000
4.001 - 4.500	19.	.038000	.080000
4.501 - 5.000	39.	.078000	.158000
5.001 - 5.500	38.	.076000	.234000
5.501 - 6.000	47.	.094000	.328000
6.001 - 6.500	46.	.092000	.420000
6.501 - 7.000	61.	.122000	.542000
7.001 - 7.500	40.	.080000	.622000
7.501 - 8.000	36.	.072000	.694000
8.001 - 8.500	41.	.082000	.776000
8.501 - 9.000	27.	.054000	.830000
9.001 - 9.500	25.	.050000	.880000
9.501 - 10.000	22.	.044000	.924000
10.001 - 10.500	14.	.028000	.952000
10.501 - 11.000	8.	.016000	.968000
11.001 - 11.500	5.	.010000	.978000
11.501 - 12.000	4.	.006000	.986000
12.001 - 12.500	2.	.004000	.990000
12.501 - 13.000	1.	.002000	.992000
13.001 - 13.500	1.	.002000	.994000
13.501 - 14.000	3.	.006000	1.000000

MEAN = 7.037

VARIANCE =

4.046

***** ASHFORD CANYON WATERSHED *****

ANNUAL MAXIMUM RUNOFF EVENT (AC-FT/SQ.MI.)

INTERVAL		PRESENT PDF	FUTURE PDF	PRESENT CDF	FUTURE CDF
0.000 -	0.000	.486000	.484000	.486000	.484000
.001 -	.250	.258000	.258000	.744000	.742000
.251 -	.500	.066000	.056000	.810000	.798000
.501 -	.750	.052000	.048000	.862000	.846000
.751 -	1.000	.024000	.026000	.886000	.872000
1.001 -	1.250	.028000	.020000	.914000	.892000
1.251 -	1.500	.010000	.022000	.924000	.914000
1.501 -	1.750	.008000	.008000	.932000	.922000
1.751 -	2.000	.006000	.006000	.938000	.928000

2.001 -	3.000	.022000	.024000	.960000	.952000
3.001 -	4.000	.010000	.010000	.970000	.962000
4.001 -	5.000	.006000	.008000	.976000	.970000
5.001 -	6.000	.006000	.006000	.982000	.976000
6.001 -	7.000	.002000	.004000	.984000	.980000
7.001 -	8.000	.006000	.004000	.990000	.984000
8.001 -	9.000	.002000	.004000	.992000	.988000
9.001 -	10.000	.002000	.004000	.994000	.992000
10.001 -	11.000	.002000	.002000	.996000	.994000
11.001 -	12.000	.002000	.002000	.998000	.996000
12.001 -	13.000	.002000	0.000000	1.000000	.996000
13.001 -	14.000	0.000000	.004000	1.000000	1.000000
		MEAN	VARIANCE		
PRESENT :		.47471535E+00	.19827631E+01		
FUTURE :		.55666824E+00	.27193890E+01		

***** ASHFORD CANYON WATERSHED *****

ANNUAL MAXIMUM PEAK DISCHARGE (CFS/SQ.MI.)

INTERVAL	PRESENT PDF	FUTURE PDF	PRESENT CDF	FUTURE CDF
0.000 -	0.000	.486000	.484000	.484000
.001 -	.500	.128000	.124000	.614000
.501 -	1.000	.034000	.038000	.648000
1.001 -	1.500	.030000	.026000	.678000
1.501 -	2.000	.030000	.028000	.708000
2.001 -	2.500	.032000	.032000	.740000
2.501 -	3.000	.016000	.022000	.756000
3.001 -	3.500	.010000	.008000	.766000
3.501 -	4.000	.020000	.016000	.786000
4.001 -	4.500	.006000	.010000	.792000
4.501 -	5.000	.014000	.004000	.806000

5.001 -	10.000	.078000	.074000	.884000
10.001 -	15.000	.038000	.036000	.922000
15.001 -	20.000	.012000	.024000	.934000
20.001 -	25.000	.018000	.010000	.952000
25.001 -	30.000	.004000	.012000	.956000
30.001 -	35.000	.008000	.008000	.964000
35.001 -	40.000	.006000	.006000	.970000
40.001 -	45.000	.002000	.006000	.972000
45.001 -	50.000	.002000	.002000	.974000
50.001 -	55.000	.002000	.002000	.976000
55.001 -	60.000	.004000	.002000	.980000
60.001 -	65.000	.002000	.002000	.982000
65.001 -	70.000	0.000000	.002000	.982000
70.001 -	75.000	.002000	.004000	.984000
75.001 -	80.000	.004000	0.000000	.988000
80.001 -	85.000	.004000	.002000	.992000
85.001 -	90.000	0.000000	.002000	.992000
90.001 -	95.000	0.000000	.002000	.992000
95.001 -	100.000	.002000	.002000	.994000
100.001 -	105.000	0.000000	.002000	.994000
105.001 -	110.000	.002000	0.000000	.996000
110.001 -	115.000	0.000000	.002000	.996000
115.001 -	120.000	0.000000	0.000000	.996000
120.001 -	125.000	.002000	.002000	.998000
125.001 -	130.000	.002000	0.000000	1.000000
130.001 -	135.000	0.000000	0.000000	1.000000
135.001 -	140.000	0.000000	0.000000	1.000000
140.001 -	145.000	0.000000	.002000	1.000000
145.001 -	150.000	0.000000	.002000	1.000000

	MEAN	VARIANCE
PRESENT :	.50093541E+01	.22078407E+03
FUTURE :	.58741481E+01	.30280863E+03

***** ASHFORD CANYON WATERSHED *****

TOTAL SEASONAL RUNOFF VOLUME (AC-FT/SQ.MI.)

INTERVAL	PRESENT PDF	FUTURE PDF	PRESENT CDF	FUTURE CDF
0.000 -	0.000	.486000	.486000	.484000
.001 -	.500	.308000	.794000	.782000
.501 -	1.000	.076000	.870000	.856000
1.001 -	1.500	.042000	.912000	.898000
1.501 -	2.000	.016000	.928000	.916000
2.001 -	2.500	.014000	.942000	.930000
2.501 -	3.000	.008000	.950000	.940000
3.001 -	3.500	.004000	.954000	.948000
3.501 -	4.000	.008000	.962000	.952000
4.001 -	4.500	.006000	.968000	.958000
4.501 -	5.000	.002000	.970000	.964000
5.001 -	5.500	.004000	.974000	.968000
5.501 -	6.000	.002000	.976000	.970000

6.001 -	8.000	.004000	.980000	.978000
8.001 -	10.000	.008000	.988000	.986000
10.001 -	12.000	.004000	.992000	.988000
12.001 -	14.000	.002000	.994000	.992000
14.001 -	16.000	.002000	.996000	.994000
16.001 -	18.000	.002000	.998000	.996000
18.001 -	20.000	0.000000	.998000	.998000
20.001 -	22.000	0.000000	.998000	.998000
22.001 -	24.000	.002000	1.000000	.998000
24.001 -	26.000	0.000000	1.000000	1.000000
	MEAN	VARIANCE		
PRESENT :	.60905843E+00	.39891949E+01		
FUTURE :	.71367478E+00	.55172133E+01		

***** ASHFORD CANYON WATERSHED *****

TOTAL SEASONAL SEDIMENT PRODUCTION (TONS/SQ.MI.)

INTERVAL	PRESENT PDF	FUTURE PDF	PRESENT CDF	FUTURE CDF
0.000 - 0.000	.486000	.484000	.486000	.484000
.001 - 50.000	.232000	.248000	.718000	.732000
50.001 - 100.000	.058000	.052000	.776000	.784000
100.001 - 150.000	.040000	.038000	.816000	.822000
150.001 - 200.000	.028000	.024000	.844000	.846000
200.001 - 250.000	.020000	.018000	.854000	.864000
250.001 - 300.000	.014000	.016000	.878000	.880000
300.001 - 350.000	.020000	.016000	.898000	.896000
350.001 - 400.000	.010000	.012000	.908000	.908000
400.001 - 450.000	.008000	.006000	.916000	.914000
450.001 - 500.000	.002000	.006000	.918000	.920000

500.001 - 1000.000	.036000	.032000	.954000	.952000
1000.001 - 1500.000	.014000	.016000	.968000	.968000
1500.001 - 2000.000	.010000	.008000	.978000	.976000
2000.001 - 2500.000	.002000	.002000	.980000	.978000
2500.001 - 3000.000	.008000	.010000	.988000	.988000
3000.001 - 3500.000	0.000000	0.000000	.988000	.988000
3500.001 - 4000.000	.004000	.004000	.992000	.992000
4000.001 - 4500.000	.002000	.002000	.994000	.994000
4500.001 - 5000.000	0.000000	0.000000	.994000	.994000
5000.001 - 5500.000	.004000	.004000	.998000	.998000
5500.001 - 6000.000	0.000000	0.000000	.998000	.998000
6000.001 - 6500.000	0.000000	0.000000	.998000	.998000
6500.001 - 7000.000	0.000000	0.000000	.998000	.998000
7000.001 - 7500.000	.002000	.002000	1.000000	1.000000

	MEAN	VARIANCE
PRESENT :	.18493903E+03	.42979387E+06
FUTURE :	.18694822E+03	.44286435E+06

***** ASHFORD CANYON WATERSHED *****

ANNUAL MAXIMUM SEDIMENT EVENT (TONS/SQ.MI.)

INTERVAL	PRESENT PDF	FUTURE PDF	PRESENT CDF	FUTURE CDF
0.000 - 0.000	.486000	.484000	.486000	.484000
.001 - 50.000	.238000	.258000	.724000	.742000
50.001 - 100.000	.062000	.050000	.786000	.792000
100.001 - 150.000	.038000	.044000	.824000	.836000
150.001 - 200.000	.038000	.026000	.862000	.862000
200.001 - 250.000	.016000	.016000	.878000	.878000
250.001 - 300.000	.016000	.016000	.894000	.894000
300.001 - 350.000	.018000	.014000	.912000	.908000
350.001 - 400.000	.008000	.010000	.920000	.918000
400.001 - 450.000	.006000	.004000	.926000	.922000
450.001 - 500.000	.004000	.006000	.930000	.928000

500.001 - 1000.000	.032000	.032000	.962000	.960000
1000.001 - 1500.000	.012000	.012000	.974000	.972000
1500.001 - 2000.000	.008000	.008000	.982000	.980000
2000.001 - 2500.000	.004000	.006000	.986000	.986000
2500.001 - 3000.000	.006000	.006000	.992000	.992000
3000.001 - 3500.000	.004000	.004000	.996000	.996000
3500.001 - 4000.000	0.000000	0.000000	.996000	.996000
4000.001 - 4500.000	.004000	.004000	1.000000	1.000000

	MEAN	VARIANCE		
PRESENT :	.14683479E+03	.22737589E+06		
FUTURE :	.14650608E+03	.23218378E+06		

***** CONE MOUNTAIN WATERSHED *****

NSUBU	TIMEC	DUREX	CSINA	AM1	AM2	NSEA	NDAY	ELEV	ISEED
6	1.14	1.00	.15	.90	1.60	500	184	6400.	9733

DATA CARD PRECIPITATION PARAMETER VALUES:

LAM-P	K-P	LAM-I	K-I	FD1
0.0000	0.0000	0.0000	0.0000	0.0000

VG-SL	AREA	PCN1	PCN2	PCN3	FCN1	FCN2	FCN3	PCVEG	FCVEG	K	LS
SB 05	.056	57.7	75.7	88.7	54.2	73.2	87.2	.060	.050	.30	1.35
SB 09	.094	49.1	63.6	84.0	50.0	69.0	84.0	.060	.050	.27	1.35
PJ 05	.716	63.8	80.8	91.8	62.2	79.2	91.0	.051	.045	.30	13.78
PJ 09	1.048	53.3	72.3	86.3	56.5	74.8	88.0	.051	.045	.27	12.65
DA 09	.360	27.8	46.8	66.8	32.2	52.2	71.2	.016	.010	.27	7.07
W 09	.014	63.2	93.2	98.0	83.2	93.2	98.0	.400	.400	.27	11.25

TOTAL WATERSHED AREA = 2,288 SQUARE MILES.

COMPUTED PRECIPITATION PARAMETER VALUES:

LAM-P	K-P	LAM-I	K-I	FD1
3.6896	.6641	.1348	.8331	.4100

DISPLAY PARAMETER VALUES FOR FREQUENCY DISTRIBUTION TABLES

	REGUN	REDUN	UTOEX
PEAK R.O.	1.00	.25	2.00
PEAK FLOW	10.00	1.00	1.00
TOT. R.O.	2.00	.50	3.00
TOT. SED.	200.00	50.00	3.00
PEAK SED.	200.00	50.00	3.00

***** CONE MOUNTAIN WATERSHED *****

FREQUENCY DISTRIBUTION OF EVENT INTERARRIVAL TIMES

INTERARRIVAL (DAYS)	OCCUR- RENCES	PDF	CDF
1	7393.	.407800	.407800
2	1988.	.109659	.517458
3	1384.	.076342	.593800
4	1154.	.063655	.657455
5	924.	.050968	.708423
6	782.	.043135	.751558
7	606.	.033427	.784985
8	572.	.031552	.816537
9	463.	.025539	.842076
10	397.	.021899	.863975
11	319.	.017596	.881571
12	314.	.017320	.898891
13	259.	.014287	.913178
14	224.	.012356	.925534
15	180.	.009929	.935463
16	151.	.008329	.943792
17	144.	.007943	.951735
18	131.	.007226	.958961
19	107.	.005902	.964863
20	99.	.005461	.970324
21	59.	.003254	.973578
22	60.	.003310	.976888
23	65.	.003585	.980473
24	53.	.002923	.983397
25	47.	.002593	.985989
26	30.	.001655	.987644
27	31.	.001710	.989354
28	29.	.001600	.990954
29	15.	.000827	.991781
30	27.	.001489	.993270
31 - 32	25.	.001379	.994649
33 - 34	26.	.001434	.996084
35 - 36	18.	.000993	.997077
37 - 38	16.	.000883	.997959
39 - 40	9.	.000496	.998456
41 - 42	6.	.000331	.998786
43 - 44	6.	.000331	.999117
45 - 46	1.	.000055	.999173
47 - 48	4.	.000221	.999393
49 - 50	2.	.000110	.999504
51 - 52	2.	.000110	.999614
53 - 54	2.	.000110	.999724
55 - 56	0.	0.000000	.999724
57 - 58	0.	0.000000	.999724
59 - 60	1.	.000055	.999779
61 - 62	1.	.000055	.999835
63 - 64	0.	0.000000	.999835
65 - 66	1.	.000055	.999890
67 - 68	0.	0.000000	.999890
69 - 70	1.	.000055	.999945
71 - 72	0.	0.000000	.999945
73 - 74	0.	0.000000	.999945
75 - 76	0.	0.000000	.999945
77 - 78	0.	0.000000	.999945
79 - 80	1.	.000055	1.000000

***** CONE MOUNTAIN WATERSHED *****

FREQUENCY DISTRIBUTION OF PRECIPITATION / EVENT

INTERVAL (INCHES)	OCCUR- RENCES	PDF	CDF
.001 - .100	7619.	.420266	.420266
.101 - .200	4040.	.222847	.643113
.201 - .300	2425.	.133764	.776877
.301 - .400	1471.	.081141	.858018
.401 - .500	922.	.050858	.908875
.501 - .600	521.	.028738	.937614
.601 - .700	390.	.021512	.959126
.701 - .800	236.	.013018	.972144
.801 - .900	170.	.009377	.981521
.901 - 1.000	113.	.006233	.987754
1.001 - 1.100	78.	.004302	.992057
1.101 - 1.200	41.	.002262	.994318
1.201 - 1.300	32.	.001765	.996084
1.301 - 1.400	21.	.001158	.997242
1.401 - 1.500	21.	.001158	.998400
1.501 - 1.600	10.	.000552	.998952
1.601 - 1.700	11.	.000607	.999559
1.701 - 1.800	3.	.000165	.999724
1.801 - 1.900	0.	0.000000	.999724
1.901 - 2.000	2.	.000110	.999835
2.001 - 2.100	0.	0.000000	.999835
2.101 - 2.200	0.	0.000000	.999835
2.201 - 2.300	1.	.000055	.999890
2.301 - 2.400	1.	.000055	.999945
2.401 - 2.500	0.	0.000000	.999945
2.501 - 2.600	0.	0.000000	.999945
2.601 - 2.700	0.	0.000000	.999945
2.701 - 2.800	0.	0.000000	.999945
2.801 - 2.900	0.	0.000000	.999945
2.901 - 3.000	0.	0.000000	.999945
3.001 - 3.100	0.	0.000000	.999945
3.101 - 3.200	0.	0.000000	.999945
3.201 - 3.300	0.	0.000000	.999945
3.301 - 3.400	1.	.000055	1.000000

MEAN = .204

VARIANCE = .050

***** CONE MOUNTAIN WATERSHED *****

FREQUENCY DISTRIBUTION OF PRECIPITATION / SEASON

INTERVAL (INCHES)	OCCUR- RENCES	PDF	CDF
2.501 - 3.000	3.	.006000	.006000
3.001 - 3.500	5.	.010000	.016000
3.501 - 4.000	5.	.010000	.026000
4.001 - 4.500	18.	.036000	.062000
4.501 - 5.000	17.	.034000	.096000
5.001 - 5.500	39.	.078000	.174000
5.501 - 6.000	40.	.090000	.254000
6.001 - 6.500	49.	.098000	.352000
6.501 - 7.000	46.	.092000	.444000
7.001 - 7.500	56.	.112000	.556000
7.501 - 8.000	47.	.094000	.650000
8.001 - 8.500	35.	.070000	.720000
8.501 - 9.000	35.	.070000	.790000
9.001 - 9.500	29.	.058000	.848000
9.501 - 10.000	26.	.052000	.900000
10.001 - 10.500	17.	.034000	.934000
10.501 - 11.000	11.	.022000	.956000
11.001 - 11.500	7.	.014000	.970000
11.501 - 12.000	4.	.008000	.978000
12.001 - 12.500	4.	.008000	.986000
12.501 - 13.000	3.	.006000	.992000
13.001 - 13.500	2.	.004000	.996000
13.501 - 14.000	1.	.002000	.998000
14.001 - 14.500	0.	0.000000	.998000
14.501 - 15.000	1.	.002000	1.000000
MEAN =	7.406	VARIANCE =	4.046

***** CONE MOUNTAIN WATERSHED *****

ANNUAL MAXIMUM RUNOFF EVENT (AC-FI/SQ.MI.)

INTERVAL	PRESENT PDF	FUTURE PDF	PRESENT CDF	FUTURE CDF
0.000 -	0.000	.002000	.002000	.002000
.001 -	.250	.658000	.690000	.692000
.251 -	.500	.078000	.078000	.738000
.501 -	.750	.050000	.028000	.788000
.751 -	1.000	.032000	.032000	.820000
1.001 -	1.250	.034000	.024000	.854000
1.251 -	1.500	.012000	.010000	.866000
1.501 -	1.750	.014000	.016000	.880000
1.751 -	2.000	.014000	.012000	.894000

2.001 -	3.000	.038000	.036000	.932000
3.001 -	4.000	.020000	.020000	.952000
4.001 -	5.000	.016000	.020000	.968000
5.001 -	6.000	.002000	0.000000	.970000
6.001 -	7.000	.006000	.006000	.976000
7.001 -	8.000	0.300000	.002000	.976000
8.001 -	9.000	.006000	.004000	.982000
9.001 -	10.000	.004000	.006000	.986000
10.001 -	11.000	.004000	.002000	.990000
11.001 -	12.000	.002000	.002000	.992000
12.001 -	13.000	0.300000	.002000	.992000
13.001 -	14.000	.002000	0.000000	.994000
14.001 -	15.000	0.000000	.002000	.994000
15.001 -	16.000	.002000	.002000	.996000
16.001 -	17.000	0.000000	0.000000	.996000
17.001 -	18.000	0.000000	0.000000	.996000
18.001 -	19.000	0.000000	0.000000	.996000
19.001 -	20.000	0.000000	0.000000	.996000
20.001 -	21.000	0.000000	0.000000	.996000
21.001 -	22.000	0.000000	0.000000	.996000
22.001 -	23.000	0.000000	0.000000	.996000
23.001 -	24.000	.002000	0.000000	.998000
24.001 -	25.000	0.000000	.002000	.998000
25.001 -	26.000	0.000000	0.000000	.998000
26.001 -	27.000	0.000000	0.000000	.998000
27.001 -	28.000	0.000000	0.000000	.998000
28.001 -	29.000	0.000000	0.000000	.998000
29.001 -	30.000	0.000000	0.000000	.998000
30.001 -	31.000	0.000000	0.000000	.998000
31.001 -	32.000	0.000000	0.000000	.998000
32.001 -	33.000	0.000000	0.000000	.998000
33.001 -	34.000	0.000000	0.000000	.998000
34.001 -	35.000	0.000000	0.000000	.998000
35.001 -	36.000	0.000000	0.000000	.998000
36.001 -	37.000	.002000	0.000000	1.000000
37.001 -	38.000	0.000000	0.000000	1.000000
38.001 -	39.000	0.000000	.002000	1.000000

	MEAN	VARIANCE
PRESENT :	.64618975E+00	.67635169E+01
FUTURE :	.64932144E+00	.74346676E+01

***** CONE MOUNTAIN WATERSHED *****

ANNUAL MAXIMUM PEAK DISCHARGE (CFS/SQ.MI.)

INTERVAL	PRESENT PDF	FUTURE PDF	PRESENT CDF	FUTURE CDF
0.000 - 0.000	.002000	.002000	.002000	.002000
.001 - 1.000	.558000	.620000	.560000	.622000
1.001 - 2.000	.106000	.076000	.666000	.698000
2.001 - 3.000	.036000	.038000	.702000	.736000
3.001 - 4.000	.040000	.034000	.742000	.770000
4.001 - 5.000	.034000	.018000	.776000	.788000
5.001 - 6.000	.018000	.012000	.794000	.800000
6.001 - 7.000	.014000	.012000	.808000	.812000
7.001 - 8.000	.024000	.020000	.832000	.832000
8.001 - 9.000	.016000	.016000	.848000	.848000
9.001 - 10.000	.010000	.010000	.858000	.858000

10.001 - 20.000	.064000	.060000	.922000	.918000
20.001 - 30.000	.026000	.026000	.948000	.944000
30.001 - 40.000	.020000	.024000	.968000	.968000
40.001 - 50.000	.002000	.002000	.970000	.970000
50.001 - 60.000	.006000	.006000	.976000	.976000
60.001 - 70.000	.008000	.006000	.984000	.982000
70.001 - 80.000	.002000	.004000	.986000	.986000
80.001 - 90.000	.006000	.004000	.992000	.990000
90.001 - 100.000	0.000000	.002000	.992000	.992000
100.001 - 110.000	.002000	0.000000	.994000	.992000
110.001 - 120.000	.002000	.002000	.996000	.994000
120.001 - 130.000	0.000000	.002000	.996000	.996000
130.001 - 140.000	0.000000	0.000000	.996000	.996000
140.001 - 150.000	0.000000	0.000000	.996000	.996000
150.001 - 160.000	0.000000	0.000000	.996000	.996000
160.001 - 170.000	0.000000	0.000000	.996000	.996000
170.001 - 180.000	.002000	0.000000	.998000	.996000
180.001 - 190.000	0.000000	.002000	.998000	.998000
190.001 - 200.000	0.000000	0.000000	.998000	.998000
200.001 - 210.000	0.000000	0.000000	.998000	.998000
210.001 - 220.000	0.000000	0.000000	.998000	.998000
220.001 - 230.000	0.000000	0.000000	.998000	.998000
230.001 - 240.000	0.000000	0.000000	.998000	.998000
240.001 - 250.000	0.000000	0.000000	.998000	.998000
250.001 - 260.000	0.000000	0.000000	.998000	.998000
260.001 - 270.000	0.000000	0.000000	.998000	.998000
270.001 - 280.000	0.000000	0.000000	.998000	.998000
280.001 - 290.000	.002000	0.000000	1.000000	.998000
290.001 - 300.000	0.000000	.002000	1.000000	1.000000

	MEAN	VARIANCE
PRESENT :	.64857912E+01	.39734064E+03
FUTURE :	.65097947E+01	.43676915E+03

***** CONE MOUNTAIN WATERSHED *****

TOTAL SEASONAL RUNOFF VOLUME (AC-FT/SQ.MI.)

INTERVAL	PRESENT PDF	FUTURE PDF	PRESENT CDF	FUTURE CDF
0.000 - 0.000	.002000	.002000	.002000	.002000
.001 - .500	.702000	.726000	.704000	.728000
.501 - 1.000	.078000	.072000	.782000	.800000
1.001 - 1.500	.062000	.044000	.844000	.844000
1.501 - 2.000	.022000	.024000	.866000	.868000
2.001 - 2.500	.020000	.018000	.886000	.886000
2.501 - 3.000	.016000	.018000	.902000	.904000
3.001 - 3.500	.016000	.016000	.918000	.920000
3.501 - 4.000	.006000	.004000	.924000	.924000
4.001 - 4.500	.010000	.012000	.934000	.936000
4.501 - 5.000	.008000	.004000	.942000	.940000
5.001 - 5.500	.008000	.010000	.950000	.950000
5.501 - 6.000	.006000	.006000	.956000	.956000

6.001 - 8.000	.014000	.012000	.970000	.968000
8.001 - 10.000	.006000	.008000	.976000	.976000
10.001 - 12.000	.008000	.008000	.984000	.984000
12.001 - 14.000	0.000000	0.000000	.984000	.984000
14.001 - 16.000	.002000	.002000	.986000	.986000
16.001 - 18.000	0.000000	0.000000	.986000	.986000
18.001 - 20.000	.004000	.002000	.990000	.988000
20.001 - 22.000	0.000000	.002000	.990000	.990000
22.001 - 24.000	.006000	.002000	.996000	.992000
24.001 - 26.000	0.000000	.004000	.996000	.996000
26.001 - 28.000	.002000	0.000000	.998000	.996000
28.001 - 30.000	0.000000	.002000	.998000	.998000
30.001 - 32.000	0.000000	0.000000	.998000	.998000
32.001 - 34.000	0.000000	0.000000	.998000	.998000
34.001 - 36.000	0.000000	0.000000	.998000	.998000
36.001 - 38.000	0.000000	0.000000	.998000	.998000
38.001 - 40.000	.002000	0.000000	1.000000	.998000
40.001 - 42.000	0.000000	.002000	1.000000	1.000000

	MEAN	VARIANCE
PRESENT :	.11831106E+01	.11655080E+02
FUTURE :	.11706972E+01	.12562474E+02

***** CONE MOUNTAIN WATERSHED *****

TOTAL SEASONAL SEDIMENT PRODUCTION (TONS/SQ. MI.)

INTERVAL	PRESENT PDF	FUTURE PDF	PRESENT CDF	FUTURE CDF
0.000 - 0.000	.002000	.002000	.002000	.002000
.001 - 50.000	.288000	.288000	.290000	.290000
50.001 - 100.000	.176000	.184000	.466000	.474000
100.001 - 150.000	.136000	.144000	.602000	.618000
150.001 - 200.000	.062000	.074000	.664000	.692000
200.001 - 250.000	.046000	.046000	.710000	.738000
250.001 - 300.000	.038000	.032000	.748000	.770000
300.001 - 350.000	.030000	.040000	.778000	.810000
350.001 - 400.000	.032000	.016000	.810000	.826000
400.001 - 450.000	.016000	.014000	.826000	.840000
450.001 - 500.000	.012000	.014000	.838000	.854000
500.001 - 550.000	.010000	.008000	.848000	.862000
550.001 - 600.000	.012000	.006000	.860000	.868000

600.001 - 800.000	.030000	.034000	.890000	.902000
800.001 - 1000.000	.030000	.024000	.920000	.926000
1000.001 - 1200.000	.014000	.016000	.934000	.942000
1200.001 - 1400.000	.016000	.012000	.950000	.954000
1400.001 - 1600.000	.010000	.010000	.960000	.964000
1600.001 - 1800.000	.004000	.004000	.964000	.968000
1800.001 - 2000.000	.004000	.002000	.968000	.970000
2000.001 - 2200.000	.002000	.004000	.970000	.974000
2200.001 - 2400.000	.004000	.002000	.974000	.976000
2400.001 - 2600.000	.002000	.004000	.976000	.980000
2600.001 - 2800.000	0.000000	.004000	.976000	.984000
2800.001 - 3000.000	.008000	0.000000	.984000	.984000
3000.001 - 3200.000	0.000000	0.000000	.984000	.984000
3200.001 - 3400.000	0.000000	.002000	.984000	.986000
3400.001 - 3600.000	0.000000	0.000000	.984000	.986000
3600.001 - 3800.000	.002000	0.000000	.986000	.986000
3800.001 - 4000.000	0.000000	0.000000	.986000	.986000
4000.001 - 4200.000	0.000000	.002000	.986000	.988000
4200.001 - 4400.000	0.000000	.002000	.986000	.990000
4400.001 - 4600.000	.002000	0.000000	.988000	.990000
4600.001 - 4800.000	.002000	0.000000	.990000	.990000
4800.001 - 5000.000	0.000000	.002000	.990000	.992000
5000.001 - 5200.000	0.000000	.002000	.990000	.994000
5200.001 - 5400.000	0.000000	.002000	.990000	.996000
5400.001 - 5600.000	.002000	0.000000	.992000	.996000
5600.001 - 5800.000	.004000	0.000000	.996000	.996000
5800.001 - 6000.000	0.000000	0.000000	.996000	.996000
6000.001 - 6200.000	0.000000	0.000000	.996000	.996000
6200.001 - 6400.000	0.000000	0.000000	.996000	.996000
6400.001 - 6600.000	0.000000	0.000000	.996000	.996000
6600.001 - 6800.000	0.000000	0.000000	.996000	.996000
6800.001 - 7000.000	0.000000	.002000	.996000	.998000
7000.001 - 7200.000	0.000000	0.000000	.996000	.998000
7200.001 - 7400.000	0.000000	0.000000	.996000	.998000
7400.001 - 7600.000	.002000	0.000000	.998000	.998000
7600.001 - 7800.000	0.000000	0.000000	.998000	.998000
7800.001 - 8000.000	0.000000	0.000000	.998000	.998000
8000.001 - 8200.000	.002000	.002000	1.000000	1.000000

	MEAN	VARIANCE
PRESENT :	.36416167E+03	.74132293E+06
FUTURE :	.33171824E+03	.61802618E+06

***** CONE MOUNTAIN WATERSHED *****

ANNUAL MAXIMUM SEDIMENT EVENT (TONS/SQ.MI.)

INTERVAL	PRESENT PDF	FUTURE PDF	PRESENT CDF	FUTURE CDF
0.000 - 0.000	.002000	.002000	.002000	.002000
.001 - 50.000	.478000	.494000	.480000	.496000
50.001 - 100.000	.174000	.186000	.654000	.682000
100.001 - 150.000	.056000	.070000	.710000	.752000
150.001 - 200.000	.056000	.028000	.766000	.780000
200.001 - 250.000	.030000	.032000	.796000	.812000
250.001 - 300.000	.022000	.036000	.818000	.848000
300.001 - 350.000	.034000	.012000	.852000	.860000
350.001 - 400.000	.014000	.012000	.866000	.872000
400.001 - 450.000	.006000	.018000	.872000	.890000
450.001 - 500.000	.018000	.006000	.890000	.896000
500.001 - 550.000	.008000	.014000	.898000	.910000
550.001 - 600.000	.012000	.012000	.910000	.922000

600.001 - 800.000	.024000	.024000	.934000	.946000
800.001 - 1000.000	.018000	.014000	.952000	.960000
1000.001 - 1200.000	.014000	.008000	.966000	.968000
1200.001 - 1400.000	.004000	.002000	.970000	.970000
1400.001 - 1600.000	.004000	.004000	.974000	.974000
1600.001 - 1800.000	0.000000	.004000	.974000	.978000
1800.001 - 2000.000	.004000	.004000	.978000	.982000
2000.001 - 2200.000	.008000	.004000	.986000	.986000
2200.001 - 2400.000	0.000000	0.000000	.986000	.986000
2400.001 - 2600.000	0.000000	.006000	.986000	.992000
2600.001 - 2800.000	.006000	0.000000	.992000	.992000
2800.001 - 3000.000	0.000000	0.000000	.992000	.992000
3000.001 - 3200.000	0.000000	.002000	.992000	.994000
3200.001 - 3400.000	.002000	.002000	.994000	.996000
3400.001 - 3600.000	0.000000	0.000000	.994000	.996000
3600.001 - 3800.000	.002000	0.000000	.996000	.996000
3800.001 - 4000.000	0.000000	0.000000	.996000	.996000
4000.001 - 4200.000	0.000000	0.000000	.996000	.996000
4200.001 - 4400.000	0.000000	0.000000	.996000	.996000
4400.001 - 4600.000	0.000000	0.000000	.996000	.996000
4600.001 - 4800.000	0.000000	0.000000	.996000	.996000
4800.001 - 5000.000	0.000000	0.000000	.996000	.996000
5000.001 - 5200.000	0.000000	0.000000	.996000	.996000
5200.001 - 5400.000	0.000000	0.000000	.996000	.996000
5400.001 - 5600.000	0.000000	0.000000	.996000	.996000
5600.001 - 5800.000	0.000000	0.000000	.996000	.996000
5800.001 - 6000.000	0.000000	.002000	.996000	.998000
6000.001 - 6200.000	0.000000	0.000000	.996000	.998000
6200.001 - 6400.000	.002000	0.000000	.998000	.998000
6400.001 - 6600.000	0.000000	0.000000	.998000	.998000
6600.001 - 6800.000	0.000000	0.000000	.998000	.998000
6800.001 - 7000.000	0.000000	0.000000	.998000	.998000
7000.001 - 7200.000	0.000000	0.000000	.998000	.998000
7200.001 - 7400.000	0.000000	0.000000	.998000	.998000
7400.001 - 7600.000	0.000000	0.000000	.998000	.998000
7600.001 - 7800.000	0.000000	0.000000	.998000	.998000
7800.001 - 8000.000	0.000000	0.000000	.998000	.998000
8000.001 - 8200.000	.002000	.002000	1.000000	1.000000

	MEAN	VARIANCE
PRESENT :	.23640296E+03	.42049473E+06
FUTURE :	.21383154E+03	.35399558E+06

***** EAST SALT CREEK TRIBUTARY WATERSHED *****

NSUBU	TIMEC	DUREX	CSINA	AM1	AM2	NSEA	NDAY	ELEV	ISEED
2	1.07	1.00	.15	.90	1.60	500	184	5750.	22391

DATA CARD PRECIPITATION PARAMETER VALUES:
 LAM-P K-P LAM-I K-I FD1
 0.0000 0.0000 0.0000 0.0000 0.0000

VG-SL	AREA	PCN1	PCN2	PCN3	FCN1	FCN2	FCN3	PCVEG	FCVEG	K	LS
SB 05	.714	74.6	87.8	95.0	70.3	85.2	94.0	.180	.142	.30	.62
SB 06	1.006	64.2	81.1	92.0	66.0	82.0	92.0	.180	.142	.22	1.52

TOTAL WATERSHED AREA = 1.720 SQUARE MILES.

COMPUTED PRECIPITATION PARAMETER VALUES:
 LAM-P K-P LAM-I K-I FD1
 4.0365 .6415 .1320 .9614 .4100

DISPLAY PARAMETER VALUES FOR FREQUENCY DISTRIBUTION TABLES

	REGUN	REDUN	UTOEX
PEAK R.O.	1.00	.25	2.00
PEAK FLOW	10.00	1.00	1.00
TOT. R.O.	2.00	.50	3.00
TOT. SED.	200.00	25.00	1.50
PEAK SED.	200.00	25.00	1.50

***** EAST SALT CREEK TRIBUTARY WATERSHED *****

FREQUENCY DISTRIBUTION OF EVENT INTERARRIVAL TIMES

INTERARRIVAL (DAYS)	OCCUR- RENCES	PDF	CDF
1	7129.	.412582	.412582
2	1720.	.099543	.512125
3	1251.	.372400	.584525
4	994.	.057526	.642051
5	860.	.049771	.691822
6	782.	.045257	.737080
7	671.	.038833	.775913
8	528.	.030557	.806470
9	453.	.026217	.832687
10	371.	.021471	.854158
11	351.	.020314	.874472
12	283.	.016378	.890850
13	228.	.013195	.904045
14	220.	.012732	.916778
15	187.	.010822	.927600
16	154.	.008913	.936513
17	141.	.008160	.944673
18	117.	.006771	.951444
19	100.	.005787	.957231
20	95.	.005498	.962729
21	93.	.005382	.968112
22	75.	.004341	.972452
23	62.	.003588	.976040
24	54.	.003125	.979165
25	39.	.002257	.981423
26	50.	.002894	.984316
27	26.	.001505	.985821
28	31.	.001794	.987615
29	26.	.001505	.989120
30	24.	.001389	.990509
31 - 32	37.	.002141	.992650
33 - 34	38.	.002199	.994849
35 - 36	17.	.000984	.995833
37 - 38	14.	.000810	.996643
39 - 40	15.	.000868	.997511
41 - 42	6.	.000347	.997859
43 - 44	5.	.000289	.998148
45 - 46	9.	.000521	.998669
47 - 48	6.	.000347	.999016
49 - 50	4.	.000231	.999248
51 - 52	4.	.000231	.999479
53 - 54	4.	.000231	.999711
55 - 56	1.	.000058	.999769
57 - 58	2.	.000116	.999884
59 - 60	0.	0.000000	.999884
61 - 62	1.	.000058	.999942
63 - 64	1.	.000058	1.000000

MEAN = 5.101 VARIANCE = 38.286

***** EAST SALT CREEK TRIBUTARY WATERSHED *****

FREQUENCY DISTRIBUTION OF PRECIPITATION / EVENT

INTERVAL (INCHES)	OCCUR- RENCES	PDF	CDF
.001 - .100	8039.	.465247	.465247
.101 - .200	3858.	.223856	.689102
.201 - .300	2099.	.121477	.810579
.301 - .400	1211.	.070085	.880664
.401 - .500	768.	.044447	.925111
.501 - .600	465.	.026911	.952023
.601 - .700	294.	.017015	.969038
.701 - .800	194.	.011228	.980265
.801 - .900	109.	.006308	.986573
.901 - 1.000	82.	.004746	.991319
1.001 - 1.100	52.	.003009	.994328
1.101 - 1.200	25.	.001447	.995775
1.201 - 1.300	30.	.001736	.997511
1.301 - 1.400	14.	.000810	.998322
1.401 - 1.500	13.	.000752	.999074
1.501 - 1.600	1.	.000058	.999132
1.601 - 1.700	6.	.000347	.999479
1.701 - 1.800	2.	.000116	.999595
1.801 - 1.900	2.	.000116	.999711
1.901 - 2.000	3.	.000174	.999884
2.001 - 2.100	1.	.000058	.999942
2.101 - 2.200	0.	0.000000	.999942
2.201 - 2.300	1.	.000058	1.000000
MEAN =	.183	VARIANCE =	.042

***** EAST SALT CREEK TRIBUTARY WATERSHED *****

FREQUENCY DISTRIBUTION OF PRECIPITATION / SEASON

INTERVAL (INCHES)	OCCUR- RENCES	PDF	CDF
1.001 - 1.500	1.	.002000	.002000
1.501 - 2.000	1.	.002000	.004000
2.001 - 2.500	1.	.002000	.006000
2.501 - 3.000	3.	.006000	.012000
3.001 - 3.500	11.	.022000	.034000
3.501 - 4.000	18.	.036000	.070000
4.001 - 4.500	39.	.078000	.148000
4.501 - 5.000	48.	.096000	.244000
5.001 - 5.500	60.	.120000	.364000
5.501 - 6.000	49.	.098000	.462000
6.001 - 6.500	51.	.102000	.564000
6.501 - 7.000	52.	.104000	.668000
7.001 - 7.500	42.	.084000	.752000
7.501 - 8.000	31.	.062000	.814000
8.001 - 8.500	36.	.072000	.886000
8.501 - 9.000	23.	.046000	.932000
9.001 - 9.500	12.	.024000	.956000
9.501 - 10.000	13.	.026000	.982000
10.001 - 10.500	3.	.006000	.988000
10.501 - 11.000	3.	.006000	.994000
11.001 - 11.500	3.	.006000	1.000000

MEAN = 6.314

VARIANCE =

3.013

***** EAST SALT CREEK TRIBUTARY WATERSHED *****

ANNUAL MAXIMUM RUNOFF EVENT (AC-FT/SQ.FI.)

INTERVAL	PRESENT PDF	FUTURE PDF	PRESENT CDF	FUTURE CDF
0.000 - 0.000	.070000	.202000	.070000	.202000
.001 - .250	.274000	.296000	.344000	.500000
.251 - .500	.114000	.082000	.458000	.582000
.501 - .750	.078000	.056000	.536000	.638000
.751 - 1.000	.058000	.034000	.594000	.672000
1.001 - 1.250	.048000	.036000	.642000	.708000
1.251 - 1.500	.028000	.022000	.670000	.730000
1.501 - 1.750	.024000	.018000	.694000	.748000
1.751 - 2.000	.034000	.014000	.728000	.762000

2.001 - 3.000	.056000	.070000	.784000	.832000
3.001 - 4.000	.058000	.038000	.842000	.870000
4.001 - 5.000	.040000	.022000	.882000	.892000
5.001 - 6.000	.012000	.026000	.894000	.918000
6.001 - 7.000	.026000	.018000	.920000	.936000
7.001 - 8.000	.018000	.012000	.938000	.948000
8.001 - 9.000	.010000	.018000	.948000	.966000
9.001 - 10.000	.018000	.004000	.966000	.970000
10.001 - 11.000	.004000	.008000	.970000	.978000
11.001 - 12.000	.004000	.002000	.974000	.980000
12.001 - 13.000	.006000	.006000	.982000	.986000
13.001 - 14.000	0.000000	.004000	.982000	.990000
14.001 - 15.000	.008000	0.000000	.990000	.990000
15.001 - 16.000	0.000000	.002000	.990000	.992000
16.001 - 17.000	.002000	0.000000	.992000	.992000
17.001 - 18.000	0.000000	0.000000	.992000	.992000
18.001 - 19.000	0.000000	0.000000	.992000	.992000
19.001 - 20.000	0.000000	0.000000	.992000	.992000
20.001 - 21.000	0.000000	.002000	.992000	.994000
21.001 - 22.000	0.000000	0.000000	.992000	.994000
22.001 - 23.000	.002000	0.000000	.994000	.994000
23.001 - 24.000	0.000000	0.000000	.994000	.994000
24.001 - 25.000	0.000000	0.000000	.994000	.994000
25.001 - 26.000	0.000000	0.000000	.994000	.994000
26.001 - 27.000	0.000000	0.000000	.994000	.994000
27.001 - 28.000	0.000000	0.000000	.994000	.994000
28.001 - 29.000	0.000000	0.000000	.994000	.994000
29.001 - 30.000	0.000000	.002000	.994000	.996000
30.001 - 31.000	0.000000	0.000000	.994000	.996000
31.001 - 32.000	.002000	0.000000	.996000	.996000
32.001 - 33.000	0.000000	0.000000	.996000	.996000
33.001 - 34.000	0.000000	0.000000	.996000	.996000
34.001 - 35.000	0.000000	0.000000	.996000	.996000
35.001 - 36.000	0.000000	0.000000	.996000	.996000
36.001 - 37.000	0.000000	0.000000	.996000	.996000
37.001 - 38.000	0.000000	0.000000	.996000	.996000
38.001 - 39.000	0.000000	0.000000	.996000	.996000
39.001 - 40.000	0.000000	0.000000	.996000	.996000
40.001 - 41.000	0.000000	.002000	.996000	.998000
41.001 - 42.000	0.000000	.002000	.996000	1.000000
42.001 - 43.000	.002000	0.000000	.998000	1.000000
43.001 - 44.000	.002000	0.000000	1.000000	1.000000

	MEAN	VARIANCE
PRESENT :	.21267871E+01	.17288334E+02
FUTURE :	.17107963E+01	.15153118E+02

***** EAST SALT CREEK TRIBUTARY WATERSHED *****

ANNUAL MAXIMUM PEAK DISCHARGE (CFS/SQ.MI.)

INTERVAL	PRESENT PDF	FUTURE PDF	PRESENT CDF	FUTURE CDF
0.000 - 0.000	.070000	.202000	.070000	.202000
.001 - 1.000	.166000	.246000	.238000	.448000
1.001 - 2.000	.106000	.052000	.344000	.500000
2.001 - 3.000	.064000	.048000	.408000	.548000
3.001 - 4.000	.050000	.034000	.456000	.582000
4.001 - 5.000	.040000	.034000	.498000	.616000
5.001 - 6.000	.040000	.022000	.538000	.638000
6.001 - 7.000	.028000	.014000	.566000	.652000
7.001 - 8.000	.030000	.022000	.596000	.674000
8.001 - 9.000	.024000	.014000	.620000	.688000
9.001 - 10.000	.022000	.020000	.642000	.708000

10.001 - 20.000	.116000	.088000	.758000	.796000
20.001 - 30.000	.076000	.070000	.834000	.866000
30.001 - 40.000	.048000	.028000	.882000	.894000
40.001 - 50.000	.018000	.028000	.900000	.922000
50.001 - 60.000	.032000	.016000	.932000	.938000
60.001 - 70.000	.014000	.026000	.946000	.964000
70.001 - 80.000	.022000	.006000	.968000	.970000
80.001 - 90.000	.002000	.010000	.970000	.980000
90.001 - 100.000	.010000	.002000	.980000	.982000
100.001 - 110.000	.002000	.008000	.982000	.990000
110.001 - 120.000	.008000	.002000	.990000	.992000
120.001 - 130.000	0.000000	0.000000	.990000	.992000
130.001 - 140.000	.002000	0.000000	.992000	.992000
140.001 - 150.000	0.000000	0.000000	.992000	.992000
150.001 - 160.000	0.000000	0.000000	.992000	.992000
160.001 - 170.000	0.000000	.002000	.992000	.994000
170.001 - 180.000	.002000	0.000000	.994000	.994000
180.001 - 190.000	0.000000	0.000000	.994000	.994000
190.001 - 200.000	0.000000	0.000000	.994000	.994000
200.001 - 210.000	0.000000	0.000000	.994000	.994000
210.001 - 220.000	0.000000	0.000000	.994000	.994000
220.001 - 230.000	0.000000	0.000000	.994000	.994000
230.001 - 240.000	0.000000	.002000	.994000	.996000
240.001 - 250.000	.002000	0.000000	.996000	.996000
250.001 - 260.000	0.000000	0.000000	.996000	.996000
260.001 - 270.000	0.000000	0.000000	.996000	.996000
270.001 - 280.000	0.000000	0.000000	.996000	.996000
280.001 - 290.000	0.000000	0.000000	.996000	.996000
290.001 - 300.000	0.000000	0.000000	.996000	.996000
300.001 - 310.000	0.000000	0.000000	.996000	.996000
310.001 - 320.000	0.000000	0.000000	.996000	.996000
320.001 - 330.000	0.000000	.002000	.996000	.998000
330.001 - 340.000	.002000	.002000	.998000	1.000000
340.001 - 350.000	.002000	0.000000	1.000000	1.000000

	MEAN	VARIANCE
PRESENT :	.16900705E+02	.10917287E+04
FUTURE :	.13594996E+02	.95689349E+03

***** EAST SALT CREEK TRIBUTARY WATERSHED *****

TOTAL SEASONAL RUNOFF VOLUME (AC-FT/SQ.MI.)

INTERVAL	PRESENT PDF	FUTURE PDF	PRESENT CDF	FUTURE CDF
0.000 -	0.000	.070000	.202000	.070000
.001 -	.500	.346000	.350000	.416000
.501 -	1.000	.108000	.108000	.524000
1.001 -	1.500	.074000	.052000	.598000
1.501 -	2.000	.066000	.038000	.664000
2.001 -	2.500	.052000	.024000	.716000
2.501 -	3.000	.030000	.020000	.746000
3.001 -	3.500	.016000	.026000	.762000
3.501 -	4.000	.014000	.024000	.776000
4.001 -	4.500	.024000	.006000	.800000
4.501 -	5.000	.026000	.016000	.826000
5.001 -	5.500	.016000	.026000	.842000
5.501 -	6.000	.006000	.012000	.848000

6.001 -	8.000	.052000	.024000	.900000
8.001 -	10.000	.026000	.026000	.926000
10.001 -	12.000	.022000	.020000	.948000
12.001 -	14.000	.014000	.008000	.962000
14.001 -	16.000	.012000	.036000	.974000
16.001 -	18.000	.008000	0.000000	.982000
18.001 -	20.000	0.000000	0.000000	.982000
20.001 -	22.000	0.000000	.004000	.982000
22.001 -	24.000	.004000	.004000	.986000
24.001 -	26.000	0.000000	.004000	.986000
26.001 -	28.000	.008000	0.000000	.994000
28.001 -	30.000	0.000000	0.000000	.994000
30.001 -	32.000	0.000000	.002000	.994000
32.001 -	34.000	.002000	0.000000	.996000
34.001 -	36.000	0.000000	0.000000	.996000
36.001 -	38.000	0.000000	0.000000	.996000
38.001 -	40.000	0.000000	0.000000	.996000
40.001 -	42.000	0.000000	0.000000	.996000
42.001 -	44.000	0.000000	0.000000	.996000
44.001 -	46.000	0.000000	0.000000	.996000
46.001 -	48.000	0.000000	0.000000	.996000
48.001 -	50.000	0.000000	.002000	.996000
50.001 -	52.000	.002000	0.000000	.998000
52.001 -	54.000	0.000000	0.000000	.998000
54.001 -	56.000	0.000000	.002000	.998000
56.001 -	58.000	0.000000	0.000000	.998000
58.001 -	60.000	.002000	0.000000	1.000000

	MEAN	VARIANCE
PRESENT :	.29317643E+01	.31421683E+02
FUTURE :	.22022843E+01	.25230188E+02

***** EAST SALT CREEK TRIBUTARY WATERSHED *****

TOTAL SEASONAL SEDIMENT PRODUCTION (TONS/SQ. MI.)

INTERVAL	PRESENT PDF	FUTURE PDF	PRESENT CDF	FUTURE CDF
0.000 - 0.000	.070000	.202000	.070000	.202000
.001 - 25.000	.432000	.454000	.502000	.656000
25.001 - 50.000	.118000	.084000	.620000	.740000
50.001 - 75.000	.082000	.038000	.702000	.778000
75.001 - 100.000	.046000	.040000	.748000	.818000
100.001 - 125.000	.018000	.028000	.766000	.846000
125.001 - 150.000	.032000	.028000	.798000	.874000
150.001 - 175.000	.032000	.016000	.830000	.890000
175.001 - 200.000	.012000	.016000	.842000	.906000
200.001 - 225.000	.014000	.014000	.856000	.920000
225.001 - 250.000	.018000	.004000	.874000	.924000
250.001 - 275.000	.020000	.010000	.894000	.934000
275.001 - 300.000	.008000	.012000	.902000	.946000

300.001 - 500.000	.054000	.032000	.956000	.978000
500.001 - 700.000	.022000	.010000	.978000	.988000
700.001 - 900.000	.004000	.006000	.982000	.994000
900.001 - 1100.000	.008000	0.000000	.990000	.994000
1100.001 - 1300.000	.004000	.002000	.994000	.996000
1300.001 - 1500.000	0.000000	0.000000	.994000	.996000
1500.001 - 1700.000	.002000	0.000000	.996000	.996000
1700.001 - 1900.000	0.000000	.002000	.996000	.998000
1900.001 - 2100.000	0.000000	.002000	.996000	1.000000
2100.001 - 2300.000	0.000000	0.000000	.996000	1.000000
2300.001 - 2500.000	.002000	0.000000	.998000	1.000000
2500.001 - 2700.000	0.000000	0.000000	.998000	1.000000
2700.001 - 2900.000	.002000	0.000000	1.000000	1.000000

	MEAN	VARIANCE
PRESENT :	.10873943E+03	.59587595E+05
FUTURE :	.67080653E+02	.31172289E+05

***** EAST SALT CREEK TRIBUTARY WATERSHED *****

ANNUAL MAXIMUM SEDIMENT EVENT (TONS/SQ.MI.)

INTERVAL	PRESENT PDF	FUTURE PDF	PRESENT CDF	FUTURE CDF
0.000 - 0.000	.070000	.202000	.070000	.202000
.001 - 25.000	.488000	.472000	.558000	.674000
25.001 - 50.000	.120000	.086000	.678000	.760000
50.001 - 75.000	.062000	.050000	.740000	.810000
75.001 - 100.000	.040000	.040000	.780000	.850000
100.001 - 125.000	.038000	.030000	.818000	.880000
125.001 - 150.000	.026000	.010000	.846000	.890000
150.001 - 175.000	.026000	.020000	.872000	.910000
175.001 - 200.000	.012000	.012000	.884000	.922000
200.001 - 225.000	.004000	.014000	.888000	.936000
225.001 - 250.000	.020000	.008000	.908000	.944000
250.001 - 275.000	.012000	.014000	.920000	.958000
275.001 - 300.000	.012000	.010000	.932000	.968000

300.001 - 500.000	.042000	.022000	.974000	.990000
500.001 - 700.000	.016000	.002000	.990000	.992000
700.001 - 900.000	.002000	.002000	.992000	.994000
900.001 - 1100.000	.002000	0.000000	.994000	.994000
1100.001 - 1300.000	0.000000	.002000	.994000	.996000
1300.001 - 1500.000	.002000	0.000000	.996000	.996000
1500.001 - 1700.000	0.000000	.004000	.996000	1.000000
1700.001 - 1900.000	0.000000	0.000000	.996000	1.000000
1900.001 - 2100.000	0.000000	0.000000	.996000	1.000000
2100.001 - 2300.000	.004000	0.000000	1.000000	1.000000

	MEAN	VARIANCE
PRESENT :	.82401448E+02	.37057781E+05
FUTURE :	.53807835E+02	.20687152E+05

***** GATEWAY WATERSHED *****

NSUBU	TIMEC	DUREX	CSINA	AM1	AM2	NSEA	NDAY	ELEV	ISEED
4	1.09	1.00	.15	.90	1.60	500	184	6500.	25667

DATA CARD PRECIPITATION PARAMETER VALUES:

LAM-P	K-P	LAM-I	K-I	FD1
0.0000	0.0000	0.0000	0.0000	0.0000

VG-SL	AREA	PCN1	PCN2	PCN3	FCN1	FCN2	FCN3	PCVEG	FCVEG	K	LS
PJ 09	.100	45.4	65.4	82.0	53.2	72.2	86.2	.051	.046	.27	8.33
PJ 07	1.517	52.8	71.8	86.0	57.1	75.1	86.1	.051	.046	.20	5.77
PJ 07	.532	56.1	74.6	88.0	61.3	78.7	90.7	.058	.054	.20	8.16
PJ 07	.144	56.1	74.6	88.0	64.4	81.2	92.0	.058	.058	.20	5.77

TOTAL WATERSHED AREA = 2.293 SQUARE MILES.

COMPUTED PRECIPITATION PARAMETER VALUES:

LAM-P	K-P	LAM-I	K-I	FD1
3.6299	.6657	.1353	.8270	.4100

DISPLAY PARAMETER VALUES FOR FREQUENCY DISTRIBUTION TABLES

	REGUN	REDUN	UTOEX
PEAK R.O.	1.00	.25	2.00
PEAK FLOW	10.00	1.00	1.00
TOT. R.O.	2.00	.50	3.00
TOT. SED.	400.00	50.00	1.50
PEAK SED.	400.00	50.00	1.50

FREQUENCY DISTRIBUTION OF EVENT INTERARRIVAL TIMES

INTERARRIVAL (DAYS)	OCCUR- RENCES	PDF	CDF
1	7877.	.417656	.417656
2	2187.	.115960	.533616
3	1451.	.076935	.610551
4	1158.	.061400	.671951
5	924.	.048993	.720944
6	803.	.042577	.763521
7	673.	.035684	.799205
8	539.	.028579	.827784
9	478.	.025345	.853128
10	365.	.019353	.872481
11	341.	.018081	.890562
12	303.	.016066	.906628
13	243.	.012884	.919512
14	204.	.010817	.930329
15	192.	.010180	.940509
16	153.	.008112	.948621
17	129.	.006840	.955461
18	116.	.006151	.961612
19	95.	.005037	.966649
20	80.	.004242	.970891
21	77.	.004083	.974973
22	68.	.003606	.978579
23	51.	.002704	.981283
24	45.	.002386	.983669
25	45.	.002386	.986055
26	35.	.001856	.987911
27	38.	.002015	.989926
28	24.	.001273	.991198
29	18.	.000954	.992153
30	22.	.001166	.993319
31 - 32	24.	.001273	.994592
33 - 34	31.	.001644	.996235
35 - 36	11.	.000583	.996819
37 - 38	15.	.000795	.997614
39 - 40	9.	.000477	.998091
41 - 42	8.	.000424	.998515
43 - 44	10.	.000530	.999046
45 - 46	2.	.000106	.999152
47 - 48	4.	.000212	.999364
49 - 50	4.	.000212	.999576
51 - 52	2.	.000106	.999682
53 - 54	1.	.000053	.999735
55 - 56	2.	.000106	.999841
57 - 58	1.	.000053	.999894
59 - 60	0.	0.000000	.999894
61 - 62	0.	0.000000	.999894
63 - 64	0.	0.000000	.999894
65 - 66	0.	0.000000	.999894
67 - 68	0.	0.000000	.999894
69 - 70	0.	0.000000	.999894
71 - 72	2.	.000106	1.000000

MEAN = 4.702 VARIANCE = 32.822

***** GATEWAY WATERSHED *****

FREQUENCY DISTRIBUTION OF PRECIPITATION / EVENT

INTERVAL (INCHES)	OCCUR- RENCES	PDF	CDF
.001 - .100	7933.	.420626	.420626
.101 - .200	4220.	.223754	.644380
.201 - .300	2414.	.127996	.772375
.301 - .400	1509.	.080011	.852386
.401 - .500	968.	.051326	.903712
.501 - .600	626.	.033192	.936903
.601 - .700	415.	.022004	.958908
.701 - .800	262.	.013892	.972800
.801 - .900	189.	.010021	.982821
.901 - 1.000	104.	.005514	.988335
1.001 - 1.100	82.	.004348	.992683
1.101 - 1.200	38.	.002015	.994698
1.201 - 1.300	30.	.001591	.996288
1.301 - 1.400	22.	.001166	.997455
1.401 - 1.500	24.	.001273	.998727
1.501 - 1.600	6.	.000318	.999046
1.601 - 1.700	6.	.000318	.999364
1.701 - 1.800	4.	.000212	.999576
1.801 - 1.900	1.	.000053	.999629
1.901 - 2.000	1.	.000053	.999682
2.001 - 2.100	1.	.000053	.999735
2.101 - 2.200	0.	0.000000	.999735
2.201 - 2.300	2.	.000106	.999841
2.301 - 2.400	1.	.000053	.999894
2.401 - 2.500	0.	0.000000	.999894
2.501 - 2.600	1.	.000053	.999947
2.601 - 2.700	1.	.000053	1.000000
MEAN =	.206	VARIANCE =	.050

***** GATEWAY WATERSHED *****

FREQUENCY DISTRIBUTION OF PRECIPITATION / SEASON

INTERVAL (INCHES)	OCCUR- RENCES	PDF	CDF
3.001 - 3.500	6.	.012000	.012000
3.501 - 4.000	5.	.010000	.022000
4.001 - 4.500	9.	.018000	.040000
4.501 - 5.000	21.	.042000	.082000
5.001 - 5.500	29.	.058000	.140000
5.501 - 6.000	41.	.082000	.222000
6.001 - 6.500	42.	.084000	.306000
6.501 - 7.000	49.	.098000	.404000
7.001 - 7.500	43.	.086000	.490000
7.501 - 8.000	52.	.104000	.594000
8.001 - 8.500	34.	.068000	.662000
8.501 - 9.000	33.	.066000	.728000
9.001 - 9.500	29.	.058000	.786000
9.501 - 10.000	29.	.058000	.844000
10.001 - 10.500	21.	.042000	.886000
10.501 - 11.000	15.	.030000	.916000
11.001 - 11.500	12.	.024000	.940000
11.501 - 12.000	11.	.022000	.962000
12.001 - 12.500	8.	.016000	.978000
12.501 - 13.000	3.	.006000	.984000
13.001 - 13.500	4.	.008000	.992000
13.501 - 14.000	3.	.006000	.998000
14.001 - 14.500	1.	.002000	1.000000
MEAN =	7.752	VARIANCE =	4.643

***** GATEWAY WATERSHED *****

ANNUAL MAXIMUM RUNOFF EVENT (AC-FI/SQ.M.I.)

INTERVAL	PRESENT PDF	FUTURE PDF	PRESENT CDF	FUTURE CDF
0.000 - 0.000	.654000	.340000	.654000	.340000
.001 - .250	.160000	.350000	.814000	.690000
.251 - .500	.034000	.058000	.848000	.748000
.501 - .750	.014000	.034000	.862000	.782000
.751 - 1.000	.018000	.030000	.880000	.812000
1.001 - 1.250	.012000	.016000	.892000	.828000
1.251 - 1.500	.014000	.018000	.906000	.846000
1.501 - 1.750	.002000	.016000	.908000	.862000
1.751 - 2.000	.006000	.008000	.914000	.870000

2.001 - 3.000	.028000	.032000	.942000	.902000
3.001 - 4.000	.014000	.022000	.956000	.924000
4.001 - 5.000	.004000	.014000	.960000	.938000
5.001 - 6.000	.010000	.014000	.970000	.950000
6.001 - 7.000	.010000	.008000	.980000	.960000
7.001 - 8.000	0.000000	.004000	.980000	.964000
8.001 - 9.000	.002000	.006000	.982000	.970000
9.001 - 10.000	.004000	.008000	.986000	.978000
10.001 - 11.000	.002000	.002000	.988000	.980000
11.001 - 12.000	.002000	0.000000	.990000	.980000
12.001 - 13.000	.004000	.002000	.994000	.982000
13.001 - 14.000	.002000	.004000	.996000	.986000
14.001 - 15.000	0.000000	.002000	.996000	.988000
15.001 - 16.000	0.000000	.006000	.996000	.994000
16.001 - 17.000	0.000000	0.000000	.996000	.994000
17.001 - 18.000	0.000000	.002000	.996000	.996000
18.001 - 19.000	0.000000	0.000000	.996000	.996000
19.001 - 20.000	0.000000	0.000000	.996000	.996000
20.001 - 21.000	0.000000	0.000000	.996000	.996000
21.001 - 22.000	0.000000	0.000000	.996000	.996000
22.001 - 23.000	0.000000	0.000000	.996000	.996000
23.001 - 24.000	.002000	0.000000	.998000	.996000
24.001 - 25.000	0.000000	0.000000	.998000	.996000
25.001 - 26.000	0.000000	0.000000	.998000	.996000
26.001 - 27.000	0.000000	0.000000	.998000	.996000
27.001 - 28.000	0.000000	0.000000	.998000	.996000
28.001 - 29.000	.002000	.002000	1.000000	.998000
29.001 - 30.000	0.000000	0.000000	1.000000	.998000
30.001 - 31.000	0.000000	0.000000	1.000000	.998000
31.001 - 32.000	0.000000	0.000000	1.000000	.998000
32.001 - 33.000	0.000000	0.000000	1.000000	.998000
33.001 - 34.000	0.000000	0.000000	1.000000	.998000
34.001 - 35.000	0.000000	.002000	1.000000	1.000000

	MEAN	VARIANCE
PRESENT :	.62120310E+00	.54445246E+01
FUTURE :	.10602186E+01	.96829151E+01

***** GATEWAY WATERSHED *****

ANNUAL MAXIMUM PEAK DISCHARGE (CFS/SQ.MI.)

INTERVAL	PRESENT PDF	FUTURE PDF	PRESENT CDF	FUTURE CDF
0.000 - 0.000	.654000	.340000	.654000	.340000
.001 - 1.000	.130000	.304000	.784000	.644000
1.001 - 2.000	.030000	.048000	.814000	.692000
2.001 - 3.000	.028000	.042000	.842000	.734000
3.001 - 4.000	.006000	.016000	.848000	.750000
4.001 - 5.000	.006000	.018000	.854000	.768000
5.001 - 6.000	.008000	.018000	.862000	.786000
6.001 - 7.000	.010000	.016000	.872000	.802000
7.001 - 8.000	.010000	.010000	.882000	.812000
8.001 - 9.000	.004000	.010000	.886000	.822000
9.001 - 10.000	.006000	.006000	.892000	.828000

10.001 - 20.000	.042000	.054000	.934000	.882000
20.001 - 30.000	.020000	.036000	.954000	.918000
30.001 - 40.000	.012000	.024000	.966000	.942000
40.001 - 50.000	.010000	.014000	.976000	.956000
50.001 - 60.000	.004000	.006000	.980000	.962000
60.001 - 70.000	.002000	.008000	.982000	.970000
70.001 - 80.000	.004000	.008000	.986000	.978000
80.001 - 90.000	.004000	.002000	.990000	.980000
90.001 - 100.000	.004000	.002000	.994000	.982000
100.001 - 110.000	.002000	.004000	.996000	.986000
110.001 - 120.000	0.000000	.002000	.996000	.988000
120.001 - 130.000	0.000000	.006000	.996000	.994000
130.001 - 140.000	0.000000	0.000000	.996000	.994000
140.001 - 150.000	0.000000	.002000	.996000	.996000
150.001 - 160.000	0.000000	0.000000	.996000	.996000
160.001 - 170.000	0.000000	0.000000	.996000	.996000
170.001 - 180.000	0.000000	0.000000	.996000	.996000
180.001 - 190.000	.002000	0.000000	.998000	.996000
190.001 - 200.000	0.000000	0.000000	.998000	.996000
200.001 - 210.000	0.000000	0.000000	.998000	.996000
210.001 - 220.000	0.000000	0.000000	.998000	.996000
220.001 - 230.000	.002000	.002000	1.000000	.998000
230.001 - 240.000	0.000000	0.000000	1.000000	.998000
240.001 - 250.000	0.000000	0.000000	1.000000	.998000
250.001 - 260.000	0.000000	0.000000	1.000000	.998000
260.001 - 270.000	0.000000	.002000	1.000000	1.000000

	MEAN	VARIANCE
PRESENT :	.48851141E+01	.33669926E+03
FUTURE :	.83375132E+01	.59880900E+03

***** GATEWAY WATERSHED *****

TOTAL SEASONAL RUNOFF VOLUME (AC-FT/SQ.MI.)

INTERVAL	PRESENT PDF	FUTURE PDF	PRESENT CDF	FUTURE CDF
0.000 - 0.000	.654000	.340000	.654000	.340000
.001 - .500	.190000	.394000	.844000	.734000
.501 - 1.000	.028000	.066000	.872000	.800000
1.001 - 1.500	.026000	.042000	.898000	.842000
1.501 - 2.000	.014000	.012000	.912000	.854000
2.001 - 2.500	.010000	.004000	.922000	.858000
2.501 - 3.000	.008000	.024000	.930000	.882000
3.001 - 3.500	.014000	.010000	.944000	.892000
3.501 - 4.000	.008000	.012000	.952000	.904000
4.001 - 4.500	.004000	.014000	.956000	.918000
4.501 - 5.000	0.000000	.006000	.956000	.924000
5.001 - 5.500	.006000	.006000	.962000	.930000
5.501 - 6.000	.002000	.004000	.964000	.934000

6.001 - 8.000	.010000	.022000	.974000	.956000
8.001 - 10.000	.008000	.012000	.982000	.968000
10.001 - 12.000	.008000	.004000	.990000	.972000
12.001 - 14.000	.004000	.006000	.994000	.978000
14.001 - 16.000	.002000	.008000	.996000	.986000
16.001 - 18.000	0.000000	.006000	.996000	.992000
18.001 - 20.000	0.000000	.004000	.996000	.996000
20.001 - 22.000	0.000000	0.000000	.996000	.996000
22.001 - 24.000	.002000	0.000000	.998000	.996000
24.001 - 26.000	0.000000	0.000000	.998000	.996000
26.001 - 28.000	0.000000	0.000000	.998000	.996000
28.001 - 30.000	.002000	0.000000	1.000000	.996000
30.001 - 32.000	0.000000	.002000	1.000000	.998000
32.001 - 34.000	0.000000	0.000000	1.000000	.998000
34.001 - 36.000	0.000000	.002000	1.000000	1.000000

	MEAN	VARIANCE
PRESENT :	.69374469E+00	.62305859E+01
FUTURE :	.12612224E+01	.12462375E+02

***** GATEWAY WATERSHED *****

TOTAL SEASONAL SEDIMENT PRODUCTION (TONS/SQ. MI.)

INTERVAL	PRESENT PDF	FUTURE PDF	PRESENT CDF	FUTURE CDF
0.000 - 0.000	.654000	.344000	.654000	.344000
.001 - 50.000	.202000	.432000	.856000	.776000
50.001 - 100.000	.044000	.068000	.900000	.844000
100.001 - 150.000	.014000	.014000	.914000	.858000
150.001 - 200.000	.014000	.030000	.928000	.888000
200.001 - 250.000	.018000	.016000	.946000	.904000
250.001 - 300.000	.008000	.014000	.954000	.918000
300.001 - 350.000	.004000	.008000	.958000	.926000
350.001 - 400.000	.004000	.006000	.962000	.932000
400.001 - 450.000	.004000	.012000	.966000	.944000
450.001 - 500.000	.006000	.006000	.972000	.950000
500.001 - 550.000	.002000	.004000	.974000	.954000
550.001 - 600.000	0.000000	.004000	.974000	.958000

600.001 - 1000.000	.020000	.016000	.994000	.974000
1000.001 - 1400.000	.002000	.020000	.996000	.994000
1400.001 - 1800.000	0.000000	.002000	.996000	.996000
1800.001 - 2200.000	.002000	0.000000	.998000	.996000
2200.001 - 2600.000	.002000	.002000	1.000000	.998000
2600.001 - 3000.000	0.000000	.002000	1.000000	1.000000

	MEAN	VARIANCE		
PRESENT :	.51750614E+02	.41368690E+05		
FUTURE :	.88975446E+02	.72635846E+05		

***** GATEWAY WATERSHED *****

TOTAL SEASONAL SEDIMENT PRODUCTION (TONS/SQ.MI.)

INTERVAL	PRESENT PDF	FUTURE PDF	PRESENT CDF	FUTURE CDF
0.000 - 0.000	.654000	.344000	.654000	.344000
.001 - 50.000	.202000	.432000	.856000	.776000
50.001 - 100.000	.044000	.068000	.900000	.844000
100.001 - 150.000	.014000	.014000	.914000	.858000
150.001 - 200.000	.014000	.030000	.928000	.888000
200.001 - 250.000	.018000	.016000	.946000	.904000
250.001 - 300.000	.008000	.014000	.954000	.918000
300.001 - 350.000	.004000	.008000	.958000	.926000
350.001 - 400.000	.004000	.006000	.962000	.932000
400.001 - 450.000	.004000	.012000	.966000	.944000
450.001 - 500.000	.006000	.006000	.972000	.950000
500.001 - 550.000	.002000	.004000	.974000	.954000
550.001 - 600.000	0.000000	.004000	.974000	.958000

600.001 - 1000.000	.020000	.016000	.994000	.974000
1000.001 - 1400.000	.002000	.020000	.996000	.994000
1400.001 - 1800.000	0.000000	.002000	.996000	.996000
1800.001 - 2200.000	.002000	0.000000	.998000	.996000
2200.001 - 2600.000	.002000	.002000	1.000000	.998000
2600.001 - 3000.000	0.000000	.002000	1.000000	1.000000

	MEAN	VARIANCE		
PRESENT :	.51750614E+02	.41368696E+05		
FUTURE :	.88975446E+02	.72635846E+05		

***** GATEWAY WATERSHED *****

ANNUAL MAXIMUM SEDIMENT EVENT (TONS/SQ.MI.)

INTERVAL	PRESENT PDF	FUTURE PDF	PRESENT CDF	FUTURE CDF
0.000 - 0.000	.654000	.344000	.654000	.344000
.001 - 50.000	.210000	.450000	.864000	.794000
50.001 - 100.000	.042000	.056000	.906000	.852000
100.001 - 150.000	.010000	.024000	.916000	.876000
150.001 - 200.000	.022000	.026000	.938000	.902000
200.001 - 250.000	.016000	.014000	.954000	.916000
250.001 - 300.000	.002000	.016000	.956000	.932000
300.001 - 350.000	.002000	.008000	.958000	.940000
350.001 - 400.000	.010000	.008000	.968000	.948000
400.001 - 450.000	.002000	.008000	.970000	.956000
450.001 - 500.000	.010000	.004000	.980000	.960000
500.001 - 550.000	0.000000	.002000	.980000	.962000
550.001 - 600.000	0.000000	.002000	.980000	.964000

600.001 - 1000.000	.014000	.018000	.994000	.982000
1000.001 - 1400.000	.002000	.014000	.996000	.996000
1400.001 - 1800.000	0.000000	0.000000	.996000	.996000
1800.001 - 2200.000	.002000	0.000000	.998000	.996000
2200.001 - 2600.000	.002000	.002000	1.000000	.998000
2600.001 - 3000.000	0.000000	.002000	1.000000	1.000000

	MEAN	VARIANCE		
PRESENT :	.46926965E+02	.37405677E+05		
FUTURE :	.76104314E+02	.59472790E+05		

***** GIBBLER GULCH WATERSHED *****

NSUBU	TIMEC	DUREX	CSINA	AM1	AM2	NSEA	NDAY	ELEV	ISEED
9	6.69	1.00	.15	.90	1.60	500	184	7200.	19423

DATA CARD PRECIPITATION PARAMETER VALUES:
 LAM-P K-P LAM-I K-I FD1
 0.0000 0.0000 0.0000 0.0000 0.0000

VG-SL	AREA	PCN1	PCN2	PCN3	FCN1	FCN2	FCN3	PCVEG	FCVEG	K	LS
GR 07	5.199	59.0	77.0	89.0	65.8	81.9	92.0	.085	.080	.20	.82
SB 07	.822	46.1	66.1	82.1	45.0	65.0	82.0	.112	.101	.20	.82
SB 07	2.122	46.1	66.1	82.1	51.1	70.1	85.1	.112	.101	.20	.82
SB 09	1.521	59.6	77.6	89.6	59.6	77.6	89.6	.112	.101	.27	.38
SB 09	1.799	59.6	77.6	89.6	55.6	74.3	88.0	.112	.101	.27	.38
PJ 07	8.546	45.9	65.9	82.0	51.9	70.9	85.9	.052	.049	.20	5.77
J 09	2.456	61.7	78.4	90.4	62.3	79.3	91.0	.052	.049	.27	5.77
J 09	2.163	61.7	78.4	90.4	57.5	77.5	88.5	.052	.049	.27	1.98
CF 07	.255	47.5	67.5	83.5	57.8	77.8	88.8	.098	.090	.20	2.55

TOTAL WATERSHED AREA = 24.883 SQUARE MILES.

COMPUTED PRECIPITATION PARAMETER VALUES:
 LAM-P K-P LAM-I K-I FD1
 3.2126 .6698 .1391 .7943 .4100

DISPLAY PARAMETER VALUES FOR FREQUENCY DISTRIBUTION TABLES

	REGUN	REDUN	UTDEX
PEAK R.D.	1.00	.25	2.00
PEAK FLOW	2.00	.50	2.00
TOT. R.D.	2.00	.50	3.00
TOT. SED.	1000.00	50.00	.50
PEAK SED.	1000.00	50.00	.50

***** GIBBLER GULCH WATERSHED *****

FREQUENCY DISTRIBUTION OF EVENT INTERARRIVAL TIMES

INTERARRIVAL (DAYS)	OCCUR- RENCES	PDF	CDF
1	7955.	.407761	.407761
2	2492.	.127736	.535496
3	1571.	.080527	.616023
4	1210.	.062023	.678046
5	971.	.049772	.727818
6	821.	.042083	.769901
7	686.	.035163	.805064
8	588.	.030140	.835204
9	503.	.025783	.860987
10	371.	.019017	.880004
11	365.	.018709	.898713
12	255.	.013071	.911784
13	262.	.013430	.925214
14	228.	.011687	.936901
15	166.	.008509	.945410
16	179.	.009175	.954585
17	121.	.006202	.960787
18	112.	.005741	.966528
19	87.	.004459	.970988
20	86.	.004408	.975396
21	62.	.003178	.978574
22	58.	.002973	.981547
23	59.	.003024	.984571
24	30.	.001538	.986109
25	31.	.001589	.987698
26	36.	.001845	.989543
27	35.	.001794	.991337
28	22.	.001128	.992465
29	16.	.000820	.993285
30	18.	.000923	.994208
31 - 32	26.	.001333	.995541
33 - 34	31.	.001589	.997130
35 - 36	13.	.000666	.997796
37 - 38	11.	.000564	.998360
39 - 40	10.	.000513	.998872
41 - 42	8.	.000410	.999282
43 - 44	2.	.000103	.999385
45 - 46	4.	.000205	.999590
47 - 48	3.	.000154	.999744
49 - 50	1.	.000051	.999795
51 - 52	1.	.000051	.999846
53 - 54	1.	.000051	.999897
55 - 56	0.	0.000000	.999897
57 - 58	0.	0.000000	.999897
59 - 60	1.	.000051	.999949
61 - 62	0.	0.000000	.999949
63 - 64	0.	0.000000	.999949
65 - 66	0.	0.000000	.999949
67 - 68	0.	0.000000	.999949
69 - 70	0.	0.000000	.999949
71 - 72	0.	0.000000	.999949
73 - 74	0.	0.000000	.999949
75 - 76	1.	.000051	1.000000

MEAN = 4.573

VARIANCE =

30.018

***** GIBBLER GULCH WATERSHED *****

FREQUENCY DISTRIBUTION OF PRECIPITATION / EVENT

INTERVAL (INCHES)	OCCUR- RENCES	PDF	CDF
.001 - .100	7665.	.392896	.392896
.101 - .200	4238.	.217233	.610129
.201 - .300	2500.	.128146	.738275
.301 - .400	1639.	.084013	.822287
.401 - .500	1090.	.055872	.878159
.501 - .600	741.	.037982	.916141
.601 - .700	494.	.025322	.941463
.701 - .800	352.	.018043	.959506
.801 - .900	224.	.011482	.970988
.901 - 1.000	180.	.009227	.980214
1.001 - 1.100	101.	.005177	.985391
1.101 - 1.200	75.	.003844	.989236
1.201 - 1.300	56.	.002870	.992106
1.301 - 1.400	55.	.002819	.994925
1.401 - 1.500	34.	.001743	.996668
1.501 - 1.600	23.	.001179	.997847
1.601 - 1.700	12.	.000615	.998462
1.701 - 1.800	9.	.000461	.998924
1.801 - 1.900	3.	.000154	.999077
1.901 - 2.000	4.	.000205	.999282
2.001 - 2.100	3.	.000154	.999436
2.101 - 2.200	3.	.000154	.999590
2.201 - 2.300	0.	0.000000	.999590
2.301 - 2.400	2.	.000103	.999692
2.401 - 2.500	3.	.000154	.999846
2.501 - 2.600	0.	0.000000	.999846
2.601 - 2.700	0.	0.000000	.999846
2.701 - 2.800	0.	0.000000	.999846
2.801 - 2.900	0.	0.000000	.999846
2.901 - 3.000	1.	.000051	.999897
3.001 - 3.100	1.	.000051	.999949
3.101 - 3.200	0.	0.000000	.999949
3.201 - 3.300	0.	0.000000	.999949
3.301 - 3.400	1.	.000051	1.000000

MEAN = .231

VARIANCE = .066

***** GIBBLER GULCH WATERSHED *****

FREQUENCY DISTRIBUTION OF PRECIPITATION / SEASON

INTERVAL (INCHES)	OCCUR- RENCES	PDF	CDF
3.501 - 4.000	1.	.092000	.002000
4.001 - 4.500	5.	.010000	.012000
4.501 - 5.000	11.	.022000	.034000
5.001 - 5.500	12.	.024000	.058000
5.501 - 6.000	20.	.040000	.098000
6.001 - 6.500	35.	.070000	.168000
6.501 - 7.000	26.	.052000	.220000
7.001 - 7.500	34.	.068000	.288000
7.501 - 8.000	48.	.096000	.384000
8.001 - 8.500	40.	.090000	.464000
8.501 - 9.000	39.	.078000	.542000
9.001 - 9.500	31.	.062000	.604000
9.501 - 10.000	31.	.062000	.666000
10.001 - 10.500	32.	.064000	.730000
10.501 - 11.000	29.	.058000	.788000
11.001 - 11.500	29.	.058000	.846000
11.501 - 12.000	20.	.040000	.886000
12.001 - 12.500	14.	.028000	.914000
12.501 - 13.000	12.	.024000	.938000
13.001 - 13.500	8.	.016000	.954000
13.501 - 14.000	4.	.008000	.962000
14.001 - 14.500	5.	.010000	.972000
14.501 - 15.000	4.	.008000	.980000
15.001 - 15.500	4.	.008000	.988000
15.501 - 16.000	2.	.004000	.992000
16.001 - 16.500	1.	.002000	.994000
16.501 - 17.000	1.	.002000	.996000
17.001 - 17.500	1.	.002000	.998000
17.501 - 18.000	0.	0.000000	.998000
18.001 - 18.500	0.	0.000000	.998000
18.501 - 19.000	1.	.002000	1.000000

MEAN = 9.013

VARIANCE = 6.188

***** GIBBLER GULCH WATERSHED *****

ANNUAL MAXIMUM PEAK DISCHARGE (CFS/SQ.MI.)

INTERVAL	PRESENT PDF	FUTURE PDF	PRESENT CDF	FUTURE CDF
0.000 - 0.000	.264000	.132000	.264000	.132000
.001 - .500	.298000	.320000	.562000	.452000
.501 - 1.000	.084000	.108000	.646000	.560000
1.001 - 1.500	.064000	.068000	.710000	.628000
1.501 - 2.000	.034000	.034000	.744000	.662000
2.001 - 2.500	.024000	.058000	.768000	.720000
2.501 - 3.000	.024000	.022000	.792000	.742000
3.001 - 3.500	.022000	.022000	.814000	.764000
3.501 - 4.000	.026000	.014000	.840000	.778000

4.001 - 6.000	.044000	.068000	.884000	.846000
6.001 - 8.000	.016000	.030000	.900000	.876000
8.001 - 10.000	.022000	.016000	.922000	.892000
10.001 - 12.000	.010000	.018000	.932000	.910000
12.001 - 14.000	.004000	.014000	.936000	.924000
14.001 - 16.000	.006000	.008000	.942000	.932000
16.001 - 18.000	.010000	.002000	.952000	.934000
18.001 - 20.000	.002000	.006000	.954000	.940000
20.001 - 22.000	.002000	.008000	.956000	.948000
22.001 - 24.000	.002000	.006000	.958000	.954000
24.001 - 26.000	.004000	.002000	.962000	.956000
26.001 - 28.000	.002000	.002000	.964000	.958000
28.001 - 30.000	0.000000	.002000	.964000	.960000
30.001 - 32.000	.002000	.002000	.966000	.962000
32.001 - 34.000	.006000	.002000	.972000	.964000
34.001 - 36.000	0.000000	.002000	.972000	.966000
36.001 - 38.000	0.000000	0.000000	.972000	.966000
38.001 - 40.000	0.000000	.002000	.972000	.968000
40.001 - 42.000	.004000	.004000	.976000	.972000
42.001 - 44.000	.002000	0.000000	.978000	.972000
44.001 - 46.000	0.000000	0.000000	.978000	.972000
46.001 - 48.000	.002000	.002000	.980000	.974000
48.001 - 50.000	.008000	.004000	.986000	.978000
50.001 - 52.000	.002000	0.000000	.990000	.978000
52.001 - 54.000	0.000000	0.000000	.990000	.978000
54.001 - 56.000	.002000	.004000	.992000	.982000
56.001 - 58.000	0.000000	.006000	.992000	.988000
58.001 - 60.000	0.000000	.002000	.992000	.990000
60.001 - 62.000	0.000000	0.000000	.992000	.990000
62.001 - 64.000	0.000000	.002000	.992000	.992000
64.001 - 66.000	0.000000	0.000000	.992000	.992000
66.001 - 68.000	0.000000	0.000000	.992000	.992000
68.001 - 70.000	0.000000	0.000000	.992000	.992000
70.001 - 72.000	.002000	0.000000	.994000	.992000
72.001 - 74.000	0.000000	0.000000	.994000	.992000
74.001 - 76.000	0.000000	0.000000	.994000	.992000
76.001 - 78.000	0.000000	0.000000	.994000	.992000
78.001 - 80.000	0.000000	0.000000	.994000	.992000
80.001 - 82.000	0.000000	.002000	.994000	.994000
82.001 - 84.000	.002000	0.000000	.996000	.994000
84.001 - 86.000	0.000000	0.000000	.996000	.994000
86.001 - 88.000	.004000	.006000	1.000000	1.000000

	MEAN	VARIANCE
PRESENT :	.37618186E+01	.14372779E+03
FUTURE :	.48370552E+01	.18529286E+03

***** GIBBLER GULCH WATERSHED *****

ANNUAL MAXIMUM RUNOFF EVENT (AC-FT/SQ.MI.)

INTERVAL	PRESENT PDF	FUTURE PDF	PRESENT CDF	FUTURE CDF
0.000 - 0.000	.264000	.132000	.264000	.132000
.001 - .250	.298000	.320000	.562000	.452000
.251 - .500	.084000	.110000	.646000	.562000
.501 - .750	.066000	.066000	.712000	.628000
.751 - 1.000	.032000	.036000	.744000	.664000
1.001 - 1.250	.024000	.058000	.768000	.722000
1.251 - 1.500	.024000	.022000	.792000	.744000
1.501 - 1.750	.022000	.020000	.814000	.764000
1.751 - 2.000	.028000	.016000	.842000	.780000

2.001 - 3.000	.042000	.068000	.884000	.848000
3.001 - 4.000	.016000	.030000	.900000	.878000
4.001 - 5.000	.022000	.014000	.922000	.892000
5.001 - 6.000	.010000	.020000	.932000	.912000
6.001 - 7.000	.004000	.012000	.936000	.924000
7.001 - 8.000	.008000	.008000	.944000	.932000
8.001 - 9.000	.038000	.002000	.952000	.934000
9.001 - 10.000	.002000	.006000	.954000	.940000
10.001 - 11.000	.004000	.008000	.958000	.948000
11.001 - 12.000	0.000000	.006000	.958000	.954000
12.001 - 13.000	.004000	.002000	.962000	.956000
13.001 - 14.000	.002000	.002000	.964000	.958000
14.001 - 15.000	.002000	.004000	.966000	.962000
15.001 - 16.000	.002000	0.000000	.968000	.962000
16.001 - 17.000	.004000	.002000	.972000	.964000
17.001 - 18.000	0.000000	.002000	.972000	.966000
18.001 - 19.000	0.000000	.002000	.972000	.968000
19.001 - 20.000	0.000000	0.000000	.972000	.968000
20.001 - 21.000	.004000	.004000	.976000	.972000
21.001 - 22.000	.002000	0.000000	.978000	.972000
22.001 - 23.000	0.000000	0.000000	.978000	.972000
23.001 - 24.000	.004000	.004000	.982000	.976000
24.001 - 25.000	.006000	.002000	.988000	.978000
25.001 - 26.000	.002000	0.000000	.990000	.978000
26.001 - 27.000	0.000000	0.000000	.990000	.978000
27.001 - 28.000	.002000	.004000	.992000	.982000
28.001 - 29.000	0.000000	.008000	.992000	.990000
29.001 - 30.000	0.000000	0.000000	.992000	.990000
30.001 - 31.000	0.000000	0.000000	.992000	.990000
31.001 - 32.000	0.000000	.002000	.992000	.992000
32.001 - 33.000	0.000000	0.000000	.992000	.992000
33.001 - 34.000	0.000000	0.000000	.992000	.992000
34.001 - 35.000	0.000000	0.000000	.992000	.992000
35.001 - 36.000	.002000	0.000000	.994000	.992000
36.001 - 37.000	0.000000	0.000000	.994000	.992000
37.001 - 38.000	0.000000	0.000000	.994000	.992000
38.001 - 39.000	0.000000	0.000000	.994000	.992000
39.001 - 40.000	0.000000	0.000000	.994000	.992000
40.001 - 41.000	0.000000	.002000	.994000	.994000
41.001 - 42.000	.002000	0.000000	.996000	.994000
42.001 - 43.000	0.000000	0.000000	.996000	.994000
43.001 - 44.000	.004000	.006000	1.000000	1.000000

	MEAN	VARIANCE
PRESENT :	.18711668E+01	.34818429E+02
FUTURE :	.24060004E+01	.45844579E+02

***** GIBBLER GULCH WATERSHED *****

TOTAL SEASONAL RUNOFF VOLUME (AC-FT/SQ.MI.)

INTERVAL	PRESENT PDF	FUTURE PDF	PRESENT CDF	FUTURE CDF
0.000 - 0.000	.264000	.132000	.264000	.132000
.001 - .500	.358000	.388000	.622000	.520000
.501 - 1.000	.384000	.102000	.706000	.622000
1.001 - 1.500	.054000	.074000	.760000	.696000
1.501 - 2.000	.032000	.040000	.792000	.730000
2.001 - 2.500	.024000	.024000	.816000	.760000
2.501 - 3.000	.036000	.022000	.852000	.782000
3.001 - 3.500	.018000	.020000	.870000	.802000
3.501 - 4.000	.010000	.020000	.880000	.822000
4.001 - 4.500	.016000	.022000	.896000	.844000
4.501 - 5.000	.010000	.022000	.906000	.866000
5.001 - 5.500	.006000	.006000	.912000	.872000
5.501 - 6.000	.002000	.014000	.914000	.886000

6.001 - 8.000	.012000	.028000	.926000	.914000
8.001 - 10.000	.018000	.006000	.944000	.920000
10.001 - 12.000	.004000	.016000	.948000	.936000
12.001 - 14.000	.008000	.008000	.956000	.944000
14.001 - 16.000	.006000	.004000	.962000	.948000
16.001 - 18.000	.002000	.006000	.964000	.954000
18.001 - 20.000	0.000000	.008000	.964000	.962000
20.001 - 22.000	.006000	.002000	.970000	.964000
22.001 - 24.000	.006000	0.000000	.976000	.964000
24.001 - 26.000	.004000	.006000	.980000	.970000
26.001 - 28.000	.002000	0.000000	.982000	.970000
28.001 - 30.000	.002000	.006000	.984000	.976000
30.001 - 32.000	0.000000	.004000	.984000	.980000
32.001 - 34.000	.004000	0.000000	.988000	.980000
34.001 - 36.000	0.000000	.004000	.988000	.984000
36.001 - 38.000	0.000000	0.000000	.988000	.984000
38.001 - 40.000	.004000	.004000	.992000	.988000
40.001 - 42.000	0.000000	0.000000	.992000	.988000
42.001 - 44.000	.002000	0.000000	.994000	.988000
44.001 - 46.000	.002000	.002000	.996000	.990000
46.001 - 48.000	0.000000	.002000	.996000	.992000
48.001 - 50.000	0.000000	.002000	.996000	.994000
50.001 - 52.000	0.000000	0.000000	.996000	.994000
52.001 - 54.000	0.000000	.002000	.996000	.996000
54.001 - 56.000	0.000000	0.000000	.996000	.996000
56.001 - 58.000	0.000000	0.000000	.996000	.996000
58.001 - 60.000	0.000000	0.000000	.996000	.996000
60.001 - 62.000	0.000000	0.000000	.996000	.996000
62.001 - 64.000	0.000000	0.000000	.996000	.996000
64.001 - 66.000	0.000000	0.000000	.996000	.996000
66.001 - 68.000	.002000	0.000000	.998000	.996000
68.001 - 70.000	0.000000	0.000000	.998000	.996000
70.001 - 72.000	.002000	0.000000	1.000000	.996000
72.001 - 74.000	0.000000	0.000000	1.000000	.996000
74.001 - 76.000	0.000000	0.000000	1.000000	.996000
76.001 - 78.000	0.000000	.002000	1.000000	.998000
78.001 - 80.000	0.000000	0.000000	1.000000	.998000
80.001 - 82.000	0.000000	.002000	1.000000	1.000000

	MEAN	VARIANCE
PRESENT :	.23655516E+01	.50993094E+02
FUTURE :	.31779953E+01	.71871982E+02

***** GIBBLER GULCH WATERSHED *****

TOTAL SEASONAL SEDIMENT PRODUCTION (TONS/SQ.MI.)						
INTERVAL		PRESENT PDF	FUTURE PDF	PRESENT CDF	FUTURE CDF	
0.000	-	0.000	.264000	.134000	.264000	.134000
.001	-	50.000	.240000	.310000	.504000	.444000
50.001	-	100.000	.068000	.074000	.572000	.518000
100.001	-	150.000	.042000	.058000	.614000	.576000
150.001	-	200.000	.028000	.038000	.642000	.614000
200.001	-	250.000	.040000	.018000	.682000	.632000
250.001	-	300.000	.014000	.038000	.696000	.670000
300.001	-	350.000	.026000	.024000	.722000	.694000
350.001	-	400.000	.018000	.008000	.740000	.702000
400.001	-	450.000	.014000	.012000	.754000	.714000
450.001	-	500.000	.006000	.020000	.760000	.734000

500.001	-	1500.000	.128000	.130000	.888000	.864000
1500.001	-	2500.000	.030000	.048000	.918000	.912000
2500.001	-	3500.000	.022000	.010000	.940000	.922000
3500.001	-	4500.000	.008000	.020000	.948000	.942000
4500.001	-	5500.000	.010000	.006000	.958000	.948000
5500.001	-	6500.000	.004000	.008000	.962000	.956000
6500.001	-	7500.000	.002000	.006000	.964000	.962000
7500.001	-	8500.000	.002000	0.000000	.966000	.962000
8500.001	-	9500.000	.004000	.002000	.970000	.964000
9500.001	-	10500.000	.006000	.004000	.976000	.968000
10500.001	-	11500.000	.004000	.006000	.980000	.974000
11500.001	-	12500.000	.002000	.002000	.982000	.976000
12500.001	-	13500.000	.002000	.006000	.984000	.982000
13500.001	-	14500.000	.004000	.002000	.988000	.984000
14500.001	-	15500.000	0.000000	0.000000	.988000	.984000
15500.001	-	16500.000	0.000000	.004000	.988000	.988000
16500.001	-	17500.000	.002000	0.000000	.990000	.988000
17500.001	-	18500.000	.002000	0.000000	.992000	.988000
18500.001	-	19500.000	0.000000	.002000	.992000	.990000
19500.001	-	20500.000	.002000	.002000	.994000	.992000
20500.001	-	21500.000	.002000	0.000000	.996000	.992000
21500.001	-	22500.000	0.000000	.002000	.996000	.994000
22500.001	-	23500.000	0.000000	.002000	.996000	.996000
23500.001	-	24500.000	0.000000	0.000000	.996000	.996000
24500.001	-	25500.000	0.000000	0.000000	.996000	.996000
25500.001	-	26500.000	0.000000	0.000000	.996000	.996000
26500.001	-	27500.000	0.000000	0.000000	.996000	.996000
27500.001	-	28500.000	0.000000	0.000000	.996000	.996000
28500.001	-	29500.000	0.000000	0.000000	.996000	.996000
29500.001	-	30500.000	0.000000	0.000000	.996000	.996000
30500.001	-	31500.000	0.000000	0.000000	.996000	.996000
31500.001	-	32500.000	0.000000	0.000000	.996000	.996000
32500.001	-	33500.000	.002000	0.000000	.998000	.996000
33500.001	-	34500.000	0.000000	0.000000	.998000	.996000
34500.001	-	35500.000	.002000	0.000000	1.000000	.996000
35500.001	-	36500.000	0.000000	.002000	1.000000	.998000
36500.001	-	37500.000	0.000000	0.000000	1.000000	.998000
37500.001	-	38500.000	0.000000	.002000	1.000000	1.000000

	MEAN	VARIANCE
PRESENT :	.96184549E+03	.10660437E+08
FUTURE :	.11460731E+04	.13277387E+08

***** GIBBLER GULCH WATERSHED *****

ANNUAL MAXIMUM SEDIMENT EVENT (TONS/SQ.MI.)

INTERVAL	PRESENT PDF	FUTURE PDF	PRESENT CDF	FUTURE CDF
0.000 - 0.000	.264000	.134000	.264000	.134000
.001 - 50.000	.250000	.328000	.514000	.462000
50.001 - 100.000	.078000	.082000	.592000	.544000
100.001 - 150.000	.042000	.056000	.634000	.600000
150.001 - 200.000	.032000	.044000	.666000	.644000
200.001 - 250.000	.040000	.018000	.706000	.662000
250.001 - 300.000	.028000	.044000	.734000	.706000
300.001 - 350.000	.014000	.016000	.748000	.722000
350.001 - 400.000	.014000	.018000	.762000	.740000
400.001 - 450.000	.012000	.012000	.774000	.752000
450.001 - 500.000	.020000	.012000	.794000	.764000

500.001 - 1500.000	.106000	.122000	.900000	.886000
1500.001 - 2500.000	.034000	.038000	.934000	.924000
2500.001 - 3500.000	.018000	.012000	.952000	.936000
3500.001 - 4500.000	.006000	.018000	.958000	.954000
4500.001 - 5500.000	.004000	.004000	.962000	.958000
5500.001 - 6500.000	.004000	.004000	.966000	.962000
6500.001 - 7500.000	.006000	.004000	.972000	.966000
7500.001 - 8500.000	0.000000	.006000	.972000	.972000
8500.001 - 9500.000	.004000	0.000000	.976000	.972000
9500.001 - 10500.000	.002000	.004000	.978000	.976000
10500.001 - 11500.000	.012000	.002000	.990000	.978000
11500.001 - 12500.000	0.000000	.008000	.990000	.980000
12500.001 - 13500.000	.002000	.004000	.992000	.990000
13500.001 - 14500.000	0.000000	.002000	.992000	.992000
14500.001 - 15500.000	0.000000	0.000000	.992000	.992000
15500.001 - 16500.000	0.000000	0.000000	.992000	.992000
16500.001 - 17500.000	.002000	0.000000	.994000	.992000
17500.001 - 18500.000	0.000000	.002000	.994000	.994000
18500.001 - 19500.000	0.000000	0.000000	.994000	.994000
19500.001 - 20500.000	.002000	0.000000	.996000	.994000
20500.001 - 21500.000	0.000000	0.000000	.996000	.994000
21500.001 - 22500.000	0.000000	.002000	.996000	.996000
22500.001 - 23500.000	0.000000	0.000000	.996000	.996000
23500.001 - 24500.000	0.000000	0.000000	.996000	.996000
24500.001 - 25500.000	0.000000	0.000000	.996000	.996000
25500.001 - 26500.000	0.000000	0.000000	.996000	.996000
26500.001 - 27500.000	0.000000	0.000000	.996000	.996000
27500.001 - 28500.000	0.000000	0.000000	.996000	.996000
28500.001 - 29500.000	.002000	0.000000	.998000	.996000
29500.001 - 30500.000	0.000000	0.000000	.998000	.996000
30500.001 - 31500.000	0.000000	.002000	.998000	.998000
31500.001 - 32500.000	.002000	0.000000	1.000000	.998000
32500.001 - 33500.000	0.000000	0.000000	1.000000	.998000
33500.001 - 34500.000	0.000000	0.000000	1.000000	.998000
34500.001 - 35500.000	0.000000	.002000	1.000000	1.000000

	MEAN	VARIANCE
PRESENT :	.78619820E+03	.79304835E+07
FUTURE :	.91853366E+03	.94721631E+07

***** LITTLE HORSETHIEF CREEK WATERSHED *****

NSUBU	TIMEC	DUREX	CSINA	AM1	AM2	NSEA	NDAY	ELEV	ISEED
8	2.27	1.00	.15	.90	1.60	500	184	6000.	16381

DATA CARD PRECIPITATION PARAMETER VALUES:

LAM-P	K-P	LAM-I	K-I	FD1
0.0000	0.0000	0.0000	0.0000	0.0000

VG-SL	AREA	PCN1	PCN2	PCN3	FCN1	FCN2	FCN3	PCVEG	FCVEG	K	LS
FC 05	.079	85.4	94.2	98.0	85.4	94.2	98.0	.260	.260	.30	.24
SB 05	.132	42.3	62.3	79.3	42.3	62.3	79.3	.028	.028	.30	.62
SB 05	.090	43.7	63.7	80.7	43.7	63.7	80.7	.028	.028	.30	1.86
SB 11	.260	42.3	62.3	79.3	36.2	56.2	75.0	.028	.010	.31	3.06
SB 11	.539	43.7	63.7	80.7	37.5	57.5	75.5	.028	.010	.31	.76
PJ 05	.908	61.2	78.1	90.1	55.3	74.3	88.0	.057	.047	.30	17.82
J 11	.979	63.0	80.0	91.0	57.3	75.3	88.3	.057	.047	.31	17.82
J 11	1.024	63.0	80.0	91.0	63.0	80.0	91.0	.057	.057	.31	17.82

TOTAL WATERSHED AREA = 4.011 SQUARE MILES.

COMPUTED PRECIPITATION PARAMETER VALUES:

LAM-P	K-P	LAM-I	K-I	FD1
3.9155	.6531	.1330	.8611	.4100

DISPLAY PARAMETER VALUES FOR FREQUENCY DISTRIBUTION TABLES

	REGUN	REDUN	UTOEX
PEAK R.O.	1.00	.25	2.00
PEAK FLOW	4.00	.50	2.00
TOT. R.O.	2.00	.50	3.00
TOT. SED.	1000.00	50.00	.50
PEAK SED.	1000.00	50.00	.50

***** LITTLE HORSETHIEF CREEK WATERSHED *****

FREQUENCY DISTRIBUTION OF EVENT INTERARRIVAL TIMES

INTERARRIVAL (DAYS)	OCCUR- RENCES	PDF	CDF
1	7299.	.408656	.408656
2	1865.	.104417	.513073
3	1360.	.076144	.589217
4	1091.	.061083	.650300
5	933.	.052237	.702536
6	755.	.042271	.744807
7	667.	.037344	.782151
8	547.	.030525	.812776
9	442.	.024747	.837523
10	374.	.020939	.858463
11	384.	.021499	.879962
12	316.	.017692	.897654
13	239.	.013381	.911035
14	218.	.012205	.923241
15	172.	.009630	.932870
16	188.	.010526	.943396
17	145.	.008118	.951514
18	110.	.006159	.957673
19	105.	.005879	.963552
20	100.	.005599	.969151
21	51.	.002855	.972006
22	69.	.003863	.975869
23	59.	.003303	.979172
24	47.	.002631	.981804
25	46.	.002575	.984379
26	43.	.002407	.986787
27	29.	.001624	.988411
28	27.	.001512	.989922
29	26.	.001456	.991378
30	17.	.000952	.992330
31 - 32	39.	.002184	.994513
33 - 34	28.	.001568	.996081
35 - 36	15.	.000840	.996921
37 - 38	17.	.000952	.997872
39 - 40	10.	.000560	.998432
41 - 42	8.	.000448	.998880
43 - 44	6.	.000336	.999216
45 - 46	4.	.000224	.999440
47 - 48	0.	0.000000	.999440
49 - 50	2.	.000112	.999552
51 - 52	0.	0.000000	.999552
53 - 54	4.	.000224	.999776
55 - 56	1.	.000056	.999832
57 - 58	1.	.000056	.999888
59 - 60	1.	.000056	.999944
61 - 62	0.	0.000000	.999944
63 - 64	0.	0.000000	.999944
65 - 66	0.	0.000000	.999944
67 - 68	0.	0.000000	.999944
69 - 70	0.	0.000000	.999944
71 - 72	0.	0.000000	.999944
73 - 74	1.	.000056	1.000000

MEAN = 4.949

VARIANCE =

34.376

***** LITTLE HORSETHIEF CREEK WATERSHED *****

FREQUENCY DISTRIBUTION OF PRECIPITATION / EVENT

INTERVAL (INCHES)	OCCUR- RENCES	PDF	CDF
.001 - .100	7981.	.446839	.446839
.101 - .200	3969.	.222216	.669055
.201 - .300	2214.	.123957	.793013
.301 - .400	1341.	.075080	.868092
.401 - .500	845.	.047310	.915402
.501 - .600	578.	.032361	.947763
.601 - .700	334.	.018700	.966463
.701 - .800	229.	.012821	.979284
.801 - .900	141.	.007894	.987179
.901 - 1.000	73.	.004087	.991266
1.001 - 1.100	50.	.002799	.994065
1.101 - 1.200	34.	.001904	.995969
1.201 - 1.300	23.	.001288	.997257
1.301 - 1.400	14.	.000784	.998040
1.401 - 1.500	13.	.000728	.998768
1.501 - 1.600	4.	.000224	.998992
1.601 - 1.700	3.	.000168	.999160
1.701 - 1.800	3.	.000168	.999328
1.801 - 1.900	1.	.000056	.999384
1.901 - 2.000	3.	.000168	.999552
2.001 - 2.100	0.	0.000000	.999552
2.101 - 2.200	4.	.000224	.999776
2.201 - 2.300	1.	.000056	.999832
2.301 - 2.400	0.	0.000000	.999832
2.401 - 2.500	1.	.000056	.999888
2.501 - 2.600	1.	.000056	.999944
2.601 - 2.700	0.	0.000000	.999944
2.701 - 2.800	1.	.000056	1.000000

MEAN = .192

VARIANCE =

.045

***** LITTLE HORSETHIEF CREEK WATERSHED *****

FREQUENCY DISTRIBUTION OF PRECIPITATION / SEASON

INTERVAL (INCHES)	OCCUR- RENCES	PDF	CDF
2.001 - 2.500	1.	.002000	.002000
2.501 - 3.000	0.	0.000000	.002000
3.001 - 3.500	7.	.014000	.016000
3.501 - 4.000	14.	.028000	.044000
4.001 - 4.500	31.	.062000	.106000
4.501 - 5.000	36.	.072000	.178000
5.001 - 5.500	34.	.068000	.246000
5.501 - 6.000	47.	.094000	.340000
6.001 - 6.500	61.	.122000	.462000
6.501 - 7.000	52.	.104000	.566000
7.001 - 7.500	48.	.096000	.662000
7.501 - 8.000	37.	.074000	.736000
8.001 - 8.500	36.	.072000	.808000
8.501 - 9.000	33.	.066000	.874000
9.001 - 9.500	16.	.032000	.906000
9.501 - 10.000	23.	.046000	.952000
10.001 - 10.500	7.	.014000	.966000
10.501 - 11.000	6.	.012000	.978000
11.001 - 11.500	2.	.004000	.982000
11.501 - 12.000	1.	.002000	.984000
12.001 - 12.500	7.	.014000	.998000
12.501 - 13.000	0.	0.000000	.998000
13.001 - 13.500	1.	.002000	1.000000

MEAN = 6.847

VARIANCE =

3.551

***** LITTLE HORSETHIEF CREEK WATERSHED *****

ANNUAL MAXIMUM RUNOFF EVENT (AC-FT/SQ.MI.)

INTERVAL	PRESENT PDF	FUTURE PDF	PRESENT CDF	FUTURE CDF
0.000 -	0.000	0.000000	0.000000	0.000000
.001 -	.250	.610000	.610000	.626000
.251 -	.500	.106000	.716000	.768000
.501 -	.750	.050000	.766000	.828000
.751 -	1.000	.042000	.808000	.872000
1.001 -	1.250	.030000	.838000	.892000
1.251 -	1.500	.030000	.868000	.920000
1.501 -	1.750	.018000	.886000	.932000
1.751 -	2.000	.014000	.900000	.942000

2.001 -	3.000	.040000	.940000	.950000
3.001 -	4.000	.006000	.946000	.958000
4.001 -	5.000	.006000	.952000	.968000
5.001 -	6.000	.012000	.964000	.970000
6.001 -	7.000	.004000	.968000	.974000
7.001 -	8.000	.002000	.970000	.982000
8.001 -	9.000	.004000	.974000	.986000
9.001 -	10.000	.008000	.982000	.988000
10.001 -	11.000	.004000	.986000	.990000
11.001 -	12.000	0.000000	.986000	.992000
12.001 -	13.000	.002000	.988000	.992000
13.001 -	14.000	0.000000	.988000	.992000
14.001 -	15.000	.002000	.990000	.996000
15.001 -	16.000	.002000	.992000	.998000
16.001 -	17.000	0.000000	.992000	1.000000
17.001 -	18.000	.004000	.996000	1.000000
18.001 -	19.000	.004000	1.000000	1.000000

	MEAN	VARIANCE
PRESENT :	.93082212E+00	.57686726E+01
FUTURE :	.70274916E+00	.35619536E+01

***** LITTLE HORSETHIEF CREEK WATERSHED *****

ANNUAL MAXIMUM PEAK DISCHARGE (CFS/SQ.MI.)

INTERVAL	PRESENT PDF	FUTURE PDF	PRESENT CDF	FUTURE CDF
0.000 -	0.000	0.000000	0.000000	0.000000
.001 -	.500	.304000	.304000	.304000
.501 -	1.000	.268000	.572000	.588000
1.001 -	1.500	.068000	.640000	.680000
1.501 -	2.000	.052000	.692000	.732000
2.001 -	2.500	.028000	.720000	.770000
2.501 -	3.000	.020000	.740000	.802000
3.001 -	3.500	.024000	.764000	.824000
3.501 -	4.000	.010000	.774000	.840000
4.001 -	4.500	.020000	.794000	.858000
4.501 -	5.000	.022000	.816000	.876000
5.001 -	5.500	.008000	.824000	.882000
5.501 -	6.000	.014000	.838000	.890000
6.001 -	6.500	.010000	.848000	.906000
6.501 -	7.000	.012000	.860000	.916000
7.001 -	7.500	.012000	.872000	.922000
7.501 -	8.000	.008000	.880000	.928000

8.001 -	12.000	.050000	.930000	.942000
12.001 -	16.000	.012000	.942000	.952000
16.001 -	20.000	.004000	.946000	.958000
20.001 -	24.000	.006000	.952000	.968000
24.001 -	28.000	.010000	.962000	.970000
28.001 -	32.000	.006000	.968000	.972000
32.001 -	36.000	.002000	.970000	.980000
36.001 -	40.000	0.000000	.970000	.984000
40.001 -	44.000	.004000	.974000	.986000
44.001 -	48.000	.006000	.980000	.988000
48.001 -	52.000	.004000	.984000	.988000
52.001 -	56.000	.002000	.986000	.990000
56.001 -	60.000	.002000	.986000	.992000
60.001 -	64.000	0.000000	.986000	.992000
64.001 -	68.000	0.000000	.988000	.992000
68.001 -	72.000	.002000	.990000	.994000
72.001 -	76.000	.002000	.992000	.998000
76.001 -	80.000	0.000000	.992000	1.000000
80.001 -	84.000	0.000000	.992000	1.000000
84.001 -	88.000	.004000	.996000	1.000000
88.001 -	92.000	.004000	1.000000	1.000000

	MEAN	VARIANCE
PRESENT :	.45366359E+01	.13702833E+03
FUTURE :	.34250551E+01	.84610198E+02

***** LITTLE HORSETHIEF CREEK WATERSHED *****

TOTAL SEASONAL RUNOFF VOLUME (AC-FT/SQ.MI.)

INTERVAL	PRESENT PDF	FUTURE PDF	PRESENT CDF	FUTURE CDF
0.000 -	0.000	0.000000	0.000000	0.000000
.001 -	.500	.580000	.580000	.580000
.501 -	1.000	.150000	.730000	.786000
1.001 -	1.500	.084000	.814000	.858000
1.501 -	2.000	.038000	.852000	.902000
2.001 -	2.500	.032000	.884000	.928000
2.501 -	3.000	.032000	.916000	.934000
3.001 -	3.500	.012000	.928000	.946000
3.501 -	4.000	.004000	.932000	.952000
4.001 -	4.500	.010000	.942000	.954000
4.501 -	5.000	.006000	.948000	.956000
5.001 -	5.500	.004000	.952000	.960000
5.501 -	6.000	.004000	.956000	.962000

6.001 -	8.000	.006000	.962000	.970000
8.001 -	10.000	.006000	.968000	.982000
10.001 -	12.000	.010000	.978000	.986000
12.001 -	14.000	.006000	.984000	.992000
14.001 -	16.000	.006000	.990000	.994000
16.001 -	18.000	.002000	.992000	.996000
18.001 -	20.000	.002000	.994000	.996000
20.001 -	22.000	.002000	.996000	.996000
22.001 -	24.000	0.000000	.996000	.998000
24.001 -	26.000	0.000000	.996000	1.000000
26.001 -	28.000	0.000000	.996000	1.000000
28.001 -	30.000	.002000	.998000	1.000000
30.001 -	32.000	.002000	1.000000	1.000000

	MEAN	VARIANCE
PRESENT :	.13476444E+01	.97934263E+01
FUTURE :	.10641751E+01	.59820056E+01

***** LITTLE HORSETHIEF CREEK WATERSHED *****

TOTAL SEASONAL SEDIMENT PRODUCTION (TONS/SQ. MI.)

INTERVAL	PRESENT PDF	FUTURE PDF	PRESENT CDF	FUTURE CDF
0.000 - 0.000	0.000000	0.000000	0.000000	0.000000
.001 - 50.000	.636000	.694000	.636000	.694000
50.001 - 100.000	.066000	.056000	.702000	.750000
100.001 - 150.000	.026000	.040000	.728000	.790000
150.001 - 200.000	.022000	.036000	.750000	.826000
200.001 - 250.000	.016000	.010000	.766000	.836000
250.001 - 300.000	.022000	.018000	.788000	.854000
300.001 - 350.000	.020000	.012000	.808000	.866000
350.001 - 400.000	.012000	.018000	.820000	.884000
400.001 - 450.000	.068000	.014000	.888000	.698000
450.001 - 500.000	.012000	.006000	.840000	.904000

500.001 - 1500.000	.094000	.048000	.934000	.952000
1500.001 - 2500.000	.018000	.010000	.952000	.962000
2500.001 - 3500.000	.006000	.012000	.958000	.974000
3500.001 - 4500.000	.008000	.010000	.966000	.984000
4500.001 - 5500.000	.006000	.004000	.972000	.988000
5500.001 - 6500.000	.012000	.004000	.984000	.992000
6500.001 - 7500.000	.004000	0.000000	.988000	.992000
7500.001 - 8500.000	0.000000	.004000	.988000	.996000
8500.001 - 9500.000	.004000	0.000000	.992000	.996000
9500.001 - 10500.000	.002000	0.000000	.994000	.996000
10500.001 - 11500.000	.002000	.002000	.996000	.998000
11500.001 - 12500.000	0.000000	.002000	.996000	1.000000
12500.001 - 13500.000	0.000000	0.000000	.996000	1.000000
13500.001 - 14500.000	0.000000	0.000000	.996000	1.000000
14500.001 - 15500.000	.002000	0.000000	.998000	1.000000
15500.001 - 16500.000	.002000	0.000000	1.000000	1.000000

	MEAN	VARIANCE
PRESENT :	.48152736E+03	.26672789E+07
FUTURE :	.30557932E+03	.12831744E+07

***** LITTLE HORSETHIEF CREEK WATERSHED *****

ANNUAL MAXIMUM SEDIMENT EVENT (TONS/SQ.MI.)

INTERVAL	PRESENT PDF	FUTURE PDF	PRESENT CDF	FUTURE CDF
0.000 - 0.000	0.000000	0.000000	0.000000	0.000000
.001 - 50.000	.662000	.712000	.662000	.712000
50.001 - 100.000	.048000	.056000	.710000	.768000
100.001 - 150.000	.034000	.038000	.744000	.806000
150.001 - 200.000	.020000	.028000	.764000	.834000
200.001 - 250.000	.014000	.020000	.778000	.854000
250.001 - 300.000	.022000	.018000	.800000	.872000
300.001 - 350.000	.014000	.008000	.814000	.880000
350.001 - 400.000	.016000	.020000	.830000	.900000
400.001 - 450.000	.010000	.014000	.840000	.914000
450.001 - 500.000	.016000	.002000	.856000	.916000

500.001 - 1500.000	.086000	.040000	.942000	.956000
1500.001 - 2500.000	.012000	.014000	.954000	.970000
2500.001 - 3500.000	.014000	.010000	.968000	.980000
3500.001 - 4500.000	.002000	.006000	.970000	.986000
4500.001 - 5500.000	.012000	.004000	.982000	.990000
5500.001 - 6500.000	.004000	.002000	.986000	.992000
6500.001 - 7500.000	.002000	0.000000	.988000	.992000
7500.001 - 8500.000	.002000	.008000	.990000	1.000000
8500.001 - 9500.000	.002000	0.000000	.992000	1.000000
9500.001 - 10500.000	.004000	0.000000	.996000	1.000000
10500.001 - 11500.000	.004000	0.000000	1.000000	1.000000
	MEAN	VARIANCE		
PRESENT :	.40132671E+03	.17837224E+07		
FUTURE :	.25528642E+03	.87614833E+06		

***** LITTLE SALT WASH TRIBUTARY WATERSHED *****

NSUBU	TIMEC	DUREX	CSINA	AM1	AM2	NSEA	NDAY	ELEV	ISEED
3	2.57	1.00	.15	.90	1.60	500	184	5050.	24179

DATA CARD PRECIPITATION PARAMETER VALUES:

LAM-P	K-P	LAM-I	K-I	FD1
0.0000	0.0000	0.0000	0.0000	0.0000

VG-SL	AREA	PCN1	PCN2	PCN3	FCN1	FCN2	FCN3	PCVEG	FCVEG	K	LS
GW 05	.243	82.9	93.5	98.0	85.3	94.2	98.0	.114	.102	.30	.44
SB 05	2.427	47.8	67.8	83.8	47.8	67.8	83.8	.056	.040	.30	1.31
SB 05	.281	47.8	67.8	83.8	47.6	67.6	83.6	.056	.040	.30	1.31

TOTAL WATERSHED AREA = 2.951 SQUARE MILES.

COMPUTED PRECIPITATION PARAMETER VALUES:

LAM-P	K-P	LAM-I	K-I	FD1
4.2015	.5810	.1298	.9501	.4100

DISPLAY PARAMETER VALUES FOR FREQUENCY DISTRIBUTION TABLES

	REGUN	REDUN	UTDEX
PEAK R.D.	1.00	.25	2.00
PEAK FLOW	4.00	.50	1.50
TOT. R.D.	2.00	.50	3.00
TOT. SED.	200.00	25.00	1.50
PEAK SED.	200.00	25.00	1.50

***** LITTLE SALT WASH TRIBUTARY WATERSHED *****

FREQUENCY DISTRIBUTION OF EVENT INTERARRIVAL TIMES

INTERARRIVAL (DAYS)	OCCUR- RENCES	PDF	CDF
1	6889.	.415676	.415676
2	1401.	.084535	.500211
3	1109.	.066916	.567127
4	978.	.059012	.626139
5	822.	.049599	.675738
6	735.	.044349	.720087
7	646.	.038979	.759066
8	526.	.031738	.790804
9	440.	.026549	.817354
10	398.	.024015	.841368
11	341.	.020576	.861944
12	324.	.019550	.881494
13	256.	.015447	.896941
14	215.	.012973	.909914
15	181.	.010921	.920835
16	158.	.009534	.930369
17	146.	.008310	.939178
18	124.	.007482	.946660
19	115.	.006939	.953599
20	116.	.006999	.960599
21	83.	.005008	.965607
22	86.	.005189	.970796
23	64.	.003862	.974658
24	62.	.003741	.978399
25	39.	.002353	.980752
26	37.	.002233	.982984
27	34.	.002052	.985036
28	29.	.001750	.986786
29	29.	.001750	.988536
30	24.	.001448	.989984
31 - 32	40.	.002414	.992397
33 - 34	30.	.001810	.994207
35 - 36	20.	.001207	.995414
37 - 38	19.	.001146	.996561
39 - 40	18.	.001086	.997647
41 - 42	10.	.000603	.998250
43 - 44	9.	.000543	.998793
45 - 46	8.	.000483	.999276
47 - 48	0.	0.000000	.999276
49 - 50	1.	.000060	.999336
51 - 52	0.	0.000000	.999336
53 - 54	3.	.000181	.999517
55 - 56	1.	.000060	.999578
57 - 58	1.	.000060	.999638
59 - 60	1.	.000060	.999698
61 - 62	2.	.000121	.999819
63 - 64	0.	0.000000	.999819
65 - 66	1.	.000060	.999879
67 - 68	0.	0.000000	.999879
69 - 70	1.	.000060	.999940
71 - 72	1.	.000060	1.000000

MEAN = 5.313 VARIANCE = 40.408

***** LITTLE SALT WASH TRIBUTARY WATERSHED *****

FREQUENCY DISTRIBUTION OF PRECIPITATION / EVENT

INTERVAL (INCHES)	OCCUR- RENCES	PDF	CDF
.001 - .100	8302.	.500935	.500935
.101 - .200	3687.	.222470	.723406
.201 - .300	1895.	.113739	.837145
.301 - .400	1134.	.068425	.905569
.401 - .500	596.	.035962	.941531
.501 - .600	397.	.023351	.964883
.601 - .700	208.	.012551	.977433
.701 - .800	132.	.007965	.985398
.801 - .900	77.	.004646	.990044
.901 - 1.000	71.	.004284	.994328
1.001 - 1.100	30.	.001810	.996138
1.101 - 1.200	27.	.001629	.997767
1.201 - 1.300	15.	.000905	.998673
1.301 - 1.400	8.	.000483	.999155
1.401 - 1.500	6.	.000362	.999517
1.501 - 1.600	4.	.000241	.999759
1.601 - 1.700	2.	.000121	.999879
1.701 - 1.800	0.	0.000000	.999879
1.801 - 1.900	1.	.000060	.999940
1.901 - 2.000	0.	0.000000	.999940
2.001 - 2.100	1.	.000060	1.000000
MEAN =	.164	VARIANCE =	.034

***** LITTLE SALT WASH TRIBUTARY WATERSHED *****

FREQUENCY DISTRIBUTION OF PRECIPITATION / SEASON

INTERVAL (INCHES)	OCCUR- RENCES	PDF	CDF
2.001 - 2.500	4.	.008000	.008000
2.501 - 3.000	10.	.020000	.028000
3.001 - 3.500	31.	.062000	.090000
3.501 - 4.000	48.	.096000	.186000
4.001 - 4.500	52.	.104000	.290000
4.501 - 5.000	60.	.120000	.410000
5.001 - 5.500	62.	.124000	.534000
5.501 - 6.000	69.	.138000	.672000
6.001 - 6.500	42.	.084000	.756000
6.501 - 7.000	49.	.098000	.854000
7.001 - 7.500	26.	.052000	.906000
7.501 - 8.000	17.	.034000	.940000
8.001 - 8.500	13.	.026000	.966000
8.501 - 9.000	8.	.016000	.982000
9.001 - 9.500	7.	.014000	.996000
9.501 - 10.000	0.	0.000000	.996000
10.001 - 10.500	1.	.002000	.998000
10.501 - 11.000	1.	.002000	1.000000

MEAN = 5.436

VARIANCE = 2.236

***** LITTLE SALT WASH TRIBUTARY WATERSHED *****

ANNUAL MAXIMUM RUNOFF EVENT (AC-FT/SQ.MI.)

INTERVAL		PRESENT PDF	FUTURE PDF	PRESENT CDF	FUTURE CDF
0.000 -	0.000	.002000	0.000000	.002000	0.000000
.001 -	.250	.394000	.310000	.396000	.310000
.251 -	.500	.224000	.238000	.620000	.548000
.501 -	.750	.148000	.148000	.768000	.696000
.751 -	1.000	.082000	.120000	.850000	.816000
1.001 -	1.250	.048000	.052000	.898000	.868000
1.251 -	1.500	.036000	.046000	.934000	.914000
1.501 -	1.750	.018000	.028000	.952000	.942000
1.751 -	2.000	.014000	.014000	.966000	.956000

2.001 -	3.000	.022000	.032000	.988000	.988000
3.001 -	4.000	.006000	.006000	.994000	.994000
4.001 -	5.000	.002000	.002000	.996000	.996000
5.001 -	6.000	.002000	.002000	.998000	.998000
6.001 -	7.000	.002000	.002000	1.000000	1.000000
		MEAN		VARIANCE	
PRESENT :		.56055261E+00	.45585440E+00		
FUTURE :		.64633894E+00	.50517791E+00		

***** LITTLE SALT WASH TRIBUTARY WATERSHED *****

ANNUAL MAXIMUM PEAK DISCHARGE (CFS/SQ.MI.)

INTERVAL		PRESENT PDF	FUTURE PDF	PRESENT CDF	FUTURE CDF
0.000 -	0.000	.002000	0.000000	.002000	0.000000
.001 -	.500	.174000	.120000	.176000	.120000
.501 -	1.000	.174000	.158000	.350000	.278000
1.001 -	1.500	.130000	.140000	.480000	.418000
1.501 -	2.000	.094000	.098000	.574000	.516000
2.001 -	2.500	.088000	.078000	.662000	.594000
2.501 -	3.000	.062000	.074000	.724000	.668000
3.001 -	3.500	.054000	.054000	.778000	.722000
3.501 -	4.000	.050000	.050000	.828000	.772000
4.001 -	4.500	.026000	.048000	.854000	.820000
4.501 -	5.000	.022000	.026000	.876000	.846000
5.001 -	5.500	.016000	.018000	.892000	.864000
5.501 -	6.000	.024000	.018000	.916000	.882000

6.001 -	10.000	.056000	.086000	.972000	.968000
10.001 -	14.000	.016000	.020000	.988000	.988000
14.001 -	18.000	.006000	.006000	.994000	.994000
18.001 -	22.000	.002000	.002000	.996000	.996000
22.001 -	26.000	.002000	.002000	.998000	.998000
26.001 -	30.000	0.000000	0.000000	.998000	.998000
30.001 -	34.000	.002000	.002000	1.000000	1.000000

	MEAN	VARIANCE
PRESENT :	.24911940E+01	.90034402E+01
FUTURE :	.28724435E+01	.99776137E+01

***** LITTLE SALT WASH TRIBUTARY WATERSHED *****

TOTAL SEASONAL RUNOFF VOLUME (AC-FT/SQ.MI.)

INTERVAL		PRESENT PDF	FUTURE PDF	PRESENT CDF	FUTURE CDF
0.000 -	0.000	.002000	0.000000	.002000	0.000000
.001 -	.500	.418000	.306000	.420000	.306000
.501 -	1.000	.240000	.278000	.660000	.584000
1.001 -	1.500	.148000	.116000	.808000	.700000
1.501 -	2.000	.086000	.138000	.894000	.838000
2.001 -	2.500	.032000	.062000	.926000	.900000
2.501 -	3.000	.024000	.028000	.950000	.928000
3.001 -	3.500	.020000	.028000	.970000	.956000
3.501 -	4.000	.006000	.010000	.976000	.966000
4.001 -	4.500	.008000	.010000	.984000	.976000
4.501 -	5.000	.004000	.010000	.988000	.986000
5.001 -	5.500	.002000	0.000000	.990000	.986000
5.501 -	6.000	0.000000	.004000	.990000	.990000

6.001 -	8.000	.008000	.008000	.998000	.998000
8.001 -	10.000	.002000	0.000000	1.000000	.998000
10.001 -	12.000	0.000000	.002000	1.000000	1.000000

	MEAN	VARIANCE
PRESENT :	.98095996E+00	.12101496E+01
FUTURE :	.12012655E+01	.14809476E+01

***** LITTLE SALT WASH TRIBUTARY WATERSHED *****

TOTAL SEASONAL SEDIMENT PRODUCTION (TONS/SQ.MI.)

INTERVAL		PRESENT PDF	FUTURE PDF	PRESENT CDF	FUTURE CDF
0.000 -	0.000	.002000	0.000000	.002000	0.000000
.001 -	25.000	.734000	.696000	.736000	.696000
25.001 -	50.000	.186000	.214000	.922000	.910000
50.001 -	75.000	.048000	.056000	.970000	.966000
75.001 -	100.000	.018000	.020000	.988000	.986000
100.001 -	125.000	.002000	.004000	.990000	.990000
125.001 -	150.000	.004000	.006000	.994000	.996000
150.001 -	175.000	.004000	.002000	.998000	.998000
175.001 -	200.000	0.000000	.002000	.998000	1.000000
200.001 -	225.000	.002000	0.000000	1.000000	1.000000
	MEAN		VARIANCE		
PRESENT :	.19356067E+02		.57076582E+03		
FUTURE :	.21225244E+02		.54365522E+03		

***** LITTLE SALT WASH TPIBUTARY WATERSHED *****

ANNUAL MAXIMUM SEDIMENT EVENT (TONS/SQ.MI.)

INTERVAL		PRESENT PDF	FUTURE PDF	PRESENT CDF	FUTURE CDF
0.000 -	0.000	.002000	0.000000	.002000	0.000000
.001 -	25.000	.874000	.870000	.876000	.870000
25.001 -	50.000	.092000	.102000	.968000	.972000
50.001 -	75.000	.020000	.022000	.988000	.994000
75.001 -	100.000	.006000	.002000	.994000	.996000
100.001 -	125.000	.004000	.002000	.998000	.998000
125.001 -	150.000	0.000000	.002000	.998000	1.000000
150.001 -	175.000	.002000	0.000000	1.000000	1.000000
	MEAN		VARIANCE		
PRESENT :	.11711477E+02		.23603635E+03		
FUTURE :	.12137657E+02		.20045700E+03		

***** LIPAN WASH WATERSHED *****

NSUBU	TIMEC	DUREX	CSINA	AM1	AM2	NSEA	NDAY	ELFV	ISEED
8	3.23	1.00	.15	.90	1.60	500	164	5650.	17911

DATA CARD PRECIPITATION PARAMETER VALUES:
 LAM-P K-P LAM-I K-I FD1
 0.0000 0.0000 0.0000 0.0000 0.0000

VG-SL	AREA	PCN1	PCN2	PCN3	FCN1	FCN2	FCN3	PCVEG	FCVEG	K	LS
GR 05	5.814	70.0	85.0	94.0	65.8	81.6	92.0	.084	.054	.30	1.52
GR 05	.107	70.0	85.0	94.0	73.0	87.0	95.0	.084	.054	.30	7.07
SB 05	3.548	46.2	66.2	82.2	42.0	62.0	79.0	.058	.047	.30	.92
SB 05	1.908	46.2	66.2	82.2	48.3	68.2	84.0	.058	.047	.30	14.58
PJ 05	1.225	57.3	75.3	88.3	52.0	71.0	86.0	.053	.048	.30	.92
PJ 05	.816	57.3	75.3	88.3	52.0	71.0	86.0	.053	.048	.30	17.90
PJ 05	6.994	57.3	75.3	88.3	60.5	78.3	90.3	.053	.048	.30	7.95
PA 05	.124	39.4	59.4	77.4	43.5	63.5	80.5	.052	.052	.30	12.65

TOTAL WATERSHED AREA = 20.536 SQUARE MILES.

COMPUTED PRECIPITATION PARAMETER VALUES:
 LAM-P K-P LAM-I K-I FD1
 4.0781 .6355 .1317 .8902 .4100

DISPLAY PARAMETER VALUES FOR FREQUENCY DISTRIBUTION TABLES

	PEGUN	REDUN	UTDEX
PEAK R.O.	1.00	.25	2.00
PEAK FLOW	4.00	.50	1.50
TOT. R.O.	2.00	.50	3.00
TOT. SED.	1000.00	50.00	.50
PEAK SED.	1600.00	50.00	.50

***** LIPAN WASH WATERSHED *****

FREQUENCY DISTRIBUTION OF EVENT INTERARRIVAL TIMES

INTERARRIVAL (DAYS)	OCCUR- RENCES	PDF	CDF
1	7075.	.409599	.409599
2	1712.	.099114	.508713
3	1258.	.072830	.581543
4	1070.	.061946	.643490
5	784.	.045389	.688879
6	749.	.043362	.732241
7	637.	.036878	.769119
8	532.	.030800	.799919
9	473.	.027384	.827303
10	400.	.023158	.850460
11	359.	.020784	.871244
12	302.	.017484	.888728
13	244.	.014126	.902854
14	215.	.012447	.915301
15	196.	.011347	.926649
16	181.	.010479	.937127
17	124.	.007179	.944306
18	132.	.007642	.951948
19	110.	.006368	.958316
20	90.	.005210	.963527
21	92.	.005326	.968853
22	73.	.004226	.973079
23	64.	.003705	.976785
24	69.	.003995	.980779
25	37.	.002142	.982921
26	42.	.002432	.985353
27	32.	.001853	.987205
28	34.	.001968	.989174
29	30.	.001737	.990911
30	27.	.001563	.992474
31 - 32	34.	.001968	.994442
33 - 34	19.	.001100	.995542
35 - 36	22.	.001274	.996816
37 - 38	13.	.000753	.997568
39 - 40	6.	.000347	.997916
41 - 42	7.	.000405	.998321
43 - 44	7.	.000405	.998726
45 - 46	7.	.000405	.999132
47 - 48	0.	0.000000	.999132
49 - 50	7.	.000405	.999537
51 - 52	1.	.000058	.999595
53 - 54	3.	.000174	.999768
55 - 56	1.	.000058	.999826
57 - 58	1.	.000058	.999884
59 - 60	0.	0.000000	.999884
61 - 62	1.	.000058	.999942
63 - 64	0.	0.000000	.999942
65 - 66	1.	.000058	1.000000

MEAN = 5.125 VARIANCE = 37.516

***** LIPAN WASH WATERSHED *****

FREQUENCY DISTRIBUTION OF PRECIPITATION / EVENT

INTERVAL (INCHES)	OCCUR- RENCES	PDF	CDF
.001 - .100	7993.	.462745	.462745
.101 - .200	3896.	.225554	.688300
.201 - .300	2130.	.123314	.811614
.301 - .400	1203.	.069646	.881260
.401 - .500	742.	.042957	.924217
.501 - .600	478.	.027673	.951850
.601 - .700	301.	.017426	.969316
.701 - .800	178.	.010305	.979621
.801 - .900	136.	.007874	.987495
.901 - 1.000	90.	.005210	.992705
1.001 - 1.100	29.	.001679	.994384
1.101 - 1.200	35.	.002026	.996411
1.201 - 1.300	28.	.001621	.998032
1.301 - 1.400	10.	.000579	.998611
1.401 - 1.500	9.	.000521	.999132
1.501 - 1.600	4.	.000232	.999363
1.601 - 1.700	3.	.000174	.999537
1.701 - 1.800	1.	.000058	.999595
1.801 - 1.900	1.	.000058	.999653
1.901 - 2.000	3.	.000174	.999826
2.001 - 2.100	1.	.000058	.999884
2.101 - 2.200	1.	.000058	.999942
2.201 - 2.300	0.	0.000000	.999942
2.301 - 2.400	0.	0.000000	.999942
2.401 - 2.500	0.	0.000000	.999942
2.501 - 2.600	0.	0.000000	.999942
2.601 - 2.700	0.	0.000000	.999942
2.701 - 2.800	0.	0.000000	.999942
2.801 - 2.900	1.	.000058	1.000000
MEAN =	.183	VARIANCE =	.041

***** LIPAN WASH WATERSHED *****

FREQUENCY DISTRIBUTION OF PRECIPITATION / SEASON

INTERVAL (INCHES)	OCCUR- RENCES	PDF	CDF
2.001 - 2.500	3.	.006000	.006000
2.501 - 3.000	6.	.012000	.018000
3.001 - 3.500	20.	.040000	.058000
3.501 - 4.000	23.	.046000	.104000
4.001 - 4.500	27.	.054000	.158000
4.501 - 5.000	45.	.090000	.248000
5.001 - 5.500	55.	.110000	.358000
5.501 - 6.000	47.	.094000	.452000
6.001 - 6.500	53.	.106000	.558000
6.501 - 7.000	49.	.098000	.656000
7.001 - 7.500	54.	.108000	.764000
7.501 - 8.000	36.	.072000	.836000
8.001 - 8.500	24.	.048000	.884000
8.501 - 9.000	16.	.032000	.916000
9.001 - 9.500	14.	.028000	.944000
9.501 - 10.000	12.	.024000	.968000
10.001 - 10.500	7.	.014000	.982000
10.501 - 11.000	4.	.008000	.990000
11.001 - 11.500	4.	.008000	.998000
11.501 - 12.000	0.	0.000000	.998000
12.001 - 12.500	0.	0.000000	.998000
12.501 - 13.000	0.	0.000000	.998000
13.001 - 13.500	0.	0.000000	.998000
13.501 - 14.000	0.	0.000000	.998000
14.001 - 14.500	1.	.002000	1.000000
MEAN =	6.309	VARIANCE =	3.338

***** LIPAN WASH WATERSHED *****

ANNUAL MAXIMUM RUNOFF EVENT (AC-FT/SQ.MI.)

INTERVAL		PRESENT PDF	FUTURE PDF	PRESENT CDF	FUTURE CDF
0.000 -	0.000	.222000	.122000	.222000	.122000
.001 -	.250	.406000	.620000	.628000	.742000
.251 -	.500	.104000	.052000	.732000	.794000
.501 -	.750	.048000	.038000	.780000	.832000
.751 -	1.000	.038000	.030000	.818000	.862000
1.001 -	1.250	.032000	.024000	.850000	.886000
1.251 -	1.500	.030000	.010000	.880000	.896000
1.501 -	1.750	.006000	.016000	.886000	.912000
1.751 -	2.000	.014000	.012000	.900000	.924000

2.001 -	3.000	.034000	.028000	.934000	.952000
3.001 -	4.000	.026000	.012000	.960000	.964000
4.001 -	5.000	.004000	.006000	.964000	.970000
5.001 -	6.000	.008000	.010000	.972000	.980000
6.001 -	7.000	.010000	.006000	.982000	.986000
7.001 -	8.000	.004000	0.000000	.986000	.986000
8.001 -	9.000	.002000	.006000	.988000	.992000
9.001 -	10.000	.004000	0.000000	.992000	.992000
10.001 -	11.000	0.000000	0.000000	.992000	.992000
11.001 -	12.000	0.000000	0.000000	.992000	.992000
12.001 -	13.000	0.000000	.002000	.992000	.994000
13.001 -	14.000	.002000	0.000000	.994000	.994000
14.001 -	15.000	0.000000	0.000000	.994000	.994000
15.001 -	16.000	0.000000	0.000000	.994000	.994000
16.001 -	17.000	0.000000	0.000000	.994000	.994000
17.001 -	18.000	0.000000	0.000000	.994000	.994000
18.001 -	19.000	0.000000	.002000	.994000	.996000
19.001 -	20.000	.002000	0.000000	.996000	.996000
20.001 -	21.000	0.000000	0.000000	.996000	.996000
21.001 -	22.000	.002000	.004000	.998000	1.000000
22.001 -	23.000	.002000	0.000000	1.000000	1.000000

	MEAN	VARIANCE
PRESENT :	.77903537E+00	.46646315E+01
FUTURE :	.60735987E+00	.39792109E+01

***** LIPAN WASH WATERSHED *****

ANNUAL MAXIMUM PEAK DISCHARGE (CFS/SQ.MI.)

INTERVAL	PRESENT PDF	FUTURE PDF	PRESENT CDF	FUTURE CDF
0.000 - 0.000	.222000	.122000	.222000	.122000
.001 - .500	.294000	.578000	.516000	.700000
.501 - 1.000	.118000	.042000	.634000	.742000
1.001 - 1.500	.070000	.030000	.704000	.772000
1.501 - 2.000	.044000	.032000	.748000	.804000
2.001 - 2.500	.008000	.018000	.756000	.822000
2.501 - 3.000	.036000	.020000	.792000	.842000
3.001 - 3.500	.020000	.010000	.812000	.852000
3.501 - 4.000	.010000	.028000	.822000	.880000
4.001 - 4.500	.028000	.002000	.850000	.892000
4.501 - 5.000	.006000	.010000	.856000	.892000
5.001 - 5.500	.022000	.002000	.878000	.894000
5.501 - 6.000	.006000	.012000	.884000	.906000

6.001 - 10.000	.044000	.030000	.928000	.936000
10.001 - 14.000	.026000	.028000	.954000	.964000
14.001 - 18.000	.010000	.006000	.964000	.970000
18.001 - 22.000	.008000	.010000	.972000	.980000
22.001 - 26.000	.010000	.006000	.982000	.986000
26.001 - 30.000	.004000	.002000	.986000	.988000
30.001 - 34.000	.004000	.004000	.990000	.992000
34.001 - 38.000	.002000	0.000000	.992000	.992000
38.001 - 42.000	0.000000	0.000000	.992000	.992000
42.001 - 46.000	0.000000	.002000	.992000	.994000
46.001 - 50.000	.002000	0.000000	.994000	.994000
50.001 - 54.000	0.000000	0.000000	.994000	.994000
54.001 - 58.000	0.000000	0.000000	.994000	.994000
58.001 - 62.000	0.000000	0.000000	.994000	.994000
62.001 - 66.000	0.000000	0.000000	.994000	.994000
66.001 - 70.000	0.000000	.002000	.994000	.996000
70.001 - 74.000	.002000	0.000000	.996000	.996000
74.001 - 78.000	0.000000	0.000000	.996000	.996000
78.001 - 82.000	.002000	.004000	.998000	1.000000
82.001 - 86.000	.002000	0.000000	1.000000	1.000000

	MEAN	VARIANCE
PRESENT :	.28998156E+01	.64631427E+02
FUTURE :	.22607852E+01	.55134490E+02

***** LIPAN WASH WATERSHED *****

TOTAL SEASONAL RUNOFF VOLUME (AC-FT/SQ.MI.)

INTERVAL		PRESENT PDF	FUTURE PDF	PRESENT CDF	FUTURE CDF
0.000 -	0.000	.222000	.122000	.222000	.122000
.001 -	.500	.472000	.658000	.694000	.780000
.501 -	1.000	.098000	.062000	.792000	.842000
1.001 -	1.500	.044000	.032000	.836000	.874000
1.501 -	2.000	.030000	.034000	.866000	.908000
2.001 -	2.500	.032000	.018000	.898000	.926000
2.501 -	3.000	.016000	.014000	.914000	.940000
3.001 -	3.500	.018000	.014000	.932000	.954000
3.501 -	4.000	.014000	.004000	.946000	.958000
4.001 -	4.500	.006000	.002000	.952000	.960000
4.501 -	5.000	.006000	0.000000	.958000	.960000
5.001 -	5.500	.002000	.004000	.960000	.964000
5.501 -	6.000	.002000	.008000	.962000	.972000

6.001 -	8.000	.020000	.014000	.982000	.986000
8.001 -	10.000	.006000	.006000	.988000	.992000
10.001 -	12.000	.004000	0.000000	.992000	.992000
12.001 -	14.000	0.000000	0.000000	.992000	.992000
14.001 -	16.000	0.000000	0.000000	.992000	.992000
16.001 -	18.000	0.000000	0.000000	.992000	.992000
18.001 -	20.000	0.000000	.004000	.992000	.996000
20.001 -	22.000	.004000	.002000	.996000	.998000
22.001 -	24.000	.002000	0.000000	.998000	.998000
24.001 -	26.000	0.000000	0.000000	.998000	.998000
26.001 -	28.000	0.000000	.002000	.998000	1.000000
28.001 -	30.000	.002000	0.000000	1.000000	1.000000

	MEAN	VARIANCE
PRESENT :	.97280905E+00	.68068370E+01
FUTURE :	.71048085E+00	.53713796E+01

***** LIPAN WASH WATERSHED *****

TOTAL SEASONAL SEDIMENT PRODUCTION (TONS/SQ.MI.)

INTERVAL	PRESENT PDF	FUTURE PDF	PRESENT CDF	FUTURE CDF
0.000 - 0.000	.224000	.122000	.224000	.122000
.001 - 50.000	.306000	.590000	.530000	.712000
50.001 - 100.000	.092000	.032000	.622000	.744000
100.001 - 150.000	.066000	.022000	.688000	.766000
150.001 - 200.000	.032000	.026000	.720000	.792000
200.001 - 250.000	.024000	.022000	.744000	.814000
250.001 - 300.000	.024000	.010000	.768000	.824000
300.001 - 350.000	.020000	.012000	.788000	.836000
350.001 - 400.000	.006000	.006000	.794000	.842000
400.001 - 450.000	.012000	.006000	.806000	.848000
450.001 - 500.000	.014000	.004000	.820000	.852000

500.001 - 1500.000	.098000	.082000	.918000	.934000
1500.001 - 2500.000	.036000	.024000	.954000	.958000
2500.001 - 3500.000	.006000	.010000	.960000	.968000
3500.001 - 4500.000	.012000	.012000	.972000	.980000
4500.001 - 5500.000	.010000	.006000	.982000	.986000
5500.001 - 6500.000	.004000	.004000	.986000	.990000
6500.001 - 7500.000	.002000	.002000	.988000	.992000
7500.001 - 8500.000	.004000	0.000000	.992000	.992000
8500.001 - 9500.000	0.000000	0.000000	.992000	.992000
9500.001 - 10500.000	0.000000	0.000000	.992000	.992000
10500.001 - 11500.000	0.000000	0.000000	.992000	.992000
11500.001 - 12500.000	0.000000	0.000000	.992000	.992000
12500.001 - 13500.000	0.000000	0.000000	.992000	.992000
13500.001 - 14500.000	0.000000	.002000	.992000	.994000
14500.001 - 15500.000	0.000000	.002000	.992000	.996000
15500.001 - 16500.000	.002000	0.000000	.994000	.996000
16500.001 - 17500.000	0.000000	0.000000	.994000	.996000
17500.001 - 18500.000	.002000	0.000000	.996000	.996000
18500.001 - 19500.000	0.000000	0.000000	.996000	.996000
19500.001 - 20500.000	0.000000	.002000	.996000	.998000
20500.001 - 21500.000	0.000000	0.000000	.996000	.998000
21500.001 - 22500.000	.002000	0.000000	.998000	.998000
22500.001 - 23500.000	0.000000	.002000	.998000	1.000000
23500.001 - 24500.000	0.000000	0.000000	.998000	1.000000
24500.001 - 25500.000	0.000000	0.000000	.998000	1.000000
25500.001 - 26500.000	.002000	0.000000	1.000000	1.000000

	MEAN	VARIANCE
PRESENT :	.56604862E+03	.44050272E+07
FUTURE :	.44039406E+03	.33609604E+07

***** LIPAN WASH WATERSHED *****

ANNUAL MAXIMUM SEDIMENT EVENT (TONS/SQ.MI.)

INTERVAL	PRESENT PDF	FUTURE PDF	PRESENT CDF	FUTURE CDF
0.000 - 0.000	.224000	.122000	.224000	.122000
.001 - 50.000	.316000	.596000	.540000	.720000
50.001 - 100.000	.118000	.028000	.658000	.748000
100.001 - 150.000	.060000	.032000	.718000	.780000
150.001 - 200.000	.032000	.024000	.750000	.804000
200.001 - 250.000	.010000	.016000	.760000	.820000
250.001 - 300.000	.030000	.012000	.790000	.832000
300.001 - 350.000	.020000	.012000	.810000	.844000
350.001 - 400.000	.008000	.012000	.818000	.856000
400.001 - 450.000	.014000	.010000	.832000	.866000
450.001 - 500.000	.014000	.006000	.846000	.872000

500.001 - 1500.000	.084000	.066000	.930000	.938000
1500.001 - 2500.000	.030000	.026000	.960000	.964000
2500.001 - 3500.000	.006000	.008000	.966000	.972000
3500.001 - 4500.000	.010000	.008000	.976000	.980000
4500.001 - 5500.000	.008000	.006000	.984000	.986000
5500.001 - 6500.000	.002000	.006000	.986000	.992000
6500.001 - 7500.000	.006000	0.000000	.992000	.992000
7500.001 - 8500.000	0.000000	0.000000	.992000	.992000
8500.001 - 9500.000	0.000000	0.000000	.992000	.992000
9500.001 - 10500.000	0.000000	.002000	.992000	.994000
10500.001 - 11500.000	.002000	0.000000	.994000	.994000
11500.001 - 12500.000	0.000000	0.000000	.994000	.994000
12500.001 - 13500.000	0.000000	0.000000	.994000	.994000
13500.001 - 14500.000	0.000000	0.000000	.994000	.994000
14500.001 - 15500.000	0.000000	.002000	.994000	.996000
15500.001 - 16500.000	0.000000	0.000000	.994000	.996000
16500.001 - 17500.000	.002000	0.000000	.996000	.996000
17500.001 - 18500.000	0.000000	0.000000	.996000	.996000
18500.001 - 19500.000	0.000000	.002000	.996000	.998000
19500.001 - 20500.000	0.000000	.002000	.996000	1.000000
20500.001 - 21500.000	0.000000	0.000000	.996000	1.000000
21500.001 - 22500.000	.004000	0.000000	1.000000	1.000000

	MEAN	VARIANCE
PRESENT :	.48620638E+03	.35148417E+07
FUTURE :	.39236059E+03	.27452975E+07

***** NORTH DRY FORK TRIBUTARY WATERSHED *****

NSUBU	TIMEC	DUREX	CSINA	AM1	AM2	NSEA	NDAY	ELEV	ISEED
5	.78	1.00	.15	.90	1.60	500	184	6300.	26407

DATA CARD PRECIPITATION PARAMETER VALUES:
 LAM-P K-P LAM-I K-I FD1
 0.0000 0.0000 0.0000 0.0000 0.0000

VG-SL	AREA	PCN1	PCN2	PCN3	FCN1	FCN2	FCN3	PCVEG	FCVEG	K	LS
SB 05	.165	51.6	70.6	85.6	52.2	71.2	86.0	.075	.060	.30	7.07
SB 12	.022	60.7	78.3	90.3	56.5	74.8	86.0	.075	.060	.27	5.77
PJ 05	1.689	60.8	78.4	90.4	62.7	79.7	91.0	.053	.048	.30	14.58
PJ 12	.220	72.2	86.2	94.2	70.0	85.0	94.0	.053	.048	.27	8.33
W 05	.115	86.0	94.5	98.0	86.0	94.5	98.0	.010	.010	.30	14.58

TOTAL WATERSHED AREA = 2.211 SQUARE MILES.

COMPUTED PRECIPITATION PARAMETER VALUES:
 LAM-P K-P LAM-I K-I FD1
 3.7484 .6621 .1343 .8395 .4100

DISPLAY PARAMETER VALUES FOR FREQUENCY DISTRIBUTION TABLES

	REGUN	REDUN	UTOEX
PEAK R.O.	1.00	.25	2.00
PEAK FLOW	10.00	1.00	1.00
TOT. R.O.	2.00	.50	3.00
TOT. SED.	1000.00	200.00	3.00
PEAK SED.	1000.00	200.00	3.00

***** NORTH DRY FORK TRIBUTARY WATERSHED *****

FREQUENCY DISTRIBUTION OF EVENT INTERARRIVAL TIMES

INTERARRIVAL (DAYS)	OCCUR- RENCES	PDF	CDF
1	7587.	.410685	.410685
2	2071.	.112103	.522789
3	1407.	.076161	.598950
4	1158.	.062683	.661633
5	910.	.049258	.710891
6	817.	.044224	.755115
7	656.	.035509	.790625
8	591.	.031991	.822616
9	469.	.025387	.848003
10	386.	.020894	.868897
11	333.	.018025	.886922
12	291.	.015752	.902674
13	239.	.012937	.915611
14	227.	.012288	.927899
15	179.	.009689	.937588
16	179.	.009689	.947277
17	137.	.007416	.954693
18	116.	.006279	.960972
19	88.	.004763	.965736
20	87.	.004709	.970445
21	64.	.003464	.973909
22	68.	.003681	.977590
23	58.	.003140	.980730
24	62.	.003356	.984086
25	40.	.002165	.986251
26	38.	.002057	.988308
27	33.	.001786	.990094
28	27.	.001462	.991556
29	17.	.000920	.992476
30	23.	.001245	.993721
31 - 32	26.	.001407	.995128
33 - 34	17.	.000920	.996040
35 - 36	19.	.001029	.997077
37 - 38	18.	.000974	.998051
39 - 40	9.	.000487	.998538
41 - 42	5.	.000271	.998809
43 - 44	4.	.000217	.999026
45 - 46	6.	.000325	.999350
47 - 48	4.	.000217	.999567
49 - 50	4.	.000217	.999783
51 - 52	2.	.000108	.999892
53 - 54	2.	.000108	1.000000

MEAN = 4.800 VARIANCE = 33.044

***** NORTH DRY FORK TRIBUTARY WATEPSHED *****

FREQUENCY DISTRIBUTION OF PRECIPITATION / EVENT

INTERVAL (INCHES)	OCCUR- RENCES	PDF	CDF
.001 - .100	7995.	.432770	.432770
.101 - .200	4086.	.221176	.653946
.201 - .300	2405.	.130183	.784129
.301 - .400	1428.	.077298	.861427
.401 - .500	898.	.048609	.910036
.501 - .600	569.	.030800	.940836
.601 - .700	406.	.021977	.962813
.701 - .800	265.	.014344	.977157
.801 - .900	134.	.007253	.984411
.901 - 1.000	105.	.005684	.990094
1.001 - 1.100	54.	.002923	.993017
1.101 - 1.200	46.	.002490	.995507
1.201 - 1.300	39.	.002111	.997618
1.301 - 1.400	10.	.000541	.998160
1.401 - 1.500	12.	.000650	.998809
1.501 - 1.600	12.	.000650	.999459
1.601 - 1.700	3.	.000162	.999621
1.701 - 1.800	3.	.000162	.999783
1.801 - 1.900	3.	.000162	.999946
1.901 - 2.000	1.	.000054	1.000000

MEAN = .199

VARIANCE = .046

***** NORTH DRY FORK TRIBUTARY WATERSHED *****

FREQUENCY DISTRIBUTION OF PRECIPITATION / SEASON

INTERVAL (INCHES)	OCCUR- RENCES	PDF	CDF
3.501 - 4.000	5.	.010000	.010000
4.001 - 4.500	20.	.040000	.050000
4.501 - 5.000	22.	.044000	.094000
5.001 - 5.500	37.	.074000	.168000
5.501 - 6.000	46.	.092000	.260000
6.001 - 6.500	51.	.102000	.362000
6.501 - 7.000	45.	.090000	.452000
7.001 - 7.500	55.	.110000	.562000
7.501 - 8.000	50.	.130000	.662000
8.001 - 8.500	41.	.082000	.744000
8.501 - 9.000	36.	.072000	.816000
9.001 - 9.500	29.	.058000	.874000
9.501 - 10.000	20.	.040000	.914000
10.001 - 10.500	14.	.028000	.942000
10.501 - 11.000	10.	.020000	.962000
11.001 - 11.500	7.	.014000	.976000
11.501 - 12.000	5.	.010000	.986000
12.001 - 12.500	4.	.008000	.994000
12.501 - 13.000	2.	.004000	.998000
13.001 - 13.500	0.	0.000000	.998000
13.501 - 14.000	1.	.002000	1.000000

MEAN = 7.335

VARIANCE = 3.475

***** NORTH DRY FORK TRIBUTARY WATERSHED *****

ANNUAL MAXIMUM RUNOFF EVENT (AC-FT/SQ.MI.)

INTERVAL	PRESENT PDF	FUTURE PDF	PRESENT CDF	FUTURE CDF
0.000 -	0.000	0.000000	0.000000	0.000000
.001 -	.250	.192000	.192000	.208000
.251 -	.500	.230000	.238000	.446000
.501 -	.750	.136000	.128000	.574000
.751 -	1.000	.092000	.074000	.648000
1.001 -	1.250	.048000	.044000	.692000
1.251 -	1.500	.040000	.030000	.722000
1.501 -	1.750	.034000	.034000	.756000
1.751 -	2.000	.026000	.024000	.798000

2.001 -	3.000	.070000	.080000	.860000
3.001 -	4.000	.034000	.030000	.902000
4.001 -	5.000	.032000	.028000	.934000
5.001 -	6.000	.010000	.022000	.944000
6.001 -	7.000	.004000	.008000	.948000
7.001 -	8.000	.010000	.008000	.956000
8.001 -	9.000	.004000	.002000	.958000
9.001 -	10.000	.002000	.004000	.962000
10.001 -	11.000	.014000	.006000	.963000
11.001 -	12.000	.002000	.012000	.963000
12.001 -	13.000	.004000	0.000000	.984000
13.001 -	14.000	0.000000	.004000	.984000
14.001 -	15.000	0.000000	0.000000	.984000
15.001 -	16.000	0.000000	0.000000	.984000
16.001 -	17.000	.004000	.002000	.988000
17.001 -	18.000	0.000000	.002000	.988000
18.001 -	19.000	.002000	0.000000	.990000
19.001 -	20.000	0.000000	.002000	.990000
20.001 -	21.000	.002000	0.000000	.992000
21.001 -	22.000	0.000000	.002000	.992000
22.001 -	23.000	0.000000	0.000000	.992000
23.001 -	24.000	0.000000	0.000000	.992000
24.001 -	25.000	.002000	0.000000	.994000
25.001 -	26.000	.002000	.002000	.996000
26.001 -	27.000	0.000000	.002000	.996000
27.001 -	28.000	0.000000	0.000000	.996000
28.001 -	29.000	.002000	0.000000	.996000
29.001 -	30.000	0.000000	.002000	.998000
30.001 -	31.000	0.000000	0.000000	.998000
31.001 -	32.000	0.000000	0.000000	.998000
32.001 -	33.000	0.000000	0.000000	.998000
33.001 -	34.000	0.000000	0.000000	.998000
34.001 -	35.000	0.000000	0.000000	.998000
35.001 -	36.000	0.000000	0.000000	.998000
36.001 -	37.000	0.000000	0.000000	.998000
37.001 -	38.000	0.000000	0.000000	.998000
38.001 -	39.000	0.000000	0.000000	.998000
39.001 -	40.000	0.000000	0.000000	.998000
40.001 -	41.000	0.000000	0.000000	.998000
41.001 -	42.000	0.000000	0.000000	.998000
42.001 -	43.000	0.000000	0.000000	.998000
43.001 -	44.000	.002000	.002000	1.000000

	MEAN	VARIANCE
PRESENT :	.17502021E+01	.15456171E+02
FUTURE :	.18434843E+01	.17015094E+02

***** NORTH DRY FORK TRIBUTARY WATERSHED *****

ANNUAL MAXIMUM PEAK DISCHARGE (CFS/SQ.MI.)

INTERVAL	PRESENT PDF	FUTURE PDF	PRESENT CDF	FUTURE CDF
0.000 - 0.000	0.000000	0.000000	0.000000	0.000000
.001 - 1.000	.036000	.036000	.036000	.036000
1.001 - 2.000	.110000	.114000	.146000	.150000
2.001 - 3.000	.124000	.132000	.270000	.282000
3.001 - 4.000	.096000	.116000	.366000	.398000
4.001 - 5.000	.078000	.068000	.444000	.466000
5.001 - 6.000	.058000	.068000	.502000	.534000
6.001 - 7.000	.054000	.038000	.556000	.572000
7.001 - 8.000	.052000	.036000	.608000	.608000
8.001 - 9.000	.036000	.034000	.644000	.642000
9.001 - 10.000	.022000	.012000	.666000	.654000

10.001 - 20.000	.154000	.142000	.820000	.796000
20.001 - 30.000	.058000	.068000	.878000	.864000
30.001 - 40.000	.032000	.034000	.910000	.898000
40.001 - 50.000	.028000	.036000	.938000	.934000
50.001 - 60.000	.010000	.010000	.948000	.944000
60.001 - 70.000	.008000	.004000	.956000	.948000
70.001 - 80.000	.004000	.008000	.960000	.956000
80.001 - 90.000	.002000	.006000	.962000	.962000
90.001 - 100.000	.016000	.002000	.978000	.964000
100.001 - 110.000	.002000	.014000	.980000	.978000
110.001 - 120.000	0.000000	.002000	.980000	.980000
120.001 - 130.000	.004000	.004000	.984000	.984000
130.001 - 140.000	0.000000	0.000000	.984000	.984000
140.001 - 150.000	0.000000	0.000000	.984000	.984000
150.001 - 160.000	.004000	.004000	.988000	.988000
160.001 - 170.000	0.000000	0.000000	.988000	.988000
170.001 - 180.000	.002000	0.000000	.990000	.988000
180.001 - 190.000	0.000000	.002000	.990000	.990000
190.001 - 200.000	.002000	0.000000	.992000	.990000
200.001 - 210.000	0.000000	.002000	.992000	.992000
210.001 - 220.000	0.000000	0.000000	.992000	.992000
220.001 - 230.000	0.000000	0.000000	.992000	.992000
230.001 - 240.000	.004000	0.000000	.996000	.992000
240.001 - 250.000	0.000000	.004000	.996000	.996000
250.001 - 260.000	0.000000	0.000000	.996000	.996000
260.001 - 270.000	.002000	0.000000	.998000	.996000
270.001 - 280.000	0.000000	.002000	.998000	.998000
280.001 - 290.000	0.000000	0.000000	.998000	.998000
290.001 - 300.000	0.000000	0.000000	.998000	.998000
300.001 - 310.000	0.000000	0.000000	.998000	.998000
310.001 - 320.000	0.000000	0.000000	.998000	.998000
320.001 - 330.000	0.000000	0.000000	.998000	.998000
330.001 - 340.000	0.000000	0.000000	.998000	.998000
340.001 - 350.000	0.000000	0.000000	.998000	.998000
350.001 - 360.000	0.000000	0.000000	.998000	.998000
360.001 - 370.000	0.000000	0.000000	.998000	.998000
370.001 - 380.000	0.000000	0.000000	.998000	.998000
380.001 - 390.000	0.000000	0.000000	.998000	.998000
390.001 - 400.000	0.000000	0.000000	.998000	.998000
400.001 - 410.000	.002000	.002000	1.000000	1.000000

	MEAN	VARIANCE
PRESENT :	.16408155E+02	.13584542E+04
FUTURE :	.17282676E+02	.14954691E+04

***** NORTH DRY FORK TRIBUTARY WATERSHED *****

TOTAL SEASONAL RUNOFF VOLUME (AC-FT/SQ.MI.)

INTERVAL	PRESENT PDF	FUTURE PDF	PRESENT CDF	FUTURE CDF
0.000 -	0.000	0.000000	0.000000	0.000000
.001 -	.500	.118000	.118000	.124000
.501 -	1.000	.232000	.350000	.374000
1.001 -	1.500	.144000	.494000	.506000
1.501 -	2.000	.100000	.594000	.602000
2.001 -	2.500	.098000	.692000	.690000
2.501 -	3.000	.060000	.752000	.744000
3.001 -	3.500	.034000	.786000	.782000
3.501 -	4.000	.030000	.816000	.805000
4.001 -	4.500	.032000	.848000	.832000
4.501 -	5.000	.016000	.864000	.852000
5.001 -	5.500	.022000	.886000	.870000
5.501 -	6.000	.014000	.900000	.892000

6.001 -	8.000	.028000	.928000	.922000
8.001 -	10.000	.022000	.950000	.944000
10.001 -	12.000	.010000	.960000	.956000
12.001 -	14.000	.010000	.970000	.970000
14.001 -	16.000	.002000	.972000	.972000
16.001 -	18.000	.008000	.980000	.980000
18.001 -	20.000	0.000000	.980000	.980000
20.001 -	22.000	.004000	.984000	.982000
22.001 -	24.000	.004000	.988000	.984000
24.001 -	26.000	0.000000	.988000	.988000
26.001 -	28.000	.004000	.992000	.988000
28.001 -	30.000	0.000000	.992000	.992000
30.001 -	32.000	.004000	.996000	.994000
32.001 -	34.000	0.000000	.996000	.996000
34.001 -	36.000	0.000000	.996000	.996000
36.001 -	38.000	0.000000	.996000	.996000
38.001 -	40.000	0.000000	.996000	.996000
40.001 -	42.000	0.000000	.996000	.996000
42.001 -	44.000	0.000000	.996000	.996000
44.001 -	46.000	0.000000	.996000	.996000
46.001 -	48.000	.002000	.998000	.996000
48.001 -	50.000	0.000000	.998000	.998000
50.001 -	52.000	0.000000	.998000	.998000
52.001 -	54.000	0.000000	.998000	.998000
54.001 -	56.000	0.000000	.998000	.998000
56.001 -	58.000	0.000000	.998000	.998000
58.001 -	60.000	0.000000	.998000	.998000
60.001 -	62.000	0.000000	.998000	.998000
62.001 -	64.000	0.000000	.998000	.998000
64.001 -	66.000	0.000000	.998000	.998000
66.001 -	68.000	.002000	1.000000	1.000000

	MEAN	VARIANCE
PRESENT :	.29909122E+01	.27973127E+02
FUTURE :	.30896491E+01	.30876298E+02

***** NORTH DRY FORK TRIBUTARY WATERSHED *****

TOTAL SEASONAL SEDIMENT PRODUCTION (TONS/SG.MI.)

INTERVAL	PRESENT PDF	FUTURE PDF	PRESENT CDF	FUTURE CDF
0.000 - 0.000	0.000000	0.000000	0.000000	0.000000
.001 - 200.000	.736000	.720000	.736000	.720000
200.001 - 400.000	.098000	.106000	.834000	.826000
400.001 - 600.000	.056000	.048000	.890000	.874000
600.001 - 800.000	.018000	.028000	.908000	.902000
800.001 - 1000.000	.016000	.022000	.924000	.924000
1000.001 - 1200.000	.014000	.014000	.938000	.938000
1200.001 - 1400.000	.012000	.008000	.950000	.946000
1400.001 - 1600.000	.004000	.008000	.954000	.954000
1600.001 - 1800.000	.006000	.004000	.960000	.958000
1800.001 - 2000.000	.002000	.004000	.962000	.962000
2000.001 - 2200.000	.006000	.006000	.968000	.968000
2200.001 - 2400.000	.002000	.002000	.970000	.970000
2400.001 - 2600.000	0.000000	0.000000	.970000	.970000
2600.001 - 2800.000	.006000	.004000	.976000	.974000
2800.001 - 3000.000	.002000	.006000	.978000	.980000

3000.001 - 4000.000	.006000	.004000	.984000	.984000
4000.001 - 5000.000	.006000	.006000	.990000	.990000
5000.001 - 6000.000	.004000	.004000	.994000	.994000
6000.001 - 7000.000	.002000	.002000	.996000	.996000
7000.001 - 8000.000	0.000000	0.000000	.996000	.996000
8000.001 - 9000.000	0.000000	0.000000	.996000	.996000
9000.001 - 10000.000	.002000	.002000	.998000	.998000
10000.001 - 11000.000	0.000000	0.000000	.998000	.998000
11000.001 - 12000.000	0.000000	0.000000	.998000	.998000
12000.001 - 13000.000	0.000000	0.000000	.998000	.998000
13000.001 - 14000.000	0.000000	0.000000	.998000	.998000
14000.001 - 15000.000	0.000000	0.000000	.998000	.998000
15000.001 - 16000.000	0.000000	.002000	.998000	1.000000
16000.001 - 17000.000	.002000	0.000000	1.000000	1.000000

	MEAN	VARIANCE
PRESENT :	.35557279E+03	.12428748E+07
FUTURE :	.35074637E+03	.11731036E+07

***** NORTH DRY FORK TRIBUTARY WATERSHED *****

ANNUAL MAXIMUM SEDIMENT EVENT (TONS/SQ.M.I.)

INTERVAL	PRESENT PDF	FUTURE PDF	PRESENT CDF	FUTURE CDF
0.000 - 0.000	0.000000	0.000000	0.000000	0.000000
.001 - 200.000	.794000	.776000	.794000	.776000
200.001 - 400.000	.076000	.082000	.870000	.858000
400.001 - 600.000	.034000	.038000	.904000	.896000
600.001 - 800.000	.030000	.030000	.934000	.926000
800.001 - 1000.000	.012000	.018000	.946000	.944000
1000.001 - 1200.000	.004000	.004000	.950000	.948000
1200.001 - 1400.000	.004000	.006000	.954000	.954000
1400.001 - 1600.000	.008000	.008000	.962000	.962000
1600.001 - 1800.000	0.000000	0.000000	.962000	.962000
1800.001 - 2000.000	.004000	.006000	.966000	.968000
2000.001 - 2200.000	.010000	.010000	.976000	.978000
2200.001 - 2400.000	.004000	.002000	.980000	.980000
2400.001 - 2600.000	0.000000	0.000000	.980000	.980000
2600.001 - 2800.000	.004000	.004000	.984000	.984000
2800.001 - 3000.000	0.000000	0.000000	.984000	.984000

3000.001 - 4000.000	.004000	.004000	.988000	.988000
4000.001 - 5000.000	.004000	.004000	.992000	.992000
5000.001 - 6000.000	.002000	.004000	.994000	.996000
6000.001 - 7000.000	.004000	.002000	.998000	.998000
7000.001 - 8000.000	0.000000	0.000000	.998000	.998000
8000.001 - 9000.000	0.000000	0.000000	.998000	.998000
9000.001 - 10000.000	0.000000	0.000000	.998000	.998000
10000.001 - 11000.000	0.000000	0.000000	.998000	.998000
11000.001 - 12000.000	0.000000	0.000000	.998000	.998000
12000.001 - 13000.000	0.000000	0.000000	.998000	.998000
13000.001 - 14000.000	0.000000	.002000	.998000	1.000000
14000.001 - 15000.000	.002000	0.000000	1.000000	1.000000

	MEAN	VARIANCE
PRESENT :	.26815034E+03	.87942176E+06
FUTURE :	.27239178E+03	.81194013E+06

***** POLLOCK CANYON WATERSHED *****

NSUBU	TIMEC	DUREX	CSINA	AM1	AM2	NSEA	NDAY	ELEV	ISEED
5	1.96	1.00	.15	.90	1.60	500	184	5650.	21179

DATA CARD PRECIPITATION PARAMETER VALUES:
 LAM-P K-P LAM-I K-I FD1
 0.0000 0.0000 0.0000 0.0000 0.0000

VG-SL	AREA	PCN1	PCN2	PCN3	FCN1	FCN2	FCN3	PCVEG	FCVEG	K	LS
SB 09	.302	57.3	75.3	88.3	53.7	72.7	86.7	.067	.052	.27	2.55
PJ 09	4.159	68.6	64.6	93.6	65.7	81.9	92.0	.051	.045	.27	2.81
PJ 09	3.203	68.6	64.6	93.6	65.0	82.0	92.0	.051	.045	.27	2.81
W 09	.382	89.5	96.5	99.0	89.5	96.5	99.0	.010	.010	.27	1.98
W 09	.570	89.5	96.5	99.0	89.5	96.5	99.0	.010	.010	.27	12.65

TOTAL WATERSHED AREA = 3.616 SQUARE MILES.

COMPUTED PRECIPITATION PARAMETER VALUES:
 LAM-P K-P LAM-I K-I FD1
 4.0781 .6355 .1317 .8902 .4100

DISPLAY PARAMETER VALUES FOR FREQUENCY DISTRIBUTION TABLES

	REGUN	REDUN	UTDEX
PEAK R.O.	1.00	.25	2.00
PEAK FLOW	10.00	1.00	1.00
TOT. R.O.	2.00	.50	3.00
TOT. SED.	2000.00	200.00	1.00
PEAK SED.	2000.00	200.00	1.00

***** POLLOCK CANYON WATERSHED *****

FREQUENCY DISTRIBUTION OF EVENT INTERARRIVAL TIMES

INTERARRIVAL (DAYS)	OCCUR- RENCES	PDF	CDF
1	7289.	.417540	.417540
2	1691.	.096867	.514407
3	1261.	.072235	.586641
4	1039.	.059518	.646159
5	905.	.051842	.698001
6	747.	.042791	.740792
7	605.	.034657	.775448
8	530.	.030360	.805809
9	478.	.027382	.833190
10	408.	.023372	.856562
11	366.	.020966	.877528
12	267.	.015295	.892822
13	238.	.013633	.906456
14	225.	.012889	.919345
15	196.	.011228	.930572
16	181.	.010368	.940941
17	129.	.007390	.948330
18	102.	.005843	.954173
19	95.	.005442	.959615
20	102.	.005843	.965458
21	64.	.003666	.969124
22	66.	.003781	.972905
23	48.	.002750	.975654
24	54.	.003093	.978748
25	37.	.002119	.980867
26	40.	.002291	.983159
27	30.	.001719	.984877
28	32.	.001833	.986710
29	27.	.001547	.988257
30	26.	.001489	.989746
31 - 32	43.	.002463	.992209
33 - 34	30.	.001719	.993928
35 - 36	23.	.001318	.995245
37 - 38	26.	.001489	.996735
39 - 40	9.	.000516	.997250
41 - 42	8.	.000458	.997709
43 - 44	5.	.000286	.997995
45 - 46	9.	.000516	.998511
47 - 48	11.	.000630	.999141
49 - 50	1.	.000057	.999198
51 - 52	3.	.000172	.999370
53 - 54	2.	.000115	.999484
55 - 56	1.	.000057	.999542
57 - 58	3.	.000172	.999714
59 - 60	2.	.000115	.999828
61 - 62	0.	0.000000	.999828
63 - 64	1.	.000057	.999885
65 - 66	1.	.000057	.999943
67 - 68	0.	0.000000	.999943
69 - 70	0.	0.000000	.999943
71 - 72	0.	0.000000	.999943
73 - 74	0.	0.000000	.999943
75 - 76	0.	0.000000	.999943
77 - 78	0.	0.000000	.999943
79 - 80	0.	0.000000	.999943
81 - 82	0.	0.000000	.999943

85 - 84	0.	0.000000	.999943
85 - 86	0.	0.000000	.999943
87 - 8E	1.	.000057	1.000000

MEAN = 5.055 VARIANCE = 38.170

***** POLLOCK CANYON WATERSHED *****

FREQUENCY DISTRIBUTION OF PRECIPITATION / EVENT

INTERVAL (INCHES)	OCCUR- RENCES	PDF	CDF
.001 - .100	8008.	.458727	.458727
.101 - .200	3840.	.219969	.678696
.201 - .300	2294.	.131409	.810105
.301 - .400	1252.	.071719	.881824
.401 - .500	746.	.042734	.924557
.501 - .600	487.	.027897	.952455
.601 - .700	285.	.016326	.968780
.701 - .800	201.	.011514	.980294
.801 - .900	137.	.007848	.988142
.901 - 1.000	74.	.004239	.992381
1.001 - 1.100	51.	.002921	.995303
1.101 - 1.200	20.	.001146	.996448
1.201 - 1.300	28.	.001604	.998052
1.301 - 1.400	12.	.000687	.998740
1.401 - 1.500	6.	.000344	.999083
1.501 - 1.600	9.	.000516	.999599
1.601 - 1.700	2.	.000115	.999714
1.701 - 1.800	3.	.000172	.999885
1.801 - 1.900	1.	.000057	.999943
1.901 - 2.000	1.	.000057	1.000000

MEAN = .183

VARIANCE = .040

***** POLLOCK CANYON WATERSHED *****

FREQUENCY DISTRIBUTION OF PRECIPITATION / SEASON

INTERVAL (INCHES)	OCCUR- RENCES	PDF	CDF
2.001 - 2.500	6.	.012000	.012000
2.501 - 3.000	4.	.008000	.020000
3.001 - 3.500	17.	.034000	.054000
3.501 - 4.000	17.	.034000	.088000
4.001 - 4.500	24.	.048000	.136000
4.501 - 5.000	38.	.076000	.212000
5.001 - 5.500	46.	.092000	.304000
5.501 - 6.000	51.	.122000	.426000
6.001 - 6.500	55.	.130000	.556000
6.501 - 7.000	51.	.102000	.658000
7.001 - 7.500	45.	.090000	.748000
7.501 - 8.000	39.	.078000	.826000
8.001 - 8.500	27.	.054000	.880000
8.501 - 9.000	17.	.034000	.914000
9.001 - 9.500	14.	.028000	.942000
9.501 - 10.000	17.	.034000	.976000
10.001 - 10.500	3.	.006000	.982000
10.501 - 11.000	3.	.006000	.988000
11.001 - 11.500	1.	.002000	.990000
11.501 - 12.000	3.	.006000	.996000
12.001 - 12.500	1.	.002000	.998000
12.501 - 13.000	0.	0.000000	.998000
13.001 - 13.500	1.	.002000	1.000000

MEAN = 6.402

VARIANCE =

3.258

***** POLLOCK CANYON WATERSHED *****

ANNUAL MAXIMUM RUNOFF EVENT (AC-FT/SQ.MI.)

INTERVAL	PRESENT PDF	FUTURE PDF	PRESENT CDF	FUTURE CDF
0.000 -	0.000	0.000000	0.000000	0.000000
.001 -	.250	.012000	.012000	.012000
.251 -	.500	.088000	.100000	.100000
.501 -	.750	.118000	.218000	.220000
.751 -	1.000	.130000	.348000	.360000
1.001 -	1.250	.068000	.416000	.448000
1.251 -	1.500	.072000	.488000	.539000
1.501 -	1.750	.062000	.550000	.604000
1.751 -	2.000	.042000	.592000	.646000

2.001 -	3.000	.120000	.712000	.760000
3.001 -	4.000	.066000	.778000	.814000
4.001 -	5.000	.040000	.818000	.872000
5.001 -	6.000	.046000	.864000	.930000
6.001 -	7.000	.026000	.890000	.922000
7.001 -	8.000	.016000	.906000	.936000
8.001 -	9.000	.026000	.932000	.958000
9.001 -	10.000	.010000	.942000	.968000
10.001 -	11.000	.018000	.960000	.970000
11.001 -	12.000	.008000	.968000	.978000
12.001 -	13.000	.002000	.970000	.982000
13.001 -	14.000	.004000	.974000	.986000
14.001 -	15.000	.006000	.980000	.986000
15.001 -	16.000	.002000	.982000	.990000
16.001 -	17.000	.004000	.986000	.990000
17.001 -	18.000	0.000000	.986000	.990000
18.001 -	19.000	.004000	.990000	.990000
19.001 -	20.000	0.000000	.990000	.990000
20.001 -	21.000	0.000000	.990000	.990000
21.001 -	22.000	0.000000	.990000	.990000
22.001 -	23.000	0.000000	.990000	.990000
23.001 -	24.000	0.000000	.990000	.994000
24.001 -	25.000	0.000000	.990000	.994000
25.001 -	26.000	.002000	.992000	.992000
26.001 -	27.000	.002000	.994000	.996000
27.001 -	28.000	0.000000	.994000	.996000
28.001 -	29.000	0.000000	.994000	.996000
29.001 -	30.000	0.000000	.994000	.996000
30.001 -	31.000	.002000	.996000	.996000
31.001 -	32.000	0.000000	.996000	.998000
32.001 -	33.000	0.000000	.996000	.998000
33.001 -	34.000	0.000000	.996000	.998000
34.001 -	35.000	0.000000	.996000	1.000000
35.001 -	36.000	.002000	.998000	1.000000
36.001 -	37.000	0.000000	.998000	1.000000
37.001 -	38.000	0.000000	.998000	1.000000
38.001 -	39.000	0.000000	.998000	1.000000
39.001 -	40.000	.002000	1.000000	1.000000

	MEAN	VARIANCE
PRESENT :	.30655850E+01	.18219297E+02
FUTURE :	.26036023E+01	.13010845E+02

***** POLLOCK CANYON WATERSHED *****

ANNUAL MAXIMUM PEAK DISCHARGE (CFS/SQ.MI.)

INTERVAL	PRESENT PDF	FUTURE PDF	PRESENT CDF	FUTURE CDF
0.000 -	0.000	0.000000	0.000000	0.000000
.001 -	1.000	.006000	.006000	.006000
1.001 -	2.000	.038000	.044000	.044000
2.001 -	3.000	.076000	.120000	.120000
3.001 -	4.000	.090000	.210000	.212000
4.001 -	5.000	.090000	.300000	.300000
5.001 -	6.000	.086000	.386000	.390000
6.001 -	7.000	.044000	.430000	.476000
7.001 -	8.000	.056000	.486000	.534000
8.001 -	9.000	.036000	.522000	.584000
9.001 -	10.000	.036000	.558000	.616000

10.001 -	20.000	.208000	.766000	.804000
20.001 -	30.000	.078000	.844000	.888000
30.001 -	40.000	.058000	.902000	.930000
40.001 -	50.000	.032000	.934000	.962000
50.001 -	60.000	.028000	.962000	.970000
60.001 -	70.000	.008000	.970000	.982000
70.001 -	80.000	.010000	.980000	.986000
80.001 -	90.000	.006000	.986000	.990000
90.001 -	100.000	.004000	.990000	.990000
100.001 -	110.000	0.000000	.990000	.990000
110.001 -	120.000	0.000000	.992000	.992000
120.001 -	130.000	0.000000	.990000	.994000
130.001 -	140.000	.002000	.992000	.994000
140.001 -	150.000	.002000	.994000	.996000
150.001 -	160.000	0.000000	.994000	.996000
160.001 -	170.000	.002000	.996000	.996000
170.001 -	180.000	0.000000	.996000	.998000
180.001 -	190.000	0.000000	.996000	1.000000
190.001 -	200.000	.002000	.998000	1.000000
200.001 -	210.000	0.000000	.998000	1.000000
210.001 -	220.000	.002000	1.000000	1.000000
	MEAN	VARIANCE		
PRESENT :	.16599165E+02	.53416742E+03		
FUTURE :	.14097679E+02	.38146200E+03		

***** PGLLOCK CANYON WATERSHED *****

TOTAL SEASONAL RUNOFF VOLUME (AC-FT/SQ.MI.)

INTERVAL	PRESENT PDF	FUTURE PDF	PRESENT CDF	FUTURE CDF
0.000 -	0.000	0.000000	0.000000	0.000000
.001 -	.500	.014000	.014000	.014000
.501 -	1.000	.042000	.042000	.056000
1.001 -	1.500	.070000	.070000	.126000
1.501 -	2.000	.090000	.092000	.216000
2.001 -	2.500	.084000	.090000	.300000
2.501 -	3.000	.084000	.096000	.384000
3.001 -	3.500	.068000	.066000	.452000
3.501 -	4.000	.058000	.064000	.510000
4.001 -	4.500	.050000	.064000	.560000
4.501 -	5.000	.034000	.034000	.594000
5.001 -	5.500	.036000	.038000	.630000
5.501 -	6.000	.032000	.048000	.662000

6.001 -	8.000	.114000	.094000	.776000
8.001 -	10.000	.058000	.054000	.834000
10.001 -	12.000	.042000	.042000	.876000
12.001 -	14.000	.032000	.024000	.908000
14.001 -	16.000	.016000	.020000	.924000
16.001 -	18.000	.018000	.008000	.942000
18.001 -	20.000	.018000	.008000	.960000
20.001 -	22.000	.002000	.004000	.962000
22.001 -	24.000	.006000	.008000	.968000
24.001 -	26.000	.004000	.006000	.972000
26.001 -	28.000	.008000	.002000	.980000
28.001 -	30.000	.004000	.006000	.984000
30.001 -	32.000	.002000	0.000000	.986000
32.001 -	34.000	.004000	0.000000	.990000
34.001 -	36.000	.004000	0.000000	.994000
36.001 -	38.000	0.000000	.002000	.994000
38.001 -	40.000	0.000000	.002000	.994000
40.001 -	42.000	0.000000	0.000000	.994000
42.001 -	44.000	.002000	0.000000	.996000
44.001 -	46.000	.002000	0.000000	.998000
46.001 -	48.000	0.000000	0.000000	.998000
48.001 -	50.000	0.000000	0.000000	.998000
50.001 -	52.000	0.000000	0.000000	.998000
52.001 -	54.000	0.000000	.002000	.998000
54.001 -	56.000	0.000000	0.000000	.998000
56.001 -	58.000	0.000000	0.000000	.998000
58.001 -	60.000	0.000000	0.000000	.998000
60.001 -	62.000	.002000	0.000000	1.000000

	MEAN	VARIANCE
PRESENT :	.61898510E+01	.46269631E+02
FUTURE :	.55147585E+01	.32852279E+02

***** POLLOCK CANYON WATERSHED *****

TOTAL SEASONAL SEDIMENT PRODUCTION (TONS/SQ.MI.)

INTERVAL	PRESENT PDF	FUTURE PDF	PRESENT CDF	FUTURE CDF
0.000 - 0.000	0.000000	0.000000	0.000000	0.000000
.001 - 200.000	.238000	.240000	.238000	.240000
200.001 - 400.000	.266000	.292000	.504000	.532000
400.001 - 600.000	.140000	.160000	.644000	.692000
600.001 - 800.000	.098000	.100000	.742000	.792000
800.001 - 1000.000	.056000	.046000	.798000	.838000
1000.001 - 1200.000	.040000	.044000	.838000	.882000
1200.001 - 1400.000	.024000	.026000	.862000	.908000
1400.001 - 1600.000	.028000	.024000	.890000	.932000
1600.001 - 1800.000	.016000	.010000	.906000	.942000
1800.001 - 2000.000	.016000	.014000	.922000	.956000

2000.001 - 4000.000	.056000	.036000	.978000	.992000
4000.001 - 6000.000	.016000	.006000	.994000	.998000
6000.001 - 8000.000	.004000	.002000	.998000	1.000000
8000.001 - 10000.000	0.000000	0.000000	.998000	1.000000
10000.001 - 12000.000	.002000	0.000000	1.000000	1.000000

	MEAN	VARIANCE
PRESENT :	.74003248E+03	.10326757E+07
FUTURE :	.61265511E+03	.58735820E+06

***** POLLOCK CANYON WATERSHED *****

ANNUAL MAXIMUM SEDIMENT EVENT (TONS/SQ.MI.)

INTERVAL	PRESENT PDF	FUTURE PDF	PRESENT CDF	FUTURE CDF
0.000 - 0.000	0.000000	0.000000	0.000000	0.000000
.001 - 200.000	.554000	.618000	.554000	.618000
200.001 - 400.000	.186000	.182000	.740000	.800000
400.001 - 600.000	.068000	.066000	.808000	.866000
600.001 - 800.000	.052000	.038000	.860000	.904000
800.001 - 1000.000	.038000	.030000	.898000	.934000
1000.001 - 1200.000	.018000	.024000	.916000	.958000
1200.001 - 1400.000	.018000	.010000	.934000	.968000
1400.001 - 1600.000	.018000	.006000	.952000	.974000
1600.001 - 1800.000	.016000	.006000	.968000	.980000
1800.001 - 2000.000	.002000	.006000	.970000	.986000

2000.001 - 4000.000	.020000	.008000	.990000	.994000
4000.001 - 6000.000	.006000	.006000	.996000	1.000000
6000.001 - 8000.000	.004000	0.000000	1.000000	1.000000

	MEAN	VARIANCE		
PRESENT :	.41585094E+03	.51791859E+06		
FUTURE :	.32172352E+03	.28906221E+06		

***** RAPID CREEK WATERSHED *****

NSUBU	TIMEC	DUREX	CSINA	AM1	AM2	NSEA	NDAY	ELFV	ISEED
17	5.16	1.00	.15	.90	1.60	500	184	8000.	21937

DATA CARD PRECIPITATION PARAMETER VALUES:

LAM-P	K-P	LAM-I	K-I	FD1
0.0000	0.0000	0.0000	0.0000	0.0000

VG-SL	AREA	PCN1	PCN2	PCN3	FCN1	FCN2	FCN3	PCVEG	FCVEG	K	LS
SB 02	3.838	50.8	69.8	84.8	50.8	69.8	84.8	.060	.060	.29	.29
PJ 05	.903	56.5	74.8	88.0	56.5	74.8	88.0	.054	.054	.30	10.20
PJ 05	3.006	56.5	74.8	88.0	61.1	78.6	90.6	.054	.050	.30	17.90
PJ 05	.441	56.5	74.8	88.0	61.6	78.8	90.8	.054	.050	.30	17.90
PJ 05	.258	56.5	74.8	88.0	62.1	79.1	91.0	.054	.050	.20	17.90
PJ 02	3.053	56.5	74.8	88.0	56.5	74.8	88.0	.054	.054	.27	8.33
PJ 02	1.602	56.5	74.8	88.0	61.1	78.6	90.6	.054	.050	.27	8.33
PJ 02	.436	56.5	74.8	88.0	56.5	74.8	88.0	.054	.050	.27	7.07
A 02	.657	37.8	57.8	75.8	37.8	57.8	75.8	.003	.003	.31	10.20
JA 02	.709	37.8	57.8	75.8	37.8	57.8	75.8	.003	.003	.31	7.07
DA 02	.634	37.8	57.8	75.8	37.8	57.8	75.8	.003	.003	.31	7.07
DA 11	1.101	34.2	54.2	73.2	34.2	54.2	73.2	.003	.003	.35	7.07
DA 11	1.860	34.2	54.2	73.2	37.2	57.2	75.2	.003	.003	.35	17.36
BF 02	.262	35.5	55.5	74.5	35.5	55.5	74.5	.016	.016	.35	17.82
BF 02	.536	35.5	55.5	74.5	38.1	58.1	76.1	.016	.016	.35	14.58
CF 02	.193	62.6	79.6	91.0	62.6	79.6	91.0	.003	.003	.35	11.25
CF 02	1.080	62.6	79.6	91.0	60.2	76.1	90.1	.003	.003	.35	11.25

TOTAL WATERSHED AREA = 20.769 SQUARE MILES.

COMPUTED PRECIPITATION PARAMETER VALUES:

LAM-P	K-P	LAM-I	K-I	FD1
2.7884	.6687	.1445	.7791	.4100

DISPLAY PARAMETER VALUES FOR FREQUENCY DISTRIBUTION TABLES

	REGUN	PEDUN	UTDEX
PEAK R.O.	2.00	.25	2.00
PEAK FLOW	10.00	1.00	2.00
TOT. R.O.	2.00	.50	3.00
TOT. SED.	2000.00	200.00	1.00
PEAK SED.	2000.00	200.00	1.00

***** RAPID CREEK WATERSHED *****

FREQUENCY DISTRIBUTION OF EVENT INTERARRIVAL TIMES

INTERARRIVAL (DAYS)	OCCUR- RENCES	PDF	CDF
1	8487.	.417113	.417113
2	2707.	.133042	.550155
3	1691.	.083108	.633263
4	1254.	.061631	.694894
5	994.	.048852	.743746
6	843.	.041431	.785177
7	709.	.034845	.820023
8	578.	.028407	.848430
9	447.	.021969	.870399
10	383.	.018823	.889222
11	354.	.017398	.906620
12	299.	.014695	.921315
13	205.	.010075	.931390
14	217.	.010665	.942055
15	176.	.008650	.950705
16	144.	.007077	.957782
17	97.	.004767	.962550
18	113.	.005554	.968103
19	82.	.004030	.972133
20	83.	.004079	.976213
21	73.	.003588	.979800
22	67.	.003293	.983093
23	39.	.001917	.985010
24	55.	.002703	.987713
25	33.	.001622	.989335
26	29.	.001425	.990760
27	26.	.001278	.992038
28	24.	.001180	.993218
29	20.	.000983	.994201
30	17.	.000836	.995036
31 - 32	22.	.001081	.996117
33 - 34	19.	.000934	.997051
35 - 36	16.	.000786	.997838
37 - 38	11.	.000541	.998378
39 - 40	9.	.000442	.998820
41 - 42	5.	.000246	.999066
43 - 44	6.	.000295	.999361
45 - 46	1.	.000049	.999410
47 - 48	4.	.000197	.999607
49 - 50	1.	.000049	.999656
51 - 52	1.	.000049	.999705
53 - 54	2.	.000098	.999803
55 - 56	0.	0.000000	.999803
57 - 58	0.	0.000000	.999803
59 - 60	1.	.000049	.999853
61 - 62	1.	.000049	.999902
63 - 64	1.	.000049	.999951
65 - 66	0.	0.000000	.999951
67 - 68	0.	0.000000	.999951
69 - 70	0.	0.000000	.999951
71 - 72	0.	0.000000	.999951
73 - 74	0.	0.000000	.999951
75 - 76	0.	0.000000	.999951
77 - 78	0.	0.000000	.999951
79 - 80	0.	0.000000	.999951
81 - 82	1.	.000049	1.000000

MEAN = 4.385

VARIANCE = 28.465

***** RAPID CREEK WATERSHED *****

FREQUENCY DISTRIBUTION OF PRECIPITATION / EVENT

INTERVAL (INCHES)	OCCUR- RENCES	PDF	CDF
.001 - .100	7318.	.359660	.359660
.101 - .200	4148.	.203863	.563523
.201 - .300	2617.	.128618	.692141
.301 - .400	1774.	.087187	.779329
.401 - .500	1166.	.057306	.836634
.501 - .600	935.	.045953	.882587
.601 - .700	629.	.030914	.913501
.701 - .800	456.	.022411	.935912
.801 - .900	350.	.017202	.953113
.901 - 1.000	227.	.011156	.964270
1.001 - 1.100	178.	.008748	.973018
1.101 - 1.200	136.	.006684	.979702
1.201 - 1.300	88.	.004325	.984027
1.301 - 1.400	83.	.004079	.988106
1.401 - 1.500	59.	.002900	.991006
1.501 - 1.600	39.	.001917	.992923
1.601 - 1.700	34.	.001671	.994594
1.701 - 1.800	33.	.001622	.996216
1.801 - 1.900	20.	.000983	.997199
1.901 - 2.000	15.	.000737	.997936
2.001 - 2.100	12.	.000590	.998526
2.101 - 2.200	11.	.000541	.999066
2.201 - 2.300	5.	.000246	.999312
2.301 - 2.400	5.	.000246	.999558
2.401 - 2.500	3.	.000147	.999705
2.501 - 2.600	4.	.000197	.999902
2.601 - 2.700	0.	0.000000	.999902
2.701 - 2.800	0.	0.000000	.999902
2.801 - 2.900	0.	0.000000	.999902
2.901 - 3.000	0.	0.000000	.999902
3.001 - 3.100	0.	0.000000	.999902
3.101 - 3.200	0.	0.000000	.999902
3.201 - 3.300	0.	0.000000	.999902
3.301 - 3.400	1.	.000049	.999951
3.401 - 3.500	1.	.000049	1.000000
MEAN =	.270	VARIANCE =	.094

***** RAPID CREEK WATERSHED *****

FREQUENCY DISTRIBUTION OF PRECIPITATION / SEASON

INTERVAL (INCHES)	OCCUR- RENCES	PDF	CDF
4.001 - 4.500	1.	.002000	.002000
4.501 - 5.000	3.	.006000	.008000
5.001 - 5.500	3.	.006000	.014000
5.501 - 6.000	5.	.010000	.024000
6.001 - 6.500	9.	.018000	.042000
6.501 - 7.000	16.	.032000	.074000
7.001 - 7.500	15.	.030000	.104000
7.501 - 8.000	21.	.042000	.146000
8.001 - 8.500	19.	.038000	.184000
8.501 - 9.000	28.	.056000	.240000
9.001 - 9.500	37.	.074000	.314000
9.501 - 10.000	36.	.072000	.386000
10.001 - 10.500	28.	.056000	.442000
10.501 - 11.000	36.	.072000	.514000
11.001 - 11.500	39.	.078000	.592000
11.501 - 12.000	36.	.072000	.664000
12.001 - 12.500	24.	.048000	.712000
12.501 - 13.000	31.	.062000	.774000
13.001 - 13.500	19.	.038000	.812000
13.501 - 14.000	27.	.054000	.866000
14.001 - 14.500	13.	.026000	.892000
14.501 - 15.000	12.	.024000	.916000
15.001 - 15.500	13.	.026000	.942000
15.501 - 16.000	4.	.008000	.950000
16.001 - 16.500	6.	.012000	.962000
16.501 - 17.000	3.	.006000	.968000
17.001 - 17.500	8.	.016000	.984000
17.501 - 18.000	4.	.008000	.992000
18.001 - 18.500	1.	.002000	.994000
18.501 - 19.000	0.	0.000000	.994000
19.001 - 19.500	2.	.004000	.998000
19.501 - 20.000	0.	0.000000	.998000
20.001 - 20.500	0.	0.000000	.998000
20.501 - 21.000	1.	.002000	1.000000

MEAN = 10.997

VARIANCE = 7.806

***** RAPID CREEK WATERSHED *****

ANNUAL MAXIMUM RUNOFF EVENT (AC-FT/SQ.M.I.)

INTERVAL	PRESENT PDF	FUTURE PDF	PRESENT CDF	FUTURE CDF
0.000 - 0.000	.108000	.108000	.108000	.108000
.001 - .250	.294000	.212000	.402000	.320000
.251 - .500	.072000	.088000	.474000	.408000
.501 - .750	.036000	.062000	.510000	.470000
.751 - 1.000	.046000	.024000	.556000	.494000
1.001 - 1.250	.020000	.040000	.576000	.534000
1.251 - 1.500	.036000	.030000	.612000	.564000
1.501 - 1.750	.018000	.014000	.630000	.578000
1.751 - 2.000	.016000	.036000	.646000	.614000
2.001 - 2.250	.010000	.020000	.656000	.634000
2.251 - 2.500	.024000	.008000	.680000	.642000
2.501 - 2.750	.022000	.012000	.702000	.654000
2.751 - 3.000	.018000	.014000	.720000	.668000
3.001 - 3.250	.012000	.024000	.732000	.692000
3.251 - 3.500	.016000	.012000	.748000	.704000
3.501 - 3.750	.008000	.020000	.756000	.724000
3.751 - 4.000	.022000	.010000	.778000	.734000

4.001 - 6.000	.070000	.090000	.848000	.824000
6.001 - 8.000	.044000	.048000	.892000	.872000
8.001 - 10.000	.042000	.040000	.934000	.912000
10.001 - 12.000	.010000	.026000	.944000	.938000
12.001 - 14.000	.012000	.014000	.956000	.952000
14.001 - 16.000	.006000	.004000	.962000	.956000
16.001 - 18.000	.006000	.006000	.968000	.962000
18.001 - 20.000	.004000	.006000	.972000	.968000
20.001 - 22.000	.006000	.004000	.978000	.972000
22.001 - 24.000	.002000	.006000	.980000	.978000
24.001 - 26.000	.008000	.002000	.988000	.980000
26.001 - 28.000	0.000000	.008000	.988000	.988000
28.001 - 30.000	.004000	0.000000	.992000	.988000
30.001 - 32.000	.002000	.004000	.994000	.992000
32.001 - 34.000	.002000	.002000	.996000	.994000
34.001 - 36.000	0.000000	.002000	.996000	.996000
36.001 - 38.000	0.000000	0.000000	.996000	.996000
38.001 - 40.000	0.000000	0.000000	.996000	.996000
40.001 - 42.000	.002000	0.000000	.998000	.996000
42.001 - 44.000	0.000000	.002000	.998000	.998000
44.001 - 46.000	0.000000	0.000000	.998000	.998000
46.001 - 48.000	0.000000	0.000000	.998000	.998000
48.001 - 50.000	0.000000	0.000000	.998000	.998000
50.001 - 52.000	0.000000	0.000000	.998000	.998000
52.001 - 54.000	0.000000	0.000000	.998000	.998000
54.001 - 56.000	.002000	0.000000	1.000000	.998000
56.001 - 58.000	0.000000	0.000000	1.000000	.998000
58.001 - 60.000	0.000000	.002000	1.000000	1.000000

	MEAN	VARIANCE
PRESENT :	.29872403E+01	.32884499E+02
FUTURE :	.34661619E+01	.38452915E+02

***** RAPID CREEK WATERSHED *****

ANNUAL MAXIMUM PEAK DISCHARGE (CFS/SQ.MI.)

INTERVAL	PRESENT PDF	FUTURE PDF	PRESENT CDF	FUTURE CDF
0.000 - 0.000	.108000	.108000	.108000	.108000
.001 - 1.000	.328000	.272000	.436000	.380000
1.001 - 2.000	.086000	.094000	.522000	.474000
2.001 - 3.000	.052000	.056000	.574000	.530000
3.001 - 4.000	.048000	.042000	.622000	.572000
4.001 - 5.000	.022000	.040000	.644000	.612000
5.001 - 6.000	.024000	.026000	.668000	.638000
6.001 - 7.000	.034000	.016000	.702000	.654000
7.001 - 8.000	.026000	.036000	.728000	.690000
8.001 - 9.000	.020000	.016000	.748000	.706000
9.001 - 10.000	.028000	.028000	.776000	.734000
10.001 - 11.000	.014000	.020000	.790000	.754000
11.001 - 12.000	.022000	.022000	.812000	.776000
12.001 - 13.000	.014000	.012000	.826000	.788000
13.001 - 14.000	.012000	.022000	.838000	.810000
14.001 - 15.000	.008000	.012000	.846000	.822000
15.001 - 16.000	.012000	.014000	.858000	.836000
16.001 - 17.000	.004000	.008000	.862000	.844000
17.001 - 18.000	.016000	.004000	.878000	.848000
18.001 - 19.000	.006000	.012000	.884000	.850000
19.001 - 20.000	.008000	.010000	.892000	.870000

20.001 - 30.000	.052000	.068000	.944000	.938000
30.001 - 40.000	.018000	.018000	.962000	.956000
40.001 - 50.000	.010000	.012000	.972000	.968000
50.001 - 60.000	.008000	.010000	.980000	.978000
60.001 - 70.000	.008000	.008000	.988000	.986000
70.001 - 80.000	.006000	.004000	.994000	.990000
80.001 - 90.000	.002000	.006000	.996000	.996000
90.001 - 100.000	0.000000	0.000000	.996000	.996000
100.001 - 110.000	.002000	.002000	.998000	.998000
110.001 - 120.000	0.000000	0.000000	.998000	.998000
120.001 - 130.000	0.000000	0.000000	.998000	.998000
130.001 - 140.000	.002000	0.000000	1.000000	.998000
140.001 - 150.000	0.000000	.002000	1.000000	1.000000

	MEAN	VARIANCE
PRESENT :	.75387159E+01	.20943327E+03
FUTURE :	.87473411E+01	.24489714E+03

***** RAPID CREEK WATERSHED *****

ANNUAL MAXIMUM SEDIMENT EVENT (TONS/SQ.MI.)

INTERVAL	PRESENT PDF	FUTURE PDF	PRESENT CDF	FUTURE CDF
0.000 - 0.000	.108000	.110000	.108000	.110000
.001 - 200.000	.294000	.174000	.402000	.284000
200.001 - 400.000	.038000	.056000	.440000	.340000
400.001 - 600.000	.046000	.046000	.486000	.386000
600.001 - 800.000	.018000	.032000	.504000	.418000
800.001 - 1000.000	.032000	.034000	.536000	.452000
1000.001 - 1200.000	.022000	.022000	.558000	.474000
1200.001 - 1400.000	.012000	.018000	.570000	.492000
1400.001 - 1600.000	.014000	.010000	.584000	.502000
1600.001 - 1800.000	.028000	.026000	.612000	.528000
1800.001 - 2000.000	.012000	.018000	.624000	.546000

2000.001 - 4000.000	.096000	.102000	.720000	.648000
4000.001 - 6000.000	.070000	.082000	.790000	.730000
6000.001 - 8000.000	.054000	.066000	.844000	.796000
8000.001 - 10000.000	.036000	.042000	.880000	.838000
10000.001 - 12000.000	.024000	.034000	.904000	.872000
12000.001 - 14000.000	.028000	.026000	.932000	.898000
14000.001 - 16000.000	.008000	.030000	.940000	.928000
16000.001 - 18000.000	.012000	.010000	.952000	.938000
18000.001 - 20000.000	.004000	.008000	.956000	.946000
20000.001 - 22000.000	.004000	.010000	.960000	.956000
22000.001 - 24000.000	.002000	0.000000	.962000	.956000
24000.001 - 26000.000	.006000	.004000	.968000	.960000
26000.001 - 28000.000	.002000	.004000	.970000	.964000
28000.001 - 30000.000	.002000	.004000	.972000	.968000
30000.001 - 32000.000	.004000	.004000	.976000	.972000
32000.001 - 34000.000	.004000	.002000	.980000	.974000
34000.001 - 36000.000	.002000	.002000	.982000	.976000
36000.001 - 38000.000	.006000	.002000	.988000	.978000
38000.001 - 40000.000	0.000000	.004000	.988000	.982000
40000.001 - 42000.000	.002000	.004000	.990000	.986000
42000.001 - 44000.000	0.000000	.002000	.990000	.988000
44000.001 - 46000.000	.002000	.002000	.992000	.990000
46000.001 - 48000.000	.002000	0.000000	.994000	.990000
48000.001 - 50000.000	.002000	.002000	.996000	.992000
50000.001 - 52000.000	0.000000	.002000	.996000	.994000
52000.001 - 54000.000	0.000000	.002000	.996000	.996000
54000.001 - 56000.000	0.000000	0.000000	.996000	.996000
56000.001 - 58000.000	0.000000	0.000000	.996000	.996000
58000.001 - 60000.000	.002000	0.000000	.998000	.996000
60000.001 - 62000.000	0.000000	0.000000	.998000	.996000
62000.001 - 64000.000	0.000000	.002000	.998000	.998000
64000.001 - 66000.000	0.000000	0.000000	.998000	.998000
66000.001 - 68000.000	0.000000	0.000000	.998000	.998000
68000.001 - 70000.000	0.000000	0.000000	.998000	.998000
70000.001 - 72000.000	0.000000	0.000000	.998000	.998000
72000.001 - 74000.000	0.000000	0.000000	.998000	.998000
74000.001 - 76000.000	0.000000	0.000000	.998000	.998000
76000.001 - 78000.000	0.000000	0.000000	.998000	.998000
78000.001 - 80000.000	0.000000	0.000000	.998000	.998000
80000.001 - 82000.000	.002000	.002000	1.000000	1.000000

	MEAN	VARIANCE
PRESENT :	.41678379E+04	.72821357E+08
FUTURE :	.52441607E+04	.89905630E+08

***** WINDY CREEK WATERSHED *****

NSUBU	TIMEC	DUREX	CSINA	AM1	AM2	NSEA	NDAY	ELEV	ISEED
6	2.50	1.00	.15	.90	1.60	500	184	6100.	13789

DATA CARD PRECIPITATION PARAMETER VALUES:

LAM-P	K-P	LAM-I	K-I	FD1
0.0000	0.0000	0.0000	0.0000	0.0000

VG-SL	AREA	PCN1	PCN2	PCN3	FCN1	FCN2	FCN3	PCVEG	FCVEG	K	LS
SL 08	2.146	83.9	93.5	98.0	87.1	95.1	98.1	.075	.090	.23	.92
SL 08	.183	87.5	95.5	98.5	87.1	95.1	98.1	.075	.090	.23	1.65
GR 05	.416	75.3	88.3	95.3	76.7	89.4	96.0	.100	.096	.30	2.74
GR 08	.356	75.3	88.3	95.3	75.3	88.3	95.3	.100	.096	.23	1.50
PJ 02	.379	58.2	76.2	89.0	61.4	78.7	90.7	.057	.054	.35	20.04
PJ 05	1.289	69.3	84.2	93.2	67.7	83.7	93.0	.057	.054	.30	8.16

TOTAL WATERSHED AREA = 4.769 SQUARE MILES.

COMPUTED PRECIPITATION PARAMETER VALUES:

LAM-P	K-P	LAM-I	K-I	FD1
3.8618	.6566	.1334	.8535	.4100

DISPLAY PARAMETER VALUES FOR FREQUENCY DISTRIBUTION TABLES

	REGUN	REDUN	UTDEX
PEAK R.O.	2.00	.50	5.00
PEAK FLOW	10.00	2.00	2.00
TOT. R.O.	10.00	1.00	2.00
TOT. SED.	500.00	50.00	1.00
PEAK SED.	500.00	50.00	1.00

***** WINDY CREEK WATERSHED *****

FREQUENCY DISTRIBUTION OF EVENT INTERARRIVAL TIMES

INTERARRIVAL (DAYS)	OCCUR- RENCES	PDF	CDF
1	7735.	.417724	.417724
2	1998.	.107901	.525625
3	1384.	.074742	.600367
4	1165.	.062915	.663282
5	942.	.050872	.714155
6	749.	.040449	.754604
7	636.	.034347	.788951
8	562.	.030350	.819301
9	464.	.025058	.844359
10	410.	.022142	.866501
11	365.	.019712	.886213
12	303.	.016363	.902576
13	250.	.013501	.916077
14	233.	.012583	.928660
15	215.	.011611	.940271
16	155.	.008371	.948642
17	131.	.007075	.955716
18	120.	.006481	.962197
19	98.	.005292	.967489
20	78.	.004212	.971702
21	62.	.003348	.975050
22	60.	.003240	.978290
23	51.	.002754	.981044
24	52.	.002808	.983853
25	49.	.002646	.986499
26	40.	.002160	.988659
27	29.	.001566	.990225
28	24.	.001296	.991521
29	30.	.001620	.993141
30	15.	.000810	.993952
31 - 32	28.	.001512	.995464
33 - 34	19.	.001026	.996490
35 - 36	18.	.000972	.997462
37 - 38	10.	.000540	.998002
39 - 40	10.	.000540	.998542
41 - 42	9.	.000486	.999028
43 - 44	5.	.000270	.999298
45 - 46	4.	.000216	.999514
47 - 48	2.	.000108	.999622
49 - 50	0.	0.000000	.999622
51 - 52	2.	.000108	.999730
53 - 54	1.	.000054	.999784
55 - 56	1.	.000054	.999838
57 - 58	1.	.000054	.999892
59 - 60	1.	.000054	.999946
61 - 62	1.	.000054	1.000000

MEAN = 4.781 VARIANCE = 32.765

***** WINDY CREEK WATERSHED *****

FREQUENCY DISTRIBUTION OF PRECIPITATION / EVENT

INTERVAL (INCHES)	OCCUR- RENCES	PDF	CDF
.001 - .100	8142.	.439704	.439704
.101 - .200	4143.	.223740	.663444
.201 - .300	2352.	.127018	.790463
.301 - .400	1444.	.077982	.868445
.401 - .500	887.	.047902	.916347
.501 - .600	544.	.029378	.945726
.601 - .700	346.	.018686	.964411
.701 - .800	214.	.011557	.975968
.801 - .900	165.	.008911	.984879
.901 - 1.000	101.	.005454	.990333
1.001 - 1.100	57.	.003078	.993411
1.101 - 1.200	39.	.002106	.995518
1.201 - 1.300	24.	.001296	.996814
1.301 - 1.400	16.	.000864	.997678
1.401 - 1.500	17.	.000918	.998596
1.501 - 1.600	10.	.000540	.999136
1.601 - 1.700	4.	.000216	.999352
1.701 - 1.800	3.	.000162	.999514
1.801 - 1.900	4.	.000216	.999730
1.901 - 2.000	2.	.000108	.999838
2.001 - 2.100	2.	.000108	.999946
2.101 - 2.200	1.	.000054	1.000000
MEAN =	.194	VARIANCE =	.045

***** WINDY CREEK WATERSHED *****

FREQUENCY DISTRIBUTION OF PRECIPITATION / SEASON

INTERVAL (INCHES)	OCCUR- RENCES	PDF	CDF
2.001 - 2.500	1.	.002000	.002000
2.501 - 3.000	2.	.004000	.006000
3.001 - 3.500	4.	.008000	.014000
3.501 - 4.000	11.	.022000	.036000
4.001 - 4.500	19.	.038000	.074000
4.501 - 5.000	26.	.052000	.126000
5.001 - 5.500	28.	.056000	.182000
5.501 - 6.000	44.	.088000	.270000
6.001 - 6.500	59.	.118000	.388000
6.501 - 7.000	56.	.112000	.500000
7.001 - 7.500	48.	.096000	.596000
7.501 - 8.000	51.	.102000	.698000
8.001 - 8.500	39.	.078000	.776000
8.501 - 9.000	29.	.058000	.834000
9.001 - 9.500	24.	.048000	.882000
9.501 - 10.000	16.	.032000	.914000
10.001 - 10.500	12.	.024000	.938000
10.501 - 11.000	8.	.016000	.954000
11.001 - 11.500	8.	.016000	.970000
11.501 - 12.000	7.	.014000	.984000
12.001 - 12.500	6.	.012000	.996000
12.501 - 13.000	0.	0.000000	.996000
13.001 - 13.500	1.	.002000	.998000
13.501 - 14.000	0.	0.000000	.998000
14.001 - 14.500	0.	0.000000	.998000
14.501 - 15.000	0.	0.000000	.998000
15.001 - 15.500	1.	.002000	1.000000
MEAN =	7.202	VARIANCE =	3.840

***** WINDY CREEK WATERSHED *****

ANNUAL MAXIMUM RUNOFF EVENT (AC-FT/SQ.MI.)

INTERVAL	PRESENT PDF	FUTURE PDF	PRESENT CDF	FUTURE CDF
0.000 -	0.000	0.000000	0.000000	0.000000
.001 -	.500	.036000	.010000	.036000
.501 -	1.000	.062000	.028000	.098000
1.001 -	1.500	.058000	.050000	.088000
1.501 -	2.000	.080000	.036000	.236000
2.001 -	2.500	.066000	.048000	.302000
2.501 -	3.000	.056000	.062000	.358000
3.001 -	3.500	.038000	.066000	.396000
3.501 -	4.000	.072000	.044000	.468000
4.001 -	4.500	.056000	.034000	.524000
4.501 -	5.000	.034000	.038000	.558000
5.001 -	5.500	.044000	.064000	.602000
5.501 -	6.000	.028000	.044000	.630000
6.001 -	6.500	.024000	.030000	.654000
6.501 -	7.000	.022000	.032000	.676000
7.001 -	7.500	.038000	.040000	.714000
7.501 -	8.000	.024000	.026000	.738000
8.001 -	8.500	.012000	.016000	.750000
8.501 -	9.000	.020000	.016000	.770000
9.001 -	9.500	.014000	.036000	.784000
9.501 -	10.000	.014000	.018000	.798000

10.001 -	12.000	.044000	.058000	.842000
12.001 -	14.000	.038000	.042000	.880000
14.001 -	16.000	.044000	.044000	.924000
16.001 -	18.000	.022000	.030000	.946000
18.001 -	20.000	.014000	.028000	.960000
20.001 -	22.000	.002000	.018000	.962000
22.001 -	24.000	.008000	.002000	.970000
24.001 -	26.000	.006000	.006000	.976000
26.001 -	28.000	.006000	.004000	.982000
28.001 -	30.000	.004000	.008000	.986000
30.001 -	32.000	.004000	.006000	.990000
32.001 -	34.000	.006000	.004000	.996000
34.001 -	36.000	0.000000	.004000	.996000
36.001 -	38.000	.002000	.004000	.998000
38.001 -	40.000	0.000000	.002000	.998000
40.001 -	42.000	0.000000	0.000000	.998000
42.001 -	44.000	.002000	0.000000	1.000000
44.001 -	46.000	0.000000	.002000	1.000000

	MEAN	VARIANCE
PRESENT :	.64722039E+01	.41631263E+02
FUTURE :	.79629401E+01	.49378815E+02

***** WINDY CREEK WATERSHED *****

ANNUAL MAXIMUM PEAK DISCHARGE (CFS/SQ.MI.)

INTERVAL	PRESENT PDF	FUTURE PDF	PRESENT CDF	FUTURE CDF
0.000 -	0.000	0.000000	0.000000	0.000000
.001 -	2.000	.030000	.030000	.006000
2.001 -	4.000	.064000	.024000	.030000
4.001 -	6.000	.044000	.036000	.066000
6.001 -	8.000	.058000	.038000	.104000
8.001 -	10.000	.072000	.036000	.140000
10.001 -	12.000	.052000	.044000	.184000
12.001 -	14.000	.042000	.064000	.248000
14.001 -	16.000	.040000	.054000	.302000
16.001 -	18.000	.064000	.040000	.342000
18.001 -	20.000	.050000	.030000	.372000

20.001 -	30.000	.144000	.188000	.560000
30.001 -	40.000	.096000	.118000	.678000
40.001 -	50.000	.056000	.092000	.770000
50.001 -	60.000	.052000	.042000	.812000
60.001 -	70.000	.044000	.058000	.870000
70.001 -	80.000	.038000	.038000	.908000
80.001 -	90.000	.014000	.032000	.940000
90.001 -	100.000	.002000	.018000	.958000
100.001 -	110.000	.008000	.002000	.970000
110.001 -	120.000	.006000	.006000	.966000
120.001 -	130.000	.008000	.008000	.974000
130.001 -	140.000	.004000	.008000	.982000
140.001 -	150.000	.004000	.006000	.988000
150.001 -	160.000	.004000	.004000	.992000
160.001 -	170.000	.002000	.002000	.998000
170.001 -	180.000	0.000000	.004000	.998000
180.001 -	190.000	0.000000	0.000000	.998000
190.001 -	200.000	.002000	0.000000	1.000000
200.001 -	210.000	0.000000	.002000	1.000000

	MEAN	VARIANCE
PRESENT :	.29367644E+02	.85714324E+03
FUTURE :	.36131863E+02	.10166571E+04

***** WINDY CREEK WATERSHED *****

TOTAL SEASONAL RUNOFF VOLUME (AC-FT/SQ.MI.)

INTERVAL	PRESENT PDF	FUTURE PDF	PRESENT CDF	FUTURE CDF
0.000 -	0.000	0.000000	0.000000	0.000000
.001 -	1.000	.034000	.010000	.034000
1.001 -	2.000	.058000	.014000	.092000
2.001 -	3.000	.062000	.026000	.154000
3.001 -	4.000	.060000	.038000	.214000
4.001 -	5.000	.070000	.028000	.284000
5.001 -	6.000	.054000	.050000	.336000
6.001 -	7.000	.052000	.052000	.390000
7.001 -	8.000	.048000	.034000	.438000
8.001 -	9.000	.044000	.056000	.482000
9.001 -	10.000	.036000	.046000	.518000
10.001 -	11.000	.040000	.024000	.558000
11.001 -	12.000	.038000	.042000	.596000
12.001 -	13.000	.040000	.042000	.636000
13.001 -	14.000	.034000	.036000	.670000
14.001 -	15.000	.032000	.016000	.702000
15.001 -	16.000	.024000	.028000	.726000
16.001 -	17.000	.018000	.038000	.744000
17.001 -	18.000	.014000	.034000	.758000
18.001 -	19.000	.022000	.026000	.780000
19.001 -	20.000	.012000	.024000	.792000

20.001 -	30.000	.112000	.156000	.904000
30.001 -	40.000	.052000	.092000	.956000
40.001 -	50.000	.026000	.048000	.982000
50.001 -	60.000	.010000	.018000	.992000
60.001 -	70.000	.004600	.014000	.996000
70.001 -	80.000	.002000	.002000	.998000
80.001 -	90.000	.002000	.004000	1.000000
90.001 -	100.000	0.000000	.002000	1.000000

	MEAN	VARIANCE
PRESENT :	.13125144E+02	.15219829E+03
FUTURE :	.18295186E+02	.21572673E+03

***** WINDY CREEK WATERSHED *****

TOTAL SEASONAL SEDIMENT PRODUCTION (TONS/SQ.MI.)

INTERVAL	PRESENT PDF	FUTURE PDF	PRESENT CDF	FUTURE CDF
0.000 - 0.000	0.000000	0.000000	0.000000	0.000000
.001 - 50.000	.066000	.020000	.066000	.020000
50.001 - 100.000	.088000	.030000	.154000	.050000
100.001 - 150.000	.078000	.048000	.232000	.098000
150.001 - 200.000	.070000	.040000	.302000	.138000
200.001 - 250.000	.064000	.056000	.366000	.194000
250.001 - 300.000	.042000	.044000	.408000	.238000
300.001 - 350.000	.046000	.052000	.454000	.290000
350.001 - 400.000	.046000	.044000	.500000	.334000
400.001 - 450.000	.022000	.028000	.522000	.362000
450.001 - 500.000	.040000	.054000	.562000	.416000

500.001 - 1000.000	.198000	.258000	.760000	.674000
1000.001 - 1500.000	.076000	.104000	.836000	.778000
1500.001 - 2000.000	.052000	.068000	.888000	.846000
2000.001 - 2500.000	.034000	.048000	.922000	.894000
2500.001 - 3000.000	.028000	.034000	.950000	.928000
3000.001 - 3500.000	.006000	.020000	.956000	.948000
3500.001 - 4000.000	.016000	.008000	.972000	.956000
4000.001 - 4500.000	.010000	.008000	.982000	.964000
4500.001 - 5000.000	.004000	.012000	.986000	.976000
5000.001 - 5500.000	.004000	.008000	.990000	.984000
5500.001 - 6000.000	0.000000	.004000	.990000	.988000
6000.001 - 6500.000	.004000	.002000	.994000	.990000
6500.001 - 7000.000	.002000	.002000	.996000	.992000
7000.001 - 7500.000	0.000000	.004000	.996000	.996000
7500.001 - 8000.000	0.000000	0.000000	.996000	.996000
8000.001 - 8500.000	.004000	0.000000	1.000000	.996000
8500.001 - 9000.000	0.000000	0.000000	1.000000	.996000
9000.001 - 9500.000	0.000000	.004000	1.000000	1.000000

	MEAN	VARIANCE
PRESENT :	.82112592E+03	.12810220E+07
FUTURE :	.10908744E+04	.16529148E+07

***** WINDY CREEK WATERSHED *****

ANNUAL MAXIMUM SEDIMENT EVENT (TONS/SQ.MI.)

INTERVAL	PRESENT PDF	FUTURE PDF	PRESENT CDF	FUTURE CDF
0.000 - 0.000	0.000000	0.000000	0.000000	0.000000
.001 - 50.000	.152000	.074000	.152000	.074000
50.001 - 100.000	.148000	.096000	.300000	.170000
100.001 - 150.000	.080000	.118000	.380000	.288000
150.001 - 200.000	.102000	.074000	.482000	.362000
200.001 - 250.000	.066000	.070000	.548000	.432000
250.001 - 300.000	.052000	.082000	.600000	.514000
300.001 - 350.000	.036000	.044000	.636000	.558000
350.001 - 400.000	.030000	.046000	.666000	.604000
400.001 - 450.000	.028000	.038000	.694000	.642000
450.001 - 500.000	.026000	.022000	.720000	.664000

500.001 - 1000.000	.122000	.162000	.842000	.826000
1000.001 - 1500.000	.074000	.066000	.916000	.892000
1500.001 - 2000.000	.038000	.058000	.954000	.950000
2000.001 - 2500.000	.014000	.012000	.968000	.962000
2500.001 - 3000.000	.010000	.012000	.978000	.974000
3000.001 - 3500.000	.006000	.008000	.984000	.982000
3500.001 - 4000.000	.006000	.004000	.992000	.986000
4000.001 - 4500.000	0.000000	.006000	.992000	.992000
4500.001 - 5000.000	.002000	.002000	.994000	.994000
5000.001 - 5500.000	.004000	0.000000	.998000	.994000
5500.001 - 6000.000	0.000000	.004000	.998000	.998000
6000.001 - 6500.000	.002000	0.000000	1.000000	.998000
6500.001 - 7000.000	0.000000	.002000	1.000000	1.000000

	MEAN	VARIANCE
PRESENT :	.50901933E+03	.61407111E+06
FUTURE :	.60426842E+03	.70642709E+06

PROGRAM BLM4 (INPUT,OUTPUT,TAPE1=INPUT,TAPE2=OUTPUT)

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THIS PROGRAM (BLM4) AND ITS SUBROUTINES (FREQ, GAMMA, STAT, UNIFD) GENERATE AND ANALYZE A MULTI-YEAR RECORD OF SIMULATED SUMMER SEASON PRECIPITATION, RUNOFF, AND SEDIMENT EVENTS FOR A SPECIFIED WATERSHED.

THE INTERNAL PARAMETER ESTIMATION PROCEDURE FOR THE EVENT-BASED STOCHASTIC PRECIPITATION MODEL REFLECTS CONDITIONS OF THE GRAND JUNCTION RESOURCE AREA FOR ELEVATIONS FROM 5000 TO 10000 FEET.

STANDARD SOIL CONSERVATION SERVICE (SCS) PROCEDURES OR MODIFICATIONS THEREOF ARE USED TO TRANSFORM PRECIPITATION INTO RUNOFF. A MODIFIED VERSION OF THE UNIVERSAL SOIL LOSS EQUATION IS USED TO OBTAIN ESTIMATES OF SEDIMENT YIELD.

BLM4 COMPARES THE HYDROLOGIC RESPONSES OF A WATERSHED UNDER TWO ALTERNATIVE MANAGEMENT PROGRAMS.

FREQUENCY DISTRIBUTIONS ARE PRESENTED FOR:

1. PRECIPITATION EVENT INTERARRIVAL TIMES.
2. PRECIPITATION DEPTH PER EVENT.
3. PRECIPITATION DEPTH PER SEASON.
4. ANNUAL MAXIMUM RUNOFF EVENT.
5. ANNUAL MAXIMUM PEAK DISCHARGE.
6. TOTAL SEASONAL RUNOFF VOLUME.
7. TOTAL SEASONAL SEDIMENT PRODUCTION.
8. ANNUAL MAXIMUM SEDIMENT EVENT.

DATA REQUIREMENTS ARE PRESENTED IN THE NEXT COMMENT CLUSTER.

LOUIS H. HEKMAN, JR. AND MARTIN M. FOGEL
DECEMBER, 1977

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INITIALIZATION

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10 DO 20 J=1,2
   S1(J)=0.0
   S2(J)=0.0
   S3(J)=0.0
   S4(J)=0.0
   S5(J)=0.0
   SS1(J)=0.0
   SS2(J)=0.0
   SS3(J)=0.0
   SS4(J)=0.0

```

```

SS5(J)=C.0
DO 15 I=1,51
  VE(I,J)=C.0
  VT(I,J)=C.0
  QP(I,J)=C.0
  ZS(I,J)=C.0
  ZT(I,J)=C.0
  PPTE(I)=C.0
15 CONTINUE
20 CONTINUE
  DO 22 I=1,81
    PPTS(I)=C.0
22 CONTINUE
  DO 24 I=1,200
    PINT(I)=C.0
24 CONTINUE
  IIN=1
  IOUT=2
  NPPT=0
  S6=C.0
  SS6=C.0
  S7=C.0
  SS7=C.0
  S8=C.0
  SS8=C.0

```

C
C READ PARAMETER VALUES AND REQUIRED INPUT DATA.

C
C
C CARD 1: WATERSHED TITLE OR DESCRIPTION. (33A2)
C CARD 2: NUMBER OF VEGETATION-SOIL SUBUNITS. (NSUBU, I5)
C CARD 3: TIME OF CONCENTRATION, DURATION OF EXCESS RAINFALL,
C COEF. OF S (INITIAL ABSTRACTIONS),
C ANTECEDENT MOISTURE CONDITION BOUNDARIES I & II,
C WHERE:
C CLASS I <= AM1 < CLASS II <= AM2 < CLASS III
C (5F10.2)
C CARD 4: NUMBER OF SEASONS TO SIMULATE, DAYS PER SIMULATED
C SEASON, SEED FOR RANDOM NUMBER GENERATOR. (3I5)
C CARD 5: AVERAGE WATERSHED ELEVATION (FT.) (F10.2), USED IF
C RESIDENT PRECIPITATION CALCULATION OPTION IS CHOSEN.
C CARD 6: LAMBDA, K FOR PPT/EVENT; LAMBDA, K FOR EVENT
C INTERARRIVAL TIME; FIXED PROBABILITY FOR ONE DAY
C INTERARRIVAL. (5F10.2)
C EITHER CARD 5 OR 6 IS REQUIRED. THE CARD FOR
C THE OPTION NOT SELECTED SHOULD BE LEFT BLANK.
C CARD 7: FREQ. DIST. PARAM. VALUES - PEAK R.O. VOL. / YEAR.
C CARD 8: FREQ. DIST. PARAM. VALUES - PEAK FLOW / YEAR.
C CARD 9: FREQ. DIST. PARAM. VALUES - TOT. R.O. VOL. / YEAR.
C CARD 10: FREQ. DIST. PARAM. VALUES - TOT. SED. PROD. / YEAR.
C CARD 11: FREQ. DIST. PARAM. VALUES - PEAK SED. PROD. / YEAR.
C EACH CARD (7-11) CONTAINS 3 VALUES (3F10.2):
C 1. REGULAR FREQUENCY INTERVAL SIZE.
C 2. REDUCED FREQUENCY INTERVAL SIZE.
C 3. NO. OF LOW ORDER FREQ. INTRVLS. TO EXPAND.
C CARD 12: ONE CARD FOR EACH VEG-SOIL SUBUNIT, CONTAINING
C * SUBUNIT VEG-SOIL IDENTIFICATION, AREA (SQ. MI.),
C * PRESENT AND FUTURE SCS CURVE NUMBERS FOR ALL THREE

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C      * ANTECEDENT MCISTURE CONDITIONS, PRESENT AND FUTURE
C      * VEGETATION FACTORS C, SOIL ERODIBILITY K, AND
C      CAED TOPOGRAPHIC FACTOR LS.
C      NSUBU+11: 2(A2,1X),F7.3,6(1X,F4.1),2(1X,F5.3),F5.2,F6.2
C
C      READ(IIN,1000) (IHEAD(I),I=1,33)
1000 FORMAT(33A2)
C
C      IF END OF FILE ENCOUNTERED, HALT.
C
C      IF (EOF(IIN)) 620,40
40 READ(IIN,1010) NSUBU
1010 FORMAT(3I5)
      READ(IIN,1020) TIMEC,DUREX,CSINA,AM1,AM2
1020 FORMAT(5F10.2)
      READ(IIN,1010) NSEA,NDAY,ISEED
      READ(IIN,1020) ELEV
      READ(IIN,1020) ALMP,AKP,ALMI,AKI,FD1
      DO 45 I=1,5
      READ(IIN,1020) (OPPAR(I,J),J=1,3)
45 CONTINUE
      TAREA=0.C
      DO 50 I=1,NSUBU
      READ(IIN,1030) IVEG(I),ISOIL(I),AREA(I),(PCN(I,J),J=1,3),
1(FCN(I,J),J=1,3),PVEG(I),FVEG(I),SOILK(I),ALS(I)
1030 FORMAT(2(A2,1X),F7.3,6(1X,F4.1),2(1X,F5.3),F5.2,F6.2)
      TAREA=TAREA+AREA(I)
50 CONTINUE
C
C      LIST PARAMETER VALUES, DATA, ETC.
C
      WRITE(IOUT,1035)
1035 FORMAT(1H1,/////)
      WRITE(IOUT,1040) (IHEAD(I),I=1,33)
1040 FORMAT(5(/),6X,33A2,/)
      WRITE(IOUT,1050) NSUBU,TIMEC,DUREX,CSINA,AM1,AM2,NSEA,NDAY,
1ELEV,ISEED
1050 FORMAT(6X,"NSUBU TIMEC DUREX CSINA AM1 AM2 NSEA"
1" NDAY ELEV ISEED",/,6X,I5,3F7.2,2F6.2,2X,I5,2X,I4,
2F8.0,2X,I5)
      WRITE(IOUT,1055)
1055 FORMAT(/,7X,"DATA CARD PRECIPITATION PARAMETER VALUES:")
      WRITE(IOUT,1060) ALMP,AKP,ALMI,AKI,FD1
1060 FORMAT(7X,"LAM-P",6X,"K-P",5X,"LAM-I",5X,"K-I",6X,"FD1",
1/,6X,5(F7.4,2X))
      WRITE(IOUT,1065)
1065 FORMAT(/,6X,"VG-SL AREA PCN1 PCN2 PCN3 PCN1 PCN2 PCN3"
1" PCVEG FCVEG K LS")
      DO 60 I=1,NSUBU
      WRITE(IOUT,1070) IVEG(I),ISOIL(I),AREA(I),(PCN(I,J),J=1,3),
1(FCN(I,J),J=1,3),PVEG(I),FVEG(I),SOILK(I),ALS(I)
1070 FORMAT(6X,2(A2,1X),F7.3,6(1X,F4.1),2(1X,F5.3),F5.2,F6.2)
60 CONTINUE
      WRITE(IOUT,1072) TAREA
1072 FORMAT(/,6X,"TOTAL WATERSHED AREA =",F7.3," SQUARE MILES.")
C
C      CALCULATE CONSTANT FOR PEAK FLOW ESTIMATES.

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C
CON=484.C/(DUREX/2.C+0.6*TIMEC)
C
C IF ELEVATION > 0, COMPUTE PRECIPITATION PARAMETERS INTERNALLY.
C
IF (ELEV) 80,80,70
70 ELEV=ELEV/1000.0
X=15.4346-2.2076*ELEV+0.1190*ELEV**2.0
Y=123.0742-17.44*ELEV+0.8396*ELEV**2.0
ALMI=X/Y
AKI=ALMI*X
X=C.0534+0.0057*ELEV+C.0022*ELEV**2.0
Y=C.0996-0.0329*ELEV+0.0039*ELEV**2.0
ALMP=X/Y
AKP=ALMP*X
FD1=0.41
WRITE(IOUT,1075)
1075 FORMAT(//,8X,"COMPUTED PRECIPITATION PARAMETER VALUES:")
WRITE(IOUT,1060) ALMP,AKP,ALMI,AKI,FD1
80 WRITE(IOUT,1080) ((OPPAR(I,J),J=1,3),I=1,5)
1080 FORMAT(//,7X,"DISPLAY PARAMETER VALUES FOR FREQUENCY DISTRIBUTION
1TABLES",//,29X,"REGUN",5X,"REDUN",5X,"UTOEX",//,15X,"PEAK P.O. ",
23(1X,F9.2),//,15X,"PEAK FLOW ",3(1X,F9.2),//,15X,"TOT. R.O. ",
33(1X,F9.2),//,15X,"TOT. SED. ",3(1X,F9.2),//,15X,"PEAK SED. ",
43(1X,F9.2))
C
C CONVERT LAMBDA'S INTO SUITABLE FORM FOR GAMMA RANDOM NUMBER ROUTINE.
C
ALMP=1.C/ALMP
ALMI=1.C/ALMI
WRITE(IOUT,1225)
C
C FIND DAY OF SEASON'S FIRST EVENT.
C
C BEGINNING OF SEASONAL LOCP FOR TOTAL SIMULATION RUN.
C
DO 500 KNT=1,NSEA
DC 110 I=1,NDAY
PPT(I)=0.0
110 CONTINUE
VBMX=0.0
VAMX=0.0
QBMX=0.0
QAMX=0.0
ZBMX=0.0
ZAMX=0.0
VBT=0.0
VAT=0.0
ZBT=0.0
ZAT=0.0
PSEA=0.0
INTER=0
C
C BEGIN EACH SEASONS SIMULATION RUN AT A RANDOM NEGATIVE DAY.
C ACTUAL EVENTS BEGIN WHEN DAY SUBSEQUENTLY BECOMES POSITIVE.
C
CALL GAMMA (ISEED,AKI,ALMI,R)

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      ID=-IFIX(R+0.999999)
C
C  GENERATE PRECIPITATION EVENT INTERARRIVAL TIME.
C
120 CALL UNIFD(ISEED,1,U)
    IF(U(1)-PD1) 140,14C,13C
130 CALL GAMMA(ISEED,AKI,ALMI,R)
    ID=ID+IFIX(R+0.999999)
140 ID=ID+1
    IF(ID) 120,12C,150
C
C  SEASON'S DATA GENERATED YET?
C
150 IF(ID-NDAY) 160,160,20C
C
C  GENERATE PRECIPITATION EVENT.
C
160 CALL GAMMA(ISEED,AKP,ALMP,R)
    IF(R-0.C1) 160,17C,17C
170 PPT(ID)=R
C
C  UPDATE PRECIPITATION COUNTERS AND ARRAYS.
C
    NPPT=NPPT+1
    N=ID-INTER
    INTER=ID
    IF(N-3C) 174,174,172
172 N=31+(N-31)/2
174 PINT(N)=PINT(N)+1.0
    A=FLOAT(N)
    S8=S8+A
    SS8=SS8+A*A
    N=IFIX(R*10.0+0.999999)
    IF(N-51) 180,18C,175
175 N=51
180 PPTE(N)=PPTE(N)+1.0
    S6=S6+R
    SS6=SS6+R*R
    PSEA=PSEA+R
    GO TO 120
C
C  PROCESS CURRENT SEASON'S GENERATED PRECIPITATION RECORD.
C
200 S7=S7+PSEA
    SS7=SS7+PSEA*PSEA
    N=IFIX(PSEA*2.0+1.999999)
    IF(N-81) 190,19C,185
185 N=81
190 PPTS(N)=PPTS(N)+1.0
    DO 400 JDAY=1,NDAY
    IF(PPT(JDAY)) 400,400,21C
C
C  DETERMINE ANTECEDENT MOISTURE CONDITIONS, JC.
C
210 A5=0.0
    DO 230 K=1,5
    IF(JDAY-K) 240,24C,220
```

```

220 ID=JDAY-K
    A5=A5+PPT(ID)
230 CONTINUE
240 JC=3
    IF (A5-AM1) 250,250,260
250 JC=1
    GO TO 280
260 IF (A5-AM2) 270,270,280
270 JC=2

```

```

C
C COMPUTE THE CURRENT SEASON'S EVENT RUNOFF DEPTHS V, PEAK FLOWS Q,
C AND SEDIMENT YIELDS Z, FOR EACH SUBUNIT UNDER BOTH BEFORE AND
C AFTER CONDITIONS.
C

```

```

280 VB=0.0
    VA=0.0
    QB=0.0
    QA=0.0
    ZB=0.0
    ZA=0.0
    DO 320 I=1, NSUBU

```

```

C
C BEFORE OR INITIAL CONDITIONS.
C

```

```

    S=1000.0/PCN(I,JC)-10.0
    TOP=PPT(JDAY)-CSINA*S
    IF(TOP) 300,300,290
290 V=TOP*TOP/(PPT(JDAY)+(1.0-CSINA)*S)
    VB=VB+V*AREA(I)/TAREA
    Q=(484.0*AREA(I)*V)/(DUREX/2.0+0.6*TIMEC*AREA(I)/TAREA)
    V=V*AREA(I)*53.3333
    Z=95.0*ALS(I)*PVEG(I)*SOILK(I)*(V*Q)**0.56
    ZB=ZB+Z

```

```

C
C AFTER OR FINAL CONDITIONS.
C

```

```

300 S=1000.0/PCN(I,JC)-10.0
    TOP=PPT(JDAY)-CSINA*S
    IF(TOP) 320,320,310
310 V=TOP*TOP/(PPT(JDAY)+(1.0-CSINA)*S)
    VA=VA+V*AREA(I)/TAREA
    Q=(484.0*AREA(I)*V)/(DUREX/2.0+0.6*TIMEC*AREA(I)/TAREA)
    V=V*AREA(I)*53.3333
    Z=95.0*ALS(I)*FVEG(I)*SOILK(I)*(V*Q)**0.56
    ZA=ZA+Z

```

```

320 CONTINUE
    IF(VB) 340,340,330
330 NRO(1)=NRO(1)+1
    QB=VB*CON
    VB=VB*53.3333
340 IF(VA) 360,360,350
350 NRC(2)=NRO(2)+1
    QA=VA*CON
    VA=VA*53.3333

```

```

C
C UPDATE REGISTERS.
C

```

```
360 VBT=VBT+VB
    VAT=VAT+VA
    ZBT=ZBT+ZB
    ZAT=ZAT+ZA
    IF (VB-VBMX) 380,380,370
370 VBMX=VB
    QBMX=QB
    ZBMX=ZB
380 IF (VA-VAMX) 400,400,390
390 VAMX=VA
    QAMX=QA
    ZAMX=ZA
400 CONTINUE
```

```
C
C
C END OF DATA GENERATION FOR THE CURRENT SEASON.
C UPDATE STATISTICAL COUNTERS AND ARRAY ELEMENTS.
C
C
C SEASONAL PEAK STORM RUNOFF VOLUME (ACRE-FEET/SQ.MI.).
C
C     CALL STAT(VBMX,VAMX,VE,S1,SS1,OPPAR,1)
C
C SEASONAL PEAK STORM FLOW (CFS/SQ.MI.).
C
C     CALL STAT(QBMX,QAMX,QP,S2,SS2,OPPAR,2)
C
C TOTAL SEASONAL RUNOFF VOLUME (ACRE-FEET/SQ.MI.)
C
C     CALL STAT(VBT,VAT,VT,S3,SS3,OPPAR,3)
C
C TOTAL SEASONAL SEDIMENT PRODUCTION (TONS/SQ.MI.)
C
C     CALL STAT(ZBT,ZAT,ZT,S4,SS4,OPPAR,4)
C
C MAXIMUM SEASONAL STORM SEDIMENT YIELD (TONS/SQ.MI.).
C
C     CALL STAT(ZBMX,ZAMX,ZS,S5,SS5,OPPAR,5)
C
C LOOP TO THE NEXT SEASON.
C
C 500 CONTINUE
C
C
C PRINT FREQUENCY ANALYSES AND ASSOCIATED STATISTICS.
C
C
C PRECIPITATION INTERARRIVAL TIME.
C
C     PNUM=FLOAT(NPPT)
C     AMEAN=S8/PNUM
C     VAR=(SS8-S8*S8/PNUM)/(PNUM-1.0)
C     DO 510 I=1,200
C     K=201-I
C     IF (PINT(K)) 520,510,520
510 CONTINUE
520 WRITE(IOUT,1200) (IHEAD(I),I=1,33)
```

```

1200 FORMAT(6X,33A2,/,/,15X,"FREQUENCY DISTRIBUTION OF EVENT INTERARRIVA
1L TIMES",/,/,18X,"INTERARRIVAL",2X,"OCCUR-",5X,"PDF",7X,
2"CDF",/,/,21X,"(DAYS)",5X,"RENCES",/)
CDF=C.0
DO 530 I=1,K
PDF=PINT(I)/PNUM
CDF=CDF+PDF
IF (I-30) 522,522,524
522 WRITE(IOUT,1210) I,PINT(I),PDF,CDF
1210 FORMAT(22X,I3,7X,F5.0,1X,2(2X,F8.6))
GO TO 530
524 IHI=(I-30)*2+30
LOW=IHI-1
WRITE(IOUT,1215) LOW,IHI,PINT(I),PDF,CDF
1215 FORMAT(19X,I3," - ",I3,4X,F5.0,1X,2(2X,F8.6))
530 CONTINUE
WRITE(IOUT,1220) AMEAN,VAR
1220 FORMAT(/,20X,"MEAN =",F7.3,5X,"VARIANCE =",F10.3)
WRITE(IOUT,1225)
1225 FORMAT(1H1)

```

```

C
C PRECIPITATION PER EVENT.
C

```

```

AMEAN=S6/PNUM
VAR=(SS6-S6*S6/PNUM)/(PNUM-1.0)
DO 540 I=1,51
K=52-I
IF (PPTS(K)) 550,540,550
540 CONTINUE
550 WRITE(IOUT,1230) (IHEAD(I),I=1,33)
1230 FORMAT(6X,33A2,/,/,15X,"FREQUENCY DISTRIBUTION OF PRECIPITATION / E
1VENT",/,/,21X,"INTERVAL",5X,"OCCUR-",5X,"PDF",7X,"CDF",/,/,21X,
2"(INCHES)",5X,"RENCES",/)
CDF=C.0
DO 560 I=1,K
TOP=FLOAT(I)/10.0
BOT=TOP-C.099
PDF=PPTE(I)/PNUM
CDF=CDF+PDF
WRITE(IOUT,1240) BOT,TOP,PPTE(I),PDF,CDF
1240 FORMAT(17X,F6.3," - ",F6.3,2X,F5.0,1X,2(2X,F8.6))
560 CONTINUE
WRITE(IOUT,1220) AMEAN,VAR
WRITE(IOUT,1225)

```

```

C
C PRECIPITATION PER SEASON.
C

```

```

PNUM=FLOAT(NSEA)
AMEAN=S7/PNUM
VAR=(SS7-S7*S7/PNUM)/(PNUM-1.0)
DO 570 I=1,81
KK=I
IF (PPTS(I)) 572,570,572
570 CONTINUE
572 DO 574 I=1,81
K=82-I
IF (PPTS(K)) 580,574,580

```



```
574 CONTINUE
580 WRITE (IOUT,1250) (IHEAD(I),I=1,33)
1250 FORMAT(6X,33A2,///,15X,"FREQUENCY DISTRIBUTION OF PRECIPITATION / S
1EASON",///,21X,"INTERVAL",5X,"OCCUR-",5X,"PDF",7X,"CDF",/,21X,
2"(INCHES)",5X,"RENCES",/)
    CDF=0.0
    TOP=C.0
    BOT=C.0
    DO 610 I=KK,K
    IF (I-1) 600,600,590
590 TOP=FLOAT(I-1)*0.5
    BOT=TOP-0.499
600 PDF=PPTS(I)/PNUM
    CDF=CDF+PDF
    WRITE(IOUT,1240) BOT, TOP, PPTS(I), PDF, CDF
610 CONTINUE
    WRITE (IOUT,1220) AMEAN, VAR
    WRITE (IOUT,1225)

C
C PROCESS RUNOFF AND SEDIMENT SUMMARIES.
C
    WRITE (IOUT,1100) (IHEAD(I),I=1,33)
1100 FORMAT(6X,33A2,///,21X,"ANNUAL MAXIMUM RUNOFF EVENT"
1" (AC-FT/SQ.MI.)",/)
    CALL FREQ(VB,NSEA,S1,SS1,OPPAR,1,IOUT)

C
    WRITE (IOUT,1110) (IHEAD(I),I=1,33)
1110 FORMAT(6X,33A2,///,21X,"ANNUAL MAXIMUM PEAK DISCHARGE"
1" (CFS/SQ.MI.)",/)
    CALL FREQ(QP,NSEA,S2,SS2,OPPAR,2,IOUT)

C
    WRITE (IOUT,1120) (IHEAD(I),I=1,33)
1120 FORMAT(6X,33A2,///,21X,"TOTAL SEASONAL RUNOFF VOLUME"
1" (AC-FT/SQ.MI.)",/)
    CALL FREQ(VT,NSEA,S3,SS3,OPPAR,3,IOUT)

C
    WRITE (IOUT,1130) (IHEAD(I),I=1,33)
1130 FORMAT(6X,33A2,///,18X,"TOTAL SEASONAL SEDIMENT PRODUCTION"
1" (TONS/SQ.MI.)",/)
    CALL FREQ(ZT,NSEA,S4,SS4,OPPAR,4,IOUT)

C
    WRITE (IOUT,1140) (IHEAD(I),I=1,33)
1140 FORMAT(6X,33A2,///,21X,"ANNUAL MAXIMUM SEDIMENT EVENT"
1" (TONS/SQ.MI.)",/)
    CALL FREQ(ZS,NSEA,S5,SS5,OPPAR,5,IOUT)
    GO TO 10
620 STOP
    END
```

SUBROUTINE FREQ(AA,N,S,SS,OPPAR,M,IOUT)

C THIS SUBROUTINE PRINTS THE FREQUENCY DISTRIBUTIONS AND
C STATISTICAL SUMMARIES.
C

```

DIMENSION AA(51,2),S(2),SS(2),OPPAR(5,3)
WRITE(IOUT,100)
100 FORMAT(18X,"INTERVAL",9X,"PRESENT",4X,"FUTURE",3X,"PRESENT",
14X,"FUTURE",/,30X,2(7X,"PDF"),2(7X,"CDF"),/)
DO 20 I=1,51
K=52-I
IF(AA(K,1)) 30,10,30
10 IF(AA(K,2)) 30,20,30
20 CONTINUE
30 B=FLOAT(N)
REGUN=OPPAR(M,1)
REDUN=OPPAR(M,2)
UTOEX=OPPAR(M,3)
IC=0
TOP=0.0
BOT=0.0
CDF1=0.0
CDF2=0.0
BOUND=REGUN*UTOEX
LIM=IFIX(REGUN/REDUN*UTOEX+1.1)
DO 80 I=1,K
IF(I-1) 70,70,40
40 IF(I-LIM) 50,50,60

```

C REGION OF EXPANDED UNITS.
C

```

50 TOP=FLOAT(I-1)*REDUN
BOT=TOP-REDUN+0.001
GO TO 70

```

C REGION OF REGULAR UNIT SIZES.
C

```

60 IF(IC) 64,62,64
62 IC=54B
WRITE(IOUT,105)(IC,LL=1,61)
105 FOPMAT(11X,61R1)
64 TOP=FLOAT(I-LIM)*REGUN+BOUND
BOT=TOP-REGUN+0.001

```

C OUTPUT ARRAY ELEMENT.
C

```

70 PDF1=AA(I,1)/B
PDF2=AA(I,2)/B
CDF1=CDF1+PDF1
CDF2=CDF2+PDF2
WRITE(IOUT,110) BOT,TOP,PDF1,PDF2,CDF1,CDF2
110 FORMAT(11X,F9.3," - ",F9.3,4(2X,F8.6))
80 CONTINUE
BOT=S(1)/B
TOP=(SS(1)-S(1)*S(1)/B)/(B-1.0)
PDF1=S(2)/B
PDF2=(SS(2)-S(2)*S(2)/B)/(B-1.0)

```

```
WRITE(IOUT,120) BOT, TOP, PDF1, PDF2
120 FORMAT(/,28X,"MEAN",11X,"VARIANCE",/,11X,"PRESENT :",
12(3X,E14.8),/,11X,"FUTURE :",2(3X,E14.8))
WRITE(IOUT,130)
130 FORMAT(1H1)
RETURN
END
```


SUBROUTINE STAT (BEFR, AFTR, AA, S, SS, OPPAR, M)

C THIS SUBROUTINE UPDATES THE STATISTICAL SUMMARY REGISTERS AND
C FREQUENCY COUNTERS.
C

DIMENSION A(2), AA(51, 2), S(2), SS(2), OPPAR(5, 3)
A(1) = BEFR
A(2) = AFTR
REGUN = OPPAR(M, 1)
REDUN = OPPAR(M, 2)
UTOEX = OPPAR(M, 3)
BOUND = REGUN * UTOEX
DO 50 I = 1, 2
S(I) = S(I) + A(I)
SS(I) = SS(I) + A(I) * A(I)
IF(A(I) - BOUND) 30, 30, 10

C REGION OF REGULAR UNIT SIZES.
C

10 N = IFIX((A(I) - BOUND) / REGUN + BOUND / REDUN + 1.999999)
IF(N - 51) 40, 40, 20
20 N = 51
GO TO 40

C REGION OF EXPANDED UNITS. (REDUN = REDUCED UNIT SIZE.)
C

30 N = IFIX(A(I) / REDUN + 1.999999)

C INCREMENT ARRAY ELEMENTS.
C

40 AA(N, I) = AA(N, I) + 1.0
50 CONTINUE
RETURN
END

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