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Precipitation and Streamflow in the Vicinity of West Chestnut Ridge, near Oak Ridge National Laboratory Oak Ridge, Tennessee

(Water Years 1984–1985)

D. D. Huff
B. J. Frederick

Environmental Sciences Division
Publication No. 2937

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ORNL/TM-10500

PRECIPITATION AND STREAMFLOW IN THE VICINITY OF WEST CHESTNUT RIDGE, NEAR OAK RIDGE NATIONAL LABORATORY OAK RIDGE, TENNESSEE

(Water Years 1984-1985)

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Publication No. 2937

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ABSTRACT

HUFF, D. D., and B. J. FREDERICK. 1986. Precipitation and streamflow in the vicinity West Chestnut Ridge, near Oak Ridge National Laboratory, Tennessee, (Water Years 1984-1985). ORNL/TM-10500. Oak Ridge National Laboratory, Oak Ridge, Tennessee. pp. 49.

Hydrologic data collection at sites on West Chestnut Ridge near Oak Ridge National Laboratory began in July 1982. The site was originally considered for use as a central waste disposal facility for a wide range of radioactive wastes, although at present, other alternatives for use of the site are being considered. During 1984 and 1985, continuous discharge and precipitation data were collected and have been summarized as daily values. The unit records are available on disk-storage media, compatible with personal computers. For the data reported, 85% of the individual daily discharge records are considered good, which means within 10% of the true value. Only 1.2% have accuracy that is not within 15%, and all occurrences resulted from flows in excess of flume capacity or the associated washout of streambanks which allowed flow to bypass measurement. Flow at most sites spans more than three orders of magnitude between high and low instantaneous values. In 1984, computed evapotranspiration was about 52% of precipitation, but in 1985, because of drier conditions, it was 78% of precipitation. It is possible that a net ground-water loss is partially responsible for the high apparent value of evapotranspiration. Based upon the variability in the hydrologic conditions, further data are required to develop a reliable water budget.

1. INTRODUCTION

The objective of this report is to document hydrologic data collected at sites located on West Chestnut Ridge, near Oak Ridge National Laboratory. The site was previously being considered for a centralized disposal facility for low-level radioactive solid wastes. Although the original plans have been set aside, characterization of the site hydrology has continued because pilot-scale waste management demonstration projects are still planned. Earlier reports by Huff and Frederick (1984) and Elmore, et al., (1986) describe the data and studies completed through April 1984 including rating tables developed for each site. Work presented here completes the record for water year 1984 and also documents hydrologic data collection for water year 1985 for sites shown in Fig. 1. It is intended that these data provide a baseline for future comparative studies. Although the summaries presented here include primarily daily values, the unit records were collected at 15-minute intervals and are available for more detailed analysis. Arrangements to obtain unit record data can be made through contact with the authors of this report, or through the Environmental Sciences Division Hydrologic Data Center. Data are stored on floppy disks. For all sites except CWDF 1, the disks are formatted for processing by Apple IIe computer. Data for site CWDF 1 are PC compatible. Processing programs are modifications of those obtained from Manning Technologies Inc. for the Apple computer and from Leopold Stevens, Inc. for the PC compatible data.

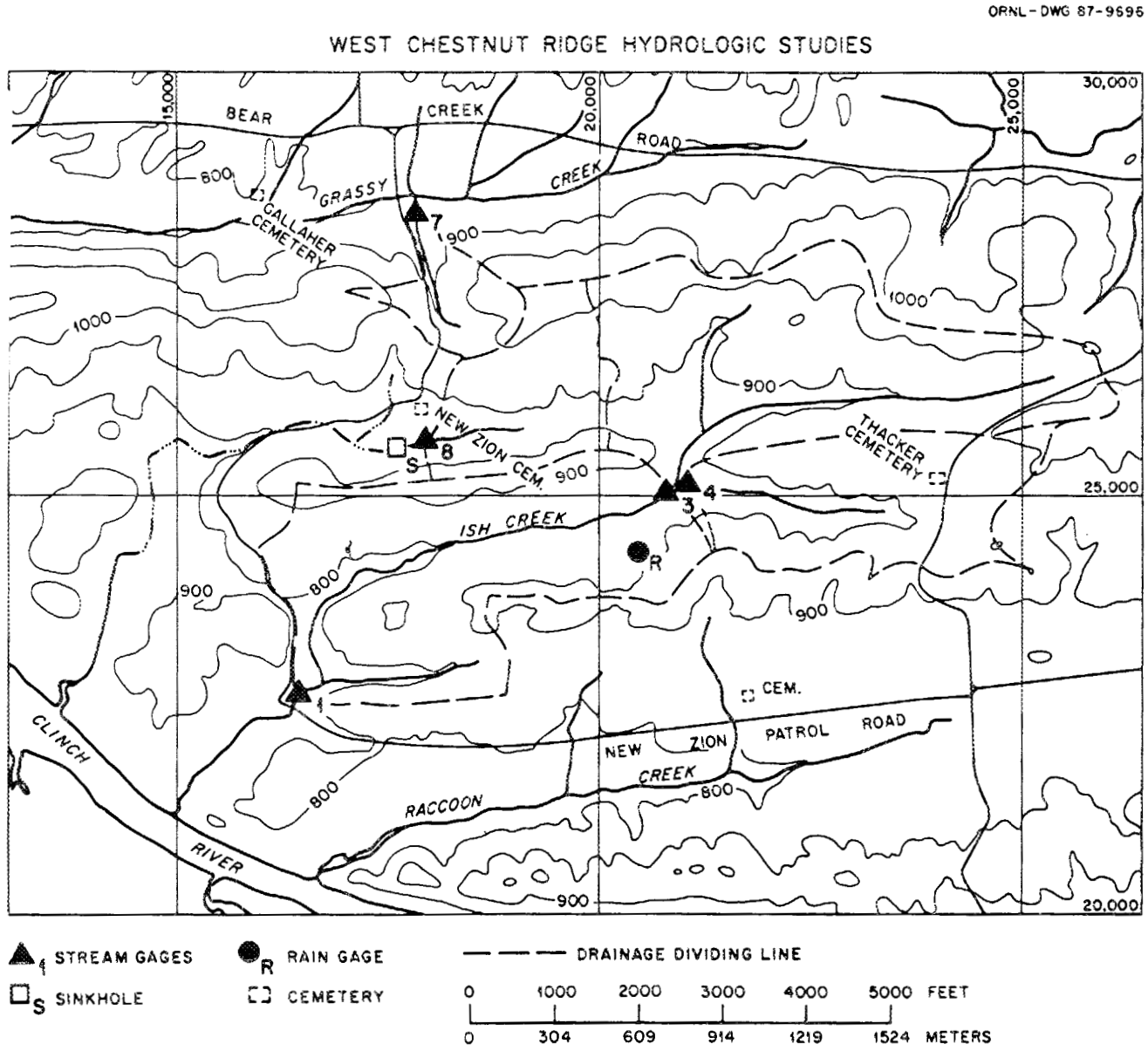

Fig. 1. Map of West Chestnut Ridge study area, near Oak Ridge National Laboratory. Locations of surface water discharge measuring sites, drainage areas, and the recording raingage are shown.

2. GENERAL SUMMARY OF HYDROLOGIC CONDITIONS

2.1 November 1983 through September 1984

Significant hydrologic events during the period were the heavy rains in May and the near-drought periods in June and September.

During May, total rainfall at the Ish Creek raingage was 10.99 in. (279.16 mm), 7.96 in. (202.25 mm) of which occurred during the period May 2-7. At the National Weather Service (NWS) station in Oak Ridge, precipitation during May was 10.70 in. (271.78 mm), which is the highest May total since the establishment of the station in 1947. In fact, only twice in the past 38 years (1973 and 1979) has the total rainfall during the month of May exceeded that for the period May 2-7, 1984.

Regarding low rainfall periods, the total of 0.54 in. (13.72 mm) observed at the Ish Creek gage for the period May 29 through June 28, 1984, was less than any calendar month of record at the NWS site except October of 1957, 1961, 1963, and 1978. The September total at Ish Creek, 0.98 in. (24.88 mm), was less than all but two of the September totals [September 1959, 0.56 in. (14.22 mm), and September 1961, 0.41 in. (10.41 mm)] at the NWS site since 1948.

2.2 Water Year 1985

The hydrologic significance of this period is the low precipitation.

Except for October 1984, when precipitation was 5.8 in. (147.22 mm), and August 1985, when precipitation was 9.38 in. (238.23 mm), every monthly total was less than the 36-year mean for that respective month at the NWS site. Total precipitation for the water year was 48.45 in. (1230.75 mm), 18% of which occurred in 4 days, October 22-23, 1984, with 3.58 in. (91.05 mm) and August 16-17, 1985, with 5.20 in. (131.97 mm).

Precipitation deficit for the water year was 5.92 in. (150.37 mm), and accumulative deficit since the heavy rains in May 1984 is 9.99 in. (253.75 mm).

3. SUMMARY OF DATA COLLECTION AND PROCESSING PROCEDURES

3.1 CWDF 1T (May through October 1984)

A Stevens digital-punch recorder (15-minute time interval) with metal tape and float in a 3-inch stilling pipe is used to collecting stage record. The control structure is a broad-crested concrete weir, with a 90° V-notch 4 inches (7.6 cm) deep in the main flow channel. Tapes are read using a Stevens translator, and resulting stage record is processed using locally developed software. During processing, minor stage corrections [0.02 ft (0.61 cm) or less] based on weekly inspections were entered into the program as needed.

A rating table dated May 11, 1984, developed from discharge measurements at stages up to 1.42 ft (43.28 cm), was used to convert stages to discharge. Except for the period May 2-8, all stages were well below maximum measured stage.

3.2 CWDF 1 (Begins November 1984)

A Stevens digital-punch recorder (15-minute time interval) with metal tape and float in a 48-inch (1.2 m) corrugated metal pipe stilling well with 3-inch (7.6 cm) intake is used to collect stage record. Low water control is a specially designed stainless steel critical flow V-type flume of throat depth approximately 1 foot (30 cm); flow capacity is approximately 32 L/s. At higher stages, a concrete box culvert 12 ft (3.7 m) wide and 13 ft (4.0 m) long, 2.5 ft (0.8 m) high at edges, and 3 ft (0.9 m) high over the V-notch, with flared entrance and exit, each 16 ft (4.9 m) wide and 10 ft (3.0 m) long, serves as the control. A staff gage mounted on the upstream right bank abutment wall serves as a reference gage to verify recording gage data. Tapes are read using a Stevens translator, and the resulting stage record is processed using locally developed software. Minor stage corrections [0.02 ft (0.61 cm) or less] based on weekly inspections were entered into the program as needed.

A rating table dated May 11, 1985, developed from discharge measurements at stages up to 1.84 feet (56.08 cm) and using a computed rating as a base shape for higher stages, was used to convert stage to discharge. Maximum stage during the period of use was 1.98 feet (60.35 cm), well within the reliable range of the rating table.

3.3 CWDF 3 and CWDF 7

A Manning Technologies, Inc. UD1100 Data Logger (15-minute recording frequency) with ultrasonic transducer mounted on a 2.5 ft (76.2 cm) H-flume that serves as the control structure is used in collecting the stage record. Water level as a percent of the preset maximum of 76.2 cm is obtained through a linear FROM (Functional Read Only Memory) and temporarily stored in hexadecimal format on an EPROM (Erasable Programmable Read Only Memory). EPROM's are read by computer and a hard copy of the original readings is prepared for permanent record. A 7-day circle-chart ink trace that is collected simultaneously serves as a back-up record. After printing the original record, EPROM data are converted to discharge using locally developed software. During processing, minor adjustments to percent maximum stage based on weekly field observations were entered into the program.

At CWDF 3, the standard rating for the 2.5 ft H-flume, modified by using percent of maximum stage rather than actual stage, is used in converting stage to discharge. The validity of the standard rating was confirmed by volumetric and current meter measurements at the site.

At CWDF 7, field measurements indicated that, for water levels less than 9% maximum stage, the standard rating underestimated discharge, probably the result of a slight downstream slope in the flume bed. The standard rating in these low stages was modified based on those field observations. Measurements at higher stages confirmed the standard rating.

3.4 CWDF 4 and CWDF 8

Instrumentation and processing of data at sites CWDF 4 and CWDF 8 is the same as described for sites CWDF 3 and CWDF 7, except that the control structure at sites 4 and 8 is a 2-in. (5.1 cm), 45° trapezoidal flume, with maximum observable stage of 30 cm (0.98 ft). At each site, standard rating, modified by using percent maximum rather than actual stage, is used in converting stage to discharge.

Flume capacity of 54.6 liters/second occurs at 80% maximum stage. During processing, minor adjustments to percent maximum stage based on weekly field observations are entered into the program.

4. RECORD EVALUATION

In general, the procedures and terminology used in evaluation of discharge records are the same as that used by the U.S. Geological Survey in Water-Data Reports. In particular, the degree of accuracy of records is described as: "excellent," which means 95% of the daily discharges are within 5%; "good" means within 10%, and "fair" within 15%. "Poor" means that daily discharges have less than "fair" accuracy. All records have been examined for errors resulting from equipment malfunction or temporary physical changes in hydraulic conditions, such as debris build-up in the control structure. This examination relies upon comparisons with flow at nearby sites, weather conditions, and the professional judgment of the hydrologist in charge. In all cases where recorded values were not valid, an estimated daily discharge value has been reported and noted. These estimates are derived from a combination of good record at nearby sites, the recorded range in stage at the site in question, and weather records.

In the following pages, there is an explanation of conditions resulting in fair and poor record, a summary of flow data for water years 1984 and 1985, a comparison of runoff to rainfall for 1984 and 1985, and tables presenting daily hydrologic summary data for the period May 1984 - September 1985.

4.1 Explanation of Data Quality

Monthly mean discharge record at all sites is considered good. Also, 85% of the individual daily discharge records are considered good. Only 32 site-days (1.2%) of the 2590 site-days of record during the period May 1984 through September 1985 are considered poor, all of which resulted from flow exceeding the flume capacity and/or washout of the stream banks at the head of the flume at sites CWDF 3, 4, and 8. Of the 366 site-days (14.1%) rated fair, 166 site-days were so rated because of "leaf action;" when leaves alternately pile up in, and wash out of, the control section of the flume, causing a change in stage. This stage fluctuation is translated into a fluctuation in discharge during record processing, when in fact there is little, if any change, in discharge during the day. The remaining 200 site-days of fair record, and the 32 site-days of poor record, are discussed for each individual site. In the following discussion, the record is considered fair unless specifically noted as poor.

4.2 Explanation of Fair and Poor Record:

CWDF 1T

7 days (May 3-9, 1984): Record based on a logarithmic extension of the rating table. Even though maximum stage was only 0.67 ft (20.4 cm) above maximum stage at which an actual discharge measurement was made, the record is considered fair rather than good because the peak discharge of the extended rating is over 4 times the maximum measured discharge, i.e., 5,900 L/s at peak stage compared to a measured maximum of 1,400 L/s.

5 days (October 3-7, 1984): Float stuck in pipe well.

CWDF 1

Entire period, November 1984 through September 1985, considered good.

CWDF 3

9 days (May 3-11, 1984): POOR RECORD. High water washed out the stream banks at the head of the flume, allowing water to by-pass the gage. Minor repair of washout made on May 11.

31 days (May 11 to June 11, 1984): Stage record processed in the usual manner, and resultant discharge increased by 10% based on estimated leakage through the repaired washout. Major repairs, including riprap along upstream left bank, completed on June 11.

10 days (June 12-21, 1984): Recorder switch left in "OFF" position after the June 11 inspection.

8 days (August 2-9, 1984): Recorder malfunction.

3 days (January 20-22, 1985): Ice in flume caused erroneous stage record.

4 days (April 30 to May 3, 1985): Stolen battery.

CWDF 4

10 days (May 2-11, 1984):	POOR RECORD. Flow exceeded capacity of flume May 2-4, and again on May 6. Recorder stopped on May 6.
3 days (January 20-22, 1985):	Ice in flume caused erroneous stage record.
1 day (February 1, 1985):	POOR RECORD. Flow exceeded capacity of flume.
4 days (April 30 to May 3, 1985):	Stolen battery.
2 days (August 16-17, 1985):	POOR RECORD. Flow exceeded capacity of flume.
18 days (September 13-30, 1985):	Recorder malfunction.

CWDF 7

15 days (May 21 to June 4, 1984):	Faulty EPROM.
3 days (January 20-22, 1985):	Ice in flume caused erroneous stage record.
4 days (April 30 to May 3, 1985):	Stolen battery.
21 days (June 29 to July 19, 1985):	Recorder malfunction.

CWDF 8

10 days (May 2-11, 1984):	POOR RECORD. Flow exceeded capacity of flume on May 2 and caused a slight washout around the left end of the headwall. Washout repaired on May 11.
18 days (May 12-29, 1984):	Spurious data. Missing or erroneous data points indicated on many days. Record processed in the usual manner and minor adjustments made to final discharge by comparison with CWDF 7.
2 days (July 10, 11, 1984):	Same as May 12-29, 1984.
20 days (August 9-28, 1984):	Recorder malfunction.
4 days (January 3-6, 1985):	Recorder malfunction.
10 days (March 23 to April 1, 1985):	Faulty EPROM.
5 days (May 6-10, 1985):	Dead battery.
5 days (June 15, July 3, 7, August 15, September 11, 1985):	Same as May 12-29, 1984.

4.3 Summary of Flows

The data presented in Table 1 include a summarization of maximum, minimum, and mean daily flows during the interval 11/83 through 3/84. There is also a synopsis of peak (instantaneous) flow at each of the sites. For the 1984 water year, which ended 9/30/84, the mean daily flow values suggest comparable conditions for sites CWDF 1T, CWDF 3, and CWDF 7. Sites CWDF 4 and CWDF 8 show a lower runoff rate (normalized to unit area), which suggests net ground-water losses from these small catchments. This is not unexpected for site CWDF 8, which is located in karst terrain and flows into a vertical cavity a short distance downstream from the flow measuring station. Station CWDF 4 is in an uplands setting, with a minimal cutoff wall to prevent water from seeping under the flume. Underflow is a possible explanation for the somewhat reduced annual runoff that was measured. Although annual runoff at site CWDF 7 is comparable to two other sites, it should be noted that this site shows a reduced maximum daily flow and an increased minimum daily flow in comparison to other sites. This confirms the importance of ground-water flow to the overall character of this site.

The flow at most sites shows a range of more than three orders of magnitude between dry weather and flood state. This underscores the difficulty of finding a hydraulic control structure that permits accurate estimation of flow at all stages.

Table 2 summarizes data for water year 1985. The relationships among sites are similar to those for the preceding water year, even though runoff is generally less than half that observed in water year 1984. The drier conditions enhance the importance of ground water to the total annual discharge, which is most apparent at site CWDF 7, as expected. The loss of ground water from the basin above CWDF 8 is more easily recognized during this period, especially with the occurrence of several periods of no flow.

Table 1. Summary of flow data for the period November 1983 through September 1984

Station	Drainage Area (km^2)	Mean flow (L/s)	Mean flow (cm/d)	Maximum day Date	Maximum day (L/s)	Maximum day (cm/d)	Minimum day Date	Minimum day (L/s)	Minimum day (cm/d)	Peak Flow Date	Peak Flow (L/s)
CWDF 1T	2.440	51.8	0.18	5/07	1860	6.59	9/24,25	0.02	<0.01	5/07	5900
CWDF 3	1.448	28.2	0.17	5/07	1100[a]	6.56	9/19	0.28	<0.01	5/07	[c]
CWDF 4	0.544	9.4	0.15	5/07	400[a]	6.35	[b]	0.02	<0.01	5/07	[c]
CWDF 7	0.140	2.9	0.18	5/07	68.2	4.21	9/19	0.39	0.02	5/07	112
CWDF 8	0.315	4.6	0.13	5/07	150[a]	4.11	No flow 11/1-26, 8/29 through 9/30			5/07	[c]

[a] Estimated value. Flow overtopped flume

[b] Several days in September.

[c] Flow overtopped flume. Instantaneous peak not estimated.

Table 2. Summary of flow data for the water year 1985
(October 1984 through September 1985)

Station	Drainage Area (km^2)	Mean flow (L/s)	Mean flow (cm/d)	Maximum day Date	Maximum day (L/s)	Maximum day (cm/d)	Minimum day Date	Minimum day (L/s)	Minimum day (cm/d)	Peak Flow Date	Peak Flow (L/s)
CWDF 1[a]	2.470	21.67	0.08	2/01	365.73	1.28	7/22	0.32	<0.01	8/16	669.00
CWDF 3	1.448	11.92	0.07	2/01	216.73	1.29	7/21	0.28	<0.01	8/17	341.22
CWDF 4	0.544	3.77	0.06	2/01	60[b]	0.95[b]	10/05	0.02	<0.01	8/17	80[b]
CWDF 7	0.140	1.61	0.10	2/01	17.74	1.09	11/06	0.22	<0.01	2/01	27.37
CWDF 8	0.315	1.59	0.04	2/02	28.48	0.78	No flow 10/1-21, 11/09, 6/26-7/02, 7/08-8/14			2/02	39.91

[a] Station CWDF 1T, 2.440 km^2, used for October record.

[b] Estimated value, flow exceeded flume capacity during the day.

4.4 Runoff Versus Precipitation

Tables 3 and 4 present precipitation and runoff data by month. The runoff values are normalized by dividing runoff volume by basin area so they can be compared directly to precipitation totals. For the annual values, it is normally assumed that moisture storage is the same at the beginning and end of the water year; thus, the difference is a good measure of basin loss. The basin loss is primarily evapotranspiration, although net gain or loss of ground water by subsurface pathways can bias the calculation.

It is interesting to compare computed evapotranspiration during the study period. For the interval 11/83 - 9/84, the estimated evapotranspiration for site CWDF 1T is 669 mm, or 52% of the precipitation. In water year 1985, evapotranspiration is calculated to total 954 mm or 78% of the precipitation. Data published by TVA (1972) indicate the expected long-term average difference between precipitation and streamflow for this area is about 730 mm or 53% of precipitation. If changes in basin moisture storage are considered, it is possible that some net accumulation occurred in summer 1985, resulting in higher storage at the end of the year than at the start. This would result in an overestimate of evapotranspiration, as observed. It is also possible that the generally drier conditions resulted in a net loss of ground water to a deeper, regional system. These uncertainties underscore the need for several years of continuous data to allow a reliable estimate of evapotranspiration loss and resolve questions about ground-water movement across small catchment (topographic) boundaries. The data presented here indicate that significant ground water loss across catchment boundaries cannot be eliminated from consideration. Data collected for Walker Branch watershed for water year 1985 show a net difference of 815 mm between precipitation and streamflow, supporting the tentative conclusion that change in storage is only partially responsible for the high net difference between precipitation and flow at the West Chestnut Ridge drainage for Ish Creek. It is likely that there is also a net ground-water loss occurring.

Table 3. Precipitation - runoff comparison

Station	1984 May	June	July	August	September	November 1983 - September 1984
			Precipitation (mm)			
Ish	279.16	76.90	185.20	34.15	24.88	1282.16
			Runoff (mm)			
CWDF 1T	215.87	5.81	25.24	3.66	0.61	612.93
CWDF 3	223.90	5.40	22.33	4.62	0.98	562.16
CWDF 4	203.56	4.19	17.21	3.59	0.34	499.68
CWDF 7	201.85	22.86	30.99	16.60	9.86	601.87
CWDF 8	141.03	2.37	9.20	1.80	0.00	425.11
			Runoff/Rainfall Ratio			
CWDF 1T	0.77	0.08	0.14	0.11	0.02	0.48
CWDF 3	0.80	0.07	0.12	0.14	0.04	0.44
CWDF 4	0.73	0.05	0.09	0.11	0.01	0.39
CWDF 7	0.72	0.30	0.17	0.49	0.40	0.47
CWDF 8	0.51	0.03	0.05	0.05	0.00	0.33

Table 4. Precipitation - runoff comparison

Station	1984 Oct.	1984 Nov.	1984 Dec.	1985 Jan.	1985 Feb.	1985 Mar.	1985 Apr.	1985 May	1985 June	1985 July	1985 Aug.	1985 Sept.	Oct. 1984 - Sept. 1985
			Precipitation (mm)										
ISH	147.22	119.49	54.36	73.66	99.90	56.65	53.60	65.28	146.18	125.22	238.25	50.94	1230.75
			Runoff (mm)										
CWDF 1	9.34	24.31	23.90	28.23	74.75	22.28	30.12	8.50	4.69	3.83	40.19	6.71	276.85
CWDF 3	7.21	21.21	21.46	26.80	73.62	21.69	29.41	6.68	2.62	2.88	41.17	4.79	259.54
CWDF 4	4.21	19.37	21.95	23.44	59.72	20.56	23.47	5.20	1.22	1.74	32.99	4.92	218.79
CWDF 7	12.53	16.56	24.66	34.07	83.88	37.11	45.23	23.70	20.15	17.83	34.17	12.95	362.84
CWDF 8	0.31	6.63	12.32	18.33	57.42	17.93	28.68	3.25	0.58	0.02	12.31	1.33	159.11
			Runoff/rainfall ratio										
CWDF 1	0.06	0.20	0.44	0.38	0.75	0.39	0.56	0.13	0.03	0.03	0.17	0.13	0.22
CWDF 3	0.05	0.18	0.39	0.36	0.74	0.38	0.55	0.10	0.02	0.02	0.17	0.09	0.21
CWDF 4	0.03	0.16	0.40	0.32	0.60	0.36	0.44	0.08	0.01	0.01	0.14	0.10	0.18
CWDF 7	0.09	0.14	0.45	0.46	0.84	0.66	0.84	0.36	0.14	0.14	0.14	0.25	0.29
CWDF 8	<0.01	0.06	0.23	0.25	0.57	0.32	0.54	0.05	<0.01	<0.01	0.05	0.03	0.13

4.5 Daily Hydrologic Summaries

Daily hydrologic summaries are presented in Tables 5-21, which encompass the period May 1984 through September 1985. The tables include precipitation and average flows at the five stations shown previously in Fig. 1. Site CWDF 1T was replaced by site CWDF 1 beginning November 1984. The latter site is approximately 100 feet (30 m) downstream and has a greater sensitivity and range of flow measuring capacity. The CWDF 1 site was operated simultaneously with CWDF 1T for sufficient period to verify comparable records existed at both sites. In addition to daily values, a summary of volume, peak instantaneous, and daily maximum and minimum flows are given for each site for the month.

Table 5. CWDF HYDROLOGIC SUMMARY REPORT FOR MAY 1984

DATE	PREC (MM)	CWDF 1T (L/S)	CWDF 3 (L/S)	CWDF 4 (L/S)	CWDF 7 (L/S)	CWDF 8 (L/S)
5/01/84	0.00	61.79	38.34	8.94	3.91	8.19
5/02/84	36.70	258.78	162.52	60.00 *	12.81	20.84
5/03/84	34.38	695.68	430.00 *	150.00 *	37.98	60.00 *
5/04/84	0.38	276.74	170.00 *	60.00 *	17.69	25.00 *
5/05/84	0.00	159.53	100.00 *	35.00 *	10.16	15.00 *
5/06/84	49.35	507.81	320.00 *	100.00 *	22.36	45.00 *
5/07/84	81.44	1860.78	1100.00 *	400.00 *	68.25	150.00 *
5/08/84	7.42	968.68	600.00 *	200.00 *	50.55	75.00 *
5/09/84	0.00	361.30	230.00 *	80.00 *	19.91	30.00 *
5/10/84	0.00	205.13	130.00 *	45.00 *	11.21	20.00 *
5/11/84	0.00	119.82	80.00 *	25.00 *	8.26	12.00 *
5/12/84	0.00	78.35	45.00 *	15.62	6.69	7.10 *
5/13/84	18.80	78.70	49.00 *	16.30	5.44	7.40 *
5/14/84	0.00	70.16	45.00 *	13.63	4.63	6.20 *
5/15/84	0.00	48.47	32.00 *	10.09	3.63	4.60 *
5/16/84	0.00	37.96	25.00 *	7.47	3.17	3.40 *
5/17/84	0.00	30.55	19.00 *	5.95	2.89	2.70 *
5/18/84	0.00	24.46	17.00 *	4.96	2.68	2.30 *
5/19/84	0.00	20.78	16.00 *	4.32	2.66	2.00 *
5/20/84	0.00	16.03	14.00 *	3.59	2.60	1.60 *
5/21/84	0.89	14.00	13.00 *	3.18	2.50 *	1.40 *
5/22/84	0.00	13.40	11.00 *	2.74	2.30 *	1.20 *
5/23/84	6.36	12.75	11.00 *	2.83	2.20 *	1.30 *
5/24/84	0.00	11.11	8.10 *	2.18	2.00 *	1.00 *
5/25/84	0.00	9.01	7.50 *	2.00	1.80 *	0.90 *
5/26/84	0.00	7.75	7.30 *	2.05	1.70 *	0.90 *
5/27/84	0.00	7.75	6.80 *	1.97	1.60 *	0.90 *
5/28/84	43.44	46.02	22.00 *	6.43	5.20 *	2.90 *
5/29/84	0.00	52.64	22.00 *	6.59	5.30 *	2.80 *
5/30/84	0.00	23.92	11.60 *	3.44	2.80 *	1.48
5/31/84	0.00	16.40	9.20 *	2.40	2.20 *	1.06
VOLUME (M**3)		526715.2	324203.8	110736.8	28259.4	44423.8
AVE FLOW (L/S)		196.65	121.04	41.34	10.55	16.59
AREA (KM**2)		2.440	1.448	0.544	0.140	0.315
UNIT AREA FLOW (L/S/KM**2)		30.59	83.59	75.99	75.36	51.67
PEAK FLOW (L/S)		5900.00	a*	a*	111.98	a*
MAX DAY (L/S)		1860.78	1100.00*	400.00*	68.25	150.00*
MIN DAY (L/S)		7.75	6.80*	1.97	1.60*	0.90*
TOTAL (MM)	279.16	215.87	223.90	203.56	201.85	141.03

[a] Flow overtopped flume; instantaneous peak not estimated.

NOTE: AN ASTERISK (*) AFTER THE DATA INDICATES AN ADJUSTED VALUE, WHERE THE ORIGINAL STAGE RECORD WAS INCOMPLETE, FAULTY OR AFFECTED BY BACKWATER.

Table 6. CWDF HYDROLOGIC SUMMARY REPORT FOR JUNE 1984

DATE	PREC (MM)	CWDF 1T (L/S)	CWDF 3 (L/S)	CWDF 4 (L/S)	CWDF 7 (L/S)	CWDF 8 (L/S)
6/01/84	0.00	13.25	7.60 *	2.17	1.80 *	0.83
6/02/84	0.00	11.30	6.50 *	2.10	1.70 *	0.72
6/03/84	0.00	9.12	5.20 *	1.84	1.50 *	0.63
6/04/84	0.00	6.88	3.90 *	1.70	1.30 *	0.56
6/05/84	0.00	6.35	3.70 *	1.53	1.25	0.47
6/06/84	0.00	5.90	3.50 *	1.40	1.29	0.41
6/07/84	0.00	5.35	3.30 *	1.36	1.38	0.40
6/08/84	0.00	5.35	3.10 *	1.29	1.31	0.33
6/09/84	0.00	5.21	2.90 *	1.15	1.21	0.25
6/10/84	0.00	4.47	2.60 *	1.06	1.22	0.22
6/11/84	0.00	3.92	2.40 *	0.82 *	1.14	0.19
6/12/84	0.00	3.55	2.20 *	0.59	1.12	0.18
6/13/84	0.00	3.52	2.20 *	0.54	1.12	0.16
6/14/84	1.52	3.27	2.10 *	0.54	1.20	0.16
6/15/84	0.00	3.39	2.00 *	0.53	1.11	0.14
6/16/84	0.50	3.19	1.90 *	0.50	1.16	0.13
6/17/84	0.00	2.98	1.90 *	0.45	1.06	0.12
6/18/84	0.00	2.55	1.80 *	0.42	1.00	0.10
6/19/84	0.00	2.55	1.70 *	0.41	1.08	0.10
6/20/84	0.64	2.45	1.70 *	0.37	1.06	0.09
6/21/84	4.20	3.14	1.80 *	0.45	1.29	0.12
6/22/84	6.73	3.70	2.03	0.53	1.27	0.13
6/23/84	0.00	4.52	2.13	0.58	1.19	0.14
6/24/84	0.63	3.10	1.76	0.49	1.08	0.12
6/25/84	0.00	2.13	1.30	0.32	0.81	0.08
6/26/84	0.00	1.64	1.03	0.26	0.73	0.08
6/27/84	0.00	1.49	0.98	0.24	0.88	0.09
6/28/84	0.00	1.30	0.99	0.23	0.96	0.09
6/29/84	39.75	18.33	7.47	1.02	1.97	0.68
6/30/84	22.93	20.26	8.83	1.48	1.86	0.92
VOLUME (M**3)		14183.4	7822.5	2277.6	3200.6	747.6
AVE FLOW (L/S)		5.47	3.02	0.88	1.23	0.29
AREA (KM**2)		2.440	1.448	0.544	0.140	0.315
UNIT AREA FLOW (L/S/KM**2)		2.24	2.09	1.62	8.79	0.92
PEAK FLOW (L/S)		108.00	71.90	7.36	15.94	7.50
MAX DAY (L/S)		20.26	8.83	2.17	1.97	0.92
MIN DAY (L/S)		1.30	0.98	0.23	0.73	0.08
TOTAL (MM)	76.90	5.81	5.40	4.19	22.86	2.37

NOTE: AN ASTERISK (*) AFTER THE DATA INDICATES AN ADJUSTED VALUE, WHERE THE ORIGINAL STAGE RECORD WAS INCOMPLETE, FAULTY OR AFFECTED BY BACKWATER.

Table 7. CWDF HYDROLOGIC SUMMARY REPORT FOR JULY 1984

DATE	PREC (MM)	CWDF 1T (L/S)	CWDF 3 (L/S)	CWDF 4 (L/S)	CWDF 7 (L/S)	CWDF 8 (L/S)
7/01/84	0.00	11.74	4.14	1.09	1.34	0.36
7/02/84	0.64	7.40	2.69	0.74	1.09	0.20
7/03/84	0.00	5.84	2.20	0.58	0.97	0.15
7/04/84	15.24	6.45	4.25	0.68	1.31	0.20
7/05/84	19.30	27.94	13.55	2.84	2.09	1.28
7/06/84	1.02	21.52	9.97	3.19	1.69	0.74
7/07/84	26.05	94.46	37.90	10.38	2.94	3.18
7/08/84	0.00	30.65	13.87	4.75	1.82	1.12
7/09/84	0.00	17.30	7.33	2.79	1.38	0.42
7/10/84	0.00	13.12	4.65	1.79	0.97	0.30 *
7/11/84	21.46	9.18	5.48	1.59	1.35	0.20 *
7/12/84	0.00	24.02	15.83	4.67	1.71	1.06
7/13/84	0.00	13.08	7.52	2.73	1.42	0.47
7/14/84	0.00	10.39	4.93	1.87	1.05	0.30
7/15/84	1.40	6.37	3.70	1.35	1.10	0.26
7/16/84	11.43	9.73	8.28	2.24	1.53	0.48
7/17/84	20.70	10.13	7.11	2.21	1.51	0.45
7/18/84	15.75	135.96	58.62	15.35	3.68	5.12
7/19/84	0.00	44.70	24.34	6.98	2.70	2.98
7/20/84	0.00	30.70	15.06	5.05	1.90	1.56
7/21/84	0.00	18.28	9.55	3.28	1.39	0.94
7/22/84	1.78	13.38	6.63	2.21	1.20	0.66
7/23/84	0.00	9.93	4.97	1.67	1.05	0.50
7/24/84	0.00	5.00	3.79	1.24	0.80	0.39
7/25/84	0.00	0.01	3.26	1.01	0.90	0.36
7/26/84	12.96	4.90	4.53	1.19	1.07	0.36
7/27/84	31.00	44.07	30.37	7.56	2.79	2.99
7/28/84	0.00	36.68	23.95	6.14	2.32	2.55
7/29/84	0.13	18.79	14.38	4.47	2.08	1.63
7/30/84	4.95	13.30	11.50	3.59	1.64	1.23
7/31/84	1.39	11.09	9.83	3.14	1.42	1.09
VOLUME (M**3)		61581.6	32331.3	9363.0	4338.3	2897.9
AVE FLOW (L/S)		22.99	12.07	3.50	1.62	1.08
AREA (KM**2)		2.440	1.448	0.544	0.140	0.315
UNIT AREA FLOW (L/S/KM**2)		9.42	8.34	6.43	11.57	3.43
PEAK FLOW (L/S)		420.00	549.00	32.98	14.57	16.29
MAX DAY (L/S)		135.96	58.62	15.35	3.68	5.12
MIN DAY (L/S)		4.90	2.20	0.58	0.80	0.20
TOTAL (MM)	185.20	25.24	22.33	17.21	30.99	9.20

NOTE: AN ASTERISK (*) AFTER THE DATA INDICATES AN ADJUSTED VALUE, WHERE THE ORIGINAL STAGE RECORD WAS INCOMPLETE, FAULTY OR AFFECTED BY BACKWATER.

Table 8. CWDF HYDROLOGIC SUMMARY REPORT FOR AUGUST 1984

DATE	PREC (MM)	CWDF 1T (L/S)	CWDF 3 (L/S)	CWDF 4 (L/S)	CWDF 7 (L/S)	CWDF 8 (L/S)
8/01/84	2.78	9.12	7.73	2.54	1.27	0.91
8/02/84	0.00	6.95	5.50 *	1.92	1.10	0.63
8/03/84	10.67	6.03	5.20 *	1.76	1.01	0.50
8/04/84	0.00	6.12	4.90 *	2.15	1.11	0.58
8/05/84	0.00	5.35	4.60 *	1.42	0.98	0.36
8/06/84	0.00	5.22	4.30 *	1.16	0.95	0.35
8/07/84	2.67	4.65	4.10 *	1.19	1.12	0.32
8/08/84	0.00	4.65	3.80 *	1.11	0.98	0.31
8/09/84	0.00	4.31	3.50 *	0.88	0.89	0.37 *
8/10/84	14.22	3.84	3.21	0.83	0.96	0.42 *
8/11/84	0.00	4.65	3.79	1.02	1.08	0.38 *
8/12/84	0.00	4.53	2.69	0.87	0.81	0.32 *
8/13/84	0.00	3.61	2.13	0.67	0.81	0.26 *
8/14/84	0.00	2.73	1.81	0.57	0.78	0.20 *
8/15/84	0.00	2.47	1.77	0.52	0.89	0.14 *
8/16/84	0.89	2.82	1.78	0.49	0.88	0.08 *
8/17/84	0.00	2.59	1.64	0.41	0.77	0.07 *
8/18/84	1.27	2.28	1.69	0.42	0.99	0.08 *
8/19/84	0.00	2.56	1.66	0.41	0.80	0.07 *
8/20/84	0.00	2.22	1.37	0.34	0.81	0.05 *
8/21/84	0.00	2.06	1.18	0.27	0.83	0.02 *
8/22/84	1.27	1.92	1.16	0.23	0.94	0.03 *
8/23/84	0.38	2.04	1.18	0.26	0.71	0.02 *
8/24/84	0.00	1.46	0.86	0.16	0.56	0.02 *
8/25/84	0.00	1.26	0.78	0.14	0.57	0.02 *
8/26/84	0.00	1.18	0.79	0.14	0.62	0.01 *
8/27/84	0.00	1.14	0.85	0.13	0.72	0.01 *
8/28/84	0.00	1.41	0.90	0.13	0.79	0.01 *
8/29/84	0.00	1.52	0.86	0.13	0.74	0.00
8/30/84	0.00	1.37	0.86	0.16	0.79	0.00
8/31/84	0.00	1.24	0.76	0.16	0.63	0.00
VOLUME (M**3)		8923.9	6683.7	1951.6	2323.6	565.5
AVE FLOW (L/S)		3.33	2.50	0.73	0.87	0.21
AREA (KM**2)		2.440	1.448	0.544	0.140	0.315
UNIT AREA FLOW (L/S/KM**2)		1.36	1.73	1.34	6.21	0.67
PEAK FLOW (L/S)		9.55	10.41	4.10	2.42	1.23
MAX DAY (L/S)		9.22	7.73	2.54	1.27	0.91
MIN DAY (L/S)		1.14	0.76	0.13	0.56	0.00
TOTAL (MM)	34.15	3.66	4.62	3.59	16.60	1.80

NOTE: AN ASTERISK (*) AFTER THE DATA INDICATES AN ADJUSTED VALUE, WHERE THE ORIGINAL STAGE RECORD WAS INCOMPLETE, FAULTY OR AFFECTED BY BACKWATER.

Table 9. CWDF HYDROLOGIC SUMMARY REPORT FOR SEPTEMBER 1984

DATE	PREC (MM)	CWDF 1T (L/S)	CWDF 3 (L/S)	CWDF 4 (L/S)	CWDF 7 (L/S)	CWDF 8 (L/S)
9/01/84	0.00	0.73	0.57	0.08	0.49	0.00
9/02/84	0.00	0.75	0.59	0.10	0.54	0.00
9/03/84	15.74	2.17	1.26	0.21	0.93	0.00
9/04/84	0.00	2.96	1.10	0.12	0.72	0.00
9/05/84	0.00	1.38	0.67	0.07	0.50	0.00
9/06/84	0.00	0.97	0.54	0.05	0.44	0.00
9/07/84	0.00	0.81	0.48	0.05	0.44	0.00
9/08/84	0.00	0.70	0.43	0.04	0.42	0.00
9/09/84	0.00	0.69	0.41	0.08	0.42	0.00
9/10/84	0.00	0.62	0.48	0.12	0.53	0.00
9/11/84	2.29	0.64	0.60	0.16	0.62	0.00
9/12/84	0.00	0.76	0.56	0.15	0.49	0.00
9/13/84	0.00	0.34	0.46	0.09	0.49	0.00
9/14/84	0.00	0.30	0.48	0.08	0.55	0.00
9/15/84	0.00	0.27	0.44	0.09	0.56	0.00
9/16/84	0.00	0.20	0.29	0.06	0.39	0.00
9/17/84	0.00	0.05	0.39	0.05	0.41	0.00
9/18/84	0.00	0.03	0.49	0.06	0.44	0.00
9/19/84	0.00	0.19	0.28	0.07	0.39	0.00
9/20/84	0.00	0.25	0.32	0.03	0.42	0.00
9/21/84	0.00	0.26	0.42	0.02	0.45	0.00
9/22/84	0.00	0.07	0.56	0.02	0.44	0.00
9/23/84	0.00	0.04	0.57	0.05	0.54	0.00
9/24/84	0.00	0.02*	0.84	0.08	0.61	0.00
9/25/84	0.00	0.02	0.70	0.05	0.54	0.00
9/26/84	0.00	0.04	0.41	0.08	0.67	0.00
9/27/84	0.00	0.14	0.36	0.04	0.61	0.00
9/28/84	0.00	0.23	0.40	0.02	0.66	0.00
9/29/84	0.00	0.55	0.36	0.02	0.60	0.00
9/30/84	6.85	0.96	0.95	0.05	0.69	0.00
VOLUME (M**3)		1482.1	1420.1	187.0	1380.8	0.0
AVE FLOW (L/S)		0.57	0.55	0.07	0.53	0.00
AREA (KM**2)		2.440	1.448	0.544	0.140	0.315
UNIT AREA FLOW (L/S/KM**2)		0.23	0.38	0.13	3.79	0.00
PEAK FLOW (L/S)		6.35	2.84	0.47	1.84	0.00
MAX DAY (L/S)		2.96	1.26	0.21	0.93	0.00
MIN DAY (L/S)		0.02*	0.28	0.02	0.39	0.00
TOTAL (MM)	24.88	0.61	0.98	0.34	9.86	0.00

NOTE: AN ASTERISK (*) AFTER THE DATA INDICATES AN ADJUSTED VALUE, WHERE THE ORIGINAL STAGE RECORD WAS INCOMPLETE, FAULTY OR AFFECTED BY BACKWATER.

Table 10. CWDF HYDROLOGIC SUMMARY REPORT FOR OCTOBER 1984

DATE	PREC (MM)	CWDF 1T (L/S)	CWDF 3 (L/S)	CWDF 4 (L/S)	CWDF 7 (L/S)	CWDF 8 (L/S)
10/ 1/84	0.00	2.03	1.29	0.05 *	0.66	0.00
10/ 2/84	0.00	1.27	1.04	0.04 *	0.51	0.00
10/ 3/84	0.00	1.00 *	0.83	0.04 *	0.59	0.00
10/ 4/84	0.00	0.72 *	0.60 *	0.03 *	0.55	0.00
10/ 5/84	0.00	0.55 *	0.46	0.02	0.38	0.00
10/ 6/84	0.00	0.70 *	0.54	0.05	0.46	0.00
10/ 7/84	0.39	0.90 *	0.74	0.09	0.57	0.00
10/ 8/84	24.52	3.11	3.71	0.41	0.87	0.00
10/ 9/84	0.52	2.52	2.81	0.33	0.70	0.00
10/10/84	0.00	1.78	2.38	0.36	0.54 *	0.00
10/11/84	0.00	1.25	1.61	0.24	0.45	0.00
10/12/84	0.00	1.06	1.02	0.14	0.45	0.00
10/13/84	0.00	1.06	0.92	0.17	0.41	0.00
10/14/84	0.00	1.19	1.31	0.27	0.41	0.00
10/15/84	1.38	1.32	1.60	0.48	0.57	0.00
10/16/84	0.50	1.21	1.39	0.68	0.50	0.00
10/17/84	4.57	1.57	2.08	0.93	0.70	0.00
10/18/84	0.00	1.54	1.34	0.52	0.45	0.00
10/19/84	0.00	1.33	0.89	0.20	0.46	0.00
10/20/84	19.35	4.47	3.15	0.23	0.78	0.00
10/21/84	3.17	3.17	1.47	0.22	0.59	0.00
10/22/84	58.36	43.63	15.46	1.77	1.53	0.00
10/23/84	32.69	73.52	27.74	6.82	1.97	0.07 *
10/24/84	0.00	46.57	18.73	4.77	1.52	0.20 *
10/25/84	0.00	17.15	7.90	2.34	0.91	0.18 *
10/26/84	0.00	11.60	4.81	1.40	0.48	0.16 *
10/27/84	0.00	8.64	3.59	0.99	0.43	0.12 *
10/28/84	1.27	7.77	3.46	0.91	0.57	0.13 *
10/29/84	0.50	9.14	3.10	0.82	0.53	0.11 *
10/30/84	0.00	6.60	2.67	0.66	0.43	0.09 *
10/31/84	0.00	5.35	2.23	0.54	0.35	0.06 *
VOLUME (M**3)		22785.9	10442.0	2291.3	1754.8	96.8
AVE FLOW (L/S)		8.51	3.90	0.86	0.66	0.04
AREA (KM**2)		2.440	1.448	0.544	0.140	0.315
UNIT AREA FLOW (L/S/KM**2)		3.49	2.69	1.58	4.71	0.13
PEAK FLOW (L/S)		188.00	75.44	25.72	7.38	0.53 *
MAX DAY (L/S)		73.52	27.74	6.82	1.97	0.20 *
MIN DAY (L/S)		0.55 *	0.46	0.02	0.35	0.00
TOTAL (MM)	147.22	9.34	7.21	4.21	12.53	0.31

NOTE: AN ASTERISK (*) AFTER THE DATA INDICATES AN ADJUSTED VALUE, WHERE THE ORIGINAL STAGE RECORD WAS INCOMPLETE, FAULTY OR AFFECTED BY BACKWATER.

Table 11. CWDF HYDROLOGIC SUMMARY REPORT FOR NOVEMBER 1984

DATE	PREC (MM)	CWDF 1 (L/S)	CWDF 3 (L/S)	CWDF 4 (L/S)	CWDF 7 (L/S)	CWDF 8 (L/S)
11/01/84	2.79	4.37	2.23	0.52	0.45	0.04 *
11/02/84	8.64	8.01	4.78	0.62	0.55	0.03
11/03/84	0.00	6.27	3.04	0.57	0.38	0.02
11/04/84	6.98	5.59	3.05	0.59	0.48	0.08
11/05/84	0.00	7.30	3.87	0.66	0.46	0.09
11/06/84	0.00	6.81	2.13	0.46	0.22	0.03
11/07/84	0.00	5.33	1.83	0.42	0.23	0.01
11/08/84	0.00	4.62	1.83	0.50	0.26	0.01
11/09/84	0.00	4.35	1.76	0.52	0.24	0.00
11/10/84	39.86	69.64	32.30	10.11	1.60	1.16
11/11/84	0.00	69.15	34.51	9.99	1.53	1.76
11/12/84	0.00	32.20	16.39	6.06	1.03	1.08
11/13/84	0.00	18.87	10.06	3.95	0.45	0.54
11/14/84	0.00	14.32	7.61	3.08	0.34	0.39
11/15/84	13.96	17.21	10.64	3.91	0.88	0.74
11/16/84	0.00	27.32	12.09	5.01	1.05	0.63
11/17/84	0.00	17.99	9.61	3.95	0.83	0.41
11/18/84	14.02	16.97	10.77	4.26	1.12	0.63
11/19/84	3.76	62.24	31.80	10.39	1.85	1.88
11/20/84	0.00	39.41	20.63	6.98	1.59	1.71
11/21/84	0.00	24.77	14.04	5.60	1.10	1.29
11/22/84	0.00	18.49	10.40	4.22	0.74	0.88
11/23/84	0.00	15.44	8.44	3.49	0.67	0.67
11/24/84	0.00	13.27	6.99	2.91	0.64	0.57
11/25/84	0.00	11.39	5.96	2.41	0.65	0.48
11/26/84	0.00	9.80	5.02	2.03	0.63	0.42
11/27/84	2.92	8.68	5.00	2.00	0.89	0.48
11/28/84	20.72	70.02	33.93	11.25	2.11	2.47
11/29/84	0.00	47.56	24.03	7.85	1.87	2.81
11/30/84	5.84	37.65	20.72	7.68	1.97	2.87
VOLUME (M**3)		60050.9	30708.5	10539.4	2318.3	2089.2
AVE FLOW (L/S)		23.17	11.85	4.07	0.89	0.81
AREA (KM**2)		2.470	1.448	0.544	0.140	0.315
UNIT AREA FLOW (L/S/KM**2)		9.38	8.18	7.48	6.36	2.57
PEAK FLOW (L/S)		171.00	82.93	27.97	4.75	5.67
MAX DAY (L/S)		70.02	34.51	11.25	2.11	2.87
MIN DAY (L/S)		4.35	1.76	0.42	0.22	0.00
TOTAL (MM)	119.49	24.31	21.21	19.37	16.56	6.63

NOTE: AN ASTERISK (*) AFTER THE DATA INDICATES AN ADJUSTED VALUE, WHERE THE ORIGINAL STAGE RECORD WAS INCOMPLETE, FAULTY OR AFFECTED BY BACKWATER.

Table 12. CWDF HYDROLOGIC SUMMARY REPORT FOR DECEMBER 1984

DATE	PREC (MM)	CWDF 1 (L/S)	CWDF 3 (L/S)	CWDF 4 (L/S)	CWDF 7 (L/S)	CWDF 8 (L/S)
12/01/84	0.00	29.25	14.84	6.14	1.33	1.90
12/02/84	2.79	23.36	13.15	5.61	1.29	1.50
12/03/84	0.00	21.25	11.45	4.88	1.14	1.23
12/04/84	0.00	16.47	8.14	3.52	0.91	0.81
12/05/84	7.90	16.89	9.44	4.15	1.08	1.04
12/06/84	2.01	26.51	12.33	5.01	1.14	1.25
12/07/84	0.00	18.96	8.73	3.72	0.90	0.87
12/08/84	0.00	18.91	9.80	4.11	0.97	0.88
12/09/84	0.00	17.18	9.07	3.77	0.99	0.97
12/10/84	2.29	16.99	9.56	3.98	1.22	1.15
12/11/84	0.00	14.49	7.03	2.96	0.87	0.86
12/12/84	0.00	13.13	6.55	2.85	1.02	0.81
12/13/84	0.00	12.05	6.01	2.67	1.01	0.77
12/14/84	0.00	10.38	4.73	2.01	0.77	0.62
12/15/84	0.00	9.02	4.12	1.69	0.71	0.54
12/16/84	0.00	8.56	4.22	1.77	0.91	0.55
12/17/84	0.00	8.52	4.11	1.78	0.91	0.53
12/18/84	0.00	8.25	3.94	1.67	0.93	0.50
12/19/84	2.03	8.33	4.25	1.77	1.07	0.55
12/20/84	12.94	16.33	8.59	3.17	1.34	1.02
12/21/84	8.65	21.32	10.24	4.69	1.63	1.05
12/22/84	1.50	50.52	22.69	7.75	1.78	1.74
12/23/84	0.00	40.09	21.01	6.93	1.88	2.60
12/24/84	7.92	35.86	20.91	7.11	2.17	3.20
12/25/84	2.26	49.42	24.10	7.68	1.78	3.00
12/26/84	0.00	41.12	23.07	7.42	1.87	2.68
12/27/84	0.00	35.25	20.49	7.26	1.89	2.90
12/28/84	0.00	29.10	17.23	6.72	1.73	2.81
12/29/84	0.00	24.48	14.63	5.59	1.55	2.42
12/30/84	2.29	21.36	13.04	5.06	1.62	2.20
12/31/84	1.78	19.83	12.12	4.79	1.56	1.97
VOLUME (M**3)		59024.2	31069.8	11940.9	3452.2	3880.6
AVE FLOW (L/S)		22.04	11.60	4.46	1.29	1.45
AREA (KM**2)		2.470	1.448	0.544	0.140	0.315
UNIT AREA FLOW (L/S/KM**2)		8.92	8.01	8.20	9.21	4.60
PEAK FLOW (L/S)		58.00	32.28	10.39	3.80	5.39
MAX DAY (L/S)		50.52	24.10	7.75	2.17	3.20
MIN DAY (L/S)		8.25	3.94	1.67	0.71	0.50
TOTAL (MM)	54.36	23.90	21.46	21.95	24.66	12.32

NOTE: AN ASTERISK (*) AFTER THE DATA INDICATES AN ADJUSTED VALUE, WHERE THE ORIGINAL STAGE RECORD WAS INCOMPLETE, FAULTY OR AFFECTED BY BACKWATER.

Table 13. CWDF HYDROLOGIC SUMMARY REPORT FOR JANUARY 1985

DATE	PREC (MM)	CWDF 1 (L/S)	CWDF 3 (L/S)	CWDF 4 (L/S)	CWDF 7 (L/S)	CWDF 8 (L/S)
1/01/85	19.31	48.02	25.18	9.36	2.13	3.01
1/02/85	0.26	75.78	43.05	12.58	2.92	4.93
1/03/85	8.63	66.78	43.10	12.38	3.57	6.00 *
1/04/85	5.35	83.22	51.74	15.44	3.64	6.20 *
1/05/85	0.00	72.72	45.64	12.46	3.85	6.00 *
1/06/85	0.00	60.28	34.93	10.07	3.08	5.50 *
1/07/85	0.00	50.39	28.70	8.84	3.07	4.80
1/08/85	0.00	35.45	19.69	7.14	2.23	3.78
1/09/85	0.00	25.64	14.49	5.50	1.76	2.47
1/10/85	2.54	22.34	13.47	5.31	1.87	2.16
1/11/85	0.00	19.79	11.16	4.44	1.68	1.68
1/12/85	0.00	15.76	7.93	3.13	1.28	1.12
1/13/85	0.00	14.54	7.30	2.98	1.18	1.36
1/14/85	0.00	14.94	8.38	3.40	1.57	1.23
1/15/85	0.00	13.30	6.30	2.38	1.19	1.27
1/16/85	3.85	11.55	5.63	2.16	1.32	1.22
1/17/85	1.99	13.96	8.08	3.17	1.61	1.57
1/18/85	0.00	13.77	7.31	2.95	1.63	1.47
1/19/85	0.52	12.11	5.82	2.31	1.38	1.27
1/20/85	1.51	9.79	5.00 *	2.00 *	1.30 *	0.57
1/21/85	0.00	8.64	4.50 *	1.80 *	1.20 *	0.51
1/22/85	0.00	8.99	4.00 *	1.60 *	1.10 *	0.70
1/23/85	0.00	9.12	3.92	1.48	0.92	0.72
1/24/85	0.00	9.70	4.72	1.76	1.20	0.86
1/25/85	0.00	9.77	4.47	1.66	1.17	0.79
1/26/85	0.00	7.76	2.97	0.94	0.89	0.54
1/27/85	2.02	7.31	3.13	1.00	1.16	0.64
1/28/85	7.36	8.55	4.00	1.32	1.13	0.78
1/29/85	0.00	8.09	3.45	1.06	0.97	0.66
1/30/85	0.91	8.08	3.77	1.23	1.18	0.75
1/31/85	19.41	40.97	17.31	5.74	2.04	2.30
VOLUME (M**3)		69735.0	38807.4	12753.4	4770.0	5775.3
AVE FLOW (L/S)		26.04	14.49	4.76	1.78	2.16
AREA (KM**2)		2.470	1.448	0.544	0.140	0.315
UNIT AREA FLOW (L/S/KM**2)		10.54	10.01	8.75	12.71	6.86
PEAK FLOW (L/S)		152.00	79.99	29.58	5.74	9.30 *
MAX DAY (L/S)		83.22	51.74	15.44	3.85	6.20 *
MIN DAY (L/S)		7.31	2.97	0.94	0.89	0.51
TOTAL (MM)	73.66	28.23	26.80	23.44	34.07	18.33

NOTE: AN ASTERISK (*) AFTER THE DATA INDICATES AN ADJUSTED VALUE, WHERE THE ORIGINAL STAGE RECORD WAS INCOMPLETE, FAULTY OR AFFECTED BY BACKWATER.

Table 14. CWDF HYDROLOGIC SUMMARY REPORT FOR FEBRUARY 1985

DATE	PREC (MM)	CWDF 1 (L/S)	CWDF 3 (L/S)	CWDF 4 (L/S)	CWDF 7 (L/S)	CWDF 8 (L/S)
2/01/85	37.08	365.73	216.73	60.00 *	17.74	22.92
2/02/85	2.77	260.80	172.72	41.01	16.15	28.48
2/03/85	0.00	137.79	89.39	28.83	9.63	17.27
2/04/85	0.00	91.83	57.93	21.44	6.98	12.50
2/05/85	15.46	116.13	66.54	23.33	6.75	13.11
2/06/85	0.00	108.49	68.34	22.50	7.42	11.72
2/07/85	0.00	80.84	47.66	14.77	6.50	8.96
2/08/85	0.00	63.69	33.58	10.38	4.47	6.61
2/09/85	0.00	53.45	26.96	8.12	3.55	5.64
2/10/85	0.00	44.90	22.85	6.74	3.19	5.14
2/11/85	19.88	52.94	28.97	8.63	3.73	5.85
2/12/85	9.47	67.72	33.97	10.29	3.76	5.39
2/13/85	0.64	55.07	27.74	8.43	3.18	4.74
2/14/85	0.00	51.16	27.00	8.26	3.45	4.51
2/15/85	0.00	47.95	24.71	7.29	2.81	4.04
2/16/85	0.00	42.89	22.51	6.53	2.56	3.77
2/17/85	0.00	42.64	22.29	6.63	2.32	3.78
2/18/85	3.56	42.00	20.77	6.50	2.27	3.46
2/19/85	3.04	60.87	31.51	10.83	2.97	4.81
2/20/85	0.00	60.30	32.83	10.75	3.49	5.49
2/21/85	0.00	53.37	28.86	9.01	3.85	5.49
2/22/85	0.00	46.94	25.36	7.28	3.56	5.15
2/23/85	0.00	40.08	22.45	7.36	3.26	4.75
2/24/85	0.00	35.33	20.27	7.55	3.11	4.29
2/25/85	8.00	33.03	18.81	6.71	2.64	3.75
2/26/85	0.00	31.83	16.86	6.64	2.58	3.21
2/27/85	0.00	25.97	13.78	5.37	2.11	2.49
2/28/85	0.00	23.13	12.38	4.78	1.87	2.06
VOLUME (M**3)		184625.3	106596.4	32485.4	11742.6	18086.6
AVE FLOW (L/S)		76.32	44.06	13.43	4.85	7.48
AREA (KM**2)		2.470	1.448	0.544	0.140	0.315
UNIT AREA FLOW (L/S/KM**2)		30.90	30.43	24.69	34.64	23.75
PEAK FLOW (L/S)		576.00	318.00	75.00 *	27.36	39.91
MAX DAY (L/S)		365.73	216.73	60.00 *	17.74	28.48
MIN DAY (L/S)		23.13	12.38	4.78	1.87	2.06
TOTAL (MM)	99.90	74.75	73.62	59.72	83.88	57.42

NOTE: AN ASTERISK (*) AFTER THE DATA INDICATES AN ADJUSTED VALUE, WHERE THE ORIGINAL STAGE RECORD WAS INCOMPLETE, FAULTY OR AFFECTED BY BACKWATER.

Table 15. CWDF HYDROLOGIC SUMMARY REPORT FOR MARCH 1985

DATE	PREC (MM)	CWDF 1 (L/S)	CWDF 3 (L/S)	CWDF 4 (L/S)	CWDF 7 (L/S)	CWDF 8 (L/S)
3/01/85	0.00	24.29	14.68	5.53	2.53	2.55
3/02/85	0.00	22.76	13.05	4.90	2.12	2.49
3/03/85	0.00	19.30	10.78	4.17	1.92	2.13
3/04/85	5.59	18.85	11.78	4.50	2.21	2.29
3/05/85	1.02	20.64	11.45	4.10	1.83	2.02
3/06/85	0.00	15.39	7.42	2.87	1.48	1.30
3/07/85	0.00	14.19	7.33	2.98	1.63	1.23
3/08/85	8.91	15.48	9.69	3.64	1.94	1.69
3/09/85	4.06	32.82	16.31	5.91	2.00	2.45
3/10/85	0.00	27.24	15.17	5.59	2.06	2.23
3/11/85	0.00	29.04	18.31	6.58	2.46	3.24
3/12/85	2.54	27.77	15.99	5.40	2.24	2.96
3/13/85	0.00	22.11	12.84	4.33	2.03	2.53
3/14/85	0.64	20.99	12.33	4.18	2.13	2.41
3/15/85	0.00	17.60	9.62	3.17	1.57	1.83
3/16/85	0.00	16.51	9.25	3.18	1.74	1.75
3/17/85	0.00	16.42	9.26	3.09	1.78	1.77
3/18/85	0.00	14.71	7.31	2.25	1.45	1.34
3/19/85	0.00	12.93	6.54	2.06	1.37	1.18
3/20/85	0.00	12.61	6.67	2.16	1.54	1.21
3/21/85	4.31	13.37	7.87	2.59	1.91	1.49
3/22/85	8.37	19.91	12.02	3.94	2.04	2.19
3/23/85	8.38	17.00	9.71	3.36	1.94	1.70 *
3/24/85	0.51	31.18	14.90	5.88	1.92	2.90 *
3/25/85	1.14	24.28	13.17	4.90	1.80	2.40 *
3/26/85	0.00	21.25	11.96	4.25	1.56	2.10 *
3/27/85	0.89	21.92	13.87	4.97	2.06	2.50 *
3/28/85	0.00	22.27	14.52	5.19	2.33	2.60 *
3/29/85	0.00	20.44	12.74	4.49	2.25	2.20 *
3/30/85	0.00	18.14	11.26	3.91	1.96	2.00 *
3/31/85	10.29	25.47	15.66	5.40	2.33	2.70 *
VOLUME (M**3)		55024.1	31401.7	11183.6	5195.5	5646.7
AVE FLOW (L/S)		20.54	11.72	4.18	1.94	2.11
AREA (KM**2)		2.470	1.448	0.544	0.140	0.315
UNIT AREA FLOW (L/S/KM**2)		8.32	8.09	7.68	13.86	6.70
PEAK FLOW (L/S)		38.30	25.79	7.57	3.54	4.07
MAX DAY (L/S)		32.82	18.31	6.58	2.53	3.24
MIN DAY (L/S)		12.61	6.54	2.06	1.37	1.18
TOTAL (MM)	56.65	22.28	21.69	20.56	37.11	17.93

NOTE: AN ASTERISK (*) AFTER THE DATA INDICATES AN ADJUSTED VALUE, WHERE THE ORIGINAL STAGE RECORD WAS INCOMPLETE, FAULTY OR AFFECTED BY BACKWATER.

Table 16. CWDF HYDROLOGIC SUMMARY REPORT FOR APRIL 1985

DATE	PREC (MM)	CWDF 1 (L/S)	CWDF 3 (L/S)	CWDF 4 (L/S)	CWDF 7 (L/S)	CWDF 8 (L/S)
4/01/85	0.00	22.25	11.56	4.02	1.75	2.00 *
4/02/85	0.00	19.27	10.63	3.39	1.47	1.62
4/03/85	0.00	19.59	11.93	3.72	1.70	1.99
4/04/85	0.00	18.49	11.74	3.64	1.84	2.32
4/05/85	27.42	47.03	29.63	8.05	2.87	4.73
4/06/85	0.00	100.85	59.73	18.39	4.99	9.11
4/07/85	0.51	68.71	42.89	11.95	5.65	8.24
4/08/85	0.64	54.96	30.49	7.66	4.20	6.89
4/09/85	0.00	41.89	22.46	6.01	2.87	5.60
4/10/85	0.00	31.70	17.76	5.36	2.44	4.94
4/11/85	0.00	26.21	15.73	4.91	2.37	4.20
4/12/85	0.00	21.66	12.96	4.06	2.16	3.30
4/13/85	0.51	19.23	11.75	3.79	2.19	3.02
4/14/85	0.00	18.03	11.32	3.63	2.11	2.83
4/15/85	24.27	48.96	26.95	7.40	2.94	5.34
4/16/85	0.00	54.06	24.74	7.02	3.37	5.55
4/17/85	0.00	40.73	21.24	6.51	3.20	5.57
4/18/85	0.00	33.56	18.62	5.61	3.00	5.01
4/19/85	0.00	28.34	16.36	4.90	2.65	4.42
4/20/85	0.00	24.09	14.00	4.18	2.20	3.79
4/21/85	0.00	19.59	11.57	3.58	2.13	2.80
4/22/85	0.00	16.44	9.38	3.11	1.95	2.19
4/23/85	0.00	14.67	8.72	2.90	2.06	1.90
4/24/85	0.25	13.93	8.25	2.79	1.94	1.69
4/25/85	0.00	11.80	6.49	2.17	1.53	1.25
4/26/85	0.00	10.24	5.75	1.95	1.58	1.01
4/27/85	0.00	9.68	5.93	2.05	1.88	1.05
4/28/85	0.00	9.66	5.85	1.97	1.69	0.96
4/29/85	0.00	8.22	4.46	1.62	1.36	0.70
4/30/85	0.00	7.25	3.94 *	1.43 *	1.20 *	0.56
VOLUME (M**3)		74399.9	42579.0	12766.5	6331.8	9035.1
AVE FLOW (L/S)		28.70	16.43	4.93	2.44	3.49
AREA (KM**2)		2.470	1.448	0.544	0.140	0.315
UNIT AREA FLOW (L/S/KM**2)		11.62	11.35	9.06	17.43	11.08
PEAK FLOW (L/S)		228.00	130.09	37.51	8.03	18.68
MAX DAY (L/S)		100.85	59.73	18.39	5.65	9.11
MIN DAY (L/S)		7.25	3.94 *	1.43 *	1.20 *	0.56
TOTAL (MM)	53.60	30.12	29.41	23.47	45.23	28.68

NOTE: AN ASTERISK (*) AFTER THE DATA INDICATES AN ADJUSTED VALUE, WHERE THE ORIGINAL STAGE RECORD WAS INCOMPLETE, FAULTY OR AFFECTED BY BACKWATER.

Table 17. CWDF HYDROLOGIC SUMMARY REPORT FOR MAY 1985

DATE	PREC (MM)	CWDF 1 (L/S)	CWDF 3 (L/S)	CWDF 4 (L/S)	CWDF 7 (L/S)	CWDF 8 (L/S)
5/01/85	0.00	7.39	3.97 *	1.44 *	1.21 *	0.55
5/02/85	18.41	29.51	13.85 *	4.24 *	2.61 *	2.44
5/03/85	0.00	31.50	14.56 *	4.46 *	2.74 *	1.71
5/04/85	0.00	15.89	7.35	2.25	1.38	0.91
5/05/85	0.00	12.19	5.44	1.61	1.24	0.57
5/06/85	0.00	10.09	4.59	1.38	1.28	0.50 *
5/07/85	3.05	10.04	5.20	1.44	1.54	0.48 *
5/08/85	4.57	10.32	5.18	1.44	1.46	0.46 *
5/09/85	0.38	9.38	4.40	1.27	1.35	0.44 *
5/10/85	0.00	8.03	3.66	1.14	1.25	0.42 *
5/11/85	0.51	7.35	3.36	1.05	1.34	0.40
5/12/85	1.27	6.76	3.27	1.03	1.37	0.36
5/13/85	0.00	6.23	2.92	0.93	1.12	0.32
5/14/85	0.00	5.49	2.54	0.82	1.10	0.29
5/15/85	0.00	4.92	2.23	0.77	1.15	0.24
5/16/85	0.76	4.28	1.92	0.58	1.10	0.17
5/17/85	8.13	5.19	2.67	0.62	1.33	0.16
5/18/85	0.00	5.07	2.29	0.62	0.89	0.14
5/19/85	0.00	4.13	1.69	0.45	0.78	0.10
5/20/85	0.00	3.67	1.52	0.41	0.92	0.10
5/21/85	7.75	4.29	1.88	0.48	1.12	0.12
5/22/85	0.38	4.33	1.95	0.52	1.13	0.12
5/23/85	7.88	4.72	2.23	0.52	1.23	0.11
5/24/85	2.79	4.89	2.27	0.53	1.18	0.10
5/25/85	0.00	4.60	1.93	0.48	0.90	0.08
5/26/85	0.00	3.78	1.45	0.37	0.76	0.07
5/27/85	0.00	3.33	1.24	0.33	0.77	0.07
5/28/85	9.40	4.85	2.00	0.41	1.18	0.12
5/29/85	0.00	4.22	1.71	0.44	0.95	0.11
5/30/85	0.00	3.50	1.42	0.37	0.93	0.09
5/31/85	0.00	3.07	1.22	0.31	1.09	0.09
VOLUME (M**3)		20995.9	9670.3	2827.4	3318.0	1023.0
AVE FLOW (L/S)		7.84	3.61	1.06	1.24	0.38
AREA (KM**2)		2.470	1.448	0.544	0.140	0.315
UNIT AREA FLOW (L/S/KM**2)		3.17	2.49	1.95	8.86	1.21
PEAK FLOW (L/S)		64.00	30.00 *	9.00 *	4.20 *	2.98
MAX DAY (L/S)		31.50	14.56 *	4.46 *	2.74 *	2.44
MIN DAY (L/S)		3.07	1.22	0.31	0.76	0.07
TOTAL (MM)	65.28	8.50	6.68	5.20	23.70	3.25

NOTE: AN ASTERISK (*) AFTER THE DATA INDICATES AN ADJUSTED VALUE, WHERE THE ORIGINAL STAGE RECORD WAS INCOMPLETE, FAULTY OR AFFECTED BY BACKWATER.

Table 18. CWDF HYDROLOGIC SUMMARY REPORT FOR JUNE 1985

DATE	PREC (MM)	CWDF 1 (L/S)	CWDF 3 (L/S)	CWDF 4 (L/S)	CWDF 7 (L/S)	CWDF 8 (L/S)
6/01/85	0.00	2.85	1.04	0.24	0.80	0.06
6/02/85	4.32	2.80	1.06	0.22	0.96	0.06
6/03/85	1.07	2.46	0.89	0.21	0.92	0.06
6/04/85	0.85	2.15	0.82	0.18	0.90	0.06
6/05/85	0.00	1.84	0.73	0.15	0.92	0.07
6/06/85	1.78	1.95	0.79	0.15	1.04	0.06
6/07/85	42.68	16.77	5.85	0.57	1.62	0.17
6/08/85	0.00	7.90	2.95	0.69	1.35	0.32
6/09/85	0.00	4.56	1.71	0.43	1.12	0.19
6/10/85	4.57	3.54	1.38	0.29	1.14	0.13
6/11/85	2.29	3.60	1.35	0.25	1.33	0.14
6/12/85	20.82	12.41	5.41	0.76	1.62	0.27
6/13/85	0.00	5.85	1.86	0.43	1.01	0.09
6/14/85	0.00	4.16	1.23	0.26	0.86	0.04
6/15/85	0.00	3.36	1.07	0.21	1.02	0.03 *
6/16/85	0.00	2.96	0.95	0.27	1.13	0.02
6/17/85	8.64	3.46	1.05	0.26	1.25	0.04
6/18/85	13.19	8.69	3.15	0.44	1.55	0.10
6/19/85	0.00	4.69	1.54	0.33	1.18	0.08
6/20/85	0.00	3.65	1.01	0.20	0.95	0.07
6/21/85	0.00	3.02	0.76	0.13	0.87	0.02
6/22/85	0.00	2.56	0.70	0.10	0.98	0.01
6/23/85	0.00	2.26	0.65	0.11	1.04	0.01
6/24/85	1.40	1.87	0.56	0.10	1.03	0.01
6/25/85	0.00	1.83	0.51	0.08	0.97	0.01
6/26/85	8.00	1.91	0.87	0.11	1.03	0.00
6/27/85	0.00	2.05	0.72	0.13	0.96	0.00
6/28/85	0.00	1.49	0.57	0.13	0.90	0.00
6/29/85	0.00	1.37	0.44	0.05	0.70 *	0.00
6/30/85	36.57	16.00	2.26	0.19	1.50 *	0.00
VOLUME (M**3)		11579.5	3792.8	662.2	2820.5	182.9
AVE FLOW (L/S)		4.47	1.46	0.26	1.09	0.07
AREA (KM**2)		2.470	1.448	0.544	0.140	0.315
UNIT AREA FLOW (L/S/KM**2)		1.81	1.01	0.48	7.79	0.22
PEAK FLOW (L/S)		219.00	40.42	4.84	5.68	0.77
MAX DAY (L/S)		16.77	5.85	0.76	1.62	0.32
MIN DAY (L/S)		1.37	0.44	0.05	0.70 *	0.00
TOTAL (MM)	146.18	4.69	2.62	1.22	20.15	0.58

NOTE: AN ASTERISK (*) AFTER THE DATA INDICATES AN ADJUSTED VALUE, WHERE THE ORIGINAL STAGE RECORD WAS INCOMPLETE, FAULTY OR AFFECTED BY BACKWATER.

Table 19. CWDF HYDROLOGIC SUMMARY REPORT FOR JULY 1985

DATE	PREC (MM)	CWDF 1 (L/S)	CWDF 3 (L/S)	CWDF 4 (L/S)	CWDF 7 (L/S)	CWDF 8 (L/S)
7/01/85	5.59	13.18	3.18	0.48	2.50 *	0.00
7/02/85	0.00	5.32	1.65	0.45	1.30 *	0.00
7/03/85	0.00	3.56	1.06	0.28	0.95 *	0.01 *
7/04/85	0.00	2.81	0.85	0.20	0.80 *	0.03
7/05/85	0.00	2.68	0.84	0.18	0.75 *	0.02
7/06/85	9.65	3.19	1.30	0.27	0.90 *	0.01
7/07/85	0.00	2.92	1.01	0.24	0.85 *	0.01 *
7/08/85	0.00	2.12	0.70	0.16	0.75 *	0.00
7/09/85	4.83	1.76	0.66	0.13	0.70 *	0.00
7/10/85	15.75	2.57	1.00	0.14	0.90 *	0.00
7/11/85	0.00	3.94	1.66	0.19	1.20 *	0.00
7/12/85	0.00	2.22	0.78	0.16	0.90 *	0.00
7/13/85	0.51	1.78	0.68	0.12	0.85 *	0.00
7/14/85	0.00	1.81	0.71	0.10	0.80 *	0.00
7/15/85	0.76	1.65	0.71	0.09	0.70 *	0.00
7/16/85	0.00	1.62	0.54	0.09	0.70 *	0.00
7/17/85	0.00	1.24	0.36	0.06	0.65 *	0.00
7/18/85	0.00	1.15	0.32	0.05	0.60 *	0.00
7/19/85	0.00	0.92	0.29	0.04	0.50 *	0.00
7/20/85	0.00	0.34	0.28	0.04	0.46	0.00
7/21/85	0.00	0.33	0.28	0.04	0.48	0.00
7/22/85	0.00	0.32	0.30	0.04	0.58	0.00
7/23/85	41.91	7.50	4.43	0.71	0.81	0.00
7/24/85	0.00	2.73	1.23	0.45	0.70	0.00
7/25/85	0.00	2.12	0.91	0.30	0.67	0.00
7/26/85	21.59	2.27	1.58	0.29	0.85	0.00
7/27/85	0.25	8.43	4.58	0.85	1.64	0.00
7/28/85	8.89	6.46	3.58	0.89	1.57	0.00
7/29/85	2.54	5.12	2.70	0.81	1.26	0.00
7/30/85	12.70	10.28	6.05	1.56	1.34	0.00
7/31/85	0.25	7.30	4.10	1.58	1.22	0.00
VOLUME (M**3)		9472.0	4174.6	948.7	2495.6	6.7
AVE FLOW (L/S)		3.54	1.56	0.35	0.93	0.00
AREA (KM**2)		2.470	1.448	0.544	0.140	0.315
UNIT AREA FLOW (L/S/KM**2)		1.43	1.08	0.64	6.64	0.00
PEAK FLOW (L/S)		56.50	71.01	6.39	5.49 *	0.08
MAX DAY (L/S)		13.18	6.05	1.58	2.50 *	0.03
MIN DAY (L/S)		0.32	0.28	0.04	0.46	0.00
TOTAL (MM)	125.22	3.83	2.88	1.74	17.83	0.02

NOTE: AN ASTERISK (*) AFTER THE DATA INDICATES AN ADJUSTED VALUE, WHERE THE ORIGINAL STAGE RECORD WAS INCOMPLETE, FAULTY OR AFFECTED BY BACKWATER.

Table 20. CWDF HYDROLOGIC SUMMARY REPORT FOR AUGUST 1985

DATE	PREC (MM)	CWDF 1 (L/S)	CWDF 3 (L/S)	CWDF 4 (L/S)	CWDF 7 (L/S)	CWDF 8 (L/S)
8/01/85	6.86	6.48	4.07	1.40	1.11	0.00
8/02/85	0.00	4.75	2.32	0.92	0.80	0.00
8/03/85	0.00	3.33	1.19	0.54	0.46	0.00
8/04/85	0.00	2.53	0.87	0.36	0.46	0.00
8/05/85	0.00	2.02	0.65	0.26	0.51	0.00
8/06/85	14.96	3.98	1.32	0.34	0.83	0.00
8/07/85	1.52	3.92	1.50	0.44	0.78	0.00
8/08/85	0.00	3.40	1.16	0.39	0.62	0.00
8/09/85	0.00	2.53	0.82	0.27	0.58 *	0.00
8/10/85	0.00	1.94	0.57	0.19	0.54	0.00
8/11/85	0.00	1.50	0.46	0.13	0.46	0.00
8/12/85	0.00	1.18	0.37	0.09	0.38	0.00
8/13/85	1.27	0.88	0.29	0.08	0.43	0.00
8/14/85	0.00	0.78	0.34	0.07	0.53	0.00
8/15/85	0.00	0.62	0.30	0.06	0.45	0.00 *
8/16/85	84.41	72.24	35.13	10.00 *	2.27	1.30
8/17/85	47.16	333.02	196.10	60.00 *	9.53	9.37
8/18/85	0.00	104.99	64.69	19.54	4.65	4.59
8/19/85	0.00	52.18	27.37	9.60	2.45	2.36
8/20/85	0.00	27.68	14.70	6.32	1.71	1.04
8/21/85	0.00	16.75	8.41	4.18	1.12	0.49
8/22/85	0.00	10.40	4.32	2.19	0.81	0.23
8/23/85	1.28	8.06	3.53	1.69	1.01	0.18
8/24/85	33.54	41.11	27.96	7.54	2.00	1.58
8/25/85	25.14	87.38	60.83	13.88	3.31	3.45
8/26/85	0.51	151.42	107.84	27.01	6.44	7.93
8/27/85	0.00	70.78	45.34	13.71	4.05	4.74
8/28/85	0.00	45.02	25.47	8.27	2.38	3.04
8/29/85	0.00	25.66	14.93	5.75	1.42	1.58
8/30/85	21.60	32.13	20.66	6.82	1.71	2.17
8/31/85	0.00	30.25	16.39	5.63	1.60	1.45
VOLUME (M**3)		99263.9	59607.0	17945.0	4784.4	3877.3
AVE FLOW (L/S)		37.06	22.25	6.70	1.79	1.45
AREA (KM**2)		2.470	1.448	0.544	0.140	0.315
UNIT AREA FLOW (L/S/KM**2)		15.00	15.37	12.32	12.79	4.60
PEAK FLOW (L/S)		669.00	341.22	80.00 *	15.92	20.92
MAX DAY (L/S)		333.02	196.10	60.00 *	9.53	9.37
MIN DAY (L/S)		0.62	0.29	0.06	0.38	0.00
TOTAL (MM)	238.25	40.19	41.17	32.99	34.17	12.31

NOTE: AN ASTERISK (*) AFTER THE DATA INDICATES AN ADJUSTED VALUE, WHERE THE ORIGINAL STAGE RECORD WAS INCOMPLETE, FAULTY OR AFFECTED BY BACKWATER.

Table 21. CWDF HYDROLOGIC SUMMARY REPORT FOR SEPTEMBER 1985

DATE	PREC (MM)	CWDF 1 (L/S)	CWDF 3 (L/S)	CWDF 4 (L/S)	CWDF 7 (L/S)	CWDF 8 (L/S)
9/01/85	0.00	17.66	9.75	3.66	1.19	0.75
9/02/85	0.00	12.48	6.43	2.70	0.93	0.48
9/03/85	0.00	9.56	4.70	2.09	0.83	0.36
9/04/85	0.00	7.78	3.68	1.67	0.79	0.27
9/05/85	2.92	6.78	3.23	1.45	0.89	0.20
9/06/85	18.04	16.69	10.14	3.13	1.39	0.75
9/07/85	0.00	12.52	6.11	2.31	1.28	0.44
9/08/85	0.00	8.33	3.83	1.58	1.00	0.21
9/09/85	0.00	6.69	3.00	1.27	0.91	0.13
9/10/85	0.00	5.94	2.69	1.12	0.97	0.14
9/11/85	0.00	5.63	2.40 *	1.01	0.89	0.13 *
9/12/85	0.00	4.94	1.80 *	0.75	0.84	0.12
9/13/85	0.00	4.32	1.40 *	0.60 *	0.66	0.11 *
9/14/85	0.00	4.12	1.20 *	0.55 *	0.65	0.10 *
9/15/85	0.00	4.12	1.00 *	0.50 *	0.66	0.09 *
9/16/85	0.00	4.08	0.95 *	0.45 *	0.59	0.08 *
9/17/85	0.00	4.01	0.90 *	0.40 *	0.54	0.07 *
9/18/85	0.00	3.98	0.90 *	0.40 *	0.49	0.06 *
9/19/85	0.00	3.80	0.80	0.35 *	0.43 *	0.05 *
9/20/85	0.00	3.64	0.78	0.30 *	0.37	0.04 *
9/21/85	0.00	3.51	0.77	0.30 *	0.38	0.03 *
9/22/85	0.00	3.30	0.79	0.25 *	0.40	0.02
9/23/85	13.73	4.45	1.69	0.50 *	0.70	0.03 *
9/24/85	6.59	6.25	2.38	0.70 *	0.57	0.04 *
9/25/85	0.00	4.40	1.36	0.40 *	0.41	0.04 *
9/26/85	9.66	5.48	2.59	0.75 *	0.71	0.03 *
9/27/85	0.00	5.09	1.84	0.55 *	0.45	0.01
9/28/85	0.00	4.20	1.20	0.45 *	0.34	0.02
9/29/85	0.00	4.00	1.02	0.40 *	0.34	0.03
9/30/85	0.00	4.00	1.01	0.40 *	0.38	0.02
VOLUME (M**3)		16566.4	6940.7	2678.6	1812.5	420.2
AVE FLOW (L/S)		6.39	2.68	1.03	0.70	0.16
AREA (KM**2)		2.470	1.448	0.544	0.140	0.315
UNIT AREA FLOW (L/S/KM**2)		2.59	1.85	1.89	5.00	0.51
PEAK FLOW (L/S)		46.30	33.35	8.03	2.62	3.41
MAX DAY (L/S)		17.66	10.14	3.66	1.39	0.75
MIN DAY (L/S)		3.30	0.77	0.25 *	0.34	0.02
TOTAL (MM)	50.94	6.71	4.79	4.92	12.95	1.33

NOTE: AN ASTERISK (*) AFTER THE DATA INDICATES AN ADJUSTED VALUE, WHERE THE ORIGINAL STAGE RECORD WAS INCOMPLETE, FAULTY OR AFFECTED BY BACKWATER.

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