FLOODPLAIN DELINEATION OF THE TOLLESON AREA

PROJECT FCD 95-26

HYDROLOGY REPORT

Prepared for

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

Registered Professional Engineer (Civil)
CERTIFICATE NO.
21684
BRIAN J.
FRY
Date Signed 5-24-99
ARIZONA, U.S.A.

Prepared by

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CONSULTING ENGINEERS
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May 14, 1999

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FLOODPLAIN DELINEATION OF THE TOLLESON AREA

HYDROLOGY REPORT

I. INTRODUCTION

A. General

This hydrology report is prepared for the Flood Control District of Maricopa County as part of the Floodplain Delineation of the Tolleson Area. The purpose of the project is to prepare hydrology and hydraulics to delineate areas of flooding due to conveyance and ponding behind the Roosevelt Irrigation District Main Canal and the Southern Pacific Railroad between 35th Avenue and El Mirage Road in the cities of Phoenix and Tolleson, Arizona. This report documents the development of project hydrology. A companion report documents the delineation of the conveyance and ponding areas.

B. Scope of Study

The project consists of approximately 15 total linear miles of floodplain delineation. Six miles of delineation are performed along the Southern Pacific Railroad (SPRR) from east of 83rd Avenue to El Mirage Road, and approximately 9 miles of delineation are performed along the Roosevelt Irrigation District (RID) Main Canal from 35th Avenue to Interstate 10. A HEC-RAS hydraulic model is developed for 2 linear miles north of the SPRR and RID Canal from 67th Avenue to 83rd Avenue and for approximately 6 miles along the north side of the SPRR from 75th Avenue to El Mirage Road. The project includes field survey work, hydraulic analysis, and the updating of 53 square miles of watershed hydrology. The Study Area is shown on **Figure 1**.

C. Previous Studies and Reports

The City of Tolleson, west of 75th Avenue was first studied in 1978 by Harris-Toups Associates as part of the *Flood Insurance Study, City of Tolleson, Maricopa County, Arizona*. Hydrology was developed for the area using Soil Conservation Service methods for the 100 year flood. Ponding limits were identified for the 100-year, 24-hour storm and flood hazard zones were identified. Interstate 10 was not constructed at the time of the study. The report indicates that at

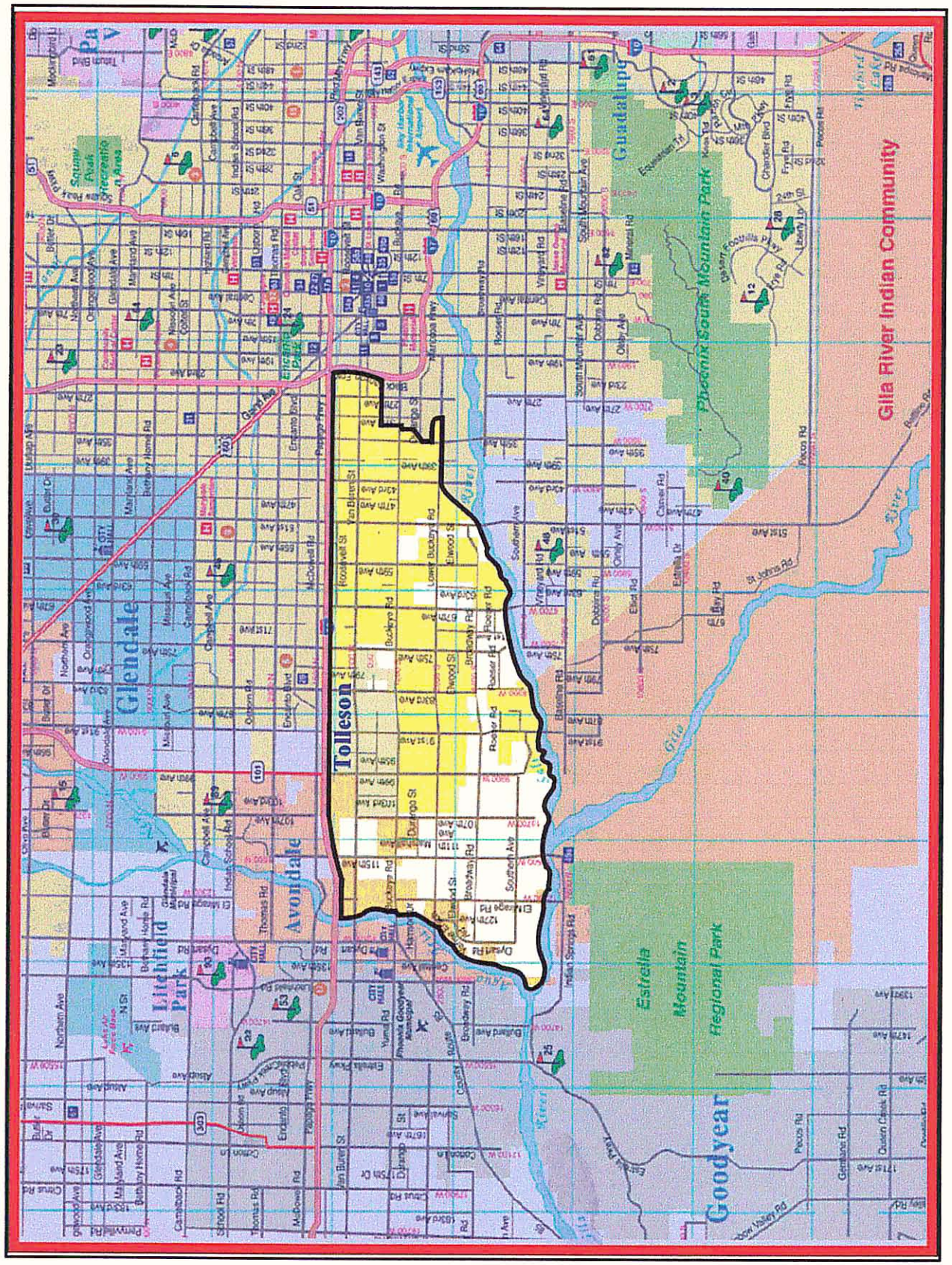

Figure 1 - Study Area

the time ADOT was delaying construction of Interstate 10. Therefore, the study did not account for the impacts of Interstate 10.

The Flood Control District of Maricopa County (FCDMC) prepared new hydrology based on methodology contained in the *Drainage Design Manual for Maricopa County, Arizona, Volume I, Hydrology*. The new hydrology accounts for the flow diversions created by construction of Interstate 10. Development of the hydrology was based on USGS mapping and field reconnaissance. The FCDMC hydrology is updated as part of this study based on March 1994 detailed mapping prepared at 1"=200' scale with a 2 foot contour interval.

D. Watershed Description

The approximate watershed limits are Interstate 10 on the north, the Salt River on the south, Interstate 17 on the east and the Agua Fria River on the west. The direction of runoff is generally from the northeast to the southwest. The watershed is characterized by a large amount of agricultural land with increasing amounts of residential and industrial development taking place. As a result, overland flow is the predominant flow condition. The north watershed boundary was created by the construction of Interstate 10. The interstate intercepts runoff from the north and diverts it to the Agua Fria River.

Two features that play a significant role in defining the drainage patterns in the watershed are the Roosevelt Irrigation District Main Canal (RID Canal) and the Southern Pacific Railroad (SPRR). The RID Canal and the SPRR are elevated through the watershed. Roadways that cross both features typically rise to meet the elevated grades and proceed over the top. The elevated railroad and canal with the crossing roadways form ponding "cells." Runoff reaching the elevated canal or railroad ponds until it either overtops the railroad or canal, or until it overtops the sag portion of the crossing roadways. Overtopping flows are then directed westerly along the railroad or canal, or are directed southerly over the railroad or canal, or a combination of the two.

Other features that define the flow pattern are roads and local irrigation ditches. Low flows accumulate along roadways and ditches, converging at road intersections at the northeast corner

of each road intersection. Higher flows accumulating along roadways and ditches may overtop the roadway or ditch and proceed according to the overall land slope and direction.

II. HYDROLOGIC ANALYSIS

The primary purpose of the hydrologic analysis is to provide runoff data for delineation of flood hazard areas upstream from the SPRR and the RID Canal. Runoff is computed for the 100-year, 24-hour storm. The hydrology model is extended in the downstream direction beyond the SPRR and RID Canal to provide a complete model to the Salt River on the south and the Agua Fria river on the west. The resulting model will be used as a tool for managing the development of the watershed.

A. Methodology

Hydrology for the Tolleson area is developed using the U.S. Army Corps of Engineers, *HEC-1 Flood Hydrograph Package* (HEC-1) computer program. Guidance is given in the *Drainage Design Manual for Maricopa County, Arizona, Volume I, Hydrology* (DDM1) for application of the HEC-1 program within Maricopa County. Additionally, the computer program *Drainage Design Menu System* (DDMS) has been developed by the Flood Control District of Maricopa County to aid in the application of the methods described in DDM1. Features within the DDMS used for this study include *Computation of Precipitation Frequency-Duration Values in the Western United States* (PREFRE) and *Maricopa County Unit Hydrograph Procedure 2* (MCUHP2). The application of these tools is more specifically described in the following sections.

B. Subbasin Delineation

The 53.4 square mile study area is divided into 107 subbasins ranging in size from 0.09 to 2.2 square miles. Drainage subbasins are delineated along predominant features that affect the flow direction. Subbasin boundaries are identified along the SPRR and RID Canal and along major roadways, typically on section lines and mid-section lines. The individual ponding "cells" are delineated as separate subareas to allow determination of the inflow hydrograph contributing to the ponding in each cell. Subbasin delineations were made using the 200 scale mapping

supplemented with field investigations. The drainage subareas are shown on **Figure 2** and on the foldout **Exhibit 1** (Sub-basin Boundaries) contained in a folder at the back of the report.

C. Rainfall

Point precipitation rainfall values are taken from NOAA Atlas II, Volume VIII. The PREFRE program included with the DDMS was used in conjunction with the precipitation isopluvial maps contained in the DDM1. The 100-year twenty-four hour point precipitation value is 3.99 inches.

Point precipitation values are reduced based on contributing drainage area using depth-area reduction factors from DDM1. A table of depth-area rainfall values is input into the HEC-1 model. The HEC-1 model computes runoff hydrographs for each rainfall value provided in the table. The model then interpolates between the hydrographs to obtain the appropriate hydrograph based on the total watershed area contributing runoff to the point of interest. The SCS Type II rainfall distribution is used for the twenty-four hour duration storm. The precipitation frequency values and the PREFRE output data are contained in the **Appendix**.

D. Rainfall Losses

Rainfall losses are modeled using the Green and Ampt infiltration equation. The rainfall loss parameters are developed using guidance provided in DDM1. The Green and Ampt infiltration equation parameters are based on logarithmic area-averaging of the map unit hydraulic conductivities (XKSAT) for the mapped soils in each subbasin, and the selection of capillary suction (PSIF) and soil moisture deficit (DTHETA) based on the calculated subbasin value of XKSAT. The bare ground XKSAT values for each subbasin are then adjusted for vegetation cover. The calculation of these parameters was accomplished using the MCUHP2 module of the DDMS model.

Soil types within the watershed were determined from the SCS *Soil Survey of Maricopa County, Central Part*, September 1977. The Flood Control District of Maricopa County input the soils data into their ARC/INFO Geographic Information System (GIS) and provided the area of each

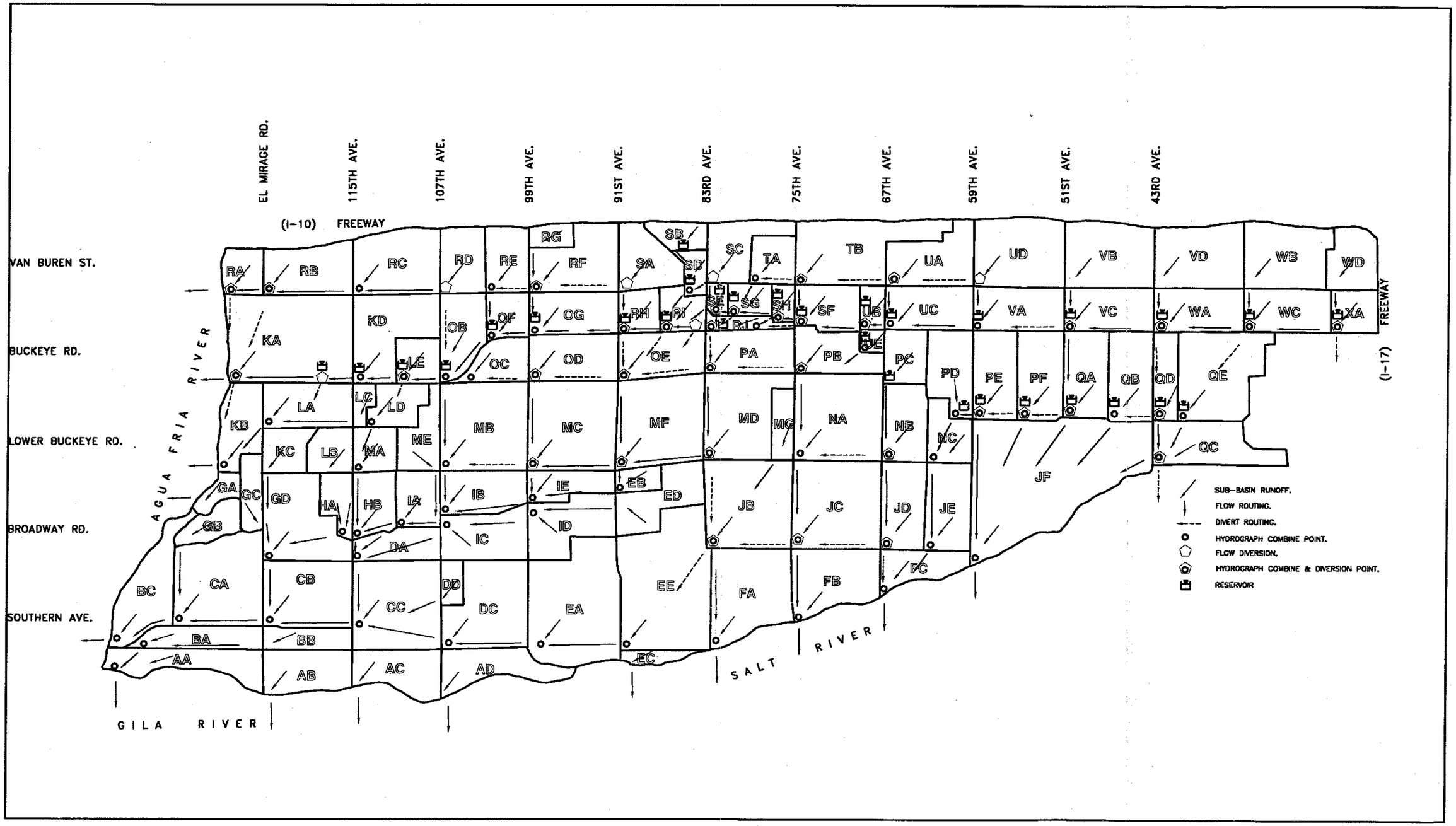

Figure 2 - Drainage Subareas

soil type within each subbasin for input into the DDMS. Soil types are shown on **Figure 3** for the watershed area. Appendix B of DDM1 contains XKSAT values for all soil Map Unit Numbers contained in the Soil Survey.

Land use information was originally obtained from the Salt River Project and updated by the Flood Control District based on field observations and Landiscor aerial photographs. The land use was then input into the District's GIS system to generate the area of each land use type within each subbasin for input into the DDMS. The soil loss parameters are adjusted based on the effective impervious area and the percent of vegetative cover. Current land use is shown on **Figure 4** for the watershed area. Representative values used for each land use classification are shown in **Table 1**.

TABLE 1 - LAND USE PARAMETER DEFAULT VALUES

Land Use	Soil Condition (DTHETA)	Vegetation Cover (%)	Impervious Area (%)	Initial Abstraction (in.)	Mean Mann. n Kn	Roughness Category
Crops	Saturated	80	0	.50	0.10	Hi
Stockyards	Normal	10	0	.50	0.10	Hi
Citrus	Normal	80	0	.70	0.10	Hi
River	Normal	90	0	.20	0.20	Max
Vacant (Desert)	Dry	15	0	.35	0.02	Min
Freeway/Canal	Normal	10	10	.20	0.01	Min
Low Dens. Res	Normal	50	15	.20	0.05	Low
Med Dens. Res	Normal	50	30	.15	0.05	Low
High Dens. Res	Normal	60	40	.15	0.05	Low
Mobile Home	Normal	50	50	.10	0.05	Low
Gen. Industrial	Normal	70	55	.10	0.03	Min
Light Industrial	Normal	60	55	.10	0.03	Min
Power Station	Normal	60	55	.20	0.03	Min
Railroad	Normal	10	25	.10	0.03	Min
Med. Intens. Comm	Normal	75	90	.15	0.02	Min

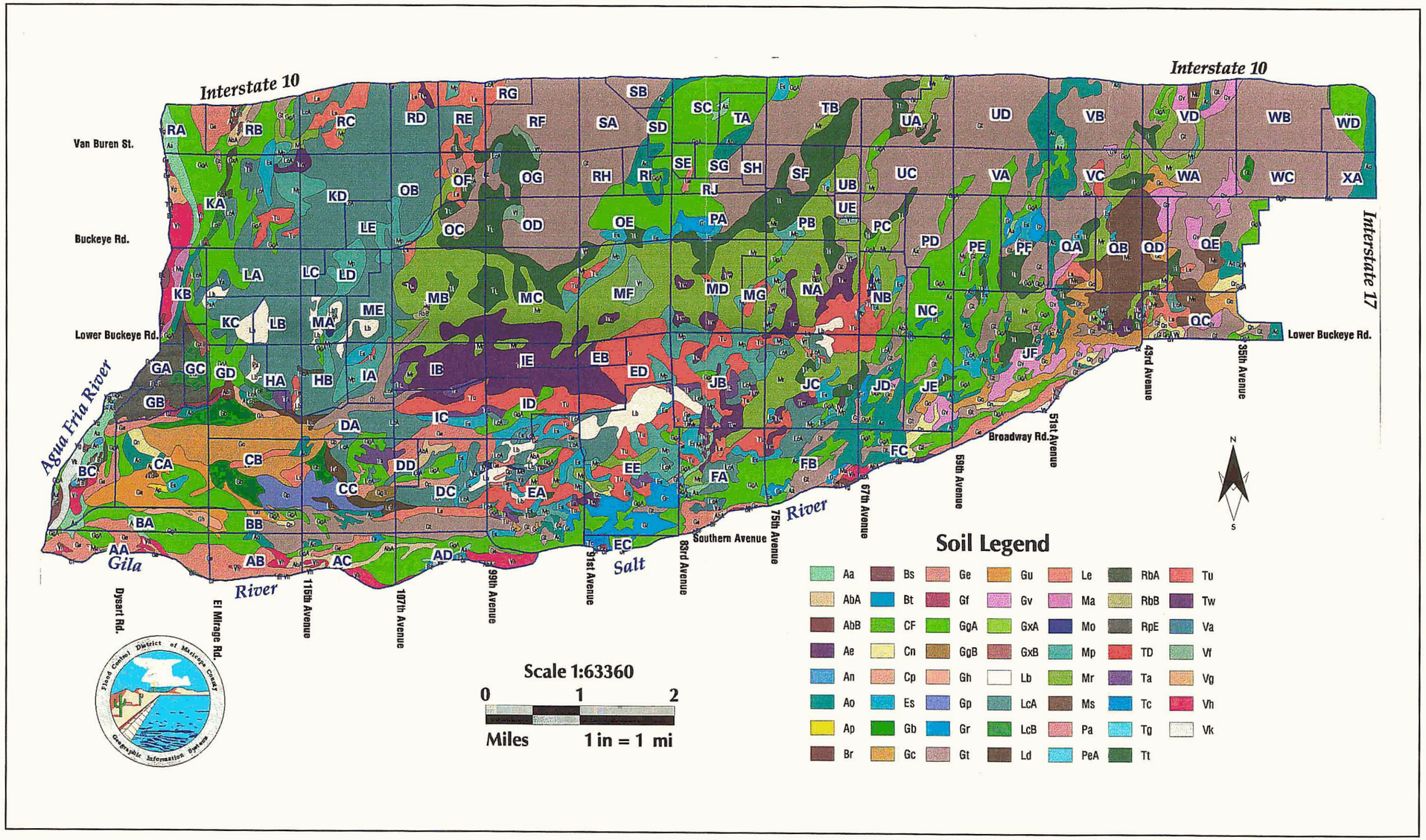

Figure 3 - Soil Types

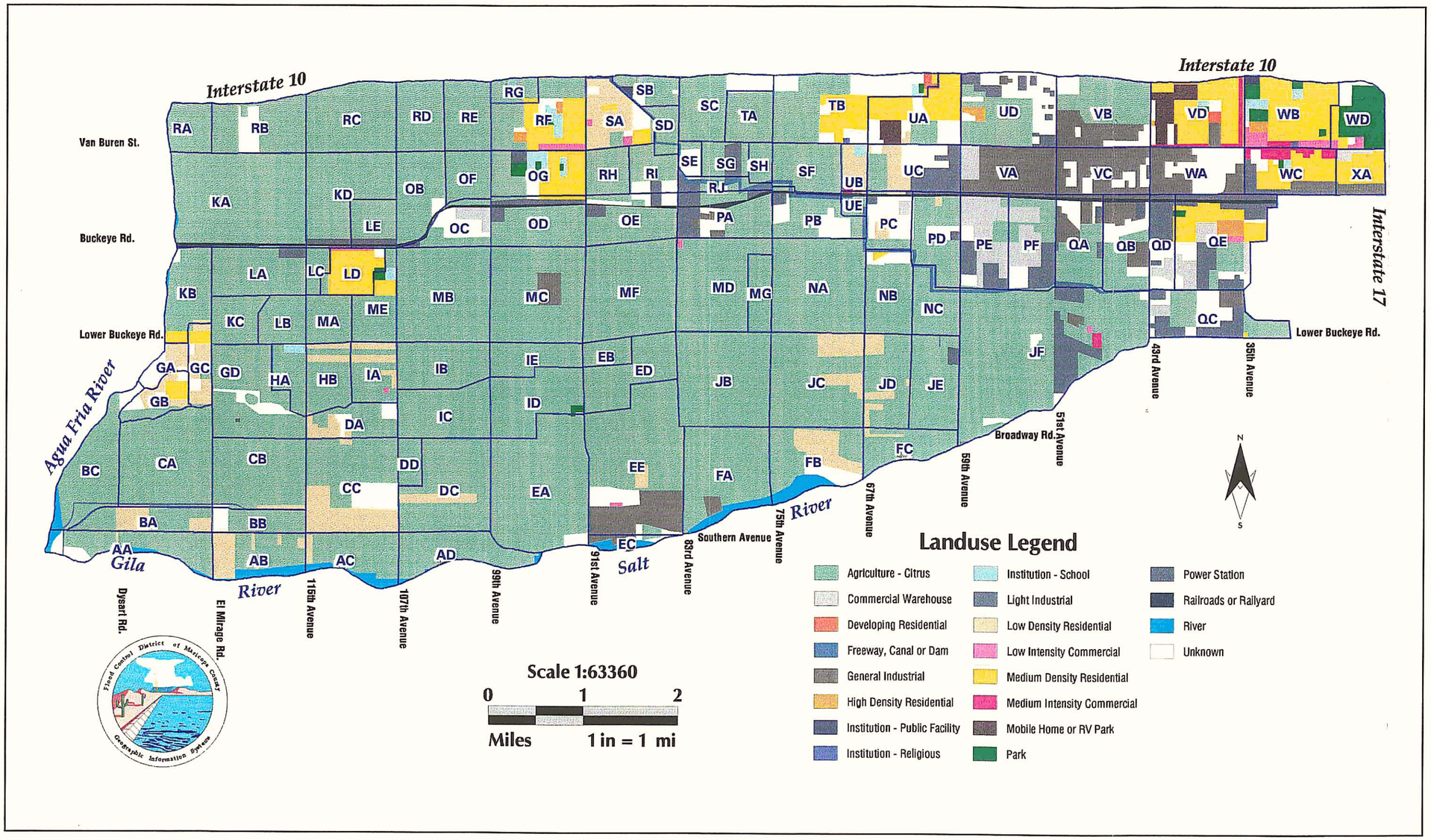

Figure 4 - Current Land Use

Land Use	Soil Condition (DTHETA)	Vegetation Cover (%)	Impervious Area (%)	Initial Abstraction (in.)	Mean Mann. n Kn	Roughness Category
Comm Warehouse	Normal	75	90	.05	0.02	Min
Low Intens. Comm	Normal	80	90	.15	0.02	Min
School	Normal	75	40	.20	0.02	Min
Religious	Normal	75	65	.15	0.02	Min
Public Facilities	Normal	75	65	.15	0.02	Min
Park	Normal	90	0	.20	0.10	Hi

The subbasin parameters input into the HEC-1 model are summarized in **Table 2.** The detailed breakdown of loss parameter data generated by the DDMS for each subbasin is contained in the **Appendix.**

TABLE 2 - SUBBASIN INPUT PARAMETERS

SUBBASIN	AREA sq.miles	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	LAG mins.
SUBAA	0.496	0.450	0.070	4.70	0.440	0	130.0
SUBVD	0.696	0.150	0.160	9.70	0.060	38	36.5
SUBWD	0.367	0.210	0.190	6.80	0.190	9	43.1
SUBAB	0.459	0.360	0.120	5.60	0.310	5	69.7
SUBAC	0.457	0.440	0.050	5.30	0.350	1	75.9
SUBAD	0.463	0.490	0.030	5.20	0.360	0	74.5
SUBBA	0.345	0.390	0.100	5.10	0.350	5	82.1
SUBBB	0.245	0.460	0.070	7.60	0.130	0	62.2
SUBBC	0.612	0.470	0.070	5.10	0.360	0	99.7
SUBCA	0.974	0.490	0.000	8.80	0.090	0	91.0
SUBCB	0.740	0.490	0.010	9.70	0.070	1	71.6
SUBCC	0.980	0.380	0.140	6.20	0.210	5	56.3
SUBDA	0.330	0.410	0.110	6.80	0.170	3	51.6
SUBDC	0.837	0.470	0.040	6.00	0.260	1	63.7
SUBDD	0.126	0.500	0.060	4.65	0.430	0	36.4
SUBEA	1.317	0.500	0.020	5.30	0.340	0	86.9
SUBEB	0.139	0.500	0.000	6.20	0.250	0	42.8
SUBEC	0.109	0.210	0.250	4.50	0.510	20	72.3
SUBED	0.477	0.500	0.000	5.70	0.300	0	84.3
SUBEE	1.470	0.390	0.130	5.10	0.340	13	78.2

SUBBASIN	AREA sq.miles	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	LAG mins.
SUBFA	0.882	0.460	0.040	5.40	0.340	2	105.0
SUBFB	0.659	0.360	0.130	6.60	0.190	4	59.8
SUBFC	0.335	0.490	0.010	7.60	0.140	1	55.3
SUBGA	0.138	0.270	0.300	4.55	0.360	8	11.7
SUBGB	0.234	0.300	0.210	4.60	0.400	11	30.7
SUBGC	0.214	0.250	0.260	4.80	0.340	14	27.4
SUBGD	0.767	0.490	0.040	7.30	0.150	0	58.4
SUBHA	0.220	0.470	0.030	4.80	0.440	4	42.7
SUBHB	0.338	0.440	0.050	4.80	0.430	3	45.2
SUBIA	0.313	0.410	0.080	6.20	0.230	5	44.5
SUBIC	0.531	0.500	0.050	5.30	0.330	0	86.2
SUBID	0.559	0.490	0.050	6.00	0.250	0	68.2
SUBIE	0.300	0.500	0.000	8.80	0.090	0	68.6
SUBJB	0.984	0.500	0.000	5.60	0.320	0	79.4
SUBJC	0.987	0.440	0.030	7.00	0.170	3	76.2
SUBJD	0.489	0.440	0.030	8.00	0.120	3	66.1
SUBJE	0.505	0.480	0.010	8.00	0.120	3	63.6
SUBJF	2.247	0.440	0.030	9.70	0.070	7	116.0
SUBKA	1.384	0.490	0.020	4.80	0.430	1	94.0
SUBKB	0.420	0.460	0.090	5.00	0.360	3	46.7
SUBKC	0.264	0.500	0.010	4.60	0.490	0	50.1
SUBKD	0.717	0.480	0.020	4.90	0.420	3	85.3
SUBLA	0.505	0.480	0.020	4.70	0.460	3	72.8
SUBLB	0.249	0.500	0.000	4.60	0.490	0	54.6
SUBLC	0.102	0.490	0.010	4.80	0.440	1	33.8
SUBLD	0.285	0.180	0.240	4.80	0.370	29	30.7
SUBLE	0.249	0.430	0.050	4.80	0.430	9	43.1
SUBMA	0.248	0.500	0.000	4.55	0.520	0	49.5
SUBMB	0.989	0.500	0.010	8.40	0.100	0	81.1
SUBMC	0.998	0.470	0.010	8.80	0.090	5	81.8
SUBMD	0.797	0.500	0.000	8.40	0.110	1	82.5
SUBME	0.323	0.430	0.050	4.70	0.450	6	54.3
SUBMF	0.967	0.500	0.010	8.40	0.100	0	87.9
SUBMG	0.203	0.500	0.000	7.30	0.160	0	54.6
SUBNA	0.977	0.500	0.010	8.00	0.120	0	81.5
SUBNB	0.441	0.460	0.060	6.80	0.180	1	54.0
SUBNC	0.307	0.470	0.030	5.20	0.350	1	43.5
SUBOB	0.445	0.480	0.030	5.00	0.390	1	68.9
SUBOC	0.315	0.330	0.130	8.80	0.070	20	29.9
SUBOD	0.527	0.410	0.040	9.70	0.070	10	58.3
SUBOE	0.488	0.430	0.080	6.20	0.230	6	56.8

SUBBASIN	AREA sq.miles	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	LAG mins.
SUBOF	0.247	0.500	0.020	8.80	0.080	0	42.9
SUBOG	0.473	0.270	0.110	9.70	0.060	20	46.0
SUBPA	0.492	0.330	0.090	7.30	0.140	19	46.5
SUBPB	0.421	0.400	0.100	8.80	0.070	4	42.2
SUBPC	0.292	0.320	0.180	8.80	0.060	12	22.9
SUBPD	0.453	0.440	0.070	7.60	0.130	4	50.0
SUBPE	0.504	0.130	0.240	6.00	0.230	63	21.9
SUBPF	0.504	0.230	0.120	7.60	0.130	44	31.0
SUBQA	0.488	0.340	0.070	10.10	0.050	18	43.9
SUBQB	0.506	0.310	0.080	11.20	0.030	21	38.1
SUBQC	0.595	0.300	0.110	10.10	0.040	23	42.3
SUBQD	0.273	0.180	0.080	12.40	0.010	40	17.6
SUBQE	0.897	0.180	0.120	10.10	0.040	40	37.6
SUBRA	0.237	0.500	0.000	4.70	0.460	0	58.3
SUBRB	0.546	0.470	0.080	5.60	0.290	0	59.9
SUBRC	0.683	0.500	0.010	6.20	0.240	0	78.2
SUBRD	0.376	0.500	0.000	5.80	0.280	0	67.8
SUBRE	0.364	0.500	0.000	7.30	0.160	0	74.7
SUBRF	0.635	0.310	0.090	9.70	0.070	19	57.1
SUBRG	0.128	0.480	0.010	9.70	0.070	2	41.7
SUBRH	0.222	0.500	0.000	8.80	0.090	0	46.8
SUBRI	0.235	0.440	0.080	7.60	0.130	4	27.9
SUBRJ	0.142	0.280	0.110	7.00	0.140	18	29.7
SUBSA	0.422	0.240	0.150	9.70	0.060	16	26.0
SUBSB	0.187	0.460	0.030	9.70	0.070	3	35.7
SUBSC	0.430	0.470	0.070	5.00	0.380	0	69.2
SUBSD	0.141	0.470	0.020	6.60	0.210	1	43.6
SUBSE	0.085	0.380	0.240	4.80	0.310	1	11.0
SUBSF	0.368	0.490	0.010	9.70	0.070	1	63.6
SUBSG	0.182	0.370	0.050	7.30	0.160	18	42.6
SUBSH	0.106	0.500	0.000	9.70	0.070	0	38.1
SUBTA	0.270	0.500	0.030	6.40	0.220	0	55.2
SUBTB	0.891	0.360	0.130	8.80	0.070	8	67.9
SUBUA	0.558	0.240	0.160	9.70	0.060	20	36.7
SUBUB	0.137	0.220	0.140	8.80	0.080	23	30.3
SUBUC	0.484	0.260	0.150	9.70	0.060	22	30.5
SUBUD	0.776	0.370	0.110	9.70	0.060	11	44.7
SUBVA	0.492	0.090	0.150	8.40	0.100	60	22.3
SUBVB	0.722	0.370	0.090	9.70	0.070	17	49.9
SUBVC	0.490	0.150	0.180	8.40	0.090	44	21.6
SUBWA	0.491	0.220	0.170	10.10	0.040	28	19.6

SUBBASIN	AREA sq.miles	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	LAG mins.
SUBWC	0.470	0.150	0.160	9.70	0.060	45	32.9
SUBWB	0.674	0.160	0.150	9.70	0.060	36	37.2
SUBXA	0.248	0.120	0.150	9.70	0.060	45	23.6
SUBIB	0.464	0.500	0.000	8.40	0.110	0	73.6
SUBUE	0.070	0.350	0.090	10.10	0.040	9	17.3

E. Unit Hydrograph

The Agricultural S-graph is used to develop the unit hydrograph for all subbasins in the watershed. Guidance is provided in DDM1 for application of the Agricultural S-graph. The MCUHP2 module of the DDMS is used to develop the unit hydrographs for each subbasin for input into the HEC-1 model. The S-graph procedure requires computation of the subbasin lag. The equation used to compute lag is:

$$LAG = 24\ K_n \left(\frac{L \times L_{ca}}{S^{0.5}} \right)^{0.38}$$

Where
- Lag = lag time, hrs
- L = length of longest flow path, miles
- L_{ca} = length along L to a point opposite of the centroid, miles
- S = flow path slope, ft/mile
- K_n = resistance coefficient

MCUHP2 computes the resistance coefficient, K_n, for each subbasin based on K_n values assigned to each land use type within the study area. The K_n values and roughness category used for each land use type is shown in **Table 1**. The parameters used to compute lag time and the resulting lag times used in the HEC-1 model are summarized in **Table 3**.

TABLE 3 - LAG TIME CALCULATION PARAMETERS

SUBBASIN	S-Graph Type	Kn	L miles	Lca miles	Slope ft/mile	Lag min
SUBAA	Agricultural	0.0990	1.89	1.25	9.00	130.0
SUBVD	Agricultural	0.0440	1.21	0.61	9.90	36.5
SUBWD	Agricultural	0.0790	0.72	0.36	11.10	43.1
SUBAB	Agricultural	0.1000	1.06	0.49	12.30	69.7
SUBAC	Agricultural	0.1120	1.10	0.56	20.00	75.9
SUBAD	Agricultural	0.1030	1.10	0.49	10.90	74.5
SUBBA	Agricultural	0.0820	1.48	0.74	8.10	82.1
SUBBB	Agricultural	0.0830	1.02	0.49	7.80	62.2
SUBBC	Agricultural	0.0990	1.74	0.76	11.50	99.7
SUBCA	Agricultural	0.0980	1.40	0.57	6.40	91.0
SUBCB	Agricultural	0.0970	1.17	0.49	11.10	71.6
SUBCC	Agricultural	0.0730	1.36	0.68	22.80	56.3
SUBDA	Agricultural	0.0760	1.02	0.57	17.60	51.6
SUBDC	Agricultural	0.0950	1.40	0.45	22.10	63.7
SUBDD	Agricultural	0.1000	0.53	0.27	28.30	36.4
SUBEA	Agricultural	0.0980	1.55	0.83	21.30	86.9
SUBEB	Agricultural	0.1000	0.53	0.26	11.30	42.8
SUBEC	Agricultural	0.1070	0.95	0.49	11.60	72.3
SUBED	Agricultural	0.1000	1.17	0.64	9.40	84.3
SUBEE	Agricultural	0.0760	1.62	1.02	16.00	78.2
SUBFA	Agricultural	0.1060	1.40	0.76	7.90	105.0
SUBFB	Agricultural	0.0900	1.17	0.45	16.20	59.8
SUBFC	Agricultural	0.0970	1.02	0.37	18.60	55.3
SUBGA	Agricultural	0.0350	0.57	0.27	52.60	11.7
SUBGB	Agricultural	0.0560	0.83	0.57	36.10	30.7
SUBGC	Agricultural	0.0530	0.83	0.42	26.50	27.4
SUBGD	Agricultural	0.0930	1.14	0.57	33.30	58.4
SUBHA	Agricultural	0.0910	0.80	0.38	33.80	42.7
SUBHB	Agricultural	0.0900	0.80	0.39	25.00	45.2
SUBIA	Agricultural	0.0850	0.76	0.38	17.10	44.5
SUBIC	Agricultural	0.1000	1.06	0.53	4.70	86.2
SUBID	Agricultural	0.1000	0.98	0.38	7.10	68.2
SUBIE	Agricultural	0.1000	0.83	0.42	6.00	68.6
SUBJB	Agricultural	0.1000	1.32	0.66	17.40	79.4
SUBJC	Agricultural	0.0900	1.36	0.68	14.00	76.2
SUBJD	Agricultural	0.0900	1.10	0.55	12.70	66.1
SUBJE	Agricultural	0.0970	1.06	0.53	19.80	63.6
SUBJF	Agricultural	0.0890	2.65	1.21	17.40	116.0

SUBBASIN	S-Graph Type	Kn	L miles	Lca miles	Slope ft/mile	Lag min
SUBKA	Agricultural	0.0980	1.74	0.87	19.50	94.0
SUBKB	Agricultural	0.0950	0.95	0.30	23.20	46.7
SUBKC	Agricultural	0.1000	0.76	0.42	26.30	50.1
SUBKD	Agricultural	0.0960	1.40	0.72	12.90	85.3
SUBLA	Agricultural	0.0960	1.14	0.57	12.30	72.8
SUBLB	Agricultural	0.1000	0.68	0.34	8.80	54.6
SUBLC	Agricultural	0.0980	0.30	0.20	6.70	33.8
SUBLD	Agricultural	0.0520	0.83	0.42	13.30	30.7
SUBLE	Agricultural	0.0870	0.68	0.34	14.70	43.1
SUBMA	Agricultural	0.1000	0.68	0.34	14.70	49.5
SUBMB	Agricultural	0.1000	1.36	0.68	17.60	81.1
SUBMC	Agricultural	0.0940	1.40	0.70	13.60	81.8
SUBMD	Agricultural	0.0990	1.40	0.64	14.30	82.5
SUBME	Agricultural	0.0900	1.02	0.45	20.60	54.3
SUBMF	Agricultural	0.1000	1.40	0.70	12.90	87.9
SUBMG	Agricultural	0.1000	0.68	0.34	8.80	54.6
SUBNA	Agricultural	0.0990	1.36	0.68	16.20	81.5
SUBNB	Agricultural	0.0870	0.95	0.47	16.80	54.0
SUBNC	Agricultural	0.0920	0.68	0.30	14.70	43.5
SUBOB	Agricultural	0.0950	1.06	0.64	17.00	68.9
SUBOC	Agricultural	0.0510	0.76	0.45	13.20	29.9
SUBOD	Agricultural	0.0850	1.10	0.55	18.20	58.3
SUBOE	Agricultural	0.0820	1.10	0.55	17.30	56.8
SUBOF	Agricultural	0.1000	0.68	0.32	27.90	42.9
SUBOG	Agricultural	0.0610	1.14	0.56	12.30	46.0
SUBPA	Agricultural	0.0650	1.14	0.57	16.70	46.5
SUBPB	Agricultural	0.0660	0.91	0.45	12.10	42.2
SUBPC	Agricultural	0.0420	0.72	0.36	11.10	22.9
SUBPD	Agricultural	0.0820	0.95	0.45	16.80	50.0
SUBPE	Agricultural	0.0310	1.10	0.55	15.50	21.9
SUBPF	Agricultural	0.0460	1.10	0.55	20.00	31.0
SUBQA	Agricultural	0.0640	1.10	0.55	18.20	43.9
SUBQB	Agricultural	0.0550	1.10	0.55	17.30	38.1
SUBQC	Agricultural	0.0500	1.14	0.64	8.80	42.3
SUBQD	Agricultural	0.0260	0.98	0.49	12.20	17.6
SUBQE	Agricultural	0.0420	1.40	0.83	16.40	37.6
SUBRA	Agricultural	0.1000	0.76	0.37	9.20	58.3
SUBRB	Agricultural	0.0860	1.14	0.57	19.30	59.9
SUBRC	Agricultural	0.1000	1.21	0.62	14.00	78.2
SUBRD	Agricultural	0.1000	0.95	0.47	10.50	67.8
SUBRE	Agricultural	0.1000	0.95	0.47	6.30	74.7

SUBBASIN	S-Graph Type	Kn	L miles	Lca miles	Slope ft/mile	Lag min
SUBRF	Agricultural	0.0680	1.21	0.68	11.60	57.1
SUBRG	Agricultural	0.0970	0.56	0.28	14.30	41.7
SUBRH	Agricultural	0.1000	0.64	0.32	15.60	46.8
SUBRI	Agricultural	0.0790	0.57	0.19	19.30	27.9
SUBRJ	Agricultural	0.0450	0.72	0.42	5.60	29.7
SUBSA	Agricultural	0.0470	0.83	0.30	9.60	26.0
SUBSB	Agricultural	0.0870	0.53	0.27	15.10	35.7
SUBSC	Agricultural	0.0840	1.32	0.68	15.20	69.2
SUBSD	Agricultural	0.0910	0.57	0.34	12.30	43.6
SUBSE	Agricultural	0.0420	0.34	0.17	26.50	11.0
SUBSF	Agricultural	0.0970	0.87	0.44	9.20	63.6
SUBSG	Agricultural	0.0770	0.60	0.30	5.00	42.6
SUBSH	Agricultural	0.0990	0.45	0.23	11.10	38.1
SUBTA	Agricultural	0.0970	0.76	0.37	10.50	55.2
SUBTB	Agricultural	0.0620	1.97	0.79	10.20	67.9
SUBUA	Agricultural	0.0490	1.21	0.57	14.90	36.7
SUBUB	Agricultural	0.0480	0.80	0.40	16.20	30.3
SUBUC	Agricultural	0.0440	1.02	0.51	12.70	30.5
SUBUD	Agricultural	0.0600	1.25	0.63	20.00	44.7
SUBVA	Agricultural	0.0290	1.06	0.53	8.50	22.3
SUBVB	Agricultural	0.0670	1.10	0.55	11.80	49.9
SUBVC	Agricultural	0.0280	1.06	0.53	8.50	21.6
SUBWA	Agricultural	0.0250	1.10	0.55	9.10	19.6
SUBWC	Agricultural	0.0370	1.17	0.59	6.00	32.9
SUBWB	Agricultural	0.0480	1.17	0.58	12.00	37.2
SUBXA	Agricultural	0.0410	0.76	0.38	10.50	23.6
SUBIB	Agricultural	0.1000	1.13	0.57	14.20	73.6
SUBUE	Agricultural	0.0660	0.34	0.17	26.50	17.3

F. Channel Routing

Channel Routing is modeled using the normal depth routing option within HEC-1. The normal depth option uses an 8-point cross-section which is representative of the routing reach. Outflows are computed for normal depth using Manning's equation. Storage is cross-sectional area times reach length. Storage and outflow values are computed for 20 evenly spaced stages beginning at the lowest point on the cross-section to a specified maximum stage. The cross-section is extended vertically at each end to the maximum stage. Three typical cross-sections were developed to depict the types of overland routing that occur within the Tolleson area. The

channel types used are shown on **Figure 5**. The type A channel section is used for sheet flow conditions as would occur through agricultural fields or open space with no defined channel section. The type B channel section is used for flow along roadways. The section includes a raised roadway section and grader ditches on each side with the sides extended in each direction to include runoff extending beyond the right-of-way into adjacent fields or open space. The type C channel section is used for flow along an embankment as would occur for flows traversing the SPRR or RID Canal. All routing within the HEC-1 model was classified as type A, B, or C. A summary of the routing parameters used for each channel routing operation in the HEC-1 file is contained in the **Appendix**.

Runoff drains generally in a southwesterly direction. As overland flow reaches major intersections there is sometimes a flow split with a portion of the flow draining south and a portion draining west along the intersecting roads. At some point along the roads, the flow may overtop and proceed along the original southwesterly flow direction. This flow condition is modeled by using the divert option within HEC-1. At intersections where diverts occur, the percentage of flow going each direction is specified. It is recognized that in reality not all the runoff will reach the intersection and not all the runoff will be diverted the entire distance to the next concentration point. However, the HEC-1 model is limited to modeling each hydrograph at a specific concentration point. The modeling of flow splits and subsequent flow routing along sub-basin boundaries is representative of the broad, overland nature of the true flow conditions.

The actual flow split ratios at intersections are determined by estimating the overland flow angle of approach to the intersection and determining the percentage of the flow that would encounter a north-south street and an east-west street of the specified length. The approach angle is estimated based on the resultant of the slopes of each street according to the equation

$$Angle = \arctan\left(\frac{Slope_{n-s}}{Slope_{e-w}}\right)$$

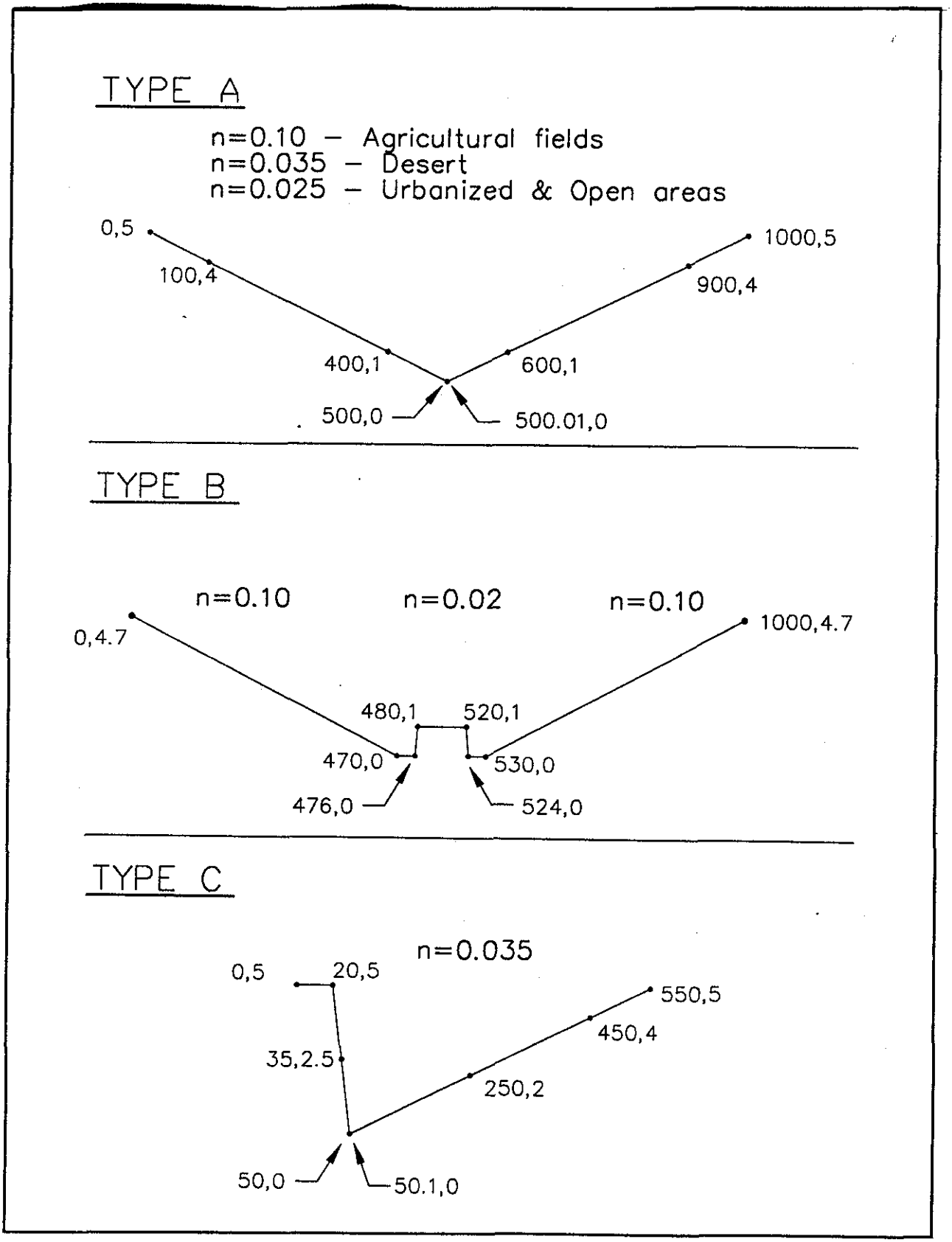

Figure 5 - Channel Types

The flow ratio (FR) is computed according to the following equation:

$$FR_s = \frac{\dfrac{L_{e-w}}{S_{e-w}}}{\dfrac{L_{e-w}}{S_{e-w}} + \dfrac{L_{n-s}}{S_{n-s}}}$$

Where:

FR_s = Flow ratio for flow going to the south, across the east - west street.
L_{e-w}, L_{n-s} = East - west and north - south street lengths, respectively (ft)
S_{e-w}, S_{n-s} = East - west and north - south street slopes, respectively (ft/ft)

The derivation of flow split values is summarized in **Table 4**.

TABLE 4 - FLOW SPLIT ANALYSIS

Subarea	E-W Street (ft)		N-S Street (ft)		Flow Ratio		Flow Angle
Designation	Length	Delta Y	Length	Delta Y	To South	To West	(deg)
UD	5280	8	2640	6.2	0.76	0.24	57
UA	5280	7	2640	6.59	0.79	0.21	62
TB	5280	9.6	2640	6.91	0.74	0.26	55
SC	2640	5	2640	4.2	0.46	0.54	40
SA	3960	8.9	2640	3.98	0.50	0.50	34
RF	5280	6	2640	5.9	0.80	0.20	63
RD	2640	2.7	3960	3.9	0.39	0.61	44
QC	5280	7.4	2640	6.8	0.79	0.21	61
NB	2640	7.07	5280	15.02	0.35	0.65	47
JD	2640	1.7	2640	2.9	0.63	0.37	60
PB	5280	6.65	2640	7.3	0.81	0.19	66
JC	5280	11.4	5280	13.5	0.54	0.46	50
PA	5280	13.29	2640	15.53	0.82	0.18	67
MD	2640	6.6	2640	1.8	0.21	0.79	15
JB	5280	9.08	5280	16.35	0.64	0.36	61
OE	5280	7.4	2640	8.73	0.83	0.17	67
OD	5280	6.47	2640	7.3	0.82	0.18	66
MC	5280	7.9	5280	12.3	0.61	0.39	57
MF	5280	12.1	5280	10.87	0.47	0.53	42

Notes: Flow split is at the southwest corner of the drainage area.
Flow angle is measured counter-clockwise from the east-west street.
Delta Y is the elevation difference corresponding to the specified street length.

G. Storage Routing

Ponding behind the RID Canal and the SPRR is modeled using Modified Puls storage routing to determine peak discharge attenuation and ponding elevations. The HEC-1 input for storage routing requires a stage-storage-discharge relationship. The stage-storage relationships were developed using Eagle Point software with the three dimensional mapping files for each ponding area. The Eagle Point output consists of total cumulative storage volume at a range of elevations from the lowest elevation in the ponding area to a point above the overflow elevation.

The stage-discharge relationships were developed using a weir equation to analyze flow over the SPRR, RID canal, or approach roadways. Profiles for weir sections used for floodplain mapping were obtained from field surveyed profiles with elevation shots taken at approximately 100 foot intervals. Profiles for weir sections used only for storage routing to determine peak discharge attenuation were taken from the three dimensional mapping. In many cases break lines along the weir sections were used from the DTM file. The stage-storage-discharge data used for storage routing is contained in the **Appendix**.

H. HEC-RAS Analysis

The preliminary HEC-1 modeling results indicated that the ponding areas typically did not extend upstream to the next adjacent ponding area. HEC-1 routing further indicated that during the 100-year event, significant peak flows pass between adjacent ponding areas that would not be depicted by mapping only the ponding limits. Therefore, detailed mapping of the riverine and sheet flow between adjacent ponding areas was performed using the HEC-RAS model.

Initial HEC-RAS modeling results did not fully support the following assumptions made for the preliminary HEC-1 modeling at several of the ponding areas along the SPRR and RID:

- *Flow over the north-south drainage divides at the SPRR and RID ponding areas occurs as weir flow.* Flow over the north-south weir was found to be submerged, or controlled by backwater, at several of the ponding areas modeled by detailed methods.

- *Flow between adjacent ponding areas is contained by the SPRR and RID embankments.* HEC-RAS profiles indicated that overflow to the south occurs at several points between a few of the ponding areas modeled by detailed methods.

The HEC-1 modeling was coordinated with the HEC-RAS analysis in the following ways:

First, weir calculations were used to establish the stage-storage-discharge relationships for each ponding area to be modeled in the preliminary HEC-1 models. Then, the outflow and diversion discharge rates estimated from the preliminary HEC-1 level pool routing through ponding areas were used for the preliminary HEC-RAS models. Second, where the HEC-RAS modeling indicated that the flow over the north-south roadways was submerged, the weir relationships used in the HEC-1 were replaced with rating curves based on HEC-RAS results. The HEC-1 model was then re-run to obtain revised discharge rates for use in the HEC-RAS models of the flow reaches between adjacent ponding areas. Where the HEC-RAS model indicated that flow over the weirs was not submerged, known water surface elevations based on the irregular weir calculations were entered into the HEC-RAS model. Third, where the HEC-RAS model indicated that the SPRR or RID could not contain flow along the embankment between the ponding areas (due to obstructions or lack of conveyance area), additional divert routines were added to the HEC-1 model to account for flow over the embankment between the ponding areas mapped by detailed methods.

III. RESULTS

The computed peak discharges for each subarea and at all concentration points are summarized in **Table 5** which shows the peak flow, time to peak, volume, and area. The last column shows the unit peak discharge per square mile as a means for comparison. The unit peak discharge ranges from zero for zero flow diverted hydrographs to a maximum of 3,843 cfs/sm with an average of 553 cfs/sm. The subbasin routing used is shown on **Figure 2** with the drainage subareas. The same exhibit is presented at a 2000 scale as **Exhibit 2** folded in the envelope at the back of the report. The HEC-1 input listing, schematic diagram, and output summary are contained in the **Appendix**.

TABLE 5 - PEAK DISCHARGE SUMMARY

KK ID	Peak Flow cfs	Time to Peak (hrs)	Volume ac-ft	Area sq. mi.	Unit Pk cfs/sm
SUBWD	329	12.50	30	0.37	889
SUBXA	395	12.17	37	0.25	1580
CPXA1	452	12.50	67	0.62	729
CPZZ1	445	12.58	67	0.62	718
SUBWB	791	12.42	92	0.67	1181
SUBWC	609	12.33	69	0.47	1296
CPWC	1325	12.50	224	1.76	753
CPWC2	1126	12.83	206	1.76	640
SUBVD	826	12.33	96	0.70	1180
SUBWA	868	12.17	65	0.49	1771
CPWA	1540	13.17	359	2.95	522
CPWA2	1520	13.25	357	2.95	515
SUBVB	1340	12.58	166	0.72	1861
SUBVC	683	12.17	59	0.49	1394
CPVC	2369	13.42	571	4.16	569
CPVC2	1698	13.50	365	4.16	408
SUBQA	517	12.50	62	0.49	1055
CPQA2	1755	13.75	423	4.65	377
SUBQE	1061	12.42	132	0.90	1179
CPQE	0	0.00	0	1.76	0
CPQE2	1061	12.42	132	0.90	1179
SUBQD	521	12.17	48	0.27	1930
CPQD	0	0.00	0	2.95	0
CPQD1	521	12.17	48	0.27	1930
CPQD2	370	12.17	40	0.27	1370
SUBQC	541	12.42	66	0.60	902
CPQC	1645	12.67	223	1.77	929
CPQC2	329	12.67	45	1.77	186
SUBJF	1077	13.42	256	2.25	479
CPJF1	1071	13.42	292	4.02	266
SUBQB	599	12.42	71	0.51	1175
CPQB	112	12.17	5	0.27	415
CPQB1	600	12.42	76	0.78	769
SUBPF	649	12.33	69	0.50	1298
CPPF	565	13.75	170	4.65	122
CPPF1	666	12.33	235	5.78	115
CPPF2	584	14.17	201	5.78	101
SUBPE	800	12.17	77	0.50	1600
CPPE	641	12.50	76	0.50	1282
CPPE2	623	12.50	270	6.28	99

KK ID	Peak Flow cfs	Time to Peak (hrs)	Volume ac-ft	Area sq. mi.	Unit Pk cfs/sm
CPPE3	603	14.92	249	6.28	96
CPJF2	1850	16.08	807	10.17	182
SUBPC	459	12.17	31	0.29	1583
SUBNB	346	12.67	36	0.44	786
CPNB1	349	12.67	46	0.73	478
CPNB2	124	12.67	16	0.73	170
SUBJD	358	12.83	49	0.49	731
CPJD	357	12.83	64	1.22	293
CPJD1	226	12.83	41	1.22	185
SUBPD	400	12.58	41	0.45	889
CPPD	0	14.75	0	6.28	0
CPPD2	400	12.58	41	0.45	889
SUBNC	269	12.50	22	0.31	868
CPNC	266	12.50	27	0.76	350
SUBJE	391	12.75	53	0.50	782
CPJE	491	13.17	78	1.26	390
SUBFC	287	12.67	33	0.34	844
CPFC	820	13.25	150	2.82	291
CPFC1	1868	16.08	937	12.99	144
SUBUD	784	12.50	85	0.78	1005
CPUD	594	12.50	64	0.78	762
SUBVA	809	12.17	78	0.49	1651
CPVA	630	13.50	154	4.16	151
CPVA2	918	13.67	295	1.27	723
SUBUA	646	12.42	65	0.56	1154
CPUA	190	12.50	21	0.78	244
CPUA1	646	12.42	86	1.33	486
CPUA2	513	12.42	68	1.33	386
SUBUC	636	12.25	58	0.48	1325
CPUC	1164	12.92	393	7.10	164
SUBUB	182	12.25	16	0.14	1300
CPUB	1153	13.08	399	7.24	159
CPUB1	1020	13.33	366	7.24	141
SUBTB	606	12.83	88	0.89	681
CPTB	128	12.42	17	1.33	96
CPTB1	666	12.92	103	2.19	304
CPTB2	504	12.92	78	2.19	230
SUBSF	297	12.75	44	0.37	803
CPSF1	1552	13.58	478	8.46	183
CPSF2	1043	13.75	327	8.46	123
SUBSH	127	12.42	14	0.11	1155
CPSH	942	14.08	336	8.57	110

KK ID	Peak Flow cfs	Time to Peak (hrs)	Volume ac-ft	Area sq. mi.	Unit Pk cfs/sm
CPSH1	157	14.25	69	8.57	18
SUBTA	211	12.67	22	0.27	781
CPTA	162	12.92	25	2.19	74
CPTA1	252	13.08	46	2.46	102
SUBSG	186	12.42	20	0.18	1033
CPSG	358	12.67	133	9.02	40
CPSG1	91	12.83	40	9.02	10
SUBSC	229	12.83	28	0.43	533
CPSC	105	12.83	13	0.43	244
SUBSE	163	12.08	5	0.09	1811
CPSE	160	13.42	57	9.54	17
CPSE2	0	0.00	0	9.54	0
SUBRJ	186	12.25	15	0.14	1329
CPRJ1	447	13.75	140	8.46	53
CPRJ2	773	14.25	241	8.57	90
CPRJ3	1171	14.25	379	8.57	137
CPRJ4A	262	12.83	79	9.02	29
CPRJ4B	1334	14.58	453	8.57	156
CPRJ5	139	13.92	46	9.54	15
CPRJ6	1423	14.83	506	9.68	147
CPRJ7	979	15.17	432	9.68	101
CPRI1	740	15.25	352	9.68	76
SUBUE	132	12.08	9	0.07	1886
CPUE	48	13.33	8	7.24	7
CPUE2	132	12.08	19	0.07	1886
SUBPB	439	12.42	43	0.42	1045
CPPB1	438	12.42	45	0.49	894
CPPB2	357	12.42	36	0.49	729
SUBNA	608	13.00	99	0.98	620
CPNA1	226	12.67	30	0.73	310
CPNA2	751	13.42	163	1.47	511
SUBJC	1153	13.00	170	0.99	1165
CPJC1	130	12.83	24	1.22	107
CPJC2	1284	13.42	352	2.46	522
CPJC3	694	13.42	190	2.46	282
SUBFB	449	12.67	52	0.66	680
CPFB	737	13.67	239	3.12	236
CPFB1	0	0.00	0	3.12	0
SUBPA	461	12.50	53	0.49	941
CPPA	81	12.42	8	0.49	165
CPPA2	350	15.17	64	9.68	36
CPPA3	461	12.50	133	0.49	941

KK ID	Peak Flow cfs	Time to Peak (hrs)	Volume ac-ft	Area sq. mi.	Unit Pk cfs/sm
CPPA	378	12.50	109	0.49	771
SUBMD	509	13.00	88	0.80	636
CPMD	511	13.00	190	1.29	396
CPMD1	407	13.00	151	1.29	316
CPMD2	0	0.00	0	1.29	0
CPMD3	0	0.00	0	9.68	0
SUBMG	176	12.67	20	0.20	880
SUBJB	531	12.92	76	0.98	542
CPJB	530	12.92	95	1.18	449
CPJB1	591	13.42	162	2.46	240
CPJB2	104	13.00	39	1.29	81
CPJB3	791	14.75	294	1.18	670
CPJB4	506	14.75	188	1.18	429
SUBFA	217	14.00	58	0.88	247
CPFA	526	16.33	231	2.06	255
CPFA1	0	0.00	0	2.06	0
CPRI3	739	15.33	349	9.68	76
SUBRI	318	12.25	21	0.23	1383
SUBSB	229	12.33	21	0.19	1205
SUBSD	137	12.50	12	0.14	979
CPSD1	124	12.83	15	0.43	288
CPSD2	429	12.58	46	0.76	564
CPRI5	759	15.33	413	10.24	74
SUBSA	620	12.25	48	0.42	1476
CPSA	310	12.25	24	0.42	738
SUBRH	225	12.50	26	0.22	1023
CPRH	779	13.08	449	10.89	72
CPRH2	780	13.08	446	10.89	72
CPOG1	776	13.17	443	10.89	71
SUBRG	143	12.42	15	0.13	1100
SUBRF	528	12.67	63	0.63	838
CPRF	310	12.25	24	0.42	738
CPRF1	542	12.67	100	1.18	459
CPRF2	434	12.67	80	1.18	368
SUBOG	475	12.50	58	0.47	1011
CPOG	1236	13.50	563	12.12	102
CPOG2	847	13.58	418	12.12	70
SUBOF	263	12.50	27	0.25	1052
SUBRE	242	12.92	36	0.36	672
CPRE	108	12.67	20	1.18	92
CPRE1	244	13.00	55	1.55	157
CPOF1	1091	13.75	491	12.73	86

KK ID	Peak Flow cfs	Time to Peak (hrs)	Volume ac-ft	Area sq. mi.	Unit Pk cfs/sm
SUBOB	250	12.83	31	0.44	568
SUBRD	245	12.83	31	0.38	645
CPRD	147	12.83	18	0.38	387
SUBRC	394	12.92	56	0.68	579
CPRC	392	12.92	74	1.06	370
SUBRB	350	12.67	38	0.55	636
CPRB	418	13.75	110	1.61	260
CPRB1	209	13.75	55	1.61	130
SUBRA	158	12.67	16	0.24	658
CPRA	154	12.67	67	1.85	83
CPRA1	25	12.67	22	1.85	14
CPRA2	0	0.00	0	1.85	0
CPOB2	98	12.83	12	0.38	258
CPOB3	933	14.58	451	13.55	69
SUBLE	212	12.42	20	0.25	848
CPLE	632	18.08	367	13.80	46
CPLE1	443	18.25	262	13.80	32
SUBKD	330	13.00	52	0.72	458
CPKD	441	18.58	299	14.52	30
CPKA2	216	22.17	112	14.52	15
SUBKA	532	13.08	88	1.38	386
CPKA3	209	13.75	55	1.61	130
CPKA4	130	12.67	45	1.85	70
CPKA5	679	13.42	268	15.90	43
CPKA6	388	13.33	246	15.90	24
SUBEC	54	12.83	9	0.11	491
SUBAD	236	12.83	31	0.46	513
SUBAC	235	12.92	32	0.46	511
SUBAB	250	12.83	33	0.46	543
CPSR7	1100	12.92	342	17.39	63
SUBOE	355	12.67	40	0.49	724
CPOE1	83	12.50	24	0.49	169
CPOE2	0	0.00	0	10.89	0
CPOE3	239	15.25	78	9.68	25
CPOE4	356	12.67	143	0.49	727
CP0E5	297	12.67	119	0.49	606
SUBMF	578	13.08	103	0.97	596
CPMF	407	13.00	151	1.29	316
CPMF1	814	14.00	355	1.46	558
CPMF2	438	14.00	190	1.46	300
SUBOD	447	12.67	62	0.53	843
CPOD1	59	12.67	24	0.49	120

KK ID	Peak Flow cfs	Time to Peak (hrs)	Volume ac-ft	Area sq. mi.	Unit Pk cfs/sm
CPOD2	0	0.00	0	10.89	0
CPOD3	358	13.58	135	12.12	30
CPOD4	498	12.75	199	31.55	16
CPOD5	409	12.75	163	31.55	13
SUBMC	643	13.00	114	1.00	643
CPMC1	810	14.33	405	34.01	24
CPMC2	500	14.33	249	34.01	15
SUBEB	137	12.42	12	0.14	979
CPEB1	376	14.00	165	1.46	258
CPEB2	395	14.00	184	0.14	2821
SUBIE	201	12.83	31	0.30	670
CPIE	804	14.75	414	34.45	23
SUBOC	421	12.25	37	0.31	1358
CPOC1	90	12.75	36	31.55	3
CPOC2	421	12.25	74	0.31	1358
SUBMB	631	12.92	105	0.99	637
CPMB	310	14.33	156	34.01	9
CPMB1	839	13.25	334	1.30	645
SUBIB	326	12.92	51	0.46	709
CPIB	1258	14.83	712	36.21	35
SUBME	218	12.67	24	0.32	681
SUBIA	281	12.50	25	0.31	906
CPIA	1340	14.17	751	36.84	36
SUBLD	314	12.25	29	0.28	1121
CPLD	187	18.25	79	13.80	14
CPLD	314	12.25	119	14.10	22
SUBMA	185	12.50	17	0.25	740
CPMA	447	12.50	118	14.35	31
SUBHB	271	12.50	23	0.34	797
CPHB	1395	14.17	833	51.53	27
SUBED	250	13.00	38	0.48	521
SUBID	340	12.83	42	0.56	607
CPID	337	12.83	77	1.04	324
SUBIC	244	13.00	37	0.53	460
CPIC	483	13.58	111	1.57	308
SUBDA	267	12.58	27	0.33	809
CPDA	1759	14.33	937	53.43	33
SUBEE	704	12.92	115	1.40	503
CPEE1	285	14.75	106	1.18	242
CPEC	705	12.92	219	1.40	504
SUBEA	607	13.00	93	1.30	467
CPEA	1232	13.25	306	2.70	456

KK ID	Peak Flow cfs	Time to Peak (hrs)	Volume ac-ft	Area sq. mi.	Unit Pk cfs/sm
SUBDC	545	12.75	64	0.84	649
CPDC	1126	14.42	356	3.54	318
SUBDD	118	12.33	8	0.13	908
SUBCC	691	12.67	75	0.98	705
CPCC	2511	15.67	1207	58.08	43
SUBLB	171	12.67	17	0.25	684
SUBHA	359	12.42	30	0.22	1632
CPHA	356	12.42	47	0.47	757
SUBKC	385	12.58	35	0.26	1481
SUBGD	592	12.67	67	0.77	769
SUBGC	243	12.25	17	0.21	1157
CPGD	717	13.58	163	1.71	419
SUBCB	540	12.92	87	0.74	730
CPCB	2652	16.50	1337	60.53	44
SUBGB	237	12.25	17	0.23	1030
SUBCA	587	13.08	114	0.97	605
CPCA	2565	17.67	1344	61.73	42
SUBBC	235	13.17	41	0.61	385
CPBC	2547	18.00	1340	62.34	41
SUBLC	109	12.33	7	0.10	1090
SUBLA	266	12.83	36	0.50	532
CPLA	119	22.17	43	14.52	8
CPLA	293	13.00	92	0.60	488
SUBKB	322	12.50	29	0.42	767
CPKB	291	13.42	23	15.90	18
CPKB1	435	14.25	141	1.02	426
SUBGA	258	12.08	10	0.14	1843
SUBBB	179	12.75	21	0.25	716
SUBBA	161	12.92	25	0.34	474
CPBA	160	12.92	46	0.59	271
CPAA	273	13.17	76	1.09	250
					Average = 539
					Max = 2821

A. Comparison of the Results With Other Studies and/or Stream gages

The only other report that prepared hydrology for the study area is the 1978 Flood Insurance Study for the City of Tolleson. The resulting report did not present peak discharges. There are no known stream gages within the watershed. Therefore, there is no basis for comparison of

results.

B. Conclusions

This hydrologic model was developed primarily for the purpose of delineating flood hazards behind the RID Canal and the SPRR. Quite detailed mapping along with sophisticated three-dimensional DTM terrain computer modeling techniques were used to develop the stage-storage relationships and HEC-RAS cross-sections. Field surveys were used to establish profiles for weir calculations at overflow boundaries. Therefore it is felt that the model can be used to delineate riverine and ponding inundation areas with reasonable confidence within the limitations of the methods employed. The JD options within HEC-1 were used to simulate the areal reduction in point precipitation values based on the accumulated drainage area. Even with this refinement, application of this model to other areas within the watershed and for other purposes should include analysis of other storm durations and centerings such as the six hour storm with rainfall patterns as described in DDM1.

The Modified Puls routing of runoff ponded behind the RID Canal and the SPRR generates maximum ponded water surface elevations. The water surface elevations generated in the HEC-1 model are used as a basis for floodplain delineation in areas not modeled with HEC-RAS. The weir hydraulic calculations and HEC-RAS modeling are presented in the companion *Final Report and Technical Data Notebook.*

IV. REFERENCES

A. References and Agencies Contacted

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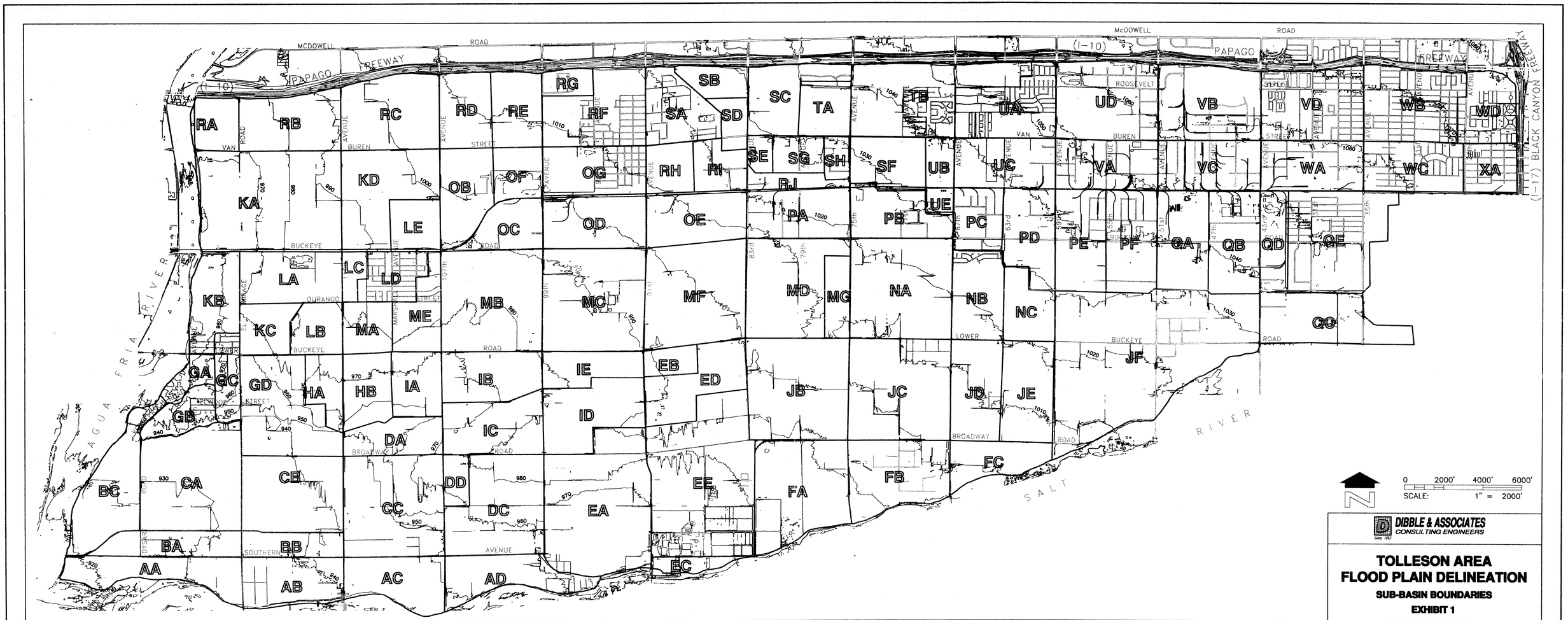
U.S. Department of Commerce, National Oceanic and Atmospheric Administration, *Technical Memorandum, NWS Hydro-40, Depth-Area Ratios in the Semi-Arid Southwest United States*.

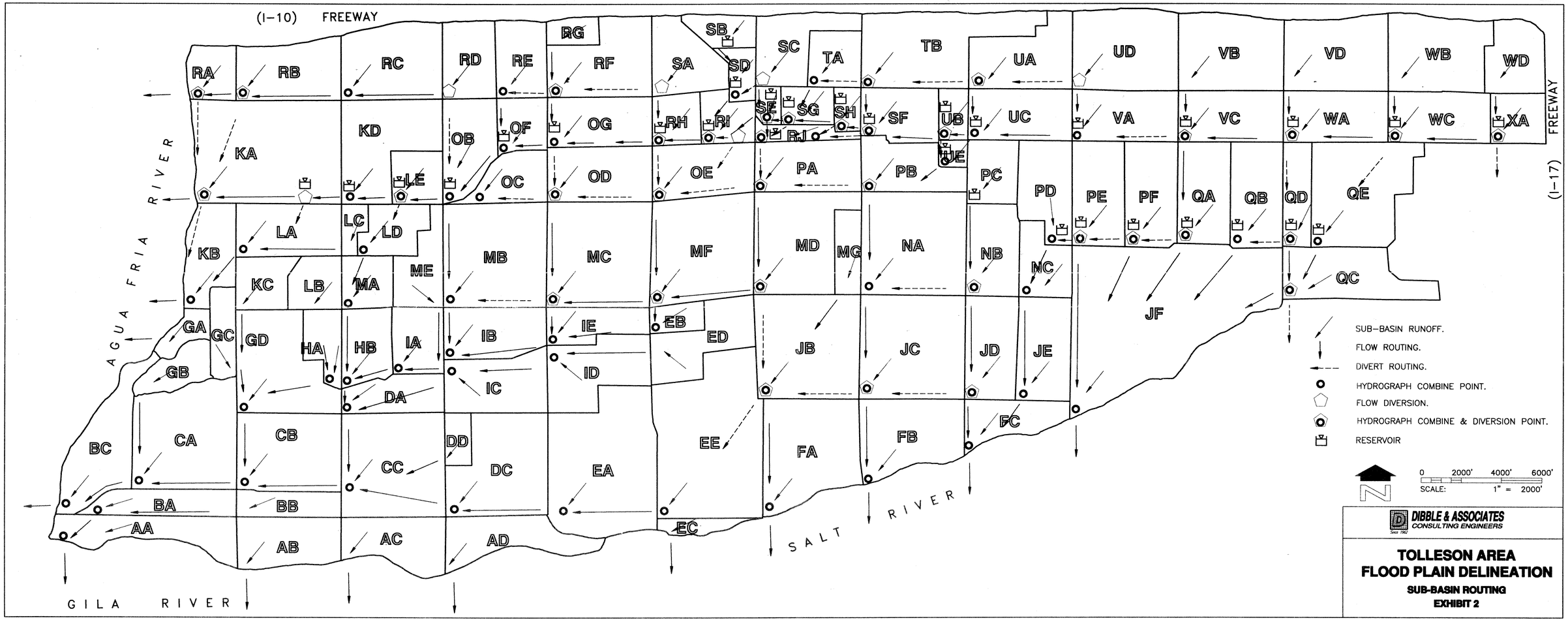
Exhibit 1 - Topographic Map
Exhibit 2 - Subbasin Routing



TOLLESON AREA FLOOD PLAIN DELINEATION

SUB-BASIN BOUNDARIES

EXHIBIT 1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(I-17) FREEWAY
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SALT RIVER
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AD
SUB-BASIN RUNOFF.
FLOW ROUTING.
DIVERT ROUTING.
HYDROGRAPH COMBINE POINT.
FLOW DIVERSION.
HYDROGRAPH COMBINE & DIVERSION POINT.
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SCALE: 1" = 2000'
DIBBLE & ASSOCIATES
CONSULTING ENGINEERS
Since 1962
TOLLESON AREA
FLOOD PLAIN DELINEATION
SUB-BASIN ROUTING
EXHIBIT 2

Appendix D.1
Precipitation Data

*** O U T P U T D A T A ***

REVISED JUNE 1988 TO UPDATE COMPUTATION OF SHORT-DURATION VALUES

PRECIPITATION FREQUENCY VALUES FOR Tolleson Floodplain Study,
PRIMARY ZONE NUMBER= 7
SHORT-DURATION ZONE NUMBER= 8

POINT VALUES

RETURN PERIOD

DURATION	2-YR	5-YR	10-YR	25-YR	50-YR	100-YR	500-YR	
5-MIN	.33	.43	.49	.59	.67	.74	.91	5-MIN
10-MIN	.49	.64	.75	.90	1.02	1.14	1.40	10-MIN
15-MIN	.59	.80	.95	1.15	1.30	1.46	1.81	15-MIN
30-MIN	.78	1.08	1.28	1.55	1.76	1.97	2.46	30-MIN
1-HR	.96	1.33	1.58	1.93	2.20	2.47	3.09	1-HR
2-HR	1.05	1.46	1.74	2.13	2.43	2.73	3.41	2-HR
3-HR	1.11	1.55	1.85	2.27	2.58	2.90	3.63	3-HR
6-HR	1.22	1.72	2.06	2.52	2.88	3.23	4.05	6-HR
12-HR	1.34	1.90	2.28	2.81	3.21	3.61	4.54	12-HR
24-HR	1.45	2.09	2.51	3.09	3.54	3.99	5.02	24-HR

* IF YOUR SITE IS IN ARIZONA OR NEW MEXICO, PLEASE CONSULT THE FOLLOWING PAPER FOR REVISED DEPTH-AREA VALUES:
DEPTH-AREA RATIOS IN THE SEMI-ARID SOUTHWEST UNITED STATES
NOAA TECHNICAL MEMORANDUM NWS HYDRO-40
ZEHR AND MYERS
AUGUST 1984

INPUT DATA

PROJECT NAME=Tolleson Floodplain Study,
ZONE= 7 SHORT-DURATION ZONE= 8
LATITUDE= .00 LONGITUDE= 100.00 ELEVATION= 0
2-YR, 6-HR PCPN= 1.22 100-YR, 6-HR PCPN= 3.23
2-YR, 24-HR PCPN= 1.45 100-YR, 24-HR PCPN= 3.99

* * * * E N D O F R U N * * * *

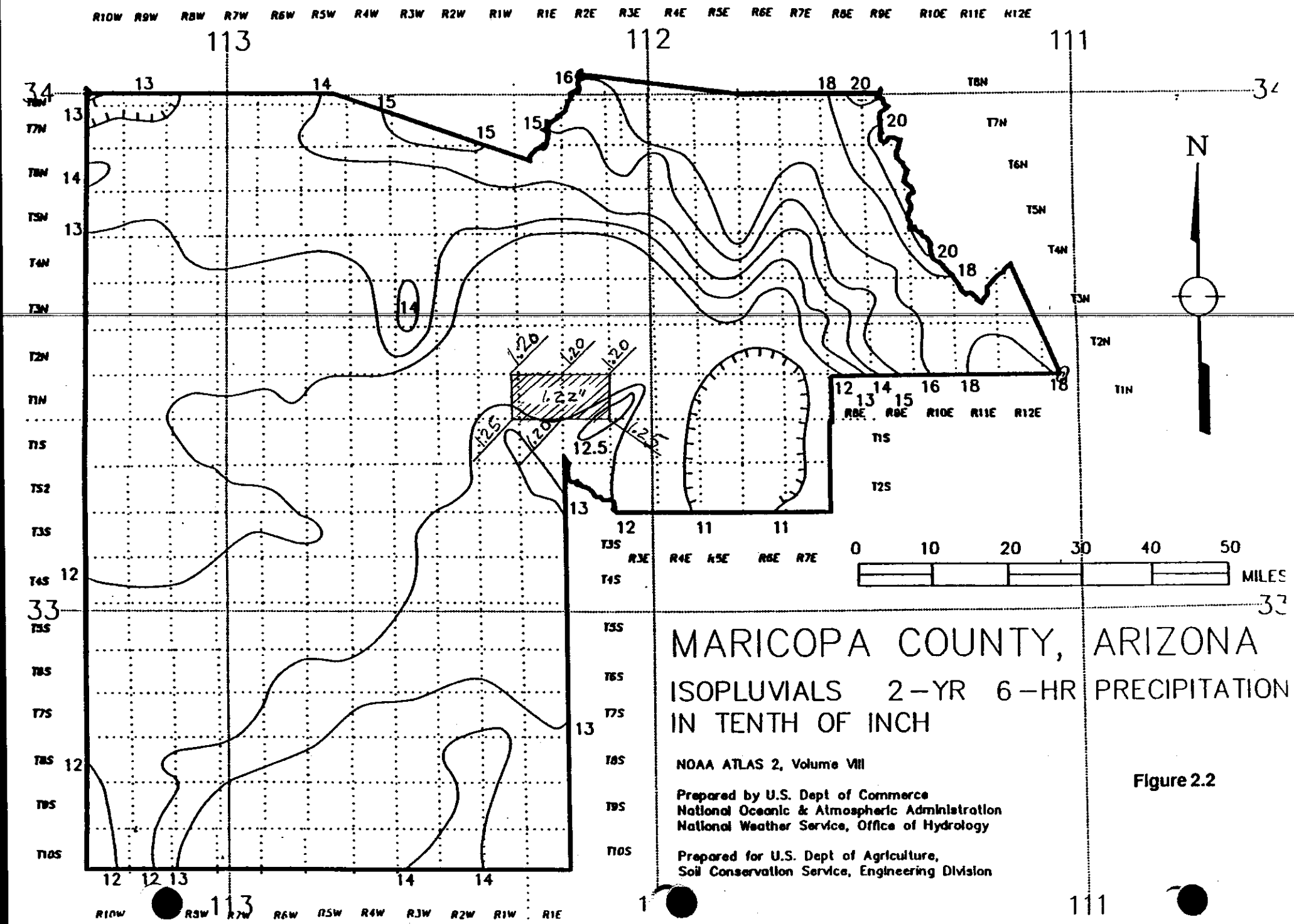
MARICOPA COUNTY, ARIZONA
ISOPLUVIALS 2-YR 6-HR PRECIPITATION
IN TENTH OF INCH
NOAA ATLAS 2, Volume VIII
Prepared by U.S. Dept of Commerce
National Oceanic & Atmospheric Administration
National Weather Service, Office of Hydrology
Prepared for U.S. Dept of Agriculture,
Soil Conservation Service, Engineering Division
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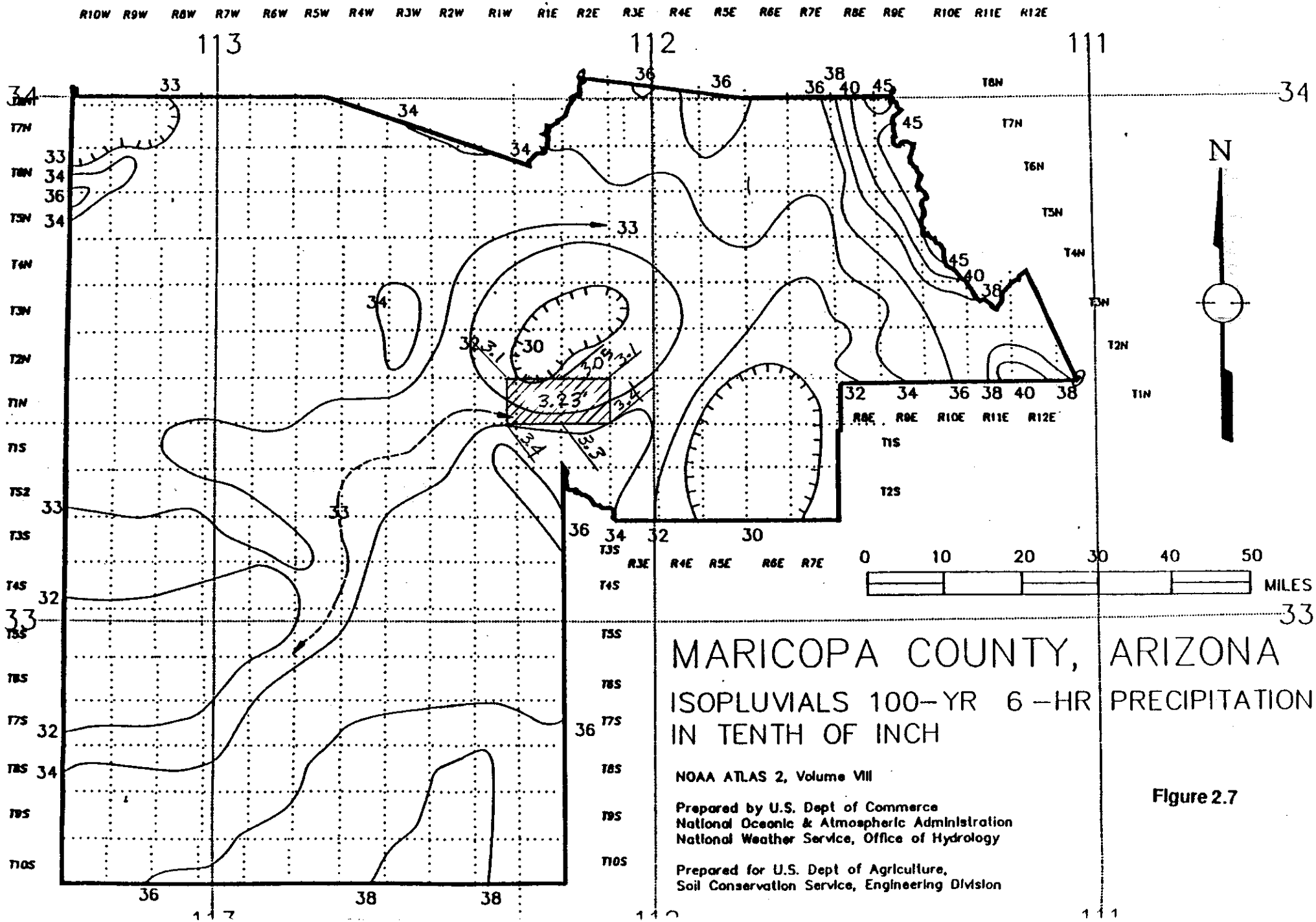
Figure 2.2



MARICOPA COUNTY, ARIZONA

ISOPLUVIALS 100-YR 6-HR PRECIPITATION IN TENTH OF INCH

NOAA ATLAS 2, Volume VIII

Prepared by U.S. Dept of Commerce
National Oceanic & Atmospheric Administration
National Weather Service, Office of Hydrology

Prepared for U.S. Dept of Agriculture,
Soil Conservation Service, Engineering Division

Figure 2.7

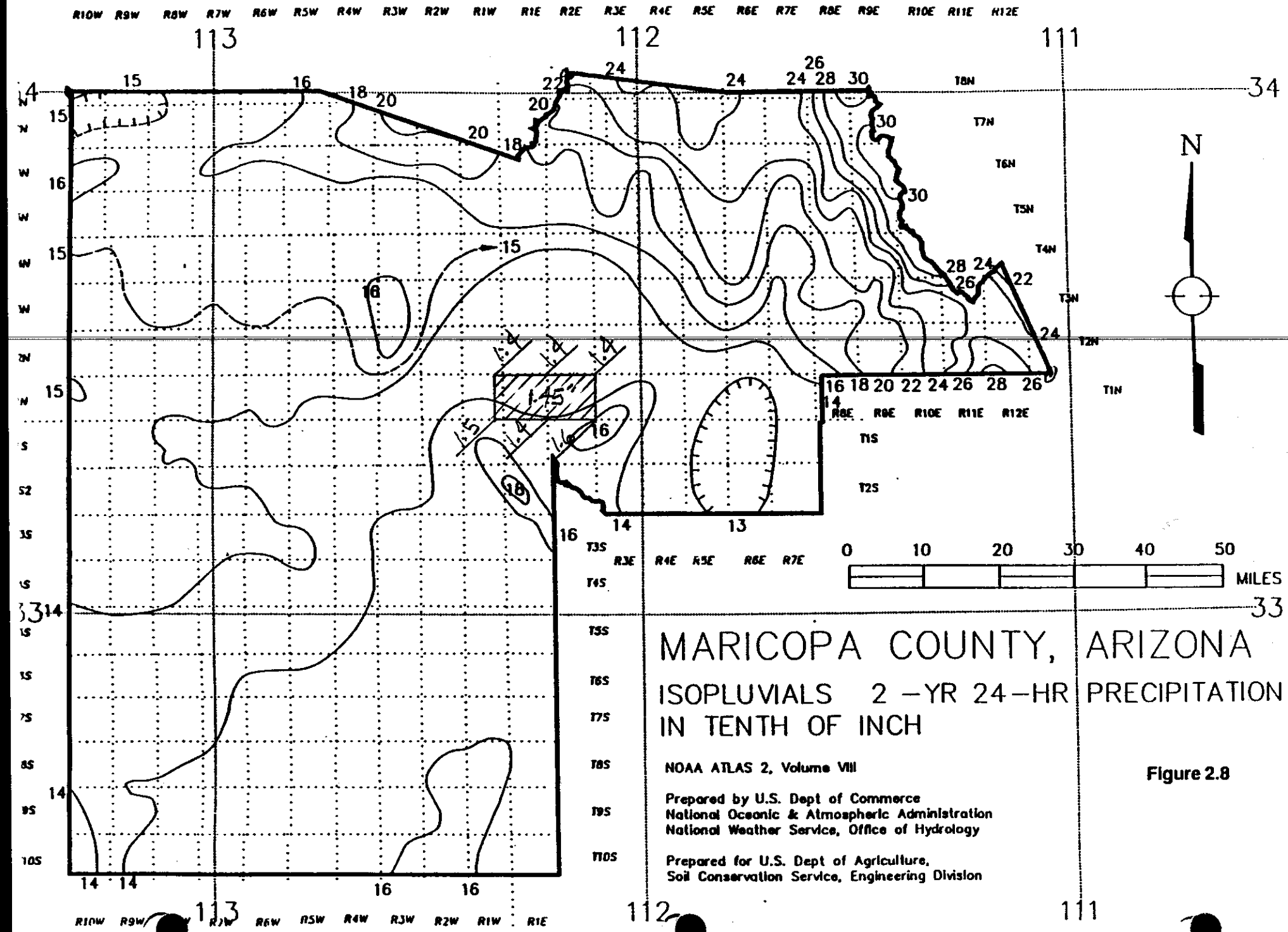

MARICOPA COUNTY, ARIZONA
ISOPLUVIALS 2 -YR 24-HR PRECIPITATION
IN TENTH OF INCH
NOAA ATLAS 2, Volume VIII
Prepared by U.S. Dept of Commerce
National Oceanic & Atmospheric Administration
National Weather Service, Office of Hydrology
Prepared for U.S. Dept of Agriculture,
Soil Conservation Service, Engineering Division
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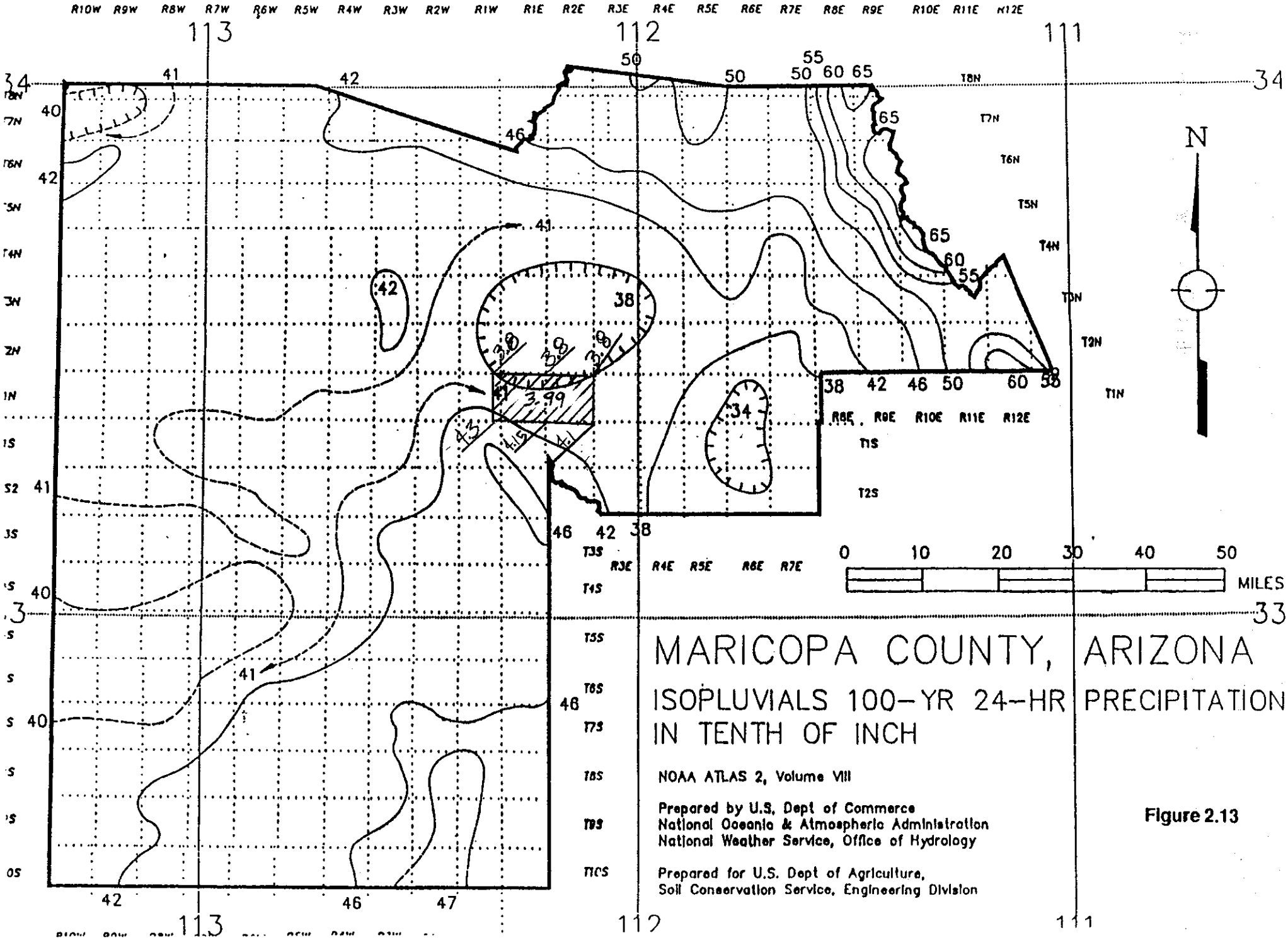
Figure 2.8


MARICOPA COUNTY, ARIZONA
ISOPLUVIALS 100-YR 24-HR PRECIPITATION
IN TENTH OF INCH
NOAA ATLAS 2, Volume VIII
Prepared by U.S. Dept of Commerce
National Oceanic & Atmospheric Administration
National Weather Service, Office of Hydrology
Prepared for U.S. Dept of Agriculture,
Soil Conservation Service, Engineering Division
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T8N T7N T6N T5N T4N T3N T2N T1N T1S T2S T3S T4S T5S T6S T7S T8S T9S T10S
113 112 111
34 33

Figure 2.13

Appendix D.2
Physical Parameter Calculations

LOSS PARAMETERS FOR SUBBASIN: SUBAA

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AA	0.012	2.4	0.26	0
CF	0.011	2.2	0.50	0
GE	0.260	52.4	0.26	0
GGA	0.164	33.1	0.25	0
MA	0.005	1.0	0.40	0
VH	0.041	8.3	0.27	0
VK	0.003	0.6	0.26	0

TOTAL = 0.496 Sq.Miles XKSAT = 0.26 %Rock = 0

DTHETA

Dry = 0.35 PSIF = 4.70
Normal = 0.25
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.390	Crops	78.5	WET	80	0	0.50	0.10	Hi	0.09
	Stockyar		NORMAL	10	0	0.50	0.10	Hi	
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
0.044	River	8.9	NORMAL	90	0	0.20	0.20	Max	0.16
0.054	Vacant	10.9	DRY	15	0	0.35	0.02	Min	0.03
0.004	Frwy/Can	0.8	NORMAL	10	10	0.20	0.01	Min	0.04
0.005	L.D.R.	1.0	NORMAL	50	15	0.20	0.05	Low	0.07
	M.D.R.		NORMAL	50	30	0.15	0.05	Low	
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
	G.I.		NORMAL	70	55	0.10	0.03	Min	
	L.I.		NORMAL	60	55	0.10	0.03	Min	
	P.S.		NORMAL	60	55	0.20	0.03	Min	
	R/R		NORMAL	10	25	0.10	0.03	Min	
0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min	
0.000	Whse.Com	0.0	NORMAL	75	90	0.05	0.02	Min	
0.000	Low.Comm	0.0	NORMAL	80	90	0.15	0.02	Min	
0.000	School	0.0	NORMAL	75	40	0.20	0.02	Min	
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Park	0.0	NORMAL	90	0	0.20	0.10	Hi	

0.497 = Total Area Avg. = 73 0% 0.450

PERCENT OF SUBBASIN DRY = 11.0 %
NORMAL = 11.0 %
WET = 78.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.07

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.44

IMPERVIOUS AREA: URBAN @ 100 % effective = 0
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 0

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBAA	0.496	1.89	1.25	0.10	9.0	0.45	0.07	4.70	0.44	0	130

LOSS PARAMETERS FOR SUBBASIN: SUBAB

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
ABA	0.016	3.5	0.38	0
AO	0.024	5.2	0.04	0
BR	0.002	0.4	1.05	0
CF	0.000	0.0	0.50	0
GE	0.220	47.9	0.26	0
GGA	0.092	20.0	0.25	0
GT	0.068	14.8	0.04	0
GU	0.002	0.4	0.04	0
VH	0.035	7.6	0.27	0

TOTAL = 0.459 Sq.Miles XKSAT = 0.18 %Rock = 0

DTHETA

Dry = 0.38 PSIF = 5.60
Normal = 0.25
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.250	Crops	54.3	WET	80	0	0.50	0.10	Hi	0.09
	Stockyar		NORMAL	10	0	0.50	0.10	Hi	
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
0.071	River	15.4	NORMAL	90	0	0.20	0.20	Max	0.15
	Vacant		DRY	15	0	0.35	0.02	Min	
	Frwy/Can		NORMAL	10	10	0.20	0.01	Min	
0.139	L.D.R.	30.2	NORMAL	50	15	0.20	0.05	Low	0.05
	M.D.R.		NORMAL	50	30	0.15	0.05	Low	
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
	G.I.		NORMAL	70	55	0.10	0.03	Min	
	L.I.		NORMAL	60	55	0.10	0.03	Min	
	P.S.		NORMAL	60	55	0.20	0.03	Min	
	R/R		NORMAL	10	25	0.10	0.03	Min	
0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min	
0.000	Whse.Com	0.0	NORMAL	75	90	0.05	0.02	Min	
0.000	Low.Comm	0.0	NORMAL	80	90	0.15	0.02	Min	
0.000	School	0.0	NORMAL	75	40	0.20	0.02	Min	
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Park	0.0	NORMAL	90	0	0.20	0.10	Hi	

0.460 = Total Area Avg. = 74 5% 0.360

PERCENT OF SUBBASIN DRY = 0.0 %

NORMAL = 46.0 %
WET = 54.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.12

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.31

IMPERVIOUS AREA: URBAN @ 100 % effective = 5
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 5

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBAB	0.459	1.06	0.49	0.10	12.3	0.36	0.12	5.60	0.31	5	70

LOSS PARAMETERS FOR SUBBASIN: SUBAC

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
ABA	0.065	14.2	0.38	0
AO	0.013	2.8	0.04	0
GE	0.049	10.7	0.26	0
GGA	0.200	43.8	0.25	0
GR	0.008	1.8	0.23	0
GT	0.062	13.6	0.04	0
VH	0.060	13.1	0.27	0

TOTAL = 0.457 Sq.Miles XKSAT = 0.20 %Rock = 0

DTHETA

Dry = 0.37 PSIF = 5.30
Normal = 0.25
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.359	Crops	78.6	WET	80	0	0.50	0.10	Hi	0.09
0.011	Stockyar	2.4	NORMAL	10	0	0.50	0.10	Hi	0.13
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
0.066	River	14.4	NORMAL	90	0	0.20	0.20	Max	0.15
	Vacant		DRY	15	0	0.35	0.02	Min	
	Frwy/Can		NORMAL	10	10	0.20	0.01	Min	
0.021	L.D.R.	4.6	NORMAL	50	15	0.20	0.05	Low	0.06
	M.D.R.		NORMAL	50	30	0.15	0.05	Low	
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
	G.I.		NORMAL	70	55	0.10	0.03	Min	
	L.I.		NORMAL	60	55	0.10	0.03	Min	
	P.S.		NORMAL	60	55	0.20	0.03	Min	
	R/R		NORMAL	10	25	0.10	0.03	Min	
0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min	
0.000	Whse.Com	0.0	NORMAL	75	90	0.05	0.02	Min	
0.000	Low.Comm	0.0	NORMAL	80	90	0.15	0.02	Min	
0.000	School	0.0	NORMAL	75	40	0.20	0.02	Min	
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Park	0.0	NORMAL	90	0	0.20	0.10	Hi	

0.457 = Total Area Avg. = 79 1% 0.440

PERCENT OF SUBBASIN DRY = 0.0 %
NORMAL = 21.0 %
WET = 79.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.05

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.35

IMPERVIOUS AREA: URBAN @ 100 % effective = 1
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 1

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBAC	0.457	1.10	0.56	0.11	20.0	0.44	0.05	5.30	0.35	1	76

LOSS PARAMETERS FOR SUBBASIN: SUBAD

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
ABA	0.034	7.3	0.38	0
AA	0.017	3.7	0.26	0
BT	0.016	3.5	0.25	0
CF	0.000	0.0	0.50	0
ES	0.000	0.0	0.25	0
GE	0.006	1.3	0.26	0
GGA	0.229	49.5	0.25	0
GT	0.059	12.7	0.04	0
VH	0.093	20.1	0.27	0
VK	0.009	1.9	0.26	0

TOTAL = 0.463 Sq.Miles XKSAT = 0.21 %Rock = 0

DTHETA

Dry = 0.37 PSIF = 5.20
Normal = 0.25
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.404	Crops	87.1	WET	80	0	0.50	0.10	Hi	0.09
0.046	Stockyar	9.9	NORMAL	10	0	0.50	0.10	Hi	0.11
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
0.014	River	3.0	NORMAL	90	0	0.20	0.20	Max	0.17
	Vacant		DRY	15	0	0.35	0.02	Min	
	Frwy/Can		NORMAL	10	10	0.20	0.01	Min	
	L.D.R.		NORMAL	50	15	0.20	0.05	Low	
	M.D.R.		NORMAL	50	30	0.15	0.05	Low	
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
	G.I.		NORMAL	70	55	0.10	0.03	Min	
	L.I.		NORMAL	60	55	0.10	0.03	Min	
	P.S.		NORMAL	60	55	0.20	0.03	Min	
	R/R		NORMAL	10	25	0.10	0.03	Min	
0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min	
0.000	Whse.Com	0.0	NORMAL	75	90	0.05	0.02	Min	
0.000	Low.Comm	0.0	NORMAL	80	90	0.15	0.02	Min	
0.000	School	0.0	NORMAL	75	40	0.20	0.02	Min	
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Park	0.0	NORMAL	90	0	0.20	0.10	Hi	
0.464	= Total Area		Avg. =	73	0%	0.490			

PERCENT OF SUBBASIN DRY = 0.0 %
NORMAL = 13.0 %
WET = 87.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.03

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.36

IMPERVIOUS AREA: URBAN @ 100 % effective = 0
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 0

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBAD	0.463	1.10	0.49	0.10	10.9	0.49	0.03	5.20	0.36	0	75

LOSS PARAMETERS FOR SUBBASIN: SUBBA

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AA	0.031	9.0	0.26	0
GE	0.050	14.5	0.26	0
GGA	0.192	55.7	0.25	0
GH	0.049	14.2	0.24	0
GU	0.023	6.7	0.04	0

TOTAL = 0.345 Sq.Miles XKSAT = 0.22 %Rock = 0

DTHETA

Dry = 0.36 PSIF = 5.10
Normal = 0.25
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.199	Crops	57.7	WET	80	0	0.50	0.10	Hi	0.10
0.025	Stockyar	7.2	NORMAL	10	0	0.50	0.10	Hi	0.12
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
	Vacant		DRY	15	0	0.35	0.02	Min	
	Frwy/Can		NORMAL	10	10	0.20	0.01	Min	
0.121	L.D.R.	35.1	NORMAL	50	15	0.20	0.05	Low	0.05
	M.D.R.		NORMAL	50	30	0.15	0.05	Low	
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
	G.I.		NORMAL	70	55	0.10	0.03	Min	
	L.I.		NORMAL	60	55	0.10	0.03	Min	
	P.S.		NORMAL	60	55	0.20	0.03	Min	
	R/R		NORMAL	10	25	0.10	0.03	Min	
0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min	
0.000	Whse.Com	0.0	NORMAL	75	90	0.05	0.02	Min	
0.000	Low.Comm	0.0	NORMAL	80	90	0.15	0.02	Min	
0.000	School	0.0	NORMAL	75	40	0.20	0.02	Min	
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Park	0.0	NORMAL	90	0	0.20	0.10	Hi	
0.345 = Total Area			Avg. =	65	5%	0.390			

PERCENT OF SUBBASIN DRY = 0.0 %
NORMAL = 42.0 %
WET = 58.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.10

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.35

IMPERVIOUS AREA: URBAN @ 100 % effective = 5
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 5

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBBA	0.345	1.48	0.74	0.08	8.1	0.39	0.10	5.10	0.35	5	82

LOSS PARAMETERS FOR SUBBASIN: SUBBB

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AO	0.004	1.6	0.04	0
CN	0.010	4.1	0.01	0
GGA	0.085	34.7	0.25	0
GH	0.014	5.7	0.24	0
GP	0.002	0.8	0.24	0
GT	0.067	27.3	0.04	0
GU	0.063	25.7	0.04	0

TOTAL = 0.245 Sq.Miles XKSAT = 0.08 %Rock = 0

DTHETA

Dry = 0.32 PSIF = 7.60
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.175	Crops	71.1	WET	80	0	0.50	0.10	Hi	0.10
0.019	Stockyar	7.7	NORMAL	10	0	0.50	0.10	Hi	0.12
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
0.043	Vacant	17.5	DRY	15	0	0.35	0.02	Min	0.03
0.007	Frwy/Can	2.8	NORMAL	10	10	0.20	0.01	Min	0.04
0.002	L.D.R.	0.8	NORMAL	50	15	0.20	0.05	Low	0.08
	M.D.R.		NORMAL	50	30	0.15	0.05	Low	
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
	G.I.		NORMAL	70	55	0.10	0.03	Min	
	L.I.		NORMAL	60	55	0.10	0.03	Min	
	P.S.		NORMAL	60	55	0.20	0.03	Min	
	R/R		NORMAL	10	25	0.10	0.03	Min	
0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min	
0.000	Whse.Com	0.0	NORMAL	75	90	0.05	0.02	Min	
0.000	Low.Comm	0.0	NORMAL	80	90	0.15	0.02	Min	
0.000	School	0.0	NORMAL	75	40	0.20	0.02	Min	
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Park	0.0	NORMAL	90	0	0.20	0.10	Hi	

0.246 = Total Area Avg. = 61 0% 0.460

PERCENT OF SUBBASIN DRY = 18.0 %
NORMAL = 11.0 %
WET = 71.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.07

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.13

IMPERVIOUS AREA: URBAN @ 100 % effective = 0
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 0

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBBB	0.245	1.02	0.49	0.08	7.8	0.46	0.07	7.60	0.13	0	62

LOSS PARAMETERS FOR SUBBASIN: SUBBC

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AA	0.145	23.7	0.26	0
AN	0.027	4.4	0.05	0
BR	0.016	2.6	1.05	0
BS	0.034	5.6	0.39	0
BT	0.004	0.7	0.25	0
GE	0.075	12.3	0.26	0
GGA	0.054	8.8	0.25	0
GU	0.050	8.2	0.04	0
RBA	0.027	4.4	0.26	0
RPE	0.037	6.0	0.29	0
VG	0.005	0.8	0.91	0
VH	0.042	6.9	0.27	0
VK	0.096	15.7	0.26	0

TOTAL = 0.612 Sq.Miles XKSAT = 0.22 %Rock = 0

DTHETA

Dry = 0.36 PSIF = 5.10
Normal = 0.25
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.456	Crops	74.4	WET	80	0	0.50	0.10	Hi	0.09
0.084	Stockyar	13.7	NORMAL	10	0	0.50	0.10	Hi	0.11
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
0.028	River	4.6	NORMAL	90	0	0.20	0.20	Max	0.16
0.033	Vacant	5.4	DRY	15	0	0.35	0.02	Min	0.03
0.011	Frwy/Can	1.8	NORMAL	10	10	0.20	0.01	Min	0.03
0.001	L.D.R.	0.2	NORMAL	50	15	0.20	0.05	Low	0.08
	M.D.R.		NORMAL	50	30	0.15	0.05	Low	
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
	G.I.		NORMAL	70	55	0.10	0.03	Min	
	L.I.		NORMAL	60	55	0.10	0.03	Min	
	P.S.		NORMAL	60	55	0.20	0.03	Min	
	R/R		NORMAL	10	25	0.10	0.03	Min	
0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min	
0.000	Whse.Com	0.0	NORMAL	75	90	0.05	0.02	Min	
0.000	Low.Comm	0.0	NORMAL	80	90	0.15	0.02	Min	
0.000	School	0.0	NORMAL	75	40	0.20	0.02	Min	
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Park	0.0	NORMAL	90	0	0.20	0.10	Hi	

0.613 = Total Area Avg. = 66 0% 0.470

PERCENT OF SUBBASIN DRY = 5.0 %
NORMAL = 20.0 %
WET = 74.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.07

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.36

IMPERVIOUS AREA: URBAN @ 100 % effective = 0
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 0

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBBC	0.612	1.74	0.76	0.10	11.5	0.47	0.07	5.10	0.36	0	100

LOSS PARAMETERS FOR SUBBASIN: SUBCA

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AO	0.087	8.9	0.04	0
AP	0.019	2.0	0.04	0
CN	0.048	4.9	0.01	0
ES	0.023	2.4	0.25	0
GB	0.054	5.5	0.04	0
GC	0.200	20.5	0.01	0
GE	0.069	7.1	0.26	0
GF	0.010	1.0	0.24	0
GGA	0.185	19.0	0.25	0
GU	0.271	27.8	0.04	0
LD	0.008	0.8	0.25	0

TOTAL = 0.974 Sq.Miles XKSAT = 0.05 %Rock = 0

DTHETA

Dry = 0.27 PSIF = 8.80
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.948	Crops	97.2	WET	80	0	0.50	0.10	Hi	0.08
0.001	Stockyar	0.1	NORMAL	10	0	0.50	0.10	Hi	0.15
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
	Vacant		DRY	15	0	0.35	0.02	Min	
0.020	Frwy/Can	2.1	NORMAL	10	10	0.20	0.01	Min	0.03
0.006	L.D.R.	0.6	NORMAL	50	15	0.20	0.05	Low	0.07
	M.D.R.		NORMAL	50	30	0.15	0.05	Low	
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
	G.I.		NORMAL	70	55	0.10	0.03	Min	
	L.I.		NORMAL	60	55	0.10	0.03	Min	
	P.S.		NORMAL	60	55	0.20	0.03	Min	
	R/R		NORMAL	10	25	0.10	0.03	Min	
0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min	
0.000	Whse.Com	0.0	NORMAL	75	90	0.05	0.02	Min	
0.000	Low.Comm	0.0	NORMAL	80	90	0.15	0.02	Min	
0.000	School	0.0	NORMAL	75	40	0.20	0.02	Min	
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Park	0.0	NORMAL	90	0	0.20	0.10	Hi	

0.975 = Total Area Avg. = 78 0% 0.490

PERCENT OF SUBBASIN DRY = 0.0 %
NORMAL = 3.0 %
WET = 97.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.00

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.09

IMPERVIOUS AREA: URBAN @ 100 % effective = 0
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 0

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBCA	0.974	1.40	0.57	0.10	6.4	0.49	0.00	8.80	0.09	0	91

LOSS PARAMETERS FOR SUBBASIN: SUBCB

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AO	0.013	1.8	0.04	0
GB	0.141	19.1	0.04	0
GC	0.276	37.3	0.01	0
GGA	0.067	9.1	0.25	0
GP	0.124	16.8	0.24	0
GT	0.003	0.4	0.04	0
GU	0.037	5.0	0.04	0
LE	0.079	10.7	0.04	0

TOTAL = 0.740 Sq.Miles XKSAT = 0.04 %Rock = 0

DTHETA

Dry = 0.25 PSIF = 9.70
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.698	Crops	94.5	WET	80	0	0.50	0.10	Hi	0.08
0.009	Stockyar	1.2	NORMAL	10	0	0.50	0.10	Hi	0.13
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
0.004	Vacant	0.5	DRY	15	0	0.35	0.02	Min	0.04
0.005	Frwy/Can	0.7	NORMAL	10	10	0.20	0.01	Min	0.04
0.023	L.D.R.	3.1	NORMAL	50	15	0.20	0.05	Low	0.06
	M.D.R.		NORMAL	50	30	0.15	0.05	Low	
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
	G.I.		NORMAL	70	55	0.10	0.03	Min	
	L.I.		NORMAL	60	55	0.10	0.03	Min	
	P.S.		NORMAL	60	55	0.20	0.03	Min	
	R/R		NORMAL	10	25	0.10	0.03	Min	
0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min	
0.000	Whse.Com	0.0	NORMAL	75	90	0.05	0.02	Min	
0.000	Low.Comm	0.0	NORMAL	80	90	0.15	0.02	Min	
0.000	School	0.0	NORMAL	75	40	0.20	0.02	Min	
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Park	0.0	NORMAL	90	0	0.20	0.10	Hi	

0.739 = Total Area Avg. = 78 1% 0.490

PERCENT OF SUBBASIN DRY = 0.0 %
NORMAL = 5.0 %

WET = 94.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.01

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.07

IMPERVIOUS AREA: URBAN @ 100 % effective = 1
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 1

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBCB	0.740	1.17	0.49	0.10	11.1	0.49	0.01	9.70	0.07	1	72

LOSS PARAMETERS FOR SUBBASIN: SUBCC

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AO	0.059	6.0	0.04	0
CP	0.064	6.5	0.40	0
GB	0.054	5.5	0.04	0
GC	0.028	2.9	0.01	0
GE	0.013	1.3	0.26	0
GGA	0.138	14.1	0.25	0
GGB	0.040	4.1	0.26	0
GP	0.148	15.1	0.24	0
GT	0.155	15.8	0.04	0
LCA	0.088	9.0	0.25	0
LD	0.108	11.0	0.25	0
LE	0.025	2.6	0.04	0
TA	0.060	6.1	0.25	0

TOTAL = 0.980 Sq.Miles XKSAT = 0.14 %Rock = 0

DTHETA

Dry = 0.39 PSIF = 6.20
Normal = 0.23
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.473	Crops	48.2	WET	80	0	0.50	0.10	Hi	0.09
0.057	Stockyar	5.8	NORMAL	10	0	0.50	0.10	Hi	0.11
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
0.136	Vacant	13.9	DRY	15	0	0.35	0.02	Min	0.03
0.000	Frwy/Can	0.0	NORMAL	10	10	0.20	0.01	Min	
0.315	L.D.R.	32.1	NORMAL	50	15	0.20	0.05	Low	0.05
	M.D.R.		NORMAL	50	30	0.15	0.05	Low	
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
	G.I.		NORMAL	70	55	0.10	0.03	Min	
	L.I.		NORMAL	60	55	0.10	0.03	Min	
	P.S.		NORMAL	60	55	0.20	0.03	Min	
	R/R		NORMAL	10	25	0.10	0.03	Min	
0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min	
0.000	Whse.Com	0.0	NORMAL	75	90	0.05	0.02	Min	
0.000	Low.Comm	0.0	NORMAL	80	90	0.15	0.02	Min	
0.000	School	0.0	NORMAL	75	40	0.20	0.02	Min	
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Park	0.0	NORMAL	90	0	0.20	0.10	Hi	

0.981 = Total Area Avg. = 58 5% 0.380

PERCENT OF SUBBASIN DRY = 14.0 %
NORMAL = 38.0 %
WET = 48.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.14

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.21

IMPERVIOUS AREA: URBAN @ 100 % effective = 5
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 5

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBCC	0.980	1.36	0.68	0.07	22.8	0.38	0.14	6.20	0.21	5	56

LOSS PARAMETERS FOR SUBBASIN: SUBDA

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AO	0.003	0.9	0.04	0
CP	0.012	3.6	0.40	0
GC	0.035	10.6	0.01	0
GGA	0.018	5.5	0.25	0
GT	0.093	28.2	0.04	0
LCA	0.147	44.5	0.25	0
LD	0.022	6.7	0.25	0

TOTAL = 0.330 Sq.Miles XKSAT = 0.11 %Rock = 0

DTHETA

Dry = 0.36 PSIF = 6.80
Normal = 0.17
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.183	Crops	55.8	WET	80	0	0.50	0.10	Hi	0.10
0.017	Stockyar	5.2	NORMAL	10	0	0.50	0.10	Hi	0.12
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
0.054	Vacant	16.5	DRY	15	0	0.35	0.02	Min	0.03
	Frwy/Can		NORMAL	10	10	0.20	0.01	Min	
0.074	L.D.R.	22.6	NORMAL	50	15	0.20	0.05	Low	0.06
	M.D.R.		NORMAL	50	30	0.15	0.05	Low	
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
	G.I.		NORMAL	70	55	0.10	0.03	Min	
	L.I.		NORMAL	60	55	0.10	0.03	Min	
	P.S.		NORMAL	60	55	0.20	0.03	Min	
	R/R		NORMAL	10	25	0.10	0.03	Min	
0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min	
0.000	Whse.Com	0.0	NORMAL	75	90	0.05	0.02	Min	
0.000	Low.Comm	0.0	NORMAL	80	90	0.15	0.02	Min	
0.000	School	0.0	NORMAL	75	40	0.20	0.02	Min	
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Park	0.0	NORMAL	90	0	0.20	0.10	Hi	

0.328 = Total Area Avg. = 59 3% 0.410

PERCENT OF SUBBASIN DRY = 16.0 %
NORMAL = 28.0 %
WET = 56.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.11

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.17

IMPERVIOUS AREA: URBAN @ 100 % effective = 3
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 3

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBDA	0.330	1.02	0.57	0.08	17.6	0.41	0.11	6.80	0.17	3	52

LOSS PARAMETERS FOR SUBBASIN: SUBDC

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
ABA	0.042	5.0	0.38	0
CP	0.036	4.3	0.40	0
ES	0.055	6.6	0.25	0
GE	0.074	8.8	0.26	0
GGA	0.061	7.3	0.25	0
GGB	0.002	0.2	0.26	0
GT	0.163	19.5	0.04	0
LB	0.019	2.3	0.40	0
LCA	0.244	29.2	0.25	0
LD	0.014	1.7	0.25	0
LE	0.089	10.6	0.04	0
MO	0.007	0.8	0.39	0
TU	0.019	2.3	0.25	0
VA	0.012	1.4	0.39	0

TOTAL = 0.837 Sq.Miles XKSAT = 0.15 %Rock = 0

DTHETA

Dry = 0.40 PSIF = 6.00
Normal = 0.25
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.721	Crops	86.0	WET	80	0	0.50	0.10	Hi	0.08
0.040	Stockyar	4.8	NORMAL	10	0	0.50	0.10	Hi	0.11
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
	Vacant		DRY	15	0	0.35	0.02	Min	
	Frwy/Can		NORMAL	10	10	0.20	0.01	Min	
0.077	L.D.R.	9.2	NORMAL	50	15	0.20	0.05	Low	0.06
	M.D.R.		NORMAL	50	30	0.15	0.05	Low	
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
	G.I.		NORMAL	70	55	0.10	0.03	Min	
	L.I.		NORMAL	60	55	0.10	0.03	Min	
	P.S.		NORMAL	60	55	0.20	0.03	Min	
	R/R		NORMAL	10	25	0.10	0.03	Min	
0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min	
0.000	Whse.Com	0.0	NORMAL	75	90	0.05	0.02	Min	
0.000	Low.Comm	0.0	NORMAL	80	90	0.15	0.02	Min	
0.000	School	0.0	NORMAL	75	40	0.20	0.02	Min	
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min	

0.000	Park	0.0	NORMAL	90	0	0.20	0.10 Hi

0.838 = Total Area Avg. = 74 1% 0.470

PERCENT OF SUBBASIN
DRY = 0.0 %
NORMAL = 14.0 %
WET = 86.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.04

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.26

IMPERVIOUS AREA:
URBAN @ 100 % effective = 1
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 1

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBDC	0.837	1.40	0.45	0.09	22.1	0.47	0.04	6.00	0.26	1	64

LOSS PARAMETERS FOR SUBBASIN: SUBDD

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
ABA	0.008	6.3	0.38	0
CP	0.013	10.3	0.40	0
GE	0.065	51.6	0.26	0
GGA	0.014	11.1	0.25	0
GGB	0.000	0.0	0.26	0
LCA	0.019	15.1	0.25	0
TA	0.007	5.6	0.25	0

TOTAL = 0.126 Sq.Miles XKSAT = 0.27 %Rock = 0

DTHETA

Dry = 0.35 PSIF = 4.65
Normal = 0.25
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.095	Crops	75.4	WET	80	0	0.50	0.10	Hi	0.11
0.031	Stockyar	24.6	NORMAL	10	0	0.50	0.10	Hi	0.12
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
	Vacant		DRY	15	0	0.35	0.02	Min	
	Frwy/Can		NORMAL	10	10	0.20	0.01	Min	
	L.D.R.		NORMAL	50	15	0.20	0.05	Low	
	M.D.R.		NORMAL	50	30	0.15	0.05	Low	
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
	G.I.		NORMAL	70	55	0.10	0.03	Min	
	L.I.		NORMAL	60	55	0.10	0.03	Min	
	P.S.		NORMAL	60	55	0.20	0.03	Min	
	R/R		NORMAL	10	25	0.10	0.03	Min	
0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min	
0.000	Whse.Com	0.0	NORMAL	75	90	0.05	0.02	Min	
0.000	Low.Comm	0.0	NORMAL	80	90	0.15	0.02	Min	
0.000	School	0.0	NORMAL	75	40	0.20	0.02	Min	
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Park	0.0	NORMAL	90	0	0.20	0.10	Hi	

0.126 = Total Area Avg. = 63 0% 0.500

PERCENT OF SUBBASIN DRY = 0.0 %
NORMAL = 25.0 %
WET = 75.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.06

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.43

IMPERVIOUS AREA: URBAN @ 100 % effective = 0
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 0

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBDD	0.126	0.53	0.27	0.10	28.3	0.50	0.06	4.65	0.43	0	36

LOSS PARAMETERS FOR SUBBASIN: SUBEA

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
ABA	0.019	1.4	0.38	0
AO	0.031	2.4	0.04	0
CP	0.008	0.6	0.40	0
ES	0.185	14.0	0.25	0
GC	0.011	0.8	0.01	0
GE	0.055	4.2	0.26	0
GGA	0.192	14.6	0.25	0
GR	0.027	2.1	0.23	0
GT	0.098	7.4	0.04	0
LB	0.091	6.9	0.40	0
LCA	0.125	9.5	0.25	0
LE	0.005	0.4	0.04	0
MO	0.012	0.9	0.39	0
MP	0.066	5.0	0.25	0
MR	0.037	2.8	0.05	0
TA	0.029	2.2	0.25	0
TC	0.002	0.2	0.40	0
TT	0.016	1.2	0.04	0
TU	0.244	18.5	0.25	0
TW	0.011	0.8	0.05	0
VA	0.053	4.0	0.39	0
VH	0.000	0.0	0.27	0

TOTAL = 1.317 Sq.Miles XKSAT = 0.20 %Rock = 0

DTHETA

Dry = 0.37 PSIF = 5.30
Normal = 0.25
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
1.212	Crops	92.1	WET	80	0	0.50	0.10	Hi	0.08
0.069	Stockyar	5.2	NORMAL	10	0	0.50	0.10	Hi	0.11
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
0.032	Vacant	2.4	DRY	15	0	0.35	0.02	Min	0.03
	Frwy/Can		NORMAL	10	10	0.20	0.01	Min	
	L.D.R.		NORMAL	50	15	0.20	0.05	Low	
	M.D.R.		NORMAL	50	30	0.15	0.05	Low	
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
0.000	G.I.	0.0	NORMAL	70	55	0.10	0.03	Min	
	L.I.		NORMAL	60	55	0.10	0.03	Min	

	P.S.		NORMAL	60	55	0.20	0.03	Min	
	R/R		NORMAL	10	25	0.10	0.03	Min	
0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min	
0.000	Whse.Com	0.0	NORMAL	75	90	0.05	0.02	Min	
0.000	Low.Comm	0.0	NORMAL	80	90	0.15	0.02	Min	
0.002	School	0.2	NORMAL	75	40	0.20	0.02	Min	0.04
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min	
0.001	Park	0.1	NORMAL	90	0	0.20	0.10	Hi	0.15

1.316 = Total Area Avg. = 75 0% 0.500

PERCENT OF SUBBASIN DRY = 2.0 %
NORMAL = 5.0 %
WET = 92.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.02

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.34

IMPERVIOUS AREA: URBAN @ 100 % effective = 0
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 0

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBEA	1.317	1.55	0.83	0.10	21.3	0.50	0.02	5.30	0.34	0	87

LOSS PARAMETERS FOR SUBBASIN: SUBEB

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
MR	0.012	8.6	0.05	0
TU	0.086	61.9	0.25	0
TW	0.041	29.5	0.05	0

TOTAL = 0.139 Sq.Miles XKSAT = 0.14 %Rock = 0

DTHETA

Dry = 0.39 PSIF = 6.20
Normal = 0.23
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.139	Crops	100.	WET	80	0	0.50	0.10	Hi	0.10
	Stockyar		NORMAL	10	0	0.50	0.10	Hi	
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
	Vacant		DRY	15	0	0.35	0.02	Min	
	Frwy/Can		NORMAL	10	10	0.20	0.01	Min	
	L.D.R.		NORMAL	50	15	0.20	0.05	Low	
	M.D.R.		NORMAL	50	30	0.15	0.05	Low	
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
	G.I.		NORMAL	70	55	0.10	0.03	Min	
	L.I.		NORMAL	60	55	0.10	0.03	Min	
	P.S.		NORMAL	60	55	0.20	0.03	Min	
	R/R		NORMAL	10	25	0.10	0.03	Min	
	Med.Comm		NORMAL	75	90	0.15	0.02	Min	
	Whse.Com		NORMAL	75	90	0.05	0.02	Min	
	Low.Comm		NORMAL	80	90	0.15	0.02	Min	
	School		NORMAL	75	40	0.20	0.02	Min	
	Religiou		NORMAL	75	65	0.15	0.02	Min	
	Public F		NORMAL	75	65	0.15	0.02	Min	
	Park		NORMAL	90	0	0.20	0.10	Hi	
0.139 = Total Area			Avg. =	80	0%	0.500			

PERCENT OF SUBBASIN DRY = 0.0 %
NORMAL = 0.0 %
WET = 100. %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.00

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.25

```
IMPERVIOUS AREA:          URBAN @   100 % effective =  0
                   ROCK OUTCROP @   100 % effective =  0
                                   ------------------------
                                   % EFFECTIVE IMP. =  0
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INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBEB	0.139	0.53	0.26	0.10	11.3	0.50	0.00	6.20	0.25	0	43

LOSS PARAMETERS FOR SUBBASIN: SUBEC

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
BS	0.004	3.7	0.39	0
CF	0.001	0.9	0.50	0
GGA	0.062	56.9	0.25	0
GR	0.006	5.5	0.23	0
TC	0.036	33.0	0.40	0

TOTAL = 0.109 Sq.Miles XKSAT = 0.30 %Rock = 0

DTHETA

Dry = 0.35 PSIF = 4.50
Normal = 0.25
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.008	Crops	7.3	WET	80	0	0.50	0.10	Hi	0.13
	Stockyar		NORMAL	10	0	0.50	0.10	Hi	
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
0.047	River	43.1	NORMAL	90	0	0.20	0.20	Max	0.16
0.015	Vacant	13.8	DRY	15	0	0.35	0.02	Min	0.03
	Frwy/Can		NORMAL	10	10	0.20	0.01	Min	
	L.D.R.		NORMAL	50	15	0.20	0.05	Low	
	M.D.R.		NORMAL	50	30	0.15	0.05	Low	
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
0.039	G.I.	35.8	NORMAL	70	55	0.10	0.03	Min	0.03
	L.I.		NORMAL	60	55	0.10	0.03	Min	
	P.S.		NORMAL	60	55	0.20	0.03	Min	
	R/R		NORMAL	10	25	0.10	0.03	Min	
0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min	
0.000	Whse.Com	0.0	NORMAL	75	90	0.05	0.02	Min	
0.000	Low.Comm	0.0	NORMAL	80	90	0.15	0.02	Min	
0.000	School	0.0	NORMAL	75	40	0.20	0.02	Min	
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Park	0.0	NORMAL	90	0	0.20	0.10	Hi	
0.109 = Total Area			Avg. =	72	20%	0.210			

PERCENT OF SUBBASIN DRY = 14.0 %
NORMAL = 79.0 %
WET = 7.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.25

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.51

IMPERVIOUS AREA: URBAN @ 100 % effective = 20
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 20

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBEC	0.109	0.95	0.49	0.11	11.6	0.21	0.25	4.50	0.51	20	72

LOSS PARAMETERS FOR SUBBASIN: SUBED

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
LB	0.008	1.7	0.40	0
LCA	0.010	2.1	0.25	0
MP	0.056	11.7	0.25	0
TU	0.283	59.3	0.25	0
TW	0.120	25.2	0.05	0

TOTAL = 0.477 Sq.Miles XKSAT = 0.17 %Rock = 0

DTHETA

Dry = 0.39 PSIF = 5.70
Normal = 0.25
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.472	Crops	98.7	WET	80	0	0.50	0.10	Hi	0.09
0.006	Stockyar	1.3	NORMAL	10	0	0.50	0.10	Hi	0.14
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
	Vacant		DRY	15	0	0.35	0.02	Min	
	Frwy/Can		NORMAL	10	10	0.20	0.01	Min	
	L.D.R.		NORMAL	50	15	0.20	0.05	Low	
	M.D.R.		NORMAL	50	30	0.15	0.05	Low	
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
	G.I.		NORMAL	70	55	0.10	0.03	Min	
	L.I.		NORMAL	60	55	0.10	0.03	Min	
	P.S.		NORMAL	60	55	0.20	0.03	Min	
	R/R		NORMAL	10	25	0.10	0.03	Min	
0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min	
0.000	Whse.Com	0.0	NORMAL	75	90	0.05	0.02	Min	
0.000	Low.Comm	0.0	NORMAL	80	90	0.15	0.02	Min	
0.000	School	0.0	NORMAL	75	40	0.20	0.02	Min	
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Park	0.0	NORMAL	90	0	0.20	0.10	Hi	

0.478 = Total Area Avg. = 79 0% 0.500

PERCENT OF SUBBASIN DRY = 0.0 %
NORMAL = 1.0 %
WET = 99.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.00

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.30

IMPERVIOUS AREA: URBAN @ 100 % effective = 0
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 0

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBED	0.477	1.17	0.64	0.10	9.4	0.50	0.00	5.70	0.30	0	84

LOSS PARAMETERS FOR SUBBASIN: SUBEE

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AN	0.002	0.1	0.05	0
CN	0.013	0.9	0.01	0
ES	0.058	3.9	0.25	0
GE	0.001	0.1	0.26	0
GGA	0.150	10.2	0.25	0
GR	0.280	19.0	0.23	0
GT	0.028	1.9	0.04	0
LB	0.232	15.8	0.40	0
LCA	0.133	9.0	0.25	0
MP	0.192	13.1	0.25	0
MR	0.084	5.7	0.05	0
TA	0.030	2.0	0.25	0
TC	0.007	0.5	0.40	0
TU	0.238	16.2	0.25	0
TW	0.022	1.5	0.05	0

TOTAL = 1.470 Sq.Miles XKSAT = 0.22 %Rock = 0

DTHETA

Dry = 0.36 PSIF = 5.10
Normal = 0.25
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.779	Crops	53.0	WET	80	0	0.50	0.10	Hi	0.08
0.205	Stockyar	13.9	NORMAL	10	0	0.50	0.10	Hi	0.10
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
0.110	Vacant	7.5	DRY	15	0	0.35	0.02	Min	0.03
	Frwy/Can		NORMAL	10	10	0.20	0.01	Min	
0.032	L.D.R.	2.2	NORMAL	50	15	0.20	0.05	Low	0.06
	M.D.R.		NORMAL	50	30	0.15	0.05	Low	
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
0.338	G.I.	23.0	NORMAL	70	55	0.10	0.03	Min	0.03
	L.I.		NORMAL	60	55	0.10	0.03	Min	
0.002	P.S.	0.1	NORMAL	60	55	0.20	0.03	Min	0.04
	R/R		NORMAL	10	25	0.10	0.03	Min	
0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min	
0.000	Whse.Com	0.0	NORMAL	75	90	0.05	0.02	Min	
0.005	Low.Comm	0.3	NORMAL	80	90	0.15	0.02	Min	0.04
0.000	School	0.0	NORMAL	75	40	0.20	0.02	Min	
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	

0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min
0.000	Park	0.0	NORMAL	90	0	0.20	0.10	Hi

1.471 = Total Area Avg. = 61 13% 0.390

PERCENT OF SUBBASIN DRY = 8.0 %
NORMAL = 39.0 %
WET = 53.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.13

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.34

IMPERVIOUS AREA: URBAN @ 100 % effective = 13
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 13

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBEE	1.470	1.62	1.02	0.08	16.0	0.39	0.13	5.10	0.34	13	78

LOSS PARAMETERS FOR SUBBASIN: SUBFA

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AA	0.040	4.5	0.26	0
ABA	0.008	0.9	0.38	0
AN	0.008	0.9	0.05	0
AO	0.006	0.7	0.04	0
CF	0.000	0.0	0.50	0
ES	0.081	9.2	0.25	0
GE	0.105	11.9	0.26	0
GGA	0.232	26.3	0.25	0
GR	0.001	0.1	0.23	0
GT	0.002	0.2	0.04	0
LCA	0.118	13.4	0.25	0
LE	0.021	2.4	0.04	0
MP	0.014	1.6	0.25	0
MR	0.057	6.5	0.05	0
TU	0.095	10.8	0.25	0
TW	0.058	6.6	0.05	0
VA	0.030	3.4	0.39	0
VH	0.006	0.7	0.27	0

TOTAL = 0.882 Sq.Miles XKSAT = 0.19 %Rock = 0

DTHETA

Dry = 0.38 PSIF = 5.40
Normal = 0.25
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.761	Crops	86.4	WET	80	0	0.50	0.10	Hi	0.08
0.012	Stockyar	1.4	NORMAL	10	0	0.50	0.10	Hi	0.13
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
0.076	River	8.6	NORMAL	90	0	0.20	0.20	Max	0.15
	Vacant		DRY	15	0	0.35	0.02	Min	
	Frwy/Can		NORMAL	10	10	0.20	0.01	Min	
	L.D.R.		NORMAL	50	15	0.20	0.05	Low	
	M.D.R.		NORMAL	50	30	0.15	0.05	Low	
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
0.032	G.I.	3.6	NORMAL	70	55	0.10	0.03	Min	0.03
	L.I.		NORMAL	60	55	0.10	0.03	Min	
	P.S.		NORMAL	60	55	0.20	0.03	Min	
	R/R		NORMAL	10	25	0.10	0.03	Min	
0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min	
0.000	Whse.Com	0.0	NORMAL	75	90	0.05	0.02	Min	

0.000	Low.Comm	0.0	NORMAL	80	90	0.15	0.02	Min
0.000	School	0.0	NORMAL	75	40	0.20	0.02	Min
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min
0.000	Park	0.0	NORMAL	90	0	0.20	0.10	Hi

0.881 = Total Area Avg. = 80 2% 0.460

PERCENT OF SUBBASIN DRY = 0.0 %
NORMAL = 14.0 %
WET = 86.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.04

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.34

IMPERVIOUS AREA: URBAN @ 100 % effective = 2
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 2

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBFA	0.882	1.40	0.76	0.11	7.9	0.46	0.04	5.40	0.34	2	105

LOSS PARAMETERS FOR SUBBASIN: SUBFB

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AA	0.005	0.8	0.26	0
AO	0.093	14.1	0.04	0
BR	0.014	2.1	1.05	0
ES	0.018	2.7	0.25	0
GE	0.014	2.1	0.26	0
GGA	0.160	24.3	0.25	0
GR	0.035	5.3	0.23	0
GT	0.165	25.0	0.04	0
LCA	0.080	12.1	0.25	0
MA	0.005	0.8	0.40	0
MP	0.000	0.0	0.25	0
TU	0.026	3.9	0.25	0
TW	0.025	3.8	0.05	0
VG	0.000	0.0	0.91	0
VH	0.019	2.9	0.27	0

TOTAL = 0.659 Sq.Miles XKSAT = 0.12 %Rock = 0

DTHETA

Dry = 0.37 PSIF = 6.60
Normal = 0.19
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.273	Crops	41.4	WET	80	0	0.50	0.10	Hi	0.09
0.030	Stockyar	4.5	NORMAL	10	0	0.50	0.10	Hi	0.12
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
0.090	River	13.6	NORMAL	90	0	0.20	0.20	Max	0.15
0.080	Vacant	12.1	DRY	15	0	0.35	0.02	Min	0.03
	Frwy/Can		NORMAL	10	10	0.20	0.01	Min	
0.187	L.D.R.	28.3	NORMAL	50	15	0.20	0.05	Low	0.05
	M.D.R.		NORMAL	50	30	0.15	0.05	Low	
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
	G.I.		NORMAL	70	55	0.10	0.03	Min	
	L.I.		NORMAL	60	55	0.10	0.03	Min	
	P.S.		NORMAL	60	55	0.20	0.03	Min	
	R/R		NORMAL	10	25	0.10	0.03	Min	
0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min	
0.000	Whse.Com	0.0	NORMAL	75	90	0.05	0.02	Min	
0.000	Low.Comm	0.0	NORMAL	80	90	0.15	0.02	Min	
0.000	School	0.0	NORMAL	75	40	0.20	0.02	Min	
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	

0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min
0.000	Park	0.0	NORMAL	90	0	0.20	0.10	Hi

0.660 = Total Area Avg. = 62 4% 0.360

PERCENT OF SUBBASIN DRY = 12.0 %
NORMAL = 46.0 %
WET = 41.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.13

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.19

IMPERVIOUS AREA: URBAN @ 100 % effective = 4
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 4

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBFB	0.659	1.17	0.45	0.09	16.2	0.36	0.13	6.60	0.19	4	60

LOSS PARAMETERS FOR SUBBASIN: SUBFC

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
ABA	0.006	1.8	0.38	0
AE	0.012	3.6	0.39	0
AO	0.103	30.7	0.04	0
BR	0.001	0.3	1.05	0
CN	0.031	9.3	0.01	0
GE	0.018	5.4	0.26	0
GGA	0.101	30.1	0.25	0
GT	0.049	14.6	0.04	0
VH	0.014	4.2	0.27	0

TOTAL = 0.335 Sq.Miles XKSAT = 0.08 %Rock = 0

DTHETA

Dry = 0.32 PSIF = 7.60
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.315	Crops	94.3	WET	80	0	0.50	0.10	Hi	0.09
	Stockyar		NORMAL	10	0	0.50	0.10	Hi	
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
0.005	Vacant	1.5	DRY	15	0	0.35	0.02	Min	0.04
	Frwy/Can		NORMAL	10	10	0.20	0.01	Min	
0.014	L.D.R.	4.2	NORMAL	50	15	0.20	0.05	Low	0.07
	M.D.R.		NORMAL	50	30	0.15	0.05	Low	
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
	G.I.		NORMAL	70	55	0.10	0.03	Min	
	L.I.		NORMAL	60	55	0.10	0.03	Min	
	P.S.		NORMAL	60	55	0.20	0.03	Min	
	R/R		NORMAL	10	25	0.10	0.03	Min	
0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min	
0.000	Whse.Com	0.0	NORMAL	75	90	0.05	0.02	Min	
0.000	Low.Comm	0.0	NORMAL	80	90	0.15	0.02	Min	
0.000	School	0.0	NORMAL	75	40	0.20	0.02	Min	
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Park	0.0	NORMAL	90	0	0.20	0.10	Hi	

0.334 = Total Area Avg. = 78 1% 0.490

PERCENT OF SUBBASIN DRY = 2.0 %

NORMAL = 4.0 %
WET = 94.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.01

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.14

IMPERVIOUS AREA: URBAN @ 100 % effective = 1
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 1

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBFC	0.335	1.02	0.37	0.10	18.6	0.49	0.01	7.60	0.14	1	55

LOSS PARAMETERS FOR SUBBASIN: SUBGA

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
GGA	0.000	0.0	0.25	0
LCB	0.002	1.4	0.25	0
RPE	0.136	98.6	0.29	0

TOTAL = 0.138 Sq.Miles XKSAT = 0.29 %Rock = 0

DTHETA

Dry = 0.35 PSIF = 4.55
Normal = 0.25
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.000	Crops	0.0	WET	80	0	0.50	0.10	Hi	
	Stockyar		NORMAL	10	0	0.50	0.10	Hi	
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
0.068	Vacant	48.9	DRY	15	0	0.35	0.02	Min	0.03
	Frwy/Can		NORMAL	10	10	0.20	0.01	Min	
0.070	L.D.R.	50.4	NORMAL	50	15	0.20	0.05	Low	0.06
0.001	M.D.R.	0.7	NORMAL	50	30	0.15	0.05	Low	0.08
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
	G.I.		NORMAL	70	55	0.10	0.03	Min	
	L.I.		NORMAL	60	55	0.10	0.03	Min	
	P.S.		NORMAL	60	55	0.20	0.03	Min	
	R/R		NORMAL	10	25	0.10	0.03	Min	
0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min	
0.000	Whse.Com	0.0	NORMAL	75	90	0.05	0.02	Min	
0.000	Low.Comm	0.0	NORMAL	80	90	0.15	0.02	Min	
0.000	School	0.0	NORMAL	75	40	0.20	0.02	Min	
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Park	0.0	NORMAL	90	0	0.20	0.10	Hi	

0.139 = Total Area Avg. = 31 8% 0.270

PERCENT OF SUBBASIN DRY = 49.0 %
NORMAL = 51.0 %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.30

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.36

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IMPERVIOUS AREA:          URBAN @   100 % effective =  8
                   ROCK OUTCROP @   100 % effective =  0
                                   ------------------------
                                   % EFFECTIVE IMP. =  8
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INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBGA	0.138	0.57	0.27	0.04	52.6	0.27	0.30	4.55	0.36	8	12

LOSS PARAMETERS FOR SUBBASIN: SUBGB

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AO	0.001	0.4	0.04	0
GE	0.010	4.3	0.26	0
GF	0.013	5.6	0.24	0
LCB	0.016	6.8	0.25	0
RPE	0.194	82.9	0.29	0

TOTAL = 0.234 Sq.Miles XKSAT = 0.28 %Rock = 0

DTHETA

Dry = 0.35 PSIF = 4.60
Normal = 0.25
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.061	Crops	26.1	WET	80	0	0.50	0.10	Hi	0.11
0.000	Stockyar	0.0	NORMAL	10	0	0.50	0.10	Hi	
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
0.053	Vacant	22.6	DRY	15	0	0.35	0.02	Min	0.03
	Frwy/Can		NORMAL	10	10	0.20	0.01	Min	
0.073	L.D.R.	31.2	NORMAL	50	15	0.20	0.05	Low	0.06
0.047	M.D.R.	20.1	NORMAL	50	30	0.15	0.05	Low	0.06
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
	G.I.		NORMAL	70	55	0.10	0.03	Min	
	L.I.		NORMAL	60	55	0.10	0.03	Min	
	P.S.		NORMAL	60	55	0.20	0.03	Min	
	R/R		NORMAL	10	25	0.10	0.03	Min	
0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min	
0.000	Whse.Com	0.0	NORMAL	75	90	0.05	0.02	Min	
0.000	Low.Comm	0.0	NORMAL	80	90	0.15	0.02	Min	
0.000	School	0.0	NORMAL	75	40	0.20	0.02	Min	
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Park	0.0	NORMAL	90	0	0.20	0.10	Hi	

0.234 = Total Area Avg. = 50 11% 0.300

PERCENT OF SUBBASIN DRY = 23.0 %
NORMAL = 51.0 %
WET = 26.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.21

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.40

IMPERVIOUS AREA: URBAN @ 100 % effective = 11
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 11

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBGB	0.234	0.83	0.57	0.06	36.1	0.30	0.21	4.60	0.40	11	31

LOSS PARAMETERS FOR SUBBASIN: SUBGC

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
ABA	0.000	0.0	0.38	0
AO	0.003	1.4	0.04	0
GF	0.008	3.7	0.24	0
GGA	0.011	5.1	0.25	0
GXB	0.030	14.0	0.24	0
LCB	0.100	46.7	0.25	0
RPE	0.062	29.0	0.29	0

TOTAL = 0.214 Sq.Miles XKSAT = 0.25 %Rock = 0

DTHETA

Dry = 0.35 PSIF = 4.80
Normal = 0.25
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.005	Crops	2.3	WET	80	0	0.50	0.10	Hi	0.14
0.023	Stockyar	10.6	NORMAL	10	0	0.50	0.10	Hi	0.12
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
0.023	Vacant	10.6	DRY	15	0	0.35	0.02	Min	0.03
	Frwy/Can		NORMAL	10	10	0.20	0.01	Min	
0.133	L.D.R.	61.6	NORMAL	50	15	0.20	0.05	Low	0.05
0.032	M.D.R.	14.8	NORMAL	50	30	0.15	0.05	Low	0.06
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
	G.I.		NORMAL	70	55	0.10	0.03	Min	
	L.I.		NORMAL	60	55	0.10	0.03	Min	
	P.S.		NORMAL	60	55	0.20	0.03	Min	
	R/R		NORMAL	10	25	0.10	0.03	Min	
0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min	
0.000	Whse.Com	0.0	NORMAL	75	90	0.05	0.02	Min	
0.000	Low.Comm	0.0	NORMAL	80	90	0.15	0.02	Min	
0.000	School	0.0	NORMAL	75	40	0.20	0.02	Min	
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Park	0.0	NORMAL	90	0	0.20	0.10	Hi	

0.216 = Total Area Avg. = 42 14% 0.250

PERCENT OF SUBBASIN DRY = 11.0 %
NORMAL = 87.0 %
WET = 2.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.26

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.34

IMPERVIOUS AREA: URBAN @ 100 % effective = 14
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 14

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBGC	0.214	0.83	0.42	0.05	26.5	0.25	0.26	4.80	0.34	14	28

LOSS PARAMETERS FOR SUBBASIN: SUBGD

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
ABA	0.034	4.4	0.38	0
AO	0.012	1.6	0.04	0
GB	0.111	14.5	0.04	0
GC	0.186	24.3	0.01	0
GF	0.008	1.0	0.24	0
GGA	0.144	18.8	0.25	0
GH	0.033	4.3	0.24	0
GXB	0.002	0.3	0.24	0
LB	0.022	2.9	0.40	0
LCA	0.113	14.7	0.25	0
LCB	0.046	6.0	0.25	0
LD	0.030	3.9	0.25	0
PA	0.003	0.4	0.40	0
RPE	0.003	0.4	0.29	0
TA	0.020	2.6	0.25	0

TOTAL = 0.767 Sq.Miles XKSAT = 0.09 %Rock = 0

DTHETA

Dry = 0.33 PSIF = 7.30
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.635	Crops	82.6	WET	80	0	0.50	0.10	Hi	0.08
0.052	Stockyar	6.8	NORMAL	10	0	0.50	0.10	Hi	0.11
0.012	Citrus	1.6	NORMAL	80	0	0.70	0.10	Hi	0.13
	River		NORMAL	90	0	0.20	0.20	Max	
0.067	Vacant	8.7	DRY	15	0	0.35	0.02	Min	0.03
	Frwy/Can		NORMAL	10	10	0.20	0.01	Min	
0.001	L.D.R.	0.1	NORMAL	50	15	0.20	0.05	Low	0.08
	M.D.R.		NORMAL	50	30	0.15	0.05	Low	
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
	G.I.		NORMAL	70	55	0.10	0.03	Min	
	L.I.		NORMAL	60	55	0.10	0.03	Min	
0.002	P.S.	0.3	NORMAL	60	55	0.20	0.03	Min	0.04
	R/R		NORMAL	10	25	0.10	0.03	Min	
0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min	
0.000	Whse.Com	0.0	NORMAL	75	90	0.05	0.02	Min	
0.000	Low.Comm	0.0	NORMAL	80	90	0.15	0.02	Min	
0.000	School	0.0	NORMAL	75	40	0.20	0.02	Min	
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	

0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min
0.000	Park	0.0	NORMAL	90	0	0.20	0.10	Hi

0.769 = Total Area Avg. = 70 0% 0.490

PERCENT OF SUBBASIN DRY = 9.0 %
NORMAL = 9.0 %
WET = 83.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.04

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.15

IMPERVIOUS AREA: URBAN @ 100 % effective = 0
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 0

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBGD	0.767	1.14	0.57	0.09	33.3	0.49	0.04	7.30	0.15	0	58

LOSS PARAMETERS FOR SUBBASIN: SUBHA

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
LB	0.006	2.7	0.40	0
LCA	0.172	78.2	0.25	0
LCB	0.001	0.5	0.25	0
LD	0.004	1.8	0.25	0
RBA	0.003	1.4	0.26	0
TA	0.013	5.9	0.25	0
TU	0.021	9.5	0.25	0

TOTAL = 0.220 Sq.Miles XKSAT = 0.25 %Rock = 0

DTHETA

Dry = 0.35 PSIF = 4.80
Normal = 0.25
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.195	Crops	89.0	WET	80	0	0.50	0.10	Hi	0.10
	Stockyar		NORMAL	10	0	0.50	0.10	Hi	
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
0.001	Vacant	0.5	DRY	15	0	0.35	0.02	Min	0.04
	Frwy/Can		NORMAL	10	10	0.20	0.01	Min	
0.000	L.D.R.	0.0	NORMAL	50	15	0.20	0.05	Low	
	M.D.R.		NORMAL	50	30	0.15	0.05	Low	
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
	G.I.		NORMAL	70	55	0.10	0.03	Min	
	L.I.		NORMAL	60	55	0.10	0.03	Min	
	P.S.		NORMAL	60	55	0.20	0.03	Min	
	R/R		NORMAL	10	25	0.10	0.03	Min	
0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min	
0.000	Whse.Com	0.0	NORMAL	75	90	0.05	0.02	Min	
0.000	Low.Comm	0.0	NORMAL	80	90	0.15	0.02	Min	
0.023	School	10.5	NORMAL	75	40	0.20	0.02	Min	0.03
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Park	0.0	NORMAL	90	0	0.20	0.10	Hi	

0.219 = Total Area Avg. = 79 4% 0.470

PERCENT OF SUBBASIN DRY = 0.0 %
NORMAL = 10.0 %
WET = 89.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.03

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.44

IMPERVIOUS AREA: URBAN @ 100 % effective = 4
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 4

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBHA	0.220	0.80	0.38	0.09	33.8	0.47	0.03	4.80	0.44	4	43

LOSS PARAMETERS FOR SUBBASIN: SUBHB

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
ES	0.001	0.3	0.25	0
GGA	0.010	3.0	0.25	0
GT	0.005	1.5	0.04	0
LB	0.011	3.3	0.40	0
LCA	0.230	68.0	0.25	0
LD	0.000	0.0	0.25	0
MP	0.071	21.0	0.25	0
RBA	0.010	3.0	0.26	0

TOTAL = 0.338 Sq.Miles XKSAT = 0.25 %Rock = 0

DTHETA

Dry = 0.35 PSIF = 4.80
Normal = 0.25
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.273	Crops	80.8	WET	80	0	0.50	0.10	Hi	0.09
	Stockyar		NORMAL	10	0	0.50	0.10	Hi	
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
	Vacant		DRY	15	0	0.35	0.02	Min	
	Frwy/Can		NORMAL	10	10	0.20	0.01	Min	
0.065	L.D.R.	19.2	NORMAL	50	15	0.20	0.05	Low	0.06
	M.D.R.		NORMAL	50	30	0.15	0.05	Low	
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
	G.I.		NORMAL	70	55	0.10	0.03	Min	
	L.I.		NORMAL	60	55	0.10	0.03	Min	
	P.S.		NORMAL	60	55	0.20	0.03	Min	
	R/R		NORMAL	10	25	0.10	0.03	Min	
0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min	
0.000	Whse.Com	0.0	NORMAL	75	90	0.05	0.02	Min	
0.000	Low.Comm	0.0	NORMAL	80	90	0.15	0.02	Min	
0.000	School	0.0	NORMAL	75	40	0.20	0.02	Min	
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Park	0.0	NORMAL	90	0	0.20	0.10	Hi	

0.338 = Total Area Avg. = 75 3% 0.440

PERCENT OF SUBBASIN DRY = 0.0 %
NORMAL = 19.0 %

WET = 81.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.05

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.43

IMPERVIOUS AREA: URBAN @ 100 % effective = 3
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 3

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBHB	0.338	0.80	0.39	0.09	25.0	0.44	0.05	4.80	0.43	3	45

LOSS PARAMETERS FOR SUBBASIN: SUBIA

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
ES	0.040	12.8	0.25	0
GT	0.097	31.0	0.04	0
LCA	0.065	20.8	0.25	0
MP	0.102	32.6	0.25	0
TA	0.001	0.3	0.25	0
TU	0.008	2.6	0.25	0

TOTAL = 0.313 Sq.Miles XKSAT = 0.14 %Rock = 0

DTHETA

Dry = 0.39 PSIF = 6.20
Normal = 0.23
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.201	Crops	64.2	WET	80	0	0.50	0.10	Hi	0.10
0.020	Stockyar	6.4	NORMAL	10	0	0.50	0.10	Hi	0.12
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
0.001	Vacant	0.3	DRY	15	0	0.35	0.02	Min	0.04
	Frwy/Can		NORMAL	10	10	0.20	0.01	Min	
0.088	L.D.R.	28.1	NORMAL	50	15	0.20	0.05	Low	0.06
	M.D.R.		NORMAL	50	30	0.15	0.05	Low	
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
	G.I.		NORMAL	70	55	0.10	0.03	Min	
	L.I.		NORMAL	60	55	0.10	0.03	Min	
	P.S.		NORMAL	60	55	0.20	0.03	Min	
	R/R		NORMAL	10	25	0.10	0.03	Min	
0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min	
0.000	Whse.Com	0.0	NORMAL	75	90	0.05	0.02	Min	
0.003	Low.Comm	1.0	NORMAL	80	90	0.15	0.02	Min	0.04
0.000	School	0.0	NORMAL	75	40	0.20	0.02	Min	
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Park	0.0	NORMAL	90	0	0.20	0.10	Hi	
0.313 = Total Area			Avg. =	68	5%	0.410			

PERCENT OF SUBBASIN DRY = 0.0 %
NORMAL = 36.0 %
WET = 64.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.08

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.23

IMPERVIOUS AREA: URBAN @ 100 % effective = 5
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 5

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBIA	0.313	0.76	0.38	0.09	17.1	0.41	0.08	6.20	0.23	5	45

LOSS PARAMETERS FOR SUBBASIN: SUBIB

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
GT	0.017	3.7	0.04	0
LCA	0.010	2.2	0.25	0
MR	0.077	16.6	0.05	0
TA	0.044	9.5	0.25	0
TW	0.316	68.1	0.05	0

TOTAL = 0.464 Sq.Miles XKSAT = 0.06 %Rock = 0

DTHETA

Dry = 0.29 PSIF = 8.40
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.464	Crops	100.	WET	80	0	0.50	0.10	Hi	0.09
	Stockyar		NORMAL	10	0	0.50	0.10	Hi	
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
	Vacant		DRY	15	0	0.35	0.02	Min	
	Frwy/Can		NORMAL	10	10	0.20	0.01	Min	
	L.D.R.		NORMAL	50	15	0.20	0.05	Low	
	M.D.R.		NORMAL	50	30	0.15	0.05	Low	
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
	G.I.		NORMAL	70	55	0.10	0.03	Min	
	L.I.		NORMAL	60	55	0.10	0.03	Min	
	P.S.		NORMAL	60	55	0.20	0.03	Min	
	R/R		NORMAL	10	25	0.10	0.03	Min	
	Med.Comm		NORMAL	75	90	0.15	0.02	Min	
	Whse.Com		NORMAL	75	90	0.05	0.02	Min	
	Low.Comm		NORMAL	80	90	0.15	0.02	Min	
	School		NORMAL	75	40	0.20	0.02	Min	
	Religiou		NORMAL	75	65	0.15	0.02	Min	
	Public F		NORMAL	75	65	0.15	0.02	Min	
	Park		NORMAL	90	0	0.20	0.10	Hi	

0.464 = Total Area Avg. = 80 0% 0.500

PERCENT OF SUBBASIN DRY = 0.0 %
NORMAL = 0.0 %
WET = 100. %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.00

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.11

IMPERVIOUS AREA: URBAN @ 100 % effective = 0
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 0

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBIB	0.464	1.13	0.57	0.10	14.2	0.50	0.00	8.40	0.11	0	74

LOSS PARAMETERS FOR SUBBASIN: SUBIC

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
ES	0.066	12.4	0.25	0
GE	0.093	17.5	0.26	0
GGA	0.010	1.9	0.25	0
GT	0.023	4.3	0.04	0
LCA	0.079	14.9	0.25	0
TA	0.064	12.1	0.25	0
TU	0.150	28.2	0.25	0
TW	0.046	8.7	0.05	0

TOTAL = 0.531 Sq.Miles XKSAT = 0.20 %Rock = 0

DTHETA

Dry = 0.37 PSIF = 5.30
Normal = 0.25
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.432	Crops	81.5	WET	80	0	0.50	0.10	Hi	0.09
0.098	Stockyar	18.5	NORMAL	10	0	0.50	0.10	Hi	0.11
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
	Vacant		DRY	15	0	0.35	0.02	Min	
	Frwy/Can		NORMAL	10	10	0.20	0.01	Min	
	L.D.R.		NORMAL	50	15	0.20	0.05	Low	
	M.D.R.		NORMAL	50	30	0.15	0.05	Low	
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
	G.I.		NORMAL	70	55	0.10	0.03	Min	
	L.I.		NORMAL	60	55	0.10	0.03	Min	
	P.S.		NORMAL	60	55	0.20	0.03	Min	
	R/R		NORMAL	10	25	0.10	0.03	Min	
0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min	
0.000	Whse.Com	0.0	NORMAL	75	90	0.05	0.02	Min	
0.000	Low.Comm	0.0	NORMAL	80	90	0.15	0.02	Min	
0.000	School	0.0	NORMAL	75	40	0.20	0.02	Min	
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Park	0.0	NORMAL	90	0	0.20	0.10	Hi	

0.530 = Total Area Avg. = 67 0% 0.500

PERCENT OF SUBBASIN DRY = 0.0 %
NORMAL = 18.0 %

WET = 82.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.05

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.33

IMPERVIOUS AREA: URBAN @ 100 % effective = 0
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 0

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBIC	0.531	1.06	0.53	0.10	4.7	0.50	0.05	5.30	0.33	0	86

LOSS PARAMETERS FOR SUBBASIN: SUBID

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
ES	0.049	8.8	0.25	0
GE	0.004	0.7	0.26	0
GGA	0.094	16.8	0.25	0
LCA	0.035	6.3	0.25	0
TA	0.015	2.7	0.25	0
TU	0.177	31.7	0.25	0
TW	0.185	33.1	0.05	0

TOTAL = 0.559 Sq.Miles XKSAT = 0.15 %Rock = 0

DTHETA

Dry = 0.40 PSIF = 6.00
Normal = 0.25
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.441	Crops	78.9	WET	80	0	0.50	0.10	Hi	0.09
0.104	Stockyar	18.6	NORMAL	10	0	0.50	0.10	Hi	0.10
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
	Vacant		DRY	15	0	0.35	0.02	Min	
	Frwy/Can		NORMAL	10	10	0.20	0.01	Min	
	L.D.R.		NORMAL	50	15	0.20	0.05	Low	
	M.D.R.		NORMAL	50	30	0.15	0.05	Low	
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
	G.I.		NORMAL	70	55	0.10	0.03	Min	
	L.I.		NORMAL	60	55	0.10	0.03	Min	
	P.S.		NORMAL	60	55	0.20	0.03	Min	
	R/R		NORMAL	10	25	0.10	0.03	Min	
0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min	
0.000	Whse.Com	0.0	NORMAL	75	90	0.05	0.02	Min	
0.000	Low.Comm	0.0	NORMAL	80	90	0.15	0.02	Min	
0.002	School	0.4	NORMAL	75	40	0.20	0.02	Min	0.04
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min	
0.012	Park	2.1	NORMAL	90	0	0.20	0.10	Hi	0.13

0.559 = Total Area Avg. = 67 0% 0.490

PERCENT OF SUBBASIN DRY = 0.0 %
NORMAL = 21.0 %
WET = 79.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.05

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.25

IMPERVIOUS AREA: URBAN @ 100 % effective = 0
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 0

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBID	0.559	0.98	0.38	0.10	7.1	0.49	0.05	6.00	0.25	0	68

LOSS PARAMETERS FOR SUBBASIN: SUBIE

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
MR	0.038	12.7	0.05	0
TW	0.262	87.3	0.05	0

TOTAL = 0.300 Sq.Miles XKSAT = 0.05 %Rock = 0

DTHETA

Dry = 0.27 PSIF = 8.80
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.300	Crops	100.	WET	80	0	0.50	0.10	Hi	0.09
	Stockyar		NORMAL	10	0	0.50	0.10	Hi	
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
	Vacant		DRY	15	0	0.35	0.02	Min	
	Frwy/Can		NORMAL	10	10	0.20	0.01	Min	
	L.D.R.		NORMAL	50	15	0.20	0.05	Low	
	M.D.R.		NORMAL	50	30	0.15	0.05	Low	
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
	G.I.		NORMAL	70	55	0.10	0.03	Min	
	L.I.		NORMAL	60	55	0.10	0.03	Min	
	P.S.		NORMAL	60	55	0.20	0.03	Min	
	R/R		NORMAL	10	25	0.10	0.03	Min	
0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min	
0.000	Whse.Com	0.0	NORMAL	75	90	0.05	0.02	Min	
0.000	Low.Comm	0.0	NORMAL	80	90	0.15	0.02	Min	
0.000	School	0.0	NORMAL	75	40	0.20	0.02	Min	
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Park	0.0	NORMAL	90	0	0.20	0.10	Hi	
0.300 = Total Area			Avg. =	80	0%	0.500			

PERCENT OF SUBBASIN DRY = 0.0 %
NORMAL = 0.0 %
WET = 100. %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.00

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.09

```
IMPERVIOUS AREA:          URBAN @   100 % effective =  0
                     ROCK OUTCROP @   100 % effective =  0
                                     ------------------------
                                     % EFFECTIVE IMP. =  0
```

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBIE	0.300	0.83	0.42	0.10	6.0	0.50	0.00	8.80	0.09	0	69

LOSS PARAMETERS FOR SUBBASIN: SUBJB

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
ES	0.012	1.2	0.25	0
GE	0.007	0.7	0.26	0
GGA	0.018	1.8	0.25	0
LB	0.042	4.3	0.40	0
LCA	0.087	8.8	0.25	0
LE	0.006	0.6	0.04	0
MP	0.258	26.2	0.25	0
MR	0.091	9.2	0.05	0
TA	0.052	5.3	0.25	0
TU	0.284	28.9	0.25	0
TW	0.127	12.9	0.05	0

TOTAL = 0.984 Sq.Miles XKSAT = 0.18 %Rock = 0

DTHETA

Dry = 0.38 PSIF = 5.60
Normal = 0.25
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.982	Crops	99.6	WET	80	0	0.50	0.10	Hi	0.08
0.004	Stockyar	0.4	NORMAL	10	0	0.50	0.10	Hi	0.14
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
	Vacant		DRY	15	0	0.35	0.02	Min	
	Frwy/Can		NORMAL	10	10	0.20	0.01	Min	
	L.D.R.		NORMAL	50	15	0.20	0.05	Low	
	M.D.R.		NORMAL	50	30	0.15	0.05	Low	
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
	G.I.		NORMAL	70	55	0.10	0.03	Min	
	L.I.		NORMAL	60	55	0.10	0.03	Min	
	P.S.		NORMAL	60	55	0.20	0.03	Min	
	R/R		NORMAL	10	25	0.10	0.03	Min	
0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min	
0.000	Whse.Com	0.0	NORMAL	75	90	0.05	0.02	Min	
0.000	Low.Comm	0.0	NORMAL	80	90	0.15	0.02	Min	
0.000	School	0.0	NORMAL	75	40	0.20	0.02	Min	
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Park	0.0	NORMAL	90	0	0.20	0.10	Hi	

0.986 = Total Area Avg. = 80 0% 0.500

PERCENT OF SUBBASIN DRY = 0.0 %
NORMAL = 0.0 %
WET = 100. %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.00

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.32

IMPERVIOUS AREA: URBAN @ 100 % effective = 0
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 0

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBJB	0.984	1.32	0.66	0.10	17.4	0.50	0.00	5.60	0.32	0	79

LOSS PARAMETERS FOR SUBBASIN: SUBJC

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AO	0.053	5.4	0.04	0
ES	0.063	6.4	0.25	0
GGA	0.029	2.9	0.25	0
GT	0.021	2.1	0.04	0
LB	0.024	2.4	0.40	0
LCA	0.145	14.7	0.25	0
LE	0.015	1.5	0.04	0
MP	0.055	5.6	0.25	0
MR	0.331	33.5	0.05	0
TT	0.064	6.5	0.04	0
TU	0.115	11.7	0.25	0
TW	0.061	6.2	0.05	0
VF	0.011	1.1	0.01	0

TOTAL = 0.987 Sq.Miles XKSAT = 0.10 %Rock = 0

DTHETA

Dry = 0.35 PSIF = 7.00
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.794	Crops	80.4	WET	80	0	0.50	0.10	Hi	0.08
0.002	Stockyar	0.2	NORMAL	10	0	0.50	0.10	Hi	0.15
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
	Vacant		DRY	15	0	0.35	0.02	Min	
	Frwy/Can		NORMAL	10	10	0.20	0.01	Min	
0.191	L.D.R.	19.4	NORMAL	50	15	0.20	0.05	Low	0.05
	M.D.R.		NORMAL	50	30	0.15	0.05	Low	
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
	G.I.		NORMAL	70	55	0.10	0.03	Min	
	L.I.		NORMAL	60	55	0.10	0.03	Min	
	P.S.		NORMAL	60	55	0.20	0.03	Min	
	R/R		NORMAL	10	25	0.10	0.03	Min	
0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min	
0.000	Whse.Com	0.0	NORMAL	75	90	0.05	0.02	Min	
0.000	Low.Comm	0.0	NORMAL	80	90	0.15	0.02	Min	
0.000	School	0.0	NORMAL	75	40	0.20	0.02	Min	
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Park	0.0	NORMAL	90	0	0.20	0.10	Hi	

0.987 = Total Area Avg. = 75 3% 0.440

PERCENT OF SUBBASIN DRY = 0.0 %
NORMAL = 20.0 %
WET = 80.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.03

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.17

IMPERVIOUS AREA: URBAN @ 100 % effective = 3
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 3

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBJC	0.987	1.36	0.68	0.09	14.0	0.44	0.03	7.00	0.17	3	76

LOSS PARAMETERS FOR SUBBASIN: SUBJD

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AO	0.179	36.6	0.04	0
GC	0.009	1.8	0.01	0
GGA	0.114	23.3	0.25	0
GR	0.020	4.1	0.23	0
GT	0.071	14.5	0.04	0
GV	0.012	2.5	0.01	0
LCA	0.014	2.9	0.25	0
MR	0.020	4.1	0.05	0
TT	0.020	4.1	0.04	0
TU	0.030	6.1	0.25	0

TOTAL = 0.489 Sq.Miles XKSAT = 0.07 %Rock = 0

DTHETA

Dry = 0.30 PSIF = 8.00
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.382	Crops	78.3	WET	80	0	0.50	0.10	Hi	0.09
0.008	Stockyar	1.6	NORMAL	10	0	0.50	0.10	Hi	0.13
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
	Vacant		DRY	15	0	0.35	0.02	Min	
	Frwy/Can		NORMAL	10	10	0.20	0.01	Min	
0.098	L.D.R.	20.1	NORMAL	50	15	0.20	0.05	Low	0.06
	M.D.R.		NORMAL	50	30	0.15	0.05	Low	
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
	G.I.		NORMAL	70	55	0.10	0.03	Min	
	L.I.		NORMAL	60	55	0.10	0.03	Min	
	P.S.		NORMAL	60	55	0.20	0.03	Min	
	R/R		NORMAL	10	25	0.10	0.03	Min	
0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min	
0.000	Whse.Com	0.0	NORMAL	75	90	0.05	0.02	Min	
0.000	Low.Comm	0.0	NORMAL	80	90	0.15	0.02	Min	
0.000	School	0.0	NORMAL	75	40	0.20	0.02	Min	
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Park	0.0	NORMAL	90	0	0.20	0.10	Hi	

0.488 = Total Area Avg. = 74 3% 0.440

PERCENT OF SUBBASIN DRY = 0.0 %
NORMAL = 22.0 %
WET = 78.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.03

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.12

IMPERVIOUS AREA: URBAN @ 100 % effective = 3
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 3

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBJD	0.489	1.10	0.55	0.09	12.7	0.44	0.03	8.00	0.12	3	66

LOSS PARAMETERS FOR SUBBASIN: SUBJE

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AO	0.061	12.1	0.04	0
BT	0.003	0.6	0.25	0
CN	0.030	5.9	0.01	0
ES	0.022	4.4	0.25	0
GC	0.028	5.5	0.01	0
GGA	0.223	44.2	0.25	0
GT	0.065	12.9	0.04	0
GV	0.063	12.5	0.01	0
TT	0.010	2.0	0.04	0

TOTAL = 0.505 Sq.Miles XKSAT = 0.07 %Rock = 0

DTHETA

Dry = 0.30 PSIF = 8.00
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.459	Crops	90.7	WET	80	0	0.50	0.10	Hi	0.09
0.021	Stockyar	4.2	NORMAL	10	0	0.50	0.10	Hi	0.12
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
	Vacant		DRY	15	0	0.35	0.02	Min	
	Frwy/Can		NORMAL	10	10	0.20	0.01	Min	
0.004	L.D.R.	0.8	NORMAL	50	15	0.20	0.05	Low	0.07
	M.D.R.		NORMAL	50	30	0.15	0.05	Low	
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
	G.I.		NORMAL	70	55	0.10	0.03	Min	
	L.I.		NORMAL	60	55	0.10	0.03	Min	
0.021	P.S.	4.2	NORMAL	60	55	0.20	0.03	Min	0.03
	R/R		NORMAL	10	25	0.10	0.03	Min	
0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min	
0.000	Whse.Com	0.0	NORMAL	75	90	0.05	0.02	Min	
0.000	Low.Comm	0.0	NORMAL	80	90	0.15	0.02	Min	
0.000	School	0.0	NORMAL	75	40	0.20	0.02	Min	
0.001	Religiou	0.2	NORMAL	75	65	0.15	0.02	Min	0.04
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Park	0.0	NORMAL	90	0	0.20	0.10	Hi	

0.506 = Total Area Avg. = 76 3% 0.480

PERCENT OF SUBBASIN DRY = 0.0 %

NORMAL = 9.0 %
WET = 91.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.01

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.12

IMPERVIOUS AREA: URBAN @ 100 % effective = 3
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 3

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBJE	0.505	1.06	0.53	0.10	19.8	0.48	0.01	8.00	0.12	3	64

LOSS PARAMETERS FOR SUBBASIN: SUBJF

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AA	0.004	0.2	0.26	0
AO	0.184	8.2	0.04	0
CN	0.059	2.6	0.01	0
ES	0.053	2.4	0.25	0
GC	0.345	15.4	0.01	0
GE	0.131	5.8	0.26	0
GGA	0.462	20.6	0.25	0
GT	0.255	11.3	0.04	0
GV	0.251	11.2	0.01	0
LCA	0.010	0.4	0.25	0
MP	0.010	0.4	0.25	0
MR	0.152	6.8	0.05	0
MS	0.118	5.3	0.01	0
TT	0.133	5.9	0.04	0
TU	0.011	0.5	0.25	0
TW	0.051	2.3	0.05	0
VH	0.007	0.3	0.27	0
VK	0.011	0.5	0.26	0

TOTAL = 2.247 Sq.Miles XKSAT = 0.04 %Rock = 0

DTHETA

Dry = 0.25 PSIF = 9.70
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
1.885	Crops	83.9	WET	80	0	0.50	0.10	Hi	0.07
0.013	Stockyar	0.6	NORMAL	10	0	0.50	0.10	Hi	0.13
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
0.044	Vacant	2.0	DRY	15	0	0.35	0.02	Min	0.03
0.029	Frwy/Can	1.3	NORMAL	10	10	0.20	0.01	Min	0.03
	L.D.R.		NORMAL	50	15	0.20	0.05	Low	
	M.D.R.		NORMAL	50	30	0.15	0.05	Low	
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
0.021	G.I.	0.9	NORMAL	70	55	0.10	0.03	Min	0.03
0.236	L.I.	10.5	NORMAL	60	55	0.10	0.03	Min	0.03
0.002	P.S.	0.1	NORMAL	60	55	0.20	0.03	Min	0.04
	R/R		NORMAL	10	25	0.10	0.03	Min	
0.014	Med.Comm	0.6	NORMAL	75	90	0.15	0.02	Min	0.03
0.000	Whse.Com	0.0	NORMAL	75	90	0.05	0.02	Min	

0.004	Low.Comm	0.2	NORMAL	80	90	0.15	0.02	Min	0.04
0.000	School	0.0	NORMAL	75	40	0.20	0.02	Min	
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Park	0.0	NORMAL	90	0	0.20	0.10	Hi	

2.248 = Total Area Avg. = 76 7% 0.440

PERCENT OF SUBBASIN DRY = 2.0 %
NORMAL = 14.0 %
WET = 84.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.03

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.07

IMPERVIOUS AREA: URBAN @ 100 % effective = 7
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 7

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBJF	2.247	2.65	1.21	0.09	17.4	0.44	0.03	9.70	0.07	7	116

LOSS PARAMETERS FOR SUBBASIN: SUBKA

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AA	0.093	6.7	0.26	0
AO	0.002	0.1	0.04	0
BR	0.005	0.4	1.05	0
BS	0.006	0.4	0.39	0
ES	0.061	4.4	0.25	0
GE	0.001	0.1	0.26	0
GGA	0.449	32.4	0.25	0
GT	0.010	0.7	0.04	0
GXA	0.004	0.3	0.23	0
LCA	0.321	23.2	0.25	0
LCB	0.030	2.2	0.25	0
MA	0.002	0.1	0.40	0
MP	0.091	6.6	0.25	0
RBA	0.034	2.5	0.26	0
TA	0.006	0.4	0.25	0
TD	0.000	0.0	1.20	0
TU	0.083	6.0	0.25	0
TW	0.025	1.8	0.05	0
VG	0.039	2.8	0.91	0
VH	0.122	8.8	0.27	0

TOTAL = 1.384 Sq.Miles XKSAT = 0.25 %Rock = 0

DTHETA

Dry = 0.35 PSIF = 4.80
Normal = 0.25
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
1.282	Crops	92.6	WET	80	0	0.50	0.10	Hi	0.08
0.053	Stockyar	3.8	NORMAL	10	0	0.50	0.10	Hi	0.11
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
0.005	River	0.4	NORMAL	90	0	0.20	0.20	Max	0.18
	Vacant		DRY	15	0	0.35	0.02	Min	
	Frwy/Can		NORMAL	10	10	0.20	0.01	Min	
	L.D.R.		NORMAL	50	15	0.20	0.05	Low	
	M.D.R.		NORMAL	50	30	0.15	0.05	Low	
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
	G.I.		NORMAL	70	55	0.10	0.03	Min	
0.005	L.I.	0.4	NORMAL	60	55	0.10	0.03	Min	0.04
	P.S.		NORMAL	60	55	0.20	0.03	Min	
0.039	R/R	2.8	NORMAL	10	25	0.10	0.03	Min	0.03

0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min
0.000	Whse.Com	0.0	NORMAL	75	90	0.05	0.02	Min
0.000	Low.Comm	0.0	NORMAL	80	90	0.15	0.02	Min
0.000	School	0.0	NORMAL	75	40	0.20	0.02	Min
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min
0.000	Park	0.0	NORMAL	90	0	0.20	0.10	Hi

1.384 = Total Area Avg. = 76 1% 0.490

PERCENT OF SUBBASIN DRY = 0.0 %
NORMAL = 7.0 %
WET = 93.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.02

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.43

IMPERVIOUS AREA: URBAN @ 100 % effective = 1
ROCK OUTCROP @ 100 % effective = 0
% EFFECTIVE IMP. = 1

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBKA	1.384	1.74	0.87	0.10	19.5	0.49	0.02	4.80	0.43	1	94

LOSS PARAMETERS FOR SUBBASIN: SUBKB

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AO	0.050	11.9	0.04	0
BS	0.022	5.2	0.39	0
GGA	0.103	24.5	0.25	0
GXB	0.021	5.0	0.24	0
LB	0.006	1.4	0.40	0
LCA	0.026	6.2	0.25	0
MA	0.074	17.6	0.40	0
RPE	0.031	7.4	0.29	0
VA	0.017	4.0	0.39	0
VH	0.070	16.7	0.27	0

TOTAL = 0.420 Sq.Miles XKSAT = 0.23 %Rock = 0

DTHETA

Dry = 0.36 PSIF = 5.00
Normal = 0.25
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.266	Crops	63.5	WET	80	0	0.50	0.10	Hi	0.09
0.100	Stockyar	23.9	NORMAL	10	0	0.50	0.10	Hi	0.10
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
0.006	River	1.4	NORMAL	90	0	0.20	0.20	Max	0.18
0.008	Vacant	1.9	DRY	15	0	0.35	0.02	Min	0.04
	Frwy/Can		NORMAL	10	10	0.20	0.01	Min	
0.006	L.D.R.	1.4	NORMAL	50	15	0.20	0.05	Low	0.07
0.029	M.D.R.	6.9	NORMAL	50	30	0.15	0.05	Low	0.06
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
	G.I.		NORMAL	70	55	0.10	0.03	Min	
	L.I.		NORMAL	60	55	0.10	0.03	Min	
	P.S.		NORMAL	60	55	0.20	0.03	Min	
0.004	R/R	1.0	NORMAL	10	25	0.10	0.03	Min	0.04
0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min	
0.000	Whse.Com	0.0	NORMAL	75	90	0.05	0.02	Min	
0.000	Low.Comm	0.0	NORMAL	80	90	0.15	0.02	Min	
0.000	School	0.0	NORMAL	75	40	0.20	0.02	Min	
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Park	0.0	NORMAL	90	0	0.20	0.10	Hi	
0.419 = Total Area			Avg. =	59	3%	0.460			

PERCENT OF SUBBASIN DRY = 2.0 %
NORMAL = 35.0 %
WET = 64.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.09

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.36

IMPERVIOUS AREA: URBAN @ 100 % effective = 3
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 3

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBKB	0.420	0.95	0.30	0.09	23.2	0.46	0.09	5.00	0.36	3	47

LOSS PARAMETERS FOR SUBBASIN: SUBKC

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
GGA	0.050	18.9	0.25	0
GXB	0.001	0.4	0.24	0
LB	0.051	19.3	0.40	0
LCA	0.155	58.7	0.25	0
PEA	0.007	2.7	0.37	0

TOTAL = 0.264 Sq.Miles XKSAT = 0.28 %Rock = 0

DTHETA

Dry = 0.35 PSIF = 4.60
Normal = 0.25
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.252	Crops	95.5	WET	80	0	0.50	0.10	Hi	0.09
0.011	Stockyar	4.2	NORMAL	10	0	0.50	0.10	Hi	0.13
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
	Vacant		DRY	15	0	0.35	0.02	Min	
	Frwy/Can		NORMAL	10	10	0.20	0.01	Min	
0.001	L.D.R.	0.4	NORMAL	50	15	0.20	0.05	Low	0.08
0.000	M.D.R.	0.0	NORMAL	50	30	0.15	0.05	Low	
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
	G.I.		NORMAL	70	55	0.10	0.03	Min	
	L.I.		NORMAL	60	55	0.10	0.03	Min	
	P.S.		NORMAL	60	55	0.20	0.03	Min	
	R/R		NORMAL	10	25	0.10	0.03	Min	
0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min	
0.000	Whse.Com	0.0	NORMAL	75	90	0.05	0.02	Min	
0.000	Low.Comm	0.0	NORMAL	80	90	0.15	0.02	Min	
0.000	School	0.0	NORMAL	75	40	0.20	0.02	Min	
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Park	0.0	NORMAL	90	0	0.20	0.10	Hi	

0.264 = Total Area Avg. = 77 0% 0.500

PERCENT OF SUBBASIN DRY = 0.0 %
NORMAL = 5.0 %
WET = 96.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.01

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.49

IMPERVIOUS AREA: URBAN @ 100 % effective = 0
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 0

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBKC	0.264	0.76	0.42	0.10	26.3	0.50	0.01	4.60	0.49	0	50

LOSS PARAMETERS FOR SUBBASIN: SUBKD

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
LCA	0.633	88.3	0.25	0
MP	0.064	8.9	0.25	0
TW	0.020	2.8	0.05	0

TOTAL = 0.717 Sq.Miles XKSAT = 0.24 %Rock = 0

DTHETA

Dry = 0.35 PSIF = 4.90
Normal = 0.25
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.665	Crops	92.9	WET	80	0	0.50	0.10	Hi	0.08
0.010	Stockyar	1.4	NORMAL	10	0	0.50	0.10	Hi	0.13
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
	Vacant		DRY	15	0	0.35	0.02	Min	
	Frwy/Can		NORMAL	10	10	0.20	0.01	Min	
	L.D.R.		NORMAL	50	15	0.20	0.05	Low	
	M.D.R.		NORMAL	50	30	0.15	0.05	Low	
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
	G.I.		NORMAL	70	55	0.10	0.03	Min	
0.027	L.I.	3.8	NORMAL	60	55	0.10	0.03	Min	0.03
	P.S.		NORMAL	60	55	0.20	0.03	Min	
0.011	R/R	1.5	NORMAL	10	25	0.10	0.03	Min	0.03
0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min	
0.000	Whse.Com	0.0	NORMAL	75	90	0.05	0.02	Min	
0.003	Low.Comm	0.4	NORMAL	80	90	0.15	0.02	Min	0.04
0.000	School	0.0	NORMAL	75	40	0.20	0.02	Min	
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Park	0.0	NORMAL	90	0	0.20	0.10	Hi	

0.716 = Total Area Avg. = 78 3% 0.480

PERCENT OF SUBBASIN DRY = 0.0 %
NORMAL = 7.0 %
WET = 93.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.02

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.42

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IMPERVIOUS AREA:          URBAN @   100 % effective =  3
                   ROCK OUTCROP @   100 % effective =  0
                                   ----------------------
                                   % EFFECTIVE IMP. =  3
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INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBKD	0.717	1.40	0.72	0.10	12.9	0.48	0.02	4.90	0.42	3	85

LOSS PARAMETERS FOR SUBBASIN: SUBLA

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
GGA	0.133	26.3	0.25	0
LB	0.020	4.0	0.40	0
LCA	0.325	64.4	0.25	0
VA	0.027	5.3	0.39	0

TOTAL = 0.505 Sq.Miles XKSAT = 0.26 %Rock = 0

DTHETA

Dry = 0.35 PSIF = 4.70
Normal = 0.25
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.471	Crops	93.3	WET	80	0	0.50	0.10	Hi	0.09
0.003	Stockyar	0.6	NORMAL	10	0	0.50	0.10	Hi	0.14
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
	Vacant		DRY	15	0	0.35	0.02	Min	
	Frwy/Can		NORMAL	10	10	0.20	0.01	Min	
	L.D.R.		NORMAL	50	15	0.20	0.05	Low	
	M.D.R.		NORMAL	50	30	0.15	0.05	Low	
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
	G.I.		NORMAL	70	55	0.10	0.03	Min	
0.031	L.I.	6.1	NORMAL	60	55	0.10	0.03	Min	0.03
	P.S.		NORMAL	60	55	0.20	0.03	Min	
	R/R		NORMAL	10	25	0.10	0.03	Min	
0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min	
0.000	Whse.Com	0.0	NORMAL	75	90	0.05	0.02	Min	
0.000	Low.Comm	0.0	NORMAL	80	90	0.15	0.02	Min	
0.000	School	0.0	NORMAL	75	40	0.20	0.02	Min	
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Park	0.0	NORMAL	90	0	0.20	0.10	Hi	
0.505 = Total Area			Avg. =	79	3%	0.480			

PERCENT OF SUBBASIN DRY = 0.0 %
NORMAL = 7.0 %
WET = 93.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.02

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.46

IMPERVIOUS AREA: URBAN @ 100 % effective = 3
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 3

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBLA	0.505	1.14	0.57	0.10	12.3	0.48	0.02	4.70	0.46	3	73

LOSS PARAMETERS FOR SUBBASIN: SUBLB

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
LB	0.065	26.1	0.40	0
LCA	0.184	73.9	0.25	0

TOTAL = 0.249 Sq.Miles XKSAT = 0.28 %Rock = 0

DTHETA

Dry = 0.35 PSIF = 4.60
Normal = 0.25
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.247	Crops	98.8	WET	80	0	0.50	0.10	Hi	0.10
0.002	Stockyar	0.8	NORMAL	10	0	0.50	0.10	Hi	0.15
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
	Vacant		DRY	15	0	0.35	0.02	Min	
	Frwy/Can		NORMAL	10	10	0.20	0.01	Min	
	L.D.R.		NORMAL	50	15	0.20	0.05	Low	
	M.D.R.		NORMAL	50	30	0.15	0.05	Low	
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
	G.I.		NORMAL	70	55	0.10	0.03	Min	
	L.I.		NORMAL	60	55	0.10	0.03	Min	
	P.S.		NORMAL	60	55	0.20	0.03	Min	
	R/R		NORMAL	10	25	0.10	0.03	Min	
0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min	
0.000	Whse.Com	0.0	NORMAL	75	90	0.05	0.02	Min	
0.000	Low.Comm	0.0	NORMAL	80	90	0.15	0.02	Min	
0.001	School	0.4	NORMAL	75	40	0.20	0.02	Min	0.04
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Park	0.0	NORMAL	90	0	0.20	0.10	Hi	

0.250 = Total Area Avg. = 79 0% 0.500

PERCENT OF SUBBASIN DRY = 0.0 %
NORMAL = 1.0 %
WET = 99.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.00

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.49

IMPERVIOUS AREA: URBAN @ 100 % effective = 0
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 0

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBLB	0.249	0.68	0.34	0.10	8.8	0.50	0.00	4.60	0.49	0	55

LOSS PARAMETERS FOR SUBBASIN: SUBLC

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
LB	0.000	0.0	0.40	0
LCA	0.102	100.	0.25	0

TOTAL = 0.102 Sq.Miles XKSAT = 0.25 %Rock = 0

DTHETA

Dry = 0.35 PSIF = 4.80
Normal = 0.25
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.098	Crops	96.1	WET	80	0	0.50	0.10	Hi	0.11
	Stockyar		NORMAL	10	0	0.50	0.10	Hi	
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
	Vacant		DRY	15	0	0.35	0.02	Min	
	Frwy/Can		NORMAL	10	10	0.20	0.01	Min	
	L.D.R.		NORMAL	50	15	0.20	0.05	Low	
0.004	M.D.R.	3.9	NORMAL	50	30	0.15	0.05	Low	0.07
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
	G.I.		NORMAL	70	55	0.10	0.03	Min	
0.000	L.I.	0.0	NORMAL	60	55	0.10	0.03	Min	
	P.S.		NORMAL	60	55	0.20	0.03	Min	
	R/R		NORMAL	10	25	0.10	0.03	Min	
0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min	
0.000	Whse.Com	0.0	NORMAL	75	90	0.05	0.02	Min	
0.000	Low.Comm	0.0	NORMAL	80	90	0.15	0.02	Min	
0.000	School	0.0	NORMAL	75	40	0.20	0.02	Min	
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Park	0.0	NORMAL	90	0	0.20	0.10	Hi	

0.102 = Total Area Avg. = 79 1% 0.490

PERCENT OF SUBBASIN DRY = 0.0 %
NORMAL = 4.0 %
WET = 96.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.01

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.44

```
IMPERVIOUS AREA:          URBAN @   100 % effective =  1
                   ROCK OUTCROP @   100 % effective =  0
                                   ------------------------
                                   % EFFECTIVE IMP. =  1
```

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBLC	0.102	0.30	0.20	0.10	6.7	0.49	0.01	4.80	0.44	1	34

LOSS PARAMETERS FOR SUBBASIN: SUBLD

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
LB	0.001	0.4	0.40	0
LCA	0.144	50.5	0.25	0
MP	0.140	49.1	0.25	0

TOTAL = 0.285 Sq.Miles XKSAT = 0.25 %Rock = 0

DTHETA

Dry = 0.35 PSIF = 4.80
Normal = 0.25
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.020	Crops	7.0	WET	80	0	0.50	0.10	Hi	0.12
	Stockyar		NORMAL	10	0	0.50	0.10	Hi	
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
0.011	Vacant	3.9	DRY	15	0	0.35	0.02	Min	0.03
	Frwy/Can		NORMAL	10	10	0.20	0.01	Min	
	L.D.R.		NORMAL	50	15	0.20	0.05	Low	
0.234	M.D.R.	82.4	NORMAL	50	30	0.15	0.05	Low	0.05
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
	G.I.		NORMAL	70	55	0.10	0.03	Min	
	L.I.		NORMAL	60	55	0.10	0.03	Min	
	P.S.		NORMAL	60	55	0.20	0.03	Min	
	R/R		NORMAL	10	25	0.10	0.03	Min	
0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min	
0.000	Whse.Com	0.0	NORMAL	75	90	0.05	0.02	Min	
0.014	Low.Comm	4.9	NORMAL	80	90	0.15	0.02	Min	0.03
0.000	School	0.0	NORMAL	75	40	0.20	0.02	Min	
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min	
0.005	Park	1.8	NORMAL	90	0	0.20	0.10	Hi	0.14
0.284 = Total Area			Avg. =	52	29%	0.180			

PERCENT OF SUBBASIN DRY = 4.0 %
NORMAL = 89.0 %
WET = 7.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.24

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.37

```
IMPERVIOUS AREA:          URBAN @   100 % effective = 29
                   ROCK OUTCROP @   100 % effective =  0
                                   ------------------------
                                   % EFFECTIVE IMP. = 29
```

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBLD	0.285	0.83	0.42	0.05	13.3	0.18	0.24	4.80	0.37	29	31

LOSS PARAMETERS FOR SUBBASIN: SUBLE

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
LCA	0.196	78.7	0.25	0
MP	0.053	21.3	0.25	0

TOTAL = 0.249 Sq.Miles XKSAT = 0.25 %Rock = 0

DTHETA

Dry = 0.35 PSIF = 4.80
Normal = 0.25
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.202	Crops	81.1	WET	80	0	0.50	0.10	Hi	0.10
0.002	Stockyar	0.8	NORMAL	10	0	0.50	0.10	Hi	0.15
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
0.001	Vacant	0.4	DRY	15	0	0.35	0.02	Min	0.04
	Frwy/Can		NORMAL	10	10	0.20	0.01	Min	
	L.D.R.		NORMAL	50	15	0.20	0.05	Low	
	M.D.R.		NORMAL	50	30	0.15	0.05	Low	
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
	G.I.		NORMAL	70	55	0.10	0.03	Min	
0.029	L.I.	11.6	NORMAL	60	55	0.10	0.03	Min	0.03
	P.S.		NORMAL	60	55	0.20	0.03	Min	
0.012	R/R	4.8	NORMAL	10	25	0.10	0.03	Min	0.03
0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min	
0.000	Whse.Com	0.0	NORMAL	75	90	0.05	0.02	Min	
0.003	Low.Comm	1.2	NORMAL	80	90	0.15	0.02	Min	0.04
0.000	School	0.0	NORMAL	75	40	0.20	0.02	Min	
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Park	0.0	NORMAL	90	0	0.20	0.10	Hi	
0.249 = Total Area			Avg. =	75	9%	0.430			

PERCENT OF SUBBASIN
DRY = 0.0 %
NORMAL = 18.0 %
WET = 81.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.05

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.43

IMPERVIOUS AREA: URBAN @ 100 % effective = 9
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 9

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBLE	0.249	0.68	0.34	0.09	14.7	0.43	0.05	4.80	0.43	9	43

LOSS PARAMETERS FOR SUBBASIN: SUBMA

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
GGA	0.004	1.6	0.25	0
LB	0.062	25.0	0.40	0
LCA	0.115	46.4	0.25	0
MO	0.019	7.7	0.39	0
MP	0.048	19.4	0.25	0

TOTAL = 0.248 Sq.Miles XKSAT = 0.29 %Rock = 0

DTHETA

Dry = 0.35 PSIF = 4.55
Normal = 0.25
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.246	Crops	99.6	WET	80	0	0.50	0.10	Hi	0.10
	Stockyar		NORMAL	10	0	0.50	0.10	Hi	
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
	Vacant		DRY	15	0	0.35	0.02	Min	
	Frwy/Can		NORMAL	10	10	0.20	0.01	Min	
0.001	L.D.R.	0.4	NORMAL	50	15	0.20	0.05	Low	0.08
0.000	M.D.R.	0.0	NORMAL	50	30	0.15	0.05	Low	
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
	G.I.		NORMAL	70	55	0.10	0.03	Min	
	L.I.		NORMAL	60	55	0.10	0.03	Min	
	P.S.		NORMAL	60	55	0.20	0.03	Min	
	R/R		NORMAL	10	25	0.10	0.03	Min	
0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min	
0.000	Whse.Com	0.0	NORMAL	75	90	0.05	0.02	Min	
0.000	Low.Comm	0.0	NORMAL	80	90	0.15	0.02	Min	
0.000	School	0.0	NORMAL	75	40	0.20	0.02	Min	
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Park	0.0	NORMAL	90	0	0.20	0.10	Hi	
0.247 = Total Area			Avg. =	80	0%	0.500			

PERCENT OF SUBBASIN
DRY = 0.0 %
NORMAL = 0.0 %
WET = 100. %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.00

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.52

IMPERVIOUS AREA: URBAN @ 100 % effective = 0
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 0

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBMA	0.248	0.68	0.34	0.10	14.7	0.50	0.00	4.55	0.52	0	50

LOSS PARAMETERS FOR SUBBASIN: SUBMB

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
GT	0.024	2.4	0.04	0
LCA	0.062	6.3	0.25	0
LE	0.015	1.5	0.04	0
MP	0.022	2.2	0.25	0
MR	0.661	66.8	0.05	0
RBB	0.014	1.4	0.25	0
TT	0.086	8.7	0.04	0
TW	0.105	10.6	0.05	0

TOTAL = 0.989 Sq.Miles XKSAT = 0.06 %Rock = 0

DTHETA

Dry = 0.29 PSIF = 8.40
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.950	Crops	96.1	WET	80	0	0.50	0.10	Hi	0.08
0.039	Stockyar	3.9	NORMAL	10	0	0.50	0.10	Hi	0.12
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
	Vacant		DRY	15	0	0.35	0.02	Min	
	Frwy/Can		NORMAL	10	10	0.20	0.01	Min	
	L.D.R.		NORMAL	50	15	0.20	0.05	Low	
0.000	M.D.R.	0.0	NORMAL	50	30	0.15	0.05	Low	
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
	G.I.		NORMAL	70	55	0.10	0.03	Min	
	L.I.		NORMAL	60	55	0.10	0.03	Min	
	P.S.		NORMAL	60	55	0.20	0.03	Min	
	R/R		NORMAL	10	25	0.10	0.03	Min	
0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min	
0.000	Whse.Com	0.0	NORMAL	75	90	0.05	0.02	Min	
0.000	Low.Comm	0.0	NORMAL	80	90	0.15	0.02	Min	
0.000	School	0.0	NORMAL	75	40	0.20	0.02	Min	
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Park	0.0	NORMAL	90	0	0.20	0.10	Hi	

0.989 = Total Area Avg. = 77 0% 0.500

PERCENT OF SUBBASIN DRY = 0.0 %
NORMAL = 4.0 %

WET = 96.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.01

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.10

IMPERVIOUS AREA: URBAN @ 100 % effective = 0
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 0

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBMB	0.989	1.36	0.68	0.10	17.6	0.50	0.01	8.40	0.10	0	81

LOSS PARAMETERS FOR SUBBASIN: SUBMC

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
GT	0.106	10.6	0.04	0
MP	0.028	2.8	0.25	0
MR	0.348	34.9	0.05	0
TT	0.310	31.1	0.04	0
TU	0.020	2.0	0.25	0
TW	0.186	18.6	0.05	0

TOTAL = 0.998 Sq.Miles XKSAT = 0.05 %Rock = 0

DTHETA

Dry = 0.27 PSIF = 8.80
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.904	Crops	90.4	WET	80	0	0.50	0.10	Hi	0.08
0.010	Stockyar	1.0	NORMAL	10	0	0.50	0.10	Hi	0.13
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
	Vacant		DRY	15	0	0.35	0.02	Min	
	Frwy/Can		NORMAL	10	10	0.20	0.01	Min	
	L.D.R.		NORMAL	50	15	0.20	0.05	Low	
	M.D.R.		NORMAL	50	30	0.15	0.05	Low	
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
0.086	G.I.	8.6	NORMAL	70	55	0.10	0.03	Min	0.03
	L.I.		NORMAL	60	55	0.10	0.03	Min	
	P.S.		NORMAL	60	55	0.20	0.03	Min	
	R/R		NORMAL	10	25	0.10	0.03	Min	
0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min	
0.000	Whse.Com	0.0	NORMAL	75	90	0.05	0.02	Min	
0.000	Low.Comm	0.0	NORMAL	80	90	0.15	0.02	Min	
0.000	School	0.0	NORMAL	75	40	0.20	0.02	Min	
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Park	0.0	NORMAL	90	0	0.20	0.10	Hi	
1.000 = Total Area			Avg. =	79	5%	0.470			

PERCENT OF SUBBASIN DRY = 0.0 %
NORMAL = 10.0 %
WET = 90.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.01

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.09

IMPERVIOUS AREA: URBAN @ 100 % effective = 5
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 5

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBMC	0.998	1.40	0.70	0.09	13.6	0.47	0.01	8.80	0.09	5	82

LOSS PARAMETERS FOR SUBBASIN: SUBMD

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
ES	0.002	0.3	0.25	0
MP	0.081	10.2	0.25	0
MR	0.518	65.0	0.05	0
TT	0.090	11.3	0.04	0
TU	0.026	3.3	0.25	0
TW	0.080	10.0	0.05	0

TOTAL = 0.797 Sq.Miles XKSAT = 0.06 %Rock = 0

DTHETA

Dry = 0.29 PSIF = 8.40
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.773	Crops	97.1	WET	80	0	0.50	0.10	Hi	0.08
0.015	Stockyar	1.9	NORMAL	10	0	0.50	0.10	Hi	0.13
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
0.001	Vacant	0.1	DRY	15	0	0.35	0.02	Min	0.04
	Frwy/Can		NORMAL	10	10	0.20	0.01	Min	
	L.D.R.		NORMAL	50	15	0.20	0.05	Low	
	M.D.R.		NORMAL	50	30	0.15	0.05	Low	
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
0.001	G.I.	0.1	NORMAL	70	55	0.10	0.03	Min	0.04
0.001	L.I.	0.1	NORMAL	60	55	0.10	0.03	Min	0.04
	P.S.		NORMAL	60	55	0.20	0.03	Min	
	R/R		NORMAL	10	25	0.10	0.03	Min	
0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min	
0.000	Whse.Com	0.0	NORMAL	75	90	0.05	0.02	Min	
0.005	Low.Comm	0.6	NORMAL	80	90	0.15	0.02	Min	0.04
0.000	School	0.0	NORMAL	75	40	0.20	0.02	Min	
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Park	0.0	NORMAL	90	0	0.20	0.10	Hi	

0.796 = Total Area Avg. = 79 1% 0.500

PERCENT OF SUBBASIN DRY = 0.0 %
NORMAL = 3.0 %
WET = 97.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.00

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.11

IMPERVIOUS AREA: URBAN @ 100 % effective = 1
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 1

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBMD	0.797	1.40	0.64	0.10	14.3	0.50	0.00	8.40	0.11	1	83

LOSS PARAMETERS FOR SUBBASIN: SUBME

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
ES	0.000	0.0	0.25	0
GT	0.003	0.9	0.04	0
LB	0.044	13.6	0.40	0
LCA	0.235	72.8	0.25	0
MP	0.041	12.7	0.25	0

TOTAL = 0.323 Sq.Miles XKSAT = 0.26 %Rock = 0

DTHETA

Dry = 0.35 PSIF = 4.70
Normal = 0.25
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.259	Crops	79.9	WET	80	0	0.50	0.10	Hi	0.09
	Stockyar		NORMAL	10	0	0.50	0.10	Hi	
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
0.000	Vacant	0.0	DRY	15	0	0.35	0.02	Min	
	Frwy/Can		NORMAL	10	10	0.20	0.01	Min	
	L.D.R.		NORMAL	50	15	0.20	0.05	Low	
0.039	M.D.R.	12.0	NORMAL	50	30	0.15	0.05	Low	0.06
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
	G.I.		NORMAL	70	55	0.10	0.03	Min	
	L.I.		NORMAL	60	55	0.10	0.03	Min	
	P.S.		NORMAL	60	55	0.20	0.03	Min	
	R/R		NORMAL	10	25	0.10	0.03	Min	
0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min	
0.000	Whse.Com	0.0	NORMAL	75	90	0.05	0.02	Min	
0.000	Low.Comm	0.0	NORMAL	80	90	0.15	0.02	Min	
0.016	School	4.9	NORMAL	75	40	0.20	0.02	Min	0.03
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min	
0.010	Park	3.1	NORMAL	90	0	0.20	0.10	Hi	0.13
0.324 = Total Area			Avg. =	77	6%	0.430			

PERCENT OF SUBBASIN DRY = 0.0 %
NORMAL = 20.0 %
WET = 80.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.05

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.45

IMPERVIOUS AREA: URBAN @ 100 % effective = 6
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 6

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	*Length* mi.	*Lca*	*Kn*	*Slope* ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBME	0.323	1.02	0.45	0.09	20.6	0.43	0.05	4.70	0.45	6	54

LOSS PARAMETERS FOR SUBBASIN: SUBMF

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
ES	0.008	0.8	0.25	0
GT	0.000	0.0	0.04	0
MP	0.089	9.2	0.25	0
MR	0.601	62.2	0.05	0
TT	0.029	3.0	0.04	0
TU	0.095	9.8	0.25	0
TW	0.037	3.8	0.05	0
VF	0.108	11.2	0.01	0

TOTAL = 0.967 Sq.Miles XKSAT = 0.06 %Rock = 0

DTHETA

Dry = 0.29 PSIF = 8.40
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.913	Crops	94.3	WET	80	0	0.50	0.10	Hi	0.08
0.055	Stockyar	5.7	NORMAL	10	0	0.50	0.10	Hi	0.11
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
	Vacant		DRY	15	0	0.35	0.02	Min	
	Frwy/Can		NORMAL	10	10	0.20	0.01	Min	
	L.D.R.		NORMAL	50	15	0.20	0.05	Low	
	M.D.R.		NORMAL	50	30	0.15	0.05	Low	
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
	G.I.		NORMAL	70	55	0.10	0.03	Min	
	L.I.		NORMAL	60	55	0.10	0.03	Min	
	P.S.		NORMAL	60	55	0.20	0.03	Min	
	R/R		NORMAL	10	25	0.10	0.03	Min	
0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min	
0.000	Whse.Com	0.0	NORMAL	75	90	0.05	0.02	Min	
0.000	Low.Comm	0.0	NORMAL	80	90	0.15	0.02	Min	
0.000	School	0.0	NORMAL	75	40	0.20	0.02	Min	
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Park	0.0	NORMAL	90	0	0.20	0.10	Hi	

0.968 = Total Area Avg. = 76 0% 0.500

PERCENT OF SUBBASIN DRY = 0.0 %
NORMAL = 6.0 %

WET = 94.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.01

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.10

IMPERVIOUS AREA: URBAN @ 100 % effective = 0
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 0

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBMF	0.967	1.40	0.70	0.10	12.9	0.50	0.01	8.40	0.10	0	88

LOSS PARAMETERS FOR SUBBASIN: SUBMG

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
LCA	0.009	4.4	0.25	0
MP	0.021	10.3	0.25	0
MR	0.136	67.0	0.05	0
TU	0.037	18.2	0.25	0

TOTAL = 0.203 Sq.Miles XKSAT = 0.09 %Rock = 0

DTHETA

Dry = 0.33 PSIF = 7.30
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.202	Crops	100.	WET	80	0	0.50	0.10	Hi	0.10
	Stockyar		NORMAL	10	0	0.50	0.10	Hi	
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
	Vacant		DRY	15	0	0.35	0.02	Min	
	Frwy/Can		NORMAL	10	10	0.20	0.01	Min	
	L.D.R.		NORMAL	50	15	0.20	0.05	Low	
	M.D.R.		NORMAL	50	30	0.15	0.05	Low	
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
	G.I.		NORMAL	70	55	0.10	0.03	Min	
	L.I.		NORMAL	60	55	0.10	0.03	Min	
	P.S.		NORMAL	60	55	0.20	0.03	Min	
	R/R		NORMAL	10	25	0.10	0.03	Min	
0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min	
0.000	Whse.Com	0.0	NORMAL	75	90	0.05	0.02	Min	
0.000	Low.Comm	0.0	NORMAL	80	90	0.15	0.02	Min	
0.000	School	0.0	NORMAL	75	40	0.20	0.02	Min	
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Park	0.0	NORMAL	90	0	0.20	0.10	Hi	

0.202 = Total Area Avg. = 80 0% 0.500

PERCENT OF SUBBASIN DRY = 0.0 %
NORMAL = 0.0 %
WET = 100. %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.00

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.16

IMPERVIOUS AREA: URBAN @ 100 % effective = 0
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 0

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBMG	0.203	0.68	0.34	0.10	8.8	0.50	0.00	7.30	0.16	0	55

LOSS PARAMETERS FOR SUBBASIN: SUBNA

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
GGA	0.019	1.9	0.25	0
GT	0.037	3.8	0.04	0
LB	0.031	3.2	0.40	0
LCA	0.002	0.2	0.25	0
LE	0.014	1.4	0.04	0
MP	0.047	4.8	0.25	0
MR	0.443	45.3	0.05	0
TT	0.046	4.7	0.04	0
TU	0.129	13.2	0.25	0
TW	0.188	19.2	0.05	0
VF	0.021	2.1	0.01	0

TOTAL = 0.977 Sq.Miles XKSAT = 0.07 %Rock = 0

DTHETA

Dry = 0.30 PSIF = 8.00
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.891	Crops	91.0	WET	80	0	0.50	0.10	Hi	0.08
0.076	Stockyar	7.8	NORMAL	10	0	0.50	0.10	Hi	0.11
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
0.001	Vacant	0.1	DRY	15	0	0.35	0.02	Min	0.04
0.005	Frwy/Can	0.5	NORMAL	10	10	0.20	0.01	Min	0.04
0.006	L.D.R.	0.6	NORMAL	50	15	0.20	0.05	Low	0.07
	M.D.R.		NORMAL	50	30	0.15	0.05	Low	
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
	G.I.		NORMAL	70	55	0.10	0.03	Min	
	L.I.		NORMAL	60	55	0.10	0.03	Min	
	P.S.		NORMAL	60	55	0.20	0.03	Min	
	R/R		NORMAL	10	25	0.10	0.03	Min	
0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min	
0.000	Whse.Com	0.0	NORMAL	75	90	0.05	0.02	Min	
0.000	Low.Comm	0.0	NORMAL	80	90	0.15	0.02	Min	
0.000	School	0.0	NORMAL	75	40	0.20	0.02	Min	
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Park	0.0	NORMAL	90	0	0.20	0.10	Hi	
0.979 = Total Area			Avg. =	74	0%	0.500			

PERCENT OF SUBBASIN DRY = 0.0 %
NORMAL = 9.0 %
WET = 91.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.01

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.12

IMPERVIOUS AREA: URBAN @ 100 % effective = 0
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 0

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBNA	0.977	1.36	0.68	0.10	16.2	0.50	0.01	8.00	0.12	0	82

LOSS PARAMETERS FOR SUBBASIN: SUBNB

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
ABA	0.004	0.9	0.38	0
ES	0.022	5.0	0.25	0
GGA	0.062	14.1	0.25	0
GT	0.064	14.5	0.04	0
MO	0.015	3.4	0.39	0
MP	0.024	5.4	0.25	0
MR	0.143	32.4	0.05	0
TU	0.103	23.4	0.25	0
TW	0.004	0.9	0.05	0

TOTAL = 0.441 Sq.Miles XKSAT = 0.11 %Rock = 0

DTHETA

Dry = 0.36 PSIF = 6.80
Normal = 0.17
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.336	Crops	76.4	WET	80	0	0.50	0.10	Hi	0.09
0.028	Stockyar	6.4	NORMAL	10	0	0.50	0.10	Hi	0.12
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
0.050	Vacant	11.4	DRY	15	0	0.35	0.02	Min	0.03
0.014	Frwy/Can	3.2	NORMAL	10	10	0.20	0.01	Min	0.03
0.004	L.D.R.	0.9	NORMAL	50	15	0.20	0.05	Low	0.07
0.008	M.D.R.	1.8	NORMAL	50	30	0.15	0.05	Low	0.07
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
	G.I.		NORMAL	70	55	0.10	0.03	Min	
	L.I.		NORMAL	60	55	0.10	0.03	Min	
	P.S.		NORMAL	60	55	0.20	0.03	Min	
	R/R		NORMAL	10	25	0.10	0.03	Min	
0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min	
0.000	Whse.Com	0.0	NORMAL	75	90	0.05	0.02	Min	
0.000	Low.Comm	0.0	NORMAL	80	90	0.15	0.02	Min	
0.000	School	0.0	NORMAL	75	40	0.20	0.02	Min	
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Park	0.0	NORMAL	90	0	0.20	0.10	Hi	

0.440 = Total Area Avg. = 65 1% 0.460

PERCENT OF SUBBASIN DRY = 11.0 %

NORMAL = 12.0 %
WET = 76.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.06

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.18

IMPERVIOUS AREA: URBAN @ 100 % effective = 1
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 1

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBNB	0.441	0.95	0.47	0.09	16.8	0.46	0.06	6.80	0.18	1	54

LOSS PARAMETERS FOR SUBBASIN: SUBNC

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AA	0.002	0.7	0.26	0
AO	0.005	1.6	0.04	0
BT	0.015	4.9	0.25	0
GGA	0.260	84.7	0.25	0
GT	0.025	8.1	0.04	0

TOTAL = 0.307 Sq.Miles XKSAT = 0.21 %Rock = 0

DTHETA

Dry = 0.37 PSIF = 5.20
Normal = 0.25
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.267	Crops	87.0	WET	80	0	0.50	0.10	Hi	0.09
0.014	Stockyar	4.6	NORMAL	10	0	0.50	0.10	Hi	0.13
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
	Vacant		DRY	15	0	0.35	0.02	Min	
0.026	Frwy/Can	8.5	NORMAL	10	10	0.20	0.01	Min	0.03
	L.D.R.		NORMAL	50	15	0.20	0.05	Low	
	M.D.R.		NORMAL	50	30	0.15	0.05	Low	
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
	G.I.		NORMAL	70	55	0.10	0.03	Min	
	L.I.		NORMAL	60	55	0.10	0.03	Min	
	P.S.		NORMAL	60	55	0.20	0.03	Min	
	R/R		NORMAL	10	25	0.10	0.03	Min	
0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min	
0.000	Whse.Com	0.0	NORMAL	75	90	0.05	0.02	Min	
0.000	Low.Comm	0.0	NORMAL	80	90	0.15	0.02	Min	
0.000	School	0.0	NORMAL	75	40	0.20	0.02	Min	
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Park	0.0	NORMAL	90	0	0.20	0.10	Hi	

0.307 = Total Area Avg. = 71 1% 0.470

PERCENT OF SUBBASIN DRY = 0.0 %
NORMAL = 13.0 %
WET = 87.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.03

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.35

IMPERVIOUS AREA: URBAN @ 100 % effective = 1
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 1

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBNC	0.307	0.68	0.30	0.09	14.7	0.47	0.03	5.20	0.35	1	44

LOSS PARAMETERS FOR SUBBASIN: SUBOB

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
LCA	0.352	79.1	0.25	0
LE	0.007	1.6	0.04	0
MP	0.073	16.4	0.25	0
MR	0.013	2.9	0.05	0

TOTAL = 0.445 Sq.Miles XKSAT = 0.23 %Rock = 0

DTHETA

Dry = 0.36 PSIF = 5.00
Normal = 0.25
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.399	Crops	89.9	WET	80	0	0.50	0.10	Hi	0.09
0.014	Stockyar	3.2	NORMAL	10	0	0.50	0.10	Hi	0.13
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
0.020	Vacant	4.5	DRY	15	0	0.35	0.02	Min	0.03
	Frwy/Can		NORMAL	10	10	0.20	0.01	Min	
	L.D.R.		NORMAL	50	15	0.20	0.05	Low	
	M.D.R.		NORMAL	50	30	0.15	0.05	Low	
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
	G.I.		NORMAL	70	55	0.10	0.03	Min	
	L.I.		NORMAL	60	55	0.10	0.03	Min	
0.000	P.S.	0.0	NORMAL	60	55	0.20	0.03	Min	
0.011	R/R	2.5	NORMAL	10	25	0.10	0.03	Min	0.03
0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min	
0.000	Whse.Com	0.0	NORMAL	75	90	0.05	0.02	Min	
0.000	Low.Comm	0.0	NORMAL	80	90	0.15	0.02	Min	
0.000	School	0.0	NORMAL	75	40	0.20	0.02	Min	
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Park	0.0	NORMAL	90	0	0.20	0.10	Hi	

0.444 = Total Area Avg. = 74 1% 0.480

PERCENT OF SUBBASIN DRY = 4.0 %
NORMAL = 6.0 %
WET = 90.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.03

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.39

IMPERVIOUS AREA: URBAN @ 100 % effective = 1
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 1

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBOB	0.445	1.06	0.64	0.09	17.0	0.48	0.03	5.00	0.39	1	69

LOSS PARAMETERS FOR SUBBASIN: SUBOC

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
GT	0.093	29.5	0.04	0
LCA	0.001	0.3	0.25	0
LE	0.013	4.1	0.04	0
MP	0.013	4.1	0.25	0
MR	0.056	17.8	0.05	0
TT	0.139	44.1	0.04	0

TOTAL = 0.315 Sq.Miles XKSAT = 0.05 %Rock = 0

DTHETA

Dry = 0.27 PSIF = 8.80
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.121	Crops	38.3	WET	80	0	0.50	0.10	Hi	0.10
	Stockyar		NORMAL	10	0	0.50	0.10	Hi	
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
0.109	Vacant	34.5	DRY	15	0	0.35	0.02	Min	0.03
	Frwy/Can		NORMAL	10	10	0.20	0.01	Min	
	L.D.R.		NORMAL	50	15	0.20	0.05	Low	
	M.D.R.		NORMAL	50	30	0.15	0.05	Low	
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
	G.I.		NORMAL	70	55	0.10	0.03	Min	
0.000	L.I.	0.0	NORMAL	60	55	0.10	0.03	Min	
0.006	P.S.	1.9	NORMAL	60	55	0.20	0.03	Min	0.04
0.018	R/R	5.7	NORMAL	10	25	0.10	0.03	Min	0.03
0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min	
0.062	Whse.Com	19.6	NORMAL	75	90	0.05	0.02	Min	0.03
0.000	Low.Comm	0.0	NORMAL	80	90	0.15	0.02	Min	
0.000	School	0.0	NORMAL	75	40	0.20	0.02	Min	
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Park	0.0	NORMAL	90	0	0.20	0.10	Hi	
0.316 = Total Area			Avg. =	48	20%	0.330			

PERCENT OF SUBBASIN DRY = 34.0 %
NORMAL = 27.0 %
WET = 38.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.13

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.07

IMPERVIOUS AREA: URBAN @ 100 % effective = 20
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 20

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBOC	0.315	0.76	0.45	0.05	13.2	0.33	0.13	8.80	0.07	20	30

LOSS PARAMETERS FOR SUBBASIN: SUBOD

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
GT	0.382	72.5	0.04	0
TT	0.112	21.3	0.04	0
VF	0.033	6.3	0.01	0

TOTAL = 0.527 Sq.Miles XKSAT = 0.04 %Rock = 0

DTHETA

Dry = 0.25 PSIF = 9.70
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.408	Crops	77.4	WET	80	0	0.50	0.10	Hi	0.09
	Stockyar		NORMAL	10	0	0.50	0.10	Hi	
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
0.004	Vacant	0.8	DRY	15	0	0.35	0.02	Min	0.04
	Frwy/Can		NORMAL	10	10	0.20	0.01	Min	
	L.D.R.		NORMAL	50	15	0.20	0.05	Low	
0.020	M.D.R.	3.8	NORMAL	50	30	0.15	0.05	Low	0.06
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
	G.I.		NORMAL	70	55	0.10	0.03	Min	
0.071	L.I.	13.5	NORMAL	60	55	0.10	0.03	Min	0.03
	P.S.		NORMAL	60	55	0.20	0.03	Min	
0.024	R/R	4.6	NORMAL	10	25	0.10	0.03	Min	0.03
0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min	
0.000	Whse.Com	0.0	NORMAL	75	90	0.05	0.02	Min	
0.000	Low.Comm	0.0	NORMAL	80	90	0.15	0.02	Min	
0.000	School	0.0	NORMAL	75	40	0.20	0.02	Min	
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Park	0.0	NORMAL	90	0	0.20	0.10	Hi	
0.527 = Total Area			Avg. =	75	10%	0.410			

PERCENT OF SUBBASIN DRY = 1.0 %
NORMAL = 22.0 %
WET = 77.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.04

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.07

```
IMPERVIOUS AREA:          URBAN @   100 % effective = 10
                   ROCK OUTCROP @   100 % effective =  0
                                   ------------------------
                                   % EFFECTIVE IMP. = 10
```

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBOD	0.527	1.10	0.55	0.09	18.2	0.41	0.04	9.70	0.07	10	58

LOSS PARAMETERS FOR SUBBASIN: SUBOE

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AO	0.014	2.9	0.04	0
ES	0.062	12.7	0.25	0
GGA	0.270	55.3	0.25	0
GT	0.092	18.9	0.04	0
MP	0.003	0.6	0.25	0
MR	0.006	1.2	0.05	0
TT	0.041	8.4	0.04	0
VF	0.000	0.0	0.01	0

TOTAL = 0.488 Sq.Miles XKSAT = 0.14 %Rock = 0

DTHETA

Dry = 0.39 PSIF = 6.20
Normal = 0.23
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.359	Crops	73.4	WET	80	0	0.50	0.10	Hi	0.09
0.011	Stockyar	2.2	NORMAL	10	0	0.50	0.10	Hi	0.13
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
0.061	Vacant	12.5	DRY	15	0	0.35	0.02	Min	0.03
	Frwy/Can		NORMAL	10	10	0.20	0.01	Min	
	L.D.R.		NORMAL	50	15	0.20	0.05	Low	
0.000	M.D.R.	0.0	NORMAL	50	30	0.15	0.05	Low	
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
	G.I.		NORMAL	70	55	0.10	0.03	Min	
0.042	L.I.	8.6	NORMAL	60	55	0.10	0.03	Min	0.03
	P.S.		NORMAL	60	55	0.20	0.03	Min	
0.016	R/R	3.3	NORMAL	10	25	0.10	0.03	Min	0.03
0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min	
0.000	Whse.Com	0.0	NORMAL	75	90	0.05	0.02	Min	
0.000	Low.Comm	0.0	NORMAL	80	90	0.15	0.02	Min	
0.000	School	0.0	NORMAL	75	40	0.20	0.02	Min	
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Park	0.0	NORMAL	90	0	0.20	0.10	Hi	

0.489 = Total Area Avg. = 67 6% 0.430

PERCENT OF SUBBASIN DRY = 12.0 %
NORMAL = 14.0 %

WET = 73.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.08

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.23

IMPERVIOUS AREA: URBAN @ 100 % effective = 6
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 6

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBOE	0.488	1.10	0.55	0.08	17.3	0.43	0.08	6.20	0.23	6	57

LOSS PARAMETERS FOR SUBBASIN: SUBOF

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
GT	0.071	28.7	0.04	0
LCA	0.014	5.7	0.25	0
LE	0.073	29.6	0.04	0
MR	0.027	10.9	0.05	0
TT	0.062	25.1	0.04	0

TOTAL = 0.247 Sq.Miles XKSAT = 0.05 %Rock = 0

DTHETA

Dry = 0.27 PSIF = 8.80
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.211	Crops	85.8	WET	80	0	0.50	0.10	Hi	0.10
0.035	Stockyar	14.2	NORMAL	10	0	0.50	0.10	Hi	0.12
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
	Vacant		DRY	15	0	0.35	0.02	Min	
	Frwy/Can		NORMAL	10	10	0.20	0.01	Min	
	L.D.R.		NORMAL	50	15	0.20	0.05	Low	
	M.D.R.		NORMAL	50	30	0.15	0.05	Low	
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
	G.I.		NORMAL	70	55	0.10	0.03	Min	
	L.I.		NORMAL	60	55	0.10	0.03	Min	
	P.S.		NORMAL	60	55	0.20	0.03	Min	
	R/R		NORMAL	10	25	0.10	0.03	Min	
0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min	
0.000	Whse.Com	0.0	NORMAL	75	90	0.05	0.02	Min	
0.000	Low.Comm	0.0	NORMAL	80	90	0.15	0.02	Min	
0.000	School	0.0	NORMAL	75	40	0.20	0.02	Min	
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Park	0.0	NORMAL	90	0	0.20	0.10	Hi	

0.246 = Total Area Avg. = 70 0% 0.500

PERCENT OF SUBBASIN DRY = 0.0 %
NORMAL = 14.0 %
WET = 86.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.02

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.08

IMPERVIOUS AREA: URBAN @ 100 % effective = 0
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 0

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBOF	0.247	0.68	0.32	0.10	27.9	0.50	0.02	8.80	0.08	0	43

LOSS PARAMETERS FOR SUBBASIN: SUBOG

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
GT	0.290	61.3	0.04	0
LCA	0.017	3.6	0.25	0
TT	0.149	31.5	0.04	0
VF	0.017	3.6	0.01	0

TOTAL = 0.473 Sq.Miles XKSAT = 0.04 %Rock = 0

DTHETA

Dry = 0.25 PSIF = 9.70
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.134	Crops	28.3	WET	80	0	0.50	0.10	Hi	0.10
	Stockyar		NORMAL	10	0	0.50	0.10	Hi	
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
0.026	Vacant	5.5	DRY	15	0	0.35	0.02	Min	0.03
	Frwy/Can		NORMAL	10	10	0.20	0.01	Min	
	L.D.R.		NORMAL	50	15	0.20	0.05	Low	
0.201	M.D.R.	42.5	NORMAL	50	30	0.15	0.05	Low	0.05
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
	G.I.		NORMAL	70	55	0.10	0.03	Min	
	L.I.		NORMAL	60	55	0.10	0.03	Min	
0.020	P.S.	4.2	NORMAL	60	55	0.20	0.03	Min	0.03
	R/R		NORMAL	10	25	0.10	0.03	Min	
0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min	
0.000	Whse.Com	0.0	NORMAL	75	90	0.05	0.02	Min	
0.000	Low.Comm	0.0	NORMAL	80	90	0.15	0.02	Min	
0.060	School	12.7	NORMAL	75	40	0.20	0.02	Min	0.03
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min	
0.032	Park	6.8	NORMAL	90	0	0.20	0.10	Hi	0.12
0.473 = Total Area			Avg. =	64	20%	0.270			

PERCENT OF SUBBASIN
DRY = 6.0 %
NORMAL = 66.0 %
WET = 28.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.11

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.06

IMPERVIOUS AREA: URBAN @ 100 % effective = 20
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 20

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBOG	0.473	1.14	0.56	0.06	12.3	0.27	0.11	9.70	0.06	20	46

LOSS PARAMETERS FOR SUBBASIN: SUBPA

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
ES	0.033	6.7	0.25	0
GGA	0.133	27.0	0.25	0
GR	0.063	12.8	0.23	0
GT	0.111	22.6	0.04	0
MR	0.032	6.5	0.05	0
TT	0.120	24.4	0.04	0

TOTAL = 0.492 Sq.Miles XKSAT = 0.09 %Rock = 0

DTHETA

Dry = 0.33 PSIF = 7.30
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.251	Crops	51.0	WET	80	0	0.50	0.10	Hi	0.09
	Stockyar		NORMAL	10	0	0.50	0.10	Hi	
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
0.052	Vacant	10.6	DRY	15	0	0.35	0.02	Min	0.03
0.002	Frwy/Can	0.4	NORMAL	10	10	0.20	0.01	Min	0.04
	L.D.R.		NORMAL	50	15	0.20	0.05	Low	
	M.D.R.		NORMAL	50	30	0.15	0.05	Low	
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
0.040	G.I.	8.1	NORMAL	70	55	0.10	0.03	Min	0.03
0.113	L.I.	23.0	NORMAL	60	55	0.10	0.03	Min	0.03
	P.S.		NORMAL	60	55	0.20	0.03	Min	
0.034	R/R	6.9	NORMAL	10	25	0.10	0.03	Min	0.03
0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min	
0.000	Whse.Com	0.0	NORMAL	75	90	0.05	0.02	Min	
0.000	Low.Comm	0.0	NORMAL	80	90	0.15	0.02	Min	
0.000	School	0.0	NORMAL	75	40	0.20	0.02	Min	
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Park	0.0	NORMAL	90	0	0.20	0.10	Hi	
0.492 = Total Area			Avg. =	64	19%	0.330			

PERCENT OF SUBBASIN DRY = 11.0 %
NORMAL = 38.0 %
WET = 51.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.09

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.14

IMPERVIOUS AREA: URBAN @ 100 % effective = 19
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 19

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBPA	0.492	1.14	0.57	0.06	16.7	0.33	0.09	7.30	0.14	19	47

LOSS PARAMETERS FOR SUBBASIN: SUBPB

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
GT	0.008	1.9	0.04	0
MP	0.042	10.0	0.25	0
MR	0.189	44.9	0.05	0
TT	0.169	40.1	0.04	0
VF	0.013	3.1	0.01	0

TOTAL = 0.421 Sq.Miles XKSAT = 0.05 %Rock = 0

DTHETA

Dry = 0.27 PSIF = 8.80
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.240	Crops	57.1	WET	80	0	0.50	0.10	Hi	0.10
	Stockyar		NORMAL	10	0	0.50	0.10	Hi	
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
0.116	Vacant	27.6	DRY	15	0	0.35	0.02	Min	0.03
0.031	Frwy/Can	7.4	NORMAL	10	10	0.20	0.01	Min	0.03
	L.D.R.		NORMAL	50	15	0.20	0.05	Low	
	M.D.R.		NORMAL	50	30	0.15	0.05	Low	
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
	G.I.		NORMAL	70	55	0.10	0.03	Min	
0.018	L.I.	4.3	NORMAL	60	55	0.10	0.03	Min	0.03
	P.S.		NORMAL	60	55	0.20	0.03	Min	
0.015	R/R	3.6	NORMAL	10	25	0.10	0.03	Min	0.03
0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min	
0.000	Whse.Com	0.0	NORMAL	75	90	0.05	0.02	Min	
0.000	Low.Comm	0.0	NORMAL	80	90	0.15	0.02	Min	
0.000	School	0.0	NORMAL	75	40	0.20	0.02	Min	
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Park	0.0	NORMAL	90	0	0.20	0.10	Hi	

0.420 = Total Area Avg. = 54 4% 0.400

PERCENT OF SUBBASIN DRY = 28.0 %
NORMAL = 15.0 %
WET = 57.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.10

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.07

IMPERVIOUS AREA: URBAN @ 100 % effective = 4
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 4

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBPB	0.421	0.91	0.45	0.07	12.1	0.40	0.10	8.80	0.07	4	42

LOSS PARAMETERS FOR SUBBASIN: SUBPC

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
GGA	0.023	7.9	0.25	0
GT	0.154	52.7	0.04	0
MR	0.085	29.1	0.05	0
TT	0.030	10.3	0.04	0

TOTAL = 0.292 Sq.Miles XKSAT = 0.05 %Rock = 0

DTHETA

Dry = 0.27 PSIF = 8.80
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.065	Crops	22.2	WET	80	0	0.50	0.10	Hi	0.11
	Stockyar		NORMAL	10	0	0.50	0.10	Hi	
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
0.145	Vacant	49.5	DRY	15	0	0.35	0.02	Min	0.03
	Frwy/Can		NORMAL	10	10	0.20	0.01	Min	
0.037	L.D.R.	12.6	NORMAL	50	15	0.20	0.05	Low	0.06
	M.D.R.		NORMAL	50	30	0.15	0.05	Low	
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
	G.I.		NORMAL	70	55	0.10	0.03	Min	
0.010	L.I.	3.4	NORMAL	60	55	0.10	0.03	Min	0.03
0.002	P.S.	0.7	NORMAL	60	55	0.20	0.03	Min	0.04
0.013	R/R	4.4	NORMAL	10	25	0.10	0.03	Min	0.03
0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min	
0.021	Whse.Com	7.2	NORMAL	75	90	0.05	0.02	Min	0.03
0.000	Low.Comm	0.0	NORMAL	80	90	0.15	0.02	Min	
0.000	School	0.0	NORMAL	75	40	0.20	0.02	Min	
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Park	0.0	NORMAL	90	0	0.20	0.10	Hi	
0.293 = Total Area			Avg. =	37	12%	0.320			

PERCENT OF SUBBASIN DRY = 50.0 %
NORMAL = 28.0 %
WET = 22.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.18

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.06

IMPERVIOUS AREA: URBAN @ 100 % effective = 12
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 12

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBPC	0.292	0.72	0.36	0.04	11.1	0.32	0.18	8.80	0.06	12	23

LOSS PARAMETERS FOR SUBBASIN: SUBPD

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AA	0.003	0.7	0.26	0
GGA	0.153	33.8	0.25	0
GT	0.286	63.1	0.04	0
MR	0.000	0.0	0.05	0
TT	0.011	2.4	0.04	0

TOTAL = 0.453 Sq.Miles XKSAT = 0.08 %Rock = 0

DTHETA

Dry = 0.32 PSIF = 7.60
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.310	Crops	68.1	WET	80	0	0.50	0.10	Hi	0.09
0.039	Stockyar	8.6	NORMAL	10	0	0.50	0.10	Hi	0.12
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
0.052	Vacant	11.4	DRY	15	0	0.35	0.02	Min	0.03
0.008	Frwy/Can	1.8	NORMAL	10	10	0.20	0.01	Min	0.04
0.007	L.D.R.	1.5	NORMAL	50	15	0.20	0.05	Low	0.07
	M.D.R.		NORMAL	50	30	0.15	0.05	Low	
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
	G.I.		NORMAL	70	55	0.10	0.03	Min	
0.022	L.I.	4.8	NORMAL	60	55	0.10	0.03	Min	0.03
	P.S.		NORMAL	60	55	0.20	0.03	Min	
0.014	R/R	3.1	NORMAL	10	25	0.10	0.03	Min	0.03
	Med.Comm		NORMAL	75	90	0.15	0.02	Min	
0.003	Whse.Com	0.7	NORMAL	75	90	0.05	0.02	Min	0.04
	Low.Comm		NORMAL	80	90	0.15	0.02	Min	
	School		NORMAL	75	40	0.20	0.02	Min	
	Religiou		NORMAL	75	65	0.15	0.02	Min	
	Public F		NORMAL	75	65	0.15	0.02	Min	
	Park		NORMAL	90	0	0.20	0.10	Hi	

0.455 = Total Area Avg. = 62 4% 0.440

PERCENT OF SUBBASIN DRY = 11.0 %
NORMAL = 21.0 %
WET = 68.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.07

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.13

IMPERVIOUS AREA: URBAN @ 100 % effective = 4
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 4

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBPD	0.453	0.95	0.45	0.08	16.8	0.44	0.07	7.60	0.13	4	50

LOSS PARAMETERS FOR SUBBASIN: SUBPE

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AA	0.004	0.8	0.26	0
AO	0.018	3.6	0.04	0
ES	0.002	0.4	0.25	0
GGA	0.338	67.1	0.25	0
GT	0.106	21.0	0.04	0
MA	0.010	2.0	0.40	0
TT	0.026	5.2	0.04	0

TOTAL = 0.504 Sq.Miles XKSAT = 0.15 %Rock = 0

DTHETA

Dry = 0.40 PSIF = 6.00
Normal = 0.25
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.050	Crops	9.9	WET	80	0	0.50	0.10	Hi	0.11
	Stockyar		NORMAL	10	0	0.50	0.10	Hi	
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
0.040	Vacant	7.9	DRY	15	0	0.35	0.02	Min	0.03
0.000	Frwy/Can	0.0	NORMAL	10	10	0.20	0.01	Min	
	L.D.R.		NORMAL	50	15	0.20	0.05	Low	
	M.D.R.		NORMAL	50	30	0.15	0.05	Low	
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
0.010	G.I.	2.0	NORMAL	70	55	0.10	0.03	Min	0.03
0.117	L.I.	23.2	NORMAL	60	55	0.10	0.03	Min	0.03
	P.S.		NORMAL	60	55	0.20	0.03	Min	
0.013	R/R	2.6	NORMAL	10	25	0.10	0.03	Min	0.03
0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min	
0.275	Whse.Com	54.5	NORMAL	75	90	0.05	0.02	Min	0.03
0.000	Low.Comm	0.0	NORMAL	80	90	0.15	0.02	Min	
0.000	School	0.0	NORMAL	75	40	0.20	0.02	Min	
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Park	0.0	NORMAL	90	0	0.20	0.10	Hi	
0.505 = Total Area			Avg. =	55	63%	0.130			

PERCENT OF SUBBASIN DRY = 8.0 %
NORMAL = 82.0 %
WET = 10.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.24

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.23

IMPERVIOUS AREA: URBAN @ 100 % effective = 63
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 63

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBPE	0.504	1.10	0.55	0.03	15.5	0.13	0.24	6.00	0.23	63	22

LOSS PARAMETERS FOR SUBBASIN: SUBPF

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AA	0.010	2.0	0.26	0
AO	0.006	1.2	0.04	0
ES	0.037	7.3	0.25	0
GGA	0.073	14.5	0.25	0
GR	0.076	15.1	0.23	0
GT	0.172	34.1	0.04	0
GV	0.006	1.2	0.01	0
MR	0.005	1.0	0.05	0
TT	0.119	23.6	0.04	0

TOTAL = 0.504 Sq.Miles XKSAT = 0.08 %Rock = 0

DTHETA

Dry = 0.32 PSIF = 7.60
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.148	Crops	29.4	WET	80	0	0.50	0.10	Hi	0.10
	Stockyar		NORMAL	10	0	0.50	0.10	Hi	
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
0.048	Vacant	9.5	DRY	15	0	0.35	0.02	Min	0.03
0.006	Frwy/Can	1.2	NORMAL	10	10	0.20	0.01	Min	0.04
	L.D.R.		NORMAL	50	15	0.20	0.05	Low	
	M.D.R.		NORMAL	50	30	0.15	0.05	Low	
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
0.014	G.I.	2.8	NORMAL	70	55	0.10	0.03	Min	0.03
0.097	L.I.	19.3	NORMAL	60	55	0.10	0.03	Min	0.03
	P.S.		NORMAL	60	55	0.20	0.03	Min	
0.014	R/R	2.8	NORMAL	10	25	0.10	0.03	Min	0.03
0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min	
0.176	Whse.Com	35.0	NORMAL	75	90	0.05	0.02	Min	0.03
0.000	Low.Comm	0.0	NORMAL	80	90	0.15	0.02	Min	
0.000	School	0.0	NORMAL	75	40	0.20	0.02	Min	
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Park	0.0	NORMAL	90	0	0.20	0.10	Hi	

0.503 = Total Area Avg. = 61 44% 0.230

PERCENT OF SUBBASIN DRY = 10.0 %

NORMAL = 61.0 %
WET = 29.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.12

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.13

IMPERVIOUS AREA: URBAN @ 100 % effective = 44
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 44

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBPF	0.504	1.10	0.55	0.05	20.0	0.23	0.12	7.60	0.13	44	31

LOSS PARAMETERS FOR SUBBASIN: SUBQA

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AO	0.055	11.3	0.04	0
ES	0.014	2.9	0.25	0
GC	0.024	4.9	0.01	0
GT	0.224	45.9	0.04	0
GV	0.026	5.3	0.01	0
LE	0.040	8.2	0.04	0
MR	0.025	5.1	0.05	0
MS	0.033	6.8	0.01	0
TT	0.047	9.6	0.04	0

TOTAL = 0.488 Sq.Miles XKSAT = 0.03 %Rock = 0

DTHETA

Dry = 0.22 PSIF = 10.10
Normal = 0.13
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.251	Crops	51.2	WET	80	0	0.50	0.10	Hi	0.09
	Stockyar		NORMAL	10	0	0.50	0.10	Hi	
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
0.057	Vacant	11.6	DRY	15	0	0.35	0.02	Min	0.03
0.013	Frwy/Can	2.7	NORMAL	10	10	0.20	0.01	Min	0.03
	L.D.R.		NORMAL	50	15	0.20	0.05	Low	
	M.D.R.		NORMAL	50	30	0.15	0.05	Low	
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
0.123	G.I.	25.1	NORMAL	70	55	0.10	0.03	Min	0.03
0.019	L.I.	3.9	NORMAL	60	55	0.10	0.03	Min	0.03
0.009	P.S.	1.8	NORMAL	60	55	0.20	0.03	Min	0.04
0.018	R/R	3.7	NORMAL	10	25	0.10	0.03	Min	0.03
0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min	
0.000	Whse.Com	0.0	NORMAL	75	90	0.05	0.02	Min	
0.000	Low.Comm	0.0	NORMAL	80	90	0.15	0.02	Min	
0.000	School	0.0	NORMAL	75	40	0.20	0.02	Min	
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Park	0.0	NORMAL	90	0	0.20	0.10	Hi	

0.490 = Total Area Avg. = 64 18% 0.340

PERCENT OF SUBBASIN DRY = 12.0 %

NORMAL = 37.0 %
WET = 51.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.07

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.05

IMPERVIOUS AREA: URBAN @ 100 % effective = 18
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 18

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBQA	0.488	1.10	0.55	0.06	18.2	0.34	0.07	10.10	0.05	18	44

LOSS PARAMETERS FOR SUBBASIN: SUBQB

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
ES	0.016	3.2	0.25	0
GC	0.016	3.2	0.01	0
GT	0.024	4.7	0.04	0
MR	0.074	14.6	0.05	0
MS	0.369	72.9	0.01	0
TT	0.005	1.0	0.04	0
TU	0.002	0.4	0.25	0

TOTAL = 0.506 Sq.Miles XKSAT = 0.02 %Rock = 0

DTHETA

Dry = 0.19 PSIF = 11.20
Normal = 0.10
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.195	Crops	38.6	WET	80	0	0.50	0.10	Hi	0.10
	Stockyar		NORMAL	10	0	0.50	0.10	Hi	
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
0.102	Vacant	20.2	DRY	15	0	0.35	0.02	Min	0.03
0.006	Frwy/Can	1.2	NORMAL	10	10	0.20	0.01	Min	0.04
	L.D.R.		NORMAL	50	15	0.20	0.05	Low	
	M.D.R.		NORMAL	50	30	0.15	0.05	Low	
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
0.166	G.I.	32.9	NORMAL	70	55	0.10	0.03	Min	0.03
0.003	L.I.	0.6	NORMAL	60	55	0.10	0.03	Min	0.04
0.015	P.S.	3.0	NORMAL	60	55	0.20	0.03	Min	0.03
0.018	R/R	3.6	NORMAL	10	25	0.10	0.03	Min	0.03
0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min	
0.000	Whse.Com	0.0	NORMAL	75	90	0.05	0.02	Min	
0.000	Low.Comm	0.0	NORMAL	80	90	0.15	0.02	Min	
0.000	School	0.0	NORMAL	75	40	0.20	0.02	Min	
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Park	0.0	NORMAL	90	0	0.20	0.10	Hi	
0.505 = Total Area			Avg. =	58	21%	0.310			

PERCENT OF SUBBASIN DRY = 20.0 %
NORMAL = 41.0 %
WET = 39.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.08

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.03

```
IMPERVIOUS AREA:          URBAN @   100 % effective = 21
                   ROCK OUTCROP @   100 % effective =  0
                                   -------------------------
                                   % EFFECTIVE IMP. = 21
```

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBQB	0.506	1.10	0.55	0.05	17.3	0.31	0.08	11.20	0.03	21	38

LOSS PARAMETERS FOR SUBBASIN: SUBQC

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AO	0.024	4.0	0.04	0
CN	0.054	9.1	0.01	0
GC	0.080	13.4	0.01	0
GGA	0.027	4.5	0.25	0
GT	0.137	23.0	0.04	0
GV	0.038	6.4	0.01	0
LCA	0.031	5.2	0.25	0
LE	0.055	9.2	0.04	0
MR	0.018	3.0	0.05	0
MS	0.111	18.7	0.01	0
TT	0.001	0.2	0.04	0
TU	0.014	2.4	0.25	0
TW	0.001	0.2	0.05	0
VK	0.004	0.7	0.26	0

TOTAL = 0.595 Sq.Miles XKSAT = 0.03 %Rock = 0

DTHETA

Dry = 0.22 PSIF = 10.10
Normal = 0.13
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.197	Crops	33.2	WET	80	0	0.50	0.10	Hi	0.10
	Stockyar		NORMAL	10	0	0.50	0.10	Hi	
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
0.147	Vacant	24.7	DRY	15	0	0.35	0.02	Min	0.03
0.015	Frwy/Can	2.5	NORMAL	10	10	0.20	0.01	Min	0.03
0.001	L.D.R.	0.2	NORMAL	50	15	0.20	0.05	Low	0.08
0.002	M.D.R.	0.3	NORMAL	50	30	0.15	0.05	Low	0.08
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
0.047	G.I.	7.9	NORMAL	70	55	0.10	0.03	Min	0.03
0.159	L.I.	26.8	NORMAL	60	55	0.10	0.03	Min	0.03
	P.S.		NORMAL	60	55	0.20	0.03	Min	
	R/R		NORMAL	10	25	0.10	0.03	Min	
	Med.Comm		NORMAL	75	90	0.15	0.02	Min	
0.026	Whse.Com	4.4	NORMAL	75	90	0.05	0.02	Min	0.03
	Low.Comm		NORMAL	80	90	0.15	0.02	Min	
	School		NORMAL	75	40	0.20	0.02	Min	
	Religiou		NORMAL	75	65	0.15	0.02	Min	
	Public F		NORMAL	75	65	0.15	0.02	Min	

```
        Park                NORMAL      90        0     0.20    0.10  Hi
-----------------------------------------------------------------------------
 0.594 = Total Area              Avg. =   53     23%    0.300

PERCENT OF SUBBASIN             DRY =     25.0 %
                                NORMAL = 42.0 %
                                WET =     33.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE =  0.11

SUBBASIN XKSAT ADJUSTED FOR VEG. =      0.04

IMPERVIOUS AREA:          URBAN @   100 % effective = 23
                   ROCK OUTCROP @   100 % effective =  0
                                   ------------------------
                                   % EFFECTIVE IMP. = 23
```

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBQC	0.595	1.14	0.64	0.05	8.8	0.30	0.11	10.10	0.04	23	42

LOSS PARAMETERS FOR SUBBASIN: SUBQD

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
GC	0.042	15.4	0.01	0
GT	0.005	1.8	0.04	0
GV	0.039	14.3	0.01	0
LE	0.004	1.5	0.04	0
MR	0.025	9.2	0.05	0
MS	0.158	57.9	0.01	0
TT	0.000	0.0	0.04	0

TOTAL = 0.273 Sq.Miles XKSAT = 0.01 %Rock = 0

DTHETA

Dry = 0.15 PSIF = 12.40
Normal = 0.05
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
	Crops		WET	80	0	0.50	0.10	Hi	
	Stockyar		NORMAL	10	0	0.50	0.10	Hi	
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
0.088	Vacant	32.4	DRY	15	0	0.35	0.02	Min	0.03
0.002	Frwy/Can	0.7	NORMAL	10	10	0.20	0.01	Min	0.04
	L.D.R.		NORMAL	50	15	0.20	0.05	Low	
0.007	M.D.R.	2.6	NORMAL	50	30	0.15	0.05	Low	0.07
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
0.001	G.I.	0.4	NORMAL	70	55	0.10	0.03	Min	0.04
0.125	L.I.	46.0	NORMAL	60	55	0.10	0.03	Min	0.03
	P.S.		NORMAL	60	55	0.20	0.03	Min	
0.008	R/R	2.9	NORMAL	10	25	0.10	0.03	Min	0.04
0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min	
0.039	Whse.Com	14.3	NORMAL	75	90	0.05	0.02	Min	0.03
0.000	Low.Comm	0.0	NORMAL	80	90	0.15	0.02	Min	
0.000	School	0.0	NORMAL	75	40	0.20	0.02	Min	
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min	
0.002	Park	0.7	NORMAL	90	0	0.20	0.10	Hi	0.15
0.272 = Total Area			Avg. =	34	40%	0.180			

PERCENT OF SUBBASIN DRY = 32.0 %
NORMAL = 68.0 %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.08

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.01

IMPERVIOUS AREA: URBAN @ 100 % effective = 40
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 40

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBQD	0.273	0.98	0.49	0.03	12.2	0.18	0.08	12.40	0.01	40	18

LOSS PARAMETERS FOR SUBBASIN: SUBQE

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AO	0.069	7.7	0.04	0
CN	0.040	4.5	0.01	0
GC	0.054	6.0	0.01	0
GGA	0.067	7.5	0.25	0
GT	0.379	42.3	0.04	0
GV	0.114	12.7	0.01	0
LCA	0.000	0.0	0.25	0
LE	0.017	1.9	0.04	0
MR	0.004	0.4	0.05	0
MS	0.094	10.5	0.01	0
TT	0.059	6.6	0.04	0

TOTAL = 0.897 Sq.Miles XKSAT = 0.03 %Rock = 0

DTHETA

Dry = 0.22 PSIF = 10.10
Normal = 0.13
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.106	Crops	11.8	WET	80	0	0.50	0.10	Hi	0.10
	Stockyar		NORMAL	10	0	0.50	0.10	Hi	
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
0.092	Vacant	10.2	DRY	15	0	0.35	0.02	Min	0.03
0.008	Frwy/Can	0.9	NORMAL	10	10	0.20	0.01	Min	0.04
0.000	L.D.R.	0.0	NORMAL	50	15	0.20	0.05	Low	
0.204	M.D.R.	22.7	NORMAL	50	30	0.15	0.05	Low	0.05
0.050	H.D.R.	5.6	NORMAL	60	40	0.15	0.05	Low	0.06
	M.H.		NORMAL	50	50	0.10	0.05	Low	
0.004	G.I.	0.4	NORMAL	70	55	0.10	0.03	Min	0.04
0.247	L.I.	27.5	NORMAL	60	55	0.10	0.03	Min	0.03
	P.S.		NORMAL	60	55	0.20	0.03	Min	
0.036	R/R	4.0	NORMAL	10	25	0.10	0.03	Min	0.03
0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min	
0.132	Whse.Com	14.7	NORMAL	75	90	0.05	0.02	Min	0.03
0.012	Low.Comm	1.3	NORMAL	80	90	0.15	0.02	Min	0.03
0.000	School	0.0	NORMAL	75	40	0.20	0.02	Min	
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min	
0.007	Park	0.8	NORMAL	90	0	0.20	0.10	Hi	0.13
0.898 = Total Area			Avg. =	51	40%	0.180			

PERCENT OF SUBBASIN DRY = 10.0 %
NORMAL = 78.0 %
WET = 12.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.12

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.04

IMPERVIOUS AREA: URBAN @ 100 % effective = 40
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 40

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBQE	0.897	1.40	0.83	0.04	16.4	0.18	0.12	10.10	0.04	40	38

LOSS PARAMETERS FOR SUBBASIN: SUBRA

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AA	0.064	27.0	0.26	0
GE	0.046	19.4	0.26	0
GGA	0.123	51.9	0.25	0
VG	0.004	1.7	0.91	0

TOTAL = 0.237 Sq.Miles XKSAT = 0.26 %Rock = 0

DTHETA

Dry = 0.35 PSIF = 4.70
Normal = 0.25
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.237	Crops	100.	WET	80	0	0.50	0.10	Hi	0.10
	Stockyar		NORMAL	10	0	0.50	0.10	Hi	
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
	Vacant		DRY	15	0	0.35	0.02	Min	
0.000	Frwy/Can	0.0	NORMAL	10	10	0.20	0.01	Min	
	L.D.R.		NORMAL	50	15	0.20	0.05	Low	
	M.D.R.		NORMAL	50	30	0.15	0.05	Low	
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
	G.I.		NORMAL	70	55	0.10	0.03	Min	
	L.I.		NORMAL	60	55	0.10	0.03	Min	
	P.S.		NORMAL	60	55	0.20	0.03	Min	
	R/R		NORMAL	10	25	0.10	0.03	Min	
0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min	
0.000	Whse.Com	0.0	NORMAL	75	90	0.05	0.02	Min	
0.000	Low.Comm	0.0	NORMAL	80	90	0.15	0.02	Min	
0.000	School	0.0	NORMAL	75	40	0.20	0.02	Min	
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Park	0.0	NORMAL	90	0	0.20	0.10	Hi	

0.237 = Total Area Avg. = 80 0% 0.500

PERCENT OF SUBBASIN DRY = 0.0 %
NORMAL = 0.0 %
WET = 100. %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.00

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.46

IMPERVIOUS AREA: URBAN @ 100 % effective = 0
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 0

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBRA	0.237	0.76	0.37	0.10	9.2	0.50	0.00	4.70	0.46	0	58

LOSS PARAMETERS FOR SUBBASIN: SUBRB

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
ABA	0.040	7.3	0.38	0
ABB	0.018	3.3	0.39	0
BS	0.006	1.1	0.39	0
ES	0.016	2.9	0.25	0
GE	0.103	18.9	0.26	0
GGA	0.183	33.5	0.25	0
GT	0.084	15.4	0.04	0
LCA	0.034	6.2	0.25	0
LCB	0.005	0.9	0.25	0
MP	0.020	3.7	0.25	0
MR	0.029	5.3	0.05	0
RBA	0.006	1.1	0.26	0
TW	0.002	0.4	0.05	0

TOTAL = 0.546 Sq.Miles XKSAT = 0.18 %Rock = 0

DTHETA

Dry = 0.38 PSIF = 5.60
Normal = 0.25
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.420	Crops	76.9	WET	80	0	0.50	0.10	Hi	0.09
0.032	Stockyar	5.9	NORMAL	10	0	0.50	0.10	Hi	0.12
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
0.094	Vacant	17.2	DRY	15	0	0.35	0.02	Min	0.03
0.000	Frwy/Can	0.0	NORMAL	10	10	0.20	0.01	Min	
	L.D.R.		NORMAL	50	15	0.20	0.05	Low	
	M.D.R.		NORMAL	50	30	0.15	0.05	Low	
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
	G.I.		NORMAL	70	55	0.10	0.03	Min	
	L.I.		NORMAL	60	55	0.10	0.03	Min	
	P.S.		NORMAL	60	55	0.20	0.03	Min	
	R/R		NORMAL	10	25	0.10	0.03	Min	
0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min	
0.000	Whse.Com	0.0	NORMAL	75	90	0.05	0.02	Min	
0.000	Low.Comm	0.0	NORMAL	80	90	0.15	0.02	Min	
0.000	School	0.0	NORMAL	75	40	0.20	0.02	Min	
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Park	0.0	NORMAL	90	0	0.20	0.10	Hi	

0.546 = Total Area Avg. = 65 0% 0.470

PERCENT OF SUBBASIN DRY = 17.0 %
NORMAL = 6.0 %
WET = 77.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.08

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.29

IMPERVIOUS AREA: URBAN @ 100 % effective = 0
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 0

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBRB	0.546	1.14	0.57	0.09	19.3	0.47	0.08	5.60	0.29	0	60

LOSS PARAMETERS FOR SUBBASIN: SUBRC

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
LCA	0.459	67.2	0.25	0
LE	0.189	27.7	0.04	0
MR	0.031	4.5	0.05	0
TW	0.004	0.6	0.05	0

TOTAL = 0.683 Sq.Miles XKSAT = 0.14 %Rock = 0

DTHETA

Dry = 0.39 PSIF = 6.20
Normal = 0.23
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.649	Crops	94.9	WET	80	0	0.50	0.10	Hi	0.08
0.034	Stockyar	5.0	NORMAL	10	0	0.50	0.10	Hi	0.12
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
	Vacant		DRY	15	0	0.35	0.02	Min	
0.001	Frwy/Can	0.1	NORMAL	10	10	0.20	0.01	Min	0.04
	L.D.R.		NORMAL	50	15	0.20	0.05	Low	
	M.D.R.		NORMAL	50	30	0.15	0.05	Low	
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
	G.I.		NORMAL	70	55	0.10	0.03	Min	
	L.I.		NORMAL	60	55	0.10	0.03	Min	
	P.S.		NORMAL	60	55	0.20	0.03	Min	
	R/R		NORMAL	10	25	0.10	0.03	Min	
0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min	
0.000	Whse.Com	0.0	NORMAL	75	90	0.05	0.02	Min	
0.000	Low.Comm	0.0	NORMAL	80	90	0.15	0.02	Min	
0.000	School	0.0	NORMAL	75	40	0.20	0.02	Min	
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Park	0.0	NORMAL	90	0	0.20	0.10	Hi	
0.684 = Total Area			Avg. =	76	0%	0.500			

PERCENT OF SUBBASIN DRY = 0.0 %
NORMAL = 5.0 %
WET = 95.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.01

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.24

IMPERVIOUS AREA: URBAN @ 100 % effective = 0
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 0

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBRC	0.683	1.21	0.62	0.10	14.0	0.50	0.01	6.20	0.24	0	78

LOSS PARAMETERS FOR SUBBASIN: SUBRD

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
LCA	0.286	76.1	0.25	0
LE	0.068	18.1	0.04	0
TW	0.022	5.9	0.05	0

TOTAL = 0.376 Sq.Miles XKSAT = 0.16 %Rock = 0

DTHETA

Dry = 0.39 PSIF = 5.80
Normal = 0.25
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.373	Crops	99.2	WET	80	0	0.50	0.10	Hi	0.09
0.003	Stockyar	0.8	NORMAL	10	0	0.50	0.10	Hi	0.14
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
	Vacant		DRY	15	0	0.35	0.02	Min	
	Frwy/Can		NORMAL	10	10	0.20	0.01	Min	
	L.D.R.		NORMAL	50	15	0.20	0.05	Low	
	M.D.R.		NORMAL	50	30	0.15	0.05	Low	
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
	G.I.		NORMAL	70	55	0.10	0.03	Min	
	L.I.		NORMAL	60	55	0.10	0.03	Min	
	P.S.		NORMAL	60	55	0.20	0.03	Min	
	R/R		NORMAL	10	25	0.10	0.03	Min	
	Med.Comm		NORMAL	75	90	0.15	0.02	Min	
	Whse.Com		NORMAL	75	90	0.05	0.02	Min	
	Low.Comm		NORMAL	80	90	0.15	0.02	Min	
	School		NORMAL	75	40	0.20	0.02	Min	
	Religiou		NORMAL	75	65	0.15	0.02	Min	
	Public F		NORMAL	75	65	0.15	0.02	Min	
	Park		NORMAL	90	0	0.20	0.10	Hi	
0.376 = Total Area			Avg. =	79	0%	0.500			

PERCENT OF SUBBASIN DRY = 0.0 %
NORMAL = 1.0 %
WET = 99.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.00

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.28

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IMPERVIOUS AREA:          URBAN @   100 % effective =  0
                   ROCK OUTCROP @   100 % effective =  0
                                   ------------------------
                                   % EFFECTIVE IMP. =  0
```

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBRD	0.376	0.95	0.47	0.10	10.5	0.50	0.00	5.80	0.28	0	68

LOSS PARAMETERS FOR SUBBASIN: SUBRE

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
LCA	0.148	40.7	0.25	0
LE	0.181	49.7	0.04	0
MP	0.021	5.8	0.25	0
TT	0.014	3.8	0.04	0

TOTAL = 0.364 Sq.Miles XKSAT = 0.09 %Rock = 0

DTHETA

Dry = 0.33 PSIF = 7.30
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.364	Crops	100.	WET	80	0	0.50	0.10	Hi	0.09
0.000	Stockyar	0.0	NORMAL	10	0	0.50	0.10	Hi	
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
	Vacant		DRY	15	0	0.35	0.02	Min	
	Frwy/Can		NORMAL	10	10	0.20	0.01	Min	
	L.D.R.		NORMAL	50	15	0.20	0.05	Low	
	M.D.R.		NORMAL	50	30	0.15	0.05	Low	
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
	G.I.		NORMAL	70	55	0.10	0.03	Min	
	L.I.		NORMAL	60	55	0.10	0.03	Min	
	P.S.		NORMAL	60	55	0.20	0.03	Min	
	R/R		NORMAL	10	25	0.10	0.03	Min	
0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min	
0.000	Whse.Com	0.0	NORMAL	75	90	0.05	0.02	Min	
0.000	Low.Comm	0.0	NORMAL	80	90	0.15	0.02	Min	
0.000	School	0.0	NORMAL	75	40	0.20	0.02	Min	
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Park	0.0	NORMAL	90	0	0.20	0.10	Hi	

0.364 = Total Area Avg. = 80 0% 0.500

PERCENT OF SUBBASIN DRY = 0.0 %
NORMAL = 0.0 %
WET = 100. %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.00

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.16

IMPERVIOUS AREA: URBAN @ 100 % effective = 0
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 0

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBRE	0.364	0.95	0.47	0.10	6.3	0.50	0.00	7.30	0.16	0	75

LOSS PARAMETERS FOR SUBBASIN: SUBRF

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
GT	0.524	82.5	0.04	0
LCA	0.008	1.3	0.25	0
LE	0.018	2.8	0.04	0
TT	0.059	9.3	0.04	0
VF	0.026	4.1	0.01	0

TOTAL = 0.635 Sq.Miles XKSAT = 0.04 %Rock = 0

DTHETA

Dry = 0.25 PSIF = 9.70
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.272	Crops	42.8	WET	80	0	0.50	0.10	Hi	0.09
	Stockyar		NORMAL	10	0	0.50	0.10	Hi	
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
0.029	Vacant	4.6	DRY	15	0	0.35	0.02	Min	0.03
0.000	Frwy/Can	0.0	NORMAL	10	10	0.20	0.01	Min	
	L.D.R.		NORMAL	50	15	0.20	0.05	Low	
0.224	M.D.R.	35.3	NORMAL	50	30	0.15	0.05	Low	0.05
0.024	H.D.R.	3.8	NORMAL	60	40	0.15	0.05	Low	0.06
	M.H.		NORMAL	50	50	0.10	0.05	Low	
	G.I.		NORMAL	70	55	0.10	0.03	Min	
	L.I.		NORMAL	60	55	0.10	0.03	Min	
	P.S.		NORMAL	60	55	0.20	0.03	Min	
	R/R		NORMAL	10	25	0.10	0.03	Min	
	Med.Comm		NORMAL	75	90	0.15	0.02	Min	
	Whse.Com		NORMAL	75	90	0.05	0.02	Min	
0.035	Low.Comm	5.5	NORMAL	80	90	0.15	0.02	Min	0.03
0.038	School	6.0	NORMAL	75	40	0.20	0.02	Min	0.03
	Religiou		NORMAL	75	65	0.15	0.02	Min	
	Public F		NORMAL	75	65	0.15	0.02	Min	
0.013	Park	2.0	NORMAL	90	0	0.20	0.10	Hi	0.13
0.635 = Total Area			Avg. =	67	19%	0.310			

PERCENT OF SUBBASIN DRY = 5.0 %
NORMAL = 53.0 %
WET = 43.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.09

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.07

IMPERVIOUS AREA: URBAN @ 100 % effective = 19
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 19

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBRF	0.635	1.21	0.68	0.07	11.6	0.31	0.09	9.70	0.07	19	57

LOSS PARAMETERS FOR SUBBASIN: SUBRG

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
GT	0.085	66.4	0.04	0
LCA	0.004	3.1	0.25	0
LE	0.039	30.5	0.04	0

TOTAL = 0.128 Sq.Miles XKSAT = 0.04 %Rock = 0

DTHETA

Dry = 0.25 PSIF = 9.70
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.120	Crops	93.7	WET	80	0	0.50	0.10	Hi	0.10
	Stockyar		NORMAL	10	0	0.50	0.10	Hi	
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
0.000	Vacant	0.0	DRY	15	0	0.35	0.02	Min	
0.001	Frwy/Can	0.8	NORMAL	10	10	0.20	0.01	Min	0.04
	L.D.R.		NORMAL	50	15	0.20	0.05	Low	
0.007	M.D.R.	5.5	NORMAL	50	30	0.15	0.05	Low	0.07
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
	G.I.		NORMAL	70	55	0.10	0.03	Min	
	L.I.		NORMAL	60	55	0.10	0.03	Min	
	P.S.		NORMAL	60	55	0.20	0.03	Min	
	R/R		NORMAL	10	25	0.10	0.03	Min	
0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min	
0.000	Whse.Com	0.0	NORMAL	75	90	0.05	0.02	Min	
0.000	Low.Comm	0.0	NORMAL	80	90	0.15	0.02	Min	
0.000	School	0.0	NORMAL	75	40	0.20	0.02	Min	
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Park	0.0	NORMAL	90	0	0.20	0.10	Hi	
0.128 = Total Area			Avg. =	78	2%	0.480			

PERCENT OF SUBBASIN DRY = 0.0 %
NORMAL = 6.0 %
WET = 94.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.01

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.07

```
IMPERVIOUS AREA:          URBAN @   100 % effective =  2
                   ROCK OUTCROP @   100 % effective =  0
                                   ------------------------
                                   % EFFECTIVE IMP. =  2
```

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBRG	0.128	0.56	0.28	0.10	14.3	0.48	0.01	9.70	0.07	2	42

LOSS PARAMETERS FOR SUBBASIN: SUBRH

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
GGA	0.020	9.0	0.25	0
GT	0.202	91.0	0.04	0

TOTAL = 0.222 Sq.Miles XKSAT = 0.05 %Rock = 0

DTHETA

Dry = 0.27 PSIF = 8.80
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.221	Crops	99.5	WET	80	0	0.50	0.10	Hi	0.10
	Stockyar		NORMAL	10	0	0.50	0.10	Hi	
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
	Vacant		DRY	15	0	0.35	0.02	Min	
	Frwy/Can		NORMAL	10	10	0.20	0.01	Min	
0.000	L.D.R.	0.0	NORMAL	50	15	0.20	0.05	Low	
0.001	M.D.R.	0.5	NORMAL	50	30	0.15	0.05	Low	0.08
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
	G.I.		NORMAL	70	55	0.10	0.03	Min	
	L.I.		NORMAL	60	55	0.10	0.03	Min	
	P.S.		NORMAL	60	55	0.20	0.03	Min	
	R/R		NORMAL	10	25	0.10	0.03	Min	
0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min	
0.000	Whse.Com	0.0	NORMAL	75	90	0.05	0.02	Min	
0.000	Low.Comm	0.0	NORMAL	80	90	0.15	0.02	Min	
0.000	School	0.0	NORMAL	75	40	0.20	0.02	Min	
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Park	0.0	NORMAL	90	0	0.20	0.10	Hi	

0.222 = Total Area Avg. = 80 0% 0.500

PERCENT OF SUBBASIN DRY = 0.0 %
NORMAL = 0.0 %
WET = 100. %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.00

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.09

IMPERVIOUS AREA: URBAN @ 100 % effective = 0
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 0

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBRH	0.222	0.64	0.32	0.10	15.6	0.50	0.00	8.80	0.09	0	47

LOSS PARAMETERS FOR SUBBASIN: SUBRI

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AO	0.112	47.7	0.04	0
GGA	0.085	36.2	0.25	0
GT	0.038	16.2	0.04	0

TOTAL = 0.235 Sq.Miles XKSAT = 0.08 %Rock = 0

DTHETA

Dry = 0.32 PSIF = 7.60
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.171	Crops	72.5	WET	80	0	0.50	0.10	Hi	0.10
0.000	Stockyar	0.0	NORMAL	10	0	0.50	0.10	Hi	
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
0.046	Vacant	19.5	DRY	15	0	0.35	0.02	Min	0.03
0.001	Frwy/Can	0.4	NORMAL	10	10	0.20	0.01	Min	0.04
	L.D.R.		NORMAL	50	15	0.20	0.05	Low	
0.002	M.D.R.	0.8	NORMAL	50	30	0.15	0.05	Low	0.08
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
	G.I.		NORMAL	70	55	0.10	0.03	Min	
0.016	L.I.	6.8	NORMAL	60	55	0.10	0.03	Min	0.03
	P.S.		NORMAL	60	55	0.20	0.03	Min	
	R/R		NORMAL	10	25	0.10	0.03	Min	
0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min	
0.000	Whse.Com	0.0	NORMAL	75	90	0.05	0.02	Min	
0.000	Low.Comm	0.0	NORMAL	80	90	0.15	0.02	Min	
0.000	School	0.0	NORMAL	75	40	0.20	0.02	Min	
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Park	0.0	NORMAL	90	0	0.20	0.10	Hi	
0.236 = Total Area			Avg. =	66	4%	0.440			

PERCENT OF SUBBASIN DRY = 20.0 %
NORMAL = 8.0 %
WET = 72.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.08

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.13

IMPERVIOUS AREA: URBAN @ 100 % effective = 4
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 4

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBRI	0.235	0.57	0.19	0.08	19.3	0.44	0.08	7.60	0.13	4	28

LOSS PARAMETERS FOR SUBBASIN: SUBRJ

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
GE	0.011	7.7	0.26	0
GGA	0.060	42.3	0.25	0
GT	0.071	50.0	0.04	0

TOTAL = 0.142 Sq.Miles XKSAT = 0.10 %Rock = 0

DTHETA

Dry = 0.35 PSIF = 7.00
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.046	Crops	32.4	WET	80	0	0.50	0.10	Hi	0.11
	Stockyar		NORMAL	10	0	0.50	0.10	Hi	
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
0.009	Vacant	6.3	DRY	15	0	0.35	0.02	Min	0.04
0.050	Frwy/Can	35.2	NORMAL	10	10	0.20	0.01	Min	0.03
	L.D.R.		NORMAL	50	15	0.20	0.05	Low	
	M.D.R.		NORMAL	50	30	0.15	0.05	Low	
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
	G.I.		NORMAL	70	55	0.10	0.03	Min	
0.037	L.I.	26.1	NORMAL	60	55	0.10	0.03	Min	0.03
	P.S.		NORMAL	60	55	0.20	0.03	Min	
	R/R		NORMAL	10	25	0.10	0.03	Min	
0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min	
0.000	Whse.Com	0.0	NORMAL	75	90	0.05	0.02	Min	
0.000	Low.Comm	0.0	NORMAL	80	90	0.15	0.02	Min	
0.000	School	0.0	NORMAL	75	40	0.20	0.02	Min	
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Park	0.0	NORMAL	90	0	0.20	0.10	Hi	
0.142 = Total Area			Avg. =	45	18%	0.280			

PERCENT OF SUBBASIN DRY = 6.0 %
NORMAL = 61.0 %
WET = 32.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.11

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.14

```
IMPERVIOUS AREA:          URBAN @   100 % effective = 18
                   ROCK OUTCROP @   100 % effective =  0
                                   ------------------------
                                   % EFFECTIVE IMP. = 18
```

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBRJ	0.142	0.72	0.42	0.05	5.6	0.28	0.11	7.00	0.14	18	30

LOSS PARAMETERS FOR SUBBASIN: SUBSA

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AO	0.005	1.2	0.04	0
GT	0.417	98.8	0.04	0

TOTAL = 0.422 Sq.Miles XKSAT = 0.04 %Rock = 0

DTHETA

Dry = 0.25 PSIF = 9.70
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.024	Crops	5.7	WET	80	0	0.50	0.10	Hi	0.12
0.007	Stockyar	1.7	NORMAL	10	0	0.50	0.10	Hi	0.13
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
0.055	Vacant	13.0	DRY	15	0	0.35	0.02	Min	0.03
0.022	Frwy/Can	5.2	NORMAL	10	10	0.20	0.01	Min	0.03
0.258	L.D.R.	61.1	NORMAL	50	15	0.20	0.05	Low	0.05
0.042	M.D.R.	10.0	NORMAL	50	30	0.15	0.05	Low	0.06
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
	G.I.		NORMAL	70	55	0.10	0.03	Min	
	L.I.		NORMAL	60	55	0.10	0.03	Min	
	P.S.		NORMAL	60	55	0.20	0.03	Min	
	R/R		NORMAL	10	25	0.10	0.03	Min	
0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min	
0.000	Whse.Com	0.0	NORMAL	75	90	0.05	0.02	Min	
0.014	Low.Comm	3.3	NORMAL	80	90	0.15	0.02	Min	0.03
0.000	School	0.0	NORMAL	75	40	0.20	0.02	Min	
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Park	0.0	NORMAL	90	0	0.20	0.10	Hi	
0.422 = Total Area			Avg. =	44	16%	0.240			

PERCENT OF SUBBASIN
DRY = 13.0 %
NORMAL = 81.0 %
WET = 6.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.15

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.06

```
IMPERVIOUS AREA:          URBAN @   100 % effective = 16
                     ROCK OUTCROP @   100 % effective =  0
                                     ------------------------
                                     % EFFECTIVE IMP. = 16
```

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBSA	0.422	0.83	0.30	0.05	9.6	0.24	0.15	9.70	0.06	16	26

LOSS PARAMETERS FOR SUBBASIN: SUBSB

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AO	0.025	13.4	0.04	0
GGA	0.010	5.3	0.25	0
GT	0.152	81.3	0.04	0

TOTAL = 0.187 Sq.Miles XKSAT = 0.04 %Rock = 0

DTHETA

Dry = 0.25 PSIF = 9.70
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.157	Crops	84.0	WET	80	0	0.50	0.10	Hi	0.10
	Stockyar		NORMAL	10	0	0.50	0.10	Hi	
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
0.013	Vacant	7.0	DRY	15	0	0.35	0.02	Min	0.03
0.009	Frwy/Can	4.8	NORMAL	10	10	0.20	0.01	Min	0.04
	L.D.R.		NORMAL	50	15	0.20	0.05	Low	
	M.D.R.		NORMAL	50	30	0.15	0.05	Low	
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
	G.I.		NORMAL	70	55	0.10	0.03	Min	
	L.I.		NORMAL	60	55	0.10	0.03	Min	
	P.S.		NORMAL	60	55	0.20	0.03	Min	
	R/R		NORMAL	10	25	0.10	0.03	Min	
0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min	
0.000	Whse.Com	0.0	NORMAL	75	90	0.05	0.02	Min	
0.000	Low.Comm	0.0	NORMAL	80	90	0.15	0.02	Min	
0.000	School	0.0	NORMAL	75	40	0.20	0.02	Min	
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	
0.008	Public F	4.3	NORMAL	75	65	0.15	0.02	Min	0.04
0.000	Park	0.0	NORMAL	90	0	0.20	0.10	Hi	
0.187 = Total Area			Avg. =	72	3%	0.460			

PERCENT OF SUBBASIN
DRY = 7.0 %
NORMAL = 9.0 %
WET = 84.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.03

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.07

IMPERVIOUS AREA: URBAN @ 100 % effective = 3
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 3

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBSB	0.187	0.53	0.27	0.09	15.1	0.46	0.03	9.70	0.07	3	36

LOSS PARAMETERS FOR SUBBASIN: SUBSC

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AA	0.009	2.1	0.26	0
AO	0.021	4.9	0.04	0
GGA	0.400	93.0	0.25	0

TOTAL = 0.430 Sq.Miles XKSAT = 0.23 %Rock = 0

DTHETA

Dry = 0.36 PSIF = 5.00
Normal = 0.25
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.342	Crops	79.7	WET	80	0	0.50	0.10	Hi	0.09
0.000	Stockyar	0.0	NORMAL	10	0	0.50	0.10	Hi	
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
0.086	Vacant	20.0	DRY	15	0	0.35	0.02	Min	0.03
0.001	Frwy/Can	0.2	NORMAL	10	10	0.20	0.01	Min	0.04
	L.D.R.		NORMAL	50	15	0.20	0.05	Low	
	M.D.R.		NORMAL	50	30	0.15	0.05	Low	
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
	G.I.		NORMAL	70	55	0.10	0.03	Min	
	L.I.		NORMAL	60	55	0.10	0.03	Min	
	P.S.		NORMAL	60	55	0.20	0.03	Min	
	R/R		NORMAL	10	25	0.10	0.03	Min	
0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min	
0.000	Whse.Com	0.0	NORMAL	75	90	0.05	0.02	Min	
0.000	Low.Comm	0.0	NORMAL	80	90	0.15	0.02	Min	
0.000	School	0.0	NORMAL	75	40	0.20	0.02	Min	
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Park	0.0	NORMAL	90	0	0.20	0.10	Hi	

0.429 = Total Area Avg. = 67 0% 0.470

PERCENT OF SUBBASIN DRY = 20.0 %
NORMAL = 0.0 %
WET = 80.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.07

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.38

IMPERVIOUS AREA: URBAN @ 100 % effective = 0
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 0

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBSC	0.430	1.32	0.68	0.08	15.2	0.47	0.07	5.00	0.38	0	69

LOSS PARAMETERS FOR SUBBASIN: SUBSD

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AO	0.039	27.7	0.04	0
GGA	0.085	60.3	0.25	0
GT	0.017	12.1	0.04	0

TOTAL = 0.141 Sq.Miles XKSAT = 0.12 %Rock = 0

DTHETA

Dry = 0.37 PSIF = 6.60
Normal = 0.19
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.126	Crops	90.0	WET	80	0	0.50	0.10	Hi	0.10
	Stockyar		NORMAL	10	0	0.50	0.10	Hi	
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
0.000	Vacant	0.0	DRY	15	0	0.35	0.02	Min	
0.014	Frwy/Can	10.0	NORMAL	10	10	0.20	0.01	Min	0.03
	L.D.R.		NORMAL	50	15	0.20	0.05	Low	
	M.D.R.		NORMAL	50	30	0.15	0.05	Low	
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
	G.I.		NORMAL	70	55	0.10	0.03	Min	
	L.I.		NORMAL	60	55	0.10	0.03	Min	
	P.S.		NORMAL	60	55	0.20	0.03	Min	
	R/R		NORMAL	10	25	0.10	0.03	Min	
0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min	
0.000	Whse.Com	0.0	NORMAL	75	90	0.05	0.02	Min	
0.000	Low.Comm	0.0	NORMAL	80	90	0.15	0.02	Min	
0.000	School	0.0	NORMAL	75	40	0.20	0.02	Min	
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Park	0.0	NORMAL	90	0	0.20	0.10	Hi	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
0.140 = Total Area			Avg. =	74	1%	0.470			

PERCENT OF SUBBASIN DRY = 0.0 %
NORMAL = 10.0 %
WET = 90.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.02

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.21

IMPERVIOUS AREA: URBAN @ 100 % effective = 1
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 1

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBSD	0.141	0.57	0.34	0.09	12.3	0.47	0.02	6.60	0.21	1	44

LOSS PARAMETERS FOR SUBBASIN: SUBSE

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
GE	0.007	8.2	0.26	0
GGA	0.078	91.8	0.25	0

TOTAL = 0.085 Sq.Miles XKSAT = 0.25 %Rock = 0

DTHETA

Dry = 0.35 PSIF = 4.80
Normal = 0.25
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.024	Crops	28.2	WET	80	0	0.50	0.10	Hi	0.12
	Stockyar		NORMAL	10	0	0.50	0.10	Hi	
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
0.054	Vacant	63.5	DRY	15	0	0.35	0.02	Min	0.03
0.007	Frwy/Can	8.2	NORMAL	10	10	0.20	0.01	Min	0.04
	L.D.R.		NORMAL	50	15	0.20	0.05	Low	
	M.D.R.		NORMAL	50	30	0.15	0.05	Low	
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
	G.I.		NORMAL	70	55	0.10	0.03	Min	
	L.I.		NORMAL	60	55	0.10	0.03	Min	
	P.S.		NORMAL	60	55	0.20	0.03	Min	
	R/R		NORMAL	10	25	0.10	0.03	Min	
0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min	
0.000	Whse.Com	0.0	NORMAL	75	90	0.05	0.02	Min	
0.000	Low.Comm	0.0	NORMAL	80	90	0.15	0.02	Min	
0.000	School	0.0	NORMAL	75	40	0.20	0.02	Min	
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Park	0.0	NORMAL	90	0	0.20	0.10	Hi	
0.085 = Total Area			Avg. =	33	1%	0.380			

PERCENT OF SUBBASIN DRY = 64.0 %
NORMAL = 8.0 %
WET = 28.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.24

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.31

```
IMPERVIOUS AREA:          URBAN @   100 % effective =  1
                   ROCK OUTCROP @   100 % effective =  0
                                   ------------------------
                                   % EFFECTIVE IMP. =  1
```

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBSE	0.085	0.34	0.17	0.04	26.5	0.38	0.24	4.80	0.31	1	11

LOSS PARAMETERS FOR SUBBASIN: SUBSF

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
GT	0.157	42.7	0.04	0
MR	0.027	7.3	0.05	0
TG	0.007	1.9	0.04	0
TT	0.177	48.1	0.04	0

TOTAL = 0.368 Sq.Miles XKSAT = 0.04 %Rock = 0

DTHETA

Dry = 0.25 PSIF = 9.70
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.352	Crops	95.9	WET	80	0	0.50	0.10	Hi	0.09
	Stockyar		NORMAL	10	0	0.50	0.10	Hi	
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
0.000	Vacant	0.0	DRY	15	0	0.35	0.02	Min	
0.009	Frwy/Can	2.5	NORMAL	10	10	0.20	0.01	Min	0.04
	L.D.R.		NORMAL	50	15	0.20	0.05	Low	
	M.D.R.		NORMAL	50	30	0.15	0.05	Low	
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
	G.I.		NORMAL	70	55	0.10	0.03	Min	
	L.I.		NORMAL	60	55	0.10	0.03	Min	
	P.S.		NORMAL	60	55	0.20	0.03	Min	
0.006	R/R	1.6	NORMAL	10	25	0.10	0.03	Min	0.04
0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min	
0.000	Whse.Com	0.0	NORMAL	75	90	0.05	0.02	Min	
0.000	Low.Comm	0.0	NORMAL	80	90	0.15	0.02	Min	
0.000	School	0.0	NORMAL	75	40	0.20	0.02	Min	
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Park	0.0	NORMAL	90	0	0.20	0.10	Hi	
0.367 = Total Area			Avg. =	78	1%	0.490			

PERCENT OF SUBBASIN DRY = 0.0 %
NORMAL = 4.0 %
WET = 96.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.01

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.07

IMPERVIOUS AREA: URBAN @ 100 % effective = 1
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 1

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBSF	0.368	0.87	0.44	0.10	9.2	0.49	0.01	9.70	0.07	1	64

LOSS PARAMETERS FOR SUBBASIN: SUBSG

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AO	0.045	24.7	0.04	0
GGA	0.075	41.2	0.25	0
GT	0.062	34.1	0.04	0

TOTAL = 0.182 Sq.Miles XKSAT = 0.09 %Rock = 0

DTHETA

Dry = 0.33 PSIF = 7.30
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.121	Crops	66.9	WET	80	0	0.50	0.10	Hi	0.10
	Stockyar		NORMAL	10	0	0.50	0.10	Hi	
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
	Vacant		DRY	15	0	0.35	0.02	Min	
0.000	Frwy/Can	0.0	NORMAL	10	10	0.20	0.01	Min	
	L.D.R.		NORMAL	50	15	0.20	0.05	Low	
	M.D.R.		NORMAL	50	30	0.15	0.05	Low	
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
	G.I.		NORMAL	70	55	0.10	0.03	Min	
0.060	L.I.	33.1	NORMAL	60	55	0.10	0.03	Min	0.03
	P.S.		NORMAL	60	55	0.20	0.03	Min	
	R/R		NORMAL	10	25	0.10	0.03	Min	
0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min	
0.000	Whse.Com	0.0	NORMAL	75	90	0.05	0.02	Min	
0.000	Low.Comm	0.0	NORMAL	80	90	0.15	0.02	Min	
0.000	School	0.0	NORMAL	75	40	0.20	0.02	Min	
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Park	0.0	NORMAL	90	0	0.20	0.10	Hi	
0.181 = Total Area			Avg. =	76	18%	0.370			

PERCENT OF SUBBASIN DRY = 0.0 %
NORMAL = 33.0 %
WET = 67.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.05

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.16

```
IMPERVIOUS AREA:          URBAN @   100 % effective = 18
                   ROCK OUTCROP @   100 % effective =  0
                                   ------------------------
                                   % EFFECTIVE IMP. = 18
```

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBSG	0.182	0.60	0.30	0.08	5.0	0.37	0.05	7.30	0.16	18	43

LOSS PARAMETERS FOR SUBBASIN: SUBSH

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AO	0.000	0.0	0.04	0
GT	0.106	100.	0.04	0

TOTAL = 0.106 Sq.Miles XKSAT = 0.04 %Rock = 0

DTHETA

Dry = 0.25 PSIF = 9.70
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.104	Crops	99.0	WET	80	0	0.50	0.10	Hi	0.10
	Stockyar		NORMAL	10	0	0.50	0.10	Hi	
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
	Vacant		DRY	15	0	0.35	0.02	Min	
0.001	Frwy/Can	1.0	NORMAL	10	10	0.20	0.01	Min	0.04
	L.D.R.		NORMAL	50	15	0.20	0.05	Low	
	M.D.R.		NORMAL	50	30	0.15	0.05	Low	
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
	G.I.		NORMAL	70	55	0.10	0.03	Min	
	L.I.		NORMAL	60	55	0.10	0.03	Min	
	P.S.		NORMAL	60	55	0.20	0.03	Min	
	R/R		NORMAL	10	25	0.10	0.03	Min	
0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min	
0.000	Whse.Com	0.0	NORMAL	75	90	0.05	0.02	Min	
0.000	Low.Comm	0.0	NORMAL	80	90	0.15	0.02	Min	
0.000	School	0.0	NORMAL	75	40	0.20	0.02	Min	
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Park	0.0	NORMAL	90	0	0.20	0.10	Hi	
0.105 = Total Area			Avg. =	79	0%	0.500			

PERCENT OF SUBBASIN DRY = 0.0 %
NORMAL = 1.0 %
WET = 99.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.00

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.07

IMPERVIOUS AREA: URBAN @ 100 % effective = 0
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 0

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBSH	0.106	0.45	0.23	0.10	11.1	0.50	0.00	9.70	0.07	0	38

LOSS PARAMETERS FOR SUBBASIN: SUBTA

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AA	0.015	5.6	0.26	0
AO	0.041	15.2	0.04	0
GGA	0.161	59.6	0.25	0
GT	0.053	19.6	0.04	0

TOTAL = 0.270 Sq.Miles XKSAT = 0.13 %Rock = 0

DTHETA

Dry = 0.38 PSIF = 6.40
Normal = 0.21
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.237	Crops	87.8	WET	80	0	0.50	0.10	Hi	0.10
0.024	Stockyar	8.9	NORMAL	10	0	0.50	0.10	Hi	0.12
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
0.009	Vacant	3.3	DRY	15	0	0.35	0.02	Min	0.04
	Frwy/Can		NORMAL	10	10	0.20	0.01	Min	
	L.D.R.		NORMAL	50	15	0.20	0.05	Low	
	M.D.R.		NORMAL	50	30	0.15	0.05	Low	
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
	G.I.		NORMAL	70	55	0.10	0.03	Min	
0.000	L.I.	0.0	NORMAL	60	55	0.10	0.03	Min	
	P.S.		NORMAL	60	55	0.20	0.03	Min	
	R/R		NORMAL	10	25	0.10	0.03	Min	
0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min	
0.000	Whse.Com	0.0	NORMAL	75	90	0.05	0.02	Min	
0.000	Low.Comm	0.0	NORMAL	80	90	0.15	0.02	Min	
0.000	School	0.0	NORMAL	75	40	0.20	0.02	Min	
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Park	0.0	NORMAL	90	0	0.20	0.10	Hi	

0.270 = Total Area Avg. = 72 0% 0.500

PERCENT OF SUBBASIN DRY = 3.0 %
NORMAL = 9.0 %
WET = 88.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.03

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.22

IMPERVIOUS AREA: URBAN @ 100 % effective = 0
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 0

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBTA	0.270	0.76	0.37	0.10	10.5	0.50	0.03	6.40	0.22	0	55

LOSS PARAMETERS FOR SUBBASIN: SUBTB

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
ES	0.033	3.7	0.25	0
GGA	0.050	5.6	0.25	0
GT	0.580	65.1	0.04	0
MR	0.049	5.5	0.05	0
TT	0.179	20.1	0.04	0

TOTAL = 0.891 Sq.Miles XKSAT = 0.05 %Rock = 0

DTHETA

Dry = 0.27 PSIF = 8.80
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.343	Crops	38.4	WET	80	0	0.50	0.10	Hi	0.09
0.038	Stockyar	4.3	NORMAL	10	0	0.50	0.10	Hi	0.12
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
0.268	Vacant	30.0	DRY	15	0	0.35	0.02	Min	0.03
0.000	Frwy/Can	0.0	NORMAL	10	10	0.20	0.01	Min	
0.015	L.D.R.	1.7	NORMAL	50	15	0.20	0.05	Low	0.07
0.208	M.D.R.	23.3	NORMAL	50	30	0.15	0.05	Low	0.05
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
	G.I.		NORMAL	70	55	0.10	0.03	Min	
	L.I.		NORMAL	60	55	0.10	0.03	Min	
	P.S.		NORMAL	60	55	0.20	0.03	Min	
	R/R		NORMAL	10	25	0.10	0.03	Min	
0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min	
0.000	Whse.Com	0.0	NORMAL	75	90	0.05	0.02	Min	
0.000	Low.Comm	0.0	NORMAL	80	90	0.15	0.02	Min	
0.011	School	1.2	NORMAL	75	40	0.20	0.02	Min	0.03
0.004	Religiou	0.4	NORMAL	75	65	0.15	0.02	Min	0.04
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min	
0.006	Park	0.7	NORMAL	90	0	0.20	0.10	Hi	0.14
0.893 = Total Area			Avg. =	50	8%	0.360			

PERCENT OF SUBBASIN DRY = 30.0 %
NORMAL = 32.0 %
WET = 38.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.13

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.07

IMPERVIOUS AREA: URBAN @ 100 % effective = 8
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 8

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBTB	0.891	1.97	0.79	0.06	10.2	0.36	0.13	8.80	0.07	8	68

LOSS PARAMETERS FOR SUBBASIN: SUBUA

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AO	0.001	0.2	0.04	0
GGA	0.021	3.8	0.25	0
GT	0.322	57.7	0.04	0
MR	0.106	19.0	0.05	0
MS	0.021	3.8	0.01	0
RBA	0.013	2.3	0.26	0
TT	0.074	13.3	0.04	0

TOTAL = 0.558 Sq.Miles XKSAT = 0.04 %Rock = 0

DTHETA

Dry = 0.25 PSIF = 9.70
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.073	Crops	13.1	WET	80	0	0.50	0.10	Hi	0.11
	Stockyar		NORMAL	10	0	0.50	0.10	Hi	
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
0.141	Vacant	25.2	DRY	15	0	0.35	0.02	Min	0.03
	Frwy/Can		NORMAL	10	10	0.20	0.01	Min	
0.012	L.D.R.	2.1	NORMAL	50	15	0.20	0.05	Low	0.07
0.277	M.D.R.	49.6	NORMAL	50	30	0.15	0.05	Low	0.05
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
0.056	M.H.	10.0	NORMAL	50	50	0.10	0.05	Low	0.06
	G.I.		NORMAL	70	55	0.10	0.03	Min	
	L.I.		NORMAL	60	55	0.10	0.03	Min	
	P.S.		NORMAL	60	55	0.20	0.03	Min	
	R/R		NORMAL	10	25	0.10	0.03	Min	
0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min	
0.000	Whse.Com	0.0	NORMAL	75	90	0.05	0.02	Min	
0.000	Low.Comm	0.0	NORMAL	80	90	0.15	0.02	Min	
0.000	School	0.0	NORMAL	75	40	0.20	0.02	Min	
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Park	0.0	NORMAL	90	0	0.20	0.10	Hi	

0.559 = Total Area Avg. = 44 20% 0.240

PERCENT OF SUBBASIN DRY = 25.0 %
NORMAL = 62.0 %
WET = 13.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.16

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.06

IMPERVIOUS AREA: URBAN @ 100 % effective = 20
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 20

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBUA	0.558	1.21	0.57	0.05	14.9	0.24	0.16	9.70	0.06	20	37

LOSS PARAMETERS FOR SUBBASIN: SUBUB

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
GT	0.040	29.2	0.04	0
MR	0.081	59.1	0.05	0
TT	0.016	11.7	0.04	0
VF	0.000	0.0	0.01	0

TOTAL = 0.137 Sq.Miles XKSAT = 0.05 %Rock = 0

DTHETA

Dry = 0.27 PSIF = 8.80
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.010	Crops	7.3	WET	80	0	0.50	0.10	Hi	0.13
0.000	Stockyar	0.0	NORMAL	10	0	0.50	0.10	Hi	
0.000	Citrus	0.0	NORMAL	80	0	0.70	0.10	Hi	
0.000	River	0.0	NORMAL	90	0	0.20	0.20	Max	
0.000	Vacant	0.0	DRY	15	0	0.35	0.02	Min	
0.000	Frwy/Can	0.0	NORMAL	10	10	0.20	0.01	Min	
0.099	L.D.R.	72.3	NORMAL	50	15	0.20	0.05	Low	0.06
0.000	M.D.R.	0.0	NORMAL	50	30	0.15	0.05	Low	
0.000	H.D.R.	0.0	NORMAL	60	40	0.15	0.05	Low	
0.000	M.H.	0.0	NORMAL	50	50	0.10	0.05	Low	
0.000	G.I.	0.0	NORMAL	70	55	0.10	0.03	Min	
0.000	L.I.	0.0	NORMAL	60	55	0.10	0.03	Min	
0.000	P.S.	0.0	NORMAL	60	55	0.20	0.03	Min	
0.000	R/R	0.0	NORMAL	10	25	0.10	0.03	Min	
0.010	Med.Comm	7.3	NORMAL	75	90	0.15	0.02	Min	0.03
0.000	Whse.Com	0.0	NORMAL	75	90	0.05	0.02	Min	
0.000	Low.Comm	0.0	NORMAL	80	90	0.15	0.02	Min	
0.018	School	13.1	NORMAL	75	40	0.20	0.02	Min	0.03
0.000	Religiou	0.0							
0.000	Religiou	0.0							
0.000	Religiou	0.0							
0.137 = Total Area			Avg. =	56	23%	0.220			

PERCENT OF SUBBASIN DRY = 0.0 %
NORMAL = 93.0 %
WET = 7.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.14

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.08

IMPERVIOUS AREA: URBAN @ 100 % effective = 23
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 23

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBUB	0.137	0.80	0.40	0.05	16.2	0.22	0.14	8.80	0.08	23	30

LOSS PARAMETERS FOR SUBBASIN: SUBUC

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
GGA	0.026	5.4	0.25	0
GT	0.426	88.0	0.04	0
MR	0.027	5.6	0.05	0
TT	0.005	1.0	0.04	0

TOTAL = 0.484 Sq.Miles XKSAT = 0.04 %Rock = 0

DTHETA

Dry = 0.25 PSIF = 9.70
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.083	Crops	17.1	WET	80	0	0.50	0.10	Hi	0.11
	Stockyar		NORMAL	10	0	0.50	0.10	Hi	
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
0.126	Vacant	26.0	DRY	15	0	0.35	0.02	Min	0.03
	Frwy/Can		NORMAL	10	10	0.20	0.01	Min	
0.106	L.D.R.	21.9	NORMAL	50	15	0.20	0.05	Low	0.05
	M.D.R.		NORMAL	50	30	0.15	0.05	Low	
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
0.001	M.H.	0.2	NORMAL	50	50	0.10	0.05	Low	0.08
	G.I.		NORMAL	70	55	0.10	0.03	Min	
0.168	L.I.	34.7	NORMAL	60	55	0.10	0.03	Min	0.03
0.000	P.S.	0.0	NORMAL	60	55	0.20	0.03	Min	
	R/R		NORMAL	10	25	0.10	0.03	Min	
0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min	
0.000	Whse.Com	0.0	NORMAL	75	90	0.05	0.02	Min	
0.000	Low.Comm	0.0	NORMAL	80	90	0.15	0.02	Min	
0.000	School	0.0	NORMAL	75	40	0.20	0.02	Min	
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Park	0.0	NORMAL	90	0	0.20	0.10	Hi	
0.484 = Total Area			Avg. =	47	22%	0.260			

PERCENT OF SUBBASIN DRY = 26.0 %
NORMAL = 57.0 %
WET = 17.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.15

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.06

IMPERVIOUS AREA: URBAN @ 100 % effective = 22
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 22

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBUC	0.484	1.02	0.51	0.04	12.7	0.26	0.15	9.70	0.06	22	31

LOSS PARAMETERS FOR SUBBASIN: SUBUD

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AO	0.092	11.9	0.04	0
GT	0.684	88.1	0.04	0

TOTAL = 0.776 Sq.Miles XKSAT = 0.04 %Rock = 0

DTHETA

Dry = 0.25 PSIF = 9.70
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.360	Crops	46.4	WET	80	0	0.50	0.10	Hi	0.09
	Stockyar		NORMAL	10	0	0.50	0.10	Hi	
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
0.255	Vacant	32.9	DRY	15	0	0.35	0.02	Min	0.03
0.005	Frwy/Can	0.6	NORMAL	10	10	0.20	0.01	Min	0.04
	L.D.R.		NORMAL	50	15	0.20	0.05	Low	
0.002	M.D.R.	0.3	NORMAL	50	30	0.15	0.05	Low	0.08
0.026	H.D.R.	3.4	NORMAL	60	40	0.15	0.05	Low	0.06
	M.H.		NORMAL	50	50	0.10	0.05	Low	
0.010	G.I.	1.3	NORMAL	70	55	0.10	0.03	Min	0.03
0.118	L.I.	15.2	NORMAL	60	55	0.10	0.03	Min	0.03
	P.S.		NORMAL	60	55	0.20	0.03	Min	
	R/R		NORMAL	10	25	0.10	0.03	Min	
0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min	
0.000	Whse.Com	0.0	NORMAL	75	90	0.05	0.02	Min	
0.000	Low.Comm	0.0	NORMAL	80	90	0.15	0.02	Min	
0.000	School	0.0	NORMAL	75	40	0.20	0.02	Min	
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Park	0.0	NORMAL	90	0	0.20	0.10	Hi	

0.776 = Total Area Avg. = 54 11% 0.370

PERCENT OF SUBBASIN DRY = 33.0 %
NORMAL = 21.0 %
WET = 46.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.11

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.06

```
IMPERVIOUS AREA:          URBAN @   100 % effective = 11
                     ROCK OUTCROP @   100 % effective =  0
                                     ------------------------
                                     % EFFECTIVE IMP. = 11
```

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBUD	0.776	1.25	0.63	0.06	20.0	0.37	0.11	9.70	0.06	11	45

LOSS PARAMETERS FOR SUBBASIN: SUBUE

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
GT	0.052	74.3	0.04	0
MR	0.001	1.4	0.05	0
VF	0.017	24.3	0.01	0

TOTAL = 0.070 Sq.Miles XKSAT = 0.03 %Rock = 0

DTHETA

Dry = 0.22 PSIF = 10.10
Normal = 0.13
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.024	Crops	34.3	WET	80	0	0.50	0.10	Hi	0.12
0.015	Stockyar	21.4	NORMAL	10	0	0.50	0.10	Hi	0.13
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
0.000	Vacant	0.0	DRY	15	0	0.35	0.02	Min	
0.015	Frwy/Can	21.4	NORMAL	10	10	0.20	0.01	Min	0.03
0.004	L.D.R.	5.7	NORMAL	50	15	0.20	0.05	Low	0.07
	M.D.R.		NORMAL	50	30	0.15	0.05	Low	
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
	G.I.		NORMAL	70	55	0.10	0.03	Min	
0.000	L.I.	0.0	NORMAL	60	55	0.10	0.03	Min	
	P.S.		NORMAL	60	55	0.20	0.03	Min	
0.010	R/R	14.3	NORMAL	10	25	0.10	0.03	Min	0.03
0.002	Med.Comm	2.9	NORMAL	75	90	0.15	0.02	Min	0.04
	Whse.Com		NORMAL	75	90	0.05	0.02	Min	
	Low.Comm		NORMAL	80	90	0.15	0.02	Min	
	School		NORMAL	75	40	0.20	0.02	Min	
	Religiou		NORMAL	75	65	0.15	0.02	Min	
	Public F		NORMAL	75	65	0.15	0.02	Min	
	Park		NORMAL	90	0	0.20	0.10	Hi	

0.070 = Total Area Avg. = 39 9% 0.350

PERCENT OF SUBBASIN DRY = 0.0 %
NORMAL = 66.0 %
WET = 34.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.09

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.04

IMPERVIOUS AREA: URBAN @ 100 % effective = 9
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 9

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBUE	0.070	0.34	0.17	0.07	26.5	0.35	0.09	10.10	0.04	9	17

LOSS PARAMETERS FOR SUBBASIN: SUBVA

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AO	0.045	9.1	0.04	0
GGA	0.107	21.7	0.25	0
GT	0.340	69.1	0.04	0

TOTAL = 0.492 Sq.Miles XKSAT = 0.06 %Rock = 0

DTHETA

Dry = 0.29 PSIF = 8.40
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.001	Crops	0.2	WET	80	0	0.50	0.10	Hi	0.15
	Stockyar		NORMAL	10	0	0.50	0.10	Hi	
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
	Vacant		DRY	15	0	0.35	0.02	Min	
	Frwy/Can		NORMAL	10	10	0.20	0.01	Min	
	L.D.R.		NORMAL	50	15	0.20	0.05	Low	
	M.D.R.		NORMAL	50	30	0.15	0.05	Low	
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
0.421	G.I.	85.6	NORMAL	70	55	0.10	0.03	Min	0.02
0.001	L.I.	0.2	NORMAL	60	55	0.10	0.03	Min	0.04
	P.S.		NORMAL	60	55	0.20	0.03	Min	
	R/R		NORMAL	10	25	0.10	0.03	Min	
0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min	
0.069	Whse.Com	14.0	NORMAL	75	90	0.05	0.02	Min	0.03
0.000	Low.Comm	0.0	NORMAL	80	90	0.15	0.02	Min	
0.000	School	0.0	NORMAL	75	40	0.20	0.02	Min	
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Park	0.0	NORMAL	90	0	0.20	0.10	Hi	

0.492 = Total Area Avg. = 70 60% 0.090

PERCENT OF SUBBASIN DRY = 0.0 %
NORMAL = 100. %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.15

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.10

```
IMPERVIOUS AREA:          URBAN @   100 % effective = 60
                   ROCK OUTCROP @   100 % effective =  0
                                   ------------------------
                                   % EFFECTIVE IMP. = 60
```

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBVA	0.492	1.06	0.53	0.03	8.5	0.09	0.15	8.40	0.10	60	22

LOSS PARAMETERS FOR SUBBASIN: SUBVB

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AA	0.013	1.8	0.26	0
AO	0.163	22.6	0.04	0
GGA	0.010	1.4	0.25	0
GT	0.515	71.3	0.04	0
GV	0.006	0.8	0.01	0
MR	0.006	0.8	0.05	0
TT	0.009	1.2	0.04	0

TOTAL = 0.722 Sq.Miles XKSAT = 0.04 %Rock = 0

DTHETA

Dry = 0.25 PSIF = 9.70
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
0.355	Crops	49.2	WET	80	0	0.50	0.10	Hi	0.09
	Stockyar		NORMAL	10	0	0.50	0.10	Hi	
0.041	Citrus	5.7	NORMAL	80	0	0.70	0.10	Hi	0.11
	River		NORMAL	90	0	0.20	0.20	Max	
0.101	Vacant	14.0	DRY	15	0	0.35	0.02	Min	0.03
0.000	Frwy/Can	0.0	NORMAL	10	10	0.20	0.01	Min	
	L.D.R.		NORMAL	50	15	0.20	0.05	Low	
0.001	M.D.R.	0.1	NORMAL	50	30	0.15	0.05	Low	0.08
0.000	H.D.R.	0.0	NORMAL	60	40	0.15	0.05	Low	
0.000	M.H.	0.0	NORMAL	50	50	0.10	0.05	Low	
0.224	G.I.	31.0	NORMAL	70	55	0.10	0.03	Min	0.03
0.000	L.I.	0.0	NORMAL	60	55	0.10	0.03	Min	
	P.S.		NORMAL	60	55	0.20	0.03	Min	
	R/R		NORMAL	10	25	0.10	0.03	Min	
0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min	
0.000	Whse.Com	0.0	NORMAL	75	90	0.05	0.02	Min	
0.000	Low.Comm	0.0	NORMAL	80	90	0.15	0.02	Min	
0.000	School	0.0	NORMAL	75	40	0.20	0.02	Min	
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Park	0.0	NORMAL	90	0	0.20	0.10	Hi	

0.722 = Total Area Avg. = 67 17% 0.370

PERCENT OF SUBBASIN DRY = 14.0 %
NORMAL = 37.0 %
WET = 49.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.09

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.07

IMPERVIOUS AREA: URBAN @ 100 % effective = 17
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 17

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBVB	0.722	1.10	0.55	0.07	11.8	0.37	0.09	9.70	0.07	17	50

LOSS PARAMETERS FOR SUBBASIN: SUBVC

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AA	0.000	0.0	0.26	0
AO	0.095	19.4	0.04	0
GC	0.000	0.0	0.01	0
GGA	0.055	11.2	0.25	0
GT	0.152	31.0	0.04	0
GV	0.006	1.2	0.01	0
MR	0.080	16.3	0.05	0
MS	0.012	2.4	0.01	0
TT	0.050	10.2	0.04	0
TU	0.040	8.2	0.25	0

TOTAL = 0.490 Sq.Miles XKSAT = 0.06 %Rock = 0

DTHETA

Dry = 0.29 PSIF = 8.40
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
	Crops		WET	80	0	0.50	0.10	Hi	
	Stockyar		NORMAL	10	0	0.50	0.10	Hi	
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
0.100	Vacant	20.4	DRY	15	0	0.35	0.02	Min	0.03
	Frwy/Can		NORMAL	10	10	0.20	0.01	Min	
	L.D.R.		NORMAL	50	15	0.20	0.05	Low	
	M.D.R.		NORMAL	50	30	0.15	0.05	Low	
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
0.390	G.I.	79.6	NORMAL	70	55	0.10	0.03	Min	0.03
0.000	L.I.	0.0	NORMAL	60	55	0.10	0.03	Min	
	P.S.		NORMAL	60	55	0.20	0.03	Min	
	R/R		NORMAL	10	25	0.10	0.03	Min	
0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min	
0.000	Whse.Com	0.0	NORMAL	75	90	0.05	0.02	Min	
0.000	Low.Comm	0.0	NORMAL	80	90	0.15	0.02	Min	
0.000	School	0.0	NORMAL	75	40	0.20	0.02	Min	
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Park	0.0	NORMAL	90	0	0.20	0.10	Hi	
0.490 = Total Area			Avg. =	50	44%	0.150			

PERCENT OF SUBBASIN DRY = 20.0 %
NORMAL = 80.0 %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.18

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.09

IMPERVIOUS AREA: URBAN @ 100 % effective = 44
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 44

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBVC	0.490	1.06	0.53	0.03	8.5	0.15	0.18	8.40	0.09	44	22

LOSS PARAMETERS FOR SUBBASIN: SUBVD

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AO	0.020	2.9	0.04	0
GGA	0.051	7.3	0.25	0
GT	0.336	48.3	0.04	0
GV	0.110	15.8	0.01	0
MP	0.005	0.7	0.25	0
MR	0.110	15.8	0.05	0
MS	0.038	5.5	0.01	0
TT	0.026	3.7	0.04	0

TOTAL = 0.696 Sq.Miles XKSAT = 0.04 %Rock = 0

DTHETA

Dry = 0.25 PSIF = 9.70
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
	Crops		WET	80	0	0.50	0.10	Hi	
	Stockyar		NORMAL	10	0	0.50	0.10	Hi	
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
0.053	Vacant	7.6	DRY	15	0	0.35	0.02	Min	0.03
0.000	Frwy/Can	0.0	NORMAL	10	10	0.20	0.01	Min	
	L.D.R.		NORMAL	50	15	0.20	0.05	Low	
0.390	M.D.R.	56.1	NORMAL	50	30	0.15	0.05	Low	0.05
0.003	H.D.R.	0.4	NORMAL	60	40	0.15	0.05	Low	0.08
0.146	M.H.	21.0	NORMAL	50	50	0.10	0.05	Low	0.05
0.033	G.I.	4.7	NORMAL	70	55	0.10	0.03	Min	0.03
	L.I.		NORMAL	60	55	0.10	0.03	Min	
	P.S.		NORMAL	60	55	0.20	0.03	Min	
	R/R		NORMAL	10	25	0.10	0.03	Min	
0.056	Med.Comm	8.1	NORMAL	75	90	0.15	0.02	Min	0.03
	Whse.Com		NORMAL	75	90	0.05	0.02	Min	
	Low.Comm		NORMAL	80	90	0.15	0.02	Min	
0.007	School	1.0	NORMAL	75	40	0.20	0.02	Min	0.04
	Religiou		NORMAL	75	65	0.15	0.02	Min	
	Public F		NORMAL	75	65	0.15	0.02	Min	
0.007	Park	1.0	NORMAL	90	0	0.20	0.10	Hi	0.13

0.695 = Total Area Avg. = 48 38% 0.150

PERCENT OF SUBBASIN DRY = 8.0 %
NORMAL = 92.0 %

WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.16

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.06

IMPERVIOUS AREA: URBAN @ 100 % effective = 38
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 38

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBVD	0.696	1.21	0.61	0.04	9.9	0.15	0.16	9.70	0.06	38	37

LOSS PARAMETERS FOR SUBBASIN: SUBWA

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
GC	0.051	10.4	0.01	0
GT	0.256	52.1	0.04	0
GV	0.074	15.1	0.01	0
MP	0.006	1.2	0.25	0
MR	0.088	17.9	0.05	0
MS	0.005	1.0	0.01	0
TT	0.011	2.2	0.04	0

TOTAL = 0.491 Sq.Miles XKSAT = 0.03 %Rock = 0

DTHETA

Dry = 0.22 PSIF = 10.10
Normal = 0.13
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
	Crops		WET	80	0	0.50	0.10	Hi	
	Stockyar		NORMAL	10	0	0.50	0.10	Hi	
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
0.244	Vacant	49.7	DRY	15	0	0.35	0.02	Min	0.03
	Frwy/Can		NORMAL	10	10	0.20	0.01	Min	
	L.D.R.		NORMAL	50	15	0.20	0.05	Low	
	M.D.R.		NORMAL	50	30	0.15	0.05	Low	
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
0.247	G.I.	50.3	NORMAL	70	55	0.10	0.03	Min	0.03
	L.I.		NORMAL	60	55	0.10	0.03	Min	
	P.S.		NORMAL	60	55	0.20	0.03	Min	
	R/R		NORMAL	10	25	0.10	0.03	Min	
0.000	Med.Comm	0.0	NORMAL	75	90	0.15	0.02	Min	
0.000	Whse.Com	0.0	NORMAL	75	90	0.05	0.02	Min	
0.000	Low.Comm	0.0	NORMAL	80	90	0.15	0.02	Min	
0.000	School	0.0	NORMAL	75	40	0.20	0.02	Min	
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Park	0.0	NORMAL	90	0	0.20	0.10	Hi	
0.491 = Total Area			Avg. =	32	28%	0.220			

PERCENT OF SUBBASIN DRY = 50.0 %
NORMAL = 50.0 %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.17

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.04

IMPERVIOUS AREA: URBAN @ 100 % effective = 28
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 28

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBWA	0.491	1.10	0.55	0.03	9.1	0.22	0.17	10.10	0.04	28	20

LOSS PARAMETERS FOR SUBBASIN: SUBWB

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
GGA	0.005	0.7	0.25	0
GT	0.664	98.5	0.04	0
GV	0.005	0.7	0.01	0

TOTAL = 0.674 Sq.Miles XKSAT = 0.04 %Rock = 0

DTHETA

Dry = 0.25 PSIF = 9.70
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
	Crops		WET	80	0	0.50	0.10	Hi	
	Stockyar		NORMAL	10	0	0.50	0.10	Hi	
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
0.003	Vacant	0.4	DRY	15	0	0.35	0.02	Min	0.04
0.003	Frwy/Can	0.4	NORMAL	10	10	0.20	0.01	Min	0.04
	L.D.R.		NORMAL	50	15	0.20	0.05	Low	
0.436	M.D.R.	64.5	NORMAL	50	30	0.15	0.05	Low	0.05
0.023	H.D.R.	3.4	NORMAL	60	40	0.15	0.05	Low	0.06
	M.H.		NORMAL	50	50	0.10	0.05	Low	
	G.I.		NORMAL	70	55	0.10	0.03	Min	
	L.I.		NORMAL	60	55	0.10	0.03	Min	
	P.S.		NORMAL	60	55	0.20	0.03	Min	
	R/R		NORMAL	10	25	0.10	0.03	Min	
0.018	Med.Comm	2.7	NORMAL	75	90	0.15	0.02	Min	0.03
0.000	Whse.Com	0.0	NORMAL	75	90	0.05	0.02	Min	
0.067	Low.Comm	9.9	NORMAL	80	90	0.15	0.02	Min	0.03
0.044	School	6.5	NORMAL	75	40	0.20	0.02	Min	0.03
0.005	Religiou	0.7	NORMAL	75	65	0.15	0.02	Min	0.04
0.013	Public F	1.9	NORMAL	75	65	0.15	0.02	Min	0.03
0.064	Park	9.5	NORMAL	90	0	0.20	0.10	Hi	0.11
0.676 = Total Area			Avg. =	58	36%	0.160			

PERCENT OF SUBBASIN DRY = 0.0 %
NORMAL = 100. %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.15

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.06

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IMPERVIOUS AREA:          URBAN @   100 % effective = 36
                   ROCK OUTCROP @   100 % effective =  0
                                   ------------------------
                                   % EFFECTIVE IMP. = 36
```

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBWB	0.674	1.17	0.58	0.05	12.0	0.16	0.15	9.70	0.06	36	37

LOSS PARAMETERS FOR SUBBASIN: SUBWC

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
GB	0.025	5.3	0.04	0
GGA	0.002	0.4	0.25	0
GT	0.437	93.0	0.04	0
GV	0.006	1.3	0.01	0
MS	0.000	0.0	0.01	0

TOTAL = 0.470 Sq.Miles XKSAT = 0.04 %Rock = 0

DTHETA

Dry = 0.25 PSIF = 9.70
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
	Crops		WET	80	0	0.50	0.10	Hi	
	Stockyar		NORMAL	10	0	0.50	0.10	Hi	
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
0.031	Vacant	6.6	DRY	15	0	0.35	0.02	Min	0.03
	Frwy/Can		NORMAL	10	10	0.20	0.01	Min	
	L.D.R.		NORMAL	50	15	0.20	0.05	Low	
0.210	M.D.R.	44.8	NORMAL	50	30	0.15	0.05	Low	0.05
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
0.043	G.I.	9.2	NORMAL	70	55	0.10	0.03	Min	0.03
0.086	L.I.	18.3	NORMAL	60	55	0.10	0.03	Min	0.03
	P.S.		NORMAL	60	55	0.20	0.03	Min	
	R/R		NORMAL	10	25	0.10	0.03	Min	
0.081	Med.Comm	17.3	NORMAL	75	90	0.15	0.02	Min	0.03
0.000	Whse.Com	0.0	NORMAL	75	90	0.05	0.02	Min	
0.002	Low.Comm	0.4	NORMAL	80	90	0.15	0.02	Min	0.04
0.010	School	2.1	NORMAL	75	40	0.20	0.02	Min	0.03
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min	
0.006	Park	1.3	NORMAL	90	0	0.20	0.10	Hi	0.14
0.469 = Total Area			Avg. =	51	45%	0.150			

PERCENT OF SUBBASIN DRY = 7.0 %
NORMAL = 93.0 %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.16

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.06

IMPERVIOUS AREA: URBAN @ 100 % effective = 45
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 45

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBWC	0.470	1.17	0.59	0.04	6.0	0.15	0.16	9.70	0.06	45	33

LOSS PARAMETERS FOR SUBBASIN: SUBWD

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AO	0.060	16.3	0.04	0
GGA	0.197	53.7	0.25	0
GT	0.110	30.0	0.04	0

TOTAL = 0.367 Sq.Miles XKSAT = 0.11 %Rock = 0

DTHETA

Dry = 0.36 PSIF = 6.80
Normal = 0.17
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
	Crops		WET	80	0	0.50	0.10	Hi	
	Stockyar		NORMAL	10	0	0.50	0.10	Hi	
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
0.049	Vacant	13.3	DRY	15	0	0.35	0.02	Min	0.03
0.001	Frwy/Can	0.3	NORMAL	10	10	0.20	0.01	Min	0.04
	L.D.R.		NORMAL	50	15	0.20	0.05	Low	
0.042	M.D.R.	11.4	NORMAL	50	30	0.15	0.05	Low	0.06
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
	G.I.		NORMAL	70	55	0.10	0.03	Min	
	L.I.		NORMAL	60	55	0.10	0.03	Min	
	P.S.		NORMAL	60	55	0.20	0.03	Min	
	R/R		NORMAL	10	25	0.10	0.03	Min	
	Med.Comm		NORMAL	75	90	0.15	0.02	Min	
0.000	Whse.Com	0.0	NORMAL	75	90	0.05	0.02	Min	
0.022	Low.Comm	6.0	NORMAL	80	90	0.15	0.02	Min	0.03
0.000	School	0.0	NORMAL	75	40	0.20	0.02	Min	
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min	
0.254	Park	69.0	NORMAL	90	0	0.20	0.10	Hi	0.09
0.368 = Total Area			Avg. =	75	9%	0.210			

PERCENT OF SUBBASIN DRY = 13.0 %
NORMAL = 87.0 %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.19

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.19

IMPERVIOUS AREA: URBAN @ 100 % effective = 9
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 9

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBWD	0.367	0.72	0.36	0.08	11.1	0.21	0.19	6.80	0.19	9	43

LOSS PARAMETERS FOR SUBBASIN: SUBXA

Soil Survey Used Central County

XKSAT

Map Unit	AREA Sq.Miles	% Area	XKSAT	% Rock Outcrop
AO	0.092	37.1	0.04	0
GGA	0.000	0.0	0.25	0
GT	0.155	62.5	0.04	0
MS	0.001	0.4	0.01	0

TOTAL = 0.248 Sq.Miles XKSAT = 0.04 %Rock = 0

DTHETA

Dry = 0.25 PSIF = 9.70
Normal = 0.15
Wet = 0.00

LAND USE

AREA Sq.Miles	LAND USE Type	% Area	DTHETA condition	%Veg. cover	RTIMP%	IA in.	Kn	Kb Type	Kb
	Crops		WET	80	0	0.50	0.10	Hi	
	Stockyar		NORMAL	10	0	0.50	0.10	Hi	
	Citrus		NORMAL	80	0	0.70	0.10	Hi	
	River		NORMAL	90	0	0.20	0.20	Max	
	Vacant		DRY	15	0	0.35	0.02	Min	
	Frwy/Can		NORMAL	10	10	0.20	0.01	Min	
	L.D.R.		NORMAL	50	15	0.20	0.05	Low	
0.154	M.D.R.	61.8	NORMAL	50	30	0.15	0.05	Low	0.05
	H.D.R.		NORMAL	60	40	0.15	0.05	Low	
	M.H.		NORMAL	50	50	0.10	0.05	Low	
0.058	G.I.	23.3	NORMAL	70	55	0.10	0.03	Min	0.03
0.001	L.I.	0.4	NORMAL	60	55	0.10	0.03	Min	0.04
	P.S.		NORMAL	60	55	0.20	0.03	Min	
	R/R		NORMAL	10	25	0.10	0.03	Min	
0.002	Med.Comm	0.8	NORMAL	75	90	0.15	0.02	Min	0.04
0.033	Whse.Com	13.3	NORMAL	75	90	0.05	0.02	Min	0.03
0.001	Low.Comm	0.4	NORMAL	80	90	0.15	0.02	Min	0.04
0.000	School	0.0	NORMAL	75	40	0.20	0.02	Min	
0.000	Religiou	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Public F	0.0	NORMAL	75	65	0.15	0.02	Min	
0.000	Park	0.0	NORMAL	90	0	0.20	0.10	Hi	
0.249 = Total Area			Avg. =	54	45%	0.120			

PERCENT OF SUBBASIN DRY = 0.0 %
NORMAL = 100. %
WET = 0.0 %

SUBBASIN DTHETA WEIGHTED BY LAND USE = 0.15

SUBBASIN XKSAT ADJUSTED FOR VEG. = 0.06

IMPERVIOUS AREA: URBAN @ 100 % effective = 45
ROCK OUTCROP @ 100 % effective = 0

% EFFECTIVE IMP. = 45

INPUT VALUES FOR MCUHP2 PROGRAM

SUBBASIN	Area sq. mi.	Length mi.	Lca	Kn	Slope ft/mi	IA in.	DTHETA	PSIF	XKSAT adj.	RTIMP %	Lag min.
SUBXA	0.248	0.76	0.38	0.04	10.5	0.12	0.15	9.70	0.06	45	24

Appendix D.3
Hydrograph Routing Data

Routing Parameters

Vavg= 2 ft/s
NMIN= 300 sec

Reach		Elevation (ft)		Diff	L(slope)	Slope	NSTPS	Section	Mannings
From	To	High	Low	(ft)	(ft)	(ft/ft)		Type	n
WD	XA	1068	1064	4	2500	0.0016	4	A	0.025
XA	WC	1066	1058	8	5100	0.0016	9	C	0.035
WB	WC	1062	1058	4	2000	0.0020	3	A	0.025
WC	WA	1058	1052	6	5200	0.0012	9	C	0.035
VD	WA	1058	1052	6	2000	0.0030	3	B	.1, .02, .1
WA	VC	1052	1038	14	5000	0.0028	8	C	0.035
VB	VC	1056	1052	4	2400	0.0017	4	B	.1, .02, .1
VC	QA	1038	1032	6	2000	0.0030	3	B	.1, .02, .1
QA	JF	1032	1000	32	10400	0.0031	17	A	0.1
WC	QE*	1059	1039	20	6600	0.0030	11	A	0.025
QE	QC	1039	1031	8	3000	0.0027	5	A	0.025
WA	QD*	1051	1039	12	5000	0.0024	8	C	0.035
QD	QC	1039	1031	8	2000	0.0040	3	B	.1, .02, .1
QC	JF	1036	1000	36	13000	0.0028	22	A	0.1
QD	QB*	1039	1032	7	2500	0.0028	4	C	0.1
QB	JF	1032	1000	32	11600	0.0028	19	A	0.1
PF	PE*	1031	1030	1	2160	0.0005	4	C	0.035
QA	PF*	1032	1031	1	2000	0.0005	3	C	0.035
PF	JF	1032	1000	32	8000	0.0040	13	C	0.035
PE	JF	1032	1000	32	8800	0.0036	15	B	.1, .02, .1
PC	NB	1032	1014	18	4800	0.0038	8	B	.1, .02, .1
NB	JD	1032	1006	26	4800	0.0054	8	B	.1, .02, .1
JD	FC	1006	990	16	3000	0.0053	5	B	.1, .02, .1
PD	NC	1028	1020	8	3000	0.0027	5	A	0.035
NC	JE	1032	1025	7	5000	0.0014	8	A	0.035
JE	FC	1010	990	20	2500	0.0080	4	A	0.035
UD	VA	1049	1044	5	2600	0.0019	4	B	.1, .02, .1
VC	VA*	1052	1044	8	5200	0.0015	9	C	0.035
VA	UC	1044	1038	6	5200	0.0012	9	C	0.035
UD	UA*	1049	1042	7	5000	0.0014	8	B	.1, .02, .1
UA	UC	1042	1038	4	2400	0.0017	4	B	.1, .02, .1
UC	UB	1038	1032	6	1400	0.0043	2	C	0.035
UB	SF	1032	1030	2	2800	0.0007	5	C	0.035
UA	TB*	1043	1033	10	5200	0.0019	9	A	0.025
TB	SF	1033	1028	5	2160	0.0023	4	B	.1, .02, .1
SF	SH	1028	1028	0	1200	0.0000	2	C	0.035
SH	SG	1028	1027	1	1300	0.0008	2	C	0.035
TB	TA	1033	1032	1	2600	0.0004	4	A	0.025

TA	SG	1035	1025	10	2000	0.0050	3	A	0.025
SG	SE	1025	1022	3	1000	0.0030	2	C	0.035
SC	SE	1026	1022	4	1800	0.0022	3	B	.1, .02, .1
SE	RI	1022	1017	5	2700	0.0019	5	A	0.035
SH	RJ	1028	1022	6	4000	0.0015	7	C	0.035
SG	RJ	1027	1022	5	2600	0.0019	4	C	0.035
SE	RJ	1022	1022	0	1200	0.0000	2	C	0.035
RJ	RI	1022	1017	5	2600	0.0019	4	C	0.035
UE	PB	1030	1024	6	4000	0.0015	7	A	0.025
SF	RJ	1030	1028	2	1300	0.0015	2	C	0.035
PB	NA	1024	1008	16	5000	0.0032	8	B	.1, .02, .1
NB	NA*	1014	1008	6	5000	0.0012	8	B	.1, .02, .1
NA	JC	1008	994	14	5000	0.0028	8	B	.1, .02, .1
JD	JC*	1006	994	12	5000	0.0024	8	B	.1, .02, .1
JC	FB	994	980	14	4400	0.0032	7	B	.1, .02, .1
PB	PA*	1024	1008	16	5000	0.0032	8	B	.1, .02, .1
RJ	PA	1022	1008	14	2600	0.0054	4	B	.1, .02, .1
PA	MD	1008	1002	6	5200	0.0012	9	B	.1, .02, .1
MG	JB	1008	986	22	7200	0.0031	12	A	0.1
JC	JB*	994	986	8	5400	0.0015	9	B	.1, .02, .1
MD	JB*	1002	986	16	5300	0.0030	9	B	.1, .02, .1
JB	FA	986	980	6	6400	0.0009	11	B	.1, .02, .1
SD	RI	1028	1017	11	2400	0.0046	4	A	0.035
RI	RH	1017	1010	7	2400	0.0029	4	C	0.035
SA	RH	1014	1010	4	2600	0.0015	4	B	.1, .02, .1
RH	OG1	1010	1008	2	1200	0.0019	2	C	0.035
OG1	OG	1008	1000	8	4100	0.0019	7	C	0.035
RG	RF	1014	1008	6	2700	0.0022	5	B	.1, .02, .1
SA	RF*	1014	1008	6	5300	0.0011	9	B	.1, .02, .1
RF	OG	1008	1002	6	2700	0.0022	5	B	.1, .02, .1
OG	OF	1002	994	8	2400	0.0033	4	C	0.035
RF	RE*	1008	1006	2	2600	0.0008	4	B	.1, .02, .1
RE	OF	1006	994	12	2700	0.0044	5	A	0.1
OF	OB	994	990	4	3600	0.0011	6	C	0.035
RD	RC	1006	994	12	5200	0.0023	9	B	.1, .02, .1
RC	RB	994	972	22	5200	0.0042	9	B	.1, .02, .1
RB	RA	972	972	0	2440	0.0000	4	B	.1, .02, .1
RA	KA*	972	957	15	3000	0.0050	5	A	0.1
RD	OB*	994	990	4	5600	0.0007	9	B	.1, .02, .1
OB	LE	990	988	2	2600	0.0008	4	C	0.035
LE	KD	988	986	2	2600	0.0008	4	C	0.035
LE	LD*	988	984	4	2500	0.0016	4	A	0.01
KD	KA1	986	983	3	1320	0.0020	2	C	0.035
KA1	KA	983	973	11	5360	0.0020	9	C	0.035
KA1	LA*	983	979	4	2500	0.0016	4	A	0.1
KA1	KA	983	963	20	4000	0.0050	7	A	0.1

RB	KA	972	970	2	5800	0.0003	10	A	0.1
PA	OE*	1008	1001	7	5600	0.0013	9	B	.1, .02, .1
RH	OE*	1010	1001	9	2600	0.0035	4	B	.1, .02, .1
RI	OE*	1017	1001	16	3000	0.0053	5	B	.1, .02, .1
OE	MF*	1001	990	11	5200	0.0021	9	B	.1, .02, .1
MF	MC	990	982	8	5200	0.0015	9	B	.1, .02, .1
OE	OD*	1001	994	7	5200	0.0013	9	B	.1, .02, .1
OD	MC	994	982	12	5200	0.0023	9	B	.1, .02, .1
MC	IE	982	976	6	2000	0.0030	3	B	.1, .02, .1
EB	IE	988	984	4	1600	0.0025	3	B	.1, .02, .1
IE	IB	976	966	10	5000	0.0020	8	B	.1, .02, .1
OD	OC*	994	990	4	4000	0.0010	7	B	.1, .02, .1
OC	MB	990	970	20	5200	0.0038	9	B	.1, .02, .1
MC	MB*	982	970	12	5200	0.0023	9	B	.1, .02, .1
MB	IB	970	966	4	2600	0.0015	4	B	.1, .02, .1
IB	IA	966	960	6	500	0.0120	1	B	.1, .02, .1
ME	IA	972	960	12	3400	0.0035	6	B	.1, .02, .1
IA	HB	960	945	15	2600	0.0058	4	C	0.035
LD	MA	982	973	9	2600	0.0035	4	A	0.025
MA	HB	973	945	28	3700	0.0071	6	B	.1, .02, .1
HB	DA	957	945	12	1200	0.0100	2	B	.1, .02, .1
ED	ID	984	982	2	5600	0.0004	9	A	0.035
ID	IC	982	973	9	6000	0.0015	10	A	0.035
IC	DA	973	945	28	5200	0.0054	9	B	.1, .02, .1
DA	CC	945	942	3	5400	0.0006	9	B	.1, .02, .1
JB	EE*	986	973	13	8500	0.0015	14	A	0.025
EE	EA	973	957	16	5300	0.0030	9	A	0.035
EA	DC	957	950	7	5300	0.0013	9	B	.1, .02, .1
DC	CC	950	942	8	5200	0.0015	9	B	.1, .02, .1
DD	CC	965	942	23	5700	0.0040	10	A	0.035
CC	CB	942	932	10	5700	0.0018	10	B	.1, .02, .1
LB	HA	976	950	26	4000	0.0065	7	A	0.1
HA	GD	950	936	14	4800	0.0029	8	A	0.1
KC	GD	960	936	24	5600	0.0043	9	B	.1, .02, .1
GC	GD	940	936	4	2400	0.0017	4	B	.1, .02, .1
GD	CB	936	932	4	4200	0.0010	7	B	.1, .02, .1
CB	CA	932	928	4	5400	0.0007	9	B	.1, .02, .1
GB	CA	940	928	12	5600	0.0021	9	B	.1, .02, .1
CA	BC	928	920	8	2400	0.0033	4	A	0.1
LC	LA	982	968	14	3200	0.0044	5	B	.1, .02, .1
LA	KB	968	951	17	2400	0.0071	4	B	.1, .02, .1
BB	BA	932	920	12	5200	0.0023	9	B	.1, .02, .1
BA	AA	920	916	4	3000	0.0013	5	A	0.1
		* Indiacates Flow diversion							

Appendix D.4
Reservior Routing Data

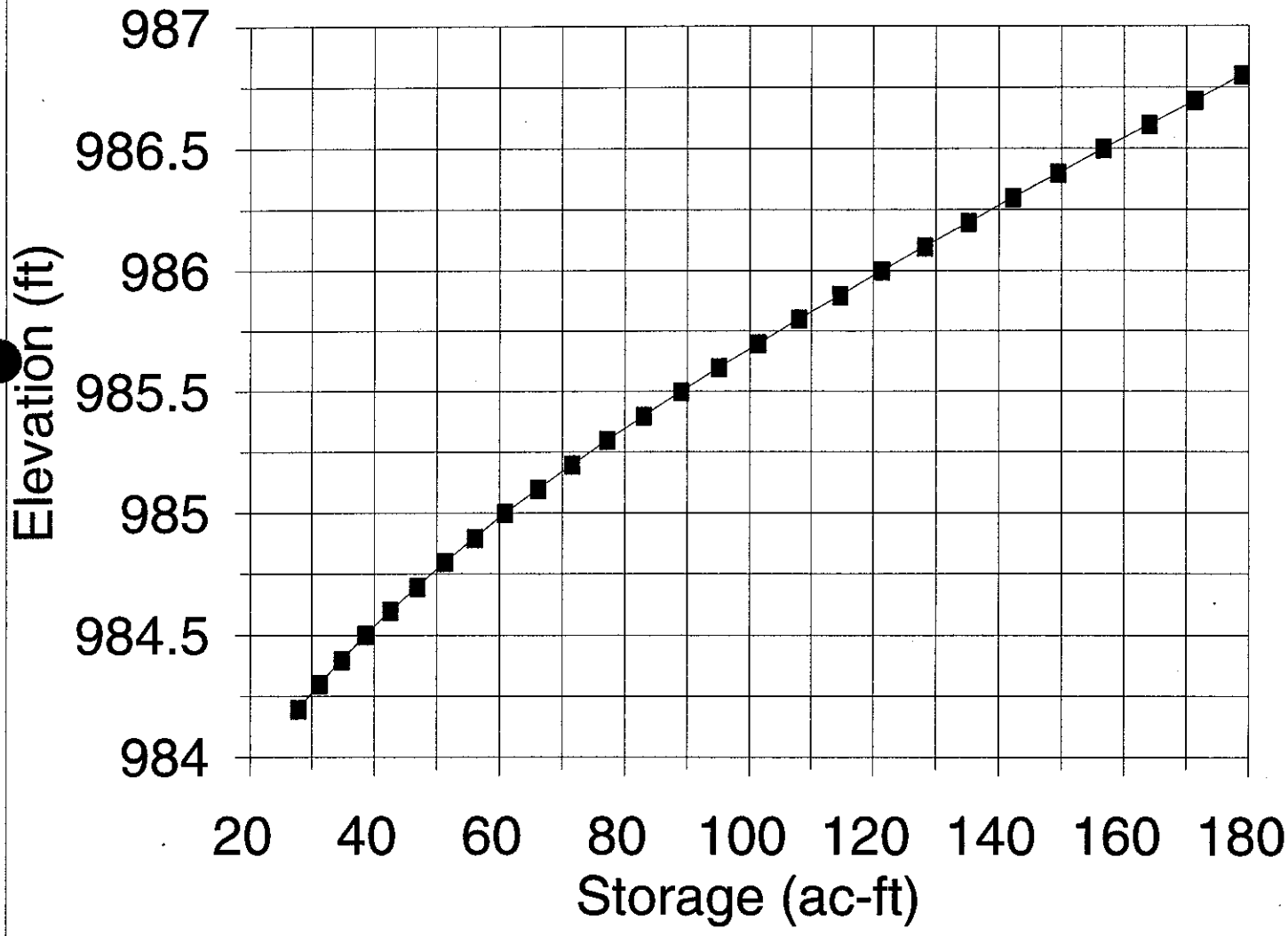
SUB-BASIN STAGE-STORAGE-DISCHARGE RELATIONSHIP

Basin: KA1 Map: 245

Stage (ft)	Storage (ac-ft)	Discharge (cfs) SPRR	Unnamed Road	Total
984.2	27.81		0	0
984.3	31.20		0.16	0.16
984.4	34.78		0.88	0.88
984.5	38.59		2.45	2.45
984.6	42.63		5.05	5.05
984.7	46.87		8.85	8.85
984.8	51.33		14.02	14.02
984.9	56.03		20.69	20.69
985.0	60.97		29.01	29.01
985.1	66.16		39.1	39.1
985.2	71.58		51.08	51.08
985.3	77.21		64.87	64.87
985.4	83.01		80.69	80.69
985.5	89.01		98.63	98.63
985.6	95.18		118.79	118.79
985.7	101.52		141.24	141.24
985.8	108.03		166.08	166.08
985.9	114.67		193.39	193.39
986.0	121.41		223.24	223.24
986.1	128.25		255.39	255.39
986.2	135.20		294.74	294.74
986.3	142.27		352.05	352.05
986.4	149.43		428.56	428.56
986.5	156.66		531.19	531.19
986.6	163.99		674.45	674.45
986.7	171.40		863.66	863.66
986.8	178.87		1106.91	1106.91

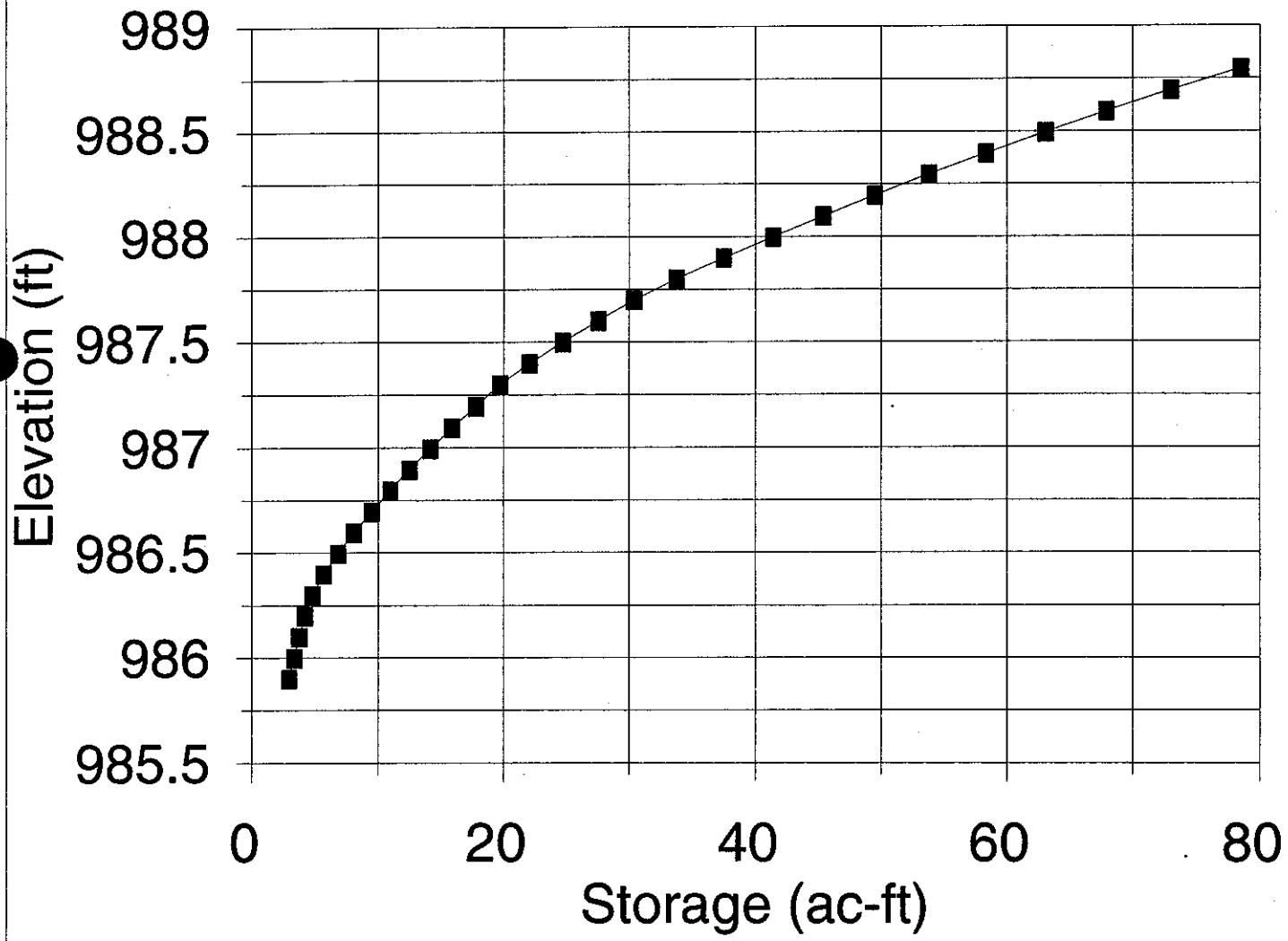
Stage-Storage Relationship

Basin:KA1 Map:245



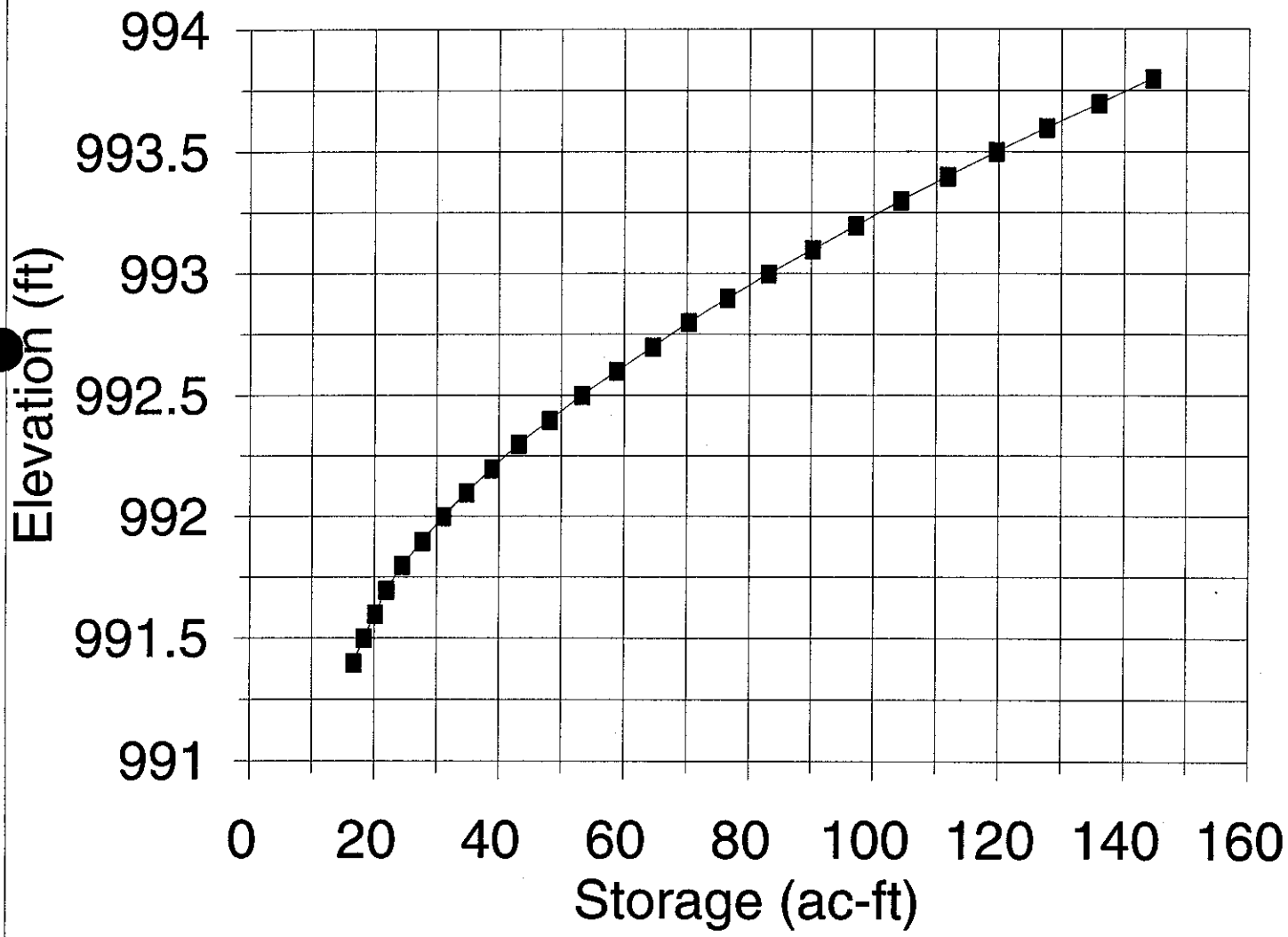
Stage-Storage Relationship

Basin:KD Map:245



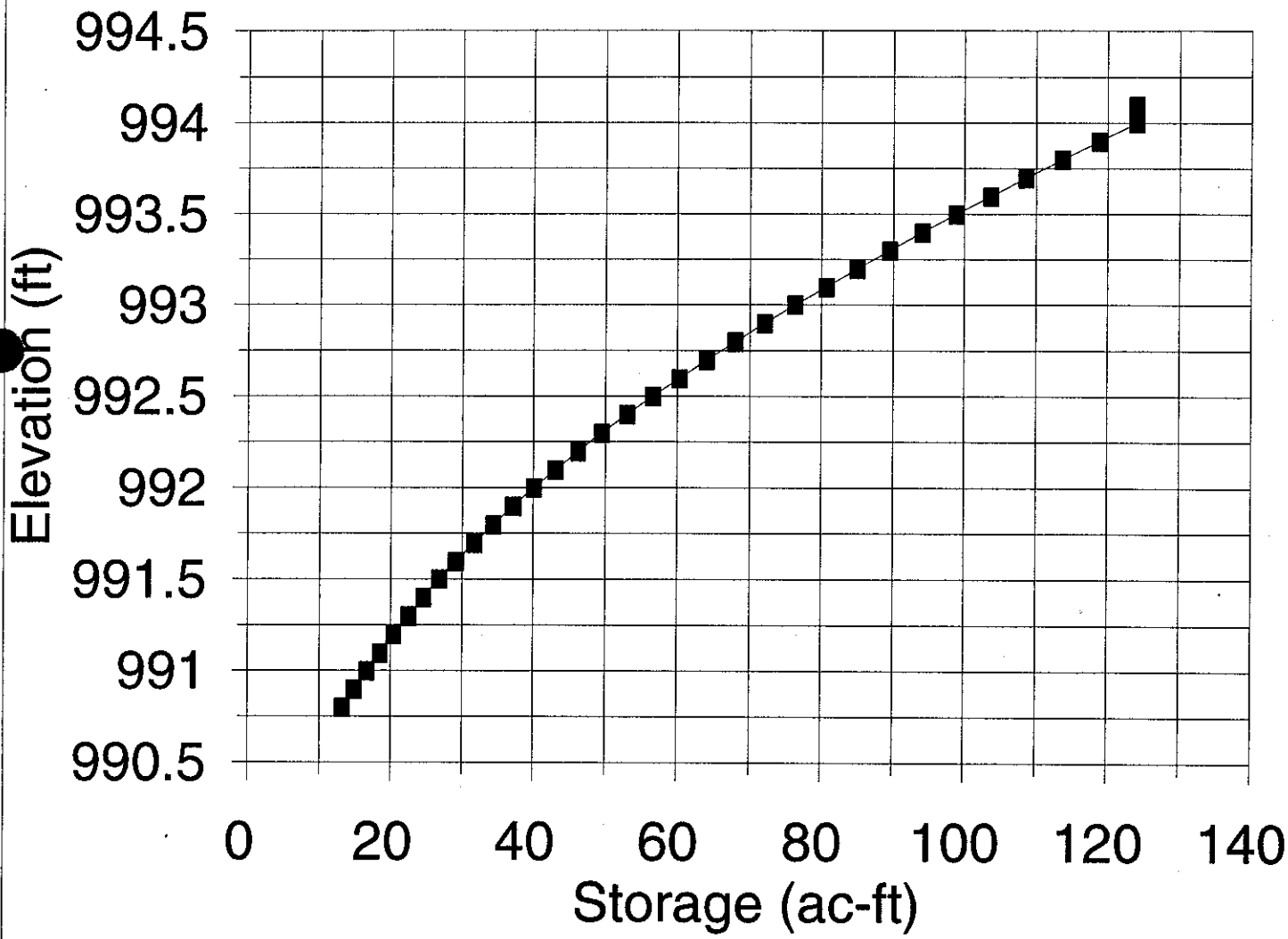
Stage-Storage Relationship

Basin:LE Map:246



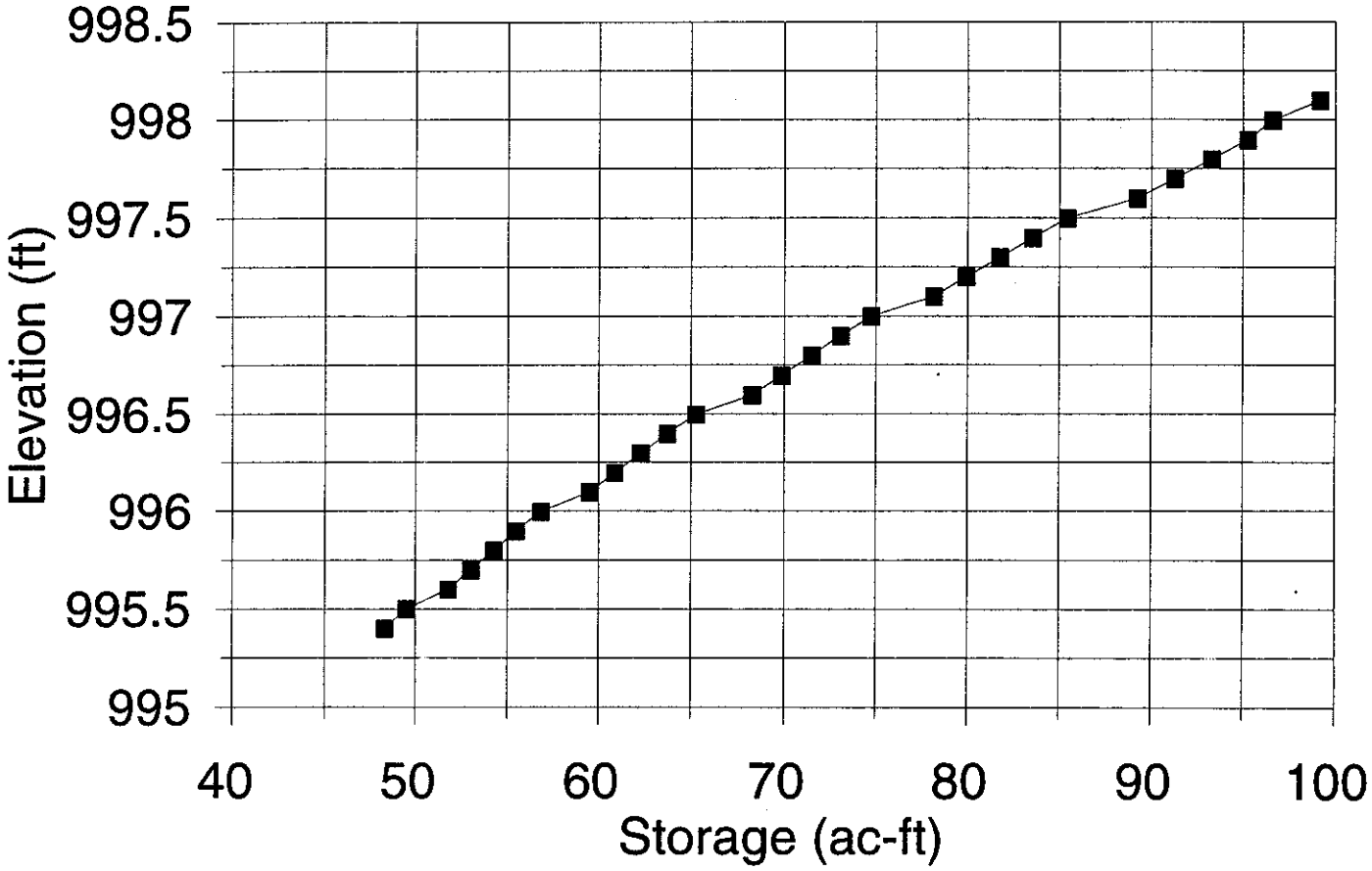
Stage-Storage Relationship

Basin:OB Map:247



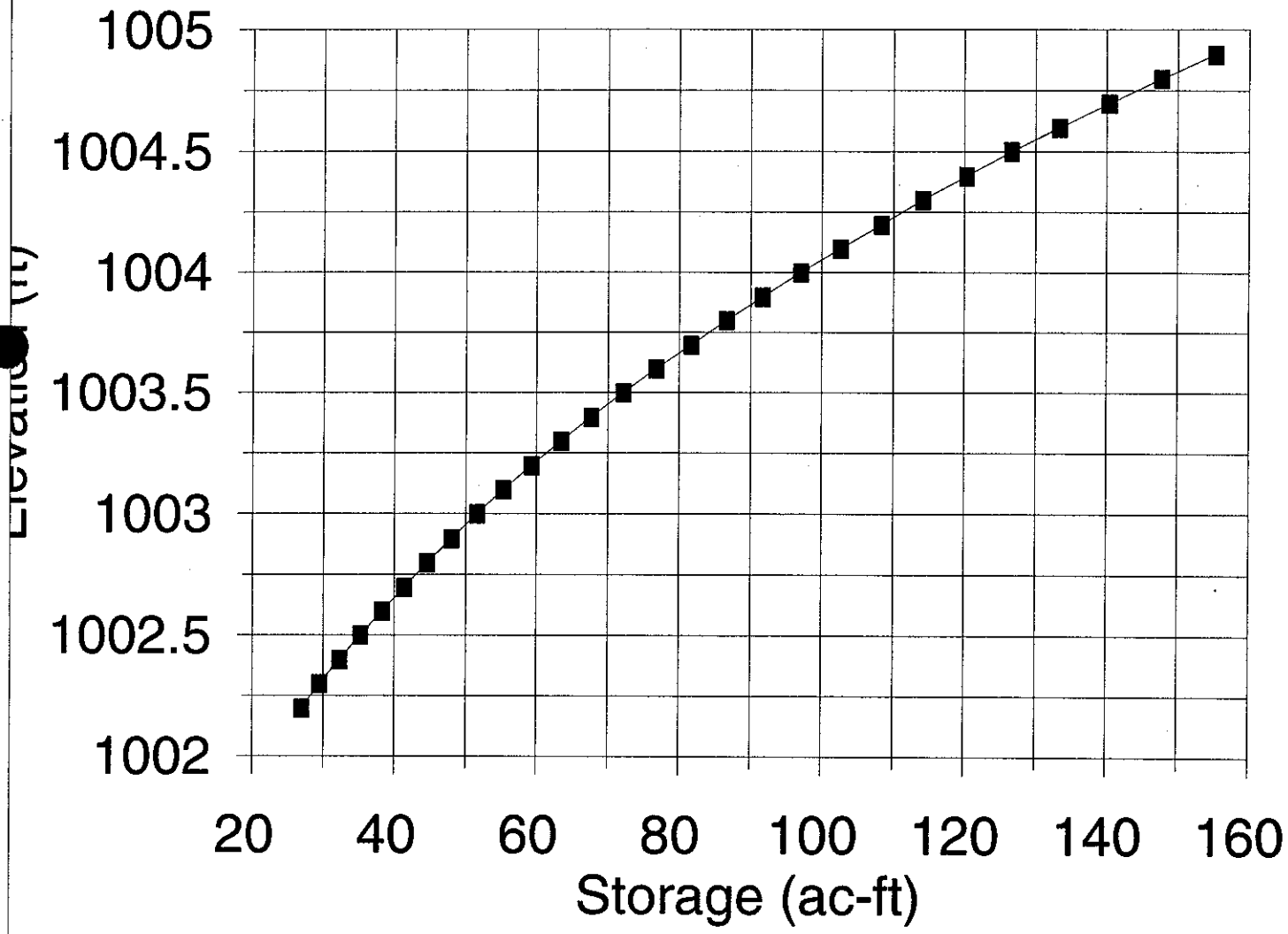
Stage-Storage Relationship

Basin:OF Map:233



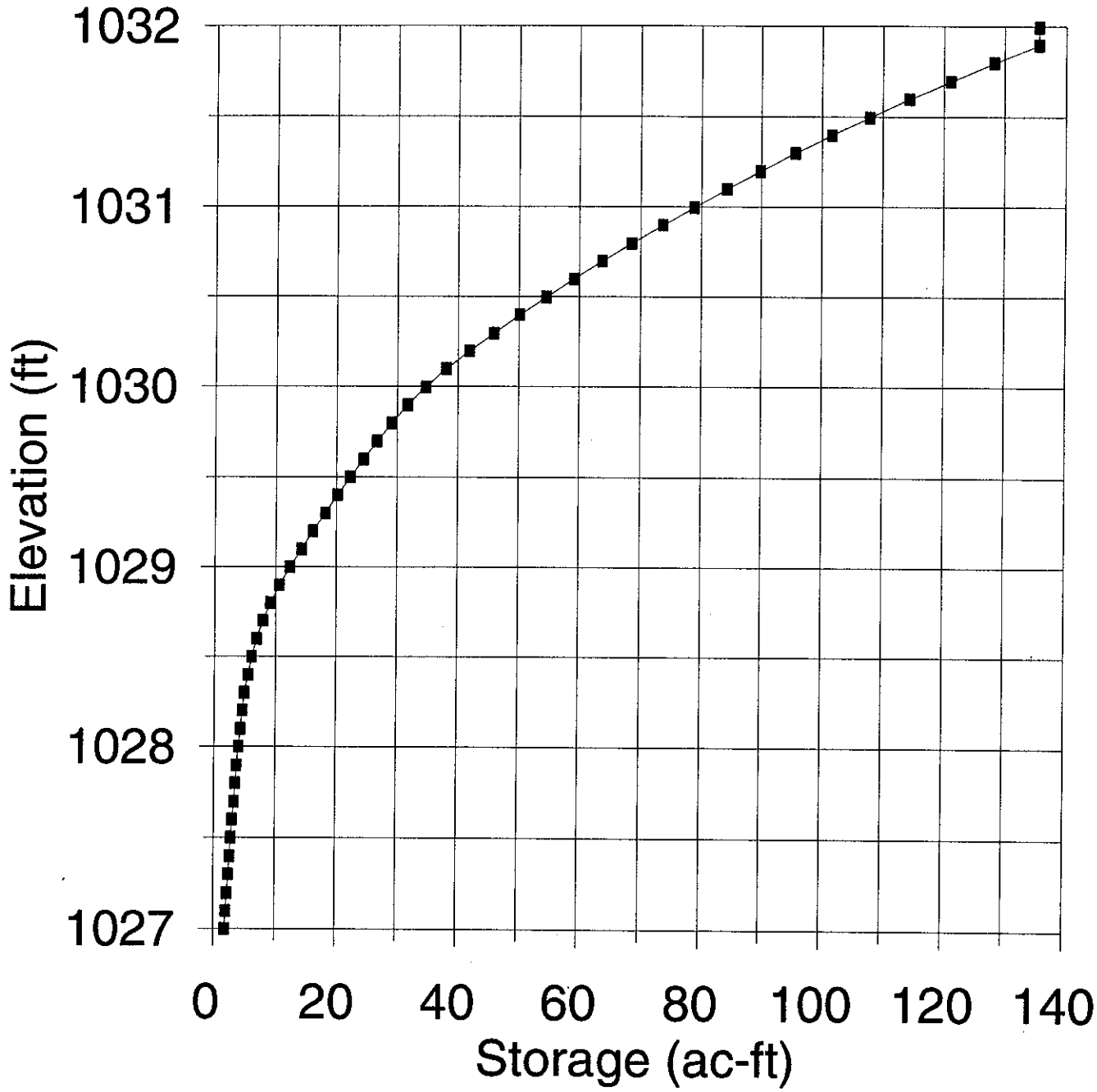
Stage-Storage Relationship

Basin:OG Map:234



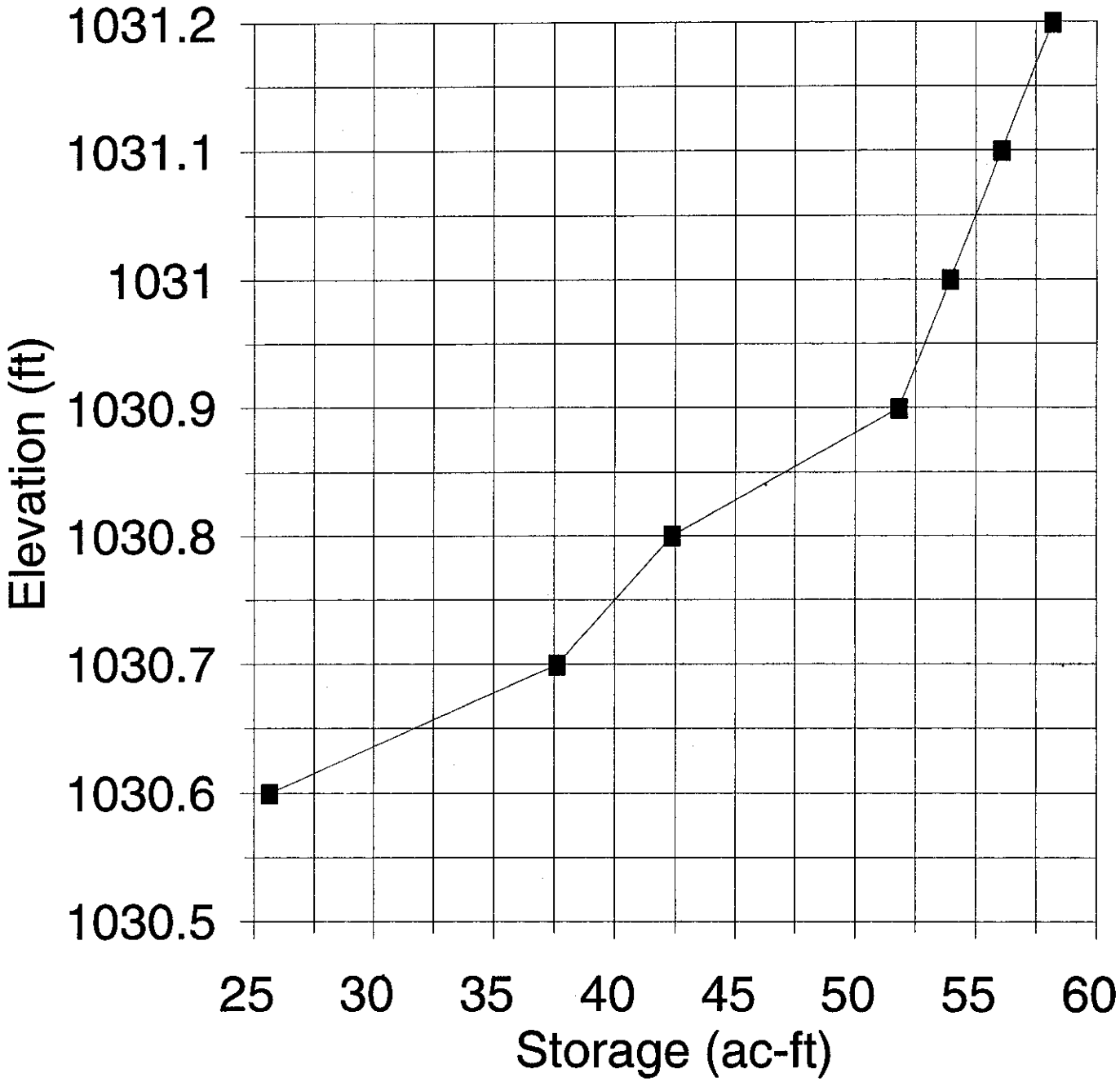
Stage-Storage Relationship

Basin:PC Map:252



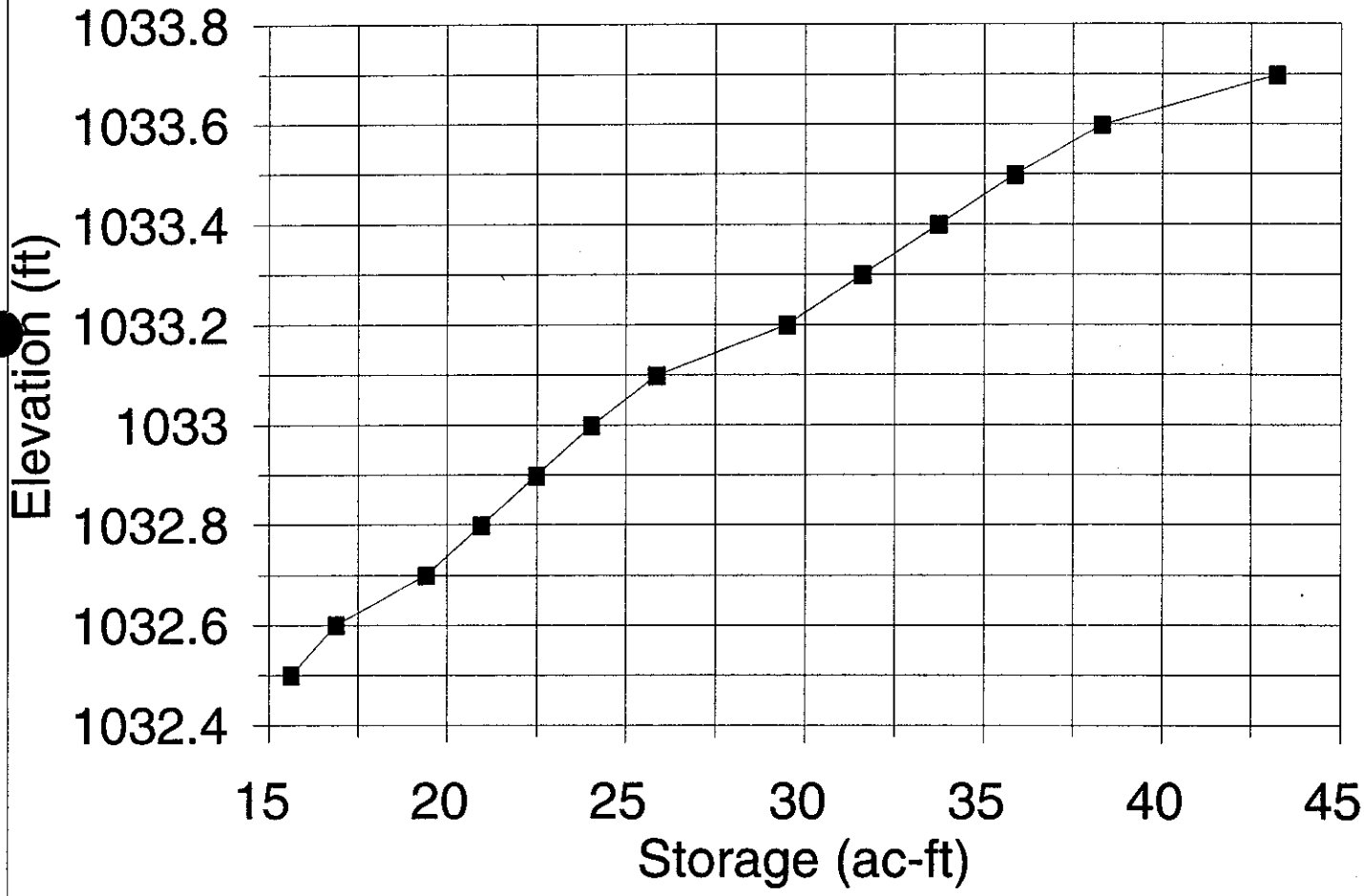
Stage-Storage Relationship

Basin:PD Map:266



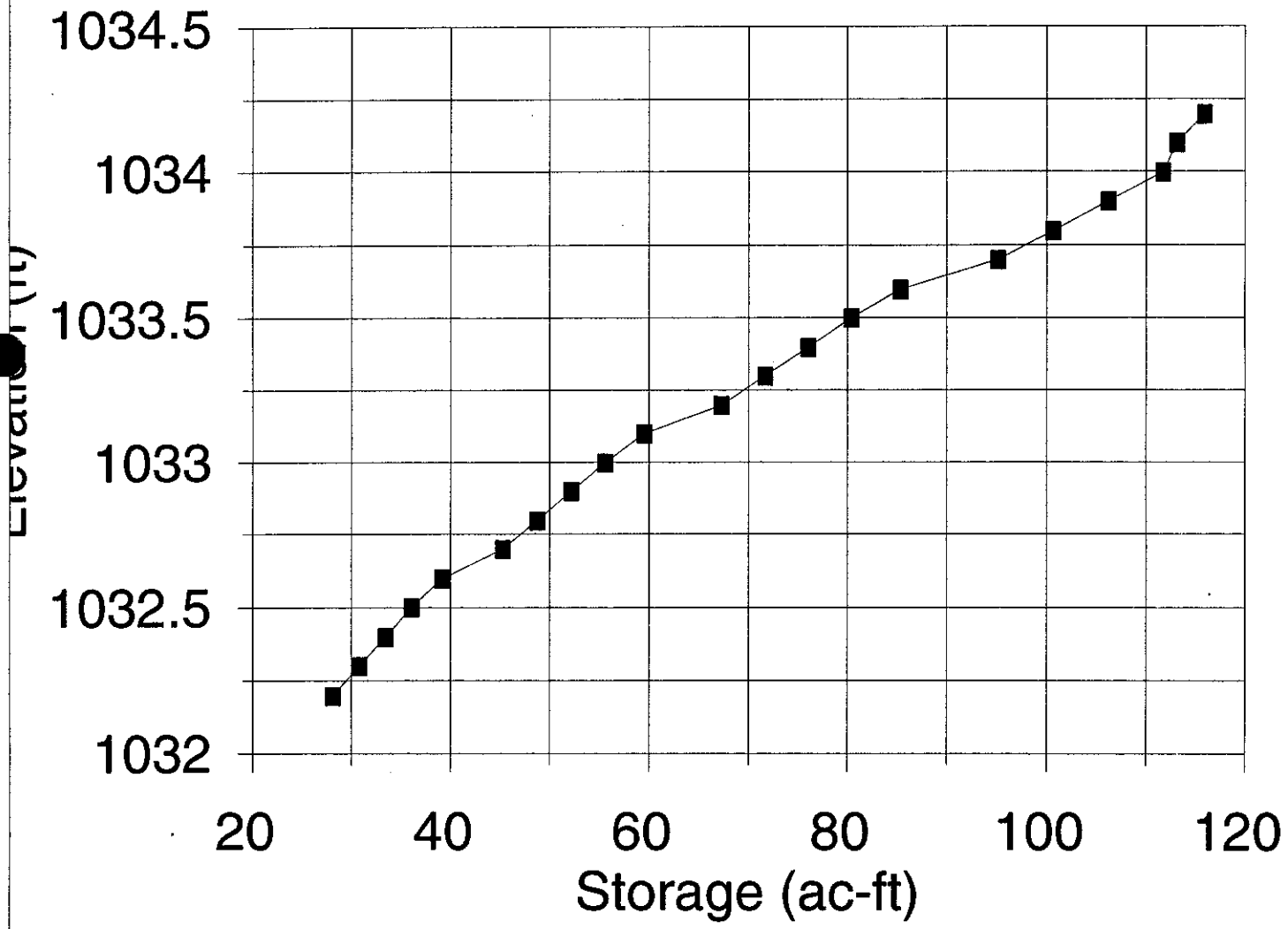
Stage-Storage Relationship

Basin:PE Map:267



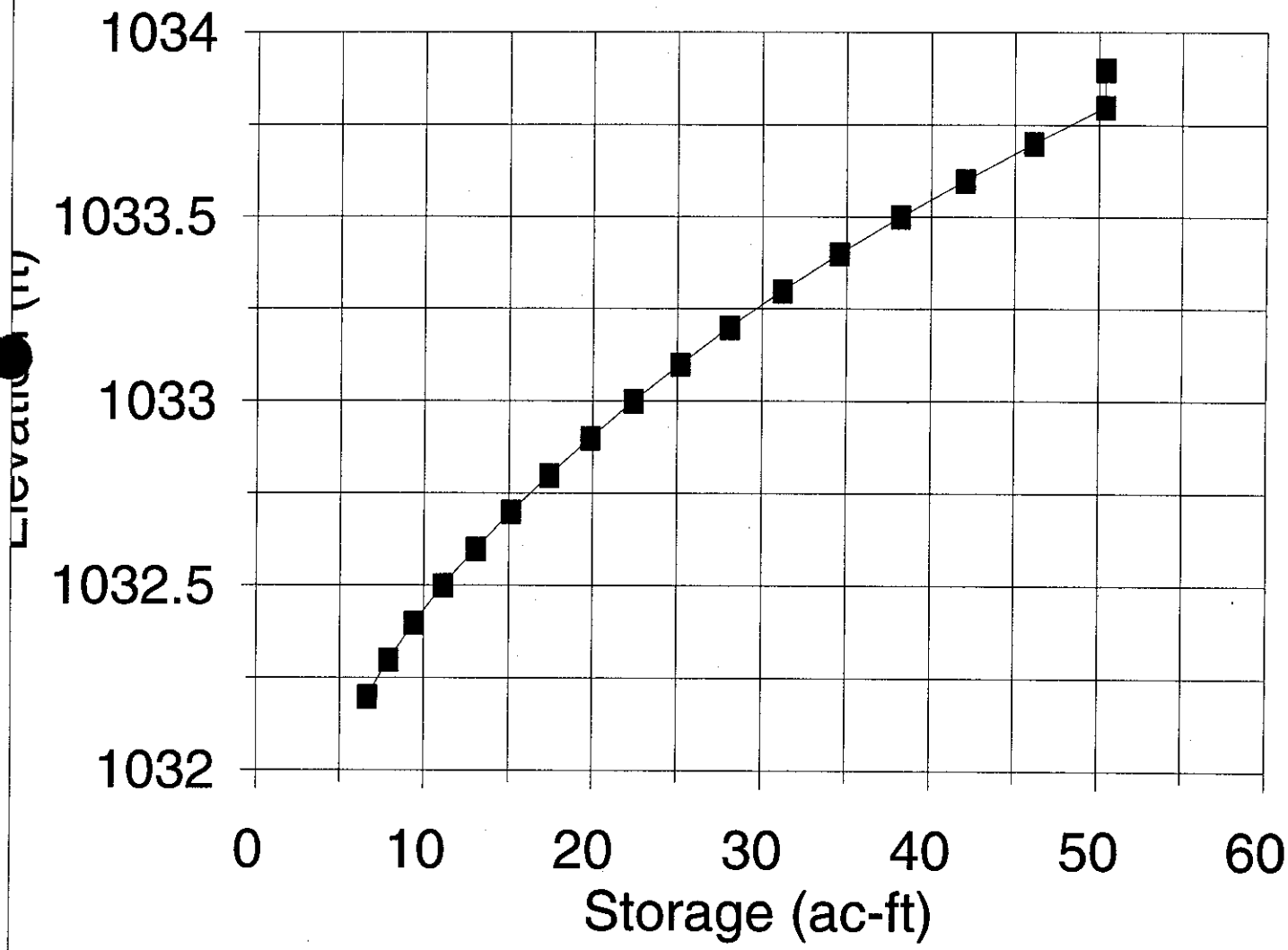
Stage-Storage Relationship

Basin:PF Map:267



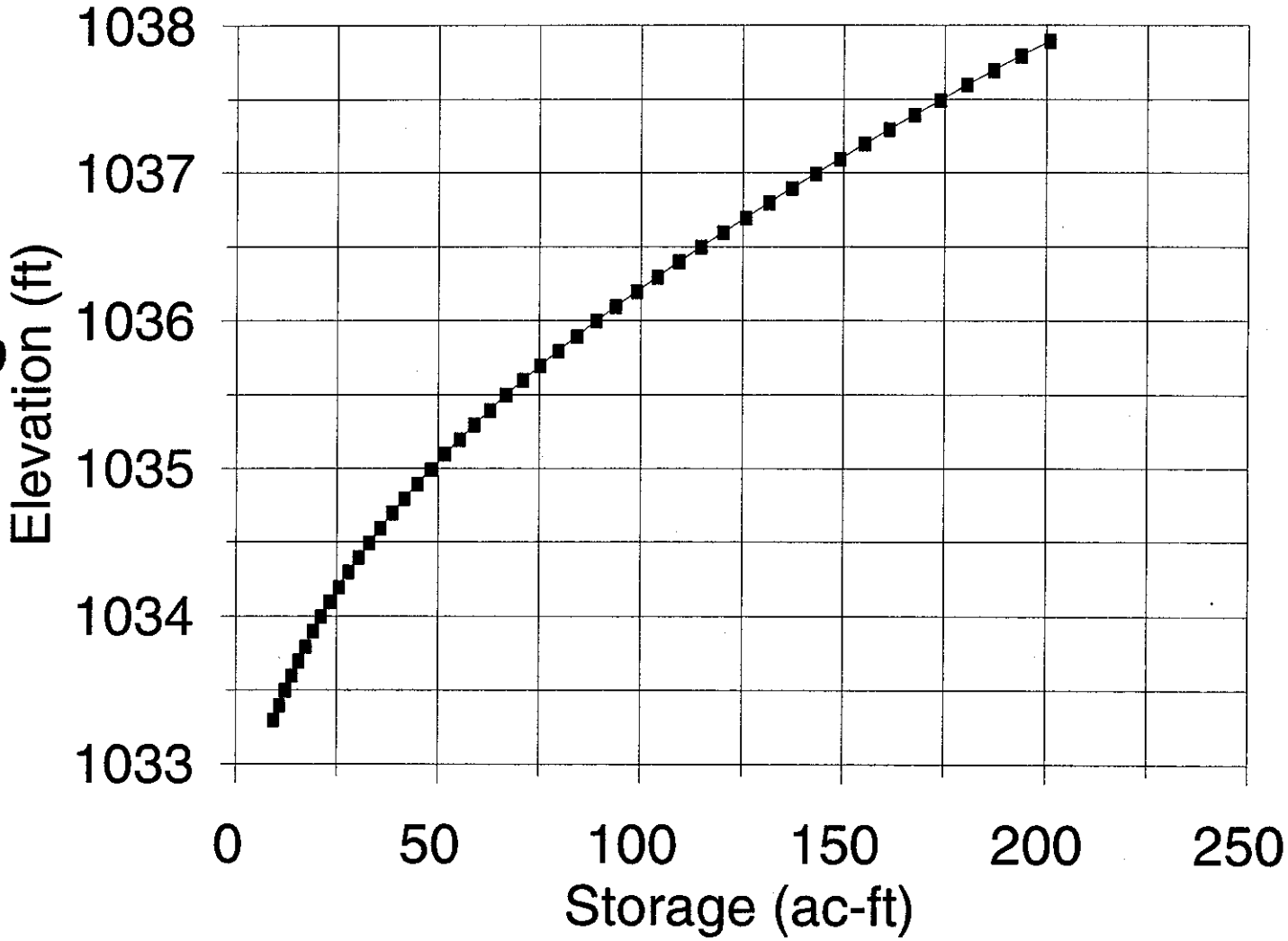
Stage-Storage Relationship

Basin:QA Map:268



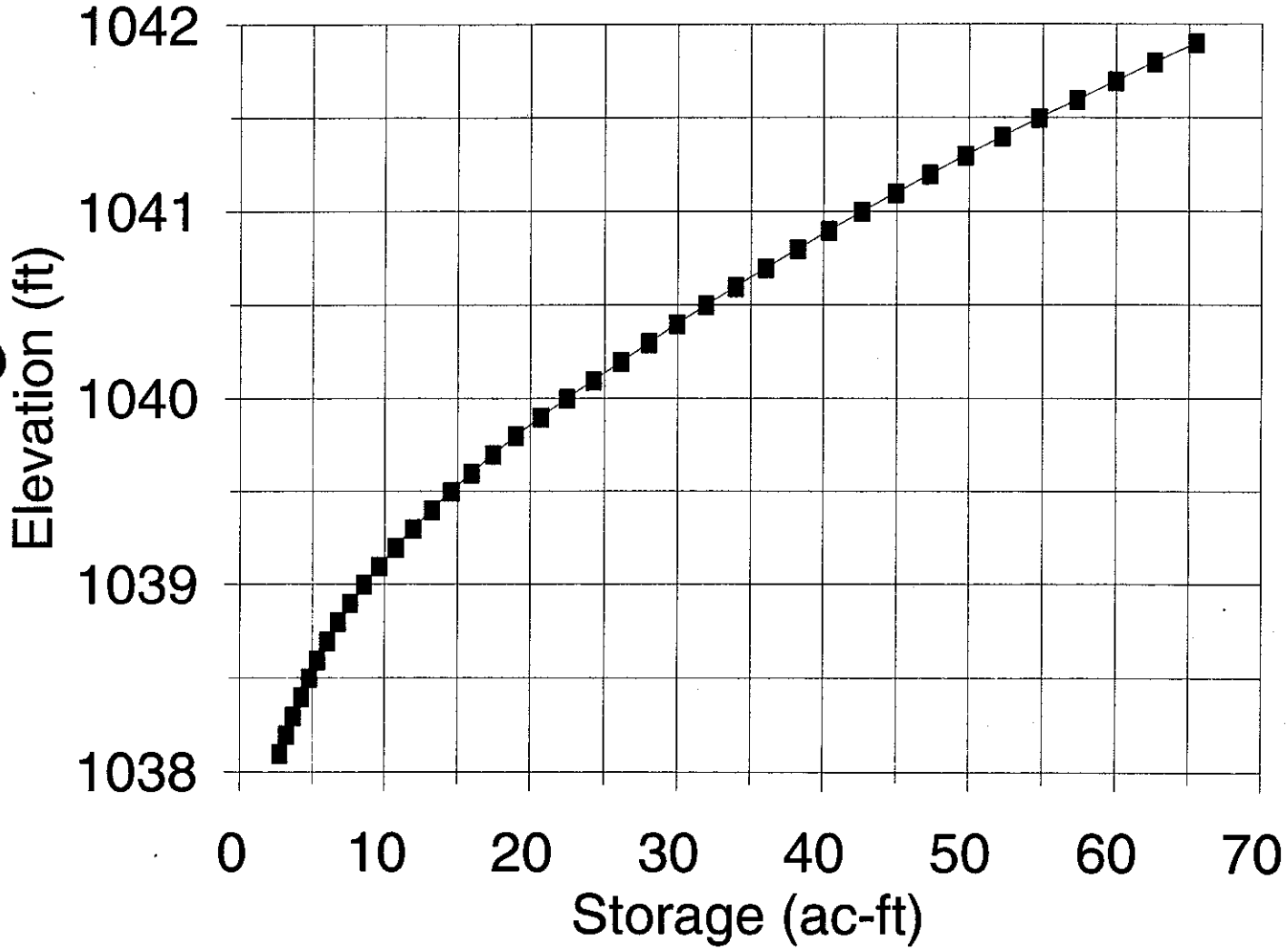
Stage-Storage Relationship

Basin:QB Map:268



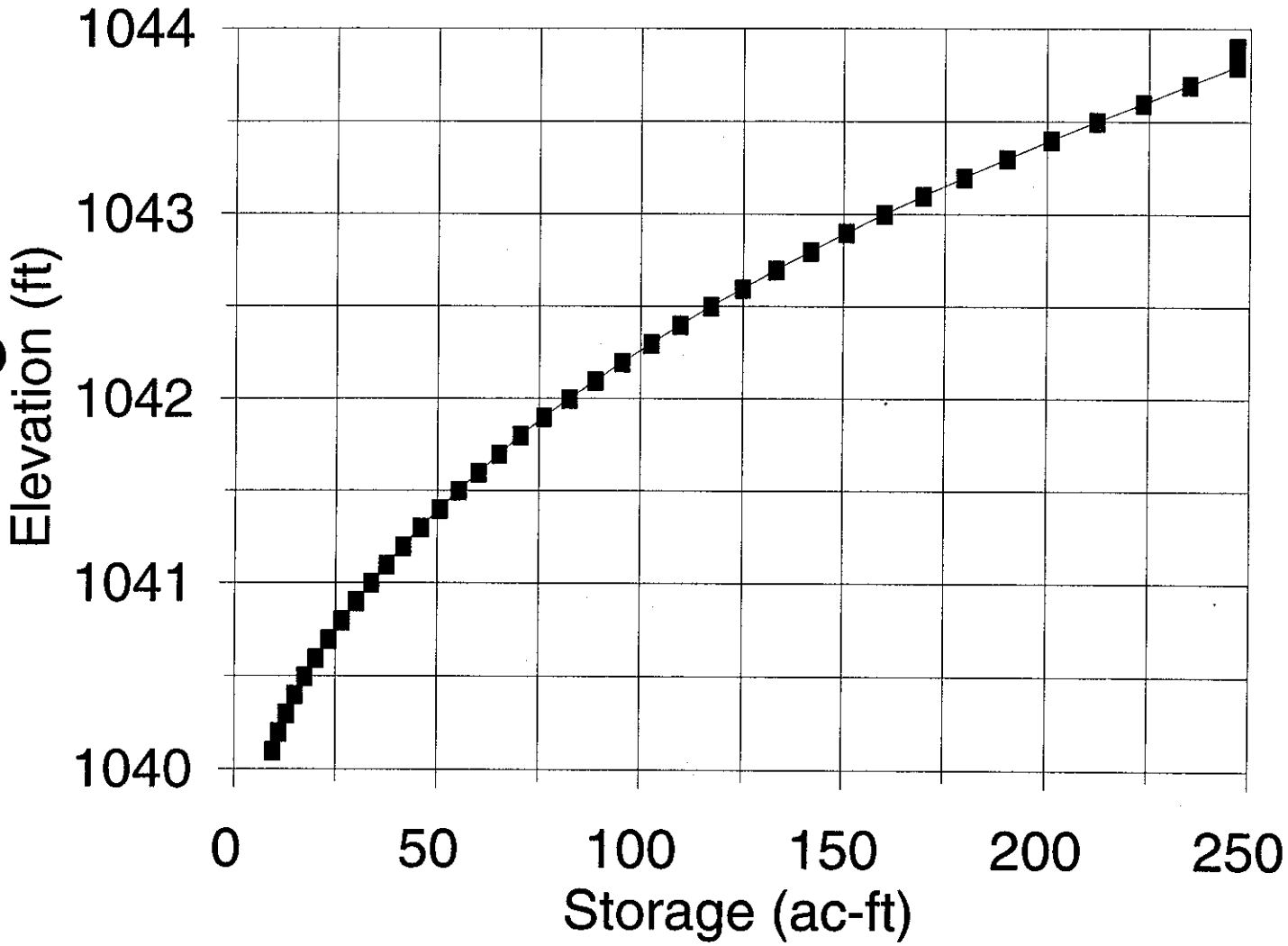
Stage-Storage Relationship

Basin:QD Map:269



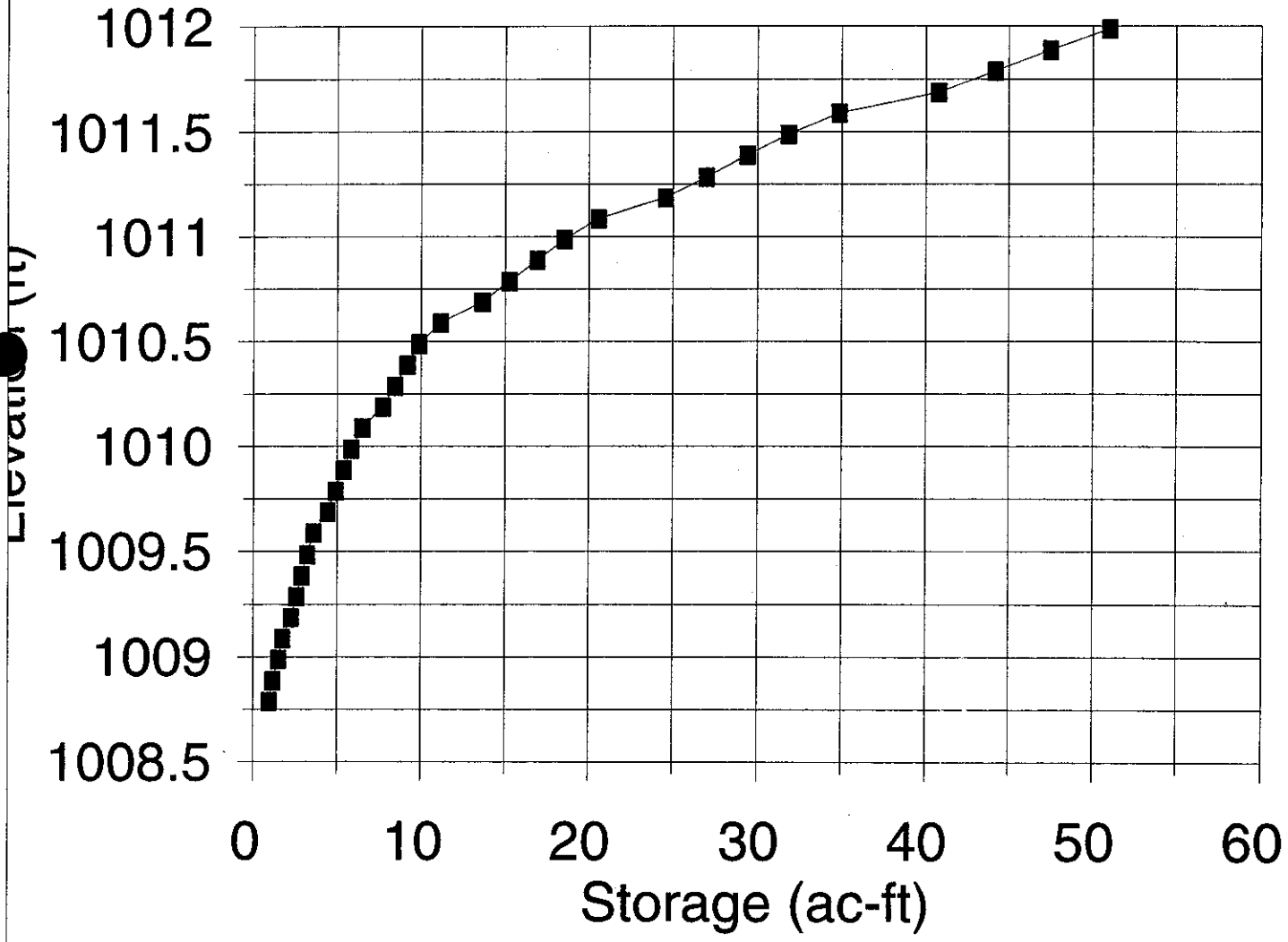
Stage-Storage Relationship

Basin:QE Map:269



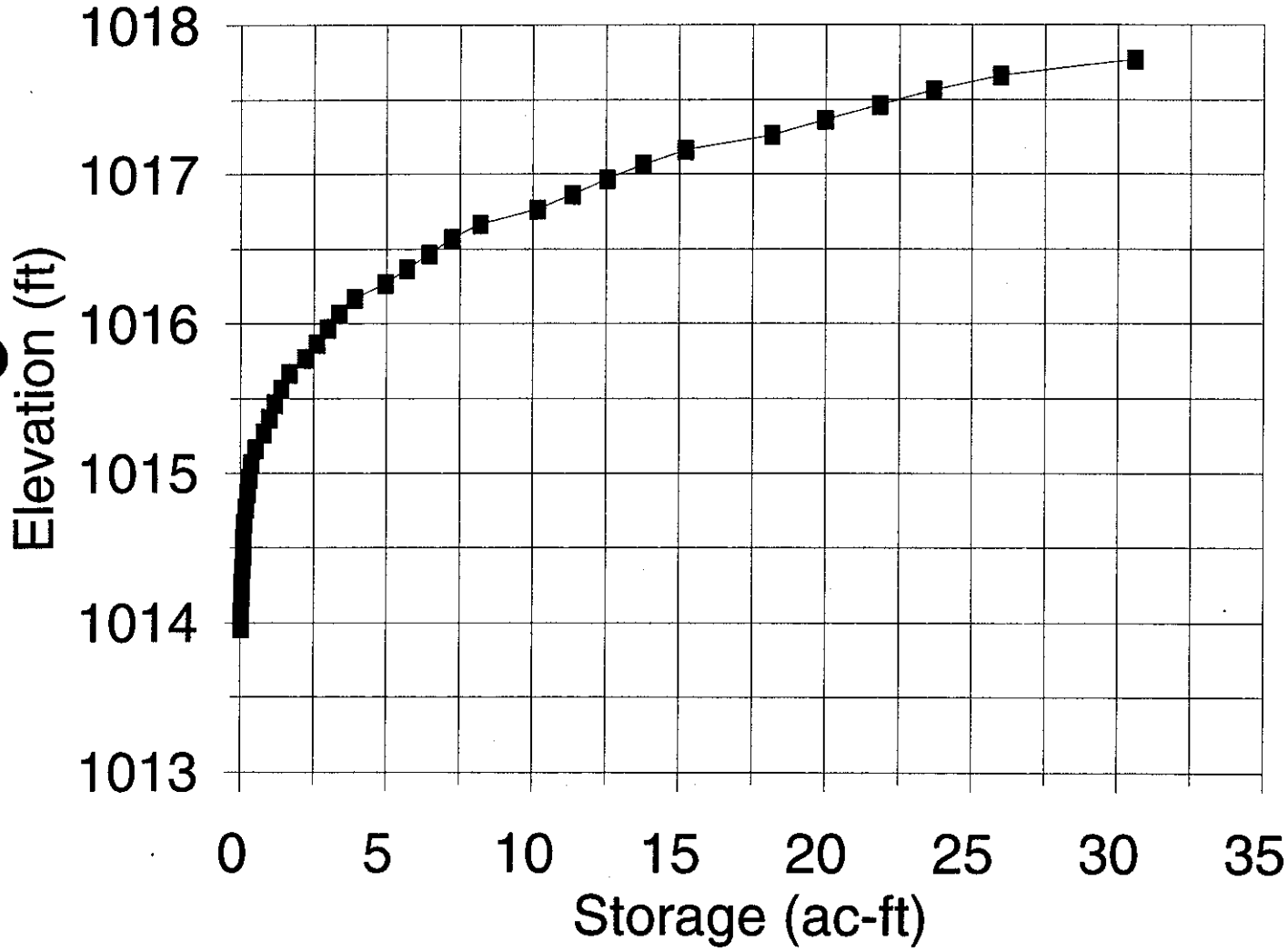
Stage-Storage Relationship

Basin:RH Map:235



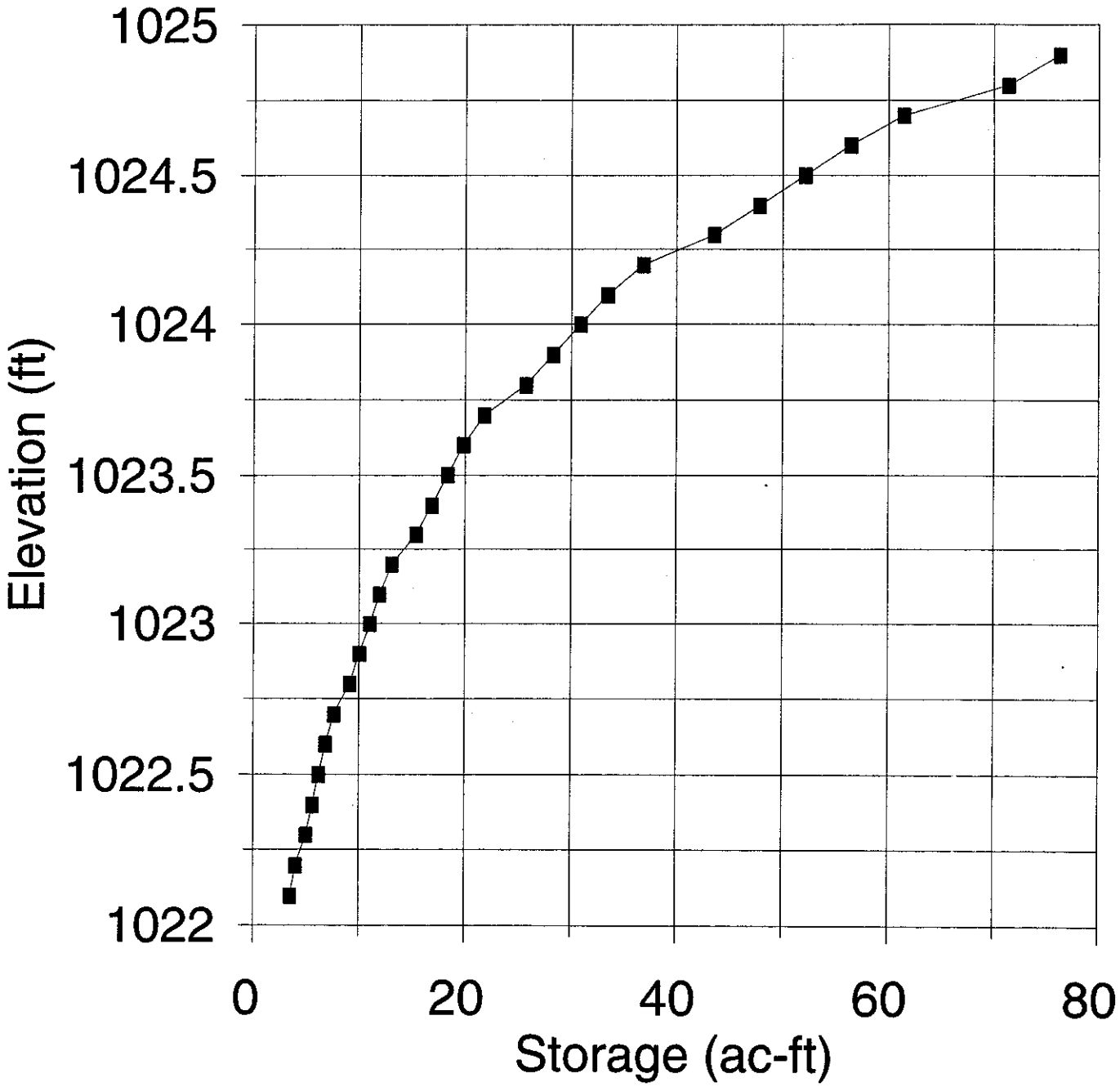
Stage-Storage Relationship

Basin:RI Map:235



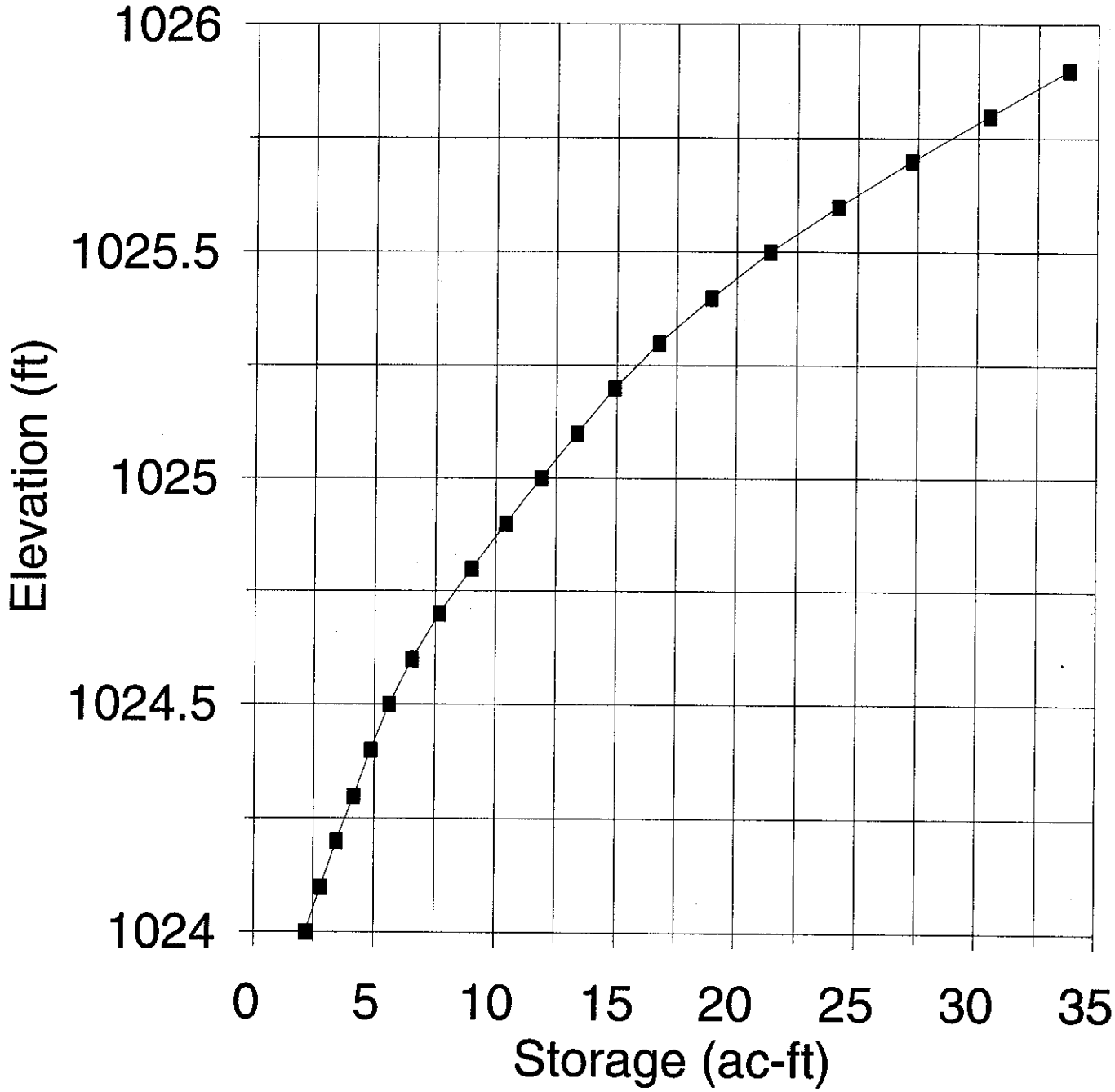
Stage-Storage Relationship

Basin:RJ Map:236



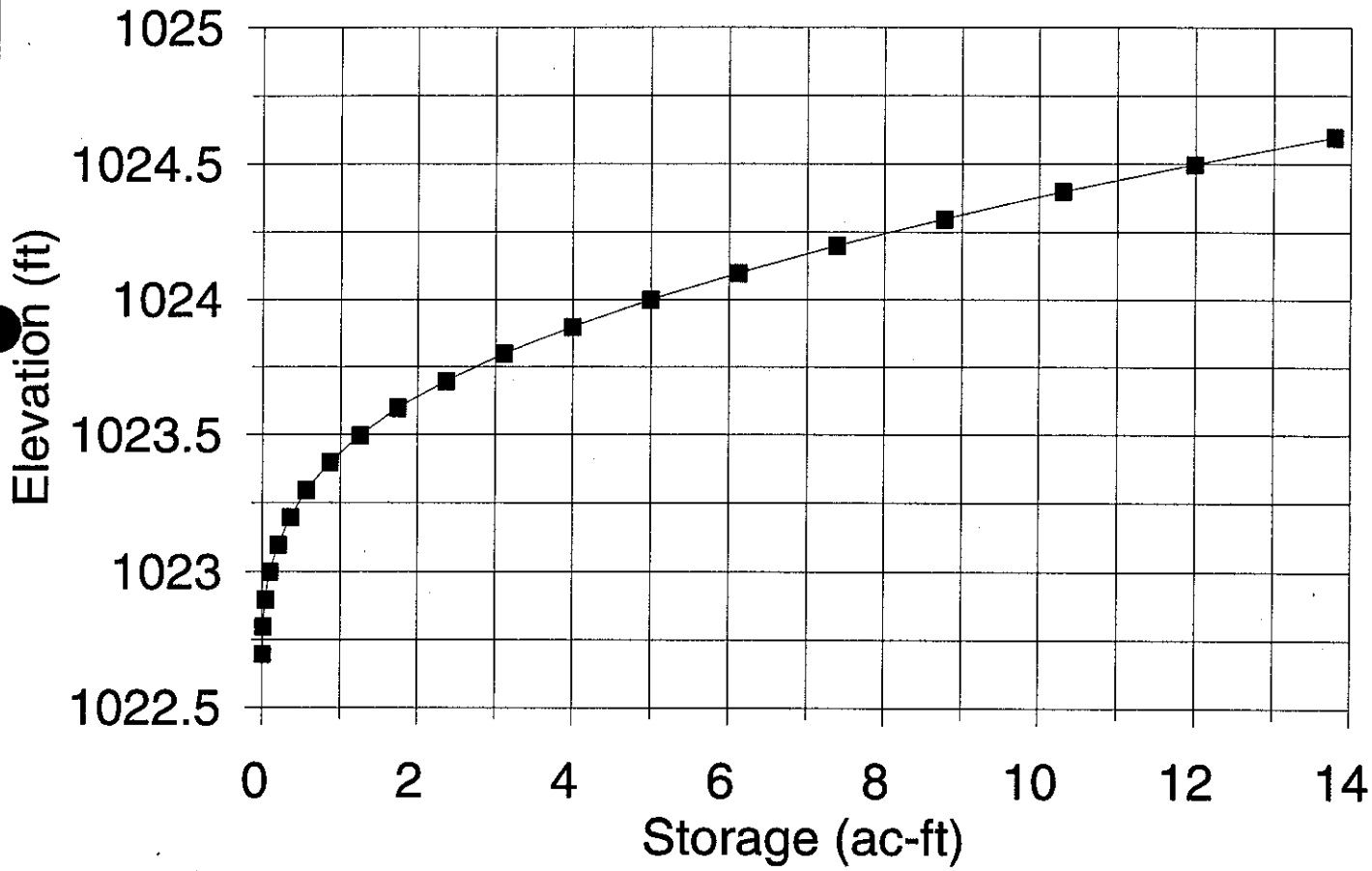
Stage-Storage Relationship

Basin:SB Map:207



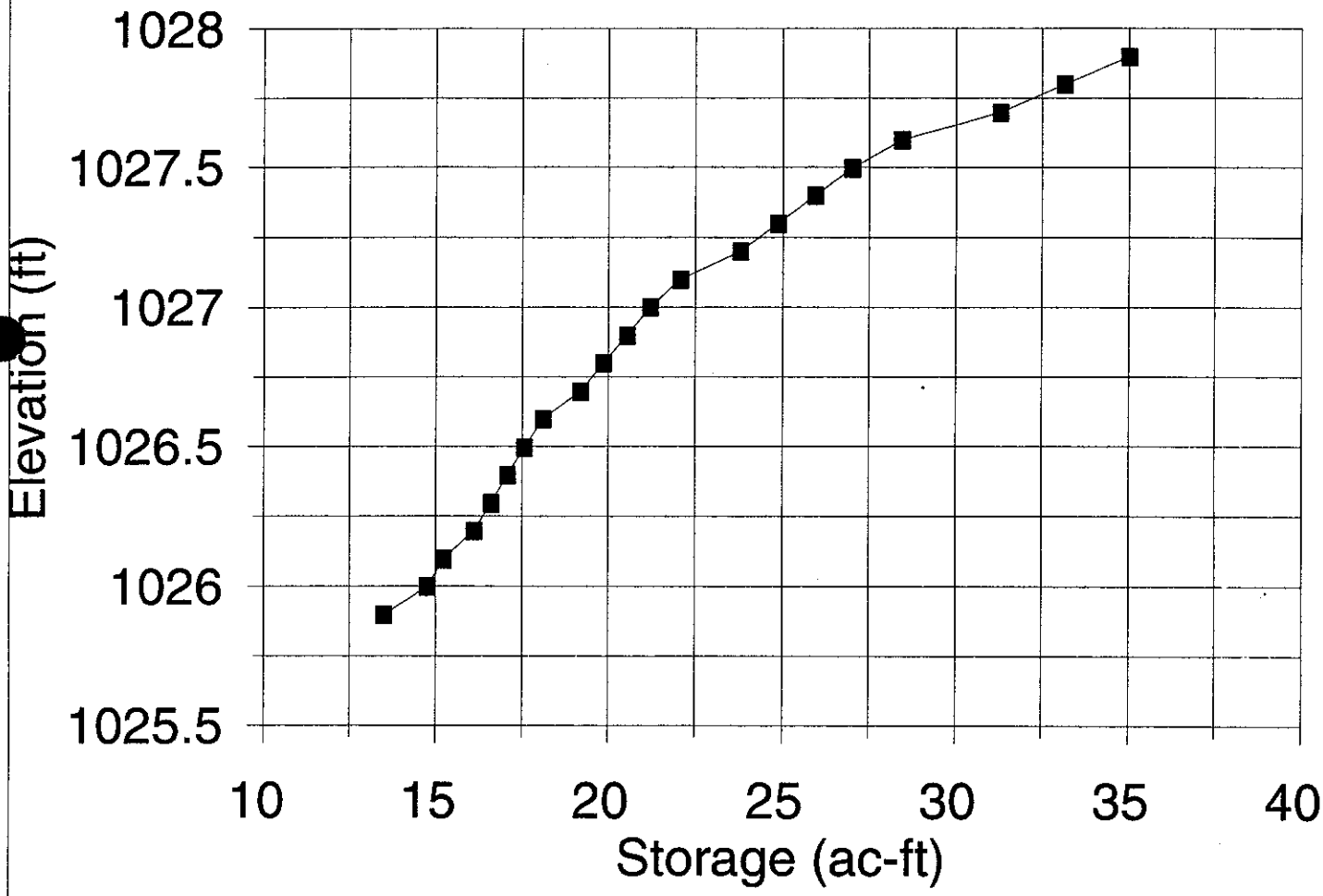
Stage-Storage Relationship

Basin:SD Map:235



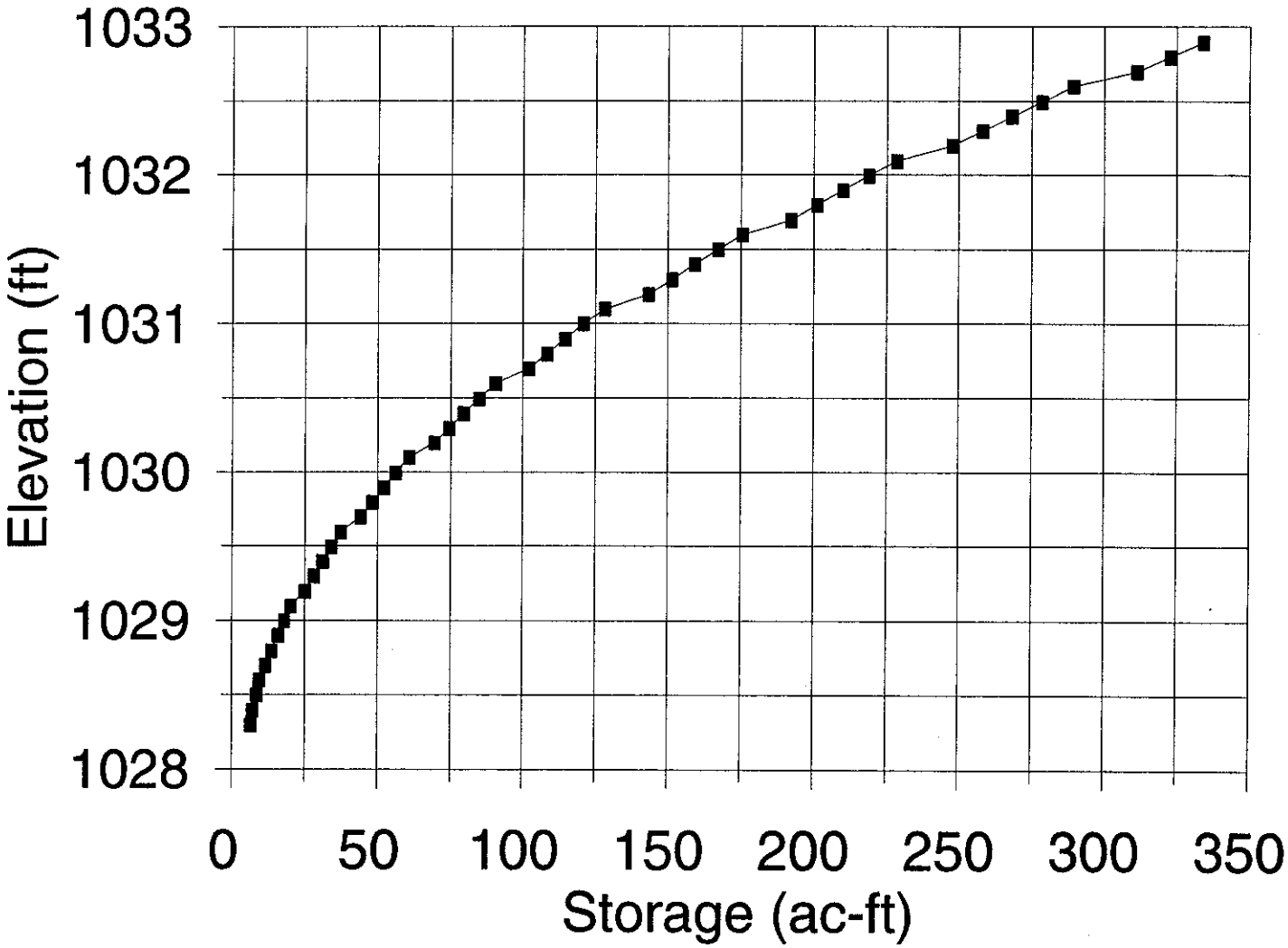
Stage-Storage Relationship

Basin:SE Map:236



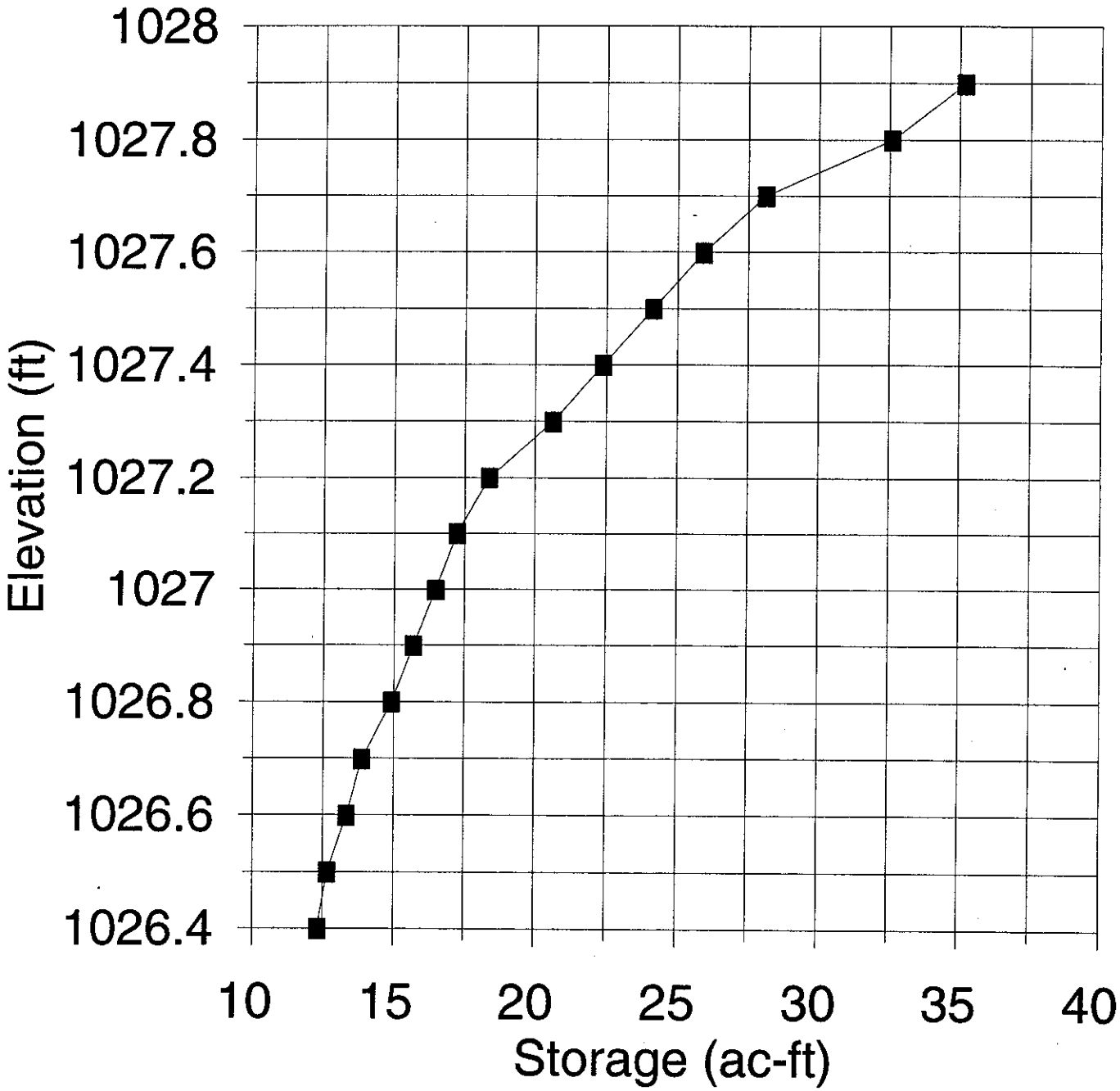
Stage-Storage Relationship

Basin:SF Map:237



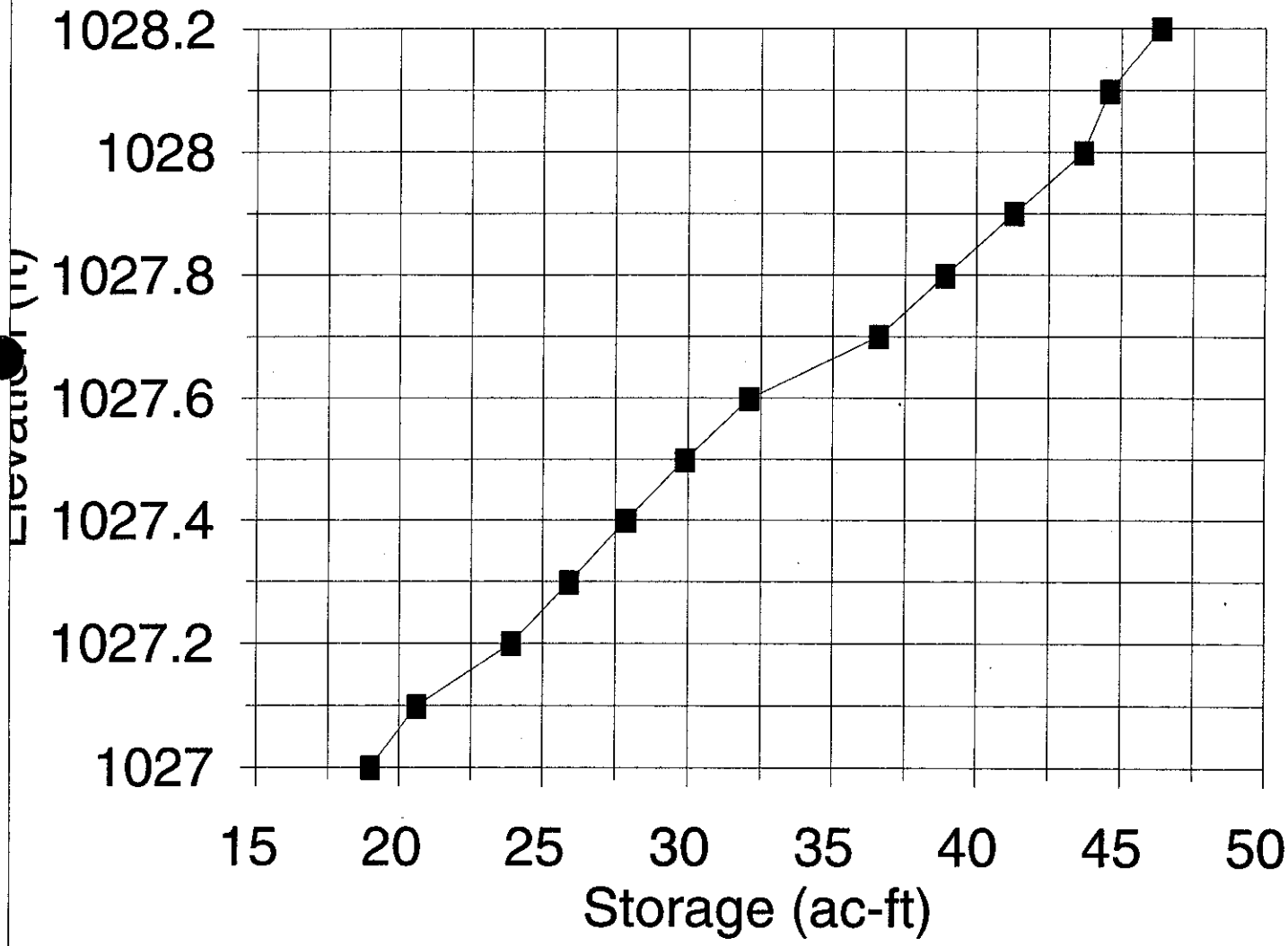
Stage-Storage Relationship

Basin:SG Map:236



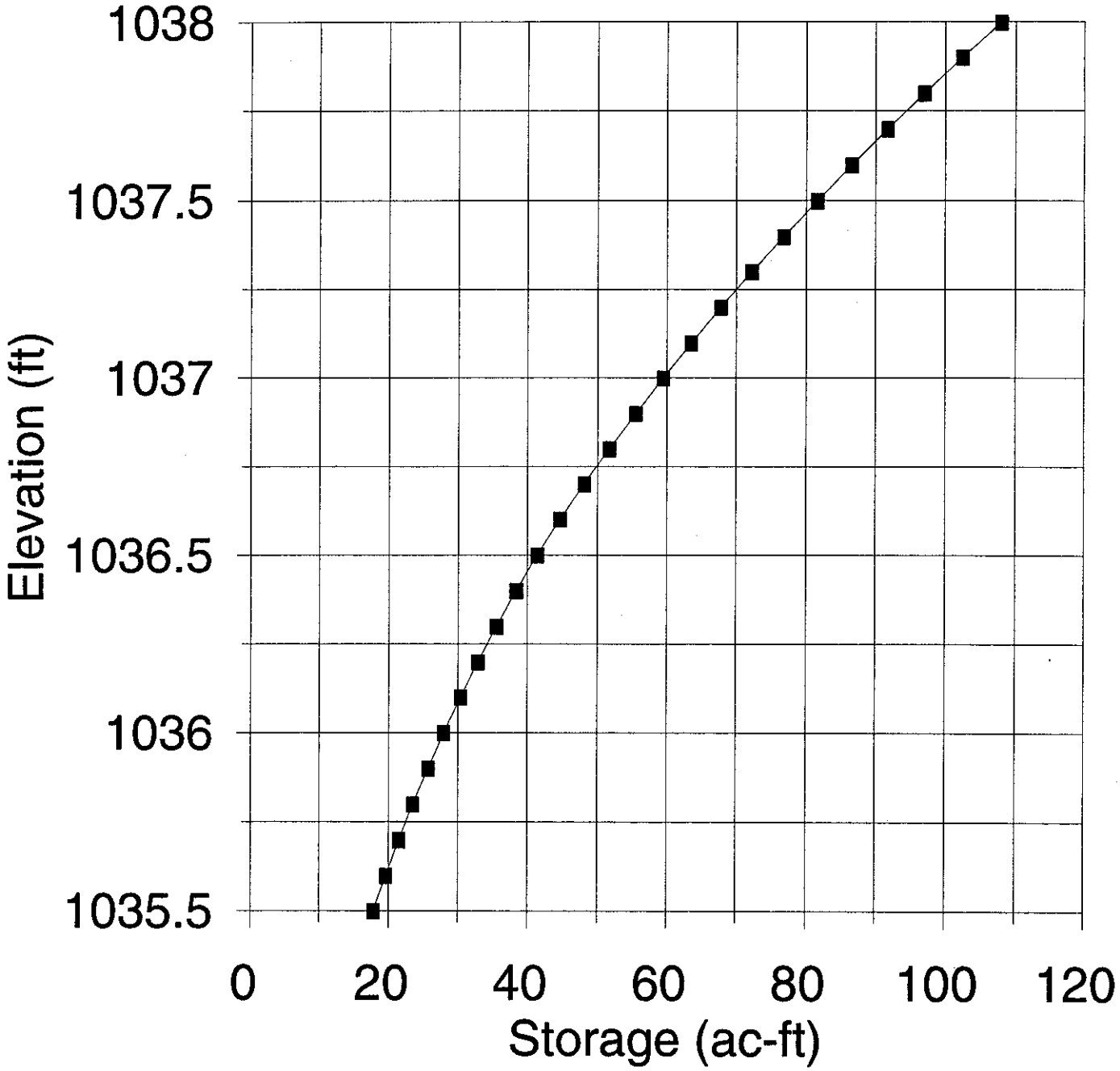
Stage-Storage Relationship

Basin:SH Map:236



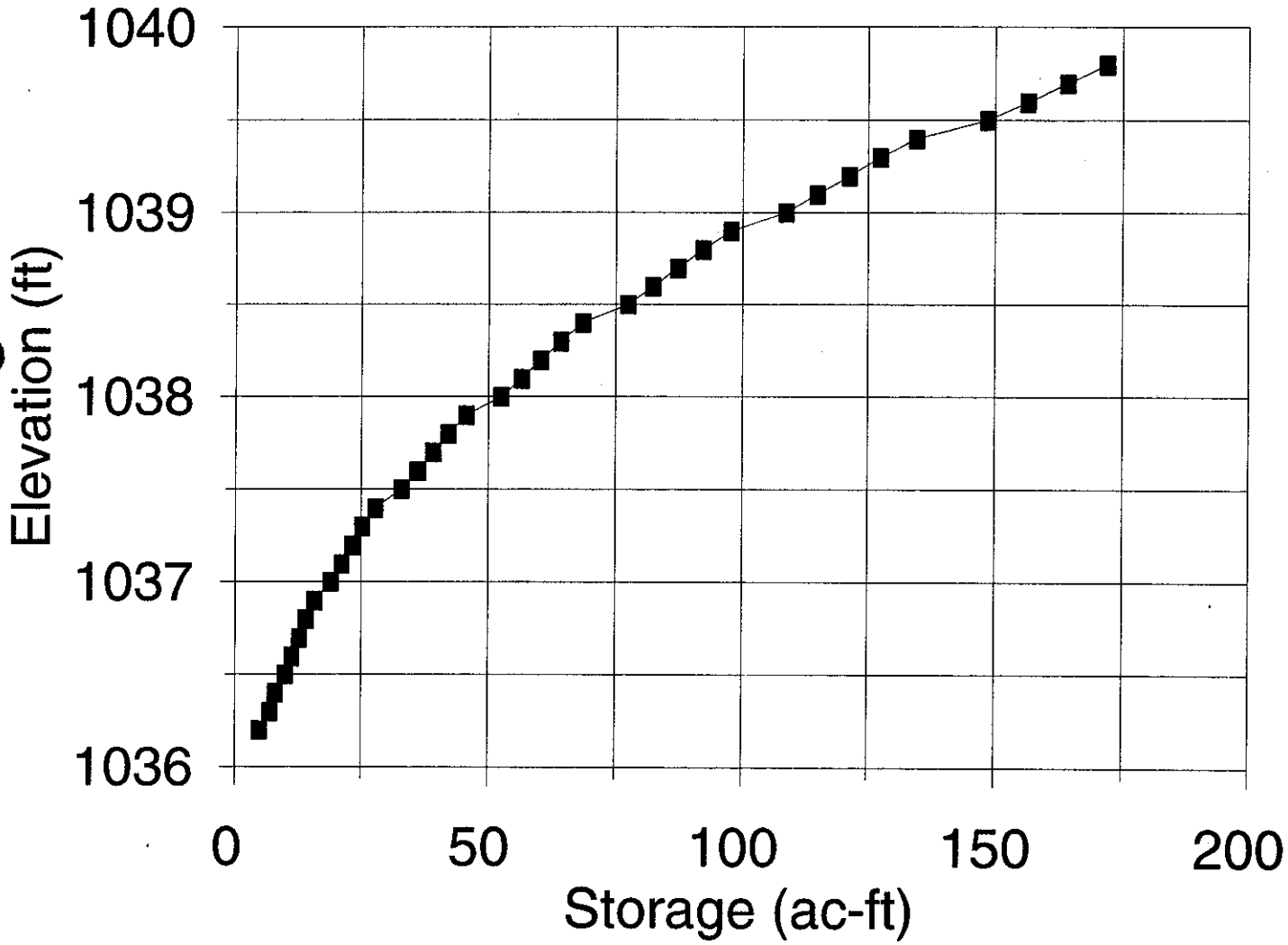
Stage-Storage Relationship

Basin:UB Map:237



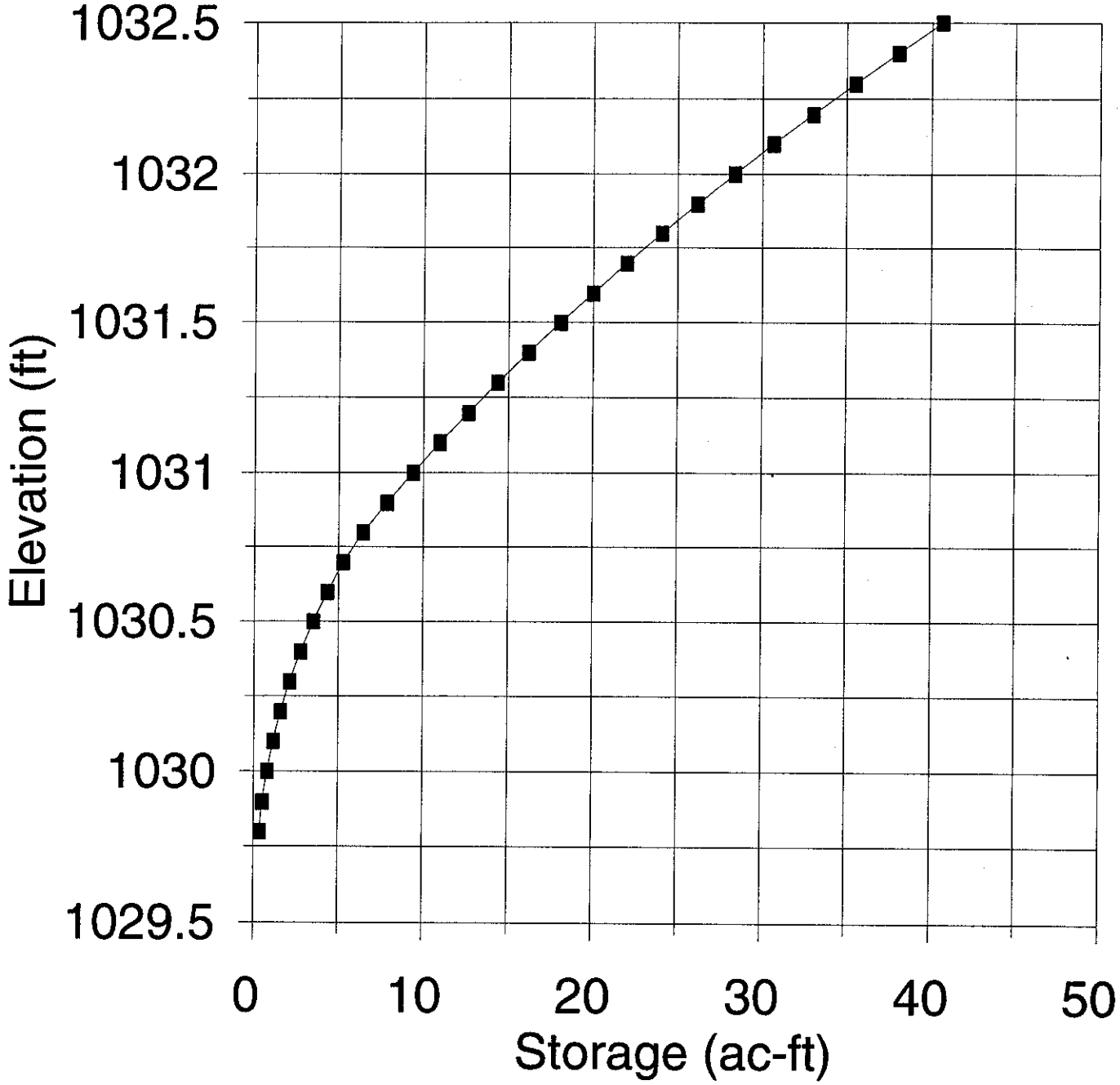
Stage-Storage Relationship

Basin:UC Map:238



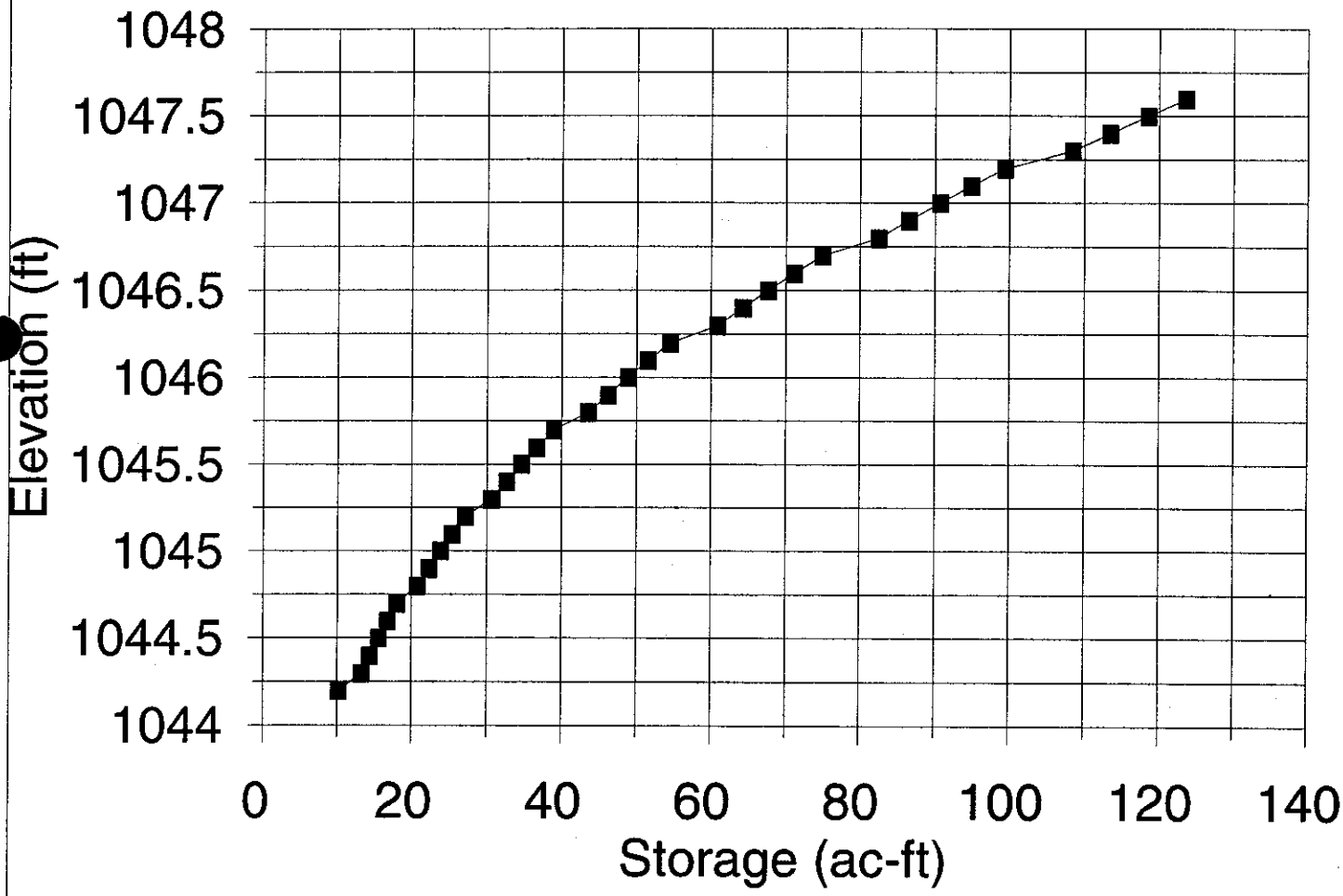
Stage-Storage Relationship

Basin:UE Map:251



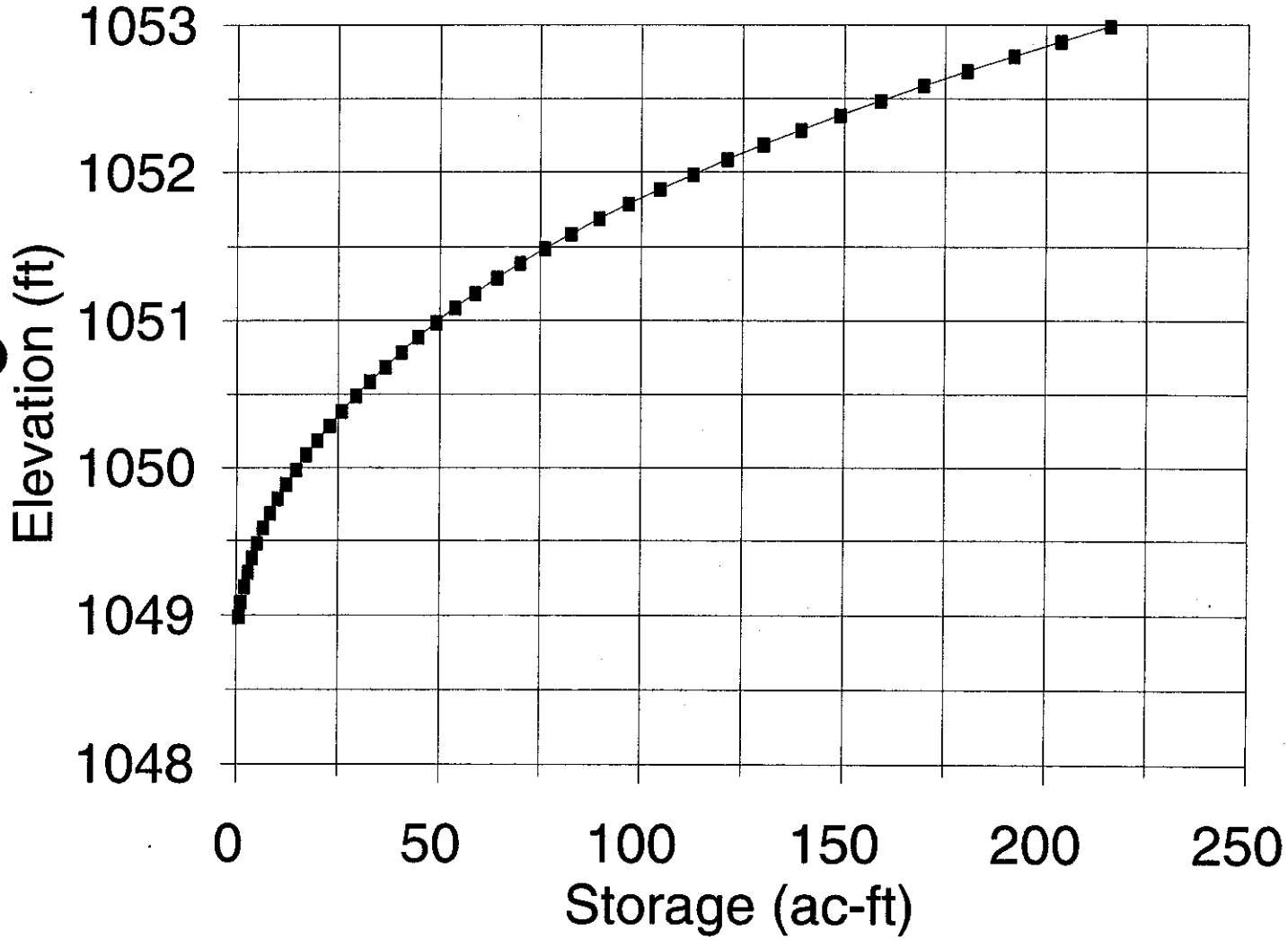
Stage-Storage Relationship

Basin:VA Map:239



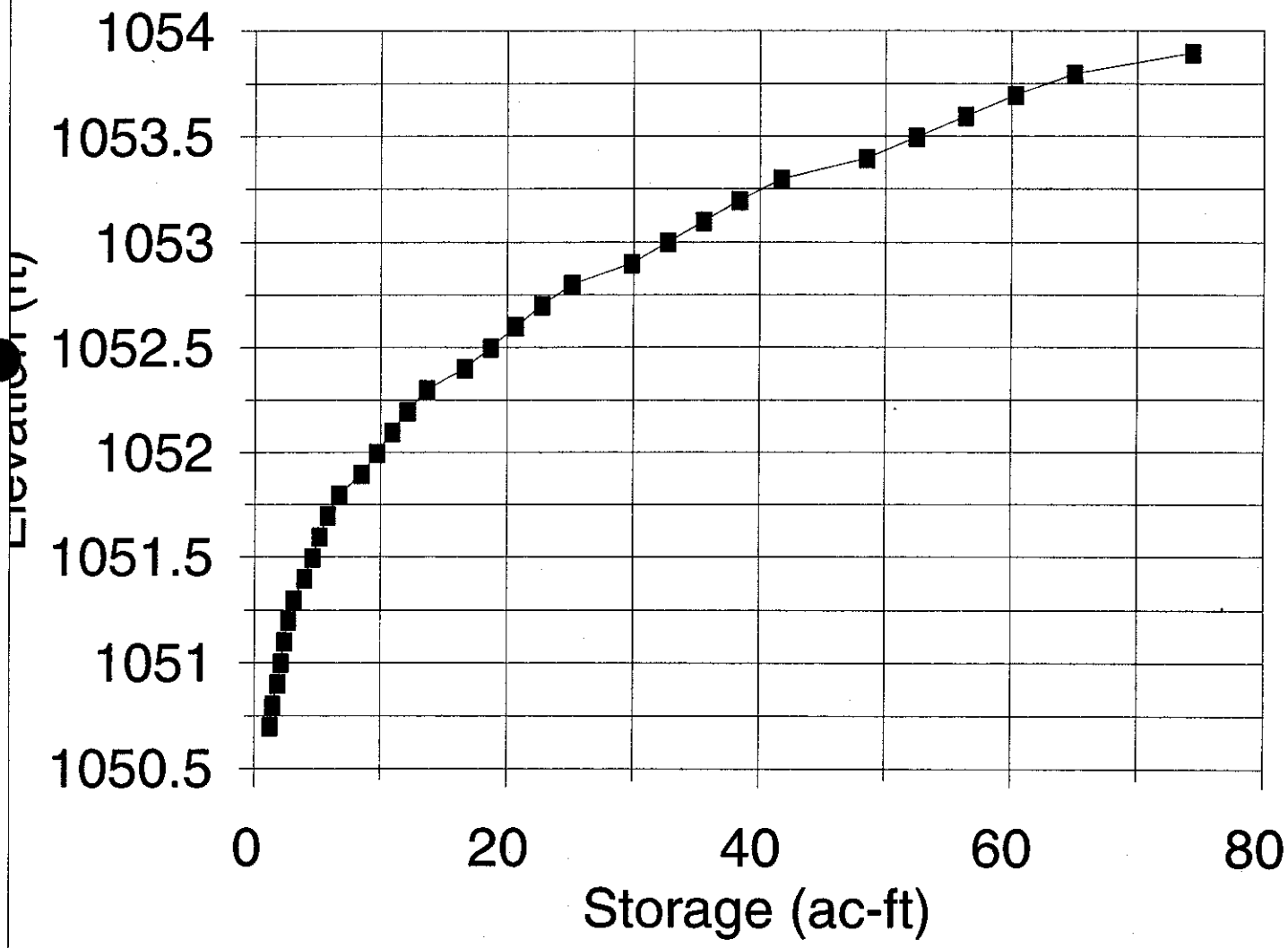
Stage-Storage Relationship

Basin:VC Map:240



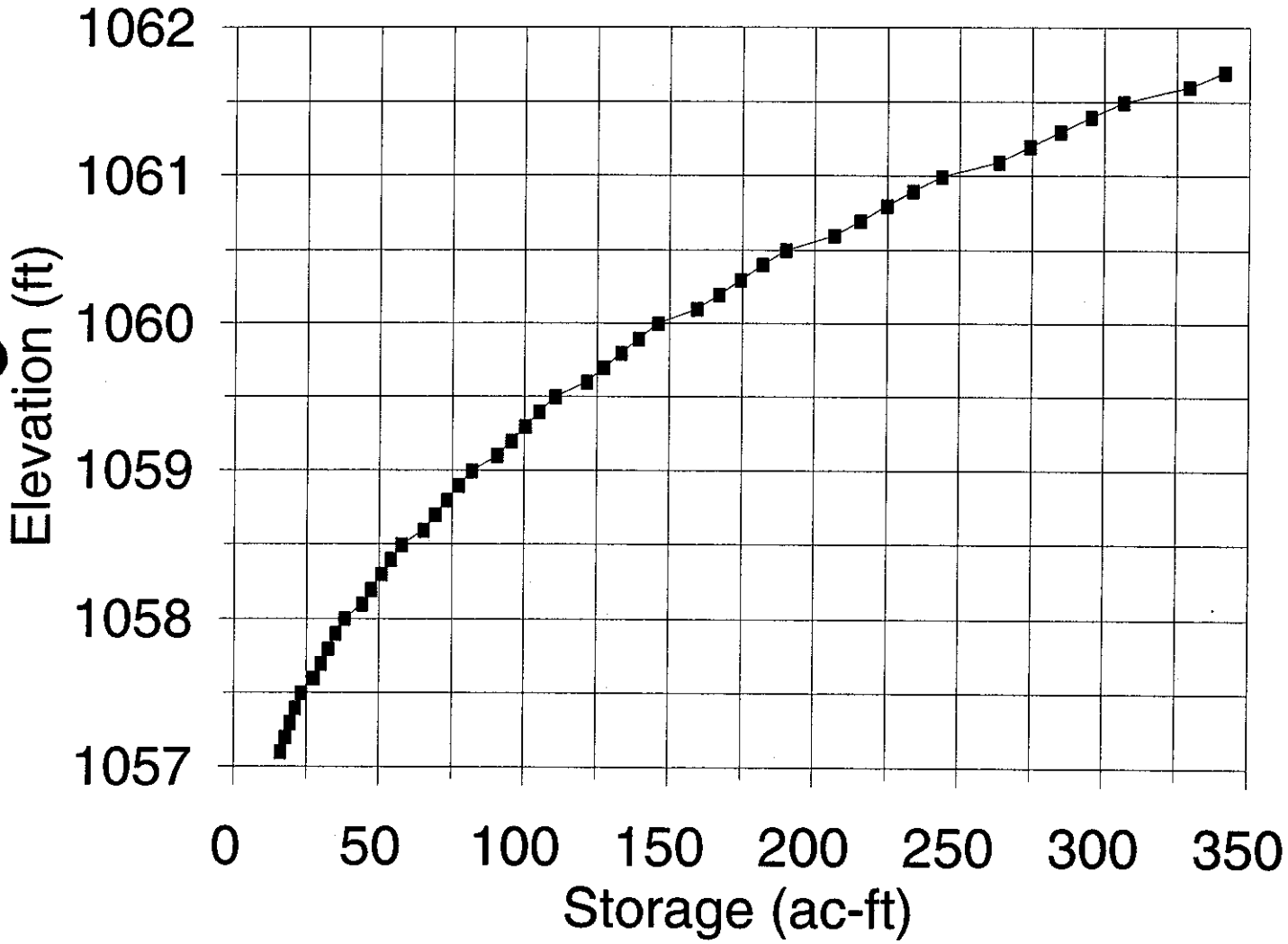
Stage-Storage Relationship

Basin:WA Map:241



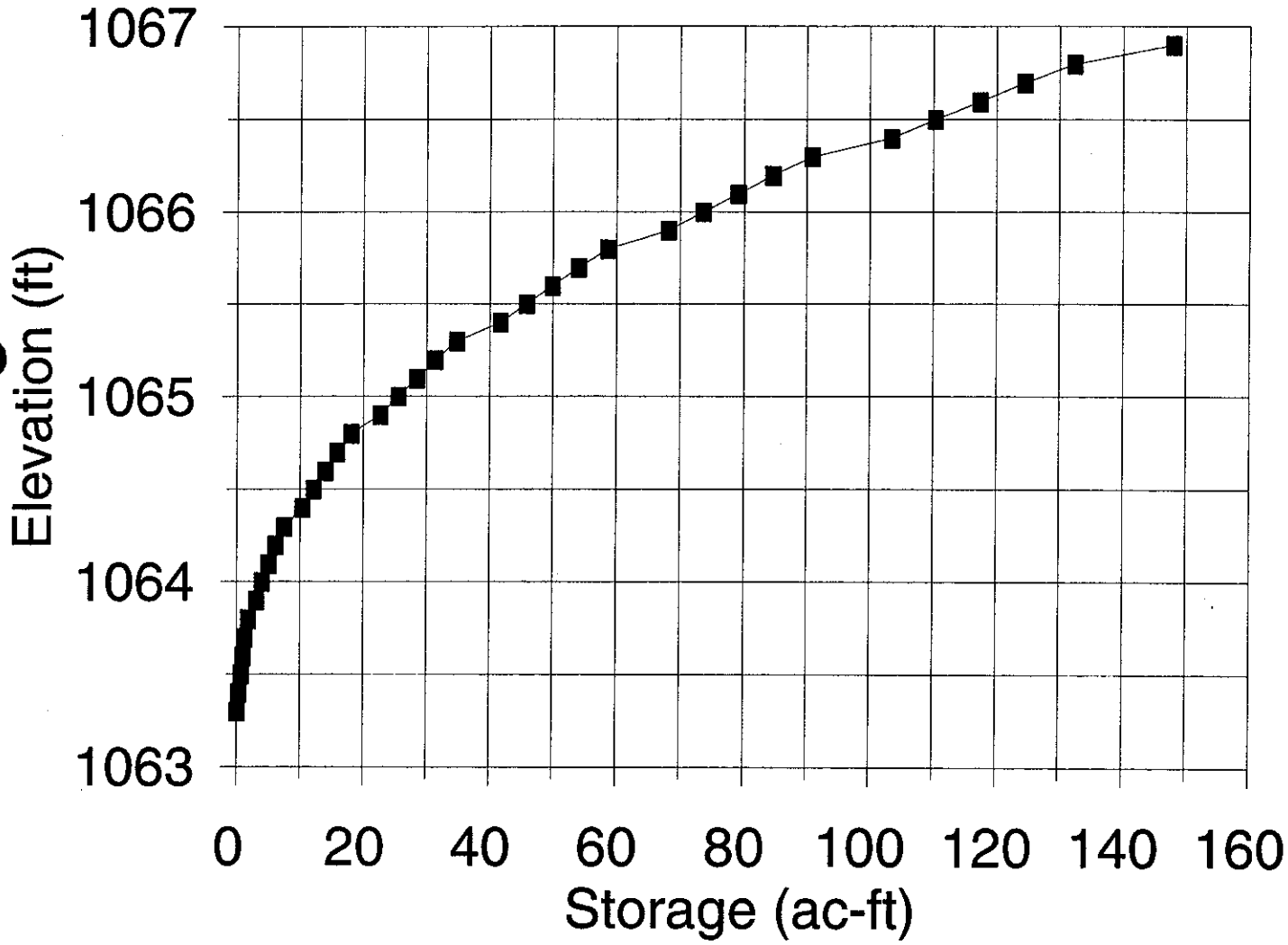
Stage-Storage Relationship

Basin:WC Map:242



Stage-Storage Relationship

Basin:XA Map:243



Appendix D.5
Flow Splits & Diversions Data

Runoff drains generally in a southwesterly direction. As overland flow reaches major intersections there is sometimes a flow split with a portion of the flow draining south and a portion draining west along the intersecting roads. At some point along the roads, the flow may overtop and proceed along the original southwesterly flow direction. This flow condition is modeled by using the divert option within HEC-1. At intersections where diverts occur, the percentage of flow going each direction is specified. It is recognized that in reality not all the runoff will reach the intersection and not all the runoff will be diverted the entire distance to the next concentration point. However, the HEC-1 model is limited to modeling each hydrograph at a specific concentration point. The modeling of flow splits and subsequent flow routing along sub-basin boundaries is representative of the broad, overland nature of the true flow conditions.

The actual flow split ratios at intersections are determined by estimating the overland flow angle of approach to the intersection and determining the percentage of the flow that would encounter a north-south street and an east-west street of the specified length. The approach angle is estimated based on the resultant of the slopes of each street according to the equation

$$Angle = \arctan\left(\frac{Slope_{n-s}}{Slope_{e-w}}\right)$$

The flow ratio (FR) is computed according to the following equation:

$$FR_s = \frac{\dfrac{L_{e-w}}{S_{e-w}}}{\dfrac{L_{e-w}}{S_{e-w}} + \dfrac{L_{n-s}}{S_{n-s}}}$$

Where:

FR_s = Flow ratio for flow going to the south, across the east - west street.
L_{e-w}, L_{n-s} = East - west and north - south street lengths, respectively (ft)
S_{e-w}, S_{n-s} = East - west and north - south street slopes, respectively (ft/ft)

The derivation of flow split values is summarized in **Table 4**.

TABLE 4 - FLOW SPLIT ANALYSIS

Subarea	E-W Street (ft)		N-S Street (ft)		Flow Ratio		Flow Angle
Designation	Length	Delta Y	Length	Delta Y	To South	To West	(deg)
UD	5280	8	2640	6.2	0.76	0.24	57
UA	5280	7	2640	6.59	0.79	0.21	62
TB	5280	9.6	2640	6.91	0.74	0.26	55
SC	2640	5	2640	4.2	0.46	0.54	40
SA	3960	8.9	2640	3.98	0.50	0.50	34
RF	5280	6	2640	5.9	0.80	0.20	63
RD	2640	2.7	3960	3.9	0.39	0.61	44
QC	5280	7.4	2640	6.8	0.79	0.21	61
NB	2640	7.07	5280	15.02	0.35	0.65	47
JD	2640	1.7	2640	2.9	0.63	0.37	60
PB	5280	6.65	2640	7.3	0.81	0.19	66
JC	5280	11.4	5280	13.5	0.54	0.46	50
PA	5280	13.29	2640	15.53	0.82	0.18	67
MD	2640	6.6	2640	1.8	0.21	0.79	15
JB	5280	9.08	5280	16.35	0.64	0.36	61
OE	5280	7.4	2640	8.73	0.83	0.17	67
OD	5280	6.47	2640	7.3	0.82	0.18	66
MC	5280	7.9	5280	12.3	0.61	0.39	57
MF	5280	12.1	5280	10.87	0.47	0.53	42

Notes:Flow split is at the southwest corner of the drainage area.
Flow angle is measured counter-clockwise from the east-west street.
Delta Y is the elevation difference corresponding to the specified street length.

Appendix D.6
Hydrological Calculations

HEC-1 Input Listing
HEC-1 Routing Diagram
HEC-1 Output Summary

```
1****************************************
 *                                      *
 *   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *
 *              JUL   1997              *
 *           VERSION 4.1                *
 *                                      *
 *  RUN DATE   06MAY99  TIME  12:51:07  *
 *                                      *
 ****************************************
```

```
****************************************
*                                      *
*    U.S. ARMY CORPS OF ENGINEERS      *
*    HYDROLOGIC ENGINEERING CENTER     *
*          609 SECOND STREET           *
*       DAVIS, CALIFORNIA 95616        *
*           (916) 756-1104             *
*                                      *
****************************************
```

```
X     X  XXXXXXX   XXXXX          X
X     X  X        X     X        XX
X     X  X        X               X
XXXXXXX  XXXX     X        XXXXX  X
X     X  X        X               X
X     X  X        X     X         X
X     X  XXXXXXX   XXXXX         XXX
```

THIS PROGRAM REPLACES ALL PREVIOUS VERSIONS OF HEC-1 KNOWN AS HEC1 (JAN 73), HEC1GS, HEC1DB, AND HEC1KW.

THE DEFINITIONS OF VARIABLES -RTIMP- AND -RTIOR- HAVE CHANGED FROM THOSE USED WITH THE 1973-STYLE INPUT STRUCTURE.
THE DEFINITION OF -AMSKK- ON RM-CARD WAS CHANGED WITH REVISIONS DATED 28 SEP 81. THIS IS THE FORTRAN77 VERSION
NEW OPTIONS: DAMBREAK OUTFLOW SUBMERGENCE , SINGLE EVENT DAMAGE CALCULATION, DSS:WRITE STAGE FREQUENCY,
DSS:READ TIME SERIES AT DESIRED CALCULATION INTERVAL LOSS RATE:GREEN AND AMPT INFILTRATION
KINEMATIC WAVE: NEW FINITE DIFFERENCE ALGORITHM

1 HEC-1 INPUT PAGE 1

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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

   1          ID   FILENAME: TOLLESON.DAT
   2          ID
   3          ID   TOLLESON-FOWLER WATERSHED RAINFALL-RUNOFF MODEL.
   4          ID
   5          ID   FCDMC CONTRACT NO. 95-26
   6          ID
   7          ID   MARCH, 1999
   8          ID
   9          ID   DIBBLE & ASSOCIATES, CONSULTING ENGINEERS WITH
  10          ID   JE FULLER/HYDROLOGY & GEOMORPHOLOGY, INC.
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11          ID
12          ID   THIS MODEL IS BASED ON MAPPING FLOWN BY KENNEY AERIAL MAPPING, INC. 3/28/1994
13          ID   NGVD 1929, AND SUBSEQUENT SURVEY BY URBAN ENGINEERS
14          ID
15          ID   THE HEC-1 HYDROLOGIC MODEL IS DEVELOPED FOR PLANNING PURPOSES AND
16          ID   IS NOT INTENDED TO BE USED FOR DESIGN WITHOUT MODIFICATION.  THE
17          ID   INVESTIGATION AND THE HYDROLOGY IS BASED UPON CRITERIA DESCRIBED
18          ID   IN THE HYDROLOGY DESIGN MANUAL (HDM).
19          ID
20          ID   THE JD OPTIONS WITHIN HEC-1 WERE USED TO SIMULATE THE AREAL REDUCTION IN
21          ID   POINT PRECIPITATION VALUES BASED ON THE ACCUMULATED DRAINAGE AREA.  EVEN
22          ID   WITH THIS REFINEMENT, APPLICATION OF THIS MODEL TO OTHER AREAS WITHIN THE
23          ID   WATERSHED AND FOR OTHER PURPOSES SHOULD INCLUDE ANALYSIS OF OTHER STORMS
24          ID   DURATIONS AND CENTERINGS SUCH AS THE SIX-HOUR STORM WITH RAINFALL PATTERNS
25          ID   AS DESCRIBED IN DDM1.
26          ID
27          ID   FLOOD CONTROL DISTRICT OF MARICOPA COUNTY.
28          ID   HYDROLOGY BRANCH, ENGINEERING DIVISION.
29          ID   100-YR 24-HOUR PRECIPITATION.
30          ID
31          ID
32          ID   THE "CDUM" OPERATIONS ARE DUMMY COMBINATIONS TO AVOID THE LIMITATION
33          ID   THAT ONLY 9 (NINE) HYDROGRAPHS CAN BE STACKED BY THE HEC-1 PROGRAM.
34          ID
35          ID
36          ID   DDM MCUHP2 TOLLESON FLOODPLAIN STUDY
            *DIAGRAM
37          IT       5            1200     300
38          IO       3
            * ******************************************************************
39          IN      15
40          JD    3.99    0.01
41          PC    .000    .002    .005    .008    .011    .014    .017    .020    .023    .026
42          PC    .029    .032    .035    .038    .041    .044    .048    .052    .056    .060
43          PC    .064    .068    .072    .076    .080    .085    .090    .095    .100    .105
44          PC    .110    .115    .120    .126    .133    .140    .147    .155    .163    .172
45          PC    .181    .191    .203    .218    .236    .257    .283    .387    .663    .707
46          PC    .735    .758    .776    .791    .804    .815    .825    .834    .842    .849
47          PC    .856    .863    .869    .875    .881    .887    .893    .898    .903    .908
48          PC    .913    .918    .922    .926    .930    .934    .938    .942    .946    .950
49          PC    .953    .956    .959    .962    .965    .968    .971    .974    .977    .980
50          PC    .983    .986    .989    .992    .995    .998   1.000
51          JD    3.75      10
52          JD    3.63      20
53          JD    3.59      30
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JD    3.51      40
JD    3.47      50
JD    3.43      60
* ******************************************************************

KK   SUBWD
KM   BASIN SUBWD
KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
KM    L=       .7  Lca=       .4   S=   11.1  Kn= .079  LAG=  43.1
KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
BA     .37
LG     .21     .19    6.80     .19    9.00
UI     31.     38.     80.    161.    182.    237.    264.    264.    247.    224.
UI    213.    172.    143.    110.     91.     78.     54.     45.     38.     29.
UI     28.     18.     18.     18.      6.      4.      4.      4.      4.      4.
UI      4.      4.      4.      4.      4.      4.      4.      4.      0.      0.
UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

KK  RTWDXA
KM        ROUTE FLOW FROM CPWD TO CPXA (ALONG 27TH AVENUE).
KM        TYPE A CHANNEL
RS       4              -1       0
RC    .025    .025    .025    2500   .0016
RX       0     100     400     500   500.1     600     900    1000
RY       5       4       1       0       0       1       4       5

KK   SUBXA
KM   BASIN SUBXA
KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
KM    L=       .8  Lca=       .4   S=   10.5  Kn= .041  LAG=  23.6
KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
BA     .25
LG     .12     .15    9.70     .06   45.00
UI     39.    128.    247.    312.    310.    271.    200.    129.     94.     56.
UI     40.     28.     22.      9.      5.      5.      5.      5.      5.      5.
UI      5.      0.      0.      0.      0.      0.      0.      0.      0.      0.
UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

KK   CPXA1
KM        ADD HYDROGRAPHS AT CPXA
HC       2

KK    RSXA
KM   MODIFIED PULS ROUTING THROUGH PONDING BEHIND SPRR.
KO       1
RS       1    STOR       0       0
SV     .01     .07     1.0     5.1    14.0    28.5    50.0    79.1   117.4   165.0
SE  1063.3  1063.5  1063.6  1064.1  1064.6  1065.1  1065.6  1066.1  1066.6  1067.1
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 96          SQ       0      15      43     455    1751    3879    6999   11192   17236   25382
1                                          HEC-1 INPUT                                                PAGE  3

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 97          KK   CPZZ1
 98          KM        DIVERT FLOW FROM CPXA SOUTHWARD OVER SPRR
 99          DT   DIZZ1
100          DI       0       0      43     455    1751    3879    6999   11192   17236   25382
101          DQ       0       0       0       0       0       0       0      44     960    3141
             * SUB-BASIN ZZ1 DOES NOT EXIST

102          KK  RTXAWC
103          KM        ROUTE FLOW FROM CPXA TO CPWC (ALONG SPRR).
104          KM        TYPE C CHANNEL
105          RS       9              -1       0
106          RC    .035    .035    .035    5100   .0016
107          RX       0      20      35      50    50.1     250     450     550
108          RY       5       5     2.5       0       0       2       4       5

109          KK   SUBWB
110          KM   BASIN SUBWB
111          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
112          KM    L=      1.2  Lca=       .6   S=   12.0  Kn= .048  LAG=  37.2
113          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
114          BA     .67
115          LG     .16     .15    9.70     .06   36.00
116          UI     67.     99.    234.    377.    467.    558.    561.    509.    488.    383.
117          UI    345.    242.    196.    156.    111.     85.     69.     61.     40.     38.
118          UI     33.      8.      8.      8.      8.      8.      8.      8.      8.      8.
119          UI      8.      8.      8.      0.      0.      0.      0.      0.      0.      0.
120          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

121          KK  RTWBWC
122          KM        ROUTE FLOW FROM CPWB TO CPWC (ALONG 35TH AVENUE).
123          KM        TYPE A CHANNEL
124          RS       3              -1       0
125          RC    .025    .025    .025    2000   .0020
126          RX       0     100     400     500   500.1     600     900    1000
127          RY       5       4       1       0       0       1       4       5

128          KK   SUBWC
129          KM   BASIN SUBWC
130          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
131          KM    L=      1.2  Lca=       .6   S=    6.0  Kn= .037  LAG=  32.9
132          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
133          BA     .47
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 134          LG     .15     .16    9.70     .06   45.00
 135          UI     53.     89.    237.    320.    422.    443.    412.    386.    296.    248.
 136          UI    174.    147.     93.     72.     56.     48.     30.     30.     16.      7.
 137          UI      7.      7.      7.      7.      7.      7.      7.      7.      7.      0.
 138          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 139          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
1                                                HEC-1 INPUT                                          PAGE  4

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


 140          KK    CPWC
 141          KM        ADD HYDROGRAPHS AT CPWC.
 142          HC       3

 143          KK    RSWC
 144          KM   MODIFIED PULS ROUTING THROUGH PONDING BEHIND SPRR.
 145          KO       1
 146          RS       1    STOR       0       0
 147          SV    16.1    27.6    44.0    65.2    90.7   121.5   159.6   206.8   263.7   329.5
 148          SE  1057.1  1057.6  1058.1  1058.6  1059.1  1059.6  1060.1  1060.6  1061.1  1061.6
 149          SQ       0     115     608    1579    3086    5253    8972   15024   23745   35057

 150          KK   CPWC2
 151          KM        DIVERT FLOW FROM CPWC TO CPQE
 152          DT    DIQE
 153          DI       0     115     608    1579    3086    5253    8972   15024   23745   35057
 154          DQ       0       0       0       0       0      40     951    3350    7104   12173

 155          KK  RTWCWA
 156          KM        ROUTE FLOW FROM CPWC TO CPWA (ALONG SPRR).
 157          KM        TYPE C CHANNEL
 158          RS       9              -1       0
 159          RC    .035    .035    .035    5200   .0012
 160          RX       0      20      35      50    50.1     250     450     550
 161          RY       5       5     2.5       0       0       2       4       5

 162          KK   SUBVD
 163          KM   BASIN SUBVD
 164          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 165          KM    L=      1.2  Lca=       .6   S=    9.9  Kn= .044  LAG=  36.5
 166          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
 167          BA     .70
 168          LG     .15     .16    9.70     .06   38.00
 169          UI     70.    106.    257.    396.    506.    591.    591.    522.    526.    375.
 170          UI    336.    242.    210.    138.    109.     87.     66.     58.     40.     40.
 171          UI     22.      9.      9.      9.      9.      9.      9.      9.      9.      9.
 172          UI      9.      9.      0.      0.      0.      0.      0.      0.      0.      0.
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 173          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 174          KK  RTVDWA
 175          KM        ROUTE FLOW FROM CPVD TO CPWA (ALONG 43RD AVENUE).
 176          KM        TYPE B CHANNEL
 177          RS       3              -1       0
 178          RC      .1     .02      .1    2000   .0030
 179          RX       0     470     476     480     520     524     530    1000
 180          RY     4.7       0       0       1       1       0       0     4.7

 181          KK   SUBWA
 182          KM   BASIN SUBWA
 183          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 184          KM    L=      1.1  Lca=       .6   S=    9.1  Kn= .025  LAG=  19.6
 185          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
 186          BA     .49
 187          LG     .22     .17   10.10     .04   28.00
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 188          UI    110.    403.    674.    766.    643.    454.    291.    162.    103.     69.
 189          UI     51.     12.     12.     12.     12.     12.     12.      0.      0.      0.
 190          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 191          KK    CPWA
 192          KM        ADD HYDROGRAPHS AT CPWA.
 193          HC       3

 194          KK    RSWA
 195          KM   MODIFIED PULS ROUTING THROUGH PONDING BEHIND SPRR.
 196          KO       1
 197          RS       1    STOR       0       0
 198          SV     1.3     1.9     2.4     3.1     4.0     8.5    16.7    29.9    48.5    74.4
 199          SE  1050.7  1050.9  1051.1  1051.3  1051.4  1051.9  1052.4  1052.9  1053.4  1053.9
 200          SQ       0       6      35     111     167     810    2025    3817    6199    9237

 201          KK   CPWA2
 202          KM        DIVERT FLOW FROM CPVC TO CPQD OVER SPRR
 203          DT    DIQD
 204          DI       0     810    9237   10710
 205          DQ       0       0       0      63

 206          KK  RTWAVC
 207          KM        ROUTE FLOW FROM CPWA TO CPVC (ALONG SPRR).
 208          KM        TYPE C CHANNEL
 209          RS       8              -1       0
 210          RC    .035    .035    .035    5000   .0028
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 211          RX       0      20      35      50    50.1     250     450     550
 212          RY       5       5     2.5       0       0       2       4       5

 213          KK   SUBVB
 214          KM   BASIN SUBVB
 215          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 216          KM    L=      1.1  Lca=       .6   S=   11.8  Kn= .067  LAG=  49.9
 217          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
 218          BA    0.72
 219          LG     .37     .09    9.70     .07   17.00
 220          UI    106.    106.    212.    414.    612.    633.    818.    891.    891.    888.
 221          UI    742.    779.    645.    595.    468.    385.    307.    314.    201.    171.
 222          UI    141.    129.     97.     97.     69.     60.     60.     58.     13.     13.
 223          UI     13.     13.     13.     13.     13.     13.     13.     13.     13.     13.
 224          UI     13.     13.     13.     13.      0.      0.      0.      0.      0.      0.
 225          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 226          KK  RTVBVC
 227          KM        ROUTE FLOW FROM CPVB TO CPVC (ALONG 51ST AVENUE).
 228          KM        TYPE B CHANNEL
 229          RS       4              -1       0
 230          RC      .1     .02      .1    2400   .0017
 231          RX       0     470     476     480     520     524     530    1000
 232          RY     4.7       0       0       1       1       0       0     4.7
1                                          HEC-1 INPUT                                                    PAGE  6

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


 233          KK   SUBVC
 234          KM   BASIN SUBVC
 235          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 236          KM    L=      1.1  Lca=       .5   S=    8.5  Kn= .028  LAG=  21.6
 237          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
 238          BA     .49
 239          LG     .15     .17    8.80     .07   44.00
 240          UI     77.    268.    466.    588.    524.    431.    285.    190.    111.     75.
 241          UI     52.     40.     12.      9.      9.      9.      9.      9.      9.      0.
 242          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 243          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 244          KK    CPVC
 245          KM        ADD HYDROGRAPHS AT CPVC.
 246          HC       3

 247          KK    RSVC
 248          KM   MODIFIED PULS ROUTING THROUGH PONDING BEHIND SPRR.
 249          KO       1
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250          RS       1    STOR       0       0
251          SV      49      59      70      83      97     113     149     170     192     216
252          SE  1051.0  1051.2  1051.4  1051.6  1051.8  1052.0  1052.4  1052.6  1052.8  1053.0
253          SQ       9     129     425     944    1729    2822    6117    8287   10832   13747

254          KK   CPVC2
255          KM        DIVERT FLOW FROM CPVC TO CPVA OVER 51st AVE.
256          DT    DIVA
257          DI       0       9     654    2822    7159
258          DQ       0       4     214     753    1814

259          KK  RTVCQA
260          KM        ROUTE FLOW FROM CPVC TO CPQA (ALONG SPRR).
261          KM        TYPE B CHANNEL
262          RS       3              -1       0
263          RC      .1     .02      .1    2000    .003
264          RX       0     470     476     480     520     524     530    1000
265          RY     4.7       0       0       1       1       0       0     4.7

266          KK   SUBQA
267          KM   BASIN SUBQA
268          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
269          KM    L=      1.1  Lca=       .6   S=   18.2  Kn= .064  LAG=  43.9
270          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
271          BA     .49
272          LG     .34     .07   10.10     .05   18.00
273          UI     41.     48.    102.    201.    237.    304.    344.    344.    332.    287.
274          UI    298.    219.    206.    152.    119.    114.     74.     63.     51.     42.
275          UI     37.     28.     23.     23.     16.      5.      5.      5.      5.      5.
276          UI      5.      5.      5.      5.      5.      5.      5.      5.      5.      0.
277          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
278          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

279          KK   CPQA2
280          KM        ADD HYDROGRAPHS AT CPQA
281          HC       2
             *

282          KK    RSQA
283          KM        MODIFIED PLUS ROUTING THROUGH PONDING BEHIND RID
284          KO       1
285          RS       1    STOR      -1       0
286          SV     6.6     9.4    13.0    17.4    22.4    28.1    34.6    42.1    50.4
287          SE  1032.2  1032.4  1032.6  1032.8  1033.0  1033.2  1033.4  1033.6  1033.8
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288          SQ       0      69    1129    6033   11213
289          SE  1031.9  1032.4  1032.9  1033.4  1033.9

290          KK    DIPF
291          KM        DIVERT FLOW FROM CPQA TO CPPF
292          DT    DIPF
293          DI       0      69    1129    6033   11213
294          DQ       0      39     462    1272    2210

295          KK  RTQAJF
296          KM        ROUTE FLOW FROM CPQA TO CPJF (SHEET FLOW).
297          KM        TYPE A CHANNEL
298          RS      10              -1       0
299          RC      .1      .1      .1   10400   .0031
300          RX       0     100     400     500   500.1     600     900    1000
301          RY       5       4       1       0       0       1       4       5

302          KK   SUBQE
303          KM   BASIN SUBQE
304          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
305          KM    L=      1.4  Lca=       .8   S=   16.4  Kn= .042  LAG=  37.6
306          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
307          BA     .90
308          LG     .18     .12   10.10     .04   40.00
309          UI     88.    128.    299.    494.    610.    720.    736.    677.    636.    521.
310          UI    465.    328.    253.    221.    149.    117.     95.     80.     58.     50.
311          UI     50.     13.     11.     11.     11.     11.     11.     11.     11.     11.
312          UI     11.     11.     11.      0.      0.      0.      0.      0.      0.      0.
313          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

314          KK    CPQE
315          KM        RETURN DIVERT FROM CPWC
316          DR    DIQE

317          KK  RTDIQE
318          KM        ROUTE DIVERT FROM CPWC TO CPQE
319          KM        TYPE A CHANNEL
320          RS      11              -1       0
321          RC    .025    .025    .025    6600   .0030
322          RX       0     100     400     500   500.1     600     900    1000
323          RY       5       4       1       0       0       1       4       5
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

324          KK   CPQE2
325          KM        ADD HYDROGRAPHS AT CPQE.
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HC       2

KK    RSQE
KM        MODIFIED PULS ROUTING BEHIND RID CANAL
KO       1
RS       1    STOR       0       0
SV     9.5    11.0    14.9    20.2    26.5    33.8   55.23    82.5    95.6   159.9
SE  1040.1  1040.2  1040.4  1040.6  1040.8  1041.0  1041.5  1042.0  1042.2  1043.0
SQ       0     1.8    62.8   242.3   581.9    1158    4169    9977   13108   31180

KK  RTQEQC
KM        ROUTE FLOW FROM CPQE TO CPQC (SHEET FLOW).
KM        TYPE A CHANNEL
RS       5              -1       0
RC    .025    .025    .025    3000   .0027
RX       0     100     400     500   500.1     600     900    1000
RY       5       4       1       0       0       1       4       5

KK   SUBQD
KM   BASIN SUBQD
KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
KM    L=      1.0  Lca=       .5   S=   12.2  Kn= .026  LAG=  17.6
KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
BA     .27
LG     .18     .08   12.40     .01   40.00
UI     74.    276.    457.    442.    358.    199.    125.     69.     43.     29.
UI      7.      7.      7.      7.      7.      0.      0.      0.      0.      0.
UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

KK    CPQD
KM        RETURN DIVERT FROM CPWA
DR    DIQD

KK  RTDIQD
KM        ROUTE DIVERT FROM CPWA TO CPQD
KM        TYPE C CHANNEL
RS       8              -1       0
RC    .035    .035    .035    5000   .0024
RX       0      20      35      50    50.1     250     450     550
RY       5       5     2.5       0       0       2       4       5

KK   CPQD1
KM        ADD HYDROGRAPHS AT CPQD
HC       2

KK    RSQD
KM        MODIFIED PULS ROUTING BEHIND RID CANAL.
KO       1
```

```
 367          RS       1    STOR       0       0
 368          SV     2.8     4.8     8.6    14.6    22.5    31.9    42.6    54.8    65.5
 369          SE  1038.1  1038.5  1039.0  1039.5  1040.0  1040.5  1041.0  1041.5  1042.0
 370          SQ       0    30.5   388.4  1580.9  4070.0  7936.6 13214.2 19810.4 26117.2
1                                          HEC-1 INPUT                                                    PAGE  9

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


 371          KK   CPQD2
 372          KM        DIVERT FLOW FROM CPQD TO QPQB
 373          DT    DIQB
 374          DI       0      31     388    1580    4070    7937   13214   19810   26117
 375          DQ       0       0      71     591    1899    3883    6624   10067   13292

 376          KK  RTQDQC
 377          KM        ROUTE FLOW FROM CPQD TO CPQC.
 378          KM        TYPE B CHANNEL
 379          RS       3              -1       0
 380          RC      .1     .02      .1    2000   .0040
 381          RX       0     470     476     480     520     524     530    1000
 382          RY     4.7       0       0       1       1       0       0     4.7

 383          KK   SUBQC
 384          KM   BASIN SUBQC
 385          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 386          KM    L=      1.1  Lca=       .6   S=    8.8  Kn= .050  LAG=  42.3
 387          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
 388          BA     .60
 389          LG     .30     .11   10.10     .04   23.00
 390          UI     43.     54.    114.    233.    252.    334.    365.    365.    332.    317.
 391          UI    272.    247.    174.    143.    129.     91.     71.     56.     48.     40.
 392          UI     33.     25.     25.     19.      5.      5.      5.      5.      5.      5.
 393          UI      5.      5.      5.      5.      5.      5.      5.      0.      0.      0.
 394          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 395          KK    CPQC
 396          KM        ADD HYDROGRAPHS AT CPQC
 397          HC       3

 398          KK   CPQC2
 399          KM        DIVERT 80% OF FLOW FROM CPQC TO RIVER
 400          DT    DISR
 401          DI       0      25      50      75     100     150     200
 402          DQ       0      20      40      60      80     120     160

 403          KK  RTQCJF
 404          KM        ROUTE FLOW FROM CPQC TO CPJF
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 405          KM        TYPE A CHANNEL
 406          RS      22              -1       0
 407          RC      .1      .1      .1   13000   .0028
 408          RX       0     100     400     500   500.1     600     900    1000
 409          RY       5       4       1       0       0       1       4       5

 410          KK   SUBJF
 411          KM   BASIN SUBJF
 412          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 413          KM    L=      2.7  Lca=      1.2   S=   17.4  Kn= .089  LAG= 116.0
 414          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
 415          BA    2.25
 416          LG     .44     .03    9.70     .07    7.00
 417          UI     71.     71.     71.     71.     81.    150.    150.    231.    302.    375.
 418          UI    445.    392.    376.    500.    605.    487.    600.    600.    600.    600.
1                                          HEC-1 INPUT                                          PAGE 10

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 419          UI    600.    600.    600.    520.    500.    500.    532.    530.    496.    375.
 420          UI    375.    403.    429.    300.    276.    273.    253.    214.    204.    200.
 421          UI    230.    186.    136.    136.    117.    115.    115.     91.     88.     88.
 422          UI     88.     66.     65.     65.     65.     65.     50.     41.     41.     41.
 423          UI     41.     41.     41.     41.     39.      9.      9.      9.      9.      9.
 424          UI      9.      9.      9.      9.      9.      9.      9.      9.      9.      9.
 425          UI      9.      9.      9.      9.      9.      9.      9.      9.      9.      9.
 426          UI      9.      9.      9.      9.      9.      9.      9.      9.      9.      9.
 427          UI      9.      9.      9.      0.      0.      0.      0.      0.      0.      0.
 428          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 429          KK   CPJF1
 430          KM        ADD HYDROGRAPHS AT CPJF
 431          HC       2

 432          KK   SUBQB
 433          KM   BASIN SUBQB
 434          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 435          KM    L=      1.1  Lca=       .6   S=   17.3  Kn= .055  LAG=  38.1
 436          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
 437          BA     .51
 438          LG     .31     .08   11.20     .03   21.00
 439          UI     49.     71.    162.    277.    340.    395.    411.    385.    356.    302.
 440          UI    267.    191.    144.    132.     86.     69.     57.     45.     37.     28.
 441          UI     28.     13.      6.      6.      6.      6.      6.      6.      6.      6.
 442          UI      6.      6.      6.      6.      0.      0.      0.      0.      0.      0.
 443          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 444          KK    CPQB
```

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445          KM        RETURN DIVERT FROM CPQD
446          DR    DIQB

447          KK  RTDIQB
448          KM        ROUTE DIVERT TO CPJF.
449          KM        TYPE C CHANNEL
450          RS       4              -1       0
451          RC      .1       .1      .1    2500   .0028
452          RX       0       20      35      50    50.1     250     450     550
453          RY       5        5     2.5       0       0       2       4       5

454          KK   CPQB1
455          KM        ADD HYDROGRAPHS AT CPQB
456          HC       2    .779

457          KK    RSQB
458          KM        MODIFIED PULS ROUTING THROUGH PONDING BEHIND RID.
459          KM   THROUGH THE 43RD AVENUE.
460          KO       1
461          RS       1    STOR       0       0
462          SV     9.4    13.9    19.2    25.5    33.1    41.8    51.7    62.9    75.3    89.1
463          SE  1033.3  1033.6  1033.9  1034.2  1034.5  1034.8  1035.1  1035.4  1035.7  1036.0
464          SQ       0    19.3   123.0   423.5   958.2  1718.8  2775.9  4426.7  6845.4  9954.3
```



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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

465          KK  RTQBJF
466          KM        ROUTE FLOW FROM CPQB TO CPJF (SHEET FLOW).
467          KM        TYPE A CHANNEL
468          RS      19              -1       0
469          RC      .1       .1      .1   11600   .0028
470          RX       0      100     400     500   500.1     600     900    1000
471          RY       5        4       1       0       0       1       4       5

472          KK   SUBPF
473          KM   BASIN SUBPF
474          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
475          KM    L=      1.1  Lca=       .6   S=   20.0  Kn= .046  LAG=  31.0
476          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
477          BA     .50
478          LG     .23      .12    7.60     .13   44.00
479          UI     60.     113.    303.    394.    477.    504.    436.    406.    322.    222.
480          UI    179.     118.     87.     67.     55.     35.     34.     17.      7.      7.
481          UI      7.       7.      7.      7.      7.      7.      7.      0.      0.      0.
482          UI      0.       0.      0.      0.      0.      0.      0.      0.      0.      0.
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483          KK    CPPF
484          KM        RETURN DIVERT FROM CPQA.
485          DR    DIPF

486          KK  RTDIPF
487          KM         ROUTE DIVERT FROM CPQA TO CPPF.
488          KM         TYPE C CHANNEL
489          RS       3              -1       0
490          RC    .035    .035    .035    2000   .0005
491          RX       0      20      35      50    50.1     250     450     550
492          RY       5       5     2.5       0       0       2       4       5

493          KK   CPPF1
494          KM        ADD HYDROGRAPHS AT CPPF
495          HC       2   5.783

496          KK    RSPF
497          KM        MODIFIED PULS ROUTING BEHIND RID
498          KO       1
499          RS       1    STOR       0       0
500          SV    28.2    33.4    39.2    48.8    55.7    67.3    76.0    85.3   100.7   111.8
501          SE  1032.2  1032.4  1032.6  1032.8  1033.0  1033.2  1033.4  1033.6  1033.8  1034.0
502          SQ       0    19.4   124.9   457.5  1050.9  1875.2  2964.8  4437.1  6362.7  8725.9

503          KK   CPPF2
504          KM        DIVERT FLOW FROM CPPF TO CPPE
505          DT    DIPE
506          DI       0     255    1875    5340   11513
507          DQ       0       0       0     160    1143
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


508          KK  RTPFJF
509          KM        ROUTE FLOW FROM CPPF TO CPJF.
510          KM        TYPE C CHANNEL
511          RS      13              -1       0
512          RC    .035    .035    .035    8000   .0040
513          RX       0      20      35      50    50.1     250     450     550
514          RY       5       5     2.5       0       0       2       4       5

515          KK   SUBPE
516          KM   BASIN SUBPE
517          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
518          KM    L=      1.1  Lca=       .6   S=   15.5  Kn= .031  LAG=  21.9
519          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
520          BA     .50
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521          LG     .13     .24    6.00     .23   63.00
522          UI     92.    313.    556.    707.    634.    529.    365.    238.    140.     94.
523          UI     66.     48.     20.     11.     11.     11.     11.     11.     11.      0.
524          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
525          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
             *

526          KK    CPPE
527          KM          RETURN DIVERT FROM CPPF
528          DR    DIPE
             *
529          KM          ROUTE DIVERT FROM CPPF TO CPPE.
530          KM          TYPE C CHANNEL
531          RS       3              -1       0
532          RC    .035    .035    .035    2000   .0005
533          RX       0      20      35      50    50.1     250     450     550
534          RY       5       5     2.5       0       0       2       4       5

535          KK   CPPE2
536          KM         ADD HYDROGRAPHS AT CPPE
537          HC       2

538          KK    RSPE
539          KM          RESERVOIR ROUTING BEHIND 59TH AVE AND RID CANAL
540          KO       1
541          RS       1    STOR       0       0
542          SV    15.6    16.9    21.0    24.0    29.5    33.7    38.3    43.2
543          SE  1032.5  1032.6  1032.8  1033.0  1033.2  1033.4  1033.6  1033.7
544          SQ       0    1.44      23     194     637    1420    2516    3177

545          KK   CPPE3
546          KM          DIVERT FLOW FROM CPPE TO CPPD
547          DT    DIPD
548          DI       0     8.2     636    3177
549          DQ       0       0       0     8.1
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

550          KK  RTPEJF
551          KM         ROUTE FLOW FROM CPPE TO CPJF (ALONG 59TH AVE).
552          KM         TYPE B CHANNEL
553          RS      15              -1       0
554          RC      .1     .02      .1    8800   .0036
555          RX       0     470     476     480     520     524     530    1000
556          RY     4.7       0       0       1       1       0       0     4.7
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557          KK   CPJF2
558          KM        COMBINE FLOWS AT SALT RIVER.
559          HC       4  10.17
             * ******************************************************************************

560          KK   SUBPC
561          KM   BASIN SUBPC
562          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
563          KM    L=        .7  Lca=        .4   S=   11.1  Kn= .042  LAG=  22.9
564          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
565          BA     .29
566          LG     .32     .18    8.80     .06   12.00
567          UI     49.    162.    306.    385.    367.    314.    229.    148.     98.     63.
568          UI     44.     29.     23.      6.      6.      6.      6.      6.      6.      6.
569          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
570          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

571          KK    RSPC
572          KM        MODIFIED PULS ROUTING FROM CPPC TO CPNB.
573          KO       1
574          RS       1    STOR       0       0
575          SV    29.1    31.8    34.8    38.2      42      46    50.2    78.8   107.9   135.6
576          SE  1029.8  1029.9  1030.0  1030.1  1030.2  1030.3  1030.4  1031.0  1031.5  1032.0
577          SQ       5      27      70     134     225     357     545    3654    9263   17876

578          KK  RTPCNB
579          KM        ROUTE FLOW FROM CPPC TO CPNB (ALONG 67TH AVE).
580          KM        TYPE B CHANNEL
581          RS       8              -1       0
582          RC      .1     .02      .1    4800   .0038
583          RX       0     470     476     480     520     524     530    1000
584          RY     4.7       0       0       1       1       0       0     4.7

585          KK   SUBNB
586          KM   BASIN SUBNB
587          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
588          KM    L=        .9  Lca=        .5   S=   16.8  Kn= .087  LAG=  54.0
589          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
590          BA     .44
591          LG     .46     .06    6.80     .18    1.00
592          UI     30.     30.     54.     91.    165.    168.    228.    232.    253.    253.
593          UI    245.    211.    222.    184.    166.    145.    115.     91.     89.     71.
594          UI     53.     48.     37.     35.     27.     27.     20.     17.     17.     17.
595          UI      7.      4.      4.      4.      4.      4.      4.      4.      4.      4.
596          UI      4.      4.      4.      4.      4.      4.      4.      4.      0.      0.
597          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 598          KK   CPNB1
 599          KM        ADD HYDROGRAPHS AT CPNB
 600          HC       2

 601          KK   CPNB2
 602          KM        DIVERT 65% OF FLOW FROM CPNB TO CPNA
 603          DT    DINA
 604          DI       0      25      50      75     100     150     200
 605          DQ       0      16      33      49      65      98     130

 606          KK  RTNBJD
 607          KM        ROUTE FLOW FROM CPNB TO CPJD (ALONG 67TH AVENUE).
 608          KM        TYPE B CHANNEL
 609          RS       8              -1       0
 610          RC      .1     .02      .1    4800   .0054
 611          RX       0     470     476     480     520     524     530    1000
 612          RY     4.7       0       0       1       1       0       0     4.7

 613          KK   SUBJD
 614          KM   BASIN SUBJD
 615          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 616          KM    L=      1.1  Lca=       .6   S=   12.7  Kn= .090  LAG=  66.1
 617          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
 618          BA     .49
 619          LG     .44     .03    8.00     .12    3.00
 620          UI     27.     27.     34.     57.     97.    146.    160.    172.    207.    229.
 621          UI    229.    229.    229.    199.    191.    206.    166.    146.    153.    109.
 622          UI    102.     81.     79.     76.     52.     45.     42.     34.     34.     26.
 623          UI     25.     25.     17.     15.     15.     15.     15.      4.      3.      3.
 624          UI      3.      3.      3.      3.      3.      3.      3.      3.      3.      3.
 625          UI      3.      3.      3.      3.      3.      3.      3.      3.      3.      0.
 626          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 627          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 628          KK    CPJD
 629          KM        ADD HYDROGRAPHS AT CPJD
 630          HC       2

 631          KK   CPJD1
 632          KM        DIVERT 37% OF FLOW AT CPJD TO CPJC.
 633          DT    DIJC
 634          DI       0      25      50     100     150     200
 635          DQ       0       9      19      37      56      74

 636          KK  RTJDFC
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637          KM        ROUTE FLOW FROM CPJD TO CPFC.
638          KM        TYPE B CHANNEL
639          RS       5              -1       0
640          RC      .1      .02      .1    3000   .0053
641          RX       0      470     476     480     520     524     530    1000
642          RY     4.7        0       0       1       1       0       0     4.7
1                                          HEC-1 INPUT                                                    PAGE 15

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


643          KK   SUBPD
644          KM   BASIN SUBPD
645          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
646          KM    L=        .9  Lca=       .4   S=   16.8  Kn= .082  LAG=  50.0
647          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
648          BA     .45
649          LG     .44     .07    7.60     .13    4.00
650          UI     33.     33.     66.    130.    193.    199.    257.    281.    281.    281.
651          UI    234.    246.    205.    187.    150.    122.     97.    100.     64.     54.
652          UI     45.     41.     31.     31.     22.     19.     19.     19.      4.      4.
653          UI      4.      4.      4.      4.      4.      4.      4.      4.      4.      4.
654          UI      4.      4.      4.      4.      0.      0.      0.      0.      0.      0.
655          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

656          KK    CPPD
657          KM        RETURN DIVERT FROM CPPE
658          DR    DIPD

659          KK   CPPD2
660          KM        ADD HYDROGRAPH AT CPPD
661          HC       2

662          KK    RSPD
663          KM        MODIFIED PULS ROUTING FROM CPPD TO CPNC.
664          KO       1
665          RS       1    STOR       0       0
666          SV    25.6    37.6    42.4    51.8    53.9    56.1    58.2
667          SE  1030.6  1030.7  1030.8  1030.9  1031.0  1031.1  1031.2
668          SQ       0       4      28     101     246     487     820

669          KK  RTPDNC
670          KM        ROUTE FLOW FROM CPPD TO CPNC (SHEET FLOW).
671          KM        TYPE A CHANNEL
672          RS       5              -1       0
673          RC    .035    .035    .035    3000   .0027
674          RX       0     100     400     500   500.1     600     900    1000
675          RY       5       4       1       0       0       1       4       5
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```
676          KK   SUBNC
677          KM   BASIN SUBNC
678          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
679          KM    L=        .7  Lca=        .3   S=   14.7  Kn= .092  LAG=  43.5
680          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
681          BA     .31
682          LG     .47     .03    5.20     .35    1.00
683          UI     26.     31.     66.    131.    150.    195.    219.    219.    208.    182.
684          UI    184.    141.    125.     94.     75.     69.     46.     39.     32.     25.
685          UI     24.     16.     15.     15.      7.      3.      3.      3.      3.      3.
686          UI      3.      3.      3.      3.      3.      3.      3.      3.      0.      0.
687          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


688          KK    CPNC
689          KM        ADD HYDROGRAPHS AT CPNC.
690          HC       2

691          KK  RTNCJE
692          KM        ROUTE FLOW FROM CPNC TO CPJE (SHEET FLOW).
693          KM        TYPE A CHANNEL
694          RS       8              -1       0
695          RC    .035    .035    .035    5000   .0014
696          RX       0     100     400     500   500.1     600     900    1000
697          RY       5       4       1       0       0       1       4       5

698          KK   SUBJE
699          KM   BASIN SUBJE
700          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
701          KM    L=       1.1  Lca=        .5   S=   19.8  Kn= .097  LAG=  63.6
702          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
703          BA     .50
704          LG     .48     .01    8.00     .12    3.00
705          UI     29.     29.     40.     64.    118.    168.    159.    210.    223.    246.
706          UI    246.    246.    234.    205.    218.    200.    154.    172.    123.    112.
707          UI     90.     83.     86.     56.     49.     45.     36.     36.     27.     27.
708          UI     26.     17.     17.     17.     17.     12.      4.      4.      4.      4.
709          UI      4.      4.      4.      4.      4.      4.      4.      4.      4.      4.
710          UI      4.      4.      4.      4.      4.      4.      0.      0.      0.      0.
711          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

712          KK    CPJE
713          KM        ADD HYDROGRAPHS AT CPJE.
714          HC       2
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```
715          KK  RTJEFC
716          KM        ROUTE FLOW FROM CPJE TO CPFC (SHEET FLOW).
717          KM        TYPE A CHANNEL
718          RS       4              -1       0
719          RC    .035    .035    .035    2500   .0080
720          RX       0     100     400     500   500.1     600     900    1000
721          RY       5       4       1       0       0       1       4       5

722          KK   SUBFC
723          KM   BASIN SUBFC
724          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
725          KM    L=      1.0  Lca=       .4   S=   18.6  Kn= .097  LAG=  55.3
726          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
727          BA     .34
728          LG     .49     .01    7.60     .14    1.00
729          UI     22.     22.     39.     65.    115.    129.    160.    171.    188.    188.
730          UI    188.    158.    165.    150.    118.    122.     87.     76.     64.     65.
731          UI     43.     36.     31.     28.     23.     20.     19.     13.     13.     13.
732          UI     12.      3.      3.      3.      3.      3.      3.      3.      3.      3.
733          UI      3.      3.      3.      3.      3.      3.      3.      3.      3.      0.
734          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
735          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
```



```
LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


736          KK    CPFC
737          KM         ADD HYDROGRAPHS AT CPFC
738          HC       3

739          KK   CPFC1
740          KM         ADD HYDROGRAPHS AT CPFC
741          HC       2
             * ******************************************************************************
             * ******************************************************************************
             * ******************************************************************************

742          KK   SUBUD
743          KM   BASIN SUBUD
744          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
745          KM    L=      1.3  Lca=       .6   S=   20.0  Kn= .060  LAG=  44.7
746          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
747          BA     .78
748          LG     .37     .11    9.70     .06   11.00
749          UI     64.     73.    155.    302.    366.    470.    532.    538.    532.    448.
750          UI    488.    336.    346.    248.    195.    195.    122.    103.     83.     72.
```

```
751          UI     58.     52.     36.     36.     36.      9.      8.      8.      8.      8.
752          UI      8.      8.      8.      8.      8.      8.      8.      8.      8.      8.
753          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
754          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

755          KK    CPUD
756          KM        DIVERT 25% OF FLOW FROM CPUD TO CPUA.
757          DT    DIUA
758          DI       0      25      50      75     100     150     200
759          DQ       0       6      13      19      25      38      50

760          KK  RTUDVA
761          KM        ROUTE FLOW FROM CPUD TO CPVA (ALONG 59TH AVENUE).
762          KM        TYPE B CHANNEL
763          RS       4              -1       0
764          RC      .1     .02      .1    2600   .0019
765          RX       0     470     476     480     520     524     530    1000
766          RY     4.7       0       0       1       1       0       0     4.7

767          KK   SUBVA
768          KM   BASIN SUBVA
769          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
770          KM    L=      1.1  Lca=       .5   S=    8.5  Kn= .029  LAG=  22.3
771          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
772          BA     .49
773          LG     .09     .15    8.40     .10   60.00
774          UI     87.    291.    531.    681.    622.    522.    375.    246.    143.     97.
775          UI     70.     46.     28.     10.     10.     10.     10.     10.     10.      0.
776          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
777          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
```



```
LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


778          KK    CPVA
779          KM        RETURN DIVERT FROM CPVC
780          DR    DIVA

781          KK  RTDIVA
782          KM        ROUTE DIVERT TO CPVA
783          KM        TYPE C CHANNEL
784          RS       9              -1       0
785          RC    .035    .035    .035    5200   .0015
786          RX       0      20      35      50    50.1     250     450     550
787          RY       5       5     2.5       0       0       2       4       5

788          KK   CPVA2
```

```
789          KM        ADD HYDROGRAPHS AT CPVA.
790          HC       3                                                                HC

791          KK    RSVA
792          KM   MODIFIED PULS ROUTING THROUGH PONDING BEHIND SPRR.
793          KO       1
794          RS       1    STOR       0       0
795          SV    10.3    13.3    15.6    23.9    34.6    48.9    67.7    90.8   118.6   140.8
796          SE  1044.2  1044.3  1044.5  1045.0  1045.5  1046.0  1046.5  1047.0  1047.5  1047.8
797          SQ       0       4      70     593    1618    3189    6809   12640   20432   26055

798          KK  RTVAUC
799          KM        ROUTE FLOW FROM CPVA TO CPUC
800          KM        TYPE C FLOW
801          RS       9              -1       0
802          RC    .035    .035    .035    5200   .0012
803          RX       0      20      35      50    50.1     250     450     550
804          RY       5       5     2.5       0       0       2       4       5

805          KK   SUBUA
806          KM   BASIN SUBUA
807          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
808          KM    L=      1.2  Lca=       .6   S=   14.9  Kn= .049  LAG=  36.7
809          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
810          BA     .56
811          LG     .24     .16    9.70     .06   20.00
812          UI     56.     84.    203.    316.    400.    471.    471.    419.    419.    302.
813          UI    275.    196.    166.    116.     88.     69.     54.     48.     32.     32.
814          UI     21.      7.      7.      7.      7.      7.      7.      7.      7.      7.
815          UI      7.      7.      0.      0.      0.      0.      0.      0.      0.      0.
816          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

817          KK    CPUA
818          KM        RETURN DIVERT FROM CPUD
819          DR    DIUA
```



```
LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

820          KK  RTDIUA
821          KM        ROUTE DIVERT TO CPUA
822          KM        TYPE B CHANNEL
823          RS       8              -1       0
824          RC      .1     .02      .1    5000   .0014
825          RX       0     470     476     480     520     524     530    1000
826          RY     4.7       0       0       1       1       0       0     4.7
```

```
827          KK   CPUA1
828          KM        ADD HYDROGRAPHS AT CPUA
829          HC       2   1.334

830          KK   CPUA2
831          KM        DIVERT 20% OF FLOW FROM CPUA TO CPTB
832          DT    DITB
833          DI       0      25      50      75     100     150     200
834          DQ       0       5      10      15      20      30      40

835          KK  RTUAUC
836          KM        ROUTE FLOW FROM CPUA TO CPUC (ALONG 67TH AVENUE).
837          KM        TYPE B CHANNEL
838          RS       4              -1       0
839          RC      .1     .02      .1    2400   .0017
840          RX       0     470     476     480     520     524     530    1000
841          RY     4.7       0       0       1       1       0       0     4.7

842          KK   SUBUC
843          KM   BASIN SUBUC
844          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
845          KM    L=      1.0  Lca=       .5   S=   12.7  Kn= .044  LAG=  30.5
846          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
847          BA     .48
848          LG     .26     .15    9.70     .06   22.00
849          UI     59.    114.    300.    386.    475.    492.    418.    384.    304.    206.
850          UI    170.    105.     81.     61.     50.     33.     33.      9.      7.      7.
851          UI      7.      7.      7.      7.      7.      7.      7.      0.      0.      0.
852          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

853          KK    CPUC
854          KM        ADDHYDROGRAPHS AT CPUC
855          HC       3   7.101

856          KK    RSUC
857          KM        ROUTE FLOW FROM CPUC TO CPUB OVER 67th AVE.
858          KO       1
859          RS       1    STOR       0       0
860          SV     4.8     6.9     9.9    19.0    33.0    52.6    77.4   108.7   148.6   172.0
861          SE  1036.2  1036.3  1036.5  1037.0  1037.5  1038.0  1038.5  1039.0  1039.5  1040.0
862          SQ       0       5      77     789    2369    4778    8161   12516   18033   23378
```



```
LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

863          KK  RTUCUB
864          KM        ROUTE FLOW FROM CPUC TO CPUB
```

```
865          KM        TYPE C CHANNEL
866          RS       2              -1       0
867          RC    .035    .035    .035    1400   .0043
868          RX       0      20      35      50    50.1     250     450     550
869          RY       5       5     2.5       0       0       2       4       5

870          KK   SUBUB
871          KM   BASIN SUBUB
872          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
873          KM    L=       .8  Lca=       .4   S=   16.2  Kn= .048  LAG=  30.3
874          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
875          BA     .14
876          LG     .22     .14    8.80     .08   23.00
877          UI     17.     33.     86.    110.    136.    140.    119.    107.     85.     58.
878          UI     47.     29.     23.     17.     14.      9.      9.      2.      2.      2.
879          UI      2.      2.      2.      2.      2.      2.      2.      0.      0.      0.
880          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

881          KK    CPUB
882          KM        ADD HYDROGRAPHS AT CPUB
883          HC       2

884          KK    RSUB
885          KM        STORAGE ROUTING AT CPUB (69TH AVE.)
886          KO       1
887          RS       1    STOR       0       0
888          SV      18      28      41      59      82     108
889          SE  1035.5  1036.0  1036.5  1037.0  1037.5    1038
890          SQ       1      85     494    1710    4700    9466

891          KK   CPUB1
892          KM        DIVERT FLOW FROM CPUB TO CPUE OVER SPRR.
893          DT    DIUE
894          DI       0     1.2    85.4   493.7  1710.3  4699.8  9465.7
895          DQ       0       0       0       0   101.6   887.6  2402.3

896          KK  RTUBSF
897          KM        ROUTE FLOW FROM CPUB TO CPSF
898          KM        TYPE C CHANNEL
899          RS       5              -1       0
900          RC    .035    .035    .035    2800   .0007
901          RX       0      20      35      50    50.1     250     450     550
902          RY       5       5     2.5       0       0       2       4       5

903          KK   SUBTB
904          KM   BASIN SUBTB
905          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
906          KM    L=      2.0  Lca=       .8   S=   10.2  Kn= .062  LAG=  67.9
```

```
 907          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
 908          BA     .89
 909          LG     .36      .13     8.80      .07     8.00
 910          UI     47.      47.      54.      98.     149.     243.     278.     277.     356.     373.
1                                                HEC-1 INPUT                                                    PAGE 21

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 911          UI    391.     391.     391.     364.     326.     348.     324.     245.     266.     221.
 912          UI    178.     157.     134.     142.     108.      86.      75.      68.      58.      56.
 913          UI     43.      43.      43.      26.      26.      26.      26.      26.       6.       6.
 914          UI      6.       6.       6.       6.       6.       6.       6.       6.       6.       6.
 915          UI      6.       6.       6.       6.       6.       6.       6.       6.       6.       6.
 916          UI      0.       0.       0.       0.       0.       0.       0.       0.       0.       0.
 917          UI      0.       0.       0.       0.       0.       0.       0.       0.       0.       0.

 918          KK    CPTB
 919          KM        RETURN DIVERT FROM CPUA
 920          DR    DITB

 921          KK  RTDITB
 922          KM        ROUTE DIVERT TO CPTB
 923          KM        TYPE A CHANNEL
 924          RS       9               -1       0
 925          RC    .025     .025     .025    5200    .0019
 926          RX       0      100      400     500    500.1      600      900     1000
 927          RY       5        4        1       0        0        1        4        5

 928          KK   CPTB1
 929          KM        ADD HYDROGRAPH AT CPTB
 930          HC       2   2.192

 931          KK   CPTB2
 932          KM        DIVERT 25% OF FLOW TO CPTA
 933          DT    DITA
 934          DI       0       25       50       75      100      150      200
 935          DQ       0        6       13       19       25       38       50

 936          KK  RTTBSF
 937          KM        ROUTE FLOW FROM CPTB TO CPSF (ALONG 75TH AVENUE).
 938          KM        TYPE B CHANNEL
 939          RS       4               -1       0
 940          RC      .1      .02       .1     2160    .0023
 941          RX       0      470      476      480      520      524      530     1000
 942          RY     4.7        0        0        1        1        0        0      4.7

 943          KK   SUBSF
 944          KM   BASIN SUBSF
```

```
945          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
946          KM    L=        .9  Lca=        .4   S=    9.2  Kn= .097  LAG=  63.6
947          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
948          BA     .37
949          LG     .49      .01     9.70      .07     1.00
950          UI     21.      21.      29.      47.      86.     122.     116.     153.     163.     179.
951          UI    179.     179.     171.     149.     159.     146.     112.     125.      90.      81.
952          UI     66.      60.      62.      41.      36.      33.      26.      26.      19.      19.
953          UI     19.      12.      12.      12.      12.       8.       3.       3.       3.       3.
954          UI      3.       3.       3.       3.       3.       3.       3.       3.       3.       3.
955          UI      3.       3.       3.       3.       3.       3.       0.       0.       0.       0.
956          UI      0.       0.       0.       0.       0.       0.       0.       0.       0.       0.
1                                                HEC-1 INPUT                                                PAGE 22

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


957          KK   CPSF1
958          KM        ADD HYDROGRAPHS AT CPSF.
959          HC       3   8.464

960          KK    RSSF
961          KM       STORAGE ROUTING AT CPSF
962          KO       1
963          RS       1    STOR       0       0
964          SV     6.5     9.6    13.8    18.0    34.2    56.1    84.8   121.0   167.4   219.0
965          SE  1028.3  1028.6  1028.8  1029.0  1029.5  1030.0  1030.5    1031  1031.5  1032.0
966          SQ       0      32     129     348    1591    3946    7404   11827 17168.7   23402

967          KK   CPSF2
968          KM        DIVERT FLOW FROM CPSF TO CPRJ1
969          DT   DIRJ1
970          DI       1     200     400     800    1600    3200
971          DQ     0.3      60     120     240     480     960

972          KK  RTSFSH
973          KM        ROUTE FLOW FROM CPSF TO CPSH
974          KM        TYPE C CHANNEL
975          RS       1              -1       0
976          RC    .035    .035    .035    1200   .0001
977          RX       0      20      35      50    50.1     250     450     600
978          RY     5.5       5     2.5       0       0       2       4     5.5

979          KK   SUBSH
980          KM   BASIN SUBSH
981          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
982          KM    L=        .4  Lca=        .2   S=   11.1  Kn= .099  LAG=  38.1
983          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
```

```
 984          BA     .11
 985          LG     .50     .00    9.70     .07     .00
 986          UI     10.     15.     34.     58.     71.     83.     86.     81.     75.     63.
 987          UI     56.     40.     30.     28.     18.     15.     12.      9.      8.      6.
 988          UI      6.      3.      1.      1.      1.      1.      1.      1.      1.      1.
 989          UI      1.      1.      1.      1.      0.      0.      0.      0.      0.      0.
 990          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 991          KK    CPSH
 992          KM        ADD HYDROGRAPHS AT CPSH
 993          HC       2

 994          KK    RSSH
 995          KM        MODIFIED PULS ROUTING BEHIND RID.
 996          KO       1
 997          RS       1    STOR       0       0
 998          SV      19      21      24      30      37      44    46.4
 999          SE  1027.0  1027.1  1027.2  1027.5  1027.7  1028.0  1028.2
1000          SQ       0   138.6   475.2  1277.3
1001          SE  1027.0  1027.6  1027.8  1028.1
              *
```

1 HEC-1 INPUT PAGE 23

```
LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


1002          KK   CPSH1
1003          KM        DIVERT FLOW FROM CPSH TO CPRJ2
1004          DT   DIRJ2
1005          DI       0   138.6   475.2  1277.3
1006          DQ       0    88.6   375.2  1077.3
              *

1007          KK  RTSHSG
1008          KM        ROUTE FLOW FROM CPSH TO CPSG
1009          KM        TYPE C CHANNEL
1010          RS       2              -1       0
1011          RC    .035    .035    .035    1300   .0008
1012          RX       0      20      35      50    50.1     250     450     550
1013          RY       5       5     2.5       0       0       2       4       5

1014          KK   SUBTA
1015          KM   BASIN SUBTA
1016          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1017          KM    L=       .8  Lca=       .4   S=   10.5  Kn= .097  LAG=  55.2
1018          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
1019          BA     .27
1020          LG     .50     .03    6.40     .22     .00
```

```
1021          UI     18.     18.     32.     52.     93.    104.    130.    137.    152.    152.
1022          UI    152.    127.    133.    120.     96.     98.     70.     61.     51.     52.
1023          UI     34.     29.     25.     22.     18.     16.     15.     10.     10.     10.
1024          UI     10.      2.      2.      2.      2.      2.      2.      2.      2.      2.
1025          UI      2.      2.      2.      2.      2.      2.      2.      2.      2.      0.
1026          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
1027          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

1028          KK    CPTA
1029          KM        RETURN DIVERT FROM CPTB
1030          DR    DITA

1031          KK  RTDITA
1032          KM        ROUTE DIVERT TO CPTA
1033          KM        TYPE A CHANNEL
1034          RS       4              -1       0
1035          RC    .025    .025    .025    2600   .0004
1036          RX       0     100     400     500   500.1     600     900    1000
1037          RY       5       4       1       0       0       1       4       5

1038          KK   CPTA1
1039          KM        ADD HYDROGRAPHS AT CPTA
1040          HC       2   2.462

1041          KK  RTTASG
1042          KM        ROUTE FLOW FROM CPTA TO CPSG (SHEET FLOW).
1043          KM        TYPE A CHANNEL
1044          RS       3              -1       0
1045          RC    .025    .025    .025    2000   .0050
1046          RX       0     100     400     500   500.1     600     900    1000
1047          RY       5       4       1       0       0       1       4       5
```



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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


1048          KK   SUBSG
1049          KM   BASIN SUBSG
1050          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1051          KM    L=       .6  Lca=       .3   S=    5.0  Kn= .077  LAG=  42.6
1052          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
1053          BA     .18
1054          LG     .37     .05    7.30     .16   18.00
1055          UI     16.     19.     41.     83.     91.    120.    132.    132.    122.    115.
1056          UI    101.     88.     66.     53.     46.     35.     26.     21.     18.     14.
1057          UI     13.      9.      9.      8.      2.      2.      2.      2.      2.      2.
1058          UI      2.      2.      2.      2.      2.      2.      2.      2.      0.      0.
1059          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
```

```
1060          KK    CPSG
1061          KM        ADD HYDROGRAPHS AT CPSG
1062          HC       3   9.022

1063          KK    RSSG
1064          KM        MODIFIED PULS ROUTING BEHIND RID AND 81ST AVENUE
1065          KO       1
1066          RS       1    STOR       0       0
1067          SV    12.3    13.3    14.9    16.5    18.4    22.4    25.9    35.2
1068          SE  1026.4  1026.6  1026.8  1027.0  1027.2  1027.4  1027.6  1027.9
1069          SQ       0       9     114     525    1221    2143    3276    5343

1070          KK   CPSG1
1071          KM        DIVERT FLOW FROM CPSG TO CPRJ
1072          DT   DIRJ4
1073          DI       0       9     114     525    1221
1074          DQ       0       1      70     400     964

1075          KK  RTSGSE
1076          KM        ROUTE FLOW FROM CPSG TO CPSE
1077          KM        TYPE C CHANNEL
1078          RS       2              -1       0
1079          RC    .035    .035    .035    1000    .003
1080          RX       0      20      35      50    50.1     250     450     550
1081          RY       5       5     2.5       0       0       2       4       5

1082          KK   SUBSC
1083          KM   BASIN SUBSC
1084          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1085          KM    L=      1.3  Lca=       .7   S=   15.2  Kn= .084  LAG=  69.2
1086          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
1087          BA     .43
1088          LG     .47     .07    5.00     .38     .00
1089          UI     23.     23.     25.     48.     71.    115.    137.    130.    179.    174.
1090          UI    192.    192.    192.    187.    160.    163.    179.    122.    125.    124.
1091          UI     91.     85.     68.     65.     67.     44.     39.     37.     29.     28.
1092          UI     24.     21.     21.     18.     13.     13.     13.     13.     10.      3.
1093          UI      3.      3.      3.      3.      3.      3.      3.      3.      3.      3.
1094          UI      3.      3.      3.      3.      3.      3.      3.      3.      3.      3.
1095          UI      3.      3.      0.      0.      0.      0.      0.      0.      0.      0.
1096          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
```



```
LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1097          KK    CPSC
```

```
KM        DIVERT 54% OF FLOW AT CPSC TO CPSD.
DT    DISD
DI       0      25      50     100     150     200
DQ       0      14      27      54      81     108

KK  RTSCSE
KM        ROUTE FLOW FROM CPSC TO CPSE (ALONG 83RD AVENUE).
KM        TYPE B CHANNEL
RS       3              -1       0
RC      .1     .02      .1    1800   .0022
RX       0     470     476     480     520     524     530    1000
RY     4.7       0       0       1       1       0       0     4.7

KK   SUBSE
KM   BASIN SUBSE
KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
KM    L=       .3  Lca=       .2   S=   26.5  Kn= .042  LAG=  11.0
KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
BA     .09
LG     .38     .24    4.80     .31    1.00
UI     68.    213.    198.    104.     40.     20.      6.      4.      4.      0.
UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

KK    CPSE
KM        ADD HYDROGRAPHS AT CPSE
HC       3

KK    RSSE
KM        MODIFIED PULS ROUTING AT CPSE BEHIND THE RID CANAL
KO       1
RS       1    STOR       0       0
SV    13.5    14.8    17.6    20.5
SE  1025.9  1026.0  1026.5  1026.9
SQ    3.14    14.3  479.44 2013.01

KK   CPSE2
KM        DIVERT FLOW FROM CPSE TO CPRJ
DT   DIRJ5
DI       0       3     142    1100
DQ       0       3     142    1100

KK  RTSERI
KM        ROUTE FLOW FROM CPSE TO CPRI
KM        TYPE A CHANNEL
RS       5              -1       0
RC    .035    .035    .035    2700   .0019
RX       0     100     400     500   500.1     600     900    1000
```

```
1140          RY       5       4       1       0       0       1       4       5

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


1141          KK   SUBRJ
1142          KM   BASIN SUBRJ
1143          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1144          KM    L=       .7  Lca=       .4   S=    5.6  Kn= .045  LAG=  29.7
1145          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
1146          BA     .14
1147          LG     .28     .11    7.00     .14   18.00
1148          UI     18.     36.     92.    117.    148.    147.    127.    106.     86.     58.
1149          UI     47.     30.     22.     16.     13.     10.      7.      2.      2.      2.
1150          UI      2.      2.      2.      2.      2.      2.      0.      0.      0.      0.
1151          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

1152          KK   CPRJ1
1153          KM       RETURN DIVERSION FROM CPSF
1154          DR   DIRJ1

1155          KK  RTSFRJ1
1156          KM       ROUTE DIVERSION HYDROGRAPH FROM CPSF TO CPRJ1
1157          KM        TYPE C CHANNEL
1158          RS       7              -1       0
1159          RC    .040    .040    .040    1300   .0015
1160          RX       0      20      35      50    50.1     250     450     550
1161          RY       5       5     2.5       0       0       2       4       5

1162          KK   CPRJ2
1163          KM        RETURN DIVERSION FROM CPSH
1164          DR   DIRJ2

1165          KK  RTSHRJ2
1166          KM        ROUTE HYDROGRAPH FROM CPSH TO CPRJ2
1167          KM        TYPE C CHANNEL
1168          RS       7              -1       0
1169          RC    .050    .050    .050     600   .0015
1170          RX       0      20      35      50    50.1     250     450     550
1171          RY       0       0     2.5       0       0       2       4       5

1172          KK   CPRJ3
1173          KM        COMBINE HYDROGRAPHS AT CPRJ3
1174          HC       2   8.574

1175          KK  RTRJ3
1176          KM        ROUTE HYDROGRAPH FROM CPRJ3 TO CPRJ
```

```
1177          KM        TYPE C CHANNEL
1178          RS       7              -1       0
1179          RC    .035    .035    .035    3900   .0015
1180          RX       0      20      35      50    50.1     250     450     550
1181          RY       0       0     2.5       0       0       2       4       5

1182          KK  CPRJ4A
1183          KM        RETURN DIVERT FROM CPSG
1184          DR   DIRJ4
              *
```



```
LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


1185          KK  CPRJ4B
1186          KM        COMBINE HYDROGRAPHS AT CPRJ4
1187          HC       2
              *

1188          KK  RTSGRJ
1189          KM        ROUTE DIVERT FROM CPSG TO CPRJ
1190          KM        TYPE C CHANNEL
1191          RS       4              -1       0
1192          RC    .035    .035    .035    2600   .0019
1193          RX       0      20      35      50    50.1     250     450     550
1194          RY       5       5     2.5       0       0       2       4       5

1195          KK   CPRJ5
1196          KM        RETURN DIVERT FROM CPSE
1197          DR   DIRJ5

1198          KK  RTSERJ
1199          KM        ROUTE DIVERT FROM CPSE TO CPRJ
1200          KM        TYPE C CHANNEL
1201          RS       2              -1       0
1202          RC    .035    .035    .035    1200   .0001
1203          RX       0      20      35      50    50.1     250     450     550
1204          RY       5       5     2.5       0       0       2       4       5
              *

1205          KK   CPRJ6
1206          KM        ADD HYDROGRAPHS AT CPRJ
1207          HC       3   9.679
              *

1208          KK    RSRJ
1209          KM        RESERVOIR ROUTING AT CPRJ BEHIND 83RD AVE AND THE SPRR
```

```
1210        KO       1
1211        RS       1    STOR       0       0
1212        SV     3.5     6.2    11.0    18.4    30.9    52.2    76.3
1213        SE  1022.1  1022.5  1023.0  1023.5  1024.0  1024.5  1024.9
1214        SQ       0      50     100     506     899    1369
1215        SE  1022.1  1022.7  1022.9  1023.7  1024.0  1024.2
            *

1216        KK   CPRJ7
1217        KM        DIVERT FLOW OVER SPRR FROM CPRJ TO CPPA
1218        DT   DIPA2
1219        DI       0      50     100     506     899    1369
1220        DQ       0       0       0       6     149     369
            *

1221        KK  RTRJRI
1222        KM        ROUTE FLOW FROM CPRJ TO CPRI1
1223        KM        TYPE C CHANNEL
1224        RS       4              -1       0
1225        RC    .035    .035    .035    1050   .0019
1226        RX       0      20      35      50    50.1     250     450     550
1                                        HEC-1 INPUT                                                    PAGE 28

LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1227        RY       5       5     2.5       0       0       2       4       5

1228        KK   CPRI1
1229        KM        DIVERT FLOW FROM CPRI TO CPOE OVER SPRR.
1230        KM        1/4 MILE WEST OF 83RD AVE.
1231        DT   DIOE3
1232        DI     100     400    1392    1300    1400
1233        DQ       0      55     370     680     730

1234        KK    RTRI
1235        KM        ROUTE FLOW FROM CPRI1 (DIVERSION POINT) TO CPRI5 (1/2 MILE WEST OF 83RD)
1236        KM        TYPE C CHANNEL
1237        RS       4              -1       0
1238        RC    .035    .035    .035    1550   .0019
1239        RX       0      20      35      50    50.1     250     450     550
1240        RY       5       5     2.5       0       0       2       4       5
            *

1241        KK   SUBUE
1242        KM   BASIN SUBUE
1243        KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1244        KM    L=       .3  Lca=       .2   S=   26.5  Kn= .066  LAG=  17.3
1245        KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
```

```
1246          BA     .07
1247          LG     .35      .09    10.10      .04     9.00
1248          UI     19.      74.     120.     114.      90.      50.      30.      17.      11.       6.
1249          UI      2.       2.       2.       2.       2.       0.       0.       0.       0.       0.
1250          UI      0.       0.       0.       0.       0.       0.       0.       0.       0.       0.

1251          KK    CPUE
1252          KM        RETURN DIVERT FROM CPUB
1253          DR    DIUE

1254          KK   CPUE2
1255          KM        ADD HYDROGRAPHS AT CPUE
1256          HC       2
              *

1257          KK    RSUE
1258          KM        MODIFIED PULS ROUTING FROM CPUE TO CPPB OVER RID
1259          KO       1
1260          RS       1    STOR       0       0
1261          SV     1.8      4.1     29.1     31.8     34.8     40.0     50.2     59.1     68.6     78.8
1262          SE    1027     1028   1029.8   1029.9   1030.0   1030.2   1030.4   1030.6   1030.8   1031.0
1263          SQ       0        0      5.0     26.6     69.8    224.6    545.0   1176.8   2192.8   3653.9
              *

1264          KK  RTUEPB
1265          KM        ROUTE FLOW FROM CPUE TO CPPB
1266          KM        TYPE A CHANNEL
1267          RS       7              -1       0
1268          RC    .025     .025     .025     4000    .0015
1269          RX       0      100      400      500    500.1      600      900     1000
1270          RY       5        4        1        0        0        1        4        5
```



```
LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


1271          KK   SUBPB
1272          KM   BASIN SUBPB
1273          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1274          KM    L=       .9  Lca=       .4   S=   12.1  Kn= .066  LAG=  42.2
1275          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
1276          BA     .42
1277          LG     .40      .10     8.80      .07     4.00
1278          UI     37.      46.      97.     198.     214.     284.     309.     309.     280.     268.
1279          UI    229.     209.     146.     120.     110.      75.      60.      47.      40.      34.
1280          UI     27.      21.      21.      15.       5.       5.       5.       5.       5.       5.
1281          UI      5.       5.       5.       5.       5.       5.       5.       0.       0.       0.
1282          UI      0.       0.       0.       0.       0.       0.       0.       0.       0.       0.
```

```
1283          KK   CPPB1
1284          KM        ADD HYDROGRAPHS AT CPPB
1285          HC       2

1286          KK   CPPB2
1287          KM        DIVERT 19% OF FLOW FROM CPPB TO CPPA
1288          DT    DIPA
1289          DI       0      25      50      75     100     150     200
1290          DQ       0       5      10      14      19      29      38

1291          KK  RTPBNA
1292          KM        ROUTE FLOW FROM CPPB TO CPNA ALONG 75th AVE.
1293          KM        TYPE B CHANNEL
1294          RS       8              -1       0
1295          RC      .1     .02      .1    5000   .0032
1296          RX       0     470     476     480     520     524     530    1000
1297          RY     4.7       0       0       1       1       0       0     4.7

1298          KK   SUBNA
1299          KM   BASIN SUBNA
1300          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1301          KM    L=      1.4  Lca=       .7   S=   16.2  Kn= .099  LAG=  81.5
1302          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
1303          BA     .98
1304          LG     .50     .01    8.00     .12     .00
1305          UI     44.     44.     44.     72.     93.    151.    230.    270.    232.    300.
1306          UI    335.    371.    371.    371.    371.    371.    328.    309.    325.    341.
1307          UI    239.    232.    264.    198.    169.    160.    132.    124.    141.     95.
1308          UI     84.     71.     71.     56.     55.     53.     40.     40.     40.     34.
1309          UI     25.     25.     25.     25.     25.     18.      6.      6.      6.      6.
1310          UI      6.      6.      6.      6.      6.      6.      6.      6.      6.      6.
1311          UI      6.      6.      6.      6.      6.      6.      6.      6.      6.      6.
1312          UI      6.      6.      6.      0.      0.      0.      0.      0.      0.      0.
1313          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

1314          KK   CPNA1
1315          KM        RETURN DIVERT FROM CPNB
1316          DR    DINA
```



```
LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


1317          KK  RTDINA
1318          KM        ROUTE DIVERT FROM CPNB TO CPNA
1319          KM        TYPE B CHANNEL
1320          RS       8              -1       0
```

```
1321          RC      .1      .02      .1    5000   .0012
1322          RX       0      470     476     480     520     524     530    1000
1323          RY     4.7        0       0       1       1       0       0     4.7

1324          KK   CPNA2
1325          KM        ADD HYDROGRAPHS AT CPNA
1326          HC       3

1327          KK  RTNAJC
1328          KM        ROUTE FLOW FROM CPNA TO CPJC (ALONG 75TH AVENUE).
1329          KM        TYPE B CHANNEL
1330          RS       8               -1       0
1331          RC      .1      .02      .1    5000   .0028
1332          RX       0      470     476     480     520     524     530    1000
1333          RY     4.7        0       0       1       1       0       0     4.7

1334          KK   SUBJC
1335          KM   BASIN SUBJC
1336          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1337          KM    L=      1.4  Lca=       .7   S=   14.0  Kn= .090  LAG=  76.2
1338          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
1339          BA   0.987
1340          LG     .44     .03    7.00     .17    3.00
1341          UI     91.     91.     91.    171.    226.    376.    501.    528.    552.    712.
1342          UI    702.    765.    765.    765.    765.    668.    637.    686.    645.    478.
1343          UI    501.    494.    362.    348.    279.    258.    283.    207.    173.    147.
1344          UI    145.    112.    112.     99.     83.     83.     83.     53.     52.     52.
1345          UI     52.     52.     38.     11.     11.     11.     11.     11.     11.     11.
1346          UI     11.     11.     11.     11.     11.     11.     11.     11.     11.     11.
1347          UI     11.     11.     11.     11.     11.     11.     11.     11.      0.      0.
1348          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

1349          KK   CPJC1
1350          KM        RETURN DIVERT FROM CPJD
1351          DR    DIJC

1352          KK  RTDIJC
1353          KM        ROUTE DIVERT FROM CPJD TO CPJC
1354          KM        TYPE B CHANNEL
1355          RS       8               -1       0
1356          RC      .1      .02      .1    5000   .0024
1357          RX       0      470     476     480     520     524     530    1000
1358          RY     4.7        0       0       1       1       0       0     4.7

1359          KK   CPJC2
1360          KM        ADD HYDROGRAPHS AT CPJC
1361          HC       3
```

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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1362          KK   CPJC3
1363          KM        DIVERT 46% OF FLOW AT CPJC TO CPJB.
1364          DT    DIJB
1365          DI       0      25      50      75     100     150     200
1366          DQ       0      12      23      35      46      69      92

1367          KK  RTJCFB
1368          KM        ROUTE FLOW FROM CPJC TO CPFB (ALONG 75TH AVENUE).
1369          KM        TYPE B CHANNEL
1370          RS       7              -1       0
1371          RC      .1     .02      .1    4400   .0032
1372          RX       0     470     476     480     520     524     530    1000
1373          RY     4.7       0       0       1       1       0       0     4.7

1374          KK   SUBFB
1375          KM   BASIN SUBFB
1376          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1377          KM    L=      1.2  Lca=       .4   S=   16.2  Kn= .090  LAG=  59.8
1378          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
1379          BA     .66
1380          LG     .36     .13    6.60     .19    4.00
1381          UI     41.     41.     62.    102.    183.    239.    235.    304.    334.    341.
1382          UI    341.    339.    284.    298.    284.    213.    238.    164.    152.    120.
1383          UI    120.    100.     74.     66.     55.     50.     41.     37.     37.     24.
1384          UI     23.     23.     23.     14.      5.      5.      5.      5.      5.      5.
1385          UI      5.      5.      5.      5.      5.      5.      5.      5.      5.      5.
1386          UI      5.      5.      5.      0.      0.      0.      0.      0.      0.      0.
1387          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

1388          KK    CPFB
1389          KM        ADD HYDROGRAPHS AT CPFB
1390          HC       2

1391          KK   CPFB1
1392          KM        DUMMY DIVERT TO ROUTE FLOW AS REQUIRED
1393          KM        COMBINES PREVIOUS FLOW INTO SALT RIVER
1394          DT   DISRX
1395          DI       0      25      50      75     100     150     200   10000
1396          DQ       0      25      50      75     100     150     200   10000
              * ******************************************************************************
              * ******************************************************************************
              * ******************************************************************************

1397          KK   SUBPA
1398          KM   BASIN SUBPA
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1399          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1400          KM    L=      1.1  Lca=       .6   S=   16.7  Kn= .065  LAG=  46.5
1401          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
1402          BA     .49
1403          LG     .33      .09     7.30      .14    19.00
1404          UI     39.      41.      88.     175.     224.     282.     302.     328.     328.     290.
1405          UI    286.     248.     216.     175.     139.     112.     107.      71.      61.      48.
1406          UI     41.      36.      30.      22.      22.      22.       6.       5.       5.       5.
1407          UI      5.       5.       5.       5.       5.       5.       5.       5.       5.       5.
1                                                HEC-1 INPUT                                                PAGE 32

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1408          UI      5.       0.       0.       0.       0.       0.       0.       0.       0.       0.
1409          UI      0.       0.       0.       0.       0.       0.       0.       0.       0.       0.

1410          KK    CPPA
1411          KM        RETURN DIVERT FROM CPPB.
1412          DR    DIPA

1413          KK  RTDIPA
1414          KM        ROUTE DIVERT FROM CPPB TO CPPA
1415          KM        TYPE B CHANNEL
1416          RS       8               -1       0
1417          RC      .1      .02      .1    5000   .0032
1418          RX       0      470     476     480     520     524     530    1000
1419          RY     4.7        0       0       1       1       0       0     4.7

1420          KK   CPPA2
1421          KM        RETURN DIVERT FROM CPRJ.
1422          DR   DIPA2
              *

1423          KK  RTRJPA
1424          KM        ROUTE DIVERT FROM CPRJ TO CPPA
1425          KM        TYPE B CHANNEL
1426          RS       4               -1       0
1427          RC      .1      .02      .1    2600   .0054
1428          RX       0      470     476     480     520     524     530    1000
1429          RY     4.7        0       0       1       1       0       0     4.7

1430          KK   CPPA3
1431          KM        ADD HYDROGRAPHS AT CPPA
1432          HC       3

1433          KK    CPPA4
1434          KM        DIVERT 18% OF FLOW AT CPPA TO CPOE.
1435          DT    DIOE
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1436          DI       0      25      50      75     100     150     200
1437          DQ       0       5       9      14      18      27      36

1438          KK  RTPAMD
1439          KM        ROUTE FLOW FROM CPPA TO CPMD (ALONG 83RD AVENUE).
1440          KM        TYPE B CHANNEL
1441          RS       9              -1       0
1442          RC      .1     .02      .1    5200   .0012
1443          RX       0     470     476     480     520     524     530    1000
1444          RY     4.7       0       0       1       1       0       0     4.7

1445          KK   SUBMD
1446          KM   BASIN SUBMD
1447          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1448          KM    L=      1.4  Lca=       .6   S=   14.3  Kn= .099  LAG=  82.5
1449          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
1450          BA     .80
1451          LG     .50     .00    8.40     .11    1.00
1452          UI     36.     36.     36.     57.     75.    119.    180.    218.    187.    234.
1453          UI    275.    287.    299.    299.    299.    299.    274.    249.    251.    275.
```



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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1454          UI    220.    187.    204.    180.    139.    136.    109.    101.    108.     93.
1455          UI     68.     61.     58.     51.     44.     44.     36.     33.     33.     33.
1456          UI     21.     20.     20.     20.     20.     20.      8.      4.      4.      4.
1457          UI      4.      4.      4.      4.      4.      4.      4.      4.      4.      4.
1458          UI      4.      4.      4.      4.      4.      4.      4.      4.      4.      4.
1459          UI      4.      4.      4.      0.      0.      0.      0.      0.      0.      0.
1460          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

1461          KK    CPMD
1462          KM        ADD HYDROGRAPHS AT CPMD
1463          HC       2

1464          KK   CPMD1
1465          KM        DIVERT 21% OF FLOW FROM CPMD TO CPJB.
1466          DT   DIJB1
1467          DI       0      25      50      75     100     150     200
1468          DQ       0       5      10      16      21      32      42

1469          KK   CPMD2
1470          KM        DIVERT FLOW FROM CPMD TO CPMF
1471          KM        DUMMY DIVERT TO ROUTE FLOW AS REQUIRED.
1472          DT   DIMFX
1473          DI       0      25      50      75     100     150     200
1474          DQ       0      25      50      75     100     150     200
```

```
1475          KK   CPMD3
1476          KM        ADD HYDROGRAPHS AT CPMD
1477          HC       2   9.679

1478          KK   SUBMG
1479          KM   BASIN SUBMG
1480          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1481          KM    L=        .7  Lca=       .3   S=    8.8  Kn= .100  LAG=  54.6
1482          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
1483          BA     .20
1484          LG     .50     .00    7.30     .16     .00
1485          UI     14.     14.     24.     41.     73.     78.    104.    103.    115.    115.
1486          UI    114.     96.    101.     88.     74.     71.     53.     44.     39.     36.
1487          UI     25.     22.     18.     17.     13.     13.     10.      8.      8.      8.
1488          UI      5.      2.      2.      2.      2.      2.      2.      2.      2.      2.
1489          UI      2.      2.      2.      2.      2.      2.      2.      2.      0.      0.
1490          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

1491          KK  RTMGJB
1492          KM        ROUTE FLOW FROM CPMG TO CPJB (SHEET FLOW).
1493          KM        TYPE A CHANNEL
1494          RS      12              -1       0
1495          RC      .1      .1      .1    7200   .0031
1496          RX       0     100     400     500   500.1     600     900    1000
1497          RY       5       4       1       0       0       1       4       5
```



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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1498          KK   SUBJB
1499          KM   BASIN SUBJB
1500          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1501          KM    L=       1.3  Lca=       .7   S=   17.4  Kn= .100  LAG=  79.4
1502          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
1503          BA     .98
1504          LG     .50     .00    5.60     .32     .00
1505          UI     46.     46.     46.     79.    101.    170.    240.    278.    248.    345.
1506          UI    339.    384.    384.    384.    384.    376.    320.    320.    345.    308.
1507          UI    240.    255.    241.    180.    174.    140.    130.    140.    113.     87.
1508          UI     76.     74.     61.     56.     56.     42.     42.     42.     35.     26.
1509          UI     26.     26.     26.     26.     15.      6.      6.      6.      6.      6.
1510          UI      6.      6.      6.      6.      6.      6.      6.      6.      6.      6.
1511          UI      6.      6.      6.      6.      6.      6.      6.      6.      6.      6.
1512          UI      6.      0.      0.      0.      0.      0.      0.      0.      0.      0.
1513          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
```

```
1514          KK    CPJB
1515          KM        ADD HYDROGRAPHS AT CPJB
1516          HC       2

1517          KK   CPJB1
1518          KM        RETURN DIVERT FROM CPJC
1519          DR    DIJB

1520          KK  RTDIJB
1521          KM        ROUTE DIVERT FROM CPMD TO CPJB
1522          KM        TYPE B CHANNEL
1523          RS       9              -1       0
1524          RC      .1     .02      .1    5400   .0015
1525          RX       0     470     476     480     520     524     530    1000
1526          RY     4.7       0       0       1       1       0       0     4.7

1527          KK   CPJB2
1528          KM        RETURN DIVERT FROM CPMD
1529          DR   DIJB1

1530          KK  RDIJB1
1531          KM        ROUTE DIVERT FROM CPMD TO CPJB
1532          KM        TYPE B CHANNEL
1533          RS       9              -1       0
1534          RC      .1     .02      .1    5200   .0030
1535          RX       0     470     476     480     520     524     530    1000
1536          RY     4.7       0       0       1       1       0       0     4.7

1537          KK   CPJB3
1538          KM        ADD HYDROGRAPHS AT CPJB
1539          HC       3
```



```
LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


1540          KK   CPJB4
1541          KM        DIVERT 36% OF FLOW AT CPJB TO CPEE.
1542          DT    DIEE
1543          DI       0      25      50      75     100     150     200
1544          DQ       0       9      18      27      36      54      72

1545          KK  RTJBFA
1546          KM        ROUTE FLOW FROM CPJB TO CPFA.
1547          KM        TYPE B CHANNEL
1548          RS      11              -1       0
1549          RC      .1     .02      .1    6400   .0009
1550          RX       0     470     476     480     520     524     530    1000
```

```
1551          RY     4.7       0       0       1       1       0       0     4.7

1552          KK   SUBFA
1553          KM   BASIN SUBFA
1554          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1555          KM    L=      1.4  Lca=       .8   S=    7.9  Kn= .110  LAG= 105.0
1556          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
1557          BA     .88
1558          LG     .46     .04    5.40     .34    2.0
1559          UI     20.     20.     20.     20.     20.     20.     33.     41.     41.     57.
1560          UI     68.     94.    103.    114.    123.    103.    103.    136.    147.    157.
1561          UI    140.    164.    164.    164.    164.    164.    164.    164.    164.    164.
1562          UI    148.    137.    137.    137.    138.    157.    147.    127.    103.    103.
1563          UI    103.    114.    120.     89.     80.     75.     75.     75.     59.     59.
1564          UI     55.     55.     59.     63.     48.     37.     37.     36.     32.     32.
1565          UI     32.     29.     24.     24.     24.     24.     23.     18.     18.     18.
1566          UI     18.     18.     18.     17.     11.     11.     11.     11.     11.     11.
1567          UI     11.     11.     11.     11.     11.      3.      2.      2.      2.      2.
1568          UI      2.      2.      2.      2.      2.      2.      2.      2.      2.      2.
1569          UI      2.      2.      2.      2.      2.      2.      2.      2.      2.      2.
1570          UI      2.      2.      2.      2.      2.      2.      2.      2.      2.      2.
1571          UI      2.      2.      2.      2.      2.      2.      2.      2.      2.      2.
1572          UI      2.      2.      2.      2.      2.      2.      0.      0.      0.      0.
1573          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

1574          KK    CPFA
1575          KM        ADD HYDROGRAPHS AT CPFA.
1576          HC       2

1577          KK   CPFA1
1578          KM        DUMMY DIVERT TO ROUTE FLOW AS REQUIRED
1579          KM        COMBINES PREVIOUS FLOW INTO SALT RIVER
1580          DT  DISRX2
1581          DI       0      25      50      75     100     150     200   10000
1582          DQ       0      25      50      75     100     150     200   10000
              * ******************************************************************************
              * ******************************************************************************
              * ******************************************************************************
1                                          HEC-1 INPUT                                          PAGE 36

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


1583          KK   CPRI3
1584          KM        ADD HYDROGRAPHS AT CPRI3 (1/2 MILE WEST OF 83RD AVE.)
1585          HC       3   9.679
              *
```

```
KK   SUBRI
KM   BASIN SUBRI
KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
KM    L=       .6  Lca=       .2   S=   19.3  Kn= .079  LAG=  27.9
KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
BA     .23
LG     .44     .08    7.60     .13    4.00
UI     31.     71.    169.    227.    261.    243.    222.    170.    116.     93.
UI     56.     42.     31.     24.     18.     12.      4.      4.      4.      4.
UI      4.      4.      4.      4.      0.      0.      0.      0.      0.      0.
UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

KK   SUBSB
KM   BASIN SUBSB
KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
KM    L=       .5  Lca=       .3   S=   15.1  Kn= .087  LAG=  35.7
KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
BA     .19
LG     .46     .03    9.70     .07    3.00
UI     19.     30.     74.    109.    145.    162.    162.    139.    138.    106.
UI     83.     62.     54.     34.     27.     22.     18.     13.     11.     11.
UI      2.      2.      2.      2.      2.      2.      2.      2.      2.      2.
UI      2.      0.      0.      0.      0.      0.      0.      0.      0.      0.
UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
*

KK    RSSB
KM         MODIFIED PULS ROUTING THROUGH PONDING  BEHIND RID CANAL.
KO       1
RS       1    STOR       0       0
SV     2.2     5.6    11.9    21.4    33.8
SE  1024.0  1024.5  1025.0  1025.5  1025.9
SQ       0      94     581    2114    4864

KK   SUBSD
KM   BASIN SUBSD
KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
KM    L=       .6  Lca=       .3   S=   12.3  Kn= .091  LAG=  43.6
KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
BA     .14
LG     .47     .02    6.60     .21    1.00
UI     12.     14.     30.     59.     69.     89.    100.    100.     95.     83.
UI     85.     64.     58.     43.     34.     32.     21.     18.     15.     12.
UI     11.      8.      7.      7.      4.      1.      1.      1.      1.      1.
UI      1.      1.      1.      1.      1.      1.      1.      1.      1.      0.
UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
*
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1629          KK   CPSD1
1630          KM        RETURN DIVERT FROM CPSC.
1631          DR    DISD

1632          KK   CPSD2
1633          KM        ADD HYDROGRAPHS AT CPSD.
1634          KM        ROUTING STEP NOT INCLUDED DUE TO SHORT ROUTING LENGTH
1635          HC       3    .758

1636          KK    RSSD
1637          KM        MODIFIED PULS ROUTING BEHIND CANAL, NORTH OF VAN BUREN.
1638          RS       1    STOR       0       0
1639          SV       0     .01      .1      .6     1.8       5       9      14      23
1640          SE  1021.4  1022.8    1023  1023.3  1023.6    1024  1024.3  1024.6    1025
1641          SQ       0     .16      46     534     939    1427    1993    2767
1642          SE  1021.4  1021.5    1022    1023  1023.5    1024  1024.5    1025

1643          KK  RTSDRI
1644          KM        ROUTE FLOW FROM CPSD TO CPRI
1645          KM        TYPE A CHANNEL
1646          RS       4              -1       0
1647          RC    .035    .035    .035    2400   .0046
1648          RX       0     100     400     500   500.1     600     900    1000
1649          RY       5       4       1       0       0       1       4       5

1650          KK   CPRI5
1651          KM        ADD HYDROGRAPHS AT CPRI (1/2 MILE WEST OF 83RD AVE)
1652          HC       4  10.242
              *

1653          KK    RSRI
1654          KM        MODIFIED PULS ROUTING BEHIND SPRR.
1655          KO       1
1656          RS       1    STOR      -1       0
1657          SV       0       0      .1      .3     1.2     3.0     6.5   13.76    21.8    35.6
1658          SE  1014.0  1014.1  1014.5  1015.0  1015.5  1016.0  1016.5  1017.0  1017.5  1018.0
1659          SQ       0       4     142     573    1333    3217    5957    9319   13343   18206
              *

1660          KK  RTRIRH
1661          KM        ROUTE FLOW FROM CPRI TO CPRH
1662          KM        TYPE C CHANNEL
1663          RS       4              -1       0
1664          RC      .1     .02      .1    2400   .0029
```

```
1664          RC      .1      .02      .1    2400   .0029
1665          RX       0      470     476     480     520     524     530    1000
1666          RY     4.7       0       0       1       1       0       0     4.7
              *

1667          KK   SUBSA
1668          KM   BASIN SUBSA
1669          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1670          KM    L=       .8  Lca=       .3   S=    9.6  Kn= .047  LAG=  26.0
1671          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
1672          BA     .42
```



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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1673          LG     .24     .15    9.70     .06   16.00
1674          UI     60.    160.    340.    471.    503.    437.    376.    284.    186.    137.
1675          UI     87.     63.     47.     34.     22.      7.      7.      7.      7.      7.
1676          UI      7.      7.      7.      0.      0.      0.      0.      0.      0.      0.
1677          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
              *

1678          KK    CPSA
1679          KM         DIVERT 50% OF FLOW AT CPSA TO CPRF
1680          DT    DIRF
1681          DI       0      25      50      75     100     150     200
1682          DQ       0      13      25      38      50      75     100
              *

1683          KK  RTSARH
1684          KM        ROUTE FLOW FROM CPSA TO CPRH.
1685          KM        TYPE B CHANNEL
1686          RS       4              -1       0
1687          RC      .1     .02      .1    2600   .0015
1688          RX       0     470     476     480     520     524     530    1000
1689          RY     4.7       0       0       1       1       0       0     4.7

1690          KK   SUBRH
1691          KM   BASIN SUBRH
1692          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1693          KM    L=       .6  Lca=       .3   S=   15.6  Kn= .100  LAG=  46.8
1694          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
1695          BA     .22
1696          LG     .50     .00    8.80     .09     .00
1697          UI     17.     18.     39.     78.    100.    126.    134.    147.    147.    131.
1698          UI    128.    113.     96.     82.     64.     51.     50.     32.     28.     22.
1699          UI     19.     16.     14.     10.     10.     10.      4.      2.      2.      2.
1700          UI      2.      2.      2.      2.      2.      2.      2.      2.      2.      2.
```

```
1701          UI      2.      0.      0.      0.      0.      0.      0.      0.      0.      0.
1702          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
              *

1703          KK    CPRH
1704          KM        ADD HYDROGRAPHS AT CPRH.
1705          HC       3  10.886
              *

1706          KK    RSRH
1707          KM        MODIFIED PULS ROUTING BEHIND SPRR.
1708          KO       1
1709          RS       1    STOR       0       0
1710          SV     1.0     1.2     1.5     1.8     2.3     4.4     7.7    13.6    24.5   40.80
1711          SE  1008.8  1008.9  1009.0  1009.1  1009.2  1009.7  1010.2  1010.7  1011.2  1011.7
1712          SQ       0      50     100     500     750    1000
1713          SE  1008.8  1009.3  1009.4  1009.7  1009.9  1010.0
              *
```



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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1714          KK   CPRH2
1715          DT   DIOE2
1716          DI    5733    9002   13168
1717          DQ       0       0     322
1718          KM   ***  DIVERT ROUTING IGNORED DUE TO LACK OF DIVERTED FLOW

1719          KK  RTRHOG1
1720          KM        ROUTE FLOW FROM CPRH TO CPOG1
1721          KM        TYPE C CHANNEL
1722          RS       9              -1       0
1723          RC    .035    .035    .035    1200   .0019
1724          RX       0      20      35      50    50.1     250     450     550
1725          RY       5       5     2.5       0       0       2       4       5

1726          KK   CPOG1
1727          DT   DIOD1
1728          DI     715    1200
1729          DQ       0       0

1730          KK  RTOG1
1731          KM        ROUTE FLOW FROM CPOG1 TO CPOG
1732          KM        TYPE C CHANNEL
1733          RS       9              -1       0
1734          RC    .035    .035    .035    4100   .0019
1735          RX       0      20      35      50    50.1     250     450     550
```

```
1736        RY      5       5     2.5       0       0       2       4       5

1737        KK   SUBRG
1738        KM   BASIN SUBRG
1739        KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1740        KM    L=       .6  Lca=       .3   S=   14.3  Kn= .097  LAG=  41.7
1741        KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
1742        BA     .13
1743        LG     .48     .01    9.70     .07    2.00
1744        UI     11.     14.     30.     63.     66.     88.     95.     95.     85.     83.
1745        UI     68.     63.     44.     35.     34.     21.     18.     14.     12.     10.
1746        UI      7.      6.      6.      3.      1.      1.      1.      1.      1.      1.
1747        UI      1.      1.      1.      1.      1.      1.      1.      0.      0.      0.
1748        UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

1749        KK  RTRGRF
1750        KM        ROUTE FLOW FROM CPRG TO CPRF (ALONG 99TH AVENUE)
1751        KM        TYPE B CHANNEL
1752        RS      5              -1       0
1753        RC     .1     .02      .1    2700   .0022
1754        RX      0     470     476     480     520     524     530    1000
1755        RY    4.7       0       0       1       1       0       0     4.7

1756        KK   SUBRF
1757        KM   BASIN SUBRF
1758        KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1759        KM    L=      1.2  Lca=       .7   S=   11.6  Kn= .070  LAG=  57.1
1760        KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
1761        BA     .63
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1762        LG     .31     .09    9.70     .07     .19
1763        UI     41.     41.     68.    113.    199.    240.    259.    320.    344.    344.
1764        UI    344.    311.    287.    317.    221.    232.    186.    157.    123.    120.
1765        UI    102.     75.     66.     54.     51.     39.     37.     34.     23.     23.
1766        UI     23.     23.      5.      5.      5.      5.      5.      5.      5.      5.
1767        UI      5.      5.      5.      5.      5.      5.      5.      5.      5.      5.
1768        UI      5.      0.      0.      0.      0.      0.      0.      0.      0.      0.
1769        UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

1770        KK    CPRF
1771        KM        RETURN DIVERT FROM CPSA.
1772        DR    DIRF

1773        KK  RTDIRF
1774        KM        ROUTE DIVERT FROM CPSA TO CPRF
```

```
1775          KM        TYPE B CHANNEL
1776          RS       9              -1       0
1777          RC      .1     .02      .1    5300   .0011
1778          RX       0     470     476     480     520     524     530    1000
1779          RY     4.7       0       0       1       1       0       0     4.7

1780          KK   CPRF1
1781          KM        ADD HYDROGHRAPS AT CPRF.
1782          HC       3   1.185

1783          KK   CPRF2
1784          KM        DIVERT 20% OF FLOW FROM CPRF TO CPRE
1785          DT    DIRE
1786          DI       0      25      50      75     100     150     200
1787          DQ       0       5      10      15      20      30      40

1788          KK  RTRFOG
1789          KM        ROUTE FLOW FROM CPRF TO CPOG (ALONG 99TH AVENUE)
1790          KM        TYPE B CHANNEL
1791          RS       5              -1       0
1792          RC      .1     .02      .1    2700   .0022
1793          RX       0     470     476     480     520     524     530    1000
1794          RY     4.7       0       0       1       1       0       0     4.7

1795          KK   SUBOG
1796          KM   BASIN SUBOG
1797          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1798          KM    L=      1.1  Lca=       .6   S=   12.3  Kn= .061  LAG=  46.0
1799          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
1800          BA     .47
1801          LG     .27     .11    9.70     .06   20.00
1802          UI     38.     41.     87.    172.    217.    276.    299.    319.    319.    276.
1803          UI    278.    232.    215.    157.    130.    110.     96.     67.     57.     47.
1804          UI     38.     35.     26.     22.     22.     17.      5.      5.      5.      5.
1805          UI      5.      5.      5.      5.      5.      5.      5.      5.      5.      5.
1806          UI      5.      0.      0.      0.      0.      0.      0.      0.      0.      0.
1807          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


1808          KK    CPOG
1809          KM        ADD HYDROGRAPHS AT CPOG
1810          HC       3  12.122
              *

1811          KK    RSOG
```

```
KM        MODIFIED PULS ROUTING FROM CPOG TO CPOF.
KO       1
RS       1    STOR      -1       0
SV      27    29.6    32.3    35.2    51.6    72.2    97.1   126.7   155.4
SE  1002.2  1002.3  1002.4  1002.5  1003.0  1003.5  1004.0  1004.5  1004.9
SQ       0       4      23      68     922    3346    7315   12805   18312
*

KK   CPOG2
KM        DIVERT FLOW FROM CPOG TO CPOD OVER SPRR
DT   DIOD2
DI       0     251     922    3346    7315   12805   18312
DQ       0      40     250    1174    2870    5440    8134
*

KK  RTOGOF
KM        ROUTE FLOW FROM CPOG TO CPOF
KM        TYPE C CHANNEL
RS       4              -1       0
RC    .035    .035    .035    2400   .0033
RX       0      20      35      50    50.1     250     450     550
RY       5       5     2.5       0       0       2       4       5

KK   SUBOF
KM   BASIN SUBOF
KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
KM    L=       .7  Lca=       .3   S=   27.9  Kn= .100  LAG=  42.9
KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
BA     .25
LG     .50     .02    8.80     .08     .00
UI     21.     26.     55.    110.    123.    161.    178.    178.    166.    153.
UI    141.    117.     94.     73.     62.     51.     36.     30.     25.     19.
UI     18.     12.     12.     12.      3.      3.      3.      3.      3.      3.
UI      3.      3.      3.      3.      3.      3.      3.      3.      0.      0.
UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

KK   SUBRE
KM   BASIN SUBRE
KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
KM    L=       .9  Lca=       .5   S=    6.3  Kn= .100  LAG=  74.7
KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
BA     .36
LG     .50     .00    7.30     .16     .00
UI     18.     18.     18.     35.     47.     78.    103.    100.    114.    137.
UI    147.    151.    151.    151.    149.    126.    126.    135.    116.     94.
UI    105.     83.     69.     63.     53.     52.     52.     34.     31.     29.
UI     24.     22.     21.     16.     16.     16.     12.     10.     10.     10.
UI     10.      9.      2.      2.      2.      2.      2.      2.      2.      2.
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1854          UI      2.      2.      2.      2.      2.      2.      2.      2.      2.      2.
1855          UI      2.      2.      2.      2.      2.      2.      0.      0.      0.      0.
1856          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

1857          KK    CPRE
1858          KM        RETURN DIVERT FROM CPRF
1859          DR    DIRE

1860          KK  RTDIRE
1861          KM        ROUTE DIVERT FROM CPRF TO CPRE
1862          KM        TYPE B CHANNEL
1863          RS       4              -1       0
1864          RC      .1     .02      .1    2600   .0008
1865          RX       0     470     476     480     520     524     530    1000
1866          RY     4.7       0       0       1       1       0       0     4.7

1867          KK   CPRE1
1868          KM        ADD HYDROGRAPHS AT CPRE
1869          HC       2   1.549

1870          KK  RTREOF
1871          KM        ROUTE FLOW FROM CPRE TO CPOF
1872          KM        TYPE A CHANNEL
1873          RS       5              -1       0
1874          RC      .1      .1      .1    2700   .0044
1875          RX       0     100     400     500   500.1     600     900    1000
1876          RY       5       4       1       0       0       1       4       5

1877          KK   CPOF1
1878          KM        ADD HYDROGRAPHS AT CPOF.
1879          HC       3  12.733
              *

1880          KK    RSOF
1881          KM   MODIFIED PULS ROUTING THROUGH PONDING BEHIND SPRR.
1882          KO       1
1883          RS       1    STOR       0       0
1884          SV    48.3    49.5    56.8    65.2    74.8    85.5    96.6    99.2
1885          SE   995.4   995.5   996.0   996.5   997.0   997.5   998.0     999
1886          SQ       0      50     100     500     750    1000
1887          SE   995.4   996.0   996.5   997.3   997.5   997.6
              *

1888          KK  RTOFOB
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1889          KM        ROUTE FLOW FROM CPOF TO CPOB
1890          KM        TYPE C CHANNEL
1891          RS       6              -1       0
1892          RC    .035    .035    .035    3600   .0011
1893          RX       0      20      35      50    50.1     250     450     550
1894          RY       5       5     2.5       0       0       2       4       5
1                                          HEC-1 INPUT                                                    PAGE 43

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


1895          KK   SUBOB
1896          KM   BASIN SUBOB
1897          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1898          KM    L=      1.1  Lca=       .6   S=   17.0  Kn= .095  LAG=  68.9
1899          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
1900          BA     .44
1901          LG     .48     .03    5.00     .39    1.00
1902          UI     24.     24.     27.     50.     74.    121.    142.    137.    185.    183.
1903          UI    200.    200.    200.    193.    167.    172.    182.    125.    131.    126.
1904          UI     93.     87.     70.     69.     66.     45.     40.     38.     29.     29.
1905          UI     24.     22.     22.     18.     14.     14.     14.     14.      9.      3.
1906          UI      3.      3.      3.      3.      3.      3.      3.      3.      3.      3.
1907          UI      3.      3.      3.      3.      3.      3.      3.      3.      3.      3.
1908          UI      3.      0.      0.      0.      0.      0.      0.      0.      0.      0.
1909          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

1910          KK   SUBRD
1911          KM   BASIN SUBRD
1912          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1913          KM    L=       .9  Lca=       .5   S=   10.5  Kn= .100  LAG=  67.8
1914          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
1915          BA     .38
1916          LG     .50     .00    5.80     .28     .00
1917          UI     20.     20.     24.     43.     66.    107.    122.    122.    156.    164.
1918          UI    172.    172.    172.    159.    143.    153.    141.    107.    117.     96.
1919          UI     78.     68.     59.     63.     46.     38.     33.     29.     25.     24.
1920          UI     19.     19.     18.     12.     12.     12.     12.     11.      3.      3.
1921          UI      3.      3.      3.      3.      3.      3.      3.      3.      3.      3.
1922          UI      3.      3.      3.      3.      3.      3.      3.      3.      3.      3.
1923          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
1924          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

1925          KK    CPRD
1926          KM        DIVERT 40% OF FLOW FROM CPRD TO CPOB
1927          DT    DIOB
1928          DI       0      25      50      75     100     150     200
1929          DQ       0      10      20      30      40      60      80
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1930          KK  RTRDRC
1931          KM        ROUTE FLOW FROM CPRD TO CPRC (ALONG VAN BUREN).
1932          KM        TYPE B CHANNEL
1933          RS       9              -1       0
1934          RC      .1      .02      .1    5200   .0023
1935          RX       0      470     476     480     520     524     530    1000
1936          RY     4.7        0       0       1       1       0       0     4.7

1937          KK   SUBRC
1938          KM   BASIN SUBRC
1939          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1940          KM    L=      1.2  Lca=       .6   S=   14.0  Kn= .100  LAG=  78.2
1941          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
1942          BA     .68
1943          LG     .50      .01    6.20     .24     .00
1944          UI     32.      32.     32.     58.     74.    125.    169.    196.    183.    260.
1                                             HEC-1 INPUT                                          PAGE 44

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1945          UI    229.     271.    271.    271.    271.    254.    225.    226.    249.    193.
1946          UI    169.     189.    148.    123.    115.     95.     90.    104.     61.     59.
1947          UI     52.      49.     40.     40.     34.     29.     29.     29.     18.     18.
1948          UI     18.      18.     18.     15.      4.      4.      4.      4.      4.      4.
1949          UI      4.       4.      4.      4.      4.      4.      4.      4.      4.      4.
1950          UI      4.       4.      4.      4.      4.      4.      4.      4.      4.      4.
1951          UI      0.       0.      0.      0.      0.      0.      0.      0.      0.      0.
1952          UI      0.       0.      0.      0.      0.      0.      0.      0.      0.      0.

1953          KK    CPRC
1954          KM        ADD HYDROGRAPHS AT CPRC
1955          HC       2

1956          KK  RTRCRB
1957          KM        ROUTE FLOW FROM CPRC TO CPRB (ALONG VAN BUREN).
1958          KM        TYPE B CHANNEL
1959          RS       9              -1       0
1960          RC      .1      .02      .1    5200   .0042
1961          RX       0      470     476     480     520     524     530    1000
1962          RY     4.7        0       0       1       1       0       0     4.7

1963          KK   SUBRB
1964          KM   BASIN SUBRB
1965          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1966          KM    L=      1.1  Lca=       .6   S=   19.3  Kn= .086  LAG=  59.9
1967          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
1968          BA     .55
```

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1969          LG     .47     .08    5.60     .29     .00
1970          UI     34.     34.     52.     84.    151.    198.    194.    252.    275.    282.
1971          UI    282.    281.    235.    246.    237.    176.    197.    137.    126.     99.
1972          UI     99.     84.     62.     54.     46.     42.     35.     31.     31.     20.
1973          UI     19.     19.     19.     12.      4.      4.      4.      4.      4.      4.
1974          UI      4.      4.      4.      4.      4.      4.      4.      4.      4.      4.
1975          UI      4.      4.      4.      0.      0.      0.      0.      0.      0.      0.
1976          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

1977          KK    CPRB
1978          KM        ADD HYDROGRAPHS AT CPRB
1979          HC       2

1980          KK   CPRB1
1981          KM        DIVERT 50% OF FLOW FROM CPRB TO CPKA3
1982          DT   DIKA3
1983          DI       0      25      50      75     100     150     200
1984          DQ       0      13      25      38      50      75     100

1985          KK  RTRBRA
1986          KM        ROUTE FLOW FORM CPRB TO CPRA (ALONG VAN BUREN).
1987          KM        TYPE B CHANNEL
1988          RS       4              -1       0
1989          RC      .1     .02      .1    2440   .0001
1990          RX       0     470     476     480     520     524     530    1000
1991          RY     4.7       0       0       1       1       0       0     4.7
1                                          HEC-1 INPUT                                          PAGE 45

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


1992          KK   SUBRA
1993          KM   BASIN SUBRA
1994          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1995          KM    L=       .8  Lca=       .4   S=    9.2  Kn= .100  LAG=  58.3
1996          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
1997          BA     .24
1998          LG     .50     .00    4.70     .46     .00
1999          UI     15.     15.     24.     40.     70.     88.     91.    114.    126.    126.
2000          UI    126.    119.    105.    111.     94.     81.     79.     58.     50.     43.
2001          UI     45.     29.     25.     22.     19.     17.     14.     14.     10.      9.
2002          UI      9.      9.      6.      2.      2.      2.      2.      2.      2.      2.
2003          UI      2.      2.      2.      2.      2.      2.      2.      2.      2.      2.
2004          UI      2.      2.      0.      0.      0.      0.      0.      0.      0.      0.
2005          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

2006          KK    CPRA
2007          KM        ADD HYDROGRAPHS AT CPRA
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2008          HC       2

2009          KK   CPRA1
2010          KM        DIVERT FLOW FROM CPRA TO CPKA4
2011          DT   DIKA4
2012          DI       0      20      50      80     100     154     200
2013          DQ       0       3      25      58      77     129     174

2014          KK   CPRA2
2015          KM        DUMMY DIVERT TO ROUTE FLOW AS REQUIRED.
2016          DT   DIAFX
2017          DI       0      25      50      75     100     150     200
2018          DQ       0      25      50      75     100     150     200

2019          KK   CPOB2
2020          KM       RETURN DIVERT FROM CPRD
2021          DR    DIOB

2022          KK  RTDIOB
2023          KM        ROUTE FLOW FROM CPRD TO CPOB
2024          KM        TYPE B CHANNEL
2025          RS       9              -1       0
2026          RC      .1     .02      .1    5600   .0007
2027          RX       0     470     476     480     520     524     530    1000
2028          RY     4.7       0       0       1       1       0       0     4.7

2029          KK   CPOB3
2030          KM       ADD HYDROGRAPHS AT CPOB
2031          HC       4  13.554
              *

2032          KK    RSOB
2033          KM   MODIFIED PULS ROUTING THROUGH THE PONDING BEHIND SPRR.
2034          KO       1
2035          RS       1    STOR       0       0
2036          SV    13.2    16.6    26.8    40.1    56.6    76.3    98.9
2037          SE   990.8   991.0   991.5   992.0   992.5   993.0   993.5
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2038          SQ       0      50     100     500     750    1000
2039          SE   991.5  993.06  993.16  993.69   993.9  994.07
              *

2040          KK  RTOBLE
2041          KM        ROUTE FLOW FROM CPOB TO CPLE.
2042          KM        TYPE C CHANNEL
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2043          RS       4              -1       0
2044          RC    .035    .035    .035    2600   .0008
2045          RX       0      20      35      50    50.1     250     450     550
2046          RY       5       5     2.5       0       0       2       4       5

2047          KK   SUBLE
2048          KM   BASIN SUBLE
2049          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2050          KM    L=        .7  Lca=       .3   S=   14.7  Kn= .087  LAG=  43.1
2051          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
2052          BA     .25
2053          LG     .43     .05    4.80     .43    9.00
2054          UI     21.     26.     55.    109.    123.    161.    179.    179.    168.    152.
2055          UI    145.    117.     97.     75.     62.     53.     37.     30.     26.     19.
2056          UI     19.     12.     12.     12.      4.      3.      3.      3.      3.      3.
2057          UI      3.      3.      3.      3.      3.      3.      3.      3.      0.      0.
2058          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

2059          KK    CPLE
2060          KM        ADD HYDROGRAPHS AT CPLE
2061          HC       2

2062          KK    RSLE
2063          KM        MODIFIED PULS ROUTING BEHIND DITCH AND SPRR
2064          KO       1
2065          RS       1    STOR       0       0
2066          SV    16.7    18.4    20.2    22.0    24.5    27.7    31.1    34.9    38.9    43.3
2067          SE   991.4   991.5   991.6   991.7   991.8   991.9   992.0   992.1   992.2   992.3
2068          SQ       0     4.7    33.7    91.1   178.5   367.6   688.3  1135.1  1705.8  2391.4

2069          KK   CPLE1
2070          KM        DIVERT FLOW FROM CPLE1 TO SUBBASIN LD
2071          DT    DILD
2072          DI   178.5   367.6   688.3  1135.1  1705.8
2073          DQ       0    62.6   214.9   444.3   745.9

2074          KK  RTLEKD
2075          KM        ROUTE FLOW FROM CPLE TO CPKD (ALONG SPRR).
2076          KM        TYPE C CHANNEL
2077          RS       4              -1       0
2078          RC    .035    .035    .035    2600   .0008
2079          RX       0      20      35      50    50.1     250     450     550
2080          RY       5       5     2.5       0       0       2       4       5
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10
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2081          KK   SUBKD
2082          KM   BASIN SUBKD
2083          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2084          KM    L=      1.4  Lca=       .7   S=   12.9  Kn= .096  LAG=  85.3
2085          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
2086          BA     .72
2087          LG     .48      .02     4.90      .42     3.00
2088          UI     31.      31.      31.      45.      65.      96.     146.     180.     173.     187.
2089          UI    251.     222.     260.     260.     260.     260.     260.     220.     217.     234.
2090          UI    237.     163.     163.     184.     144.     119.     117.      93.      88.      94.
2091          UI     81.      59.      54.      50.      46.      38.      38.      34.      28.      28.
2092          UI     28.      22.      18.      18.      18.      18.      18.      14.       4.       4.
2093          UI      4.       4.       4.       4.       4.       4.       4.       4.       4.       4.
2094          UI      4.       4.       4.       4.       4.       4.       4.       4.       4.       4.
2095          UI      4.       4.       4.       4.       4.       4.       0.       0.       0.       0.
2096          UI      0.       0.       0.       0.       0.       0.       0.       0.       0.       0.

2097          KK    CPKD
2098          KM        ADD HYDROGRAPHS AT CPKD.
2099          HC       2
              *

2100          KK    RSKD
2101          KM        MODIFIED PULS ROUTING BEHIND 115TH AVE
2102          KO       1
2103          RS       1    STOR       0       0
2104          SV       3     3.4     3.8     4.2     4.8     5.7     6.8     8.1     9.5    11.0
2105          SE   985.9   986.0   986.1   986.2   986.3   986.4   986.5   986.6   986.7   986.8
2106          SQ       0      50     100     500     750    1000
2107          SE   985.9   986.5   986.6   987.0   987.1   987.3
              *

2108          KK  RTKDKA
2109          KM        ROUTE FLOW FROM CPKD TO CPKA (ALONG SPRR).
2110          KM        TYPE C CHANNEL
2111          RS      13              -1       0
2112          RC    .035    .035    .035    1320   .0020
2113          RX       0      20      35      50    50.1     250     450     550
2114          RY       5       5     2.5       0       0       2       4       5
              *

2115          KK   RSKA1
2116          KM        MODIFIED PULS ROUTING BEHIND 117TH AVE AND SPRR
2117          KO       1
2118          RS       1    STOR       0       0
2119          SV    27.8    34.8    42.6    61.0    77.2    89.1   101.5   121.4   156.7   178.9
2120          SE   984.2   984.4   984.6   985.0   985.3   985.5   985.7   986.0   986.5   986.8
2121          SQ     0.0     0.9     5.1    29.0    64.9    98.6   141.2   223.2   531.2  1106.9
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LINE                ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2122                KK   CPKA2
2123                KM        DIVERT FLOW FROM CPKA2 TO SUBBASIN LA
2124                DT    DILA
2125                DI   166.1   239.3   364.4   532.6   749.5
2126                DQ       0    45.9   141.1   277.2   454.8

2127                KK  RTKAKA
2128                KM        ROUTE FLOW FROM CPKA2 TO CPKA (ALONG SPRR).
2129                KM        TYPE C CHANNEL
2130                RS      13              -1       0
2131                RC    .035    .035    .035    6680   .0020
2132                RX       0      20      35      50    50.1     250     450     550
2133                RY       5       5     2.5       0       0       2       4       5

2134                KK   SUBKA
2135                KM   BASIN SUBKA
2136                KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2137                KM    L=      1.7  Lca=       .9   S=   19.5  Kn= .098  LAG=  94.0
2138                KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
2139                BA    1.38
2140                LG     .49     .02    4.80     .43    1.00
2141                UI     51.     51.     51.     54.    106.    119.    181.    266.    314.    268.
2142                UI    308.    415.    349.    425.    425.    425.    425.    425.    411.    355.
2143                UI    355.    381.    385.    286.    266.    284.    281.    206.    193.    181.
2144                UI    152.    142.    154.    140.     97.     93.     82.     82.     66.     63.
2145                UI     63.     52.     46.     46.     46.     41.     29.     29.     29.     29.
2146                UI     29.     29.     21.      6.      6.      6.      6.      6.      6.      6.
2147                UI      6.      6.      6.      6.      6.      6.      6.      6.      6.      6.
2148                UI      6.      6.      6.      6.      6.      6.      6.      6.      6.      6.
2149                UI      6.      6.      6.      6.      0.      0.      0.      0.      0.      0.
2150                UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

2151                KK   CPKA3
2152                KM        RETURN DIVERT FROM CPRB.
2153                DR   DIKA3

2154                KK  RTDIKA
2155                KM        ROUTE DIVERT FROM CPRB TO CPKA3
2156                KM        TYPE A CHANNEL
2157                RS      11              -1       0
2158                RC      .1      .1      .1    3800   .005
2159                RX       0     100     400     500   500.1     600     900    1000
```

```
2160          RY       5       4       1       0       0       1       4       5

2161          KK   CPKA4
2162          KM        RETURN DIVERT FROM CPRA.
2163          DR   DIKA4

2164          KK  RTDIKA
2165          KM        ROUTE DIVERT FROM CPRA TO CPKA4
2166          KM        TYPE A CHANNEL
2167          RS      11              -1       0
2168          RC      .1      .1      .1    3000    .005
2169          RX       0     100     400     500   500.1     600     900    1000
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2170          RY       5       4       1       0       0       1       4       5

2171          KK   CPKA5
2172          KM        ADD HYDROGRAPHS AT CPKA
2173          HC       4

2174          KK   CPKA6
2175          KM        DIVERT FLOW FROM CPKA TO CPKB
2176          DT    DIKB
2177          DI       0     350     420     490     560     630     679
2178          DQ       0       0      40     106     174     242     291
              * ***********************************************************************
              * ***********************************************************************
              * ***********************************************************************

2179          KK   SUBEC
2180          KM   BASIN SUBEC
2181          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2182          KM    L=       .9  Lca=       .5   S=   11.6  Kn= .107  LAG=  72.3
2183          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
2184          BA     .11
2185          LG     .21     .25    4.50     .51   20.00
2186          UI      6.      6.      6.     11.     16.     26.     33.     29.     39.     43.
2187          UI     47.     47.     47.     47.     42.     39.     42.     40.     29.     31.
2188          UI     29.     22.     21.     17.     16.     17.     11.     10.      9.      8.
2189          UI      7.      7.      5.      5.      5.      3.      3.      3.      3.      3.
2190          UI      2.      1.      1.      1.      1.      1.      1.      1.      1.      1.
2191          UI      1.      1.      1.      1.      1.      1.      1.      1.      1.      1.
2192          UI      1.      1.      1.      1.      0.      0.      0.      0.      0.      0.
2193          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

2194          KK   SUBAD
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```
2195        KM   BASIN SUBAD
2196        KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2197        KM    L=      1.1  Lca=       .5   S=   10.9  Kn= .103  LAG=  74.5
2198        KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
2199        BA     .46
2200        LG     .49     .03    5.20     .36     .00
2201        UI     22.     22.     22.     43.     58.     96.    127.    122.    141.    167.
2202        UI    182.    185.    185.    185.    182.    155.    155.    167.    139.    116.
2203        UI    130.     99.     84.     76.     64.     65.     62.     42.     38.     36.
2204        UI     29.     27.     26.     20.     20.     20.     14.     13.     13.     13.
2205        UI     13.     10.      3.      3.      3.      3.      3.      3.      3.      3.
2206        UI      3.      3.      3.      3.      3.      3.      3.      3.      3.      3.
2207        UI      3.      3.      3.      3.      3.      3.      0.      0.      0.      0.
2208        UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

2209        KK   SUBAC
2210        KM   BASIN SUBAC
2211        KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2212        KM    L=      1.1  Lca=       .6   S=   20.0  Kn= .112  LAG=  75.9
2213        KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
2214        BA     .46
2215        LG     .44     .05    5.30     .35    1.00
2216        UI     22.     22.     22.     42.     56.     93.    123.    128.    136.    173.
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2217        UI    173.    187.    187.    187.    187.    161.    155.    167.    154.    117.
2218        UI    123.    117.     87.     84.     67.     62.     70.     47.     41.     36.
2219        UI     34.     27.     27.     23.     20.     20.     19.     13.     13.     13.
2220        UI     13.     13.      8.      3.      3.      3.      3.      3.      3.      3.
2221        UI      3.      3.      3.      3.      3.      3.      3.      3.      3.      3.
2222        UI      3.      3.      3.      3.      3.      3.      3.      3.      0.      0.
2223        UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

2224        KK   SUBAB
2225        KM   BASIN SUBAB
2226        KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2227        KM    L=      1.1  Lca=       .5   S=   12.3  Kn= .100  LAG=  69.7
2228        KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
2229        BA     .46
2230        LG     .36     .12    5.60     .31    5.00
2231        UI     24.     24.     26.     51.     74.    121.    145.    136.    192.    180.
2232        UI    204.    204.    204.    202.    170.    170.    189.    139.    130.    137.
2233        UI     97.     93.     73.     68.     76.     46.     43.     39.     33.     30.
2234        UI     27.     22.     22.     21.     14.     14.     14.     14.     14.      3.
2235        UI      3.      3.      3.      3.      3.      3.      3.      3.      3.      3.
2236        UI      3.      3.      3.      3.      3.      3.      3.      3.      3.      3.
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2237          UI      3.      3.      0.      0.      0.      0.      0.      0.      0.      0.
2238          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

2239          KK   CPSR7
2240          KM        ADD HYDROGRAPHS AT SALT RIVER.
2241          HC       5

2242          KK   SUBOE
2243          KM   BASIN SUBOE
2244          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2245          KM    L=      1.1  Lca=       .6   S=   17.3  Kn= .082  LAG=  56.8
2246          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
2247          BA     .49
2248          LG     .43     .08    6.20     .23    6.00
2249          UI     32.     32.     53.     88.    155.    185.    202.    249.    266.    266.
2250          UI    266.    238.    222.    245.    166.    181.    138.    120.     93.     94.
2251          UI     74.     57.     51.     40.     39.     29.     29.     25.     18.     18.
2252          UI     18.     15.      4.      4.      4.      4.      4.      4.      4.      4.
2253          UI      4.      4.      4.      4.      4.      4.      4.      4.      4.      4.
2254          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
2255          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

2256          KK   CPOE1
2257          KM        RETURN DIVERT FROM CPPA.
2258          DR    DIOE

2259          KK  RTDIOE
2260          KM        ROUTE DIVERT FROM CPPA T0 CPOE
2261          KM        TYPE B CHANNEL
2262          RS       9              -1       0
2263          RC      .1     .02      .1    5600   .0013
2264          RX       0     470     476     480     520     524     530    1000
2265          RY     4.7       0       0       1       1       0       0     4.7
1                                          HEC-1 INPUT                                          PAGE 51

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


2266          KK   CPOE2
2267          KM        RETURN DIVERT FROM CPRH
2268          DR   DIOE2

2269          KK  RTDIOE
2270          KM        ROUTE DIVERT FROM CPRH T0 CPOE
2271          KM        TYPE B CHANNEL
2272          RS       4              -1       0
2273          RC      .1     .02      .1    2600   .0035
2274          RX       0     470     476     480     520     524     530    1000
```

```
2275          RY     4.7       0       0       1       1       0       0     4.7

2276          KK   CPOE3
2277          KM        RETURN DIVERT FROM CPRI
2278          DR   DIOE3

2279          KK  RTDIOE
2280          KM        ROUTE DIVERT FROM CPRI TO CPOE
2281          KM        TYPE B CHANNEL
2282          RS       5              -1       0
2283          RC      .1     .02      .1    3000   .0053
2284          RX       0     470     476     480     520     524     530    1000
2285          RY     4.7       0       0       1       1       0       0     4.7

2286          KK   CPOE4
2287          KM        ADD HYDROGRAPHS AT CPOE
2288          HC       4

2289          KK   CP0E5
2290          KM        DIVERT 17% OF FLOW FROM CPOE2 TO CPOD
2291          DT    DIOD
2292          DI       0      25      50      75     100     150     200
2293          DQ       0       4       9      12      17      26      34

2294          KK  RTOEMF
2295          KM        ROUTE FLOW FROM CPOE TO CPMF.
2296          KM        TYPE B CHANNEL
2297          RS       9              -1       0
2298          RC      .1     .02      .1    5200   .0021
2299          RX       0     470     476     480     520     524     530    1000
2300          RY     4.7       0       0       1       1       0       0     4.7

2301          KK   SUBMF
2302          KM   BASIN SUBMF
2303          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2304          KM    L=      1.4  Lca=       .7   S=   12.9  Kn= .100  LAG=  87.9
2305          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
2306          BA     .97
2307          LG     .50     .01    8.40     .10     .00
2308          UI     41.     41.     41.     54.     85.    116.    177.    219.    244.    224.
2309          UI    298.    302.    341.    341.    341.    341.    341.    317.    284.    284.
2310          UI    309.    282.    213.    219.    243.    168.    155.    147.    122.    114.
2311          UI    125.    103.     77.     70.     66.     61.     50.     50.     46.     37.
2312          UI     37.     37.     33.     23.     23.     23.     23.     23.     23.      9.
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10
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2313        UI      5.      5.      5.      5.      5.      5.      5.      5.      5.      5.
2314        UI      5.      5.      5.      5.      5.      5.      5.      5.      5.      5.
2315        UI      5.      5.      5.      5.      5.      5.      5.      5.      0.      0.
2316        UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

2317        KK    CPMF
2318        KM        RETURN ROUTING DIVERT FROM CPMD (DIMFX).
2319        DR   DIMFX
            *

2320        KK  RTMDMF
2321        KM        ROUTE FLOW FROM CPMD TO CPMF (ALONG LOWER BUCKEYE ROAD).
2322        KM        TYPE B CHANNEL
2323        RS       9              -1       0
2324        RC      .1     .02      .1    5200   .0015
2325        RX       0     470     476     480     520     524     530    1000
2326        RY     4.7       0       0       1       1       0       0     4.7
            *

2327        KK   CPMF1
2328        KM        ADD HYDROGRAPHS AT CPMF
2329        HC       3

2330        KK   CPMF2
2331        KM        DIVERT 47% OF FLOW AT CPMF TO CPEB.
2332        DT    DIEB
2333        DI       0      25      50      75     100     150     200
2334        DQ       0      12      23      35      47      71      94

2335        KK  RTMFMC
2336        KM        ROUTE FLOW FROM CPMF TO CPMC (ALONG LOWER BUCKEYE ROAD).
2337        KM        TYPE B CHANNEL
2338        RS       9              -1       0
2339        RC      .1     .02      .1    5200   .0015
2340        RX       0     470     476     480     520     524     530    1000
2341        RY     4.7       0       0       1       1       0       0     4.7

2342        KK   SUBOD
2343        KM   BASIN SUBOD
2344        KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2345        KM    L=      1.1  Lca=       .6   S=   18.2  Kn= .085  LAG=  58.3
2346        KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
2347        BA     .53
2348        LG     .41     .04    9.70     .07   10.00
2349        UI     33.     33.     54.     88.    157.    195.    202.    253.    280.    280.
2350        UI    280.    264.    233.    247.    209.    180.    175.    129.    112.     95.
2351        UI    100.     64.     55.     50.     41.     37.     30.     30.     23.     19.
2352        UI     19.     19.     14.      4.      4.      4.      4.      4.      4.      4.
```

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2353        UI      4.      4.      4.      4.      4.      4.      4.      4.      4.      4.
2354        UI      4.      4.      0.      0.      0.      0.      0.      0.      0.      0.
2355        UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
1                                                HEC-1 INPUT                                          PAGE 53

LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


2356        KK   CPOD1
2357        KM        RETURN DIVERT FROM CPOE.
2358        DR    DIOD

2359        KK  RTDIOD
2360        KM        ROUTE DIVERT FROM CPOE T0 CPOD
2361        KM        TYPE B CHANNEL
2362        RS       9              -1       0
2363        RC      .1     .02      .1    5200   .0013
2364        RX       0     470     476     480     520     524     530    1000
2365        RY     4.7       0       0       1       1       0       0     4.7

2366        KK   CPOD2
2367        KM        RETURN DIVERT FROM CPOG1
2368        DR   DIOD1

2369        KK  RTDIOD1
2370        KM        ROUTE DIVERT FROM CPOG1 T0 CPOD
2371        KM        TYPE A CHANNEL
2372        RS       4              -1       0
2373        RC    .025    .025    .025    2500   .0016
2374        RX       0     100     400     500   500.1     600     900    1000
2375        RY       5       4       1       0       0       1       4       5
2376        KM        TYPE B CHANNEL
2377        RS       9              -1       0
2378        RC      .1     .02      .1    5500   .0013
2379        RX       0     470     476     480     520     524     530    1000
2380        RY     4.7       0       0       1       1       0       0     4.7

2381        KK   CPOD3
2382        KM        RETURN DIVERT FROM CPOG2.
2383        DR   DIOD2

2384        KK   CPOD4
2385        KM        ADD HYDROGRAPHS AT CPOD.
2386        HC       4   31.55

2387        KK   CPOD5
2388        KM        DIVERT 18% OF FLOW FROM CPOD TO CPOC.
2389        DT    DIOC
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2390          DI       0      25      50      75     100     150     200
2391          DQ       0       5       9      14      18      27      36

2392          KK  RTODMC
2393          KM        ROUTE FLOW FROM CPOD TO CPMC.
2394          KM        TYPE B CHANNEL
2395          RS       9              -1       0
2396          RC      .1     .02      .1    5200   .0023
2397          RX       0     470     476     480     520     524     530    1000
2398          RY     4.7       0       0       1       1       0       0     4.7
1                                          HEC-1 INPUT                                                    PAGE 54

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


2399          KK   SUBMC
2400          KM   BASIN SUBMC
2401          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2402          KM    L=      1.4  Lca=       .7   S=   13.6  Kn= .094  LAG=  81.8
2403          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
2404          BA    1.00
2405          LG     .47     .01    8.80     .09    5.00
2406          UI     45.     45.     45.     73.     94.    153.    232.    275.    236.    302.
2407          UI    343.    373.    378.    378.    378.    378.    338.    315.    327.    347.
2408          UI    254.    236.    265.    210.    173.    166.    135.    126.    141.    103.
2409          UI     86.     74.     73.     59.     56.     55.     41.     41.     41.     37.
2410          UI     26.     26.     26.     26.     26.     22.      6.      6.      6.      6.
2411          UI      6.      6.      6.      6.      6.      6.      6.      6.      6.      6.
2412          UI      6.      6.      6.      6.      6.      6.      6.      6.      6.      6.
2413          UI      6.      6.      6.      0.      0.      0.      0.      0.      0.      0.
2414          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

2415          KK   CPMC1
2416          KM        ADD HYDROGRAPHS AT CPMC
2417          HC       3

2418          KK   CPMC2
2419          KM        DIVERT 39% OF FLOW AT CPMC TO CPMB.
2420          DT    DIMB
2421          DI       0      25      50      75     100     150     200
2422          DQ       0       8      20      29      39      59      78

2423          KK  RTMCIE
2424          KM        ROUTE FLOW FROM CPMC TO CPIE (ALONG 99TH AVENUE).
2425          KM        TYPE B CHANNEL
2426          RS       3              -1       0
2427          RC      .1     .02      .1    2000   .0030
2428          RX       0     470     476     480     520     524     530    1000
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2429          RY     4.7       0       0       1       1       0       0     4.7

2430          KK   SUBEB
2431          KM   SUB-BASIN SUBEB
2432          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2433          KM    L=        .5  Lca=        .3   S=   11.3  Kn= .100  LAG=  42.8
2434          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
2435          BA     .14
2436          LG     .50     .00    6.20     .25     .00
2437          UI     12.     15.     31.     62.     69.     91.    101.    101.     93.     86.
2438          UI     79.     67.     52.     41.     35.     28.     20.     17.     14.     11.
2439          UI     10.      7.      7.      7.      1.      1.      1.      1.      1.      1.
2440          UI      1.      1.      1.      1.      1.      1.      1.      1.      0.      0.
2441          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

2442          KK   CPEB1
2443          KM        RETURN DIVERT FROM CPMF TO CPEB
2444          DR    DIEB
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


2445          KK   CPEB2
2446          KM        ADD HYDROGRAPHS AT CPEB
2447          HC       2

2448          KK  RTEBIE
2449          KM        ROUTE FLOW FROM CPEB TO CPIE.
2450          KM        TYPE B CHANNEL
2451          RS       3              -1       0
2452          RC      .1     .02      .1    5280   .0025
2453          RX       0     470     476     480     520     524     530    1000
2454          RY     4.7       0       0       1       1       0       0     4.7

2455          KK   SUBIE
2456          KM   BASIN SUBIE
2457          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2458          KM    L=        .8  Lca=        .4   S=    6.0  Kn= .100  LAG=  68.6
2459          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
2460          BA     .30
2461          LG     .50     .00    8.80     .09     .00
2462          UI     14.     14.     16.     30.     45.     73.     85.     82.    110.    110.
2463          UI    119.    119.    119.    114.     99.    104.    105.     75.     78.     73.
2464          UI     55.     50.     42.     42.     38.     27.     23.     22.     18.     18.
2465          UI     14.     13.     13.     10.      8.      8.      8.      8.      4.      2.
2466          UI      2.      2.      2.      2.      2.      2.      2.      2.      2.      2.
2467          UI      2.      2.      2.      2.      2.      2.      2.      2.      2.      2.
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2468          UI      2.      0.      0.      0.      0.      0.      0.      0.      0.      0.
2469          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

2470          KK    CPIE
2471          KM        ADD HYDROGRAPHS AT CPIE
2472          HC       3

2473          KK  RTIEIB
2474          KM        ROUTE FLOW FROM CPIE TO CPIB.
2475          KM        TYPE B CHANNEL
2476          RS       8              -1       0
2477          RC      .1     .02      .1    5000   .0020
2478          RX       0     470     476     480     520     524     530    1000
2479          RY     4.7       0       0       1       1       0       0     4.7

2480          KK   SUBOC
2481          KM   BASIN SUBOC
2482          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2483          KM    L=       .8  Lca=       .4   S=   13.2  Kn= .051  LAG=  29.9
2484          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
2485          BA     .31
2486          LG     .33     .13    8.80     .07   20.00
2487          UI     39.     79.    202.    258.    323.    325.    279.    238.    192.    130.
2488          UI    105.     67.     50.     37.     29.     22.     18.      5.      5.      5.
2489          UI      5.      5.      5.      5.      5.      5.      0.      0.      0.      0.
2490          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
```



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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


2491          KK   CPOC1
2492          KM        RETURN DIVERT FROM CPOD.
2493          DR    DIOC

2494          KK  RTDIOC
2495          KM        ROUTE DIVERT FROM CPOD TO CPOC
2496          KM        TYPE B CHANNEL
2497          RS       7              -1       0
2498          RC      .1     .02      .1    4000   .0010
2499          RX       0     470     476     480     520     524     530    1000
2500          RY     4.7       0       0       1       1       0       0     4.7

2501          KK   CPOC2
2502          KM        ADD HYDROGRAPHS AT CPOC
2503          HC       2

2504          KK  RTOCMB
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2505          KM        ROUTE FLOW FROM CPOC TO CPMB.
2506          KM        TYPE B CHANNEL
2507          RS       9              -1       0
2508          RC      .1      .02      .1    5200   .0038
2509          RX       0      470     476     480     520     524     530    1000
2510          RY     4.7        0       0       1       1       0       0     4.7

2511          KK   SUBMB
2512          KM   BASIN SUBMB
2513          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2514          KM    L=      1.4  Lca=       .7   S=   17.6  Kn= .100  LAG=  81.1
2515          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
2516          BA     .99
2517          LG     .50      .01    8.40     .10     .00
2518          UI     45.      45.     45.     74.     94.    156.    236.    274.    236.    308.
2519          UI    344.     378.    378.    378.    378.    378.    329.    315.    337.    340.
2520          UI    236.     239.    270.    189.    172.    158.    133.    126.    145.     88.
2521          UI     83.      73.     71.     56.     56.     51.     41.     41.     41.     32.
2522          UI     26.      26.     26.     26.     26.     14.      6.      6.      6.      6.
2523          UI      6.       6.      6.      6.      6.      6.      6.      6.      6.      6.
2524          UI      6.       6.      6.      6.      6.      6.      6.      6.      6.      6.
2525          UI      6.       6.      0.      0.      0.      0.      0.      0.      0.      0.
2526          UI      0.       0.      0.      0.      0.      0.      0.      0.      0.      0.

2527          KK    CPMB
2528          KM        RETURN DIVERT FROM CPMC.
2529          DR    DIMB

2530          KK  RTDIMB
2531          KM        ROUTE DIVERT FROM CPMC TO CPMB
2532          KM        TYPE B CHANNEL
2533          RS       9              -1       0
2534          RC      .1      .02      .1    5200   .0023
2535          RX       0      470     476     480     520     524     530    1000
2536          RY     4.7        0       0       1       1       0       0     4.7
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


2537          KK   CPMB1
2538          KM        ADD HYDROGRAPHS AT CPMB.
2539          HC       3

2540          KK  RTMBIB
2541          KM        ROUTE FLOW FROM CPMB TO CPIB (ALONG 107TH AVENUE).
2542          KM        TYPE B CHANNEL
2543          RS       4              -1       0
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```
2544          RC      .1      .02       .1     2600    .0015
2545          RX       0      470      476      480      520      524      530     1000
2546          RY     4.7        0        0        1        1        0        0      4.7

2547          KK   SUBIB
2548          KM   BASIN SUBIB
2549          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2550          KM    L=      1.1  Lca=       .6   S=   14.2  Kn= .100  LAG=  73.6
2551          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
2552          BA     .46
2553          LG     .50     .00    8.40     .11     .00
2554          UI     23.     23.     23.     46.     63.    104.    137.    125.    153.    177.
2555          UI    195.    195.    195.    195.    186.    163.    165.    181.    130.    124.
2556          UI    136.     94.     89.     75.     66.     71.     55.     44.     38.     37.
2557          UI     29.     29.     24.     21.     21.     19.     13.     13.     13.     13.
2558          UI     13.      5.      3.      3.      3.      3.      3.      3.      3.      3.
2559          UI      3.      3.      3.      3.      3.      3.      3.      3.      3.      3.
2560          UI      3.      3.      3.      3.      3.      0.      0.      0.      0.      0.
2561          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

2562          KK    CPIB
2563          KM        ADD HYDROGRAPHS AT CPIB.
2564          HC       3

2565          KK  RTIBIA
2566          KM        ROUTE FLOW FROM CPIB TO CPIA (ALONG 107TH AVENUE).
2567          KM        TYPE B CHANNEL
2568          RS       1              -1       0
2569          RC      .1      .02       .1     500    .0120
2570          RX       0      470      476      480      520      524      530     1000
2571          RY     4.7        0        0        1        1        0        0      4.7

2572          KK   SUBME
2573          KM   BASIN SUBME
2574          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2575          KM    L=      1.0  Lca=       .4   S=   20.6  Kn= .090  LAG=  54.3
2576          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
2577          BA     .32
2578          LG     .43     .05    4.70     .45    6.00
2579          UI     22.     22.     39.     66.    119.    123.    166.    167.    184.    184.
2580          UI    180.    154.    162.    137.    119.    110.     84.     68.     64.     55.
2581          UI     40.     35.     27.     26.     20.     20.     15.     12.     12.     12.
2582          UI      7.      3.      3.      3.      3.      3.      3.      3.      3.      3.
2583          UI      3.      3.      3.      3.      3.      3.      3.      3.      0.      0.
2584          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10
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KK  RTMEIA
KM        ROUTE FLOW FROM CPME TO CPIA (ALONG 107TH AVENUE).
KM        TYPE B CAHNNEL
RS       6              -1       0
RC      .1     .02      .1    3400   .0034
RX       0     470     476     480     520     524     530    1000
RY     4.7       0       0       1       1       0       0     4.7

KK   SUBIA
KM   BASIN SUBIA
KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
KM    L=       .8  Lca=       .4   S=   17.1  Kn= .085  LAG=  44.5
KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
BA     .31
LG     .41     .08    6.20     .23    5.00
UI     26.     30.     63.    123.    149.    190.    217.    218.    214.    182.
UI    195.    136.    138.    100.     77.     77.     49.     42.     33.     29.
UI     24.     20.     15.     15.     14.      3.      3.      3.      3.      3.
UI      3.      3.      3.      3.      3.      3.      3.      3.      3.      0.
UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

KK    CPIA
KM        ADD HYDROGRAPHS AT CPIA.
HC       3

KK  RTIAHB
KM        ROUTE FLOW FROM CPIA TO CPHB.
KM        TYPE C CHANNEL
RS       4              -1       0
RC    .035    .035    .035    2600   .0058
RX       0      20      35      50    50.1     250     450     550
RY       5       5     2.5       0       0       2       4       5

KK   SUBLD
KM   BASIN SUBLD
KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
KM    L=       .8  Lca=       .4   S=   13.3  Kn= .052  LAG=  30.7
KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
BA     .28
LG     .18     .24    4.80     .37   29.00
UI     34.     66.    174.    226.    276.    288.    246.    228.    181.    123.
UI    102.     62.     48.     37.     30.     19.     19.      7.      4.      4.
UI      4.      4.      4.      4.      4.      4.      4.      0.      0.      0.
UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

KK    CPLD
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2627          KM        RETURN DIVERT FROM CPLE.
2628          DR    DILD

2629          KK  RTDILD
2630          KM        ROUTE DIVERT FROM CPLE TO CPLD
2631          KM        TYPE A CHANNEL
2632          RS       4              -1       0
2633          RC    .025    .025    .025    2500   .0016
2634          RX       0     100     400     500   500.1     600     900    1000
2635          RY       5       4       1       0       0       1       4       5

2636          KK    CPLD1
2637          KM        ADD HYDROGRAPHS AT CPLD.
2638          HC       2    14.1

2639          KK  RTLDMA
2640          KM        ROUTE FLOW FROM CPLD TO CPMA
2641          KM        TYPE A CHANNEL
2642          RS       4              -1       0
2643          RC    .025    .025    .025    2600   .0035
2644          RX       0     100     400     500   500.1     600     900    1000
2645          RY       5       4       1       0       0       1       4       5

2646          KK   SUBMA
2647          KM   BASIN SUBMA
2648          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2649          KM    L=       .7  Lca=       .3   S=   14.7  Kn= .100  LAG=  49.5
2650          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
2651          BA     .25
2652          LG     .50     .00    4.55     .52     .00
2653          UI     18.     18.     37.     74.    107.    112.    144.    155.    155.    153.
2654          UI    129.    138.    107.    106.     77.     65.     53.     52.     34.     30.
2655          UI     24.     22.     17.     17.     11.     10.     10.      8.      2.      2.
2656          UI      2.      2.      2.      2.      2.      2.      2.      2.      2.      2.
2657          UI      2.      2.      2.      2.      0.      0.      0.      0.      0.      0.
2658          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

2659          KK    CPMA
2660          KM        ADD HYDROGRAPHS AT CPMA
2661          HC       2

2662          KK  RTMAHB
2663          KM        ROUTE FLOW FROM CPMA TO CPHB (ALONG 115TH AVENUE).
2664          KM        TYPE B CHANNEL
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```
2665        RS       6              -1       0
2666        RC      .1      .02      .1    3700   .0071
2667        RX       0      470     476     480     520     524     530    1000
2668        RY     4.7        0       0       1       1       0       0     4.7

2669        KK   SUBHB
2670        KM   BASIN SUBHB
2671        KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2672        KM    L=        .8  Lca=        .4   S=   25.0  Kn= .090  LAG=  45.2
2673        KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
2674        BA     .34
2675        LG     .44     .05    4.80     .43    3.00
2676        UI     28.     31.     66.    128.    158.    202.    225.    232.    232.    195.
1                                         HEC-1 INPUT                                                    PAGE 60

LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2677        UI    206.    155.    153.    108.     89.     82.     59.     46.     38.     33.
2678        UI     25.     25.     16.     16.     16.      7.      3.      3.      3.      3.
2679        UI      3.      3.      3.      3.      3.      3.      3.      3.      3.      3.
2680        UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
2681        UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

2682        KK    CPHB
2683        KM        ADD HYDROGRAPHS AT CPHB.
2684        HC       3

2685        KK  RTHBDA
2686        KM        ROUTE FLOW FROM CPHB TO CPDA (ALONG 115TH AVENUE).
2687        KM        TYPE B CHANNEL
2688        RS       2              -1       0
2689        RC      .1      .02      .1    1200   .0100
2690        RX       0      470     476     480     520     524     530    1000
2691        RY     4.7        0       0       1       1       0       0     4.7

2692        KK   SUBED
2693        KM   BASIN SUBED
2694        KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2695        KM    L=       1.2  Lca=        .6   S=    9.4  Kn= .100  LAG=  84.3
2696        KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
2697        BA     .48
2698        LG     .50     .00    5.70     .30     .00
2699        UI     21.     21.     21.     31.     44.     66.    101.    125.    113.    130.
2700        UI    166.    156.    175.    175.    175.    175.    171.    146.    146.    158.
2701        UI    149.    110.    112.    124.     86.     80.     74.     62.     58.     67.
2702        UI     45.     40.     34.     34.     28.     26.     26.     20.     19.     19.
2703        UI     19.     12.     12.     12.     12.     12.     12.      5.      3.      3.
2704        UI      3.      3.      3.      3.      3.      3.      3.      3.      3.      3.
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2705        UI      3.      3.      3.      3.      3.      3.      3.      3.      3.      3.
2706        UI      3.      3.      3.      3.      3.      0.      0.      0.      0.      0.
2707        UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

2708        KK  RTEDID
2709        KM        ROUTE FLOW FROM CPED TO CPID (SHEET FLOW).
2710        KM        TYPE A CHANNEL
2711        RS       9              -1       0
2712        RC      .1     .02      .1    5600   .0004
2713        RX       0     470     476     480     520     524     530    1000
2714        RY     4.7       0       0       1       1       0       0     4.7

2715        KK   SUBID
2716        KM   BASIN SUBID
2717        KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2718        KM    L=      1.0  Lca=       .4   S=    7.1  Kn= .100  LAG=  68.2
2719        KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
2720        BA     .56
2721        LG     .49     .05    6.00     .25     .00
2722        UI     30.     30.     35.     63.     96.    156.    180.    178.    232.    239.
2723        UI    254.    254.    254.    239.    212.    225.    215.    159.    170.    149.
2724        UI    116.    104.     88.     91.     74.     57.     49.     45.     37.     37.
2725        UI     28.     28.     28.     19.     17.     17.     17.     17.      6.      4.
2726        UI      4.      4.      4.      4.      4.      4.      4.      4.      4.      4.
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2727        UI      4.      4.      4.      4.      4.      4.      4.      4.      4.      4.
2728        UI      4.      0.      0.      0.      0.      0.      0.      0.      0.      0.
2729        UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

2730        KK    CPID
2731        KM        ADD HYDROGRAPHS AT CPIE.
2732        HC       2

2733        KK  RTIDIC
2734        KM        ROUTE FLOW FROM CPID TO CPIC
2735        KM        TYPE A CHANNEL
2736        RS      10              -1       0
2737        RC    .035    .035    .035    6000   .0015
2738        RX       0     100     400     500   500.1     600     900    1000
2739        RY       5       4       1       0       0       1       4       5

2740        KK   SUBIC
2741        KM   BASIN SUBIC
2742        KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2743        KM    L=      1.1  Lca=       .5   S=    4.7  Kn= .100  LAG=  86.2
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2744          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
2745          BA     .53
2746          LG     .50      .05     5.30      .33      .00
2747          UI     23.      23.      23.      32.      48.      69.     104.     129.     130.     133.
2748          UI    184.     160.     191.     191.     191.     191.     191.     167.     159.     165.
2749          UI    174.     134.     119.     130.     117.      90.      87.      73.      66.      66.
2750          UI     69.      43.      42.      37.      37.      28.      28.      28.      21.      21.
2751          UI     21.      20.      13.      13.      13.      13.      13.      13.       6.       3.
2752          UI      3.       3.       3.       3.       3.       3.       3.       3.       3.       3.
2753          UI      3.       3.       3.       3.       3.       3.       3.       3.       3.       3.
2754          UI      3.       3.       3.       3.       3.       3.       3.       0.       0.       0.
2755          UI      0.       0.       0.       0.       0.       0.       0.       0.       0.       0.

2756          KK    CPIC
2757          KM        C0M?.? : ADD HYDROGRAPHS AT CPIC
2758          HC       2

2759          KK  RTICDA
2760          KM        ROUTE FLOW FROM CPIC TO CPDA (ALONG BROADWAY RD).
2761          KM        TYPE B CHANNEL
2762          RS       9              -1       0
2763          RC      .1      .02      .1    5200   .0054
2764          RX       0      470     476     480     520     524     530    1000
2765          RY     4.7        0       0       1       1       0       0     4.7

2766          KK   SUBDA
2767          KM   BASIN SUBDA
2768          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2769          KM    L=      1.0  Lca=       .6   S=   17.6  Kn= .076  LAG=  51.6
2770          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
2771          BA     .33
2772          LG     .41      .11     6.80      .17     3.00
2773          UI     24.      24.      45.      83.     137.     133.     175.     198.     198.     198.
2774          UI    176.     169.     165.     125.     127.      92.      77.      68.      60.      42.
2775          UI     38.      29.      27.      22.      22.      14.      13.      13.      12.       3.
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2776          UI      3.       3.       3.       3.       3.       3.       3.       3.       3.       3.
2777          UI      3.       3.       3.       3.       3.       3.       0.       0.       0.       0.
2778          UI      0.       0.       0.       0.       0.       0.       0.       0.       0.       0.

2779          KK    CPDA
2780          KM        ADD HYDROGRAPHS AT CPDA.
2781          HC       3

2782          KK  RTDACC
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2783          KM        ROUTE FLOW FROM CPDA TO CPCC.
2784          KM        TYPE B CHANNEL
2785          RS      9              -1       0
2786          RC     .1     .02      .1    5400   .0006
2787          RX      0     550     626     630     670     674     680    1050
2788          RY    5.5       0       0       1       1       0       0     5.5

2789          KK   SUBEE
2790          KM   BASIN SUBEE
2791          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2792          KM    L=      1.6  Lca=      1.0   S=   16.0  Kn= .076  LAG=  78.2
2793          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
2794          BA    1.4                                                                B
2795          LG     .39     .13    5.10     .34   13.00
2796          UI     67.     67.     67.    121.    156.    261.    354.    409.    383.    544.
2797          UI    479.    566.    566.    566.    566.    532.    472.    473.    522.    404.
2798          UI    354.    396.    311.    257.    242.    200.    189.    217.    129.    123.
2799          UI    109.    103.     83.     83.     70.     62.     62.     62.     38.     38.
2800          UI     38.     38.     38.     32.      8.      8.      8.      8.      8.      8.
2801          UI      8.      8.      8.      8.      8.      8.      8.      8.      8.      8.
2802          UI      8.      8.      8.      8.      8.      8.      8.      8.      8.      8.
2803          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
2804          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

2805          KK   CPEE1
2806          KM        RETURN DIVERT FROM CPJB
2807          DR    DIEE

2808          KK  RTDIEE
2809          KM        ROUTE DIVERT FROM CPJB TO CPEE
2810          KM        TYPE A CHANNEL
2811          RS     14              -1       0
2812          RC     .1     .02      .1    8500   .0015
2813          RX      0     100     400     500   500.1     600     900    1000
2814          RY      5       4       1       0       0       1       4       5

2815          KK    CPEC
2816          KM        ADD HYDROGRAPHS AT CPEC
2817          HC      2

2818          KK  RTEEEA
2819          KM        ROUTE FLOW FROM CPEE TO CPEA
2820          KM        TYPE A CHANNEL
2821          RS      9              -1       0
2822          RC   .035    .035    .035    5300   .0030
2823          RX      0     100     400     500   500.1     600     900    1000
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2824          RY       5       4       1       0       0       1       4       5

2825          KK   SUBEA
2826          KM   BASIN SUBEA
2827          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2828          KM    L=      1.5  Lca=       .8   S=   21.3  Kn= .098  LAG=  86.9
2829          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
2830          BA    1.30
2831          LG     .50     .02    5.30     .34     .00
2832          UI     55.     55.     55.     76.    116.    163.    247.    306.    322.    315.
2833          UI    428.    396.    462.    462.    462.    462.    462.    415.    385.    386.
2834          UI    422.    354.    289.    306.    303.    222.    210.    186.    162.    155.
2835          UI    178.    113.    105.     89.     89.     74.     68.     68.     54.     50.
2836          UI     50.     50.     36.     31.     31.     31.     31.     31.     23.      7.
2837          UI      7.      7.      7.      7.      7.      7.      7.      7.      7.      7.
2838          UI      7.      7.      7.      7.      7.      7.      7.      7.      7.      7.
2839          UI      7.      7.      7.      7.      7.      7.      7.      0.      0.      0.
2840          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

2841          KK    CPEA
2842          KM        ADD HYDROGRAPHS AT CPEA
2843          HC       2

2844          KK  RTEADC
2845          KM        TYPE B CHANNEL
2846          RS       9              -1       0
2847          RC      .1     .02      .1    5300   .0013
2848          RX       0     470     476     480     520     524     530    1000
2849          RY     4.7       0       0       1       1       0       0     4.7

2850          KK   SUBDC
2851          KM   BASIN SUBDC
2852          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2853          KM    L=      1.4  Lca=       .4   S=   22.1  Kn= .095  LAG=  63.7
2854          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
2855          BA     .84
2856          LG     .47     .04    6.00     .26    1.00
2857          UI     48.     48.     66.    105.    194.    277.    264.    345.    371.    407.
2858          UI    407.    407.    389.    339.    361.    333.    254.    283.    207.    185.
2859          UI    150.    136.    144.     93.     81.     76.     60.     60.     45.     44.
2860          UI     44.     28.     28.     28.     28.     20.      6.      6.      6.      6.
2861          UI      6.      6.      6.      6.      6.      6.      6.      6.      6.      6.
2862          UI      6.      6.      6.      6.      6.      6.      6.      0.      0.      0.
2863          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

2864          KK    CPDC
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2865          KM        ADD HYDROIGRAPHS AT CPDC
2866          HC       2

2867          KK  RTDCCC
2868          KM        ROUTE FLOW FROM CPDC TO CPCC.
2869          KM        TYPE B CHANNEL
2870          RS       9              -1       0
2871          RC      .1     .02      .1    5200   .0015
2872          RX       0     470     476     480     520     524     530    1000
1                                          HEC-1 INPUT                                                    PAGE 64

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2873          RY     4.7       0       0       1       1       0       0     4.7

2874          KK   SUBDD
2875          KM   BASIN SUBDD
2876          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2877          KM    L=       .5  Lca=       .3   S=   28.3  Kn= .100  LAG=  36.4
2878          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
2879          BA     .13
2880          LG     .50     .06    4.65     .43     .00
2881          UI     13.     19.     47.     72.     92.    107.    107.     94.     95.     68.
2882          UI     60.     44.     38.     24.     20.     16.     12.     10.      7.      7.
2883          UI      4.      2.      2.      2.      2.      2.      2.      2.      2.      2.
2884          UI      2.      2.      0.      0.      0.      0.      0.      0.      0.      0.
2885          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

2886          KK  RTDDCC
2887          KM        ROUTE FLOW FROM CPDD TO CPCC (ALONG 107TH AVENUE).
2888          KM        TYPE A CAHNNEL
2889          RS      10              -1       0
2890          RC    .035    .035    .035    5700   .0040
2891          RX       0     100     400     500   500.1     600     900    1000
2892          RY       5       4       1       0       0       1       4       5

2893          KK   SUBCC
2894          KM   BASIN SUBCC
2895          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2896          KM    L=      1.4  Lca=       .7   S=   22.8  Kn= .073  LAG=  56.3
2897          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
2898          BA     .98
2899          LG     .38     .14    6.20     .21    5.00
2900          UI     64.     64.    109.    181.    318.    375.    419.    506.    539.    539.
2901          UI    539.    473.    454.    478.    337.    374.    259.    234.    187.    196.
2902          UI    136.    111.    100.     79.     75.     59.     59.     44.     36.     36.
2903          UI     36.     23.      8.      8.      8.      8.      8.      8.      8.      8.
2904          UI      8.      8.      8.      8.      8.      8.      8.      8.      8.      8.
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2905          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
2906          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

2907          KK    CPCC
2908          KM        ADD HYDROGRAPHS AT CPCC
2909          HC       4

2910          KK  RTCCCB
2911          KM        ROUTE FLOW FROM CPCC TO CPCB.
2912          KM        TYPE B CHANNEL
2913          RS      10              -1       0
2914          RC      .1     .02      .1    5700   .0018
2915          RX       0     470     476     480     520     524     530    1000
2916          RY     4.7       0       0       1       1       0       0     4.7
1                                          HEC-1 INPUT                                                    PAGE 65

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


2917          KK   SUBLB
2918          KM   BASIN SUBLB
2919          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2920          KM    L=       .7  Lca=       .3   S=    8.8  Kn= .100  LAG=  54.6
2921          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
2922          BA     .25
2923          LG     .50     .00    4.60     .49     .00
2924          UI     17.     17.     30.     50.     90.     95.    127.    126.    141.    141.
2925          UI    139.    118.    124.    107.     91.     87.     65.     54.     48.     44.
2926          UI     31.     27.     22.     21.     15.     15.     13.     10.     10.     10.
2927          UI      6.      2.      2.      2.      2.      2.      2.      2.      2.      2.
2928          UI      2.      2.      2.      2.      2.      2.      2.      2.      0.      0.
2929          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

2930          KK  RTLBHA
2931          KM        ROUTE FLOW FROM CPLB TO CPHA (SHEET FLOW).
2932          KM        TYPE A CHANNEL
2933          RS       7              -1       0
2934          RC      .1      .1      .1    4000   .0065
2935          RX       0     100     400     500   500.1     600     900    1000
2936          RY       5       4       1       0       0       1       4       5

2937          KK   SUBHA
2938          KM   BASIN SUBHA
2939          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2940          KM    L=       .8  Lca=       .4   S=   33.8  Kn= .091  LAG=  42.7
2941          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
2942          BA     .22
2943          LG     .47     .03    4.80     .44    4.00
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2944          UI     36.     44.     94.    189.    210.    275.    303.    303.    280.    262.
2945          UI    234.    201.    155.    123.    106.     83.     61.     49.     42.     33.
2946          UI     30.     20.     20.     19.      5.      5.      5.      5.      5.      5.
2947          UI      5.      5.      5.      5.      5.      5.      5.      5.      0.      0.
2948          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

2949          KK    CPHA
2950          KM        ADD HYDROGRAPHS AT CPHA
2951          HC       2

2952          KK  RTHAGD
2953          KM        ROUTE FLOW FROM CPHA TO CPGD (SHEET FLOW).
2954          KM        TYPE A CHANNEL
2955          RS       8              -1       0
2956          RC      .1      .1      .1    4800   .0029
2957          RX       0     100     400     500   500.1     600     900    1000
2958          RY       5       4       1       0       0       1       4       5

2959          KK   SUBKC
2960          KM   BASIN SUBKC
2961          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2962          KM    L=        .8  Lca=       .4   S=   26.3  Kn= .100  LAG=  50.1
2963          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
2964          BA     .26
2965          LG     .50     .01    4.60     .49     .00
```



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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2966          UI     38.     38.     76.    148.    222.    227.    295.    322.    322.    322.
2967          UI    270.    282.    237.    213.    174.    141.    111.    116.     73.     62.
2968          UI     52.     47.     36.     35.     26.     22.     22.     22.      6.      5.
2969          UI      5.      5.      5.      5.      5.      5.      5.      5.      5.      5.
2970          UI      5.      5.      5.      5.      0.      0.      0.      0.      0.      0.
2971          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

2972          KK  RTKCGD
2973          KM        ROUTE FLOW FROM CPKC TO CPGD (ALONG EL MARAGE RD).
2974          KM        ASSUM NEGLIGIBLE CHANNEL TRANSMISSION LOSS.
2975          KM        TYPE B CHANNEL
2976          RS       9              -1       0
2977          RC      .1     .02      .1    5600   .0043
2978          RX       0     470     476     480     520     524     530    1000
2979          RY     4.7       0       0       1       1       0       0     4.7

2980          KK   SUBGD
2981          KM   BASIN SUBGD
2982          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
```

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2983        KM    L=      1.1  Lca=       .6   S=   33.3  Kn= .093  LAG=  58.4
2984        KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
2985        BA     .77
2986        LG     .49     .04    7.30     .15     .00
2987        UI     48.     48.     78.    127.    227.    284.    293.    367.    407.    407.
2988        UI    407.    385.    339.    359.    305.    261.    256.    188.    163.    138.
2989        UI    147.     92.     81.     73.     60.     55.     44.     44.     34.     27.
2990        UI     27.     27.     21.      6.      6.      6.      6.      6.      6.      6.
2991        UI      6.      6.      6.      6.      6.      6.      6.      6.      6.      6.
2992        UI      6.      6.      0.      0.      0.      0.      0.      0.      0.      0.
2993        UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

2994        KK   SUBGC
2995        KM   BASIN SUBGC
2996        KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2997        KM    L=       .8  Lca=       .4   S=   26.5  Kn= .054  LAG=  28.0
2998        KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
2999        BA     .21
3000        LG     .25     .26    4.80     .34   14.00
3001        UI     28.     64.    153.    205.    237.    221.    203.    155.    107.     84.
3002        UI     52.     39.     29.     22.     16.     12.      4.      4.      4.      4.
3003        UI      4.      4.      4.      4.      4.      0.      0.      0.      0.      0.
3004        UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

3005        KK  RTGCGD
3006        KM        ROUTE FLOW FROM CPGC TO CPGD (ALONG EL MIRAGE ROAD).
3007        KM        TYPE B CHANNEL
3008        RS       4              -1       0
3009        RC      .1     .02      .1    2400   .0017
3010        RX       0     470     476     480     520     524     530    1000
3011        RY     4.7       0       0       1       1       0       0     4.7
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

3012        KK    CPGD
3013        KM        ADD HYDROGRAPHS AT CPGD.
3014        HC       4

3015        KK  RTGDCB
3016        KM        ROUTE FLOW FROM CPGD TO CPCB (EL MIRAGE ROAD).
3017        KM        TYPE B CHANNEL
3018        RS       7              -1       0
3019        RC      .1     .02      .1    4200   .0010
3020        RX       0     470     476     480     520     524     530    1000
3021        RY     4.7       0       0       1       1       0       0     4.7
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3022          KK   SUBCB
3023          KM   BASIN SUBCB
3024          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
3025          KM    L=      1.2  Lca=       .5   S=   11.1  Kn= .097  LAG=  71.6
3026          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
3027          BA     .74
3028          LG     .49     .01    9.70     .07    1.00
3029          UI     38.     38.     38.     80.    110.    180.    229.    200.    282.    287.
3030          UI    320.    320.    320.    320.    284.    267.    286.    260.    200.    217.
3031          UI    185.    146.    134.    112.    112.    105.     73.     64.     62.     48.
3032          UI     47.     41.     35.     35.     32.     22.     22.     22.     22.     22.
3033          UI      6.      5.      5.      5.      5.      5.      5.      5.      5.      5.
3034          UI      5.      5.      5.      5.      5.      5.      5.      5.      5.      5.
3035          UI      5.      5.      5.      5.      0.      0.      0.      0.      0.      0.
3036          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

3037          KK    CPCB
3038          KM        ADD HYDROGRAPHS AT CPCB
3039          HC       3

3040          KK  RTCBCA
3041          KM        ROUTE FLOW FROM CPCB TO CPCA.
3042          KM        TYPE B CHANNEL
3043          RS       9              -1       0
3044          RC      .1     .02      .1    5400   .0007
3045          RX       0     470     476     480     520     524     530    1000
3046          RY       6       0       0       1       1       0       0       6

3047          KK   SUBGB
3048          KM   BASIN SUBGB
3049          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
3050          KM    L=       .8  Lca=       .6   S=   36.1  Kn= .056  LAG=  30.7
3051          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
3052          BA     .23
3053          LG     .30     .21    4.60     .40   11.00
3054          UI     28.     54.    143.    185.    226.    236.    202.    187.    148.    101.
3055          UI     84.     51.     40.     30.     25.     16.     16.      6.      4.      4.
3056          UI      4.      4.      4.      4.      4.      4.      4.      0.      0.      0.
3057          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
```



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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

3058          KK  RTGBCA
3059          KM        ROUTE FLOW FROM CPGB TO CPCA.
3060          KM        TYPE B CHANNEL
3061          RS       9              -1       0
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```
RC      .1     .02      .1    5600   .0021
RX       0     470     476     480     520     524     530    1000
RY     4.7       0       0       1       1       0       0     4.7

KK   SUBCA
KM   BASIN SUBCA
KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
KM    L=      1.4  Lca=       .6   S=    6.4  Kn= .098  LAG=  91.0
KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
BA     .97
LG     .49     .00    8.80     .09     .00
UI     39.     39.     39.     47.     83.    103.    157.    207.    245.    207.
UI    263.    313.    305.    332.    332.    332.    332.    332.    287.    276.
UI    280.    301.    255.    207.    217.    229.    162.    151.    143.    118.
UI    111.    121.    106.     75.     70.     64.     63.     49.     49.     49.
UI     37.     36.     36.     36.     25.     22.     22.     22.     22.     22.
UI     22.      5.      5.      5.      5.      5.      5.      5.      5.      5.
UI      5.      5.      5.      5.      5.      5.      5.      5.      5.      5.
UI      5.      5.      5.      5.      5.      5.      5.      5.      5.      5.
UI      5.      0.      0.      0.      0.      0.      0.      0.      0.      0.
UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

KK    CPCA
KM        ADD HYDROGRAPHS AT CPCA
HC       3

KK  RTCABC
KM        ROUTE FLOW FROM CPCA TO CPBC (SHEET FLOW).
KM        TYPE A CHANNEL
RS       4              -1       0
RC      .1      .1      .1    2400   .0033
RX       0     100     400     500   500.1     600     900    1000
RY       5       4       1       0       0       1       4       5

KK   SUBBC
KM   BASIN SUBBC
KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
KM    L=      1.7  Lca=       .8   S=   11.5  Kn= .099  LAG=  99.7
KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
BA     .61
LG     .47     .07    5.10     .36     .00
UI     23.     23.     23.     23.     43.     48.     73.    104.    120.    141.
UI    119.    152.    185.    165.    190.    190.    190.    190.    190.    188.
UI    158.    158.    161.    172.    155.    119.    120.    135.    109.     89.
UI     86.     77.     67.     63.     69.     64.     43.     42.     37.     37.
UI     32.     28.     28.     27.     21.     21.     21.     21.     16.     13.
UI     13.     13.     13.     13.     13.     11.      3.      3.      3.      3.
UI      3.      3.      3.      3.      3.      3.      3.      3.      3.      3.
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3106          UI      3.      3.      3.      3.      3.      3.      3.      3.      3.      3.
3107          UI      3.      3.      3.      3.      3.      3.      3.      3.      3.      0.
1                                          HEC-1 INPUT                                          PAGE 69

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

3108          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
3109          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

3110          KK    CPBC
3111          KM        ADD HYDROGRAPHS AT CPBC
3112          HC       2

3113          KK    CDUM
3114          KM        ADD HYDROGRAPHS AT AF3 (AGUA FRIA RIVER)
3115          HC       3

3116          KK   SUBLC
3117          KM   BASIN SUBLC
3118          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
3119          KM    L=       .3  Lca=       .2   S=    6.7  Kn= .098  LAG=  33.8
3120          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
3121          BA     .10
3122          LG     .49     .01    4.80     .44    1.00
3123          UI     11.     18.     47.     67.     87.     93.     90.     81.     67.     57.
3124          UI     40.     33.     22.     17.     13.     10.      8.      6.      6.      1.
3125          UI      1.      1.      1.      1.      1.      1.      1.      1.      1.      1.
3126          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
3127          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

3128          KK  RTLCLA
3129          KM        ROUTE FLOW FROM CPLC TO CPLA.
3130          KM        TYPE B CHANNEL
3131          RS       5              -1       0
3132          RC      .1     .02      .1    3200   .0044
3133          RX       0     470     476     480     520     524     530    1000
3134          RY     4.7       0       0       1       1       0       0     4.7

3135          KK   SUBLA
3136          KM   BASIN SUBLA
3137          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
3138          KM    L=      1.1  Lca=       .6   S=   12.3  Kn= .096  LAG=  72.8
3139          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
3140          BA     .50
3141          LG     .48     .02    4.70     .46    3.00
3142          UI     26.     26.     26.     52.     71.    117.    154.    134.    172.    198.
3143          UI    215.    215.    215.    215.    199.    179.    188.    192.    134.    139.
3144          UI    140.    102.     98.     77.     72.     81.     51.     46.     41.     37.
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3145        UI     32.     32.     24.     23.     23.     18.     15.     15.     15.     15.
3146        UI     12.      3.      3.      3.      3.      3.      3.      3.      3.      3.
3147        UI      3.      3.      3.      3.      3.      3.      3.      3.      3.      3.
3148        UI      3.      3.      3.      3.      3.      0.      0.      0.      0.      0.
3149        UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

3150        KK    CPLA
3151        KM        RETURN DIVERT FROM CPKA.
3152        DR    DILA
```



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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

3153        KK  RTDILA
3154        KM        ROUTE DIVERT FROM CPKA TO CPLA
3155        KM        TYPE A CHANNEL
3156        RS       4              -1       0
3157        RC    .025    .025    .025    2500   .0016
3158        RX       0     100     400     500   500.1     600     900    1000
3159        RY       5       4       1       0       0       1       4       5

3160        KK    CPLA
3161        KM        ADD HYDROGRAPHS AT CPLA
3162        HC       3

3163        KK  RTLAKB
3164        KM        ROUTE FLOW FROM CPLA TO CPKB.
3165        KM        TYPE B CHANNEL
3166        RS       4              -1       0
3167        RC      .1     .02      .1    2400   .0071
3168        RX       0     470     476     480     520     524     530    1000
3169        RY     4.7       0       0       1       1       0       0     4.7

3170        KK   SUBKB
3171        KM   BASIN SUBKB
3172        KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
3173        KM    L=       .9  Lca=       .3   S=   23.2  Kn= .095  LAG=  46.7
3174        KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
3175        BA     .42
3176        LG     .46     .09    5.00     .36    3.00
3177        UI     33.     35.     75.    148.    190.    240.    254.    279.    279.    248.
3178        UI    243.    213.    182.    153.    120.     96.     93.     61.     53.     41.
3179        UI     36.     30.     27.     19.     19.     19.      6.      4.      4.      4.
3180        UI      4.      4.      4.      4.      4.      4.      4.      4.      4.      4.
3181        UI      4.      0.      0.      0.      0.      0.      0.      0.      0.      0.
3182        UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
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3183          KK    CPKB
3184          KM        RETURN DIVERT FROM CPKA.
3185          DR    DIKB

3186          KK  RTDIKB
3187          KM        ROUTE DIVERT FROM CPKA TO CPKB
3188          KM        TYPE A CHANNEL
3189          RS      11              -1       0
3190          RC      .1      .1      .1    4000   .005
3191          RX       0     100     400     500   500.1     600     900    1000
3192          RY       5       4       1       0       0       1       4       5

3193          KK   CPKB1
3194          KM        ADD HYDROGRAPHS AT CPKB1.
3195          HC       3
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


3196          KK   SUBGA
3197          KM   BASIN SUBGA
3198          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
3199          KM    L=       .6  Lca=       .3   S=   52.6  Kn= .035  LAG=  11.7
3200          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
3201          BA     .14
3202          LG     .27     .30    4.55     .36    8.00
3203          UI     96.    320.    328.    184.     83.     38.     16.      6.      6.      6.
3204          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
3205          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

3206          KK    CDUM
3207          KM        ADD HYDROGRAPHS AT AUGUA FRIA
3208          HC       3

3209          KK   SUBBB
3210          KM   BASIN SUBBB
3211          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
3212          KM    L=      1.0  Lca=       .5   S=    7.8  Kn= .083  LAG=  62.2
3213          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
3214          BA     .25
3215          LG     .46     .07    7.60     .13     .00
3216          UI     15.     15.     21.     33.     61.     86.     77.    114.    108.    122.
3217          UI    122.    122.    111.    102.    108.     90.     78.     79.     57.     51.
3218          UI     42.     44.     33.     26.     23.     19.     18.     15.     13.     13.
3219          UI      9.      8.      8.      8.      7.      2.      2.      2.      2.      2.
3220          UI      2.      2.      2.      2.      2.      2.      2.      2.      2.      2.
3221          UI      2.      2.      2.      2.      2.      0.      0.      0.      0.      0.
```

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3222        UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

3223        KK  RTBBBA
3224        KM        ROUTE FLOW FROM CPBB TO CPBA (ALONG SOUTHERN AVENUE).
3225        KM        TYPE B CHANNEL
3226        RS       9              -1       0
3227        RC      .1     .02      .1    5200   .0023
3228        RX       0     470     476     480     520     524     530    1000
3229        RY     4.7       0       0       1       1       0       0     4.7

3230        KK   SUBBA
3231        KM   BASIN SUBBA
3232        KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
3233        KM    L=      1.5  Lca=       .7   S=    8.1  Kn= .082  LAG=  82.1
3234        KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
3235        BA     .34
3236        LG     .39     .10    5.10     .35    5.00
3237        UI     15.     15.     15.     25.     33.     52.     79.     95.     81.    103.
3238        UI    119.    127.    130.    130.    130.    130.    118.    108.    111.    119.
3239        UI     91.     81.     90.     75.     60.     58.     46.     44.     48.     38.
3240        UI     30.     26.     25.     21.     19.     19.     15.     14.     14.     14.
3241        UI      9.      9.      9.      9.      9.      9.      2.      2.      2.      2.
3242        UI      2.      2.      2.      2.      2.      2.      2.      2.      2.      2.
3243        UI      2.      2.      2.      2.      2.      2.      2.      2.      2.      2.
3244        UI      2.      2.      2.      0.      0.      0.      0.      0.      0.      0.
3245        UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


3246        KK    CPBA
3247        KM        ADD HYDROGRAPHS AT CPBA
3248        HC       2

3249        KK  RTBAAA
3250        KM        ROUTE FLOW FROM CPBA TO CPAA.
3251        KM         TYPE A CHANNEL
3252        RS       5              -1       0
3253        RC      .1      .1      .1    3000   .0013
3254        RX       0     100     400     500   500.1     600     900    1000
3255        RY       5       4       1       0       0       1       4       5
3256        KM   BASIN SUBAA
3257        KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
3258        KM    L=      1.9  Lca=      1.3   S=    9.0  Kn= .099  LAG= 130.0
3259        KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
3260        BA     .50
3261        LG     .45     .07    4.70     .44     .00
```

```
3262          UI     14.     14.     14.     14.     14.     22.     30.     30.     48.     59.
3263          UI     74.     81.     86.     74.     85.     98.    119.    100.    118.    118.
3264          UI    118.    118.    118.    118.    118.    118.     98.     98.     98.    100.
3265          UI    109.    111.     74.     74.     74.     81.     85.     59.     55.     54.
3266          UI     54.     43.     42.     39.     40.     45.     37.     27.     27.     24.
3267          UI     23.     23.     22.     17.     17.     17.     17.     14.     13.     13.
3268          UI     13.     13.     13.      9.      8.      8.      8.      8.      8.      8.
3269          UI      8.      8.      7.      2.      2.      2.      2.      2.      2.      2.
3270          UI      2.      2.      2.      2.      2.      2.      2.      2.      2.      2.
3271          UI      2.      2.      2.      2.      2.      2.      2.      2.      2.      2.
3272          UI      2.      2.      2.      2.      2.      2.      2.      2.      2.      2.
3273          UI      2.      2.      2.      2.      2.      2.      0.      0.      0.      0.
3274          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

3275          KK    CPAA
3276          KM        ADD HYDROGRAPHS AT CPAA.
3277          HC       2
              * ******************************************************************************
              * ******************************************************************************
              * ******************************************************************************
              * changes made to file
              * 01.09.99   Backwater rating curves added.
              * 03.17.99   Minor edits of File KM records incorporated.
              *
3278          ZZ
```

1

1

SCHEMATIC DIAGRAM OF STREAM NETWORK

```
INPUT
LINE      (V) ROUTING          (--->) DIVERSION OR PUMP FLOW

 NO.      (.) CONNECTOR        (<---) RETURN OF DIVERTED OR PUMPED FLOW

  57       SUBWD
               V
               V
  69      RTWDXA
               .
               .
  76           .        SUBXA
               .            .
               .            .
  87       CPXA1............
               V
               V
  90        RSXA
               .
               .
  99           .-------->   DIZZ1
  97       CPZZ1
               V
               V
 102      RTXAWC
               .
               .
 109           .        SUBWB
               .            V
               .            V
 121           .       RTWBWC
               .            .
               .            .
 128           .            .        SUBWC
               .            .            .
               .            .            .
 140        CPWC........................
               V
               V
 143        RSWC
               .
               .
 152           .-------->    DIQE
 150       CPWC2
               V
               V
 155      RTWCWA
               .
               .
 162           .        SUBVD
               .            V
               .            V
 174           .       RTVDWA
               .            .
               .            .
 181           .            .        SUBWA
               .            .            .
               .            .            .
 191        CPWA........................
               V
               V
 194        RSWA
               .
               .
 203           .-------->    DIQD
 201       CPWA2
               V
               V
 206      RTWAVC
               .
               .
 213           .        SUBVB
               .            V
               .            V
 226           .       RTVBVC
               .            .
```

```
                .           .
233             .           .       SUBVC
                .           .           .
                .           .           .
244         CPVC.......................
               V
               V
247         RSVC
                .
                .
256             .------->    DIVA
254        CPVC2
               V
               V
259       RTVCQA
                .
                .
266             .       SUBQA
                .           .
                .           .
279        CPQA2............
               V
               V
282         RSQA
                .
                .
292             .------->    DIPF
290         DIPF
               V
               V
295       RTQAJF
                .
                .
302             .       SUBQE
                .           .
                .           .
316             .           .           .<-------    DIQE
314             .           .       CPQE
                .           .          V
                .           .          V
317             .           .     RTDIQE
                .           .           .
                .           .           .
324             .       CPQE2............
                .           V
                .           V
327             .        RSQE
                .           V
                .           V
334             .      RTQEQC
                .           .
                .           .
341             .           .      SUBQD
                .           .           .
                .           .           .
353             .           .           .           .<-------    DIQD
351             .           .           .        CPQD
                .           .           .           V
                .           .           .           V
354             .           .           .      RTDIQD
                .           .           .           .
                .           .           .           .
361             .           .      CPQD1............
                .           .           V
                .           .           V
364             .           .       RSQD
                .           .           .
                .           .           .
373             .           .           .------->    DIQB
371             .           .      CPQD2
                .           .           V
                .           .           V
376             .           .     RTQDQC
                .           .           .
                .           .           .
383             .           .           .       SUBQC
                .           .           .           .
                .           .           .           .
```

```
395          .        CPQC.......................
             .           .
             .           .
400          .           .-------->    DISR
398          .       CPQC2
             .          V
             .          V
403          .      RTQCJF
             .           .
             .           .
410          .           .       SUBJF
             .           .           .
             .           .           .
429          .       CPJF1............
             .           .
             .           .
432          .           .       SUBQB
             .           .           .
             .           .           .
446          .           .           .<-------    DIQB
444          .           .        CPQB
             .           .           V
             .           .           V
447          .           .      RTDIQB
             .           .           .
             .           .           .
454          .           .       CPQB1............
             .           .           V
             .           .           V
457          .           .        RSQB
             .           .           V
             .           .           V
465          .           .      RTQBJF
             .           .           .
             .           .           .
472          .           .           .       SUBPF
             .           .           .           .
             .           .           .           .
485          .           .           .           .           .<-------    DIPF
483          .           .           .           .        CPPF
             .           .           .           .           V
             .           .           .           .           V
486          .           .           .           .      RTDIPF
             .           .           .           .           .
             .           .           .           .           .
493          .           .           .       CPPF1............
             .           .           .           V
             .           .           .           V
496          .           .           .        RSPF
             .           .           .           .
             .           .           .           .
505          .           .           .           .-------->    DIPE
503          .           .           .       CPPF2
             .           .           .           V
             .           .           .           V
508          .           .           .      RTPFJF
             .           .           .           .
             .           .           .           .
515          .           .           .           .       SUBPE
             .           .           .           .           .
             .           .           .           .           .
528          .           .           .           .           .           .<-------    DIPE
526          .           .           .           .           .        CPPE
             .           .           .           .           .           .
             .           .           .           .           .           .
535          .           .           .           .       CPPE2............
             .           .           .           .           V
             .           .           .           .           V
538          .           .           .           .        RSPE
             .           .           .           .           .
             .           .           .           .           .
547          .           .           .           .           .-------->    DIPD
545          .           .           .           .       CPPE3
             .           .           .           .           V
             .           .           .           .           V
550          .           .           .           .      RTPEJF
             .           .           .           .           .
             .           .           .           .           .
```

```
557          .       CPJF2.................................
             .           .
             .           .
560          .           .      SUBPC
             .           .         V
             .           .         V
571          .           .       RSPC
             .           .         V
             .           .         V
578          .           .     RTPCNB
             .           .         .
             .           .         .
585          .           .         .       SUBNB
             .           .         .           .
             .           .         .           .
598          .           .      CPNB1............
             .           .         .
             .           .         .
603          .           .         .-------->    DINA
601          .           .      CPNB2
             .           .         V
             .           .         V
606          .           .     RTNBJD
             .           .         .
             .           .         .
613          .           .         .       SUBJD
             .           .         .           .
             .           .         .           .
628          .           .       CPJD............
             .           .         .
             .           .         .
633          .           .         .-------->    DIJC
631          .           .      CPJD1
             .           .         V
             .           .         V
636          .           .     RTJDFC
             .           .         .
             .           .         .
643          .           .         .       SUBPD
             .           .         .           .
             .           .         .           .
658          .           .         .           .           .<-------    DIPD
656          .           .         .           .        CPPD
             .           .         .           .           .
             .           .         .           .           .
659          .           .         .       CPPD2............
             .           .         .           V
             .           .         .           V
662          .           .         .        RSPD
             .           .         .           V
             .           .         .           V
669          .           .         .      RTPDNC
             .           .         .           .
             .           .         .           .
676          .           .         .           .       SUBNC
             .           .         .           .           .
             .           .         .           .           .
688          .           .         .        CPNC............
             .           .         .           V
             .           .         .           V
691          .           .         .      RTNCJE
             .           .         .           .
             .           .         .           .
698          .           .         .           .       SUBJE
             .           .         .           .           .
             .           .         .           .           .
712          .           .         .        CPJE............
             .           .         .           V
             .           .         .           V
715          .           .         .      RTJEFC
             .           .         .           .
             .           .         .           .
722          .           .         .           .       SUBFC
             .           .         .           .           .
             .           .         .           .           .
736          .           .       CPFC........................
             .           .         .
             .           .         .
```

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739          .        CPFC1............
             .           .
             .           .
742          .           .       SUBUD
             .           .           .
             .           .           .
757          .           .           .-------->    DIUA
755          .           .        CPUD
             .           .           V
             .           .           V
760          .           .      RTUDVA
             .           .           .
             .           .           .
767          .           .           .       SUBVA
             .           .           .           .
             .           .           .           .
780          .           .           .           .           .<-------    DIVA
778          .           .           .           .        CPVA
             .           .           .           .           V
             .           .           .           .           V
781          .           .           .           .      RTDIVA
             .           .           .           .           .
             .           .           .           .           .
788          .           .       CPVA2........................
             .           .           V
             .           .           V
791          .           .        RSVA
             .           .           V
             .           .           V
798          .           .      RTVAUC
             .           .           .
             .           .           .
805          .           .           .       SUBUA
             .           .           .           .
             .           .           .           .
819          .           .           .           .           .<-------    DIUA
817          .           .           .           .        CPUA
             .           .           .           .           V
             .           .           .           .           V
820          .           .           .           .      RTDIUA
             .           .           .           .           .
             .           .           .           .           .
827          .           .           .       CPUA1............
             .           .           .           .
             .           .           .           .
832          .           .           .           .-------->    DITB
830          .           .           .       CPUA2
             .           .           .           V
             .           .           .           V
835          .           .           .      RTUAUC
             .           .           .           .
             .           .           .           .
842          .           .           .           .       SUBUC
             .           .           .           .           .
             .           .           .           .           .
853          .           .        CPUC........................
             .           .           V
             .           .           V
856          .           .        RSUC
             .           .           V
             .           .           V
863          .           .      RTUCUB
             .           .           .
             .           .           .
870          .           .           .       SUBUB
             .           .           .           .
             .           .           .           .
881          .           .        CPUB............
             .           .           V
             .           .           V
884          .           .        RSUB
             .           .           .
             .           .           .
893          .           .           .-------->    DIUE
891          .           .       CPUB1
             .           .           V
             .           .           V
896          .           .      RTUBSF
```

```
903                 SUBTB
                      .
                      .
920                   .            .<-------    DITB
918                   .         CPTB
                      .           V
                      .           V
921                   .       RTDITB
                      .           .
                      .           .
928                 CPTB1............
                      .
                      .
933                   .-------->    DITA
931                 CPTB2
                      V
                      V
936               RTTBSF
                      .
                      .
943                   .        SUBSF
                      .           .
                      .           .
957           CPSF1.......................
                V
                V
960           RSSF
                .
                .
969           .------->   DIRJ1
967           CPSF2
                V
                V
972         RTSFSH
                .
                .
979           SUBSH
                .
                .
991           CPSH............
                V
                V
994           RSSH
                .
                .
1004          .------->   DIRJ2
1002          CPSH1
                V
                V
1007        RTSHSG
                .
                .
1014          SUBTA
                .
                .
1030                  .<-------    DITA
1028                  .         CPTA
                      .           V
                      .           V
1031                  .       RTDITA
                      .           .
                      .           .
1038          CPTA1............
                V
                V
1041              RTTASG
                      .
                      .
1048                  .        SUBSG
                      .           .
                      .           .
1060          CPSG........................
                V
                V
1063          RSSG
                .
```

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1072                .-------> DIRJ4
1070            CPSG1
                    V
                    V
1075            RTSGSE
                    .
                    .
1082                .       SUBSC
                    .           .
                    .           .
1099                .           .-------> DISD
1097                .        CPSC
                    .           V
                    .           V
1102                .      RTSCSE
                    .           .
                    .           .
1109                .           .       SUBSE
                    .           .           .
                    .           .           .
1119            CPSE.......................
                    V
                    V
1122            RSSE
                    .
                    .
1131                .-------> DIRJ5
1129            CPSE2
                    V
                    V
1134            RTSERI
                    .
                    .
1141                .       SUBRJ
                    .           .
                    .           .
1154                .           .           .<-------   DIRJ1
1152                .           .       CPRJ1
                    .           .           V
                    .           .           V
1155                .           .      RTSFRJ
                    .           .           .
                    .           .           .
1164                .           .           .           .<-------   DIRJ2
1162                .           .           .       CPRJ2
                    .           .           .           V
                    .           .           .           V
1165                .           .           .      RTSHRJ
                    .           .           .           .
                    .           .           .           .
1172                .           .       CPRJ3............
                    .           .           V
                    .           .           V
1175                .           .      RTRJ3
                    .           .           .
                    .           .           .
1184                .           .           .           .<-------   DIRJ4
1182                .           .           .      CPRJ4A
                    .           .           .           .
                    .           .           .           .
1185                .           .      CPRJ4B............
                    .           .           V
                    .           .           V
1188                .           .      RTSGRJ
                    .           .           .
                    .           .           .
1197                .           .           .           .<-------   DIRJ5
1195                .           .           .       CPRJ5
                    .           .           .           V
                    .           .           .           V
1198                .           .           .      RTSERJ
                    .           .           .           .
                    .           .           .           .
1205                .       CPRJ6........................
                    .           V
                    .           V
1208                .        RSRJ
```

```
1218                    .-------> DIPA2
1216                CPRJ7
                        V
                        V
1221               RTRJRI

1231                    .-------> DIOE3
1228                CPRI1
                        V
                        V
1234                RTRI

1241                        SUBUE

1253                                .<-------    DIUE
1251                                      CPUE

1254                        CPUE2............
                                V
                                V
1257                         RSUE
                                V
                                V
1264                       RTUEPB

1271                                     SUBPB

1283                        CPPB1............

1288                                .-------> DIPA
1286                        CPPB2
                                V
                                V
1291                       RTPBNA

1298                                     SUBNA

1316                                                .<-------    DINA
1314                                           CPNA1
                                                   V
                                                   V
1317                                          RTDINA

1324                        CPNA2........................
                                V
                                V
1327                       RTNAJC

1334                                     SUBJC

1351                                                .<-------    DIJC
1349                                           CPJC1
                                                   V
                                                   V
1352                                          RTDIJC

1359                        CPJC2........................

1364                                .-------> DIJB
1362                        CPJC3
                                V
                                V
```

```
1367                                  RTJCFB
                                         .
                                         .
1374                                     .       SUBFB
                                         .          .
                                         .          .
1388                                     .     CPFB...........
                                         .
                                         .
1394                                     .-------> DISRX
1391                                  CPFB1
                                         .
                                         .
1397                                     .       SUBPA
                                         .          .
                                         .          .
1412                                     .          .          .<-------    DIPA
1410                                     .          .       CPPA
                                         .          .          V
                                         .          .          V
1413                                     .          .     RTDIPA
                                         .          .          .
                                         .          .          .
1422                                     .          .          .           .<-------
DIPA2
1420                                     .          .          .      CPPA2
                                         .          .          .          V
                                         .          .          .          V
1423                                     .          .          .     RTRJPA
                                         .          .          .          .
                                         .          .          .          .
1430                                     .       CPPA3.......................
                                         .          .
                                         .          .
1435                                     .          .-------> DIOE
1433                                     .       CPPA
                                         .          V
                                         .          V
1438                                     .     RTPAMD
                                         .          .
                                         .          .
1445                                     .          .       SUBMD
                                         .          .          .
                                         .          .          .
1461                                     .       CPMD...........
                                         .          .
                                         .          .
1466                                     .          .-------> DIJB1
1464                                     .       CPMD1
                                         .          .
                                         .          .
1472                                     .          .-------> DIMFX
1469                                     .       CPMD2
                                         .          .
                                         .          .
1475                                  CPMD3...........
                                         .
                                         .
1478                                     .       SUBMG
                                         .          V
                                         .          V
1491                                     .     RTMGJB
                                         .          .
                                         .          .
1498                                     .          .       SUBJB
                                         .          .          .
                                         .          .          .
1514                                     .       CPJB...........
                                         .          .
                                         .          .
1519                                     .          .          .<-------    DIJB
1517                                     .          .       CPJB1
                                         .          .          V
                                         .          .          V
1520                                     .          .     RTDIJB
                                         .          .          .
                                         .          .          .
1529                                     .          .          .           .<-------
```

```
DIJB1
  1527          .         .         .         .         .         .         .         .         CPJB2
                .         .         .         .         .         .         .                     V
                .         .         .         .         .         .         .                     V
  1530          .         .         .         .         .         .         .         .       RDIJB1
                .         .         .         .         .         .         .         .           .
                .         .         .         .         .         .         .         .           .
  1537          .         .         .         .         .      CPJB3.......................
                .         .         .         .         .         .
                .         .         .         .         .         .
  1542          .         .         .         .         .         .-------->    DIEE
  1540          .         .         .         .         .      CPJB4
                .         .         .         .         .         V
                .         .         .         .         .         V
  1545          .         .         .         .         .     RTJBFA
                .         .         .         .         .         .
                .         .         .         .         .         .
  1552          .         .         .         .         .         .       SUBFA
                .         .         .         .         .         .           .
                .         .         .         .         .         .           .
  1574          .         .         .         .         .       CPFA............
                .         .         .         .         .         .
                .         .         .         .         .         .
  1580          .         .         .         .         .         .-------->  DISRX2
  1577          .         .         .         .         .      CPFA1
                .         .         .         .         .         .
                .         .         .         .         .         .
  1583          .         .         .      CPRI3.......................
                .         .         .         .
                .         .         .         .
  1586          .         .         .         .      SUBRI
                .         .         .         .         .
                .         .         .         .         .
  1597          .         .         .         .         .      SUBSB
                .         .         .         .         .         V
                .         .         .         .         .         V
  1609          .         .         .         .         .       RSSB
                .         .         .         .         .         .
                .         .         .         .         .         .
  1616          .         .         .         .         .         .       SUBSD
                .         .         .         .         .         .           .
                .         .         .         .         .         .           .
  1631          .         .         .         .         .         .           .           .<-------
DISD
  1629          .         .         .         .         .         .         .         CPSD1
                .         .         .         .         .         .         .           .
                .         .         .         .         .         .         .           .
  1632          .         .         .         .         .      CPSD2.......................
                .         .         .         .         .         V
                .         .         .         .         .         V
  1636          .         .         .         .         .       RSSD
                .         .         .         .         .         V
                .         .         .         .         .         V
  1643          .         .         .         .         .     RTSDRI
                .         .         .         .         .         .
                .         .         .         .         .         .
  1650          .         .      CPRI5.................................
                .         .         V
                .         .         V
  1653          .         .       RSRI
                .         .         V
                .         .         V
  1660          .         .     RTRIRH
                .         .         .
                .         .         .
  1667          .         .         .      SUBSA
                .         .         .         .
                .         .         .         .
  1680          .         .         .         .-------->    DIRF
  1678          .         .         .       CPSA
                .         .         .          V
                .         .         .          V
  1683          .         .         .     RTSARH
                .         .         .         .
                .         .         .         .
  1690          .         .         .         .      SUBRH
                .         .         .         .         .
                .         .         .         .         .
```

```
1703          .          .        CPRH.......................
              .          .           V
              .          .           V
1706          .          .        RSRH
              .          .           .
              .          .           .
1715          .          .           .-------->   DIOE2
1714          .          .      CPRH2
              .          .           V
              .          .           V
1719          .          .     RTRHOG
              .          .           .
              .          .           .
1727          .          .           .-------->   DIOD1
1726          .          .      CPOG1
              .          .           V
              .          .           V
1730          .          .     RTOG1
              .          .           .
              .          .           .
1737          .          .           .       SUBRG
              .          .           .           V
              .          .           .           V
1749          .          .           .      RTRGRF
              .          .           .           .
              .          .           .           .
1756          .          .           .           .       SUBRF
              .          .           .           .           .
              .          .           .           .           .
1772          .          .           .           .           .           .<-------    DIRF
1770          .          .           .           .           .        CPRF
              .          .           .           .           .           V
              .          .           .           .           .           V
1773          .          .           .           .           .      RTDIRF
              .          .           .           .           .           .
              .          .           .           .           .           .
1780          .          .           .       CPRF1.......................
              .          .           .           .
              .          .           .           .
1785          .          .           .           .-------->    DIRE
1783          .          .           .       CPRF2
              .          .           .           V
              .          .           .           V
1788          .          .           .      RTRFOG
              .          .           .           .
              .          .           .           .
1795          .          .           .           .       SUBOG
              .          .           .           .           .
              .          .           .           .           .
1808          .          .        CPOG.......................
              .          .           V
              .          .           V
1811          .          .        RSOG
              .          .           .
              .          .           .
1820          .          .           .-------->   DIOD2
1818          .          .      CPOG2
              .          .           V
              .          .           V
1823          .          .     RTOGOF
              .          .           .
              .          .           .
1830          .          .           .       SUBOF
              .          .           .           .
              .          .           .           .
1842          .          .           .           .       SUBRE
              .          .           .           .           .
              .          .           .           .           .
1859          .          .           .           .           .           .<-------    DIRE
1857          .          .           .           .           .        CPRE
              .          .           .           .           .           V
              .          .           .           .           .           V
1860          .          .           .           .           .      RTDIRE
              .          .           .           .           .           .
              .          .           .           .           .           .
1867          .          .           .           .       CPRE1............
              .          .           .           .           V
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1870          .          .          .          .      RTREOF
              .          .          .          .          .
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1877          .          .      CPOF1.......................
              .          .          V
              .          .          V
1880          .          .       RSOF
              .          .          V
              .          .          V
1888          .          .     RTOFOB
              .          .          .
              .          .          .
1895          .          .          .       SUBOB
              .          .          .          .
              .          .          .          .
1910          .          .          .          .      SUBRD
              .          .          .          .          .
              .          .          .          .          .
1927          .          .          .          .          .-------->    DIOB
1925          .          .          .          .       CPRD
              .          .          .          .          V
              .          .          .          .          V
1930          .          .          .          .     RTRDRC
              .          .          .          .          .
              .          .          .          .          .
1937          .          .          .          .          .       SUBRC
              .          .          .          .          .          .
              .          .          .          .          .          .
1953          .          .          .          .       CPRC............
              .          .          .          .          V
              .          .          .          .          V
1956          .          .          .          .     RTRCRB
              .          .          .          .          .
              .          .          .          .          .
1963          .          .          .          .          .       SUBRB
              .          .          .          .          .          .
              .          .          .          .          .          .
1977          .          .          .          .       CPRB............
              .          .          .          .          .
              .          .          .          .          .
1982          .          .          .          .          .-------->   DIKA3
1980          .          .          .          .      CPRB1
              .          .          .          .          V
              .          .          .          .          V
1985          .          .          .          .     RTRBRA
              .          .          .          .          .
              .          .          .          .          .
1992          .          .          .          .          .       SUBRA
              .          .          .          .          .          .
              .          .          .          .          .          .
2006          .          .          .          .       CPRA............
              .          .          .          .          .
              .          .          .          .          .
2011          .          .          .          .          .-------->   DIKA4
2009          .          .          .          .      CPRA1
              .          .          .          .          .
              .          .          .          .          .
2016          .          .          .          .          .-------->   DIAFX
2014          .          .          .          .      CPRA2
              .          .          .          .          .
              .          .          .          .          .
2021          .          .          .          .          .          .<-------    DIOB
2019          .          .          .          .          .       CPOB2
              .          .          .          .          .          V
              .          .          .          .          .          V
2022          .          .          .          .          .      RTDIOB
              .          .          .          .          .          .
              .          .          .          .          .          .
2029          .          .      CPOB3.....................................
              .          .          V
              .          .          V
2032          .          .       RSOB
              .          .          V
              .          .          V
2040          .          .     RTOBLE
              .          .          .
              .          .          .
2047          .          .          .       SUBLE
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2059          CPLE............
                 V
                 V
2062          RSLE
                 .
                 .
2071             .------->    DILD
2069        CPLE1
                 V
                 V
2074       RTLEKD
                 .
                 .
2081             .       SUBKD
                 .           .
                 .           .
2097          CPKD............
                 V
                 V
2100          RSKD
                 V
                 V
2108       RTKDKA
                 V
                 V
2115        RSKA1
                 .
                 .
2124             .------->    DILA
2122        CPKA2
                 V
                 V
2127       RTKAKA
                 .
                 .
2134             .       SUBKA
                 .           .
                 .           .
2153             .           .          .<-------   DIKA3
2151             .           .      CPKA3
                 .           .          V
                 .           .          V
2154             .           .     RTDIKA
                 .           .          .
                 .           .          .
2163             .           .          .          .<-------   DIKA4
2161             .           .          .      CPKA4
                 .           .          .          V
                 .           .          .          V
2164             .           .          .     RTDIKA
                 .           .          .          .
                 .           .          .          .
2171       CPKA5.................................
                 .
                 .
2176             .------->    DIKB
2174       CPKA6
                 .
                 .
2179             .       SUBEC
                 .           .
                 .           .
2194             .           .      SUBAD
                 .           .          .
                 .           .          .
2209             .           .          .      SUBAC
                 .           .          .          .
                 .           .          .          .
2224             .           .          .          .       SUBAB
                 .           .          .          .           .
                 .           .          .          .           .
2239       CPSR7.............................................
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2242             .       SUBOE
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2258                                                  .<-------    DIOE
2256                                            CPOE1
                                                    V
                                                    V
2259                                          RTDIOE
                                                    .
                                                    .
2268                                                .           .<-------   DIOE2
2266                                                .       CPOE2
                                                    .           V
                                                    .           V
2269                                                .      RTDIOE
                                                    .           .
                                                    .           .
2278                                                .           .           .<-------   DIOE3
2276                                                .           .       CPOE3
                                                    .           .           V
                                                    .           .           V
2279                                                .           .      RTDIOE
                                                    .           .           .
                                                    .           .           .
2286                                        CPOE4.................................
                                                    .
                                                    .
2291                                                .------->    DIOD
2289                                        CP0E5
                                                V
                                                V
2294                                       RTOEMF
                                                    .
                                                    .
2301                                            SUBMF
                                                    .
                                                    .
2319                                                .           .<-------   DIMFX
2317                                                .        CPMF
                                                    .           V
                                                    .           V
2320                                                .      RTMDMF
                                                    .           .
                                                    .           .
2327                                        CPMF1......................
                                                    .
                                                    .
2332                                                .------->    DIEB
2330                                        CPMF2
                                                V
                                                V
2335                                       RTMFMC
                                                    .
                                                    .
2342                                            SUBOD
                                                    .
                                                    .
2358                                                .           .<-------    DIOD
2356                                                .       CPOD1
                                                    .           V
                                                    .           V
2359                                                .      RTDIOD
                                                    .           .
                                                    .           .
2368                                                .           .           .<-------   DIOD1
2366                                                .           .       CPOD2
                                                    .           .           V
                                                    .           .           V
2369                                                .           .      RTDIOD
                                                    .           .           .
                                                    .           .           .
2383                                                .           .           .           .<-------
DIOD2
2381                                                .           .           .       CPOD3
                                                    .           .           .           .
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2384                                            CPOD4.................................
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                                                    .
2389                                                .------->    DIOC
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2387                                    CPOD5
                                            V
                                            V
2392                                   RTODMC
                                            .
                                            .
2399                                            SUBMC
                                                    .
                                                    .
2415                            CPMC1.......................
                                    .
                                    .
2420                                .-------->    DIMB
2418                            CPMC2
                                    V
                                    V
2423                           RTMCIE
                                    .
                                    .
2430                                   SUBEB
                                            .
                                            .
2444                                            .<--------    DIEB
2442                                            CPEB1
                                                    .
                                                    .
2445                                   CPEB2............
                                            V
                                            V
2448                                   RTEBIE
                                            .
                                            .
2455                                            SUBIE
                                                    .
                                                    .
2470                             CPIE.......................
                                    V
                                    V
2473                           RTIEIB
                                    .
                                    .
2480                                   SUBOC
                                            .
                                            .
2493                                            .<--------    DIOC
2491                                            CPOC1
                                                    V
                                                    V
2494                                           RTDIOC
                                                    .
                                                    .
2501                                   CPOC2............
                                            V
                                            V
2504                                   RTOCMB
                                            .
                                            .
2511                                            SUBMB
                                                    .
                                                    .
2529                                                    .<--------    DIMB
2527                                                CPMB
                                                        V
                                                        V
2530                                               RTDIMB
                                                        .
                                                        .
2537                                   CPMB1........................
                                            V
                                            V
2540                                   RTMBIB
                                            .
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2547                                            SUBIB
                                                    .
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2562                             CPIB.......................
                                    V
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                 .         .         .         V
2565             .         .         .     RTIBIA
                 .         .         .         .
                 .         .         .         .
2572             .         .         .         .       SUBME
                 .         .         .         .          V
                 .         .         .         .          V
2585             .         .         .         .     RTMEIA
                 .         .         .         .          .
                 .         .         .         .          .
2592             .         .         .         .          .       SUBIA
                 .         .         .         .          .          .
                 .         .         .         .          .          .
2605             .         .         .       CPIA.....................
                 .         .         .         V
                 .         .         .         V
2608             .         .         .     RTIAHB
                 .         .         .         .
                 .         .         .         .
2615             .         .         .         .       SUBLD
                 .         .         .         .          .
                 .         .         .         .          .
2628             .         .         .         .          .           .<-------    DILD
2626             .         .         .         .          .        CPLD
                 .         .         .         .          .           V
                 .         .         .         .          .           V
2629             .         .         .         .          .      RTDILD
                 .         .         .         .          .          .
                 .         .         .         .          .          .
2636             .         .         .         .       CPLD............
                 .         .         .         .          V
                 .         .         .         .          V
2639             .         .         .         .     RTLDMA
                 .         .         .         .          .
                 .         .         .         .          .
2646             .         .         .         .          .       SUBMA
                 .         .         .         .          .          .
                 .         .         .         .          .          .
2659             .         .         .         .       CPMA............
                 .         .         .         .          V
                 .         .         .         .          V
2662             .         .         .         .     RTMAHB
                 .         .         .         .          .
                 .         .         .         .          .
2669             .         .         .         .          .       SUBHB
                 .         .         .         .          .          .
                 .         .         .         .          .          .
2682             .         .         .       CPHB......................
                 .         .         .         V
                 .         .         .         V
2685             .         .         .     RTHBDA
                 .         .         .         .
                 .         .         .         .
2692             .         .         .         .       SUBED
                 .         .         .         .          V
                 .         .         .         .          V
2708             .         .         .         .     RTEDID
                 .         .         .         .          .
                 .         .         .         .          .
2715             .         .         .         .          .       SUBID
                 .         .         .         .          .          .
                 .         .         .         .          .          .
2730             .         .         .         .       CPID............
                 .         .         .         .          V
                 .         .         .         .          V
2733             .         .         .         .     RTIDIC
                 .         .         .         .          .
                 .         .         .         .          .
2740             .         .         .         .          .       SUBIC
                 .         .         .         .          .          .
                 .         .         .         .          .          .
2756             .         .         .         .       CPIC............
                 .         .         .         .          V
                 .         .         .         .          V
2759             .         .         .         .     RTICDA
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                 .         .         .         .          .
2766             .         .         .         .          .       SUBDA
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2779          CPDA.......................
                 V
                 V
2782          RTDACC
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2789             .        SUBEE
                 .          .
                 .          .
2807             .          .           .<-------    DIEE
2805             .          .       CPEE1
                 .          .          V
                 .          .          V
2808             .          .      RTDIEE
                 .          .          .
                 .          .          .
2815             .        CPEC............
                 .          V
                 .          V
2818             .      RTEEEA
                 .          .
                 .          .
2825             .          .       SUBEA
                 .          .          .
                 .          .          .
2841             .        CPEA............
                 .          V
                 .          V
2844             .      RTEADC
                 .          .
                 .          .
2850             .          .       SUBDC
                 .          .          .
                 .          .          .
2864             .        CPDC............
                 .          V
                 .          V
2867             .      RTDCCC
                 .          .
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2874             .          .      SUBDD
                 .          .          V
                 .          .          V
2886             .          .     RTDDCC
                 .          .          .
                 .          .          .
2893             .          .          .        SUBCC
                 .          .          .          .
                 .          .          .          .
2907          CPCC.................................
                 V
                 V
2910          RTCCCB
                 .
                 .
2917             .      SUBLB
                 .        V
                 .        V
2930             .     RTLBHA
                 .        .
                 .        .
2937             .        .      SUBHA
                 .        .        .
                 .        .        .
2949             .      CPHA............
                 .        V
                 .        V
2952             .     RTHAGD
                 .        .
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2959             .        .      SUBKC
                 .        .        V
                 .        .        V
2972             .        .     RTKCGD
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2980                                                                  SUBGD
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2994                                                                    .      SUBGC
                                                                        .        V
                                                                        .        V
3005                                                                    .     RTGCGD
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3012                                                  CPGD.......................................
                                                        V
                                                        V
3015                                                RTGDCB
                                                        .
                                                        .
3022                                                    .        SUBCB
                                                        .          .
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3037                                        CPCB.......................
                                                V
                                                V
3040                                        RTCBCA
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                                                .
3047                                                SUBGB
                                                        V
                                                        V
3058                                                RTGBCA
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3065                                                    .        SUBCA
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3082                                        CPCA.......................
                                                V
                                                V
3085                                        RTCABC
                                                .
                                                .
3092                                                SUBBC
                                                        .
                                                        .
3110                                        CPBC............
                                                .
                                                .
3113                                CDUM........................
                                        .
                                        .
3116                                    .       SUBLC
                                        .           V
                                        .           V
3128                                    .      RTLCLA
                                        .           .
                                        .           .
3135                                    .       SUBLA
                                        .           .
                                        .           .
3152                                    .           .<-------    DILA
3150                                    .           .       CPLA
                                        .           .           V
                                        .           .           V
3153                                    .           .      RTDILA
                                        .           .           .
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3160                                    .        CPLA........................
                                        .           V
                                        .           V
3163                                    .      RTLAKB
                                        .           .
                                        .           .
3170                                    .       SUBKB
                                        .           .
                                        .           .
3185                                    .           .<-------    DIKB
3183                                    .           .       CPKB
                                        .           .           V
                                        .           .           V
3186                                    .           .      RTDIKB
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  3193          .           .       CPKB1.......................
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  3196          .           .           .       SUBGA
                .           .           .           .
                .           .           .           .
  3206          .       CDUM.......................
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                .           .
  3209          .           .       SUBBB
                .           .           V
                .           .           V
  3223          .           .      RTBBBA
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                .           .           .
  3230          .           .           .       SUBBA
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                .           .           .           .
  3246          .           .        CPBA............
                .           .           V
                .           .           V
  3249          .           .      RTBAAA
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  3275          .       CPAA............
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(***) RUNOFF ALSO COMPUTED AT THIS LOCATION

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RUNOFF SUMMARY
FLOW IN CUBIC FEET PER SECOND
TIME IN HOURS, AREA IN SQUARE MILES

OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA
HYDROGRAPH AT	SUBWD	329.	12.50	57.	15.	15.	.37
ROUTED TO	RTWDXA	310.	12.75	57.	15.	15.	.37
HYDROGRAPH AT	SUBXA	395.	12.17	60.	18.	18.	.25
2 COMBINED AT	CPXA1	452.	12.50	117.	34.	32.	.62
ROUTED TO	RSXA	445.	12.58	117.	34.	32.	.62
DIVERSION TO	DIZZ1	0.	.00	0.	0.	0.	.62
HYDROGRAPH AT	CPZZ1	445.	12.58	117.	34.	32.	.62
ROUTED TO	RTXAWC	424.	13.17	116.	33.	32.	.62
HYDROGRAPH AT	SUBWB	791.	12.42	156.	46.	45.	.67
ROUTED TO	RTWBWC	764.	12.58	156.	46.	45.	.67
HYDROGRAPH AT	SUBWC	609.	12.33	113.	35.	33.	.47
3 COMBINED AT	CPWC	1325.	12.50	379.	113.	109.	1.76
ROUTED TO	RSWC	1126.	12.83	372.	104.	100.	1.76
DIVERSION TO	DIQE	0.	.00	0.	0.	0.	1.76
HYDROGRAPH AT	CPWC2	1126.	12.83	372.	104.	100.	1.76
ROUTED TO	RTWCWA	1091.	13.33	371.	102.	99.	1.76
HYDROGRAPH AT	SUBVD	826.	12.33	162.	48.	47.	.70
ROUTED TO	RTVDWA	730.	12.67	161.	48.	46.	.70
HYDROGRAPH AT	SUBWA	868.	12.17	115.	33.	32.	.49
3 COMBINED AT	CPWA	1540.	13.17	623.	181.	174.	2.95
ROUTED TO	RSWA	1520.	13.25	623.	180.	173.	2.95

RUNOFF SUMMARY
FLOW IN CUBIC FEET PER SECOND
TIME IN HOURS, AREA IN SQUARE MILES

	OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA
+	DIVERSION TO	DIQD	0.	.00	0.	0.	0.	2.95
+	HYDROGRAPH AT	CPWA2	1520.	13.25	623.	180.	173.	2.95
+	ROUTED TO	RTWAVC	1494.	13.58	622.	178.	172.	2.95
+	HYDROGRAPH AT	SUBVB	1340.	12.58	305.	84.	81.	.72
+	ROUTED TO	RTVBVC	1195.	13.00	304.	83.	80.	.72
+	HYDROGRAPH AT	SUBVC	683.	12.17	96.	30.	28.	.49
+	3 COMBINED AT	CPVC	2369.	13.42	1000.	288.	277.	4.16
+	ROUTED TO	RSVC	2328.	13.50	935.	262.	252.	4.16
+	DIVERSION TO	DIVA	630.	13.50	271.	78.	75.	4.16
+	HYDROGRAPH AT	CPVC2	1698.	13.50	664.	184.	177.	4.16
+	ROUTED TO	RTVCQA	1671.	13.75	656.	183.	176.	4.16
+	HYDROGRAPH AT	SUBQA	517.	12.50	114.	31.	30.	.49
+	2 COMBINED AT	CPQA2	1755.	13.75	742.	213.	205.	4.65
+	ROUTED TO	RSQA	1755.	13.75	740.	213.	205.	4.65
+	DIVERSION TO	DIPF	565.	13.75	283.	86.	83.	4.65
+	HYDROGRAPH AT	DIPF	1190.	13.75	457.	127.	122.	4.65
+	ROUTED TO	RTQAJF	872.	15.83	429.	121.	116.	4.65
+	HYDROGRAPH AT	SUBQE	1061.	12.42	223.	67.	64.	.90
+	HYDROGRAPH AT	CPQE	0.	.00	0.	0.	0.	1.76
+	ROUTED TO	RTDIQE	0.	.00	0.	0.	0.	1.76
+	2 COMBINED AT	CPQE2	1061.	12.42	223.	67.	64.	.90
+	ROUTED TO	RSQE	964.	12.58	221.	61.	59.	.90

RUNOFF SUMMARY
FLOW IN CUBIC FEET PER SECOND
TIME IN HOURS, AREA IN SQUARE MILES

	OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA
+	ROUTED TO	RTQEQC	944.	12.75	221.	61.	59.	.90
+	HYDROGRAPH AT	SUBQD	521.	12.17	77.	24.	23.	.27
+	HYDROGRAPH AT	CPQD	0.	.00	0.	0.	0.	2.95
+	ROUTED TO	RTDIQD	0.	.00	0.	0.	0.	2.95
+	2 COMBINED AT	CPQD1	521.	12.17	77.	24.	23.	.27
+	ROUTED TO	RSQD	482.	12.17	76.	23.	22.	.27
+	DIVERSION TO	DIQB	112.	12.17	11.	3.	3.	.27
+	HYDROGRAPH AT	CPQD2	370.	12.17	66.	20.	19.	.27
+	ROUTED TO	RTQDQC	280.	12.58	65.	20.	19.	.27
+	HYDROGRAPH AT	SUBQC	541.	12.42	118.	33.	32.	.60
+	3 COMBINED AT	CPQC	1645.	12.67	399.	112.	108.	1.77
+	DIVERSION TO	DISR	1316.	12.67	319.	90.	87.	1.77
+	HYDROGRAPH AT	CPQC2	329.	12.67	80.	22.	22.	1.77
+	ROUTED TO	RTQCJF	137.	16.83	68.	19.	19.	1.77
+	HYDROGRAPH AT	SUBJF	1077.	13.42	484.	129.	124.	2.25
+	2 COMBINED AT	CPJF1	1071.	13.42	513.	147.	142.	4.02
+	HYDROGRAPH AT	SUBQB	599.	12.42	127.	36.	34.	.51
+	HYDROGRAPH AT	CPQB	112.	12.17	11.	3.	3.	.27
+	ROUTED TO	RTDIQB	41.	13.08	10.	3.	3.	.27
+	2 COMBINED AT	CPQB1	600.	12.42	137.	38.	37.	.78
+	ROUTED TO	RSQB	495.	12.67	121.	33.	32.	.78
+	ROUTED TO	RTQBJF	223.	16.17	102.	29.	28.	.78

RUNOFF SUMMARY
FLOW IN CUBIC FEET PER SECOND
TIME IN HOURS, AREA IN SQUARE MILES

	OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA
+	HYDROGRAPH AT	SUBPF	649.	12.33	112.	35.	33.	.50
+	HYDROGRAPH AT	CPPF	565.	13.75	283.	86.	83.	4.65
+	ROUTED TO	RTDIPF	559.	14.08	280.	85.	82.	4.65
+	2 COMBINED AT	CPPF1	666.	12.33	375.	118.	114.	5.78
+	ROUTED TO	RSPF	584.	14.17	340.	101.	98.	5.78
+	DIVERSION TO	DIPE	0.	.00	0.	0.	0.	5.78
+	HYDROGRAPH AT	CPPF2	584.	14.17	340.	101.	98.	5.78
+	ROUTED TO	RTPFJF	576.	14.83	333.	99.	95.	5.78
+	HYDROGRAPH AT	SUBPE	800.	12.17	117.	39.	37.	.50
+	ROUTED TO	CPPE	641.	12.50	117.	39.	37.	.50
+	2 COMBINED AT	CPPE2	623.	12.50	414.	136.	131.	6.28
+	ROUTED TO	RSPE	603.	14.92	404.	125.	121.	6.28
+	DIVERSION TO	DIPD	0.	14.75	0.	0.	0.	6.28
+	HYDROGRAPH AT	CPPE3	603.	14.92	404.	125.	121.	6.28
+	ROUTED TO	RTPEJF	575.	16.33	378.	116.	111.	6.28
+	4 COMBINED AT	CPJF2	1850.	16.08	1235.	407.	392.	10.17
+	HYDROGRAPH AT	SUBPC	459.	12.17	59.	16.	15.	.29
+	ROUTED TO	RSPC	5.	.00	5.	5.	5.	.29
+	ROUTED TO	RTPCNB	5.	.00	5.	5.	5.	.29
+	HYDROGRAPH AT	SUBNB	346.	12.67	73.	18.	18.	.44
+	2 COMBINED AT	CPNB1	349.	12.67	77.	23.	23.	.73
+	DIVERSION TO	DINA	226.	12.67	50.	15.	15.	.73

RUNOFF SUMMARY
FLOW IN CUBIC FEET PER SECOND
TIME IN HOURS, AREA IN SQUARE MILES

	OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA
+	HYDROGRAPH AT	CPNB2	124.	12.67	27.	8.	8.	.73
+	ROUTED TO	RTNBJD	83.	14.00	27.	8.	8.	.73
+	HYDROGRAPH AT	SUBJD	358.	12.83	96.	25.	24.	.49
+	2 COMBINED AT	CPJD	357.	12.83	121.	32.	31.	1.22
+	DIVERSION TO	DIJC	130.	12.83	45.	12.	12.	1.22
+	HYDROGRAPH AT	CPJD1	226.	12.83	76.	20.	20.	1.22
+	ROUTED TO	RTJDFC	205.	13.42	76.	20.	20.	1.22
+	HYDROGRAPH AT	SUBPD	400.	12.58	81.	21.	20.	.45
+	HYDROGRAPH AT	CPPD	0.	14.75	0.	0.	0.	6.28
+	2 COMBINED AT	CPPD2	400.	12.58	81.	21.	20.	.45
+	ROUTED TO	RSPD	12.	14.58	8.	3.	3.	.45
+	ROUTED TO	RTPDNC	12.	15.67	7.	3.	3.	.45
+	HYDROGRAPH AT	SUBNC	269.	12.50	44.	11.	11.	.31
+	2 COMBINED AT	CPNC	266.	12.50	49.	14.	13.	.76
+	ROUTED TO	RTNCJE	200.	13.33	47.	13.	13.	.76
+	HYDROGRAPH AT	SUBJE	391.	12.75	106.	27.	26.	.50
+	2 COMBINED AT	CPJE	491.	13.17	148.	39.	38.	1.26
+	ROUTED TO	RTJEFC	482.	13.33	148.	39.	38.	1.26
+	HYDROGRAPH AT	SUBFC	287.	12.67	67.	17.	16.	.34
+	3 COMBINED AT	CPFC	820.	13.25	285.	75.	73.	2.82
+	2 COMBINED AT	CPFC1	1868.	16.08	1457.	473.	455.	12.99
+	HYDROGRAPH AT	SUBUD	784.	12.50	162.	43.	41.	.78

RUNOFF SUMMARY
FLOW IN CUBIC FEET PER SECOND
TIME IN HOURS, AREA IN SQUARE MILES

+	OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA
+	DIVERSION TO	DIUA	190.	12.50	40.	11.	10.	.78
+	HYDROGRAPH AT	CPUD	594.	12.50	122.	32.	31.	.78
+	ROUTED TO	RTUDVA	486.	13.08	122.	32.	31.	.78
+	HYDROGRAPH AT	SUBVA	809.	12.17	121.	39.	38.	.49
+	HYDROGRAPH AT	CPVA	630.	13.50	271.	78.	75.	4.16
+	ROUTED TO	RTDIVA	620.	14.00	266.	77.	74.	4.16
+	3 COMBINED AT	CPVA2	918.	13.67	485.	148.	143.	1.27
+	ROUTED TO	RSVA	897.	13.83	483.	142.	136.	1.27
+	ROUTED TO	RTVAUC	873.	14.42	479.	139.	134.	1.27
+	HYDROGRAPH AT	SUBUA	646.	12.42	119.	33.	32.	.56
+	HYDROGRAPH AT	CPUA	190.	12.50	40.	11.	10.	.78
+	ROUTED TO	RTDIUA	86.	14.67	38.	10.	10.	.78
+	2 COMBINED AT	CPUA1	646.	12.42	150.	43.	42.	1.33
+	DIVERSION TO	DITB	128.	12.42	30.	9.	8.	1.33
+	HYDROGRAPH AT	CPUA2	513.	12.42	119.	34.	33.	1.33
+	ROUTED TO	RTUAUC	399.	12.92	117.	34.	33.	1.33
+	HYDROGRAPH AT	SUBUC	636.	12.25	105.	29.	28.	.48
+	3 COMBINED AT	CPUC	1164.	12.92	663.	198.	191.	7.10
+	ROUTED TO	RSUC	1126.	13.00	660.	194.	187.	7.10
+	ROUTED TO	RTUCUB	1119.	13.08	659.	193.	186.	7.10
+	HYDROGRAPH AT	SUBUB	182.	12.25	29.	8.	8.	.14
+	2 COMBINED AT	CPUB	1153.	13.08	681.	201.	194.	7.24

RUNOFF SUMMARY
FLOW IN CUBIC FEET PER SECOND
TIME IN HOURS, AREA IN SQUARE MILES

	OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA
+	ROUTED TO	RSUB	1068.	13.33	642.	189.	182.	7.24
+	DIVERSION TO	DIUE	48.	13.33	17.	4.	4.	7.24
+	HYDROGRAPH AT	CPUB1	1020.	13.33	625.	184.	178.	7.24
+	ROUTED TO	RTUBSF	987.	13.67	618.	182.	175.	7.24
+	HYDROGRAPH AT	SUBTB	606.	12.83	168.	44.	43.	.89
+	HYDROGRAPH AT	CPTB	128.	12.42	30.	9.	8.	1.33
+	ROUTED TO	RTDITB	102.	13.17	29.	8.	8.	1.33
+	2 COMBINED AT	CPTB1	666.	12.92	194.	52.	50.	2.19
+	DIVERSION TO	DITA	162.	12.92	48.	13.	12.	2.19
+	HYDROGRAPH AT	CPTB2	504.	12.92	147.	39.	38.	2.19
+	ROUTED TO	RTTBSF	475.	13.33	145.	39.	38.	2.19
+	HYDROGRAPH AT	SUBSF	297.	12.75	87.	22.	21.	.37
+	3 COMBINED AT	CPSF1	1552.	13.58	800.	241.	232.	8.46
+	ROUTED TO	RSSF	1490.	13.75	795.	235.	227.	8.46
+	DIVERSION TO	DIRJ1	447.	13.75	238.	71.	68.	8.46
+	HYDROGRAPH AT	CPSF2	1043.	13.75	556.	165.	159.	8.46
+	ROUTED TO	RTSFSH	932.	14.08	547.	163.	157.	8.46
+	HYDROGRAPH AT	SUBSH	127.	12.42	27.	7.	7.	.11
+	2 COMBINED AT	CPSH	942.	14.08	553.	169.	163.	8.57
+	ROUTED TO	RSSH	930.	14.25	524.	156.	151.	8.57
+	DIVERSION TO	DIRJ2	773.	14.25	420.	121.	117.	8.57
+	HYDROGRAPH AT	CPSH1	157.	14.25	104.	35.	34.	8.57

RUNOFF SUMMARY
FLOW IN CUBIC FEET PER SECOND
TIME IN HOURS, AREA IN SQUARE MILES

	OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA
+	ROUTED TO	RTSHSG	151.	14.67	103.	34.	33.	8.57
+	HYDROGRAPH AT	SUBTA	211.	12.67	44.	11.	11.	.27
+	HYDROGRAPH AT	CPTA	162.	12.92	48.	13.	12.	2.19
+	ROUTED TO	RTDITA	147.	13.50	47.	13.	12.	2.19
+	2 COMBINED AT	CPTA1	252.	13.08	90.	23.	23.	2.46
+	ROUTED TO	RTTASG	249.	13.25	89.	23.	23.	2.46
+	HYDROGRAPH AT	SUBSG	186.	12.42	36.	10.	10.	.18
+	3 COMBINED AT	CPSG	358.	12.67	201.	67.	64.	9.02
+	ROUTED TO	RSSG	354.	12.83	186.	60.	58.	9.02
+	DIVERSION TO	DIRJ4	262.	12.83	129.	40.	38.	9.02
+	HYDROGRAPH AT	CPSG1	91.	12.83	58.	20.	20.	9.02
+	ROUTED TO	RTSGSE	87.	13.08	57.	20.	19.	9.02
+	HYDROGRAPH AT	SUBSC	229.	12.83	57.	14.	14.	.43
+	DIVERSION TO	DISD	124.	12.83	31.	8.	7.	.43
+	HYDROGRAPH AT	CPSC	105.	12.83	26.	7.	6.	.43
+	ROUTED TO	RTSCSE	84.	13.50	26.	7.	6.	.43
+	HYDROGRAPH AT	SUBSE	163.	12.08	11.	3.	3.	.09
+	3 COMBINED AT	CPSE	160.	13.42	85.	29.	28.	9.54
+	ROUTED TO	RSSE	139.	13.92	66.	23.	22.	9.54
+	DIVERSION TO	DIRJ5	139.	13.92	66.	23.	22.	9.54
+	HYDROGRAPH AT	CPSE2	0.	.00	0.	0.	0.	9.54
+	ROUTED TO	RTSERI	0.	.00	0.	0.	0.	9.54

RUNOFF SUMMARY
FLOW IN CUBIC FEET PER SECOND
TIME IN HOURS, AREA IN SQUARE MILES

	OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA
+	HYDROGRAPH AT	SUBRJ	186.	12.25	27.	8.	7.	.14
+	HYDROGRAPH AT	CPRJ1	447.	13.75	238.	71.	68.	8.46
+	ROUTED TO	RTSFRJ	445.	13.92	238.	70.	68.	8.46
+	HYDROGRAPH AT	CPRJ2	773.	14.25	420.	121.	117.	8.57
+	ROUTED TO	RTSHRJ	771.	14.33	420.	121.	117.	8.57
+	2 COMBINED AT	CPRJ3	1171.	14.25	646.	191.	184.	8.57
+	ROUTED TO	RTRJ3	1151.	14.58	643.	188.	182.	8.57
+	HYDROGRAPH AT	CPRJ4A	262.	12.83	129.	40.	38.	9.02
+	2 COMBINED AT	CPRJ4B	1334.	14.58	737.	228.	220.	8.57
+	ROUTED TO	RTSGRJ	1316.	14.83	736.	226.	218.	8.57
+	HYDROGRAPH AT	CPRJ5	139.	13.92	66.	23.	22.	9.54
+	ROUTED TO	RTSERJ	108.	14.92	63.	22.	22.	9.54
+	3 COMBINED AT	CPRJ6	1423.	14.83	799.	255.	246.	9.68
+	ROUTED TO	RSRJ	1329.	15.17	794.	250.	241.	9.68
+	DIVERSION TO	DIPA2	350.	15.17	128.	32.	31.	9.68
+	HYDROGRAPH AT	CPRJ7	979.	15.17	666.	218.	210.	9.68
+	ROUTED TO	RTRJRI	978.	15.25	666.	217.	209.	9.68
+	DIVERSION TO	DIOE3	239.	15.25	140.	39.	38.	9.68
+	HYDROGRAPH AT	CPRI1	740.	15.25	526.	178.	171.	9.68
+	ROUTED TO	RTRI	739.	15.33	526.	176.	170.	9.68
+	HYDROGRAPH AT	SUBUE	132.	12.08	17.	4.	4.	.07
+	HYDROGRAPH AT	CPUE	48.	13.33	17.	4.	4.	7.24

RUNOFF SUMMARY
FLOW IN CUBIC FEET PER SECOND
TIME IN HOURS, AREA IN SQUARE MILES

	OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA
+	2 COMBINED AT	CPUE2	132.	12.08	37.	9.	9.	.07
+	ROUTED TO	RSUE	3.	16.50	3.	1.	1.	.07
+	ROUTED TO	RTUEPB	3.	18.92	3.	1.	1.	.07
+	HYDROGRAPH AT	SUBPB	439.	12.42	84.	22.	21.	.42
+	2 COMBINED AT	CPPB1	438.	12.42	85.	23.	22.	.49
+	DIVERSION TO	DIPA	81.	12.42	16.	4.	4.	.49
+	HYDROGRAPH AT	CPPB2	357.	12.42	69.	18.	18.	.49
+	ROUTED TO	RTPBNA	236.	13.58	67.	18.	17.	.49
+	HYDROGRAPH AT	SUBNA	608.	13.00	198.	50.	48.	.98
+	HYDROGRAPH AT	CPNA1	226.	12.67	50.	15.	15.	.73
+	ROUTED TO	RTDINA	116.	14.58	48.	15.	15.	.73
+	3 COMBINED AT	CPNA2	751.	13.42	305.	82.	79.	1.47
+	*ROUTED TO*	RTNAJC	687.	14.17	298.	82.	79.	1.47
+	HYDROGRAPH AT	SUBJC	1153.	13.00	335.	86.	83.	.99
+	HYDROGRAPH AT	CPJC1	130.	12.83	45.	12.	12.	1.22
+	ROUTED TO	RTDIJC	92.	14.83	42.	12.	11.	1.22
+	3 COMBINED AT	CPJC2	1284.	13.42	650.	178.	171.	2.46
+	DIVERSION TO	DIJB	591.	13.42	299.	82.	79.	2.46
+	HYDROGRAPH AT	CPJC3	694.	13.42	351.	96.	92.	2.46
+	ROUTED TO	RTJCFB	670.	14.17	342.	95.	92.	2.46
+	HYDROGRAPH AT	SUBFB	449.	12.67	101.	26.	25.	.66
+	2 COMBINED AT	CPFB	737.	13.67	424.	120.	116.	3.12

RUNOFF SUMMARY
FLOW IN CUBIC FEET PER SECOND
TIME IN HOURS, AREA IN SQUARE MILES

	OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA
+	DIVERSION TO	DISRX	737.	13.67	424.	120.	116.	3.12
+	HYDROGRAPH AT	CPFB1	0.	.00	0.	0.	0.	3.12
+	HYDROGRAPH AT	SUBPA	461.	12.50	95.	27.	26.	.49
+	HYDROGRAPH AT	CPPA	81.	12.42	16.	4.	4.	.49
+	ROUTED TO	RTDIPA	37.	14.58	15.	4.	4.	.49
+	HYDROGRAPH AT	CPPA2	350.	15.17	128.	32.	31.	9.68
+	ROUTED TO	RTRJPA	329.	15.67	127.	32.	31.	9.68
+	3 COMBINED AT	CPPA3	461.	12.50	228.	67.	64.	.49
+	DIVERSION TO	DIOE	83.	12.50	41.	12.	12.	.49
+	HYDROGRAPH AT	CPPA	378.	12.50	187.	55.	53.	.49
+	ROUTED TO	RTPAMD	261.	17.42	169.	53.	51.	.49
+	HYDROGRAPH AT	SUBMD	509.	13.00	174.	44.	43.	.80
+	2 COMBINED AT	CPMD	511.	13.00	291.	96.	92.	1.29
+	DIVERSION TO	DIJB1	104.	13.00	60.	20.	19.	1.29
+	HYDROGRAPH AT	CPMD1	407.	13.00	231.	76.	73.	1.29
+	DIVERSION TO	DIMFX	407.	13.00	231.	76.	73.	1.29
+	HYDROGRAPH AT	CPMD2	0.	.00	0.	0.	0.	1.29
+	2 COMBINED AT	CPMD3	0.	.00	0.	0.	0.	9.68
+	HYDROGRAPH AT	SUBMG	176.	12.67	41.	10.	10.	.20
+	ROUTED TO	RTMGJB	93.	15.08	38.	10.	10.	.20
+	HYDROGRAPH AT	SUBJB	531.	12.92	152.	38.	37.	.98
+	2 COMBINED AT	CPJB	530.	12.92	184.	48.	46.	1.18

RUNOFF SUMMARY
FLOW IN CUBIC FEET PER SECOND
TIME IN HOURS, AREA IN SQUARE MILES

	OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA
+	HYDROGRAPH AT	CPJB1	591.	13.42	299.	82.	79.	2.46
+	ROUTED TO	RTDIJB	551.	14.67	284.	80.	78.	2.46
+	HYDROGRAPH AT	CPJB2	104.	13.00	60.	20.	19.	1.29
+	ROUTED TO	RDIJB1	92.	15.17	56.	19.	18.	1.29
+	3 COMBINED AT	CPJB3	791.	14.75	491.	148.	143.	1.18
+	DIVERSION TO	DIEE	285.	14.75	177.	53.	51.	1.18
+	HYDROGRAPH AT	CPJB4	506.	14.75	314.	95.	91.	1.18
+	ROUTED TO	RTJBFA	465.	16.50	292.	88.	85.	1.18
+	HYDROGRAPH AT	SUBFA	217.	14.00	110.	29.	28.	.88
+	2 COMBINED AT	CPFA	526.	16.33	351.	116.	112.	2.06
+	DIVERSION TO	DISRX2	526.	16.33	351.	116.	112.	2.06
+	HYDROGRAPH AT	CPFA1	0.	.00	0.	0.	0.	2.06
+	3 COMBINED AT	CPRI3	739.	15.33	526.	176.	170.	9.68
+	HYDROGRAPH AT	SUBRI	318.	12.25	42.	11.	10.	.23
+	HYDROGRAPH AT	SUBSB	229.	12.33	42.	11.	10.	.19
+	ROUTED TO	RSSB	195.	12.58	38.	10.	9.	.19
+	HYDROGRAPH AT	SUBSD	137.	12.50	24.	6.	6.	.14
+	HYDROGRAPH AT	CPSD1	124.	12.83	31.	8.	7.	.43
+	3 COMBINED AT	CPSD2	429.	12.58	91.	23.	22.	.76
+	ROUTED TO	RSSD	429.	12.58	91.	23.	22.	.76
+	ROUTED TO	RTSDRI	417.	12.83	91.	23.	22.	.76
+	4 COMBINED AT	CPRI5	759.	15.33	533.	208.	201.	10.24

RUNOFF SUMMARY
FLOW IN CUBIC FEET PER SECOND
TIME IN HOURS, AREA IN SQUARE MILES

	OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA
+	ROUTED TO	RSRI	760.	15.33	533.	208.	201.	10.24
+	ROUTED TO	RTRIRH	744.	15.83	532.	203.	196.	10.24
+	HYDROGRAPH AT	SUBSA	620.	12.25	89.	24.	23.	.42
+	DIVERSION TO	DIRF	310.	12.25	45.	12.	12.	.42
+	HYDROGRAPH AT	CPSA	310.	12.25	44.	12.	12.	.42
+	ROUTED TO	RTSARH	169.	13.00	44.	12.	11.	.42
+	HYDROGRAPH AT	SUBRH	225.	12.50	53.	13.	13.	.22
+	3 COMBINED AT	CPRH	779.	13.08	589.	227.	218.	10.89
+	ROUTED TO	RSRH	780.	13.08	589.	225.	217.	10.89
+	DIVERSION TO	DIOE2	0.	.00	0.	0.	0.	10.89
+	HYDROGRAPH AT	CPRH2	780.	13.08	589.	225.	217.	10.89
+	ROUTED TO	RTRHOG	776.	13.17	589.	224.	215.	10.89
+	DIVERSION TO	DIOD1	0.	.00	0.	0.	0.	10.89
+	HYDROGRAPH AT	CPOG1	776.	13.17	589.	224.	215.	10.89
+	ROUTED TO	RTOG1	761.	13.58	586.	219.	211.	10.89
+	HYDROGRAPH AT	SUBRG	143.	12.42	30.	8.	7.	.13
+	ROUTED TO	RTRGRF	95.	13.42	30.	8.	7.	.13
+	HYDROGRAPH AT	SUBRF	528.	12.67	127.	32.	31.	.63
+	HYDROGRAPH AT	CPRF	310.	12.25	45.	12.	12.	.42
+	ROUTED TO	RTDIRF	102.	14.33	43.	12.	11.	.42
+	3 COMBINED AT	CPRF1	542.	12.67	192.	51.	49.	1.18
+	DIVERSION TO	DIRE	108.	12.67	38.	10.	10.	1.18

RUNOFF SUMMARY
FLOW IN CUBIC FEET PER SECOND
TIME IN HOURS, AREA IN SQUARE MILES

	OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA
+	HYDROGRAPH AT	CPRF2	434.	12.67	153.	40.	39.	1.18
+	ROUTED TO	RTRFOG	395.	13.33	150.	40.	39.	1.18
+	HYDROGRAPH AT	SUBOG	475.	12.50	105.	29.	28.	.47
+	3 COMBINED AT	CPOG	1236.	13.50	748.	284.	273.	12.12
+	ROUTED TO	RSOG	1205.	13.58	745.	279.	269.	12.12
+	DIVERSION TO	DIOD2	358.	13.58	196.	68.	65.	12.12
+	HYDROGRAPH AT	CPOG2	847.	13.58	549.	211.	203.	12.12
+	ROUTED TO	RTOGOF	839.	13.75	548.	209.	201.	12.12
+	HYDROGRAPH AT	SUBOF	263.	12.50	55.	14.	13.	.25
+	HYDROGRAPH AT	SUBRE	242.	12.92	72.	18.	17.	.36
+	HYDROGRAPH AT	CPRE	108.	12.67	38.	10.	10.	1.18
+	ROUTED TO	RTDIRE	66.	14.33	36.	10.	10.	1.18
+	2 COMBINED AT	CPRE1	244.	13.00	103.	28.	27.	1.55
+	ROUTED TO	RTREOF	227.	13.67	101.	27.	26.	1.55
+	3 COMBINED AT	CPOF1	1091.	13.75	657.	247.	238.	12.73
+	ROUTED TO	RSOF	965.	14.08	601.	214.	206.	12.73
+	ROUTED TO	RTOFOB	914.	14.58	594.	208.	200.	12.73
+	HYDROGRAPH AT	SUBOB	250.	12.83	62.	16.	15.	.44
+	HYDROGRAPH AT	SUBRD	245.	12.83	62.	15.	15.	.38
+	DIVERSION TO	DIOB	98.	12.83	25.	6.	6.	.38
+	HYDROGRAPH AT	CPRD	147.	12.83	37.	9.	9.	.38
+	ROUTED TO	RTRDRC	90.	14.83	35.	9.	9.	.38
+	HYDROGRAPH AT	SUBRC	394.	12.92	113.	28.	27.	.68

RUNOFF SUMMARY
FLOW IN CUBIC FEET PER SECOND
TIME IN HOURS, AREA IN SQUARE MILES

	OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA
+	2 COMBINED AT	CPRC	392.	12.92	145.	37.	36.	1.06
+	ROUTED TO	RTRCRB	350.	13.92	139.	37.	36.	1.06
+	HYDROGRAPH AT	SUBRB	350.	12.67	76.	19.	18.	.55
+	2 COMBINED AT	CPRB	418.	13.75	204.	56.	54.	1.61
+	DIVERSION TO	DIKA3	209.	13.75	102.	28.	27.	1.61
+	HYDROGRAPH AT	CPRB1	209.	13.75	102.	28.	27.	1.61
+	ROUTED TO	RTRBRA	132.	15.83	86.	26.	25.	1.61
+	HYDROGRAPH AT	SUBRA	158.	12.67	33.	8.	8.	.24
+	2 COMBINED AT	CPRA	154.	12.67	100.	34.	33.	1.85
+	DIVERSION TO	DIKA4	130.	12.67	76.	23.	22.	1.85
+	HYDROGRAPH AT	CPRA1	25.	12.67	23.	11.	11.	1.85
+	DIVERSION TO	DIAFX	25.	12.67	23.	11.	11.	1.85
+	HYDROGRAPH AT	CPRA2	0.	.00	0.	0.	0.	1.85
+	HYDROGRAPH AT	CPOB2	98.	12.83	25.	6.	6.	.38
+	ROUTED TO	RTDIOB	33.	16.92	20.	6.	6.	.38
+	4 COMBINED AT	CPOB3	933.	14.58	614.	227.	219.	13.55
+	ROUTED TO	RSOB	633.	17.75	528.	182.	175.	13.55
+	ROUTED TO	RTOBLE	631.	18.08	526.	176.	170.	13.55
+	HYDROGRAPH AT	SUBLE	212.	12.42	37.	10.	9.	.25
+	2 COMBINED AT	CPLE	632.	18.08	527.	185.	178.	13.80
+	ROUTED TO	RSLE	630.	18.25	524.	172.	166.	13.80
+	DIVERSION TO	DILD	187.	18.25	137.	40.	38.	13.80
+	HYDROGRAPH AT	CPLE1	443.	18.25	387.	132.	127.	13.80

RUNOFF SUMMARY
FLOW IN CUBIC FEET PER SECOND
TIME IN HOURS, AREA IN SQUARE MILES

	OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA
+	ROUTED TO	RTLEKD	442.	18.58	385.	126.	122.	13.80
+	HYDROGRAPH AT	SUBKD	330.	13.00	101.	26.	25.	.72
+	2 COMBINED AT	CPKD	441.	18.58	387.	151.	145.	14.52
+	ROUTED TO	RSKD	440.	18.75	385.	145.	140.	14.52
+	ROUTED TO	RTKDKA	440.	18.92	385.	143.	138.	14.52
+	ROUTED TO	RSKA1	335.	22.17	291.	78.	75.	14.52
+	DIVERSION TO	DILA	119.	22.17	87.	22.	21.	14.52
+	HYDROGRAPH AT	CPKA2	216.	22.17	204.	57.	55.	14.52
+	ROUTED TO	RTKAKA	216.	23.08	185.	47.	45.	14.52
+	HYDROGRAPH AT	SUBKA	532.	13.08	175.	44.	43.	1.38
+	HYDROGRAPH AT	CPKA3	209.	13.75	102.	28.	27.	1.61
+	ROUTED TO	RTDIKA	192.	14.67	99.	28.	27.	1.61
+	HYDROGRAPH AT	CPKA4	130.	12.67	76.	23.	22.	1.85
+	ROUTED TO	RTDIKA	110.	13.50	74.	23.	22.	1.85
+	4 COMBINED AT	CPKA5	679.	13.42	308.	135.	130.	15.90
+	DIVERSION TO	DIKB	291.	13.42	45.	11.	11.	15.90
+	HYDROGRAPH AT	CPKA6	388.	13.33	263.	124.	119.	15.90
+	HYDROGRAPH AT	SUBEC	54.	12.83	16.	5.	4.	.11
+	HYDROGRAPH AT	SUBAD	236.	12.83	63.	16.	15.	.46
+	HYDROGRAPH AT	SUBAC	235.	12.92	64.	16.	16.	.46
+	HYDROGRAPH AT	SUBAB	250.	12.83	64.	17.	16.	.46
+	5 COMBINED AT	CPSR7	1100.	12.92	449.	173.	166.	17.39
+	HYDROGRAPH AT	SUBOE	355.	12.67	77.	20.	19.	.49

RUNOFF SUMMARY
FLOW IN CUBIC FEET PER SECOND
TIME IN HOURS, AREA IN SQUARE MILES

	OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA
+	HYDROGRAPH AT	CPOE1	83.	12.50	41.	12.	12.	.49
+	ROUTED TO	RTDIOE	46.	18.83	35.	11.	11.	.49
+	HYDROGRAPH AT	CPOE2	0.	.00	0.	0.	0.	10.89
+	ROUTED TO	RTDIOE	0.	.00	0.	0.	0.	10.89
+	HYDROGRAPH AT	CPOE3	239.	15.25	140.	39.	38.	9.68
+	ROUTED TO	RTDIOE	229.	15.92	137.	39.	37.	9.68
+	4 COMBINED AT	CPOE4	356.	12.67	189.	72.	69.	.49
+	DIVERSION TO	DIOD	59.	12.67	32.	12.	12.	.49
+	HYDROGRAPH AT	CP0E5	297.	12.67	157.	60.	58.	.49
+	ROUTED TO	RTOEMF	205.	17.50	147.	56.	54.	.49
+	HYDROGRAPH AT	SUBMF	578.	13.08	204.	52.	50.	.97
+	HYDROGRAPH AT	CPMF	407.	13.00	231.	76.	73.	1.29
+	ROUTED TO	RTMDMF	373.	14.67	218.	73.	70.	1.29
+	3 COMBINED AT	CPMF1	814.	14.00	477.	179.	172.	1.46
+	DIVERSION TO	DIEB	376.	14.00	222.	83.	80.	1.46
+	HYDROGRAPH AT	CPMF2	438.	14.00	256.	96.	92.	1.46
+	ROUTED TO	RTMFMC	398.	15.33	247.	88.	85.	1.46
+	HYDROGRAPH AT	SUBOD	447.	12.67	117.	31.	30.	.53
+	HYDROGRAPH AT	CPOD1	59.	12.67	32.	12.	12.	.49
+	ROUTED TO	RTDIOD	36.	19.67	29.	10.	10.	.49
+	HYDROGRAPH AT	CPOD2	0.	.00	0.	0.	0.	10.89
+	ROUTED TO	RTDIOD	0.	.00	0.	0.	0.	10.89
+	HYDROGRAPH AT	CPOD3	358.	13.58	196.	68.	65.	12.12

RUNOFF SUMMARY
FLOW IN CUBIC FEET PER SECOND
TIME IN HOURS, AREA IN SQUARE MILES

	OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA
+	4 COMBINED AT	CPOD4	498.	12.75	276.	100.	97.	31.55
+	DIVERSION TO	DIOC	90.	12.75	50.	18.	17.	31.55
+	HYDROGRAPH AT	CPOD5	409.	12.75	226.	82.	79.	31.55
+	ROUTED TO	RTODMC	384.	14.25	214.	77.	74.	31.55
+	HYDROGRAPH AT	SUBMC	643.	13.00	221.	57.	55.	1.00
+	3 COMBINED AT	CPMC1	810.	14.33	545.	204.	197.	34.01
+	DIVERSION TO	DIMB	310.	14.33	209.	79.	76.	34.01
+	HYDROGRAPH AT	CPMC2	500.	14.33	336.	126.	121.	34.01
+	ROUTED TO	RTMCIE	490.	14.67	333.	123.	118.	34.01
+	HYDROGRAPH AT	SUBEB	137.	12.42	24.	6.	6.	.14
+	HYDROGRAPH AT	CPEB1	376.	14.00	222.	83.	80.	1.46
+	2 COMBINED AT	CPEB2	395.	14.00	249.	93.	89.	.14
+	ROUTED TO	RTEBIE	347.	15.00	232.	87.	84.	.14
+	HYDROGRAPH AT	SUBIE	201.	12.83	62.	16.	15.	.30
+	3 COMBINED AT	CPIE	804.	14.75	555.	209.	201.	34.45
+	ROUTED TO	RTIEIB	787.	15.67	546.	195.	188.	34.45
+	HYDROGRAPH AT	SUBOC	421.	12.25	67.	19.	18.	.31
+	HYDROGRAPH AT	CPOC1	90.	12.75	50.	18.	17.	31.55
+	ROUTED TO	RTDIOC	66.	15.42	44.	16.	15.	31.55
+	2 COMBINED AT	CPOC2	421.	12.25	100.	37.	36.	.31
+	ROUTED TO	RTOCMB	261.	13.33	94.	34.	33.	.31
+	HYDROGRAPH AT	SUBMB	631.	12.92	210.	53.	51.	.99
+	HYDROGRAPH AT	CPMB	310.	14.33	209.	79.	76.	34.01

RUNOFF SUMMARY
FLOW IN CUBIC FEET PER SECOND
TIME IN HOURS, AREA IN SQUARE MILES

	OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA
+	ROUTED TO	RTDIMB	297.	15.50	201.	72.	69.	34.01
+	3 COMBINED AT	CPMB1	839.	13.25	477.	169.	162.	1.30
+	ROUTED TO	RTMBIB	776.	13.83	470.	162.	157.	1.30
+	HYDROGRAPH AT	SUBIB	326.	12.92	102.	26.	25.	.46
+	3 COMBINED AT	CPIB	1258.	14.83	973.	359.	346.	36.21
+	ROUTED TO	RTIBIA	1258.	14.83	973.	358.	345.	36.21
+	HYDROGRAPH AT	SUBME	218.	12.67	45.	12.	11.	.32
+	ROUTED TO	RTMEIA	165.	13.50	45.	12.	11.	.32
+	HYDROGRAPH AT	SUBIA	281.	12.50	49.	13.	12.	.31
+	3 COMBINED AT	CPIA	1340.	14.17	1023.	379.	365.	36.84
+	ROUTED TO	RTIAHB	1338.	14.33	1023.	375.	361.	36.84
+	HYDROGRAPH AT	SUBLD	314.	12.25	48.	15.	14.	.28
+	HYDROGRAPH AT	CPLD	187.	18.25	137.	40.	38.	13.80
+	ROUTED TO	RTDILD	186.	18.50	136.	39.	38.	13.80
+	2 COMBINED AT	CPLD	314.	12.25	161.	60.	58.	14.10
+	ROUTED TO	RTLDMA	274.	12.50	138.	52.	50.	14.10
+	HYDROGRAPH AT	SUBMA	185.	12.50	33.	8.	8.	.25
+	2 COMBINED AT	CPMA	447.	12.50	137.	60.	57.	14.35
+	ROUTED TO	RTMAHB	362.	13.08	135.	57.	55.	14.35
+	HYDROGRAPH AT	SUBHB	271.	12.50	46.	12.	11.	.34
+	3 COMBINED AT	CPHB	1395.	14.17	1078.	420.	404.	51.53
+	ROUTED TO	RTHBDA	1392.	14.33	1077.	417.	401.	51.53
+	HYDROGRAPH AT	SUBED	250.	13.00	76.	19.	18.	.48

RUNOFF SUMMARY
FLOW IN CUBIC FEET PER SECOND
TIME IN HOURS, AREA IN SQUARE MILES

	OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA
+	ROUTED TO	RTEDID	120.	16.25	63.	18.	17.	.48
+	HYDROGRAPH AT	SUBID	340.	12.83	84.	21.	20.	.56
+	2 COMBINED AT	CPID	337.	12.83	126.	39.	37.	1.04
+	ROUTED TO	RTIDIC	299.	13.67	119.	38.	36.	1.04
+	HYDROGRAPH AT	SUBIC	244.	13.00	74.	19.	18.	.53
+	2 COMBINED AT	CPIC	483.	13.58	177.	56.	54.	1.57
+	ROUTED TO	RTICDA	433.	14.33	171.	54.	52.	1.57
+	HYDROGRAPH AT	SUBDA	267.	12.58	53.	14.	13.	.33
+	3 COMBINED AT	CPDA	1759.	14.33	1231.	473.	455.	53.43
+	ROUTED TO	RTDACC	1642.	15.75	1201.	429.	413.	53.43
+	HYDROGRAPH AT	SUBEE	704.	12.92	210.	58.	56.	1.40
+	HYDROGRAPH AT	CPEE1	285.	14.75	177.	53.	51.	1.18
+	ROUTED TO	RTDIEE	280.	15.50	174.	52.	50.	1.18
+	2 COMBINED AT	CPEC	705.	12.92	360.	110.	106.	1.40
+	ROUTED TO	RTEEEA	684.	13.42	356.	109.	105.	1.40
+	HYDROGRAPH AT	SUBEA	607.	13.00	186.	47.	45.	1.30
+	2 COMBINED AT	CPEA	1232.	13.25	524.	154.	149.	2.70
+	ROUTED TO	RTEADC	1079.	14.50	504.	148.	143.	2.70
+	HYDROGRAPH AT	SUBDC	545.	12.75	128.	32.	31.	.84
+	2 COMBINED AT	CPDC	1126.	14.42	573.	179.	173.	3.54
+	ROUTED TO	RTDCCC	1030.	15.50	557.	171.	165.	3.54
+	HYDROGRAPH AT	SUBDD	118.	12.33	17.	4.	4.	.13
+	ROUTED TO	RTDDCC	84.	13.33	17.	4.	4.	.13

RUNOFF SUMMARY
FLOW IN CUBIC FEET PER SECOND
TIME IN HOURS, AREA IN SQUARE MILES

	OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA
+	HYDROGRAPH AT	SUBCC	691.	12.67	146.	38.	37.	.98
+	4 COMBINED AT	CPCC	2511.	15.67	1665.	608.	586.	58.08
+	ROUTED TO	RTCCCB	2445.	16.58	1652.	570.	549.	58.08
+	HYDROGRAPH AT	SUBLB	171.	12.67	34.	9.	8.	.25
+	ROUTED TO	RTLBHA	130.	13.58	34.	9.	8.	.25
+	HYDROGRAPH AT	SUBHA	359.	12.42	59.	15.	15.	.22
+	2 COMBINED AT	CPHA	356.	12.42	92.	24.	23.	.47
+	ROUTED TO	RTHAGD	217.	13.92	88.	23.	23.	.47
+	HYDROGRAPH AT	SUBKC	385.	12.58	70.	18.	17.	.26
+	ROUTED TO	RTKCGD	263.	13.67	69.	18.	17.	.26
+	HYDROGRAPH AT	SUBGD	592.	12.67	135.	34.	33.	.77
+	HYDROGRAPH AT	SUBGC	243.	12.25	31.	9.	8.	.21
+	ROUTED TO	RTGCGD	125.	13.00	31.	9.	8.	.21
+	4 COMBINED AT	CPGD	717.	13.58	312.	82.	79.	1.71
+	ROUTED TO	RTGDCB	642.	14.50	298.	81.	78.	1.71
+	HYDROGRAPH AT	SUBCB	540.	12.92	172.	44.	42.	.74
+	3 COMBINED AT	CPCB	2652.	16.50	1803.	674.	649.	60.53
+	ROUTED TO	RTCBCA	2550.	17.67	1798.	623.	600.	60.53
+	HYDROGRAPH AT	SUBGB	237.	12.25	32.	9.	8.	.23
+	ROUTED TO	RTGBCA	81.	14.42	31.	8.	8.	.23
+	HYDROGRAPH AT	SUBCA	587.	13.08	223.	57.	55.	.97
+	3 COMBINED AT	CPCA	2565.	17.67	1815.	678.	653.	61.73
+	ROUTED TO	RTCABC	2547.	18.00	1813.	659.	635.	61.73

RUNOFF SUMMARY
FLOW IN CUBIC FEET PER SECOND
TIME IN HOURS, AREA IN SQUARE MILES

	OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA
+	HYDROGRAPH AT	SUBBC	235.	13.17	81.	20.	20.	.61
+	2 COMBINED AT	CPBC	2547.	18.00	1814.	676.	651.	62.34
+	3 COMBINED AT	CDUM	3517.	17.67	2816.	1195.	1151.	92.72
+	HYDROGRAPH AT	SUBLC	109.	12.33	14.	4.	3.	.10
+	ROUTED TO	RTLCLA	55.	13.42	14.	4.	3.	.10
+	HYDROGRAPH AT	SUBLA	266.	12.83	70.	18.	17.	.50
+	HYDROGRAPH AT	CPLA	119.	22.17	87.	22.	21.	14.52
+	ROUTED TO	RTDILA	119.	22.50	79.	20.	19.	14.52
+	3 COMBINED AT	CPLA	293.	13.00	100.	46.	45.	.60
+	ROUTED TO	RTLAKB	281.	13.33	88.	43.	42.	.60
+	HYDROGRAPH AT	SUBKB	322.	12.50	57.	15.	14.	.42
+	HYDROGRAPH AT	CPKB	291.	13.42	45.	11.	11.	15.90
+	ROUTED TO	RTDIKB	231.	14.33	45.	11.	11.	15.90
+	3 COMBINED AT	CPKB1	435.	14.25	195.	71.	69.	1.02
+	HYDROGRAPH AT	SUBGA	258.	12.08	18.	5.	5.	.14
+	3 COMBINED AT	CDUM	3522.	17.67	2914.	1239.	1194.	93.88
+	HYDROGRAPH AT	SUBBB	179.	12.75	43.	11.	10.	.25
+	ROUTED TO	RTBBBA	108.	14.58	41.	11.	10.	.25
+	HYDROGRAPH AT	SUBBA	161.	12.92	48.	13.	12.	.34
+	2 COMBINED AT	CPBA	160.	12.92	86.	23.	22.	.59
+	HYDROGRAPH AT	RTBAAA	139.	13.58	61.	16.	15.	.50
+	2 COMBINED AT	CPAA	273.	13.17	146.	39.	37.	1.09

*** NORMAL END OF HEC-1 ***

The results for searching **tolleson** using **Match All Words Intelligently** in flat file cabinets in FCDMC Front Desk are as follows:

Sorry, no records are found. Try a different input or database

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The results for searching **tolleson** using **Match All Words Intelligently** in FCD's contract database are as follows:

Sorry, no records are found. Try a different input or database

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The results for searching **tolleson** using **Match All Words Intelligently** are as follows:

Sorry, no records are found. Try a different input or database

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The results for searching **tolleson** using **Match All Words Intelligently** are as follows:

Sorry, no records are found. Try a different input or database

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The results for searching **tolleson** using **Match All Words Intelligently** in Engineering Division Hydrology & Hydraulics Branch Development Review Database are as follows:

Sorry, no records are found. Try a different input or database

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The results for searching **tolleson** using **Match All Words Intelligently** in the report of Flood Insurance Study, Maricopa County and Incorporated Areas, Volume 1 of 12, Sept. 30, 1995

Sorry, no records are found. Try a different input or database

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The results for searching **tolleson** using **Match All Words Intelligently** are as follows:

FLOODING PHOTO: Photo With Detailed Descriptions
Photo Without Detailed Descriptions

4. **STORM DATE:** September/12/1966
LOCATION: Top Photo: 83rd Avenue (Ave.) & Roosevelt Irrigation District Canal, Tolleson, Maricopa County, T1N R1E SEC11; Bottom Photo: 92nd Avenue (Ave.) & Van Buren Street (St.), Tolleson, Maricopa County, T1N R1E SEC3 & SEC4
PHOTO DESCRIPTIONS: Top Photo: Flood across RID Canal at 83rd Avenue (Ave.). Bottom Photo: View of highway patrol fording the intersection of 92nd Avenue (Ave.) and Van Buren Street (St.).
PHOTO SOURCE: Flooding Event 1966-1970
FCD LIBRARY CALL #: Call Number: 007.105.1
FLOODING PHOTO: Photo With Detailed Descriptions
Photo Without Detailed Descriptions

5. **STORM DATE:** September/12/1966
LOCATION: Tolleson, Maricopa County, T1N R1E
PHOTO DESCRIPTIONS: Top Photo: View of flooded rural area near Tolleson. Lateral was unable to carry the water and spilling it into the roadway. Bottom Photo: RID system east of Tolleson.
PHOTO SOURCE: Flooding Event 1966-1970
FCD LIBRARY CALL #: Call Number: 007.105.1
FLOODING PHOTO: Photo With Detailed Descriptions
Photo Without Detailed Descriptions

The results for searching **tolleson** using **Match All Words Intelligently** in Regulatory Division ADMS & Floodplain workmap flat file cabinets are as follows:

Sorry, no records are found. Try a different input or database

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The results for searching **tolleson** using **Match All Words Intelligently** in Regulatory Division ADMS & Floodplain mylar flat file cabinets are as follows:

1. **DRAWER:** 303
TITLE: TOLLESON AREA FLOODPLAIN DELINEATION STUDY
CONSULTANT: DIBBLE & ASSOCIATES
YEAR OF STUDY: 1999

YEAR OF AERIAL PHOTO:	
FCDMC CONTRACT NUMBER:	FCD 95-26
DOCUMENT LOCATION:	Flat File Cabinet in Regulatory Division (by Cindy Lu Mayo's cubicle)

The results for searching **tolleson** using **Match All Words Intelligently** in Floodplain Branch's on-going floodplain insurance studies are as follows:

1. **CONTRACT TITLE:** Tolleson Area Floodplain Delineation Study
   CONTRACT NUMBER: 95-26
   PROJECT MANAGER: Tim Murphy
   NOTICE-TO-PROCEED DATE:
   COMPLETION DATE: 2/23/00
   CONSULTANT: Dibble & Associates with JE Fuller
   MILES OF FLOODPLAIN DELINEATION: 8
   STATUS: 00-09-009P The LOMR is dated 2-23-00. There was one mistake on the LOMRs that needs to be corrected. The GIS group is working on adding the study results to the District's GIS system.

The results for searching **tolleson** using **Match All Words Intelligently** in Hydrology and Hydraulics Branch's projects:

Sorry, no records are found. Try a different input or database

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The results for searching **tolleson** using **Match All Words Intelligently** in Engineering Division Libraries are as follows:

1. **CALL NUMBER:** 007.105.1
   TITLE: Newspaper Articles and Photos : Flooding Events 1966-70, Scottsdale, Tolleson, Agua Fria, Apache Junction, Arizona Canal, Buckeye, Cave Creek, Cave Creek Dam, Dreamy Draw Dam, Gila River, Granite Reef Dam, Harquahala,

		Guadalupe, New River, New River Dam,
	AUTHOR:	Various Newspaper Articles and Flood Control District of Maricopa County Photos
	DATE:	1970
	DOCUMENT LOCATION:	Engineering Division Main Library by Mona Merkevicius' cubicle
2.	**CALL NUMBER:**	802.001
	TITLE:	Flood of June 22, 1972 : Newspaper Clippings, Photos and Other Reports Including Indian Bend Wash, Dreamy Draw, Arizona Canal, Along Central Avenue in Phoenix, Queen Creek, Tolleson
	AUTHOR:	Flood Control District of Maricopa County-FCD
	DATE:	1972
	DOCUMENT LOCATION:	Engineering Division Main Library by Mona Merkevicius' cubicle
3.	**CALL NUMBER:**	A650.912
	TITLE:	Middle Gila River Watershed Management Study Phase I, Assessment Study
	AUTHOR:	Greeley and Hansen for the Multi-City Subregional Operating Group and the City of Tolleson
	DATE:	1998
	DOCUMENT LOCATION:	Engineering Division Main Library by Mona Merkevicius' cubicle
4.	**CALL NUMBER:**	A262.014.001
	TITLE:	Floodplain Delineation of the Tolleson Area, Hydrology Report
	AUTHOR:	Dibble and Assoc. for Flood Control District of Maricopa County-FCD
	DATE:	1999
	DOCUMENT LOCATION:	Engineering Division Main Library by Mona Merkevicius' cubicle
5.	**CALL NUMBER:**	A262.014.002
	TITLE:	Floodplain Delineation of the Tolleson Area, Final Report and Technical Data Notebook
	AUTHOR:	Dibble and Assoc.; JE Fuller/Hydrology and Geomorphology, Inc. for Flood Control District of Maricopa County-FCD
	DATE:	1999
	DOCUMENT LOCATION:	Engineering Division Main Library by Mona Merkevicius' cubicle
6.	**CALL NUMBER:**	A029.901
	TITLE:	Candidate Assessment Report, Tolleson - SPRR and Van

	Buren Street at 91st Avenue
AUTHOR:	Primatech Eng. and Consult. for Flood Control District of Maricopa County-FCD; City of Tolleson
DATE:	1999
DOCUMENT LOCATION:	Engineering Division Main Library by Mona Merkevicius' cubicle

7.	**CALL NUMBER:**	A650.913
	TITLE:	Middle Gila River Watershed Management Study Phase 2, GIS Database Update and Functionality Enhancement
	AUTHOR:	Greeley and Hansen for City of Glendale, City of Mesa; City of Tempe; City of Phoenix; City of Scottsdale; City of Tolleson
	DATE:	2001
	DOCUMENT LOCATION:	Engineering Division Main Library by Mona Merkevicius' cubicle

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The results for searching **tolleson** using **Match All Words Intelligently** in Engineering Division Staff are as follows:

Sorry, no records are found. Try a different input or database

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The results for searching **tolleson** using **Match All Words Intelligently** are as follows:

1.	**TOWNSHIP RANGE:**	T01SR01E
	QUAD NAME:	TOLLESON
	GRID FILE NAME:	grd2279
	GRID FILE:	Right-click Here to Save Target As... (for WMS use)
	GRID FILES FOR MORE AREAS:	Click Here (for WMS use)

2.	**TOWNSHIP RANGE:**	T01SR01W
	QUAD NAME:	TOLLESON
	GRID FILE NAME:	grd2279
	GRID FILE:	Right-click Here to Save Target As... (for WMS use)
	GRID FILES FOR MORE AREAS:	Click Here (for WMS use)

3.	**TOWNSHIP RANGE:**	T01NR01W
	QUAD NAME:	TOLLESON
	GRID FILE NAME:	grd2279
	GRID FILE:	Right-click Here to Save Target As... (for WMS use)

GRID FILES FOR MORE AREAS: Click Here (for WMS use)

4. **TOWNSHIP RANGE:** T01NR01E
   QUAD NAME: TOLLESON
   GRID FILE NAME: grd2279
   GRID FILE: Right-click Here to Save Target As... (for WMS use)
   GRID FILES FOR MORE AREAS: Click Here (for WMS use)

5. **TOWNSHIP RANGE:** T02NR01W
   QUAD NAME: TOLLESON
   GRID FILE NAME: grd2279
   GRID FILE: Right-click Here to Save Target As... (for WMS use)
   GRID FILES FOR MORE AREAS: Click Here (for WMS use)

6. **TOWNSHIP RANGE:** T02NR01E
   QUAD NAME: TOLLESON
   GRID FILE NAME: grd2279
   GRID FILE: Right-click Here to Save Target As... (for WMS use)
   GRID FILES FOR MORE AREAS: Click Here (for WMS use)

The results for searching **tolleson** using **Match All Words Intelligently** in Engineering Division Flat File are as follows:

Sorry, no records are found. Try a different input or database

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