

June 15, 1994

Mr. John Curtin, P.E.
COA Hydrology
P.O. Box 1293
Albuquerque, NM 87103

RE: Parkwest Unit 1 Drainage

Dear Mr. Curtin:

The enclosed tables reflect the finalized hydraulic calculations for Parkwest Unit 1. Please replace "Table 2" from the "Drainage Report for Parkwest Subdivision" with the current table enclosed. Note that the street capacity for the "SE SPUF" has been added since it collects the flow from the internal loop and conveys the flow to the Unser storm drain. Meadowbrook Ave. at Parkwest Drive has also been changed to reflect the steeper street intersection. All of the other streets remain the same.

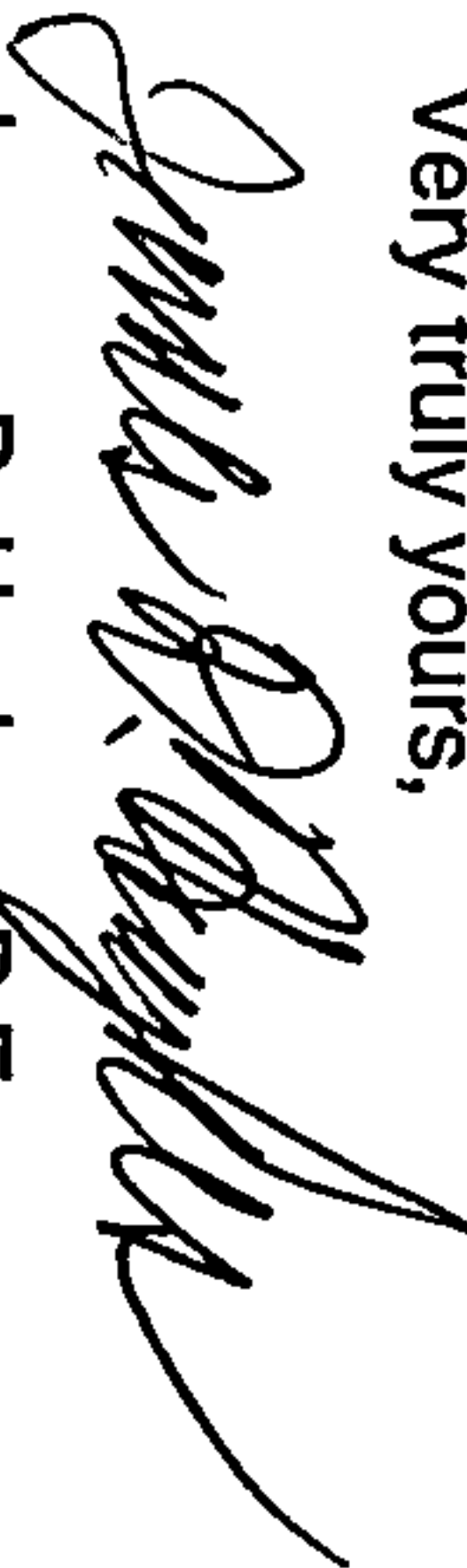
Upon final analysis of the 98th Street storm drain, it was determined that the existing structure does not have capacity for the 64 cfs from this site as stated by the "Drainage Analysis Report SAD No. 215". Therefore, the 27.31 cfs from Meadowbrook Ave. shall be collected in a storm drain and conveyed to the Ladera Channel. The remaining 30.98 cfs from this site will be collected at the existing "Triple D" inlet just north of the 98th Street and Unser Boulevard intersection. This will decrease the existing flow by 5 cfs and maintain the existing capacity of the Unser storm drain.

The "Triple D" inlet at Unser was checked using both weir and orifice control conditions. The capacity of the inlet is limited by weir flow measured along the parameter of three sides of the grate. The head is 0.89' above the top of the grates. This depth has been used to set the invert of 7-8" x 40" emergency overflow openings in the boundary wall. The curb around this basin has been set to contain the emergency overflow pool within the curb. (See Parkwest Subdivision Unit 1 Storm drain Details Sheet 15 of 15 for structural details and capacity calculations).

A side weir along Windward Drive will discharge 27.66 cfs from this street when Unit 3 is constructed into the Ladera Channel. A concrete apron from the curb along the north edge of Windward Drive will convey flow over a retaining wall along the Ladera Channel right-of-way. This apron will extend across the AMAFCA Service Road to the concrete channel. HEC-12 was used to determine the length required by analyzing the weir as a "curb inlet on a continuous grade" (Windward Side Weir Calculations are enclosed).

Please attach the enclosed tables to the Drainage Report for Parkwest Subdivision. If you have any further questions or comments, please contact me at 897-0000.

Very truly yours,


James D. Hughes, P.E.
Vice President

JUN 16 1994

JDH:ml
enclosures:

Table 2 (Revised)
Hydraulic Grade Line Computations
Windward Side Weir Calculations

SURVEYING
LAND PLANNING
CIVIL ENGINEERING
DEVELOPMENT CONSULTANTS

cc: John Kelly, AMAFCA
Larry Collins, Sivage Thomas Homes, Inc.

CSC#143-18-036/June-025.Let

55

MEADOWBROOK AVE.
INLET CAPACITY CALCULATIONS

$Q_{100} = 27.31$ cfs
 $S_o = 1.50\%$

INLETS 1 & 2

$D_n = 0.46'$

INLET CAPACITY = 7.6 cfs Each (DPM PLATE 22.3 PAGE 75)

INLETS 3 & 4

$D_n = 0.40'$

INLET CAPACITY = 6.1 cfs EACH (DPM PLATE 22.3 PAGE 75)

USE 2- "TYPE A" DOUBLE GRATE SINGLE THROUGHT AND 2 - "TYPE DOUBLE C" INLETS

143-22-066 - 143-22AH.REP

Parkwest Drive
Storm Drain

HYDRAULIC GRADE LINE COMPUTATIONS

STRUCTURE	DIAM (in)	Q	AREA	VEL	K	Sf (%)	LENGTH	ANGLE (degrees)	Hf	Hb	Hl	Hmh	Ht	TOTAL	HGL (dn)	HGL (up)	PIPE(dn)		PIPE(up)		HV	EGL (dn)	EGL (up)	JUNCTION			
														LOSSES			INVERT	SOFFIT	INVERT	SOFFIT				DIA 3	ANGLE		
Pipe Outfall														0.00		15.50			13.00	15.50			15.98				
	30	27.31	4.91	5.56	410.17	0.44	10.04		0.04					0.04							0.48						
MH D								45.00		0.07	0.00	0.02	0.00	0.09	15.65	15.85	13.15	15.65	13.35	15.85		16.13	16.33				
	30	27.31	4.91	5.56	410.17	0.44	342.28		1.52					1.52							0.48						
MH C								0.00		0.00	0.00	0.02	0.00	0.02	17.56	17.66	15.06	17.56	15.16	17.66		18.04	18.14				
	30	27.31	4.91	5.56	410.17	0.44	226.96		1.01					1.01							0.48						
MH B								45.00		0.07	0.00	0.02	0.14	0.23	18.80	19.00	16.30	18.80	17.00	19.00		19.28	20.17				
	24	27.31	3.14	8.69	226.22	1.46	38.56		0.56					0.56							1.17						
MH A								0.00		0.00	0.47	0.00	0.00	0.47	19.56	20.91	17.19	19.19	17.29	19.29		20.74	21.20	24.00	45.00		
	24	13.66	3.14	4.35	226.22	0.36	41.53		0.15					0.15							0.29						
INLET # 3								45.00		0.04	0.00	0.01	0.00	0.06	21.06	22.23	17.50	19.50	20.23	22.23		21.35	22.32				
	24	7.60	3.14	2.42	226.22	0.11	12.00		0.01					0.01							0.09						
INLET #1								0.00		0.00	0.00	0.00	0.00	0.00	22.35	22.45	20.35	22.35				22.44	22.45				

MH A								0.00		0.00	0.47	0.00	0.00	0.47	19.56	20.91	17.19	19.19	17.29	19.29		20.74	21.20	24.00	45.00		
	24	13.66	3.14	4.35	226.22	0.36	41.53		0.15					0.15							0.29						
INLET # 4								0.00		0.00	0.00	0.01	0.00	0.01	21.41	22.23	19.41	21.41	20.23	22.23		21.70	22.32				
	24	7.60	3.14	2.42	226.22	0.11	12.00		0.01					0.01							0.09						
INLET #2								0.00		0.00	0.00	0.00	0.00	0.00	22.35	22.45	20.35	22.35				22.44	22.45				

WINDWARD SIDE WEIR CALCULATIONS

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[ 1 ] INLET NUMBER
[ 2 ] CURB INLET ON A CONTINUOUS GRADE
[ 3 ] STATION
[ 4 ] PEAK DISCHARGE IS 27.66 (cfs)
[ 7 ] APPROACH GUTTER ' N' VALUE .017
[ 8 ] GUTTER LONGITUDINAL SLOPE .0325 (ft/ft)
[ 9 ] PAVEMENT CROSS SLOPE .02 (ft/ft)
[10 ] WIDTH OF GUTTER IS 2 (ft)
[11 ] GUTTER CROSS SLOPE IS .0625 (ft/ft)
[12 ] WIDTH OF LOCAL DEPRESSION IS 2 (ft.)
[13 ] AMOUNT OF LOCAL DEPRESSION IS 2.4 (in.)
  
```

Enter number of item you want to change or
enter a 0 if all items are ok.?

```

=====
INLET NUMBER          LENGTH 4.0          STATION
=====
  
```

TOTAL PEAK DISCHARGE = 27.66 (cfs)

GUTTER SLOPE = 0.0325 FT/FT

PAVEMENT CROSS SLOPE = 0.0200 FT/FT

SPREAD	W	W/T	SW	SW/SX	EO	a	S'W	SE
20.18	2.0	0.10	0.0625	3.1	0.28	3.4	0.142	0.059

XXXXXXXXXX CURB INLET ON A CONTINUOUS GRADE XXXXXXXXXX
 REQUIRED LENGTH (ft) = 54.4
 CFS INTERCEPTED= 3.55
 CFS CARRYOVER= 24.11

JUL 29 1994

community
sciences
corporation

April 21, 1994

Mr. John Curtin
City of Albuquerque
P.O. Box 1293
Albuquerque, NM 87103

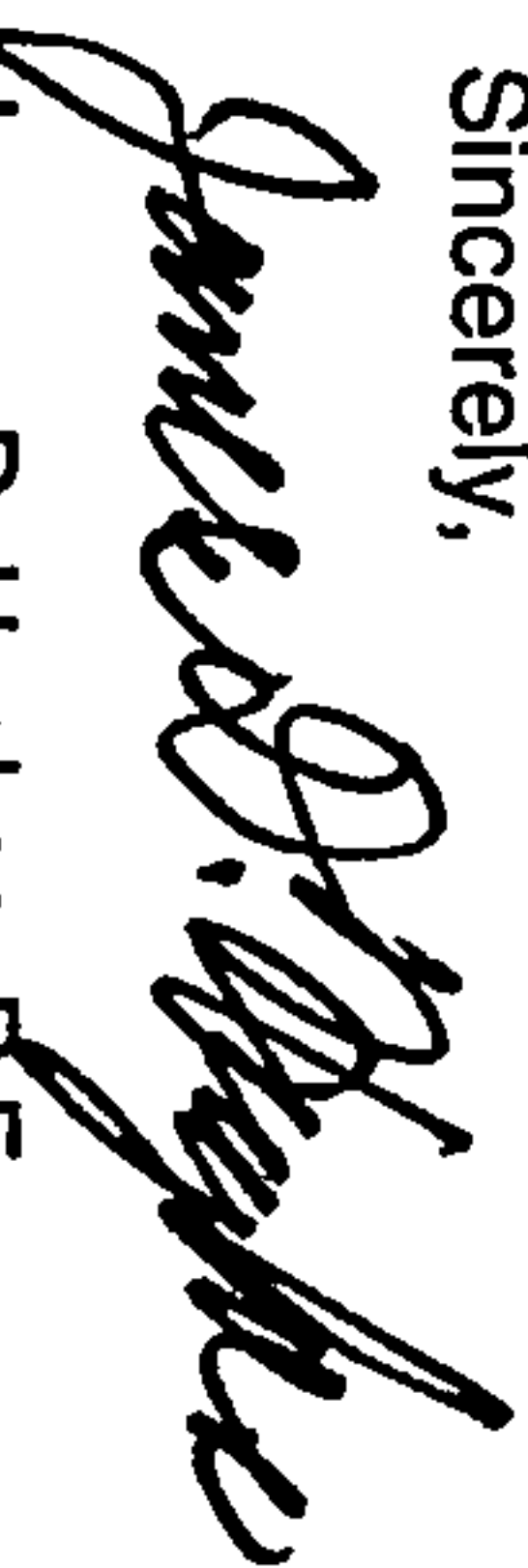
RE: Revised Drainage Report for Parkwest Subdivision Map #G9.

Dear Mr. Curtin,

The Drainage Report for Parkwest Subdivision, submitted February 25, 1994 has been revised to include both AMAFCA and the City of Albuquerque's comments. The comments have been addressed previously by one amendment, a letter to AMAFCA, and one to the City of Albuquerque. This revised report combines all of this correspondence together as a single volume.

If you have any further comments concerning the drainage of Parkwest Subdivision, please call me at 897-0000.

Sincerely,


James D. Hughes, P.E.

enc: Revised Drainage Report

SURVEYING
LAND PLANNING
CIVIL ENGINEERING
DEVELOPMENT CONSULTANTS

P.O. Box 1328
Corrales, New Mexico 87048
Tel (505) 897-0000
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COMMUNITY SCIENCES CORPORATION
P.O. Box 1328
CORRALES, NEW MEXICO 87048-1328

LETTER OF TRANSMITTAL

(505) 897-0000 • FAX (505) 898-2305

TO City of Albuquerque Hydrology

DATE	4-27-94	JOB NO.	143-18-036
ATTENTION	John Curtin		

RE: Revised Drainage Report for Parkwest Sub.

> WE ARE SENDING YOU ☒ Attached ☐ Under separate cover via _____ the following items:

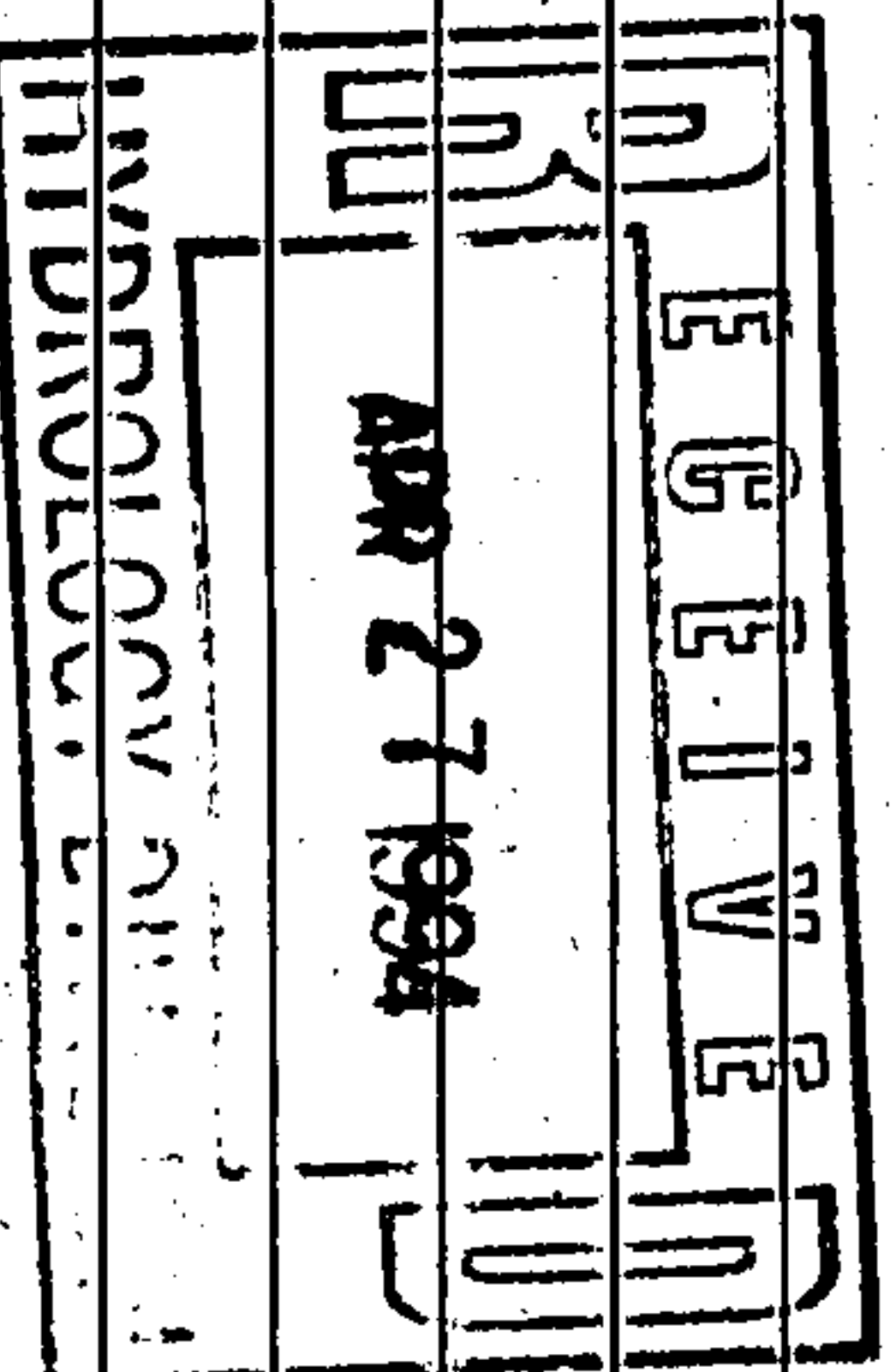
- ☐ Shop drawings ☐ Prints ☐ Plans ☐ Samples ☐ Specifications
☐ Copy of letter ☐ Change order ☐ _____

COPIES	DATE	NO.	DESCRIPTION
1	4-21-94		Revised Drainage Report for Parkwest Subdivision (Map #G9)

THESE ARE TRANSMITTED as checked below:

- ☐ For approval ☐ Approved as submitted ☐ Resubmit _____ copies for approval
☐ For your use ☐ Approved as noted ☐ Submit _____ copies for distribution
> ☐ As requested ☐ Returned for corrections ☐ Return _____ corrected prints
☐ For review and comment ☐ _____
☐ FOR BIDS DUE _____ 19____ ☐ PRINTS RETURNED AFTER LOAN TO US

REMARKS Please replace the Drainage report dated February 24, 1994 with this revised report. This revised report has been submitted to AMAFCA.



COPY TO AMAFCA, SIH, Files

DRAINAGE INFORMATION SHEET

PROJECT TITLE: PARKWEST SUBDIVISION

ZONE ATLAS/DRNG. FILE #: G9

LEGAL DESCRIPTION: TRACTS I, II-A, II-B, III, AND IV LAURELWOOD II SUBDIVISION

PROPERTY ADDRESS: UNSER BLULEVARD AND 98TH STREET

ENGINEERING FIRM: Community Sciences Corporation CONTACT: JAMES D. HUGHES, P.E.

ADDRESS: P.O. Box 1328, Corrales, N. M. 87048 PHONE: 897-0000

OWNER: SIVAGE THOMAS HOMES CONTACT: LARRY COLLINS

ADDRESS: 5141 MASTHEAD NE PHONE: 821-3511

ARCHITECT: N/A CONTACT: _____

ADDRESS: _____ PHONE: _____

SURVEYOR: N/A CONTACT: _____

ADDRESS: _____ PHONE: _____

CONTRACTOR: N/A CONTACT: _____

ADDRESS: _____ PHONE: _____

PRE-DESIGN MEETING:

 YES

X NO

DRB NO. 93-303

EPC NO. _____

PROJ. NO. _____

TYPE OF SUBMITTAL:

CHECK TYPE OF APPROVAL SOUGHT:

X DRAINAGE REPORT

 SKETCH PLAT APPROVAL

 DRAINAGE PLAN

X PRELIMINARY PLAT APPROVAL

X CONCEPTUAL GRADING AND DRAINAGE PLAN

 SITE DEVELOPMENT PLAN APPROVAL

 GRADING PLAN

 FINAL PLAT APPROVAL

 EROSION CONTROL PLAN

 BUILDING PERMIT APPROVAL

 ENGINEER'S CERTIFICATION

 FOUNDATION PERMIT APPROVAL

 CERTIFICATE OF OCCUPANCY APPROVAL

 ROUGH GRADING PERMIT APPROVAL

 GRADING/PAVING PERMIT APPROVAL

 OTHER _____ (SPECIFY)

DATE SUBMITTED: _____

BY: _____

SCALE: 1"=750' +/- VICINITY MAP ZONE ATLAS G-9/H-9

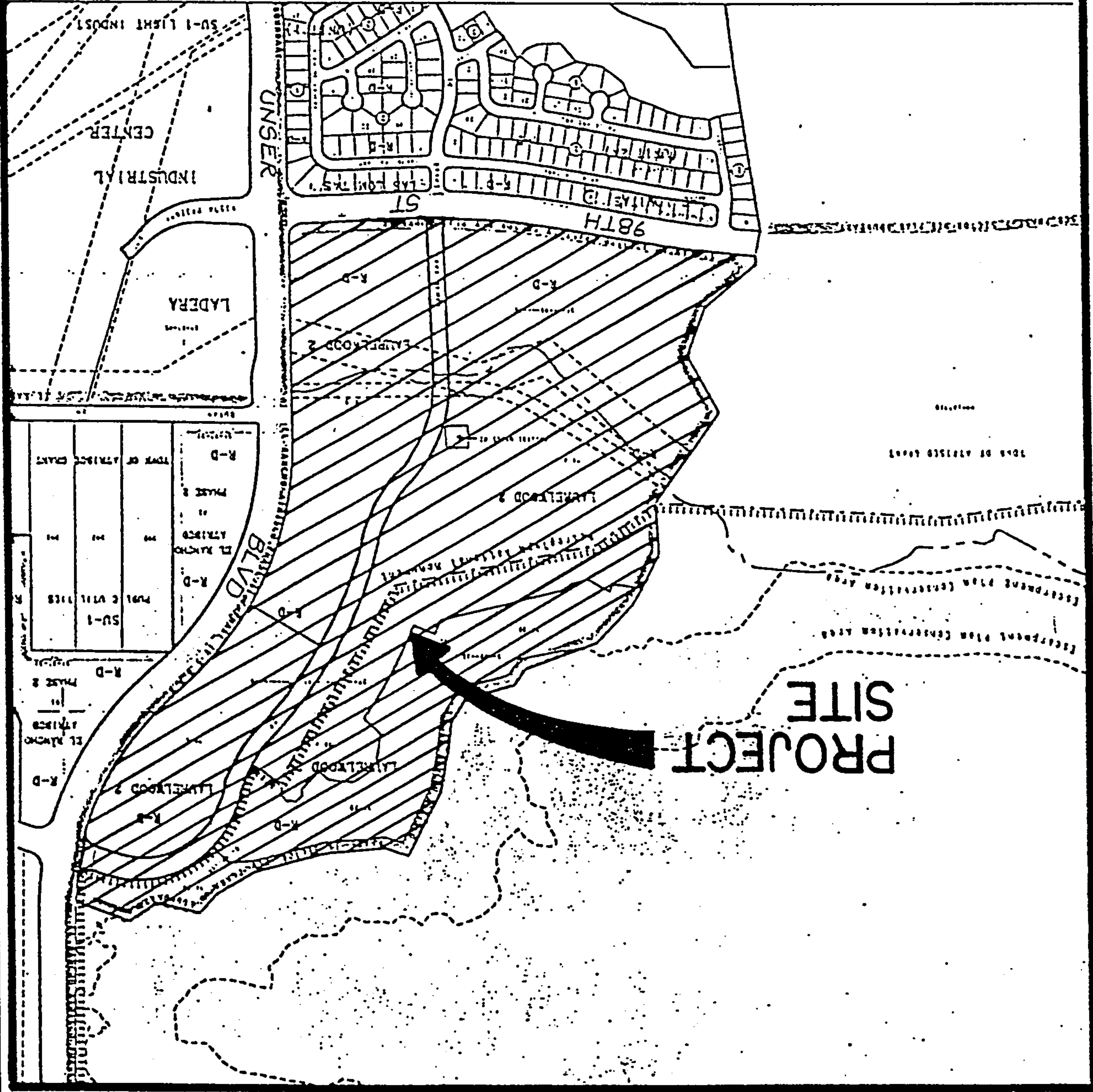


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I. PURPOSE AND SCOPE

Sivage Thomas Homes, Incorporated is currently planning for the development of Parkwest Subdivision. The proposed development consists of approximately 95 acres and is to be subdivided into 422 lots including future Units 2 and 4 shown on the Preliminary Grading and Drainage Plan as Tract B. These future units (Tract B) have been included in the Preliminary Plat and Sheets 8A and 8B have been added for Preliminary Grading and Drainage in pockets at the end of this report.

This report presents an overall Drainage Management and Conceptual Grading Plan for approval by the City of Albuquerque in order that subsequent subdivision and development may commence.

II. SITE DESCRIPTION AND HISTORY

This project is located in Tracts I, II-A, II-B, III, and IV of the previously platted Laurelwood II Subdivision. It is located north of 98th Street, west of Unser Boulevard, and abuts the Petroglyph National Monument and a portion of unplatted land owned by Westland Development to the west (See Vicinity Map at the front of this report).

The Ladera Arroyo contains the existing floodplain which bisects the site (See FEMA Floodplain Map in Appendix C). A concrete channel shall be constructed through the site to convey the flow to the existing Ladera Diversion Channel east of Unser Boulevard. East of Unser Blvd., the AMAFCA maintained channel is constructed with an earth bottom and gabbion rip-rapping. Off-site flows entering the subdivision will be diverted either to the Ladera Channel or the Ouray Road Storm Drain (See Off-site Drainage).

The Ladera Channel is located on a ridgetline through the site. South of this channel the ground slopes from northwest to southeast and on the north side of the channel it slopes from west to east. The soil classification varies across the site consisting of Blueprint loamy fine sand (BCC) Blueprint-Kokan association (BKD), and Pajarito loamy fine sand (PAC). The off-site watersheds also contain Rock outcrop-Akela complex (RBE), Kokan-Rock outcrop association (KR), Akela-Rock outcrop complex (AKC), and Alameda Sandy loam (AMB) (See SCS Soil Classification in Appendix C). These classifications are according to the Soil Survey of Bernalillo County and Parts of Sandoval and Valencia Counties, New Mexico, USSCS, 1977.

The site has been previously platted as Laurelwood II Subdivision and has been studied by the following drainage reports:

1. Ladera and West Bluff Watersheds, February 1991.
2. Northwest Mesa Drainage Management Plan, Scanlon & Associates.
3. "Final Drainage Analysis Report" Unser Boulevard from Ouray to San Antonio near San Antonio Arroyo, Greiner Engineering, November 1988, Vol. 2.
4. Drainage Analysis Report Special Assessment District No. 215 Unser Boulevard and 98th St., Greiner Engineering.
5. Final Ladera Dam #15 Hydrology and Sediment Issues, Bohannan-Houston Inc., January 1993.
6. Northwest Mesa Escarpment Plan.

These reports were used to establish the capacity of the 98th St. and Ouray Road storm drains as well as the Ladera channel at Unser Boulevard. Refer to "ON-SITE DRAINAGE" and "OFF-SITE DRAINAGE" for capacities of each of these structures. Drainage basins L14, L31, L30.2,

and 130.21 shall be conveyed through the site via the proposed Ladera Channel; while basins 132.11, 133.51, 133.52, 133.53, 133.54, 133.3, and 133.4 enter the Ouray Storm Drain (See OFF-SITE DRAINAGE BASINS in Appendix C).

III. DESIGN CRITERIA

A. Flood Control Regulations

The drainage plan presented in this report has been designed to comply with AMAFCA resolution 80-15, which requires that proposed land development projects be designed such that no flooding of private properties will occur during any storm up to and including the 100-year frequency event. Additionally, this drainage plan has been designed to comply with current "City of Albuquerque Drainage Ordinance" and Chapter 22 of the Development Process Manual (DPM), and subsequently adopted general policies of the City of Albuquerque.

1. 100-year storm

- a. Stormwater flow depth not to exceed the top of curb in any street.
- b. Jump depth to be contained within right-of-way.

2. 10-year storm:

- a. Local street - velocity times depth less than 6.5
- b. Arterial streets:

- i. Flow not to exceed a depth of 0.50
- ii. Velocity times depth less than 6.5
- iii. One driving lane in each direction free of stormwater

B. Engineering Parameters

In accordance with AMAFCA criteria, all hydrological analysis is based on the 100-year frequency, 6-hour duration storm, as represented in Section 22.2, Hydrology, of the "Development Process Manual, Volume 2, Design Criteria for the City of Albuquerque, New Mexico, January 1993".

Ten-year, 6-hour values were also used for subcatchments, in accordance with City drainage policies regarding street flow.

The eighteen rainfalls pertinent to the study are as follows:

	2-Year	5-Year	10-Year	25-Year	50-Year	100-Year
One-Hour	0.81"	1.06"	1.25"	1.50"	1.68"	1.87"
Six-Hour	0.95"	1.25"	1.47"	1.76"	1.98"	2.20"
Twenty-Four-Hour	1.15"	1.51"	1.77"	2.13"	2.39"	2.66"

IV. COMPUTATIONAL PROCEDURES

The analysis approach follows standard engineering practice. Key points of confluence were selected and the associated individual and aggregate contributing basins were subsequently defined.

Hydrological computations were accomplished by means of the September 1993 version of AHYMO Computer Program as developed by AMAFCA. The input parameters and resulting flows for the basins are summarized on Table 1. Summary and detailed AHYMO printouts are contained in Appendix A.

Times of concentration were estimated using the Upland Method and then converted to times to peak (Lg), in accordance with the above referenced Section 22.2 which also establishes the minimum time of concentration as 12 minutes.

Flow characteristics for conveyance swales, channels, and streets were analyzed based on the Manning equation for uniform flow. Streets are assumed to have a 2% cross slope from lip of gutter to crown and a curb and gutter per City of Albuquerque Standard details. Finished grade at the right-of-way is 0.33' above top of curb.

V. OFF-SITE DRAINAGE

Existing Conditions.

The "Ladera and West Bluff Watersheds" Drainage Basin Map (See Appendix C) shows the existing basins as they were referenced in each of the referenced reports. Basins 130.1 and 130.2 have a southern boundary of 98th Street while Unser Boulevard makes the eastern boundary of basins 130.1, 131, 132.1, 133.4, and 133.5. Basin 130.1 drains to the 98th Street storm drain with an allowable discharge of 64.7 cfs according to the Final Ladera Dam Report (See Table 1 and Appendix C Table A-2). The Unser Boulevard and 98th Street report on Page 14 also in Appendix C, states that the 98th Street storm drain is designed for this flow. A "Triple D" inlet has been constructed to intercept the undeveloped flows from this area north of 98th Street at the Unser Blvd. right-of-way. Basins 133.3, 133.4, 133.5 and 132.1 flow to the Ouray Storm Drain with a capacity of 265 cfs at the intersection of Ouray and Unser according to the as-builts. The Ladera Channel east of Unser was designed for a flow of 750 cfs according to the SAD 215 report which is greater than the (687 cfs) future developed flow, including 10% bulking, exiting the subdivision at the Unser crossing.

Proposed and Future Conditions.

Minor changes to the "Ladera and West Bluff Watersheds" will occur as a result of the development (See OFF-SITE DRAINAGE BASINS in Appendix C). Basin 130.2 has been extended east to the west boundary of the subdivision where its flows will be diverted north to the Ladera Channel along a floodwall. Future developed flows in this basin may be collected in either the Ladera or Mirehaven Arroyo's. Basin 130.21 is added to on-site street flow until future development. With future off-site development, it is anticipated that it will be diverted and/or limited to the existing flow of 7 cfs. The areas of Basins 131, 132.1, and 133.5 have been reduced to account for only off-site flows. Basin 131 has a 350 foot wide developable strip along its eastern edge which has been accounted for in the AHYMO future conditions. This area and Basin 130.2 are the only developable lands according to the Northwest Mesa Escarpment Plan. The "land factors" (A=3.91%, B=34.7%, C=4.22%, and D=57.80%) were duplicated from Table A-3 of the Final Ladera Dam Report for developed conditions in Basin 130.2. These same densities were used for 350 foot strip in Basin 131 to produce "land factors" for future developed conditions in this basin (A=52.70%, B=5.20%, C=39.77%, D=2.33%).

A desiltation/detention pond shall be constructed on the west edge of Lava Bluff Drive and east side of Basin 133.52 (See sheet 7 in a pocket at the end of this report). This pond will collect street flows from Lava Bluff and off-site basins 132.11, 133.51, and 133.52. A concrete channel along the west boundary line shall be constructed to collect the flow from Basins 132.11 and 133.51.

The channel will have a higher sediment transport capacity than is needed to convey the incoming sediment to the pond. The pond shall be designed to store two average annuals and one 100-year sediment yields plus detention for the 24 hour-100 year storm runoff in order to provide free discharge for Future Units 2 and 4. Units 2 and 4 have been analyzed at the same development density as the rest of the site in order to size this pond and maintain the existing Ouray Storm Drain capacity. Basins 133.53 and 133.54 sheet flow over the top of curb and are transported in the street to catch basins. A special inlet structure for the concentrated flow in Basin 153.54 shall be designed to maintain the sediment transport into the Ouray Storm Drain. Basins 133.3 and 133.4 have already been intercepted by the Ouray Storm Drain along with the construction of Unser Boulevard.

VI. ON-SITE DRAINAGE

98th Street Storm Drain.

An existing 24 inch storm drain in 98th Street connects to a 48 inch one in Unser Boulevard and discharges to the existing Ladera Diversion Channel east of Unser. This storm drain has been designed for a developed flow of 64.7 cfs (See OFF-SITE DRAINAGE Existing Conditions) from this site. An existing "triple grate Type D" catch basin located at the Unser right-of-way (See Sheet 2 in a pocket at the end of this report) can be used to intercept Basins 108, 109, and 110 (31 cfs). The 24 inch storm drain shall be extended from 98th Street to the intersection of Parkwest Drive and Meadowbrook Avenue where it will intercept Basins 105 and 106 (27.3 cfs) for a total of 58.3 cfs which is less than the allowable discharge of 64.7 cfs to this storm drain.

Ladera Channel.

The Ladera Channel is designed to collect the flows from Basins 101 through 104, 107, 111 through 114, and 116 through 120. These on-site flows are added to the off-site flows and conveyed through the subdivision. Sediment bulking has been added to the off-site flows for the channel design. Flows for Basins 130.2, 130.21 and 131 were compared between undeveloped with sediment bulking and developed to see which produced the greater flow. Since the developed flow is greater than undeveloped plus bulking, the channel was designed considering Basins 130.21, 130.2, and the 350 foot strip of 131 as developed as explained in OFF-SITE DRAINAGE.

The on-site portion of the concrete channel is designed to contain the 100-year design flow (687 cfs including sediment bulking), in accordance with the requirements of both the City of Albuquerque Development Process Manual and the FEMA regulations. The channel depth will contain all of the following three criteria: 1.) Normal depth (Super Critical Plus Freeboard, 2.) Critical depth plus freeboard, and 3.) The normal depth energy grade line. The third criteria is applied in order to account for roller wave criteria. The Freeboard is calculated using the DPM criteria. Where the design channel depth results in a top of channel elevation which is higher than the proposed adjacent grade, the freeboard is increased in accordance with FEMA's leave criteria to a minimum of 3 feet. Manning's 'n' value for the channel was increased to 0.023 to account for the sediment being transported along the bed of the channel. See the letter dated April 1, 1994 to Mr. John Curtin, City of Albuquerque, Item 2 in Appendix D for the removal of the energy grade line criteria.

At the upper end of the Ladera Channel a temporary soil cement transition will be constructed to transition between the upstream natural flood plain and the on-site concrete channel. It will also be designed to prevent flanking that might result from lateral migration of the upstream natural channel (See Transition Detail in Appendix C).

Off-site Basin 130.21 enters Basin 101 and then is combined with Basins 102 and 103 in 104 (See Preliminary Grading and Drainage Plan in the pockets at the end of this report). A 24 inch storm drain collects 20 cfs at Sta. 18 + 00 and takes it to the Ladera Channel. The remainder flows in the street toward Parkwest Drive. A weir on the north edge of the Windward Drive will discharge the flow into the Ladera Channel prior to reaching the intersection of Parkwest Avenue. Flows from Basins 112, 113, 114, 116.1, 116.2, and 117 are conveyed by street flow to the channel. At the Parkwest Drive bridge, these flows combine with the Basin 107 flow and enter the channel. Basin 117 contains a well site and land which may be purchased by Albuquerque Public Schools, therefore, "land factors" of $A = 0.0\%$, $B = 25\%$, $C = 25\%$, and $D = 50\%$ were used for this basin. If this site is not purchased by the school, it will be dedicated as park and therefore, the hydrology is conservative. A 10' concrete rundown is proposed to convey surface flows from Basins 118, 119 and 120 to the Ladera Channel.

Ouray Storm Drain.

Tract B (Basin 124) of the Preliminary Grading and Drainage Plan has been considered fully developed with free discharge to the Ouray Storm Drain for the future development of Units 2 and 4. In order to maintain the 265 cfs capacity of the Ouray Storm Drain a disiltation/detention pond shall be constructed on the west side of Lava Bluff Drive. This single pond will provide for two average annuals and one 100-year storm sediment volumes and detention of the off-site drainage. It will also contain the developed flows from Basins 115, 121, and 122. The Ouray Storm Drain shall be extended to this pond to provide the outlet network. See Amendment #1 dated March 16, 1994 in Appendix D for further information on the development of Tract B.

VII.

EROSION CONTROL

Control of excessive soil erosion into City streets and drainage improvements during construction will be accomplished by use of temporary lot line, water-trap berms. These will be windrowed into place following mass grading operations and left in place until each home is constructed and sold. The Preliminary Grading and Drainage Plan in the pockets at the end of this report illustrates the dimensions of these berms, and they will be located along those boundaries of each lot which are common to City rights-of-way or public easements.

TABLES

TABLE 1A

TIME OF CONCENTRATION

BASIN	AREA (mi ²)	L (ft)	S %	K	V (fps)	T _c (hr)	T _c [*] (hr)
L14	0.800	9,200	2.5	2	3.16	0.81	0.840**
131	0.301	8,000	4.0	2	4.00	0.56	0.519
130.2	0.069	2,700	5.2	2	4.56	0.16 (0.2)***	0.167
133.3	0.037	1,600	13.3	2	7.29	0.06 (0.2)***	0.167
133.4	0.255	5,000	3.0	2	3.46	0.40	0.570
133.51	0.067	3,000	7.0	2	5.29	0.16 (0.2)***	

* T_c from Northwest Mesa Drainage Management Plan Future Conditions and Proposed Improvements, Scanlon and Associates, Tables 1 and 2 (See Appendix C).

** T_p = 2/3 T_c

*** Minimum T_c = 0.2 hr.

Drainage Plates from the Northwest Mesa Drainage Management Plan were checked to confirm the areas. Then, T_c was calculated based on Section 22.2 of the DPM and summarized in the above table. These values were compared with the Northwest Mesa Report and the areas with the Final Ladera Dam Report. The areas matched and the T_c's were comparable. The T_c's which were calculated above were used since they match the current city standards and the size of some basins were decreased due to this development.

TABLE I
EXISTING DEVELOPMENT CONDITIONS
(from Final Ladera Dam Report)

Basin I.D.	Area (Sq.Mi.)	LAND TREATMENT				Q ₁₀₀ (cfs)
		A	B	C	D	
130.1	0.067	58.51	8.96	14.63	17.91	64.7
130.2	0.069	74.20	5.80	20.00	0.00	54.9
L14	0.800	69.00	8.00	23.00	0.00	425.2
131	0.301	54.75	3.99	41.26	0.00	174.2
133.3	0.037	51.89	6.49	41.62	0.00	45.7
133.4	0.255	80.00	0.00	20.00	0.00	121.1
132.1	0.038	58.50	14.13	16.84	10.53	26.0
133.5	0.183	60.24	7.16	28.22	4.37	207.8

POST DEVELOPMENT CONDITIONS

Basin I.D.	Area (Sq.Mi.)	Contr. Basin	Sum Area (Sq.Mi.)	T _c (Min.)	LAND TREATMENT				INCRE- MENTAL	POST TOTAL
					A	B	C	D		
L14	0.8000			0.81	69.00	8.00	23.00	0.00	419.68	419.68
131	0.2802	L14	1.0802	0.56	54.75	3.99	41.26	0.00	157.76	513.75
130.2	0.0690	131	1.1492	0.20	74.20	5.80	20.00	0.00	71.38	527.45
130.21	0.0090			0.20	100.0	0.00	0.00	0.00	7.48	7.48
133.3	0.0370			0.20	51.89	6.49	41.62	0.00	45.50	45.50
133.4	0.2550			0.40	80.00	0.00	20.00	0.00	119.11	119.11
132.11	0.0093			0.20	30.00	20.00	50.00	0.00	11.54	
133.51	0.0670	132.11	0.0763	0.20	5.00	65.00	30.00	0.00	95.23	106.77
133.52	0.0485	133.51	0.1248	0.20	5.00	65.00	30.00	0.00	68.88	175.68
133.53	0.0025			0.20	0.00	100.0	0.00	0.00	3.26	3.26
133.54	0.0173			0.20	15.00	70.00	15.00	0.00	22.38	22.38

Developed flows to 98th Street Storm Drain = 58.29 cfs

Developed flows to Ladera Channel at Unser = 591.74 cfs unbulked

Developed flows to Ouray Storm Drain = 265 cfs max

FUTURE DEVELOPMENT CONDITIONS

Basin I.D.	Area (Sq.Mi.)	Contr. Basin	Sum Area (Sq.Mi.)	T _c (Min.)	LAND TREATMENT				INCRE- MENTAL	FUTURE TOTAL
					A	B	C	D		
131	0.2802	L14	1.0802	0.56	52.70	5.20	39.77	2.33	164.71	520.35
130.2	0.0690	131	1.1492	0.20	3.91	34.07	4.22	57.80	149.09	565.06
130.21	0.0090	130.2	1.1582	0.20	3.91	34.07	4.22	57.80	19.46	570.89

Developed flows to Ladera Channel at Unser = 634.99 cfs unbulked

- Note:
- 1) Future and Post Development Conditions are identical with the exception of these basins.
 - 2) A 10% bulking factor was added to undeveloped flows for the channel design

TABLE 2

FLOW CHARACTERISTICS AT KEY LOCATIONS

STREET	LOCATION	ST. WIDTH	% SLOPE	Q100	Dn	Dc	Vn	Vc	AREA	TOP WIDTH	EG	F	*POOL DEPTH
WEDGEWOOD CT	5+50	22 MOUNT	1.58	4.66	0.23	0.25	2.31	1.82	2.01	20.77	0.31	1.31	0.31
STONEWOOD	SADDLEBROOK	22 STAND	0.50	26.46	0.56	0.54	3.16	3.40	8.38	22.29	0.72	0.91	
GARDENBROOK	WINDWARD	25 MOUNT	2.72	11.62	0.28	0.34	3.60	2.43	3.23	25.74	0.48	1.79	0.45
MILLSTREAM	WINDWARD	25 MOUNT	2.50	12.26	0.28	0.34	3.58	2.47	3.42	25.81	0.48	1.73	0.46
SKYBROOK	LOT 41	25 MOUNT	1.00	11.41	0.32	0.33	3.60	2.42	3.23	26.15	0.48	1.81	0.44
MEADOWBROOK	13+00	25 MOUNT	2.42	8.06	0.25	0.29	3.10	2.21	2.60	23.67	0.40	1.65	0.38
STONECREEK	SUNSTONE	25 MOUNT	0.60	9.90	0.33	0.32	2.12	2.33	4.67	26.25	0.40	0.89	
FIELDSTONE	SUNSTONE	25 MOUNT	2.34	7.75	0.25	0.29	3.03	2.13	2.56	23.47	0.39	1.62	0.38
WESTBROOK	CREEKWOOD	25 MOUNT	2.00	3.67	0.20	0.23	2.38	1.81	1.54	18.10	0.29	1.44	0.29
OAKBROOK	20+00	25 MOUNT	2.24	12.47	0.29	0.35	3.49	2.48	3.57	25.87	0.48	1.66	0.47
OAKBROOK	CREEKWOOD	25 MOUNT	1.07	12.47	0.33	0.35	2.77	2.48	4.50	26.21	0.45	1.18	0.47
CREEKWOOD	OAKBROOK	25 MOUNT	2.95	9.38	0.26	0.31	3.47	2.30	2.71	24.15	0.44	1.83	0.41
LAVA BLUFF	PARKWEST	25 MOUNT	3.00	4.10	0.20	0.24	2.85	1.85	1.44	17.47	0.32	1.75	0.31
SMOKERISE	STONEWOOD	25 MOUNT	1.50	14.41	0.32	0.36	3.26	2.64	4.43	26.18	0.49	1.40	0.50
CREEKWOOD	STONEWOOD	25 MOUNT	1.04	12.05	0.32	0.34	2.71	2.46	4.44	26.19	0.44	1.16	0.46
SADDLEBROOK	STONEWOOD	25 MOUNT	2.95	12.69	0.28	0.35	3.82	2.53	3.32	25.77	0.51	1.88	0.47
PETROGLYPH	MONUMENT	25 MOUNT	2.40	9.90	0.27	0.32	3.25	2.33	3.05	25.66	0.43	1.66	0.43
ESCARPMENT	MONUMENT	25 MOUNT	4.00	9.90	0.27	0.32	3.35	2.33	2.95	25.26	0.44	1.73	0.43
CLIFFVIEW	MONUMENT	25 MOUNT	3.88	9.47	0.25	0.31	3.85	2.30	2.46	23.01	0.48	2.08	0.41
DARK MESA	5+00	25 MOUNT	5.51	6.25	0.20	0.27	3.98	2.02	1.57	18.28	0.45	2.39	0.35
DARK MESA	MONUMENT	25 MOUNT	4.00	6.25	0.21	0.27	3.53	2.02	1.77	19.45	0.41	2.06	0.35
LAVA REACH	4+47	25 MOUNT	4.43	5.82	0.21	0.27	3.60	1.97	1.62	18.55	0.41	2.15	0.35
LAVA REACH	MONUMENT	25 MOUNT	4.00	5.82	0.21	0.27	3.47	1.97	1.68	18.92	0.39	2.05	0.35
WEDGEWOODE AVE	WINDWARD DR	26 STAND	1.80	21.27	0.41	0.48	3.99	2.97	5.33	26.21	0.66	1.56	0.657
MEADOWBROOK	14+00	26 STAND	0.50	22.47	0.52	0.49	2.77	3.05	8.12	26.26	0.64	0.88	
MEADOWBROOK	PARKWEST	26 STAND	1.50	27.31	0.46	0.53	4.17	3.26	6.55	26.23	0.73	1.47	0.74
SUNSTONE	FIELDSTONE	26 STAND	0.60	23.23	0.51	0.50	2.96	3.09	7.84	26.26	0.64	0.95	
SE SPUR	SUMP	26 STAND	1.02	30.98	0.51	0.56	3.90	3.38	7.94	26.26	0.75	1.25	0.78
CREEKWOOD	PARKWEST	26 STAND	0.50	30.98	0.58	0.56	3.16	3.38	9.81	26.30	0.74	0.91	
MONUMENT	18+00	27 MOUNT	2.40	19.79	0.33	0.41	4.12	1.96	4.81	28.25	0.60	1.76	0.48
MONUMENT	N. OF SUMP	27 MOUNT	2.90	4.74	0.21	0.25	2.92	1.90	1.62	18.60	0.34	1.74	0.32
BASALT	MONUMENT	27 MOUNT	3.88	6.03	0.21	0.27	3.46	1.96	1.74	19.29	0.40	2.03	0.34
WINDWARD	18+00	28 STAND	1.00	54.61	0.63	0.71	4.74	3.97	11.53	28.32	0.98	1.31	
WINDWARD	PARKWEST	28 STAND	3.25	8.95	0.30	0.36	3.66	2.22	2.45	21.38	0.51	1.91	0.46
MONUMENT	PHASE LINE US	28 STAND	0.50	29.29	0.57	0.54	2.99	3.25	9.80	28.29	0.70	0.90	
MONUMENT	11+00	28 STAND	3.16	35.29	0.44	0.58	5.62	3.43	6.28	28.22	0.93	2.10	0.81
MONUMENT	14+00	28 STAND	1.00	49.29	0.60	0.67	4.52	3.85	10.89	28.31	0.92	1.28	0.96
MONUMENT	LAVA REACH	28 STAND	1.00	55.10	0.63	0.71	4.75	3.98	11.59	28.32	0.98	1.31	
LAVA BLUFF	PHASE LINE US	32 MOUNT	2.50	9.91	0.27	0.32	3.31	2.18	2.99	25.42	0.44	1.70	0.41
LAVA BLUFF	SUMP	32 MOUNT	2.50	12.33	0.29	0.35	3.49	2.28	3.53	27.64	0.48	1.72	0.45
LAVA BLUFF	25+50	32 MOUNT	6.54	9.13	0.22	0.31	4.64	2.16	1.97	20.53	0.56	2.64	0.40
LAVA BLUFF	OURAY	32 MOUNT	1.82	9.13	0.28	0.31	2.86	2.16	3.19	26.25	0.40	1.45	0.40
PARKWEST	STONEHAVEN	36 MOUNT	0.50	7.84	0.32	0.29	1.70	2.11	4.62	31.69	0.37	0.78	
PARKWEST	LOT 10	36 MOUNT	0.55	7.82	0.32	0.29	1.69	2.11	4.61	31.65	0.37	0.78	
PARKWEST	N. CHANNEL	36 STAND	0.55	50.66	0.66	0.65	3.47	3.59	14.61	36.34	0.85	0.96	
PARKWEST	S. CHANNEL	36 STAND	0.50	14.84	0.46	0.43	2.07	2.42	7.17	36.23	0.52	0.82	

* POOL DEPTH = Dc + (1.25Vc^2)/(2g)

The maximum discharge from the park site (Basin 117) to Parkwest Drive shall be limited to 5.7 cfs. Any additional flow due to future development shall be discharged directly to the channel.

JUL 2 9 1994

TABLE 3

MUSCLE SEDIMENT TRANSPORT

BASIN NUMBER	BASIN AREA (sq. mi.)	SOIL TYPE	PERCENT OF AREA	K	SLOPE (%)	LENGTH (ft.)	LS	C	P	WEIGHTED K	WEIGHTED LS
L14	0.8000	AKC	5	0.17	4	100	0.400	0.25	1	0.19	0.333
		RBE	20	0.10	4	200	0.528	0.25	1		
		KR	7	0.02	2	100	0.201	0.25	1		
		Amb	68	0.24	2	400	0.305	0.25	1		
		KR	30	0.02	20	150	5.000	0.25	1		
		BKD	65	0.17	7	300	1.450	0.25	1	0.12	0.955
		Amb	5	0.24	2	200	0.248	0.25	1		
131	0.2802	BKD	75	0.17	2	400	0.305	0.25	1	0.17	0.418
		BCC	25	0.17	5	200	0.758	0.25	1		
130.21	0.0090	BCC	100	0.17	2	50	0.163	0.25	1	0.17	0.163
132.11	0.0093	BKD	100	0.17	5	200	0.758	0.25	1	0.17	0.758
		Amb	40	0.24	2	200	0.248	0.25	1		
133.51	0.0670	KR	20	0.02	20	150	5.000	0.25	1	0.16	0.470
		BKD	40	0.17	5	300	0.928	0.25	1		
		Amb	25	0.24	2	200	0.248	0.25	1		
133.52	0.0485	KR	30	0.02	20	150	5.000	0.25	1	0.14	0.357
		BKD	45	0.17	5	150	0.656	0.25	1		
133.53	0.0025	BKD	100	0.17	6	150	0.824	0.25	1	0.17	0.824
		Amb	5	0.24	2	100	0.201	0.25	1		
133.54	0.0173	KR	50	0.02	20	150	5.000	0.25	1	0.09	0.251
		BKD	45	0.17	5	100	0.536	0.25	1		

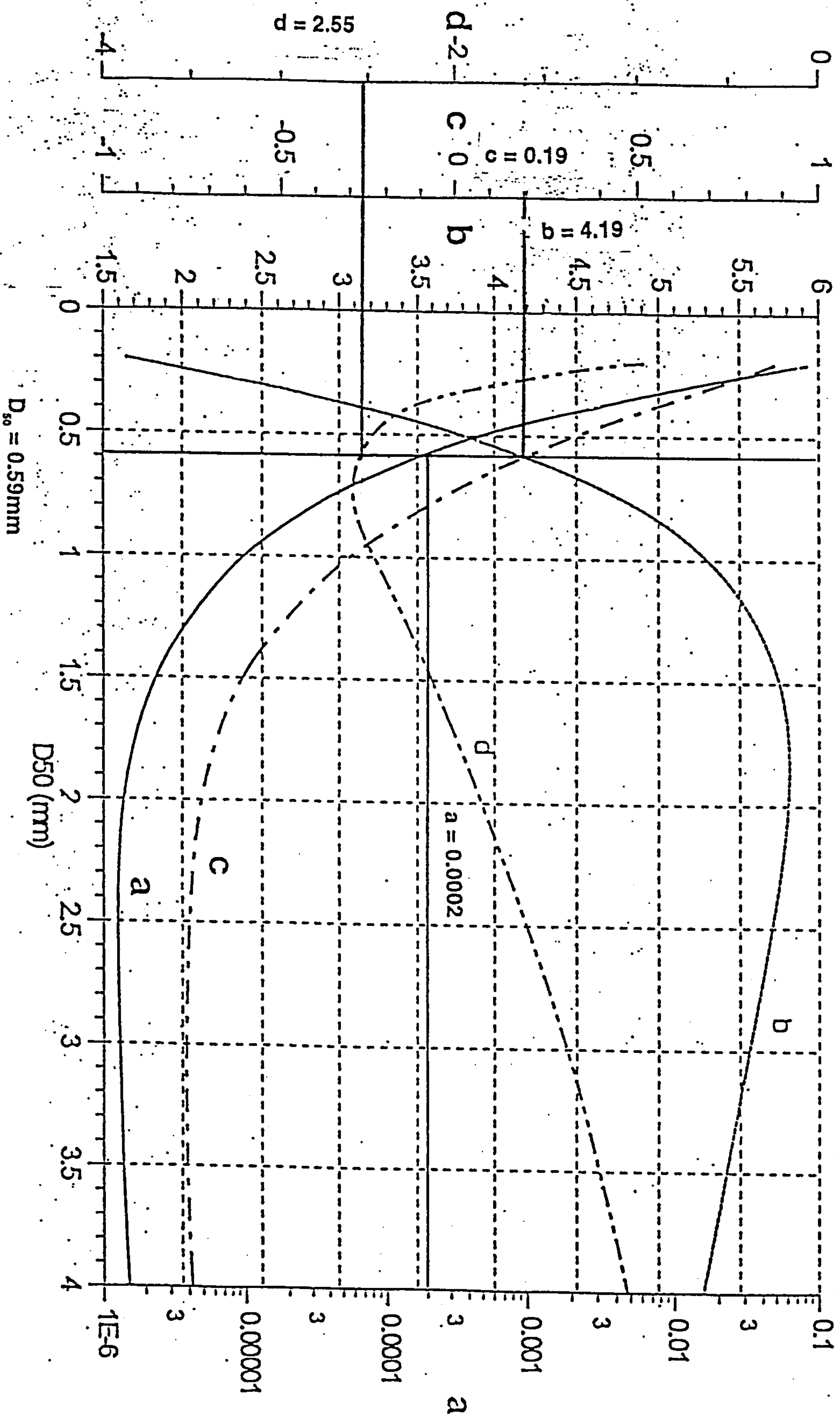
TABLE 4

SUMMARY OF SEDIMENT TRANSPORT

RETURN PERIOD (YRS.)	"TOTAL SED. (TONS)" FROM AHYMO				TOTAL VOLUME AC-FT
	BASIN	BASIN	BASIN	TOTAL TO POND	
100	54.70	1030.67	692.68	1778.05	0.82
50	39.59	744.62	469.95	1254.16	0.58
25	26.47	506.20	335.92	868.59	0.40
10	12.58	242.45	161.66	416.69	0.19
5	5.00	107.09	70.68	182.77	0.08
2	0.00	8.54	5.63	14.17	0.00
AVG/YR	4.48	91.11	60.20	155.78	0.07

REQ'D POND VOLUME = 0.96 AC-FT.

CSC#143-18-036/143-18AF.REP

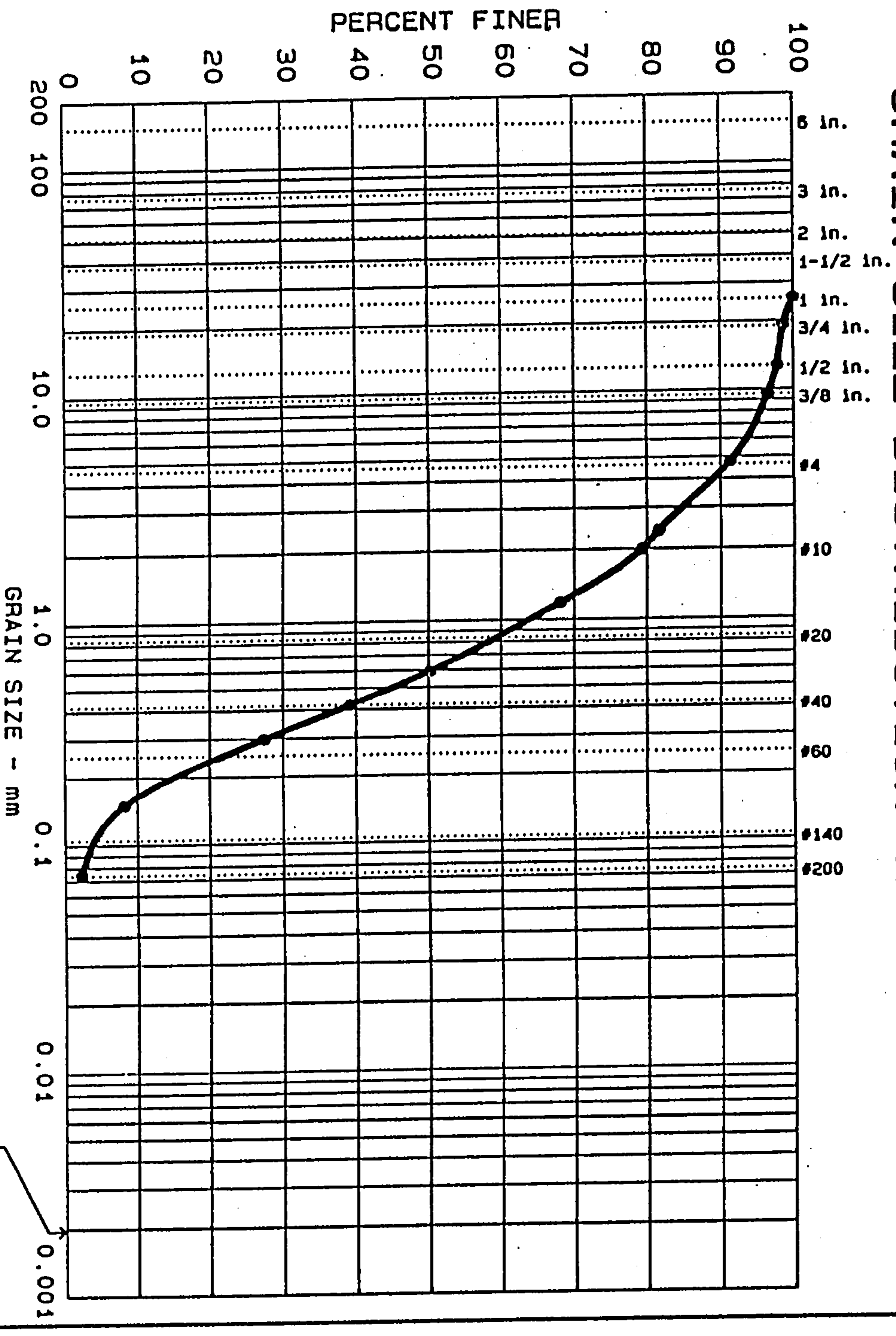


$$q_s = aV^b Y^c (1-C_f)^d$$

$$C_{b_{\max}} = 0.51 - 0.065 \cdot D_{50}$$

Figure 3.11. Coefficient and exponents for Equation 3.41, developed using MPM-Woo method.

GRAIN SIZE DISTRIBUTION TEST REPORT



Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
2	0.0	8.6	89.1		2.3

LL	PI	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
		3.02	0.85	0.59	0.318	0.2000	0.1626	0.73	5.2

MATERIAL DESCRIPTION

● Poorly Graded Sand

USCS

AASHTO

SP

A-1-b

Project No.: 32440064

Project: Parkwest #143-18-030

● Location: West Sample

Date: January 1, 1994

Remarks:

Moisture Content 3.4%

GRAIN SIZE DISTRIBUTION TEST REPORT

WESTERN TECHNOLOGIES INC.

Figure No. 2

GRAIN SIZE DISTRIBUTION TEST DATA

Test No.: 2

Date: January 1, 1994
Project No.: 32440064
Project: Parkwest #143-18-030

Sample Data

Location of Sample: West Sample
Sample Description: Poorly Graded Sand
USCS Class: SP
ASHTO Class: A-1-b
Liquid limit:
Plasticity index:

Notes

Remarks: Moisture Content 3.4%

Fig. No.: 2

Mechanical Analysis Data

Initial

Dry sample and tare= 865.20
Tare = 0.00

Dry sample weight = 865.20

Tare for cumulative weight retained= 0

Sieve	Cumul. Wt. retained	Percent finer
1 inches	0.00	100.0
0.75 inches	11.70	98.6
0.5 inches	18.80	97.8
0.375 inches	30.30	96.5
# 4	74.50	91.4
# 8	159.20	81.6
# 10	178.30	79.4
# 16	275.50	68.2
# 30	431.10	50.2
# 40	525.10	39.3
# 50	627.90	27.4
# 100	794.40	8.2
# 200	845.50	2.3

Fractional Components

% + 3 in. = 0.0 % GRAVEL = 8.6 % SAND = 89.1
% FINES = 2.3

D85= 3.02 D60= 0.851 D50= 0.586
D30= 0.3184 D15= 0.19999 D10= 0.16255
Cc = 0.7328 Cu = 5.2360

TABLE 5

PRELIMINARY PIPE CAPACITY CALCULATIONS

DIAM (in)	K	So (ft/ft)	Qcap (cfs)	Q100 (cfs)	STREET	LOCATION
24	226.2	0.010	22.62	20.00	WINDWARD DR.	18+00
24	226.2	0.015	27.70	27.31	PARKWEST	98TH
24	226.2	0.010	22.62	5.00	POND DISCHARGE	
24	226.2	0.010	22.62	15.00	MONUMENT	LAVA REACH
24	226.2	0.040	45.24	31.52	LAVA BLUFF	OURAY

K = CONSTANT FOR MANNING'S FORMULA FROM SECTN. 22.3 PG. 41 OF THE DPM

So = STREET SLOPE

Qcap = DPM FULL PIPE FLOW BASED ON $Q = K (So \wedge .5)$ WHERE So = FRICTION SLOPE (Sf)

Q100 = 100 YEAR FLOW INTERCEPTED BY THE STORM DRAIN

TABLE 6

PRELIMINARY CHANNEL DESIGN

So (%)	DEPTH (ft)	VEL (fps)	FREEBOARD (FT)	REQ'D DEPTH (ft)	EG (ft)
CRITICAL	4.00	9.25	1.66	5.66	5.41
1.8	3.03	14.14	1.76	4.79	6.13
2.5	2.79	15.82	1.79	4.58	6.68

Q100 = 635 cfs Qdesign = 687 cfs (where BF = 1.076 from AYHMO)
 FREEBOARD = 0.7 (2.0 + VDA.33) PER THE DPM SECT. 22.3 PG. 61.1
 REQ'D DEPTH = DEPTH PLUS FREEBOARD

CRITICAL DEPTH PLUS FREEBOARD CONTROLES THE CHANNEL DEPTH
 SINCE THE ENERGY GRADE LINE (EG) IS NOT REQUIRED TO BE
 MAINTAINED WITHIN THE LINED CHANNEL BY AMAFCA.

THE CHANNEL SHALL BE DESIGNED TO MAINTAIN SEDIMENT TRANSPORT
 THROUGH THE SITE.

APPENDIX A

AHYMO

SUMMARY AND DETAILED OUTPUT

2-YEAR POST DEVELOPMENT SUMMARY PRINTOUT

AHYMO SUMMARY TABLE (AHYMO993) - AMAFCA VERSION OF HYMO - SEPTEMBER, 1993
INPUT FILE = PM2PO.DAT

```

RUN DATE (MON/DAY/YR) =11/26/1993
USER NO. = COMMSC_B.T93

```

USER NO. = COMMSC_B.T93

COMMAND	IDENTIFICATION	FROM TO		AREA (SQ MI)	PEAK		RUNOFF VOLUME (AC-FT)	RUNOFF (INCHES)	TIME TO		CFS PER ACRE	PAGE = 1
		ID	ID		DISCHARGE (CFS)	PEAK			PEAK	(HOURS)		

5

PARKWEST 2-YEAR POST DEVELOPMENT

START

RAINFALL TYPE= 1

```
TIME=.00
RAIN6=.950
```

COMPUTE MM HYD

RAIN6=	.950
5 PER IMP=	.00

SED WASH LOAD

133.51	-	10	.06700	4.11	.094	.02643	1.532	.096 PER IMP=	.00
133.51	10						WASH CONC. (PPM-W) =		23974

SEDIMENT TRANSP

133.51	10	SED ID =	6	PEAK CONC. (PPM-W) =	76872	WASH CONC. (PPM-W) =	23974
133.51	10			TOTAL SED. (TONS) =			8.54

COMPUTE NM HYD

	SED ID = 6	PEAK CONC. (PPM-W) =	76872	TOTAL SED. (TONS) =	8.54
133.51	10				
133.52	11	.04850	2.98	.068	.02643
-				1.532	.096 PER IMP=
					.00

SED WASH LOAD

133.52	-	11	.04850	2.98	.068	.02643	1.532	.096 PER IMP=	.00
133.52	11						WASH CONC. (PPM-W) =		16256

SEDIMENT TRANSP

133.52	11		WASH CONC. (PPM-W) =	16256
133.52	11	SED ID = 7	PEAK CONC. (PPM-W) =	72995
133.52	11		TOTAL SED. (TONS) =	5.63

*S UNDEVELOPED, OFF-SITE FLOW ENTERING POND

ADD HYD	133.50	10&11	11	.1150
---------	--------	-------	----	-------

FINISH

133.50	10611	11	.11550	7.09	.163	.02642	1.532	.096
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100-YEAR POST DEVELOPMENT SUMMARY PRINTOUT

AHYMO SUMMARY TABLE (AHYMO993) - AMAFCA VERSION OF HYMO - SEPTEMBER, 1993
 INPUT FILE = PM10PO.DAT

RUN DATE (MON/DAY/YR) =11/26/1993
 USER NO.= COMMSC_B.T93

COMMAND	HYDROGRAPH IDENTIFICATION NO.	NO.	AREA (SQ MI)	PEAK DISCHARGE (CFS)	RUNOFF VOLUME (AC-FT)	RUNOFF (INCHES)	TIME TO PEAK (HOURS)	CFS PER ACRE	PAGE = 1
---------	-------------------------------	-----	--------------	----------------------	-----------------------	-----------------	----------------------	--------------	----------

*S PARKWEST-100 YEAR POST DEVELOPMENT

START TIME= .00

RAINFALL TYPE= 1 RAIN6= 2.200

COMPUTE NM HYD 14.00 - 1 .80000 419.68 23.643 .55414 1.732 .820 PER IMP= .00

SED WASH LOAD 14.00 1 .80000 419.68 23.643 .55414 1.732 .820 PER IMP= .00

*S ROUTE L14 THROUGH 131 WASH CONC. (PPM-W) = 23698

ROUTE 14.01 1 2 .80000 363.29 23.643 .55414 1.865 .710

COMPUTE NM HYD 131.00 - 3 .28020 157.76 9.442 .63179 1.765 .880 PER IMP= .00

SED WASH LOAD 131.00 3 .28020 157.76 9.442 .63179 1.765 .880 PER IMP= .00

*S BASINS L14 AND 131 ENTERING THE SITE WASH CONC. (PPM-W) = 36673

ADD HYD 131.01 2& 3 3 1.08020 513.75 33.085 .57428 1.832 .743

SEDIMENT TRANSP 131.01 3 SED ID = 1 PEAK CONC. (PPM-W) = 167305 TOTAL SED. (TONS) = 7168.86

COMPUTE NM HYD 130.20 - 4 .06900 71.38 1.970 .53534 1.532 1.616 PER IMP= .00

SED WASH LOAD 130.20 4 .06900 71.38 1.970 .53534 1.532 1.616 PER IMP= .00

SEDIMENT TRANSP 130.20 4 SED ID = 2 PEAK CONC. (PPM-W) = 42900 TOTAL SED. (TONS) = 109.35

*S TOTAL FLOW TO CHANNEL ENTERING THE SITE

ADD HYD 131.02 3& 4 5 1.14920 527.45 35.055 .57195 1.832 .717

*S FLOW ENTERING SW CORNER

COMPUTE NM HYD 130.21 - 6 .00900 7.48 .211 .43919 1.532 1.299 PER IMP= .00

SED WASH LOAD 130.21 6 .00900 7.48 .211 .43919 1.532 1.299 PER IMP= .00

COMPUTE NM HYD 133.30 - 7 .03700 45.50 1.263 .64008 1.532 1.921 PER IMP= .00

COMPUTE NM HYD 133.40 - 8 .25500 119.11 7.104 .52233 1.732 .730 PER IMP= .00

*S FLOW ENTERING OURAY STORM DRAIN TO THE NORTH

ADD HYD 133.01 7& 8 9 .29200 138.33 8.367 .53725 1.698 .740

COMPUTE NM HYD 132.11 - 10 .00930 11.54 .318 .64079 1.532 1.939 PER IMP= .00

SED WASH LOAD 132.11 10 .00930 11.54 .318 .64079 1.532 1.939 PER IMP= .00

SEDIMENT TRANSP 132.11 10 SED ID = 3 PEAK CONC. (PPM-W) = 134621 TOTAL SED. (TONS) = 54.70

COMPUTE NM HYD 133.51 - 11 .06700 95.23 2.637 .73808 1.532 2.221 PER IMP= .00

SED WASH LOAD 133.51 11 .06700 95.23 2.637 .73808 1.532 2.221 PER IMP= .00

SEDIMENT TRANSP 133.51 11 SED ID = 4 PEAK CONC. (PPM-W) = 276738 TOTAL SED. (TONS) = 1030.67

ADD HYD 133.50 10&11 10 .07630 106.77 2.955 .72622 1.532 2.186

COMPUTE NM HYD 133.52 - 11 .04850 68.88 1.909 .73808 1.532 2.219 PER IMP= .00

SED WASH LOAD 133.52 11 .04850 68.88 1.909 .73808 1.532 2.219 PER IMP= .00

SEDIMENT TRANSP 133.52 11 SED ID = 5 PEAK CONC. (PPM-W) = 264216 TOTAL SED. (TONS) = 692.68

*S UNDEVELOPED, OFF-SITE FLOW ENTERING POND

ADD HYD 133.50 10&11 11 .12480 175.65 4.864 .73083 1.532 2.199

*S FLOW ENTERING STREET AT NW CORNER OF SITE

COMPUTE NM HYD 133.53 - 13 .00250 3.26 .089 .66738 1.532 2.036 PER IMP= .00

SED WASH LOAD 133.53 13 .00250 3.26 .089 .66738 1.532 2.036 PER IMP= .00

COMPUTE NM HYD 133.54 - 14 .01730 22.38 .616 .66738 1.532 2.021 PER IMP= .00

SED WASH LOAD 133.54 14 .01730 22.38 .616 .66738 1.532 2.021 PER IMP= .00

SEDIMENT TRANSP 133.54 14 SED ID = 6 PEAK CONC. (PPM-W) = 57448 TOTAL SED. (TONS) = 40.35

COMPUTE NM HYD 101.00 - 7 .00650 13.98 .473 1.36302 1.499 3.360 PER IMP= 47.60

*S OFFSITE FLOW PLUS AREA 101

ADD HYD 101.01 6& 7 6 .01550 21.27 .683 .82658 1.499 2.144

COMPUTE NM HYD 102.00 - 7 .00540 11.62 .393 1.36302 1.499 3.361 PER IMP= 47.60

COMPUTE NM HYD 103.00 - 8 .00570 12.26 .414 1.36302 1.499 3.361 PER IMP= 47.60

COMPUTE NM HYD 104.00 - 4 .00880 18.92 .640 1.36302 1.499 3.359 PER IMP= 47.60

ADD HYD 104.12 6& 7 6 .02090 32.89 1.076 .96517 1.499 2.459

ADD HYD 104.13 6& 8 6 .02660 45.15 1.490 1.05041 1.499 2.652

*S FLOW EXITING AREA 104 TO CHANNEL

ADD HYD 104.14 6& 4 6 .03540 64.07 2.130 1.12812 1.499 2.828

COMPUTE NM HYD 105.00 - 7 .00600 12.90 .436 1.36302 1.499 3.361 PER IMP= 47.60

COMPUTE NM HYD	106.00	-	8	.00670	14.41	.487	1.36302	1.499	3.360	PER IMP=	47.60
*S FLOW ENTERING 98TH STREET SD AT PARKWEST											
ADD HYD	105.01	7& 8	7	.01270	27.31	.923	1.36298	1.499	3.360		
*S FLOW EXITING AREA 107 TO CHANNEL											
COMPUTE NM HYD	107.00	-	8	.00690	14.84	.502	1.36302	1.499	3.360	PER IMP=	47.60
*S ONSITE FLOW ENTERING CHANNEL FROM THE SOUTH											
ADD HYD	107.01	6& 8	6	.04230	78.91	2.631	1.16643	1.499	2.915		
COMPUTE NM HYD	108.00	-	1	.00460	9.90	.334	1.36302	1.499	3.362	PER IMP=	47.60
COMPUTE NM HYD	110.00	-	8	.00620	13.33	.451	1.36302	1.499	3.360	PER IMP=	47.60
ADD HYD	110.01	1& 8	8	.01080	23.23	.785	1.36297	1.499	3.361		
COMPUTE NM HYD	109.00	-	4	.00360	7.75	.262	1.36302	1.499	3.364	PER IMP=	47.60
*S FLOW ENTERING 98TH STREET SD AT UNSER											
ADD HYD	108.01	4& 8	4	.01440	30.98	1.047	1.36297	1.499	3.362		
*S TOTAL ON-SITE FLOW TO 98TH STREET SD											
ADD HYD	108.02	4& 7	1	.02710	58.29	1.970	1.36297	1.499	3.361		
COMPUTE NM HYD	111.10	-	4	.00250	5.93	.204	1.52843	1.499	3.706	PER IMP=	55.00
*S FLOW TO BRIDGE EXCLUDING UNIT 3											
ADD HYD	111.11	4& 5	4	1.15170	529.27	35.259	.57402	1.832	.718		
*S FLOW TO BRIDGE INCLUDING UNIT 3											
ADD HYD	111.12	4& 6	4	1.19400	551.68	37.890	.59501	1.832	.722		
COMPUTE NM HYD	112.00	-	15	.00170	3.67	.124	1.36302	1.499	3.371	PER IMP=	47.60
COMPUTE NM HYD	113.00	-	16	.00580	12.47	.422	1.36302	1.499	3.361	PER IMP=	47.60
COMPUTE NM HYD	114.00	-	17	.00690	14.84	.502	1.36302	1.499	3.360	PER IMP=	47.60
ADD HYD	114.01	15&16	15	.00750	16.14	.545	1.36294	1.499	3.363		
ADD HYD	114.02	15&17	15	.01440	30.98	1.047	1.36296	1.499	3.361		
COMPUTE NM HYD	116.10	-	16	.00410	8.82	.298	1.36302	1.499	3.363	PER IMP=	47.60
ADD HYD	116.01	15&16	15	.01850	39.80	1.345	1.36296	1.499	3.362		
COMPUTE NM HYD	116.20	-	16	.00240	5.17	.174	1.36302	1.499	3.366	PER IMP=	47.60
ADD HYD	116.02	15&16	15	.02090	44.97	1.519	1.36295	1.499	3.362		
COMPUTE NM HYD	117.00	-	16	.00490	10.69	.363	1.39061	1.499	3.408	PER IMP=	50.00
*S FLOW ENTERING CHANNEL FROM THE NORTH AT THE BRIDGE											
ADD HYD	116.03	15&16	15	.02580	55.66	1.883	1.36819	1.499	3.371		
*S TOTAL FLOW IN CHANNEL AT BRIDGE											
ADD HYD	111.12	4&15	4	1.21980	569.17	39.773	.61136	1.798	.729		
COMPUTE NM HYD	111.20	-	5	.00150	3.56	.122	1.52844	1.499	3.712	PER IMP=	55.00
ADD HYD	111.00	4& 5	4	1.22130	570.36	39.895	.61249	1.798	.730		
*S TOTAL FLOW IN CHANNEL AT UNSER WITHOUT UNIT 5 EAST OF PARKWEST DR.											
ADD HYD	111.00	4& 7	4	1.23400	579.15	40.818	.62021	1.798	.733		
COMPUTE NM HYD	120.00	-	15	.00670	14.41	.487	1.36302	1.499	3.360	PER IMP=	47.60
COMPUTE NM HYD	119.00	-	16	.00560	12.05	.407	1.36302	1.499	3.361	PER IMP=	47.60
ADD HYD	119.01	15&16	15	.01230	26.45	.894	1.36298	1.499	3.360		
COMPUTE NM HYD	118.00	-	16	.00590	12.69	.429	1.36302	1.499	3.361	PER IMP=	47.60
*S TOTAL FLOW IN RUNDOWN TO CHANNEL											
ADD HYD	118.01	15&16	15	.01820	39.14	1.323	1.36298	1.499	3.360		
*S TOTAL FLOW IN CHANNEL AT UNSER EXITING THE SITE											
ADD HYD	111.00	4&15	2	1.25220	591.74	42.141	.63101	1.798	.738		
COMPUTE NM HYD	115.00	-	15	.00190	4.10	.138	1.36302	1.499	3.370	PER IMP=	47.60
COMPUTE NM HYD	121.00	-	16	.00270	5.82	.196	1.36302	1.499	3.365	PER IMP=	47.60
ADD HYD	121.01	15&16	15	.00460	9.91	.334	1.36290	1.499	3.367		
COMPUTE NM HYD	122.00	-	16	.00090	2.42	.089	1.85049	1.499	4.204	PER IMP=	90.00
*S ON-SITE FLOW TO POND											
ADD HYD	122.01	15&16	15	.00550	12.33	.423	1.44263	1.499	3.504		
*S TOTAL FLOW TO POND											
ADD HYD	122.02	11&15	11	.13030	187.62	5.288	.76088	1.499	2.250		
*S ROUTE HYDROGRAPH THRU POND											
ROUTE RESERVOIR	133.50	11	12	.13030	4.46	4.807	.69177	2.498	.054	AC-FT=	4.772
COMPUTE NM HYD	123.00	-	15	.00220	5.90	.217	1.85049	1.499	4.189	PER IMP=	90.00
ADD HYD	123.01	15&13	15	.00470	9.13	.306	1.22110	1.499	3.035		
*S FLOW FROM LAVA BLUFF TO OURAY SD INCLUDING OFFSITE SHEET FLOW											
ADD HYD	123.02	15&14	15	.02200	31.32	.922	.78567	1.499	2.224		

[illegible]

100-YEAR FUTURE DEVELOPMENT SUMMARY PRINTOUT

AHYMO SUMMARY TABLE (AHYMO993) - AMAFCA VERSION OF HYMO - SEPTEMBER, 1993
INPUT FILE = PM100FU.DAT

RUN DATE (MON/DAY/YR) =11/26/1993
USER NO. = COMMSC_B.193

COMMAND	HYDROGRAPH IDENTIFICATION NO.	ID NO.	AREA (SQ MI)	PEAK DISCHARGE (CFS)	RUNOFF VOLUME (AC-FT)	RUNOFF (INCHES)	TIME TO PEAK (HOURS)	CFS PER ACRE	PAGE = 1
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*S PARKWEST-100 YEAR POST DEVELOPMENT

START

RAINFALL TYPE= 1

TIME= .00
RAIN6= 2.200

COMPUTE NM HYD	14.00	-	1	.80000	419.68	23.643	.55414	1.732	.820 PER IMP=	.00
SED WASH LOAD	14.00	1						WASH CONC. (PPM-W) =	23698	

*S ROUTE 114 THROUGH 131

ROUTE	14.01	1	2	.80000	363.29	23.643	.55414	1.865	.710	
COMPUTE NM HYD	131.00	-	3	.28020	164.71	9.915	.66348	1.765	.918 PER IMP=	2.33
SED WASH LOAD	131.00	3						WASH CONC. (PPM-W) =	35940	

*S BASINS 114 AND 131 ENTERING THE SITE

ADD HYD	131.01	2& 3	3	1.08020	520.35	33.558	.58250	1.832	.753	
SEDIMENT TRANSP	131.01	3		SED ID = 1	PEAK CONC. (PPM-W) =	168434	TOTAL SED. (TONS) =	7303.22		
COMPUTE NM HYD	130.20	-	4	.06900	149.09	5.220	1.41850	1.499	3.376 PER IMP=	57.80
ADD HYD	131.02	3& 4	5	1.14920	565.06	38.778	.63270	1.832	.768	
COMPUTE NM HYD	130.21	-	6	.00900	19.46	.681	1.41850	1.499	3.378 PER IMP=	57.80

*S TOTAL FLOW TO CHANNEL ENTERING THE SITE

ADD HYD	130.21	5& 6	5	1.15820	570.89	39.459	.63880	1.832	.770	
COMPUTE NM HYD	133.30	-	7	.03700	45.50	1.263	.64008	1.532	1.921 PER IMP=	.00
COMPUTE NM HYD	133.40	-	8	.25500	119.11	7.104	.52233	1.732	.730 PER IMP=	.00

*S FLOW ENTERING OURAY STORM DRAIN TO THE NORTH

ADD HYD	133.01	7& 8	9	.29200	138.33	8.367	.53725	1.698	.740	
COMPUTE NM HYD	132.11	-	10	.00930	11.54	.318	.64079	1.532	1.939 PER IMP=	.00
SED WASH LOAD	132.11	10						WASH CONC. (PPM-W) =	42151	
SEDIMENT TRANSP	132.11	10		SED ID = 3	PEAK CONC. (PPM-W) =	134621	TOTAL SED. (TONS) =	54.70		
COMPUTE NM HYD	133.51	-	11	.06700	95.23	2.637	.73808	1.532	2.221 PER IMP=	.00
SED WASH LOAD	133.51	11						WASH CONC. (PPM-W) =	31948	
SEDIMENT TRANSP	133.51	11		SED ID = 4	PEAK CONC. (PPM-W) =	276738	TOTAL SED. (TONS) =	1030.67		
ADD HYD	133.50	10&11	10	.07630	106.77	2.955	.72622	1.532	2.186	
COMPUTE NM HYD	133.52	-	11	.04850	68.88	1.909	.73808	1.532	2.219 PER IMP=	.00
SED WASH LOAD	133.52	11						WASH CONC. (PPM-W) =	21674	
SEDIMENT TRANSP	133.52	11		SED ID = 5	PEAK CONC. (PPM-W) =	264216	TOTAL SED. (TONS) =	692.68		

*S UNDEVELOPED, OFF-SITE FLOW ENTERING POND

ADD HYD	133.50	10&11	11	.12480	175.65	4.864	.73083	1.532	2.199	
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*S FLOW ENTERING STREET AT NW CORNER OF SITE

COMPUTE NM HYD	133.53	-	13	.00250	3.26	.089	.66738	1.532	2.036 PER IMP=	.00
SED WASH LOAD	133.53	13						WASH CONC. (PPM-W) =	39613	
COMPUTE NM HYD	133.54	-	14	.01730	22.38	.616	.66738	1.532	2.021 PER IMP=	.00
SED WASH LOAD	133.54	14						WASH CONC. (PPM-W) =	8286	
SEDIMENT TRANSP	133.54	14		SED ID = 6	PEAK CONC. (PPM-W) =	57448	TOTAL SED. (TONS) =	40.35		

COMPUTE NM HYD	101.00	-	6	.00650	13.98	.473	1.36302	1.499	3.360 PER IMP=	47.60
COMPUTE NM HYD	102.00	-	7	.00540	11.62	.393	1.36302	1.499	3.361 PER IMP=	47.60
COMPUTE NM HYD	103.00	-	8	.00570	12.26	.414	1.36302	1.499	3.361 PER IMP=	47.60
COMPUTE NM HYD	104.00	-	4	.00880	18.92	.640	1.36302	1.499	3.359 PER IMP=	47.60
ADD HYD	104.12	6& 7	6	.01190	25.60	.865	1.36298	1.499	3.361	
ADD HYD	104.13	6& 8	6	.01760	37.86	1.279	1.36298	1.499	3.361	

*S FLOW EXITING AREA 104 TO CHANNEL

ADD HYD	104.14	6& 4	6	.02640	56.78	1.919	1.36298	1.499	3.360	
COMPUTE NM HYD	105.00	-	7	.00600	12.90	.436	1.36302	1.499	3.361 PER IMP=	47.60
COMPUTE NM HYD	106.00	-	8	.00670	14.41	.487	1.36302	1.499	3.360 PER IMP=	47.60

*S FLOW ENTERING 98TH STREET SD AT PARKWEST

ADD HYD	105.01	7& 8	7	.01270	27.31	.923	1.36298	1.499	3.360	
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*S FLOW EXITING AREA 107 TO CHANNEL

COMPUTE NM HYD	107.00	-	8	.00690	14.84	.502	1.36302	1.499	3.360 PER IMP=	47.60
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* S ONSITE FLOW ENTERING CHANNEL FROM THE SOUTH

ADD HYD	107.01	6E 8	6	.03330	71.61	2.421	1.36298	1.499	3.360	
COMPUTE NM HYD	108.00	-	1	.00460	9.90	.334	1.36302	1.499	3.362 PER IMP=	47.60
COMPUTE NM HYD	110.00	-	8	.00620	13.33	.451	1.36302	1.499	3.360 PER IMP=	47.60
ADD HYD	110.01	1E 8	8	.01080	23.23	.785	1.36297	1.499	3.361	
COMPUTE NM HYD	109.00	-	4	.00360	7.75	.262	1.36302	1.499	3.364 PER IMP=	47.60

* S FLOW ENTERING 98TH STREET SD AT UNSER

ADD HYD	108.01	4E 8	4	.01440	30.98	1.047	1.36297	1.499	3.362	
* S TOTAL ON-SITE FLOW TO 98TH STREET SD										
ADD HYD	108.02	4E 7	1	.02710	58.29	1.970	1.36297	1.499	3.361	
COMPUTE NM HYD	111.10	-	4	.00250	5.93	.204	1.52843	1.499	3.706 PER IMP=	55.00

* S FLOW TO BRIDGE EXCLUDING UNIT 3

ADD HYD	111.11	4E 5	4	1.16070	572.71	39.663	.64072	1.832	.771	
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* S FLOW TO BRIDGE INCLUDING UNIT 3

ADD HYD	111.12	4E 6	4	1.19400	594.48	42.084	.66086	1.798	.778	
COMPUTE NM HYD	112.00	-	15	.00170	3.67	.124	1.36302	1.499	3.371 PER IMP=	47.60
COMPUTE NM HYD	113.00	-	16	.00580	12.47	.422	1.36302	1.499	3.361 PER IMP=	47.60
COMPUTE NM HYD	114.00	-	17	.00690	14.84	.502	1.36302	1.499	3.360 PER IMP=	47.60
ADD HYD	114.01	15E16	15	.00750	16.14	.545	1.36294	1.499	3.363	
ADD HYD	114.02	15E17	15	.01440	30.98	1.047	1.36296	1.499	3.361	
COMPUTE NM HYD	116.10	-	16	.00410	8.82	.298	1.36302	1.499	3.363 PER IMP=	47.60
ADD HYD	116.01	15E16	15	.01850	39.80	1.345	1.36296	1.499	3.362	
COMPUTE NM HYD	116.20	-	16	.00240	5.17	.174	1.36302	1.499	3.366 PER IMP=	47.60
ADD HYD	116.02	15E16	15	.02090	44.97	1.519	1.36295	1.499	3.362	
COMPUTE NM HYD	117.00	-	16	.00490	10.69	.363	1.39061	1.499	3.408 PER IMP=	50.00

* S FLOW ENTERING CHANNEL FROM THE NORTH AT THE BRIDGE

ADD HYD	116.03	15E16	15	.02580	55.66	1.883	1.36819	1.499	3.371	
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* S TOTAL FLOW IN CHANNEL AT BRIDGE

ADD HYD	111.12	4E15	4	1.21980	612.42	43.966	.67582	1.798	.784	
COMPUTE NM HYD	111.20	-	5	.00150	3.56	.122	1.52844	1.499	3.712 PER IMP=	55.00
ADD HYD	111.00	4E 5	4	1.22130	613.61	44.089	.67687	1.798	.785	

* S TOTAL FLOW IN CHANNEL AT UNSER WITHOUT UNIT 5 EAST OF PARKWEST DR.

ADD HYD	111.00	4E 7	4	1.23400	622.39	45.012	.68393	1.798	.788	
COMPUTE NM HYD	120.00	-	15	.00670	14.41	.487	1.36302	1.499	3.360 PER IMP=	47.60
COMPUTE NM HYD	119.00	-	16	.00560	12.05	.407	1.36302	1.499	3.361 PER IMP=	47.60
ADD HYD	119.01	15E16	15	.01230	26.45	.894	1.36298	1.499	3.360	
COMPUTE NM HYD	118.00	-	16	.00590	12.69	.429	1.36302	1.499	3.361 PER IMP=	47.60

* S TOTAL FLOW IN RUNDOWN TO CHANNEL

ADD HYD	118.01	15E16	15	.01820	39.14	1.323	1.36298	1.499	3.360	
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* S TOTAL FLOW IN CHANNEL AT UNSER EXITING THE SITE

ADD HYD	111.00	4E15	2	1.25220	634.99	46.335	.69380	1.798	.792	
COMPUTE NM HYD	115.00	-	15	.00190	4.10	.138	1.36302	1.499	3.370 PER IMP=	47.60
COMPUTE NM HYD	121.00	-	16	.00270	5.82	.196	1.36302	1.499	3.365 PER IMP=	47.60
ADD HYD	121.01	15E16	15	.00460	9.91	.334	1.36290	1.499	3.367	
COMPUTE NM HYD	122.00	-	16	.00090	2.42	.089	1.85049	1.499	4.204 PER IMP=	90.00

* S ON-SITE FLOW TO POND

ADD HYD	122.01	15E16	15	.00550	12.33	.423	1.44263	1.499	3.504	
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* S TOTAL FLOW TO POND

ADD HYD	122.02	11E15	11	.13030	187.62	5.288	.76088	1.499	2.250	
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* S ROUTE HYDROGRAPH THRU POND

ROUTE RESERVOIR	133.50	11	12	.13030	4.46	4.807	.69177	2.498	.054 AC-FT=	4.772
COMPUTE NM HYD	123.00	-	15	.00220	5.90	.217	1.85049	1.499	4.189 PER IMP=	90.00

ADD HYD	123.01	15E13	15	.00470	9.13	.306	1.22110	1.499	3.035	
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* S FLOW FROM LAVA BLUFF TO OURAY SD INCLUDING OFFSITE SHEET FLOW

ADD HYD	123.02	15E14	15	.02200	31.32	.922	.78567	1.499	2.224	
COMPUTE NM HYD	124.00	-	16	.03110	66.82	2.261	1.36302	1.499	3.357 PER IMP=	47.60

* S UNPONDED FLOW TO INLETS AT OURAY

ADD HYD	124.01	15E16	15	.05310	98.14	3.183	1.12381	1.499	2.888	
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* S TOTAL ONSITE FLOW TO OURAY SD

ADD HYD	124.02	12E15	12	.18340	100.48	7.990	.81686	1.499	.856	
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100-YEAR 24 HOUR RAINFALL SUMMARY PRINTOUT

AHYMO SUMMARY TABLE (AHYMO993) - AMAFCA VERSION OF HYMO - SEPTEMBER, 1993 RUN DATE (MON/DAY/YR) =11/26/1993
 INPUT FILE = PML0024.DAT USER NO. = COMMSC_B.T93

COMMAND	HYDROGRAPH IDENTIFICATION NO.	FROM TO ID ID	AREA (SQ MT)	PEAK DISCHARGE (CFS)	RUNOFF VOLUME (AC-FT)	RUNOFF (INCHES)	TIME TO PEAK (HOURS)	CFS PER ACRE	PAGE = 1
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*S PARKWEST 100-YEAR 24 HOUR POST DEVELOPMENT

START RAINFALL TYPE= 2 / TIME= .00
 RAIN24= 2.660

COMPUTE NM HYD 14.00 - 1 .80000 414.29 23.498 .55074 1.750 .809 PER IMP= .00
 SED WASH LOAD 14.00 1 .80000 414.29 23.498 .55074 1.750 .809 PER IMP= .00
 WASH CONC. (PPM-W) = 23594

*S ROUTE L14 THROUGH 131
 ROUTE 14.01 1 2 .80000 363.48 23.498 .55074 1.850 .710
 COMPUTE NM HYD 131.00 - 3 .28020 157.05 9.415 .63001 1.750 .876 PER IMP= .00
 SED WASH LOAD 131.00 3 .28020 157.05 9.415 .63001 1.750 .876 PER IMP= .00
 WASH CONC. (PPM-W) = 36628

*S BASINS L14 AND 131 ENTERING THE SITE
 ADD HYD 131.01 2& 3 3 1.08020 509.31 32.913 .57130 1.850 .737
 SEDIMENT TRANSP 131.01 3 SED ID = 1 PEAK CONC. (PPM-W) = 166539 TOTAL SED. (TONS) = 7121.94
 COMPUTE NM HYD 130.20 - 4 .06900 69.75 1.960 .53253 1.500 1.580 PER IMP= .00
 SED WASH LOAD 130.20 4 .06900 69.75 1.960 .53253 1.500 1.580 PER IMP= .00
 WASH CONC. (PPM-W) = 28988

SEDIMENT TRANSP 130.20 4 SED ID = 2 PEAK CONC. (PPM-W) = 42449 TOTAL SED. (TONS) = 107.65
 *S TOTAL FLOW TO CHANNEL ENTERING THE SITE

ADD HYD 131.02 3& 4 5 1.14920 524.06 34.873 .56898 1.800 .713
 *S FLOW ENTERING SW CORNER

COMPUTE NM HYD 130.21 - 6 .00900 7.41 .211 .43936 1.500 1.286 PER IMP= .00
 SED WASH LOAD 130.21 6 .00900 7.41 .211 .43936 1.500 1.286 PER IMP= .00
 WASH CONC. (PPM-W) = 8766

COMPUTE NM HYD 133.30 - 7 .03700 44.96 1.260 .63864 1.500 1.899 PER IMP= .00
 COMPUTE NM HYD 133.40 - 8 .25500 118.13 7.074 .52015 1.750 .724 PER IMP= .00

*S FLOW ENTERING OURAY STORM DRAIN TO THE NORTH
 ADD HYD 133.01 7& 8 9 .29200 137.20 8.334 .53516 1.700 .734
 COMPUTE NM HYD 132.11 - 10 .00930 11.41 .317 .63937 1.500 1.916 PER IMP= .00
 SED WASH LOAD 132.11 10 .00930 11.41 .317 .63937 1.500 1.916 PER IMP= .00
 WASH CONC. (PPM-W) = 41928

SEDIMENT TRANSP 132.11 10 SED ID = 3 PEAK CONC. (PPM-W) = 133925 TOTAL SED. (TONS) = 54.28
 COMPUTE NM HYD 133.51 - 11 .06700 95.20 2.637 .73789 1.500 2.220 PER IMP= .00
 SED WASH LOAD 133.51 11 .06700 95.20 2.637 .73789 1.500 2.220 PER IMP= .00
 WASH CONC. (PPM-W) = 31946

SEDIMENT TRANSP 133.51 11 SED ID = 4 PEAK CONC. (PPM-W) = 276701 TOTAL SED. (TONS) = 1027.72
 ADD HYD 133.50 10&11 10 .07630 106.60 2.954 .72588 1.500 2.183
 COMPUTE NM HYD 133.52 - 11 .04850 68.85 1.909 .73789 1.500 2.218 PER IMP= .00
 SED WASH LOAD 133.52 11 .04850 68.85 1.909 .73789 1.500 2.218 PER IMP= .00
 WASH CONC. (PPM-W) = 21672

SEDIMENT TRANSP 133.52 11 SED ID = 5 PEAK CONC. (PPM-W) = 264178 TOTAL SED. (TONS) = 690.88
 *S UNDEVELOPED, OFF-SITE FLOW ENTERING POND

ADD HYD 133.50 10&11 11 .12480 175.46 4.863 .73055 1.500 2.197
 *S FLOW ENTERING STREET AT NW CORNER OF SITE

COMPUTE NM HYD 133.53 - 13 .00250 3.23 .089 .66636 1.500 2.018 PER IMP= .00
 SED WASH LOAD 133.53 13 .00250 3.23 .089 .66636 1.500 2.018 PER IMP= .00
 WASH CONC. (PPM-W) = 39459

COMPUTE NM HYD 133.54 - 14 .01730 22.19 .615 .66636 1.500 2.004 PER IMP= .00
 SED WASH LOAD 133.54 14 .01730 22.19 .615 .66636 1.500 2.004 PER IMP= .00
 WASH CONC. (PPM-W) = 8253

SEDIMENT TRANSP 133.54 14 SED ID = 6 PEAK CONC. (PPM-W) = 57240 TOTAL SED. (TONS) = 40.17
 COMPUTE NM HYD 101.00 - 7 .00650 13.83 .549 1.58264 1.500 3.324 PER IMP= 47.60
 *S OFFSITE FLOW PLUS AREA 101

ADD HYD 101.01 6& 7 6 .01550 21.24 .760 .91878 1.500 2.141
 COMPUTE NM HYD 102.00 - 7 .00540 11.49 .456 1.58264 1.500 3.324 PER IMP= 47.60

COMPUTE NM HYD 103.00 - 8 .00570 12.13 .481 1.58264 1.500 3.324 PER IMP= 47.60
 COMPUTE NM HYD 104.00 - 4 .00880 18.71 .743 1.58264 1.500 3.323 PER IMP= 47.60

ADD HYD 104.12 6& 7 6 .02090 32.72 1.215 1.09029 1.500 2.447
 ADD HYD 104.13 6& 8 6 .02660 44.85 1.696 1.19578 1.500 2.635

*S FLOW EXITING AREA 104 TO CHANNEL
 ADD HYD 104.14 6& 4 6 .03540 63.57 2.439 1.29194 1.500 2.806
 COMPUTE NM HYD 105.00 - 7 .00600 12.77 .506 1.58264 1.500 3.324 PER IMP= 47.60

COMPUTE NM HYD	106.00	-	8	.00670	14.25	.566	1.58264	1.500	3.324	PER IMP=	47.60
*S FLOW ENTERING 98TH STREET SD AT PARKWEST											
ADD HYD	105.01	74 8	7	.01270	27.02	1.072	1.58259	1.500	3.324		
*S FLOW EXITING AREA 107 TO CHANNEL											
COMPUTE NM HYD	107.00	-	8	.00690	14.68	.582	1.58264	1.500	3.324	PER IMP=	47.60
*S ONSITE FLOW ENTERING CHANNEL FROM THE SOUTH											
ADD HYD	107.01	64 8	6	.04230	78.24	3.022	1.33935	1.500	2.890		
COMPUTE NM HYD	108.00	-	1	.00460	9.79	.388	1.58264	1.500	3.325	PER IMP=	47.60
COMPUTE NM HYD	110.00	-	8	.00620	13.19	.523	1.58264	1.500	3.324	PER IMP=	47.60
ADD HYD	110.01	14 8	8	.01080	22.98	.912	1.58258	1.500	3.325		
COMPUTE NM HYD	109.00	-	4	.00360	7.66	.304	1.58264	1.500	3.327	PER IMP=	47.60
*S FLOW ENTERING 98TH STREET SD AT UNSER											
ADD HYD	108.01	44 8	4	.01440	30.64	1.215	1.58257	1.500	3.325		
*S TOTAL ON-SITE FLOW TO 98TH STREET SD											
ADD HYD	108.02	44 7	1	.02710	57.66	2.287	1.58258	1.500	3.325		
COMPUTE NM HYD	111.10	-	4	.00250	5.84	.238	1.78186	1.500	3.653	PER IMP=	55.00
*S FLOW TO BRIDGE EXCLUDING UNIT 3											
ADD HYD	111.11	44 5	4	1.15170	525.98	35.110	.57161	1.800	.714		
*S FLOW TO BRIDGE INCLUDING UNIT 3											
ADD HYD	111.12	44 6	4	1.19400	550.18	38.132	.59881	1.800	.720		
COMPUTE NM HYD	112.00	-	15	.00170	3.63	.143	1.58264	1.500	3.334	PER IMP=	47.60
COMPUTE NM HYD	113.00	-	16	.00580	12.34	.490	1.58264	1.500	3.324	PER IMP=	47.60
COMPUTE NM HYD	114.00	-	17	.00690	14.68	.582	1.58264	1.500	3.324	PER IMP=	47.60
ADD HYD	114.01	15416	15	.00750	15.97	.633	1.58256	1.500	3.327		
ADD HYD	114.02	15417	15	.01440	30.65	1.215	1.58257	1.500	3.325		
COMPUTE NM HYD	116.10	-	16	.00410	8.73	.346	1.58264	1.500	3.326	PER IMP=	47.60
ADD HYD	116.01	15416	15	.01850	39.37	1.561	1.58257	1.500	3.325		
COMPUTE NM HYD	116.20	-	16	.00240	5.12	.203	1.58264	1.500	3.330	PER IMP=	47.60
ADD HYD	116.02	15416	15	.02090	44.49	1.764	1.58257	1.500	3.326		
COMPUTE NM HYD	117.00	-	16	.00490	10.57	.424	1.62132	1.500	3.369	PER IMP=	50.00
*S FLOW ENTERING CHANNEL FROM THE NORTH AT THE BRIDGE											
ADD HYD	116.03	15416	15	.02580	55.05	2.188	1.58992	1.500	3.334		
*S TOTAL FLOW IN CHANNEL AT BRIDGE											
ADD HYD	111.12	4415	4	1.21980	567.59	40.320	.61977	1.800	.727		
COMPUTE NM HYD	111.20	-	5	.00150	3.51	.143	1.78186	1.500	3.660	PER IMP=	55.00
ADD HYD	111.00	44 5	4	1.22130	568.75	40.462	.62120	1.800	.728		
*S TOTAL FLOW IN CHANNEL AT UNSER WITHOUT UNIT 5 EAST OF PARKWEST DR.											
ADD HYD	111.00	44 7	4	1.23400	577.28	41.534	.63109	1.800	.731		
COMPUTE NM HYD	120.00	-	15	.00670	14.25	.566	1.58264	1.500	3.324	PER IMP=	47.60
COMPUTE NM HYD	119.00	-	16	.00560	11.91	.473	1.58264	1.500	3.324	PER IMP=	47.60
ADD HYD	119.01	15416	15	.01230	26.17	1.038	1.58259	1.500	3.324		
COMPUTE NM HYD	118.00	-	16	.00590	12.55	.498	1.58264	1.500	3.324	PER IMP=	47.60
*S TOTAL FLOW IN RUNDOWN TO CHANNEL											
ADD HYD	118.01	15416	15	.01820	38.72	1.536	1.58259	1.500	3.324		
*S TOTAL FLOW IN CHANNEL AT UNSER EXITING THE SITE											
ADD HYD	111.00	4415	2	1.25220	589.50	43.070	.64492	1.800	.736		
COMPUTE NM HYD	115.00	-	15	.00190	4.05	.160	1.58264	1.500	3.333	PER IMP=	47.60
COMPUTE NM HYD	121.00	-	16	.00270	5.75	.228	1.58264	1.500	3.329	PER IMP=	47.60
ADD HYD	121.01	15416	15	.00460	9.81	.388	1.58251	1.500	3.331		
COMPUTE NM HYD	122.00	-	16	.00090	2.38	.109	2.26606	1.500	4.137	PER IMP=	90.00
*S ON-SITE FLOW TO POND											
ADD HYD	122.01	15416	15	.00550	12.19	.497	1.69431	1.500	3.462		
*S TOTAL FLOW TO POND											
ADD HYD	122.02	14415	11	.13030	187.64	5.360	.77123	1.500	2.250		
*S ROUTE HYDROGRAPH THRU POND											
ROUTE RESERVOIR	133.50	11	12	.13030	4.46	5.360	.77123	2.500	.053	AC-FT=	4.769
COMPUTE NM HYD	123.00	-	15	.00220	5.80	.266	2.26606	1.500	4.120	PER IMP=	90.00
ADD HYD	123.01	15413	15	.00470	9.03	.355	1.41507	1.500	3.002		
*S FLOW FROM LAVA BLUFF TO OURAY SD INCLUDING OFFSITE SHEET FLOW											
ADD HYD	123.02	15414	15	.02200	31.22	.970	.82630	1.500	2.217		

COMPUTE NM HYD	124.00	-	16	.03110	66.10	2.625	1.58264	1.500	3.321 PER IMP=	47.60
*S UNPONDED FLOW TO INLETS AT OURAY										
ADD HYD	124.01	15416	15	.05310	97.32	3.595	1.26928	1.500	2.864	
*S TOTAL ONSITE FLOW TO OURAY SD										
ADD HYD	124.02	12415	12	.18340	99.77	8.954	.91542	1.500	.850	
COMPUTE NM HYD	133.20	-	15	.02100	55.26	2.538	2.26606	1.500	4.111 PER IMP=	90.00
*S EXISTING FLOW TO OURAY SD										
ADD HYD	133.01	154 9	14	.31300	166.75	10.872	.65129	1.600	.832	
*S TOTAL FLOW TO OURAY STORM DRAIN										
ADD HYD	133.02	12414	3	.49640	254.57	19.826	.74888	1.550	.801	
FINISH										

2-YEAR POST DEVELOPMENT DETAIL PRINTOUT

AHYMO PROGRAM (AHYMO993) - AMAPCA VERSION OF HYMO - SEPTEMBER, 1993

RUN DATE (MON/DAY/YR) = 11/26/1993

START TIME (HR:MIN:SEC) = 07:30:31 USER NO. = COMMSC_B.T93

INPUT FILE = PM2PO.DAT

*S PARKWEST 2-YEAR POST DEVELOPMENT

START TIME=0.0 HR PUNCH CODE=0

RAINFALL TYPE=1 RAIN QUARTER=0.0

RAIN ONE=0.81 IN RAIN SIX=0.95 IN

RAIN DAY=1.15 IN DT=0.0333 HRS

COMPUTED 6-HOUR RAINFALL DISTRIBUTION BASED ON NOAA ATLAS 2 - PEAK AT 1.40 HR.

DT = .033300 HOURS	END TIME = 5.994000 HOURS
.0000 .0007 .0014 .0021 .0028 .0035 .0043	
.0051 .0058 .0067 .0075 .0083 .0092 .0101	
.0110 .0120 .0130 .0140 .0150 .0161 .0172	
.0184 .0196 .0209 .0222 .0235 .0250 .0265	
.0281 .0297 .0315 .0337 .0361 .0387 .0439	
.0560 .0747 .1015 .1382 .1865 .2481 .3248	
.4185 .5084 .5453 .5764 .6039 .6290 .6521	
.6735 .6935 .7123 .7299 .7466 .7623 .7772	
.7913 .8047 .8174 .8294 .8409 .8440 .8465	
.8488 .8511 .8532 .8552 .8572 .8591 .8609	
.8627 .8644 .8660 .8676 .8692 .8707 .8721	
.8736 .8750 .8763 .8776 .8789 .8802 .8815	
.8827 .8839 .8850 .8862 .8873 .8884 .8895	
.8905 .8916 .8926 .8936 .8946 .8956 .8966	
.8975 .8985 .8994 .9003 .9012 .9021 .9030	
.9038 .9047 .9055 .9064 .9072 .9080 .9088	
.9096 .9104 .9112 .9119 .9127 .9134 .9142	
.9149 .9156 .9164 .9171 .9178 .9185 .9192	
.9199 .9205 .9212 .9219 .9225 .9232 .9238	
.9245 .9251 .9258 .9264 .9270 .9276 .9282	
.9288 .9294 .9300 .9306 .9312 .9318 .9324	
.9330 .9335 .9341 .9347 .9352 .9358 .9363	
.9369 .9374 .9380 .9385 .9390 .9395 .9401	
.9406 .9411 .9416 .9421 .9426 .9432 .9437	
.9442 .9446 .9451 .9456 .9461 .9466 .9471	
.9476 .9480 .9485 .9490 .9495 .9499	

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* *****
* *****

COMPUTE NM HYD

ID=10 HYD NO=133.51 DA=0.0670 SQ MI

PER A=5.00 PER B=65.00 PER C=30.00 PER D=0.00

TP=-0.1333 HR MASS RAIN=-1

K = .140513HR TP = .133300HR K/TP RATIO = 1.054109 SHAPE CONSTANT, N = 3.349556
UNIT PEAK = 155.40 CFS UNIT VOLUME = .9999 B = 309.18 P60 = .81000
AREA = .067000 SQ MI IA = .46250 INCHES INF = 1.14500 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=10 CODE=1

PARTIAL HYDROGRAPH 133.51

RUNOFF VOLUME = .02643 INCHES = .0945 ACRE-FEET
PEAK DISCHARGE RATE = 4.11 CFS AT 1.532 HOURS BASIN AREA = .0670 SQ. MI.

SED WASH LOAD

ID=10 K=0.16 C=0.25

P=1.0 IS=0.470

IMPERVIOUS=0.0 FACTOR=3.0

SEDIMENT YIELD (Wash Mat.) = 3.2 (TONS) WASH LOAD CONCENTRATION = 23974 (PPM-W)
PERCENTAGE IMPERVIOUS AREA = .000 WASH LOAD FACTOR = 3.00000

PRINT HYD

ID=10 CODE=1

PARTIAL HYDROGRAPH 133.51

RUNOFF VOLUME = .02643 INCHES = .0945 ACRE-FEET
PEAK DISCHARGE RATE = 4.11 CFS AT 1.532 HOURS BASIN AREA = .0670 SQ. MI.

SEDIMENT TRANS

ID=10 IDS=6 CODE=1

A=0.0002 B=4.19 C=0.19 D=-2.55

NUMB WASH=-1 NUMB SECTIONS=9

FLOW	VELOCITY	WIDTH
(CFS)	(FPS)	(FT)
5.00	2.91	8.75
10.00	3.61	10.08
25.00	4.77	12.68
40.00	5.42	14.57
55.00	5.96	16.02
70.00	6.36	17.31
85.00	6.65	18.49
100.00	6.96	19.50
115.00	6.74	24.19

Use wash load from SED WASH LOAD command - Concentration = 23974 (PPM-W)

* * * * *

TIME	WATER FLOW	VELOCITY	HYD. DEPTH	WIDTH	WASHLOAD CONC.	BED MAT. TRANSPORT	BED CONC.	TOTAL CONC.	BULKING FACTOR	ACCUM. SEDIMENT
(HRS)	(CFS)	(FT/SEC)	(FT)	(FT)	(PPM-W)	(CFS)	(PPM-W)	(PPM-W)		(TONS)
.000	.00	.000	.000	.00	23974.	.00	0.	23974.	1.0000	.00
.033	.00	.000	.000	.00	23974.	.00	0.	23974.	1.0000	.00
.067	.00	.000	.000	.00	23974.	.00	0.	23974.	1.0000	.00
.100	.00	.000	.000	.00	23974.	.00	0.	23974.	1.0000	.00
.133	.00	.000	.000	.00	23974.	.00	0.	23974.	1.0000	.00
.167	.00	.000	.000	.00	23974.	.00	0.	23974.	1.0000	.00
.200	.00	.000	.000	.00	23974.	.00	0.	23974.	1.0000	.00
.233	.00	.000	.000	.00	23974.	.00	0.	23974.	1.0000	.00
.266	.00	.000	.000	.00	23974.	.00	0.	23974.	1.0000	.00
.300	.00	.000	.000	.00	23974.	.00	0.	23974.	1.0000	.00
.333	.00	.000	.000	.00	23974.	.00	0.	23974.	1.0000	.00
.366	.00	.000	.000	.00	23974.	.00	0.	23974.	1.0000	.00
.400	.00	.000	.000	.00	23974.	.00	0.	23974.	1.0000	.00
.433	.00	.000	.000	.00	23974.	.00	0.	23974.	1.0000	.00
.466	.00	.000	.000	.00	23974.	.00	0.	23974.	1.0000	.00
.500	.00	.000	.000	.00	23974.	.00	0.	23974.	1.0000	.00
.533	.00	.000	.000	.00	23974.	.00	0.	23974.	1.0000	.00
.566	.00	.000	.000	.00	23974.	.00	0.	23974.	1.0000	.00
.599	.00	.000	.000	.00	23974.	.00	0.	23974.	1.0000	.00

TIME (HRS)	WATER FLOW (CFS)	VELOCITY (FT/SEC)	HYD. DEPTH (FT)	WIDTH (FT)	WASHLOAD CONC. (PPM-W)	BED MAT. TRANSPORT (CFS)	BED CONC. (PPM-W)	TOTAL CONC. (PPM-W)	BULKING FACTOR	ACCUM. SEDIMENT (TONS)
1.865	.50	1.584	.079	4.01	23974.	.00	18787.	41879.	1.0165	7.84
1.898	.40	1.493	.072	3.67	23974.	.00	16747.	39934.	1.0157	7.90
1.931	.36	1.461	.070	3.55	23974.	.00	16051.	39270.	1.0154	7.96
1.965	.33	1.432	.068	3.45	23974.	.00	15446.	38694.	1.0152	8.01
1.998	.31	1.404	.066	3.35	23974.	.00	14864.	38139.	1.0150	8.06
2.031	.29	1.377	.064	3.25	23974.	.00	14304.	37605.	1.0147	8.10
2.065	.26	1.350	.062	3.16	23974.	.00	13764.	37090.	1.0145	8.14
2.098	.24	1.324	.060	3.06	23974.	.00	13244.	36595.	1.0143	8.17
2.131	.23	1.298	.058	2.97	23974.	.00	12744.	36118.	1.0141	8.20
2.164	.21	1.272	.057	2.89	23974.	.00	12263.	35659.	1.0140	8.23
2.198	.19	1.247	.055	2.80	23974.	.00	11799.	35217.	1.0138	8.26
2.231	.18	1.223	.054	2.72	23974.	.00	11353.	34792.	1.0136	8.28
2.264	.16	1.199	.052	2.64	23974.	.00	10923.	34383.	1.0134	8.30
2.298	.15	1.176	.050	2.56	23974.	.00	10510.	33988.	1.0133	8.32
2.331	.14	1.153	.049	2.49	23974.	.00	10112.	33609.	1.0131	8.34
2.364	.13	1.130	.048	2.42	23974.	.00	9729.	33244.	1.0130	8.36
2.398	.12	1.108	.046	2.35	23974.	.00	9360.	32893.	1.0128	8.37
2.431	.11	1.086	.045	2.28	23974.	.00	9005.	32555.	1.0127	8.39
.633	.00	.000	.000	.00	23974.	.00	0.	23974.	1.0000	.00
.666	.00	.000	.000	.00	23974.	.00	0.	23974.	1.0000	.00
.699	.00	.000	.000	.00	23974.	.00	0.	23974.	1.0000	.00
.733	.00	.000	.000	.00	23974.	.00	0.	23974.	1.0000	.00
.766	.00	.000	.000	.00	23974.	.00	0.	23974.	1.0000	.00
.799	.00	.000	.000	.00	23974.	.00	0.	23974.	1.0000	.00
.833	.00	.000	.000	.00	23974.	.00	0.	23974.	1.0000	.00
.866	.00	.000	.000	.00	23974.	.00	0.	23974.	1.0000	.00
.899	.00	.000	.000	.00	23974.	.00	0.	23974.	1.0000	.00
.932	.00	.000	.000	.00	23974.	.00	0.	23974.	1.0000	.00
.966	.00	.000	.000	.00	23974.	.00	0.	23974.	1.0000	.00
.999	.00	.000	.000	.00	23974.	.00	0.	23974.	1.0000	.00
1.032	.00	.000	.000	.00	23974.	.00	0.	23974.	1.0000	.00
1.066	.00	.000	.000	.00	23974.	.00	0.	23974.	1.0000	.00
1.099	.00	.000	.000	.00	23974.	.00	0.	23974.	1.0000	.00
1.132	.00	.000	.000	.00	23974.	.00	0.	23974.	1.0000	.00
1.166	.00	.000	.000	.00	23974.	.00	0.	23974.	1.0000	.00
1.199	.00	.000	.000	.00	23974.	.00	0.	23974.	1.0000	.00
1.232	.00	.000	.000	.00	23974.	.00	0.	23974.	1.0000	.00
1.265	.00	.000	.000	.00	23974.	.00	0.	23974.	1.0000	.00
1.299	.00	.000	.000	.00	23974.	.00	0.	23974.	1.0000	.00
1.332	.00	.000	.000	.00	23974.	.00	0.	23974.	1.0000	.00
1.365	.00	.000	.000	.00	23974.	.00	0.	23974.	1.0000	.00
1.399	.00	.000	.000	.00	23974.	.00	0.	23974.	1.0000	.00
1.432	.92	1.844	.099	5.04	23974.	.01	25184.	47980.	1.0190	.17
1.465	2.61	2.507	.157	6.62	23974.	.05	45239.	67116.	1.0271	.87
1.499	3.76	2.740	.179	7.65	23974.	.08	53456.	74963.	1.0306	2.01
1.532	4.11	2.794	.185	7.96	23974.	.09	55455.	76872.	1.0314	3.29
1.565	3.86	2.756	.181	7.74	23974.	.08	54048.	75528.	1.0308	4.47
1.598	3.29	2.657	.171	7.23	23974.	.07	50472.	72114.	1.0293	5.43
1.632	2.63	2.514	.158	6.65	23974.	.05	45472.	67339.	1.0272	6.14
1.665	2.08	2.358	.143	6.16	23974.	.03	40295.	62397.	1.0251	6.66
1.698	1.64	2.201	.129	5.77	23974.	.02	35367.	57694.	1.0231	7.03
1.732	1.29	2.047	.116	5.46	23974.	.02	30771.	53309.	1.0212	7.31
1.765	1.02	1.896	.103	5.22	23974.	.01	26565.	49296.	1.0196	7.50
1.798	.81	1.784	.094	4.79	23974.	.01	23624.	46491.	1.0184	7.65
1.832	.64	1.681	.086	4.39	23974.	.01	21070.	44056.	1.0174	7.76

2.464	.10	1.065	.043	2.21	23974.	.00	8664.	32229.	1.0126	8.40
2.498	.09	1.044	.042	2.15	23974.	.00	8335.	31916.	1.0124	8.41
2.531	.09	1.024	.041	2.08	23974.	.00	8019.	31614.	1.0123	8.42
2.564	.08	1.004	.040	2.02	23974.	.00	7714.	31324.	1.0122	8.43
2.597	.07	.984	.039	1.96	23974.	.00	7422.	31045.	1.0121	8.44
2.631	.07	.965	.037	1.91	23974.	.00	7140.	30777.	1.0120	8.45
2.664	.06	.946	.036	1.85	23974.	.00	6868.	30518.	1.0119	8.46
2.697	.06	.928	.035	1.80	23974.	.00	6607.	30269.	1.0118	8.46
2.731	.05	.909	.034	1.74	23974.	.00	6356.	30030.	1.0117	8.47
2.764	.05	.892	.033	1.69	23974.	.00	6115.	29800.	1.0116	8.48
2.797	.05	.874	.032	1.64	23974.	.00	5882.	29578.	1.0115	8.48
2.831	.04	.857	.031	1.60	23974.	.00	5658.	29365.	1.0114	8.49
2.864	.04	.840	.030	1.55	23974.	.00	5443.	29160.	1.0113	8.49
2.897	.04	.824	.030	1.50	23974.	.00	5236.	28963.	1.0113	8.50
2.930	.03	.808	.029	1.46	23974.	.00	5037.	28773.	1.0112	8.50
2.964	.03	.792	.028	1.42	23974.	.00	4845.	28590.	1.0111	8.50
2.997	.03	.777	.027	1.38	23974.	.00	4660.	28414.	1.0110	8.51
3.030	.03	.761	.026	1.34	23974.	.00	4483.	28245.	1.0110	8.51
3.064	.02	.746	.026	1.30	23974.	.00	4312.	28082.	1.0109	8.51
3.097	.02	.732	.025	1.26	23974.	.00	4148.	27926.	1.0108	8.51
3.130	.02	.718	.024	1.22	23974.	.00	3990.	27775.	1.0108	8.52
3.164	.02	.704	.023	1.19	23974.	.00	3838.	27630.	1.0107	8.52
3.197	.02	.690	.023	1.15	23974.	.00	3692.	27491.	1.0107	8.52
3.230	.02	.676	.022	1.12	23974.	.00	3551.	27357.	1.0106	8.52
3.263	.02	.663	.021	1.09	23974.	.00	3416.	27228.	1.0106	8.52
3.297	.01	.650	.021	1.05	23974.	.00	3285.	27104.	1.0105	8.52
3.330	.01	.637	.020	1.02	23974.	.00	3160.	26985.	1.0105	8.53
3.363	.01	.625	.020	.99	23974.	.00	3039.	26870.	1.0104	8.53
3.397	.01	.613	.019	.96	23974.	.00	2924.	26759.	1.0104	8.53
3.430	.01	.601	.018	.94	23974.	.00	2812.	26653.	1.0103	8.53
3.463	.01	.589	.018	.91	23974.	.00	2705.	26551.	1.0103	8.53
3.497	.01	.577	.017	.88	23974.	.00	2602.	26452.	1.0103	8.53
3.530	.01	.566	.017	.86	23974.	.00	2502.	26358.	1.0102	8.53
3.563	.01	.555	.016	.83	23974.	.00	2407.	26267.	1.0102	8.53
3.596	.01	.544	.016	.81	23974.	.00	2315.	26179.	1.0101	8.53
3.630	.01	.534	.015	.78	23974.	.00	2227.	26095.	1.0101	8.53
3.663	.01	.523	.015	.76	23974.	.00	2142.	26014.	1.0101	8.53
3.696	.01	.513	.015	.74	23974.	.00	2060.	25936.	1.0100	8.54
3.730	.01	.503	.014	.72	23974.	.00	1981.	25861.	1.0100	8.54
3.763	.00	.493	.014	.70	23974.	.00	1906.	25789.	1.0100	8.54
3.796	.00	.483	.013	.68	23974.	.00	1833.	25720.	1.0100	8.54
3.830	.00	.474	.013	.66	23974.	.00	1763.	25653.	1.0099	8.54
3.863	.00	.465	.013	.64	23974.	.00	1695.	25589.	1.0099	8.54
3.896	.00	.456	.012	.62	23974.	.00	1631.	25528.	1.0099	8.54
3.929	.00	.447	.012	.60	23974.	.00	1568.	25468.	1.0099	8.54
3.963	.00	.438	.011	.58	23974.	.00	1509.	25411.	1.0098	8.54
3.996	.00	.429	.011	.57	23974.	.00	1451.	25356.	1.0098	8.54
4.029	.00	.421	.011	.55	23974.	.00	1395.	25303.	1.0098	8.54
4.063	.00	.413	.010	.53	23974.	.00	1342.	25253.	1.0098	8.54
4.096	.00	.405	.010	.52	23974.	.00	1291.	25204.	1.0098	8.54
4.129	.00	.397	.010	.50	23974.	.00	1242.	25157.	1.0097	8.54
4.163	.00	.389	.010	.49	23974.	.00	1194.	25112.	1.0097	8.54
4.196	.00	.381	.009	.47	23974.	.00	1149.	25068.	1.0097	8.54
4.229	.00	.374	.009	.46	23974.	.00	1105.	25026.	1.0097	8.54
4.262	.00	.367	.009	.45	23974.	.00	1062.	24986.	1.0097	8.54

4.296	.00	.359	.009	.43	23974.	.00	1022.	24947.	1.0097	8.54
4.329	.00	.352	.008	.42	23974.	.00	983.	24910.	1.0096	8.54
4.362	.00	.346	.008	.41	23974.	.00	945.	24874.	1.0096	8.54
4.396	.00	.339	.008	.40	23974.	.00	909.	24840.	1.0096	8.54

AT PEAK FLOW OF 4.108 WITH TIME AT 1.53 HOURS: BEDMAT = 2.25 (TONS) = .0010 (AC-FT bulked)
 PEAK BULKING FACTOR = 1.031424 = 76872. (PPM-W) TOTAL SED = 3.29 (TONS) = .0015 (AC-FT bulked)

	UNBULKED WEIGHT (TONS)	BULKED VOLUME (AC-FT)	CONCENTRATION BY WEIGHT (PPM)	AVERAGE BULKING FACTOR
WASHMAT =	3.15	.0009	.0014	23967.
BEDMAT =	5.39	.0015	.0025	40286.
TOTAL SEDIMENT =	8.54	.0024	.0039	62383.
				1.025107

SEDIMENT TRANSPORT CAPACITY: .05853 AC-FT/SQ MI (bulkcd) = .1992 TONS/ACRE (at Porosity=0.395)

PRINT HYD ID=10 CODE=1

PARTIAL HYDROGRAPH 133.51

RUNOFF VOLUME = .02643 INCHES = .0945 ACRE-FEET
 PEAK DISCHARGE RATE = 4.11 CFS AT 1.532 HOURS BASIN AREA = .0670 SQ. MI.

COMPUTE NM HYD ID=11 HYD NO=133.52 DA=0.0485 SQ MI
 PER A=5.00 PER B=65.00 PER C=30.00 PER D=0.00
 TP=-0.1333 HR MASS RAIN=-1

K = .139988HR TP = .133300HR K/TP RATIO = 1.050173 SHAPE CONSTANT, N = 3.361918
 UNIT PEAK = 112.83 CFS UNIT VOLUME = .9999 B = 310.11 P60 = .81000
 AREA = .048500 SQ MI IA = .46250 INCHES INF = 1.14500 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=11 CODE=1

PARTIAL HYDROGRAPH 133.52

RUNOFF VOLUME = .02643 INCHES = .0684 ACRE-FEET
 PEAK DISCHARGE RATE = 2.98 CFS AT 1.532 HOURS BASIN AREA = .0485 SQ. MI.

SED WASH LOAD ID=11 K=0.14 C=0.25
 P=1.0 LS=0.375
 IMPERVIOUS=0.0 FACTOR=3.0
 SEDIMENT YIELD (Wash Mat.) = 1.5 (TONS) WASH LOAD CONCENTRATION = 16256 (PPM-W)
 PERCENTAGE IMPERVIOUS AREA = .000 WASH LOAD FACTOR = 3.00000

PRINT HYD ID=11 CODE=1

PARTIAL HYDROGRAPH 133.52

RUNOFF VOLUME = .02643 INCHES = .0684 ACRE-FEET
PEAK DISCHARGE RATE = 2.98 CFS AT 1.532 HOURS BASIN AREA = .0485 SQ. MI.

SEDIMENT TRANS

ID=11 IDS=7 CODE=1
A=0.0002 B=4.19 C=0.19 D=-2.55
NUMB WASH=-1 NUMB SECTIONS=9

FLOW	VELOCITY	WIDTH
(CFS)	(FPS)	(FT)
5.00	3.05	9.07
10.00	3.73	10.90
25.00	4.84	14.34
40.00	5.50	16.71
55.00	5.99	18.61
65.00	6.26	19.71
70.00	6.38	20.22
75.00	6.50	20.71
85.00	6.70	21.65

Use wash load from SED WASH LOAD command - Concentration = 16256 (PPM-W)

* * * * *

TIME	WATER		HYD.		WASHLOAD	BED MAT.	BED	TOTAL	BULKING	ACCUM.
(HRS)	FLOW	VELOCITY	DEPTH	WIDTH	CONC.	TRANSPORT	CONC.	CONC.	FACTOR	SEDIMENT
	(CFS)	(FT/SEC)	(FT)	(FT)	(PPM-W)	(CFS)	(PPM-W)	(PPM-W)		(TONS)
.000	.00	.000	.000	.00	16256.	.00	0.	16256.	1.0000	.00
.033	.00	.000	.000	.00	16256.	.00	0.	16256.	1.0000	.00
.067	.00	.000	.000	.00	16256.	.00	0.	16256.	1.0000	.00
.100	.00	.000	.000	.00	16256.	.00	0.	16256.	1.0000	.00
.133	.00	.000	.000	.00	16256.	.00	0.	16256.	1.0000	.00
.167	.00	.000	.000	.00	16256.	.00	0.	16256.	1.0000	.00
.200	.00	.000	.000	.00	16256.	.00	0.	16256.	1.0000	.00
.233	.00	.000	.000	.00	16256.	.00	0.	16256.	1.0000	.00
.266	.00	.000	.000	.00	16256.	.00	0.	16256.	1.0000	.00
.300	.00	.000	.000	.00	16256.	.00	0.	16256.	1.0000	.00
.333	.00	.000	.000	.00	16256.	.00	0.	16256.	1.0000	.00
.366	.00	.000	.000	.00	16256.	.00	0.	16256.	1.0000	.00
.400	.00	.000	.000	.00	16256.	.00	0.	16256.	1.0000	.00
.433	.00	.000	.000	.00	16256.	.00	0.	16256.	1.0000	.00
.466	.00	.000	.000	.00	16256.	.00	0.	16256.	1.0000	.00
.500	.00	.000	.000	.00	16256.	.00	0.	16256.	1.0000	.00
.533	.00	.000	.000	.00	16256.	.00	0.	16256.	1.0000	.00
.566	.00	.000	.000	.00	16256.	.00	0.	16256.	1.0000	.00
.599	.00	.000	.000	.00	16256.	.00	0.	16256.	1.0000	.00
.633	.00	.000	.000	.00	16256.	.00	0.	16256.	1.0000	.00
.666	.00	.000	.000	.00	16256.	.00	0.	16256.	1.0000	.00
.699	.00	.000	.000	.00	16256.	.00	0.	16256.	1.0000	.00
.733	.00	.000	.000	.00	16256.	.00	0.	16256.	1.0000	.00
.766	.00	.000	.000	.00	16256.	.00	0.	16256.	1.0000	.00
.799	.00	.000	.000	.00	16256.	.00	0.	16256.	1.0000	.00
.833	.00	.000	.000	.00	16256.	.00	0.	16256.	1.0000	.00
.866	.00	.000	.000	.00	16256.	.00	0.	16256.	1.0000	.00
.899	.00	.000	.000	.00	16256.	.00	0.	16256.	1.0000	.00
.932	.00	.000	.000	.00	16256.	.00	0.	16256.	1.0000	.00
.966	.00	.000	.000	.00	16256.	.00	0.	16256.	1.0000	.00
.999	.00	.000	.000	.00	16256.	.00	0.	16256.	1.0000	.00
1.032	.00	.000	.000	.00	16256.	.00	0.	16256.	1.0000	.00

1.066	.00	.000	.000	.00	16256.	.00	0.	16256.	1.0000	.00
1.099	.00	.000	.000	.00	16256.	.00	0.	16256.	1.0000	.00
1.132	.00	.000	.000	.00	16256.	.00	0.	16256.	1.0000	.00
1.166	.00	.000	.000	.00	16256.	.00	0.	16256.	1.0000	.00
1.199	.00	.000	.000	.00	16256.	.00	0.	16256.	1.0000	.00
1.232	.00	.000	.000	.00	16256.	.00	0.	16256.	1.0000	.00
1.265	.00	.000	.000	.00	16256.	.00	0.	16256.	1.0000	.00
1.299	.00	.000	.000	.00	16256.	.00	0.	16256.	1.0000	.00
1.332	.00	.000	.000	.00	16256.	.00	0.	16256.	1.0000	.00
1.365	.00	.000	.000	.00	16256.	.00	0.	16256.	1.0000	.00
1.399	.00	.000	.000	.00	16256.	.00	0.	16256.	1.0000	.00
1.432	.66	1.800	.082	4.50	16256.	.01	26602.	42012.	1.0165	.11
1.465	1.89	2.422	.128	6.09	16256.	.04	46841.	61621.	1.0248	.57
1.499	2.73	2.671	.148	6.90	16256.	.06	56237.	70730.	1.0287	1.35
1.532	2.98	2.730	.153	7.14	16256.	.07	58574.	72995.	1.0297	2.23
1.565	2.80	2.688	.150	6.97	16256.	.06	56928.	71399.	1.0290	3.03
1.598	2.39	2.582	.141	6.57	16256.	.05	52788.	67386.	1.0273	3.68
1.632	1.91	2.430	.128	6.11	16256.	.04	47106.	61878.	1.0249	4.15
1.665	1.50	2.267	.116	5.73	16256.	.02	41350.	56299.	1.0225	4.48
1.698	1.19	2.107	.104	5.42	16256.	.02	35978.	51094.	1.0203	4.72
1.732	.94	1.961	.093	5.11	16256.	.01	31375.	46635.	1.0185	4.89
1.765	.74	1.848	.085	4.68	16256.	.01	27995.	43361.	1.0171	5.02
1.798	.58	1.741	.078	4.28	16256.	.01	24971.	40431.	1.0159	5.11
1.832	.46	1.641	.071	3.91	16256.	.00	22265.	37811.	1.0148	5.18

TIME (HRS)	WATER FLOW (CFS)	VELOCITY (FT/SEC)	HYD. DEPTH (FT)	WIDTH (FT)	WASHLOAD CONC. (PPM-W)	BED MAT. TRANSPORT (CFS)	BED CONC. (PPM-W)	TOTAL CONC. (PPM-W)	BULKING FACTOR	ACCUM. SEDIMENT (TONS)
1.865	.36	1.546	.065	3.58	16256.	.00	19847.	35469.	1.0139	5.23
1.898	.28	1.457	.060	3.27	16256.	.00	17686.	33377.	1.0130	5.27
1.931	.26	1.427	.058	3.18	16256.	.00	16999.	32711.	1.0128	5.30
1.965	.24	1.399	.056	3.08	16256.	.00	16357.	32089.	1.0125	5.33
1.998	.22	1.372	.055	2.99	16256.	.00	15738.	31491.	1.0123	5.36
2.031	.21	1.345	.053	2.90	16256.	.00	15143.	30915.	1.0120	5.38
2.065	.19	1.319	.051	2.82	16256.	.00	14570.	30360.	1.0118	5.40
2.098	.18	1.293	.050	2.74	16256.	.00	14019.	29826.	1.0116	5.42
2.131	.16	1.267	.048	2.66	16256.	.00	13488.	29312.	1.0114	5.44
2.164	.15	1.242	.047	2.58	16256.	.00	12977.	28817.	1.0112	5.46
2.198	.14	1.218	.046	2.50	16256.	.00	12485.	28341.	1.0110	5.47
2.231	.13	1.194	.044	2.43	16256.	.00	12011.	27882.	1.0108	5.49
2.264	.12	1.171	.043	2.36	16256.	.00	11555.	27441.	1.0106	5.50
2.298	.11	1.148	.042	2.29	16256.	.00	11117.	27016.	1.0105	5.51
2.331	.10	1.125	.041	2.22	16256.	.00	10694.	26607.	1.0103	5.52
2.364	.09	1.103	.039	2.16	16256.	.00	10288.	26214.	1.0102	5.53
2.398	.09	1.081	.038	2.09	16256.	.00	9897.	25835.	1.0100	5.54
2.431	.08	1.060	.037	2.03	16256.	.00	9521.	25471.	1.0099	5.55
2.464	.07	1.039	.036	1.97	16256.	.00	9158.	25120.	1.0097	5.55
2.498	.07	1.019	.035	1.92	16256.	.00	8810.	24783.	1.0096	5.56
2.531	.06	.999	.034	1.86	16256.	.00	8474.	24458.	1.0095	5.57
2.564	.06	.979	.033	1.80	16256.	.00	8152.	24146.	1.0093	5.57
2.597	.05	.960	.032	1.75	16256.	.00	7841.	23845.	1.0092	5.58
2.631	.05	.941	.031	1.70	16256.	.00	7542.	23556.	1.0091	5.58
2.664	.05	.923	.030	1.65	16256.	.00	7255.	23278.	1.0090	5.59
2.697	.04	.905	.029	1.60	16256.	.00	6978.	23010.	1.0089	5.59
2.731	.04	.887	.028	1.56	16256.	.00	6712.	22752.	1.0088	5.59
2.764	.04	.870	.028	1.51	16256.	.00	6456.	22505.	1.0087	5.60
2.797	.03	.853	.027	1.47	16256.	.00	6210.	22266.	1.0086	5.60
2.831	.03	.836	.026	1.42	16256.	.00	5973.	22037.	1.0085	5.60
2.864	.03	.819	.025	1.38	16256.	.00	5745.	21816.	1.0084	5.60

2.897	.03	.803	.024	1.34	16256.	.00	5525.	21604.	1.0083	5.61
2.930	.02	.788	.024	1.30	16256.	.00	5314.	21399.	1.0083	5.61
2.964	.02	.772	.023	1.26	16256.	.00	5111.	21203.	1.0082	5.61
2.997	.02	.757	.022	1.23	16256.	.00	4916.	21014.	1.0081	5.61
3.030	.02	.742	.022	1.19	16256.	.00	4728.	20832.	1.0080	5.61
3.064	.02	.728	.021	1.16	16256.	.00	4548.	20657.	1.0080	5.61
3.097	.02	.713	.020	1.12	16256.	.00	4374.	20489.	1.0079	5.62
3.130	.02	.699	.020	1.09	16256.	.00	4207.	20327.	1.0078	5.62
3.164	.01	.686	.019	1.06	16256.	.00	4046.	20171.	1.0078	5.62
3.197	.01	.672	.019	1.03	16256.	.00	3891.	20022.	1.0077	5.62
3.230	.01	.659	.018	1.00	16256.	.00	3742.	19878.	1.0077	5.62
3.263	.01	.646	.018	.97	16256.	.00	3599.	19739.	1.0076	5.62
3.297	.01	.633	.017	.94	16256.	.00	3461.	19606.	1.0075	5.62
3.330	.01	.621	.017	.91	16256.	.00	3329.	19478.	1.0075	5.62
3.363	.01	.609	.016	.88	16256.	.00	3201.	19354.	1.0074	5.62
3.397	.01	.597	.016	.86	16256.	.00	3079.	19236.	1.0074	5.62
3.430	.01	.585	.015	.83	16256.	.00	2961.	19122.	1.0074	5.62
3.463	.01	.573	.015	.81	16256.	.00	2848.	19012.	1.0073	5.62
3.497	.01	.562	.014	.78	16256.	.00	2739.	18906.	1.0073	5.62
3.530	.01	.551	.014	.76	16256.	.00	2634.	18805.	1.0072	5.62
3.563	.01	.540	.013	.74	16256.	.00	2533.	18707.	1.0072	5.63
3.596	.00	.530	.013	.72	16256.	.00	2436.	18613.	1.0072	5.63
3.630	.00	.519	.013	.70	16256.	.00	2343.	18523.	1.0071	5.63
3.663	.00	.509	.012	.68	16256.	.00	2253.	18436.	1.0071	5.63
3.696	.00	.499	.012	.66	16256.	.00	2167.	18353.	1.0071	5.63

TIME (HRS)	WATER FLOW (CFS)	HYD. VELOCITY (FT/SEC)	DEPTH (FT)	WIDTH (FT)	WASHLOAD CONC. (PPM-W)	BED MAT. TRANSPORT (CFS)	BED CONC. (PPM-W)	TOTAL CONC. (PPM-W)	BULKING FACTOR	ACCUM. SEDIMENT (TONS)
3.730	.00	.489	.012	.64	16256.	.00	2084.	18272.	1.0070	5.63
3.763	.00	.480	.011	.62	16256.	.00	2004.	18195.	1.0070	5.63
3.796	.00	.470	.011	.60	16256.	.00	1927.	18121.	1.0070	5.63
3.830	.00	.461	.011	.58	16256.	.00	1853.	18049.	1.0069	5.63
3.863	.00	.452	.010	.57	16256.	.00	1782.	17981.	1.0069	5.63
3.896	.00	.443	.010	.55	16256.	.00	1714.	17915.	1.0069	5.63
3.929	.00	.435	.010	.53	16256.	.00	1648.	17851.	1.0069	5.63
3.963	.00	.426	.009	.52	16256.	.00	1585.	17790.	1.0068	5.63
3.996	.00	.418	.009	.50	16256.	.00	1524.	17731.	1.0068	5.63
4.029	.00	.409	.009	.49	16256.	.00	1466.	17674.	1.0068	5.63
4.063	.00	.401	.009	.47	16256.	.00	1409.	17620.	1.0068	5.63
4.096	.00	.394	.008	.46	16256.	.00	1355.	17568.	1.0067	5.63
4.129	.00	.386	.008	.45	16256.	.00	1303.	17517.	1.0067	5.63
4.163	.00	.378	.008	.43	16256.	.00	1253.	17469.	1.0067	5.63
4.196	.00	.371	.008	.42	16256.	.00	1205.	17423.	1.0067	5.63
4.229	.00	.364	.007	.41	16256.	.00	1159.	17378.	1.0067	5.63
4.262	.00	.356	.007	.40	16256.	.00	1115.	17335.	1.0067	5.63

AT PEAK FLOW OF 2.983 WITH TIME AT 1.53 HOURS: BEDMAT = 1.72 (TONS) = .0008 (AC-FT bulked)
TOTAL SED = 2.23 (TONS) = .0010 (AC-FT bulked)

PEAK BULKING FACTOR = 1.029714 = 72995. (PPM-W)

UNBULKED	BULKED	CONCENTRATION	AVERAGE
WEIGHT (TONS)	VOLUME (AC-FT)	BY WEIGHT (PPM)	BULKING FACTOR

WASHMAT = 1.53 .0004 .0007 16250.
BEDMAT = 4.09 .0011 .0019 42198.

TOTAL SEDIMENT = 5.63 .0016 .0026 57115. 1.022859

SEDIMENT TRANSPORT CAPACITY: .05329 AC-FT/SQ MI (bulked) = .1813 TONS/ACRE (at Porosity=0.395)

PRINT HYD ID=11 CODE=1

PARTIAL HYDROGRAPH 133.52

RUNOFF VOLUME = .02643 INCHES = .0684 ACRE-FEET
PEAK DISCHARGE RATE = 2.98 CFS AT 1.532 HOURS BASIN AREA = .0485 SQ. MI.

*S UNDEVELOPED, OFF-SITE FLOW ENTERING POND

ADD HYD ID=11 HYD NO=133.50 ID I=10 ID II=11
PRINT HYD ID=11 CODE=1

PARTIAL HYDROGRAPH 133.50

RUNOFF VOLUME = .02642 INCHES = .1628 ACRE-FEET
PEAK DISCHARGE RATE = 7.09 CFS AT 1.532 HOURS BASIN AREA = .1155 SQ. MI.

* *****

FINISH

NORMAL PROGRAM FINISH END TIME (HR:MIN:SEC) = 07:30:47

5-YEAR POST DEVELOPMENT DETAIL PRINTOUT

AHYMO PROGRAM (AHYMO993) - AMAFCA VERSION OF HYMO - SEPTEMBER, 1993

RUN DATE (MON/DAY/YR) = 11/26/1993

START TIME (HR:MIN:SEC) = 07:31:17 USER NO. = COMMSC_B.T93

INPUT FILE = PM5PO.DAT

*S PARKWEST 5-YEAR POST DEVELOPMENT

START TIME=0.0 HR PUNCH CODE=0

RAINFALL TYPE=1 RAIN QUARTER=0.0

RAIN ONE=1.06 IN RAIN SIX=1.25 IN

RAIN DAY=1.47 IN DT=0.0333 HRS

COMPUTED 6-HOUR RAINFALL DISTRIBUTION BASED ON NOAA ATLAS 2 - PEAK AT 1.40 HR.

DT =	.033300 HOURS	END TIME =	5.994000 HOURS
.0000	.0009	.0019	.0029
.0071	.0082	.0093	.0105
.0155	.0168	.0182	.0196
.0258	.0275	.0293	.0311
.0394	.0417	.0442	.0471
.0763	.1007	.1358	.1839
.5506	.6683	.7166	.7572
.8844	.9106	.9351	.9582
1.0385	1.0560	1.0726	1.0884
1.1139	1.1169	1.1198	1.1225
1.1324	1.1347	1.1368	1.1390
1.1469	1.1488	1.1506	1.1524
1.1591	1.1607	1.1623	1.1638
1.1697	1.1711	1.1725	1.1739
1.1791	1.1804	1.1816	1.1828
1.1876	1.1887	1.1899	1.1910
1.1954	1.1964	1.1975	1.1985
1.2025	1.2035	1.2045	1.2054
1.2092	1.2101	1.2110	1.2119
1.2154	1.2163	1.2172	1.2180
1.2213	1.2221	1.2230	1.2238
1.2269	1.2277	1.2284	1.2292
1.2322	1.2329	1.2337	1.2344
1.2372	1.2379	1.2386	1.2393
1.2421	1.2427	1.2434	1.2441
1.2467	1.2473	1.2480	1.2486

* *****
* *****
* *****

COMPUTE NM HYD

ID=10 HYD NO=132.11 DA=0.0093 SQ MI
PER A=30.00 PER B=50.00 PER C=20.00 PER D=0.00
TP=-0.1333 HR MASS RAIN=-1

K = .148591HR TP = .133300HR K/TP RATIO = 1.114712 SHAPE CONSTANT, N = 3.172826
UNIT PEAK = 20.625 CFS UNIT VOLUME = .9994 B = 295.62 P60 = 1.0600
AREA = .009300 SQ MI IA = .51500 INCHES INF = 1.29200 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=10 CODE=1

PARTIAL HYDROGRAPH 132.11

RUNOFF VOLUME = .10306 INCHES = .0511 ACRE-FEET
PEAK DISCHARGE RATE = 2.09 CFS AT 1.532 HOURS BASIN AREA = .0093 SQ. MI.

SED WASH LOAD

ID=10 K=0.17 C=0.25

P=1.0 LS=0.758

IMPERVIOUS=0.0 FACTOR=3.0

SEDIMENT YIELD (Wash Mat.) = 2.6 (TONS) WASH LOAD CONCENTRATION = 36411 (ppm-w)
PERCENTAGE IMPERVIOUS AREA = .000 WASH LOAD FACTOR = 3.00000

SEDIMENT TRANS

ID=10 IDS=5 CODE=1

A=0.0002 B=4.19 C=0.19 D=-2.55

NUMB WASH=-1 NUMB SECTIONS=9

FLOW	VELOCITY	WIDTH
(CFS)	(FPS)	(FT)
1.00	2.06	4.06
2.00	2.46	5.26
3.00	2.73	6.11
4.00	2.93	6.82
6.00	3.25	7.92
8.00	3.48	8.85
10.00	3.67	9.62
12.00	3.84	10.30
14.00	3.99	10.92

Use wash load from SED WASH LOAD command - Concentration = 36411 (PPM-w)

* * * * *

TIME	WATER FLOW	VELOCITY	HYD. DEPTH	WIDTH	WASHLOAD CONC.	BED MAT. TRANSPORT	BED CONC.	TOTAL CONC.	BULKING FACTOR	ACCUM. SEDIMENT
(HRS)	(CFS)	(FT/SEC)	(FT)	(FT)	(PPM-w)	(CFS)	(PPM-w)	(PPM-w)		(TONS)
.000	.00	.000	.000	.00	36411.	.00	0.	36411.	1.0000	.00
.033	.00	.000	.000	.00	36411.	.00	0.	36411.	1.0000	.00
.067	.00	.000	.000	.00	36411.	.00	0.	36411.	1.0000	.00
.100	.00	.000	.000	.00	36411.	.00	0.	36411.	1.0000	.00
.133	.00	.000	.000	.00	36411.	.00	0.	36411.	1.0000	.00
.167	.00	.000	.000	.00	36411.	.00	0.	36411.	1.0000	.00
.200	.00	.000	.000	.00	36411.	.00	0.	36411.	1.0000	.00
.233	.00	.000	.000	.00	36411.	.00	0.	36411.	1.0000	.00
.266	.00	.000	.000	.00	36411.	.00	0.	36411.	1.0000	.00
.300	.00	.000	.000	.00	36411.	.00	0.	36411.	1.0000	.00
.333	.00	.000	.000	.00	36411.	.00	0.	36411.	1.0000	.00
.366	.00	.000	.000	.00	36411.	.00	0.	36411.	1.0000	.00
.400	.00	.000	.000	.00	36411.	.00	0.	36411.	1.0000	.00
.433	.00	.000	.000	.00	36411.	.00	0.	36411.	1.0000	.00
.466	.00	.000	.000	.00	36411.	.00	0.	36411.	1.0000	.00
.500	.00	.000	.000	.00	36411.	.00	0.	36411.	1.0000	.00
.533	.00	.000	.000	.00	36411.	.00	0.	36411.	1.0000	.00
.566	.00	.000	.000	.00	36411.	.00	0.	36411.	1.0000	.00
.599	.00	.000	.000	.00	36411.	.00	0.	36411.	1.0000	.00
.633	.00	.000	.000	.00	36411.	.00	0.	36411.	1.0000	.00
.666	.00	.000	.000	.00	36411.	.00	0.	36411.	1.0000	.00
.699	.00	.000	.000	.00	36411.	.00	0.	36411.	1.0000	.00
.733	.00	.000	.000	.00	36411.	.00	0.	36411.	1.0000	.00
.766	.00	.000	.000	.00	36411.	.00	0.	36411.	1.0000	.00
.799	.00	.000	.000	.00	36411.	.00	0.	36411.	1.0000	.00
.833	.00	.000	.000	.00	36411.	.00	0.	36411.	1.0000	.00
.866	.00	.000	.000	.00	36411.	.00	0.	36411.	1.0000	.00
.899	.00	.000	.000	.00	36411.	.00	0.	36411.	1.0000	.00
.932	.00	.000	.000	.00	36411.	.00	0.	36411.	1.0000	.00

.966	.00	.000	.000	.00	36411.	.00	0.	36411.	1.0000	.00
.999	.00	.000	.000	.00	36411.	.00	0.	36411.	1.0000	.00
1.032	.00	.000	.000	.00	36411.	.00	0.	36411.	1.0000	.00
1.066	.00	.000	.000	.00	36411.	.00	0.	36411.	1.0000	.00
1.099	.00	.000	.000	.00	36411.	.00	0.	36411.	1.0000	.00
1.132	.00	.000	.000	.00	36411.	.00	0.	36411.	1.0000	.00
1.166	.00	.000	.000	.00	36411.	.00	0.	36411.	1.0000	.00
1.199	.00	.000	.000	.00	36411.	.00	0.	36411.	1.0000	.00
1.232	.00	.000	.000	.00	36411.	.00	0.	36411.	1.0000	.00
1.265	.00	.000	.000	.00	36411.	.00	0.	36411.	1.0000	.00
1.299	.00	.000	.000	.00	36411.	.00	0.	36411.	1.0000	.00
1.332	.00	.000	.000	.00	36411.	.00	0.	36411.	1.0000	.00
1.365	.00	.000	.000	.00	36411.	.00	0.	36411.	1.0000	.00
1.399	.12	1.212	.054	1.83	36411.	.00	11311.	46918.	1.0186	.02
1.432	.70	1.895	.105	3.50	36411.	.01	26924.	61435.	1.0247	.19
1.465	1.48	2.290	.139	4.63	36411.	.02	38847.	72532.	1.0295	.63
1.499	1.97	2.451	.154	5.22	36411.	.03	44302.	77612.	1.0318	1.25
1.532	2.09	2.490	.157	5.34	36411.	.04	45674.	78890.	1.0323	1.92
1.565	1.95	2.447	.153	5.20	36411.	.03	44147.	77468.	1.0317	2.53
1.598	1.67	2.361	.146	4.87	36411.	.03	41220.	74741.	1.0305	3.03
1.632	1.36	2.242	.135	4.49	36411.	.02	37293.	71085.	1.0289	3.42
1.665	1.09	2.111	.124	4.17	36411.	.01	33157.	67234.	1.0272	3.72
1.698	.87	1.997	.114	3.82	36411.	.01	29795.	64105.	1.0258	3.94
1.732	.70	1.892	.105	3.49	36411.	.01	26862.	61377.	1.0247	4.11
1.765	.56	1.785	.096	3.23	36411.	.01	23994.	58709.	1.0235	4.24
1.798	.44	1.683	.088	2.99	36411.	.00	21418.	56313.	1.0225	4.34
1.832	.36	1.591	.081	2.75	36411.	.00	19217.	54267.	1.0217	4.42

TIME	WATER FLOW	VELOCITY	HYD. DEPTH	WIDTH	WASHLOAD CONC.	BED MAT. TRANSPORT	BED CONC.	TOTAL CONC.	BULKING FACTOR	ACCUM. SEDIMENT
(HRS)	(CFS)	(FT/SEC)	(FT)	(FT)	(PPM-W)	(CFS)	(PPM-W)	(PPM-W)		(TONS)
1.865	.28	1.504	.075	2.53	36411.	.00	17239.	52428.	1.0209	4.48
1.898	.23	1.426	.069	2.34	36411.	.00	15537.	50846.	1.0202	4.52
1.931	.20	1.372	.065	2.20	36411.	.00	14410.	49798.	1.0198	4.56
1.965	.18	1.345	.063	2.14	36411.	.00	13858.	49285.	1.0196	4.59
1.998	.17	1.320	.061	2.08	36411.	.00	13363.	48824.	1.0194	4.63
2.031	.16	1.295	.060	2.02	36411.	.00	12885.	48380.	1.0192	4.66
2.065	.14	1.271	.058	1.97	36411.	.00	12424.	47952.	1.0190	4.68
2.098	.13	1.248	.056	1.91	36411.	.00	11980.	47539.	1.0188	4.71
2.131	.12	1.225	.055	1.86	36411.	.00	11551.	47141.	1.0187	4.73
2.164	.12	1.202	.053	1.81	36411.	.00	11137.	46756.	1.0185	4.75
2.198	.11	1.180	.052	1.76	36411.	.00	10738.	46386.	1.0184	4.77
2.231	.10	1.158	.050	1.71	36411.	.00	10354.	46028.	1.0182	4.79
2.264	.09	1.137	.049	1.66	36411.	.00	9982.	45683.	1.0181	4.81
2.298	.09	1.115	.048	1.62	36411.	.00	9624.	45350.	1.0179	4.82
2.331	.08	1.095	.046	1.57	36411.	.00	9279.	45030.	1.0178	4.84
2.364	.07	1.075	.045	1.53	36411.	.00	8946.	44720.	1.0177	4.85
2.398	.07	1.055	.044	1.49	36411.	.00	8625.	44422.	1.0175	4.86
2.431	.06	1.035	.043	1.44	36411.	.00	8315.	44134.	1.0174	4.87
2.464	.06	1.016	.041	1.40	36411.	.00	8016.	43857.	1.0173	4.88
2.498	.05	.997	.040	1.37	36411.	.00	7728.	43589.	1.0172	4.89
2.531	.05	.979	.039	1.33	36411.	.00	7451.	43331.	1.0171	4.90
2.564	.05	.961	.038	1.29	36411.	.00	7183.	43082.	1.0170	4.91
2.597	.04	.943	.037	1.26	36411.	.00	6924.	42842.	1.0169	4.92
2.631	.04	.925	.036	1.22	36411.	.00	6675.	42611.	1.0168	4.92
2.664	.04	.908	.035	1.19	36411.	.00	6435.	42388.	1.0167	4.93
2.697	.04	.892	.034	1.15	36411.	.00	6204.	42172.	1.0166	4.94
2.731	.03	.875	.033	1.12	36411.	.00	5980.	41965.	1.0165	4.94
2.764	.03	.859	.032	1.09	36411.	.00	5765.	41765.	1.0164	4.95

2.797	.03	.843	.031	1.06	36411.	.00	5557.	41572.	1.0164	4.95
2.831	.03	.827	.030	1.03	36411.	.00	5357.	41386.	1.0163	4.95
2.864	.02	.812	.030	1.00	36411.	.00	5164.	41207.	1.0162	4.96
2.897	.02	.797	.029	.98	36411.	.00	4978.	41034.	1.0161	4.96
2.930	.02	.782	.028	.95	36411.	.00	4799.	40867.	1.0161	4.96
2.964	.02	.768	.027	.92	36411.	.00	4626.	40707.	1.0160	4.97
2.997	.02	.754	.026	.90	36411.	.00	4459.	40552.	1.0159	4.97
3.030	.02	.740	.026	.87	36411.	.00	4298.	40403.	1.0159	4.97
3.064	.02	.726	.025	.85	36411.	.00	4143.	40259.	1.0158	4.98
3.097	.01	.713	.024	.82	36411.	.00	3994.	40120.	1.0158	4.98
3.130	.01	.699	.024	.80	36411.	.00	3850.	39986.	1.0157	4.98
3.164	.01	.686	.023	.78	36411.	.00	3711.	39857.	1.0157	4.98
3.197	.01	.674	.022	.76	36411.	.00	3577.	39733.	1.0156	4.98
3.230	.01	.661	.022	.74	36411.	.00	3448.	39613.	1.0156	4.99
3.263	.01	.649	.021	.72	36411.	.00	3323.	39497.	1.0155	4.99
3.297	.01	.637	.021	.70	36411.	.00	3203.	39386.	1.0155	4.99
3.330	.01	.625	.020	.68	36411.	.00	3088.	39278.	1.0154	4.99
3.363	.01	.614	.019	.66	36411.	.00	2976.	39175.	1.0154	4.99
3.397	.01	.602	.019	.64	36411.	.00	2869.	39075.	1.0153	4.99
3.430	.01	.591	.018	.62	36411.	.00	2765.	38979.	1.0153	4.99
3.463	.01	.580	.018	.61	36411.	.00	2665.	38886.	1.0153	4.99
3.497	.01	.569	.017	.59	36411.	.00	2569.	38797.	1.0152	4.99
3.530	.01	.559	.017	.57	36411.	.00	2476.	38711.	1.0152	5.00
3.563	.01	.549	.016	.56	36411.	.00	2387.	38627.	1.0152	5.00
3.596	.00	.538	.016	.54	36411.	.00	2301.	38547.	1.0151	5.00
3.630	.00	.528	.016	.53	36411.	.00	2218.	38470.	1.0151	5.00
3.663	.00	.519	.015	.51	36411.	.00	2137.	38396.	1.0151	5.00
3.696	.00	.509	.015	.50	36411.	.00	2060.	38324.	1.0150	5.00

TIME (HRS)	WATER FLOW (CFS)	VELOCITY (FT/SEC)	HYD. DEPTH (FT)	WIDTH (FT)	WASHLOAD CONC. (PPM-w)	BED MAT. TRANSPORT (CFS)	BED CONC. (PPM-w)	TOTAL CONC. (PPM-w)	BULKING FACTOR	ACCUM. SEDIMENT (TONS)
3.730	.00	.500	.014	.48	36411.	.00	1986.	38255.	1.0150	5.00
3.763	.00	.490	.014	.47	36411.	.00	1914.	38188.	1.0150	5.00
3.796	.00	.481	.014	.46	36411.	.00	1845.	38124.	1.0150	5.00
3.830	.00	.472	.013	.45	36411.	.00	1778.	38062.	1.0149	5.00
3.863	.00	.464	.013	.43	36411.	.00	1714.	38002.	1.0149	5.00
3.896	.00	.455	.012	.42	36411.	.00	1652.	37945.	1.0149	5.00
3.929	.00	.447	.012	.41	36411.	.00	1592.	37889.	1.0149	5.00
3.963	.00	.438	.012	.40	36411.	.00	1535.	37836.	1.0148	5.00
3.996	.00	.430	.011	.39	36411.	.00	1479.	37784.	1.0148	5.00
4.029	.00	.422	.011	.38	36411.	.00	1426.	37735.	1.0148	5.00
4.063	.00	.415	.011	.37	36411.	.00	1374.	37687.	1.0148	5.00
4.096	.00	.407	.010	.36	36411.	.00	1324.	37641.	1.0148	5.00
4.129	.00	.399	.010	.35	36411.	.00	1276.	37596.	1.0147	5.00
4.163	.00	.392	.010	.34	36411.	.00	1230.	37553.	1.0147	5.00
4.196	.00	.385	.010	.33	36411.	.00	1186.	37512.	1.0147	5.00
4.229	.00	.378	.009	.32	36411.	.00	1143.	37472.	1.0147	5.00
4.262	.00	.371	.009	.31	36411.	.00	1102.	37434.	1.0147	5.00

AT PEAK FLOW OF 2.091 WITH TIME AT 1.53 HOURS: BEDMAT = 1.02 (TONS) = .0005 (AC-FT bulked)

TOTAL SED = 1.92 (TONS) = .0009 (AC-FT bulked)

PEAK BULKING FACTOR = 1.032319 = 78890. (PPM-w)

UNBULKED	BULKED	CONCENTRATION	AVERAGE
WEIGHT	VOLUME	BY WEIGHT	BULKING
(TONS)	(AC-FT)	(AC-FT)	FACTOR

WASHMAT = 2.63 .0007 .0012 36409.
BEDMAT = 2.38 .0007 .0011 33108.
TOTAL SEDIMENT = 5.00 .0014 .0023 67187. 1.027180

SEDIMENT TRANSPORT CAPACITY: .24704 AC-FT/SQ MI (bulked) = .8407 TONS/ACRE (at Porosity=0.395)

PRINT HYD ID=10 CODE=1

PARTIAL HYDROGRAPH 132.11

RUNOFF VOLUME = .10306 INCHES = .0511 ACRE-FEET
PEAK DISCHARGE RATE = 2.09 CFS AT 1.532 HOURS BASIN AREA = .0093 SQ. MI.

PRINT HYD ID=10 CODE=1

PARTIAL HYDROGRAPH 132.11

RUNOFF VOLUME = .10306 INCHES = .0511 ACRE-FEET
PEAK DISCHARGE RATE = 2.09 CFS AT 1.532 HOURS BASIN AREA = .0093 SQ. MI.

COMPUTE NM HYD

ID=11 HYD NO=133.51 DA=0.0670 SQ MI
PER A=5.00 PER B=65.00 PER C=30.00 PER D=0.00
TP=-0.1333 HR MASS RAIN=-1

K = .136706HR TP = .133300HR K/TP RATIO = 1.025554 SHAPE CONSTANT, N = 3.441963
UNIT PEAK = 158.86 CFS UNIT VOLUME = 1.000 B = 316.07 P60 = 1.0600
AREA = .067000 SQ MI IA = .46250 INCHES INF = 1.14500 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=11 CODE=1

PARTIAL HYDROGRAPH 133.51

RUNOFF VOLUME = .15292 INCHES = .5464 ACRE-FEET
PEAK DISCHARGE RATE = 23.39 CFS AT 1.532 HOURS BASIN AREA = .0670 SQ. MI.

SED WASH LOAD ID=11 K=0.16 C=0.25
P=1.0 IS=0.470

IMPERVIOUS=0.0 FACTOR=3.0
SEDIMENT YIELD (Wash Mat.) = 22.3 (TONS) WASH LOAD CONCENTRATION = 29178 (ppm-w)
PERCENTAGE IMPERVIOUS AREA = .000 WASH LOAD FACTOR = 3.00000

PRINT HYD ID=11 CODE=1

PARTIAL HYDROGRAPH 133.51

RUNOFF VOLUME = .15292 INCHES = .5464 ACRE-FEET
PEAK DISCHARGE RATE = 23.39 CFS AT 1.532 HOURS BASIN AREA = .0670 SQ. MI.

SEDIMENT TRANS

ID=11 IDS=6 CODE=1

A=0.0002 B=4.19 C=0.19 D=-2.55

NUMB WASH=-1 NUMB SECTIONS=9

FLOW	VELOCITY	WIDTH
(CFS)	(FPS)	(FT)
5.00	2.91	8.75
10.00	3.61	10.08
25.00	4.77	12.68
40.00	5.42	14.57
55.00	5.96	16.02
70.00	6.36	17.31
85.00	6.65	18.49
100.00	6.96	19.50
115.00	6.74	24.19

Use wash load from SED WASH LOAD command - Concentration = 29178 (PPM-W)

* * * * *

TIME (HRS)	WATER FLOW (CFS)	VELOCITY (FT/SEC)	HYD. DEPTH (FT)	WIDTH (FT)	WASHLOAD CONC. (PPM-W)	BED MAT. TRANSPORT (CFS)	BED CONC. (PPM-W)	TOTAL CONC. (PPM-W)	BULKING FACTOR	ACCU. SEDIMENT (TONS)
.000	.00	.000	.000	.00	29178.	.00	0.	29178.	1.0000	.00
.033	.00	.000	.000	.00	29178.	.00	0.	29178.	1.0000	.00
.067	.00	.000	.000	.00	29178.	.00	0.	29178.	1.0000	.00
.100	.00	.000	.000	.00	29178.	.00	0.	29178.	1.0000	.00
.133	.00	.000	.000	.00	29178.	.00	0.	29178.	1.0000	.00
.167	.00	.000	.000	.00	29178.	.00	0.	29178.	1.0000	.00
.200	.00	.000	.000	.00	29178.	.00	0.	29178.	1.0000	.00
.233	.00	.000	.000	.00	29178.	.00	0.	29178.	1.0000	.00
.266	.00	.000	.000	.00	29178.	.00	0.	29178.	1.0000	.00
.300	.00	.000	.000	.00	29178.	.00	0.	29178.	1.0000	.00
.333	.00	.000	.000	.00	29178.	.00	0.	29178.	1.0000	.00
.366	.00	.000	.000	.00	29178.	.00	0.	29178.	1.0000	.00
.400	.00	.000	.000	.00	29178.	.00	0.	29178.	1.0000	.00
.433	.00	.000	.000	.00	29178.	.00	0.	29178.	1.0000	.00
.466	.00	.000	.000	.00	29178.	.00	0.	29178.	1.0000	.00
.500	.00	.000	.000	.00	29178.	.00	0.	29178.	1.0000	.00
.533	.00	.000	.000	.00	29178.	.00	0.	29178.	1.0000	.00
.566	.00	.000	.000	.00	29178.	.00	0.	29178.	1.0000	.00
.599	.00	.000	.000	.00	29178.	.00	0.	29178.	1.0000	.00
.633	.00	.000	.000	.00	29178.	.00	0.	29178.	1.0000	.00
.666	.00	.000	.000	.00	29178.	.00	0.	29178.	1.0000	.00
.699	.00	.000	.000	.00	29178.	.00	0.	29178.	1.0000	.00
.733	.00	.000	.000	.00	29178.	.00	0.	29178.	1.0000	.00
.766	.00	.000	.000	.00	29178.	.00	0.	29178.	1.0000	.00
.799	.00	.000	.000	.00	29178.	.00	0.	29178.	1.0000	.00
.833	.00	.000	.000	.00	29178.	.00	0.	29178.	1.0000	.00
.866	.00	.000	.000	.00	29178.	.00	0.	29178.	1.0000	.00
.899	.00	.000	.000	.00	29178.	.00	0.	29178.	1.0000	.00
.932	.00	.000	.000	.00	29178.	.00	0.	29178.	1.0000	.00
.966	.00	.000	.000	.00	29178.	.00	0.	29178.	1.0000	.00
.999	.00	.000	.000	.00	29178.	.00	0.	29178.	1.0000	.00
1.032	.00	.000	.000	.00	29178.	.00	0.	29178.	1.0000	.00
1.066	.00	.000	.000	.00	29178.	.00	0.	29178.	1.0000	.00
1.099	.00	.000	.000	.00	29178.	.00	0.	29178.	1.0000	.00
1.132	.00	.000	.000	.00	29178.	.00	0.	29178.	1.0000	.00
1.166	.00	.000	.000	.00	29178.	.00	0.	29178.	1.0000	.00

1.199	.00	.000	.000	.00	29178.	.00	0.	29178.	1.0000	.00
1.232	.00	.000	.000	.00	29178.	.00	0.	29178.	1.0000	.00
1.265	.00	.000	.000	.00	29178.	.00	0.	29178.	1.0000	.00
1.299	.00	.000	.000	.00	29178.	.00	0.	29178.	1.0000	.00
1.332	.00	.000	.000	.00	29178.	.00	0.	29178.	1.0000	.00
1.365	.00	.000	.000	.00	29178.	.00	0.	29178.	1.0000	.00
1.399	2.04	2.344	.142	6.12	29178.	.03	40376.	67277.	1.0272	.55
1.432	8.68	3.463	.258	9.73	29178.	.30	82709.	107320.	1.0454	4.45
1.465	17.01	4.277	.352	11.30	29178.	.88	120677.	143317.	1.0631	15.10
1.499	22.26	4.622	.395	12.20	29178.	1.35	138139.	159900.	1.0718	30.94
1.532	23.39	4.685	.403	12.40	29178.	1.45	141430.	163027.	1.0735	47.98
1.565	21.48	4.576	.389	12.07	29178.	1.27	135795.	157674.	1.0706	63.02
1.598	18.03	4.351	.361	11.47	29178.	.97	124407.	146858.	1.0650	74.63
1.632	14.39	4.063	.327	10.84	29178.	.67	110212.	133387.	1.0581	82.91
1.665	11.32	3.762	.292	10.31	29178.	.45	95936.	119851.	1.0514	88.68
1.698	8.87	3.486	.260	9.78	29178.	.31	83676.	108235.	1.0458	92.70
1.732	6.95	3.236	.232	9.27	29178.	.21	73322.	98432.	1.0412	95.54
1.765	5.45	2.994	.205	8.87	29178.	.14	63765.	89388.	1.0370	97.55
1.798	4.27	2.818	.187	8.10	29178.	.10	57065.	83051.	1.0342	98.99
1.832	3.35	2.668	.172	7.28	29178.	.07	51518.	77807.	1.0318	100.05

TIME (HRS)	WATER FLOW (CFS)	VELOCITY (FT/SEC)	HYD. DEPTH (FT)	WIDTH (FT)	WASHLOAD CONC. (PPM-W)	BED MAT. TRANSPORT (CFS)	BED CONC. (PPM-W)	TOTAL CONC. (PPM-W)	BULKING FACTOR	ACCUM. SEDIMENT (TONS)
1.865	2.66	2.519	.158	6.67	29178.	.05	46260.	72837.	1.0296	100.83
1.898	2.25	2.410	.148	6.31	29178.	.04	42546.	69327.	1.0281	101.46
1.931	2.05	2.347	.142	6.13	29178.	.03	40479.	67374.	1.0273	102.01
1.965	1.88	2.292	.137	5.98	29178.	.03	38687.	65682.	1.0265	102.51
1.998	1.73	2.238	.132	5.85	29178.	.03	36986.	64074.	1.0258	102.95
2.031	1.60	2.185	.128	5.73	29178.	.02	35322.	62503.	1.0252	103.35
2.065	1.47	2.132	.123	5.62	29178.	.02	33699.	60970.	1.0245	103.71
2.098	1.36	2.079	.119	5.52	29178.	.02	32119.	59478.	1.0239	104.03
2.131	1.25	2.026	.114	5.42	29178.	.01	30584.	58029.	1.0232	104.32
2.164	1.16	1.974	.110	5.34	29178.	.01	29096.	56625.	1.0227	104.58
2.198	1.07	1.923	.105	5.26	29178.	.01	27657.	55266.	1.0221	104.81
2.231	.98	1.874	.102	5.16	29178.	.01	26341.	54024.	1.0216	105.02
2.264	.91	1.837	.098	5.01	29178.	.01	25332.	53071.	1.0211	105.21
2.298	.84	1.800	.096	4.86	29178.	.01	24361.	52155.	1.0208	105.38
2.331	.77	1.764	.093	4.71	29178.	.01	23426.	51272.	1.0204	105.54
2.364	.71	1.728	.090	4.57	29178.	.01	22526.	50423.	1.0200	105.68
2.398	.65	1.694	.087	4.43	29178.	.01	21660.	49606.	1.0197	105.81
2.431	.60	1.659	.085	4.30	29178.	.00	20827.	48819.	1.0194	105.92
2.464	.56	1.626	.082	4.17	29178.	.00	20025.	48062.	1.0191	106.03
2.498	.51	1.593	.080	4.05	29178.	.00	19253.	47334.	1.0187	106.12
2.531	.47	1.561	.077	3.93	29178.	.00	18510.	46633.	1.0185	106.21
2.564	.44	1.530	.075	3.81	29178.	.00	17796.	45959.	1.0182	106.29
2.597	.40	1.499	.073	3.69	29178.	.00	17109.	45311.	1.0179	106.36
2.631	.37	1.469	.070	3.58	29178.	.00	16447.	44687.	1.0177	106.42
2.664	.34	1.440	.068	3.48	29178.	.00	15811.	44087.	1.0174	106.48
2.697	.32	1.411	.066	3.37	29178.	.00	15199.	43510.	1.0172	106.54
2.731	.29	1.382	.064	3.27	29178.	.00	14611.	42954.	1.0169	106.58
2.764	.27	1.355	.062	3.17	29178.	.00	14045.	42420.	1.0167	106.63
2.797	.25	1.327	.060	3.08	29178.	.00	13500.	41907.	1.0165	106.67
2.831	.23	1.301	.059	2.98	29178.	.00	12977.	41413.	1.0163	106.71
2.864	.21	1.275	.057	2.90	29178.	.00	12473.	40938.	1.0161	106.74
2.897	.19	1.249	.055	2.81	29178.	.00	11989.	40481.	1.0159	106.77
2.930	.18	1.224	.054	2.72	29178.	.00	11523.	40042.	1.0157	106.80
2.964	.16	1.199	.052	2.64	29178.	.00	11075.	39620.	1.0156	106.82
2.997	.15	1.175	.050	2.56	29178.	.00	10645.	39214.	1.0154	106.85

3.030	.14	1.152	.049	2.49	29178.	.00	10231.	38823.	1.0152	106.87
3.064	.13	1.128	.047	2.41	29178.	.00	9832.	38448.	1.0151	106.89
3.097	.12	1.106	.046	2.34	29178.	.00	9450.	38087.	1.0149	106.90
3.130	.11	1.084	.045	2.27	29178.	.00	9082.	37740.	1.0148	106.92
3.164	.10	1.062	.043	2.20	29178.	.00	8728.	37406.	1.0147	106.94
3.197	.09	1.040	.042	2.14	29178.	.00	8388.	37085.	1.0145	106.95
3.230	.09	1.020	.041	2.07	29178.	.00	8061.	36777.	1.0144	106.96
3.263	.08	.999	.040	2.01	29178.	.00	7747.	36481.	1.0143	106.97
3.297	.07	.979	.038	1.95	29178.	.00	7444.	36196.	1.0142	106.98
3.330	.07	.959	.037	1.89	29178.	.00	7154.	35922.	1.0141	106.99
3.363	.06	.940	.036	1.83	29178.	.00	6875.	35659.	1.0140	107.00
3.397	.06	.921	.035	1.78	29178.	.00	6606.	35406.	1.0139	107.01
3.430	.05	.903	.034	1.73	29178.	.00	6348.	35162.	1.0138	107.02
3.463	.05	.884	.033	1.67	29178.	.00	6100.	34929.	1.0137	107.02
3.497	.04	.867	.032	1.62	29178.	.00	5862.	34704.	1.0136	107.03
3.530	.04	.849	.031	1.57	29178.	.00	5633.	34488.	1.0135	107.03
3.563	.04	.832	.030	1.53	29178.	.00	5413.	34280.	1.0134	107.04
3.596	.04	.815	.029	1.48	29178.	.00	5201.	34081.	1.0133	107.04
3.630	.03	.799	.028	1.44	29178.	.00	4998.	33889.	1.0132	107.05
3.663	.03	.783	.027	1.39	29178.	.00	4802.	33705.	1.0132	107.05
3.696	.03	.767	.027	1.35	29178.	.00	4615.	33528.	1.0131	107.06
TIME	WATER FLOW	VELOCITY	HYD. DEPTH	WIDTH	WASHLOAD CONC.	BED MAT. TRANSPORT	BED CONC.	TOTAL CONC.	BULKING FACTOR	ACCU. SEDIMENT
(HRS)	(CFS)	(FT/SEC)	(FT)	(FT)	(PPM-W)	(CFS)	(PPM-W)	(PPM-W)		(TONS)
3.730	.03	.752	.026	1.31	29178.	.00	4434.	33358.	1.0130	107.06
3.763	.02	.737	.025	1.27	29178.	.00	4261.	33194.	1.0130	107.06
3.796	.02	.722	.024	1.23	29178.	.00	4094.	33037.	1.0129	107.06
3.830	.02	.707	.024	1.20	29178.	.00	3934.	32886.	1.0128	107.07
3.863	.02	.693	.023	1.16	29178.	.00	3780.	32741.	1.0128	107.07
3.896	.02	.679	.022	1.13	29178.	.00	3632.	32601.	1.0127	107.07
3.929	.02	.666	.021	1.09	29178.	.00	3489.	32467.	1.0127	107.07
3.963	.01	.652	.021	1.06	29178.	.00	3353.	32338.	1.0126	107.08
3.996	.01	.639	.020	1.03	29178.	.00	3221.	32214.	1.0126	107.08
4.029	.01	.626	.020	1.00	29178.	.00	3095.	32095.	1.0125	107.08
4.063	.01	.614	.019	.97	29178.	.00	2974.	31981.	1.0125	107.08
4.096	.01	.601	.018	.94	29178.	.00	2857.	31871.	1.0124	107.08
4.129	.01	.589	.018	.91	29178.	.00	2745.	31766.	1.0124	107.08
4.163	.01	.578	.017	.88	29178.	.00	2638.	31664.	1.0123	107.08
4.196	.01	.566	.017	.86	29178.	.00	2534.	31567.	1.0123	107.08
4.229	.01	.555	.016	.83	29178.	.00	2435.	31473.	1.0123	107.09
4.262	.01	.543	.016	.81	29178.	.00	2340.	31383.	1.0122	107.09
4.296	.01	.532	.015	.78	29178.	.00	2248.	31297.	1.0122	107.09
4.329	.01	.522	.015	.76	29178.	.00	2160.	31214.	1.0122	107.09
4.362	.01	.511	.014	.74	29178.	.00	2075.	31134.	1.0121	107.09
4.396	.01	.501	.014	.71	29178.	.00	1994.	31057.	1.0121	107.09
4.429	.00	.491	.014	.69	29178.	.00	1915.	30983.	1.0121	107.09
4.462	.00	.481	.013	.67	29178.	.00	1840.	30913.	1.0120	107.09
4.496	.00	.471	.013	.65	29178.	.00	1768.	30845.	1.0120	107.09
4.529	.00	.462	.012	.63	29178.	.00	1699.	30779.	1.0120	107.09
4.562	.00	.453	.012	.61	29178.	.00	1632.	30716.	1.0120	107.09
4.595	.00	.444	.012	.59	29178.	.00	1568.	30656.	1.0119	107.09
4.629	.00	.435	.011	.58	29178.	.00	1507.	30598.	1.0119	107.09
4.662	.00	.426	.011	.56	29178.	.00	1447.	30542.	1.0119	107.09
4.695	.00	.417	.011	.54	29178.	.00	1391.	30489.	1.0119	107.09
4.729	.00	.409	.010	.53	29178.	.00	1336.	30437.	1.0118	107.09
4.762	.00	.401	.010	.51	29178.	.00	1284.	30388.	1.0118	107.09
4.795	.00	.393	.010	.50	29178.	.00	1233.	30340.	1.0118	107.09
4.829	.00	.385	.009	.48	29178.	.00	1185.	30295.	1.0118	107.09

4.862 .00 .377 .009 .47 29178. .00 1138. 30251. 1.0118 107.09

AT PEAK FLOW OF 23.391 WITH TIME AT 1.53 HOURS: BEDMAT = 39.73 (TONS) = .0182 (AC-FT bulked)
TOTAL SED = 47.98 (TONS) = .0220 (AC-FT bulked)
PEAK BULKING FACTOR = 1.073503 = 163027. (PPM-w)

	UNBULKED WEIGHT (TONS)	BULKED VOLUME (AC-FT)	CONCENTRATION BY WEIGHT (PPM)	AVERAGE BULKING FACTOR
WASHMAT =	22.32	.0062	.0102	29178.
BEDMAT =	84.77	.0235	.0389	102460.
TOTAL SEDIMENT =	107.09	.0297	.0492	126035.

1.054419

SEDIMENT TRANSPORT CAPACITY: .73389 AC-FT/SQ MI (bulked) = 2.4975 TONS/ACRE (at Porosity=0.395)

PRINT HYD ID=11 CODE=1

PARTIAL HYDROGRAPH 133.51

RUNOFF VOLUME = .15292 INCHES = .5464 ACRE-FEET
PEAK DISCHARGE RATE = 23.39 CFS AT 1.532 HOURS BASIN AREA = .0670 SQ. MI.

ADD HYD ID=10 HYD NO=133.50 ID I=10 ID II=11
PRINT HYD ID=10 CODE=1

PARTIAL HYDROGRAPH 133.50

RUNOFF VOLUME = .14684 INCHES = .5975 ACRE-FEET
PEAK DISCHARGE RATE = 25.48 CFS AT 1.532 HOURS BASIN AREA = .0763 SQ. MI.

COMPUTE NM HYD ID=11 HYD NO=133.52 DA=0.0485 SQ MI
PER A=5.00 PER B=65.00 PER C=30.00 PER D=0.00
TP=-0.1333 HR MASS RAIN=-1

K = .136380HR TP = .133300HR K/TP RATIO = 1.023107 SHAPE CONSTANT, N = 3.450181
UNIT PEAK = 115.22 CFS UNIT VOLUME = 1.000 B = 316.68 P60 = 1.0600
AREA = .048500 SQ MI IA = .46250 INCHES INF = 1.14500 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=11 CODE=1

PARTIAL HYDROGRAPH 133.52

RUNOFF VOLUME = .15292 INCHES = .3955 ACRE-FEET
PEAK DISCHARGE RATE = 16.96 CFS AT 1.532 HOURS BASIN AREA = .0485 SQ. MI.

SED WASH LOAD ID=11 K=0.14 C=0.25
P=1.0 LS=0.375

IMPERVIOUS=0.0 FACTOR=3.0
SEDIMENT YIELD (Wash Mat.) = 10.9 (TONS) WASH LOAD CONCENTRATION = 19804 (PPM-W)
PERCENTAGE IMPERVIOUS AREA = .000 WASH LOAD FACTOR = 3.00000

PRINT HYD ID=11 CODE=1

PARTIAL HYDROGRAPH 133.52

RUNOFF VOLUME = .15292 INCHES = .3955 ACRE-FEET
PEAK DISCHARGE RATE = 16.96 CFS AT 1.532 HOURS BASIN AREA = .0485 SQ. MI.

SEDIMENT TRANS

ID=11 IDS=7 CODE=1
A=0.0002 B=4.19 C=0.19 D=-2.55
NUMB WASH=-1 NUMB SECTIONS=9

FLOW	VELOCITY	WIDTH
(CFS)	(FPS)	(FT)
5.00	3.05	9.07
10.00	3.73	10.90
25.00	4.84	14.34
40.00	5.50	16.71
55.00	5.99	18.61
65.00	6.26	19.71
70.00	6.38	20.22
75.00	6.50	20.71
85.00	6.70	21.65

Use wash load from SED WASH LOAD command - Concentration = 19804 (PPM-W)

* * * * *

TIME (HRS)	WATER FLOW (CFS)	HYD. VELOCITY (FT/SEC)	DEPTH (FT)	WIDTH (FT)	WASHLOAD CONC. (PPM-W)	BED MAT. TRANSPORT (CFS)	BED CONC. (PPM-W)	TOTAL CONC. (PPM-W)	BULKING FACTOR	ACCUM. SEDIMENT (TONS)
.000	.00	.000	.000	.00	19804.	.00	0.	19804.	1.0000	.00
.033	.00	.000	.000	.00	19804.	.00	0.	19804.	1.0000	.00
.067	.00	.000	.000	.00	19804.	.00	0.	19804.	1.0000	.00
.100	.00	.000	.000	.00	19804.	.00	0.	19804.	1.0000	.00
.133	.00	.000	.000	.00	19804.	.00	0.	19804.	1.0000	.00
.167	.00	.000	.000	.00	19804.	.00	0.	19804.	1.0000	.00
.200	.00	.000	.000	.00	19804.	.00	0.	19804.	1.0000	.00
.233	.00	.000	.000	.00	19804.	.00	0.	19804.	1.0000	.00
.266	.00	.000	.000	.00	19804.	.00	0.	19804.	1.0000	.00
.300	.00	.000	.000	.00	19804.	.00	0.	19804.	1.0000	.00
.333	.00	.000	.000	.00	19804.	.00	0.	19804.	1.0000	.00
.366	.00	.000	.000	.00	19804.	.00	0.	19804.	1.0000	.00
.400	.00	.000	.000	.00	19804.	.00	0.	19804.	1.0000	.00
.433	.00	.000	.000	.00	19804.	.00	0.	19804.	1.0000	.00
.466	.00	.000	.000	.00	19804.	.00	0.	19804.	1.0000	.00
.500	.00	.000	.000	.00	19804.	.00	0.	19804.	1.0000	.00
.533	.00	.000	.000	.00	19804.	.00	0.	19804.	1.0000	.00
.566	.00	.000	.000	.00	19804.	.00	0.	19804.	1.0000	.00
.599	.00	.000	.000	.00	19804.	.00	0.	19804.	1.0000	.00
.666	.00	.000	.000	.00	19804.	.00	0.	19804.	1.0000	.00
.699	.00	.000	.000	.00	19804.	.00	0.	19804.	1.0000	.00
.733	.00	.000	.000	.00	19804.	.00	0.	19804.	1.0000	.00
.766	.00	.000	.000	.00	19804.	.00	0.	19804.	1.0000	.00

.799	.00	.000	.000	.00	19804.	.00	0.	19804.	1.0000	.00
.833	.00	.000	.000	.00	19804.	.00	0.	19804.	1.0000	.00
.866	.00	.000	.000	.00	19804.	.00	0.	19804.	1.0000	.00
.899	.00	.000	.000	.00	19804.	.00	0.	19804.	1.0000	.00
.932	.00	.000	.000	.00	19804.	.00	0.	19804.	1.0000	.00
.966	.00	.000	.000	.00	19804.	.00	0.	19804.	1.0000	.00
.999	.00	.000	.000	.00	19804.	.00	0.	19804.	1.0000	.00
1.032	.00	.000	.000	.00	19804.	.00	0.	19804.	1.0000	.00
1.066	.00	.000	.000	.00	19804.	.00	0.	19804.	1.0000	.00
1.099	.00	.000	.000	.00	19804.	.00	0.	19804.	1.0000	.00
1.132	.00	.000	.000	.00	19804.	.00	0.	19804.	1.0000	.00
1.166	.00	.000	.000	.00	19804.	.00	0.	19804.	1.0000	.00
1.199	.00	.000	.000	.00	19804.	.00	0.	19804.	1.0000	.00
1.232	.00	.000	.000	.00	19804.	.00	0.	19804.	1.0000	.00
1.265	.00	.000	.000	.00	19804.	.00	0.	19804.	1.0000	.00
1.299	.00	.000	.000	.00	19804.	.00	0.	19804.	1.0000	.00
1.332	.00	.000	.000	.00	19804.	.00	0.	19804.	1.0000	.00
1.365	.00	.000	.000	.00	19804.	.00	0.	19804.	1.0000	.00
1.399	1.47	2.251	.115	5.69	19804.	.02	41150.	59373.	1.0238	.35
1.432	6.28	3.271	.201	9.54	19804.	.21	82243.	98951.	1.0414	2.93
1.465	12.33	3.983	.271	11.43	19804.	.61	116638.	132127.	1.0575	9.94
1.499	16.14	4.312	.304	12.31	19804.	.94	134079.	148968.	1.0661	20.51
1.532	16.96	4.373	.310	12.50	19804.	1.02	137382.	152158.	1.0677	31.90
1.565	15.57	4.268	.300	12.18	19804.	.89	131728.	146697.	1.0649	41.91
1.598	13.07	4.054	.278	11.60	19804.	.67	120345.	135706.	1.0593	49.58
1.632	10.42	3.780	.251	11.00	19804.	.47	106243.	122096.	1.0525	55.00
1.665	8.19	3.533	.226	10.24	19804.	.32	94326.	110601.	1.0469	58.81
1.698	6.42	3.293	.203	9.59	19804.	.22	83218.	99890.	1.0419	61.48
1.732	5.03	3.055	.181	9.08	19804.	.15	72742.	89794.	1.0372	63.33
1.765	3.94	2.907	.168	8.05	19804.	.11	66393.	83678.	1.0345	64.68
1.798	3.09	2.752	.155	7.24	19804.	.07	59975.	77495.	1.0317	65.64
1.832	2.42	2.590	.141	6.60	19804.	.05	53562.	71320.	1.0290	66.34

TIME (HRS)	WATER FLOW (CFS)	VELOCITY (FT/SEC)	HYD. DEPTH (FT)	WIDTH (FT)	WASHLOAD CONC. (PPM-W)	BED MAT. TRANSPORT CONC. (CFS)	BED CONC. (PPM-W)	TOTAL CONC. (PPM-W)	BULKING FACTOR	ACCUM. SEDIMENT (TONS)
1.865	1.92	2.433	.129	6.12	19804.	.04	47655.	65634.	1.0265	66.84
1.898	1.63	2.321	.120	5.84	19804.	.03	43588.	61719.	1.0248	67.24
1.931	1.48	2.256	.115	5.70	19804.	.02	41327.	59543.	1.0239	67.59
1.965	1.36	2.199	.111	5.59	19804.	.02	39377.	57667.	1.0231	67.91
1.998	1.25	2.145	.107	5.49	19804.	.02	37537.	55895.	1.0223	68.18
2.031	1.16	2.090	.103	5.39	19804.	.02	35748.	54174.	1.0216	68.43
2.065	1.07	2.036	.099	5.31	19804.	.01	34013.	52505.	1.0209	68.65
2.098	.98	1.986	.095	5.21	19804.	.01	32418.	50971.	1.0203	68.85
2.131	.91	1.946	.092	5.05	19804.	.01	31181.	49781.	1.0198	69.03
2.164	.84	1.907	.089	4.90	19804.	.01	29990.	48635.	1.0193	69.19
2.198	.77	1.868	.087	4.76	19804.	.01	28842.	47531.	1.0188	69.33
2.231	.71	1.831	.084	4.61	19804.	.01	27738.	46469.	1.0184	69.46
2.264	.65	1.794	.082	4.47	19804.	.01	26674.	45446.	1.0180	69.58
2.298	.60	1.758	.079	4.34	19804.	.01	25651.	44461.	1.0176	69.68
2.331	.56	1.722	.077	4.21	19804.	.01	24665.	43514.	1.0172	69.78
2.364	.51	1.688	.074	4.08	19804.	.00	23717.	42601.	1.0168	69.86
2.398	.47	1.654	.072	3.96	19804.	.00	22804.	41723.	1.0164	69.94
2.431	.44	1.620	.070	3.84	19804.	.00	21925.	40879.	1.0161	70.01
2.464	.40	1.588	.068	3.72	19804.	.00	21080.	40066.	1.0158	70.07
2.498	.37	1.556	.066	3.61	19804.	.00	20266.	39283.	1.0154	70.13
2.531	.34	1.524	.064	3.50	19804.	.00	19484.	38531.	1.0151	70.18
2.564	.31	1.494	.062	3.40	19804.	.00	18731.	37807.	1.0148	70.22
2.597	.29	1.464	.060	3.30	19804.	.00	18006.	37110.	1.0145	70.27

2.631	.27	1.434	.058	3.20	19804.	.00	17309.	36440.	1.0143	70.30
2.664	.25	1.405	.057	3.10	19804.	.00	16639.	35795.	1.0140	70.34
2.697	.23	1.377	.055	3.01	19804.	.00	15994.	35175.	1.0138	70.37
2.731	.21	1.349	.053	2.92	19804.	.00	15373.	34579.	1.0135	70.40
2.764	.19	1.322	.052	2.83	19804.	.00	14777.	34005.	1.0133	70.42
2.797	.18	1.295	.050	2.75	19804.	.00	14203.	33454.	1.0131	70.45
2.831	.16	1.269	.049	2.66	19804.	.00	13651.	32923.	1.0128	70.47
2.864	.15	1.244	.047	2.58	19804.	.00	13121.	32413.	1.0126	70.49
2.897	.14	1.219	.046	2.50	19804.	.00	12610.	31923.	1.0124	70.50
2.930	.13	1.194	.044	2.43	19804.	.00	12120.	31451.	1.0123	70.52
2.964	.12	1.170	.043	2.36	19804.	.00	11648.	30998.	1.0121	70.53
2.997	.11	1.146	.042	2.29	19804.	.00	11194.	30561.	1.0119	70.54
3.030	.10	1.123	.040	2.22	19804.	.00	10758.	30142.	1.0117	70.56
3.064	.09	1.101	.039	2.15	19804.	.00	10339.	29739.	1.0116	70.57
3.097	.09	1.079	.038	2.09	19804.	.00	9935.	29352.	1.0114	70.58
3.130	.08	1.057	.037	2.02	19804.	.00	9548.	28979.	1.0113	70.59
3.164	.07	1.036	.036	1.96	19804.	.00	9175.	28621.	1.0111	70.59
3.197	.07	1.015	.035	1.90	19804.	.00	8817.	28277.	1.0110	70.60
3.230	.06	.994	.034	1.85	19804.	.00	8473.	27946.	1.0108	70.61
3.263	.06	.974	.033	1.79	19804.	.00	8142.	27627.	1.0107	70.61
3.297	.05	.955	.032	1.74	19804.	.00	7823.	27322.	1.0106	70.62
3.330	.05	.935	.031	1.68	19804.	.00	7517.	27028.	1.0105	70.62
3.363	.04	.917	.030	1.63	19804.	.00	7224.	26745.	1.0104	70.63
3.397	.04	.898	.029	1.58	19804.	.00	6941.	26474.	1.0103	70.63
3.430	.04	.880	.028	1.54	19804.	.00	6669.	26213.	1.0102	70.64
3.463	.03	.862	.027	1.49	19804.	.00	6408.	25962.	1.0101	70.64
3.497	.03	.845	.026	1.45	19804.	.00	6157.	25721.	1.0100	70.64
3.530	.03	.828	.026	1.40	19804.	.00	5916.	25489.	1.0099	70.65
3.563	.03	.811	.025	1.36	19804.	.00	5685.	25266.	1.0098	70.65
3.596	.03	.795	.024	1.32	19804.	.00	5462.	25052.	1.0097	70.65
3.630	.02	.779	.023	1.28	19804.	.00	5248.	24847.	1.0096	70.65
3.663	.02	.763	.023	1.24	19804.	.00	5042.	24649.	1.0095	70.66
3.696	.02	.748	.022	1.20	19804.	.00	4845.	24459.	1.0095	70.66

TIME (HRS)	WATER FLOW (CFS)	VELOCITY (FT/SEC)	HYD. DEPTH (FT)	WIDTH (FT)	WASHLOAD CONC. (PPM-W)	BED MAT. TRANSPORT (CFS)	BED CONC. (PPM-W)	TOTAL CONC. (PPM-W)	BULKING FACTOR	ACCUM. SEDIMENT (TONS)
3.730	.02	.733	.021	1.17	19804.	.00	4655.	24277.	1.0094	70.66
3.763	.02	.718	.021	1.13	19804.	.00	4472.	24101.	1.0093	70.66
3.796	.02	.704	.020	1.10	19804.	.00	4297.	23933.	1.0093	70.66
3.830	.01	.689	.019	1.07	19804.	.00	4128.	23771.	1.0092	70.66
3.863	.01	.675	.019	1.03	19804.	.00	3966.	23615.	1.0091	70.66
3.896	.01	.662	.018	1.00	19804.	.00	3811.	23465.	1.0091	70.67
3.929	.01	.649	.018	.97	19804.	.00	3661.	23322.	1.0090	70.67
3.963	.01	.635	.017	.94	19804.	.00	3517.	23184.	1.0090	70.67
3.996	.01	.623	.017	.91	19804.	.00	3379.	23051.	1.0089	70.67
4.029	.01	.610	.016	.89	19804.	.00	3247.	22923.	1.0089	70.67
4.063	.01	.598	.016	.86	19804.	.00	3119.	22801.	1.0088	70.67
4.096	.01	.586	.015	.83	19804.	.00	2997.	22683.	1.0088	70.67
4.129	.01	.574	.015	.81	19804.	.00	2879.	22570.	1.0087	70.67
4.163	.01	.562	.014	.79	19804.	.00	2766.	22462.	1.0087	70.67
4.196	.01	.551	.014	.76	19804.	.00	2657.	22357.	1.0086	70.67
4.229	.01	.540	.013	.74	19804.	.00	2553.	22257.	1.0086	70.67
4.262	.00	.529	.013	.72	19804.	.00	2452.	22160.	1.0086	70.67
4.296	.00	.518	.013	.70	19804.	.00	2356.	22068.	1.0085	70.67
4.329	.00	.508	.012	.67	19804.	.00	2264.	21979.	1.0085	70.67
4.362	.00	.498	.012	.65	19804.	.00	2175.	21893.	1.0084	70.67
4.396	.00	.488	.012	.63	19804.	.00	2089.	21811.	1.0084	70.67
4.429	.00	.478	.011	.62	19804.	.00	2007.	21732.	1.0084	70.67

4.462	.00	.468	.011	.60	19804.	.00	1928.	21657.	1.0084	70.68
4.496	.00	.459	.011	.58	19804.	.00	1852.	21584.	1.0083	70.68
4.529	.00	.450	.010	.56	19804.	.00	1779.	21514.	1.0083	70.68
4.562	.00	.441	.010	.54	19804.	.00	1709.	21446.	1.0083	70.68
4.595	.00	.432	.010	.53	19804.	.00	1642.	21382.	1.0082	70.68
4.629	.00	.423	.009	.51	19804.	.00	1578.	21320.	1.0082	70.68
4.662	.00	.415	.009	.50	19804.	.00	1516.	21260.	1.0082	70.68
4.695	.00	.406	.009	.48	19804.	.00	1456.	21203.	1.0082	70.68
4.729	.00	.398	.009	.47	19804.	.00	1399.	21148.	1.0082	70.68

AT PEAK FLOW OF 16.963 WITH TIME AT 1.53 HOURS: BEDMAT = 27.88 (TONS) = .0128 (AC-FT bulked)
TOTAL SED = 31.90 (TONS) = .0146 (AC-FT bulked)

PEAK BULKING FACTOR = 1.067723 = 152158. (PPM-W)

UNBULKED WEIGHT (TONS)	BULKED VOLUME (AC-FT)	CONCENTRATION BY WEIGHT (PPM)	AVERAGE BULKING FACTOR
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WASHMAT =	10.86	.0030	.0050	19804.
BEDMAT =	59.82	.0166	.0275	100129.
TOTAL SEDIMENT =	70.68	.0196	.0325	116197.

1.049613

SEDIMENT TRANSPORT CAPACITY: .66908 AC-FT/SQ MI (bulked) = 2.2769 TONS/ACRE (at Porosity=0.395)

PRINT HYD ID=11 CODE=1

PARTIAL HYDROGRAPH 133.52

RUNOFF VOLUME = .15292 INCHES = .3955 ACRE-FEET
PEAK DISCHARGE RATE = 16.96 CFS AT 1.532 HOURS BASIN AREA = .0485 SQ. MI.

*S UNDEVELOPED, OFF-SITE FLOW ENTERING POND
ADD HYD ID=11 HYD NO=133.50 ID I=10 ID II=11
PRINT HYD ID=11 CODE=1

PARTIAL HYDROGRAPH 133.50

RUNOFF VOLUME = .14920 INCHES = .9931 ACRE-FEET
PEAK DISCHARGE RATE = 42.45 CFS AT 1.532 HOURS BASIN AREA = .1248 SQ. MI.

* *****

FINISH

NORMAL PROGRAM FINISH END TIME (HR:MIN:SEC) = 07:31:37

10-YEAR POST DEVELOPMENT DETAIL PRINTOUT

AHYMO PROGRAM (AHYMO993) - AMAFCA VERSION OF HYMO - SEPTEMBER, 1993
 RUN DATE (MON/DAY/YR) = 11/26/1993
 START TIME (HR:MIN:SEC) = 07:32:07 USER NO. = COMMSC_B.T93
 INPUT FILE = PM10PO.DAT

*S PARKWEST 10-YEAR POST DEVELOPMENT
 START TIME=0.0 HR PUNCH CODE=0
 RAINFALL TYPE=1 RAIN QUARTER=0.0
 RAIN ONE=1.25 IN RAIN SIX=1.47 IN
 RAIN DAY=1.77 IN DT=0.0333 HRS

COMPUTED 6-HOUR RAINFALL DISTRIBUTION BASED ON NOAA ATLAS 2 - PEAK AT 1.40 HR.
 DT = .033300 HOURS END TIME = 5.994000 HOURS

.0000	.0011	.0022	.0033	.0045	.0056	.0068
.0081	.0093	.0106	.0120	.0133	.0147	.0162
.0176	.0192	.0207	.0224	.0240	.0258	.0276
.0294	.0313	.0333	.0354	.0376	.0399	.0423
.0448	.0475	.0503	.0537	.0574	.0614	.0695
.0882	.1170	.1584	.2150	.2895	.3845	.5029
.6475	.7863	.8432	.8912	.9337	.9724	1.0080
1.0411	1.0720	1.1009	1.1282	1.1539	1.1781	1.2011
1.2229	1.2435	1.2631	1.2817	1.2994	1.3042	1.3081
1.3117	1.3152	1.3185	1.3217	1.3248	1.3277	1.3305
1.3333	1.3359	1.3385	1.3410	1.3434	1.3458	1.3480
1.3503	1.3524	1.3546	1.3566	1.3587	1.3606	1.3626
1.3645	1.3663	1.3682	1.3700	1.3717	1.3734	1.3751
1.3768	1.3784	1.3801	1.3816	1.3832	1.3847	1.3862
1.3877	1.3892	1.3907	1.3921	1.3935	1.3949	1.3962
1.3976	1.3989	1.4003	1.4016	1.4028	1.4041	1.4054
1.4066	1.4078	1.4091	1.4103	1.4115	1.4126	1.4138
1.4149	1.4161	1.4172	1.4183	1.4194	1.4205	1.4216
1.4227	1.4238	1.4248	1.4259	1.4269	1.4279	1.4289
1.4299	1.4309	1.4319	1.4329	1.4339	1.4349	1.4358
1.4368	1.4377	1.4387	1.4396	1.4405	1.4414	1.4423
1.4432	1.4441	1.4450	1.4459	1.4468	1.4477	1.4485
1.4494	1.4502	1.4511	1.4519	1.4528	1.4536	1.4544
1.4552	1.4560	1.4568	1.4577	1.4584	1.4592	1.4600
1.4608	1.4616	1.4624	1.4631	1.4639	1.4647	1.4654
1.4662	1.4669	1.4677	1.4684	1.4691	1.4699	

* *****
 * *****
 * *****
 COMPUTE NM HYD ID=10 HYD NO=132.11 DA=0.0093 SQ MI
 PER A=30.00 PER B=50.00 PER C=20.00 PER D=0.00
 TP=-0.1333 HR MASS RAIN=-1

K = .146348HR TP = .133300HR K/TP RATIO = 1.097884 SHAPE CONSTANT, N = 3.219462
 UNIT PEAK = 20.878 CFS UNIT VOLUME = .9994 B = 299.25 P60 = 1.2500
 AREA = .009300 SQ MI IA = .51500 INCHES INF = 1.29200 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=10 CODE=1

PARTIAL HYDROGRAPH 132.11

RUNOFF VOLUME = .20771 INCHES = .1030 ACRE-FEET
 PEAK DISCHARGE RATE = 4.17 CFS AT 1.532 HOURS BASIN AREA = .0093 SQ. MI.

SED WASH LOAD

ID=10 K=0.17 C=0.25

P=1.0 LS=0.758

IMPERVIOUS=0.0 FACTOR=3.0

SEDIMENT YIELD (Wash Mat.) = 5.7 (TONS)
PERCENTAGE IMPERVIOUS AREA = .000WASH LOAD CONCENTRATION = 39239 (ppm-w)
WASH LOAD FACTOR = 3.00000

SEDIMENT TRANS

ID=10 IDS=5 CODE=1

A=0.0002 B=4.19 C=0.19 D=-2.55

NUMB WASH=-1 NUMB SECTIONS=9

FLOW	VELOCITY	WIDTH
(CFS)	(FPS)	(FT)
1.00	2.06	4.06
2.00	2.46	5.26
3.00	2.73	6.11
4.00	2.93	6.82
6.00	3.25	7.92
8.00	3.48	8.85
10.00	3.67	9.62
12.00	3.84	10.30
14.00	3.99	10.92

Use wash load from SED WASH LOAD command - Concentration = 39239 (PPM-w)

* * * * *

TIME (HRS)	WATER FLOW (CFS)	VELOCITY (FT/SEC)	HYD. DEPTH (FT)	WIDTH (FT)	WASHLOAD CONC. (PPM-w)	BED MAT. TRANSPORT (CFS)	BED CONC. (PPM-w)	TOTAL CONC. (PPM-w)	BULKING FACTOR	ACCUM. SEDIMENT (TONS)
.000	.00	.000	.000	.00	39239.	.00	0.	39239.	1.0000	.00
.033	.00	.000	.000	.00	39239.	.00	0.	39239.	1.0000	.00
.067	.00	.000	.000	.00	39239.	.00	0.	39239.	1.0000	.00
.100	.00	.000	.000	.00	39239.	.00	0.	39239.	1.0000	.00
.133	.00	.000	.000	.00	39239.	.00	0.	39239.	1.0000	.00
.167	.00	.000	.000	.00	39239.	.00	0.	39239.	1.0000	.00
.200	.00	.000	.000	.00	39239.	.00	0.	39239.	1.0000	.00
.233	.00	.000	.000	.00	39239.	.00	0.	39239.	1.0000	.00
.266	.00	.000	.000	.00	39239.	.00	0.	39239.	1.0000	.00
.300	.00	.000	.000	.00	39239.	.00	0.	39239.	1.0000	.00
.333	.00	.000	.000	.00	39239.	.00	0.	39239.	1.0000	.00
.366	.00	.000	.000	.00	39239.	.00	0.	39239.	1.0000	.00
.400	.00	.000	.000	.00	39239.	.00	0.	39239.	1.0000	.00
.433	.00	.000	.000	.00	39239.	.00	0.	39239.	1.0000	.00
.466	.00	.000	.000	.00	39239.	.00	0.	39239.	1.0000	.00
.500	.00	.000	.000	.00	39239.	.00	0.	39239.	1.0000	.00
.533	.00	.000	.000	.00	39239.	.00	0.	39239.	1.0000	.00
.566	.00	.000	.000	.00	39239.	.00	0.	39239.	1.0000	.00
.599	.00	.000	.000	.00	39239.	.00	0.	39239.	1.0000	.00
.633	.00	.000	.000	.00	39239.	.00	0.	39239.	1.0000	.00
.666	.00	.000	.000	.00	39239.	.00	0.	39239.	1.0000	.00
.699	.00	.000	.000	.00	39239.	.00	0.	39239.	1.0000	.00
.733	.00	.000	.000	.00	39239.	.00	0.	39239.	1.0000	.00
.766	.00	.000	.000	.00	39239.	.00	0.	39239.	1.0000	.00
.799	.00	.000	.000	.00	39239.	.00	0.	39239.	1.0000	.00
.833	.00	.000	.000	.00	39239.	.00	0.	39239.	1.0000	.00
.866	.00	.000	.000	.00	39239.	.00	0.	39239.	1.0000	.00
.899	.00	.000	.000	.00	39239.	.00	0.	39239.	1.0000	.00
.932	.00	.000	.000	.00	39239.	.00	0.	39239.	1.0000	.00

.966	.00	.000	.000	.00	39239.	.00	0.	39239.	1.0000	.00
.999	.00	.000	.000	.00	39239.	.00	0.	39239.	1.0000	.00
1.032	.00	.000	.000	.00	39239.	.00	0.	39239.	1.0000	.00
1.066	.00	.000	.000	.00	39239.	.00	0.	39239.	1.0000	.00
1.099	.00	.000	.000	.00	39239.	.00	0.	39239.	1.0000	.00
1.132	.00	.000	.000	.00	39239.	.00	0.	39239.	1.0000	.00
1.166	.00	.000	.000	.00	39239.	.00	0.	39239.	1.0000	.00
1.199	.00	.000	.000	.00	39239.	.00	0.	39239.	1.0000	.00
1.232	.00	.000	.000	.00	39239.	.00	0.	39239.	1.0000	.00
1.265	.00	.000	.000	.00	39239.	.00	0.	39239.	1.0000	.00
1.299	.00	.000	.000	.00	39239.	.00	0.	39239.	1.0000	.00
1.332	.00	.000	.000	.00	39239.	.00	0.	39239.	1.0000	.00
1.365	.00	.000	.000	.00	39239.	.00	0.	39239.	1.0000	.00
1.399	.47	1.709	.090	.00	39239.	.00	22230.	59777.	1.0240	.11
1.432	1.75	2.387	.148	.03	39239.	.03	42388.	78431.	1.0321	.67
1.465	3.16	2.767	.184	.07	39239.	.07	56202.	91232.	1.0379	1.86
1.499	4.00	2.930	.200	.10	39239.	.10	62467.	97041.	1.0406	3.46
1.532	4.17	2.963	.203	.11	39239.	.11	63806.	98284.	1.0411	5.16
1.565	3.85	2.904	.197	.10	39239.	.10	61453.	96101.	1.0401	6.69
1.598	3.28	2.792	.186	.07	39239.	.07	57168.	92127.	1.0383	7.94
1.632	2.66	2.652	.172	.06	39239.	.06	51898.	87242.	1.0361	8.89
1.665	2.13	2.503	.159	.04	39239.	.04	46455.	82198.	1.0338	9.60
1.698	1.70	2.369	.146	.03	39239.	.03	41791.	77878.	1.0319	10.14
1.732	1.35	2.238	.135	.02	39239.	.02	37436.	73846.	1.0301	10.54
1.765	1.08	2.104	.123	.01	39239.	.01	33192.	69918.	1.0284	10.85
1.798	.86	1.991	.114	.01	39239.	.01	29818.	66795.	1.0270	11.08
1.832	.68	1.884	.105	.01	39239.	.01	26823.	64024.	1.0258	11.25

TIME (HRS)	WATER FLOW (CFS)	VELOCITY (FT/SEC)	HYD. DEPTH (FT)	WIDTH (FT)	WASHLOAD CONC. (PPM-W)	BED MAT. TRANSPORT (CFS)	BED CONC. (PPM-W)	TOTAL CONC. (PPM-W)	BULKING FACTOR	ACCU. SEDIMENT (TONS)
1.865	.54	1.774	.096	3.21	39239.	.01	23898.	61319.	1.0247	11.38
1.898	.45	1.685	.088	3.00	39239.	.00	21636.	59227.	1.0238	11.49
1.931	.39	1.632	.084	2.86	39239.	.00	20335.	58024.	1.0232	11.58
1.965	.36	1.597	.082	2.77	39239.	.00	19503.	57255.	1.0229	11.66
1.998	.33	1.566	.079	2.69	39239.	.00	18780.	56587.	1.0226	11.74
2.031	.31	1.537	.077	2.61	39239.	.00	18102.	55960.	1.0224	11.81
2.065	.29	1.508	.075	2.54	39239.	.00	17448.	55356.	1.0221	11.87
2.098	.27	1.480	.073	2.47	39239.	.00	16818.	54773.	1.0219	11.93
2.131	.25	1.452	.071	2.40	39239.	.00	16209.	54211.	1.0216	11.98
2.164	.23	1.425	.069	2.33	39239.	.00	15623.	53669.	1.0214	12.03
2.198	.21	1.398	.067	2.27	39239.	.00	15057.	53146.	1.0212	12.07
2.231	.20	1.372	.065	2.20	39239.	.00	14512.	52642.	1.0210	12.11
2.264	.18	1.346	.063	2.14	39239.	.00	13986.	52156.	1.0208	12.15
2.298	.17	1.320	.061	2.08	39239.	.00	13479.	51687.	1.0206	12.18
2.331	.16	1.296	.060	2.02	39239.	.00	12990.	51235.	1.0204	12.22
2.364	.14	1.271	.058	1.97	39239.	.00	12518.	50800.	1.0202	12.25
2.398	.13	1.247	.056	1.91	39239.	.00	12064.	50380.	1.0200	12.27
2.431	.12	1.224	.055	1.86	39239.	.00	11625.	49975.	1.0199	12.30
2.464	.12	1.201	.053	1.81	39239.	.00	11203.	49585.	1.0197	12.32
2.498	.11	1.178	.052	1.75	39239.	.00	10796.	49208.	1.0195	12.34
2.531	.10	1.156	.050	1.71	39239.	.00	10403.	48845.	1.0194	12.36
2.564	.09	1.135	.049	1.66	39239.	.00	10024.	48496.	1.0192	12.38
2.597	.09	1.113	.048	1.61	39239.	.00	9659.	48159.	1.0191	12.39
2.631	.08	1.092	.046	1.57	39239.	.00	9308.	47834.	1.0190	12.41
2.664	.07	1.072	.045	1.52	39239.	.00	8969.	47521.	1.0188	12.42
2.697	.07	1.052	.044	1.48	39239.	.00	8642.	47219.	1.0187	12.43
2.731	.06	1.032	.042	1.44	39239.	.00	8327.	46928.	1.0186	12.45
2.764	.06	1.013	.041	1.40	39239.	.00	8023.	46647.	1.0185	12.46

2.797	.05	.994	.040	1.36	39239.	.00	7731.	46377.	1.0184	12.47
2.831	.05	.975	.039	1.32	39239.	.00	7449.	46116.	1.0182	12.47
2.864	.05	.957	.038	1.28	39239.	.00	7177.	45865.	1.0181	12.48
2.897	.04	.939	.037	1.25	39239.	.00	6915.	45623.	1.0180	12.49
2.930	.04	.921	.036	1.21	39239.	.00	6662.	45390.	1.0179	12.50
2.964	.04	.904	.035	1.18	39239.	.00	6419.	45166.	1.0178	12.50
2.997	.03	.887	.034	1.15	39239.	.00	6184.	44949.	1.0178	12.51
3.030	.03	.870	.033	1.11	39239.	.00	5959.	44740.	1.0177	12.52
3.064	.03	.854	.032	1.08	39239.	.00	5741.	44539.	1.0176	12.52
3.097	.03	.838	.031	1.05	39239.	.00	5531.	44345.	1.0175	12.53
3.130	.03	.822	.030	1.02	39239.	.00	5329.	44159.	1.0174	12.53
3.164	.02	.807	.029	.99	39239.	.00	5134.	43979.	1.0174	12.53
3.197	.02	.791	.028	.97	39239.	.00	4946.	43805.	1.0173	12.54
3.230	.02	.777	.028	.94	39239.	.00	4765.	43638.	1.0172	12.54
3.263	.02	.762	.027	.91	39239.	.00	4591.	43477.	1.0172	12.54
3.297	.02	.748	.026	.89	39239.	.00	4423.	43322.	1.0171	12.55
3.330	.02	.734	.025	.86	39239.	.00	4261.	43173.	1.0170	12.55
3.363	.01	.720	.025	.84	39239.	.00	4105.	43029.	1.0170	12.55
3.397	.01	.706	.024	.81	39239.	.00	3955.	42890.	1.0169	12.56
3.430	.01	.693	.023	.79	39239.	.00	3810.	42756.	1.0169	12.56
3.463	.01	.680	.023	.77	39239.	.00	3670.	42627.	1.0168	12.56
3.497	.01	.667	.022	.75	39239.	.00	3536.	42503.	1.0168	12.56
3.530	.01	.655	.021	.73	39239.	.00	3406.	42384.	1.0167	12.56
3.563	.01	.642	.021	.71	39239.	.00	3282.	42268.	1.0167	12.56
3.596	.01	.630	.020	.69	39239.	.00	3161.	42157.	1.0166	12.57
3.630	.01	.618	.020	.67	39239.	.00	3045.	42051.	1.0166	12.57
3.663	.01	.607	.019	.65	39239.	.00	2934.	41947.	1.0165	12.57
3.696	.01	.595	.019	.63	39239.	.00	2826.	41848.	1.0165	12.57
3.730	.01	.584	.018	.61	39239.	.00	2723.	41753.	1.0164	12.57
3.763	.01	.573	.018	.60	39239.	.00	2623.	41660.	1.0164	12.57
3.796	.01	.563	.017	.58	39239.	.00	2527.	41572.	1.0164	12.57
3.830	.01	.552	.017	.56	39239.	.00	2434.	41486.	1.0163	12.57
3.863	.00	.542	.016	.55	39239.	.00	2345.	41404.	1.0163	12.57
3.896	.00	.531	.016	.53	39239.	.00	2259.	41324.	1.0163	12.57
3.929	.00	.521	.015	.52	39239.	.00	2176.	41248.	1.0162	12.58
3.963	.00	.512	.015	.50	39239.	.00	2096.	41174.	1.0162	12.58
3.996	.00	.502	.014	.49	39239.	.00	2019.	41103.	1.0162	12.58
4.029	.00	.493	.014	.47	39239.	.00	1945.	41035.	1.0161	12.58
4.063	.00	.483	.014	.46	39239.	.00	1874.	40969.	1.0161	12.58
4.096	.00	.474	.013	.45	39239.	.00	1805.	40905.	1.0161	12.58
4.129	.00	.465	.013	.44	39239.	.00	1739.	40844.	1.0161	12.58
4.163	.00	.457	.012	.42	39239.	.00	1675.	40785.	1.0160	12.58
4.196	.00	.448	.012	.41	39239.	.00	1614.	40729.	1.0160	12.58
4.229	.00	.440	.012	.40	39239.	.00	1554.	40674.	1.0160	12.58
4.262	.00	.376	.009	.32	39239.	.00	1139.	40291.	1.0158	12.58

AT PEAK FLOW OF 4.168 WITH TIME AT 1.53 HOURS: BEDMAT = 3.09 (TONS) = .0014 (AC-FT bulked)

PEAK BULKING FACTOR = 1.041131 = 98284. (PPM-W) TOTAL SED = 5.16 (TONS) = .0024 (AC-FT bulked)

UNBULKED	BULKED	CONCENTRATION	AVERAGE
WEIGHT (TONS)	VOLUME (AC-FT)	BY WEIGHT (PPM)	BULKING FACTOR

WASHMAT = 5.72 .0016 .0026 39239.
BEDMAT = 6.86 .0019 .0032 46714.
TOTAL SEDIMENT = 12.58 .0035 .0058 82438. 1.033904

SEDIMENT TRANSPORT CAPACITY: .62105 AC-FT/SQ MI (bulked) = 2.1135 TONS/ACRE (at Porosity=0.395)

PRINT HYD ID=10 CODE=1

PARTIAL HYDROGRAPH 132.11

RUNOFF VOLUME = .20771 INCHES = .1030 ACRE-FEET
PEAK DISCHARGE RATE = 4.17 CFS AT 1.532 HOURS BASIN AREA = .0093 SQ. MI.

PRINT HYD ID=10 CODE=1

PARTIAL HYDROGRAPH 132.11

RUNOFF VOLUME = .20771 INCHES = .1030 ACRE-FEET
PEAK DISCHARGE RATE = 4.17 CFS AT 1.532 HOURS BASIN AREA = .0093 SQ. MI.

COMPUTE NM HYD

ID=11 HYD NO=133.51 DA=0.0670 SQ MI
PER A=5.00 PER B=65.00 PER C=30.00 PER D=0.00
TP=-0.1333 HR MASS RAIN=-1

K = .133737HR TP = .133300HR K/TP RATIO = 1.003281 SHAPE CONSTANT, N = 3.518644
UNIT PEAK = 161.69 CFS UNIT VOLUME = 1.000 B = 321.69 P60 = 1.2500
AREA = .067000 SQ MI IA = .46250 INCHES INF = 1.14500 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=11 CODE=1

PARTIAL HYDROGRAPH 133.51

RUNOFF VOLUME = .26812 INCHES = .9581 ACRE-FEET
PEAK DISCHARGE RATE = 39.74 CFS AT 1.532 HOURS BASIN AREA = .0670 SQ. MI.

SED WASH LOAD ID=11 K=0.16 C=0.25

P=1.0 LS=0.470
IMPERVIOUS=0.0 FACTOR=3.0
SEDIMENT YIELD (Wash Mat.) = 41.1 (TONS) WASH LOAD CONCENTRATION = 30620 (ppm-w)
PERCENTAGE IMPERVIOUS AREA = .000 WASH LOAD FACTOR = 3.00000

PRINT HYD ID=11 CODE=1

PARTIAL HYDROGRAPH 133.51

RUNOFF VOLUME = .26812 INCHES = .9581 ACRE-FEET
PEAK DISCHARGE RATE = 39.74 CFS AT 1.532 HOURS BASIN AREA = .0670 SQ. MI.

SEDIMENT TRANS

ID=11 IDS=6 CODE=1

A=0.0002 B=4.19 C=0.19 D=-2.55

NUMB WASH=-1 NUMB SECTIONS=9

FLOW	VELOCITY	WIDTH
(CFS)	(FPS)	(FT)
5.00	2.91	8.75
10.00	3.61	10.08
25.00	4.77	12.68
40.00	5.42	14.57
55.00	5.96	16.02
70.00	6.36	17.31
85.00	6.65	18.49
100.00	6.96	19.50
115.00	6.74	24.19

Use wash load from SED WASH LOAD command - Concentration = 30620 (PPM-W)

* * * * *

TIME	WATER	VELOCITY	HYD.	WASHLOAD	BED MAT.	BED	TOTAL	BULKING	ACCUM.
(HRS)	FLOW	(FT/SEC)	DEPTH	WIDTH	CONC.	TRANSPORT	CONC.	FACTOR	SEDIMENT
	(CFS)		(FT)	(FT)	(PPM-W)	(CFS)	(PPM-W)		(TONS)
.000	.00	.000	.000	.00	30620.	.00	0.	30620.	1.0000
.033	.00	.000	.000	.00	30620.	.00	0.	30620.	1.0000
.067	.00	.000	.000	.00	30620.	.00	0.	30620.	1.0000
.100	.00	.000	.000	.00	30620.	.00	0.	30620.	1.0000
.133	.00	.000	.000	.00	30620.	.00	0.	30620.	1.0000
.167	.00	.000	.000	.00	30620.	.00	0.	30620.	1.0000
.200	.00	.000	.000	.00	30620.	.00	0.	30620.	1.0000
.233	.00	.000	.000	.00	30620.	.00	0.	30620.	1.0000
.266	.00	.000	.000	.00	30620.	.00	0.	30620.	1.0000
.300	.00	.000	.000	.00	30620.	.00	0.	30620.	1.0000
.333	.00	.000	.000	.00	30620.	.00	0.	30620.	1.0000
.366	.00	.000	.000	.00	30620.	.00	0.	30620.	1.0000
.400	.00	.000	.000	.00	30620.	.00	0.	30620.	1.0000
.433	.00	.000	.000	.00	30620.	.00	0.	30620.	1.0000
.466	.00	.000	.000	.00	30620.	.00	0.	30620.	1.0000
.500	.00	.000	.000	.00	30620.	.00	0.	30620.	1.0000
.533	.00	.000	.000	.00	30620.	.00	0.	30620.	1.0000
.566	.00	.000	.000	.00	30620.	.00	0.	30620.	1.0000
.599	.00	.000	.000	.00	30620.	.00	0.	30620.	1.0000
.633	.00	.000	.000	.00	30620.	.00	0.	30620.	1.0000
.666	.00	.000	.000	.00	30620.	.00	0.	30620.	1.0000
.699	.00	.000	.000	.00	30620.	.00	0.	30620.	1.0000
.733	.00	.000	.000	.00	30620.	.00	0.	30620.	1.0000
.766	.00	.000	.000	.00	30620.	.00	0.	30620.	1.0000
.799	.00	.000	.000	.00	30620.	.00	0.	30620.	1.0000
.833	.00	.000	.000	.00	30620.	.00	0.	30620.	1.0000
.866	.00	.000	.000	.00	30620.	.00	0.	30620.	1.0000
.899	.00	.000	.000	.00	30620.	.00	0.	30620.	1.0000
.932	.00	.000	.000	.00	30620.	.00	0.	30620.	1.0000
.966	.00	.000	.000	.00	30620.	.00	0.	30620.	1.0000
.999	.00	.000	.000	.00	30620.	.00	0.	30620.	1.0000
1.032	.00	.000	.000	.00	30620.	.00	0.	30620.	1.0000
1.066	.00	.000	.000	.00	30620.	.00	0.	30620.	1.0000
1.099	.00	.000	.000	.00	30620.	.00	0.	30620.	1.0000
1.132	.00	.000	.000	.00	30620.	.00	0.	30620.	1.0000
1.166	.00	.000	.000	.00	30620.	.00	0.	30620.	1.0000

1.199	.00	.000	.000	.00	30620.	.00	0.	30620.	1.0000	.00
1.232	.00	.000	.000	.00	30620.	.00	0.	30620.	1.0000	.00
1.265	.00	.000	.000	.00	30620.	.00	0.	30620.	1.0000	.00
1.299	.00	.000	.000	.00	30620.	.00	0.	30620.	1.0000	.00
1.332	.00	.000	.000	.00	30620.	.00	0.	30620.	1.0000	.00
1.365	.89	1.829	.098	4.98	30620.	.01	25215.	54333.	1.0217	.19
1.399	6.18	3.118	.219	9.06	30620.	.17	68826.	95432.	1.0398	2.63
1.432	17.87	4.340	.360	11.44	30620.	.96	124235.	147809.	1.0655	14.22
1.465	30.68	5.053	.453	13.40	30620.	2.21	160537.	182222.	1.0841	39.79
1.499	38.33	5.361	.498	14.36	30620.	3.10	176289.	197177.	1.0927	75.00
1.532	39.74	5.411	.505	14.54	30620.	3.27	178855.	199615.	1.0941	112.07
1.565	36.49	5.294	.488	14.13	30620.	2.88	172793.	193856.	1.0907	144.89
1.598	30.83	5.060	.454	13.41	30620.	2.23	160875.	182542.	1.0843	170.63
1.632	24.82	4.761	.412	12.65	30620.	1.60	145845.	168285.	1.0764	189.42
1.665	19.61	4.459	.374	11.75	30620.	1.11	130259.	153514.	1.0684	202.72
1.698	15.35	4.146	.336	11.01	30620.	.75	114601.	138689.	1.0608	211.97
1.732	11.98	3.832	.300	10.42	30620.	.50	99567.	124469.	1.0536	218.34
1.765	9.34	3.539	.266	9.90	30620.	.33	86243.	111877.	1.0475	222.74
1.798	7.28	3.283	.237	9.36	30620.	.22	75479.	101712.	1.0427	225.82
1.832	5.71	3.038	.210	8.94	30620.	.15	65717.	92499.	1.0385	228.00

TIME (HRS)	WATER FLOW (CFS)	VELOCITY (FT/SEC)	HYD. DEPTH (FT)	WIDTH (FT)	WASHLOAD CONC. (PPM-W)	BED MAT. TRANSPORT (CFS)	BED CONC. (PPM-W)	TOTAL CONC. (PPM-W)	BULKING FACTOR	ACCUM. SEDIMENT (TONS)
1.865	4.62	2.864	.192	8.41	30620.	.11	59014.	86175.	1.0356	229.63
1.898	3.98	2.774	.183	7.84	30620.	.09	55640.	82994.	1.0342	230.97
1.931	3.58	2.710	.176	7.49	30620.	.08	53242.	80733.	1.0331	232.15
1.965	3.27	2.652	.171	7.21	30620.	.07	51128.	78740.	1.0323	233.19
1.998	3.00	2.597	.166	6.97	30620.	.06	49168.	76892.	1.0314	234.13
2.031	2.76	2.543	.160	6.76	30620.	.05	47272.	75105.	1.0306	234.96
2.065	2.54	2.489	.155	6.56	30620.	.05	45397.	73339.	1.0299	235.72
2.098	2.34	2.435	.150	6.38	30620.	.04	43542.	71591.	1.0291	236.39
2.131	2.15	2.380	.145	6.22	30620.	.04	41712.	69867.	1.0283	236.99
2.164	1.98	2.325	.140	6.07	30620.	.03	39911.	68170.	1.0276	237.54
2.198	1.82	2.271	.135	5.93	30620.	.03	38144.	66506.	1.0269	238.02
2.231	1.68	2.216	.130	5.80	30620.	.02	36414.	64876.	1.0262	238.46
2.264	1.54	2.161	.126	5.68	30620.	.02	34725.	63286.	1.0255	238.85
2.298	1.42	2.107	.121	5.57	30620.	.02	33080.	61737.	1.0248	239.19
2.331	1.31	2.053	.116	5.47	30620.	.02	31481.	60231.	1.0242	239.51
2.364	1.20	2.000	.112	5.38	30620.	.01	29930.	58771.	1.0236	239.79
2.398	1.11	1.947	.107	5.29	30620.	.01	28430.	57359.	1.0230	240.04
2.431	1.02	1.894	.103	5.21	30620.	.01	26981.	55995.	1.0224	240.27
2.464	.94	1.853	.100	5.07	30620.	.01	25851.	54931.	1.0219	240.47
2.498	.86	1.815	.097	4.92	30620.	.01	24839.	53979.	1.0215	240.66
2.531	.79	1.777	.094	4.77	30620.	.01	23865.	53062.	1.0211	240.82
2.564	.73	1.741	.091	4.62	30620.	.01	22929.	52181.	1.0208	240.97
2.597	.67	1.705	.088	4.48	30620.	.01	22029.	51334.	1.0204	241.11
2.631	.62	1.670	.085	4.34	30620.	.01	21163.	50519.	1.0201	241.23
2.664	.57	1.636	.083	4.21	30620.	.00	20330.	49736.	1.0198	241.34
2.697	.52	1.602	.080	4.08	30620.	.00	19530.	48983.	1.0194	241.44
2.731	.48	1.569	.078	3.96	30620.	.00	18760.	48259.	1.0191	241.54
2.764	.44	1.537	.075	3.83	30620.	.00	18021.	47563.	1.0188	241.62
2.797	.41	1.505	.073	3.72	30620.	.00	17310.	46895.	1.0186	241.69
2.831	.38	1.475	.071	3.60	30620.	.00	16626.	46252.	1.0183	241.76
2.864	.35	1.444	.069	3.49	30620.	.00	15969.	45634.	1.0180	241.82
2.897	.32	1.415	.067	3.39	30620.	.00	15338.	45040.	1.0178	241.88
2.930	.29	1.386	.065	3.28	30620.	.00	14731.	44469.	1.0176	241.93
2.964	.27	1.357	.063	3.18	30620.	.00	14148.	43921.	1.0173	241.98
2.997	.25	1.329	.061	3.08	30620.	.00	13588.	43394.	1.0171	242.02

3.030	.23	1.302	.059	2.99	30620.	.00	13049.	42887.	1.0169	242.06
3.064	.21	1.275	.057	2.90	30620.	.00	12532.	42401.	1.0167	242.09
3.097	.19	1.249	.055	2.81	30620.	.00	12035.	41933.	1.0165	242.12
3.130	.18	1.223	.054	2.72	30620.	.00	11557.	41484.	1.0163	242.15
3.164	.16	1.198	.052	2.64	30620.	.00	11098.	41052.	1.0162	242.18
3.197	.15	1.174	.050	2.56	30620.	.00	10657.	40638.	1.0160	242.20
3.230	.14	1.150	.049	2.48	30620.	.00	10234.	40240.	1.0158	242.23
3.263	.13	1.126	.047	2.40	30620.	.00	9827.	39857.	1.0157	242.25
3.297	.12	1.103	.046	2.33	30620.	.00	9436.	39490.	1.0155	242.26
3.330	.11	1.080	.044	2.26	30620.	.00	9061.	39137.	1.0154	242.28
3.363	.10	1.058	.043	2.19	30620.	.00	8700.	38798.	1.0152	242.30
3.397	.09	1.036	.042	2.12	30620.	.00	8354.	38472.	1.0151	242.31
3.430	.08	1.015	.040	2.06	30620.	.00	8021.	38159.	1.0150	242.32
3.463	.08	.994	.039	1.99	30620.	.00	7701.	37859.	1.0148	242.33
3.497	.07	.974	.038	1.93	30620.	.00	7394.	37570.	1.0147	242.34
3.530	.07	.954	.037	1.87	30620.	.00	7100.	37293.	1.0146	242.35
3.563	.06	.934	.036	1.82	30620.	.00	6816.	37027.	1.0145	242.36
3.596	.06	.915	.035	1.76	30620.	.00	6545.	36771.	1.0144	242.37
3.630	.05	.896	.034	1.71	30620.	.00	6283.	36526.	1.0143	242.38
3.663	.05	.878	.033	1.65	30620.	.00	6033.	36290.	1.0142	242.38
3.696	.04	.860	.032	1.60	30620.	.00	5792.	36064.	1.0141	242.39
3.730	.04	.842	.031	1.55	30620.	.00	5561.	35846.	1.0140	242.40
3.763	.04	.825	.030	1.51	30620.	.00	5338.	35637.	1.0139	242.40
3.796	.03	.808	.029	1.46	30620.	.00	5125.	35437.	1.0139	242.40
3.830	.03	.791	.028	1.42	30620.	.00	4920.	35244.	1.0138	242.41
3.863	.03	.775	.027	1.37	30620.	.00	4724.	35060.	1.0137	242.41
3.896	.03	.759	.026	1.33	30620.	.00	4535.	34882.	1.0136	242.42
3.929	.02	.744	.025	1.29	30620.	.00	4354.	34712.	1.0136	242.42
3.963	.02	.728	.025	1.25	30620.	.00	4180.	34548.	1.0135	242.42
3.996	.02	.713	.024	1.21	30620.	.00	4012.	34391.	1.0134	242.43
4.029	.02	.699	.023	1.17	30620.	.00	3852.	34240.	1.0134	242.43
4.063	.02	.684	.022	1.14	30620.	.00	3698.	34095.	1.0133	242.43
4.096	.02	.670	.022	1.10	30620.	.00	3550.	33956.	1.0133	242.43
4.129	.01	.656	.021	1.07	30620.	.00	3408.	33823.	1.0132	242.43
4.163	.01	.643	.020	1.04	30620.	.00	3272.	33695.	1.0132	242.44
4.196	.01	.630	.020	1.01	30620.	.00	3141.	33571.	1.0131	242.44
4.229	.01	.617	.019	.97	30620.	.00	3015.	33453.	1.0131	242.44
4.262	.01	.604	.019	.94	30620.	.00	2894.	33340.	1.0130	242.44
4.296	.01	.592	.018	.92	30620.	.00	2778.	33231.	1.0130	242.44
4.329	.01	.580	.017	.89	30620.	.00	2667.	33126.	1.0129	242.44
4.362	.01	.568	.017	.86	30620.	.00	2560.	33026.	1.0129	242.44
4.396	.01	.556	.016	.83	30620.	.00	2458.	32930.	1.0128	242.45
4.429	.01	.545	.016	.81	30620.	.00	2359.	32837.	1.0128	242.45
4.462	.01	.533	.015	.78	30620.	.00	2265.	32748.	1.0128	242.45
4.496	.01	.523	.015	.76	30620.	.00	2174.	32663.	1.0127	242.45
4.529	.01	.512	.014	.74	30620.	.00	2087.	32581.	1.0127	242.45
4.562	.01	.501	.014	.71	30620.	.00	2003.	32503.	1.0127	242.45
4.595	.00	.491	.014	.69	30620.	.00	1923.	32427.	1.0126	242.45
4.629	.00	.481	.013	.67	30620.	.00	1846.	32355.	1.0126	242.45
4.662	.00	.471	.013	.65	30620.	.00	1772.	32285.	1.0126	242.45
4.695	.00	.461	.012	.63	30620.	.00	1701.	32218.	1.0126	242.45
4.729	.00	.452	.012	.61	30620.	.00	1633.	32154.	1.0125	242.45
4.762	.00	.443	.012	.59	30620.	.00	1567.	32093.	1.0125	242.45
4.795	.00	.424	.011	.55	30620.	.00	1437.	31970.	1.0125	242.45
4.829	.00	.363	.009	.44	30620.	.00	1060.	31616.	1.0123	242.45

AT PEAK FLOW OF 39.740 WITH TIME AT 1.53 HOURS: BEDMAT = 96.28 (TONS) = .0442 (AC-FT bulked)
PEAK BULKING FACTOR = 1.094113 = 199615. (PPM-w) TOTAL SED = 112.07 (TONS) = .0515 (AC-FT bulked)

	UNBULKED WEIGHT (TONS)	BULKED VOLUME (AC-FT)	CONCENTRATION BY WEIGHT (PPM)	AVERAGE BULKING FACTOR
WASHMAT =	41.13	.0114	.0189	30620.
BEDMAT =	201.32	.0559	.0924	133910.
TOTAL SEDIMENT =	242.45	.0673	.1113	156973.
				1.070265

SEDIMENT TRANSPORT CAPACITY: 1.66147 AC-FT/SQ MI (bulked) = 5.6542 TONS/ACRE (at Porosity=0.395)

PRINT HYD ID=11 CODE=1

PARTIAL HYDROGRAPH 133.51

RUNOFF VOLUME = .26812 INCHES = .9581 ACRE-FEET
PEAK DISCHARGE RATE = 39.74 CFS AT 1.532 HOURS BASIN AREA = .0670 SQ. MI.

ADD HYD ID=10 HYD NO=133.50 ID I=10 ID II=11
PRINT HYD ID=10 CODE=1

PARTIAL HYDROGRAPH 133.50

RUNOFF VOLUME = .26075 INCHES = 1.0611 ACRE-FEET
PEAK DISCHARGE RATE = 43.91 CFS AT 1.532 HOURS BASIN AREA = .0763 SQ. MI.

COMPUTE NM HYD ID=11 HYD NO=133.52 DA=0.0485 SQ MI
PER A=5.00 PER B=65.00 PER C=30.00 PER D=0.00
TP=-0.1333 HR MASS RAIN=-1

K = .133606HR TP = .133300HR K/TP RATIO = 1.002297 SHAPE CONSTANT, N = 3.522130
UNIT PEAK = 117.14 CFS UNIT VOLUME = 1.000 B = 321.94 P60 = 1.2500
AREA = .048500 SQ MI IA = .46250 INCHES INF = 1.14500 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=11 CODE=1

PARTIAL HYDROGRAPH 133.52

RUNOFF VOLUME = .26812 INCHES = .6935 ACRE-FEET
PEAK DISCHARGE RATE = 28.79 CFS AT 1.532 HOURS BASIN AREA = .0485 SQ. MI.

SED WASH LOAD ID=11 K=0.14 C=0.25
P=1.0 IS=0.375
IMPERVIOUS=0.0 FACTOR=3.0

SEDIMENT YIELD (Wash Mat.) = 20.0 (TONS) WASH LOAD CONCENTRATION = 20781 (ppm-w)
PERCENTAGE IMPERVIOUS AREA = .000 WASH LOAD FACTOR = 3.00000

PRINT HYD ID=11 CODE=1

PARTIAL HYDROGRAPH 133.52

RUNOFF VOLUME = .26812 INCHES = .6935 ACRE-FEET
PEAK DISCHARGE RATE = 28.79 CFS AT 1.532 HOURS BASIN AREA = .0485 SQ. MI.

SEDIMENT TRANS

ID=11 IDS=7 CODE=1

A=0.0002 B=4.19 C=0.19 D=-2.55

NUMB WASH=-1 NUMB SECTIONS=9

FLOW	VELOCITY	WIDTH
(CFS)	(FPS)	(FT)
5.00	3.05	9.07
10.00	3.73	10.90
25.00	4.84	14.34
40.00	5.50	16.71
55.00	5.99	18.61
65.00	6.26	19.71
70.00	6.38	20.22
75.00	6.50	20.71
85.00	6.70	21.65

Use wash load from SED WASH LOAD command - Concentration = 20781 (ppm-w)

* * * * *

TIME	WATER	HYD.	WASHLOAD	BED MAT.	BED	TOTAL	BULKING	ACCUM.
(HRS)	FLOW	VELOCITY	DEPTH	WIDTH	CONC.	TRANSPORT	CONC.	SEDIMENT
	(CFS)	(FT/SEC)	(FT)	(FT)	(PPM-W)	(CFS)	(PPM-W)	(TONS)
.000	.00	.000	.000	.00	20781.	.00	20781.	1.0000
.033	.00	.000	.000	.00	20781.	.00	20781.	1.0000
.067	.00	.000	.000	.00	20781.	.00	20781.	1.0000
.100	.00	.000	.000	.00	20781.	.00	20781.	1.0000
.133	.00	.000	.000	.00	20781.	.00	20781.	1.0000
.167	.00	.000	.000	.00	20781.	.00	20781.	1.0000
.200	.00	.000	.000	.00	20781.	.00	20781.	1.0000
.233	.00	.000	.000	.00	20781.	.00	20781.	1.0000
.266	.00	.000	.000	.00	20781.	.00	20781.	1.0000
.300	.00	.000	.000	.00	20781.	.00	20781.	1.0000
.333	.00	.000	.000	.00	20781.	.00	20781.	1.0000
.366	.00	.000	.000	.00	20781.	.00	20781.	1.0000
.400	.00	.000	.000	.00	20781.	.00	20781.	1.0000
.433	.00	.000	.000	.00	20781.	.00	20781.	1.0000
.466	.00	.000	.000	.00	20781.	.00	20781.	1.0000
.500	.00	.000	.000	.00	20781.	.00	20781.	1.0000
.533	.00	.000	.000	.00	20781.	.00	20781.	1.0000
.566	.00	.000	.000	.00	20781.	.00	20781.	1.0000
.599	.00	.000	.000	.00	20781.	.00	20781.	1.0000
.633	.00	.000	.000	.00	20781.	.00	20781.	1.0000
.666	.00	.000	.000	.00	20781.	.00	20781.	1.0000
.699	.00	.000	.000	.00	20781.	.00	20781.	1.0000
.733	.00	.000	.000	.00	20781.	.00	20781.	1.0000
.766	.00	.000	.000	.00	20781.	.00	20781.	1.0000
.799	.00	.000	.000	.00	20781.	.00	20781.	1.0000

.833	.00	.000	.000	.00	20781.	.00	0.	20781.	1.0000	.00
.866	.00	.000	.000	.00	20781.	.00	0.	20781.	1.0000	.00
.899	.00	.000	.000	.00	20781.	.00	0.	20781.	1.0000	.00
.932	.00	.000	.000	.00	20781.	.00	0.	20781.	1.0000	.00
.966	.00	.000	.000	.00	20781.	.00	0.	20781.	1.0000	.00
.999	.00	.000	.000	.00	20781.	.00	0.	20781.	1.0000	.00
1.032	.00	.000	.000	.00	20781.	.00	0.	20781.	1.0000	.00
1.066	.00	.000	.000	.00	20781.	.00	0.	20781.	1.0000	.00
1.099	.00	.000	.000	.00	20781.	.00	0.	20781.	1.0000	.00
1.132	.00	.000	.000	.00	20781.	.00	0.	20781.	1.0000	.00
1.166	.00	.000	.000	.00	20781.	.00	0.	20781.	1.0000	.00
1.199	.00	.000	.000	.00	20781.	.00	0.	20781.	1.0000	.00
1.232	.00	.000	.000	.00	20781.	.00	0.	20781.	1.0000	.00
1.265	.00	.000	.000	.00	20781.	.00	0.	20781.	1.0000	.00
1.299	.00	.000	.000	.00	20781.	.00	0.	20781.	1.0000	.00
1.332	.00	.000	.000	.00	20781.	.00	0.	20781.	1.0000	.00
1.365	.64	1.787	.081	4.45	20781.	.01	26532.	46236.	1.0183	.12
1.399	4.47	2.984	.175	8.56	20781.	.13	69839.	87844.	1.0363	1.73
1.432	12.93	4.041	.277	11.57	20781.	.67	119969.	136103.	1.0595	9.35
1.465	22.22	4.700	.345	13.70	20781.	1.55	155728.	170589.	1.0776	26.44
1.499	27.77	4.988	.377	14.78	20781.	2.18	172007.	186305.	1.0864	50.22
1.532	28.79	5.040	.382	14.94	20781.	2.30	174919.	189118.	1.0880	75.33
1.565	26.43	4.919	.369	14.57	20781.	2.01	168043.	182477.	1.0842	97.39
1.598	22.32	4.706	.346	13.73	20781.	1.56	156044.	170894.	1.0778	114.60
1.632	17.97	4.444	.318	12.73	20781.	1.12	141533.	156893.	1.0702	127.11
1.665	14.19	4.155	.288	11.86	20781.	.77	125953.	141870.	1.0624	135.89
1.698	11.11	3.857	.258	11.15	20781.	.52	110410.	126893.	1.0548	141.93
1.732	8.67	3.589	.232	10.41	20781.	.35	97200.	114172.	1.0486	146.11
1.765	6.76	3.343	.208	9.71	20781.	.24	85706.	103109.	1.0434	149.01
1.798	5.27	3.100	.185	9.17	20781.	.16	74843.	92658.	1.0385	151.02
1.832	4.12	2.936	.171	8.23	20781.	.11	67758.	85844.	1.0354	152.47

TIME (HRS)	WATER FLOW (CFS)	VELOCITY (FT/SEC)	HYD. DEPTH (FT)	WIDTH (FT)	WASHLOAD CONC. (PPM-W)	BED MAT. TRANSPORT (CFS)	BED CONC. (PPM-W)	TOTAL CONC. (PPM-W)	BULKING FACTOR	ACCU. SEDIMENT (TONS)
1.865	3.34	2.803	.159	7.48	20781.	.08	62206.	80505.	1.0330	153.57
1.898	2.88	2.706	.151	7.04	20781.	.07	58283.	76735.	1.0314	154.46
1.931	2.59	2.637	.145	6.77	20781.	.06	55522.	74081.	1.0302	155.24
1.965	2.36	2.575	.140	6.55	20781.	.05	53110.	71763.	1.0292	155.92
1.998	2.17	2.517	.135	6.36	20781.	.04	50892.	69631.	1.0282	156.53
2.031	2.00	2.460	.131	6.20	20781.	.04	48762.	67585.	1.0274	157.07
2.065	1.84	2.403	.126	6.05	20781.	.03	46672.	65577.	1.0265	157.55
2.098	1.69	2.347	.122	5.91	20781.	.03	44620.	63605.	1.0256	157.98
2.131	1.56	2.290	.118	5.78	20781.	.03	42610.	61674.	1.0248	158.36
2.164	1.43	2.234	.113	5.66	20781.	.02	40645.	59787.	1.0240	158.70
2.198	1.32	2.178	.109	5.55	20781.	.02	38731.	57948.	1.0232	159.00
2.231	1.21	2.122	.105	5.45	20781.	.02	36869.	56160.	1.0225	159.27
2.264	1.12	2.067	.101	5.36	20781.	.02	35062.	54425.	1.0217	159.51
2.298	1.03	2.012	.097	5.27	20781.	.01	33313.	52746.	1.0210	159.73
2.331	.94	1.967	.094	5.13	20781.	.01	31894.	51383.	1.0204	159.92
2.364	.87	1.926	.091	4.98	20781.	.01	30651.	50190.	1.0199	160.09
2.398	.80	1.886	.088	4.82	20781.	.01	29456.	49042.	1.0195	160.25
2.431	.74	1.848	.085	4.68	20781.	.01	28305.	47938.	1.0190	160.38
2.464	.68	1.810	.083	4.53	20781.	.01	27199.	46876.	1.0186	160.51
2.498	.62	1.773	.080	4.39	20781.	.01	26134.	45854.	1.0181	160.62
2.531	.57	1.736	.078	4.26	20781.	.01	25110.	44871.	1.0177	160.72
2.564	.53	1.700	.075	4.13	20781.	.00	24125.	43926.	1.0173	160.81
2.597	.49	1.665	.073	4.00	20781.	.00	23178.	43016.	1.0170	160.90
2.631	.45	1.631	.071	3.88	20781.	.00	22267.	42142.	1.0166	160.97

2.664	.41	1.598	.069	3.76	20781.	.00	21391.	41302.	1.0163	161.03
2.697	.38	1.565	.066	3.64	20781.	.00	20549.	40494.	1.0159	161.09
2.731	.35	1.533	.064	3.53	20781.	.00	19740.	39717.	1.0156	161.15
2.764	.32	1.501	.062	3.42	20781.	.00	18962.	38970.	1.0153	161.20
2.797	.30	1.470	.060	3.32	20781.	.00	18213.	38252.	1.0150	161.24
2.831	.27	1.440	.059	3.22	20781.	.00	17494.	37562.	1.0147	161.28
2.864	.25	1.410	.057	3.12	20781.	.00	16803.	36898.	1.0145	161.32
2.897	.23	1.381	.055	3.02	20781.	.00	16138.	36261.	1.0142	161.35
2.930	.21	1.353	.053	2.93	20781.	.00	15500.	35648.	1.0139	161.38
2.964	.19	1.325	.052	2.84	20781.	.00	14886.	35059.	1.0137	161.40
2.997	.18	1.298	.050	2.75	20781.	.00	14296.	34493.	1.0135	161.43
3.030	.17	1.271	.049	2.67	20781.	.00	13730.	33950.	1.0133	161.45
3.064	.15	1.245	.047	2.59	20781.	.00	13185.	33427.	1.0131	161.47
3.097	.14	1.220	.046	2.51	20781.	.00	12662.	32925.	1.0128	161.49
3.130	.13	1.195	.044	2.43	20781.	.00	12159.	32443.	1.0127	161.50
3.164	.12	1.170	.043	2.36	20781.	.00	11676.	31980.	1.0125	161.52
3.197	.11	1.146	.042	2.28	20781.	.00	11212.	31535.	1.0123	161.53
3.230	.10	1.122	.040	2.21	20781.	.00	10766.	31107.	1.0121	161.54
3.263	.09	1.099	.039	2.15	20781.	.00	10338.	30696.	1.0120	161.56
3.297	.08	1.077	.038	2.08	20781.	.00	9927.	30302.	1.0118	161.57
3.330	.08	1.055	.037	2.02	20781.	.00	9532.	29922.	1.0116	161.57
3.363	.07	1.033	.036	1.95	20781.	.00	9152.	29558.	1.0115	161.58
3.397	.07	1.012	.035	1.89	20781.	.00	8788.	29209.	1.0114	161.59
3.430	.06	.991	.033	1.84	20781.	.00	8437.	28873.	1.0112	161.60
3.463	.06	.971	.032	1.78	20781.	.00	8101.	28550.	1.0111	161.60
3.497	.05	.951	.031	1.73	20781.	.00	7778.	28240.	1.0110	161.61
3.530	.05	.931	.030	1.67	20781.	.00	7468.	27943.	1.0108	161.61
3.563	.04	.912	.030	1.62	20781.	.00	7170.	27657.	1.0107	161.62
3.596	.04	.893	.029	1.57	20781.	.00	6884.	27382.	1.0106	161.62
3.630	.04	.875	.028	1.52	20781.	.00	6609.	27119.	1.0105	161.63
3.663	.03	.857	.027	1.48	20781.	.00	6345.	26866.	1.0104	161.63
3.696	.03	.839	.026	1.43	20781.	.00	6091.	26623.	1.0103	161.63

TIME (HRS)	WATER FLOW (CFS)	VELOCITY (FT/SEC)	HYD. DEPTH (FT)	WIDTH (FT)	WASHLOAD CONC. (PPM-W)	BED MAT. TRANSPORT CONC. (CFS)	BED CONC. (PPM-W)	TOTAL CONC. (PPM-W)	BULKING FACTOR	ACCU. SEDIMENT (TONS)
3.730	.03	.822	.025	1.39	20781.	.00	5848.	26389.	1.0102	161.64
3.763	.03	.805	.025	1.34	20781.	.00	5614.	26165.	1.0101	161.64
3.796	.02	.789	.024	1.30	20781.	.00	5390.	25950.	1.0101	161.64
3.830	.02	.772	.023	1.26	20781.	.00	5174.	25743.	1.0100	161.64
3.863	.02	.756	.022	1.22	20781.	.00	4967.	25545.	1.0099	161.65
3.896	.02	.741	.022	1.19	20781.	.00	4769.	25354.	1.0098	161.65
3.929	.02	.726	.021	1.15	20781.	.00	4578.	25171.	1.0097	161.65
3.963	.02	.711	.020	1.12	20781.	.00	4395.	24995.	1.0097	161.65
4.029	.01	.682	.019	1.05	20781.	.00	4050.	24665.	1.0095	161.65
4.063	.01	.668	.019	1.02	20781.	.00	3888.	24509.	1.0095	161.65
4.096	.01	.654	.018	.98	20781.	.00	3732.	24360.	1.0094	161.66
4.129	.01	.641	.017	.95	20781.	.00	3583.	24217.	1.0094	161.66
4.163	.01	.627	.017	.93	20781.	.00	3439.	24079.	1.0093	161.66
4.196	.01	.615	.016	.90	20781.	.00	3301.	23947.	1.0093	161.66
4.229	.01	.602	.016	.87	20781.	.00	3169.	23820.	1.0092	161.66
4.262	.01	.590	.015	.84	20781.	.00	3042.	23698.	1.0092	161.66
4.296	.01	.577	.015	.82	20781.	.00	2920.	23581.	1.0091	161.66
4.329	.01	.566	.014	.79	20781.	.00	2803.	23469.	1.0091	161.66
4.362	.01	.554	.014	.77	20781.	.00	2691.	23361.	1.0090	161.66
4.396	.01	.543	.014	.74	20781.	.00	2583.	23258.	1.0090	161.66
4.429	.01	.531	.013	.72	20781.	.00	2479.	23159.	1.0089	161.66
4.462	.00	.520	.013	.70	20781.	.00	2380.	23063.	1.0089	161.66

4.496	.00	.510	.012	.68	20781.	.00	2285.	22972.	1.0089	161.66
4.529	.00	.499	.012	.66	20781.	.00	2193.	22884.	1.0088	161.66
4.562	.00	.489	.012	.64	20781.	.00	2105.	22800.	1.0088	161.66
4.595	.00	.479	.011	.62	20781.	.00	2021.	22719.	1.0088	161.66
4.629	.00	.469	.011	.60	20781.	.00	1940.	22641.	1.0087	161.66
4.662	.00	.449	.010	.56	20781.	.00	1778.	22486.	1.0087	161.66
4.695	.00	.385	.008	.44	20781.	.00	1312.	22039.	1.0085	161.66

AT PEAK FLOW OF 28.788 WITH TIME AT 1.53 HOURS: BEDMAT = 67.65 (TONS) = .0311 (AC-FT bulked)
 TOTAL SED = 75.33 (TONS) = .0346 (AC-FT bulked)

PEAK BULKING FACTOR = 1.088009 = 189118. (PPM-W)

WEIGHT (TONS)	UNBULKED VOLUME (AC-FT)	BULKED VOLUME (AC-FT)	CONCENTRATION BY WEIGHT (PPM)	AVERAGE BULKING FACTOR
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WASHMAT = 20.00 .0056 .0092 20781.
 BEDMAT = 141.66 .0393 .0650 130657.
 TOTAL SEDIMENT = 161.66 .0449 .0742 146405. 1.064723

SEDIMENT TRANSPORT CAPACITY: 1.53043 AC-FT/SQ MI (bulked) = 5.2083 TONS/ACRE (at Porosity=0.395)

PRINT HYD ID=11 CODE=1

PARTIAL HYDROGRAPH 133.52

RUNOFF VOLUME = .26812 INCHES = .6935 ACRE-FEET
 PEAK DISCHARGE RATE = 28.79 CFS AT 1.532 HOURS BASIN AREA = .0485 SQ. MI.

*S UNDEVELOPED, OFF-SITE FLOW ENTERING POND
 ADD HYD ID=11 HYD NO=133.50 ID I=10 ID II=11
 PRINT HYD ID=11 CODE=1

PARTIAL HYDROGRAPH 133.50

RUNOFF VOLUME = .26362 INCHES = 1.7546 ACRE-FEET
 PEAK DISCHARGE RATE = 72.70 CFS AT 1.532 HOURS BASIN AREA = .1248 SQ. MI.

FINISH

NORMAL PROGRAM FINISH END TIME (HR:MIN:SEC) = 07:32:25

SED WASH LOAD

ID=10 K=0.17 C=0.25

P=1.0 LS=0.758

IMPERVIOUS=0.0 FACTOR=3.0

SEDIMENT YIELD (Wash Mat.) = 10.5 (TONS)

WASH LOAD CONCENTRATION =

40990 (ppm-w)

PERCENTAGE IMPERVIOUS AREA = .000

WASH LOAD FACTOR = 3.00000

SEDIMENT TRANS

ID=10 IDS=5 CODE=1

A=0.0002 B=4.19 C=0.19 D=-2.55

NUMB WASH=-1 NUMB SECTIONS=9

FLOW	VELOCITY	WIDTH
(CFS)	(FPS)	(FT)
1.00	2.06	4.06
2.00	2.46	5.26
3.00	2.73	6.11
4.00	2.93	6.82
6.00	3.25	7.92
8.00	3.48	8.85
10.00	3.67	9.62
12.00	3.84	10.30
14.00	3.99	10.92

Use wash load from SED WASH LOAD command - Concentration = 40990 (PPM-W)

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TIME (HRS)	WATER FLOW (CFS)	HYD. VELOCITY (FT/SEC)	DEPTH (FT)	WIDTH (FT)	WASHLOAD CONC. (PPM-W)	BED MAT. TRANSPORT (CFS)	BED CONC. (PPM-W)	TOTAL CONC. (PPM-W)	BULKING FACTOR	ACCUM. SEDIMENT (TONS)
.000	.00	.000	.000	.00	40990.	.00	0.	40990.	1.0000	.00
.033	.00	.000	.000	.00	40990.	.00	0.	40990.	1.0000	.00
.067	.00	.000	.000	.00	40990.	.00	0.	40990.	1.0000	.00
.100	.00	.000	.000	.00	40990.	.00	0.	40990.	1.0000	.00
.133	.00	.000	.000	.00	40990.	.00	0.	40990.	1.0000	.00
.167	.00	.000	.000	.00	40990.	.00	0.	40990.	1.0000	.00
.200	.00	.000	.000	.00	40990.	.00	0.	40990.	1.0000	.00
.233	.00	.000	.000	.00	40990.	.00	0.	40990.	1.0000	.00
.266	.00	.000	.000	.00	40990.	.00	0.	40990.	1.0000	.00
.300	.00	.000	.000	.00	40990.	.00	0.	40990.	1.0000	.00
.333	.00	.000	.000	.00	40990.	.00	0.	40990.	1.0000	.00
.366	.00	.000	.000	.00	40990.	.00	0.	40990.	1.0000	.00
.400	.00	.000	.000	.00	40990.	.00	0.	40990.	1.0000	.00
.433	.00	.000	.000	.00	40990.	.00	0.	40990.	1.0000	.00
.466	.00	.000	.000	.00	40990.	.00	0.	40990.	1.0000	.00
.500	.00	.000	.000	.00	40990.	.00	0.	40990.	1.0000	.00
.533	.00	.000	.000	.00	40990.	.00	0.	40990.	1.0000	.00
.566	.00	.000	.000	.00	40990.	.00	0.	40990.	1.0000	.00
.599	.00	.000	.000	.00	40990.	.00	0.	40990.	1.0000	.00
.633	.00	.000	.000	.00	40990.	.00	0.	40990.	1.0000	.00
.666	.00	.000	.000	.00	40990.	.00	0.	40990.	1.0000	.00
.699	.00	.000	.000	.00	40990.	.00	0.	40990.	1.0000	.00
.733	.00	.000	.000	.00	40990.	.00	0.	40990.	1.0000	.00
.766	.00	.000	.000	.00	40990.	.00	0.	40990.	1.0000	.00
.799	.00	.000	.000	.00	40990.	.00	0.	40990.	1.0000	.00
.833	.00	.000	.000	.00	40990.	.00	0.	40990.	1.0000	.00
.866	.00	.000	.000	.00	40990.	.00	0.	40990.	1.0000	.00
.899	.00	.000	.000	.00	40990.	.00	0.	40990.	1.0000	.00
.932	.00	.000	.000	.00	40990.	.00	0.	40990.	1.0000	.00

.966	.00	.000	.000	.00	40990.	.00	0.	40990.	1.0000	.00
.999	.00	.000	.000	.00	40990.	.00	0.	40990.	1.0000	.00
1.032	.00	.000	.000	.00	40990.	.00	0.	40990.	1.0000	.00
1.066	.00	.000	.000	.00	40990.	.00	0.	40990.	1.0000	.00
1.099	.00	.000	.000	.00	40990.	.00	0.	40990.	1.0000	.00
1.132	.00	.000	.000	.00	40990.	.00	0.	40990.	1.0000	.00
1.166	.00	.000	.000	.00	40990.	.00	0.	40990.	1.0000	.00
1.199	.00	.000	.000	.00	40990.	.00	0.	40990.	1.0000	.00
1.232	.00	.000	.000	.00	40990.	.00	0.	40990.	1.0000	.00
1.265	.00	.000	.000	.00	40990.	.00	0.	40990.	1.0000	.00
1.299	.00	.000	.000	.00	40990.	.00	0.	40990.	1.0000	.00
1.332	.00	.000	.000	.00	40990.	.00	0.	40990.	1.0000	.00
1.365	.30	1.520	.076	2.57	40990.	.00	17794.	57367.	1.0230	.07
1.399	1.47	2.285	.139	4.62	40990.	.02	39126.	77032.	1.0315	.52
1.432	3.58	2.853	.192	6.52	40990.	.09	59743.	96071.	1.0401	1.95
1.465	5.67	3.206	.229	7.74	40990.	.17	74233.	109471.	1.0464	4.55
1.499	6.86	3.358	.245	8.32	40990.	.23	80600.	115363.	1.0492	7.90
1.532	7.05	3.380	.248	8.41	40990.	.24	81547.	116240.	1.0496	11.37
1.565	6.52	3.318	.241	8.16	40990.	.21	78929.	113817.	1.0485	14.50
1.598	5.62	3.199	.228	7.71	40990.	.17	73917.	109178.	1.0462	17.07
1.632	4.62	3.046	.212	7.16	40990.	.13	67472.	103216.	1.0434	19.06
1.665	3.72	2.881	.195	6.62	40990.	.09	60842.	97086.	1.0406	20.56
1.698	2.97	2.723	.179	6.08	40990.	.06	54814.	91516.	1.0380	21.68
1.732	2.35	2.570	.165	5.56	40990.	.05	49079.	86219.	1.0356	22.51
1.765	1.86	2.421	.151	5.09	40990.	.03	43749.	81298.	1.0334	23.13
1.798	1.47	2.287	.139	4.63	40990.	.02	39217.	77116.	1.0315	23.59
1.832	1.16	2.150	.127	4.26	40990.	.02	34765.	73009.	1.0297	23.93

TIME (HRS)	WATER FLOW (CFS)	VELOCITY (FT/SEC)	HYD. DEPTH (FT)	WIDTH (FT)	WASHLOAD CONC. (PPM-W)	BED MAT. TRANSPORT (CFS)	BED CONC. (PPM-W)	TOTAL CONC. (PPM-W)	BULKING FACTOR	ACCU. SEDIMENT (TONS)
1.865	.93	2.030	.117	3.94	40990.	.01	31084.	69615.	1.0282	24.19
1.898	.79	1.950	.110	3.66	40990.	.01	28778.	67488.	1.0273	24.41
1.931	.70	1.894	.105	3.50	40990.	.01	27223.	66055.	1.0267	24.59
1.965	.63	1.848	.102	3.38	40990.	.01	25956.	64888.	1.0262	24.75
1.998	.58	1.806	.098	3.28	40990.	.01	24833.	63852.	1.0257	24.90
2.031	.54	1.766	.095	3.19	40990.	.00	23799.	62900.	1.0253	25.04
2.065	.50	1.729	.092	3.12	40990.	.00	22829.	62005.	1.0249	25.16
2.098	.46	1.695	.089	3.03	40990.	.00	21982.	61225.	1.0246	25.27
2.131	.42	1.662	.087	2.94	40990.	.00	21166.	60473.	1.0243	25.37
2.164	.39	1.630	.084	2.85	40990.	.00	20380.	59749.	1.0240	25.47
2.198	.36	1.598	.082	2.77	40990.	.00	19622.	59051.	1.0237	25.55
2.231	.33	1.567	.079	2.69	40990.	.00	18892.	58378.	1.0234	25.63
2.264	.31	1.537	.077	2.61	40990.	.00	18189.	57730.	1.0231	25.70
2.298	.29	1.507	.075	2.54	40990.	.00	17511.	57106.	1.0229	25.76
2.331	.26	1.478	.073	2.46	40990.	.00	16858.	56505.	1.0226	25.82
2.364	.24	1.449	.071	2.39	40990.	.00	16229.	55926.	1.0224	25.88
2.398	.23	1.421	.069	2.32	40990.	.00	15623.	55368.	1.0221	25.93
2.431	.21	1.394	.067	2.26	40990.	.00	15040.	54830.	1.0219	25.97
2.464	.19	1.367	.065	2.19	40990.	.00	14477.	54313.	1.0217	26.01
2.498	.18	1.340	.063	2.13	40990.	.00	13936.	53814.	1.0215	26.05
2.531	.17	1.314	.061	2.07	40990.	.00	13415.	53334.	1.0213	26.09
2.564	.15	1.289	.059	2.01	40990.	.00	12913.	52872.	1.0211	26.12
2.597	.14	1.264	.057	1.95	40990.	.00	12429.	52427.	1.0209	26.15
2.631	.13	1.239	.056	1.89	40990.	.00	11963.	51998.	1.0207	26.18
2.664	.12	1.215	.054	1.84	40990.	.00	11515.	51585.	1.0205	26.20
2.697	.11	1.192	.053	1.78	40990.	.00	11083.	51188.	1.0204	26.22
2.731	.10	1.169	.051	1.73	40990.	.00	10667.	50805.	1.0202	26.24
2.764	.10	1.146	.050	1.68	40990.	.00	10267.	50436.	1.0200	26.26

2.797	.09	1.124	.048	1.63	40990.	.00	9881.	50081.	1.0199	26.28
2.831	.08	1.102	.047	1.59	40990.	.00	9510.	49740.	1.0198	26.30
2.864	.08	1.081	.045	1.54	40990.	.00	9153.	49411.	1.0196	26.31
2.897	.07	1.060	.044	1.50	40990.	.00	8809.	49094.	1.0195	26.32
2.930	.06	1.039	.043	1.45	40990.	.00	8477.	48789.	1.0194	26.34
2.964	.06	1.019	.042	1.41	40990.	.00	8159.	48496.	1.0192	26.35
3.030	.05	.980	.039	1.33	40990.	.00	7556.	47941.	1.0190	26.37
3.064	.05	.961	.038	1.29	40990.	.00	7272.	47680.	1.0189	26.38
3.097	.04	.942	.037	1.25	40990.	.00	6998.	47428.	1.0188	26.38
3.130	.04	.924	.036	1.22	40990.	.00	6734.	47185.	1.0187	26.39
3.164	.04	.906	.035	1.18	40990.	.00	6480.	46952.	1.0186	26.40
3.197	.03	.888	.034	1.15	40990.	.00	6236.	46727.	1.0185	26.41
3.230	.03	.871	.033	1.12	40990.	.00	6001.	46511.	1.0184	26.41
3.263	.03	.854	.032	1.08	40990.	.00	5775.	46302.	1.0183	26.42
3.297	.03	.838	.031	1.05	40990.	.00	5557.	46102.	1.0182	26.42
3.330	.03	.822	.030	1.02	40990.	.00	5347.	45909.	1.0182	26.43
3.363	.02	.806	.029	.99	40990.	.00	5146.	45723.	1.0181	26.43
3.397	.02	.790	.028	.96	40990.	.00	4951.	45545.	1.0180	26.43
3.430	.02	.775	.028	.94	40990.	.00	4765.	45373.	1.0179	26.44
3.463	.02	.760	.027	.91	40990.	.00	4585.	45207.	1.0179	26.44
3.497	.02	.745	.026	.88	40990.	.00	4412.	45048.	1.0178	26.44
3.530	.02	.730	.025	.86	40990.	.00	4245.	44895.	1.0177	26.45
3.563	.01	.716	.025	.83	40990.	.00	4085.	44747.	1.0177	26.45
3.596	.01	.702	.024	.81	40990.	.00	3930.	44605.	1.0176	26.45
3.630	.01	.689	.023	.78	40990.	.00	3782.	44469.	1.0176	26.45
3.663	.01	.675	.022	.76	40990.	.00	3639.	44337.	1.0175	26.46
3.696	.01	.662	.022	.74	40990.	.00	3501.	44211.	1.0175	26.46

TIME (HRS)	WATER FLOW (CFS)	VELOCITY (FT/SEC)	HYD. DEPTH (FT)	WIDTH (FT)	WASHLOAD CONC. (PPM-W)	BED MAT. TRANSPORT (CFS)	BED CONC. (PPM-W)	TOTAL CONC. (PPM-W)	BULKING FACTOR	ACCUM. SEDIMENT (TONS)
3.730	.01	.650	.021	.72	40990.	.00	3369.	44089.	1.0174	26.46
3.763	.01	.637	.021	.70	40990.	.00	3242.	43972.	1.0174	26.46
3.796	.01	.625	.020	.68	40990.	.00	3119.	43859.	1.0173	26.46
3.830	.01	.612	.019	.66	40990.	.00	3001.	43751.	1.0173	26.46
3.863	.01	.601	.019	.64	40990.	.00	2888.	43646.	1.0172	26.47
3.896	.01	.589	.018	.62	40990.	.00	2779.	43546.	1.0172	26.47
3.929	.01	.578	.018	.60	40990.	.00	2673.	43449.	1.0171	26.47
3.963	.01	.566	.017	.58	40990.	.00	2572.	43356.	1.0171	26.47
3.996	.01	.555	.017	.57	40990.	.00	2475.	43267.	1.0171	26.47
4.029	.00	.545	.016	.55	40990.	.00	2381.	43180.	1.0170	26.47
4.063	.00	.534	.016	.54	40990.	.00	2291.	43098.	1.0170	26.47
4.096	.00	.524	.015	.52	40990.	.00	2205.	43018.	1.0170	26.47
4.129	.00	.514	.015	.50	40990.	.00	2121.	42941.	1.0169	26.47
4.163	.00	.484	.014	.46	40990.	.00	1888.	42727.	1.0168	26.47
4.196	.00	.418	.011	.37	40990.	.00	1416.	42292.	1.0167	26.47

AT PEAK FLOW OF 7.051 WITH TIME AT 1.53 HOURS: BEDMAT = 7.38 (TONS) = .0034 (AC-FT bulked)
 PEAK BULKING FACTOR = 1.049634 = 116240. (PPM-W) TOTAL SED = 11.37 (TONS) = .0052 (AC-FT bulked)

UNBULKED	BULKED	CONCENTRATION	AVERAGE
WEIGHT	VOLUME	BY WEIGHT	BULKING
(TONS)	(AC-FT)	(AC-FT)	FACTOR

WASHMAT = 10.54 .0029 .0048 40989.

BEDMAT = 15.93 .0044 .0073 60701.
TOTAL SEDIMENT = 26.47 .0074 .0122 96955. 1.040515

SEDIMENT TRANSPORT CAPACITY: 1.30696 AC-FT/SQ MI (bulked) = 4.4478 TONS/ACRE (at Porosity=0.395)

PRINT HYD ID=10 CODE=1

PARTIAL HYDROGRAPH 132.11

RUNOFF VOLUME = .36578 INCHES = .1814 ACRE-FEET
PEAK DISCHARGE RATE = 7.05 CFS AT 1.532 HOURS BASIN AREA = .0093 SQ. MI.

PRINT HYD ID=10 CODE=1

PARTIAL HYDROGRAPH 132.11

RUNOFF VOLUME = .36578 INCHES = .1814 ACRE-FEET
PEAK DISCHARGE RATE = 7.05 CFS AT 1.532 HOURS BASIN AREA = .0093 SQ. MI.

COMPUTE NM HYD

ID=11 HYD NO=133.51 DA=0.0670 SQ MI
PER A=5.00 PER B=65.00 PER C=30.00 PER D=0.00
TP=-0.1333 HR MASS RAIN=-1

K = .129646HR TP = .133300HR K/TP RATIO = .972591 SHAPE CONSTANT, N = 3.631572
UNIT PEAK = 165.77 CFS UNIT VOLUME = 1.000 B = 329.81 P60 = 1.5000
AREA = .067000 SQ MI IA = .46250 INCHES INF = 1.14500 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=11 CODE=1

PARTIAL HYDROGRAPH 133.51

RUNOFF VOLUME = .44269 INCHES = 1.5819 ACRE-FEET
PEAK DISCHARGE RATE = 62.24 CFS AT 1.532 HOURS BASIN AREA = .0670 SQ. MI.

SED WASH LOAD ID=11 K=0.16 C=0.25
P=1.0 IS=0.470

IMPERVIOUS=0.0 FACTOR=3.0
SEDIMENT YIELD (Wash Mat.) = 70.0 (TONS) WASH LOAD CONCENTRATION = 31541 (ppm-w)
PERCENTAGE IMPERVIOUS AREA = .000 WASH LOAD FACTOR = 3.00000

PRINT HYD ID=11 CODE=1

PARTIAL HYDROGRAPH 133.51

RUNOFF VOLUME = .44269 INCHES = 1.5819 ACRE-FEET
PEAK DISCHARGE RATE = 62.24 CFS AT 1.532 HOURS BASIN AREA = .0670 SQ. MI.

SEDIMENT TRANS

ID=11 IDS=6 CODE=1

A=0.0002 B=4.19 C=0.19 D=-2.55

NUMB WASH=-1 NUMB SECTIONS=9

FLOW	VELOCITY	WIDTH
(CFS)	(FPS)	(FT)
5.00	2.91	8.75
10.00	3.61	10.08
25.00	4.77	12.68
40.00	5.42	14.57
55.00	5.96	16.02
70.00	6.36	17.31
85.00	6.65	18.49
100.00	6.96	19.50
115.00	6.74	24.19

Use wash load from SED WASH LOAD command - Concentration = 31541 (PPM-W)

* * * * *

TIME (HRS)	WATER FLOW (CFS)	HYD. VELOCITY (FT/SEC)	DEPTH (FT)	WIDTH (FT)	WASHLOAD CONC. (PPM-W)	BED MAT. TRANSPORT (CFS)	BED CONC. (PPM-W)	TOTAL CONC. (PPM-W)	BULKING FACTOR	ACCUM. SEDIMENT (TONS)
.000	.00	.000	.000	.00	31541.	.00	0.	31541.	1.0000	.00
.033	.00	.000	.000	.00	31541.	.00	0.	31541.	1.0000	.00
.067	.00	.000	.000	.00	31541.	.00	0.	31541.	1.0000	.00
.100	.00	.000	.000	.00	31541.	.00	0.	31541.	1.0000	.00
.133	.00	.000	.000	.00	31541.	.00	0.	31541.	1.0000	.00
.167	.00	.000	.000	.00	31541.	.00	0.	31541.	1.0000	.00
.200	.00	.000	.000	.00	31541.	.00	0.	31541.	1.0000	.00
.233	.00	.000	.000	.00	31541.	.00	0.	31541.	1.0000	.00
.266	.00	.000	.000	.00	31541.	.00	0.	31541.	1.0000	.00
.300	.00	.000	.000	.00	31541.	.00	0.	31541.	1.0000	.00
.333	.00	.000	.000	.00	31541.	.00	0.	31541.	1.0000	.00
.366	.00	.000	.000	.00	31541.	.00	0.	31541.	1.0000	.00
.400	.00	.000	.000	.00	31541.	.00	0.	31541.	1.0000	.00
.433	.00	.000	.000	.00	31541.	.00	0.	31541.	1.0000	.00
.466	.00	.000	.000	.00	31541.	.00	0.	31541.	1.0000	.00
.500	.00	.000	.000	.00	31541.	.00	0.	31541.	1.0000	.00
.533	.00	.000	.000	.00	31541.	.00	0.	31541.	1.0000	.00
.566	.00	.000	.000	.00	31541.	.00	0.	31541.	1.0000	.00
.599	.00	.000	.000	.00	31541.	.00	0.	31541.	1.0000	.00
.633	.00	.000	.000	.00	31541.	.00	0.	31541.	1.0000	.00
.666	.00	.000	.000	.00	31541.	.00	0.	31541.	1.0000	.00
.699	.00	.000	.000	.00	31541.	.00	0.	31541.	1.0000	.00
.733	.00	.000	.000	.00	31541.	.00	0.	31541.	1.0000	.00
.766	.00	.000	.000	.00	31541.	.00	0.	31541.	1.0000	.00
.799	.00	.000	.000	.00	31541.	.00	0.	31541.	1.0000	.00
.833	.00	.000	.000	.00	31541.	.00	0.	31541.	1.0000	.00
.866	.00	.000	.000	.00	31541.	.00	0.	31541.	1.0000	.00
.899	.00	.000	.000	.00	31541.	.00	0.	31541.	1.0000	.00
.932	.00	.000	.000	.00	31541.	.00	0.	31541.	1.0000	.00
.966	.00	.000	.000	.00	31541.	.00	0.	31541.	1.0000	.00
.999	.00	.000	.000	.00	31541.	.00	0.	31541.	1.0000	.00
1.032	.00	.000	.000	.00	31541.	.00	0.	31541.	1.0000	.00
1.066	.00	.000	.000	.00	31541.	.00	0.	31541.	1.0000	.00
1.099	.00	.000	.000	.00	31541.	.00	0.	31541.	1.0000	.00
1.132	.00	.000	.000	.00	31541.	.00	0.	31541.	1.0000	.00
1.166	.00	.000	.000	.00	31541.	.00	0.	31541.	1.0000	.00
1.199	.00	.000	.000	.00	31541.	.00	0.	31541.	1.0000	.00
1.232	.00	.000	.000	.00	31541.	.00	0.	31541.	1.0000	.00

1.265	.00	.000	.000	.00	31541.	.00	0.	31541.	1.0000	.00
1.299	.00	.000	.000	.00	31541.	.00	0.	31541.	1.0000	.00
1.332	.00	.000	.000	.00	31541.	.00	0.	31541.	1.0000	.00
1.365	3.16	2.631	.169	7.12	31541.	.06	50496.	78977.	1.0324	1.01
1.399	14.35	4.059	.326	10.83	31541.	.67	110629.	135664.	1.0592	9.44
1.432	32.75	5.144	.466	13.66	31541.	2.45	165469.	187550.	1.0871	37.71
1.465	50.92	5.830	.559	15.63	31541.	4.90	203273.	223424.	1.1086	92.50
1.499	61.05	6.134	.602	16.54	31541.	6.51	220371.	239676.	1.1190	164.48
1.532	62.24	6.166	.607	16.64	31541.	6.71	222126.	241346.	1.1200	238.54
1.565	57.11	6.023	.585	16.20	31541.	5.88	214288.	233892.	1.1152	303.75
1.598	49.05	5.766	.551	15.45	31541.	4.62	199605.	219939.	1.1064	355.48
1.632	40.53	5.442	.509	14.62	31541.	3.38	180948.	202229.	1.0957	393.91
1.665	32.78	5.145	.466	13.66	31541.	2.45	165540.	187618.	1.0872	422.23
1.698	26.06	4.828	.421	12.81	31541.	1.73	149487.	172411.	1.0786	442.53
1.732	20.45	4.513	.381	11.89	31541.	1.19	133308.	157100.	1.0703	456.79
1.765	15.92	4.192	.342	11.11	31541.	.80	117109.	141787.	1.0623	466.63
1.798	12.33	3.869	.304	10.48	31541.	.53	101484.	127029.	1.0549	473.34
1.832	9.72	3.580	.271	10.01	31541.	.35	88218.	114513.	1.0488	478.04
TIME	WATER	HYD.	WASHLOAD	BED MAT.	BED	TOTAL	BULKING	ACCUM.		
(HRS)	FLOW	VELOCITY	DEPTH	WIDTH	CONC.	TRANSPORT	CONC.	CONC.	FACTOR	SEDIMENT
	(CFS)	(FT/SEC)	(FT)	(FT)	(PPM-W)	(CFS)	(PPM-W)	(PPM-W)		(TONS)
1.865	7.97	3.375	.248	9.54	31541.	.26	79483.	106276.	1.0449	481.59
1.898	6.88	3.225	.231	9.25	31541.	.21	73285.	100435.	1.0421	484.46
1.931	6.09	3.103	.217	9.04	31541.	.17	68413.	95845.	1.0400	486.87
1.965	5.47	2.997	.206	8.88	31541.	.14	64269.	91942.	1.0382	488.95
1.998	4.96	2.905	.196	8.71	31541.	.12	60760.	88638.	1.0367	490.75
2.031	4.53	2.852	.191	8.33	31541.	.11	58709.	86707.	1.0358	492.36
2.065	4.15	2.800	.185	7.99	31541.	.09	56723.	84837.	1.0350	493.79
2.098	3.81	2.747	.180	7.69	31541.	.08	54759.	82989.	1.0342	495.08
2.131	3.49	2.694	.175	7.41	31541.	.07	52794.	81140.	1.0333	496.24
2.164	3.21	2.640	.170	7.16	31541.	.06	50828.	79290.	1.0325	497.27
2.198	2.94	2.585	.164	6.92	31541.	.06	48867.	77445.	1.0317	498.19
2.231	2.70	2.530	.159	6.71	31541.	.05	46917.	75610.	1.0309	499.02
2.264	2.48	2.474	.154	6.51	31541.	.04	44984.	73792.	1.0301	499.76
2.298	2.28	2.418	.149	6.33	31541.	.04	43073.	71995.	1.0293	500.42
2.331	2.09	2.362	.144	6.17	31541.	.03	41190.	70224.	1.0285	501.01
2.364	1.92	2.305	.138	6.01	31541.	.03	39341.	68485.	1.0277	501.54
2.398	1.76	2.248	.133	5.87	31541.	.03	37528.	66781.	1.0270	502.01
2.431	1.62	2.192	.128	5.75	31541.	.02	35757.	65116.	1.0263	502.43
2.464	1.48	2.136	.123	5.63	31541.	.02	34031.	63493.	1.0256	502.81
2.498	1.36	2.080	.119	5.52	31541.	.02	32352.	61916.	1.0249	503.14
2.531	1.25	2.025	.114	5.42	31541.	.01	30725.	60386.	1.0243	503.45
2.564	1.15	1.970	.109	5.33	31541.	.01	29150.	58906.	1.0236	503.71
2.597	1.05	1.916	.105	5.25	31541.	.01	27629.	57477.	1.0230	503.95
2.631	.97	1.867	.101	5.13	31541.	.01	26303.	56231.	1.0225	504.17
2.664	.89	1.828	.098	4.97	31541.	.01	25242.	55234.	1.0221	504.36
2.697	.82	1.789	.095	4.81	31541.	.01	24222.	54277.	1.0217	504.54
2.731	.75	1.751	.092	4.66	31541.	.01	23243.	53357.	1.0213	504.70
2.764	.69	1.714	.089	4.51	31541.	.01	22302.	52473.	1.0209	504.84
2.797	.63	1.678	.086	4.37	31541.	.01	21399.	51625.	1.0205	504.97
2.831	.58	1.642	.083	4.23	31541.	.00	20531.	50810.	1.0202	505.08
2.864	.53	1.607	.081	4.10	31541.	.00	19698.	50028.	1.0199	505.19
2.897	.49	1.573	.078	3.97	31541.	.00	18898.	49276.	1.0196	505.28
2.930	.45	1.540	.076	3.85	31541.	.00	18130.	48555.	1.0193	505.37
2.964	.41	1.507	.073	3.72	31541.	.00	17393.	47863.	1.0190	505.45
2.997	.38	1.475	.071	3.61	31541.	.00	16685.	47198.	1.0187	505.52
3.030	.35	1.444	.069	3.49	31541.	.00	16005.	46560.	1.0184	505.58
3.064	.32	1.414	.066	3.38	31541.	.00	15353.	45948.	1.0182	505.64

3.097	.29	1.384	.064	3.27	31541.	.00	14727.	45360.	1.0179	505.69
3.130	.27	1.354	.062	3.17	31541.	.00	14126.	44796.	1.0177	505.73
3.164	.25	1.326	.060	3.07	31541.	.00	13549.	44254.	1.0175	505.78
3.197	.23	1.298	.058	2.97	31541.	.00	12995.	43735.	1.0173	505.82
3.230	.21	1.270	.057	2.88	31541.	.00	12464.	43236.	1.0171	505.85
3.263	.19	1.243	.055	2.79	31541.	.00	11954.	42758.	1.0169	505.88
3.297	.17	1.217	.053	2.70	31541.	.00	11465.	42298.	1.0167	505.91
3.330	.16	1.191	.051	2.62	31541.	.00	10996.	41858.	1.0165	505.94
3.363	.15	1.166	.050	2.53	31541.	.00	10546.	41435.	1.0163	505.96
3.397	.14	1.141	.048	2.45	31541.	.00	10114.	41030.	1.0161	505.98
3.430	.12	1.117	.047	2.38	31541.	.00	9699.	40641.	1.0160	506.00
3.463	.11	1.093	.045	2.30	31541.	.00	9301.	40267.	1.0158	506.02
3.497	.10	1.070	.044	2.23	31541.	.00	8920.	39909.	1.0157	506.04
3.530	.10	1.048	.042	2.16	31541.	.00	8554.	39566.	1.0155	506.05
3.563	.09	1.025	.041	2.09	31541.	.00	8202.	39236.	1.0154	506.06
3.596	.08	1.004	.040	2.02	31541.	.00	7866.	38920.	1.0153	506.08
3.630	.07	.982	.039	1.96	31541.	.00	7542.	38617.	1.0152	506.09
3.663	.07	.962	.037	1.90	31541.	.00	7233.	38326.	1.0150	506.10
3.696	.06	.941	.036	1.84	31541.	.00	6935.	38047.	1.0149	506.11

TIME (HRS)	WATER FLOW (CFS)	VELOCITY (FT/SEC)	HYD. DEPTH (FT)	WIDTH (FT)	WASHLOAD CONC. (PPM-W)	BED MAT. TRANSPORT (CFS)	BED CONC. (PPM-W)	TOTAL CONC. (PPM-W)	BULKING FACTOR	ACCU. SEDIMENT (TONS)
3.730	.06	.921	.035	1.78	31541.	.00	6650.	37780.	1.0148	506.12
3.763	.05	.902	.034	1.72	31541.	.00	6377.	37523.	1.0147	506.12
3.796	.05	.883	.033	1.67	31541.	.00	6114.	37277.	1.0146	506.13
3.830	.04	.864	.032	1.62	31541.	.00	5863.	37041.	1.0145	506.14
3.863	.04	.846	.031	1.56	31541.	.00	5621.	36814.	1.0144	506.14
3.896	.04	.828	.030	1.52	31541.	.00	5390.	36597.	1.0143	506.15
3.929	.03	.810	.029	1.47	31541.	.00	5168.	36389.	1.0143	506.15
3.963	.03	.793	.028	1.42	31541.	.00	4955.	36189.	1.0142	506.16
3.996	.03	.776	.027	1.38	31541.	.00	4751.	35998.	1.0141	506.16
4.029	.03	.760	.026	1.33	31541.	.00	4555.	35814.	1.0140	506.16
4.063	.02	.744	.025	1.29	31541.	.00	4367.	35638.	1.0139	506.17
4.096	.02	.728	.025	1.25	31541.	.00	4187.	35469.	1.0139	506.17
4.129	.02	.713	.024	1.21	31541.	.00	4015.	35307.	1.0138	506.17
4.163	.02	.698	.023	1.17	31541.	.00	3849.	35152.	1.0137	506.18
4.196	.02	.683	.022	1.14	31541.	.00	3691.	35003.	1.0137	506.18
4.229	.02	.668	.022	1.10	31541.	.00	3538.	34860.	1.0136	506.18
4.262	.01	.654	.021	1.06	31541.	.00	3392.	34723.	1.0136	506.18
4.296	.01	.640	.020	1.03	31541.	.00	3252.	34592.	1.0135	506.19
4.329	.01	.627	.020	1.00	31541.	.00	3118.	34466.	1.0135	506.19
4.362	.01	.613	.019	.97	31541.	.00	2990.	34345.	1.0134	506.19
4.396	.01	.600	.018	.94	31541.	.00	2866.	34229.	1.0134	506.19
4.429	.01	.588	.018	.91	31541.	.00	2748.	34118.	1.0133	506.19
4.462	.01	.575	.017	.88	31541.	.00	2634.	34012.	1.0133	506.19
4.496	.01	.563	.017	.85	31541.	.00	2526.	33910.	1.0132	506.19
4.529	.01	.551	.016	.82	31541.	.00	2421.	33812.	1.0132	506.19
4.562	.01	.540	.016	.80	31541.	.00	2321.	33718.	1.0132	506.19
4.595	.01	.528	.015	.77	31541.	.00	2225.	33628.	1.0131	506.20
4.629	.01	.517	.015	.75	31541.	.00	2134.	33542.	1.0131	506.20
4.662	.01	.506	.014	.72	31541.	.00	2045.	33460.	1.0131	506.20
4.695	.00	.495	.014	.70	31541.	.00	1961.	33380.	1.0130	506.20
4.729	.00	.459	.012	.63	31541.	.00	1686.	33122.	1.0129	506.20
4.762	.00	.402	.010	.51	31541.	.00	1299.	32759.	1.0128	506.20

AT PEAK FLOW OF 62.239 WITH TIME AT 1.53 HOURS: BEDMAT = 211.20 (TONS) = .0970 (AC-FT bulked)

TOTAL SED = 238.54 (TONS) = .1095 (AC-FT bulked)

PEAK BULKING FACTOR = 1.120047 = 241346. (PPM-W)

	UNBULKED WEIGHT (TONS)	BULKED VOLUME (AC-FT)	CONCENTRATION BY WEIGHT (PPM)	AVERAGE BULKING FACTOR
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WASHMAT =	70.02	.0194	.0321	31541.
BEDMAT =	436.18	.1211	.2003	168664.
TOTAL SEDIMENT =	506.20	.1406	.2324	190579.
				1.088849.

SEDIMENT TRANSPORT CAPACITY: 3.46887 AC-FT/SQ MI (bulkcd) = 11.8050 TONS/ACRE (at Porosity=0.395)

PRINT HYD ID=11 CODE=1

PARTIAL HYDROGRAPH 133.51

RUNOFF VOLUME = .44269 INCHES = 1.5819 ACRE-FEET
PEAK DISCHARGE RATE = 62.24 CFS AT 1.532 HOURS BASIN AREA = .0670 SQ. MI.

ADD HYD ID=10 HYD NO=133.50 ID I=10 ID II=11

PRINT HYD ID=10 CODE=1

PARTIAL HYDROGRAPH 133.50

RUNOFF VOLUME = .43332 INCHES = 1.7633 ACRE-FEET
PEAK DISCHARGE RATE = 69.29 CFS AT 1.532 HOURS BASIN AREA = .0763 SQ. MI.

COMPUTE NM HYD

ID=11 HYD NO=133.52 DA=0.0485 SQ MI
PER A=5.00 PER B=65.00 PER C=30.00 PER D=0.00
TP=-0.1333 HR MASS RAIN=-1

K = .129683HR TP = .133300HR K/TP RATIO = .972867 SHAPE CONSTANT, N = 3.630516
UNIT PEAK = 119.97 CFS UNIT VOLUME = 1.000 B = 329.73 P60 = 1.5000
AREA = .048500 SQ MI IA = .46250 INCHES INF = 1.14500 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=11 CODE=1

PARTIAL HYDROGRAPH 133.52

RUNOFF VOLUME = .44269 INCHES = 1.1451 ACRE-FEET
PEAK DISCHARGE RATE = 45.05 CFS AT 1.532 HOURS BASIN AREA = .0485 SQ. MI.

SED WASH LOAD ID=11 K=0.14 C=0.25

P=1.0 LS=0.375

IMPERVIOUS=0.0 FACTOR=3.0

SEDIMENT YIELD (Wash Mat.) = 34.0 (TONS) WASH LOAD CONCENTRATION = 21402 (PPM-W)
PERCENTAGE IMPERVIOUS AREA = .000 WASH LOAD FACTOR = 3.00000

PRINT HYD ID=11 CODE=1

PARTIAL HYDROGRAPH 133.52

RUNOFF VOLUME = .44269 INCHES = 1.1451 ACRE-FEET
 PEAK DISCHARGE RATE = 45.05 CFS AT 1.532 HOURS BASIN AREA = .0485 SQ. MI.

SEDIMENT TRANS

ID=11 IDS=7 CODE=1
 A=0.0002 B=4.19 C=0.19 D=-2.55
 NUMB WASH=-1 NUMB SECTIONS=9

FLOW	VELOCITY	WIDTH
(CFS)	(FPS)	(FT)
5.00	3.05	9.07
10.00	3.73	10.90
25.00	4.84	14.34
40.00	5.50	16.71
55.00	5.99	18.61
65.00	6.26	19.71
70.00	6.38	20.22
75.00	6.50	20.71
85.00	6.70	21.65

Use wash load from SED WASH LOAD command - Concentration = 21402 (PPM-W)

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TIME (HRS)	WATER FLOW (CFS)	HYD. VELOCITY (FT/SEC)	DEPTH (FT)	WIDTH (FT)	WASHLOAD CONC. (PPM-W)	BED MAT. TRANSPORT (CFS)	BED CONC. (PPM-W)	TOTAL CONC. (PPM-W)	BULKING FACTOR	ACCUM. SEDIMENT (TONS)
.000	.00	.000	.000	.00	21402.	.00	0.	21402.	1.0000	.00
.033	.00	.000	.000	.00	21402.	.00	0.	21402.	1.0000	.00
.067	.00	.000	.000	.00	21402.	.00	0.	21402.	1.0000	.00
.100	.00	.000	.000	.00	21402.	.00	0.	21402.	1.0000	.00
.133	.00	.000	.000	.00	21402.	.00	0.	21402.	1.0000	.00
.167	.00	.000	.000	.00	21402.	.00	0.	21402.	1.0000	.00
.200	.00	.000	.000	.00	21402.	.00	0.	21402.	1.0000	.00
.233	.00	.000	.000	.00	21402.	.00	0.	21402.	1.0000	.00
.266	.00	.000	.000	.00	21402.	.00	0.	21402.	1.0000	.00
.300	.00	.000	.000	.00	21402.	.00	0.	21402.	1.0000	.00
.333	.00	.000	.000	.00	21402.	.00	0.	21402.	1.0000	.00
.366	.00	.000	.000	.00	21402.	.00	0.	21402.	1.0000	.00
.400	.00	.000	.000	.00	21402.	.00	0.	21402.	1.0000	.00
.433	.00	.000	.000	.00	21402.	.00	0.	21402.	1.0000	.00
.466	.00	.000	.000	.00	21402.	.00	0.	21402.	1.0000	.00
.500	.00	.000	.000	.00	21402.	.00	0.	21402.	1.0000	.00
.533	.00	.000	.000	.00	21402.	.00	0.	21402.	1.0000	.00
.566	.00	.000	.000	.00	21402.	.00	0.	21402.	1.0000	.00
.599	.00	.000	.000	.00	21402.	.00	0.	21402.	1.0000	.00
.633	.00	.000	.000	.00	21402.	.00	0.	21402.	1.0000	.00
.666	.00	.000	.000	.00	21402.	.00	0.	21402.	1.0000	.00
.699	.00	.000	.000	.00	21402.	.00	0.	21402.	1.0000	.00
.733	.00	.000	.000	.00	21402.	.00	0.	21402.	1.0000	.00
.766	.00	.000	.000	.00	21402.	.00	0.	21402.	1.0000	.00
.799	.00	.000	.000	.00	21402.	.00	0.	21402.	1.0000	.00
.833	.00	.000	.000	.00	21402.	.00	0.	21402.	1.0000	.00
.866	.00	.000	.000	.00	21402.	.00	0.	21402.	1.0000	.00
.899	.00	.000	.000	.00	21402.	.00	0.	21402.	1.0000	.00
.932	.00	.000	.000	.00	21402.	.00	0.	21402.	1.0000	.00

.966	.00	.000	.000	.00	21402.	.00	0.	21402.	1.0000	.00
.999	.00	.000	.000	.00	21402.	.00	0.	21402.	1.0000	.00
1.032	.00	.000	.000	.00	21402.	.00	0.	21402.	1.0000	.00
1.066	.00	.000	.000	.00	21402.	.00	0.	21402.	1.0000	.00
1.099	.00	.000	.000	.00	21402.	.00	0.	21402.	1.0000	.00
1.132	.00	.000	.000	.00	21402.	.00	0.	21402.	1.0000	.00
1.166	.00	.000	.000	.00	21402.	.00	0.	21402.	1.0000	.00
1.199	.00	.000	.000	.00	21402.	.00	0.	21402.	1.0000	.00
1.232	.00	.000	.000	.00	21402.	.00	0.	21402.	1.0000	.00
1.265	.00	.000	.000	.00	21402.	.00	0.	21402.	1.0000	.00
1.299	.00	.000	.000	.00	21402.	.00	0.	21402.	1.0000	.00
1.332	.00	.000	.000	.00	21402.	.00	0.	21402.	1.0000	.00
1.365	2.29	2.553	.138	6.48	21402.	.05	52363.	71604.	1.0291	.66
1.399	10.39	3.775	.250	10.99	21402.	.47	106434.	123562.	1.0532	6.14
1.432	23.70	4.777	.353	14.04	21402.	1.71	160275.	175418.	1.0803	25.00
1.465	36.85	5.387	.422	16.21	21402.	3.37	195136.	209058.	1.0997	61.43
1.499	44.19	5.654	.453	17.24	21402.	4.45	210792.	224182.	1.1090	109.19
1.532	45.05	5.684	.457	17.35	21402.	4.59	212546.	225877.	1.1101	158.35
1.565	41.34	5.551	.441	16.88	21402.	4.02	204722.	218317.	1.1054	201.53
1.598	35.51	5.335	.416	16.00	21402.	3.19	192126.	206152.	1.0980	236.02
1.632	29.34	5.066	.385	15.03	21402.	2.38	176683.	191245.	1.0892	261.97
1.665	23.73	4.778	.353	14.05	21402.	1.71	160347.	175488.	1.0803	280.86
1.698	18.87	4.503	.324	12.93	21402.	1.21	144985.	160680.	1.0722	294.37
1.732	14.81	4.207	.293	12.00	21402.	.83	128908.	145193.	1.0641	303.78
1.765	11.52	3.901	.263	11.25	21402.	.55	112839.	129725.	1.0562	310.20
1.798	8.93	3.619	.235	10.51	21402.	.37	98748.	116168.	1.0496	314.59
1.832	7.04	3.384	.212	9.82	21402.	.26	87681.	105528.	1.0445	317.70

TIME (HRS)	WATER FLOW (CFS)	VELOCITY (FT/SEC)	HYD. DEPTH (FT)	WIDTH (FT)	WASHLOAD CONC. (PPM-W)	BED MAT. TRANSPORT (CFS)	BED CONC. (PPM-W)	TOTAL CONC. (PPM-W)	BULKING FACTOR	ACCUM. SEDIMENT (TONS)
1.865	5.77	3.189	.194	9.35	21402.	.19	78876.	97065.	1.0406	320.02
1.898	4.98	3.048	.181	9.05	21402.	.15	72691.	91123.	1.0378	321.89
1.931	4.41	2.976	.174	8.51	21402.	.12	69595.	88150.	1.0365	323.48
1.965	3.96	2.911	.168	8.08	21402.	.11	66799.	85464.	1.0353	324.86
1.998	3.59	2.849	.163	7.72	21402.	.09	64227.	82994.	1.0342	326.08
2.031	3.28	2.791	.158	7.42	21402.	.08	61812.	80675.	1.0331	327.16
2.065	3.00	2.734	.153	7.16	21402.	.07	59494.	78450.	1.0321	328.11
2.098	2.76	2.677	.149	6.92	21402.	.06	57223.	76269.	1.0312	328.96
2.131	2.53	2.620	.144	6.71	21402.	.06	54970.	74106.	1.0302	329.72
2.164	2.32	2.563	.139	6.51	21402.	.05	52734.	71960.	1.0293	330.39
2.198	2.13	2.505	.135	6.33	21402.	.04	50521.	69836.	1.0283	330.99
2.231	1.96	2.446	.130	6.16	21402.	.04	48339.	67742.	1.0274	331.52
2.264	1.80	2.388	.125	6.01	21402.	.03	46192.	65681.	1.0265	332.00
2.298	1.65	2.330	.121	5.87	21402.	.03	44086.	63661.	1.0257	332.42
2.331	1.51	2.272	.116	5.74	21402.	.03	42026.	61685.	1.0248	332.79
2.364	1.39	2.214	.112	5.62	21402.	.02	40016.	59757.	1.0240	333.12
2.398	1.28	2.156	.107	5.51	21402.	.02	38061.	57881.	1.0232	333.41
2.431	1.17	2.099	.103	5.41	21402.	.02	36162.	56060.	1.0224	333.67
2.464	1.07	2.042	.099	5.32	21402.	.01	34324.	54296.	1.0217	333.90
2.498	.99	1.988	.095	5.22	21402.	.01	32612.	52654.	1.0210	334.11
2.531	.91	1.946	.092	5.05	21402.	.01	31304.	51401.	1.0204	334.29
2.564	.83	1.905	.089	4.89	21402.	.01	30048.	50196.	1.0199	334.46
2.597	.76	1.864	.086	4.74	21402.	.01	28840.	49038.	1.0195	334.60
2.631	.70	1.825	.084	4.59	21402.	.01	27680.	47925.	1.0190	334.73
2.664	.64	1.786	.081	4.45	21402.	.01	26565.	46856.	1.0186	334.85
2.697	.59	1.748	.078	4.30	21402.	.01	25494.	45829.	1.0181	334.96
2.731	.54	1.711	.076	4.17	21402.	.01	24464.	44843.	1.0177	335.05
2.764	.50	1.675	.074	4.04	21402.	.00	23476.	43895.	1.0173	335.14

2.797	.46	1.640	.071	3.91	21402.	.00	22526.	42985.	1.0169	335.22
2.831	.42	1.605	.069	3.79	21402.	.00	21614.	42111.	1.0166	335.29
2.864	.38	1.571	.067	3.67	21402.	.00	20738.	41271.	1.0162	335.35
2.897	.35	1.538	.065	3.55	21402.	.00	19897.	40465.	1.0159	335.40
2.930	.32	1.505	.063	3.44	21402.	.00	19090.	39691.	1.0156	335.45
2.964	.30	1.473	.061	3.33	21402.	.00	18314.	38947.	1.0153	335.50
2.997	.27	1.442	.059	3.22	21402.	.00	17570.	38234.	1.0150	335.54
3.030	.25	1.412	.057	3.12	21402.	.00	16855.	37549.	1.0147	335.58
3.064	.23	1.382	.055	3.02	21402.	.00	16169.	36891.	1.0145	335.61
3.097	.21	1.352	.053	2.93	21402.	.00	15510.	36260.	1.0142	335.64
3.130	.19	1.324	.052	2.84	21402.	.00	14878.	35654.	1.0140	335.67
3.164	.18	1.296	.050	2.75	21402.	.00	14271.	35073.	1.0137	335.69
3.197	.16	1.268	.048	2.66	21402.	.00	13688.	34515.	1.0135	335.71
3.230	.15	1.241	.047	2.58	21402.	.00	13129.	33979.	1.0133	335.73
3.263	.14	1.215	.045	2.49	21402.	.00	12593.	33465.	1.0131	335.75
3.297	.13	1.189	.044	2.42	21402.	.00	12078.	32972.	1.0129	335.77
3.330	.12	1.164	.043	2.34	21402.	.00	11584.	32498.	1.0127	335.78
3.363	.11	1.140	.041	2.27	21402.	.00	11110.	32044.	1.0125	335.79
3.397	.10	1.116	.040	2.19	21402.	.00	10655.	31608.	1.0123	335.80
3.430	.09	1.092	.039	2.12	21402.	.00	10219.	31190.	1.0121	335.82
3.463	.08	1.069	.037	2.06	21402.	.00	9800.	30789.	1.0120	335.83
3.497	.08	1.046	.036	1.99	21402.	.00	9398.	30404.	1.0118	335.83
3.530	.07	1.024	.035	1.93	21402.	.00	9013.	30035.	1.0117	335.84
3.563	.06	1.002	.034	1.87	21402.	.00	8643.	29681.	1.0115	335.85
3.596	.06	.981	.033	1.81	21402.	.00	8288.	29341.	1.0114	335.86
3.630	.05	.960	.032	1.75	21402.	.00	7948.	29015.	1.0113	335.86
3.663	.05	.940	.031	1.70	21402.	.00	7622.	28702.	1.0112	335.87
3.696	.05	.920	.030	1.64	21402.	.00	7309.	28402.	1.0110	335.87

TIME (HRS)	WATER FLOW (CFS)	VELOCITY (FT/SEC)	HYD. DEPTH (FT)	WIDTH (FT)	WASHLOAD CONC. (PPM-W)	BED MAT. TRANSPORT (CFS)	BED CONC. (PPM-W)	TOTAL CONC. (PPM-W)	BULKING FACTOR	ACCU. SEDIMENT (TONS)
3.730	.04	.901	.029	1.59	21402.	.00	7008.	28115.	1.0109	335.88
3.763	.04	.882	.028	1.54	21402.	.00	6720.	27839.	1.0108	335.88
3.796	.04	.863	.027	1.49	21402.	.00	6444.	27574.	1.0107	335.88
3.830	.03	.845	.026	1.45	21402.	.00	6179.	27320.	1.0106	335.89
3.863	.03	.827	.026	1.40	21402.	.00	5925.	27077.	1.0105	335.89
3.896	.03	.809	.025	1.36	21402.	.00	5681.	26843.	1.0104	335.89
3.929	.02	.792	.024	1.31	21402.	.00	5447.	26619.	1.0103	335.90
3.963	.02	.775	.023	1.27	21402.	.00	5223.	26404.	1.0102	335.90
3.996	.02	.759	.022	1.23	21402.	.00	5008.	26198.	1.0102	335.90
4.029	.02	.743	.022	1.19	21402.	.00	4802.	26001.	1.0101	335.90
4.063	.02	.727	.021	1.15	21402.	.00	4604.	25811.	1.0100	335.90
4.096	.02	.712	.020	1.12	21402.	.00	4414.	25630.	1.0099	335.91
4.129	.01	.697	.020	1.08	21402.	.00	4232.	25456.	1.0099	335.91
4.163	.01	.682	.019	1.05	21402.	.00	4058.	25288.	1.0098	335.91
4.196	.01	.667	.019	1.02	21402.	.00	3891.	25128.	1.0097	335.91
4.229	.01	.653	.018	.98	21402.	.00	3730.	24975.	1.0097	335.91
4.262	.01	.640	.017	.95	21402.	.00	3576.	24827.	1.0096	335.91
4.296	.01	.626	.017	.92	21402.	.00	3429.	24686.	1.0096	335.91
4.329	.01	.613	.016	.89	21402.	.00	3288.	24551.	1.0095	335.91
4.362	.01	.600	.016	.86	21402.	.00	3152.	24421.	1.0094	335.91
4.396	.01	.587	.015	.84	21402.	.00	3022.	24296.	1.0094	335.92
4.429	.01	.575	.015	.81	21402.	.00	2897.	24177.	1.0093	335.92
4.462	.01	.562	.014	.79	21402.	.00	2778.	24062.	1.0093	335.92
4.496	.01	.551	.014	.76	21402.	.00	2663.	23952.	1.0093	335.92
4.529	.01	.539	.013	.74	21402.	.00	2553.	23847.	1.0092	335.92
4.562	.00	.527	.013	.71	21402.	.00	2448.	23746.	1.0092	335.92
4.595	.00	.489	.012	.64	21402.	.00	2104.	23417.	1.0090	335.92

4.629 .00 .428 .010 .52 21402. .00 1621. 22955. 1.0089 335.92

AT PEAK FLOW OF 45.046 WITH TIME AT 1.53 HOURS: BEDMAT = 145.06 (TONS) = .0666 (AC-FT bulked)
TOTAL SED = 158.35 (TONS) = .0727 (AC-FT bulked)
PEAK BULKING FACTOR = 1.110108 = 225877. (PPM-w)

	WEIGHT (TONS)	UNBULKED VOLUME (AC-FT)	BULKED VOLUME (AC-FT)	CONCENTRATION BY WEIGHT (PPM)	AVERAGE BULKING FACTOR
WASHMAT =	34.04	.0095	.0156	21402.	
BEDMAT =	301.88	.0838	.1386	162463.	
TOTAL SEDIMENT =	335.92	.0933	.1542	177529.	1.081452

SEDIMENT TRANSPORT CAPACITY: 3.18006 AC-FT/SQ MI (bulkcd) = 10.8221 TONS/ACRE (at Porosity=0.395)

PRINT HYD ID=11 CODE=1

PARTIAL HYDROGRAPH 133.52

RUNOFF VOLUME = .44269 INCHES = 1.1451 ACRE-FEET
PEAK DISCHARGE RATE = 45.05 CFS AT 1.532 HOURS BASIN AREA = .0485 SQ. MI.

*S UNDEVELOPED, OFF-SITE FLOW ENTERING POND
ADD HYD ID=11 HYD NO=133.50 ID I=10 ID II=11
PRINT HYD ID=11 CODE=1

PARTIAL HYDROGRAPH 133.50

RUNOFF VOLUME = .43696 INCHES = 2.9084 ACRE-FEET
PEAK DISCHARGE RATE = 114.34 CFS AT 1.532 HOURS BASIN AREA = .1248 SQ. MI.

*

FINISH

NORMAL PROGRAM FINISH END TIME (HR:MIN:SEC) = 07:33:15

50-YEAR POST DEVELOPMENT DETAIL PRINTOUT

AHYMO PROGRAM (AHYMO993) - AMAFCA VERSION OF HYMO - SEPTEMBER, 1993
RUN DATE (MON/DAY/YR) = 11/26/1993
START TIME (HR:MIN:SEC) = 07:33:51 USER NO. = COMMSC_B.T93
INPUT FILE = PM50PO.DAT

*S PARKWEST 50-YEAR POST DEVELOPMENT
START TIME=0.0 HR PUNCH CODE=0
RAINFALL TYPE=1 RAIN QUARTER=0.0
RAIN ONE=1.68 IN RAIN SIX=1.98 IN
RAIN DAY=2.39 IN DT=0.0333 HRS

COMPUTED 6-HOUR RAINFALL DISTRIBUTION BASED ON NOAA ATLAS 2 - PEAK AT 1.40 HR.
DT = .033300 HOURS END TIME = 5.994000 HOURS
0.000 .0015 .0030 .0046 .0062 .0078 .0095
.0112 .0129 .0147 .0165 .0184 .0204 .0223
.0244 .0265 .0287 .0309 .0332 .0356 .0381
.0407 .0433 .0461 .0490 .0520 .0552 .0585
.0620 .0656 .0695 .0741 .0791 .0844 .0953
.1204 .1591 .2148 .2909 .3910 .5187 .6778
.8721 1.0587 1.1352 1.1996 1.2568 1.3088 1.3567
1.4011 1.4426 1.4816 1.5182 1.5527 1.5853 1.6162
1.6455 1.6732 1.6995 1.7245 1.7483 1.7548 1.7600
1.7650 1.7697 1.7742 1.7785 1.7826 1.7866 1.7904
1.7941 1.7977 1.8012 1.8046 1.8079 1.8110 1.8141
1.8172 1.8201 1.8230 1.8258 1.8286 1.8312 1.8339
1.8364 1.8390 1.8414 1.8439 1.8463 1.8486 1.8509
1.8532 1.8554 1.8576 1.8597 1.8619 1.8639 1.8660
1.8680 1.8700 1.8720 1.8739 1.8758 1.8777 1.8796
1.8814 1.8832 1.8850 1.8868 1.8886 1.8903 1.8920
1.8937 1.8954 1.8970 1.8986 1.9003 1.9019 1.9034
1.9050 1.9066 1.9081 1.9096 1.9111 1.9126 1.9141
1.9156 1.9170 1.9184 1.9199 1.9213 1.9227 1.9241
1.9254 1.9268 1.9281 1.9295 1.9308 1.9321 1.9334
1.9347 1.9360 1.9373 1.9386 1.9398 1.9411 1.9423
1.9435 1.9447 1.9460 1.9472 1.9484 1.9495 1.9507
1.9519 1.9531 1.9542 1.9554 1.9565 1.9576 1.9587
1.9599 1.9610 1.9621 1.9632 1.9643 1.9653 1.9664
1.9675 1.9685 1.9696 1.9706 1.9717 1.9727 1.9738
1.9748 1.9758 1.9768 1.9778 1.9788 1.9798

* *****
* *****
* *****
* COMPUTE NM HYD ID=10 HYD NO=132.11 DA=0.0093 SQ MI
PER A=30.00 PER B=50.00 PER C=20.00 PER D=0.00
TP=-0.1333 HR MASS RAIN=-1

K = .138454HR TP = .133300HR K/TP RATIO = 1.038667 SHAPE CONSTANT, N = 3.398736
UNIT PEAK = 21.828 CFS UNIT VOLUME = .9995 B = 312.86 P60 = 1.6800
AREA = .009300 SQ MI IA = .51500 INCHES INF = 1.29200 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=10 CODE=1
PARTIAL HYDROGRAPH 132.11

RUNOFF VOLUME = .49764 INCHES = .2468 ACRE-FEET
PEAK DISCHARGE RATE = 9.32 CFS AT 1.532 HOURS BASIN AREA = .0093 SQ. MI.

SED WASH LOAD

ID=10 K=0.17 C=0.25

P=1.0 LS=0.758

IMPERVIOUS=0.0 FACTOR=3.0

SEDIMENT YIELD (Wash Mat.) = 14.6 (TONS)

WASH LOAD CONCENTRATION = 41813 (PPM-W)

PERCENTAGE IMPERVIOUS AREA = .000

WASH LOAD FACTOR = 3.00000

SEDIMENT TRANS

ID=10 IDS=5 CODE=1

A=0.0002 B=4.19 C=0.19 D=-2.55

NUMB WASH=-1 NUMB SECTIONS=9

FLOW	VELOCITY	WIDTH
(CFS)	(FPS)	(FT)
1.00	2.06	4.06
2.00	2.46	5.26
3.00	2.73	6.11
4.00	2.93	6.82
6.00	3.25	7.92
8.00	3.48	8.85
10.00	3.67	9.62
12.00	3.84	10.30
14.00	3.99	10.92

Use wash load from SED WASH LOAD command - Concentration = 41813 (PPM-W)

* * * * *

TIME	WATER	HYD.	WASHLOAD	BED MAT.	BED	TOTAL	BULKING	ACCUM.
(HRS)	FLOW	VELOCITY	DEPTH	WIDTH	CONC.	TRANSPORT	CONC.	SEDIMENT
	(CFS)	(FT/SEC)	(FT)	(FT)	(PPM-W)	(CFS)	(PPM-W)	(TONS)
.000	.00	.000	.000	.00	41813.	.00	41813.	1.0000
.033	.00	.000	.000	.00	41813.	.00	41813.	1.0000
.067	.00	.000	.000	.00	41813.	.00	41813.	1.0000
.100	.00	.000	.000	.00	41813.	.00	41813.	1.0000
.133	.00	.000	.000	.00	41813.	.00	41813.	1.0000
.167	.00	.000	.000	.00	41813.	.00	41813.	1.0000
.200	.00	.000	.000	.00	41813.	.00	41813.	1.0000
.233	.00	.000	.000	.00	41813.	.00	41813.	1.0000
.266	.00	.000	.000	.00	41813.	.00	41813.	1.0000
.300	.00	.000	.000	.00	41813.	.00	41813.	1.0000
.333	.00	.000	.000	.00	41813.	.00	41813.	1.0000
.366	.00	.000	.000	.00	41813.	.00	41813.	1.0000
.400	.00	.000	.000	.00	41813.	.00	41813.	1.0000
.433	.00	.000	.000	.00	41813.	.00	41813.	1.0000
.466	.00	.000	.000	.00	41813.	.00	41813.	1.0000
.500	.00	.000	.000	.00	41813.	.00	41813.	1.0000
.533	.00	.000	.000	.00	41813.	.00	41813.	1.0000
.566	.00	.000	.000	.00	41813.	.00	41813.	1.0000
.599	.00	.000	.000	.00	41813.	.00	41813.	1.0000
.633	.00	.000	.000	.00	41813.	.00	41813.	1.0000
.666	.00	.000	.000	.00	41813.	.00	41813.	1.0000
.699	.00	.000	.000	.00	41813.	.00	41813.	1.0000
.733	.00	.000	.000	.00	41813.	.00	41813.	1.0000
.766	.00	.000	.000	.00	41813.	.00	41813.	1.0000
.799	.00	.000	.000	.00	41813.	.00	41813.	1.0000
.833	.00	.000	.000	.00	41813.	.00	41813.	1.0000
.866	.00	.000	.000	.00	41813.	.00	41813.	1.0000
.899	.00	.000	.000	.00	41813.	.00	41813.	1.0000
.932	.00	.000	.000	.00	41813.	.00	41813.	1.0000

.966	.00	.000	.000	.000	.00	41813.	.00	0.	41813.	1.0000	.00
.999	.00	.000	.000	.000	.00	41813.	.00	0.	41813.	1.0000	.00
1.032	.00	.000	.000	.000	.00	41813.	.00	0.	41813.	1.0000	.00
1.066	.00	.000	.000	.000	.00	41813.	.00	0.	41813.	1.0000	.00
1.099	.00	.000	.000	.000	.00	41813.	.00	0.	41813.	1.0000	.00
1.132	.00	.000	.000	.000	.00	41813.	.00	0.	41813.	1.0000	.00
1.166	.00	.000	.000	.000	.00	41813.	.00	0.	41813.	1.0000	.00
1.199	.00	.000	.000	.000	.00	41813.	.00	0.	41813.	1.0000	.00
1.232	.00	.000	.000	.000	.00	41813.	.00	0.	41813.	1.0000	.00
1.265	.00	.000	.000	.000	.00	41813.	.00	0.	41813.	1.0000	.00
1.299	.00	.000	.000	.000	.00	41813.	.00	0.	41813.	1.0000	.00
1.332	.01	.677	.023	.023	.00	41813.	.00	3660.	45174.	1.0179	.00
1.365	.58	1.808	.098	.098	.01	41813.	.01	24950.	64744.	1.0261	.15
1.399	2.36	2.572	.165	.165	.05	41813.	.05	49241.	87116.	1.0360	1.00
1.432	5.13	3.128	.220	.220	.15	41813.	.15	71030.	107222.	1.0453	3.30
1.465	7.73	3.453	.257	.257	.27	41813.	.27	84826.	119971.	1.0514	7.24
1.499	9.15	3.595	.274	.274	.35	41813.	.35	90869.	125561.	1.0542	12.15
1.532	9.32	3.611	.276	.276	.35	41813.	.35	91546.	126186.	1.0545	17.19
1.565	8.61	3.543	.267	.267	.32	41813.	.32	88653.	123510.	1.0532	21.73
1.598	7.47	3.426	.253	.253	.26	41813.	.26	83669.	118901.	1.0509	25.50
1.632	6.24	3.282	.237	.237	.20	41813.	.20	77587.	113279.	1.0482	28.48
1.665	5.10	3.124	.220	.220	.15	41813.	.15	70871.	107075.	1.0453	30.77
1.698	4.11	2.951	.202	.202	.11	41813.	.11	63731.	100482.	1.0422	32.48
1.732	3.27	2.790	.186	.186	.08	41813.	.08	57454.	94690.	1.0395	33.76
1.765	2.58	2.631	.170	.170	.05	41813.	.05	51455.	89156.	1.0369	34.71
1.798	2.03	2.471	.156	.156	.04	41813.	.04	45611.	83769.	1.0345	35.40
1.832	1.60	2.336	.143	.143	.03	41813.	.03	40938.	79464.	1.0326	35.92

TIME (HRS)	WATER FLOW (CFS)	VELOCITY (FT/SEC)	HYD. DEPTH (FT)	WIDTH (FT)	WASHLOAD CONC. (PPM-W)	BED MAT. TRANSPORT CONC. (CFS)	BED CONC. (PPM-W)	TOTAL CONC. (PPM-W)	BULKING FACTOR	ACCUM. SEDIMENT (TONS)
1.865	1.30	2.214	.133	4.42	41813.	.02	36895.	75739.	1.0309	36.32
1.898	1.10	2.116	.124	4.18	41813.	.01	33765.	72857.	1.0297	36.64
1.931	.97	2.048	.118	4.01	41813.	.01	31682.	70939.	1.0288	36.92
1.965	.87	1.999	.114	3.83	41813.	.01	30268.	69638.	1.0282	37.16
1.998	.79	1.955	.111	3.68	41813.	.01	28996.	68467.	1.0277	37.38
2.031	.73	1.914	.107	3.55	41813.	.01	27827.	67392.	1.0273	37.58
2.065	.67	1.874	.104	3.44	41813.	.01	26729.	66381.	1.0268	37.75
2.098	.62	1.835	.101	3.35	41813.	.01	25674.	65410.	1.0264	37.92
2.131	.57	1.796	.097	3.26	41813.	.01	24641.	64460.	1.0260	38.06
2.164	.53	1.757	.094	3.18	41813.	.00	23623.	63523.	1.0256	38.20
2.198	.49	1.720	.091	3.09	41813.	.00	22663.	62640.	1.0252	38.32
2.231	.45	1.686	.089	3.00	41813.	.00	21802.	61848.	1.0249	38.43
2.264	.41	1.652	.086	2.91	41813.	.00	20974.	61086.	1.0246	38.53
2.298	.38	1.620	.083	2.83	41813.	.00	20176.	60353.	1.0242	38.62
2.331	.35	1.588	.081	2.74	41813.	.00	19408.	59647.	1.0239	38.70
2.364	.33	1.556	.078	2.66	41813.	.00	18669.	58967.	1.0236	38.78
2.398	.30	1.525	.076	2.58	41813.	.00	17958.	58313.	1.0234	38.85
2.431	.28	1.495	.074	2.51	41813.	.00	17273.	57683.	1.0231	38.91
2.464	.26	1.465	.072	2.43	41813.	.00	16613.	57077.	1.0228	38.97
2.498	.24	1.436	.070	2.36	41813.	.00	15979.	56493.	1.0226	39.02
2.531	.22	1.408	.068	2.29	41813.	.00	15368.	55932.	1.0224	39.07
2.564	.20	1.380	.066	2.22	41813.	.00	14781.	55392.	1.0221	39.12
2.597	.19	1.352	.064	2.16	41813.	.00	14215.	54872.	1.0219	39.16
2.631	.17	1.326	.062	2.09	41813.	.00	13671.	54372.	1.0217	39.19
2.664	.16	1.299	.060	2.03	41813.	.00	13147.	53891.	1.0215	39.23
2.697	.15	1.273	.058	1.97	41813.	.00	12644.	53427.	1.0213	39.26
2.731	.13	1.248	.056	1.91	41813.	.00	12159.	52982.	1.0211	39.29
2.764	.12	1.223	.055	1.86	41813.	.00	11692.	52553.	1.0209	39.31

2.797	.11	1.199	.053	1.80	41813.	.00	11244.	52141.	1.0208	39.34
2.831	.11	1.175	.052	1.75	41813.	.00	10812.	51744.	1.0206	39.36
2.864	.10	1.152	.050	1.70	41813.	.00	10397.	51363.	1.0204	39.38
2.897	.09	1.129	.049	1.65	41813.	.00	9997.	50996.	1.0203	39.39
2.930	.08	1.107	.047	1.60	41813.	.00	9613.	50643.	1.0201	39.41
2.964	.08	1.085	.046	1.55	41813.	.00	9243.	50303.	1.0200	39.43
2.997	.07	1.063	.044	1.50	41813.	.00	8888.	49976.	1.0199	39.44
3.030	.07	1.042	.043	1.46	41813.	.00	8546.	49662.	1.0197	39.45
3.064	.06	1.021	.042	1.42	41813.	.00	8217.	49360.	1.0196	39.47
3.097	.06	1.001	.041	1.37	41813.	.00	7901.	49069.	1.0195	39.48
3.130	.05	.981	.039	1.33	41813.	.00	7596.	48789.	1.0194	39.49
3.164	.05	.962	.038	1.29	41813.	.00	7304.	48521.	1.0192	39.49
3.197	.04	.943	.037	1.26	41813.	.00	7022.	48262.	1.0191	39.50
3.230	.04	.924	.036	1.22	41813.	.00	6751.	48013.	1.0190	39.51
3.263	.04	.906	.035	1.18	41813.	.00	6491.	47774.	1.0189	39.52
3.297	.03	.888	.034	1.15	41813.	.00	6241.	47544.	1.0188	39.52
3.330	.03	.870	.033	1.11	41813.	.00	6000.	47323.	1.0187	39.53
3.363	.03	.853	.032	1.08	41813.	.00	5768.	47110.	1.0187	39.54
3.397	.03	.836	.031	1.05	41813.	.00	5546.	46906.	1.0186	39.54
3.430	.03	.819	.030	1.02	41813.	.00	5332.	46709.	1.0185	39.55
3.463	.02	.803	.029	.99	41813.	.00	5126.	46520.	1.0184	39.55
3.497	.02	.787	.028	.96	41813.	.00	4928.	46338.	1.0183	39.55
3.530	.02	.772	.027	.93	41813.	.00	4738.	46163.	1.0183	39.56
3.563	.02	.756	.027	.90	41813.	.00	4554.	45995.	1.0182	39.56
3.596	.02	.741	.026	.88	41813.	.00	4379.	45834.	1.0181	39.56
3.630	.02	.727	.025	.85	41813.	.00	4209.	45678.	1.0181	39.57
3.663	.01	.712	.024	.82	41813.	.00	4047.	45529.	1.0180	39.57
3.696	.01	.698	.024	.80	41813.	.00	3890.	45385.	1.0179	39.57

TIME (HRS)	WATER FLOW (CFS)	VELOCITY (FT/SEC)	HYD. DEPTH (FT)	WIDTH (FT)	WASHLOAD CONC. (PPM-W)	BED MAT. TRANSPORT (CFS)	BED CONC. (PPM-W)	TOTAL CONC. (PPM-W)	BULKING FACTOR	ACCU. SEDIMENT (TONS)
3.730	.01	.684	.023	.78	41813.	.00	3740.	45247.	1.0179	39.57
3.763	.01	.671	.022	.75	41813.	.00	3595.	45114.	1.0178	39.57
3.796	.01	.657	.022	.73	41813.	.00	3456.	44987.	1.0178	39.58
3.830	.01	.644	.021	.71	41813.	.00	3322.	44864.	1.0177	39.58
3.863	.01	.631	.020	.69	41813.	.00	3194.	44746.	1.0177	39.58
3.896	.01	.619	.020	.67	41813.	.00	3070.	44632.	1.0176	39.58
3.929	.01	.607	.019	.65	41813.	.00	2951.	44523.	1.0176	39.58
3.963	.01	.595	.019	.63	41813.	.00	2837.	44418.	1.0175	39.58
3.996	.01	.583	.018	.61	41813.	.00	2727.	44317.	1.0175	39.58
4.029	.01	.571	.017	.59	41813.	.00	2622.	44220.	1.0175	39.59
4.063	.01	.559	.017	.57	41813.	.00	2515.	44123.	1.0174	39.59
4.096	.00	.518	.015	.51	41813.	.00	2160.	43796.	1.0173	39.59
4.129	.00	.453	.012	.42	41813.	.00	1662.	43339.	1.0171	39.59

AT PEAK FLOW OF 9.319 WITH TIME AT 1.53 HOURS: BEDMAT = 11.59 (TONS) = .0053 (AC-FT bulked)
PEAK BULKING FACTOR = 1.054494 = 126186. (PPM-W) TOTAL SED = 17.19 (TONS) = .0079 (AC-FT bulked)

WASHMAT =	14.64	.0041	.0067	41812.
BEDMAT =	24.95	.0069	.0115	69226.
TOTAL SEDIMENT =	39.59	.0110	.0182	105555.
				1.044533

SEDIMENT TRANSPORT CAPACITY: 1.95444 AC-FT/SQ MI (bulked) = 6.6512 TONS/ACRE (at Porosity=0.395)

PRINT HYD ID=10 CODE=1

PARTIAL HYDROGRAPH 132.11

RUNOFF VOLUME = .49764 INCHES = .2468 ACRE-FEET
PEAK DISCHARGE RATE = 9.32 CFS AT 1.532 HOURS BASIN AREA = .0093 SQ. MI.

PRINT HYD ID=10 CODE=1

PARTIAL HYDROGRAPH 132.11

RUNOFF VOLUME = .49764 INCHES = .2468 ACRE-FEET
PEAK DISCHARGE RATE = 9.32 CFS AT 1.532 HOURS BASIN AREA = .0093 SQ. MI.

COMPUTE NM HYD

ID=11 HYD NO=133.51 DA=0.0670 SQ MI
PER A=5.00 PER B=65.00 PER C=30.00 PER D=0.00
TP=-0.1333 HR MASS RAIN=-1

K = .126750HR TP = .133300HR K/TP RATIO = .950864 SHAPE CONSTANT, N = 3.717090
UNIT PEAK = 168.80 CFS UNIT VOLUME = 1.000 B = 335.85 P60 = 1.6800
AREA = .067000 SQ MI IA = .46250 INCHES INF = 1.14500 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=11 CODE=1

PARTIAL HYDROGRAPH 133.51

RUNOFF VOLUME = .58291 INCHES = 2.0829 ACRE-FEET
PEAK DISCHARGE RATE = 78.42 CFS AT 1.532 HOURS BASIN AREA = .0670 SQ. MI.

SED WASH LOAD ID=11 K=0.16 C=0.25

P=1.0 LS=0.470
IMPERVIOUS=0.0 FACTOR=3.0
SEDIMENT YIELD (Wash Mat.) = 93.0 (TONS) WASH LOAD CONCENTRATION = 31797 (ppm-w)
PERCENTAGE IMPERVIOUS AREA = .000 WASH LOAD FACTOR = 3.00000

PRINT HYD ID=11 CODE=1

PARTIAL HYDROGRAPH 133.51

RUNOFF VOLUME = .58291 INCHES = 2.0829 ACRE-FEET
PEAK DISCHARGE RATE = 78.42 CFS AT 1.532 HOURS BASIN AREA = .0670 SQ. MI.

SEDIMENT TRANS

ID=11 IDS=6 CODE=1
A=0.0002 B=4.19 C=0.19 D=-2.55

NUMB WASH=-1 NUMB SECTIONS=9

FLOW	VELOCITY	WIDTH
(CFS)	(FPS)	(FT)
5.00	2.91	8.75
10.00	3.61	10.08
25.00	4.77	12.68
40.00	5.42	14.57
55.00	5.96	16.02
70.00	6.36	17.31
85.00	6.65	18.49
100.00	6.96	19.50
115.00	6.74	24.19

Use wash load from SED WASH LOAD command - Concentration = 31797 (PPM-W)

* * * * *

TIME (HRS)	WATER FLOW (CFS)	VELOCITY (FT/SEC)	HYD. DEPTH (FT)	WIDTH (FT)	WASHLOAD CONC. (PPM-W)	BED MAT. TRANSPORT (CFS)	BED CONC. (PPM-W)	TOTAL CONC. (PPM-W)	BULKING FACTOR	ACCUM. SEDIMENT (TONS)
.000	.00	.000	.000	.00	31797.	.00	0.	31797.	1.0000	.00
.033	.00	.000	.000	.00	31797.	.00	0.	31797.	1.0000	.00
.067	.00	.000	.000	.00	31797.	.00	0.	31797.	1.0000	.00
.100	.00	.000	.000	.00	31797.	.00	0.	31797.	1.0000	.00
.133	.00	.000	.000	.00	31797.	.00	0.	31797.	1.0000	.00
.167	.00	.000	.000	.00	31797.	.00	0.	31797.	1.0000	.00
.200	.00	.000	.000	.00	31797.	.00	0.	31797.	1.0000	.00
.233	.00	.000	.000	.00	31797.	.00	0.	31797.	1.0000	.00
.266	.00	.000	.000	.00	31797.	.00	0.	31797.	1.0000	.00
.300	.00	.000	.000	.00	31797.	.00	0.	31797.	1.0000	.00
.333	.00	.000	.000	.00	31797.	.00	0.	31797.	1.0000	.00
.366	.00	.000	.000	.00	31797.	.00	0.	31797.	1.0000	.00
.400	.00	.000	.000	.00	31797.	.00	0.	31797.	1.0000	.00
.433	.00	.000	.000	.00	31797.	.00	0.	31797.	1.0000	.00
.466	.00	.000	.000	.00	31797.	.00	0.	31797.	1.0000	.00
.500	.00	.000	.000	.00	31797.	.00	0.	31797.	1.0000	.00
.533	.00	.000	.000	.00	31797.	.00	0.	31797.	1.0000	.00
.566	.00	.000	.000	.00	31797.	.00	0.	31797.	1.0000	.00
.599	.00	.000	.000	.00	31797.	.00	0.	31797.	1.0000	.00
.633	.00	.000	.000	.00	31797.	.00	0.	31797.	1.0000	.00
.666	.00	.000	.000	.00	31797.	.00	0.	31797.	1.0000	.00
.699	.00	.000	.000	.00	31797.	.00	0.	31797.	1.0000	.00
.733	.00	.000	.000	.00	31797.	.00	0.	31797.	1.0000	.00
.766	.00	.000	.000	.00	31797.	.00	0.	31797.	1.0000	.00
.799	.00	.000	.000	.00	31797.	.00	0.	31797.	1.0000	.00
.833	.00	.000	.000	.00	31797.	.00	0.	31797.	1.0000	.00
.866	.00	.000	.000	.00	31797.	.00	0.	31797.	1.0000	.00
.899	.00	.000	.000	.00	31797.	.00	0.	31797.	1.0000	.00
.932	.00	.000	.000	.00	31797.	.00	0.	31797.	1.0000	.00
.966	.00	.000	.000	.00	31797.	.00	0.	31797.	1.0000	.00
.999	.00	.000	.000	.00	31797.	.00	0.	31797.	1.0000	.00
1.032	.00	.000	.000	.00	31797.	.00	0.	31797.	1.0000	.00
1.066	.00	.000	.000	.00	31797.	.00	0.	31797.	1.0000	.00
1.099	.00	.000	.000	.00	31797.	.00	0.	31797.	1.0000	.00
1.132	.00	.000	.000	.00	31797.	.00	0.	31797.	1.0000	.00
1.166	.00	.000	.000	.00	31797.	.00	0.	31797.	1.0000	.00
1.199	.00	.000	.000	.00	31797.	.00	0.	31797.	1.0000	.00
1.232	.00	.000	.000	.00	31797.	.00	0.	31797.	1.0000	.00
1.265	.00	.000	.000	.00	31797.	.00	0.	31797.	1.0000	.00
1.299	.00	.000	.000	.00	31797.	.00	0.	31797.	1.0000	.00

1.332	1.18	1.987	.111	5.36	31797.	.01	29656.	59623.	1.0239	.28
1.365	7.55	3.320	.241	9.43	31797.	.24	77225.	104367.	1.0440	3.57
1.399	22.74	4.649	.398	12.29	31797.	1.40	140400.	164000.	1.0740	20.26
1.432	45.10	5.624	.532	15.06	31797.	4.03	191459.	212373.	1.1017	65.74
1.465	66.35	6.272	.622	17.00	31797.	7.40	228065.	247150.	1.1239	147.21
1.499	77.73	6.517	.666	17.92	31797.	9.28	240266.	258760.	1.1317	248.69
1.532	78.42	6.530	.668	17.97	31797.	9.39	240886.	259351.	1.1321	351.40
1.565	71.86	6.399	.643	17.46	31797.	8.32	234763.	253523.	1.1282	442.68
1.598	62.08	6.161	.606	16.63	31797.	6.68	222008.	241391.	1.1201	516.56
1.632	51.94	5.863	.563	15.72	31797.	5.06	205341.	225552.	1.1099	573.14
1.665	42.79	5.535	.521	14.84	31797.	3.70	186338.	207514.	1.0988	615.06
1.698	34.76	5.227	.478	13.91	31797.	2.68	169798.	191833.	1.0896	645.92
1.732	27.80	4.917	.434	13.03	31797.	1.91	154045.	176912.	1.0811	668.27
1.765	21.90	4.601	.392	12.14	31797.	1.32	137885.	161622.	1.0727	684.06
1.798	17.14	4.286	.353	11.32	31797.	.90	121876.	146490.	1.0648	695.06
1.832	13.60	3.991	.318	10.70	31797.	.62	107412.	132832.	1.0578	702.85
WATER										
TIME (HRS)	FLOW (CFS)	VELOCITY (FT/SEC)	HYD. DEPTH (FT)	WIDTH (FT)	WASHLOAD CONC. (PPM-W)	BED MAT. TRANSPORT (CFS)	BED CONC. (PPM-W)	TOTAL CONC. (PPM-W)	BULKING FACTOR	ACCU. SEDIMENT (TONS)
1.865	11.16	3.744	.290	10.28	31797.	.45	95733.	121812.	1.0523	708.64
1.898	9.56	3.564	.269	9.96	31797.	.35	87554.	114101.	1.0486	713.24
1.931	8.36	3.424	.253	9.64	31797.	.28	81566.	108458.	1.0459	717.05
1.965	7.40	3.300	.239	9.39	31797.	.23	76394.	103584.	1.0436	720.25
1.998	6.64	3.189	.227	9.19	31797.	.19	71869.	99323.	1.0416	722.98
2.031	6.00	3.088	.215	9.02	31797.	.16	67851.	95539.	1.0399	725.35
2.065	5.46	2.995	.205	8.87	31797.	.14	64217.	92118.	1.0383	727.42
2.098	4.98	2.908	.196	8.74	31797.	.12	60910.	89006.	1.0369	729.24
2.131	4.56	2.857	.191	8.36	31797.	.11	58930.	87143.	1.0360	730.87
2.164	4.18	2.805	.186	8.02	31797.	.10	56943.	85273.	1.0352	732.33
2.198	3.83	2.751	.181	7.71	31797.	.08	54940.	83389.	1.0343	733.64
2.231	3.51	2.697	.175	7.43	31797.	.07	52930.	81498.	1.0335	734.80
2.264	3.22	2.642	.170	7.16	31797.	.07	50917.	79605.	1.0326	735.84
2.298	2.95	2.586	.164	6.93	31797.	.06	48910.	77718.	1.0318	736.77
2.331	2.70	2.529	.159	6.71	31797.	.05	46914.	75841.	1.0310	737.60
2.364	2.47	2.472	.154	6.51	31797.	.04	44936.	73981.	1.0301	738.34
2.398	2.26	2.414	.148	6.32	31797.	.04	42982.	72144.	1.0293	738.99
2.431	2.08	2.357	.143	6.15	31797.	.03	41058.	70335.	1.0285	739.58
2.464	1.90	2.299	.138	6.00	31797.	.03	39168.	68559.	1.0278	740.10
2.498	1.74	2.241	.133	5.86	31797.	.03	37318.	66821.	1.0270	740.57
2.531	1.60	2.183	.128	5.73	31797.	.02	35511.	65123.	1.0263	740.99
2.564	1.46	2.126	.123	5.61	31797.	.02	33752.	63471.	1.0256	741.36
2.597	1.34	2.069	.118	5.50	31797.	.02	32044.	61867.	1.0249	741.69
2.631	1.23	2.012	.113	5.40	31797.	.01	30390.	60312.	1.0242	741.98
2.664	1.12	1.956	.108	5.31	31797.	.01	28791.	58811.	1.0236	742.24
2.697	1.03	1.901	.104	5.22	31797.	.01	27249.	57363.	1.0230	742.48
2.731	.94	1.856	.100	5.09	31797.	.01	26007.	56196.	1.0225	742.69
2.764	.86	1.815	.097	4.92	31797.	.01	24934.	55189.	1.0220	742.88
2.797	.79	1.776	.094	4.76	31797.	.01	23904.	54222.	1.0216	743.05
2.831	.73	1.738	.091	4.61	31797.	.01	22915.	53294.	1.0212	743.20
2.864	.66	1.700	.088	4.46	31797.	.01	21967.	52404.	1.0209	743.34
2.897	.61	1.663	.085	4.32	31797.	.00	21057.	51549.	1.0205	743.46
2.930	.56	1.627	.082	4.18	31797.	.00	20184.	50730.	1.0202	743.57
2.964	.51	1.592	.079	4.04	31797.	.00	19346.	49944.	1.0198	743.67
2.997	.47	1.557	.077	3.91	31797.	.00	18543.	49189.	1.0195	743.76
3.030	.43	1.524	.074	3.78	31797.	.00	17772.	48466.	1.0192	743.85
3.064	.39	1.491	.072	3.66	31797.	.00	17033.	47772.	1.0189	743.92
3.097	.36	1.458	.070	3.54	31797.	.00	16324.	47107.	1.0187	743.99
3.130	.33	1.427	.067	3.43	31797.	.00	15644.	46469.	1.0184	744.05

3.164	.30	1.396	.065	3.32	31797.	.00	14992.	45857.	1.0181	744.10
3.197	.28	1.366	.063	3.21	31797.	.00	14366.	45270.	1.0179	744.15
3.230	.25	1.336	.061	3.11	31797.	.00	13767.	44708.	1.0177	744.19
3.263	.23	1.307	.059	3.01	31797.	.00	13192.	44168.	1.0174	744.23
3.297	.21	1.279	.057	2.91	31797.	.00	12641.	43651.	1.0172	744.27
3.330	.20	1.251	.055	2.82	31797.	.00	12112.	43155.	1.0170	744.30
3.363	.18	1.224	.054	2.72	31797.	.00	11605.	42680.	1.0168	744.33
3.397	.16	1.198	.052	2.64	31797.	.00	11120.	42225.	1.0166	744.36
3.430	.15	1.172	.050	2.55	31797.	.00	10654.	41788.	1.0165	744.39
3.463	.14	1.146	.049	2.47	31797.	.00	10208.	41369.	1.0163	744.41
3.497	.13	1.121	.047	2.39	31797.	.00	9780.	40968.	1.0161	744.43
3.530	.12	1.097	.045	2.31	31797.	.00	9370.	40583.	1.0160	744.45
3.563	.11	1.073	.044	2.24	31797.	.00	8977.	40215.	1.0158	744.46
3.596	.10	1.050	.043	2.17	31797.	.00	8601.	39862.	1.0157	744.48
3.630	.09	1.027	.041	2.10	31797.	.00	8240.	39523.	1.0155	744.49
3.663	.08	1.005	.040	2.03	31797.	.00	7894.	39199.	1.0154	744.50
3.696	.07	.983	.039	1.96	31797.	.00	7562.	38888.	1.0153	744.51
3.730	.07	.962	.037	1.90	31797.	.00	7245.	38590.	1.0151	744.52
3.763	.06	.941	.036	1.84	31797.	.00	6940.	38304.	1.0150	744.53
3.796	.06	.921	.035	1.78	31797.	.00	6648.	38031.	1.0149	744.54
3.830	.05	.901	.034	1.72	31797.	.00	6369.	37768.	1.0148	744.55
3.863	.05	.881	.033	1.66	31797.	.00	6101.	37517.	1.0147	744.56
3.896	.04	.862	.032	1.61	31797.	.00	5844.	37277.	1.0146	744.56
3.929	.04	.844	.031	1.56	31797.	.00	5598.	37046.	1.0145	744.57
3.963	.04	.825	.030	1.51	31797.	.00	5363.	36825.	1.0144	744.57
3.996	.03	.808	.029	1.46	31797.	.00	5137.	36613.	1.0143	744.58
4.029	.03	.790	.028	1.41	31797.	.00	4921.	36410.	1.0143	744.58
4.063	.03	.773	.027	1.37	31797.	.00	4713.	36216.	1.0142	744.59
4.096	.03	.756	.026	1.32	31797.	.00	4515.	36030.	1.0141	744.59
4.129	.02	.740	.025	1.28	31797.	.00	4325.	35851.	1.0140	744.59
4.163	.02	.724	.024	1.24	31797.	.00	4142.	35681.	1.0140	744.60
4.196	.02	.708	.024	1.20	31797.	.00	3968.	35517.	1.0139	744.60
4.229	.02	.693	.023	1.16	31797.	.00	3800.	35360.	1.0138	744.60
4.262	.02	.678	.022	1.12	31797.	.00	3640.	35210.	1.0138	744.61
4.296	.02	.663	.021	1.09	31797.	.00	3487.	35066.	1.0137	744.61
4.329	.01	.649	.021	1.05	31797.	.00	3340.	34928.	1.0137	744.61
4.362	.01	.635	.020	1.02	31797.	.00	3199.	34796.	1.0136	744.61
4.396	.01	.621	.019	.98	31797.	.00	3064.	34669.	1.0136	744.61
4.429	.01	.608	.019	.95	31797.	.00	2935.	34548.	1.0135	744.61
4.462	.01	.594	.018	.92	31797.	.00	2811.	34432.	1.0135	744.62
4.496	.01	.581	.018	.89	31797.	.00	2692.	34321.	1.0134	744.62
4.529	.01	.569	.017	.86	31797.	.00	2578.	34214.	1.0134	744.62
4.562	.01	.557	.016	.84	31797.	.00	2470.	34112.	1.0133	744.62
4.595	.01	.545	.016	.81	31797.	.00	2365.	34014.	1.0133	744.62
4.629	.01	.526	.015	.77	31797.	.00	2206.	33865.	1.0132	744.62
4.662	.00	.488	.013	.69	31797.	.00	1908.	33586.	1.0131	744.62
4.695	.00	.433	.011	.57	31797.	.00	1508.	33211.	1.0130	744.62
4.729	.00	.357	.008	.43	31797.	.00	1031.	32764.	1.0128	744.62

AT PEAK FLOW OF 78.419 WITH TIME AT 1.53 HOURS: BEDMAT = 314.67 (TONS) = .1445 (AC-FT bulked)

PEAK BULKING FACTOR = 1.132138 = 259351. (PPM-W) TOTAL SED = 351.40 (TONS) = .1613 (AC-FT bulked)

	UNBULKED WEIGHT (TONS)	BULKED VOLUME (AC-FT)	CONCENTRATION BY WEIGHT (PPM)	AVERAGE BULKING FACTOR
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WASHMAT =	92.97	.0258	.0427	31797.
BEDMAT =	651.65	.1809	.2992	187123.
TOTAL SEDIMENT =	744.62	.2068	.3419	208259.
				1.099260

SEDIMENT TRANSPORT CAPACITY: 5.10274 AC-FT/SQ MI (bulked) = 17.3652 TONS/ACRE (at Porosity=0.395)

PRINT HYD ID=11 CODE=1

PARTIAL HYDROGRAPH 133.51

RUNOFF VOLUME = .58291 INCHES = 2.0829 ACRE-FEET
PEAK DISCHARGE RATE = 78.42 CFS AT 1.532 HOURS BASIN AREA = .0670 SQ. MI.

ADD HYD ID=10 HYD NO=133.50 ID I=10 ID II=11
PRINT HYD ID=10 CODE=1

PARTIAL HYDROGRAPH 133.50

RUNOFF VOLUME = .57251 INCHES = 2.3297 ACRE-FEET
PEAK DISCHARGE RATE = 87.74 CFS AT 1.532 HOURS BASIN AREA = .0763 SQ. MI.

COMPUTE NM HYD ID=11 HYD NO=133.52 DA=0.0485 SQ MI
PER A=5.00 PER B=65.00 PER C=30.00 PER D=0.00
TP=-0.1333 HR MASS RAIN=-1

K = .126859HR TP = .133300HR K/TP RATIO = .951677 SHAPE CONSTANT, N = 3.713800
UNIT PEAK = 122.11 CFS UNIT VOLUME = 1.000 B = 335.61 P60 = 1.6800
AREA = .048500 SQ MI IA = .46250 INCHES INF = 1.14500 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=11 CODE=1

PARTIAL HYDROGRAPH 133.52

RUNOFF VOLUME = .58291 INCHES = 1.5078 ACRE-FEET
PEAK DISCHARGE RATE = 56.74 CFS AT 1.532 HOURS BASIN AREA = .0485 SQ. MI.

SED WASH LOAD ID=11 K=0.14 C=0.25
P=1.0 LS=0.375
IMPERVIOUS=0.0 FACTOR=3.0
SEDIMENT YIELD (Wash Mat.) = 45.2 (TONS) WASH LOAD CONCENTRATION = 21573 (ppm-w)
PERCENTAGE IMPERVIOUS AREA = .000 WASH LOAD FACTOR = 3.00000

PRINT HYD ID=11 CODE=1

PARTIAL HYDROGRAPH 133.52

RUNOFF VOLUME = .58291 INCHES = 1.5078 ACRE-FEET
PEAK DISCHARGE RATE = 56.74 CFS AT 1.532 HOURS BASIN AREA = .0485 SQ. MI.

SEDIMENT TRANS

ID=11 IDS=7 CODE=1

A=0.0002 B=4.19 C=0.19 D=-2.55

NUMB WASH=-1 NUMB SECTIONS=9

FLOW		VELOCITY		WIDTH	
FLOW	(CFS)	VELOCITY	(FPS)	WIDTH	(FT)
5.00	3.05	9.07			
10.00	3.73	10.90			
25.00	4.84	14.34			
40.00	5.50	16.71			
55.00	5.99	18.61			
65.00	6.26	19.71			
70.00	6.38	20.22			
75.00	6.50	20.71			
85.00	6.70	21.65			

Use wash load from SED WASH LOAD command - Concentration = 21573 (PPM-W)

* * * * *

TIME	WATER	HYD.	WASHLOAD	BED MAT.	BED	TOTAL	BULKING	ACCUM.		
(HRS)	FLOW	VELOCITY	DEPTH	WIDTH	CONC.	TRANSPORT	CONC.	FACTOR	SEDIMENT	
	(CFS)	(FT/SEC)	(FT)	(FT)	(PPM-W)	(CFS)	(PPM-W)	(PPM-W)	(TONS)	
.000	.00	.000	.000	.00	21573.	.00	0.	21573.	1.0000	.00
.033	.00	.000	.000	.00	21573.	.00	0.	21573.	1.0000	.00
.067	.00	.000	.000	.00	21573.	.00	0.	21573.	1.0000	.00
.100	.00	.000	.000	.00	21573.	.00	0.	21573.	1.0000	.00
.133	.00	.000	.000	.00	21573.	.00	0.	21573.	1.0000	.00
.167	.00	.000	.000	.00	21573.	.00	0.	21573.	1.0000	.00
.200	.00	.000	.000	.00	21573.	.00	0.	21573.	1.0000	.00
.233	.00	.000	.000	.00	21573.	.00	0.	21573.	1.0000	.00
.266	.00	.000	.000	.00	21573.	.00	0.	21573.	1.0000	.00
.300	.00	.000	.000	.00	21573.	.00	0.	21573.	1.0000	.00
.333	.00	.000	.000	.00	21573.	.00	0.	21573.	1.0000	.00
.366	.00	.000	.000	.00	21573.	.00	0.	21573.	1.0000	.00
.400	.00	.000	.000	.00	21573.	.00	0.	21573.	1.0000	.00
.433	.00	.000	.000	.00	21573.	.00	0.	21573.	1.0000	.00
.466	.00	.000	.000	.00	21573.	.00	0.	21573.	1.0000	.00
.500	.00	.000	.000	.00	21573.	.00	0.	21573.	1.0000	.00
.533	.00	.000	.000	.00	21573.	.00	0.	21573.	1.0000	.00
.566	.00	.000	.000	.00	21573.	.00	0.	21573.	1.0000	.00
.599	.00	.000	.000	.00	21573.	.00	0.	21573.	1.0000	.00
.633	.00	.000	.000	.00	21573.	.00	0.	21573.	1.0000	.00
.666	.00	.000	.000	.00	21573.	.00	0.	21573.	1.0000	.00
.699	.00	.000	.000	.00	21573.	.00	0.	21573.	1.0000	.00
.733	.00	.000	.000	.00	21573.	.00	0.	21573.	1.0000	.00
.766	.00	.000	.000	.00	21573.	.00	0.	21573.	1.0000	.00
.799	.00	.000	.000	.00	21573.	.00	0.	21573.	1.0000	.00
.833	.00	.000	.000	.00	21573.	.00	0.	21573.	1.0000	.00
.866	.00	.000	.000	.00	21573.	.00	0.	21573.	1.0000	.00
.899	.00	.000	.000	.00	21573.	.00	0.	21573.	1.0000	.00
.932	.00	.000	.000	.00	21573.	.00	0.	21573.	1.0000	.00
.966	.00	.000	.000	.00	21573.	.00	0.	21573.	1.0000	.00
.999	.00	.000	.000	.00	21573.	.00	0.	21573.	1.0000	.00
1.032	.00	.000	.000	.00	21573.	.00	0.	21573.	1.0000	.00

1.066	.00	.000	.000	.00	21573.	.00	0.	21573.	1.0000	.00
1.099	.00	.000	.000	.00	21573.	.00	0.	21573.	1.0000	.00
1.132	.00	.000	.000	.00	21573.	.00	0.	21573.	1.0000	.00
1.166	.00	.000	.000	.00	21573.	.00	0.	21573.	1.0000	.00
1.199	.00	.000	.000	.00	21573.	.00	0.	21573.	1.0000	.00
1.232	.00	.000	.000	.00	21573.	.00	0.	21573.	1.0000	.00
1.265	.00	.000	.000	.00	21573.	.00	0.	21573.	1.0000	.00
1.299	.00	.000	.000	.00	21573.	.00	0.	21573.	1.0000	.00
1.332	.85	1.918	.090	4.95	21573.	.01	30462.	50754.	1.0202	.17
1.365	5.47	3.137	.189	9.24	21573.	.17	76600.	95025.	1.0396	2.32
1.399	16.47	4.337	.307	12.38	21573.	.98	135950.	152104.	1.0677	13.37
1.432	32.64	5.217	.402	15.55	21573.	2.80	185376.	199749.	1.0942	43.84
1.465	48.01	5.782	.468	17.72	21573.	5.06	218409.	231650.	1.1138	97.98
1.499	56.23	6.026	.498	18.75	21573.	6.44	232817.	245579.	1.1228	166.44
1.532	56.74	6.041	.500	18.80	21573.	6.53	233669.	246402.	1.1234	235.83
1.565	52.00	5.905	.483	18.23	21573.	5.72	225634.	238633.	1.1183	296.78
1.598	44.93	5.680	.456	17.33	21573.	4.57	212380.	225824.	1.1101	345.80
1.632	37.60	5.414	.425	16.33	21573.	3.48	196817.	210794.	1.1008	383.36
1.665	30.98	5.143	.394	15.29	21573.	2.59	181154.	195676.	1.0918	411.55
1.698	25.17	4.850	.361	14.37	21573.	1.87	164430.	179546.	1.0826	432.15
1.732	20.13	4.581	.332	13.22	21573.	1.33	149380.	165040.	1.0746	447.04
1.765	15.86	4.291	.302	12.24	21573.	.92	133470.	149715.	1.0664	457.48
1.798	12.41	3.991	.272	11.45	21573.	.62	117564.	134405.	1.0586	464.69
1.832	9.85	3.715	.244	10.85	21573.	.43	103464.	120842.	1.0519	469.76

TIME (HRS)	WATER FLOW (CFS)	VELOCITY (FT/SEC)	HYD. DEPTH (FT)	WIDTH (FT)	WASHLOAD CONC. (PPM-W)	BED MAT. TRANSPORT (CFS)	BED CONC. (PPM-W)	TOTAL CONC. (PPM-W)	BULKING FACTOR	ACCUM. SEDIMENT (TONS)
1.865	8.08	3.520	.225	10.20	21573.	.32	94109.	111848.	1.0475	473.56
1.898	6.93	3.368	.210	9.78	21573.	.25	87001.	105017.	1.0443	476.60
1.931	6.05	3.235	.198	9.45	21573.	.20	80967.	99220.	1.0416	479.10
1.965	5.36	3.117	.187	9.20	21573.	.17	75755.	94213.	1.0393	481.18
1.998	4.81	3.027	.179	8.88	21573.	.14	71822.	90436.	1.0375	482.97
2.031	4.34	2.967	.173	8.44	21573.	.12	69235.	87952.	1.0364	484.54
2.065	3.95	2.909	.168	8.07	21573.	.11	66774.	85589.	1.0353	485.92
2.098	3.61	2.853	.163	7.74	21573.	.09	64397.	83308.	1.0343	487.15
2.131	3.31	2.796	.159	7.45	21573.	.08	62066.	81070.	1.0333	488.24
2.164	3.03	2.740	.154	7.19	21573.	.07	59748.	78845.	1.0323	489.21
2.198	2.78	2.682	.149	6.94	21573.	.06	57432.	76622.	1.0313	490.07
2.231	2.54	2.624	.144	6.72	21573.	.06	55127.	74410.	1.0303	490.83
2.264	2.33	2.565	.139	6.52	21573.	.05	52839.	72215.	1.0294	491.51
2.298	2.13	2.506	.135	6.33	21573.	.04	50576.	70043.	1.0284	492.11
2.331	1.96	2.446	.130	6.16	21573.	.04	48343.	67901.	1.0275	492.65
2.364	1.79	2.386	.125	6.00	21573.	.03	46148.	65796.	1.0266	493.12
2.398	1.64	2.327	.120	5.86	21573.	.03	43997.	63732.	1.0257	493.54
2.431	1.50	2.267	.116	5.73	21573.	.02	41893.	61714.	1.0248	493.91
2.464	1.38	2.208	.111	5.61	21573.	.02	39843.	59748.	1.0240	494.23
2.498	1.26	2.149	.107	5.50	21573.	.02	37849.	57836.	1.0232	494.52
2.531	1.16	2.091	.103	5.40	21573.	.02	35915.	55982.	1.0224	494.78
2.564	1.06	2.033	.098	5.30	21573.	.01	34044.	54188.	1.0216	495.01
2.597	.97	1.980	.095	5.19	21573.	.01	32379.	52592.	1.0209	495.21
2.631	.89	1.937	.091	5.02	21573.	.01	31053.	51320.	1.0204	495.39
2.664	.82	1.895	.089	4.86	21573.	.01	29779.	50099.	1.0199	495.55
2.697	.75	1.854	.086	4.70	21573.	.01	28556.	48927.	1.0194	495.69
2.731	.68	1.814	.083	4.55	21573.	.01	27381.	47801.	1.0189	495.82
2.764	.63	1.775	.080	4.40	21573.	.01	26254.	46721.	1.0185	495.94
2.797	.57	1.736	.078	4.26	21573.	.01	25172.	45683.	1.0181	496.04
2.831	.53	1.699	.075	4.12	21573.	.00	24133.	44688.	1.0177	496.13
2.864	.48	1.662	.073	3.99	21573.	.00	23136.	43733.	1.0173	496.22

2.897	.44	1.626	.070	3.86	21573.	.00	22180.	42816.	1.0169	496.29
2.930	.40	1.591	.068	3.74	21573.	.00	21262.	41937.	1.0165	496.36
2.964	.37	1.557	.066	3.62	21573.	.00	20381.	41093.	1.0162	496.42
2.997	.34	1.523	.064	3.50	21573.	.00	19536.	40283.	1.0158	496.47
3.030	.31	1.490	.062	3.39	21573.	.00	18726.	39507.	1.0155	496.52
3.064	.29	1.458	.060	3.28	21573.	.00	17948.	38762.	1.0152	496.56
3.097	.26	1.426	.058	3.17	21573.	.00	17202.	38047.	1.0149	496.60
3.130	.24	1.395	.056	3.07	21573.	.00	16487.	37362.	1.0146	496.63
3.164	.22	1.365	.054	2.97	21573.	.00	15801.	36705.	1.0144	496.66
3.197	.20	1.336	.052	2.87	21573.	.00	15143.	36074.	1.0141	496.69
3.230	.18	1.307	.051	2.78	21573.	.00	14512.	35470.	1.0139	496.72
3.263	.17	1.278	.049	2.69	21573.	.00	13907.	34890.	1.0136	496.74
3.297	.15	1.251	.047	2.60	21573.	.00	13327.	34334.	1.0134	496.76
3.330	.14	1.224	.046	2.52	21573.	.00	12770.	33802.	1.0132	496.78
3.363	.13	1.197	.044	2.44	21573.	.00	12237.	33291.	1.0130	496.80
3.397	.12	1.171	.043	2.36	21573.	.00	11726.	32801.	1.0128	496.81
3.430	.11	1.146	.042	2.28	21573.	.00	11235.	32331.	1.0126	496.82
3.463	.10	1.121	.040	2.21	21573.	.00	10765.	31881.	1.0124	496.84
3.497	.09	1.097	.039	2.14	21573.	.00	10315.	31450.	1.0123	496.85
3.530	.08	1.073	.038	2.07	21573.	.00	9883.	31036.	1.0121	496.86
3.563	.08	1.050	.037	2.00	21573.	.00	9469.	30640.	1.0119	496.87
3.596	.07	1.027	.035	1.94	21573.	.00	9072.	30260.	1.0118	496.88
3.630	.06	1.005	.034	1.88	21573.	.00	8692.	29896.	1.0116	496.88
3.663	.06	.983	.033	1.82	21573.	.00	8328.	29547.	1.0115	496.89
3.696	.05	.962	.032	1.76	21573.	.00	7978.	29212.	1.0114	496.90

TIME (HRS)	WATER FLOW (CFS)	VELOCITY (FT/SEC)	HYD. DEPTH (FT)	WIDTH (FT)	WASHLOAD CONC. (PPM-W)	BED MAT. TRANSPORT (CFS)	BED CONC. (PPM-W)	TOTAL CONC. (PPM-W)	BULKING FACTOR	ACCUM. SEDIMENT (TONS)
3.730	.05	.941	.031	1.70	21573.	.00	7644.	28892.	1.0112	496.90
3.763	.05	.921	.030	1.65	21573.	.00	7323.	28584.	1.0111	496.91
3.796	.04	.901	.029	1.59	21573.	.00	7015.	28290.	1.0110	496.91
3.830	.04	.881	.028	1.54	21573.	.00	6721.	28008.	1.0109	496.92
3.863	.03	.862	.027	1.49	21573.	.00	6438.	27737.	1.0108	496.92
3.896	.03	.844	.026	1.44	21573.	.00	6168.	27478.	1.0107	496.92
3.929	.03	.825	.025	1.40	21573.	.00	5909.	27230.	1.0106	496.93
3.963	.03	.808	.025	1.35	21573.	.00	5660.	26992.	1.0105	496.93
3.996	.02	.790	.024	1.31	21573.	.00	5422.	26764.	1.0104	496.93
4.029	.02	.773	.023	1.27	21573.	.00	5194.	26546.	1.0103	496.93
4.063	.02	.756	.022	1.22	21573.	.00	4976.	26337.	1.0102	496.93
4.096	.02	.740	.022	1.19	21573.	.00	4766.	26136.	1.0101	496.94
4.129	.02	.724	.021	1.15	21573.	.00	4566.	25944.	1.0101	496.94
4.163	.02	.708	.020	1.11	21573.	.00	4373.	25760.	1.0100	496.94
4.196	.01	.693	.020	1.07	21573.	.00	4189.	25584.	1.0099	496.94
4.229	.01	.678	.019	1.04	21573.	.00	4013.	25415.	1.0098	496.94
4.262	.01	.663	.018	1.01	21573.	.00	3844.	25253.	1.0098	496.94
4.296	.01	.649	.018	.97	21573.	.00	3682.	25098.	1.0097	496.95
4.329	.01	.635	.017	.94	21573.	.00	3527.	24949.	1.0097	496.95
4.362	.01	.621	.017	.91	21573.	.00	3378.	24807.	1.0096	496.95
4.396	.01	.608	.016	.88	21573.	.00	3236.	24671.	1.0095	496.95
4.429	.01	.595	.016	.85	21573.	.00	3099.	24540.	1.0095	496.95
4.462	.01	.582	.015	.83	21573.	.00	2969.	24415.	1.0094	496.95
4.496	.01	.561	.014	.78	21573.	.00	2769.	24224.	1.0094	496.95
4.529	.00	.522	.013	.70	21573.	.00	2396.	23866.	1.0092	496.95
4.562	.00	.463	.011	.59	21573.	.00	1893.	23385.	1.0090	496.95
4.595	.00	.382	.008	.44	21573.	.00	1295.	22812.	1.0088	496.95

AT PEAK FLOW OF 56.738 WITH TIME AT 1.53 HOURS: BEDMAT = 217.98 (TONS) = .1001 (AC-FT bulked)

PEAK BULKING FACTOR = 1.123384 = 246402. (PPM-W) TOTAL SED = 235.83 (TONS) = .1083 (AC-FT bulked)

	WEIGHT (TONS)	UNBULKED VOLUME (AC-FT)	BULKED VOLUME (AC-FT)	CONCENTRATION BY WEIGHT (PPM)	AVERAGE BULKING FACTOR
WASHMAT =	45.18	.0125	.0207	21573.	
BEDMAT =	451.77	.1254	.2074	180639.	
TOTAL SEDIMENT =	496.95	.1380	.2282	195178.	1.091514

SEDIMENT TRANSPORT CAPACITY: 4.70450 AC-FT/SQ MI (bulkcd) = 16.0100 TONS/ACRE (at Porosity=0.395)

PRINT HYD ID=11 CODE=1

PARTIAL HYDROGRAPH 133.52

RUNOFF VOLUME = .58291 INCHES = 1.5078 ACRE-FEET
PEAK DISCHARGE RATE = 56.74 CFS AT 1.532 HOURS BASIN AREA = .0485 SQ. MI.

*S UNDEVELOPED, OFF-SITE FLOW ENTERING POND
ADD HYD ID=11 HYD NO=133.50 ID I=10 ID II=11
PRINT HYD ID=11 CODE=1

PARTIAL HYDROGRAPH 133.50

RUNOFF VOLUME = .57655 INCHES = 3.8375 ACRE-FEET
PEAK DISCHARGE RATE = 144.48 CFS AT 1.532 HOURS BASIN AREA = .1248 SQ. MI.

* *****

FINISH

NORMAL PROGRAM FINISH END TIME (HR:MIN:SEC) = 07:34:09

100-YEAR POST DEVELOPMENT DETAIL PRINTOUT

AHYMO PROGRAM (AHYMO993) - AMAFCA VERSION OF HYMO - SEPTEMBER, 1993
RUN DATE (MON/DAY/YR) = 11/26/1993
START TIME (HR:MIN:SEC) = 08:13:49 USER NO. = COMMSC_B.T93
INPUT FILE = P4100PO.DAT

*S PARKWEST-100 YEAR POST DEVELOPMENT

START TIME=0.0 HR PUNCH CODE=0

RAINFALL TYPE=1 RAIN QUARTER=0.0
RAIN ONE=1.87 IN RAIN SIX=2.20 IN
RAIN DAY=2.66 IN DT=0.0333 HRS

COMPUTED 6-HOUR RAINFALL DISTRIBUTION BASED ON NOAA ATLAS 2 - PEAK AT 1.40 HR.
DT = .033300 HOURS END TIME = 5.994000 HOURS

.0000	.0016	.0033	.0050	.0067	.0085	.0103
.0121	.0140	.0160	.0180	.0200	.0221	.0243
.0265	.0288	.0312	.0336	.0361	.0387	.0414
.0442	.0471	.0501	.0533	.0566	.0600	.0636
.0674	.0714	.0757	.0808	.0863	.0922	.1044
.1323	.1754	.2374	.3221	.4335	.5756	.7527
.9690	1.1767	1.2619	1.3336	1.3972	1.4551	1.5084
1.5579	1.6041	1.6474	1.6881	1.7266	1.7629	1.7973
1.8298	1.8607	1.8900	1.9178	1.9442	1.9515	1.9573
1.9627	1.9680	1.9729	1.9777	1.9823	1.9867	1.9909
1.9950	1.9990	2.0029	2.0066	2.0102	2.0137	2.0172
2.0205	2.0238	2.0269	2.0300	2.0331	2.0360	2.0389
2.0418	2.0446	2.0473	2.0500	2.0526	2.0552	2.0578
2.0603	2.0627	2.0651	2.0675	2.0698	2.0721	2.0744
2.0766	2.0788	2.0810	2.0832	2.0853	2.0873	2.0894
2.0914	2.0934	2.0954	2.0974	2.0993	2.1012	2.1031
2.1050	2.1068	2.1086	2.1104	2.1122	2.1140	2.1157
2.1174	2.1191	2.1208	2.1225	2.1242	2.1258	2.1274
2.1290	2.1306	2.1322	2.1338	2.1353	2.1369	2.1384
2.1399	2.1414	2.1429	2.1444	2.1459	2.1473	2.1487
2.1502	2.1516	2.1530	2.1544	2.1558	2.1571	2.1585
2.1599	2.1612	2.1625	2.1639	2.1652	2.1665	2.1678
2.1691	2.1703	2.1716	2.1729	2.1741	2.1754	2.1766
2.1778	2.1791	2.1803	2.1815	2.1827	2.1839	2.1850
2.1862	2.1874	2.1886	2.1897	2.1909	2.1920	2.1931
2.1943	2.1954	2.1965	2.1976	2.1987	2.1998	

* *****

COMPUTE NM HYD ID=1 HYD NO=14.0 DA=0.8000 SQ MI
PER A=69.00 PER B=8.00 PER C=23.00 PER D=0.00
TP=-0.3459 HR MASS RAIN=-1

K = .326587HR TP = .345900HR K/TP RATIO = .944166 SHAPE CONSTANT, N = 3.744453
UNIT PEAK = 781.16 CFS UNIT VOLUME = 1.000 B = 337.76 P60 = 1.8700
AREA = .800000 SQ MI IA = .56900 INCHES INF = 1.44320 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=1 CODE=1

OUTFLOW HYDROGRAPH REACH 14.00

RUNOFF VOLUME = .55414 INCHES = 23.6432 ACRE-FEET

PEAK DISCHARGE RATE = 419.68 CFS AT 1.732 HOURS BASIN AREA = .8000 SQ. MI.

SED WASH LOAD ID=1 K=0.19 C=0.25

P=1.0 LS=0.333

IMPERVIOUS=0.0 FACTOR=3.0

SEDIMENT YIELD (Wash Mat.) = 780.0 (TONS) WASH LOAD CONCENTRATION = 23698 (ppm-w)
PERCENTAGE IMPERVIOUS AREA = .000 WASH LOAD FACTOR = 3.00000

PRINT HYD ID=1 CODE=1

OUTFLOW HYDROGRAPH REACH 14.00

RUNOFF VOLUME = .55414 INCHES = 23.6432 ACRE-FEET
PEAK DISCHARGE RATE = 419.68 CFS AT 1.732 HOURS BASIN AREA = .8000 SQ. MI.

*S ROUTE L14 THROUGH 131

COMPUTE RATING CURVE RC=1 VS NO=1 NO SEGS=1 MIN ELEV=0.0 FT

MAX ELEV=5.0 FT CH SLP=0.0325 FP

SLP= 0.0325 N=0.03 DIST=100 FT

DIST	ELEV	DIST	ELEV	DIST	ELEV	DIST	ELEV
0.0	5.0	20	0.0	80	0.0	100	5.0

RATING CURVE VALLEY SECTION 1.0

WATER SURFACE ELEV	FLOW AREA SQ FT	FLOW RATE CFS	TOP WIDTH FT
.00	.00	.00	.00
.26	16.07	58.21	62.11
.53	32.69	185.84	64.21
.79	49.86	367.44	66.32
1.05	67.59	597.16	68.42
1.32	85.87	871.70	70.53
1.58	104.71	1189.01	72.63
1.84	124.10	1547.69	74.74
2.11	144.04	1946.80	76.84
2.37	164.54	2385.70	78.95
2.63	185.60	2863.98	81.05
2.89	207.20	3381.36	83.16
3.16	229.36	3937.71	85.26
3.42	252.08	4532.98	87.37
3.68	275.35	5167.20	89.47
3.95	299.17	5840.48	91.58
4.21	323.55	6552.94	93.68
4.47	348.48	7304.79	95.79
4.74	373.96	8096.24	97.89
5.00	400.00	8927.54	100.00

COMPUTE TRAVEL TIME ID=2 REACH NO=1 NO VS=1 L=4000 FT SLP=0.0325

TRAVEL TIME TABLE

REACH= 1.0

WATER DEPTH FEET	AVERAGE AREA SQ.FT.	FLOW RATE CFS	TRAVEL TIME HRS
.263	16.066	58.21	.3067

.526	32.687	185.84	.1954
.789	49.861	367.44	.1508
1.053	67.590	597.16	.1258
1.316	85.873	871.70	.1095
1.579	104.709	1189.01	.0978
1.842	124.100	1547.69	.0891
2.105	144.044	1946.80	.0822
2.368	164.543	2385.70	.0766
2.632	185.596	2863.98	.0720
2.895	207.202	3381.36	.0681
3.158	229.363	3937.71	.0647
3.421	252.078	4532.98	.0618
3.684	275.346	5167.20	.0592
3.947	299.169	5840.48	.0569
4.211	323.546	6552.94	.0549
4.474	348.476	7304.79	.0530
4.737	373.961	8096.24	.0513
5.000	400.000	8927.54	.0498

ROUTE ID=2 HYD NO= 14.01 INFLOW ID=1
PRINT HYD ID=2 CODE=1

OUTFLOW HYDROGRAPH REACH 14.01

RUNOFF VOLUME = .55414 INCHES = 23.6432 ACRE-FEET
PEAK DISCHARGE RATE = 363.29 CFS AT 1.865 HOURS BASIN AREA = .8000 SQ. MI.

COMPUTE NM HYD ID=3 HYD NO=131.0 DA=0.2802 SQ MI
PER A=54.75 PER B=3.99 PER C=41.26 PER D=0.00
TP=-0.3695 HR MASS RAIN=-1

K = .341904HR TP = .369500HR K/TP RATIO = .925316 SHAPE CONSTANT, N = 3.824152
UNIT PEAK = 260.31 CFS UNIT VOLUME = 1.000 B = 343.27 P60 = 1.8700
AREA = .280200 SQ MI IA = .52024 INCHES INF = 1.30666 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=3 CODE=1

PARTIAL HYDROGRAPH 131.00

RUNOFF VOLUME = .63179 INCHES = 9.4415 ACRE-FEET
PEAK DISCHARGE RATE = 157.76 CFS AT 1.765 HOURS BASIN AREA = .2802 SQ. MI.

SED WASH LOAD ID=3 K=0.12 C=0.25
P=1.0 LS=0.955
IMPERVIOUS=0.0 FACTOR=3.0
SEDIMENT YIELD (Wash Mat.) = 488.5 (TONS) WASH LOAD CONCENTRATION = 36673 (ppm-w)
PERCENTAGE IMPERVIOUS AREA = .000 WASH LOAD FACTOR = 3.00000

PRINT HYD ID=3 CODE=1

PARTIAL HYDROGRAPH 131.00

RUNOFF VOLUME = .63179 INCHES = 9.4415 ACRE-FEET

PEAK DISCHARGE RATE = 157.76 CFS AT 1.765 HOURS BASIN AREA = .2802 SQ. MI.

*S BASINS 114 AND 131 ENTERING THE SITE
ADD HYD ID=3 HYD NO=131.01 ID I=2 ID II=3
PRINT HYD ID=3 CODE=1

PARTIAL HYDROGRAPH 131.01

RUNOFF VOLUME = .57428 INCHES = 33.0847 ACRE-FEET
PEAK DISCHARGE RATE = 513.75 CFS AT 1.832 HOURS BASIN AREA = 1.0802 SQ. MI.

SEDIMENT TRANS ID=3 IDS=1 CODE=1
A=0.0002 B=4.19 C=0.19 D=-2.55
NUMB WASH=1 WASH CONC=27400 NUMB SECTIONS=7
FLOW VELOCITY WIDTH
(CFS) (FPS) (FT)
100. 3.96 52.95
200. 4.80 64.81
300. 5.36 73.59
400. 5.56 88.83
500. 5.69 105.67
600. 6.09 106.94
700. 6.46 108.10

* * * * *

TIME (HRS)	WATER FLOW (CFS)	HYD. VELOCITY (FT/SEC)	DEPTH (FT)	WIDTH (FT)	WASHLOAD CONC. (PPM-W)	BED MAT. TRANSPORT (CFS)	BED CONC. (PPM-W)	TOTAL CONC. (PPM-W)	BULKING FACTOR	ACCUM. SEDIMENT (TONS)
.000	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
.033	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
.067	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
.100	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
.133	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
.167	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
.200	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
.233	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
.266	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
.300	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
.333	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
.366	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
.400	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
.433	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
.466	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
.500	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
.533	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
.566	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
.599	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
.633	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
.666	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
.699	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
.733	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
.766	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
.799	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00

.833	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
.866	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
.899	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
.932	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
.966	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
.999	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
1.032	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
1.066	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
1.099	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
1.132	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
1.166	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
1.199	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
1.232	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
1.265	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
1.299	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
1.332	.15	.762	.040	.00	27400.	.00	0.	27400.	1.0000	.00
1.365	1.43	1.405	.101	10.13	27400.	.01	10677.	37503.	1.0147	.23
1.399	6.32	2.356	.219	12.25	27400.	.07	29096.	54946.	1.0219	1.60
1.432	18.03	3.119	.333	17.34	27400.	.35	49572.	74357.	1.0303	7.02
1.465	39.08	3.588	.411	26.48	27400.	1.01	64354.	88383.	1.0366	21.19
1.499	70.48	3.847	.457	40.13	27400.	2.10	73162.	96746.	1.0404	49.42
1.532	112.16	4.098	.503	54.39	27400.	3.78	81997.	105140.	1.0443	98.71
1.565	161.40	4.541	.590	60.23	27400.	6.63	98210.	120553.	1.0517	181.46
1.598	217.16	4.914	.666	66.32	27400.	10.40	112634.	134276.	1.0585	307.44
1.632	282.11	5.276	.742	72.02	27400.	15.53	127286.	148228.	1.0657	491.07
1.665	351.73	5.474	.789	81.47	27400.	20.74	135141.	155712.	1.0696	733.70
1.698	411.60	5.578	.813	90.78	27400.	25.14	139314.	159689.	1.0717	1026.26
1.732	455.55	5.638	.823	98.18	27400.	28.51	142264.	162502.	1.0732	1356.87
1.765	487.72	5.676	.829	103.60	27400.	31.00	144144.	164293.	1.0742	1715.49
1.798	507.19	5.721	.838	105.76	27400.	32.75	146116.	166175.	1.0752	2093.55
1.832	513.75	5.748	.844	105.84	27400.	33.49	147302.	167305.	1.0758	2479.63

TIME (HRS)	WATER FLOW (CFS)	VELOCITY (FT/SEC)	HYD. DEPTH (FT)	WIDTH (FT)	WASHLOAD CONC. (PPM-w)	BED MAT. TRANSPORT (CFS)	BED CONC. (PPM-w)	TOTAL CONC. (PPM-w)	BULKING FACTOR	ACCU. SEDIMENT (TONS)
1.865	508.10	5.724	.839	105.77	27400.	32.85	146282.	166332.	1.0753	2858.81
1.898	490.76	5.680	.830	104.11	27400.	31.23	144310.	164452.	1.0743	3220.08
1.931	465.41	5.650	.825	99.85	27400.	29.27	142863.	163072.	1.0735	3559.26
1.965	437.14	5.614	.819	95.08	27400.	27.10	141087.	161379.	1.0726	3873.89
1.998	408.38	5.573	.812	90.24	27400.	24.89	139077.	159464.	1.0716	4163.67
2.031	380.39	5.527	.802	85.84	27400.	22.82	137181.	157656.	1.0706	4429.96
2.065	353.70	5.478	.790	81.77	27400.	20.88	135288.	155852.	1.0697	4674.21
2.098	328.45	5.426	.777	77.93	27400.	19.06	133295.	153953.	1.0687	4897.75
2.131	301.73	5.364	.762	73.85	27400.	17.15	130929.	151699.	1.0675	5099.57
2.164	274.77	5.240	.735	71.38	27400.	14.92	125797.	146809.	1.0649	5276.41
2.198	251.20	5.116	.708	69.31	27400.	13.02	120745.	141998.	1.0625	5431.91
2.231	229.31	4.990	.682	67.38	27400.	11.32	115649.	137146.	1.0600	5568.23
2.264	208.62	4.858	.655	65.57	27400.	9.77	110426.	132175.	1.0575	5687.07
2.298	190.57	4.742	.631	63.69	27400.	8.52	105879.	127847.	1.0553	5791.56
2.331	175.14	4.640	.610	61.86	27400.	7.50	101970.	124128.	1.0535	5884.39
2.364	161.66	4.543	.590	60.26	27400.	6.65	98284.	120623.	1.0518	5967.33
2.398	149.64	4.449	.572	58.84	27400.	5.91	94760.	117271.	1.0501	6041.69
2.431	138.78	4.357	.553	57.55	27400.	5.27	91356.	114036.	1.0486	6108.50
2.464	128.86	4.267	.536	56.37	27400.	4.70	88051.	110894.	1.0471	6168.61
2.498	119.96	4.180	.519	55.32	27400.	4.20	84907.	107905.	1.0456	6222.89
2.531	112.08	4.098	.503	54.38	27400.	3.78	81967.	105112.	1.0443	6272.13
2.564	104.86	4.017	.488	53.53	27400.	3.40	79132.	102418.	1.0431	6316.88
2.597	98.13	3.955	.476	52.14	27400.	3.09	76950.	100345.	1.0421	6357.82
2.631	92.07	3.936	.473	49.50	27400.	2.87	76283.	99711.	1.0418	6395.96

2.664	86.74	3.917	.469	47.19	27400.	2.68	75633.	99094.	1.0415	6431.65
2.697	82.11	3.900	.466	45.18	27400.	2.51	75011.	98503.	1.0412	6465.20
2.731	77.95	3.882	.463	43.37	27400.	2.36	74401.	97924.	1.0410	6496.85
2.764	74.16	3.865	.460	41.73	27400.	2.23	73798.	97350.	1.0407	6526.77
2.797	70.74	3.848	.457	40.24	27400.	2.11	73207.	96789.	1.0404	6555.12
2.831	67.68	3.832	.454	38.91	27400.	2.00	72639.	96250.	1.0402	6582.08
2.864	64.88	3.816	.451	37.69	27400.	1.90	72082.	95721.	1.0399	6607.77
2.897	62.23	3.799	.448	36.54	27400.	1.81	71522.	95189.	1.0397	6632.25
2.930	59.73	3.783	.445	35.46	27400.	1.72	70956.	94651.	1.0395	6655.61
2.964	57.36	3.766	.442	34.43	27400.	1.64	70384.	94109.	1.0392	6677.90
2.997	55.11	3.750	.439	33.45	27400.	1.56	69807.	93560.	1.0389	6699.18
3.030	52.97	3.732	.436	32.52	27400.	1.49	69223.	93006.	1.0387	6719.50
3.064	50.94	3.715	.433	31.64	27400.	1.42	68634.	92446.	1.0384	6738.90
3.097	49.00	3.698	.430	30.79	27400.	1.35	68039.	91881.	1.0382	6757.45
3.130	47.15	3.680	.427	29.99	27400.	1.29	67438.	91311.	1.0379	6775.17
3.164	45.38	3.662	.424	29.22	27400.	1.23	66831.	90735.	1.0377	6792.10
3.197	43.70	3.644	.421	28.49	27400.	1.17	66219.	90154.	1.0374	6808.30
3.230	42.08	3.625	.418	27.79	27400.	1.11	65602.	89568.	1.0371	6823.78
3.263	40.54	3.606	.414	27.12	27400.	1.06	64979.	88977.	1.0369	6838.59
3.297	39.07	3.588	.411	26.48	27400.	1.01	64351.	88380.	1.0366	6852.76
3.330	37.66	3.568	.408	25.87	27400.	.97	63718.	87779.	1.0363	6866.31
3.363	36.30	3.549	.405	25.28	27400.	.92	63079.	87173.	1.0360	6879.28
3.397	35.01	3.529	.401	24.72	27400.	.88	62436.	86563.	1.0358	6891.69
3.430	33.76	3.510	.398	24.18	27400.	.84	61788.	85948.	1.0355	6903.56
3.463	32.57	3.490	.395	23.66	27400.	.80	61136.	85328.	1.0352	6914.93
3.497	31.42	3.469	.391	23.16	27400.	.76	60478.	84705.	1.0349	6925.80
3.530	30.32	3.449	.388	22.68	27400.	.73	59817.	84077.	1.0346	6936.21
3.563	29.26	3.428	.384	22.22	27400.	.69	59151.	83445.	1.0344	6946.18
3.596	28.24	3.407	.381	21.78	27400.	.66	58482.	82810.	1.0341	6955.71
3.630	27.26	3.386	.377	21.35	27400.	.63	57809.	82171.	1.0338	6964.84
3.663	26.32	3.365	.374	20.94	27400.	.60	57132.	81529.	1.0335	6973.58
3.696	25.41	3.343	.370	20.55	27400.	.57	56452.	80883.	1.0332	6981.95

TIME (HRS)	WATER FLOW (CFS)	VELOCITY (FT/SEC)	HYD. DEPTH (FT)	WIDTH (FT)	WASHLOAD CONC. (PPM-W)	BED MAT. TRANSPORT (CFS)	BED CONC. (PPM-W)	TOTAL CONC. (PPM-W)	BULKING FACTOR	ACCU. SEDIMENT (TONS)
3.730	24.54	3.321	.366	20.17	27400.	.55	55768.	80235.	1.0329	6989.96
3.763	23.70	3.299	.363	19.80	27400.	.52	55082.	79584.	1.0326	6997.62
3.796	22.89	3.277	.359	19.45	27400.	.50	54393.	78930.	1.0323	7004.96
3.830	22.11	3.255	.355	19.11	27400.	.47	53702.	78274.	1.0320	7011.98
3.863	21.36	3.232	.352	18.79	27400.	.45	53009.	77616.	1.0318	7018.70
3.896	20.63	3.210	.348	18.47	27400.	.43	52313.	76957.	1.0315	7025.13
3.929	19.93	3.187	.344	18.17	27400.	.41	51617.	76296.	1.0312	7031.29
3.963	19.26	3.164	.341	17.87	27400.	.39	50919.	75634.	1.0309	7037.19
3.996	18.61	3.140	.337	17.59	27400.	.37	50219.	74971.	1.0306	7042.83
4.029	17.98	3.117	.333	17.32	27400.	.35	49520.	74307.	1.0303	7048.22
4.063	17.37	3.093	.329	17.06	27400.	.34	48819.	73642.	1.0300	7053.39
4.096	16.79	3.070	.325	16.80	27400.	.32	48119.	72978.	1.0297	7058.33
4.129	16.22	3.046	.322	16.56	27400.	.30	47419.	72314.	1.0294	7063.06
4.163	15.68	3.022	.318	16.32	27400.	.29	46719.	71650.	1.0291	7067.59
4.196	15.15	2.998	.314	16.09	27400.	.28	46020.	70987.	1.0288	7071.92
4.229	14.65	2.974	.310	15.87	27400.	.26	45321.	70325.	1.0285	7076.06
4.262	14.16	2.949	.307	15.66	27400.	.25	44625.	69665.	1.0283	7080.03
4.296	13.68	2.925	.303	15.45	27400.	.24	43930.	69005.	1.0280	7083.82
4.329	13.23	2.900	.299	15.25	27400.	.23	43237.	68348.	1.0277	7087.45
4.362	12.78	2.876	.295	15.06	27400.	.21	42546.	67693.	1.0274	7090.92
4.396	12.36	2.851	.291	14.88	27400.	.20	41857.	67040.	1.0271	7094.24
4.429	11.95	2.826	.288	14.70	27400.	.19	41172.	66391.	1.0268	7097.42
4.462	11.55	2.801	.284	14.53	27400.	.18	40489.	65744.	1.0266	7100.46

4.496	11.16	2.777	.280	14.36	27400.	.17	39810.	65100.	1.0263	7103.37
4.529	10.79	2.752	.276	14.20	27400.	.17	39135.	64459.	1.0260	7106.15
4.562	10.43	2.727	.272	14.04	27400.	.16	38463.	63823.	1.0257	7108.81
4.595	10.09	2.702	.269	13.89	27400.	.15	37796.	63190.	1.0255	7111.35
4.629	9.75	2.677	.265	13.74	27400.	.14	37133.	62562.	1.0252	7113.79
4.662	9.43	2.652	.261	13.60	27400.	.13	36475.	61938.	1.0249	7116.11
4.695	9.11	2.627	.258	13.47	27400.	.13	35822.	61319.	1.0247	7118.34
4.729	8.81	2.601	.254	13.34	27400.	.12	35174.	60705.	1.0244	7120.47
4.762	8.52	2.576	.250	13.21	27400.	.11	34531.	60095.	1.0241	7122.51
4.795	8.23	2.551	.247	13.09	27400.	.11	33894.	59492.	1.0239	7124.46
4.829	7.96	2.526	.243	12.97	27400.	.10	33262.	58893.	1.0236	7126.32
4.862	7.70	2.501	.239	12.85	27400.	.10	32637.	58300.	1.0234	7128.10
4.895	7.44	2.476	.236	12.74	27400.	.09	32017.	57714.	1.0231	7129.81
4.928	7.20	2.452	.232	12.63	27400.	.09	31404.	57133.	1.0229	7131.44
4.962	6.96	2.427	.229	12.53	27400.	.08	30798.	56558.	1.0226	7133.00
4.995	6.73	2.402	.225	12.43	27400.	.08	30198.	55990.	1.0224	7134.49
5.028	6.50	2.377	.222	12.33	27400.	.07	29605.	55428.	1.0221	7135.92
5.062	6.29	2.352	.218	12.24	27400.	.07	29019.	54872.	1.0219	7137.28
5.095	6.08	2.328	.215	12.15	27400.	.07	28440.	54324.	1.0217	7138.59
5.128	5.88	2.303	.212	12.06	27400.	.06	27868.	53782.	1.0214	7139.84
5.161	5.68	2.279	.208	11.98	27400.	.06	27303.	53247.	1.0212	7141.03
5.195	5.50	2.255	.205	11.90	27400.	.06	26746.	52719.	1.0210	7142.18
5.228	5.31	2.230	.202	11.82	27400.	.05	26196.	52198.	1.0208	7143.27
5.261	5.14	2.206	.198	11.74	27400.	.05	25654.	51685.	1.0206	7144.32
5.295	4.97	2.182	.195	11.67	27400.	.05	25120.	51178.	1.0204	7145.32
5.328	4.80	2.158	.192	11.60	27400.	.05	24593.	50679.	1.0201	7146.28
5.361	4.64	2.135	.189	11.53	27400.	.04	24074.	50187.	1.0199	7147.20
5.395	4.49	2.111	.186	11.46	27400.	.04	23562.	49703.	1.0197	7148.08
5.428	4.34	2.087	.183	11.40	27400.	.04	23058.	49226.	1.0195	7148.92
5.461	4.20	2.064	.179	11.33	27400.	.04	22563.	48756.	1.0193	7149.72
5.495	4.06	2.041	.176	11.27	27400.	.03	22075.	48294.	1.0191	7150.49
5.528	3.92	2.018	.173	11.21	27400.	.03	21595.	47840.	1.0190	7151.23
5.561	3.80	1.995	.171	11.16	27400.	.03	21122.	47392.	1.0188	7151.94

TIME (HRS)	WATER FLOW (CFS)	VELOCITY (FT/SEC)	HYD. DEPTH (FT)	WIDTH (FT)	WASHLOAD CONC. (PPM-W)	BED MAT. TRANSPORT (CFS)	BED CONC. (PPM-W)	TOTAL CONC. (PPM-W)	BULKING FACTOR	ACCUM. SEDIMENT (TONS)
5.594	3.67	1.972	.168	11.10	27400.	.03	20658.	46952.	1.0186	7152.61
5.628	3.55	1.949	.165	11.05	27400.	.03	20201.	46520.	1.0184	7153.26
5.661	3.43	1.927	.162	11.00	27400.	.03	19753.	46095.	1.0182	7153.88
5.694	3.32	1.905	.159	10.95	27400.	.02	19312.	45678.	1.0181	7154.47
5.728	3.21	1.882	.156	10.90	27400.	.02	18879.	45268.	1.0179	7155.04
5.761	3.10	1.860	.154	10.86	27400.	.02	18453.	44865.	1.0177	7155.59
5.794	3.00	1.839	.151	10.81	27400.	.02	18036.	44469.	1.0176	7156.11
5.828	2.90	1.817	.148	10.77	27400.	.02	17626.	44081.	1.0174	7156.61
5.861	2.80	1.795	.146	10.73	27400.	.02	17223.	43700.	1.0172	7157.09
5.894	2.71	1.774	.143	10.69	27400.	.02	16828.	43326.	1.0171	7157.55
5.927	2.62	1.753	.140	10.65	27400.	.02	16441.	42960.	1.0169	7157.99
5.961	2.53	1.732	.138	10.61	27400.	.02	16061.	42600.	1.0168	7158.41
5.994	2.45	1.711	.135	10.57	27400.	.01	15689.	42247.	1.0166	7158.81
6.027	2.37	1.691	.133	10.54	27400.	.01	15323.	41901.	1.0165	7159.20
6.061	2.29	1.670	.131	10.50	27400.	.01	14965.	41562.	1.0164	7159.57
6.094	2.22	1.650	.128	10.47	27400.	.01	14615.	41230.	1.0162	7159.93
6.127	2.14	1.630	.126	10.44	27400.	.01	14271.	40905.	1.0161	7160.27
6.161	2.07	1.610	.124	10.41	27400.	.01	13934.	40586.	1.0160	7160.60
6.194	2.00	1.590	.121	10.38	27400.	.01	13604.	40274.	1.0158	7160.91
6.227	1.94	1.571	.119	10.35	27400.	.01	13281.	39968.	1.0157	7161.22
6.260	1.87	1.551	.117	10.32	27400.	.01	12965.	39668.	1.0156	7161.51
6.294	1.81	1.532	.115	10.30	27400.	.01	12655.	39375.	1.0155	7161.78

6.327	1.75	1.513	.113	10.27	27400.	.01	12352.	39088.	1.0154	7162.05
6.360	1.69	1.495	.111	10.24	27400.	.01	12055.	38807.	1.0152	7162.31
6.394	1.64	1.476	.109	10.22	27400.	.01	11765.	38532.	1.0151	7162.55
6.427	1.58	1.458	.107	10.20	27400.	.01	11480.	38263.	1.0150	7162.79
6.460	1.53	1.440	.105	10.17	27400.	.01	11202.	38000.	1.0149	7163.01
6.494	1.48	1.422	.103	10.15	27400.	.01	10931.	37743.	1.0148	7163.23
6.527	1.43	1.404	.101	10.13	27400.	.01	10665.	37491.	1.0147	7163.44
6.560	1.38	1.386	.099	10.11	27400.	.01	10405.	37245.	1.0146	7163.64
6.593	1.34	1.369	.097	10.09	27400.	.01	10150.	37004.	1.0145	7163.83
6.627	1.29	1.351	.095	10.07	27400.	.00	9902.	36769.	1.0144	7164.02
6.660	1.25	1.334	.093	10.05	27400.	.00	9659.	36539.	1.0143	7164.19
6.693	1.21	1.318	.092	10.03	27400.	.00	9421.	36314.	1.0142	7164.36
6.727	1.17	1.301	.090	10.02	27400.	.00	9189.	36095.	1.0141	7164.53
6.760	1.13	1.284	.088	10.00	27400.	.00	8962.	35880.	1.0140	7164.69
6.793	1.09	1.268	.086	9.98	27400.	.00	8741.	35670.	1.0140	7164.84
6.827	1.06	1.252	.085	9.97	27400.	.00	8524.	35465.	1.0139	7164.98
6.860	1.02	1.236	.083	9.95	27400.	.00	8313.	35265.	1.0138	7165.12
6.893	.99	1.222	.082	9.90	27400.	.00	8129.	35092.	1.0137	7165.26
6.926	.96	1.212	.081	9.78	27400.	.00	7997.	34966.	1.0137	7165.39
6.960	.92	1.202	.080	9.66	27400.	.00	7866.	34842.	1.0136	7165.51
6.993	.89	1.191	.079	9.54	27400.	.00	7738.	34721.	1.0136	7165.63
7.026	.86	1.182	.078	9.42	27400.	.00	7611.	34601.	1.0135	7165.75
7.060	.84	1.172	.077	9.30	27400.	.00	7487.	34484.	1.0135	7165.86
7.093	.81	1.162	.076	9.18	27400.	.00	7365.	34368.	1.0134	7165.97
7.126	.78	1.152	.075	9.07	27400.	.00	7244.	34254.	1.0134	7166.07
7.160	.76	1.142	.074	8.95	27400.	.00	7126.	34142.	1.0133	7166.17
7.193	.73	1.133	.073	8.84	27400.	.00	7010.	34032.	1.0133	7166.27
7.226	.71	1.123	.072	8.73	27400.	.00	6895.	33924.	1.0133	7166.36
7.259	.68	1.114	.071	8.62	27400.	.00	6782.	33817.	1.0132	7166.45
7.293	.66	1.105	.070	8.51	27400.	.00	6672.	33712.	1.0132	7166.54
7.326	.64	1.095	.069	8.41	27400.	.00	6563.	33609.	1.0131	7166.62
7.359	.62	1.086	.069	8.30	27400.	.00	6455.	33507.	1.0131	7166.70
7.393	.60	1.077	.068	8.20	27400.	.00	6350.	33408.	1.0130	7166.78
7.426	.58	1.068	.067	8.09	27400.	.00	6246.	33309.	1.0130	7166.85

WATER				HYD.		WASHLOAD		BED MAT. BED		TOTAL		BULKING	
TIME	FLOW	VELOCITY	DEPTH	WIDTH	CONC.	TRANSPORT	CONC.	CONC.	FACTOR	SEDIMENT			
(HRS)	(CFS)	(FT/SEC)	(FT)	(FT)	(PPM-W)	(CFS)	(PPM-W)	(PPM-W)		(TONS)			
7.459	.56	1.059	.066	7.99	27400.	.00	6144.	33213.	1.0130	7166.92			
7.493	.54	1.050	.065	7.89	27400.	.00	6043.	33118.	1.0129	7166.99			
7.526	.52	1.042	.064	7.79	27400.	.00	5945.	33024.	1.0129	7167.06			
7.559	.51	1.033	.064	7.70	27400.	.00	5847.	32932.	1.0129	7167.12			
7.592	.49	1.024	.063	7.60	27400.	.00	5752.	32842.	1.0128	7167.18			
7.626	.47	1.016	.062	7.51	27400.	.00	5658.	32753.	1.0128	7167.24			
7.659	.46	1.007	.061	7.41	27400.	.00	5565.	32665.	1.0127	7167.30			
7.692	.44	.999	.060	7.32	27400.	.00	5474.	32579.	1.0127	7167.36			
7.726	.43	.990	.060	7.23	27400.	.00	5384.	32494.	1.0127	7167.41			
7.759	.41	.982	.059	7.14	27400.	.00	5296.	32411.	1.0126	7167.46			
7.792	.40	.974	.058	7.05	27400.	.00	5210.	32329.	1.0126	7167.51			
7.826	.39	.966	.057	6.96	27400.	.00	5124.	32248.	1.0126	7167.56			
7.859	.37	.958	.057	6.87	27400.	.00	5041.	32169.	1.0125	7167.61			
7.892	.36	.950	.056	6.79	27400.	.00	4958.	32091.	1.0125	7167.65			
7.925	.35	.942	.055	6.70	27400.	.00	4877.	32014.	1.0125	7167.70			
7.959	.34	.934	.055	6.62	27400.	.00	4797.	31938.	1.0124	7167.74			
7.992	.33	.926	.054	6.53	27400.	.00	4719.	31864.	1.0124	7167.78			
8.025	.32	.918	.053	6.45	27400.	.00	4641.	31791.	1.0124	7167.82			
8.059	.31	.911	.053	6.37	27400.	.00	4565.	31719.	1.0124	7167.85			
8.092	.30	.903	.052	6.29	27400.	.00	4491.	31648.	1.0123	7167.89			
8.125	.29	.896	.051	6.21	27400.	.00	4417.	31579.	1.0123	7167.92			

8.159	.28	.888	.051	6.14	27400.	.00	4345.	31510.	1.0123	7167.96
8.192	.27	.881	.050	6.06	27400.	.00	4274.	31443.	1.0123	7167.99
8.225	.26	.873	.049	5.98	27400.	.00	4204.	31377.	1.0122	7168.02
8.258	.25	.866	.049	5.91	27400.	.00	4135.	31312.	1.0122	7168.05
8.292	.24	.859	.048	5.83	27400.	.00	4067.	31248.	1.0122	7168.08
8.325	.23	.852	.048	5.76	27400.	.00	4000.	31185.	1.0121	7168.11
8.358	.23	.844	.047	5.69	27400.	.00	3935.	31123.	1.0121	7168.14
8.392	.22	.837	.046	5.62	27400.	.00	3870.	31062.	1.0121	7168.16
8.425	.21	.830	.046	5.55	27400.	.00	3807.	31002.	1.0121	7168.19
8.458	.20	.823	.045	5.48	27400.	.00	3745.	30943.	1.0120	7168.21
8.491	.20	.817	.045	5.41	27400.	.00	3683.	30885.	1.0120	7168.24
8.525	.19	.810	.044	5.34	27400.	.00	3623.	30827.	1.0120	7168.26
8.558	.18	.803	.044	5.27	27400.	.00	3564.	30771.	1.0120	7168.28
8.591	.18	.796	.043	5.21	27400.	.00	3505.	30716.	1.0120	7168.30
8.625	.17	.790	.042	5.14	27400.	.00	3448.	30662.	1.0119	7168.32
8.658	.17	.783	.042	5.08	27400.	.00	3391.	30608.	1.0119	7168.34
8.691	.16	.776	.041	5.02	27400.	.00	3336.	30556.	1.0119	7168.36
8.725	.16	.770	.041	4.95	27400.	.00	3281.	30504.	1.0119	7168.38
8.758	.15	.763	.040	4.89	27400.	.00	3227.	30453.	1.0119	7168.40
8.791	.15	.757	.040	4.83	27400.	.00	3174.	30403.	1.0118	7168.41
8.825	.14	.751	.039	4.77	27400.	.00	3122.	30354.	1.0118	7168.43
8.858	.14	.744	.039	4.71	27400.	.00	3071.	30305.	1.0118	7168.45
8.891	.13	.738	.038	4.65	27400.	.00	3021.	30258.	1.0118	7168.46
8.924	.13	.732	.038	4.59	27400.	.00	2971.	30211.	1.0118	7168.48
8.958	.12	.726	.037	4.54	27400.	.00	2923.	30165.	1.0117	7168.49
8.991	.12	.720	.037	4.48	27400.	.00	2875.	30119.	1.0117	7168.50
9.024	.12	.714	.037	4.42	27400.	.00	2828.	30075.	1.0117	7168.52
9.058	.11	.708	.036	4.37	27400.	.00	2781.	30031.	1.0117	7168.53
9.091	.11	.702	.036	4.31	27400.	.00	2736.	29988.	1.0117	7168.54
9.124	.10	.696	.035	4.26	27400.	.00	2691.	29945.	1.0116	7168.56
9.158	.10	.690	.035	4.21	27400.	.00	2647.	29904.	1.0116	7168.57
9.191	.10	.685	.034	4.15	27400.	.00	2603.	29863.	1.0116	7168.58
9.224	.09	.679	.034	4.10	27400.	.00	2561.	29822.	1.0116	7168.59
9.257	.09	.673	.033	4.05	27400.	.00	2519.	29783.	1.0116	7168.60
9.291	.09	.668	.033	4.00	27400.	.00	2477.	29744.	1.0116	7168.61
9.324	.09	.662	.033	3.95	27400.	.00	2437.	29705.	1.0116	7168.62
9.357	.08	.656	.032	3.90	27400.	.00	2397.	29667.	1.0115	7168.63
9.391	.08	.651	.032	3.85	27400.	.00	2357.	29630.	1.0115	7168.64
9.424	.08	.645	.031	3.80	27400.	.00	2319.	29594.	1.0115	7168.65
9.457	.07	.640	.031	3.75	27400.	.00	2281.	29558.	1.0115	7168.65
9.491	.07	.635	.031	3.71	27400.	.00	2243.	29522.	1.0115	7168.66
9.524	.07	.629	.030	3.66	27400.	.00	2206.	29487.	1.0115	7168.67
9.557	.07	.624	.030	3.62	27400.	.00	2170.	29453.	1.0115	7168.68
9.590	.07	.619	.029	3.57	27400.	.00	2135.	29419.	1.0114	7168.69
9.624	.06	.614	.029	3.53	27400.	.00	2100.	29386.	1.0114	7168.69
9.657	.06	.609	.029	3.48	27400.	.00	2065.	29354.	1.0114	7168.70
9.690	.06	.604	.028	3.44	27400.	.00	2031.	29322.	1.0114	7168.71
9.724	.06	.599	.028	3.39	27400.	.00	1998.	29290.	1.0114	7168.71
9.757	.06	.594	.028	3.35	27400.	.00	1965.	29259.	1.0114	7168.72
9.790	.05	.589	.027	3.31	27400.	.00	1933.	29229.	1.0114	7168.73
9.824	.05	.584	.027	3.27	27400.	.00	1901.	29199.	1.0113	7168.73
9.857	.05	.579	.027	3.23	27400.	.00	1870.	29169.	1.0113	7168.74
9.890	.05	.574	.026	3.19	27400.	.00	1839.	29140.	1.0113	7168.74
9.923	.05	.569	.026	3.15	27400.	.00	1809.	29112.	1.0113	7168.75
9.957	.05	.564	.026	3.11	27400.	.00	1780.	29083.	1.0113	7168.75

9.990	.04	.560	.025	3.07	27400.	.00	1750.	29056.	1.0113	7168.76
10.023	.04	.555	.025	3.03	27400.	.00	1722.	29029.	1.0113	7168.76
10.057	.04	.550	.025	2.99	27400.	.00	1693.	29002.	1.0113	7168.77
10.090	.04	.546	.024	2.96	27400.	.00	1666.	28976.	1.0113	7168.77
10.123	.04	.541	.024	2.92	27400.	.00	1638.	28950.	1.0113	7168.78
10.157	.04	.537	.024	2.88	27400.	.00	1611.	28924.	1.0112	7168.78
10.190	.04	.532	.023	2.85	27400.	.00	1585.	28899.	1.0112	7168.78
10.223	.03	.528	.023	2.81	27400.	.00	1559.	28875.	1.0112	7168.79
10.256	.03	.523	.023	2.78	27400.	.00	1533.	28851.	1.0112	7168.79
10.290	.03	.519	.023	2.74	27400.	.00	1508.	28827.	1.0112	7168.79
10.323	.03	.515	.022	2.71	27400.	.00	1484.	28803.	1.0112	7168.80
10.356	.03	.510	.022	2.67	27400.	.00	1459.	28780.	1.0112	7168.80
10.390	.03	.506	.022	2.64	27400.	.00	1435.	28758.	1.0112	7168.80
10.423	.03	.502	.022	2.61	27400.	.00	1412.	28735.	1.0112	7168.81
10.456	.03	.498	.021	2.57	27400.	.00	1389.	28714.	1.0112	7168.81
10.490	.03	.494	.021	2.54	27400.	.00	1366.	28692.	1.0111	7168.81
10.523	.03	.489	.021	2.51	27400.	.00	1343.	28671.	1.0111	7168.82
10.556	.02	.485	.020	2.48	27400.	.00	1321.	28650.	1.0111	7168.82
10.589	.02	.481	.020	2.45	27400.	.00	1300.	28629.	1.0111	7168.82
10.623	.02	.475	.020	2.40	27400.	.00	1268.	28600.	1.0111	7168.82
10.656	.02	.464	.019	2.32	27400.	.00	1211.	28545.	1.0111	7168.83
10.689	.02	.451	.018	2.22	27400.	.00	1141.	28480.	1.0111	7168.83
10.723	.02	.436	.017	2.11	27400.	.00	1072.	28414.	1.0110	7168.83
10.756	.01	.424	.017	2.02	27400.	.00	1012.	28357.	1.0110	7168.83
10.789	.01	.420	.016	2.00	27400.	.00	995.	28341.	1.0110	7168.83
10.823	.01	.417	.016	1.97	27400.	.00	979.	28326.	1.0110	7168.83
10.856	.01	.413	.016	1.95	27400.	.00	962.	28310.	1.0110	7168.84
10.889	.01	.410	.016	1.92	27400.	.00	946.	28295.	1.0110	7168.84
10.922	.01	.406	.016	1.90	27400.	.00	931.	28280.	1.0110	7168.84
10.956	.01	.403	.015	1.87	27400.	.00	915.	28266.	1.0110	7168.84
10.989	.01	.399	.015	1.85	27400.	.00	900.	28251.	1.0110	7168.84
11.022	.01	.396	.015	1.83	27400.	.00	885.	28237.	1.0110	7168.84
11.056	.01	.393	.015	1.80	27400.	.00	870.	28223.	1.0110	7168.84
11.089	.01	.389	.015	1.78	27400.	.00	856.	28209.	1.0110	7168.85
11.122	.01	.386	.015	1.76	27400.	.00	841.	28196.	1.0109	7168.85
11.156	.01	.383	.014	1.74	27400.	.00	828.	28183.	1.0109	7168.85
11.189	.01	.380	.014	1.71	27400.	.00	814.	28170.	1.0109	7168.85
11.222	.01	.376	.014	1.69	27400.	.00	800.	28157.	1.0109	7168.85
11.255	.01	.373	.014	1.67	27400.	.00	787.	28144.	1.0109	7168.85
11.289	.01	.370	.014	1.65	27400.	.00	774.	28132.	1.0109	7168.85
11.322	.01	.366	.013	1.62	27400.	.00	758.	28117.	1.0109	7168.85
11.355	.01	.361	.013	1.59	27400.	.00	735.	28096.	1.0109	7168.85
11.389	.01	.354	.013	1.54	27400.	.00	709.	28071.	1.0109	7168.85
11.422	.01	.348	.012	1.50	27400.	.00	684.	28047.	1.0109	7168.85
11.455	.01	.341	.012	1.46	27400.	.00	659.	28024.	1.0109	7168.85
11.489	.01	.335	.012	1.42	27400.	.00	635.	28001.	1.0109	7168.86
11.522	.01	.328	.011	1.38	27400.	.00	612.	27979.	1.0109	7168.86
11.555	.00	.322	.011	1.34	27400.	.00	589.	27957.	1.0109	7168.86
11.588	.00	.316	.011	1.30	27400.	.00	566.	27936.	1.0108	7168.86
11.622	.00	.310	.010	1.26	27400.	.00	545.	27915.	1.0108	7168.86
11.655	.00	.304	.010	1.23	27400.	.00	524.	27895.	1.0108	7168.86
11.688	.00	.298	.010	1.19	27400.	.00	503.	27876.	1.0108	7168.86
11.722	.00	.292	.010	1.15	27400.	.00	483.	27857.	1.0108	7168.86
11.755	.00	.286	.009	1.12	27400.	.00	464.	27839.	1.0108	7168.86
11.788	.00	.280	.009	1.09	27400.	.00	446.	27822.	1.0108	7168.86

11.822	.00	.274	.009	1.05	27400.	.00	428.	27805.	1.0108	7168.86
11.855	.00	.268	.008	1.02	27400.	.00	410.	27788.	1.0108	7168.86
11.888	.00	.263	.008	.99	27400.	.00	394.	27772.	1.0108	7168.86
11.921	.00	.257	.008	.96	27400.	.00	378.	27757.	1.0108	7168.86
11.955	.00	.252	.008	.93	27400.	.00	362.	27742.	1.0108	7168.86
11.988	.00	.246	.007	.90	27400.	.00	347.	27728.	1.0108	7168.86
12.021	.00	.241	.007	.87	27400.	.00	333.	27715.	1.0108	7168.86
12.055	.00	.236	.007	.84	27400.	.00	319.	27701.	1.0108	7168.86
12.088	.00	.231	.007	.81	27400.	.00	305.	27689.	1.0107	7168.86
12.121	.00	.226	.007	.79	27400.	.00	292.	27677.	1.0107	7168.86
12.155	.00	.221	.006	.76	27400.	.00	280.	27665.	1.0107	7168.86

AT PEAK FLOW OF 513.754 WITH TIME AT 1.83 HOURS: BEDMAT = 2096.52 (TONS) = .9626 (AC-FT bulked)
 PEAK BUILDING FACTOR = 1.075819 = 167305. (PPM-W) TOTAL SED = 2479.63 (TONS) = 1.1385 (AC-FT bulked)

	UNBULKED WEIGHT (TONS)	BULKED VOLUME (AC-FT)	CONCENTRATION BY WEIGHT (PPM)	AVERAGE BULKING FACTOR
WASHMAT =	1266.74	.3517	.5816	27400.
BEDMAT =	5902.12	1.6388	2.7099	116031.
TOTAL SEDIMENT =	7168.86	1.9905	3.2915	137509.
				1.060163

SEDIMENT TRANSPORT CAPACITY: 3.04711 AC-FT/SQ MI (bulked) = 10.3697 TONS/ACRE (at Porosity=0.395)

PRINT HYD ID=3 CODE=1

PARTIAL HYDROGRAPH 131.01

RUNOFF VOLUME = .57428 INCHES = 33.0847 ACRE-FEET
 PEAK DISCHARGE RATE = 513.75 CFS AT 1.832 HOURS BASIN AREA = 1.0802 SQ. MI.

COMPUTE NM HYD

ID=4 HYD NO=130.2 DA=0.0690 SQ MI
 PER A=74.20 PER B=5.80 PER C=20.00 PER D=0.00
 TP=-0.1333 HR MASS RAIN=-1

K = .149622HR TP = .133300HR K/TP RATIO = 1.122445 SHAPE CONSTANT, N = 3.151978
 UNIT PEAK = 152.18 CFS UNIT VOLUME = .9999 B = 293.99 P60 = 1.8700
 AREA = .069000 SQ MI IA = .58130 INCHES INF = 1.47764 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DF = .033300

PRINT HYD ID=4 CODE=1

PARTIAL HYDROGRAPH 130.20

RUNOFF VOLUME = .53534 INCHES = 1.9700 ACRE-FEET
 PEAK DISCHARGE RATE = 71.38 CFS AT 1.532 HOURS BASIN AREA = .0690 SQ. MI.

SED WASH LOAD ID=4 K=0.17 C=0.25
 P=1.0 LS=0.418

IMPERVIOUS=0.0 FACTOR=3.0
SEDIMENT YIELD (Wash Mat.) = 80.8 (TONS) WASH LOAD CONCENTRATION = 29288 (ppm-w)
PERCENTAGE IMPERVIOUS AREA = .000 WASH LOAD FACTOR = 3.00000

PRINT HYD ID=4 CODE=1

PARTIAL HYDROGRAPH 130.20

RUNOFF VOLUME = .53534 INCHES = 1.9700 ACRE-FEET
PEAK DISCHARGE RATE = 71.38 CFS AT 1.532 HOURS BASIN AREA = .0690 SQ. MI.

SEDIMENT TRANS

ID=4 IDS=2 CODE=1
A=0.0002 B=4.19 C=0.19 D=-2.55
NUMB WASH=-1 NUMB SECTIONS=8

FLOW	VELOCITY	WIDTH
(CFS)	(FPS)	(FT)
10.0	1.47	24.25
20.0	1.75	31.48
30.0	1.93	36.66
40.0	2.08	40.81
50.0	2.20	44.36
60.0	2.31	47.48
70.0	2.40	50.30
80.0	2.48	52.87

Use wash load from SED WASH LOAD command - Concentration = 29288 (PPM-W)

* * * * *

TIME (HRS)	WATER FLOW (CFS)	HYD. VELOCITY (FT/SEC)	DEPTH (FT)	WIDTH (FT)	WASHLOAD CONC. (PPM-W)	BED MAT. TRANSPORT (CFS)	BED CONC. (PPM-W)	TOTAL CONC. (PPM-W)	BULKING FACTOR	ACCU. SEDIMENT (TONS)
.000	.00	.000	.000	.00	29288.	.00	0.	29288.	1.0000	.00
.033	.00	.000	.000	.00	29288.	.00	0.	29288.	1.0000	.00
.067	.00	.000	.000	.00	29288.	.00	0.	29288.	1.0000	.00
.100	.00	.000	.000	.00	29288.	.00	0.	29288.	1.0000	.00
.133	.00	.000	.000	.00	29288.	.00	0.	29288.	1.0000	.00
.167	.00	.000	.000	.00	29288.	.00	0.	29288.	1.0000	.00
.200	.00	.000	.000	.00	29288.	.00	0.	29288.	1.0000	.00
.233	.00	.000	.000	.00	29288.	.00	0.	29288.	1.0000	.00
.266	.00	.000	.000	.00	29288.	.00	0.	29288.	1.0000	.00
.300	.00	.000	.000	.00	29288.	.00	0.	29288.	1.0000	.00
.333	.00	.000	.000	.00	29288.	.00	0.	29288.	1.0000	.00
.366	.00	.000	.000	.00	29288.	.00	0.	29288.	1.0000	.00
.400	.00	.000	.000	.00	29288.	.00	0.	29288.	1.0000	.00
.433	.00	.000	.000	.00	29288.	.00	0.	29288.	1.0000	.00
.466	.00	.000	.000	.00	29288.	.00	0.	29288.	1.0000	.00
.500	.00	.000	.000	.00	29288.	.00	0.	29288.	1.0000	.00
.533	.00	.000	.000	.00	29288.	.00	0.	29288.	1.0000	.00
.566	.00	.000	.000	.00	29288.	.00	0.	29288.	1.0000	.00
.599	.00	.000	.000	.00	29288.	.00	0.	29288.	1.0000	.00
.633	.00	.000	.000	.00	29288.	.00	0.	29288.	1.0000	.00
.666	.00	.000	.000	.00	29288.	.00	0.	29288.	1.0000	.00
.699	.00	.000	.000	.00	29288.	.00	0.	29288.	1.0000	.00
.733	.00	.000	.000	.00	29288.	.00	0.	29288.	1.0000	.00
.766	.00	.000	.000	.00	29288.	.00	0.	29288.	1.0000	.00
.799	.00	.000	.000	.00	29288.	.00	0.	29288.	1.0000	.00

.833	.00	.000	.000	.00	29288.	.00	0.	29288.	1.0000	.00
.866	.00	.000	.000	.00	29288.	.00	0.	29288.	1.0000	.00
.899	.00	.000	.000	.00	29288.	.00	0.	29288.	1.0000	.00
.932	.00	.000	.000	.00	29288.	.00	0.	29288.	1.0000	.00
.966	.00	.000	.000	.00	29288.	.00	0.	29288.	1.0000	.00
.999	.00	.000	.000	.00	29288.	.00	0.	29288.	1.0000	.00
1.032	.00	.000	.000	.00	29288.	.00	0.	29288.	1.0000	.00
1.066	.00	.000	.000	.00	29288.	.00	0.	29288.	1.0000	.00
1.099	.00	.000	.000	.00	29288.	.00	0.	29288.	1.0000	.00
1.132	.00	.000	.000	.00	29288.	.00	0.	29288.	1.0000	.00
1.166	.00	.000	.000	.00	29288.	.00	0.	29288.	1.0000	.00
1.199	.00	.000	.000	.00	29288.	.00	0.	29288.	1.0000	.00
1.232	.00	.000	.000	.00	29288.	.00	0.	29288.	1.0000	.00
1.265	.00	.000	.000	.00	29288.	.00	0.	29288.	1.0000	.00
1.299	.00	.000	.000	.00	29288.	.00	0.	29288.	1.0000	.00
1.332	.00	.000	.000	.00	29288.	.00	0.	29288.	1.0000	.00
1.365	4.78	1.289	.230	16.11	29288.	.01	4203.	33249.	1.0130	.62
1.399	18.88	1.728	.356	30.67	29288.	.05	7493.	36350.	1.0142	3.28
1.432	40.26	2.084	.472	40.90	29288.	.17	10795.	39463.	1.0155	9.47
1.465	59.57	2.306	.546	47.35	29288.	.30	13239.	41768.	1.0164	19.18
1.499	69.93	2.399	.580	50.28	29288.	.38	14300.	42768.	1.0169	30.86
1.532	71.38	2.412	.584	50.65	29288.	.39	14440.	42900.	1.0169	42.83
1.565	66.48	2.370	.569	49.31	29288.	.36	13964.	42452.	1.0167	53.86
1.598	58.28	2.293	.542	46.94	29288.	.29	13083.	41621.	1.0164	63.32
1.632	49.14	2.191	.509	44.05	29288.	.22	11912.	40516.	1.0159	71.08
1.665	40.53	2.087	.474	41.00	29288.	.17	10833.	39499.	1.0155	77.32
1.698	32.99	1.980	.440	37.90	29288.	.12	9738.	38467.	1.0151	82.25
1.732	26.61	1.878	.406	34.90	29288.	.09	8778.	37562.	1.0147	86.14
1.765	21.36	1.780	.373	32.18	29288.	.06	7932.	36764.	1.0144	89.19
1.798	17.11	1.689	.345	29.39	29288.	.05	7167.	36042.	1.0141	91.58
1.832	13.70	1.600	.318	26.92	29288.	.03	6436.	35354.	1.0138	93.46

TIME (HRS)	WATER FLOW (CFS)	VELOCITY (FT/SEC)	HYD. DEPTH (FT)	WIDTH (FT)	WASHLOAD CONC. (PPM-w)	BED MAT. TRANSPORT (CFS)	BED CONC. (PPM-w)	TOTAL CONC. (PPM-w)	BULKING FACTOR	ACCU. SEDIMENT (TONS)
1.865	11.03	1.511	.292	25.00	29288.	.02	5746.	34703.	1.0136	94.94
1.898	9.16	1.451	.275	22.93	29288.	.02	5305.	34287.	1.0134	96.16
1.931	7.94	1.419	.266	21.03	29288.	.02	5075.	34071.	1.0133	97.20
1.965	7.14	1.394	.259	19.79	29288.	.01	4899.	33905.	1.0132	98.14
1.998	6.51	1.370	.253	18.80	29288.	.01	4741.	33756.	1.0132	98.99
2.031	5.98	1.349	.247	17.97	29288.	.01	4595.	33618.	1.0131	99.77
2.065	5.52	1.328	.241	17.27	29288.	.01	4457.	33488.	1.0131	100.48
2.098	5.12	1.308	.235	16.64	29288.	.01	4324.	33363.	1.0130	101.15
2.131	4.76	1.287	.230	16.07	29288.	.01	4192.	33239.	1.0130	101.76
2.164	4.42	1.267	.224	15.54	29288.	.01	4060.	33115.	1.0129	102.32
2.198	4.10	1.246	.219	15.04	29288.	.01	3929.	32990.	1.0129	102.85
2.231	3.81	1.224	.213	14.59	29288.	.01	3797.	32866.	1.0128	103.33
2.264	3.53	1.202	.208	14.16	29288.	.00	3666.	32743.	1.0128	103.78
2.298	3.28	1.181	.202	13.77	29288.	.00	3536.	32620.	1.0127	104.19
2.331	3.05	1.158	.196	13.40	29288.	.00	3407.	32498.	1.0127	104.57
2.364	2.83	1.136	.191	13.06	29288.	.00	3279.	32378.	1.0126	104.93
2.398	2.63	1.114	.185	12.75	29288.	.00	3153.	32259.	1.0126	105.26
2.431	2.44	1.091	.179	12.45	29288.	.00	3029.	32142.	1.0125	105.56
2.464	2.26	1.069	.174	12.18	29288.	.00	2907.	32028.	1.0125	105.84
2.498	2.10	1.046	.168	11.93	29288.	.00	2788.	31915.	1.0124	106.10
2.531	1.95	1.024	.163	11.69	29288.	.00	2671.	31805.	1.0124	106.34
2.564	1.81	1.001	.158	11.48	29288.	.00	2557.	31698.	1.0124	106.56
2.597	1.68	.979	.152	11.27	29288.	.00	2446.	31593.	1.0123	106.77
2.631	1.56	.957	.147	11.09	29288.	.00	2338.	31491.	1.0123	106.96

2.664	1.45	.935	.142	10.91	29288.	.00	2233.	31392.	1.0122	107.13
2.697	1.35	.913	.137	10.75	29288.	.00	2131.	31296.	1.0122	107.29
2.731	1.25	.891	.132	10.60	29288.	.00	2032.	31203.	1.0122	107.44
2.764	1.16	.870	.128	10.46	29288.	.00	1937.	31113.	1.0121	107.58
2.797	1.08	.849	.123	10.33	29288.	.00	1845.	31026.	1.0121	107.71
2.831	1.00	.828	.119	10.21	29288.	.00	1756.	30943.	1.0120	107.83
2.864	.93	.812	.115	9.93	29288.	.00	1693.	30883.	1.0120	107.94
2.897	.86	.797	.112	9.66	29288.	.00	1632.	30826.	1.0120	108.05
2.930	.80	.783	.109	9.40	29288.	.00	1573.	30771.	1.0120	108.14
2.964	.74	.768	.106	9.14	29288.	.00	1517.	30717.	1.0120	108.23
2.997	.69	.754	.103	8.89	29288.	.00	1462.	30666.	1.0119	108.31
3.030	.64	.740	.100	8.64	29288.	.00	1410.	30616.	1.0119	108.39
3.064	.60	.727	.098	8.41	29288.	.00	1359.	30569.	1.0119	108.46
3.097	.55	.713	.095	8.18	29288.	.00	1310.	30523.	1.0119	108.52
3.130	.51	.700	.092	7.95	29288.	.00	1263.	30478.	1.0119	108.58
3.164	.48	.687	.090	7.73	29288.	.00	1218.	30436.	1.0118	108.64
3.197	.44	.675	.087	7.52	29288.	.00	1174.	30394.	1.0118	108.69
3.230	.41	.662	.085	7.31	29288.	.00	1132.	30355.	1.0118	108.74
3.263	.38	.650	.083	7.11	29288.	.00	1091.	30316.	1.0118	108.78
3.297	.35	.638	.080	6.92	29288.	.00	1052.	30279.	1.0118	108.83
3.330	.33	.627	.078	6.73	29288.	.00	1014.	30244.	1.0118	108.86
3.363	.31	.615	.076	6.54	29288.	.00	978.	30209.	1.0118	108.90
3.397	.28	.604	.074	6.36	29288.	.00	943.	30176.	1.0117	108.93
3.430	.26	.593	.072	6.19	29288.	.00	909.	30144.	1.0117	108.96
3.463	.24	.582	.070	6.02	29288.	.00	876.	30114.	1.0117	108.99
3.497	.23	.571	.068	5.86	29288.	.00	845.	30084.	1.0117	109.02
3.530	.21	.561	.066	5.69	29288.	.00	814.	30055.	1.0117	109.04
3.563	.20	.550	.064	5.54	29288.	.00	785.	30028.	1.0117	109.06
3.596	.18	.540	.062	5.39	29288.	.00	757.	30001.	1.0117	109.09
3.630	.17	.530	.061	5.24	29288.	.00	730.	29976.	1.0117	109.11
3.663	.16	.520	.059	5.09	29288.	.00	703.	29951.	1.0117	109.12
3.696	.15	.511	.057	4.95	29288.	.00	678.	29927.	1.0116	109.14

TIME (HRS)	WATER FLOW (CFS)	VELOCITY (FT/SEC)	HYD. DEPTH (FT)	WIDTH (FT)	WASHLOAD CONC. (PPM-W)	BED MAT. TRANSPORT (CFS)	BED CONC. (PPM-W)	TOTAL CONC. (PPM-W)	BULKING FACTOR	ACCUM. SEDIMENT (TONS)
3.730	.14	.502	.056	4.82	29288.	.00	654.	29904.	1.0116	109.16
3.763	.13	.492	.054	4.69	29288.	.00	630.	29882.	1.0116	109.17
3.796	.12	.483	.053	4.56	29288.	.00	608.	29861.	1.0116	109.18
3.830	.11	.474	.051	4.43	29288.	.00	586.	29840.	1.0116	109.20
3.863	.10	.466	.050	4.31	29288.	.00	565.	29820.	1.0116	109.21
3.896	.09	.457	.049	4.19	29288.	.00	544.	29801.	1.0116	109.22
3.929	.09	.449	.047	4.08	29288.	.00	525.	29783.	1.0116	109.23
3.963	.08	.440	.046	3.97	29288.	.00	506.	29765.	1.0116	109.24
3.996	.07	.432	.045	3.86	29288.	.00	488.	29748.	1.0116	109.25
4.029	.07	.424	.044	3.75	29288.	.00	470.	29731.	1.0116	109.25
4.063	.06	.417	.042	3.65	29288.	.00	453.	29715.	1.0116	109.26
4.096	.06	.409	.041	3.55	29288.	.00	437.	29700.	1.0116	109.27
4.129	.06	.401	.040	3.45	29288.	.00	421.	29685.	1.0115	109.27
4.163	.05	.394	.039	3.36	29288.	.00	406.	29671.	1.0115	109.28
4.196	.05	.387	.038	3.26	29288.	.00	392.	29657.	1.0115	109.29
4.229	.04	.380	.037	3.17	29288.	.00	377.	29644.	1.0115	109.29
4.262	.04	.373	.036	3.09	29288.	.00	364.	29631.	1.0115	109.30
4.296	.04	.366	.035	3.00	29288.	.00	351.	29619.	1.0115	109.30
4.329	.04	.359	.034	2.92	29288.	.00	338.	29607.	1.0115	109.30
4.362	.03	.353	.033	2.84	29288.	.00	326.	29595.	1.0115	109.31
4.396	.03	.346	.032	2.76	29288.	.00	314.	29584.	1.0115	109.31
4.429	.03	.340	.031	2.69	29288.	.00	303.	29574.	1.0115	109.31
4.462	.03	.333	.030	2.61	29288.	.00	292.	29563.	1.0115	109.32

4.496	.02	.327	.029	2.54	29288.	.00	282.	29553.	1.0115	109.32
4.529	.02	.321	.029	2.47	29288.	.00	272.	29544.	1.0115	109.32
4.562	.02	.315	.028	2.40	29288.	.00	262.	29535.	1.0115	109.33
4.595	.02	.310	.027	2.34	29288.	.00	252.	29526.	1.0115	109.33
4.629	.02	.304	.026	2.27	29288.	.00	243.	29517.	1.0115	109.33
4.662	.02	.298	.026	2.21	29288.	.00	235.	29509.	1.0115	109.33
4.695	.02	.293	.025	2.15	29288.	.00	226.	29501.	1.0115	109.33
4.729	.01	.288	.024	2.09	29288.	.00	218.	29493.	1.0115	109.33
4.762	.01	.282	.024	2.03	29288.	.00	210.	29486.	1.0115	109.34
4.795	.01	.277	.023	1.98	29288.	.00	203.	29479.	1.0115	109.34
4.829	.01	.272	.022	1.92	29288.	.00	195.	29472.	1.0115	109.34
4.862	.01	.267	.022	1.87	29288.	.00	188.	29465.	1.0115	109.34
4.895	.01	.262	.021	1.82	29288.	.00	181.	29459.	1.0115	109.34
4.928	.01	.257	.021	1.77	29288.	.00	175.	29453.	1.0115	109.34
4.962	.01	.252	.020	1.72	29288.	.00	169.	29447.	1.0114	109.34
4.995	.01	.248	.019	1.67	29288.	.00	163.	29441.	1.0114	109.34
5.028	.01	.243	.019	1.63	29288.	.00	157.	29436.	1.0114	109.35
5.062	.01	.239	.018	1.58	29288.	.00	151.	29430.	1.0114	109.35
5.095	.01	.234	.018	1.54	29288.	.00	146.	29425.	1.0114	109.35
5.128	.01	.230	.017	1.50	29288.	.00	140.	29420.	1.0114	109.35
5.161	.00	.213	.016	1.34	29288.	.00	121.	29402.	1.0114	109.35
5.195	.00	.186	.013	1.09	29288.	.00	92.	29375.	1.0114	109.35

AT PEAK FLOW OF 71.379 WITH TIME AT 1.53 HOURS: BEDMAT = 12.95 (TONS) = .0059 (AC-FT bulked)
 PEAK BULKING FACTOR = 1.016914 = 42900. (PPM-W) TOTAL SED = 42.83 (TONS) = .0197 (AC-FT bulked)

	WEIGHT (TONS)	UNBULKED VOLUME (AC-FT)	BULKED VOLUME (AC-FT)	CONCENTRATION BY WEIGHT (PPM)	AVERAGE BULKING FACTOR
WASHMAT =	80.78	.0224	.0371	29288.	
BEDMAT =	28.57	.0079	.0131	10557.	
TOTAL SEDIMENT =	109.35	.0304	.0502	39238.	1.015412

SEDIMENT TRANSPORT CAPACITY: .72762 AC-FT/SQ MI (bulked) = 2.4762 TONS/ACRE (at Porosity=0.395)

PRINT HYD ID=4 CODE=1

PARTIAL HYDROGRAPH 130.20

RUNOFF VOLUME = .53534 INCHES = 1.9700 ACRE-FEET
 PEAK DISCHARGE RATE = 71.38 CFS AT 1.532 HOURS BASIN AREA = .0690 SQ. MI.

*S TOTAL FLOW TO CHANNEL ENTERING THE SITE
 ADD HYD ID=5 HYD NO=131.02 ID I=3 ID II=4
 PRINT HYD ID=5 CODE=1

PARTIAL HYDROGRAPH 131.02

RUNOFF VOLUME = .57195 INCHES = 35.0547 ACRE-FEET
 PEAK DISCHARGE RATE = 527.45 CFS AT 1.832 HOURS BASIN AREA = 1.1492 SQ. MI.

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*S FLOW ENTERING SW CORNER

COMPUTE NM HYD ID=6 HYD NO=130.21 DA=0.0090 SQ MI
PER A=100.00 PER B=0.00 PER C=0.00 PER D=0.00
TP=-0.1333 HR MASS RAIN=-1

K = .163684HR TP = .133300HR K/TP RATIO = 1.227936 SHAPE CONSTANT, N = 2.899764
UNIT PEAK = 18.469 CFS UNIT VOLUME = .9989 B = 273.54 P60 = 1.8700
AREA = .009000 SQ MI IA = .65000 INCHES INF = 1.67000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=6 CODE=1

PARTIAL HYDROGRAPH 130.21

RUNOFF VOLUME = .43919 INCHES = .2108 ACRE-FEET
PEAK DISCHARGE RATE = 7.48 CFS AT 1.532 HOURS BASIN AREA = .0090 SQ. MI.

SED WASH LOAD ID=6 K=0.17 C=0.25
P=1.0 LS=0.163
IMPERVIOUS=0.0 FACTOR=3.0
SEDIMENT YIELD (Wash Mat.) = 2.5 (TONS) WASH LOAD CONCENTRATION = 8817 (ppm-w)
PERCENTAGE IMPERVIOUS AREA = .000 WASH LOAD FACTOR = 3.00000

PRINT HYD ID=6 CODE=1

PARTIAL HYDROGRAPH 130.21

RUNOFF VOLUME = .43919 INCHES = .2108 ACRE-FEET
PEAK DISCHARGE RATE = 7.48 CFS AT 1.532 HOURS BASIN AREA = .0090 SQ. MI.

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COMPUTE NM HYD ID=7 HYD NO=133.3 DA=0.0370 SQ MI
PER A=51.89 PER B=6.49 PER C=41.62 PER D=0.00
TP=-0.1333 HR MASS RAIN=-1

K = .137499HR TP = .133300HR K/TP RATIO = 1.031498 SHAPE CONSTANT, N = 3.422199
UNIT PEAK = 87.325 CFS UNIT VOLUME = 1.000 B = 314.61 P60 = 1.8700
AREA = .037000 SQ MI IA = .51540 INCHES INF = 1.29313 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=7 CODE=1

PARTIAL HYDROGRAPH 133.30

RUNOFF VOLUME = .64008 INCHES = 1.2631 ACRE-FEET
PEAK DISCHARGE RATE = 45.50 CFS AT 1.532 HOURS BASIN AREA = .0370 SQ. MI.

COMPUTE NM HYD ID=8 HYD NO=133.4 DA=0.2550 SQ MI
PER A=80.00 PER B=0.00 PER C=20.00 PER D=0.00
TP=-0.3518 HR MASS RAIN=-1

K = .352269HR TP = .351800HR K/TP RATIO = 1.001334 SHAPE CONSTANT, N = 3.525549
UNIT PEAK = 233.54 CFS UNIT VOLUME = 1.000 B = 322.19 P60 = 1.8700
AREA = .255000 SQ MI IA = .59000 INCHES INF = 1.50200 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=8 CODE=1

PARTIAL HYDROGRAPH 133.40

RUNOFF VOLUME = .52233 INCHES = 7.1037 ACRE-FEET
PEAK DISCHARGE RATE = 119.11 CFS AT 1.732 HOURS BASIN AREA = .2550 SQ. MI.

*S FLOW ENTERING OVRAY STORM DRAIN TO THE NORTH

ADD HYD ID=9 HYD NO=133.01 ID I=7 ID II=8

PRINT HYD ID=9 CODE=1

PARTIAL HYDROGRAPH 133.01

RUNOFF VOLUME = .53725 INCHES = 8.3668 ACRE-FEET
PEAK DISCHARGE RATE = 138.33 CFS AT 1.698 HOURS BASIN AREA = .2920 SQ. MI.

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COMPUTE NM HYD ID=10 HYD NO=132.11 DA=0.0093 SQ MI
PER A=30.00 PER B=50.00 PER C=20.00 PER D=0.00
TP=-0.1333 HR MASS RAIN=-1

K = .135774HR TP = .133300HR K/TP RATIO = 1.018563 SHAPE CONSTANT, N = 3.465578
UNIT PEAK = 22.173 CFS UNIT VOLUME = .9997 B = 317.81 P60 = 1.8700
AREA = .009300 SQ MI IA = .51500 INCHES INF = 1.29200 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=10 CODE=1

PARTIAL HYDROGRAPH 132.11

RUNOFF VOLUME = .64079 INCHES = .3178 ACRE-FEET
PEAK DISCHARGE RATE = 11.54 CFS AT 1.532 HOURS BASIN AREA = .0093 SQ. MI.

SED WASH LOAD ID=10 K=0.17 C=0.25

P=1.0 LS=0.758

IMPERVIOUS=0.0 FACTOR=3.0

SEDIMENT YIELD (Wash Mat.) = 19.0 (TONS) WASH LOAD CONCENTRATION = 42151 (ppm-w)

PERCENTAGE IMPERVIOUS AREA = .000 WASH LOAD FACTOR = 3.00000

SEDIMENT TRANS

ID=10 IDS=3 CODE=1

A=0.0002 B=4.19 C=0.19 D=-2.55

NUMB WASH=-1 NUMB SECTIONS=9

FLOW	VELOCITY	WIDTH
(CFS)	(FPS)	(FT)
1.00	2.06	4.06
2.00	2.46	5.26
3.00	2.73	6.11
4.00	2.93	6.82
6.00	3.25	7.92
8.00	3.48	8.85
10.00	3.67	9.62
12.00	3.84	10.30
14.00	3.99	10.92

Use wash load from SED WASH LOAD command - Concentration = 42151 (PPM-W)

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TIME (HRS)	WATER FLOW (CFS)	VELOCITY (FT/SEC)	HYD. DEPTH (FT)	WIDTH (FT)	WASHLOAD CONC. (PPM-W)	BED MAT. TRANSPORT (CFS)	BED CONC. (PPM-W)	TOTAL CONC. (PPM-W)	BULKING FACTOR	ACCU. SEDIMENT (TONS)
.000	.00	.000	.000	.00	42151.	.00	0.	42151.	1.0000	.00
.033	.00	.000	.000	.00	42151.	.00	0.	42151.	1.0000	.00
.067	.00	.000	.000	.00	42151.	.00	0.	42151.	1.0000	.00
.100	.00	.000	.000	.00	42151.	.00	0.	42151.	1.0000	.00
.133	.00	.000	.000	.00	42151.	.00	0.	42151.	1.0000	.00
.167	.00	.000	.000	.00	42151.	.00	0.	42151.	1.0000	.00
.200	.00	.000	.000	.00	42151.	.00	0.	42151.	1.0000	.00
.233	.00	.000	.000	.00	42151.	.00	0.	42151.	1.0000	.00
.266	.00	.000	.000	.00	42151.	.00	0.	42151.	1.0000	.00
.300	.00	.000	.000	.00	42151.	.00	0.	42151.	1.0000	.00
.333	.00	.000	.000	.00	42151.	.00	0.	42151.	1.0000	.00
.366	.00	.000	.000	.00	42151.	.00	0.	42151.	1.0000	.00
.400	.00	.000	.000	.00	42151.	.00	0.	42151.	1.0000	.00
.433	.00	.000	.000	.00	42151.	.00	0.	42151.	1.0000	.00
.466	.00	.000	.000	.00	42151.	.00	0.	42151.	1.0000	.00
.500	.00	.000	.000	.00	42151.	.00	0.	42151.	1.0000	.00
.533	.00	.000	.000	.00	42151.	.00	0.	42151.	1.0000	.00
.566	.00	.000	.000	.00	42151.	.00	0.	42151.	1.0000	.00
.599	.00	.000	.000	.00	42151.	.00	0.	42151.	1.0000	.00
.633	.00	.000	.000	.00	42151.	.00	0.	42151.	1.0000	.00
.666	.00	.000	.000	.00	42151.	.00	0.	42151.	1.0000	.00
.699	.00	.000	.000	.00	42151.	.00	0.	42151.	1.0000	.00
.733	.00	.000	.000	.00	42151.	.00	0.	42151.	1.0000	.00
.766	.00	.000	.000	.00	42151.	.00	0.	42151.	1.0000	.00
.799	.00	.000	.000	.00	42151.	.00	0.	42151.	1.0000	.00
.833	.00	.000	.000	.00	42151.	.00	0.	42151.	1.0000	.00
.866	.00	.000	.000	.00	42151.	.00	0.	42151.	1.0000	.00
.899	.00	.000	.000	.00	42151.	.00	0.	42151.	1.0000	.00
.932	.00	.000	.000	.00	42151.	.00	0.	42151.	1.0000	.00
.966	.00	.000	.000	.00	42151.	.00	0.	42151.	1.0000	.00
.999	.00	.000	.000	.00	42151.	.00	0.	42151.	1.0000	.00
1.032	.00	.000	.000	.00	42151.	.00	0.	42151.	1.0000	.00
1.066	.00	.000	.000	.00	42151.	.00	0.	42151.	1.0000	.00
1.099	.00	.000	.000	.00	42151.	.00	0.	42151.	1.0000	.00
1.132	.00	.000	.000	.00	42151.	.00	0.	42151.	1.0000	.00
1.166	.00	.000	.000	.00	42151.	.00	0.	42151.	1.0000	.00
1.199	.00	.000	.000	.00	42151.	.00	0.	42151.	1.0000	.00
1.232	.00	.000	.000	.00	42151.	.00	0.	42151.	1.0000	.00
1.265	.00	.000	.000	.00	42151.	.00	0.	42151.	1.0000	.00
1.299	.00	.000	.000	.00	42151.	.00	0.	42151.	1.0000	.00

1.332	.19	1.369	.065	2.20	42151.	.00	14574.	55531.	1.0222	.04
1.365	1.20	2.168	.129	4.30	42151.	.02	35445.	74719.	1.0305	.41
1.399	3.50	2.838	.191	6.46	42151.	.08	59335.	96726.	1.0404	1.81
1.432	6.79	3.350	.245	8.29	42151.	.22	80505.	116264.	1.0496	5.15
1.465	9.81	3.654	.281	9.55	42151.	.38	93509.	128282.	1.0555	10.55
1.499	11.41	3.793	.298	10.10	42151.	.48	99878.	134174.	1.0585	17.16
1.532	11.54	3.804	.299	10.14	42151.	.49	100362.	134622.	1.0587	23.88
1.565	10.66	3.730	.290	9.85	42151.	.43	96956.	131470.	1.0571	29.91
1.598	9.31	3.610	.276	9.36	42151.	.35	91591.	126509.	1.0547	34.96
1.632	7.87	3.468	.258	8.79	42151.	.28	85513.	120891.	1.0519	39.01
1.665	6.55	3.321	.241	8.18	42151.	.21	79284.	115136.	1.0491	42.20
1.698	5.37	3.164	.224	7.57	42151.	.16	72626.	108988.	1.0462	44.65
1.732	4.33	2.994	.207	7.00	42151.	.11	65544.	102453.	1.0431	46.50
1.765	3.45	2.829	.190	6.43	42151.	.08	58976.	96395.	1.0403	47.88
1.798	2.73	2.668	.174	5.88	42151.	.06	52870.	90766.	1.0377	48.90
1.832	2.17	2.514	.160	5.40	42151.	.04	47192.	85535.	1.0353	49.66
1.865	1.76	2.390	.148	4.97	42151.	.03	42811.	81500.	1.0335	50.24
1.898	1.49	2.294	.140	4.65	42151.	.02	39563.	78509.	1.0322	50.72
1.931	1.30	2.217	.133	4.43	42151.	.02	37017.	76167.	1.0311	51.12
1.965	1.16	2.148	.127	4.25	42151.	.02	34798.	74124.	1.0302	51.47
1.998	1.04	2.085	.122	4.11	42151.	.01	32838.	72321.	1.0294	51.77
2.031	.95	2.035	.117	3.96	42151.	.01	31343.	70946.	1.0288	52.04
2.065	.86	1.994	.114	3.81	42151.	.01	30140.	69839.	1.0283	52.28
2.098	.79	1.954	.110	3.68	42151.	.01	28998.	68788.	1.0279	52.50
2.131	.73	1.915	.107	3.56	42151.	.01	27896.	67775.	1.0274	52.70
2.164	.67	1.876	.104	3.45	42151.	.01	26817.	66783.	1.0270	52.88
2.198	.62	1.837	.101	3.35	42151.	.01	25750.	65801.	1.0266	53.04
2.231	.57	1.798	.097	3.26	42151.	.01	24695.	64831.	1.0262	53.19
2.264	.53	1.758	.094	3.18	42151.	.00	23655.	63875.	1.0257	53.33
2.298	.49	1.720	.091	3.09	42151.	.00	22675.	62975.	1.0254	53.45
2.331	.45	1.685	.088	3.00	42151.	.00	21798.	62168.	1.0250	53.56
2.364	.41	1.651	.086	2.91	42151.	.00	20953.	61392.	1.0247	53.66
2.398	.38	1.617	.083	2.82	42151.	.00	20141.	60646.	1.0244	53.75
2.431	.35	1.585	.081	2.74	42151.	.00	19360.	59928.	1.0241	53.83
2.464	.32	1.553	.078	2.65	42151.	.00	18608.	59237.	1.0238	53.91
2.498	.30	1.521	.076	2.57	42151.	.00	17885.	58572.	1.0235	53.98
2.531	.27	1.491	.074	2.50	42151.	.00	17190.	57933.	1.0232	54.04
2.564	.25	1.460	.071	2.42	42151.	.00	16521.	57319.	1.0229	54.10
2.597	.23	1.431	.069	2.35	42151.	.00	15878.	56728.	1.0227	54.15
2.631	.21	1.402	.067	2.28	42151.	.00	15259.	56160.	1.0225	54.20
2.664	.20	1.374	.065	2.21	42151.	.00	14664.	55613.	1.0222	54.24
2.697	.18	1.346	.063	2.14	42151.	.00	14092.	55088.	1.0220	54.28
2.731	.17	1.318	.061	2.08	42151.	.00	13542.	54583.	1.0218	54.32
2.764	.15	1.292	.059	2.01	42151.	.00	13013.	54097.	1.0216	54.35
2.797	.14	1.266	.058	1.95	42151.	.00	12505.	53630.	1.0214	54.38
2.831	.13	1.240	.056	1.89	42151.	.00	12016.	53181.	1.0212	54.41
2.864	.12	1.215	.054	1.84	42151.	.00	11546.	52750.	1.0210	54.44
2.897	.11	1.190	.053	1.78	42151.	.00	11095.	52335.	1.0208	54.46
2.930	.10	1.166	.051	1.73	42151.	.00	10660.	51936.	1.0207	54.48
2.964	.09	1.143	.049	1.68	42151.	.00	10243.	51553.	1.0205	54.50
2.997	.09	1.120	.048	1.62	42151.	.00	9842.	51184.	1.0204	54.52
3.030	.08	1.097	.046	1.58	42151.	.00	9456.	50830.	1.0202	54.53
3.064	.07	1.075	.045	1.53	42151.	.00	9085.	50490.	1.0201	54.55
3.097	.07	1.053	.044	1.48	42151.	.00	8729.	50163.	1.0199	54.56
3.130	.06	1.032	.042	1.44	42151.	.00	8387.	49848.	1.0198	54.57

3.164	.06	1.011	.041	1.39	42151.	.00	8058.	49546.	1.0197	54.58
3.197	.05	.990	.040	1.35	42151.	.00	7741.	49256.	1.0195	54.59
3.230	.05	.970	.039	1.31	42151.	.00	7437.	48977.	1.0194	54.60
3.263	.05	.951	.037	1.27	42151.	.00	7145.	48708.	1.0193	54.61
3.297	.04	.932	.036	1.23	42151.	.00	6864.	48451.	1.0192	54.62
3.330	.04	.913	.035	1.20	42151.	.00	6595.	48203.	1.0191	54.63
3.363	.04	.894	.034	1.16	42151.	.00	6335.	47965.	1.0190	54.63
3.397	.03	.876	.033	1.12	42151.	.00	6086.	47736.	1.0189	54.64
3.430	.03	.858	.032	1.09	42151.	.00	5847.	47517.	1.0188	54.65
3.463	.03	.841	.031	1.06	42151.	.00	5617.	47306.	1.0187	54.65
3.497	.03	.824	.030	1.03	42151.	.00	5396.	47103.	1.0187	54.66
3.530	.02	.807	.029	.99	42151.	.00	5183.	46908.	1.0186	54.66
3.563	.02	.791	.028	.96	42151.	.00	4979.	46720.	1.0185	54.66
3.596	.02	.775	.028	.94	42151.	.00	4783.	46541.	1.0184	54.67
3.630	.02	.759	.027	.91	42151.	.00	4595.	46368.	1.0183	54.67
3.663	.02	.744	.026	.88	42151.	.00	4414.	46202.	1.0183	54.67
3.696	.02	.729	.025	.85	42151.	.00	4240.	46042.	1.0182	54.68

TIME (HRS)	WATER FLOW (CFS)	HYD. VELOCITY (FT/SEC)	DEPTH (FT)	WIDTH (FT)	WASHLOAD CONC. (PPM-W)	BED MAT. TRANSPORT (CFS)	BED CONC. (PPM-W)	TOTAL CONC. (PPM-W)	BULKING FACTOR	ACCUM. SEDIMENT (TONS)
3.730	.01	.714	.024	.83	42151.	.00	4073.	45889.	1.0181	54.68
3.763	.01	.700	.024	.80	42151.	.00	3913.	45741.	1.0181	54.68
3.796	.01	.686	.023	.78	42151.	.00	3758.	45600.	1.0180	54.68
3.830	.01	.672	.022	.76	42151.	.00	3610.	45464.	1.0180	54.69
3.863	.01	.658	.022	.73	42151.	.00	3468.	45333.	1.0179	54.69
3.896	.01	.645	.021	.71	42151.	.00	3331.	45208.	1.0179	54.69
3.929	.01	.632	.020	.69	42151.	.00	3200.	45087.	1.0178	54.69
3.963	.01	.619	.020	.67	42151.	.00	3074.	44971.	1.0178	54.69
3.996	.01	.606	.019	.65	42151.	.00	2952.	44860.	1.0177	54.69
4.029	.01	.586	.018	.62	42151.	.00	2762.	44685.	1.0177	54.70
4.063	.00	.545	.016	.55	42151.	.00	2390.	44344.	1.0175	54.70
4.096	.00	.483	.014	.46	42151.	.00	1884.	43879.	1.0173	54.70
4.129	.00	.396	.010	.34	42151.	.00	1274.	43320.	1.0171	54.70

AT PEAK FLOW OF 11.539 WITH TIME AT 1.53 HOURS: BEDMAT = 16.56 (TONS) = .0076 (AC-FT bulked)
 PEAK BULKING FACTOR = 1.058703 = 134622. (PPM-W) TOTAL SED = 23.88 (TONS) = .0110 (AC-FT bulked)

WEIGHT (TONS)	UNBULKED VOLUME (AC-FT)	BULKED VOLUME (AC-FT)	CONCENTRATION BY WEIGHT (PPM)	AVERAGE BULKING FACTOR
WASHMAT =	19.01	.0053	.0087	42150.
BEDMAT =	35.69	.0099	.0164	76316.
TOTAL SEDIMENT =	54.70	.0152	.0251	112394.
				1.047783

SEDIMENT TRANSPORT CAPACITY: 2.70038 AC-FT/SQ MI (bulked) = 9.1897 TONS/ACRE (at Porosity=0.395)

PRINT HYD ID=10 CODE=1

PARTIAL HYDROGRAPH 132.11

RUNOFF VOLUME = .64079 INCHES = .3178 ACRE-FEET
 PEAK DISCHARGE RATE = 11.54 CFS AT 1.532 HOURS BASIN AREA = .0093 SQ. MI.

PRINT HYD ID=10 CODE=1

PARTIAL HYDROGRAPH 132.11

RUNOFF VOLUME = .64079 INCHES = .3178 ACRE-FEET
PEAK DISCHARGE RATE = 11.54 CFS AT 1.532 HOURS BASIN AREA = .0093 SQ. MI.

COMPUTE NM HYD

ID=11 HYD NO=133.51 DA=0.0670 SQ MI
PER A=5.00 PER B=65.00 PER C=30.00 PER D=0.00
TP=-0.1333 HR MASS RAIN=-1

K = .124915HR TP = .133300HR K/TP RATIO = .937100 SHAPE CONSTANT, N = 3.773854
UNIT PEAK = 170.79 CFS UNIT VOLUME = 1.000 B = 339.80 P60 = 1.8700
AREA = .067000 SQ MI IA = .46250 INCHES INF = 1.14500 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=11 CODE=1

PARTIAL HYDROGRAPH 133.51

RUNOFF VOLUME = .73808 INCHES = 2.6374 ACRE-FEET
PEAK DISCHARGE RATE = 95.23 CFS AT 1.532 HOURS BASIN AREA = .0670 SQ. MI.

SED WASH LOAD

ID=11 K=0.16 C=0.25
P=1.0 LS=0.470
IMPERVIOUS=0.0 FACTOR=3.0
SEDIMENT YIELD (Wash Mat.) = 118.3 (TONS) WASH LOAD CONCENTRATION = 31948 (ppm-w)
PERCENTAGE IMPERVIOUS AREA = .000 WASH LOAD FACTOR = 3.00000

PRINT HYD ID=11 CODE=1

PARTIAL HYDROGRAPH 133.51

RUNOFF VOLUME = .73808 INCHES = 2.6374 ACRE-FEET
PEAK DISCHARGE RATE = 95.23 CFS AT 1.532 HOURS BASIN AREA = .0670 SQ. MI.

SEDIMENT TRANS

ID=11 IDS=4 CODE=1
A=0.0002 B=4.19 C=0.19 D=-2.55
NUMB WASH=-1 NUMB SECTIONS=9
FLOW VELOCITY WIDTH
(CFS) (FPS) (FT)
5.00 2.91 8.75
10.00 3.61 10.08
25.00 4.77 12.68
40.00 5.42 14.57
55.00 5.96 16.02
70.00 6.36 17.31
85.00 6.65 18.49
100.00 6.96 19.50

115.00 6.74 24.19
Use wash load from SED WASH LOAD command - Concentration = 31948 (PPM-W)

* * * * *										
TIME (HRS)	WATER FLOW (CFS)	VELOCITY (FT/SEC)	HYD. DEPTH (FT)	WIDTH (FT)	WASHLOAD CONC. (PPM-W)	BED MAT. TRANSPORT (CFS)	BED CONC. (PPM-W)	TOTAL CONC. (PPM-W)	BULKING FACTOR	ACCU. SEDIMENT (TONS)
.000	.00	.000	.000	.00	31948.	.00	0.	31948.	1.0000	.00
.033	.00	.000	.000	.00	31948.	.00	0.	31948.	1.0000	.00
.067	.00	.000	.000	.00	31948.	.00	0.	31948.	1.0000	.00
.100	.00	.000	.000	.00	31948.	.00	0.	31948.	1.0000	.00
.133	.00	.000	.000	.00	31948.	.00	0.	31948.	1.0000	.00
.167	.00	.000	.000	.00	31948.	.00	0.	31948.	1.0000	.00
.200	.00	.000	.000	.00	31948.	.00	0.	31948.	1.0000	.00
.233	.00	.000	.000	.00	31948.	.00	0.	31948.	1.0000	.00
.266	.00	.000	.000	.00	31948.	.00	0.	31948.	1.0000	.00
.300	.00	.000	.000	.00	31948.	.00	0.	31948.	1.0000	.00
.333	.00	.000	.000	.00	31948.	.00	0.	31948.	1.0000	.00
.366	.00	.000	.000	.00	31948.	.00	0.	31948.	1.0000	.00
.400	.00	.000	.000	.00	31948.	.00	0.	31948.	1.0000	.00
.433	.00	.000	.000	.00	31948.	.00	0.	31948.	1.0000	.00
.466	.00	.000	.000	.00	31948.	.00	0.	31948.	1.0000	.00
.500	.00	.000	.000	.00	31948.	.00	0.	31948.	1.0000	.00
.533	.00	.000	.000	.00	31948.	.00	0.	31948.	1.0000	.00
.566	.00	.000	.000	.00	31948.	.00	0.	31948.	1.0000	.00
.599	.00	.000	.000	.00	31948.	.00	0.	31948.	1.0000	.00
.633	.00	.000	.000	.00	31948.	.00	0.	31948.	1.0000	.00
.666	.00	.000	.000	.00	31948.	.00	0.	31948.	1.0000	.00
.699	.00	.000	.000	.00	31948.	.00	0.	31948.	1.0000	.00
.733	.00	.000	.000	.00	31948.	.00	0.	31948.	1.0000	.00
.766	.00	.000	.000	.00	31948.	.00	0.	31948.	1.0000	.00
.799	.00	.000	.000	.00	31948.	.00	0.	31948.	1.0000	.00
.833	.00	.000	.000	.00	31948.	.00	0.	31948.	1.0000	.00
.866	.00	.000	.000	.00	31948.	.00	0.	31948.	1.0000	.00
.899	.00	.000	.000	.00	31948.	.00	0.	31948.	1.0000	.00
.932	.00	.000	.000	.00	31948.	.00	0.	31948.	1.0000	.00
.966	.00	.000	.000	.00	31948.	.00	0.	31948.	1.0000	.00
.999	.00	.000	.000	.00	31948.	.00	0.	31948.	1.0000	.00
1.032	.00	.000	.000	.00	31948.	.00	0.	31948.	1.0000	.00
1.066	.00	.000	.000	.00	31948.	.00	0.	31948.	1.0000	.00
1.099	.00	.000	.000	.00	31948.	.00	0.	31948.	1.0000	.00
1.132	.00	.000	.000	.00	31948.	.00	0.	31948.	1.0000	.00
1.166	.00	.000	.000	.00	31948.	.00	0.	31948.	1.0000	.00
1.199	.00	.000	.000	.00	31948.	.00	0.	31948.	1.0000	.00
1.232	.00	.000	.000	.00	31948.	.00	0.	31948.	1.0000	.00
1.265	.00	.000	.000	.00	31948.	.00	0.	31948.	1.0000	.00
1.299	.00	.000	.000	.00	31948.	.00	0.	31948.	1.0000	.00
1.332	2.42	2.457	.152	6.45	31948.	.04	44431.	73644.	1.0300	.72
1.365	12.32	3.867	.304	10.48	31948.	.53	101516.	127391.	1.0551	7.44
1.399	31.80	5.103	.460	13.54	31948.	2.35	163533.	186004.	1.0862	34.62
1.432	58.23	6.055	.590	16.30	31948.	6.06	216244.	236006.	1.1166	101.90
1.465	82.55	6.607	.683	18.30	31948.	10.08	244540.	262917.	1.1346	212.03
1.499	95.10	6.864	.723	19.17	31948.	12.54	258900.	276593.	1.1443	348.03
1.532	95.23	6.867	.723	19.18	31948.	12.56	259052.	276738.	1.1444	484.31
1.565	87.20	6.699	.698	18.64	31948.	10.93	249391.	267535.	1.1378	603.44
1.598	75.68	6.477	.658	17.76	31948.	8.94	238472.	257142.	1.1306	701.42
1.632	63.91	6.210	.613	16.79	31948.	6.99	224723.	244064.	1.1218	778.60
1.665	53.37	5.909	.569	15.86	31948.	5.29	208085.	228255.	1.1116	837.64

1.698	44.18	5.589	.528	14.97	31948.	3.90	189505.	210619.	1.1007	881.73
1.732	36.18	5.282	.486	14.09	31948.	2.85	172701.	194688.	1.0912	914.45
1.765	29.26	4.988	.444	13.22	31948.	2.07	157681.	180463.	1.0831	938.55
1.798	23.50	4.691	.403	12.42	31948.	1.48	142623.	166215.	1.0752	956.07
1.832	18.96	4.416	.369	11.63	31948.	1.05	128450.	152818.	1.0681	968.86
WATER				HYD.		WASHLOAD		BED MAT. BED		BULKING
TIME	FLOW	VELOCITY	DEPTH	WIDTH	CONC.	TRANSPORT	CONC.	TOTAL	FACTOR	
(HRS)	(CFS)	(FT/SEC)	(FT)	(FT)	(PPM-W)	(CFS)	(PPM-W)	(PPM-W)		ACCTM.
										SEDIMENT
										(TONS)
1.865	15.61	4.166	.339	11.05	31948.	.77	115978.	141038.	1.0620	978.44
1.898	13.23	3.956	.314	10.64	31948.	.59	105770.	131404.	1.0571	985.93
1.931	11.37	3.768	.293	10.32	31948.	.46	96858.	122998.	1.0529	991.89
1.965	9.92	3.602	.274	10.06	31948.	.37	89243.	115819.	1.0494	996.75
1.998	8.77	3.473	.259	9.75	31948.	.30	83705.	110600.	1.0469	1000.83
2.031	7.83	3.357	.245	9.50	31948.	.25	78791.	105972.	1.0447	1004.30
2.065	7.05	3.250	.233	9.30	31948.	.21	74390.	101827.	1.0428	1007.29
2.098	6.39	3.151	.222	9.12	31948.	.18	70396.	98067.	1.0410	1009.89
2.131	5.82	3.059	.212	8.97	31948.	.16	66718.	94605.	1.0394	1012.17
2.164	5.32	2.970	.203	8.83	31948.	.14	63279.	91369.	1.0379	1014.17
2.198	4.87	2.894	.195	8.63	31948.	.12	60392.	88652.	1.0367	1015.94
2.231	4.45	2.842	.190	8.26	31948.	.10	58391.	86770.	1.0359	1017.52
2.264	4.07	2.789	.184	7.93	31948.	.09	56369.	84868.	1.0350	1018.93
2.298	3.73	2.735	.179	7.62	31948.	.08	54333.	82953.	1.0341	1020.20
2.331	3.41	2.679	.173	7.34	31948.	.07	52291.	81033.	1.0333	1021.32
2.364	3.12	2.623	.168	7.08	31948.	.06	50249.	79113.	1.0324	1022.32
2.398	2.85	2.566	.163	6.85	31948.	.05	48215.	77201.	1.0316	1023.22
2.431	2.61	2.508	.157	6.63	31948.	.05	46195.	75302.	1.0307	1024.01
2.464	2.39	2.450	.152	6.43	31948.	.04	44196.	73423.	1.0299	1024.72
2.498	2.19	2.391	.146	6.25	31948.	.04	42223.	71570.	1.0291	1025.35
2.531	2.00	2.333	.141	6.09	31948.	.03	40284.	69747.	1.0283	1025.91
2.564	1.83	2.274	.136	5.94	31948.	.03	38382.	67961.	1.0275	1026.41
2.597	1.68	2.215	.130	5.80	31948.	.02	36523.	66214.	1.0268	1026.86
2.631	1.53	2.157	.125	5.67	31948.	.02	34710.	64512.	1.0260	1027.25
2.664	1.40	2.099	.120	5.56	31948.	.02	32949.	62858.	1.0253	1027.60
2.697	1.28	2.041	.115	5.45	31948.	.02	31241.	61254.	1.0246	1027.92
2.731	1.17	1.984	.111	5.35	31948.	.01	29589.	59703.	1.0240	1028.19
2.764	1.07	1.928	.106	5.26	31948.	.01	27995.	58207.	1.0233	1028.44
2.797	.98	1.875	.102	5.16	31948.	.01	26534.	56834.	1.0227	1028.66
2.831	.90	1.833	.098	4.99	31948.	.01	25424.	55792.	1.0223	1028.86
2.864	.82	1.793	.095	4.83	31948.	.01	24359.	54793.	1.0219	1029.04
2.897	.75	1.754	.092	4.67	31948.	.01	23338.	53835.	1.0215	1029.20
2.930	.69	1.715	.089	4.52	31948.	.01	22358.	52915.	1.0211	1029.35
2.964	.63	1.678	.086	4.37	31948.	.01	21419.	52034.	1.0207	1029.48
2.997	.58	1.641	.083	4.23	31948.	.00	20518.	51189.	1.0204	1029.59
3.030	.53	1.605	.080	4.09	31948.	.00	19655.	50379.	1.0200	1029.70
3.064	.48	1.569	.078	3.96	31948.	.00	18827.	49602.	1.0197	1029.79
3.097	.44	1.535	.075	3.83	31948.	.00	18034.	48857.	1.0194	1029.88
3.130	.40	1.501	.073	3.70	31948.	.00	17273.	48144.	1.0191	1029.95
3.164	.37	1.468	.070	3.58	31948.	.00	16544.	47460.	1.0188	1030.02
3.197	.34	1.436	.068	3.46	31948.	.00	15845.	46804.	1.0185	1030.08
3.230	.31	1.404	.066	3.35	31948.	.00	15175.	46176.	1.0183	1030.14
3.263	.28	1.374	.064	3.24	31948.	.00	14533.	45573.	1.0180	1030.19
3.297	.26	1.343	.062	3.13	31948.	.00	13918.	44996.	1.0178	1030.24
3.330	.24	1.314	.060	3.03	31948.	.00	13328.	44444.	1.0176	1030.28
3.363	.22	1.285	.058	2.93	31948.	.00	12763.	43914.	1.0173	1030.31
3.397	.20	1.257	.056	2.83	31948.	.00	12222.	43406.	1.0171	1030.35
3.430	.18	1.229	.054	2.74	31948.	.00	11704.	42920.	1.0169	1030.38
3.463	.17	1.202	.052	2.65	31948.	.00	11207.	42454.	1.0167	1030.41
3.497	.15	1.176	.050	2.57	31948.	.00	10731.	42008.	1.0165	1030.43

3.530	.14	1.150	.049	2.48	31948.	.00	10275.	41580.	1.0164	1030.45
3.563	.13	1.125	.047	2.40	31948.	.00	9838.	41171.	1.0162	1030.47
3.596	.12	1.100	.046	2.32	31948.	.00	9420.	40778.	1.0160	1030.49
3.630	.11	1.076	.044	2.24	31948.	.00	9019.	40403.	1.0159	1030.51
3.663	.10	1.052	.043	2.17	31948.	.00	8636.	40043.	1.0157	1030.52
3.696	.09	1.029	.041	2.10	31948.	.00	8268.	39698.	1.0156	1030.54

TIME (HRS)	WATER FLOW (CFS)	HYD. VELOCITY (FT/SEC)	DEPTH (FT)	WIDTH (FT)	WASHLOAD CONC. (PPM-W)	BED MAT. TRANSPORT (CFS)	BED CONC. (PPM-W)	TOTAL CONC. (PPM-W)	BULKING FACTOR	ACCU. SEDIMENT (TONS)
3.730	.08	1.006	.040	2.03	31948.	.00	7916.	39368.	1.0155	1030.55
3.763	.07	.984	.039	1.96	31948.	.00	7579.	39052.	1.0153	1030.56
3.796	.07	.963	.037	1.90	31948.	.00	7256.	38749.	1.0152	1030.57
3.830	.06	.942	.036	1.84	31948.	.00	6946.	38459.	1.0151	1030.58
3.863	.06	.921	.035	1.78	31948.	.00	6650.	38181.	1.0150	1030.59
3.896	.05	.901	.034	1.72	31948.	.00	6367.	37915.	1.0149	1030.60
3.929	.05	.881	.033	1.66	31948.	.00	6095.	37661.	1.0148	1030.60
3.963	.04	.861	.032	1.61	31948.	.00	5835.	37417.	1.0147	1030.61
3.996	.04	.843	.031	1.56	31948.	.00	5586.	37183.	1.0146	1030.62
4.029	.04	.824	.030	1.51	31948.	.00	5347.	36960.	1.0145	1030.62
4.063	.03	.806	.029	1.46	31948.	.00	5119.	36746.	1.0144	1030.63
4.096	.03	.788	.028	1.41	31948.	.00	4900.	36541.	1.0143	1030.63
4.129	.03	.771	.027	1.36	31948.	.00	4691.	36345.	1.0142	1030.64
4.163	.03	.754	.026	1.32	31948.	.00	4490.	36157.	1.0142	1030.64
4.196	.02	.737	.025	1.27	31948.	.00	4298.	35977.	1.0141	1030.64
4.229	.02	.721	.024	1.23	31948.	.00	4115.	35805.	1.0140	1030.65
4.262	.02	.705	.023	1.19	31948.	.00	3939.	35640.	1.0139	1030.65
4.296	.02	.690	.023	1.15	31948.	.00	3770.	35482.	1.0139	1030.65
4.329	.02	.675	.022	1.12	31948.	.00	3609.	35331.	1.0138	1030.65
4.362	.02	.660	.021	1.08	31948.	.00	3455.	35186.	1.0138	1030.65
4.396	.01	.645	.021	1.04	31948.	.00	3307.	35047.	1.0137	1030.66
4.429	.01	.631	.020	1.01	31948.	.00	3165.	34915.	1.0137	1030.66
4.462	.01	.617	.019	.98	31948.	.00	3030.	34788.	1.0136	1030.66
4.496	.01	.604	.019	.94	31948.	.00	2900.	34666.	1.0136	1030.66
4.529	.01	.591	.018	.91	31948.	.00	2776.	34550.	1.0135	1030.66
4.562	.01	.578	.017	.88	31948.	.00	2657.	34438.	1.0135	1030.66
4.595	.01	.552	.016	.83	31948.	.00	2434.	34229.	1.0134	1030.66
4.629	.01	.515	.015	.74	31948.	.00	2123.	33938.	1.0133	1030.67
4.662	.00	.463	.012	.63	31948.	.00	1716.	33556.	1.0131	1030.67
4.695	.00	.394	.010	.50	31948.	.00	1249.	33118.	1.0129	1030.67
4.729	.00	.361	.009	.44	31948.	.00	1054.	32935.	1.0129	1030.67

AT PEAK FLOW OF 95.228 WITH TIME AT 1.53 HOURS: BEDMAT = 437.70 (TONS) = .2010 (AC-FT bulked)
TOTAL SED = 484.31 (TONS) = .2224 (AC-FT bulked)

PEAK BULKING FACTOR = 1.144387 = 276738. (PPM-W)

UNBULKED WEIGHT (TONS)	BULKED VOLUME (AC-FT)	CONCENTRATION BY WEIGHT (PPM)	AVERAGE BULKING FACTOR
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WASHMAT =	118.29	.0328	.0543	31948.
BEDMAT =	912.37	.2533	.4189	202893.
TOTAL SEDIMENT =	1030.67	.2862	.4732	223325.
				1.108505

SEDIMENT TRANSPORT CAPACITY: 7.06294 AC-FT/SQ MI (bulked) = 24.0361 TONS/ACRE (at Porosity=0.395)

PARTIAL HYDROGRAPH 133.51

RUNOFF VOLUME = .73808 INCHES = 2.6374 ACRE-FEET
 PEAK DISCHARGE RATE = 95.23 CFS AT 1.532 HOURS BASIN AREA = .0670 SQ. MI.

ADD HYD ID=10 HYD NO=133.50 ID I=10 ID II=11
 PRINT HYD ID=10 CODE=1

PARTIAL HYDROGRAPH 133.50

RUNOFF VOLUME = .72622 INCHES = 2.9552 ACRE-FEET
 PEAK DISCHARGE RATE = 106.77 CFS AT 1.532 HOURS BASIN AREA = .0763 SQ. MI.

COMPUTE NM HYD ID=11 HYD NO=133.52 DA=0.0485 SQ MI
 PER A=5.00 PER B=65.00 PER C=30.00 PER D=0.00
 TP=-0.1333 HR MASS RAIN=-1

K = .125089HR TP = .133300HR K/TP RATIO = .938402 SHAPE CONSTANT, N = 3.768397
 UNIT PEAK = 123.50 CFS UNIT VOLUME = 1.000 B = 339.42 P60 = 1.8700
 AREA = .048500 SQ MI IA = .46250 INCHES INF = 1.14500 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=11 CODE=1

PARTIAL HYDROGRAPH 133.52

RUNOFF VOLUME = .73808 INCHES = 1.9092 ACRE-FEET
 PEAK DISCHARGE RATE = 68.88 CFS AT 1.532 HOURS BASIN AREA = .0485 SQ. MI.

SED WASH LOAD ID=11 K=0.14 C=0.25
 P=1.0 IS=0.375

IMPERVIOUS=0.0 FACTOR=3.0
 SEDIMENT YIELD (Wash Mat.) = 57.5 (TONS) WASH LOAD CONCENTRATION = 21674 (ppm-w)
 PERCENTAGE IMPERVIOUS AREA = .000 WASH LOAD FACTOR = 3.00000

PRINT HYD ID=11 CODE=1

PARTIAL HYDROGRAPH 133.52

RUNOFF VOLUME = .73808 INCHES = 1.9092 ACRE-FEET
 PEAK DISCHARGE RATE = 68.88 CFS AT 1.532 HOURS BASIN AREA = .0485 SQ. MI.

SEDIMENT TRANS

ID=11 IDS=5 CODE=1
 A=0.0002 B=4.19 C=0.19 D=-2.55
 NUMB WASH=-1 NUMB SECTIONS=9
 FLOW VELOCITY WIDTH
 (CFS) (FPS) (FT)

5.00 3.05 9.07
10.00 3.73 10.90
25.00 4.84 14.34
40.00 5.50 16.71
55.00 5.99 18.61
65.00 6.26 19.71
70.00 6.38 20.22
75.00 6.50 20.71
85.00 6.70 21.65

Use wash load from SED WASH LOAD command - Concentration = 21674 (PPM-W)

* * * * *

TIME (HRS)	WATER FLOW (CFS)	VELOCITY (FT/SEC)	HYD. DEPTH (FT)	WIDTH (FT)	WASHLOAD CONC. (PPM-W)	BED MAT. TRANSPORT (CFS)	BED CONC. (PPM-W)	TOTAL CONC. (PPM-W)	BULKING FACTOR	ACCUM. SEDIMENT (TONS)
.000	.00	.000	.000	.00	21674.	.00	0.	21674.	1.0000	.00
.033	.00	.000	.000	.00	21674.	.00	0.	21674.	1.0000	.00
.067	.00	.000	.000	.00	21674.	.00	0.	21674.	1.0000	.00
.100	.00	.000	.000	.00	21674.	.00	0.	21674.	1.0000	.00
.133	.00	.000	.000	.00	21674.	.00	0.	21674.	1.0000	.00
.167	.00	.000	.000	.00	21674.	.00	0.	21674.	1.0000	.00
.200	.00	.000	.000	.00	21674.	.00	0.	21674.	1.0000	.00
.233	.00	.000	.000	.00	21674.	.00	0.	21674.	1.0000	.00
.266	.00	.000	.000	.00	21674.	.00	0.	21674.	1.0000	.00
.300	.00	.000	.000	.00	21674.	.00	0.	21674.	1.0000	.00
.333	.00	.000	.000	.00	21674.	.00	0.	21674.	1.0000	.00
.366	.00	.000	.000	.00	21674.	.00	0.	21674.	1.0000	.00
.400	.00	.000	.000	.00	21674.	.00	0.	21674.	1.0000	.00
.433	.00	.000	.000	.00	21674.	.00	0.	21674.	1.0000	.00
.466	.00	.000	.000	.00	21674.	.00	0.	21674.	1.0000	.00
.500	.00	.000	.000	.00	21674.	.00	0.	21674.	1.0000	.00
.533	.00	.000	.000	.00	21674.	.00	0.	21674.	1.0000	.00
.566	.00	.000	.000	.00	21674.	.00	0.	21674.	1.0000	.00
.599	.00	.000	.000	.00	21674.	.00	0.	21674.	1.0000	.00
.633	.00	.000	.000	.00	21674.	.00	0.	21674.	1.0000	.00
.666	.00	.000	.000	.00	21674.	.00	0.	21674.	1.0000	.00
.699	.00	.000	.000	.00	21674.	.00	0.	21674.	1.0000	.00
.733	.00	.000	.000	.00	21674.	.00	0.	21674.	1.0000	.00
.766	.00	.000	.000	.00	21674.	.00	0.	21674.	1.0000	.00
.799	.00	.000	.000	.00	21674.	.00	0.	21674.	1.0000	.00
.833	.00	.000	.000	.00	21674.	.00	0.	21674.	1.0000	.00
.866	.00	.000	.000	.00	21674.	.00	0.	21674.	1.0000	.00
.899	.00	.000	.000	.00	21674.	.00	0.	21674.	1.0000	.00
.932	.00	.000	.000	.00	21674.	.00	0.	21674.	1.0000	.00
.966	.00	.000	.000	.00	21674.	.00	0.	21674.	1.0000	.00
.999	.00	.000	.000	.00	21674.	.00	0.	21674.	1.0000	.00
1.032	.00	.000	.000	.00	21674.	.00	0.	21674.	1.0000	.00
1.066	.00	.000	.000	.00	21674.	.00	0.	21674.	1.0000	.00
1.099	.00	.000	.000	.00	21674.	.00	0.	21674.	1.0000	.00
1.132	.00	.000	.000	.00	21674.	.00	0.	21674.	1.0000	.00
1.166	.00	.000	.000	.00	21674.	.00	0.	21674.	1.0000	.00
1.199	.00	.000	.000	.00	21674.	.00	0.	21674.	1.0000	.00
1.232	.00	.000	.000	.00	21674.	.00	0.	21674.	1.0000	.00
1.265	.00	.000	.000	.00	21674.	.00	0.	21674.	1.0000	.00
1.299	.00	.000	.000	.00	21674.	.00	0.	21674.	1.0000	.00
1.332	1.75	2.371	.124	5.96	21674.	.03	45612.	65373.	1.0264	.46
1.365	8.92	3.618	.235	10.51	21674.	.37	98781.	116422.	1.0497	4.86
1.399	23.02	4.742	.350	13.89	21674.	1.63	158403.	173807.	1.0794	22.97

1.432	42.14	5.581	.445	16.98	21674.	4.14	206586.	220292.	1.1066	67.50
1.465	59.71	6.123	.510	19.13	21674.	7.06	238593.	251224.	1.1266	142.43
1.499	68.78	6.352	.539	20.10	21674.	8.74	251889.	264086.	1.1354	234.75
1.532	68.88	6.354	.539	20.11	21674.	8.76	252024.	264217.	1.1355	327.26
1.565	63.09	6.212	.521	19.50	21674.	7.68	243820.	256279.	1.1300	408.57
1.598	54.77	5.984	.493	18.58	21674.	6.19	230359.	243262.	1.1213	474.42
1.632	46.26	5.725	.462	17.50	21674.	4.78	215079.	228495.	1.1118	525.67
1.665	38.64	5.452	.430	16.50	21674.	3.62	199070.	213034.	1.1022	564.79
1.698	31.99	5.188	.399	15.44	21674.	2.72	183792.	198289.	1.0933	594.39
1.732	26.21	4.907	.368	14.53	21674.	1.99	167700.	182769.	1.0844	616.31
1.765	21.20	4.644	.339	13.47	21674.	1.44	152875.	168480.	1.0765	632.37
1.798	17.02	4.377	.311	12.51	21674.	1.03	138195.	154341.	1.0689	643.99
1.832	13.73	4.115	.284	11.76	21674.	.73	124065.	140740.	1.0618	652.41
WATER										
TIME	FLOW	VELOCITY	HYD.	WIDTH	WASHLOAD	BED MAT.	BED	TOTAL	BULKING	ACCUM.
(HRS)	(CFS)	(FT/SEC)	DEPTH	(FT)	CONC.	TRANSPORT	CONC.	CONC.	FACTOR	SEDIMENT
			(FT)		(PPM-W)	(CFS)	(PPM-W)	(PPM-W)		(TONS)
1.865	11.30	3.877	.260	11.20	21674.	.54	111699.	128843.	1.0558	658.66
1.898	9.58	3.688	.242	10.75	21674.	.41	102155.	119666.	1.0513	663.53
1.931	8.24	3.539	.227	10.26	21674.	.33	95019.	112807.	1.0480	667.45
1.965	7.19	3.404	.214	9.87	21674.	.26	88703.	106737.	1.0451	670.66
1.998	6.35	3.283	.202	9.56	21674.	.22	83127.	101380.	1.0426	673.34
2.031	5.67	3.172	.192	9.32	21674.	.18	78178.	96627.	1.0404	675.61
2.065	5.11	3.071	.183	9.11	21674.	.15	73745.	92370.	1.0384	677.55
2.098	4.63	3.005	.177	8.72	21674.	.13	70904.	89642.	1.0372	679.26
2.131	4.22	2.949	.172	8.32	21674.	.12	68496.	87331.	1.0361	680.77
2.164	3.86	2.894	.167	7.98	21674.	.10	66136.	85065.	1.0351	682.11
2.198	3.53	2.838	.162	7.66	21674.	.09	63793.	82817.	1.0341	683.30
2.231	3.23	2.781	.157	7.38	21674.	.08	61445.	80563.	1.0331	684.36
2.264	2.95	2.723	.152	7.11	21674.	.07	59094.	78307.	1.0321	685.30
2.298	2.70	2.664	.148	6.87	21674.	.06	56747.	76055.	1.0311	686.13
2.331	2.47	2.605	.143	6.65	21674.	.05	54414.	73816.	1.0301	686.87
2.364	2.26	2.545	.138	6.45	21674.	.05	52100.	71596.	1.0291	687.52
2.398	2.07	2.485	.133	6.27	21674.	.04	49814.	69404.	1.0281	688.10
2.431	1.90	2.425	.128	6.10	21674.	.04	47562.	67244.	1.0272	688.61
2.464	1.73	2.364	.123	5.95	21674.	.03	45351.	65123.	1.0263	689.06
2.498	1.59	2.304	.119	5.81	21674.	.03	43187.	63047.	1.0254	689.46
2.531	1.45	2.243	.114	5.68	21674.	.02	41073.	61021.	1.0245	689.81
2.564	1.33	2.183	.109	5.56	21674.	.02	39016.	59049.	1.0237	690.12
2.597	1.22	2.124	.105	5.45	21674.	.02	37019.	57134.	1.0229	690.40
2.631	1.11	2.065	.101	5.35	21674.	.02	35085.	55280.	1.0221	690.64
2.664	1.02	2.006	.096	5.26	21674.	.01	33217.	53490.	1.0213	690.86
2.697	.93	1.960	.093	5.11	21674.	.01	31754.	52087.	1.0207	691.05
2.731	.85	1.917	.090	4.94	21674.	.01	30434.	50822.	1.0202	691.22
2.764	.78	1.875	.087	4.78	21674.	.01	29168.	49609.	1.0197	691.37
2.797	.71	1.834	.084	4.62	21674.	.01	27952.	48444.	1.0192	691.51
2.831	.65	1.793	.081	4.47	21674.	.01	26786.	47326.	1.0187	691.63
2.864	.60	1.754	.079	4.33	21674.	.01	25667.	46254.	1.0183	691.74
2.897	.55	1.715	.076	4.18	21674.	.01	24594.	45226.	1.0179	691.84
2.930	.50	1.678	.074	4.05	21674.	.00	23565.	44240.	1.0175	691.92
2.964	.46	1.641	.071	3.91	21674.	.00	22577.	43294.	1.0171	692.00
2.997	.42	1.605	.069	3.79	21674.	.00	21630.	42387.	1.0167	692.07
3.030	.38	1.570	.067	3.66	21674.	.00	20722.	41517.	1.0163	692.13
3.064	.35	1.535	.065	3.54	21674.	.00	19852.	40683.	1.0160	692.19
3.097	.32	1.502	.062	3.43	21674.	.00	19017.	39883.	1.0157	692.24
3.130	.29	1.469	.060	3.31	21674.	.00	18216.	39116.	1.0154	692.28
3.164	.27	1.436	.058	3.21	21674.	.00	17449.	38381.	1.0151	692.32
3.197	.25	1.405	.057	3.10	21674.	.00	16714.	37677.	1.0148	692.36
3.230	.23	1.374	.055	3.00	21674.	.00	16009.	37002.	1.0145	692.39

3.263	.21	1.344	.053	2.90	21674.	.00	15333.	36354.	1.0142	692.42
3.297	.19	1.315	.051	2.81	21674.	.00	14685.	35734.	1.0140	692.45
3.330	.17	1.286	.049	2.71	21674.	.00	14065.	35140.	1.0137	692.47
3.363	.16	1.257	.048	2.63	21674.	.00	13470.	34570.	1.0135	692.49
3.397	.14	1.230	.046	2.54	21674.	.00	12900.	34024.	1.0133	692.51
3.430	.13	1.203	.045	2.46	21674.	.00	12354.	33501.	1.0131	692.53
3.463	.12	1.177	.043	2.38	21674.	.00	11830.	33000.	1.0129	692.54
3.497	.11	1.151	.042	2.30	21674.	.00	11329.	32520.	1.0127	692.56
3.530	.10	1.125	.041	2.22	21674.	.00	10849.	32060.	1.0125	692.57
3.563	.09	1.101	.039	2.15	21674.	.00	10388.	31619.	1.0123	692.58
3.596	.08	1.077	.038	2.08	21674.	.00	9947.	31197.	1.0122	692.59
3.630	.08	1.053	.037	2.01	21674.	.00	9525.	30793.	1.0120	692.60
3.663	.07	1.030	.035	1.95	21674.	.00	9121.	30405.	1.0118	692.61
3.696	.07	1.007	.034	1.88	21674.	.00	8733.	30034.	1.0117	692.62
WATER										
TIME	FLOW	VELOCITY	HYD.	WASHLOAD	BED MAT.	BED	TOTAL	BULKING	ACCU.	SEDIMENT
(HRS)	(CFS)	(FT/SEC)	DEPTH	CONC.	TRANSPORT	CONC.	CONC.	FACTOR	(TONS)	
		(FT)	(FT)	(PPM-W)	(CFS)	(PPM-W)	(PPM-W)			
3.730	.06	.985	.033	1.82	21674.	.00	8362.	29679.	1.0115	692.62
3.763	.05	.964	.032	1.76	21674.	.00	8006.	29338.	1.0114	692.63
3.796	.05	.942	.031	1.70	21674.	.00	7666.	29012.	1.0113	692.63
3.830	.05	.922	.030	1.65	21674.	.00	7339.	28700.	1.0112	692.64
3.863	.04	.902	.029	1.59	21674.	.00	7027.	28401.	1.0110	692.64
3.896	.04	.882	.028	1.54	21674.	.00	6728.	28114.	1.0109	692.65
3.929	.03	.862	.027	1.49	21674.	.00	6441.	27840.	1.0108	692.65
3.963	.03	.843	.026	1.44	21674.	.00	6167.	27577.	1.0107	692.66
3.996	.03	.825	.025	1.40	21674.	.00	5904.	27326.	1.0106	692.66
4.029	.03	.807	.025	1.35	21674.	.00	5652.	27085.	1.0105	692.66
4.063	.02	.789	.024	1.31	21674.	.00	5411.	26854.	1.0104	692.66
4.096	.02	.772	.023	1.26	21674.	.00	5181.	26633.	1.0103	692.67
4.129	.02	.755	.022	1.22	21674.	.00	4960.	26421.	1.0102	692.67
4.163	.02	.738	.022	1.18	21674.	.00	4748.	26219.	1.0102	692.67
4.196	.02	.722	.021	1.14	21674.	.00	4545.	26025.	1.0101	692.67
4.229	.02	.706	.020	1.11	21674.	.00	4351.	25839.	1.0100	692.67
4.262	.01	.691	.019	1.07	21674.	.00	4166.	25661.	1.0099	692.67
4.296	.01	.676	.019	1.03	21674.	.00	3988.	25491.	1.0099	692.68
4.329	.01	.661	.018	1.00	21674.	.00	3817.	25328.	1.0098	692.68
4.362	.01	.646	.018	.97	21674.	.00	3654.	25172.	1.0097	692.68
4.396	.01	.632	.017	.94	21674.	.00	3498.	25023.	1.0097	692.68
4.429	.01	.618	.016	.91	21674.	.00	3349.	24879.	1.0096	692.68
4.462	.01	.591	.015	.85	21674.	.00	3068.	24610.	1.0095	692.68
4.496	.01	.552	.014	.76	21674.	.00	2676.	24235.	1.0094	692.68
4.529	.00	.495	.012	.65	21674.	.00	2163.	23744.	1.0092	692.68
4.562	.00	.422	.009	.51	21674.	.00	1574.	23181.	1.0090	692.68
4.595	.00	.387	.008	.45	21674.	.00	1329.	22946.	1.0089	692.68
4.629	.00	.355	.007	.39	21674.	.00	1120.	22746.	1.0088	692.68

AT PEAK FLOW OF 68.881 WITH TIME AT 1.53 HOURS: BEDMAT = 304.62 (TONS) = .1399 (AC-FT bulked)
 PEAK BULKING FACTOR = 1.135508 = 264217. (PPM-W) TOTAL SED = 327.26 (TONS) = .1503 (AC-FT bulked)

WEIGHT (TONS)	UNBULKED VOLUME (AC-FT)	BULKED VOLUME (AC-FT)	CONCENTRATION BY WEIGHT (PPM)	AVERAGE BULKING FACTOR
WASHMAT = 57.48	.0160	.0264	21674.	
BEDMAT = 635.20	.1764	.2916	196662.	

TOTAL SEDIMENT = 692.68 .1923 .3180 210709. 1.100740

SEDIMENT TRANSPORT CAPACITY: 6.55744 AC-FT/SQ MI (bulked) = 22.3158 TONS/ACRE (at Porosity=0.395)

PRINT HYD ID=11 CODE=1

PARTIAL HYDROGRAPH 133.52

RUNOFF VOLUME = .73808 INCHES = 1.9092 ACRE-FEET
PEAK DISCHARGE RATE = 68.88 CFS AT 1.532 HOURS BASIN AREA = .0485 SQ. MI.

*S UNDEVELOPED, OFF-SITE FLOW ENTERING POND

ADD HYD ID=11 HYD NO=133.50 ID I=10 ID II=11
PRINT HYD ID=11 CODE=1

PARTIAL HYDROGRAPH 133.50

RUNOFF VOLUME = .73083 INCHES = 4.8644 ACRE-FEET
PEAK DISCHARGE RATE = 175.65 CFS AT 1.532 HOURS BASIN AREA = .1248 SQ. MI.

* *****

*S FLOW ENTERING STREET AT NW CORNER OF SITE

COMPUTE NM HYD ID=13 HYD NO=133.53 DA=0.0025 SQ MI
PER A=0.00 PER B=100.00 PER C=0.00 PER D=0.00
TP=-0.1333 HR MASS RAIN=-1

K = .130992HR TP = .133300HR K/TP RATIO = .982685 SHAPE CONSTANT, N = 3.593450
UNIT PEAK = 6.1344 CFS UNIT VOLUME = .9981 B = 327.09 P60 = 1.8700
AREA = .002500 SQ MI IA = .50000 INCHES INF = 1.25000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=13 CODE=1

PARTIAL HYDROGRAPH 133.53

RUNOFF VOLUME = .66738 INCHES = .0890 ACRE-FEET
PEAK DISCHARGE RATE = 3.26 CFS AT 1.532 HOURS BASIN AREA = .0025 SQ. MI.

SED WASH LOAD ID=13 K=0.17 C=0.25
P=1.0 LS=0.824
IMPERVIOUS=0.0 FACTOR=3.0
SEDIMENT YIELD (Wash Mat.) = 5.0 (TONS) WASH LOAD CONCENTRATION = 39613 (pgm-w)
PERCENTAGE IMPERVIOUS AREA = .000 WASH LOAD FACTOR = 3.00000

PRINT HYD ID=13 CODE=1

PARTIAL HYDROGRAPH 133.53

RUNOFF VOLUME = .66738 INCHES = .0890 ACRE-FEET
PEAK DISCHARGE RATE = 3.26 CFS AT 1.532 HOURS BASIN AREA = .0025 SQ. MI.

*

COMPUTE NM HYD ID=14 HYD NO=133.54 DA=0.0173 SQ MI
PER A=15.00 PER B=70.00 PER C=15.00 PER D=0.00
TP=-0.1333 HR MASS RAIN=-1

K = .132127HR TP = .133300HR K/TP RATIO = .991200 SHAPE CONSTANT, N = 3.562051
UNIT PEAK = 42.157 CFS UNIT VOLUME = 1.000 B = 324.83 P60 = 1.8700
AREA = .017300 SQ MI IA = .50000 INCHES INF = 1.25000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=14 CODE=1

PARTIAL HYDROGRAPH 133.54

RUNOFF VOLUME = .66738 INCHES = .6158 ACRE-FEET
PEAK DISCHARGE RATE = 22.38 CFS AT 1.532 HOURS BASIN AREA = .0173 SQ. MI.

SED WASH LOAD ID=14 K=0.09 C=0.25
P=1.0 IS=0.251
IMPERVIOUS=0.0 FACTOR=3.0
SEDIMENT YIELD (Wash Mat.) = 7.0 (TONS) WASH LOAD CONCENTRATION = 8286 (PPM-W)
PERCENTAGE IMPERVIOUS AREA = .000 WASH LOAD FACTOR = 3.00000

PRINT HYD ID=14 CODE=1

PARTIAL HYDROGRAPH 133.54

RUNOFF VOLUME = .66738 INCHES = .6158 ACRE-FEET
PEAK DISCHARGE RATE = 22.38 CFS AT 1.532 HOURS BASIN AREA = .0173 SQ. MI.

SEDIMENT TRANS ID=14 IDS=6 CODE=1
A=0.0002 B=4.19 C=0.19 D=-2.55
NUMB WASH=-1 NUMB SECTIONS=9
FLOW VELOCITY WIDTH
(CFS) (FPS) (FT)
2.00 1.63 12.78
5.00 2.06 17.99
10.00 2.41 24.53
14.00 2.58 28.75
17.00 2.70 31.28
20.00 2.79 33.67
23.00 2.88 35.74
27.00 2.99 38.25
30.00 3.06 39.98

Use wash load from SED WASH LOAD command - Concentration = 8286 (PPM-W)

* * * * *

TIME	WATER FLOW	HYD. VELOCITY	DEPTH	WIDTH	WASHLOAD CONC.	BED MAT. TRANSPORT	BED CONC.	TOTAL CONC.	BULKING FACTOR	ACCU. SEDIMENT
(HRS)	(CFS)	(FT/SEC)	(FT)	(FT)	(PPM-W)	(CFS)	(PPM-W)	(PPM-W)		(TONS)

.000	.00	.000	.000	.00	8286.	.00	0.	8286.	1.0000	.00
.033	.00	.000	.000	.00	8286.	.00	0.	8286.	1.0000	.00
.067	.00	.000	.000	.00	8286.	.00	0.	8286.	1.0000	.00
.100	.00	.000	.000	.00	8286.	.00	0.	8286.	1.0000	.00
.133	.00	.000	.000	.00	8286.	.00	0.	8286.	1.0000	.00
.167	.00	.000	.000	.00	8286.	.00	0.	8286.	1.0000	.00
.200	.00	.000	.000	.00	8286.	.00	0.	8286.	1.0000	.00
.233	.00	.000	.000	.00	8286.	.00	0.	8286.	1.0000	.00
.266	.00	.000	.000	.00	8286.	.00	0.	8286.	1.0000	.00
.300	.00	.000	.000	.00	8286.	.00	0.	8286.	1.0000	.00
.333	.00	.000	.000	.00	8286.	.00	0.	8286.	1.0000	.00
.366	.00	.000	.000	.00	8286.	.00	0.	8286.	1.0000	.00
.400	.00	.000	.000	.00	8286.	.00	0.	8286.	1.0000	.00
.433	.00	.000	.000	.00	8286.	.00	0.	8286.	1.0000	.00
.466	.00	.000	.000	.00	8286.	.00	0.	8286.	1.0000	.00
.500	.00	.000	.000	.00	8286.	.00	0.	8286.	1.0000	.00
.533	.00	.000	.000	.00	8286.	.00	0.	8286.	1.0000	.00
.566	.00	.000	.000	.00	8286.	.00	0.	8286.	1.0000	.00
.599	.00	.000	.000	.00	8286.	.00	0.	8286.	1.0000	.00
.633	.00	.000	.000	.00	8286.	.00	0.	8286.	1.0000	.00
.666	.00	.000	.000	.00	8286.	.00	0.	8286.	1.0000	.00
.699	.00	.000	.000	.00	8286.	.00	0.	8286.	1.0000	.00
.733	.00	.000	.000	.00	8286.	.00	0.	8286.	1.0000	.00
.766	.00	.000	.000	.00	8286.	.00	0.	8286.	1.0000	.00
.799	.00	.000	.000	.00	8286.	.00	0.	8286.	1.0000	.00
.833	.00	.000	.000	.00	8286.	.00	0.	8286.	1.0000	.00
.866	.00	.000	.000	.00	8286.	.00	0.	8286.	1.0000	.00
.899	.00	.000	.000	.00	8286.	.00	0.	8286.	1.0000	.00
.932	.00	.000	.000	.00	8286.	.00	0.	8286.	1.0000	.00
.966	.00	.000	.000	.00	8286.	.00	0.	8286.	1.0000	.00
.999	.00	.000	.000	.00	8286.	.00	0.	8286.	1.0000	.00
1.032	.00	.000	.000	.00	8286.	.00	0.	8286.	1.0000	.00
1.066	.00	.000	.000	.00	8286.	.00	0.	8286.	1.0000	.00
1.099	.00	.000	.000	.00	8286.	.00	0.	8286.	1.0000	.00
1.132	.00	.000	.000	.00	8286.	.00	0.	8286.	1.0000	.00
1.166	.00	.000	.000	.00	8286.	.00	0.	8286.	1.0000	.00
1.199	.00	.000	.000	.00	8286.	.00	0.	8286.	1.0000	.00
1.232	.00	.000	.000	.00	8286.	.00	0.	8286.	1.0000	.00
1.265	.00	.000	.000	.00	8286.	.00	0.	8286.	1.0000	.00
1.299	.00	.000	.000	.00	8286.	.00	0.	8286.	1.0000	.00
1.332	.44	1.117	.054	7.25	8286.	.00	8072.	16226.	1.0062	.03
1.365	2.49	1.736	.105	13.63	8286.	.02	19124.	27097.	1.0105	.29
1.399	6.96	2.234	.152	20.56	8286.	.09	31393.	39169.	1.0154	1.35
1.432	13.29	2.555	.186	28.00	8286.	.21	40466.	48098.	1.0191	3.86
1.465	19.12	2.765	.210	32.97	8286.	.36	46919.	54449.	1.0217	7.98
1.499	22.19	2.857	.221	35.18	8286.	.44	49792.	57276.	1.0229	13.02
1.532	22.38	2.863	.221	35.31	8286.	.44	49967.	57449.	1.0230	18.12
1.565	20.62	2.810	.215	34.10	8286.	.39	48268.	55777.	1.0223	22.68
1.598	17.97	2.731	.205	32.05	8286.	.33	45917.	53462.	1.0213	26.47
1.632	15.18	2.631	.194	29.75	8286.	.26	42792.	50387.	1.0200	29.49
1.665	12.64	2.530	.183	27.31	8286.	.20	39754.	47397.	1.0188	31.84
1.698	10.39	2.430	.171	24.94	8286.	.15	36946.	44633.	1.0176	33.65
1.732	8.41	2.328	.161	22.45	8286.	.11	34027.	41761.	1.0164	35.02
1.765	6.71	2.215	.150	20.23	8286.	.08	30871.	38656.	1.0152	36.03
1.798	5.31	2.092	.138	18.39	8286.	.06	27592.	35429.	1.0139	36.76
1.832	4.23	1.985	.128	16.64	8286.	.04	24902.	32783.	1.0128	37.30

	(HRS)	(CFS)	(FT/SEC)	(FT)	(FT)	(PPM-W)	(CFS)	(PPM-W)	(PPM-W)		(TONS)
	1.865	3.45	1.892	.119	15.30	8286.	.03	22652.	30568.	1.0119	37.70
	1.898	2.92	1.814	.112	14.39	8286.	.02	20846.	28791.	1.0112	38.03
	1.931	2.55	1.748	.106	13.73	8286.	.02	19375.	27344.	1.0106	38.30
	1.965	2.26	1.688	.101	13.22	8286.	.02	18096.	26086.	1.0101	38.52
	1.998	2.02	1.635	.096	12.81	8286.	.01	16975.	24983.	1.0097	38.72
	2.031	1.83	1.597	.093	12.27	8286.	.01	16228.	24248.	1.0094	38.89
	2.065	1.66	1.563	.090	11.79	8286.	.01	15558.	23589.	1.0091	39.04
	2.098	1.52	1.530	.087	11.37	8286.	.01	14926.	22968.	1.0089	39.17
	2.131	1.39	1.498	.085	11.01	8286.	.01	14321.	22372.	1.0086	39.29
	2.164	1.28	1.466	.082	10.68	8286.	.01	13732.	21793.	1.0084	39.40
	2.198	1.18	1.434	.079	10.37	8286.	.01	13153.	21223.	1.0082	39.49
	2.231	1.08	1.402	.077	10.10	8286.	.01	12583.	20663.	1.0080	39.58
	2.264	1.00	1.370	.074	9.84	8286.	.00	12026.	20114.	1.0077	39.65
	2.298	.92	1.341	.072	9.53	8286.	.00	11543.	19639.	1.0076	39.72
	2.331	.84	1.313	.069	9.24	8286.	.00	11079.	19183.	1.0074	39.78
	2.364	.77	1.286	.067	8.95	8286.	.00	10633.	18745.	1.0072	39.84
	2.398	.71	1.259	.065	8.67	8286.	.00	10206.	18324.	1.0070	39.89
	2.431	.65	1.233	.063	8.40	8286.	.00	9795.	17920.	1.0069	39.93
	2.464	.60	1.207	.061	8.14	8286.	.00	9401.	17533.	1.0067	39.97
	2.498	.55	1.182	.059	7.89	8286.	.00	9022.	17160.	1.0066	40.01
	2.531	.51	1.158	.057	7.65	8286.	.00	8659.	16803.	1.0064	40.04
	2.564	.47	1.134	.056	7.41	8286.	.00	8310.	16460.	1.0063	40.07
	2.597	.43	1.110	.054	7.18	8286.	.00	7975.	16130.	1.0062	40.10
	2.631	.40	1.087	.052	6.96	8286.	.00	7654.	15814.	1.0061	40.12
	2.664	.36	1.064	.051	6.74	8286.	.00	7345.	15510.	1.0059	40.14
	2.697	.33	1.042	.049	6.53	8286.	.00	7049.	15219.	1.0058	40.16
	2.731	.31	1.021	.048	6.33	8286.	.00	6764.	14939.	1.0057	40.18
	2.764	.28	.999	.046	6.13	8286.	.00	6491.	14670.	1.0056	40.20
	2.797	.26	.979	.045	5.94	8286.	.00	6229.	14412.	1.0055	40.21
	2.831	.24	.958	.043	5.76	8286.	.00	5977.	14165.	1.0054	40.22
	2.864	.22	.938	.042	5.58	8286.	.00	5736.	13927.	1.0053	40.23
	2.897	.20	.919	.041	5.41	8286.	.00	5504.	13700.	1.0052	40.24
	2.930	.19	.900	.039	5.24	8286.	.00	5282.	13481.	1.0052	40.25
	2.964	.17	.881	.038	5.08	8286.	.00	5068.	13271.	1.0051	40.26
	2.997	.16	.863	.037	4.92	8286.	.00	4863.	13069.	1.0050	40.27
	3.030	.14	.845	.036	4.77	8286.	.00	4667.	12876.	1.0049	40.28
	3.064	.13	.827	.035	4.62	8286.	.00	4478.	12690.	1.0049	40.28
	3.097	.12	.810	.034	4.48	8286.	.00	4297.	12512.	1.0048	40.29
	3.130	.11	.793	.033	4.34	8286.	.00	4123.	12341.	1.0047	40.30
	3.164	.10	.777	.032	4.20	8286.	.00	3956.	12177.	1.0047	40.30
	3.197	.09	.761	.031	4.07	8286.	.00	3796.	12019.	1.0046	40.30
	3.230	.09	.745	.030	3.95	8286.	.00	3642.	11868.	1.0045	40.31
	3.263	.08	.729	.029	3.82	8286.	.00	3495.	11723.	1.0045	40.31
	3.297	.07	.714	.028	3.70	8286.	.00	3353.	11584.	1.0044	40.31
	3.330	.07	.699	.027	3.59	8286.	.00	3217.	11450.	1.0044	40.32
	3.363	.06	.685	.026	3.48	8286.	.00	3087.	11322.	1.0043	40.32
	3.397	.06	.671	.025	3.37	8286.	.00	2962.	11199.	1.0043	40.32
	3.430	.05	.657	.025	3.27	8286.	.00	2842.	11081.	1.0042	40.33
	3.463	.05	.643	.024	3.16	8286.	.00	2727.	10968.	1.0042	40.33
	3.497	.04	.630	.023	3.07	8286.	.00	2616.	10859.	1.0041	40.33
	3.530	.04	.617	.022	2.97	8286.	.00	2510.	10755.	1.0041	40.33
	3.563	.04	.604	.022	2.88	8286.	.00	2408.	10655.	1.0041	40.33
	3.596	.03	.591	.021	2.79	8286.	.00	2311.	10559.	1.0040	40.33
	3.630	.03	.579	.020	2.70	8286.	.00	2217.	10467.	1.0040	40.33
	3.663	.03	.567	.020	2.62	8286.	.00	2127.	10378.	1.0040	40.34
	3.696	.03	.555	.019	2.54	8286.	.00	2041.	10293.	1.0039	40.34

WATER

HYD.

WASHLOAD

BED MAT.

BED

TOTAL

BULKING

ACCU.

TIME (HRS)	FLOW (CFS)	VELOCITY (FT/SEC)	DEPTH (FT)	WIDTH (FT)	CONC. (PPM-W)	TRANSPORT (CFS)	CONC. (PPM-W)	CONC. (PPM-W)	FACTOR	SEDIMENT (TONS)
3.730	.02	.544	.018	2.46	8286.	.00	1958.	10212.	1.0039	40.34
3.763	.02	.532	.018	2.38	8286.	.00	1879.	10134.	1.0039	40.34
3.796	.02	.521	.017	2.31	8286.	.00	1803.	10059.	1.0038	40.34
3.830	.02	.510	.017	2.24	8286.	.00	1730.	9987.	1.0038	40.34
3.863	.02	.500	.016	2.17	8286.	.00	1659.	9918.	1.0038	40.34
3.896	.02	.489	.016	2.10	8286.	.00	1592.	9852.	1.0038	40.34
3.929	.01	.479	.015	2.04	8286.	.00	1527.	9788.	1.0037	40.34
3.963	.01	.469	.015	1.97	8286.	.00	1465.	9727.	1.0037	40.34
3.996	.01	.459	.014	1.91	8286.	.00	1406.	9669.	1.0037	40.34
4.029	.01	.450	.014	1.85	8286.	.00	1349.	9613.	1.0037	40.34
4.063	.01	.441	.013	1.79	8286.	.00	1294.	9559.	1.0036	40.34
4.096	.01	.431	.013	1.74	8286.	.00	1242.	9507.	1.0036	40.34
4.129	.01	.422	.013	1.69	8286.	.00	1191.	9458.	1.0036	40.34
4.163	.01	.414	.012	1.63	8286.	.00	1143.	9410.	1.0036	40.34
4.196	.01	.399	.012	1.54	8286.	.00	1062.	9330.	1.0036	40.34
4.229	.01	.371	.010	1.39	8286.	.00	921.	9192.	1.0035	40.35
4.262	.00	.330	.009	1.16	8286.	.00	731.	9005.	1.0034	40.35
4.296	.00	.274	.007	.88	8286.	.00	505.	8783.	1.0033	40.35
4.329	.00	.248	.006	.76	8286.	.00	415.	8695.	1.0033	40.35

AT PEAK FLOW OF	22.378 WITH TIME AT	1.53 HOURS: BEDMAT =	15.41 (TONS) =	.0071 (AC-FT bulked)
PEAK BULKING FACTOR =	1.023000 =	57449. (PPM-W)	TOTAL SED =	18.12 (TONS) =
				.0083 (AC-FT bulked)

	UNBULKED WEIGHT (TONS)	BULKED VOLUME (AC-FT)	CONCENTRATION BY WEIGHT (PPM)	AVERAGE BULKING FACTOR
WASHMAT =	6.99	.0019	8286.	
BEDMAT =	33.35	.0093	38327.	
TOTAL SEDIMENT =	40.35	.0112	45992.	1.01819

SEDIMENT TRANSPORT CAPACITY: 1.07075 AC-FT/SQ MI (bulked) = 3.6439 TONS/ACRE (at Porosity=0.395)

PRINT HYD ID=14 CODE=1

PARTIAL HYDROGRAPH 133.54

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RUNOFF VOLUME = .66738 INCHES = .6158 ACRE-FEET
PEAK DISCHARGE RATE = 22.38 CFS AT 1.532 HOURS BASIN AREA = .0173 SQ. MI.

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COMPUTE NM HYD
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ID=7 HYD NO=101.00 DA=0.0065 SQ MI
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PER A=0.00 PER B=.26 PER C=.26 PER D=47.60
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TP=-0.1333 HR MASS RAIN=-1
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K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106428
UNIT PEAK = 12.215 CFS UNIT VOLUME = .9984 B = 526.28 P60 = 1.8700
AREA = .003094 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

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K = .118429HR TP = .133300HR K/TP RATIO = .888442 SHAPE CONSTANT, N = 3.992479
UNIT PEAK = 9.0623 CFS UNIT VOLUME = .9989 B = 354.67 P60 = 1.8700
AREA = .003406 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=7 CODE=1

PARTIAL HYDROGRAPH 101.00

RUNOFF VOLUME = 1.36302 INCHES = .4725 ACRE-FEET
PEAK DISCHARGE RATE = 13.98 CFS AT 1.499 HOURS BASIN AREA = .0065 SQ. MI.

*S OFFSITE FLOW PLUS AREA 101

ADD HYD ID=6 HYD NO=101.01 ID I=6 ID II=7

PRINT HYD ID=6 CODE=1

PARTIAL HYDROGRAPH 101.01

RUNOFF VOLUME = .82658 INCHES = .6833 ACRE-FEET
PEAK DISCHARGE RATE = 21.27 CFS AT 1.499 HOURS BASIN AREA = .0155 SQ. MI.

COMPUTE NM HYD

ID=7 HYD NO=102.00 DA=0.0054 SQ MI
PER A=0.00 PER B=26.20 PER C=26.20 PER D=47.60
TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106428
UNIT PEAK = 10.148 CFS UNIT VOLUME = .9982 B = 526.28 P60 = 1.8700
AREA = .002570 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

K = .118429HR TP = .133300HR K/TP RATIO = .888442 SHAPE CONSTANT, N = 3.992479
UNIT PEAK = 7.5287 CFS UNIT VOLUME = .9986 B = 354.67 P60 = 1.8700
AREA = .002830 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=7 CODE=1

PARTIAL HYDROGRAPH 102.00

RUNOFF VOLUME = 1.36302 INCHES = .3925 ACRE-FEET
PEAK DISCHARGE RATE = 11.62 CFS AT 1.499 HOURS BASIN AREA = .0054 SQ. MI.

COMPUTE NM HYD

ID=8 HYD NO=103.00 DA=0.0057 SQ MI
PER A=0.00 PER B=26.20 PER C=26.20 PER D=47.60
TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106428
UNIT PEAK = 10.712 CFS UNIT VOLUME = .9982 B = 526.28 P60 = 1.8700

AREA = .002713 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

K = .118429HR TP = .133300HR K/TP RATIO = .888442 SHAPE CONSTANT, N = 3.992479
UNIT PEAK = 7.9469 CFS UNIT VOLUME = .9988 B = 354.67 P60 = 1.8700
AREA = .002987 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=8 CODE=1

PARTIAL HYDROGRAPH 103.00

RUNOFF VOLUME = 1.36302 INCHES = .4144 ACRE-FEET
PEAK DISCHARGE RATE = 12.26 CFS AT 1.499 HOURS BASIN AREA = .0057 SQ. MI.

COMPUTE NM HYD

ID=4 HYD NO=104.00 DA=0.0088 SQ MI
PER A=0.00 PER B=26.20 PER C=26.20 PER D=47.60
TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106428
UNIT PEAK = .16.538 CFS UNIT VOLUME = .9986 B = 526.28 P60 = 1.8700
AREA = .004189 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

K = .118429HR TP = .133300HR K/TP RATIO = .888442 SHAPE CONSTANT, N = 3.992479
UNIT PEAK = 12.269 CFS UNIT VOLUME = .9994 B = 354.67 P60 = 1.8700
AREA = .004611 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=4 CODE=1

PARTIAL HYDROGRAPH 104.00

RUNOFF VOLUME = 1.36302 INCHES = .6397 ACRE-FEET
PEAK DISCHARGE RATE = 18.92 CFS AT 1.499 HOURS BASIN AREA = .0088 SQ. MI.

ADD HYD ID=6 HYD NO=104.12 ID I=6 ID II=7
PRINT HYD ID=6 CODE=1

PARTIAL HYDROGRAPH 104.12

RUNOFF VOLUME = .96517 INCHES = 1.0758 ACRE-FEET
PEAK DISCHARGE RATE = 32.89 CFS AT 1.499 HOURS BASIN AREA = .0209 SQ. MI.

ADD HYD ID=6 HYD NO=104.13 ID I=6 ID II=8
PRINT HYD ID=6 CODE=1

PARTIAL HYDROGRAPH 104.13

RUNOFF VOLUME = 1.05041 INCHES = 1.4902 ACRE-FEET
PEAK DISCHARGE RATE = 45.15 CFS AT 1.499 HOURS BASIN AREA = .0266 SQ. MI.

*S FLOW EXITING AREA 104 TO CHANNEL

ADD HYD ID=6 HYD NO=104.14 ID I=6 ID II=4
PRINT HYD ID=6 CODE=1

PARTIAL HYDROGRAPH 104.14

RUNOFF VOLUME = 1.12812 INCHES = 2.1299 ACRE-FEET
PEAK DISCHARGE RATE = 64.07 CFS AT 1.499 HOURS BASIN AREA = .0354 SQ. MI.

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COMPUTE NM HYD ID=7 HYD NO=105.00 DA=0.0060 SQ MI
PER A=0.00 PER B=26.20 PER C=26.20 PER D=47.60
TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106428
UNIT PEAK = 11.276 CFS UNIT VOLUME = .9984 B = 526.28 P60 = 1.8700
AREA = .002856 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

K = .118429HR TP = .133300HR K/TP RATIO = .888442 SHAPE CONSTANT, N = 3.992479
UNIT PEAK = 8.3652 CFS UNIT VOLUME = .9988 B = 354.67 P60 = 1.8700
AREA = .003144 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=7 CODE=1

PARTIAL HYDROGRAPH 105.00

RUNOFF VOLUME = 1.36302 INCHES = .4362 ACRE-FEET
PEAK DISCHARGE RATE = 12.90 CFS AT 1.499 HOURS BASIN AREA = .0060 SQ. MI.

COMPUTE NM HYD ID=8 HYD NO=106.00 DA=0.0067 SQ MI
PER A=0.00 PER B=26.20 PER C=26.20 PER D=47.60
TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106428
UNIT PEAK = 12.591 CFS UNIT VOLUME = .9985 B = 526.28 P60 = 1.8700
AREA = .003189 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

K = .118429HR TP = .133300HR K/TP RATIO = .888442 SHAPE CONSTANT, N = 3.992479
UNIT PEAK = 9.3411 CFS UNIT VOLUME = .9991 B = 354.67 P60 = 1.8700
AREA = .003511 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=8 CODE=1

PARTIAL HYDROGRAPH 106.00

RUNOFF VOLUME = 1.36302 INCHES = .4871 ACRE-FEET
PEAK DISCHARGE RATE = 14.41 CFS AT 1.499 HOURS BASIN AREA = .0067 SQ. MI.

*S FLOW ENTERING 98TH STREET SD AT PARKWEST

ADD HYD ID=7 HYD NO=105.01 ID I=7 ID II=8
PRINT HYD ID=7 CODE=1

PARTIAL HYDROGRAPH 105.01

RUNOFF VOLUME = 1.36298 INCHES = .9232 ACRE-FEET
PEAK DISCHARGE RATE = 27.31 CFS AT 1.499 HOURS BASIN AREA = .0127 SQ. MI.

*S FLOW EXITING AREA 107 TO CHANNEL

COMPUTE NM HYD ID=8 HYD NO=107.00 DA=0.0069 SQ MI
PER A=0.00 PER B=26.20 PER C=26.20 PER D=47.60
TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106428
UNIT PEAK = 12.967 CFS UNIT VOLUME = .9985 B = 526.28 P60 = 1.8700
AREA = .003284 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

K = .118429HR TP = .133300HR K/TP RATIO = .888442 SHAPE CONSTANT, N = 3.992479
UNIT PEAK = 9.6199 CFS UNIT VOLUME = .9991 B = 354.67 P60 = 1.8700
AREA = .003616 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=8 CODE=1

PARTIAL HYDROGRAPH 107.00

RUNOFF VOLUME = 1.36302 INCHES = .5016 ACRE-FEET
PEAK DISCHARGE RATE = 14.84 CFS AT 1.499 HOURS BASIN AREA = .0069 SQ. MI.

*S ONSITE FLOW ENTERING CHANNEL FROM THE SOUTH

ADD HYD ID=6 HYD NO=107.01 ID I=6 ID II=8
PRINT HYD ID=6 CODE=1

PARTIAL HYDROGRAPH 107.01

RUNOFF VOLUME = 1.16643 INCHES = 2.6314 ACRE-FEET
PEAK DISCHARGE RATE = 78.91 CFS AT 1.499 HOURS BASIN AREA = .0423 SQ. MI.

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COMPUTE NM HYD ID=1 HYD NO=108.00 DA=0.0046 SQ MI
PER A=0.00 PER B=26.20 PER C=26.20 PER D=47.60
TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106428
UNIT PEAK = 8.6447 CFS UNIT VOLUME = .9980 B = 526.28 P60 = 1.8700
AREA = .002190 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

K = .118429HR TP = .133300HR K/TP RATIO = .888442 SHAPE CONSTANT, N = 3.992479
UNIT PEAK = 6.4133 CFS UNIT VOLUME = .9984 B = 354.67 P60 = 1.8700
AREA = .002410 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=1 CODE=1

PARTIAL HYDROGRAPH 108.00

RUNOFF VOLUME = 1.36302 INCHES = .3344 ACRE-FEET
PEAK DISCHARGE RATE = 9.90 CFS AT 1.499 HOURS BASIN AREA = .0046 SQ. MI.

COMPUTE NM HYD ID=8 HYD NO=110.00 DA=0.0062 SQ MI
PER A=0.00 PER B=26.20 PER C=26.20 PER D=47.60
TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106428
UNIT PEAK = 11.651 CFS UNIT VOLUME = .9984 B = 526.28 P60 = 1.8700
AREA = .002951 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

K = .118429HR TP = .133300HR K/TP RATIO = .888442 SHAPE CONSTANT, N = 3.992479
UNIT PEAK = 8.6440 CFS UNIT VOLUME = .9989 B = 354.67 P60 = 1.8700
AREA = .003249 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=8 CODE=1

PARTIAL HYDROGRAPH 110.00

RUNOFF VOLUME = 1.36302 INCHES = .4507 ACRE-FEET
PEAK DISCHARGE RATE = 13.33 CFS AT 1.499 HOURS BASIN AREA = .0062 SQ. MI.

ADD HYD ID=8 HYD NO=110.01 ID I=1 ID II=8
PRINT HYD ID=8 CODE=1

PARTIAL HYDROGRAPH 110.01

RUNOFF VOLUME = 1.36297 INCHES = .7851 ACRE-FEET
PEAK DISCHARGE RATE = 23.23 CFS AT 1.499 HOURS BASIN AREA = .0108 SQ. MI.

COMPUTE NM HYD ID=4 HYD NO=109.00 DA=0.0036 SQ MI
PER A=0.00 PER B=26.20 PER C=26.20 PER D=47.60
TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106428
UNIT PEAK = 6.7654 CFS UNIT VOLUME = .9975 B = 526.28 P60 = 1.8700
AREA = .001714 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

K = .118429HR TP = .133300HR K/TP RATIO = .888442 SHAPE CONSTANT, N = 3.992479
UNIT PEAK = 5.0191 CFS UNIT VOLUME = .9978 B = 354.67 P60 = 1.8700
AREA = .001886 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=4 CODE=1

PARTIAL HYDROGRAPH 109.00

RUNOFF VOLUME = 1.36302 INCHES = .2617 ACRE-FEET
PEAK DISCHARGE RATE = 7.75 CFS AT 1.499 HOURS BASIN AREA = .0036 SQ. MI.

*S FLOW ENTERING 98TH STREET SD AT UNSER

ADD HYD ID=4 HYD NO=108.01 ID I=4 ID II=8
PRINT HYD ID=4 CODE=1

PARTIAL HYDROGRAPH 108.01

RUNOFF VOLUME = 1.36297 INCHES = 1.0468 ACRE-FEET
PEAK DISCHARGE RATE = 30.98 CFS AT 1.499 HOURS BASIN AREA = .0144 SQ. MI.

*S TOTAL ON-SITE FLOW TO 98TH STREET SD

ADD HYD ID=1 HYD NO=108.02 ID I=4 ID II=7
PRINT HYD ID=1 CODE=1

PARTIAL HYDROGRAPH 108.02

RUNOFF VOLUME = 1.36297 INCHES = 1.9699 ACRE-FEET
PEAK DISCHARGE RATE = 58.29 CFS AT 1.499 HOURS BASIN AREA = .0271 SQ. MI.

* *****

COMPUTE NM HYD ID=4 HYD NO=111.10 DA=0.0025 SQ MI
PER A=0.00 PER B=0.00 PER C=45.00 PER D=55.00
TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106428
UNIT PEAK = 5.4286 CFS UNIT VOLUME = .9972 B = 526.28 P60 = 1.8700
AREA = .001375 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

K = .105867HR TP = .133300HR K/TP RATIO = .794199 SHAPE CONSTANT, N = 4.514858
UNIT PEAK = 3.2758 CFS UNIT VOLUME = .9967 B = 388.14 P60 = 1.8700
AREA = .001125 SQ MI IA = .35000 INCHES INF = .83000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=4 CODE=1

PARTIAL HYDROGRAPH 111.10

RUNOFF VOLUME = 1.52843 INCHES = .2038 ACRE-FEET
PEAK DISCHARGE RATE = 5.93 CFS AT 1.499 HOURS BASIN AREA = .0025 SQ. MI.

*S FLOW TO BRIDGE EXCLUDING UNIT 3

ADD HYD ID=4 HYD NO=111.11 ID I=4 ID II=5
PRINT HYD ID=4 CODE=1

PARTIAL HYDROGRAPH 111.11

RUNOFF VOLUME = .57402 INCHES = 35.2585 ACRE-FEET
PEAK DISCHARGE RATE = 529.27 CFS AT 1.832 HOURS BASIN AREA = 1.1517 SQ. MI.

*S FLOW TO BRIDGE INCLUDING UNIT 3

ADD HYD ID=4 HYD NO=111.12 ID I=4 ID II=6
PRINT HYD ID=4 CODE=1

PARTIAL HYDROGRAPH 111.12

RUNOFF VOLUME = .59501 INCHES = 37.8899 ACRE-FEET
PEAK DISCHARGE RATE = 551.68 CFS AT 1.832 HOURS BASIN AREA = 1.1940 SQ. MI.

COMPUTE NM HYD

ID=15 HYD NO=112.00 DA=0.0017 SQ MI
PER A=0.00 PER B=26.20 PER C=26.20 PER D=47.60
TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106428
UNIT PEAK = 3.1948 CFS UNIT VOLUME = .9960 B = 526.28 P60 = 1.8700
AREA = .000809 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

K = .118429HR TP = .133300HR K/TP RATIO = .888442 SHAPE CONSTANT, N = 3.992479
UNIT PEAK = 2.3701 CFS UNIT VOLUME = .9948 B = 354.67 P60 = 1.8700
AREA = .000891 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=15 CODE=1

PARTIAL HYDROGRAPH 112.00

RUNOFF VOLUME = 1.36302 INCHES = .1236 ACRE-FEET
PEAK DISCHARGE RATE = 3.67 CFS AT 1.499 HOURS BASIN AREA = .0017 SQ. MI.

COMPUTE NM HYD ID=16 HYD NO=113.00 DA=0.0058 SQ MI
PER A=0.00 PER B=26.20 PER C=26.20 PER D=47.60
TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106428
UNIT PEAK = 10.900 CFS UNIT VOLUME = .9984 B = 526.28 P60 = 1.8700
AREA = .002761 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

K = .118429HR TP = .133300HR K/TP RATIO = .888442 SHAPE CONSTANT, N = 3.992479
UNIT PEAK = 8.0863 CFS UNIT VOLUME = .9988 B = 354.67 P60 = 1.8700
AREA = .003039 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=16 CODE=1

PARTIAL HYDROGRAPH 113.00

RUNOFF VOLUME = 1.36302 INCHES = .4216 ACRE-FEET
PEAK DISCHARGE RATE = 12.47 CFS AT 1.499 HOURS BASIN AREA = .0058 SQ. MI.

COMPUTE NM HYD ID=17 HYD NO=114.00 DA=0.0069 SQ MI
PER A=0.00 PER B=26.20 PER C=26.20 PER D=47.60
TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106428
UNIT PEAK = 12.967 CFS UNIT VOLUME = .9985 B = 526.28 P60 = 1.8700
AREA = .003284 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

K = .118429HR TP = .133300HR K/TP RATIO = .888442 SHAPE CONSTANT, N = 3.992479
UNIT PEAK = 9.6199 CFS UNIT VOLUME = .9991 B = 354.67 P60 = 1.8700
AREA = .003616 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=17 CODE=1

PARTIAL HYDROGRAPH 114.00

RUNOFF VOLUME = 1.36302 INCHES = .5016 ACRE-FEET
PEAK DISCHARGE RATE = 14.84 CFS AT 1.499 HOURS BASIN AREA = .0069 SQ. MI.

ADD HYD ID=15 HYD NO=114.01 ID I=15 ID II=16
PRINT HYD ID=15 CODE=1

PARTIAL HYDROGRAPH 114.01

RUNOFF VOLUME = 1.36294 INCHES = .5452 ACRE-FEET
PEAK DISCHARGE RATE = 16.14 CFS AT 1.499 HOURS BASIN AREA = .0075 SQ. MI.

ADD HYD ID=15 HYD NO=114.02 ID I=15 ID II=17
PRINT HYD ID=15 CODE=1

PARTIAL HYDROGRAPH 114.02

RUNOFF VOLUME = 1.36296 INCHES = 1.0467 ACRE-FEET
PEAK DISCHARGE RATE = 30.98 CFS AT 1.499 HOURS BASIN AREA = .0144 SQ. MI.

* *****

COMPUTE NM HYD ID=16 HYD NO=116.10 DA=0.0041 SQ MI
PER A=0.00 PER B=26.20 PER C=26.20 PER D=47.60
TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106428
UNIT PEAK = 7.7050 CFS UNIT VOLUME = .9978 B = 526.28 P60 = 1.8700
AREA = .001952 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

K = .118429HR TP = .133300HR K/TP RATIO = .888442 SHAPE CONSTANT, N = 3.992479
UNIT PEAK = 5.7162 CFS UNIT VOLUME = .9980 B = 354.67 P60 = 1.8700
AREA = .002148 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=16 CODE=1

PARTIAL HYDROGRAPH 116.10

RUNOFF VOLUME = 1.36302 INCHES = .2980 ACRE-FEET
PEAK DISCHARGE RATE = 8.82 CFS AT 1.499 HOURS BASIN AREA = .0041 SQ. MI.

ADD HYD ID=15 HYD NO=116.01 ID I=15 ID II=16
PRINT HYD ID=15 CODE=1

PARTIAL HYDROGRAPH 116.01

RUNOFF VOLUME = 1.36296 INCHES = 1.3448 ACRE-FEET
PEAK DISCHARGE RATE = 39.80 CFS AT 1.499 HOURS BASIN AREA = .0185 SQ. MI.

COMPUTE NM HYD ID=16 HYD NO=116.20 DA=0.0024 SQ MI
PER A=0.00 PER B=26.20 PER C=26.20 PER D=47.60
TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106428

UNIT PEAK = 4.5103 CFS UNIT VOLUME = .9969 B = 526.28 P60 = 1.8700
AREA = .001142 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

K = .118429HR TP = .133300HR K/TP RATIO = .888442 SHAPE CONSTANT, N = 3.992479
UNIT PEAK = 3.3461 CFS UNIT VOLUME = .9966 B = 354.67 P60 = 1.8700
AREA = .001258 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=16 CODE=1

PARTIAL HYDROGRAPH 116.20

RUNOFF VOLUME = 1.36302 INCHES = .1745 ACRE-FEET
PEAK DISCHARGE RATE = 5.17 CFS AT 1.499 HOURS BASIN AREA = .0024 SQ. MI.

ADD HYD ID=15 HYD NO=116.02 ID I=15 ID II=16
PRINT HYD ID=15 CODE=1

PARTIAL HYDROGRAPH 116.02

RUNOFF VOLUME = 1.36295 INCHES = 1.5192 ACRE-FEET
PEAK DISCHARGE RATE = 44.97 CFS AT 1.499 HOURS BASIN AREA = .0209 SQ. MI.

COMPUTE NM HYD ID=16 HYD NO=117.00 DA=0.0049 SQ MI
PER A=0.00 PER B=25.00 PER C=25.00 PER D=50.00
TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106428
UNIT PEAK = 9.6727 CFS UNIT VOLUME = .9982 B = 526.28 P60 = 1.8700
AREA = .002450 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

K = .118429HR TP = .133300HR K/TP RATIO = .888442 SHAPE CONSTANT, N = 3.992479
UNIT PEAK = 6.5187 CFS UNIT VOLUME = .9984 B = 354.67 P60 = 1.8700
AREA = .002450 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=16 CODE=1

PARTIAL HYDROGRAPH 117.00

RUNOFF VOLUME = 1.39061 INCHES = .3634 ACRE-FEET
PEAK DISCHARGE RATE = 10.69 CFS AT 1.499 HOURS BASIN AREA = .0049 SQ. MI.

*S FLOW ENTERING CHANNEL FROM THE NORTH AT THE BRIDGE
ADD HYD ID=15 HYD NO=116.03 ID I=15 ID II=16
PRINT HYD ID=15 CODE=1

PARTIAL HYDROGRAPH 116.03

RUNOFF VOLUME = 1.36819 INCHES = 1.8826 ACRE-FEET
PEAK DISCHARGE RATE = 55.66 CFS AT 1.499 HOURS BASIN AREA = .0258 SQ. MI.

* *****

*S TOTAL FLOW IN CHANNEL AT BRIDGE

ADD HYD ID=4 HYD NO=111.12 ID I=4 ID II=15
PRINT HYD ID=4 CODE=1

PARTIAL HYDROGRAPH 111.12

RUNOFF VOLUME = .61136 INCHES = 39.7725 ACRE-FEET
PEAK DISCHARGE RATE = 569.17 CFS AT 1.798 HOURS BASIN AREA = 1.2198 SQ. MI.

* *****

COMPUTE NM HYD

ID=5 HYD NO=111.20 DA=0.0015 SQ MI
PER A=0.00 PER B=0.00 PER C=45.00 PER D=55.00
TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106428
UNIT PEAK = 3.2571 CFS UNIT VOLUME = .9960 B = 526.28 P60 = 1.8700
AREA = .000825 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

K = .105867HR TP = .133300HR K/TP RATIO = .794199 SHAPE CONSTANT, N = 4.514858
UNIT PEAK = 1.9655 CFS UNIT VOLUME = .9941 B = 388.14 P60 = 1.8700
AREA = .000675 SQ MI IA = .35000 INCHES INF = .83000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=5 CODE=1

PARTIAL HYDROGRAPH 111.20

RUNOFF VOLUME = 1.52844 INCHES = .1223 ACRE-FEET
PEAK DISCHARGE RATE = 3.56 CFS AT 1.499 HOURS BASIN AREA = .0015 SQ. MI.

ADD HYD ID=4 HYD NO=111.00 ID I=4 ID II=5
PRINT HYD ID=4 CODE=1

PARTIAL HYDROGRAPH 111.00

RUNOFF VOLUME = .61249 INCHES = 39.8948 ACRE-FEET
PEAK DISCHARGE RATE = 570.36 CFS AT 1.798 HOURS BASIN AREA = 1.2213 SQ. MI.

*S TOTAL FLOW IN CHANNEL AT UNSER WITHOUT UNIT 5 EAST OF PARKWEST DR.
ADD HYD ID=4 HYD NO=111.00 ID I=4 ID II=7

PRINT HYD

ID=4 CODE=1

PARTIAL HYDROGRAPH 111.00

RUNOFF VOLUME = .62021 INCHES = 40.8180 ACRE-FEET
PEAK DISCHARGE RATE = 579.15 CFS AT 1.798 HOURS BASIN AREA = 1.2340 SQ. MI.

*

COMPUTE NM HYD

ID=15 HYD NO=120.00 DA=0.0067 SQ MI
PER A=0.00 PER B=26.20 PER C=26.20 PER D=47.60
TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106428
UNIT PEAK = 12.591 CFS UNIT VOLUME = .9985 B = 526.28 P60 = 1.8700
AREA = .003189 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

K = .118429HR TP = .133300HR K/TP RATIO = .888442 SHAPE CONSTANT, N = 3.992479
UNIT PEAK = 9.3411 CFS UNIT VOLUME = .9991 B = 354.67 P60 = 1.8700
AREA = .003511 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD

ID=15 CODE=1

PARTIAL HYDROGRAPH 120.00

RUNOFF VOLUME = 1.36302 INCHES = .4871 ACRE-FEET
PEAK DISCHARGE RATE = 14.41 CFS AT 1.499 HOURS BASIN AREA = .0067 SQ. MI.

COMPUTE NM HYD

ID=16 HYD NO=119.00 DA=0.0056 SQ MI
PER A=0.00 PER B=26.20 PER C=26.20 PER D=47.60
TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106428
UNIT PEAK = 10.524 CFS UNIT VOLUME = .9982 B = 526.28 P60 = 1.8700
AREA = .002666 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

K = .118429HR TP = .133300HR K/TP RATIO = .888442 SHAPE CONSTANT, N = 3.992479
UNIT PEAK = 7.8075 CFS UNIT VOLUME = .9988 B = 354.67 P60 = 1.8700
AREA = .002934 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD

ID=16 CODE=1

PARTIAL HYDROGRAPH 119.00

RUNOFF VOLUME = 1.36302 INCHES = .4071 ACRE-FEET
PEAK DISCHARGE RATE = 12.05 CFS AT 1.499 HOURS BASIN AREA = .0056 SQ. MI.

ADD HYD ID=15 HYD NO=119.01 ID I=15 ID II=16
PRINT HYD ID=15 CODE=1

PARTIAL HYDROGRAPH 119.01

RUNOFF VOLUME = 1.36298 INCHES = .8941 ACRE-FEET
PEAK DISCHARGE RATE = 26.45 CFS AT 1.499 HOURS BASIN AREA = .0123 SQ. MI.

COMPLETE NM HYD

ID=16 HYD NO=118.00 DA=0.0059 SQ MI
PER A=0.00 PER B=26.20 PER C=26.20 PER D=47.60
TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106428
UNIT PEAK = 11.088 CFS UNIT VOLUME = .9984 B = 526.28 P60 = 1.8700
AREA = .002808 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

K = .118429HR TP = .133300HR K/TP RATIO = .888442 SHAPE CONSTANT, N = 3.992479
UNIT PEAK = 8.2257 CFS UNIT VOLUME = .9988 B = 354.67 P60 = 1.8700
AREA = .003092 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=16 CODE=1

PARTIAL HYDROGRAPH 118.00

RUNOFF VOLUME = 1.36302 INCHES = .4289 ACRE-FEET
PEAK DISCHARGE RATE = 12.69 CFS AT 1.499 HOURS BASIN AREA = .0059 SQ. MI.

*S TOTAL FLOW IN RUNDOWN TO CHANNEL

ADD HYD ID=15 HYD NO=118.01 ID I=15 ID II=16
PRINT HYD ID=15 CODE=1

PARTIAL HYDROGRAPH 118.01

RUNOFF VOLUME = 1.36298 INCHES = 1.3230 ACRE-FEET
PEAK DISCHARGE RATE = 39.14 CFS AT 1.499 HOURS BASIN AREA = .0182 SQ. MI.

*S TOTAL FLOW IN CHANNEL AT UNSER EXITING THE SITE

ADD HYD ID=2 HYD NO=111.00 ID I=4 ID II=15
PRINT HYD ID=2 CODE=1

PARTIAL HYDROGRAPH 111.00

RUNOFF VOLUME = .63101 INCHES = 42.1410 ACRE-FEET
PEAK DISCHARGE RATE = 591.74 CFS AT 1.798 HOURS BASIN AREA = 1.2522 SQ. MI.

*

*
COMPUTE NM HYD ID=15 HYD NO=115.00 DA=0.0019 SQ MI
PER A=0.00 PER B=26.20 PER C=26.20 PER D=47.60
TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106428
UNIT PEAK = 3.5706 CFS UNIT VOLUME = .9960 B = 526.28 P60 = 1.8700
AREA = .000904 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

K = .118429HR TP = .133300HR K/TP RATIO = .888442 SHAPE CONSTANT, N = 3.992479
UNIT PEAK = 2.6490 CFS UNIT VOLUME = .9953 B = 354.67 P60 = 1.8700
AREA = .000996 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=15 CODE=1

PARTIAL HYDROGRAPH 115.00

RUNOFF VOLUME = 1.36302 INCHES = .1381 ACRE-FEET
PEAK DISCHARGE RATE = 4.10 CFS AT 1.499 HOURS BASIN AREA = .0019 SQ. MI.

COMPUTE NM HYD ID=16 HYD NO=121.00 DA=0.0027 SQ MI
PER A=0.00 PER B=26.20 PER C=26.20 PER D=47.60
TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106428
UNIT PEAK = 5.0740 CFS UNIT VOLUME = .9972 B = 526.28 P60 = 1.8700
AREA = .001285 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

K = .118429HR TP = .133300HR K/TP RATIO = .888442 SHAPE CONSTANT, N = 3.992479
UNIT PEAK = 3.7643 CFS UNIT VOLUME = .9969 B = 354.67 P60 = 1.8700
AREA = .001415 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=16 CODE=1

PARTIAL HYDROGRAPH 121.00

RUNOFF VOLUME = 1.36302 INCHES = .1963 ACRE-FEET
PEAK DISCHARGE RATE = 5.82 CFS AT 1.499 HOURS BASIN AREA = .0027 SQ. MI.

ADD HYD ID=15 HYD NO=121.01 ID I=15 ID II=16
PRINT HYD ID=15 CODE=1

PARTIAL HYDROGRAPH 121.01

RUNOFF VOLUME = 1.36290 INCHES = .3344 ACRE-FEET

PEAK DISCHARGE RATE = 9.91 CFS AT 1.499 HOURS BASIN AREA = .0046 SQ. MI.

COMPUTE NM HYD

ID=16 HYD NO=122.00 DA=0.0009 SQ MI
PER A=0.00 PER B=5.00 PER C=5.00 PER D=90.00
TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106428
UNIT PEAK = 3.1979 CFS UNIT VOLUME = .9960 B = 526.28 P60 = 1.8700
AREA = .000810 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

K = .118429HR TP = .133300HR K/TP RATIO = .888442 SHAPE CONSTANT, N = 3.992479
UNIT PEAK = .23946 CFS UNIT VOLUME = .9469 B = 354.67 P60 = 1.8700
AREA = .000090 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=16 CODE=1

• PARTIAL HYDROGRAPH 122.00

RUNOFF VOLUME = 1.85049 INCHES = .0888 ACRE-FEET
PEAK DISCHARGE RATE = 2.42 CFS AT 1.499 HOURS BASIN AREA = .0009 SQ. MI.

*S ON-SITE FLOW TO POND

ADD HYD ID=15 HYD NO=122.01 ID I=15 ID II=16
PRINT HYD ID=15 CODE=1

PARTIAL HYDROGRAPH 122.01

RUNOFF VOLUME = 1.44263 INCHES = .4232 ACRE-FEET
PEAK DISCHARGE RATE = 12.33 CFS AT 1.499 HOURS BASIN AREA = .0055 SQ. MI.

*S TOTAL FLOW TO POND

ADD HYD ID=11 HYD NO=122.02 ID I=11 ID II=15
PRINT HYD ID=11 CODE=1

PARTIAL HYDROGRAPH 122.02

RUNOFF VOLUME = .76088 INCHES = 5.2875 ACRE-FEET
PEAK DISCHARGE RATE = 187.62 CFS AT 1.499 HOURS BASIN AREA = .1303 SQ. MI.

PUNCH HYD ID=11 •

*S ROUTE HYDROGRAPH THRU POND

ROUTE RESERVOIR ID=12 HYD NO=133.50 INFLOW ID=11 CODE=5
OUTFLOW (CFS) STORAGE (AC FT) ELEV (FT)
0.0 0.00 04.00
1.6 0.06 04.50
2.3 1.23 05.00

2.8	1.86	05.50
3.3	2.50	06.00
3.6	3.14	06.50
4.0	3.78	07.00
4.3	4.42	07.50
4.6	5.07	08.00

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
.00	.00	4.00	.000	.00
.17	.00	4.00	.000	.00
.33	.00	4.00	.000	.00
.50	.00	4.00	.000	.00
.67	.00	4.00	.000	.00
.83	.00	4.00	.000	.00
1.00	.00	4.00	.000	.00
1.17	.02	4.00	.000	.00
1.33	7.05	4.15	.017	.46
1.50	187.62	5.04	1.281	2.34
1.67	105.00	6.69	3.382	3.75
1.83	38.54	7.37	4.252	4.22
2.00	18.64	7.61	4.558	4.36
2.16	11.02	7.71	4.697	4.43
2.33	6.90	7.76	4.757	4.46
2.50	4.41	7.77	4.772	4.46
2.66	2.84	7.76	4.760	4.46
2.83	1.83	7.74	4.730	4.44
3.00	1.19	7.71	4.690	4.42
3.16	.77	7.67	4.642	4.40
3.33	.51	7.63	4.590	4.38
3.50	.35	7.59	4.536	4.35
3.66	.24	7.55	4.480	4.33
3.83	.17	7.50	4.424	4.30
4.00	.13	7.46	4.367	4.28
4.16	.09	7.41	4.310	4.25
4.33	.08	7.37	4.253	4.22
4.50	.06	7.32	4.196	4.19
4.66	.05	7.28	4.139	4.17
4.83	.05	7.24	4.082	4.14
5.00	.05	7.19	4.026	4.12
5.16	.05	7.15	3.971	4.09
5.33	.05	7.11	3.915	4.06
5.49	.06	7.06	3.860	4.04
5.66	.06	7.02	3.806	4.01
5.83	.06	6.98	3.751	3.98
5.99	.06	6.94	3.698	3.95
6.16	.02	6.89	3.644	3.92
6.33	.01	6.85	3.591	3.88
6.49	.00	6.81	3.538	3.85
6.66	.00	6.77	3.485	3.82
6.83	.00	6.73	3.433	3.78
6.99	.00	6.69	3.381	3.75
7.16	.00	6.65	3.329	3.72
7.33	.00	6.61	3.278	3.69
7.49	.00	6.57	3.228	3.65
7.66	.00	6.53	3.178	3.62
7.83	.00	6.49	3.128	3.59

7.99	.00	6.45	3.079	3.57
8.16	.00	6.41	3.030	3.55
8.33	.00	6.38	2.981	3.53
8.49	.00	6.34	2.933	3.50
8.66	.00	6.30	2.885	3.48
8.82	.00	6.26	2.837	3.46
8.99	.00	6.23	2.790	3.44
9.16	.00	6.19	2.743	3.41
9.32	.00	6.15	2.696	3.39
9.49	.00	6.12	2.649	3.37
9.66	.00	6.08	2.603	3.35
9.82	.00	6.04	2.557	3.33
9.99	.00	6.01	2.511	3.31
10.16	.00	5.97	2.466	3.27
10.32	.00	5.94	2.421	3.24
10.49	.00	5.90	2.377	3.20
10.66	.00	5.87	2.333	3.17
10.82	.00	5.84	2.290	3.14
10.99	.00	5.80	2.247	3.10
11.16	.00	5.77	2.204	3.07
11.32	.00	5.74	2.162	3.04
11.49	.00	5.70	2.121	3.00
11.66	.00	5.67	2.080	2.97
11.82	.00	5.64	2.039	2.94
11.99	.00	5.61	1.999	2.91
12.15	.00	5.58	1.959	2.88
12.32	.00	5.55	1.920	2.85
12.49	.00	5.52	1.881	2.82
12.65	.00	5.49	1.842	2.79
12.82	.00	5.46	1.804	2.76
12.99	.00	5.43	1.766	2.73
13.15	.00	5.40	1.729	2.70
13.32	.00	5.37	1.692	2.67
13.49	.00	5.34	1.656	2.64
13.65	.00	5.31	1.619	2.61
13.82	.00	5.28	1.584	2.58
13.99	.00	5.25	1.548	2.55
14.15	.00	5.23	1.514	2.53
14.32	.00	5.20	1.479	2.50
14.49	.00	5.17	1.445	2.47
14.65	.00	5.14	1.411	2.44
14.82	.00	5.12	1.378	2.42
14.99	.00	5.09	1.344	2.39
15.15	.00	5.06	1.312	2.36
15.32	.00	5.04	1.279	2.34
15.48	.00	5.01	1.247	2.31
15.65	.00	4.99	1.216	2.29
15.82	.00	4.98	1.184	2.27
15.98	.00	4.97	1.153	2.25
16.15	.00	4.95	1.122	2.24
16.32	.00	4.94	1.092	2.22
16.48	.00	4.93	1.061	2.20
16.65	.00	4.91	1.031	2.18
16.82	.00	4.90	1.001	2.16
16.98	.00	4.89	.972	2.15
17.15	.00	4.88	.942	2.13

17.32	.00	4.86	.913	2.11
17.48	.00	4.85	.884	2.09
17.65	.00	4.84	.855	2.08
17.82	.00	4.83	.827	2.06
17.98	.00	4.82	.799	2.04
18.15	.00	4.80	.771	2.03
18.32	.00	4.79	.743	2.01
18.48	.00	4.78	.715	1.99

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
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18.65	.00	4.77	.688	1.98
18.81	.00	4.76	.661	1.96
18.98	.00	4.75	.634	1.94
19.15	.00	4.73	.608	1.93
19.31	.00	4.72	.581	1.91
19.48	.00	4.71	.555	1.90
19.65	.00	4.70	.529	1.88
19.81	.00	4.69	.503	1.87

PEAK DISCHARGE = 4.462 CFS - PEAK OCCURS AT HOUR 2.50
 MAXIMUM WATER SURFACE ELEVATION = 7.771

MAXIMUM STORAGE = 4.7720 AC-FT INCREMENTAL TIME= .033300HRS

PRINT HYD ID=12 CODE=1

PARTIAL HYDROGRAPH 133.50

RUNOFF VOLUME = .69177 INCHES = 4.8073 ACRE-FEET
 PEAK DISCHARGE RATE = 4.46 CFS AT 2.498 HOURS BASIN AREA = .1303 SQ. MI.

* *****

COMPUTE NM HYD ID=15 HYD NO=123.00 DA=0.0022 SQ MI
 PER A=0.00 PER B=5.00 PER C=5.00 PER D=90.00
 TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106428
 UNIT PEAK = 7.8171 CFS UNIT VOLUME = .9978 B = 526.28 P60 = 1.8700
 AREA = .001980 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

K = .118429HR TP = .133300HR K/TP RATIO = .888442 SHAPE CONSTANT, N = 3.992479
 UNIT PEAK = .58535 CFS UNIT VOLUME = .9774 B = 354.67 P60 = 1.8700
 AREA = .000220 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=15 CODE=1

PARTIAL HYDROGRAPH 123.00

RUNOFF VOLUME = 1.85049 INCHES = .2171 ACRE-FEET
 PEAK DISCHARGE RATE = 5.90 CFS AT 1.499 HOURS BASIN AREA = .0022 SQ. MI.

ADD HYD ID=15 HYD NO=123.01 ID I=15 ID II=13
PRINT HYD ID=15 CODE=1

PARTIAL HYDROGRAPH 123.01

RUNOFF VOLUME = 1.22110 INCHES = .3061 ACRE-FEET
PEAK DISCHARGE RATE = 9.13 CFS AT 1.499 HOURS BASIN AREA = .0047 SQ. MI.

* S FLOW FROM LAVA BLUFF TO OURAY SD INCLUDING OFFSITE SHEET FLOW
ADD HYD ID=15 HYD NO=123.02 ID I=15 ID II=14
PRINT HYD ID=15 CODE=1

PARTIAL HYDROGRAPH 123.02

RUNOFF VOLUME = .78567 INCHES = .9218 ACRE-FEET
PEAK DISCHARGE RATE = 31.32 CFS AT 1.499 HOURS BASIN AREA = .0220 SQ. MI.

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COMPUTE NM HYD ID=16 HYD NO=124.10 DA=0.0046 SQ MI
PER A=0.00 PER B=26.20 PER C=26.20 PER D=47.60
TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106428
UNIT PEAK = 8.6447 CFS UNIT VOLUME = .9980 B = 526.28 P60 = 1.8700
AREA = .002190 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

K = .118429HR TP = .133300HR K/TP RATIO = .888442 SHAPE CONSTANT, N = 3.992479
UNIT PEAK = 6.4133 CFS UNIT VOLUME = .9984 B = 354.67 P60 = 1.8700
AREA = .002410 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=16 CODE=1

PARTIAL HYDROGRAPH 124.10

RUNOFF VOLUME = 1.36302 INCHES = .3344 ACRE-FEET
PEAK DISCHARGE RATE = 9.90 CFS AT 1.499 HOURS BASIN AREA = .0046 SQ. MI.

COMPUTE NM HYD ID=17 HYD NO=124.20 DA=0.0046 SQ MI
PER A=0.00 PER B=26.20 PER C=26.20 PER D=47.60
TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106428
UNIT PEAK = 8.6447 CFS UNIT VOLUME = .9980 B = 526.28 P60 = 1.8700
AREA = .002190 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

K = .118429HR TP = .133300HR K/TP RATIO = .888442 SHAPE CONSTANT, N = 3.992479
UNIT PEAK = 6.4133 CFS UNIT VOLUME = .9984 B = 354.67 P60 = 1.8700
AREA = .002410 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=17 CODE=1

PARTIAL HYDROGRAPH 124.20

RUNOFF VOLUME = 1.36302 INCHES = .3344 ACRE-FEET
PEAK DISCHARGE RATE = 9.90 CFS AT 1.499 HOURS BASIN AREA = .0046 SQ. MI.

ADD HYD ID=16 HYD NO=124.12 ID I=16 ID II=17
PRINT HYD ID=16 CODE=1

PARTIAL HYDROGRAPH 124.12

RUNOFF VOLUME = 1.36296 INCHES = .6688 ACRE-FEET
PEAK DISCHARGE RATE = 19.79 CFS AT 1.499 HOURS BASIN AREA = .0092 SQ. MI.

COMPUTE NM HYD ID=17 HYD NO=124.30 DA=0.0044 SQ MI
PER A=0.00 PER B=26.20 PER C=26.20 PER D=47.60
TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106428
UNIT PEAK = 8.2688 CFS UNIT VOLUME = .9980 B = 526.28 P60 = 1.8700
AREA = .002094 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

K = .118429HR TP = .133300HR K/TP RATIO = .888442 SHAPE CONSTANT, N = 3.992479
UNIT PEAK = 6.1345 CFS UNIT VOLUME = .9982 B = 354.67 P60 = 1.8700
AREA = .002306 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300
PRINT HYD ID=17 CODE=1

PARTIAL HYDROGRAPH 124.30

RUNOFF VOLUME = 1.36302 INCHES = .3199 ACRE-FEET
PEAK DISCHARGE RATE = 9.47 CFS AT 1.499 HOURS BASIN AREA = .0044 SQ. MI.

ADD HYD ID=16 HYD NO=124.13 ID I=16 ID II=17
PRINT HYD ID=16 CODE=1

PARTIAL HYDROGRAPH 124.13

RUNOFF VOLUME = 1.36296 INCHES = .9886 ACRE-FEET
PEAK DISCHARGE RATE = 29.26 CFS AT 1.499 HOURS BASIN AREA = .0136 SQ. MI.

COMPUTE NM HYD ID=17 HYD NO=124.40 DA=0.0028 SQ MI
PER A=0.00 PER B=26.20 PER C=26.20 PER D=47.60
TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106428
UNIT PEAK = 5.2620 CFS UNIT VOLUME = .9972 B = 526.28 P60 = 1.8700
AREA = .001333 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

K = .118429HR TP = .133300HR K/TP RATIO = .888442 SHAPE CONSTANT, N = 3.992479
UNIT PEAK = 3.9037 CFS UNIT VOLUME = .9969 B = 354.67 P60 = 1.8700
AREA = .001467 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=17 CODE=1

PARTIAL HYDROGRAPH 124.40

RUNOFF VOLUME = 1.36302 INCHES = .2035 ACRE-FEET
PEAK DISCHARGE RATE = 6.03 CFS AT 1.499 HOURS BASIN AREA = .0028 SQ. MI.

ADD HYD ID=16 HYD NO=124.14 ID I=16 ID II=17
PRINT HYD ID=16 CODE=1

PARTIAL HYDROGRAPH 124.14

RUNOFF VOLUME = 1.36295 INCHES = 1.1921 ACRE-FEET
PEAK DISCHARGE RATE = 35.29 CFS AT 1.499 HOURS BASIN AREA = .0164 SQ. MI.

COMPUTE NM HYD ID=17 HYD NO=124.50 DA=0.0029 SQ MI
PER A=0.00 PER B=26.20 PER C=26.20 PER D=47.60
TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106428
UNIT PEAK = 5.4499 CFS UNIT VOLUME = .9972 B = 526.28 P60 = 1.8700
AREA = .001380 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

K = .118429HR TP = .133300HR K/TP RATIO = .888442 SHAPE CONSTANT, N = 3.992479
UNIT PEAK = 4.0432 CFS UNIT VOLUME = .9972 B = 354.67 P60 = 1.8700
AREA = .001520 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=17 CODE=1

PARTIAL HYDROGRAPH 124.50

RUNOFF VOLUME = 1.36302 INCHES = .2108 ACRE-FEET

PEAK DISCHARGE RATE = 6.25 CFS AT 1.499 HOURS BASIN AREA = .0029 SQ. MI.

ADD HYD ID=16 HYD NO=124.15 ID I=16 ID II=17
PRINT HYD ID=16 CODE=1

PARTIAL HYDROGRAPH 124.15

RUNOFF VOLUME = 1.36295 INCHES = 1.4029 ACRE-FEET
PEAK DISCHARGE RATE = 41.54 CFS AT 1.499 HOURS BASIN AREA = .0193 SQ. MI.

COMPUTE NM HYD ID=17 HYD NO=124.60 DA=0.0036 SQ MI
PER A=0.00 PER B=26.20 PER C=26.20 PER D=47.60
TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106428
UNIT PEAK = 6.7654 CFS UNIT VOLUME = .9975 B = 526.28 P60 = 1.8700
AREA = .001714 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

K = .118429HR TP = .133300HR K/TP RATIO = .888442 SHAPE CONSTANT, N = 3.992479
UNIT PEAK = 5.0191 CFS UNIT VOLUME = .9978 B = 354.67 P60 = 1.8700
AREA = .001886 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=17 CODE=1

PARTIAL HYDROGRAPH 124.60

RUNOFF VOLUME = 1.36302 INCHES = .2617 ACRE-FEET
PEAK DISCHARGE RATE = 7.75 CFS AT 1.499 HOURS BASIN AREA = .0036 SQ. MI.

ADD HYD ID=16 HYD NO=124.16 ID I=16 ID II=17
PRINT HYD ID=16 CODE=1

PARTIAL HYDROGRAPH 124.16

RUNOFF VOLUME = 1.36295 INCHES = 1.6646 ACRE-FEET
PEAK DISCHARGE RATE = 49.29 CFS AT 1.499 HOURS BASIN AREA = .0229 SQ. MI.

COMPUTE NM HYD ID=17 HYD NO=124.70 DA=0.0027 SQ MI
PER A=0.00 PER B=26.20 PER C=26.20 PER D=47.60
TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106428
UNIT PEAK = 5.0740 CFS UNIT VOLUME = .9972 B = 526.28 P60 = 1.8700
AREA = .001285 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

K = .118429HR TP = .133300HR K/TP RATIO = .888442 SHAPE CONSTANT, N = 3.992479
UNIT PEAK = 3.7643 CFS UNIT VOLUME = .9969 B = 354.67 P60 = 1.8700
AREA = .001415 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=17 CODE=1

PARTIAL HYDROGRAPH 124.70

RUNOFF VOLUME = 1.36302 INCHES = .1963 ACRE-FEET
PEAK DISCHARGE RATE = 5.82 CFS AT 1.499 HOURS BASIN AREA = .0027 SQ. MI.

ADD HYD ID=16 HYD NO=124.17 ID I=16 ID II=17
PRINT HYD ID=16 CODE=1

PARTIAL HYDROGRAPH 124.17

RUNOFF VOLUME = 1.36294 INCHES = 1.8609 ACRE-FEET
PEAK DISCHARGE RATE = 55.10 CFS AT 1.499 HOURS BASIN AREA = .0256 SQ. MI.

COMPUTE NM HYD ID=17 HYD NO=124.80 DA=0.0033 SQ MI
PER A=0.00 PER B=26.20 PER C=26.20 PER D=47.60
TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106428
UNIT PEAK = 6.2016 CFS UNIT VOLUME = .9975 B = 526.28 P60 = 1.8700
AREA = .001571 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

K = .118429HR TP = .133300HR K/TP RATIO = .888442 SHAPE CONSTANT, N = 3.992479
UNIT PEAK = 4.6008 CFS UNIT VOLUME = .9975 B = 354.67 P60 = 1.8700
AREA = .001729 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=17 CODE=1

PARTIAL HYDROGRAPH 124.80

RUNOFF VOLUME = 1.36302 INCHES = .2399 ACRE-FEET
PEAK DISCHARGE RATE = 7.10 CFS AT 1.499 HOURS BASIN AREA = .0033 SQ. MI.

ADD HYD ID=16 HYD NO=124.18 ID I=16 ID II=17
PRINT HYD ID=16 CODE=1

PARTIAL HYDROGRAPH 124.18

RUNOFF VOLUME = 1.36294 INCHES = 2.1007 ACRE-FEET
PEAK DISCHARGE RATE = 62.21 CFS AT 1.499 HOURS BASIN AREA = .0289 SQ. MI.

COMPUTE NM HYD ID=17 HYD NO=124.90 DA=0.0022 SQ MI
PER A=0.00 PER B=26.20 PER C=26.20 PER D=47.60
TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106428
UNIT PEAK = 4.1344 CFS UNIT VOLUME = .9965 B = 526.28 P60 = 1.8700
AREA = .001047 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

K = .118429HR TP = .133300HR K/TP RATIO = .888442 SHAPE CONSTANT, N = 3.992479
UNIT PEAK = 3.0672 CFS UNIT VOLUME = .9962 B = 354.67 P60 = 1.8700
AREA = .001153 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=17 CODE=1

PARTIAL HYDROGRAPH 124.90

RUNOFF VOLUME = 1.36302 INCHES = .1599 ACRE-FEET
PEAK DISCHARGE RATE = 4.74 CFS AT 1.499 HOURS BASIN AREA = .0022 SQ. MI.

ADD HYD ID=16 HYD NO=124.19 ID I=16 ID II=17
PRINT HYD ID=16 CODE=1

PARTIAL HYDROGRAPH 124.19

RUNOFF VOLUME = 1.36294 INCHES = 2.2607 ACRE-FEET
PEAK DISCHARGE RATE = 66.95 CFS AT 1.499 HOURS BASIN AREA = .0311 SQ. MI.

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*S UNPONDED FLOW TO INLETS AT OURAY
ADD HYD ID=15 HYD NO=124.01 ID I=15 ID II=16
PRINT HYD ID=15 CODE=1

PARTIAL HYDROGRAPH 124.01

RUNOFF VOLUME = 1.12377 INCHES = 3.1825 ACRE-FEET
PEAK DISCHARGE RATE = 98.27 CFS AT 1.499 HOURS BASIN AREA = .0531 SQ. MI.

*S TOTAL ONSITE FLOW TO OURAY SD
ADD HYD ID=12 HYD NO=124.02 ID I=12 ID II=15
PRINT HYD ID=12 CODE=1

PARTIAL HYDROGRAPH 124.02

RUNOFF VOLUME = .81685 INCHES = 7.9898 ACRE-FEET
PEAK DISCHARGE RATE = 100.61 CFS AT 1.499 HOURS BASIN AREA = .1834 SQ. MI.

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COMPUTE NM HYD ID=15 HYD NO=133.2 DA=0.0210 SQ MI
PER A=0.00 PER B=5.00 PER C=5.00 PER D=90.00
TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106428
UNIT PEAK = 74.618 CFS UNIT VOLUME = .9992 B = 526.28 P60 = 1.8700
AREA = .018900 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

K = .118429HR TP = .133300HR K/TP RATIO = .888442 SHAPE CONSTANT, N = 3.992479
UNIT PEAK = 5.5874 CFS UNIT VOLUME = .9980 B = 354.67 P60 = 1.8700
AREA = .002100 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=15 CODE=1

PARTIAL HYDROGRAPH 133.20

RUNOFF VOLUME = 1.85049 INCHES = 2.0725 ACRE-FEET
PEAK DISCHARGE RATE = 56.15 CFS AT 1.499 HOURS BASIN AREA = .0210 SQ. MI.

*S EXISTING FLOW TO OURAY SD

ADD HYD ID=14 HYD NO=133.01 ID I=15 ID II=9
PRINT HYD ID=14 CODE=1

PARTIAL HYDROGRAPH 133.01

RUNOFF VOLUME = .62536 INCHES = 10.4393 ACRE-FEET
PEAK DISCHARGE RATE = 167.35 CFS AT 1.632 HOURS BASIN AREA = .3130 SQ. MI.

*S TOTAL FLOW TO OURAY STORM DRAIN

ADD HYD ID=3 HYD NO=133.02 ID I=12 ID II=14
PRINT HYD ID=3 CODE=1

PARTIAL HYDROGRAPH 133.02

RUNOFF VOLUME = .69611 INCHES = 18.4291 ACRE-FEET
PEAK DISCHARGE RATE = 257.82 CFS AT 1.532 HOURS BASIN AREA = .4964 SQ. MI.

FINISH

NORMAL PROGRAM FINISH END TIME (HR:MIN:SEC) = 08:15:48

100-YEAR FUTURE DEVELOPMENT DETAIL PRINTOUT

AHYMO PROGRAM (AHYMO993) - AMAFCA VERSION OF HYMO - SEPTEMBER, 1993

RUN DATE (MON/DAY/YR) = 11/26/1993

START TIME (HR:MIN:SEC) = 07:37:50 USER NO. = COMMSC_B.T93

INPUT FILE = PML00FU.DAT

*S PARKWEST-100 YEAR POST DEVELOPMENT

START TIME=0.0 HR PUNCH CODE=0

RAINFALL

TYPE=1 RAIN QUARTER=0.0

RAIN ONE=1.87 IN RAIN SIX=2.20 IN

RAIN DAY=2.66 IN DT=0.0333 HRS

COMPUTED 6-HOUR RAINFALL DISTRIBUTION BASED ON NOAA ATLAS 2 - PEAK AT 1.40 HR.
DT = .033300 HOURS END TIME = 5.994000 HOURS

.0000	.0016	.0033	.0050	.0067	.0085	.0103
.0121	.0140	.0160	.0180	.0200	.0221	.0243
.0265	.0288	.0312	.0336	.0361	.0387	.0414
.0442	.0471	.0501	.0533	.0566	.0600	.0636
.0674	.0714	.0757	.0808	.0863	.0922	.1044
.1323	.1754	.2374	.3221	.4335	.5756	.7527
.9690	1.1767	1.2619	1.3336	1.3972	1.4551	1.5084
1.5579	1.6041	1.6474	1.6881	1.7266	1.7629	1.7973
1.8298	1.8607	1.8900	1.9178	1.9442	1.9515	1.9573
1.9627	1.9680	1.9729	1.9777	1.9823	1.9867	1.9909
1.9950	1.9990	2.0029	2.0066	2.0102	2.0137	2.0172
2.0205	2.0238	2.0269	2.0300	2.0331	2.0360	2.0389
2.0418	2.0446	2.0473	2.0500	2.0526	2.0552	2.0578
2.0603	2.0627	2.0651	2.0675	2.0698	2.0721	2.0744
2.0766	2.0788	2.0810	2.0832	2.0853	2.0873	2.0894
2.0914	2.0934	2.0954	2.0974	2.0993	2.1012	2.1031
2.1050	2.1068	2.1086	2.1104	2.1122	2.1140	2.1157
2.1174	2.1191	2.1208	2.1225	2.1242	2.1258	2.1274
2.1290	2.1306	2.1322	2.1338	2.1353	2.1369	2.1384
2.1399	2.1414	2.1429	2.1444	2.1459	2.1473	2.1487
2.1502	2.1516	2.1530	2.1544	2.1558	2.1571	2.1585
2.1599	2.1612	2.1625	2.1639	2.1652	2.1665	2.1678
2.1691	2.1703	2.1716	2.1729	2.1741	2.1754	2.1766
2.1778	2.1791	2.1803	2.1815	2.1827	2.1839	2.1850
2.1862	2.1874	2.1886	2.1897	2.1909	2.1920	2.1931
2.1943	2.1954	2.1965	2.1976	2.1987	2.1998	

* *****

COMPUTE NM HYD

ID=1 HYD NO=14.0 DA=0.8000 SQ MI

PER A=69.00 PER B=8.00 PER C=23.00 PER D=0.00

TP=-0.3459 HR MASS RAIN=-1

K = .326587HR TP = .345900HR K/TP RATIO = .944166 SHAPE CONSTANT, N = 3.744453
UNIT PEAK = 781.16 CFS UNIT VOLUME = 1.000 B = 337.76 P60 = 1.8700
AREA = .800000 SQ MI IA = .56900 INCHES INF = 1.44320 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD

ID=1 CODE=1

OUTFLOW HYDROGRAPH REACH 14.00

RUNOFF VOLUME = .55414 INCHES = 23.6432 ACRE-FEET

PEAK DISCHARGE RATE = 419.68 CFS AT 1.732 HOURS BASIN AREA = .8000 SQ. MI.

SED WASH LOAD ID=1 K=0.19 C=0.25

P=1.0 LS=0.333

IMPERVIOUS=0.0 FACTOR=3.0

SEDIMENT YIELD (Wash Mat.) = 780.0 (TONS) WASH LOAD CONCENTRATION = 23698 (ppm-w)
PERCENTAGE IMPERVIOUS AREA = .000 WASH LOAD FACTOR = 3.00000

PRINT HYD ID=1 CODE=1

OUTFLOW HYDROGRAPH REACH 14.00

RUNOFF VOLUME = .55414 INCHES = 23.6432 ACRE-FEET
PEAK DISCHARGE RATE = 419.68 CFS AT 1.732 HOURS BASIN AREA = .8000 SQ. MI.

*S ROUTE L14 THROUGH 131

COMPUTE RATING CURVE RC=1 VS NO=1 NO SEGS=1 MIN ELEV=0.0 FT

MAX ELEV=5.0 FT CH SLP=0.0325 FP

SLP= 0.0325 N=0.03 DIST=100 FT

DIST ELEV DIST ELEV DIST ELEV DIST ELEV
0.0 5.0 20 0.0 80 0.0 100 5.0

RATING CURVE VALLEY SECTION 1.0

WATER SURFACE ELEV	FLOW AREA SQ FT	FLOW RATE CFS	TOP WIDTH FT
.00	.00	.00	.00
.26	16.07	58.21	62.11
.53	32.69	185.84	64.21
.79	49.86	367.44	66.32
1.05	67.59	597.16	68.42
1.32	85.87	871.70	70.53
1.58	104.71	1189.01	72.63
1.84	124.10	1547.69	74.74
2.11	144.04	1946.80	76.84
2.37	164.54	2385.70	78.95
2.63	185.60	2863.98	81.05
2.89	207.20	3381.36	83.16
3.16	229.36	3937.71	85.26
3.42	252.08	4532.98	87.37
3.68	275.35	5167.20	89.47
3.95	299.17	5840.48	91.58
4.21	323.55	6552.94	93.68
4.47	348.48	7304.79	95.79
4.74	373.96	8096.24	97.89
5.00	400.00	8927.54	100.00

COMPUTE TRAVEL TIME ID=2 REACH NO=1 NO VS=1 L=4000 FT SLP=0.0325

TRAVEL TIME TABLE

REACH= 1.0

WATER DEPTH FEET	AVERAGE AREA SQ.FT.	FLOW RATE CFS	TRAVEL TIME HRS
.263	16.066	58.21	.3067

.526	32.687	185.84	.1954
.789	49.861	367.44	.1508
1.053	67.590	597.16	.1258
1.316	85.873	871.70	.1095
1.579	104.709	1189.01	.0978
1.842	124.100	1547.69	.0891
2.105	144.044	1946.80	.0822
2.368	164.543	2385.70	.0766
2.632	185.596	2863.98	.0720
2.895	207.202	3381.36	.0681
3.158	229.363	3937.71	.0647
3.421	252.078	4532.98	.0618
3.684	275.346	5167.20	.0592
3.947	299.169	5840.48	.0569
4.211	323.546	6552.94	.0549
4.474	348.476	7304.79	.0530
4.737	373.961	8096.24	.0513
5.000	400.000	8927.54	.0498

ROUTE ID=2 HYD NO= 14.01 INFLOW ID=1
 PRINT HYD ID=2 CODE=1

OUTFLOW HYDROGRAPH REACH 14.01

RUNOFF VOLUME = .55414 INCHES = 23.6432 ACRE-FEET
 PEAK DISCHARGE RATE = 363.29 CFS AT 1.865 HOURS BASIN AREA = .8000 SQ. MI.

COMPUTE NM HYD ID=3 HYD NO=131.0 DA=0.2802 SQ MI
 PER A=52.70 PER B=5.20 PER C=39.77 PER D=2.33
 TP=-0.3695 HR MASS RAIN=-1

K = .211615HR TP = .369500HR K/TP RATIO = .572706 SHAPE CONSTANT, N = 6.672018
 UNIT PEAK = 8.9316 CFS UNIT VOLUME = .9986 B = 505.50 P60 = 1.8700
 AREA = .006529 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

K = .341771HR TP = .369500HR K/TP RATIO = .924956 SHAPE CONSTANT, N = 3.825715
 UNIT PEAK = 254.32 CFS UNIT VOLUME = 1.000 B = 343.38 P60 = 1.8700
 AREA = .273671 SQ MI IA = .51986 INCHES INF = 1.30560 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=3 CODE=1

PARTIAL HYDROGRAPH 131.00

RUNOFF VOLUME = .66348 INCHES = 9.9150 ACRE-FEET
 PEAK DISCHARGE RATE = 164.71 CFS AT 1.765 HOURS BASIN AREA = .2802 SQ. MI.

SED WASH LOAD ID=3 K=0.12 C=0.25
 P=1.0 LS=0.955
 IMPERVIOUS=2.33 FACTOR=3.0
 SEDIMENT YIELD (Wash Mat.) = 502.4 (TONS) WASH LOAD CONCENTRATION = 35940 (ppm-w)
 PERCENTAGE IMPERVIOUS AREA = 2.330 WASH LOAD FACTOR = 3.00000

PRINT HYD

ID=3 CODE=1

PARTIAL HYDROGRAPH 131.00

RUNOFF VOLUME = .66348 INCHES = 9.9150 ACRE-FEET
PEAK DISCHARGE RATE = 164.71 CFS AT 1.765 HOURS BASIN AREA = .2802 SQ. MI.

*S BASINS L14 AND 131 ENTERING THE SITE
ADD HYD ID=3 HYD NO=131.01 ID I=2 ID II=3
PRINT HYD ID=3 CODE=1

PARTIAL HYDROGRAPH 131.01

RUNOFF VOLUME = .58250 INCHES = 33.5582 ACRE-FEET
PEAK DISCHARGE RATE = 520.35 CFS AT 1.832 HOURS BASIN AREA = 1.0802 SQ. MI.

SEDIMENT TRANS

ID=3 IDS=1 CODE=1

A=0.0002 B=4.19 C=0.19 D=-2.55

NUMB WASH=1 WASH CONC=27400 NUMB SECTIONS=7

FLOW (CFS)	VELOCITY (FPS)	WIDTH (FT)
100.	3.96	52.95
200.	4.80	64.81
300.	5.36	73.59
400.	5.56	88.83
500.	5.69	105.67
600.	6.09	106.94
700.	6.46	108.10

* * * * *

TIME (HRS)	WATER FLOW (CFS)	VELOCITY (FT/SEC)	HYD. DEPTH (FT)	WIDTH (FT)	WASHLOAD CONC. (PPM-W)	BED MAT. TRANSPORT CONC. (CFS)	BED CONC. (PPM-W)	TOTAL CONC. (PPM-W)	BULKING FACTOR	ACCU. SEDIMENT (TONS)
.000	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
.033	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
.067	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
.100	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
.133	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
.167	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
.200	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
.233	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
.266	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
.300	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
.333	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
.366	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
.400	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
.433	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
.466	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
.500	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
.533	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
.566	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
.599	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00

.633	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
.666	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
.699	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
.733	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
.766	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
.799	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
.833	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
.866	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
.899	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
.932	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
.966	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
.999	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
1.032	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
1.066	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
1.099	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
1.132	.00	.063	.001	.12	27400.	.00	24.	27423.	1.0106	.00
1.166	.00	.157	.004	.46	27400.	.00	142.	27535.	1.0107	.00
1.199	.00	.284	.009	1.11	27400.	.00	459.	27834.	1.0108	.00
1.232	.02	.432	.017	2.08	27400.	.00	1050.	28393.	1.0110	.00
1.265	.05	.590	.027	3.32	27400.	.00	1940.	29235.	1.0114	.01
1.299	.14	.751	.039	4.77	27400.	.00	3125.	30356.	1.0118	.02
1.332	.45	1.006	.061	7.40	27400.	.00	5553.	32653.	1.0127	.08
1.365	1.99	1.588	.121	10.38	27400.	.01	13559.	40231.	1.0158	.39
1.399	7.21	2.453	.233	12.64	27400.	.09	31447.	57173.	1.0229	2.03
1.432	19.33	3.166	.341	17.90	27400.	.39	50990.	75702.	1.0309	7.95
1.465	40.86	3.610	.415	27.26	27400.	1.07	65110.	89101.	1.0369	22.90
1.499	72.88	3.859	.459	41.17	27400.	2.18	73581.	97144.	1.0406	52.23
1.532	115.30	4.132	.510	54.76	27400.	3.95	83184.	106268.	1.0449	103.50
1.565	165.38	4.571	.596	60.70	27400.	6.88	99327.	121615.	1.0522	189.14
1.598	221.99	4.945	.673	66.74	27400.	10.76	113850.	135434.	1.0591	319.21
1.632	287.73	5.303	.748	72.51	27400.	16.00	128401.	149290.	1.0662	508.07
1.665	357.98	5.486	.792	82.43	27400.	21.19	135606.	156155.	1.0698	755.84
1.698	418.29	5.588	.814	91.91	27400.	25.65	139795.	160148.	1.0720	1054.17
1.732	462.46	5.647	.824	99.35	27400.	29.05	142686.	162904.	1.0734	1390.79
1.765	494.67	5.684	.831	104.77	27400.	31.54	144523.	164655.	1.0744	1755.48
1.798	514.02	5.749	.845	105.85	27400.	33.52	147350.	167351.	1.0758	2141.89
1.832	520.35	5.776	.851	105.93	27400.	34.24	148486.	168434.	1.0764	2536.10

TIME (HRS)	WATER FLOW (CFS)	VELOCITY (FT/SEC)	HYD. DEPTH (FT)	WIDTH (FT)	WASHLOAD CONC. (PPM-W)	BED MAT. TRANSPORT (CFS)	BED CONC. (PPM-W)	TOTAL CONC. (PPM-W)	BULKING FACTOR	ACCUM. SEDIMENT (TONS)
1.865	514.40	5.751	.845	105.85	27400.	33.56	147418.	167416.	1.0759	2922.98
1.898	496.72	5.686	.831	105.12	27400.	31.69	144633.	164760.	1.0744	3289.46
1.931	471.05	5.657	.826	100.79	27400.	29.71	143196.	163390.	1.0737	3633.55
1.965	442.47	5.621	.820	95.98	27400.	27.51	141436.	161712.	1.0728	3952.80
1.998	413.44	5.581	.813	91.09	27400.	25.28	139448.	159816.	1.0718	4246.95
2.031	385.20	5.535	.804	86.58	27400.	23.17	137501.	157961.	1.0708	4517.22
2.065	358.27	5.487	.792	82.47	27400.	21.21	135628.	156176.	1.0698	4765.24
2.098	332.80	5.436	.779	78.59	27400.	19.37	133654.	154295.	1.0688	4992.34
2.131	305.86	5.374	.764	74.48	27400.	17.45	131314.	152065.	1.0677	5197.50
2.164	278.67	5.259	.739	71.72	27400.	15.24	126592.	147567.	1.0653	5377.93
2.198	254.86	5.136	.713	69.63	27400.	13.31	121556.	142771.	1.0628	5536.69
2.231	232.71	5.010	.686	67.68	27400.	11.58	116468.	137926.	1.0604	5675.95
2.264	211.76	4.879	.659	65.84	27400.	10.00	111246.	132955.	1.0579	5797.40
2.298	193.45	4.760	.635	64.03	27400.	8.71	106574.	128509.	1.0556	5904.09
2.331	177.77	4.658	.614	62.17	27400.	7.67	102656.	124782.	1.0538	5998.89
2.364	164.05	4.561	.594	60.55	27400.	6.80	98957.	121263.	1.0521	6083.56
2.398	151.81	4.467	.575	59.09	27400.	6.04	95413.	117893.	1.0504	6159.45
2.431	140.74	4.375	.557	57.78	27400.	5.38	91988.	114636.	1.0489	6227.61

2.464	130.64	4.284	.539	56.58	27400.	4.80	88661.	111473.	1.0473	6288.91
2.498	121.59	4.196	.522	55.51	27400.	4.29	85494.	108463.	1.0459	6344.23
2.531	113.57	4.114	.506	54.56	27400.	3.86	82534.	105650.	1.0446	6394.41
2.564	106.23	4.033	.491	53.69	27400.	3.47	79680.	102939.	1.0433	6440.01
2.597	99.40	3.958	.477	52.69	27400.	3.13	77081.	100469.	1.0421	6481.53
2.631	93.25	3.940	.473	50.02	27400.	2.91	76418.	99840.	1.0419	6520.22
2.664	87.84	3.921	.470	47.67	27400.	2.72	75772.	99226.	1.0416	6556.41
2.697	83.13	3.904	.467	45.62	27400.	2.55	75153.	98637.	1.0413	6590.43
2.731	78.90	3.886	.464	43.78	27400.	2.40	74545.	98060.	1.0410	6622.52
2.764	75.05	3.869	.461	42.11	27400.	2.26	73943.	97488.	1.0408	6652.84
2.797	71.57	3.852	.458	40.60	27400.	2.14	73354.	96929.	1.0405	6681.57
2.831	68.46	3.836	.455	39.25	27400.	2.03	72787.	96391.	1.0403	6708.88
2.864	65.61	3.820	.452	38.01	27400.	1.93	72232.	95863.	1.0400	6734.90
2.897	62.93	3.804	.449	36.84	27400.	1.83	71672.	95332.	1.0398	6759.70
2.930	60.39	3.787	.446	35.74	27400.	1.74	71108.	94796.	1.0395	6783.36
2.964	57.99	3.771	.443	34.70	27400.	1.66	70538.	94254.	1.0393	6805.93
2.997	55.70	3.754	.440	33.71	27400.	1.58	69961.	93707.	1.0390	6827.47
3.030	53.53	3.737	.437	32.76	27400.	1.51	69379.	93154.	1.0388	6848.04
3.064	51.47	3.720	.434	31.87	27400.	1.43	68791.	92596.	1.0385	6867.68
3.097	49.50	3.702	.431	31.01	27400.	1.37	68197.	92031.	1.0382	6886.45
3.130	47.63	3.685	.428	30.20	27400.	1.30	67597.	91462.	1.0380	6904.38
3.164	45.84	3.667	.425	29.42	27400.	1.24	66991.	90887.	1.0377	6921.52
3.197	44.13	3.648	.422	28.68	27400.	1.18	66379.	90306.	1.0375	6937.90
3.230	42.50	3.630	.419	27.97	27400.	1.13	65762.	89720.	1.0372	6953.57
3.263	40.93	3.611	.415	27.29	27400.	1.08	65140.	89129.	1.0369	6968.55
3.297	39.44	3.592	.412	26.64	27400.	1.03	64512.	88533.	1.0367	6982.88
3.330	38.01	3.573	.409	26.02	27400.	.98	63879.	87932.	1.0364	6996.59
3.363	36.64	3.554	.405	25.43	27400.	.93	63241.	87327.	1.0361	7009.70
3.397	35.33	3.534	.402	24.86	27400.	.89	62598.	86716.	1.0358	7022.25
3.430	34.07	3.515	.399	24.31	27400.	.85	61950.	86101.	1.0356	7034.25
3.463	32.86	3.495	.395	23.78	27400.	.81	61298.	85482.	1.0353	7045.74
3.497	31.70	3.474	.392	23.28	27400.	.77	60641.	84859.	1.0350	7056.73
3.530	30.59	3.454	.388	22.80	27400.	.74	59979.	84231.	1.0347	7067.26
3.563	29.52	3.433	.385	22.33	27400.	.70	59314.	83599.	1.0344	7077.33
3.596	28.49	3.412	.381	21.88	27400.	.67	58645.	82964.	1.0341	7086.97
3.630	27.50	3.391	.378	21.45	27400.	.64	57972.	82325.	1.0339	7096.19
3.663	26.54	3.370	.374	21.04	27400.	.61	57295.	81683.	1.0336	7105.02
3.696	25.63	3.348	.371	20.64	27400.	.58	56615.	81038.	1.0333	7113.48
TIME	WATER	VELOCITY	HYD.	WIDTH	WASHLOAD	BED MAT.	BED	TOTAL	BULKING	ACCUM.
(HRS)	FLOW	(FT/SEC)	DEPTH	(FT)	CONC.	TRANSPORT	CONC.	CONC.	FACTOR	SEDIMENT
	(CFS)		(FT)		(PPM-W)	(CFS)	(PPM-W)	(PPM-W)		(TONS)
3.730	24.75	3.327	.367	20.26	27400.	.55	55932.	80390.	1.0330	7121.57
3.763	23.90	3.305	.364	19.89	27400.	.53	55246.	79739.	1.0327	7129.31
3.796	23.08	3.283	.360	19.54	27400.	.50	54558.	79086.	1.0324	7136.73
3.830	22.29	3.260	.356	19.19	27400.	.48	53867.	78431.	1.0321	7143.82
3.863	21.53	3.238	.353	18.86	27400.	.46	53174.	77773.	1.0318	7150.61
3.896	20.80	3.215	.349	18.55	27400.	.43	52479.	77114.	1.0315	7157.11
3.929	20.10	3.192	.345	18.24	27400.	.41	51783.	76454.	1.0312	7163.34
3.963	19.42	3.169	.341	17.94	27400.	.39	51086.	75792.	1.0309	7169.29
3.996	18.76	3.146	.338	17.66	27400.	.38	50387.	75130.	1.0307	7174.99
4.029	18.13	3.123	.334	17.38	27400.	.36	49688.	74467.	1.0304	7180.45
4.063	17.52	3.099	.330	17.12	27400.	.34	48989.	73803.	1.0301	7185.67
4.096	16.93	3.076	.326	16.86	27400.	.32	48289.	73140.	1.0298	7190.67
4.129	16.36	3.052	.323	16.62	27400.	.31	47590.	72477.	1.0295	7195.45
4.163	15.81	3.028	.319	16.38	27400.	.29	46891.	71814.	1.0292	7200.02
4.196	15.28	3.004	.315	16.15	27400.	.28	46194.	71152.	1.0289	7204.40
4.229	14.77	2.980	.311	15.93	27400.	.27	45497.	70492.	1.0286	7208.59
4.262	14.28	2.956	.307	15.71	27400.	.25	44802.	69833.	1.0283	7212.60

4.296	13.80	2.931	.304	15.51	27400.	.24	44109.	69175.	1.0280	7216.44
4.329	13.34	2.907	.300	15.31	27400.	.23	43417.	68520.	1.0278	7220.11
4.362	12.90	2.882	.296	15.11	27400.	.22	42729.	67867.	1.0275	7223.62
4.396	12.47	2.858	.292	14.93	27400.	.21	42042.	67216.	1.0272	7226.98
4.429	12.06	2.833	.289	14.75	27400.	.20	41359.	66568.	1.0269	7230.20
4.462	11.66	2.808	.285	14.57	27400.	.19	40679.	65924.	1.0266	7233.28
4.496	11.27	2.784	.281	14.41	27400.	.18	40003.	65282.	1.0264	7236.22
4.529	10.90	2.759	.277	14.24	27400.	.17	39331.	64645.	1.0261	7239.04
4.562	10.54	2.734	.274	14.09	27400.	.16	38662.	64011.	1.0258	7241.73
4.595	10.19	2.709	.270	13.94	27400.	.15	37998.	63382.	1.0255	7244.31
4.629	9.85	2.684	.266	13.79	27400.	.14	37339.	62757.	1.0253	7246.78
4.662	9.53	2.660	.262	13.65	27400.	.14	36684.	62136.	1.0250	7249.14
4.695	9.21	2.635	.259	13.51	27400.	.13	36035.	61521.	1.0247	7251.40
4.729	8.91	2.610	.255	13.38	27400.	.12	35391.	60910.	1.0245	7253.56
4.762	8.62	2.585	.252	13.25	27400.	.12	34752.	60305.	1.0242	7255.63
4.795	8.33	2.560	.248	13.13	27400.	.11	34119.	59705.	1.0240	7257.61
4.829	8.06	2.536	.244	13.01	27400.	.11	33492.	59111.	1.0237	7259.50
4.862	7.80	2.511	.241	12.90	27400.	.10	32872.	58523.	1.0235	7261.32
4.895	7.54	2.486	.237	12.78	27400.	.09	32257.	57941.	1.0232	7263.05
4.928	7.29	2.461	.234	12.68	27400.	.09	31649.	57364.	1.0230	7264.71
4.962	7.05	2.437	.230	12.57	27400.	.09	31046.	56793.	1.0227	7266.30
4.995	6.82	2.412	.227	12.47	27400.	.08	30450.	56229.	1.0225	7267.82
5.028	6.60	2.388	.223	12.38	27400.	.08	29861.	55670.	1.0222	7269.28
5.062	6.38	2.363	.220	12.28	27400.	.07	29278.	55118.	1.0220	7270.67
5.095	6.17	2.339	.216	12.19	27400.	.07	28702.	54572.	1.0218	7272.00
5.128	5.97	2.315	.213	12.10	27400.	.07	28132.	54032.	1.0216	7273.28
5.161	5.77	2.290	.210	12.02	27400.	.06	27569.	53498.	1.0213	7274.50
5.195	5.59	2.266	.206	11.94	27400.	.06	27013.	52972.	1.0211	7275.67
5.228	5.40	2.242	.203	11.86	27400.	.06	26469.	52456.	1.0209	7276.79
5.261	5.23	2.219	.200	11.78	27400.	.05	25933.	51949.	1.0207	7277.86
5.295	5.06	2.195	.197	11.71	27400.	.05	25405.	51448.	1.0205	7278.88
5.328	4.89	2.172	.194	11.63	27400.	.05	24884.	50955.	1.0203	7279.87
5.361	4.74	2.148	.191	11.57	27400.	.04	24372.	50470.	1.0201	7280.81
5.395	4.58	2.125	.187	11.50	27400.	.04	23868.	49993.	1.0199	7281.71
5.428	4.43	2.102	.184	11.44	27400.	.04	23372.	49523.	1.0197	7282.57
5.461	4.29	2.079	.181	11.37	27400.	.04	22884.	49061.	1.0195	7283.40
5.495	4.15	2.057	.178	11.31	27400.	.04	22405.	48607.	1.0193	7284.19
5.528	4.02	2.034	.176	11.26	27400.	.03	21933.	48160.	1.0191	7284.96
5.561	3.89	2.012	.173	11.20	27400.	.03	21470.	47721.	1.0189	7285.68

TIME (HRS)	WATER FLOW (CFS)	VELOCITY (FT/SEC)	HYD. DEPTH (FT)	WIDTH (FT)	WASHLOAD CONC. (PPM-W)	BED MAT. TRANSPORT (CFS)	BED CONC. (PPM-W)	TOTAL CONC. (PPM-W)	BULKING FACTOR	ACCUM. SEDIMENT (TONS)
5.594	3.77	1.990	.170	11.14	27400.	.03	21015.	47291.	1.0187	7286.38
5.628	3.65	1.968	.167	11.09	27400.	.03	20568.	46867.	1.0186	7287.05
5.661	3.53	1.946	.164	11.04	27400.	.03	20129.	46451.	1.0184	7287.70
5.694	3.42	1.924	.162	10.99	27400.	.03	19698.	46043.	1.0182	7288.31
5.728	3.31	1.903	.159	10.95	27400.	.02	19275.	45642.	1.0180	7288.91
5.761	3.20	1.881	.156	10.90	27400.	.02	18859.	45249.	1.0179	7289.47
5.794	3.10	1.860	.154	10.86	27400.	.02	18453.	44864.	1.0177	7290.02
5.828	3.00	1.840	.151	10.81	27400.	.02	18054.	44487.	1.0176	7290.54
5.861	2.91	1.819	.148	10.77	27400.	.02	17664.	44117.	1.0174	7291.04
5.894	2.82	1.798	.146	10.73	27400.	.02	17280.	43754.	1.0173	7291.52
5.927	2.73	1.778	.144	10.69	27400.	.02	16905.	43399.	1.0171	7291.99
5.961	2.64	1.758	.141	10.66	27400.	.02	16537.	43050.	1.0170	7292.43
5.994	2.56	1.738	.139	10.62	27400.	.02	16177.	42709.	1.0168	7292.86
6.027	2.48	1.719	.136	10.59	27400.	.02	15824.	42375.	1.0167	7293.27
6.061	2.40	1.699	.134	10.55	27400.	.01	15478.	42048.	1.0166	7293.67
6.094	2.33	1.680	.132	10.52	27400.	.01	15138.	41726.	1.0164	7294.04

6.127	2.26	1.661	.130	10.49	27400.	.01	14802.	41407.	1.0163	7294.41
6.161	2.18	1.641	.127	10.46	27400.	.01	14466.	41090.	1.0162	7294.76
6.194	2.11	1.622	.125	10.43	27400.	.01	14130.	40771.	1.0160	7295.10
6.227	2.04	1.601	.123	10.40	27400.	.01	13791.	40450.	1.0159	7295.42
6.260	1.97	1.581	.120	10.37	27400.	.01	13450.	40128.	1.0158	7295.73
6.294	1.90	1.560	.118	10.34	27400.	.01	13108.	39804.	1.0156	7296.02
6.327	1.83	1.539	.116	10.31	27400.	.01	12768.	39482.	1.0155	7296.30
6.360	1.77	1.518	.113	10.28	27400.	.01	12431.	39163.	1.0154	7296.57
6.394	1.70	1.498	.111	10.25	27400.	.01	12100.	38850.	1.0153	7296.83
6.427	1.64	1.477	.109	10.22	27400.	.01	11776.	38543.	1.0151	7297.07
6.460	1.58	1.457	.106	10.20	27400.	.01	11462.	38246.	1.0150	7297.31
6.494	1.52	1.437	.104	10.17	27400.	.01	11157.	37957.	1.0149	7297.53
6.527	1.47	1.417	.102	10.15	27400.	.01	10862.	37678.	1.0148	7297.75
6.560	1.42	1.398	.100	10.12	27400.	.01	10578.	37409.	1.0147	7297.95
6.593	1.37	1.379	.098	10.10	27400.	.01	10302.	37148.	1.0146	7298.15
6.627	1.32	1.361	.096	10.08	27400.	.01	10036.	36896.	1.0145	7298.34
6.660	1.27	1.343	.094	10.06	27400.	.00	9777.	36651.	1.0144	7298.52
6.693	1.23	1.325	.092	10.04	27400.	.00	9527.	36414.	1.0143	7298.70
6.727	1.19	1.308	.090	10.02	27400.	.00	9283.	36184.	1.0142	7298.86
6.760	1.15	1.291	.089	10.01	27400.	.00	9047.	35960.	1.0141	7299.02
6.793	1.11	1.274	.087	9.99	27400.	.00	8818.	35743.	1.0140	7299.18
6.827	1.07	1.257	.085	9.97	27400.	.00	8595.	35532.	1.0139	7299.32
6.860	1.03	1.241	.084	9.96	27400.	.00	8378.	35327.	1.0138	7299.46
6.893	1.00	1.225	.082	9.94	27400.	.00	8169.	35129.	1.0137	7299.60
6.926	.97	1.215	.081	9.81	27400.	.00	8034.	35002.	1.0137	7299.73
6.960	.93	1.204	.080	9.69	27400.	.00	7902.	34876.	1.0136	7299.86
6.993	.90	1.194	.079	9.57	27400.	.00	7772.	34753.	1.0136	7299.98
7.026	.87	1.184	.078	9.45	27400.	.00	7644.	34632.	1.0135	7300.10
7.060	.84	1.174	.077	9.33	27400.	.00	7518.	34513.	1.0135	7300.21
7.093	.82	1.164	.076	9.21	27400.	.00	7394.	34396.	1.0134	7300.32
7.126	.79	1.154	.075	9.09	27400.	.00	7272.	34281.	1.0134	7300.42
7.160	.76	1.145	.074	8.98	27400.	.00	7152.	34167.	1.0133	7300.52
7.193	.74	1.135	.073	8.86	27400.	.00	7035.	34056.	1.0133	7300.62
7.226	.71	1.125	.072	8.75	27400.	.00	6919.	33946.	1.0133	7300.71
7.259	.69	1.116	.071	8.64	27400.	.00	6805.	33838.	1.0132	7300.80
7.293	.67	1.107	.070	8.53	27400.	.00	6693.	33732.	1.0132	7300.89
7.326	.64	1.097	.070	8.43	27400.	.00	6583.	33628.	1.0131	7300.97
7.359	.62	1.088	.069	8.32	27400.	.00	6474.	33525.	1.0131	7301.05
7.393	.60	1.079	.068	8.21	27400.	.00	6368.	33424.	1.0130	7301.13
7.426	.58	1.070	.067	8.11	27400.	.00	6263.	33325.	1.0130	7301.21

TIME (HRS)	WATER FLOW (CFS)	VELOCITY (FT/SEC)	HYD. DEPTH (FT)	WIDTH (FT)	WASHLOAD CONC. (PPM-W)	BED MAT. TRANSPORT (CFS)	BED CONC. (PPM-W)	TOTAL CONC. (PPM-W)	BULKING FACTOR	ACCUM. SEDIMENT (TONS)
7.459	.56	1.061	.066	8.01	27400.	.00	6160.	33228.	1.0130	7301.28
7.493	.54	1.052	.065	7.91	27400.	.00	6058.	33132.	1.0129	7301.35
7.526	.52	1.043	.064	7.81	27400.	.00	5958.	33037.	1.0129	7301.42
7.559	.51	1.034	.064	7.71	27400.	.00	5860.	32944.	1.0129	7301.48
7.592	.49	1.025	.063	7.61	27400.	.00	5764.	32853.	1.0128	7301.54
7.626	.47	1.017	.062	7.52	27400.	.00	5669.	32763.	1.0128	7301.60
7.659	.46	1.008	.061	7.42	27400.	.00	5576.	32675.	1.0127	7301.66
7.692	.44	1.000	.060	7.33	27400.	.00	5484.	32588.	1.0127	7301.72
7.726	.43	.991	.060	7.24	27400.	.00	5393.	32503.	1.0127	7301.77
7.759	.41	.983	.059	7.14	27400.	.00	5305.	32419.	1.0126	7301.82
7.792	.40	.975	.058	7.06	27400.	.00	5217.	32336.	1.0126	7301.87
7.826	.39	.966	.058	6.97	27400.	.00	5131.	32255.	1.0126	7301.92
7.859	.37	.958	.057	6.88	27400.	.00	5047.	32175.	1.0125	7301.97
7.892	.36	.950	.056	6.79	27400.	.00	4964.	32096.	1.0125	7302.01
7.925	.35	.942	.055	6.71	27400.	.00	4882.	32019.	1.0125	7302.06

7.959	.34	.934	.055	6.62	27400.	.00	4802.	31943.	1.0125	7302.10
7.992	.33	.927	.054	6.54	27400.	.00	4723.	31868.	1.0124	7302.14
8.025	.32	.919	.053	6.46	27400.	.00	4645.	31795.	1.0124	7302.18
8.059	.31	.911	.053	6.38	27400.	.00	4569.	31722.	1.0124	7302.21
8.092	.30	.903	.052	6.29	27400.	.00	4493.	31651.	1.0123	7302.25
8.125	.29	.896	.051	6.22	27400.	.00	4419.	31581.	1.0123	7302.28
8.159	.28	.888	.051	6.14	27400.	.00	4347.	31512.	1.0123	7302.32
8.192	.27	.881	.050	6.06	27400.	.00	4275.	31445.	1.0123	7302.35
8.225	.26	.873	.049	5.98	27400.	.00	4205.	31378.	1.0122	7302.38
8.258	.25	.866	.049	5.91	27400.	.00	4136.	31312.	1.0122	7302.41
8.292	.24	.859	.048	5.83	27400.	.00	4067.	31248.	1.0122	7302.44
8.325	.23	.852	.048	5.76	27400.	.00	4000.	31185.	1.0121	7302.47
8.358	.23	.844	.047	5.69	27400.	.00	3935.	31122.	1.0121	7302.50
8.392	.22	.837	.046	5.62	27400.	.00	3870.	31061.	1.0121	7302.52
8.425	.21	.830	.046	5.55	27400.	.00	3806.	31001.	1.0121	7302.55
8.458	.20	.823	.045	5.48	27400.	.00	3744.	30942.	1.0120	7302.57
8.491	.20	.816	.045	5.41	27400.	.00	3682.	30883.	1.0120	7302.60
8.525	.19	.810	.044	5.34	27400.	.00	3621.	30826.	1.0120	7302.62
8.558	.18	.803	.044	5.27	27400.	.00	3562.	30769.	1.0120	7302.64
8.591	.18	.796	.043	5.21	27400.	.00	3503.	30714.	1.0120	7302.66
8.625	.17	.789	.042	5.14	27400.	.00	3445.	30659.	1.0119	7302.68
8.658	.17	.783	.042	5.08	27400.	.00	3389.	30606.	1.0119	7302.70
8.691	.16	.776	.041	5.01	27400.	.00	3333.	30553.	1.0119	7302.72
8.725	.16	.770	.041	4.95	27400.	.00	3278.	30501.	1.0119	7302.74
8.758	.15	.763	.040	4.89	27400.	.00	3224.	30450.	1.0119	7302.76
8.791	.15	.757	.040	4.83	27400.	.00	3171.	30400.	1.0118	7302.77
8.825	.14	.750	.039	4.77	27400.	.00	3119.	30350.	1.0118	7302.79
8.858	.14	.744	.039	4.71	27400.	.00	3067.	30302.	1.0118	7302.81
8.891	.13	.738	.038	4.65	27400.	.00	3017.	30254.	1.0118	7302.82
8.924	.13	.732	.038	4.59	27400.	.00	2967.	30207.	1.0118	7302.84
8.958	.12	.725	.037	4.53	27400.	.00	2918.	30161.	1.0117	7302.85
8.991	.12	.719	.037	4.47	27400.	.00	2870.	30115.	1.0117	7302.86
9.024	.11	.713	.036	4.42	27400.	.00	2823.	30071.	1.0117	7302.88
9.058	.11	.707	.036	4.36	27400.	.00	2777.	30027.	1.0117	7302.89
9.091	.11	.701	.036	4.31	27400.	.00	2731.	29983.	1.0117	7302.90
9.124	.10	.696	.035	4.25	27400.	.00	2686.	29941.	1.0116	7302.91
9.158	.10	.690	.035	4.20	27400.	.00	2642.	29899.	1.0116	7302.93
9.191	.10	.684	.034	4.15	27400.	.00	2598.	29858.	1.0116	7302.94
9.224	.09	.678	.034	4.09	27400.	.00	2555.	29817.	1.0116	7302.95
9.257	.09	.672	.033	4.04	27400.	.00	2513.	29778.	1.0116	7302.96
9.291	.09	.667	.033	3.99	27400.	.00	2472.	29738.	1.0116	7302.97

TIME (HRS)	WATER FLOW (CFS)	VELOCITY (FT/SEC)	HVD. DEPTH (FT)	WIDTH (FT)	WASHLOAD CONC. (PPM-W)	BED MAT. TRANSPORT (CFS)	BED CONC. (PPM-W)	TOTAL CONC. (PPM-W)	BULKING FACTOR	ACCUM. SEDIMENT (TONS)
9.324	.08	.661	.033	3.94	27400.	.00	2431.	29700.	1.0116	7302.98
9.357	.08	.656	.032	3.89	27400.	.00	2391.	29662.	1.0115	7302.99
9.391	.08	.650	.032	3.84	27400.	.00	2352.	29625.	1.0115	7303.00
9.424	.08	.645	.031	3.79	27400.	.00	2313.	29588.	1.0115	7303.01
9.457	.07	.639	.031	3.75	27400.	.00	2275.	29552.	1.0115	7303.01
9.491	.07	.634	.031	3.70	27400.	.00	2237.	29516.	1.0115	7303.02
9.524	.07	.629	.030	3.65	27400.	.00	2200.	29482.	1.0115	7303.03
9.557	.07	.623	.030	3.61	27400.	.00	2164.	29447.	1.0114	7303.04
9.590	.06	.618	.029	3.56	27400.	.00	2128.	29413.	1.0114	7303.05
9.624	.06	.613	.029	3.52	27400.	.00	2093.	29380.	1.0114	7303.05
9.657	.06	.608	.029	3.47	27400.	.00	2059.	29348.	1.0114	7303.06
9.690	.06	.603	.028	3.43	27400.	.00	2025.	29315.	1.0114	7303.07
9.724	.06	.598	.028	3.39	27400.	.00	1991.	29284.	1.0114	7303.07
9.757	.05	.593	.028	3.34	27400.	.00	1959.	29253.	1.0114	7303.08

9.790	.05	.588	.027	3.30	27400.	.00	1926.	29222.	1.0114	7303.08
9.824	.05	.583	.027	3.26	27400.	.00	1895.	29192.	1.0113	7303.09
9.857	.05	.578	.027	3.22	27400.	.00	1864.	29163.	1.0113	7303.10
9.890	.05	.573	.026	3.18	27400.	.00	1833.	29134.	1.0113	7303.10
9.923	.05	.568	.026	3.14	27400.	.00	1803.	29106.	1.0113	7303.11
9.957	.04	.563	.026	3.10	27400.	.00	1773.	29078.	1.0113	7303.11
9.990	.04	.559	.025	3.06	27400.	.00	1744.	29050.	1.0113	7303.12
10.023	.04	.554	.025	3.02	27400.	.00	1716.	29023.	1.0113	7303.12
10.057	.04	.549	.025	2.99	27400.	.00	1688.	28996.	1.0113	7303.13
10.090	.04	.545	.024	2.95	27400.	.00	1660.	28970.	1.0113	7303.13
10.123	.04	.540	.024	2.91	27400.	.00	1633.	28944.	1.0112	7303.13
10.157	.04	.536	.024	2.87	27400.	.00	1606.	28919.	1.0112	7303.14
10.190	.04	.531	.023	2.84	27400.	.00	1579.	28894.	1.0112	7303.14
10.223	.03	.527	.023	2.80	27400.	.00	1554.	28870.	1.0112	7303.15
10.256	.03	.522	.023	2.77	27400.	.00	1528.	28845.	1.0112	7303.15
10.290	.03	.518	.023	2.73	27400.	.00	1503.	28822.	1.0112	7303.15
10.323	.03	.514	.022	2.70	27400.	.00	1478.	28798.	1.0112	7303.16
10.356	.03	.509	.022	2.67	27400.	.00	1454.	28775.	1.0112	7303.16
10.390	.03	.505	.022	2.63	27400.	.00	1430.	28753.	1.0112	7303.16
10.423	.03	.501	.021	2.60	27400.	.00	1407.	28731.	1.0112	7303.17
10.456	.03	.497	.021	2.57	27400.	.00	1384.	28709.	1.0112	7303.17
10.490	.03	.493	.021	2.53	27400.	.00	1361.	28687.	1.0111	7303.17
10.523	.03	.488	.021	2.50	27400.	.00	1339.	28666.	1.0111	7303.18
10.556	.02	.484	.020	2.47	27400.	.00	1317.	28645.	1.0111	7303.18
10.589	.02	.478	.020	2.43	27400.	.00	1285.	28615.	1.0111	7303.18
10.623	.02	.468	.019	2.34	27400.	.00	1228.	28561.	1.0111	7303.18
10.656	.02	.454	.019	2.24	27400.	.00	1158.	28495.	1.0111	7303.19
10.689	.02	.440	.018	2.14	27400.	.00	1089.	28430.	1.0110	7303.19
10.723	.01	.428	.017	2.05	27400.	.00	1029.	28373.	1.0110	7303.19
10.756	.01	.424	.017	2.02	27400.	.00	1012.	28357.	1.0110	7303.19
10.789	.01	.420	.016	2.00	27400.	.00	995.	28341.	1.0110	7303.19
10.823	.01	.417	.016	1.97	27400.	.00	979.	28326.	1.0110	7303.19
10.856	.01	.413	.016	1.95	27400.	.00	962.	28310.	1.0110	7303.19
10.889	.01	.410	.016	1.92	27400.	.00	946.	28295.	1.0110	7303.20
10.922	.01	.406	.016	1.90	27400.	.00	931.	28280.	1.0110	7303.20
10.956	.01	.403	.015	1.87	27400.	.00	915.	28266.	1.0110	7303.20
10.989	.01	.399	.015	1.85	27400.	.00	900.	28251.	1.0110	7303.20
11.022	.01	.396	.015	1.83	27400.	.00	885.	28237.	1.0110	7303.20
11.056	.01	.393	.015	1.80	27400.	.00	870.	28223.	1.0110	7303.20
11.089	.01	.389	.015	1.78	27400.	.00	856.	28209.	1.0110	7303.20
11.122	.01	.386	.015	1.76	27400.	.00	841.	28196.	1.0109	7303.20
11.156	.01	.383	.014	1.74	27400.	.00	828.	28183.	1.0109	7303.21

TIME (HRS)	WATER FLOW (CFS)	VELOCITY (FT/SEC)	HYD. DEPTH (FT)	WIDTH (FT)	WASHLOAD CONC. (PPM-W)	BED MAT. TRANSPORT (CFS)	BED CONC. (PPM-W)	TOTAL CONC. (PPM-W)	BULKING FACTOR	ACCUM. SEDIMENT (TONS)
11.189	.01	.380	.014	1.71	27400.	.00	814.	28170.	1.0109	7303.21
11.222	.01	.376	.014	1.69	27400.	.00	800.	28157.	1.0109	7303.21
11.255	.01	.373	.014	1.67	27400.	.00	787.	28144.	1.0109	7303.21
11.289	.01	.370	.014	1.65	27400.	.00	774.	28132.	1.0109	7303.21
11.322	.01	.366	.013	1.62	27400.	.00	758.	28117.	1.0109	7303.21
11.355	.01	.361	.013	1.59	27400.	.00	735.	28096.	1.0109	7303.21
11.389	.01	.354	.013	1.54	27400.	.00	709.	28071.	1.0109	7303.21
11.422	.01	.348	.012	1.50	27400.	.00	684.	28047.	1.0109	7303.21
11.455	.01	.341	.012	1.46	27400.	.00	659.	28024.	1.0109	7303.21
11.489	.01	.335	.012	1.42	27400.	.00	635.	28001.	1.0109	7303.21
11.522	.01	.328	.011	1.38	27400.	.00	612.	27979.	1.0109	7303.21
11.555	.00	.322	.011	1.34	27400.	.00	589.	27957.	1.0109	7303.21
11.588	.00	.316	.011	1.30	27400.	.00	566.	27936.	1.0108	7303.22

COMPUTE NM HYD ID=7 HYD NO=133.3 DA=0.0370 SQ MI
PER A=51.89 PER B=6.49 PER C=41.62 PER D=0.00
TP=-0.1333 HR MASS RAIN=-1

K = .137499HR TP = .133300HR K/TP RATIO = 1.031498 SHAPE CONSTANT, N = 3.422199
UNIT PEAK = 87.325 CFS UNIT VOLUME = 1.000 B = 314.61 P60 = 1.8700
AREA = .037000 SQ MI IA = .51540 INCHES INF = 1.29313 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=7 CODE=1

PARTIAL HYDROGRAPH 133.30

RUNOFF VOLUME = .64008 INCHES = 1.2631 ACRE-FEET
PEAK DISCHARGE RATE = 45.50 CFS AT 1.532 HOURS BASIN AREA = .0370 SQ. MI.

COMPUTE NM HYD ID=8 HYD NO=133.4 DA=0.2550 SQ MI
PER A=80.00 PER B=0.00 PER C=20.00 PER D=0.00
TP=-0.3518 HR MASS RAIN=-1

K = .352269HR TP = .351800HR K/TP RATIO = 1.001334 SHAPE CONSTANT, N = 3.525549
UNIT PEAK = 233.54 CFS UNIT VOLUME = 1.000 B = 322.19 P60 = 1.8700
AREA = .255000 SQ MI IA = .59000 INCHES INF = 1.50200 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=8 CODE=1

PARTIAL HYDROGRAPH 133.40

RUNOFF VOLUME = .52233 INCHES = 7.1037 ACRE-FEET
PEAK DISCHARGE RATE = 119.11 CFS AT 1.732 HOURS BASIN AREA = .2550 SQ. MI.

*S FLOW ENTERING OURAY STORM DRAIN TO THE NORTH
ADD HYD ID=9 HYD NO=133.01 ID I=7 ID II=8
PRINT HYD ID=9 CODE=1

PARTIAL HYDROGRAPH 133.01

RUNOFF VOLUME = .53725 INCHES = 8.3668 ACRE-FEET
PEAK DISCHARGE RATE = 138.33 CFS AT 1.698 HOURS BASIN AREA = .2920 SQ. MI.

* *****

COMPUTE NM HYD ID=10 HYD NO=132.11 DA=0.0093 SQ MI
PER A=30.00 PER B=50.00 PER C=20.00 PER D=0.00
TP=-0.1333 HR MASS RAIN=-1

K = .135774HR TP = .133300HR K/TP RATIO = 1.018563 SHAPE CONSTANT, N = 3.465578
UNIT PEAK = 22.173 CFS UNIT VOLUME = .9997 B = 317.81 P60 = 1.8700
AREA = .009300 SQ MI IA = .51500 INCHES INF = 1.29200 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD

ID=10 CODE=1

PARTIAL HYDROGRAPH 132.11

RUNOFF VOLUME = .64079 INCHES = .3178 ACRE-FEET
PEAK DISCHARGE RATE = 11.54 CFS AT 1.532 HOURS BASIN AREA = .0093 SQ. MI.

SED WASH LOAD

ID=10 K=0.17 C=0.25
P=1.0 LS=0.758

IMPERVIOUS=0.0 FACTOR=3.0

SEDIMENT YIELD (Wash Mat.) = 19.0 (TONS) WASH LOAD CONCENTRATION = 42151 (ppm-w)
PERCENTAGE IMPERVIOUS AREA = .000 WASH LOAD FACTOR = 3.00000

SEDIMENT TRANS

ID=10 IDS=3 CODE=1

A=0.0002 B=4.19 C=0.19 D=-2.55

NUMB WASH=-1 NUMB SECTIONS=9

FLOW	VELOCITY	WIDTH
(CFS)	(FPS)	(FT)
1.00	2.06	4.06
2.00	2.46	5.26
3.00	2.73	6.11
4.00	2.93	6.82
6.00	3.25	7.92
8.00	3.48	8.85
10.00	3.67	9.62
12.00	3.84	10.30
14.00	3.99	10.92

Use wash load from SED WASH LOAD command - Concentration = 42151 (ppm-w)

* * * * *

TIME (HRS)	WATER FLOW (CFS)	HYD. VELOCITY (FT/SEC)	DEPTH (FT)	WIDTH (FT)	WASHLOAD CONC. (PPM-W)	BED MAT. TRANSPORT CONC. (CFS)	BED CONC. (PPM-W)	TOTAL CONC. (PPM-W)	BULKING FACTOR	ACCUM. SEDIMENT (TONS)
.000	.00	.000	.000	.00	42151.	.00	0.	42151.	1.0000	.00
.033	.00	.000	.000	.00	42151.	.00	0.	42151.	1.0000	.00
.067	.00	.000	.000	.00	42151.	.00	0.	42151.	1.0000	.00
.100	.00	.000	.000	.00	42151.	.00	0.	42151.	1.0000	.00
.133	.00	.000	.000	.00	42151.	.00	0.	42151.	1.0000	.00
.167	.00	.000	.000	.00	42151.	.00	0.	42151.	1.0000	.00
.200	.00	.000	.000	.00	42151.	.00	0.	42151.	1.0000	.00
.233	.00	.000	.000	.00	42151.	.00	0.	42151.	1.0000	.00
.266	.00	.000	.000	.00	42151.	.00	0.	42151.	1.0000	.00
.300	.00	.000	.000	.00	42151.	.00	0.	42151.	1.0000	.00
.333	.00	.000	.000	.00	42151.	.00	0.	42151.	1.0000	.00
.366	.00	.000	.000	.00	42151.	.00	0.	42151.	1.0000	.00
.400	.00	.000	.000	.00	42151.	.00	0.	42151.	1.0000	.00
.433	.00	.000	.000	.00	42151.	.00	0.	42151.	1.0000	.00
.466	.00	.000	.000	.00	42151.	.00	0.	42151.	1.0000	.00
.500	.00	.000	.000	.00	42151.	.00	0.	42151.	1.0000	.00
.533	.00	.000	.000	.00	42151.	.00	0.	42151.	1.0000	.00
.566	.00	.000	.000	.00	42151.	.00	0.	42151.	1.0000	.00
.599	.00	.000	.000	.00	42151.	.00	0.	42151.	1.0000	.00
.633	.00	.000	.000	.00	42151.	.00	0.	42151.	1.0000	.00
.666	.00	.000	.000	.00	42151.	.00	0.	42151.	1.0000	.00

.699	.00	.000	.000	.00	42151.	.00	0.	42151.	1.0000	.00
.733	.00	.000	.000	.00	42151.	.00	0.	42151.	1.0000	.00
.766	.00	.000	.000	.00	42151.	.00	0.	42151.	1.0000	.00
.799	.00	.000	.000	.00	42151.	.00	0.	42151.	1.0000	.00
.833	.00	.000	.000	.00	42151.	.00	0.	42151.	1.0000	.00
.866	.00	.000	.000	.00	42151.	.00	0.	42151.	1.0000	.00
.899	.00	.000	.000	.00	42151.	.00	0.	42151.	1.0000	.00
.932	.00	.000	.000	.00	42151.	.00	0.	42151.	1.0000	.00
.966	.00	.000	.000	.00	42151.	.00	0.	42151.	1.0000	.00
.999	.00	.000	.000	.00	42151.	.00	0.	42151.	1.0000	.00
1.032	.00	.000	.000	.00	42151.	.00	0.	42151.	1.0000	.00
1.066	.00	.000	.000	.00	42151.	.00	0.	42151.	1.0000	.00
1.099	.00	.000	.000	.00	42151.	.00	0.	42151.	1.0000	.00
1.132	.00	.000	.000	.00	42151.	.00	0.	42151.	1.0000	.00
1.166	.00	.000	.000	.00	42151.	.00	0.	42151.	1.0000	.00
1.199	.00	.000	.000	.00	42151.	.00	0.	42151.	1.0000	.00
1.232	.00	.000	.000	.00	42151.	.00	0.	42151.	1.0000	.00
1.265	.00	.000	.000	.00	42151.	.00	0.	42151.	1.0000	.00
1.299	.00	.000	.000	.00	42151.	.00	0.	42151.	1.0000	.00
1.332	.19	1.369	.065	2.20	42151.	.00	14574.	55531.	1.0222	.04
1.365	1.20	2.168	.129	4.30	42151.	.02	35445.	74719.	1.0305	.41
1.399	3.50	2.838	.191	6.46	42151.	.08	59335.	96726.	1.0404	1.81
1.432	6.79	3.350	.245	8.29	42151.	.22	80505.	116264.	1.0496	5.15
1.465	9.81	3.654	.281	9.55	42151.	.38	93509.	128282.	1.0555	10.55
1.499	11.41	3.793	.298	10.10	42151.	.48	99878.	134174.	1.0585	17.16
1.532	11.54	3.804	.299	10.14	42151.	.49	100362.	134622.	1.0587	23.88
1.565	10.66	3.730	.290	9.85	42151.	.43	96956.	131470.	1.0571	29.91
1.598	9.31	3.610	.276	9.36	42151.	.35	91591.	126509.	1.0547	34.96
1.632	7.87	3.468	.258	8.79	42151.	.28	85513.	120891.	1.0519	39.01
1.665	6.55	3.321	.241	8.18	42151.	.21	79284.	115136.	1.0491	42.20
1.698	5.37	3.164	.224	7.57	42151.	.16	72626.	108988.	1.0462	44.65
1.732	4.33	2.994	.207	7.00	42151.	.11	65544.	102453.	1.0431	46.50
1.765	3.45	2.829	.190	6.43	42151.	.08	58976.	96395.	1.0403	47.88
1.798	2.73	2.668	.174	5.88	42151.	.06	52870.	90766.	1.0377	48.90
1.832	2.17	2.514	.160	5.40	42151.	.04	47192.	85535.	1.0353	49.66

TIME (HRS)	WATER FLOW (CFS)	VELOCITY (FT/SEC)	HVD. DEPTH (FT)	WIDTH (FT)	WASHLOAD CONC. (PPM-W)	BED MAT. TRANSPORT (CFS)	BED CONC. (PPM-W)	TOTAL CONC. (PPM-W)	BULKING FACTOR	ACCU. SEDIMENT (TONS)
1.865	1.76	2.390	.148	4.97	42151.	.03	42811.	81500.	1.0335	50.24
1.898	1.49	2.294	.140	4.65	42151.	.02	39563.	78509.	1.0322	50.72
1.931	1.30	2.217	.133	4.43	42151.	.02	37017.	76167.	1.0311	51.12
1.965	1.16	2.148	.127	4.25	42151.	.02	34798.	74124.	1.0302	51.47
1.998	1.04	2.085	.122	4.11	42151.	.01	32838.	72321.	1.0294	51.77
2.031	.95	2.035	.117	3.96	42151.	.01	31343.	70946.	1.0288	52.04
2.065	.86	1.994	.114	3.81	42151.	.01	30140.	69839.	1.0283	52.28
2.098	.79	1.954	.110	3.68	42151.	.01	28998.	68788.	1.0279	52.50
2.131	.73	1.915	.107	3.56	42151.	.01	27896.	67775.	1.0274	52.70
2.164	.67	1.876	.104	3.45	42151.	.01	26817.	66783.	1.0270	52.88
2.198	.62	1.837	.101	3.35	42151.	.01	25750.	65801.	1.0266	53.04
2.231	.57	1.798	.097	3.26	42151.	.01	24695.	64831.	1.0262	53.19
2.264	.53	1.758	.094	3.18	42151.	.00	23655.	63875.	1.0257	53.33
2.298	.49	1.720	.091	3.09	42151.	.00	22675.	62975.	1.0254	53.45
2.331	.45	1.685	.088	3.00	42151.	.00	21798.	62168.	1.0250	53.56
2.364	.41	1.651	.086	2.91	42151.	.00	20953.	61392.	1.0247	53.66
2.398	.38	1.617	.083	2.82	42151.	.00	20141.	60646.	1.0244	53.75
2.431	.35	1.585	.081	2.74	42151.	.00	19360.	59928.	1.0241	53.83
2.464	.32	1.553	.078	2.65	42151.	.00	18608.	59237.	1.0238	53.91
2.498	.30	1.521	.076	2.57	42151.	.00	17885.	58572.	1.0235	53.98

2.531	.27	1.491	.074	2.50	42151.	.00	17190.	57933.	1.0232	54.04
2.564	.25	1.460	.071	2.42	42151.	.00	16521.	57319.	1.0229	54.10
2.597	.23	1.431	.069	2.35	42151.	.00	15878.	56728.	1.0227	54.15
2.631	.21	1.402	.067	2.28	42151.	.00	15259.	56160.	1.0225	54.20
2.664	.20	1.374	.065	2.21	42151.	.00	14664.	55613.	1.0222	54.24
2.697	.18	1.346	.063	2.14	42151.	.00	14092.	55088.	1.0220	54.28
2.731	.17	1.318	.061	2.08	42151.	.00	13542.	54583.	1.0218	54.32
2.764	.15	1.292	.059	2.01	42151.	.00	13013.	54097.	1.0216	54.35
2.797	.14	1.266	.058	1.95	42151.	.00	12505.	53630.	1.0214	54.38
2.831	.13	1.240	.056	1.89	42151.	.00	12016.	53181.	1.0212	54.41
2.864	.12	1.215	.054	1.84	42151.	.00	11546.	52750.	1.0210	54.44
2.897	.11	1.190	.053	1.78	42151.	.00	11095.	52335.	1.0208	54.46
2.930	.10	1.166	.051	1.73	42151.	.00	10660.	51936.	1.0207	54.48
2.964	.09	1.143	.049	1.68	42151.	.00	10243.	51553.	1.0205	54.50
2.997	.09	1.120	.048	1.62	42151.	.00	9842.	51184.	1.0204	54.52
3.030	.08	1.097	.046	1.58	42151.	.00	9456.	50830.	1.0202	54.53
3.064	.07	1.075	.045	1.53	42151.	.00	9085.	50490.	1.0201	54.55
3.097	.07	1.053	.044	1.48	42151.	.00	8729.	50163.	1.0199	54.56
3.130	.06	1.032	.042	1.44	42151.	.00	8387.	49848.	1.0198	54.57
3.164	.06	1.011	.041	1.39	42151.	.00	8058.	49546.	1.0197	54.58
3.197	.05	.990	.040	1.35	42151.	.00	7741.	49256.	1.0195	54.59
3.230	.05	.970	.039	1.31	42151.	.00	7437.	48977.	1.0194	54.60
3.263	.05	.951	.037	1.27	42151.	.00	7145.	48708.	1.0193	54.61
3.297	.04	.932	.036	1.23	42151.	.00	6864.	48451.	1.0192	54.62
3.330	.04	.913	.035	1.20	42151.	.00	6595.	48203.	1.0191	54.63
3.363	.04	.894	.034	1.16	42151.	.00	6335.	47965.	1.0190	54.63
3.397	.03	.876	.033	1.12	42151.	.00	6086.	47736.	1.0189	54.64
3.430	.03	.858	.032	1.09	42151.	.00	5847.	47517.	1.0188	54.65
3.463	.03	.841	.031	1.06	42151.	.00	5617.	47306.	1.0187	54.65
3.497	.03	.824	.030	1.03	42151.	.00	5396.	47103.	1.0187	54.66
3.530	.02	.807	.029	.99	42151.	.00	5183.	46908.	1.0186	54.66
3.563	.02	.791	.028	.96	42151.	.00	4979.	46720.	1.0185	54.66
3.596	.02	.775	.028	.94	42151.	.00	4783.	46541.	1.0184	54.67
3.630	.02	.759	.027	.91	42151.	.00	4595.	46368.	1.0183	54.67
3.663	.02	.744	.026	.88	42151.	.00	4414.	46202.	1.0183	54.67
3.696	.02	.729	.025	.85	42151.	.00	4240.	46042.	1.0182	54.68
3.730	.01	.714	.024	.83	42151.	.00	4073.	45889.	1.0181	54.68
3.763	.01	.700	.024	.80	42151.	.00	3913.	45741.	1.0181	54.68
3.796	.01	.686	.023	.78	42151.	.00	3758.	45600.	1.0180	54.68
3.830	.01	.672	.022	.76	42151.	.00	3610.	45464.	1.0180	54.69
3.863	.01	.658	.022	.73	42151.	.00	3468.	45333.	1.0179	54.69
3.896	.01	.645	.021	.71	42151.	.00	3331.	45208.	1.0179	54.69
3.929	.01	.632	.020	.69	42151.	.00	3200.	45087.	1.0178	54.69
3.963	.01	.619	.020	.67	42151.	.00	3074.	44971.	1.0178	54.69
3.996	.01	.606	.019	.65	42151.	.00	2952.	44860.	1.0177	54.69
4.029	.01	.586	.018	.62	42151.	.00	2762.	44685.	1.0177	54.70
4.063	.00	.545	.016	.55	42151.	.00	2390.	44344.	1.0175	54.70
4.096	.00	.483	.014	.46	42151.	.00	1884.	43879.	1.0173	54.70
4.129	.00	.396	.010	.34	42151.	.00	1274.	43320.	1.0171	54.70

AT PEAK FLOW OF 11.539 WITH TIME AT 1.53 HOURS: BEDMAP = 16.56 (TONS) = .0076 (AC-FT bulked)

PEAK BULKING FACTOR = 1.058703 = 134622. (PPM-W) TOTAL SED = 23.88 (TONS) = .0110 (AC-FT bulked)

	UNBULKED WEIGHT (TONS)	BULKED VOLUME (AC-FT)	CONCENTRATION BY WEIGHT (PPM)	AVERAGE BULKING FACTOR
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WASHMAT =	19.01	.0053	.0087	42150.
BEDMAT =	35.69	.0099	.0164	76316.
TOTAL SEDIMENT =	54.70	.0152	.0251	112394.
				1.047783

SEDIMENT TRANSPORT CAPACITY: 2.70038 AC-FT/SQ MI (bulked) = 9.1897 TONS/ACRE (at Porosity=0.395)

PRINT HYD ID=10 CODE=1

PARTIAL HYDROGRAPH 132.11

RUNOFF VOLUME = .64079 INCHES = .3178 ACRE-FEET
PEAK DISCHARGE RATE = 11.54 CFS AT 1.532 HOURS BASIN AREA = .0093 SQ. MI.

PRINT HYD ID=10 CODE=1

PARTIAL HYDROGRAPH 132.11

RUNOFF VOLUME = .64079 INCHES = .3178 ACRE-FEET
PEAK DISCHARGE RATE = 11.54 CFS AT 1.532 HOURS BASIN AREA = .0093 SQ. MI.

COMPUTE NM HYD ID=11 HYD NO=133.51 DA=0.0670 SQ MI
PER A=5.00 PER B=65.00 PER C=30.00 PER D=0.00
TP=-0.1333 HR MASS RAIN=-1

K = .124915HR TP = .133300HR K/TP RATIO = .937100 SHAPE CONSTANT, N = 3.773854
UNIT PEAK = 170.79 CFS UNIT VOLUME = 1.000 B = 339.80 P60 = 1.8700
AREA = .067000 SQ MI IA = .46250 INCHES INF = 1.14500 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=11 CODE=1

PARTIAL HYDROGRAPH 133.51

RUNOFF VOLUME = .73808 INCHES = 2.6374 ACRE-FEET
PEAK DISCHARGE RATE = 95.23 CFS AT 1.532 HOURS BASIN AREA = .0670 SQ. MI.

SED WASH LOAD ID=11 K=0.16 C=0.25
P=1.0 LS=0.470
IMPERVIOUS=0.0 FACTOR=3.0
SEDIMENT YIELD (Wash Mat.) = 118.3 (TONS) WASH LOAD CONCENTRATION = 31948 (PPM-W)
PERCENTAGE IMPERVIOUS AREA = .000 WASH LOAD FACTOR = 3.00000

PRINT HYD ID=11 CODE=1

PARTIAL HYDROGRAPH 133.51

RUNOFF VOLUME = .73808 INCHES = 2.6374 ACRE-FEET
PEAK DISCHARGE RATE = 95.23 CFS AT 1.532 HOURS BASIN AREA = .0670 SQ. MI.

SEDIMENT TRANS

ID=11 IDS=4 CODE=1
A=0.0002 B=4.19 C=0.19 D=-2.55
NUMB WASH=-1 NUMB SECTIONS=9

FLOW	VELOCITY	WIDTH
(CFS)	(FPS)	(FT)
5.00	2.91	8.75
10.00	3.61	10.08
25.00	4.77	12.68
40.00	5.42	14.57
55.00	5.96	16.02
70.00	6.36	17.31
85.00	6.65	18.49
100.00	6.96	19.50
115.00	6.74	24.19

Use wash load from SED WASH LOAD command - Concentration = 31948 (PPM-W)

* * * * *

TIME (HRS)	WATER FLOW (CFS)	VELOCITY (FT/SEC)	HYD. DEPTH (FT)	WIDTH (FT)	WASHLOAD CONC. (PPM-W)	BED MAT. TRANSPORT (CFS)	BED CONC. (PPM-W)	TOTAL CONC. (PPM-W)	BULKING FACTOR	ACCUM. SEDIMENT (TONS)
.000	.00	.000	.000	.00	31948.	.00	0.	31948.	1.0000	.00
.033	.00	.000	.000	.00	31948.	.00	0.	31948.	1.0000	.00
.067	.00	.000	.000	.00	31948.	.00	0.	31948.	1.0000	.00
.100	.00	.000	.000	.00	31948.	.00	0.	31948.	1.0000	.00
.133	.00	.000	.000	.00	31948.	.00	0.	31948.	1.0000	.00
.167	.00	.000	.000	.00	31948.	.00	0.	31948.	1.0000	.00
.200	.00	.000	.000	.00	31948.	.00	0.	31948.	1.0000	.00
.233	.00	.000	.000	.00	31948.	.00	0.	31948.	1.0000	.00
.266	.00	.000	.000	.00	31948.	.00	0.	31948.	1.0000	.00
.300	.00	.000	.000	.00	31948.	.00	0.	31948.	1.0000	.00
.333	.00	.000	.000	.00	31948.	.00	0.	31948.	1.0000	.00
.366	.00	.000	.000	.00	31948.	.00	0.	31948.	1.0000	.00
.400	.00	.000	.000	.00	31948.	.00	0.	31948.	1.0000	.00
.433	.00	.000	.000	.00	31948.	.00	0.	31948.	1.0000	.00
.466	.00	.000	.000	.00	31948.	.00	0.	31948.	1.0000	.00
.500	.00	.000	.000	.00	31948.	.00	0.	31948.	1.0000	.00
.533	.00	.000	.000	.00	31948.	.00	0.	31948.	1.0000	.00
.566	.00	.000	.000	.00	31948.	.00	0.	31948.	1.0000	.00
.599	.00	.000	.000	.00	31948.	.00	0.	31948.	1.0000	.00
.633	.00	.000	.000	.00	31948.	.00	0.	31948.	1.0000	.00
.666	.00	.000	.000	.00	31948.	.00	0.	31948.	1.0000	.00
.699	.00	.000	.000	.00	31948.	.00	0.	31948.	1.0000	.00
.733	.00	.000	.000	.00	31948.	.00	0.	31948.	1.0000	.00
.766	.00	.000	.000	.00	31948.	.00	0.	31948.	1.0000	.00
.799	.00	.000	.000	.00	31948.	.00	0.	31948.	1.0000	.00
.833	.00	.000	.000	.00	31948.	.00	0.	31948.	1.0000	.00
.866	.00	.000	.000	.00	31948.	.00	0.	31948.	1.0000	.00
.899	.00	.000	.000	.00	31948.	.00	0.	31948.	1.0000	.00
.932	.00	.000	.000	.00	31948.	.00	0.	31948.	1.0000	.00
.966	.00	.000	.000	.00	31948.	.00	0.	31948.	1.0000	.00
.999	.00	.000	.000	.00	31948.	.00	0.	31948.	1.0000	.00
1.032	.00	.000	.000	.00	31948.	.00	0.	31948.	1.0000	.00

1.066	.00	.000	.000	.00	31948.	.00	0.	31948.	1.0000	.00
1.099	.00	.000	.000	.00	31948.	.00	0.	31948.	1.0000	.00
1.132	.00	.000	.000	.00	31948.	.00	0.	31948.	1.0000	.00
1.166	.00	.000	.000	.00	31948.	.00	0.	31948.	1.0000	.00
1.199	.00	.000	.000	.00	31948.	.00	0.	31948.	1.0000	.00
1.232	.00	.000	.000	.00	31948.	.00	0.	31948.	1.0000	.00
1.265	.00	.000	.000	.00	31948.	.00	0.	31948.	1.0000	.00
1.299	.00	.000	.000	.00	31948.	.00	0.	31948.	1.0000	.00
1.332	2.42	2.457	.152	6.45	31948.	.04	44431.	73644.	1.0300	.72
1.365	12.32	3.867	.304	10.48	31948.	.53	101516.	127391.	1.0551	7.44
1.399	31.80	5.103	.460	13.54	31948.	2.35	163533.	186004.	1.0862	34.62
1.432	58.23	6.055	.590	16.30	31948.	6.06	216244.	236006.	1.1166	101.90
1.465	82.55	6.607	.683	18.30	31948.	10.08	244540.	262917.	1.1346	212.03
1.499	95.10	6.864	.723	19.17	31948.	12.54	258900.	276593.	1.1443	348.03
1.532	95.23	6.867	.723	19.18	31948.	12.56	259052.	276738.	1.1444	484.31
1.565	87.20	6.699	.698	18.64	31948.	10.93	249391.	267535.	1.1378	603.44
1.598	75.68	6.477	.658	17.76	31948.	8.94	238472.	257142.	1.1306	701.42
1.632	63.91	6.210	.613	16.79	31948.	6.99	224723.	244064.	1.1218	778.60
1.665	53.37	5.909	.569	15.86	31948.	5.29	208085.	228255.	1.1116	837.64
1.698	44.18	5.589	.528	14.97	31948.	3.90	189505.	210619.	1.1007	881.73
1.732	36.18	5.282	.486	14.09	31948.	2.85	172701.	194688.	1.0912	914.45
1.765	29.26	4.988	.444	13.22	31948.	2.07	157681.	180463.	1.0831	938.55
1.798	23.50	4.691	.403	12.42	31948.	1.48	142623.	166215.	1.0752	956.07
1.832	18.96	4.416	.369	11.63	31948.	1.05	128450.	152818.	1.0681	968.86

TIME (HRS)	WATER FLOW (CFS)	VELOCITY (FT/SEC)	HYD. DEPTH (FT)	WIDTH (FT)	WASHLOAD CONC. (PPM-W)	BED MAT. TRANSPORT (CFS)	BED CONC. (PPM-W)	TOTAL CONC. (PPM-W)	BULKING FACTOR	ACCUM. SEDIMENT (TONS)
1.865	15.61	4.166	.339	11.05	31948.	.77	115978.	141038.	1.0620	978.44
1.898	13.23	3.956	.314	10.64	31948.	.59	105770.	131404.	1.0571	985.93
1.931	11.37	3.768	.293	10.32	31948.	.46	96858.	122998.	1.0529	991.89
1.965	9.92	3.602	.274	10.06	31948.	.37	89243.	115819.	1.0494	996.75
1.998	8.77	3.473	.259	9.75	31948.	.30	83705.	110600.	1.0469	1000.83
2.031	7.83	3.357	.245	9.50	31948.	.25	78791.	105972.	1.0447	1004.30
2.065	7.05	3.250	.233	9.30	31948.	.21	74390.	101827.	1.0428	1007.29
2.098	6.39	3.151	.222	9.12	31948.	.18	70396.	98067.	1.0410	1009.89
2.131	5.82	3.059	.212	8.97	31948.	.16	66718.	94605.	1.0394	1012.17
2.164	5.32	2.970	.203	8.83	31948.	.14	63279.	91369.	1.0379	1014.17
2.198	4.87	2.894	.195	8.63	31948.	.12	60392.	88652.	1.0367	1015.94
2.231	4.45	2.842	.190	8.26	31948.	.10	58391.	86770.	1.0359	1017.52
2.264	4.07	2.789	.184	7.93	31948.	.09	56369.	84868.	1.0350	1018.93
2.298	3.73	2.735	.179	7.62	31948.	.08	54333.	82953.	1.0341	1020.20
2.331	3.41	2.679	.173	7.34	31948.	.07	52291.	81033.	1.0333	1021.32
2.364	3.12	2.623	.168	7.08	31948.	.06	50249.	79113.	1.0324	1022.32
2.398	2.85	2.566	.163	6.85	31948.	.05	48215.	77201.	1.0316	1023.22
2.431	2.61	2.508	.157	6.63	31948.	.05	46195.	75302.	1.0307	1024.01
2.464	2.39	2.450	.152	6.43	31948.	.04	44196.	73423.	1.0299	1024.72
2.498	2.19	2.391	.146	6.25	31948.	.04	42223.	71570.	1.0291	1025.35
2.531	2.00	2.333	.141	6.09	31948.	.03	40284.	69747.	1.0283	1025.91
2.564	1.83	2.274	.136	5.94	31948.	.03	38382.	67961.	1.0275	1026.41
2.597	1.68	2.215	.130	5.80	31948.	.02	36523.	66214.	1.0268	1026.86
2.631	1.53	2.157	.125	5.67	31948.	.02	34710.	64512.	1.0260	1027.25
2.664	1.40	2.099	.120	5.56	31948.	.02	32949.	62858.	1.0253	1027.60
2.697	1.28	2.041	.115	5.45	31948.	.02	31241.	61254.	1.0246	1027.92
2.731	1.17	1.984	.111	5.35	31948.	.01	29589.	59703.	1.0240	1028.19
2.764	1.07	1.928	.106	5.26	31948.	.01	27995.	58207.	1.0233	1028.44
2.797	.98	1.875	.102	5.16	31948.	.01	26534.	56834.	1.0227	1028.66
2.831	.90	1.833	.098	4.99	31948.	.01	25424.	55792.	1.0223	1028.86
2.864	.82	1.793	.095	4.83	31948.	.01	24359.	54793.	1.0219	1029.04

2.897	.75	1.754	.092	4.67	31948.	.01	23338.	53835.	1.0215	1029.20
2.930	.69	1.715	.089	4.52	31948.	.01	22358.	52915.	1.0211	1029.35
2.964	.63	1.678	.086	4.37	31948.	.01	21419.	52034.	1.0207	1029.48
2.997	.58	1.641	.083	4.23	31948.	.00	20518.	51189.	1.0204	1029.59
3.030	.53	1.605	.080	4.09	31948.	.00	19655.	50379.	1.0200	1029.70
3.064	.48	1.569	.078	3.96	31948.	.00	18827.	49602.	1.0197	1029.79
3.097	.44	1.535	.075	3.83	31948.	.00	18034.	48857.	1.0194	1029.88
3.130	.40	1.501	.073	3.70	31948.	.00	17273.	48144.	1.0191	1029.95
3.164	.37	1.468	.070	3.58	31948.	.00	16544.	47460.	1.0188	1030.02
3.197	.34	1.436	.068	3.46	31948.	.00	15845.	46804.	1.0185	1030.08
3.230	.31	1.404	.066	3.35	31948.	.00	15175.	46176.	1.0183	1030.14
3.263	.28	1.374	.064	3.24	31948.	.00	14533.	45573.	1.0180	1030.19
3.297	.26	1.343	.062	3.13	31948.	.00	13918.	44996.	1.0178	1030.24
3.330	.24	1.314	.060	3.03	31948.	.00	13328.	44444.	1.0176	1030.28
3.363	.22	1.285	.058	2.93	31948.	.00	12763.	43914.	1.0173	1030.31
3.397	.20	1.257	.056	2.83	31948.	.00	12222.	43406.	1.0171	1030.35
3.430	.18	1.229	.054	2.74	31948.	.00	11704.	42920.	1.0169	1030.38
3.463	.17	1.202	.052	2.65	31948.	.00	11207.	42454.	1.0167	1030.41
3.497	.15	1.176	.050	2.57	31948.	.00	10731.	42008.	1.0165	1030.43
3.530	.14	1.150	.049	2.48	31948.	.00	10275.	41580.	1.0164	1030.45
3.563	.13	1.125	.047	2.40	31948.	.00	9838.	41171.	1.0162	1030.47
3.596	.12	1.100	.046	2.32	31948.	.00	9420.	40778.	1.0160	1030.49
3.630	.11	1.076	.044	2.24	31948.	.00	9019.	40403.	1.0159	1030.51
3.663	.10	1.052	.043	2.17	31948.	.00	8636.	40043.	1.0157	1030.52
3.696	.09	1.029	.041	2.10	31948.	.00	8268.	39698.	1.0156	1030.54

TIME (HRS)	WATER FLOW (CFS)	VELOCITY (FT/SEC)	HYD. DEPTH (FT)	WIDTH (FT)	WASHLOAD CONC. (PPM-W)	BED MAT. TRANSPORT (CFS)	BED CONC. (PPM-W)	TOTAL CONC. (PPM-W)	BULKING FACTOR	ACCU. SEDIMENT (TONS)
3.730	.08	1.006	.040	2.03	31948.	.00	7916.	39368.	1.0155	1030.55
3.763	.07	.984	.039	1.96	31948.	.00	7579.	39052.	1.0153	1030.56
3.796	.07	.963	.037	1.90	31948.	.00	7256.	38749.	1.0152	1030.57
3.830	.06	.942	.036	1.84	31948.	.00	6946.	38459.	1.0151	1030.58
3.863	.06	.921	.035	1.78	31948.	.00	6650.	38181.	1.0150	1030.59
3.896	.05	.901	.034	1.72	31948.	.00	6367.	37915.	1.0149	1030.60
3.929	.05	.881	.033	1.66	31948.	.00	6095.	37661.	1.0148	1030.60
3.963	.04	.861	.032	1.61	31948.	.00	5835.	37417.	1.0147	1030.61
3.996	.04	.843	.031	1.56	31948.	.00	5586.	37183.	1.0146	1030.62
4.029	.04	.824	.030	1.51	31948.	.00	5347.	36960.	1.0145	1030.62
4.063	.03	.806	.029	1.46	31948.	.00	5119.	36746.	1.0144	1030.63
4.096	.03	.788	.028	1.41	31948.	.00	4900.	36541.	1.0143	1030.63
4.129	.03	.771	.027	1.36	31948.	.00	4691.	36345.	1.0142	1030.64
4.163	.03	.754	.026	1.32	31948.	.00	4490.	36157.	1.0142	1030.64
4.196	.02	.737	.025	1.27	31948.	.00	4298.	35977.	1.0141	1030.64
4.229	.02	.721	.024	1.23	31948.	.00	4115.	35805.	1.0140	1030.65
4.262	.02	.705	.023	1.19	31948.	.00	3939.	35640.	1.0139	1030.65
4.296	.02	.690	.023	1.15	31948.	.00	3770.	35482.	1.0139	1030.65
4.329	.02	.675	.022	1.12	31948.	.00	3609.	35331.	1.0138	1030.65
4.362	.02	.660	.021	1.08	31948.	.00	3455.	35186.	1.0138	1030.65
4.396	.01	.645	.021	1.04	31948.	.00	3307.	35047.	1.0137	1030.66
4.429	.01	.631	.020	1.01	31948.	.00	3165.	34915.	1.0137	1030.66
4.462	.01	.617	.019	.98	31948.	.00	3030.	34788.	1.0136	1030.66
4.496	.01	.604	.019	.94	31948.	.00	2900.	34666.	1.0136	1030.66
4.529	.01	.591	.018	.91	31948.	.00	2776.	34550.	1.0135	1030.66
4.562	.01	.578	.017	.88	31948.	.00	2657.	34438.	1.0135	1030.66
4.595	.01	.552	.016	.83	31948.	.00	2434.	34229.	1.0134	1030.66
4.629	.01	.515	.015	.74	31948.	.00	2123.	33938.	1.0133	1030.67
4.662	.00	.463	.012	.63	31948.	.00	1716.	33556.	1.0131	1030.67
4.695	.00	.394	.010	.50	31948.	.00	1249.	33118.	1.0129	1030.67

4.729 .00 .361 .009 .44 31948. .00 1054. 32935. 1.0129 1030.67

AT PEAK FLOW OF 95.228 WITH TIME AT 1.53 HOURS: BEDMAT = 437.70 (TONS) = .2010 (AC-FT bulked)
TOTAL SED = 484.31 (TONS) = .2224 (AC-FT bulked)
PEAK BULKING FACTOR = 1.144387 = 276738. (PPM-W)

	WEIGHT (TONS)	UNBULKED VOLUME (AC-FT)	BULKED VOLUME (AC-FT)	CONCENTRATION BY WEIGHT (PPM)	AVERAGE BULKING FACTOR
WASHMAT =	118.29	.0328	.0543	31948.	
BEDMAT =	912.37	.2533	.4189	202893.	
TOTAL SEDIMENT =	1030.67	.2862	.4732	223325.	1.108505

SEDIMENT TRANSPORT CAPACITY: 7.06294 AC-FT/SQ MI (bulked) = 24.0361 TONS/ACRE (at Porosity=0.395)

PRINT HYD ID=11 CODE=1

PARTIAL HYDROGRAPH 133.51

RUNOFF VOLUME = .73808 INCHES = 2.6374 ACRE-FEET
PEAK DISCHARGE RATE = 95.23 CFS AT 1.532 HOURS BASIN AREA = .0670 SQ. MI.

ADD HYD ID=10 HYD NO=133.50 ID I=10 ID II=11
PRINT HYD ID=10 CODE=1

PARTIAL HYDROGRAPH 133.50

RUNOFF VOLUME = .72622 INCHES = 2.9552 ACRE-FEET
PEAK DISCHARGE RATE = 106.77 CFS AT 1.532 HOURS BASIN AREA = .0763 SQ. MI.

COMPUTE NM HYD ID=11 HYD NO=133.52 DA=0.0485 SQ MI
PER A=5.00 PER B=65.00 PER C=30.00 PER D=0.00
TP=-0.1333 HR MASS RAIN=-1

K = .125089HR TP = .133300HR K/TP RATIO = .938402 SHAPE CONSTANT, N = 3.768397
UNIT PEAK = 123.50 CFS UNIT VOLUME = 1.000 B = 339.42 P60 = 1.8700
AREA = .048500 SQ MI IA = .46250 INCHES INF = 1.14500 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=11 CODE=1

PARTIAL HYDROGRAPH 133.52

RUNOFF VOLUME = .73808 INCHES = 1.9092 ACRE-FEET
PEAK DISCHARGE RATE = 68.88 CFS AT 1.532 HOURS BASIN AREA = .0485 SQ. MI.

SED WASH LOAD ID=11 K=0.14 C=0.25
P=1.0 LS=0.375

IMPERVIOUS=0.0 FACTOR=3.0
SEDIMENT YIELD (Wash Mat.) = 57.5 (TONS) WASH LOAD CONCENTRATION = 21674 (PPM-W)
PERCENTAGE IMPERVIOUS AREA = .000 WASH LOAD FACTOR = 3.00000

PRINT HYD ID=11 CODE=1

PARTIAL HYDROGRAPH 133.52

RUNOFF VOLUME = .73808 INCHES = 1.9092 ACRE-FEET
PEAK DISCHARGE RATE = 68.88 CFS AT 1.532 HOURS BASIN AREA = .0485 SQ. MI.

SEDIMENT TRANS

ID=11 IDS=5 CODE=1
A=0.0002 B=4.19 C=0.19 D=-2.55
NUMB WASH=-1 NUMB SECTIONS=9

FLOW (CFS)	VELOCITY (FPS)	WIDTH (FT)
5.00	3.05	9.07
10.00	3.73	10.90
25.00	4.84	14.34
40.00	5.50	16.71
55.00	5.99	18.61
65.00	6.26	19.71
70.00	6.38	20.22
75.00	6.50	20.71
85.00	6.70	21.65

Use wash load from SED WASH LOAD command - Concentration = 21674 (PPM-W)

* * * * *

TIME (HRS)	WATER FLOW (CFS)	VELOCITY (FT/SEC)	HYD. DEPTH (FT)	WIDTH (FT)	WASHLOAD CONC. (PPM-W)	BED MAT. TRANSPORT (CFS)	BED CONC. (PPM-W)	TOTAL CONC. (PPM-W)	BULKING FACTOR	ACCU. SEDIMENT (TONS)
.000	.00	.000	.000	.00	21674.	.00	0.	21674.	1.0000	.00
.033	.00	.000	.000	.00	21674.	.00	0.	21674.	1.0000	.00
.067	.00	.000	.000	.00	21674.	.00	0.	21674.	1.0000	.00
.100	.00	.000	.000	.00	21674.	.00	0.	21674.	1.0000	.00
.133	.00	.000	.000	.00	21674.	.00	0.	21674.	1.0000	.00
.167	.00	.000	.000	.00	21674.	.00	0.	21674.	1.0000	.00
.200	.00	.000	.000	.00	21674.	.00	0.	21674.	1.0000	.00
.233	.00	.000	.000	.00	21674.	.00	0.	21674.	1.0000	.00
.266	.00	.000	.000	.00	21674.	.00	0.	21674.	1.0000	.00
.300	.00	.000	.000	.00	21674.	.00	0.	21674.	1.0000	.00
.333	.00	.000	.000	.00	21674.	.00	0.	21674.	1.0000	.00
.366	.00	.000	.000	.00	21674.	.00	0.	21674.	1.0000	.00
.400	.00	.000	.000	.00	21674.	.00	0.	21674.	1.0000	.00
.433	.00	.000	.000	.00	21674.	.00	0.	21674.	1.0000	.00
.466	.00	.000	.000	.00	21674.	.00	0.	21674.	1.0000	.00
.500	.00	.000	.000	.00	21674.	.00	0.	21674.	1.0000	.00
.533	.00	.000	.000	.00	21674.	.00	0.	21674.	1.0000	.00
.566	.00	.000	.000	.00	21674.	.00	0.	21674.	1.0000	.00
.599	.00	.000	.000	.00	21674.	.00	0.	21674.	1.0000	.00
.633	.00	.000	.000	.00	21674.	.00	0.	21674.	1.0000	.00
.666	.00	.000	.000	.00	21674.	.00	0.	21674.	1.0000	.00
.699	.00	.000	.000	.00	21674.	.00	0.	21674.	1.0000	.00
.733	.00	.000	.000	.00	21674.	.00	0.	21674.	1.0000	.00
.766	.00	.000	.000	.00	21674.	.00	0.	21674.	1.0000	.00

.799	.00	.000	.000	.00	21674.	.00	0.	21674.	1.0000	.00
.833	.00	.000	.000	.00	21674.	.00	0.	21674.	1.0000	.00
.866	.00	.000	.000	.00	21674.	.00	0.	21674.	1.0000	.00
.899	.00	.000	.000	.00	21674.	.00	0.	21674.	1.0000	.00
.932	.00	.000	.000	.00	21674.	.00	0.	21674.	1.0000	.00
.966	.00	.000	.000	.00	21674.	.00	0.	21674.	1.0000	.00
.999	.00	.000	.000	.00	21674.	.00	0.	21674.	1.0000	.00
1.032	.00	.000	.000	.00	21674.	.00	0.	21674.	1.0000	.00
1.066	.00	.000	.000	.00	21674.	.00	0.	21674.	1.0000	.00
1.099	.00	.000	.000	.00	21674.	.00	0.	21674.	1.0000	.00
1.132	.00	.000	.000	.00	21674.	.00	0.	21674.	1.0000	.00
1.166	.00	.000	.000	.00	21674.	.00	0.	21674.	1.0000	.00
1.199	.00	.000	.000	.00	21674.	.00	0.	21674.	1.0000	.00
1.232	.00	.000	.000	.00	21674.	.00	0.	21674.	1.0000	.00
1.265	.00	.000	.000	.00	21674.	.00	0.	21674.	1.0000	.00
1.299	.00	.000	.000	.00	21674.	.00	0.	21674.	1.0000	.00
1.332	1.75	2.371	.124	5.96	21674.	.03	45612.	65373.	1.0264	.46
1.365	8.92	3.618	.235	10.51	21674.	.37	98781.	116422.	1.0497	4.86
1.399	23.02	4.742	.350	13.89	21674.	1.63	158403.	173807.	1.0794	22.97
1.432	42.14	5.581	.445	16.98	21674.	4.14	206586.	220292.	1.1066	67.50
1.465	59.71	6.123	.510	19.13	21674.	7.06	238593.	251224.	1.1266	142.43
1.499	68.78	6.352	.539	20.10	21674.	8.74	251889.	264086.	1.1354	234.75
1.532	68.88	6.354	.539	20.11	21674.	8.76	252024.	264217.	1.1355	327.26
1.565	63.09	6.212	.521	19.50	21674.	7.68	243820.	256279.	1.1300	408.57
1.598	54.77	5.984	.493	18.58	21674.	6.19	230359.	243262.	1.1213	474.42
1.632	46.26	5.725	.462	17.50	21674.	4.78	215079.	228495.	1.1118	525.67
1.665	38.64	5.452	.430	16.50	21674.	3.62	199070.	213034.	1.1022	564.79
1.698	31.99	5.188	.399	15.44	21674.	2.72	183792.	198289.	1.0933	594.39
1.732	26.21	4.907	.368	14.53	21674.	1.99	167700.	182769.	1.0844	616.31
1.765	21.20	4.644	.339	13.47	21674.	1.44	152875.	168480.	1.0765	632.37
1.798	17.02	4.377	.311	12.51	21674.	1.03	138195.	154341.	1.0689	643.99
1.832	13.73	4.115	.284	11.76	21674.	.73	124065.	140740.	1.0618	652.41

TIME (HRS)	WATER FLOW (CFS)	VELOCITY (FT/SEC)	HYD. DEPTH (FT)	WIDTH (FT)	WASHLOAD CONC. (PPM-W)	BED MAT. TRANSPORT (CFS)	BED CONC. (PPM-W)	TOTAL CONC. (PPM-W)	BULKING FACTOR	ACCUM. SEDIMENT (TONS)
1.865	11.30	3.877	.260	11.20	21674.	.54	111699.	128843.	1.0558	658.66
1.898	9.58	3.688	.242	10.75	21674.	.41	102155.	119666.	1.0513	663.53
1.931	8.24	3.539	.227	10.26	21674.	.33	95019.	112807.	1.0480	667.45
1.965	7.19	3.404	.214	9.87	21674.	.26	88703.	106737.	1.0451	670.66
1.998	6.35	3.283	.202	9.56	21674.	.22	83127.	101380.	1.0426	673.34
2.031	5.67	3.172	.192	9.32	21674.	.18	78178.	96627.	1.0404	675.61
2.065	5.11	3.071	.183	9.11	21674.	.15	73745.	92370.	1.0384	677.55
2.098	4.63	3.005	.177	8.72	21674.	.13	70904.	89642.	1.0372	679.26
2.131	4.22	2.949	.172	8.32	21674.	.12	68496.	87331.	1.0361	680.77
2.164	3.86	2.894	.167	7.98	21674.	.10	66136.	85065.	1.0351	682.11
2.198	3.53	2.838	.162	7.66	21674.	.09	63793.	82817.	1.0341	683.30
2.231	3.23	2.781	.157	7.38	21674.	.08	61445.	80563.	1.0331	684.36
2.264	2.95	2.723	.152	7.11	21674.	.07	59094.	78307.	1.0321	685.30
2.298	2.70	2.664	.148	6.87	21674.	.06	56747.	76055.	1.0311	686.13
2.331	2.47	2.605	.143	6.65	21674.	.05	54414.	73816.	1.0301	686.87
2.364	2.26	2.545	.138	6.45	21674.	.05	52100.	71596.	1.0291	687.52
2.398	2.07	2.485	.133	6.27	21674.	.04	49814.	69404.	1.0281	688.10
2.431	1.90	2.425	.128	6.10	21674.	.04	47562.	67244.	1.0272	688.61
2.464	1.73	2.364	.123	5.95	21674.	.03	45351.	65123.	1.0263	689.06
2.498	1.59	2.304	.119	5.81	21674.	.03	43187.	63047.	1.0254	689.46
2.531	1.45	2.243	.114	5.68	21674.	.02	41073.	61021.	1.0245	689.81
2.564	1.33	2.183	.109	5.56	21674.	.02	39016.	59049.	1.0237	690.12
2.597	1.22	2.124	.105	5.45	21674.	.02	37019.	57134.	1.0229	690.40

2.631	1.11	2.065	.101	5.35	21674.	.02	35085.	55280.	1.0221	690.64
2.664	1.02	2.006	.096	5.26	21674.	.01	33217.	53490.	1.0213	690.86
2.697	.93	1.960	.093	5.11	21674.	.01	31754.	52087.	1.0207	691.05
2.731	.85	1.917	.090	4.94	21674.	.01	30434.	50822.	1.0202	691.22
2.764	.78	1.875	.087	4.78	21674.	.01	29168.	49609.	1.0197	691.37
2.797	.71	1.834	.084	4.62	21674.	.01	27952.	48444.	1.0192	691.51
2.831	.65	1.793	.081	4.47	21674.	.01	26786.	47326.	1.0187	691.63
2.864	.60	1.754	.079	4.33	21674.	.01	25667.	46254.	1.0183	691.74
2.897	.55	1.715	.076	4.18	21674.	.01	24594.	45226.	1.0179	691.84
2.930	.50	1.678	.074	4.05	21674.	.00	23565.	44240.	1.0175	691.92
2.964	.46	1.641	.071	3.91	21674.	.00	22577.	43294.	1.0171	692.00
2.997	.42	1.605	.069	3.79	21674.	.00	21630.	42387.	1.0167	692.07
3.030	.38	1.570	.067	3.66	21674.	.00	20722.	41517.	1.0163	692.13
3.064	.35	1.535	.065	3.54	21674.	.00	19852.	40683.	1.0160	692.19
3.097	.32	1.502	.062	3.43	21674.	.00	19017.	39883.	1.0157	692.24
3.130	.29	1.469	.060	3.31	21674.	.00	18216.	39116.	1.0154	692.28
3.164	.27	1.436	.058	3.21	21674.	.00	17449.	38381.	1.0151	692.32
3.197	.25	1.405	.057	3.10	21674.	.00	16714.	37677.	1.0148	692.36
3.230	.23	1.374	.055	3.00	21674.	.00	16009.	37002.	1.0145	692.39
3.263	.21	1.344	.053	2.90	21674.	.00	15333.	36354.	1.0142	692.42
3.297	.19	1.315	.051	2.81	21674.	.00	14685.	35734.	1.0140	692.45
3.330	.17	1.286	.049	2.71	21674.	.00	14065.	35140.	1.0137	692.47
3.363	.16	1.257	.048	2.63	21674.	.00	13470.	34570.	1.0135	692.49
3.397	.14	1.230	.046	2.54	21674.	.00	12900.	34024.	1.0133	692.51
3.430	.13	1.203	.045	2.46	21674.	.00	12354.	33501.	1.0131	692.53
3.463	.12	1.177	.043	2.38	21674.	.00	11830.	33000.	1.0129	692.54
3.497	.11	1.151	.042	2.30	21674.	.00	11329.	32520.	1.0127	692.56
3.530	.10	1.125	.041	2.22	21674.	.00	10849.	32060.	1.0125	692.57
3.563	.09	1.101	.039	2.15	21674.	.00	10388.	31619.	1.0123	692.58
3.596	.08	1.077	.038	2.08	21674.	.00	9947.	31197.	1.0122	692.59
3.630	.08	1.053	.037	2.01	21674.	.00	9525.	30793.	1.0120	692.60
3.663	.07	1.030	.035	1.95	21674.	.00	9121.	30405.	1.0118	692.61
3.696	.07	1.007	.034	1.88	21674.	.00	8733.	30034.	1.0117	692.62

TIME (HRS)	WATER FLOW (CFS)	VELOCITY (FT/SEC)	HYD. DEPTH (FT)	WIDTH (FT)	WASHLOAD CONC. (PPM-W)	BED MAT. TRANSPORT CONC. (CFS)	BED CONC. (PPM-W)	TOTAL CONC. (PPM-W)	BULKING FACTOR	ACCU. SEDIMENT (TONS)
3.730	.06	.985	.033	1.82	21674.	.00	8362.	29679.	1.0115	692.62
3.763	.05	.964	.032	1.76	21674.	.00	8006.	29338.	1.0114	692.63
3.796	.05	.942	.031	1.70	21674.	.00	7666.	29012.	1.0113	692.63
3.830	.05	.922	.030	1.65	21674.	.00	7339.	28700.	1.0112	692.64
3.863	.04	.902	.029	1.59	21674.	.00	7027.	28401.	1.0110	692.64
3.896	.04	.882	.028	1.54	21674.	.00	6728.	28114.	1.0109	692.65
3.929	.03	.862	.027	1.49	21674.	.00	6441.	27840.	1.0108	692.65
3.963	.03	.843	.026	1.44	21674.	.00	6167.	27577.	1.0107	692.66
3.996	.03	.825	.025	1.40	21674.	.00	5904.	27326.	1.0106	692.66
4.029	.03	.807	.025	1.35	21674.	.00	5652.	27085.	1.0105	692.66
4.063	.02	.789	.024	1.31	21674.	.00	5411.	26854.	1.0104	692.66
4.096	.02	.772	.023	1.26	21674.	.00	5181.	26633.	1.0103	692.67
4.129	.02	.755	.022	1.22	21674.	.00	4960.	26421.	1.0102	692.67
4.163	.02	.738	.022	1.18	21674.	.00	4748.	26219.	1.0102	692.67
4.196	.02	.722	.021	1.14	21674.	.00	4545.	26025.	1.0101	692.67
4.229	.02	.706	.020	1.11	21674.	.00	4351.	25839.	1.0100	692.67
4.262	.01	.691	.019	1.07	21674.	.00	4166.	25661.	1.0099	692.67
4.296	.01	.676	.019	1.03	21674.	.00	3988.	25491.	1.0099	692.68
4.329	.01	.661	.018	1.00	21674.	.00	3817.	25328.	1.0098	692.68
4.362	.01	.646	.018	.97	21674.	.00	3654.	25172.	1.0097	692.68
4.396	.01	.632	.017	.94	21674.	.00	3498.	25023.	1.0097	692.68
4.429	.01	.618	.016	.91	21674.	.00	3349.	24879.	1.0096	692.68

4.462	.01	.591	.015	.85	21674.	.00	3068.	24610.	1.0095	692.68
4.496	.01	.552	.014	.76	21674.	.00	2676.	24235.	1.0094	692.68
4.529	.00	.495	.012	.65	21674.	.00	2163.	23744.	1.0092	692.68
4.562	.00	.422	.009	.51	21674.	.00	1574.	23181.	1.0090	692.68
4.595	.00	.387	.008	.45	21674.	.00	1329.	22946.	1.0089	692.68
4.629	.00	.355	.007	.39	21674.	.00	1120.	22746.	1.0088	692.68

AT PEAK FLOW OF 68.881 WITH TIME AT 1.53 HOURS: BEDMAT = 304.62 (TONS) = .1399 (AC-FT bulked)
 PEAK BULKING FACTOR = 1.135508 = 264217. (PPM-W) TOTAL SED = 327.26 (TONS) = .1503 (AC-FT bulked)

	UNBULKED WEIGHT (TONS)	BULKED VOLUME (AC-FT)	CONCENTRATION BY WEIGHT (PPM)	AVERAGE BULKING FACTOR
WASHMAT =	57.48	.0160	.0264	21674.
BEDMAT =	635.20	.1764	.2916	196662.
TOTAL SEDIMENT =	692.68	.1923	.3180	210709.
				1.100740

SEDIMENT TRANSPORT CAPACITY: 6.55744 AC-FT/SQ MI (bulked) = 22.3158 TONS/ACRE (at Porosity=0.395)

PRINT HYD ID=11 CODE=1

PARTIAL HYDROGRAPH 133.52

RUNOFF VOLUME = .73808 INCHES = 1.9092 ACRE-FEET
 PEAK DISCHARGE RATE = 68.88 CFS AT 1.532 HOURS BASIN AREA = .0485 SQ. MI.

* S UNDEVELOPED, OFF-SITE FLOW ENTERING POND

ADD HYD ID=11 HYD NO=133.50 ID I=10 ID II=11

PRINT HYD ID=11 CODE=1

PARTIAL HYDROGRAPH 133.50

RUNOFF VOLUME = .73083 INCHES = 4.8644 ACRE-FEET
 PEAK DISCHARGE RATE = 175.65 CFS AT 1.532 HOURS BASIN AREA = .1248 SQ. MI.

* *****

* S FLOW ENTERING STREET AT NW CORNER OF SITE

COMPUTE NM HYD ID=13 HYD NO=133.53 DA=0.0025 SQ MI

PER A=0.00 PER B=100.00 PER C=0.00 PER D=0.00

TP=-0.1333 HR MASS RAIN=-1

K = .13092HR TP = .133300HR K/TP RATIO = .98265 SHAPE CONSTANT, N = 3.593450
 UNIT PEAK = 6.1344 CFS UNIT VOLUME = .9981 B = 327.09 P60 = 1.8700
 AREA = .002500 SQ MI IA = .50000 INCHES INF = 1.25000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=13 CODE=1

PARTIAL HYDROGRAPH 133.53

RUNOFF VOLUME = .66738 INCHES = .0890 ACRE-FEET
PEAK DISCHARGE RATE = 3.26 CFS AT 1.532 HOURS BASIN AREA = .0025 SQ. MI.

SED WASH LOAD ID=13 K=0.17 C=0.25

P=1.0 LS=0.824

IMPERVIOUS=0.0 FACTOR=3.0

SEDIMENT YIELD (Wash Mat.) = 5.0 (TONS) WASH LOAD CONCENTRATION = 39613 (ppm-w)
PERCENTAGE IMPERVIOUS AREA = .000 WASH LOAD FACTOR = 3.00000

PRINT HYD ID=13 CODE=1

PARTIAL HYDROGRAPH 133.53

RUNOFF VOLUME = .66738 INCHES = .0890 ACRE-FEET
PEAK DISCHARGE RATE = 3.26 CFS AT 1.532 HOURS BASIN AREA = .0025 SQ. MI.

* *****

COMPUTE NM HYD

ID=14 HYD NO=133.54 DA=0.0173 SQ MI

PER A=15.00 PER B=70.00 PER C=15.00 PER D=0.00

TP=-0.1333 HR MASS RAIN=-1

K = .132127HR TP = .133300HR K/TP RATIO = .991200 SHAPE CONSTANT, N = 3.562051
UNIT PEAK = 42.157 CFS UNIT VOLUME = 1.000 B = 324.83 P60 = 1.8700
AREA = .017300 SQ MI IA = .50000 INCHES INF = 1.25000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .0333300

PRINT HYD ID=14 CODE=1

PARTIAL HYDROGRAPH 133.54

RUNOFF VOLUME = .66738 INCHES = .6158 ACRE-FEET
PEAK DISCHARGE RATE = 22.38 CFS AT 1.532 HOURS BASIN AREA = .0173 SQ. MI.

SED WASH LOAD ID=14 K=0.09 C=0.25

P=1.0 LS=0.251

IMPERVIOUS=0.0 FACTOR=3.0

SEDIMENT YIELD (Wash Mat.) = 7.0 (TONS) WASH LOAD CONCENTRATION = 8286 (ppm-w)
PERCENTAGE IMPERVIOUS AREA = .000 WASH LOAD FACTOR = 3.00000

PRINT HYD ID=14 CODE=1

PARTIAL HYDROGRAPH 133.54

RUNOFF VOLUME = .66738 INCHES = .6158 ACRE-FEET
PEAK DISCHARGE RATE = 22.38 CFS AT 1.532 HOURS BASIN AREA = .0173 SQ. MI.

SEDIMENT TRANS

ID=14 IDS=6 CODE=1

A=0.0002 B=4.19 C=0.19 D=-2.55

NUMB WASH=-1 NUMB SECTIONS=9

FLOW	VELOCITY	WIDTH
(CFS)	(FPS)	(FT)
2.00	1.63	12.78
5.00	2.06	17.99
10.00	2.41	24.53
14.00	2.58	28.75
17.00	2.70	31.28
20.00	2.79	33.67
23.00	2.88	35.74
27.00	2.99	38.25
30.00	3.06	39.98

Use wash load from SED WASH LOAD command - Concentration = 8286 (PPM-W)

* * * * *

TIME (HRS)	WATER FLOW (CFS)	VELOCITY (FT/SEC)	HYD. DEPTH (FT)	WIDTH (FT)	WASHLOAD CONC. (PPM-W)	BED MAT. TRANSPORT (CFS)	BED CONC. (PPM-W)	TOTAL CONC. (PPM-W)	BULKING FACTOR	ACCU. SEDIMENT (TONS)
.000	.00	.000	.000	.00	8286.	.00	0.	8286.	1.0000	.00
.033	.00	.000	.000	.00	8286.	.00	0.	8286.	1.0000	.00
.067	.00	.000	.000	.00	8286.	.00	0.	8286.	1.0000	.00
.100	.00	.000	.000	.00	8286.	.00	0.	8286.	1.0000	.00
.133	.00	.000	.000	.00	8286.	.00	0.	8286.	1.0000	.00
.167	.00	.000	.000	.00	8286.	.00	0.	8286.	1.0000	.00
.200	.00	.000	.000	.00	8286.	.00	0.	8286.	1.0000	.00
.233	.00	.000	.000	.00	8286.	.00	0.	8286.	1.0000	.00
.266	.00	.000	.000	.00	8286.	.00	0.	8286.	1.0000	.00
.300	.00	.000	.000	.00	8286.	.00	0.	8286.	1.0000	.00
.333	.00	.000	.000	.00	8286.	.00	0.	8286.	1.0000	.00
.366	.00	.000	.000	.00	8286.	.00	0.	8286.	1.0000	.00
.400	.00	.000	.000	.00	8286.	.00	0.	8286.	1.0000	.00
.433	.00	.000	.000	.00	8286.	.00	0.	8286.	1.0000	.00
.466	.00	.000	.000	.00	8286.	.00	0.	8286.	1.0000	.00
.500	.00	.000	.000	.00	8286.	.00	0.	8286.	1.0000	.00
.533	.00	.000	.000	.00	8286.	.00	0.	8286.	1.0000	.00
.566	.00	.000	.000	.00	8286.	.00	0.	8286.	1.0000	.00
.599	.00	.000	.000	.00	8286.	.00	0.	8286.	1.0000	.00
.633	.00	.000	.000	.00	8286.	.00	0.	8286.	1.0000	.00
.666	.00	.000	.000	.00	8286.	.00	0.	8286.	1.0000	.00
.699	.00	.000	.000	.00	8286.	.00	0.	8286.	1.0000	.00
.733	.00	.000	.000	.00	8286.	.00	0.	8286.	1.0000	.00
.766	.00	.000	.000	.00	8286.	.00	0.	8286.	1.0000	.00
.799	.00	.000	.000	.00	8286.	.00	0.	8286.	1.0000	.00
.833	.00	.000	.000	.00	8286.	.00	0.	8286.	1.0000	.00
.866	.00	.000	.000	.00	8286.	.00	0.	8286.	1.0000	.00
.899	.00	.000	.000	.00	8286.	.00	0.	8286.	1.0000	.00
.932	.00	.000	.000	.00	8286.	.00	0.	8286.	1.0000	.00
.966	.00	.000	.000	.00	8286.	.00	0.	8286.	1.0000	.00
.999	.00	.000	.000	.00	8286.	.00	0.	8286.	1.0000	.00
1.032	.00	.000	.000	.00	8286.	.00	0.	8286.	1.0000	.00
1.066	.00	.000	.000	.00	8286.	.00	0.	8286.	1.0000	.00
1.099	.00	.000	.000	.00	8286.	.00	0.	8286.	1.0000	.00
1.132	.00	.000	.000	.00	8286.	.00	0.	8286.	1.0000	.00
1.166	.00	.000	.000	.00	8286.	.00	0.	8286.	1.0000	.00
1.199	.00	.000	.000	.00	8286.	.00	0.	8286.	1.0000	.00
1.232	.00	.000	.000	.00	8286.	.00	0.	8286.	1.0000	.00
1.265	.00	.000	.000	.00	8286.	.00	0.	8286.	1.0000	.00
1.299	.00	.000	.000	.00	8286.	.00	0.	8286.	1.0000	.00

1.332	.44	1.117	.054	7.25	8286.	.00	8072.	16226.	1.0062	.03
1.365	2.49	1.736	.105	13.63	8286.	.02	19124.	27097.	1.0105	.29
1.399	6.96	2.234	.152	20.56	8286.	.09	31393.	39169.	1.0154	1.35
1.432	13.29	2.555	.186	28.00	8286.	.21	40466.	48098.	1.0191	3.86
1.465	19.12	2.765	.210	32.97	8286.	.36	46919.	54449.	1.0217	7.98
1.499	22.19	2.857	.221	35.18	8286.	.44	49792.	57276.	1.0229	13.02
1.532	22.38	2.863	.221	35.31	8286.	.44	49967.	57449.	1.0230	18.12
1.565	20.62	2.810	.215	34.10	8286.	.39	48268.	55777.	1.0223	22.68
1.598	17.97	2.731	.205	32.05	8286.	.33	45917.	53462.	1.0213	26.47
1.632	15.18	2.631	.194	29.75	8286.	.26	42792.	50387.	1.0200	29.49
1.665	12.64	2.530	.183	27.31	8286.	.20	39754.	47397.	1.0188	31.84
1.698	10.39	2.430	.171	24.94	8286.	.15	36946.	44633.	1.0176	33.65
1.732	8.41	2.328	.161	22.45	8286.	.11	34027.	41761.	1.0164	35.02
1.765	6.71	2.215	.150	20.23	8286.	.08	30871.	38656.	1.0152	36.03
1.798	5.31	2.092	.138	18.39	8286.	.06	27592.	35429.	1.0139	36.76
1.832	4.23	1.985	.128	16.64	8286.	.04	24902.	32783.	1.0128	37.30
WATER										
TIME (HRS)	FLOW (CFS)	VELOCITY (FT/SEC)	HYD. DEPTH (FT)	WIDTH (FT)	WASHLOAD CONC. (PPM-W)	BED MAT. TRANSPORT (CFS)	BED CONC. (PPM-W)	TOTAL CONC. (PPM-W)	BULKING FACTOR	ACCU. SEDIMENT (TONS)
1.865	3.45	1.892	.119	15.30	8286.	.03	22652.	30568.	1.0119	37.70
1.898	2.92	1.814	.112	14.39	8286.	.02	20846.	28791.	1.0112	38.03
1.931	2.55	1.748	.106	13.73	8286.	.02	19375.	27344.	1.0106	38.30
1.965	2.26	1.688	.101	13.22	8286.	.02	18096.	26086.	1.0101	38.52
1.998	2.02	1.635	.096	12.81	8286.	.01	16975.	24983.	1.0097	38.72
2.031	1.83	1.597	.093	12.27	8286.	.01	16228.	24248.	1.0094	38.89
2.065	1.66	1.563	.090	11.79	8286.	.01	15558.	23589.	1.0091	39.04
2.098	1.52	1.530	.087	11.37	8286.	.01	14926.	22968.	1.0089	39.17
2.131	1.39	1.498	.085	11.01	8286.	.01	14321.	22372.	1.0086	39.29
2.164	1.28	1.466	.082	10.68	8286.	.01	13732.	21793.	1.0084	39.40
2.198	1.18	1.434	.079	10.37	8286.	.01	13153.	21223.	1.0082	39.49
2.231	1.08	1.402	.077	10.10	8286.	.01	12583.	20663.	1.0080	39.58
2.264	1.00	1.370	.074	9.84	8286.	.00	12026.	20114.	1.0077	39.65
2.298	.92	1.341	.072	9.53	8286.	.00	11543.	19639.	1.0076	39.72
2.331	.84	1.313	.069	9.24	8286.	.00	11079.	19183.	1.0074	39.78
2.364	.77	1.286	.067	8.95	8286.	.00	10633.	18745.	1.0072	39.84
2.398	.71	1.259	.065	8.67	8286.	.00	10206.	18324.	1.0070	39.89
2.431	.65	1.233	.063	8.40	8286.	.00	9795.	17920.	1.0069	39.93
2.464	.60	1.207	.061	8.14	8286.	.00	9401.	17533.	1.0067	39.97
2.498	.55	1.182	.059	7.89	8286.	.00	9022.	17160.	1.0066	40.01
2.531	.51	1.158	.057	7.65	8286.	.00	8659.	16803.	1.0064	40.04
2.564	.47	1.134	.056	7.41	8286.	.00	8310.	16460.	1.0063	40.07
2.597	.43	1.110	.054	7.18	8286.	.00	7975.	16130.	1.0062	40.10
2.631	.40	1.087	.052	6.96	8286.	.00	7654.	15814.	1.0061	40.12
2.664	.36	1.064	.051	6.74	8286.	.00	7345.	15510.	1.0059	40.14
2.697	.33	1.042	.049	6.53	8286.	.00	7049.	15219.	1.0058	40.16
2.731	.31	1.021	.048	6.33	8286.	.00	6764.	14939.	1.0057	40.18
2.764	.28	.999	.046	6.13	8286.	.00	6491.	14670.	1.0056	40.20
2.797	.26	.979	.045	5.94	8286.	.00	6229.	14412.	1.0055	40.21
2.831	.24	.958	.043	5.76	8286.	.00	5977.	14165.	1.0054	40.22
2.864	.22	.938	.042	5.58	8286.	.00	5736.	13927.	1.0053	40.23
2.897	.20	.919	.041	5.41	8286.	.00	5504.	13700.	1.0052	40.24
2.930	.19	.900	.039	5.24	8286.	.00	5282.	13481.	1.0052	40.25
2.964	.17	.881	.038	5.08	8286.	.00	5068.	13271.	1.0051	40.26
2.997	.16	.863	.037	4.92	8286.	.00	4863.	13069.	1.0050	40.27
3.030	.14	.845	.036	4.77	8286.	.00	4667.	12876.	1.0049	40.28
3.064	.13	.827	.035	4.62	8286.	.00	4478.	12690.	1.0049	40.28
3.097	.12	.810	.034	4.48	8286.	.00	4297.	12512.	1.0048	40.29
3.130	.11	.793	.033	4.34	8286.	.00	4123.	12341.	1.0047	40.30

3.164	.10	.777	.032	4.20	8286.	.00	3956.	12177.	1.0047	40.30
3.197	.09	.761	.031	4.07	8286.	.00	3796.	12019.	1.0046	40.30
3.230	.09	.745	.030	3.95	8286.	.00	3642.	11868.	1.0045	40.31
3.263	.08	.729	.029	3.82	8286.	.00	3495.	11723.	1.0045	40.31
3.297	.07	.714	.028	3.70	8286.	.00	3353.	11584.	1.0044	40.31
3.330	.07	.699	.027	3.59	8286.	.00	3217.	11450.	1.0044	40.32
3.363	.06	.685	.026	3.48	8286.	.00	3087.	11322.	1.0043	40.32
3.397	.06	.671	.025	3.37	8286.	.00	2962.	11199.	1.0043	40.32
3.430	.05	.657	.025	3.27	8286.	.00	2842.	11081.	1.0042	40.33
3.463	.05	.643	.024	3.16	8286.	.00	2727.	10968.	1.0042	40.33
3.497	.04	.630	.023	3.07	8286.	.00	2616.	10859.	1.0041	40.33
3.530	.04	.617	.022	2.97	8286.	.00	2510.	10755.	1.0041	40.33
3.563	.04	.604	.022	2.88	8286.	.00	2408.	10655.	1.0041	40.33
3.596	.03	.591	.021	2.79	8286.	.00	2311.	10559.	1.0040	40.33
3.630	.03	.579	.020	2.70	8286.	.00	2217.	10467.	1.0040	40.33
3.663	.03	.567	.020	2.62	8286.	.00	2127.	10378.	1.0040	40.34
3.696	.03	.555	.019	2.54	8286.	.00	2041.	10293.	1.0039	40.34

WATER TIME (HRS)	FLOW (CFS)	VELOCITY (FT/SEC)	HYD. DEPTH (FT)	WIDTH (FT)	WASHLOAD CONC. (PPM-W)	BED MAT. TRANSPORT (CFS)	BED CONC. (PPM-W)	TOTAL CONC. (PPM-W)	BULKING FACTOR	ACCU. SEDIMENT (TONS)
3.730	.02	.544	.018	2.46	8286.	.00	1958.	10212.	1.0039	40.34
3.763	.02	.532	.018	2.38	8286.	.00	1879.	10134.	1.0039	40.34
3.796	.02	.521	.017	2.31	8286.	.00	1803.	10059.	1.0038	40.34
3.830	.02	.510	.017	2.24	8286.	.00	1730.	9987.	1.0038	40.34
3.863	.02	.500	.016	2.17	8286.	.00	1659.	9918.	1.0038	40.34
3.896	.02	.489	.016	2.10	8286.	.00	1592.	9852.	1.0038	40.34
3.929	.01	.479	.015	2.04	8286.	.00	1527.	9788.	1.0037	40.34
3.963	.01	.469	.015	1.97	8286.	.00	1465.	9727.	1.0037	40.34
3.996	.01	.459	.014	1.91	8286.	.00	1406.	9669.	1.0037	40.34
4.029	.01	.450	.014	1.85	8286.	.00	1349.	9613.	1.0037	40.34
4.063	.01	.441	.013	1.79	8286.	.00	1294.	9559.	1.0036	40.34
4.096	.01	.431	.013	1.74	8286.	.00	1242.	9507.	1.0036	40.34
4.129	.01	.422	.013	1.69	8286.	.00	1191.	9458.	1.0036	40.34
4.163	.01	.414	.012	1.63	8286.	.00	1143.	9410.	1.0036	40.34
4.196	.01	.399	.012	1.54	8286.	.00	1062.	9330.	1.0036	40.34
4.229	.01	.371	.010	1.39	8286.	.00	921.	9192.	1.0035	40.35
4.262	.00	.330	.009	1.16	8286.	.00	731.	9005.	1.0034	40.35
4.296	.00	.274	.007	.88	8286.	.00	505.	8783.	1.0033	40.35
4.329	.00	.248	.006	.76	8286.	.00	415.	8695.	1.0033	40.35

AT PEAK FLOW OF 22.378 WITH TIME AT 1.53 HOURS: BEDMAT = 15.41 (TONS) = .0071 (AC-FT bulked)
 TOTAL SED = 18.12 (TONS) = .0083 (AC-FT bulked)
 PEAK BULKING FACTOR = 1.023000 = 57449. (PPM-W)

WEIGHT (TONS)	UNBULKED VOLUME (AC-FT)	BULKED VOLUME (AC-FT)	CONCENTRATION BY WEIGHT (PPM)	AVERAGE BULKING FACTOR
WASHMAT = 6.99	.0019	.0032	8286.	
BEDMAT = 33.35	.0093	.0153	38327.	
TOTAL SEDIMENT = 40.35	.0112	.0185	45992.	1.018192

SEDIMENT TRANSPORT CAPACITY: 1.07075 AC-FT/SQ MT (bulkcd) = 3.6439 TONS/ACRE (at Porosity=0.395)

PARTIAL HYDROGRAPH 133.54

RUNOFF VOLUME = .66738 INCHES = .6158 ACRE-FEET
 PEAK DISCHARGE RATE = 22.38 CFS AT 1.532 HOURS BASIN AREA = .0173 SQ. MI.

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COMPUTE NM HYD

ID=6 HYD NO=101.00 DA=0.0065 SQ MI
 PER A=0.00 PER B=26.20 PER C=26.20 PER D=47.60
 TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106428
 UNIT PEAK = 12.215 CFS UNIT VOLUME = .9984 B = 526.28 P60 = 1.8700
 AREA = .003094 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

K = .118429HR TP = .133300HR K/TP RATIO = .888442 SHAPE CONSTANT, N = 3.992479
 UNIT PEAK = 9.0623 CFS UNIT VOLUME = .9989 B = 354.67 P60 = 1.8700
 AREA = .003406 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=6 CODE=1

PARTIAL HYDROGRAPH 101.00

RUNOFF VOLUME = 1.36302 INCHES = .4725 ACRE-FEET
 PEAK DISCHARGE RATE = 13.98 CFS AT 1.499 HOURS BASIN AREA = .0065 SQ. MI.

COMPUTE NM HYD

ID=7 HYD NO=102.00 DA=0.0054 SQ MI
 PER A=0.00 PER B=26.20 PER C=26.20 PER D=47.60
 TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106428
 UNIT PEAK = 10.148 CFS UNIT VOLUME = .9982 B = 526.28 P60 = 1.8700
 AREA = .002570 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

K = .118429HR TP = .133300HR K/TP RATIO = .888442 SHAPE CONSTANT, N = 3.992479
 UNIT PEAK = 7.5287 CFS UNIT VOLUME = .9986 B = 354.67 P60 = 1.8700
 AREA = .002830 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=7 CODE=1

PARTIAL HYDROGRAPH 102.00

RUNOFF VOLUME = 1.36302 INCHES = .3925 ACRE-FEET
 PEAK DISCHARGE RATE = 11.62 CFS AT 1.499 HOURS BASIN AREA = .0054 SQ. MI.

COMPUTE NM HYD ID=8 HYD NO=103.00 DA=0.0057 SQ MI
PER A=0.00 PER B=26.20 PER C=26.20 PER D=47.60
TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106428
UNIT PEAK = 10.712 CFS UNIT VOLUME = .9982 B = 526.28 P60 = 1.8700
AREA = .002713 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

K = .118429HR TP = .133300HR K/TP RATIO = .888442 SHAPE CONSTANT, N = 3.992479
UNIT PEAK = 7.9469 CFS UNIT VOLUME = .9988 B = 354.67 P60 = 1.8700
AREA = .002987 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=8 CODE=1

PARTIAL HYDROGRAPH 103.00

RUNOFF VOLUME = 1.36302 INCHES = .4144 ACRE-FEET
PEAK DISCHARGE RATE = 12.26 CFS AT 1.499 HOURS BASIN AREA = .0057 SQ. MI.

COMPUTE NM HYD ID=4 HYD NO=104.00 DA=0.0088 SQ MI
PER A=0.00 PER B=26.20 PER C=26.20 PER D=47.60
TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106428
UNIT PEAK = 16.538 CFS UNIT VOLUME = .9986 B = 526.28 P60 = 1.8700
AREA = .004189 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

K = .118429HR TP = .133300HR K/TP RATIO = .888442 SHAPE CONSTANT, N = 3.992479
UNIT PEAK = 12.269 CFS UNIT VOLUME = .9994 B = 354.67 P60 = 1.8700
AREA = .004611 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=4 CODE=1

PARTIAL HYDROGRAPH 104.00

RUNOFF VOLUME = 1.36302 INCHES = .6397 ACRE-FEET
PEAK DISCHARGE RATE = 18.92 CFS AT 1.499 HOURS BASIN AREA = .0088 SQ. MI.

ADD HYD ID=6 HYD NO=104.12 ID I=6 ID II=7
PRINT HYD ID=6 CODE=1

PARTIAL HYDROGRAPH 104.12

RUNOFF VOLUME = 1.36298 INCHES = .8650 ACRE-FEET
PEAK DISCHARGE RATE = 25.60 CFS AT 1.499 HOURS BASIN AREA = .0119 SQ. MI.

ADD HYD ID=6 HYD NO=104.13 ID I=6 ID II=8
PRINT HYD ID=6 CODE=1

PARTIAL HYDROGRAPH 104.13

RUNOFF VOLUME = 1.36298 INCHES = 1.2794 ACRE-FEET
PEAK DISCHARGE RATE = 37.86 CFS AT 1.499 HOURS BASIN AREA = .0176 SQ. MI.

*S FLOW EXITING AREA 104 TO CHANNEL

ADD HYD ID=6 HYD NO=104.14 ID I=6 ID II=4
PRINT HYD ID=6 CODE=1

PARTIAL HYDROGRAPH 104.14

RUNOFF VOLUME = 1.36298 INCHES = 1.9191 ACRE-FEET
PEAK DISCHARGE RATE = 56.78 CFS AT 1.499 HOURS BASIN AREA = .0264 SQ. MI.

* *****

COMPUTE NM HYD ID=7 HYD NO=105.00 DA=0.0060 SQ MI
PER A=0.00 PER B=26.20 PER C=26.20 PER D=47.60
TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106428
UNIT PEAK = 11.276 CFS UNIT VOLUME = .9984 B = 526.28 P60 = 1.8700
AREA = .002856 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

K = .118429HR TP = .133300HR K/TP RATIO = .888442 SHAPE CONSTANT, N = 3.992479
UNIT PEAK = 8.3652 CFS UNIT VOLUME = .9988 B = 354.67 P60 = 1.8700
AREA = .003144 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=7 CODE=1

PARTIAL HYDROGRAPH 105.00

RUNOFF VOLUME = 1.36302 INCHES = .4362 ACRE-FEET
PEAK DISCHARGE RATE = 12.90 CFS AT 1.499 HOURS BASIN AREA = .0060 SQ. MI.

COMPUTE NM HYD ID=8 HYD NO=106.00 DA=0.0067 SQ MI
PER A=0.00 PER B=26.20 PER C=26.20 PER D=47.60
TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106428
UNIT PEAK = 12.591 CFS UNIT VOLUME = .9985 B = 526.28 P60 = 1.8700
AREA = .003189 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

K = .118429HR TP = .133300HR K/TP RATIO = .888442 SHAPE CONSTANT, N = 3.992479
UNIT PEAK = 9.3411 CFS UNIT VOLUME = .9991 B = 354.67 P60 = 1.8700
AREA = .003511 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=8 CODE=1

PARTIAL HYDROGRAPH 106.00

RUNOFF VOLUME = 1.36302 INCHES = .4871 ACRE-FEET
PEAK DISCHARGE RATE = 14.41 CFS AT 1.499 HOURS BASIN AREA = .0067 SQ. MI.

*S FLOW ENTERING 98TH STREET SD AT PARKWEST

ADD HYD ID=7 HYD NO=105.01 ID I=7 ID II=8

PRINT HYD ID=7 CODE=1

PARTIAL HYDROGRAPH 105.01

RUNOFF VOLUME = 1.36298 INCHES = .9232 ACRE-FEET
PEAK DISCHARGE RATE = 27.31 CFS AT 1.499 HOURS BASIN AREA = .0127 SQ. MI.

*S FLOW EXITING AREA 107 TO CHANNEL

COMPUTE NM HYD ID=8 HYD NO=107.00 DA=0.0069 SQ MI

PER A=0.00 PER B=26.20 PER C=26.20 PER D=47.60
TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106428
UNIT PEAK = 12.967 CFS UNIT VOLUME = .9985 B = 526.28 P60 = 1.8700
AREA = .003284 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

K = .118429HR TP = .133300HR K/TP RATIO = .888442 SHAPE CONSTANT, N = 3.992479
UNIT PEAK = 9.6199 CFS UNIT VOLUME = .9991 B = 354.67 P60 = 1.8700
AREA = .003616 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=8 CODE=1

PARTIAL HYDROGRAPH 107.00

RUNOFF VOLUME = 1.36302 INCHES = .5016 ACRE-FEET
PEAK DISCHARGE RATE = 14.84 CFS AT 1.499 HOURS BASIN AREA = .0069 SQ. MI.

*S ONSITE FLOW ENTERING CHANNEL FROM THE SOUTH

ADD HYD ID=6 HYD NO=107.01 ID I=6 ID II=8

PRINT HYD ID=6 CODE=1

PARTIAL HYDROGRAPH 107.01

RUNOFF VOLUME = 1.36298 INCHES = 2.4206 ACRE-FEET
PEAK DISCHARGE RATE = 71.61 CFS AT 1.499 HOURS BASIN AREA = .0333 SQ. MI.

* *****

COMPUTE NM HYD ID=1 HYD NO=108.00 DA=0.0046 SQ MI
PER A=0.00 PER B=26.20 PER C=26.20 PER D=47.60
TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .54500 SHAPE CONSTANT, N = 7.106428
UNIT PEAK = 8.6447 CFS UNIT VOLUME = .9980 B = 526.28 P60 = 1.8700
AREA = .002190 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

K = .118429HR TP = .133300HR K/TP RATIO = .888442 SHAPE CONSTANT, N = 3.992479
UNIT PEAK = 6.4133 CFS UNIT VOLUME = .9984 B = 354.67 P60 = 1.8700
AREA = .002410 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=1 CODE=1

PARTIAL HYDROGRAPH 108.00

RUNOFF VOLUME = 1.36302 INCHES = .3344 ACRE-FEET
PEAK DISCHARGE RATE = 9.90 CFS AT 1.499 HOURS BASIN AREA = .0046 SQ. MI.

COMPUTE NM HYD ID=8 HYD NO=110.00 DA=0.0062 SQ MI
PER A=0.00 PER B=26.20 PER C=26.20 PER D=47.60
TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .54500 SHAPE CONSTANT, N = 7.106428
UNIT PEAK = 11.651 CFS UNIT VOLUME = .9984 B = 526.28 P60 = 1.8700
AREA = .002951 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

K = .118429HR TP = .133300HR K/TP RATIO = .888442 SHAPE CONSTANT, N = 3.992479
UNIT PEAK = 8.6440 CFS UNIT VOLUME = .9989 B = 354.67 P60 = 1.8700
AREA = .003249 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=8 CODE=1

PARTIAL HYDROGRAPH 110.00

RUNOFF VOLUME = 1.36302 INCHES = .4507 ACRE-FEET
PEAK DISCHARGE RATE = 13.33 CFS AT 1.499 HOURS BASIN AREA = .0062 SQ. MI.

ADD HYD ID=8 HYD NO=110.01 ID I=1 ID II=8
PRINT HYD ID=8 CODE=1

PARTIAL HYDROGRAPH 110.01

RUNOFF VOLUME = 1.36297 INCHES = .7851 ACRE-FEET
 PEAK DISCHARGE RATE = 23.23 CFS AT 1.499 HOURS BASIN AREA = .0108 SQ. MI.

COMPUTE NM HYD ID=4 HYD NO=109.00 DA=0.0036 SQ MI
 PER A=0.00 PER B=26.20 PER C=26.20 PER D=47.60
 TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106428
 UNIT PEAK = 6.7654 CFS UNIT VOLUME = .9975 B = 526.28 P60 = 1.8700
 AREA = .001714 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

K = .118429HR TP = .133300HR K/TP RATIO = .888442 SHAPE CONSTANT, N = 3.992479
 UNIT PEAK = 5.0191 CFS UNIT VOLUME = .9978 B = 354.67 P60 = 1.8700
 AREA = .001886 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=4 CODE=1

PARTIAL HYDROGRAPH 109.00

RUNOFF VOLUME = 1.36302 INCHES = .2617 ACRE-FEET
 PEAK DISCHARGE RATE = 7.75 CFS AT 1.499 HOURS BASIN AREA = .0036 SQ. MI.

*S FLOW ENTERING 98TH STREET SD AT UNSER
 ADD HYD ID=4 HYD NO=108.01 ID I=4 ID II=8
 PRINT HYD ID=4 CODE=1

PARTIAL HYDROGRAPH 108.01

RUNOFF VOLUME = 1.36297 INCHES = 1.0468 ACRE-FEET
 PEAK DISCHARGE RATE = 30.98 CFS AT 1.499 HOURS BASIN AREA = .0144 SQ. MI.

*S TOTAL ON-SITE FLOW TO 98TH STREET SD
 ADD HYD ID=1 HYD NO=108.02 ID I=4 ID II=7
 PRINT HYD ID=1 CODE=1

PARTIAL HYDROGRAPH 108.02

RUNOFF VOLUME = 1.36297 INCHES = 1.9699 ACRE-FEET
 PEAK DISCHARGE RATE = 58.29 CFS AT 1.499 HOURS BASIN AREA = .0271 SQ. MI.

COMPUTE NM HYD ID=4 HYD NO=111.10 DA=0.0025 SQ MI
 PER A=0.00 PER B=0.00 PER C=45.00 PER D=55.00

TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106428
UNIT PEAK = 5.4286 CFS UNIT VOLUME = .9972 B = 526.28 P60 = 1.8700
AREA = .001375 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

K = .105867HR TP = .133300HR K/TP RATIO = .794199 SHAPE CONSTANT, N = 4.514858
UNIT PEAK = 3.2758 CFS UNIT VOLUME = .9967 B = 388.14 P60 = 1.8700
AREA = .001125 SQ MI IA = .35000 INCHES INF = .83000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=4 CODE=1

PARTIAL HYDROGRAPH 111.10

RUNOFF VOLUME = 1.52843 INCHES = .2038 ACRE-FEET
PEAK DISCHARGE RATE = 5.93 CFS AT 1.499 HOURS BASIN AREA = .0025 SQ. MI.

*S FLOW TO BRIDGE EXCLUDING UNIT 3

ADD HYD ID=4 HYD NO=111.11 ID I=4 ID II=5
PRINT HYD ID=4 CODE=1

PARTIAL HYDROGRAPH 111.11

RUNOFF VOLUME = .64072 INCHES = 39.6629 ACRE-FEET
PEAK DISCHARGE RATE = 572.71 CFS AT 1.832 HOURS BASIN AREA = 1.1607 SQ. MI.

*S FLOW TO BRIDGE INCLUDING UNIT 3

ADD HYD ID=4 HYD NO=111.12 ID I=4 ID II=6
PRINT HYD ID=4 CODE=1

PARTIAL HYDROGRAPH 111.12

RUNOFF VOLUME = .66086 INCHES = 42.0835 ACRE-FEET
PEAK DISCHARGE RATE = 594.48 CFS AT 1.798 HOURS BASIN AREA = 1.1940 SQ. MI.

COMPUTE NM HYD ID=15 HYD NO=112.00 DA=0.0017 SQ MI
PER A=0.00 PER B=26.20 PER C=26.20 PER D=47.60
TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106428
UNIT PEAK = 3.1948 CFS UNIT VOLUME = .9960 B = 526.28 P60 = 1.8700
AREA = .000809 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

K = .118429HR TP = .133300HR K/TP RATIO = .888442 SHAPE CONSTANT, N = 3.992479
UNIT PEAK = 2.3701 CFS UNIT VOLUME = .9948 B = 354.67 P60 = 1.8700

AREA = .000891 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=15 CODE=1

PARTIAL HYDROGRAPH 112.00

RUNOFF VOLUME = 1.36302 INCHES = .1236 ACRE-FEET
PEAK DISCHARGE RATE = 3.67 CFS AT 1.499 HOURS BASIN AREA = .0017 SQ. MI.

COMPUTE NM HYD

ID=16 HYD NO=113.00 DA=0.0058 SQ MI
PER A=0.00 PER B=26.20 PER C=26.20 PER D=47.60
TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106428
UNIT PEAK = 10.900 CFS UNIT VOLUME = .9984 B = 526.28 P60 = 1.8700
AREA = .002761 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

K = .118429HR TP = .133300HR K/TP RATIO = .888442 SHAPE CONSTANT, N = 3.992479
UNIT PEAK = 8.0863 CFS UNIT VOLUME = .9988 B = 354.67 P60 = 1.8700
AREA = .003039 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=16 CODE=1

PARTIAL HYDROGRAPH 113.00

RUNOFF VOLUME = 1.36302 INCHES = .4216 ACRE-FEET
PEAK DISCHARGE RATE = 12.47 CFS AT 1.499 HOURS BASIN AREA = .0058 SQ. MI.

COMPUTE NM HYD

ID=17 HYD NO=114.00 DA=0.0069 SQ MI
PER A=0.00 PER B=26.20 PER C=26.20 PER D=47.60
TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106428
UNIT PEAK = 12.967 CFS UNIT VOLUME = .9985 B = 526.28 P60 = 1.8700
AREA = .003284 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

K = .118429HR TP = .133300HR K/TP RATIO = .888442 SHAPE CONSTANT, N = 3.992479
UNIT PEAK = 9.6199 CFS UNIT VOLUME = .9991 B = 354.67 P60 = 1.8700
AREA = .003616 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=17 CODE=1

PARTIAL HYDROGRAPH 114.00

RUNOFF VOLUME = 1.36302 INCHES = .5016 ACRE-FEET
PEAK DISCHARGE RATE = 14.84 CFS AT 1.499 HOURS BASIN AREA = .0069 SQ. MI.

ADD HYD ID=15 HYD NO=114.01 ID I=15 ID II=16
PRINT HYD ID=15 CODE=1

PARTIAL HYDROGRAPH 114.01

RUNOFF VOLUME = 1.36294 INCHES = .5452 ACRE-FEET
PEAK DISCHARGE RATE = 16.14 CFS AT 1.499 HOURS BASIN AREA = .0075 SQ. MI.

ADD HYD ID=15 HYD NO=114.02 ID I=15 ID II=17
PRINT HYD ID=15 CODE=1

PARTIAL HYDROGRAPH 114.02

RUNOFF VOLUME = 1.36296 INCHES = 1.0467 ACRE-FEET
PEAK DISCHARGE RATE = 30.98 CFS AT 1.499 HOURS BASIN AREA = .0144 SQ. MI.

* *****

COMPUTE NM HYD ID=16 HYD NO=116.10 DA=0.0041 SQ MI
PER A=0.00 PER B=26.20 PER C=26.20 PER D=47.60
TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106428
UNIT PEAK = 7.7050 CFS UNIT VOLUME = .9978 B = 526.28 P60 = 1.8700
AREA = .001952 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

K = .118429HR TP = .133300HR K/TP RATIO = .888442 SHAPE CONSTANT, N = 3.992479
UNIT PEAK = 5.7162 CFS UNIT VOLUME = .9980 B = 354.67 P60 = 1.8700
AREA = .002148 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=16 CODE=1

PARTIAL HYDROGRAPH 116.10

RUNOFF VOLUME = 1.36302 INCHES = .2980 ACRE-FEET
PEAK DISCHARGE RATE = 8.82 CFS AT 1.499 HOURS BASIN AREA = .0041 SQ. MI.

ADD HYD ID=15 HYD NO=116.01 ID I=15 ID II=16
PRINT HYD ID=15 CODE=1

PARTIAL HYDROGRAPH 116.01

RUNOFF VOLUME = 1.36296 INCHES = 1.3448 ACRE-FEET
PEAK DISCHARGE RATE = 39.80 CFS AT 1.499 HOURS BASIN AREA = .0185 SQ. MI.

COMPUTE NM HYD ID=16 HYD NO=116.20 DA=0.0024 SQ MI
PER A=0.00 PER B=26.20 PER C=26.20 PER D=47.60
TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106428
UNIT PEAK = 4.5103 CFS UNIT VOLUME = .9969 B = 526.28 P60 = 1.8700
AREA = .001142 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

K = .118429HR TP = .133300HR K/TP RATIO = .888442 SHAPE CONSTANT, N = 3.992479
UNIT PEAK = 3.3461 CFS UNIT VOLUME = .9966 B = 354.67 P60 = 1.8700
AREA = .001258 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=16 CODE=1

PARTIAL HYDROGRAPH 116.20

RUNOFF VOLUME = 1.36302 INCHES = .1745 ACRE-FEET
PEAK DISCHARGE RATE = 5.17 CFS AT 1.499 HOURS BASIN AREA = .0024 SQ. MI.

ADD HYD ID=15 HYD NO=116.02 ID I=15 ID II=16
PRINT HYD ID=15 CODE=1

PARTIAL HYDROGRAPH 116.02

RUNOFF VOLUME = 1.36295 INCHES = 1.5192 ACRE-FEET
PEAK DISCHARGE RATE = 44.97 CFS AT 1.499 HOURS BASIN AREA = .0209 SQ. MI.

COMPUTE NM HYD ID=16 HYD NO=117.00 DA=0.0049 SQ MI
PER A=0.00 PER B=25.00 PER C=25.00 PER D=50.00
TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106428
UNIT PEAK = 9.6727 CFS UNIT VOLUME = .9982 B = 526.28 P60 = 1.8700
AREA = .002450 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

K = .118429HR TP = .133300HR K/TP RATIO = .888442 SHAPE CONSTANT, N = 3.992479
UNIT PEAK = 6.5187 CFS UNIT VOLUME = .9984 B = 354.67 P60 = 1.8700
AREA = .002450 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=16 CODE=1

PARTIAL HYDROGRAPH 117.00

RUNOFF VOLUME = 1.39061 INCHES = .3634 ACRE-FEET
PEAK DISCHARGE RATE = 10.69 CFS AT 1.499 HOURS BASIN AREA = .0049 SQ. MI.

*S FLOW ENTERING CHANNEL FROM THE NORTH AT THE BRIDGE

ADD HYD ID=15 HYD NO=116.03 ID I=15 ID II=16

PRINT HYD ID=15 CODE=1

PARTIAL HYDROGRAPH 116.03

RUNOFF VOLUME = 1.36819 INCHES = 1.8826 ACRE-FEET

PEAK DISCHARGE RATE = 55.66 CFS AT 1.499 HOURS BASIN AREA = .0258 SQ. MI.

* *****

*S TOTAL FLOW IN CHANNEL AT BRIDGE

ADD HYD ID=4 HYD NO=111.12 ID I=4 ID II=15

PRINT HYD ID=4 CODE=1

PARTIAL HYDROGRAPH 111.12

RUNOFF VOLUME = .67582 INCHES = 43.9661 ACRE-FEET

PEAK DISCHARGE RATE = 612.42 CFS AT 1.798 HOURS BASIN AREA = 1.2198 SQ. MI.

* *****

COMPUTE NM HYD

ID=5 HYD NO=111.20 DA=0.0015 SQ MI

PER A=0.00 PER B=0.00 PER C=45.00 PER D=55.00

TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106428

UNIT PEAK = 3.2571 CFS UNIT VOLUME = .9960 B = 526.28 P60 = 1.8700

AREA = .000825 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR

RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

K = .105867HR TP = .133300HR K/TP RATIO = .794199 SHAPE CONSTANT, N = 4.514858

UNIT PEAK = 1.9655 CFS UNIT VOLUME = .9941 B = 388.14 P60 = 1.8700

AREA = .000675 SQ MI IA = .35000 INCHES INF = .83000 INCHES PER HOUR

RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=5 CODE=1

PARTIAL HYDROGRAPH 111.20

RUNOFF VOLUME = 1.52844 INCHES = .1223 ACRE-FEET

PEAK DISCHARGE RATE = 3.56 CFS AT 1.499 HOURS BASIN AREA = .0015 SQ. MI.

ADD HYD ID=4 HYD NO=111.00 ID I=4 ID II=5

PRINT HYD ID=4 CODE=1

PARTIAL HYDROGRAPH 111.00

RUNOFF VOLUME = .67687 INCHES = 44.0884 ACRE-FEET
PEAK DISCHARGE RATE = 613.61 CFS AT 1.798 HOURS BASIN AREA = 1.2213 SQ. MI.

*S TOTAL FLOW IN CHANNEL AT UNSER WITHOUT UNIT 5 EAST OF PARKWEST DR.

ADD HYD ID=4 HYD NO=111.00 ID I=4 ID II=7

PRINT HYD ID=4 CODE=1

PARTIAL HYDROGRAPH 111.00

RUNOFF VOLUME = .68393 INCHES = 45.0116 ACRE-FEET

PEAK DISCHARGE RATE = 622.39 CFS AT 1.798 HOURS BASIN AREA = 1.2340 SQ. MI.

* *****

COMPUTE NM HYD

ID=15 HYD NO=120.00 DA=0.0067 SQ MI

PER A=0.00 PER B=26.20 PER C=26.20 PER D=47.60

TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106428

UNIT PEAK = 12.591 CFS UNIT VOLUME = .9985 B = 526.28 P60 = 1.8700

AREA = .003189 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR

RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

K = .118429HR TP = .133300HR K/TP RATIO = .888442 SHAPE CONSTANT, N = 3.992479
UNIT PEAK = 9.3411 CFS UNIT VOLUME = .9991 B = 354.67 P60 = 1.8700
AREA = .003511 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR

RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD

ID=15 CODE=1

PARTIAL HYDROGRAPH 120.00

RUNOFF VOLUME = 1.36302 INCHES = .4871 ACRE-FEET

PEAK DISCHARGE RATE = 14.41 CFS AT 1.499 HOURS BASIN AREA = .0067 SQ. MI.

COMPUTE NM HYD

ID=16 HYD NO=119.00 DA=0.0056 SQ MI

PER A=0.00 PER B=26.20 PER C=26.20 PER D=47.60

TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106428

UNIT PEAK = 10.524 CFS UNIT VOLUME = .9982 B = 526.28 P60 = 1.8700

AREA = .002666 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR

RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

K = .118429HR TP = .133300HR K/TP RATIO = .888442 SHAPE CONSTANT, N = 3.992479

UNIT PEAK = 7.8075 CFS UNIT VOLUME = .9988 B = 354.67 P60 = 1.8700

AREA = .002934 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR

RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD

ID=16 CODE=1

PARTIAL HYDROGRAPH 119.00

RUNOFF VOLUME = 1.36302 INCHES = .4071 ACRE-FEET
 PEAK DISCHARGE RATE = 12.05 CFS AT 1.499 HOURS BASIN AREA = .0056 SQ. MI.

ADD HYD ID=15 HYD NO=119.01 ID I=15 ID II=16
 PRINT HYD ID=15 CODE=1

PARTIAL HYDROGRAPH 119.01

RUNOFF VOLUME = 1.36298 INCHES = .8941 ACRE-FEET
 PEAK DISCHARGE RATE = 26.45 CFS AT 1.499 HOURS BASIN AREA = .0123 SQ. MI.

COMPUTE NM HYD ID=16 HYD NO=118.00 DA=0.0059 SQ MI
 PER A=0.00 PER B=26.20 PER C=26.20 PER D=47.60
 TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106428
 UNIT PEAK = 11.088 CFS UNIT VOLUME = .9984 B = 526.28 P60 = 1.8700
 AREA = .002808 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

K = .118429HR TP = .133300HR K/TP RATIO = .888442 SHAPE CONSTANT, N = 3.992479
 UNIT PEAK = 8.2257 CFS UNIT VOLUME = .9988 B = 354.67 P60 = 1.8700
 AREA = .003092 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=16 CODE=1

PARTIAL HYDROGRAPH 118.00

RUNOFF VOLUME = 1.36302 INCHES = .4289 ACRE-FEET
 PEAK DISCHARGE RATE = 12.69 CFS AT 1.499 HOURS BASIN AREA = .0059 SQ. MI.

*S TOTAL FLOW IN RUNDOWN TO CHANNEL
 ADD HYD ID=15 HYD NO=118.01 ID I=15 ID II=16
 PRINT HYD ID=15 CODE=1

PARTIAL HYDROGRAPH 118.01

RUNOFF VOLUME = 1.36298 INCHES = 1.3230 ACRE-FEET
 PEAK DISCHARGE RATE = 39.14 CFS AT 1.499 HOURS BASIN AREA = .0182 SQ. MI.

*S TOTAL FLOW IN CHANNEL AT UNSER EXITING THE SITE
 ADD HYD ID=2 HYD NO=111.00 ID I=4 ID II=15
 PRINT HYD ID=2 CODE=1

PARTIAL HYDROGRAPH 111.00

RUNOFF VOLUME = .69380 INCHES = 46.3345 ACRE-FEET
 PEAK DISCHARGE RATE = 634.99 CFS AT 1.798 HOURS BASIN AREA = 1.2522 SQ. MI.

*

 *

COMPUTE NM HYD

ID=15 HYD NO=115.00 DA=0.0019 SQ MI
 PER A=0.00 PER B=26.20 PER C=26.20 PER D=47.60
 TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106428
 UNIT PEAK = 3.5706 CFS UNIT VOLUME = .9960 B = 526.28 P60 = 1.8700
 AREA = .000904 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .0333300

K = .118429HR TP = .133300HR K/TP RATIO = .888442 SHAPE CONSTANT, N = 3.992479
 UNIT PEAK = 2.6490 CFS UNIT VOLUME = .9953 B = 354.67 P60 = 1.8700
 AREA = .000996 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .0333300

PRINT HYD ID=15 CODE=1

PARTIAL HYDROGRAPH 115.00

RUNOFF VOLUME = 1.36302 INCHES = .1381 ACRE-FEET
 PEAK DISCHARGE RATE = 4.10 CFS AT 1.499 HOURS BASIN AREA = .0019 SQ. MI.

COMPUTE NM HYD ID=16 HYD NO=121.00 DA=0.0027 SQ MI
 PER A=0.00 PER B=26.20 PER C=26.20 PER D=47.60
 TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106428
 UNIT PEAK = 5.0740 CFS UNIT VOLUME = .9972 B = 526.28 P60 = 1.8700
 AREA = .001285 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .0333300

K = .118429HR TP = .133300HR K/TP RATIO = .888442 SHAPE CONSTANT, N = 3.992479
 UNIT PEAK = 3.7643 CFS UNIT VOLUME = .9969 B = 354.67 P60 = 1.8700
 AREA = .001415 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .0333300

PRINT HYD ID=16 CODE=1

PARTIAL HYDROGRAPH 121.00

RUNOFF VOLUME = 1.36302 INCHES = .1963 ACRE-FEET
 PEAK DISCHARGE RATE = 5.82 CFS AT 1.499 HOURS BASIN AREA = .0027 SQ. MI.

ADD HYD ID=15 HYD NO=121.01 ID I=15 ID II=16
PRINT HYD ID=15 CODE=1

PARTIAL HYDROGRAPH 121.01

RUNOFF VOLUME = 1.36290 INCHES = .3344 ACRE-FEET
PEAK DISCHARGE RATE = 9.91 CFS AT 1.499 HOURS BASIN AREA = .0046 SQ. MI.

COMPUTE NM HYD

ID=16 HYD NO=122.00 DA=0.0009 SQ MI
PER A=0.00 PER B=5.00 PER C=5.00 PER D=90.00
TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106428
UNIT PEAK = 3.1979 CFS UNIT VOLUME = .9960 B = 526.28 P60 = 1.8700
AREA = .000810 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

K = .118429HR TP = .133300HR K/TP RATIO = .888442 SHAPE CONSTANT, N = 3.992479
UNIT PEAK = .23946 CFS UNIT VOLUME = .9469 B = 354.67 P60 = 1.8700
AREA = .000090 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=16 CODE=1

PARTIAL HYDROGRAPH 122.00

RUNOFF VOLUME = 1.85049 INCHES = .0888 ACRE-FEET
PEAK DISCHARGE RATE = 2.42 CFS AT 1.499 HOURS BASIN AREA = .0009 SQ. MI.

*S ON-SITE FLOW TO POND

ADD HYD ID=15 HYD NO=122.01 ID I=15 ID II=16
PRINT HYD ID=15 CODE=1

PARTIAL HYDROGRAPH 122.01

RUNOFF VOLUME = 1.44263 INCHES = .4232 ACRE-FEET
PEAK DISCHARGE RATE = 12.33 CFS AT 1.499 HOURS BASIN AREA = .0055 SQ. MI.

*S TOTAL FLOW TO POND

ADD HYD ID=11 HYD NO=122.02 ID I=11 ID II=15
PRINT HYD ID=11 CODE=1

PARTIAL HYDROGRAPH 122.02

RUNOFF VOLUME = .76088 INCHES = 5.2875 ACRE-FEET
PEAK DISCHARGE RATE = 187.62 CFS AT 1.499 HOURS BASIN AREA = .1303 SQ. MI.

PUNCH HYD ID=11
 *S ROUTE HYDROGRAPH THRU POND
 ROUTE RESERVOIR

ID=12 HYD NO=133.50 INFLOW ID=11 CODE=5
 OUTFLOW (CFS) STORAGE (AC FT) ELEV (FT)
 0.0 0.00 04.00
 1.6 0.06 04.50
 2.3 1.23 05.00
 2.8 1.86 05.50
 3.3 2.50 06.00
 3.6 3.14 06.50
 4.0 3.78 07.00
 4.3 4.42 07.50
 4.6 5.07 08.00

* * * * *

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
.00	.00	4.00	.000	.00
.17	.00	4.00	.000	.00
.33	.00	4.00	.000	.00
.50	.00	4.00	.000	.00
.67	.00	4.00	.000	.00
.83	.00	4.00	.000	.00
1.00	.00	4.00	.000	.00
1.17	.02	4.00	.000	.00
1.33	7.05	4.15	.017	.46
1.50	187.62	5.04	1.281	2.34
1.67	105.00	6.69	3.382	3.75
1.83	38.54	7.37	4.252	4.22
2.00	18.64	7.61	4.558	4.36
2.16	11.02	7.71	4.697	4.43
2.33	6.90	7.76	4.757	4.46
2.50	4.41	7.77	4.772	4.46
2.66	2.84	7.76	4.760	4.46
2.83	1.83	7.74	4.730	4.44
3.00	1.19	7.71	4.690	4.42
3.16	.77	7.67	4.642	4.40
3.33	.51	7.63	4.590	4.38
3.50	.35	7.59	4.536	4.35
3.66	.24	7.55	4.480	4.33
3.83	.17	7.50	4.424	4.30
4.00	.13	7.46	4.367	4.28
4.16	.09	7.41	4.310	4.25
4.33	.08	7.37	4.253	4.22
4.50	.06	7.32	4.196	4.19
4.66	.05	7.28	4.139	4.17
4.83	.05	7.24	4.082	4.14
5.00	.05	7.19	4.026	4.12
5.16	.05	7.15	3.971	4.09
5.33	.05	7.11	3.915	4.06
5.49	.06	7.06	3.860	4.04
5.66	.06	7.02	3.806	4.01
5.83	.06	6.98	3.751	3.98
5.99	.06	6.94	3.698	3.95
6.16	.02	6.89	3.644	3.92
6.33	.01	6.85	3.591	3.88
6.49	.00	6.81	3.538	3.85
6.66	.00	6.77	3.485	3.82

6.83	.00	6.73	3.433	3.78
6.99	.00	6.69	3.381	3.75
7.16	.00	6.65	3.329	3.72
7.33	.00	6.61	3.278	3.69
7.49	.00	6.57	3.228	3.65
7.66	.00	6.53	3.178	3.62
7.83	.00	6.49	3.128	3.59
7.99	.00	6.45	3.079	3.57
8.16	.00	6.41	3.030	3.55
8.33	.00	6.38	2.981	3.53
8.49	.00	6.34	2.933	3.50
8.66	.00	6.30	2.885	3.48
8.82	.00	6.26	2.837	3.46
8.99	.00	6.23	2.790	3.44
9.16	.00	6.19	2.743	3.41
9.32	.00	6.15	2.696	3.39
9.49	.00	6.12	2.649	3.37
9.66	.00	6.08	2.603	3.35
9.82	.00	6.04	2.557	3.33
9.99	.00	6.01	2.511	3.31
10.16	.00	5.97	2.466	3.27
10.32	.00	5.94	2.421	3.24
10.49	.00	5.90	2.377	3.20
10.66	.00	5.87	2.333	3.17
10.82	.00	5.84	2.290	3.14
10.99	.00	5.80	2.247	3.10
11.16	.00	5.77	2.204	3.07
11.32	.00	5.74	2.162	3.04
11.49	.00	5.70	2.121	3.00
11.66	.00	5.67	2.080	2.97
11.82	.00	5.64	2.039	2.94
11.99	.00	5.61	1.999	2.91
12.15	.00	5.58	1.959	2.88
12.32	.00	5.55	1.920	2.85
12.49	.00	5.52	1.881	2.82
12.65	.00	5.49	1.842	2.79
12.82	.00	5.46	1.804	2.76
12.99	.00	5.43	1.766	2.73
13.15	.00	5.40	1.729	2.70
13.32	.00	5.37	1.692	2.67
13.49	.00	5.34	1.656	2.64
13.65	.00	5.31	1.619	2.61
13.82	.00	5.28	1.584	2.58
13.99	.00	5.25	1.548	2.55
14.15	.00	5.23	1.514	2.53
14.32	.00	5.20	1.479	2.50
14.49	.00	5.17	1.445	2.47
14.65	.00	5.14	1.411	2.44
14.82	.00	5.12	1.378	2.42
14.99	.00	5.09	1.344	2.39
15.15	.00	5.06	1.312	2.36
15.32	.00	5.04	1.279	2.34
15.48	.00	5.01	1.247	2.31
15.65	.00	4.99	1.216	2.29
15.82	.00	4.98	1.184	2.27
15.98	.00	4.97	1.153	2.25

16.15	.00	4.95	1.122	2.24
16.32	.00	4.94	1.092	2.22
16.48	.00	4.93	1.061	2.20
16.65	.00	4.91	1.031	2.18
16.82	.00	4.90	1.001	2.16
16.98	.00	4.89	.972	2.15
17.15	.00	4.88	.942	2.13
17.32	.00	4.86	.913	2.11
17.48	.00	4.85	.884	2.09
17.65	.00	4.84	.855	2.08
17.82	.00	4.83	.827	2.06
17.98	.00	4.82	.799	2.04
18.15	.00	4.80	.771	2.03
18.32	.00	4.79	.743	2.01
18.48	.00	4.78	.715	1.99

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
18.65	.00	4.77	.688	1.98
18.81	.00	4.76	.661	1.96
18.98	.00	4.75	.634	1.94
19.15	.00	4.73	.608	1.93
19.31	.00	4.72	.581	1.91
19.48	.00	4.71	.555	1.90
19.65	.00	4.70	.529	1.88
19.81	.00	4.69	.503	1.87

PEAK DISCHARGE = 4.462 CFS - PEAK OCCURS AT HOUR 2.50
 MAXIMUM WATER SURFACE ELEVATION = 7.771
 MAXIMUM STORAGE = 4.7720 AC-FT INCREMENTAL TIME= .033300HRS

PRINT HYD ID=12 CODE=1

PARTIAL HYDROGRAPH 133.50

RUNOFF VOLUME = .69177 INCHES = 4.8073 ACRE-FEET
 PEAK DISCHARGE RATE = 4.46 CFS AT 2.498 HOURS BASIN AREA = .1303 SQ. MI.

* *****

COMPUTE NM HYD ID=15 HYD NO=123.00 DA=0.0022 SQ MI
 PER A=0.00 PER B=5.00 PER C=5.00 PER D=90.00
 TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106428
 UNIT PEAK = 7.8171 CFS UNIT VOLUME = .9978 B = 526.28 P60 = 1.8700
 AREA = .001980 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

K = .118429HR TP = .133300HR K/TP RATIO = .888442 SHAPE CONSTANT, N = 3.992479
 UNIT PEAK = .58535 CFS UNIT VOLUME = .9774 B = 354.67 P60 = 1.8700
 AREA = .002220 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=15 CODE=1

PARTIAL HYDROGRAPH 123.00

RUNOFF VOLUME = 1.85049 INCHES = .2171 ACRE-FEET
PEAK DISCHARGE RATE = 5.90 CFS AT 1.499 HOURS BASIN AREA = .0022 SQ. MI.

ADD HYD ID=15 HYD NO=123.01 ID I=15 ID II=13
PRINT HYD ID=15 CODE=1

PARTIAL HYDROGRAPH 123.01

RUNOFF VOLUME = 1.22110 INCHES = .3061 ACRE-FEET
PEAK DISCHARGE RATE = 9.13 CFS AT 1.499 HOURS BASIN AREA = .0047 SQ. MI.

*S FLOW FROM LAVA BLUFF TO OURAY SD INCLUDING OFFSITE SHEET FLOW
ADD HYD ID=15 HYD NO=123.02 ID I=15 ID II=14
PRINT HYD ID=15 CODE=1

PARTIAL HYDROGRAPH 123.02

RUNOFF VOLUME = .78567 INCHES = .9218 ACRE-FEET
PEAK DISCHARGE RATE = 31.32 CFS AT 1.499 HOURS BASIN AREA = .0220 SQ. MI.

COMPUTE NM HYD ID=16 HYD NO=124.00 DA=0.0311 SQ MI
PER A=0.00 PER B=26.20 PER C=26.20 PER D=47.60
TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106428
UNIT PEAK = 58.445 CFS UNIT VOLUME = .9992 B = 526.28 P60 = 1.8700
AREA = .014804 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

K = .118429HR TP = .133300HR K/TP RATIO = .888442 SHAPE CONSTANT, N = 3.992479
UNIT PEAK = 43.359 CFS UNIT VOLUME = 1.000 B = 354.67 P60 = 1.8700
AREA = .016296 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=16 CODE=1

PARTIAL HYDROGRAPH 124.00

RUNOFF VOLUME = 1.36302 INCHES = 2.2608 ACRE-FEET
PEAK DISCHARGE RATE = 66.82 CFS AT 1.499 HOURS BASIN AREA = .0311 SQ. MI.

*S UNPONDED FLOW TO INLETS AT OURAY
ADD HYD ID=15 HYD NO=124.01 ID I=15 ID II=16
PRINT HYD ID=15 CODE=1

PARTIAL HYDROGRAPH 124.01

RUNOFF VOLUME = 1.12381 INCHES = 3.1826 ACRE-FEET
PEAK DISCHARGE RATE = 98.14 CFS AT 1.499 HOURS BASIN AREA = .0531 SQ. MI.

*S TOTAL ONSITE FLOW TO OURAY SD

ADD HYD ID=12 HYD NO=124.02 ID I=12 ID II=15
PRINT HYD ID=12 CODE=1

PARTIAL HYDROGRAPH 124.02

RUNOFF VOLUME = .81686 INCHES = 7.9899 ACRE-FEET
PEAK DISCHARGE RATE = 100.48 CFS AT 1.499 HOURS BASIN AREA = .1834 SQ. MI.

*

COMPUTE NM HYD

ID=15 HYD NO=133.2 DA=0.0210 SQ MI
PER A=0.00 PER B=5.00 PER C=5.00 PER D=90.00
TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106428
UNIT PEAK = 74.618 CFS UNIT VOLUME = .9992 B = 526.28 P60 = 1.8700
AREA = .018900 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

K = .118429HR TP = .133300HR K/TP RATIO = .888442 SHAPE CONSTANT, N = 3.992479
UNIT PEAK = 5.5874 CFS UNIT VOLUME = .9980 B = 354.67 P60 = 1.8700
AREA = .002100 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .033300

PRINT HYD ID=15 CODE=1

PARTIAL HYDROGRAPH 133.20

RUNOFF VOLUME = 1.85049 INCHES = 2.0725 ACRE-FEET
PEAK DISCHARGE RATE = 56.15 CFS AT 1.499 HOURS BASIN AREA = .0210 SQ. MI.

*S EXISTING FLOW TO OURAY SD

ADD HYD ID=14 HYD NO=133.01 ID I=15 ID II=9
PRINT HYD ID=14 CODE=1

PARTIAL HYDROGRAPH 133.01

RUNOFF VOLUME = .62536 INCHES = 10.4393 ACRE-FEET
PEAK DISCHARGE RATE = 167.35 CFS AT 1.632 HOURS BASIN AREA = .3130 SQ. MI.

*S TOTAL FLOW TO OURAY STORM DRAIN

ADD HYD ID=3 HYD NO=133.02 ID I=12 ID II=14
PRINT HYD ID=3 CODE=1

PARTIAL HYDROGRAPH 133.02

RUNOFF VOLUME = .69611 INCHES = 18.4292 ACRE-FeET
PEAK DISCHARGE RATE = 257.70 CFS AT 1.532 HOURS BASIN AREA = .4964 SQ. MI.

FINISH

NORMAL PROGRAM FINISH

END TIME (HR:MIN:SEC) = 07:39:35

100-YEAR 24 HOUR RAINFALL DETAIL PRINTOUT

AHYM PROGRAM (AHYM0993) - AMAFCA VERSION OF HYMO - SEPTEMBER, 1993

RUN DATE (MON/DAY/YR) = 11/26/1993

START TIME (HR:MIN:SEC) = 07:40:15 USER NO. = COMMSC_B.T93

INPUT FILE = PW10024.DAT

*S

PARKWEST 100-YEAR 24 HOUR POST DEVELOPMENT

START

TIME=0.0 HR PUNCH CODE=0

RAINFALL

TYPE=2 RAIN QUARTER=0.0

RAIN ONE=1.87 IN RAIN SIX=2.20 IN

RAIN DAY=2.66 IN DT=0.05 HRS

COMPUTED 24-HOUR RAINFALL DISTRIBUTION BASED ON NOAA ATLAS 2 - PEAK AT 1.40 HR.
DT = .050000 HOURS END TIME = 24.000000 HOURS

.0000	.0025	.0050	.0076	.0103	.0131	.0160
.0190	.0222	.0254	.0289	.0324	.0362	.0401
.0443	.0487	.0534	.0584	.0637	.0695	.0758
.0837	.0924	.1176	.1773	.2798	.4384	.6668
.9790	1.2253	1.3366	1.4295	1.5109	1.5836	1.6495
1.7096	1.7648	1.8156	1.8624	1.9057	1.9458	1.9548
1.9631	1.9708	1.9780	1.9848	1.9912	1.9973	2.0031
2.0087	2.0140	2.0191	2.0240	2.0287	2.0333	2.0377
2.0420	2.0462	2.0502	2.0542	2.0580	2.0617	2.0653
2.0689	2.0724	2.0757	2.0791	2.0823	2.0855	2.0886
2.0916	2.0946	2.0976	2.1005	2.1033	2.1061	2.1088
2.1115	2.1142	2.1168	2.1193	2.1219	2.1244	2.1268
2.1293	2.1316	2.1340	2.1363	2.1386	2.1409	2.1431
2.1453	2.1475	2.1497	2.1518	2.1539	2.1560	2.1580
2.1601	2.1621	2.1641	2.1660	2.1680	2.1699	2.1718
2.1737	2.1756	2.1774	2.1793	2.1811	2.1829	2.1847
2.1864	2.1882	2.1899	2.1916	2.1933	2.1950	2.1967
2.1984	2.2000	2.2020	2.2039	2.2059	2.2078	2.2097
2.2117	2.2136	2.2155	2.2174	2.2193	2.2212	2.2231
2.2249	2.2268	2.2287	2.2305	2.2324	2.2342	2.2361
2.2379	2.2398	2.2416	2.2434	2.2452	2.2470	2.2488
2.2506	2.2524	2.2542	2.2559	2.2577	2.2595	2.2612
2.2630	2.2647	2.2665	2.2682	2.2700	2.2717	2.2734
2.2751	2.2768	2.2785	2.2802	2.2819	2.2836	2.2853
2.2870	2.2887	2.2903	2.2920	2.2937	2.2953	2.2970
2.2986	2.3002	2.3019	2.3035	2.3051	2.3068	2.3084
2.3100	2.3116	2.3132	2.3148	2.3164	2.3180	2.3196
2.3212	2.3227	2.3243	2.3259	2.3274	2.3290	2.3305
2.3321	2.3336	2.3352	2.3367	2.3383	2.3398	2.3413
2.3428	2.3444	2.3459	2.3474	2.3489	2.3504	2.3519
2.3534	2.3549	2.3563	2.3578	2.3593	2.3608	2.3622
2.3637	2.3652	2.3666	2.3681	2.3695	2.3710	2.3724
2.3739	2.3753	2.3767	2.3782	2.3796	2.3810	2.3824
2.3839	2.3853	2.3867	2.3881	2.3895	2.3909	2.3923
2.3937	2.3951	2.3965	2.3978	2.3992	2.4006	2.4020
2.4033	2.4047	2.4061	2.4074	2.4088	2.4101	2.4115
2.4128	2.4142	2.4155	2.4168	2.4182	2.4195	2.4208
2.4222	2.4235	2.4248	2.4261	2.4274	2.4287	2.4300
2.4314	2.4327	2.4340	2.4352	2.4365	2.4378	2.4391
2.4404	2.4417	2.4430	2.4442	2.4455	2.4468	2.4480
2.4493	2.4506	2.4518	2.4531	2.4543	2.4556	2.4568
2.4581	2.4593	2.4606	2.4618	2.4630	2.4643	2.4655
2.4667	2.4680	2.4692	2.4704	2.4716	2.4728	2.4740
2.4753	2.4765	2.4777	2.4789	2.4801	2.4813	2.4825
2.4837	2.4849	2.4860	2.4872	2.4884	2.4896	2.4908
2.4919	2.4931	2.4943	2.4955	2.4966	2.4978	2.4990

2.5001 2.5013 2.5024 2.5036 2.5047 2.5059 2.5070
2.5082 2.5093 2.5105 2.5116 2.5127 2.5139 2.5150
2.5161 2.5172 2.5184 2.5195 2.5206 2.5217 2.5229
2.5240 2.5251 2.5262 2.5273 2.5284 2.5295 2.5306
2.5317 2.5328 2.5339 2.5350 2.5361 2.5372 2.5383
2.5394 2.5404 2.5415 2.5426 2.5437 2.5448 2.5458
2.5469 2.5480 2.5490 2.5501 2.5512 2.5522 2.5533
2.5544 2.5554 2.5565 2.5575 2.5586 2.5596 2.5607
2.5617 2.5628 2.5638 2.5649 2.5659 2.5669 2.5680
2.5690 2.5700 2.5711 2.5721 2.5731 2.5741 2.5752
2.5762 2.5772 2.5782 2.5792 2.5803 2.5813 2.5823
2.5833 2.5843 2.5853 2.5863 2.5873 2.5883 2.5893
2.5903 2.5913 2.5923 2.5933 2.5943 2.5953 2.5963
2.5973 2.5982 2.5992 2.6002 2.6012 2.6022 2.6031
2.6041 2.6051 2.6061 2.6070 2.6080 2.6090 2.6099
2.6109 2.6119 2.6128 2.6138 2.6148 2.6157 2.6167
2.6176 2.6186 2.6195 2.6205 2.6214 2.6224 2.6233
2.6243 2.6252 2.6261 2.6271 2.6280 2.6290 2.6299
2.6308 2.6318 2.6327 2.6336 2.6346 2.6355 2.6364
2.6373 2.6383 2.6392 2.6401 2.6410 2.6419 2.6428
2.6438 2.6447 2.6456 2.6465 2.6474 2.6483 2.6492
2.6501 2.6510 2.6519 2.6528 2.6537 2.6546 2.6555
2.6564 2.6573 2.6582 2.6591 2.6600

*

COMPUTE NM HYD ID=1 HYD NO=14.0 DA=0.8000 SQ MI
PER A=69.00 PER B=8.00 PER C=23.00 PER D=0.00
TP=-0.3459 HR MASS RAIN=-1

K = .326587HR TP = .345900HR K/TP RATIO = .944166 SHAPE CONSTANT, N = 3.744453
UNIT PEAK = 781.16 CFS UNIT VOLUME = 1.000 B = 337.76 P60 = 1.8700
AREA = .800000 SQ MI IA = .56900 INCHES INF = 1.44320 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

PRINT HYD ID=1 CODE=1

OUTFLOW HYDROGRAPH REACH 14.00

RUNOFF VOLUME = .55074 INCHES = 23.4981 ACRE-FEET
PEAK DISCHARGE RATE = 414.29 CFS AT 1.750 HOURS BASIN AREA = .8000 SQ. MI.

SED WASH LOAD ID=1 K=0.19 C=0.25
P=1.0 IS=0.333
IMPERVIOUS=0.0 FACTOR=3.0
SEDIMENT YIELD (Wash Mat.) = 771.7 (TONS) WASH LOAD CONCENTRATION = 23594 (ppm-w)
PERCENTAGE IMPERVIOUS AREA = .000 WASH LOAD FACTOR = 3.00000

PRINT HYD ID=1 CODE=1

OUTFLOW HYDROGRAPH REACH 14.00

RUNOFF VOLUME = .55074 INCHES = 23.4981 ACRE-FEET
PEAK DISCHARGE RATE = 414.29 CFS AT 1.750 HOURS BASIN AREA = .8000 SQ. MI.

*S ROUTE L14 THROUGH 131

COMPUTE RATING CURVE RC=1 VS NO=1 NO SEGS=1 MIN ELEV=0.0 FT

MAX ELEV=5.0 FT CH SLP=0.0325 FP

SLP= 0.0325 N=0.03 DIST=100 FT

DIST	ELEV	DIST	ELEV	DIST	ELEV	DIST	ELEV
0.0	5.0	20	0.0	80	0.0	100	5.0

RATING CURVE VALLEY SECTION 1.0

WATER SURFACE ELEV	FLOW AREA SQ FT	FLOW RATE CFS	TOP WIDTH FT
.00	.00	.00	.00
.26	16.07	58.21	62.11
.53	32.69	185.84	64.21
.79	49.86	367.44	66.32
1.05	67.59	597.16	68.42
1.32	85.87	871.70	70.53
1.58	104.71	1189.01	72.63
1.84	124.10	1547.69	74.74
2.11	144.04	1946.80	76.84
2.37	164.54	2385.70	78.95
2.63	185.60	2863.98	81.05
2.89	207.20	3381.36	83.16
3.16	229.36	3937.71	85.26
3.42	252.08	4532.98	87.37
3.68	275.35	5167.20	89.47
3.95	299.17	5840.48	91.58
4.21	323.55	6552.94	93.68
4.47	348.48	7304.79	95.79
4.74	373.96	8096.24	97.89
5.00	400.00	8927.54	100.00

COMPUTE TRAVEL TIME ID=2 REACH NO=1 NO VS=1 L=4000 FT SLP=0.0325

TRAVEL TIME TABLE

REACH= 1.0

WATER DEPTH FEET	AVERAGE AREA SQ.FT.	FLOW RATE CFS	TRAVEL TIME HRS
.263	16.066	58.21	.3067
.526	32.687	185.84	.1954
.789	49.861	367.44	.1508
1.053	67.590	597.16	.1258
1.316	85.873	871.70	.1095
1.579	104.709	1189.01	.0978
1.842	124.100	1547.69	.0891
2.105	144.044	1946.80	.0822
2.368	164.543	2385.70	.0766
2.632	185.596	2863.98	.0720
2.895	207.202	3381.36	.0681
3.158	229.363	3937.71	.0647
3.421	252.078	4532.98	.0618
3.684	275.346	5167.20	.0592
3.947	299.169	5840.48	.0569
4.211	323.546	6552.94	.0549
4.474	348.476	7304.79	.0530
4.737	373.961	8096.24	.0513
5.000	400.000	8927.54	.0498

ROUTE ID=2 HYD NO= 14.01 INFLOW ID=1
PRINT HYD ID=2 CODE=1

OUTFLOW HYDROGRAPH REACH 14.01

RUNOFF VOLUME = .55074 INCHES = 23.4982 ACRE-FEET
 PEAK DISCHARGE RATE = 363.48 CFS AT 1.850 HOURS BASIN AREA = .8000 SQ. MI.

COMPUTE NM HYD

ID=3 HYD NO=131.0 DA=0.2802 SQ MI
 PER A=54.75 PER B=3.99 PER C=41.26 PER D=0.00
 TP=-0.3695 HR MASS RAIN=-1

K = .341904HR TP = .369500HR K/TP RATIO = .925316 SHAPE CONSTANT, N = 3.824152
 UNIT PEAK = 260.31 CFS UNIT VOLUME = 1.000 B = 343.27 P60 = 1.8700
 AREA = .280200 SQ MI IA = .52024 INCHES INF = 1.30666 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

PRINT HYD ID=3 CODE=1

PARTIAL HYDROGRAPH 131.00

RUNOFF VOLUME = .63001 INCHES = 9.4148 ACRE-FEET
 PEAK DISCHARGE RATE = 157.05 CFS AT 1.750 HOURS BASIN AREA = .2802 SQ. MI.

SED WASH LOAD ID=3 K=0.12 C=0.25

P=1.0 LS=0.955
 IMPERVIOUS=0.0 FACTOR=3.0
 SEDIMENT YIELD (Wash Mat.) = 486.5 (TONS) WASH LOAD CONCENTRATION = 36628 (ppm-w)
 PERCENTAGE IMPERVIOUS AREA = .000 WASH LOAD FACTOR = 3.00000

PRINT HYD ID=3 CODE=1

PARTIAL HYDROGRAPH 131.00

RUNOFF VOLUME = .63001 INCHES = 9.4148 ACRE-FEET
 PEAK DISCHARGE RATE = 157.05 CFS AT 1.750 HOURS BASIN AREA = .2802 SQ. MI.

*S BASINS L14 AND 131 ENTERING THE SITE

ADD HYD ID=3 HYD NO=131.01 ID I=2 ID II=3
 PRINT HYD ID=3 CODE=1

PARTIAL HYDROGRAPH 131.01

RUNOFF VOLUME = .57130 INCHES = 32.9130 ACRE-FEET
 PEAK DISCHARGE RATE = 509.31 CFS AT 1.850 HOURS BASIN AREA = 1.0802 SQ. MI.

SEDIMENT TRANS

ID=3 IDS=1 CODE=1
 A=0.0002 B=4.19 C=0.19 D=-2.55
 NDMB WASH=1 WASH CONC=27400 NDMB SECTIONS=7
 FLOW VELOCITY WIDTH

(CFS)	(FPS)	(FT)
100.	3.96	52.95
200.	4.80	64.81
300.	5.36	73.59
400.	5.56	88.83
500.	5.69	105.67
600.	6.09	106.94
700.	6.46	108.10

* * * * *

TIME (HRS)	WATER FLOW (CFS)	VELOCITY (FT/SEC)	HYD. DEPTH (FT)	WIDTH (FT)	WASHLOAD CONC. (PPM-W)	BED MAT. TRANSPORT (CFS)	BED CONC. (PPM-W)	TOTAL CONC. (PPM-W)	BULKING FACTOR	ACCU. SEDIMENT (TONS)
.000	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
.050	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
.100	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
.150	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
.200	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
.250	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
.300	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
.350	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
.400	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
.450	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
.500	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
.550	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
.600	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
.650	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
.700	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
.750	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
.800	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
.850	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
.900	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
.950	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
1.000	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
1.050	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
1.100	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
1.150	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
1.200	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
1.250	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
1.300	.00	.000	.000	.00	27400.	.00	0.	27400.	1.0000	.00
1.350	1.31	1.356	.095	10.08	27400.	.00	9974.	36838.	1.0144	.28
1.400	9.96	2.693	.267	13.84	27400.	.15	37554.	62960.	1.0254	4.04
1.450	35.11	3.531	.402	24.76	27400.	.88	62489.	86613.	1.0358	22.74
1.500	81.90	3.899	.466	45.09	27400.	2.51	74982.	98475.	1.0412	72.98
1.550	149.17	4.446	.571	58.78	27400.	5.88	94616.	117135.	1.0501	184.13
1.600	231.18	5.001	.684	67.55	27400.	11.46	116102.	137577.	1.0602	391.24
1.650	328.82	5.427	.777	77.98	27400.	19.09	133325.	153982.	1.0687	727.34
1.700	421.01	5.592	.815	92.37	27400.	25.86	139987.	160331.	1.0721	1178.81
1.750	478.58	5.666	.828	102.06	27400.	30.29	143631.	163804.	1.0739	1705.31
1.800	508.05	5.724	.839	105.77	27400.	32.85	146272.	166323.	1.0753	2274.54
1.850	509.31	5.729	.840	105.79	27400.	32.99	146500.	166540.	1.0754	2846.07
1.900	484.58	5.673	.829	103.07	27400.	30.75	143969.	164127.	1.0741	3380.42
1.950	444.00	5.623	.820	96.24	27400.	27.62	141535.	161806.	1.0728	3861.77
2.000	400.11	5.560	.810	88.85	27400.	24.26	138457.	158872.	1.0713	4286.19
2.050	358.28	5.487	.792	82.47	27400.	21.21	135628.	156176.	1.0698	4658.58
2.100	319.08	5.405	.772	76.50	27400.	18.39	132498.	153193.	1.0683	4982.76
2.150	279.81	5.265	.740	71.82	27400.	15.34	126822.	147786.	1.0654	5255.26
2.200	243.93	5.075	.700	68.67	27400.	12.44	119097.	140429.	1.0616	5479.06

2.250	212.23	4.882	.660	65.88	27400.	10.04	111370.	133073.	1.0579	5662.01
2.300	184.81	4.705	.623	63.01	27400.	8.13	104455.	126492.	1.0546	5812.31
2.350	162.94	4.553	.592	60.41	27400.	6.73	98646.	120967.	1.0519	5938.24
2.400	144.89	4.410	.564	58.27	27400.	5.63	93297.	115880.	1.0495	6044.89
2.450	129.43	4.273	.537	56.44	27400.	4.73	88247.	111080.	1.0472	6135.72
2.500	116.25	4.142	.511	54.88	27400.	4.00	83539.	106605.	1.0450	6213.62
2.550	104.98	4.019	.488	53.54	27400.	3.41	79181.	102464.	1.0431	6280.93
2.600	95.15	3.946	.474	50.84	27400.	2.98	76631.	100042.	1.0419	6340.33
2.650	86.81	3.918	.469	47.22	27400.	2.68	75642.	99102.	1.0415	6393.96
2.700	79.93	3.891	.464	44.23	27400.	2.43	74698.	98205.	1.0411	6442.84
2.750	74.09	3.865	.460	41.69	27400.	2.23	73785.	97338.	1.0407	6487.71
TIME	WATER FLOW	VELOCITY	HYD. DEPTH	WIDTH	WASHLOAD CONC.	BED MAT. TRANSPORT	BED CONC.	TOTAL CONC.	BULKING FACTOR	ACCUM. SEDIMENT
(HRS)	(CFS)	(FT/SEC)	(FT)	(FT)	(PPM-W)	(CFS)	(PPM-W)	(PPM-W)		(TONS)
2.800	69.07	3.839	.455	39.52	27400.	2.05	72903.	96501.	1.0403	6529.14
2.850	64.74	3.815	.451	37.63	27400.	1.90	72056.	95696.	1.0399	6567.62
2.900	60.85	3.791	.447	35.94	27400.	1.76	71213.	94896.	1.0396	6603.45
2.950	57.26	3.766	.442	34.38	27400.	1.64	70358.	94084.	1.0392	6636.85
3.000	53.94	3.740	.438	32.94	27400.	1.52	69490.	93260.	1.0388	6668.00
3.050	50.86	3.714	.433	31.60	27400.	1.41	68609.	92423.	1.0384	6697.09
3.100	47.99	3.688	.429	30.36	27400.	1.32	67715.	91574.	1.0380	6724.25
3.150	45.32	3.661	.424	29.19	27400.	1.22	66808.	90713.	1.0376	6749.64
3.200	42.82	3.634	.419	28.11	27400.	1.14	65888.	89840.	1.0372	6773.38
3.250	40.49	3.606	.414	27.10	27400.	1.06	64957.	88955.	1.0368	6795.58
3.300	38.31	3.577	.409	26.15	27400.	.99	64013.	88059.	1.0364	6816.36
3.350	36.26	3.548	.405	25.26	27400.	.92	63057.	87153.	1.0360	6835.80
3.400	34.34	3.519	.399	24.43	27400.	.86	62091.	86235.	1.0356	6854.00
3.450	32.53	3.489	.394	23.64	27400.	.80	61114.	85308.	1.0352	6871.03
3.500	30.83	3.458	.389	22.90	27400.	.74	60126.	84371.	1.0348	6886.99
3.550	29.23	3.427	.384	22.21	27400.	.69	59130.	83424.	1.0343	6901.93
3.600	27.72	3.396	.379	21.55	27400.	.65	58124.	82470.	1.0339	6915.92
3.650	26.29	3.364	.373	20.93	27400.	.60	57109.	81507.	1.0335	6929.02
3.700	24.94	3.332	.368	20.35	27400.	.56	56088.	80538.	1.0331	6941.29
3.750	23.67	3.299	.363	19.79	27400.	.52	55059.	79562.	1.0326	6952.78
3.800	22.47	3.265	.357	19.27	27400.	.48	54024.	78580.	1.0322	6963.54
3.850	21.33	3.232	.352	18.78	27400.	.45	52985.	77594.	1.0317	6973.62
3.900	20.25	3.197	.346	18.31	27400.	.42	51941.	76603.	1.0313	6983.06
3.950	19.23	3.163	.340	17.86	27400.	.39	50894.	75610.	1.0309	6991.89
4.000	18.27	3.128	.335	17.44	27400.	.36	49844.	74615.	1.0304	7000.16
4.050	17.35	3.093	.329	17.05	27400.	.34	48793.	73618.	1.0300	7007.91
4.100	16.48	3.057	.323	16.67	27400.	.31	47742.	72621.	1.0295	7015.16
4.150	15.66	3.021	.318	16.31	27400.	.29	46691.	71624.	1.0291	7021.94
4.200	14.88	2.985	.312	15.97	27400.	.27	45642.	70630.	1.0287	7028.29
4.250	14.14	2.948	.306	15.65	27400.	.25	44596.	69637.	1.0282	7034.23
4.300	13.43	2.912	.301	15.34	27400.	.23	43554.	68649.	1.0278	7039.79
4.350	12.77	2.875	.295	15.05	27400.	.21	42516.	67665.	1.0274	7045.00
4.400	12.13	2.838	.289	14.78	27400.	.20	41484.	66686.	1.0270	7049.86
4.450	11.53	2.800	.284	14.52	27400.	.18	40458.	65714.	1.0265	7054.42
4.500	10.96	2.763	.278	14.27	27400.	.17	39441.	64749.	1.0261	7058.68
4.550	10.42	2.725	.272	14.03	27400.	.16	38431.	63792.	1.0257	7062.66
4.600	9.90	2.688	.267	13.81	27400.	.15	37431.	62845.	1.0253	7066.39
4.650	9.41	2.650	.261	13.60	27400.	.13	36442.	61907.	1.0249	7069.88
4.700	8.94	2.613	.256	13.39	27400.	.12	35463.	60979.	1.0245	7073.14
4.750	8.50	2.575	.250	13.20	27400.	.11	34497.	60063.	1.0241	7076.19
4.800	8.08	2.538	.245	13.02	27400.	.11	33543.	59159.	1.0237	7079.05
4.850	7.68	2.500	.239	12.85	27400.	.10	32602.	58267.	1.0233	7081.72
4.900	7.30	2.463	.234	12.68	27400.	.09	31675.	57389.	1.0230	7084.21
4.950	6.94	2.425	.229	12.53	27400.	.08	30763.	56525.	1.0226	7086.55

5.000	6.60	2.388	.223	12.38	27400.	.08	29865.	55674.	1.0222	7088.74
5.050	6.28	2.351	.218	12.23	27400.	.07	28983.	54839.	1.0219	7090.78
5.100	5.97	2.314	.213	12.10	27400.	.07	28117.	54018.	1.0215	7092.69
5.150	5.67	2.277	.208	11.97	27400.	.06	27268.	53213.	1.0212	7094.48
5.200	5.39	2.241	.203	11.85	27400.	.06	26434.	52424.	1.0209	7096.16
5.250	5.13	2.205	.198	11.74	27400.	.05	25618.	51651.	1.0206	7097.73
5.300	4.87	2.169	.193	11.63	27400.	.05	24819.	50894.	1.0202	7099.19
5.350	4.63	2.133	.189	11.52	27400.	.04	24038.	50153.	1.0199	7100.57
5.400	4.40	2.098	.184	11.42	27400.	.04	23273.	49430.	1.0196	7101.85
5.450	4.19	2.062	.179	11.33	27400.	.04	22527.	48723.	1.0193	7103.06
5.500	3.98	2.028	.175	11.24	27400.	.03	21798.	48032.	1.0190	7104.19
5.550	3.79	1.993	.170	11.15	27400.	.03	21087.	47359.	1.0188	7105.24
TIME (HRS)	WATER FLOW (CFS)	VELOCITY (FT/SEC)	HYD. DEPTH (FT)	WIDTH (FT)	WASHLOAD CONC. (PPM-W)	BED MAT. TRANSPORT (CFS)	BED CONC. (PPM-W)	TOTAL CONC. (PPM-W)	BULKING FACTOR	ACCUM. SEDIMENT (TONS)
5.600	3.60	1.959	.166	11.07	27400.	.03	20394.	46702.	1.0185	7106.23
5.650	3.42	1.925	.162	11.00	27400.	.03	19718.	46062.	1.0182	7107.16
5.700	3.25	1.892	.157	10.92	27400.	.02	19060.	45439.	1.0180	7108.03
5.750	3.09	1.859	.153	10.85	27400.	.02	18419.	44832.	1.0177	7108.85
5.800	2.94	1.826	.149	10.79	27400.	.02	17796.	44242.	1.0175	7109.61
5.850	2.80	1.794	.145	10.72	27400.	.02	17190.	43668.	1.0172	7110.33
5.900	2.66	1.762	.142	10.66	27400.	.02	16601.	43111.	1.0170	7111.00
5.950	2.53	1.730	.138	10.61	27400.	.02	16029.	42569.	1.0168	7111.63
6.000	2.40	1.699	.134	10.55	27400.	.01	15473.	42043.	1.0166	7112.22
6.050	2.28	1.668	.130	10.50	27400.	.01	14934.	41532.	1.0164	7112.78
6.100	2.17	1.638	.127	10.45	27400.	.01	14410.	41037.	1.0161	7113.30
6.150	2.07	1.608	.123	10.41	27400.	.01	13903.	40557.	1.0160	7113.79
6.200	1.96	1.579	.120	10.36	27400.	.01	13411.	40091.	1.0158	7114.25
6.250	1.87	1.550	.117	10.32	27400.	.01	12935.	39640.	1.0156	7114.69
6.300	1.78	1.521	.114	10.28	27400.	.01	12473.	39203.	1.0154	7115.09
6.350	1.69	1.493	.110	10.24	27400.	.01	12026.	38780.	1.0152	7115.48
6.400	1.60	1.465	.107	10.21	27400.	.01	11593.	38370.	1.0151	7115.83
6.450	1.53	1.438	.104	10.17	27400.	.01	11175.	37974.	1.0149	7116.17
6.500	1.45	1.411	.101	10.14	27400.	.01	10770.	37590.	1.0147	7116.49
6.550	1.38	1.384	.099	10.11	27400.	.01	10378.	37220.	1.0146	7116.79
6.600	1.31	1.358	.096	10.08	27400.	.00	9999.	36861.	1.0144	7117.07
6.650	1.25	1.333	.093	10.05	27400.	.00	9633.	36515.	1.0143	7117.34
6.700	1.19	1.307	.090	10.02	27400.	.00	9279.	36180.	1.0142	7117.59
6.750	1.13	1.283	.088	10.00	27400.	.00	8938.	35857.	1.0140	7117.82
6.800	1.07	1.258	.085	9.97	27400.	.00	8608.	35544.	1.0139	7118.04
6.850	1.02	1.234	.083	9.95	27400.	.00	8289.	35243.	1.0138	7118.25
6.900	.97	1.216	.081	9.83	27400.	.00	8047.	35014.	1.0137	7118.45
6.950	.92	1.200	.080	9.64	27400.	.00	7851.	34828.	1.0136	7118.64
7.000	.88	1.185	.078	9.46	27400.	.00	7659.	34647.	1.0135	7118.81
7.050	.83	1.170	.077	9.28	27400.	.00	7472.	34470.	1.0135	7118.98
7.100	.79	1.156	.075	9.11	27400.	.00	7290.	34297.	1.0134	7119.14
7.150	.75	1.141	.074	8.94	27400.	.00	7112.	34129.	1.0133	7119.29
7.200	.72	1.127	.072	8.77	27400.	.00	6938.	33964.	1.0133	7119.43
7.250	.68	1.113	.071	8.61	27400.	.00	6768.	33804.	1.0132	7119.56
7.300	.65	1.099	.070	8.45	27400.	.00	6603.	33647.	1.0131	7119.69
7.350	.62	1.085	.068	8.29	27400.	.00	6442.	33495.	1.0131	7119.81
7.400	.58	1.072	.067	8.13	27400.	.00	6284.	33346.	1.0130	7119.92
7.450	.56	1.058	.066	7.98	27400.	.00	6131.	33200.	1.0130	7120.03
7.500	.53	1.045	.065	7.83	27400.	.00	5981.	33058.	1.0129	7120.13
7.550	.50	1.032	.063	7.68	27400.	.00	5834.	32920.	1.0128	7120.23
7.600	.48	1.019	.062	7.54	27400.	.00	5692.	32785.	1.0128	7120.32
7.650	.45	1.006	.061	7.40	27400.	.00	5553.	32653.	1.0127	7120.40
7.700	.43	.993	.060	7.26	27400.	.00	5417.	32525.	1.0127	7120.49

7.750	.41	.981	.059	7.12	27400.	.00	5284.	32399.	1.0126	7120.56
7.800	.39	.969	.058	6.99	27400.	.00	5155.	32277.	1.0126	7120.64
7.850	.37	.957	.057	6.86	27400.	.00	5029.	32158.	1.0125	7120.71
7.900	.35	.945	.056	6.73	27400.	.00	4906.	32041.	1.0125	7120.77
7.950	.34	.933	.055	6.60	27400.	.00	4786.	31928.	1.0124	7120.83
8.000	.32	.921	.053	6.48	27400.	.00	4668.	31817.	1.0124	7120.89
8.050	.30	.910	.052	6.36	27400.	.00	4554.	31709.	1.0124	7120.95
8.100	.29	.898	.052	6.24	27400.	.00	4443.	31603.	1.0123	7121.00
8.150	.27	.887	.051	6.12	27400.	.00	4334.	31500.	1.0123	7121.05
8.200	.26	.876	.050	6.01	27400.	.00	4228.	31400.	1.0122	7121.10
8.250	.25	.865	.049	5.90	27400.	.00	4124.	31302.	1.0122	7121.14
8.300	.24	.854	.048	5.79	27400.	.00	4023.	31206.	1.0122	7121.19
8.350	.22	.843	.047	5.68	27400.	.00	3925.	31113.	1.0121	7121.23
8.400	.21	.833	.046	5.57	27400.	.00	3829.	31022.	1.0121	7121.26
8.450	.20	.822	.045	5.47	27400.	.00	3735.	30933.	1.0120	7121.30
8.500	.19	.812	.044	5.36	27400.	.00	3643.	30847.	1.0120	7121.34
8.550	.18	.802	.043	5.26	27400.	.00	3554.	30762.	1.0120	7121.37
8.600	.17	.792	.043	5.17	27400.	.00	3467.	30680.	1.0119	7121.40
8.650	.17	.782	.042	5.07	27400.	.00	3382.	30599.	1.0119	7121.43
8.700	.16	.772	.041	4.97	27400.	.00	3299.	30521.	1.0119	7121.46
8.750	.15	.762	.040	4.88	27400.	.00	3218.	30445.	1.0118	7121.48
8.800	.14	.753	.040	4.79	27400.	.00	3139.	30370.	1.0118	7121.51
8.850	.14	.743	.039	4.70	27400.	.00	3062.	30297.	1.0118	7121.53
8.900	.13	.734	.038	4.61	27400.	.00	2987.	30226.	1.0118	7121.55
8.950	.12	.725	.037	4.53	27400.	.00	2914.	30157.	1.0117	7121.58
9.000	.12	.716	.037	4.44	27400.	.00	2843.	30089.	1.0117	7121.60
9.050	.11	.707	.036	4.36	27400.	.00	2773.	30023.	1.0117	7121.61
9.100	.11	.698	.035	4.28	27400.	.00	2705.	29959.	1.0117	7121.63
9.150	.10	.689	.035	4.20	27400.	.00	2639.	29896.	1.0116	7121.65
9.200	.10	.681	.034	4.12	27400.	.00	2574.	29835.	1.0116	7121.67
9.250	.09	.672	.033	4.04	27400.	.00	2511.	29775.	1.0116	7121.68
9.300	.09	.664	.033	3.96	27400.	.00	2449.	29717.	1.0116	7121.70
9.350	.08	.655	.032	3.89	27400.	.00	2389.	29660.	1.0115	7121.71
9.400	.08	.647	.032	3.82	27400.	.00	2331.	29605.	1.0115	7121.72
9.450	.07	.639	.031	3.75	27400.	.00	2274.	29551.	1.0115	7121.74
9.500	.07	.631	.030	3.68	27400.	.00	2218.	29498.	1.0115	7121.75
9.550	.07	.623	.030	3.61	27400.	.00	2163.	29447.	1.0114	7121.76
9.600	.06	.615	.029	3.54	27400.	.00	2110.	29396.	1.0114	7121.77
9.650	.06	.608	.029	3.47	27400.	.00	2059.	29347.	1.0114	7121.78
9.700	.06	.600	.028	3.41	27400.	.00	2008.	29300.	1.0114	7121.79
9.750	.05	.593	.028	3.34	27400.	.00	1959.	29253.	1.0114	7121.80
9.800	.05	.585	.027	3.28	27400.	.00	1911.	29208.	1.0114	7121.81
9.850	.05	.578	.027	3.22	27400.	.00	1864.	29163.	1.0113	7121.82
9.900	.05	.571	.026	3.16	27400.	.00	1818.	29120.	1.0113	7121.83
9.950	.04	.563	.026	3.10	27400.	.00	1774.	29078.	1.0113	7121.83
10.000	.04	.556	.025	3.04	27400.	.00	1730.	29037.	1.0113	7121.84
10.050	.04	.549	.025	2.99	27400.	.00	1688.	28997.	1.0113	7121.85
10.100	.04	.543	.024	2.93	27400.	.00	1646.	28957.	1.0113	7121.85
10.150	.04	.536	.024	2.88	27400.	.00	1606.	28919.	1.0112	7121.86
10.200	.03	.529	.023	2.82	27400.	.00	1566.	28882.	1.0112	7121.87
10.250	.03	.522	.023	2.77	27400.	.00	1528.	28846.	1.0112	7121.87
10.300	.03	.516	.022	2.72	27400.	.00	1491.	28810.	1.0112	7121.88
10.350	.03	.509	.022	2.67	27400.	.00	1454.	28775.	1.0112	7121.88
10.400	.03	.503	.022	2.62	27400.	.00	1418.	28742.	1.0112	7121.89
10.450	.03	.497	.021	2.57	27400.	.00	1384.	28709.	1.0112	7121.89

10.500	.03	.491	.021	2.52	27400.	.00	1350.	.28677.	1.0111	7121.90
10.550	.02	.484	.020	2.47	27400.	.00	1316.	.28645.	1.0111	7121.90
10.600	.02	.478	.020	2.43	27400.	.00	1284.	.28615.	1.0111	7121.90
10.650	.02	.467	.019	2.34	27400.	.00	1225.	.28559.	1.0111	7121.91
10.700	.02	.447	.018	2.19	27400.	.00	1125.	.28464.	1.0111	7121.91
10.750	.01	.423	.017	2.02	27400.	.00	1008.	.28353.	1.0110	7121.91
10.800	.01	.418	.016	1.98	27400.	.00	983.	.28329.	1.0110	7121.91
10.850	.01	.412	.016	1.94	27400.	.00	958.	.28306.	1.0110	7121.92
10.900	.01	.407	.016	1.90	27400.	.00	934.	.28284.	1.0110	7121.92
10.950	.01	.402	.015	1.87	27400.	.00	911.	.28262.	1.0110	7121.92
11.000	.01	.397	.015	1.83	27400.	.00	888.	.28240.	1.0110	7121.92
11.050	.01	.392	.015	1.80	27400.	.00	866.	.28220.	1.0110	7121.92
11.100	.01	.387	.015	1.76	27400.	.00	845.	.28199.	1.0109	7121.92
11.150	.01	.382	.014	1.73	27400.	.00	824.	.28179.	1.0109	7121.93
11.200	.01	.377	.014	1.70	27400.	.00	803.	.28160.	1.0109	7121.93
11.250	.01	.372	.014	1.67	27400.	.00	783.	.28141.	1.0109	7121.93
11.300	.01	.367	.013	1.63	27400.	.00	762.	.28121.	1.0109	7121.93
11.350	.01	.359	.013	1.58	27400.	.00	730.	.28091.	1.0109	7121.93
11.400	.01	.350	.013	1.52	27400.	.00	692.	.28055.	1.0109	7121.93
11.450	.01	.340	.012	1.46	27400.	.00	656.	.28021.	1.0109	7121.93
11.500	.01	.331	.012	1.40	27400.	.00	622.	.27988.	1.0109	7121.93
11.550	.00	.322	.011	1.34	27400.	.00	589.	.27958.	1.0109	7121.94
11.600	.00	.314	.011	1.29	27400.	.00	559.	.27929.	1.0108	7121.94
11.650	.00	.305	.010	1.24	27400.	.00	530.	.27901.	1.0108	7121.94
11.700	.00	.297	.010	1.19	27400.	.00	502.	.27875.	1.0108	7121.94
11.750	.00	.289	.009	1.14	27400.	.00	476.	.27850.	1.0108	7121.94
11.800	.00	.282	.009	1.10	27400.	.00	452.	.27827.	1.0108	7121.94
11.850	.00	.274	.009	1.05	27400.	.00	428.	.27805.	1.0108	7121.94
11.900	.00	.267	.008	1.01	27400.	.00	406.	.27784.	1.0108	7121.94
11.950	.00	.260	.008	.97	27400.	.00	385.	.27764.	1.0108	7121.94
12.000	.00	.253	.008	.93	27400.	.00	365.	.27746.	1.0108	7121.94
12.050	.00	.246	.007	.90	27400.	.00	346.	.27728.	1.0108	7121.94
12.100	.00	.240	.007	.86	27400.	.00	329.	.27711.	1.0108	7121.94
12.150	.00	.233	.007	.83	27400.	.00	312.	.27695.	1.0107	7121.94
12.200	.00	.227	.007	.79	27400.	.00	296.	.27680.	1.0107	7121.94
12.250	.00	.221	.006	.76	27400.	.00	281.	.27665.	1.0107	7121.94

AT PEAK FLOW OF 509.306 WITH TIME AT 1.85 HOURS: BEDMAT = 2410.29 (TONS) = 1.1067 (AC-FT bulked)
TOTAL SED = 2846.07 (TONS) = 1.3067 (AC-FT bulked)

PEAK BULKING FACTOR = 1.075403 = 166540. (PPM-W)

WEIGHT (TONS)	UNBULKED VOLUME (AC-FT)	BULKED VOLUME (AC-FT)	CONCENTRATION BY WEIGHT (PPM)	AVERAGE BULKING FACTOR
WASHMAT = 1260.17	.3499	.5786	27400.	
BEDMAT = 5861.77	1.6276	2.6914	115861.	
TOTAL SEDIMENT = 7121.94	1.9775	3.2699	137348.	1.060081

SEDIMENT TRANSPORT CAPACITY: 3.02717 AC-FT/SQ MI (bulked) = 10.3018 TONS/ACRE (at Porosity=0.395)

PRINT HYD

ID=3 CODE=1

PARTIAL HYDROGRAPH 131.01

RUNOFF VOLUME = .57130 INCHES = 32.9130 ACRE-FEET
PEAK DISCHARGE RATE = 509.31 CFS AT 1.850 HOURS BASIN AREA = 1.0802 SQ. MI.

* *****

COMPUTE NM HYD

ID=4 HYD NO=130.2 DA=0.0690 SQ MI
PER A=74.20 PER B=5.80 PER C=20.00 PER D=0.00
TP=-0.1333 HR MASS RAIN=-1

K = .149622HR TP = .133300HR K/TP RATIO = 1.122445 SHAPE CONSTANT, N = 3.151978
UNIT PEAK = 152.18 CFS UNIT VOLUME = .9997 B = 293.99 P60 = 1.8700
AREA = .069000 SQ MI IA = .58130 INCHES INF = 1.47764 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

PRINT HYD ID=4 CODE=1

PARTIAL HYDROGRAPH 130.20

RUNOFF VOLUME = .53253 INCHES = 1.9597 ACRE-FEET
PEAK DISCHARGE RATE = 69.75 CFS AT 1.500 HOURS BASIN AREA = .0690 SQ. MI.

SED WASH LOAD ID=4 K=0.17 C=0.25
P=1.0 LS=0.418
IMPERVIOUS=0.0 FACTOR=3.0
SEDIMENT YIELD (Wash Mat.) = 79.5 (TONS) WASH LOAD CONCENTRATION = 28988 (ppm-w)
PERCENTAGE IMPERVIOUS AREA = .000 WASH LOAD FACTOR = 3.00000

PRINT HYD ID=4 CODE=1

PARTIAL HYDROGRAPH 130.20

RUNOFF VOLUME = .53253 INCHES = 1.9597 ACRE-FEET
PEAK DISCHARGE RATE = 69.75 CFS AT 1.500 HOURS BASIN AREA = .0690 SQ. MI.

SEDIMENT TRANS

ID=4 IDS=2 CODE=1
A=0.0002 B=4.19 C=0.19 D=-2.55
NUMB WASH=-1 NUMB SECTIONS=8

FLOW	VELOCITY	WIDTH
(CFS)	(FPS)	(FT)
10.0	1.47	24.25
20.0	1.75	31.48
30.0	1.93	36.66
40.0	2.08	40.81
50.0	2.20	44.36
60.0	2.31	47.48
70.0	2.40	50.30
80.0	2.48	52.87

Use wash load from SED WASH LOAD command - Concentration = 28988 (PPM-w)

* * * * *

TIME (HRS)	WATER FLOW (CFS)	VELOCITY (FT/SEC)	HYD. DEPTH (FT)	WIDTH (FT)	WASHLOAD CONC. (PPM-W)	BED MAT. TRANSPORT (CFS)	BED CONC. (PPM-W)	TOTAL CONC. (PPM-W)	BULKING FACTOR	ACCUM. SEDIMENT (TONS)
.000	.00	.000	.000	.00	28988.	.00	0.	28988.	1.0000	.00
.050	.00	.000	.000	.00	28988.	.00	0.	28988.	1.0000	.00
.100	.00	.000	.000	.00	28988.	.00	0.	28988.	1.0000	.00
.150	.00	.000	.000	.00	28988.	.00	0.	28988.	1.0000	.00
.200	.00	.000	.000	.00	28988.	.00	0.	28988.	1.0000	.00
.250	.00	.000	.000	.00	28988.	.00	0.	28988.	1.0000	.00
.300	.00	.000	.000	.00	28988.	.00	0.	28988.	1.0000	.00
.350	.00	.000	.000	.00	28988.	.00	0.	28988.	1.0000	.00
.400	.00	.000	.000	.00	28988.	.00	0.	28988.	1.0000	.00
.450	.00	.000	.000	.00	28988.	.00	0.	28988.	1.0000	.00
.500	.00	.000	.000	.00	28988.	.00	0.	28988.	1.0000	.00
.550	.00	.000	.000	.00	28988.	.00	0.	28988.	1.0000	.00
.600	.00	.000	.000	.00	28988.	.00	0.	28988.	1.0000	.00
.650	.00	.000	.000	.00	28988.	.00	0.	28988.	1.0000	.00
.700	.00	.000	.000	.00	28988.	.00	0.	28988.	1.0000	.00
.750	.00	.000	.000	.00	28988.	.00	0.	28988.	1.0000	.00
.800	.00	.000	.000	.00	28988.	.00	0.	28988.	1.0000	.00
.850	.00	.000	.000	.00	28988.	.00	0.	28988.	1.0000	.00
.900	.00	.000	.000	.00	28988.	.00	0.	28988.	1.0000	.00
.950	.00	.000	.000	.00	28988.	.00	0.	28988.	1.0000	.00
1.000	.00	.000	.000	.00	28988.	.00	0.	28988.	1.0000	.00
1.050	.00	.000	.000	.00	28988.	.00	0.	28988.	1.0000	.00
1.100	.00	.000	.000	.00	28988.	.00	0.	28988.	1.0000	.00
1.150	.00	.000	.000	.00	28988.	.00	0.	28988.	1.0000	.00
1.200	.00	.000	.000	.00	28988.	.00	0.	28988.	1.0000	.00
1.250	.00	.000	.000	.00	28988.	.00	0.	28988.	1.0000	.00
1.300	.00	.000	.000	.00	28988.	.00	0.	28988.	1.0000	.00
1.350	4.10	1.245	.219	15.04	28988.	.01	3924.	32688.	1.0128	.78
1.400	24.99	1.850	.397	34.07	28988.	.08	8528.	37031.	1.0145	6.18
1.450	54.33	2.250	.528	45.71	28988.	.26	12579.	40853.	1.0161	19.17
1.500	69.75	2.398	.579	50.23	28988.	.38	14272.	42450.	1.0167	36.54
1.550	67.26	2.377	.571	49.53	28988.	.36	14030.	42222.	1.0166	53.19
1.600	55.51	2.263	.532	46.08	28988.	.27	12729.	40994.	1.0161	66.52
1.650	42.25	2.110	.481	41.61	28988.	.18	11054.	39414.	1.0155	76.25
1.700	30.99	1.947	.429	37.07	28988.	.11	9406.	37859.	1.0148	83.10
1.750	22.34	1.800	.380	32.69	28988.	.07	8098.	36625.	1.0143	87.87
1.800	16.01	1.663	.337	28.59	28988.	.04	6942.	35534.	1.0139	91.18
1.850	11.55	1.530	.298	25.37	28988.	.03	5885.	34537.	1.0135	93.50
1.900	8.78	1.442	.272	22.34	28988.	.02	5233.	33923.	1.0133	95.23
1.950	7.26	1.397	.260	19.97	28988.	.01	4923.	33630.	1.0131	96.65
2.000	6.31	1.363	.250	18.49	28988.	.01	4685.	33406.	1.0130	97.88
2.050	5.58	1.331	.242	17.36	28988.	.01	4473.	33206.	1.0130	98.95
2.100	4.98	1.300	.233	16.42	28988.	.01	4272.	33017.	1.0129	99.91
2.150	4.46	1.269	.225	15.60	28988.	.01	4075.	32830.	1.0128	100.76
2.200	3.99	1.238	.217	14.87	28988.	.01	3877.	32644.	1.0127	101.51
2.250	3.57	1.205	.208	14.22	28988.	.00	3680.	32458.	1.0127	102.19
2.300	3.19	1.172	.200	13.63	28988.	.00	3485.	32274.	1.0126	102.78
2.350	2.86	1.139	.191	13.10	28988.	.00	3292.	32093.	1.0125	103.32
2.400	2.55	1.105	.183	12.63	28988.	.00	3104.	31915.	1.0124	103.79
2.450	2.29	1.072	.175	12.21	28988.	.00	2920.	31741.	1.0124	104.21
2.500	2.04	1.038	.166	11.84	28988.	.00	2741.	31573.	1.0123	104.58
2.550	1.83	1.004	.158	11.50	28988.	.00	2569.	31410.	1.0122	104.92
2.600	1.64	.971	.151	11.20	28988.	.00	2402.	31253.	1.0122	105.21
2.650	1.46	.937	.143	10.93	28988.	.00	2243.	31103.	1.0121	105.48
2.700	1.31	.905	.135	10.69	28988.	.00	2091.	30959.	1.0121	105.71

2.750	1.17	.872	.128	10.48	28988.	.00	1946.	30823.	1.0120	105.92
TIME	WATER FLOW	VELOCITY	HYD. DEPTH	WIDTH	WASHLOAD CONC.	BED MAT. TRANSPORT	BED CONC.	TOTAL CONC.	BULKING FACTOR	ACCUM. SEDIMENT
(HRS)	(CFS)	(FT/SEC)	(FT)	(FT)	(PPM-W)	(CFS)	(PPM-W)	(PPM-W)		(TONS)
2.800	1.05	.840	.121	10.28	28988.	.00	1809.	30693.	1.0119	106.11
2.850	.94	.814	.116	9.96	28988.	.00	1698.	30589.	1.0119	106.27
2.900	.84	.792	.111	9.56	28988.	.00	1607.	30504.	1.0119	106.42
2.950	.75	.770	.106	9.17	28988.	.00	1522.	30423.	1.0118	106.56
3.000	.67	.749	.102	8.79	28988.	.00	1440.	30346.	1.0118	106.67
3.050	.60	.728	.098	8.43	28988.	.00	1363.	30273.	1.0118	106.78
3.100	.54	.708	.094	8.09	28988.	.00	1290.	30205.	1.0118	106.87
3.150	.48	.689	.090	7.76	28988.	.00	1221.	30140.	1.0117	106.96
3.200	.43	.670	.086	7.44	28988.	.00	1156.	30078.	1.0117	107.03
3.250	.38	.651	.083	7.13	28988.	.00	1094.	30020.	1.0117	107.10
3.300	.34	.634	.079	6.84	28988.	.00	1036.	29965.	1.0117	107.16
3.350	.31	.616	.076	6.56	28988.	.00	981.	29913.	1.0116	107.21
3.400	.28	.599	.073	6.29	28988.	.00	928.	29863.	1.0116	107.26
3.450	.25	.583	.070	6.04	28988.	.00	878.	29816.	1.0116	107.30
3.500	.22	.567	.067	5.79	28988.	.00	831.	29772.	1.0116	107.34
3.550	.20	.551	.064	5.55	28988.	.00	787.	29730.	1.0116	107.37
3.600	.18	.536	.062	5.32	28988.	.00	745.	29690.	1.0115	107.40
3.650	.16	.521	.059	5.11	28988.	.00	705.	29653.	1.0115	107.43
3.700	.14	.507	.057	4.90	28988.	.00	667.	29617.	1.0115	107.45
3.750	.13	.493	.054	4.70	28988.	.00	632.	29584.	1.0115	107.48
3.800	.11	.480	.052	4.51	28988.	.00	598.	29552.	1.0115	107.50
3.850	.10	.466	.050	4.32	28988.	.00	566.	29522.	1.0115	107.51
3.900	.09	.454	.048	4.14	28988.	.00	536.	29493.	1.0115	107.53
3.950	.08	.441	.046	3.97	28988.	.00	507.	29466.	1.0115	107.54
4.000	.07	.429	.044	3.81	28988.	.00	480.	29440.	1.0114	107.55
4.050	.06	.417	.042	3.66	28988.	.00	454.	29416.	1.0114	107.57
4.100	.06	.406	.041	3.51	28988.	.00	430.	29393.	1.0114	107.57
4.150	.05	.395	.039	3.36	28988.	.00	407.	29372.	1.0114	107.58
4.200	.05	.384	.037	3.23	28988.	.00	385.	29351.	1.0114	107.59
4.250	.04	.373	.036	3.09	28988.	.00	365.	29332.	1.0114	107.60
4.300	.04	.363	.034	2.97	28988.	.00	345.	29313.	1.0114	107.60
4.350	.03	.353	.033	2.85	28988.	.00	327.	29296.	1.0114	107.61
4.400	.03	.343	.032	2.73	28988.	.00	309.	29279.	1.0114	107.62
4.450	.03	.334	.030	2.62	28988.	.00	293.	29264.	1.0114	107.62
4.500	.02	.325	.029	2.51	28988.	.00	277.	29249.	1.0114	107.62
4.550	.02	.316	.028	2.41	28988.	.00	262.	29235.	1.0114	107.63
4.600	.02	.307	.027	2.31	28988.	.00	248.	29222.	1.0114	107.63
4.650	.02	.299	.026	2.21	28988.	.00	235.	29209.	1.0114	107.63
4.700	.02	.290	.025	2.12	28988.	.00	222.	29198.	1.0113	107.64
4.750	.01	.283	.024	2.04	28988.	.00	210.	29186.	1.0113	107.64
4.800	.01	.275	.023	1.95	28988.	.00	199.	29176.	1.0113	107.64
4.850	.01	.267	.022	1.87	28988.	.00	188.	29166.	1.0113	107.64
4.900	.01	.260	.021	1.80	28988.	.00	178.	29156.	1.0113	107.64
4.950	.01	.253	.020	1.72	28988.	.00	169.	29147.	1.0113	107.65
5.000	.01	.246	.019	1.65	28988.	.00	160.	29139.	1.0113	107.65
5.050	.01	.239	.018	1.59	28988.	.00	151.	29131.	1.0113	107.65
5.100	.01	.232	.018	1.52	28988.	.00	143.	29123.	1.0113	107.65
5.150	.01	.221	.016	1.41	28988.	.00	129.	29110.	1.0113	107.65
5.200	.00	.184	.012	1.07	28988.	.00	90.	29073.	1.0113	107.65

AT PEAK FLOW OF 69.753 WITH TIME AT 1.50 HOURS: BEDMAT = 10.86 (TONS) = .0050 (AC-FT bulked)

PEAK BULKING FACTOR = 1.016729 = 42450. (PPM-W) TOTAL SED = 36.54 (TONS) = .0168 (AC-FT bulked)

	UNBULKED WEIGHT (TONS)	BULKED VOLUME (AC-FT)	CONCENTRATION BY WEIGHT (PPM)	AVERAGE BULKING FACTOR
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WASHMAT =	79.51	.0221	.0365	28988.
BEDMAT =	28.14	.0078	.0129	10455.
TOTAL SEDIMENT =	107.65	.0299	.0494	38848.
				1.015252

SEDIMENT TRANSPORT CAPACITY: .71632 AC-FT/SQ MI (bulked) = 2.4377 TONS/ACRE (at Porosity=0.395)

PRINT HYD ID=4 CODE=1

PARTIAL HYDROGRAPH 130.20

RUNOFF VOLUME = .53253 INCHES = 1.9597 ACRE-FEET
 PEAK DISCHARGE RATE = 69.75 CFS AT 1.500 HOURS BASIN AREA = .0690 SQ. MI.

*S TOTAL FLOW TO CHANNEL ENTERING THE SITE

ADD HYD ID=5 HYD NO=131.02 ID I=3 ID II=4
 PRINT HYD ID=5 CODE=1

PARTIAL HYDROGRAPH 131.02

RUNOFF VOLUME = .56898 INCHES = 34.8727 ACRE-FEET
 PEAK DISCHARGE RATE = 524.06 CFS AT 1.800 HOURS BASIN AREA = 1.1492 SQ. MI.

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*S FLOW ENTERING SW CORNER

COMPUTE NM HYD ID=6 HYD NO=130.21 DA=0.0090 SQ MI
 PER A=100.00 PER B=0.00 PER C=0.00 PER D=0.00
 TP=-0.1333 HR MASS RAIN=-1

K = .163684HR TP = .133300HR K/TP RATIO = 1.227936 SHAPE CONSTANT, N = 2.899764
 UNIT PEAK = 18.469 CFS UNIT VOLUME = .9976 B = 273.54 P60 = 1.8700
 AREA = .009000 SQ MI IA = .65000 INCHES INF = 1.67000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

PRINT HYD ID=6 CODE=1

PARTIAL HYDROGRAPH 130.21

RUNOFF VOLUME = .43936 INCHES = .2109 ACRE-FEET
 PEAK DISCHARGE RATE = 7.41 CFS AT 1.500 HOURS BASIN AREA = .0090 SQ. MI.

SED WASH LOAD ID=6 K=0.17 C=0.25

P=1.0 LS=0.163 IMPERVIOUS=0.0 FACTOR=3.0
 SEDIMENT YIELD (Wash Mat.) = 2.5 (TONS) WASH LOAD CONCENTRATION = 8766 (ppm-w)

PERCENTAGE IMPERVIOUS AREA = .000 WASH LOAD FACTOR = 3.00000

PRINT HYD ID=6 CODE=1

PARTIAL HYDROGRAPH 130.21

RUNOFF VOLUME = .43936 INCHES = .2109 ACRE-FEET
PEAK DISCHARGE RATE = 7.41 CFS AT 1.500 HOURS BASIN AREA = .0090 SQ. MI.

* *****

COMPUTE NM HYD

ID=7 HYD NO=133.3 DA=0.0370 SQ MI
PER A=51.89 PER B=6.49 PER C=41.62 PER D=0.00
TP=-0.1333 HR MASS RAIN=-1

K = .137499HR TP = .133300HR K/TP RATIO = 1.031498 SHAPE CONSTANT, N = 3.422199
UNIT PEAK = 87.325 CFS UNIT VOLUME = 1.000 B = 314.61 P60 = 1.8700
AREA = .037000 SQ MI IA = .51540 INCHES INF = 1.29313 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

PRINT HYD ID=7 CODE=1

PARTIAL HYDROGRAPH 133.30

RUNOFF VOLUME = .63864 INCHES = 1.2602 ACRE-FEET
PEAK DISCHARGE RATE = 44.96 CFS AT 1.500 HOURS BASIN AREA = .0370 SQ. MI.

COMPUTE NM HYD

ID=8 HYD NO=133.4 DA=0.2550 SQ MI
PER A=80.00 PER B=0.00 PER C=20.00 PER D=0.00
TP=-0.3518 HR MASS RAIN=-1

K = .352269HR TP = .351800HR K/TP RATIO = 1.001334 SHAPE CONSTANT, N = 3.525549
UNIT PEAK = 233.54 CFS UNIT VOLUME = 1.000 B = 322.19 P60 = 1.8700
AREA = .255000 SQ MI IA = .59000 INCHES INF = 1.50200 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

PRINT HYD ID=8 CODE=1

PARTIAL HYDROGRAPH 133.40

RUNOFF VOLUME = .52015 INCHES = 7.0740 ACRE-FEET
PEAK DISCHARGE RATE = 118.13 CFS AT 1.750 HOURS BASIN AREA = .2550 SQ. MI.

* S FLOW ENTERING OURAY STORM DRAIN TO THE NORTH

ADD HYD ID=9 HYD NO=133.01 ID I=7 ID II=8
PRINT HYD ID=9 CODE=1

PARTIAL HYDROGRAPH 133.01

RUNOFF VOLUME = .53516 INCHES = 8.3342 ACRE-FEET

PEAK DISCHARGE RATE = 137.20 CFS AT 1.700 HOURS BASIN AREA = .2920 SQ. MI.

*

*

COMPUTE NM HYD

ID=10 HYD NO=132.11 DA=0.0093 SQ MI
PER A=30.00 PER B=50.00 PER C=20.00 PER D=0.00
TP=-0.1333 HR MASS RAIN=-1

K = .135774HR TP = .133300HR K/TP RATIO = 1.018563 SHAPE CONSTANT, N = 3.465578
UNIT PEAK = 22.173 CFS UNIT VOLUME = 1.000 B = 317.81 P60 = 1.8700
AREA = .009300 SQ MI IA = .51500 INCHES INF = 1.29200 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

PRINT HYD ID=10 CODE=1

PARTIAL HYDROGRAPH 132.11

RUNOFF VOLUME = .63937 INCHES = .3171 ACRE-FEET
PEAK DISCHARGE RATE = 11.41 CFS AT 1.500 HOURS BASIN AREA = .0093 SQ. MI.

SED WASH LOAD

ID=10 K=0.17 C=0.25
P=1.0 LS=0.758

IMPERVIOUS=0.0 FACTOR=3.0
SEDIMENT YIELD (Wash Mat.) = 18.9 (TONS) WASH LOAD CONCENTRATION = 41928 (ppm-w)
PERCENTAGE IMPERVIOUS AREA = .000 WASH LOAD FACTOR = 3.00000

SEDIMENT TRANS

ID=10 IDS=3 CODE=1
A=0.0002 B=4.19 C=0.19 D=-2.55
NUMB WASH=-1 NUMB SECTIONS=9

FLOW	VELOCITY	WIDTH
(CFS)	(FPS)	(FT)
1.00	2.06	4.06
2.00	2.46	5.26
3.00	2.73	6.11
4.00	2.93	6.82
6.00	3.25	7.92
8.00	3.48	8.85
10.00	3.67	9.62
12.00	3.84	10.30
14.00	3.99	10.92

Use wash load from SED WASH LOAD command - Concentration = 41928 (PPM-W)

* * * * *

TIME	WATER FLOW	HYD. VELOCITY	DEPTH	WIDTH	WASHLOAD CONC.	BED MAT. TRANSPORT	BED CONC.	TOTAL CONC.	BULKING FACTOR	ACCUM. SEDIMENT
(HRS)	(CFS)	(FT/SEC)	(FT)	(FT)	(PPM-W)	(CFS)	(PPM-W)	(PPM-W)		(TONS)
.000	.00	.000	.000	.00	41928.	.00	0.	41928.	1.0000	.00
.050	.00	.000	.000	.00	41928.	.00	0.	41928.	1.0000	.00
.100	.00	.000	.000	.00	41928.	.00	0.	41928.	1.0000	.00
.150	.00	.000	.000	.00	41928.	.00	0.	41928.	1.0000	.00
.200	.00	.000	.000	.00	41928.	.00	0.	41928.	1.0000	.00
.250	.00	.000	.000	.00	41928.	.00	0.	41928.	1.0000	.00
.300	.00	.000	.000	.00	41928.	.00	0.	41928.	1.0000	.00

.350	.00	.000	.000	.00	41928.	.00	0.	41928.	1.0000	.00
.400	.00	.000	.000	.00	41928.	.00	0.	41928.	1.0000	.00
.450	.00	.000	.000	.00	41928.	.00	0.	41928.	1.0000	.00
.500	.00	.000	.000	.00	41928.	.00	0.	41928.	1.0000	.00
.550	.00	.000	.000	.00	41928.	.00	0.	41928.	1.0000	.00
.600	.00	.000	.000	.00	41928.	.00	0.	41928.	1.0000	.00
.650	.00	.000	.000	.00	41928.	.00	0.	41928.	1.0000	.00
.700	.00	.000	.000	.00	41928.	.00	0.	41928.	1.0000	.00
.750	.00	.000	.000	.00	41928.	.00	0.	41928.	1.0000	.00
.800	.00	.000	.000	.00	41928.	.00	0.	41928.	1.0000	.00
.850	.00	.000	.000	.00	41928.	.00	0.	41928.	1.0000	.00
.900	.00	.000	.000	.00	41928.	.00	0.	41928.	1.0000	.00
.950	.00	.000	.000	.00	41928.	.00	0.	41928.	1.0000	.00
1.000	.00	.000	.000	.00	41928.	.00	0.	41928.	1.0000	.00
1.050	.00	.000	.000	.00	41928.	.00	0.	41928.	1.0000	.00
1.100	.00	.000	.000	.00	41928.	.00	0.	41928.	1.0000	.00
1.150	.00	.000	.000	.00	41928.	.00	0.	41928.	1.0000	.00
1.200	.00	.000	.000	.00	41928.	.00	0.	41928.	1.0000	.00
1.250	.00	.000	.000	.00	41928.	.00	0.	41928.	1.0000	.00
1.300	.00	.000	.000	.00	41928.	.00	0.	41928.	1.0000	.00
1.350	1.00	2.062	.120	4.07	41928.	.01	32134.	71463.	1.0290	.43
1.400	4.48	3.021	.209	7.09	41928.	.12	66628.	103257.	1.0435	3.33
1.450	9.05	3.586	.273	9.25	41928.	.34	90499.	125313.	1.0541	10.62
1.500	11.41	3.793	.298	10.10	41928.	.48	99806.	133925.	1.0584	20.52
1.550	10.85	3.746	.292	9.91	41928.	.44	97643.	131923.	1.0573	29.78
1.600	8.90	3.572	.271	9.20	41928.	.33	89906.	124765.	1.0538	36.91
1.650	6.83	3.355	.245	8.31	41928.	.23	80666.	116223.	1.0496	41.95
1.700	5.06	3.117	.219	7.40	41928.	.15	70619.	106941.	1.0452	45.35
1.750	3.63	2.863	.193	6.56	41928.	.09	60278.	97398.	1.0407	47.55
1.800	2.55	2.624	.170	5.73	41928.	.05	51207.	89032.	1.0369	48.96
1.850	1.84	2.414	.150	5.07	41928.	.03	43623.	82043.	1.0337	49.88
1.900	1.43	2.270	.138	4.57	41928.	.02	38718.	77525.	1.0317	50.55
1.950	1.18	2.160	.128	4.28	41928.	.02	35173.	74261.	1.0303	51.09
2.000	1.01	2.066	.120	4.07	41928.	.01	32245.	71565.	1.0291	51.52
2.050	.88	2.001	.114	3.83	41928.	.01	30333.	69807.	1.0283	51.89
2.100	.77	1.942	.109	3.64	41928.	.01	28621.	68231.	1.0276	52.21
2.150	.68	1.883	.104	3.47	41928.	.01	26988.	66729.	1.0270	52.48
2.200	.60	1.824	.100	3.32	41928.	.01	25388.	65256.	1.0263	52.72
2.250	.53	1.765	.095	3.19	41928.	.00	23817.	63812.	1.0257	52.93
2.300	.47	1.708	.090	3.06	41928.	.00	22368.	62479.	1.0251	53.10
2.350	.42	1.657	.086	2.92	41928.	.00	21080.	61295.	1.0246	53.26
2.400	.37	1.606	.082	2.79	41928.	.00	19865.	60178.	1.0242	53.39
2.450	.33	1.558	.079	2.67	41928.	.00	18719.	59124.	1.0237	53.50
2.500	.29	1.511	.075	2.55	41928.	.00	17637.	58129.	1.0233	53.60
2.550	.26	1.465	.072	2.43	41928.	.00	16617.	57192.	1.0229	53.69
2.600	.23	1.421	.068	2.32	41928.	.00	15656.	56308.	1.0225	53.77
2.650	.20	1.378	.065	2.22	41928.	.00	14748.	55474.	1.0222	53.83
2.700	.18	1.336	.062	2.12	41928.	.00	13893.	54688.	1.0218	53.89
2.750	.16	1.296	.060	2.02	41928.	.00	13087.	53947.	1.0215	53.94
TIME	WATER	HYD.			WASHLOAD	BED MAT.	BED	TOTAL	BULKING	ACCUM.
(HRS)	FLOW	VELOCITY	DEPTH	WIDTH	CONC.	TRANSPORT	CONC.	CONC.	FACTOR	SEDIMENT
	(CFS)	(FT/SEC)	(FT)	(FT)	(PPM-W)	(CFS)	(PPM-W)	(PPM-W)		(TONS)
2.800	.14	1.257	.057	1.93	41928.	.00	12327.	53249.	1.0212	53.98
2.850	.12	1.219	.054	1.85	41928.	.00	11610.	52590.	1.0209	54.02
2.900	.11	1.182	.052	1.76	41928.	.00	10935.	51970.	1.0207	54.06
2.950	.10	1.146	.050	1.68	41928.	.00	10298.	51385.	1.0204	54.09
3.000	.08	1.112	.047	1.61	41928.	.00	9699.	50834.	1.0202	54.11
3.050	.07	1.078	.045	1.54	41928.	.00	9133.	50315.	1.0200	54.13

3.100	.07	1.045	.043	1.47	41928.	.00	8601.	49826.	1.0198	54.15
3.150	.06	1.014	.041	1.40	41928.	.00	8099.	49365.	1.0196	54.17
3.200	.05	.983	.039	1.34	41928.	.00	7627.	48931.	1.0194	54.18
3.250	.05	.953	.038	1.28	41928.	.00	7181.	48522.	1.0192	54.20
3.300	.04	.925	.036	1.22	41928.	.00	6762.	48136.	1.0191	54.21
3.350	.04	.897	.034	1.16	41928.	.00	6367.	47774.	1.0189	54.22
3.400	.03	.870	.033	1.11	41928.	.00	5995.	47432.	1.0188	54.23
3.450	.03	.843	.031	1.06	41928.	.00	5644.	47110.	1.0187	54.24
3.500	.02	.818	.030	1.01	41928.	.00	5314.	46807.	1.0185	54.24
3.550	.02	.793	.029	.97	41928.	.00	5003.	46521.	1.0184	54.25
3.600	.02	.769	.027	.93	41928.	.00	4710.	46252.	1.0183	54.25
3.650	.02	.746	.026	.88	41928.	.00	4434.	45999.	1.0182	54.26
3.700	.02	.723	.025	.84	41928.	.00	4175.	45761.	1.0181	54.26
3.750	.01	.702	.024	.81	41928.	.00	3930.	45536.	1.0180	54.27
3.800	.01	.680	.023	.77	41928.	.00	3700.	45325.	1.0179	54.27
3.850	.01	.660	.022	.74	41928.	.00	3483.	45126.	1.0178	54.27
3.900	.01	.640	.021	.70	41928.	.00	3279.	44938.	1.0178	54.27
3.950	.01	.620	.020	.67	41928.	.00	3087.	44762.	1.0177	54.28
4.000	.01	.602	.019	.64	41928.	.00	2906.	44595.	1.0176	54.28
4.050	.01	.562	.017	.58	41928.	.00	2542.	44261.	1.0175	54.28
4.100	.00	.477	.013	.45	41928.	.00	1839.	43616.	1.0172	54.28
4.150	.00	.371	.009	.31	41928.	.00	1122.	42958.	1.0169	54.28

AT PEAK FLOW OF 11.406 WITH TIME AT 1.50 HOURS: BEDMAT = 14.14 (TONS) = .0065 (AC-FT bulked)
TOTAL SED = 20.52 (TONS) = .0094 (AC-FT bulked)
PEAK BULKING FACTOR = 1.058353 = 133925. (PPM-W)

WEIGHT (TONS)	UNBULKED VOLUME (AC-FT)	BULKED VOLUME (AC-FT)	CONCENTRATION BY WEIGHT (PPM)	AVERAGE BULKING FACTOR
WASHMAT = 18.86	.0052	.0087	41928.	
BEDMAT = 35.42	.0098	.0163	75940.	
TOTAL SEDIMENT = 54.28	.0151	.0249	111856.	1.047526

SEDIMENT TRANSPORT CAPACITY: 2.67984 AC-FT/SQ MI (bulked) = 9.1198 TONS/ACRE (at Porosity=0.395)

PRINT HYD ID=10 CODE=1
PARTIAL HYDROGRAPH 132.11

RUNOFF VOLUME = .63937 INCHES = .3171 ACRE-FEET
PEAK DISCHARGE RATE = 11.41 CFS AT 1.500 HOURS BASIN AREA = .0093 SQ. MI.

PRINT HYD ID=10 CODE=1
PARTIAL HYDROGRAPH 132.11

RUNOFF VOLUME = .63937 INCHES = .3171 ACRE-FEET
PEAK DISCHARGE RATE = 11.41 CFS AT 1.500 HOURS BASIN AREA = .0093 SQ. MI.

COMPUTE NM HYD ID=11 HYD NO=133.51 DA=0.0670 SQ MI

PER A=5.00 PER B=65.00 PER C=30.00 PER D=0.00
TP=-0.1333 HR MASS RAIN=-1

K = .124915HR TP = .133300HR K/TP RATIO = .937100 SHAPE CONSTANT, N = 3.773854
UNIT PEAK = 170.79 CFS UNIT VOLUME = 1.001 B = 339.80 P60 = 1.8700
AREA = .067000 SQ MI IA = .46250 INCHES INF = 1.14500 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

PRINT HYD ID=11 CODE=1

PARTIAL HYDROGRAPH 133.51

RUNOFF VOLUME = .73789 INCHES = 2.6367 ACRE-FEET
PEAK DISCHARGE RATE = 95.20 CFS AT 1.500 HOURS BASIN AREA = .0670 SQ. MI.

SED WASH LOAD ID=11 K=0.16 C=0.25

P=1.0 LS=0.470

IMPERVIOUS=0.0 FACTOR=3.0

SEDIMENT YIELD (Wash Mat.) = 118.3 (TONS) WASH LOAD CONCENTRATION = 31946 (ppm-w)
PERCENTAGE IMPERVIOUS AREA = .000 WASH LOAD FACTOR = 3.00000

PRINT HYD ID=11 CODE=1

PARTIAL HYDROGRAPH 133.51

RUNOFF VOLUME = .73789 INCHES = 2.6367 ACRE-FEET
PEAK DISCHARGE RATE = 95.20 CFS AT 1.500 HOURS BASIN AREA = .0670 SQ. MI.

SEDIMENT TRANS

ID=11 IDS=4 CODE=1

A=0.0002 B=4.19 C=0.19 D=-2.55

NUMB WASH=-1 NUMB SECTIONS=9

FLOW (CFS)	VELOCITY (FPS)	WIDTH (FT)
5.00	2.91	8.75
10.00	3.61	10.08
25.00	4.77	12.68
40.00	5.42	14.57
55.00	5.96	16.02
70.00	6.36	17.31
85.00	6.65	18.49
100.00	6.96	19.50
115.00	6.74	24.19

Use wash load from SED WASH LOAD command - Concentration = 31946 (PPM-w)

* * * * *

TIME (HRS)	WATER FLOW (CFS)	HYD. VELOCITY (FT/SEC)	DEPTH (FT)	WIDTH (FT)	WASHLOAD CONC. (PPM-w)	BED MAT. TRANSPORT (CFS)	BED CONC. (PPM-w)	TOTAL CONC. (PPM-w)	BULKING FACTOR	ACCUM. SEDIMENT (TONS)
.000	.00	.000	.000	.00	31946.	.00	0.	31946.	1.0000	.00
.050	.00	.000	.000	.00	31946.	.00	0.	31946.	1.0000	.00
.100	.00	.000	.000	.00	31946.	.00	0.	31946.	1.0000	.00
.150	.00	.000	.000	.00	31946.	.00	0.	31946.	1.0000	.00

.200	.00	.000	.000	.00	31946.	.00	0.	31946.	1.0000	.00
.250	.00	.000	.000	.00	31946.	.00	0.	31946.	1.0000	.00
.300	.00	.000	.000	.00	31946.	.00	0.	31946.	1.0000	.00
.350	.00	.000	.000	.00	31946.	.00	0.	31946.	1.0000	.00
.400	.00	.000	.000	.00	31946.	.00	0.	31946.	1.0000	.00
.450	.00	.000	.000	.00	31946.	.00	0.	31946.	1.0000	.00
.500	.00	.000	.000	.00	31946.	.00	0.	31946.	1.0000	.00
.550	.00	.000	.000	.00	31946.	.00	0.	31946.	1.0000	.00
.600	.00	.000	.000	.00	31946.	.00	0.	31946.	1.0000	.00
.650	.00	.000	.000	.00	31946.	.00	0.	31946.	1.0000	.00
.700	.00	.000	.000	.00	31946.	.00	0.	31946.	1.0000	.00
.750	.00	.000	.000	.00	31946.	.00	0.	31946.	1.0000	.00
.800	.00	.000	.000	.00	31946.	.00	0.	31946.	1.0000	.00
.850	.00	.000	.000	.00	31946.	.00	0.	31946.	1.0000	.00
.900	.00	.000	.000	.00	31946.	.00	0.	31946.	1.0000	.00
.950	.00	.000	.000	.00	31946.	.00	0.	31946.	1.0000	.00
1.000	.00	.000	.000	.00	31946.	.00	0.	31946.	1.0000	.00
1.050	.00	.000	.000	.00	31946.	.00	0.	31946.	1.0000	.00
1.100	.00	.000	.000	.00	31946.	.00	0.	31946.	1.0000	.00
1.150	.00	.000	.000	.00	31946.	.00	0.	31946.	1.0000	.00
1.200	.00	.000	.000	.00	31946.	.00	0.	31946.	1.0000	.00
1.250	.00	.000	.000	.00	31946.	.00	0.	31946.	1.0000	.00
1.300	.00	.000	.000	.00	31946.	.00	0.	31946.	1.0000	.00
1.350	9.74	3.582	.272	10.01	31946.	.36	88388.	115011.	1.0490	7.11
1.400	39.74	5.411	.505	14.54	31946.	3.28	179369.	201007.	1.0949	63.25
1.450	76.80	6.499	.662	17.84	31946.	9.13	239496.	258115.	1.1313	213.31
1.500	95.20	6.866	.723	19.18	31946.	12.56	259015.	276702.	1.1444	417.83
1.550	89.20	6.742	.705	18.77	31946.	11.33	251875.	269900.	1.1395	603.01
1.600	72.55	6.414	.646	17.51	31946.	8.43	235505.	254317.	1.1287	741.96
1.650	55.74	5.982	.579	16.08	31946.	5.67	212259.	232218.	1.1141	836.64
1.700	41.89	5.499	.516	14.75	31946.	3.57	184325.	205705.	1.0977	897.58
1.750	30.70	5.054	.453	13.40	31946.	2.22	161051.	183652.	1.0849	936.36
1.800	22.16	4.616	.394	12.19	31946.	1.35	138709.	162513.	1.0732	960.50
1.850	16.33	4.224	.346	11.18	31946.	.83	118839.	143738.	1.0633	975.90
1.900	12.66	3.901	.308	10.54	31946.	.55	103133.	128914.	1.0558	986.42
1.950	10.21	3.635	.278	10.12	31946.	.38	90733.	117222.	1.0501	994.03
2.000	8.48	3.439	.255	9.68	31946.	.29	82239.	109218.	1.0463	999.87
2.050	7.20	3.272	.236	9.34	31946.	.22	75281.	102664.	1.0432	1004.50
2.100	6.22	3.124	.219	9.07	31946.	.17	69289.	97023.	1.0405	1008.25
2.150	5.42	2.988	.205	8.86	31946.	.14	63960.	92007.	1.0382	1011.33
2.200	4.74	2.879	.193	8.52	31946.	.11	59790.	88084.	1.0365	1013.90
2.250	4.15	2.800	.185	7.99	31946.	.09	56767.	85241.	1.0352	1016.07
2.300	3.63	2.718	.177	7.53	31946.	.08	53711.	82366.	1.0339	1017.90
2.350	3.17	2.634	.169	7.13	31946.	.06	50644.	79483.	1.0326	1019.44
2.400	2.78	2.548	.161	6.78	31946.	.05	47591.	76613.	1.0313	1020.73
2.450	2.43	2.461	.153	6.47	31946.	.04	44575.	73778.	1.0301	1021.82
2.500	2.13	2.373	.145	6.20	31946.	.03	41616.	70998.	1.0288	1022.73
2.550	1.86	2.285	.137	5.96	31946.	.03	38735.	68291.	1.0277	1023.50
2.600	1.63	2.197	.129	5.76	31946.	.02	35948.	65673.	1.0265	1024.14
2.650	1.43	2.110	.121	5.58	31946.	.02	33270.	63157.	1.0254	1024.68
2.700	1.25	2.023	.114	5.42	31946.	.01	30711.	60754.	1.0244	1025.14
2.750	1.09	1.938	.107	5.28	31946.	.01	28280.	58472.	1.0234	1025.52
2.800	.96	1.861	.100	5.11	31946.	.01	26173.	56494.	1.0226	1025.84
2.850	.84	1.800	.096	4.86	31946.	.01	24546.	54966.	1.0219	1026.11
2.900	.73	1.741	.091	4.62	31946.	.01	23017.	53532.	1.0213	1026.34

2.950	.64	1.684	.086	4.40	31946.	.01	21581.	52184.	1.0208	1026.54
3.000	.56	1.629	.082	4.18	31946.	.00	20233.	50919.	1.0202	1026.71
3.050	.49	1.575	.078	3.98	31946.	.00	18967.	49732.	1.0197	1026.85
3.100	.43	1.524	.074	3.78	31946.	.00	17780.	48617.	1.0193	1026.98
3.150	.38	1.474	.071	3.60	31946.	.00	16665.	47572.	1.0188	1027.08
3.200	.33	1.425	.067	3.42	31946.	.00	15619.	46590.	1.0184	1027.17
3.250	.29	1.379	.064	3.26	31946.	.00	14638.	45670.	1.0181	1027.25
3.300	.25	1.333	.061	3.10	31946.	.00	13718.	44807.	1.0177	1027.32
3.350	.22	1.290	.058	2.95	31946.	.00	12854.	43997.	1.0174	1027.37
3.400	.19	1.247	.055	2.80	31946.	.00	12045.	43238.	1.0171	1027.42
3.450	.17	1.206	.052	2.67	31946.	.00	11285.	42526.	1.0168	1027.46
3.500	.15	1.167	.050	2.54	31946.	.00	10573.	41858.	1.0165	1027.50
3.550	.13	1.129	.047	2.41	31946.	.00	9906.	41232.	1.0162	1027.53
3.600	.11	1.092	.045	2.29	31946.	.00	9280.	40645.	1.0160	1027.56
3.650	.10	1.056	.043	2.18	31946.	.00	8694.	40095.	1.0158	1027.58
3.700	.09	1.021	.041	2.08	31946.	.00	8144.	39580.	1.0156	1027.60
3.750	.08	.988	.039	1.97	31946.	.00	7629.	39097.	1.0154	1027.62
3.800	.07	.955	.037	1.88	31946.	.00	7146.	38644.	1.0152	1027.63
3.850	.06	.924	.035	1.79	31946.	.00	6693.	38220.	1.0150	1027.65
3.900	.05	.894	.033	1.70	31946.	.00	6269.	37822.	1.0148	1027.66
3.950	.04	.864	.032	1.62	31946.	.00	5872.	37450.	1.0147	1027.67
4.000	.04	.836	.030	1.54	31946.	.00	5500.	37101.	1.0145	1027.68
4.050	.03	.808	.029	1.46	31946.	.00	5151.	36774.	1.0144	1027.68
4.100	.03	.782	.027	1.39	31946.	.00	4824.	36467.	1.0143	1027.69
4.150	.03	.756	.026	1.32	31946.	.00	4518.	36180.	1.0142	1027.69
4.200	.02	.731	.025	1.26	31946.	.00	4231.	35912.	1.0141	1027.70
4.250	.02	.707	.024	1.20	31946.	.00	3962.	35660.	1.0140	1027.70
4.300	.02	.684	.022	1.14	31946.	.00	3711.	35424.	1.0139	1027.71
4.350	.02	.662	.021	1.08	31946.	.00	3475.	35203.	1.0138	1027.71
4.400	.01	.640	.020	1.03	31946.	.00	3254.	34996.	1.0137	1027.71
4.450	.01	.619	.019	.98	31946.	.00	3047.	34802.	1.0136	1027.72
4.500	.01	.599	.018	.93	31946.	.00	2854.	34620.	1.0135	1027.72
4.550	.01	.579	.017	.89	31946.	.00	2672.	34450.	1.0135	1027.72
4.600	.01	.536	.016	.79	31946.	.00	2293.	34095.	1.0133	1027.72
4.650	.00	.462	.012	.63	31946.	.00	1713.	33551.	1.0131	1027.72
4.700	.00	.377	.009	.47	31946.	.00	1147.	33021.	1.0129	1027.72

AT PEAK FLOW OF 95.196 WITH TIME AT 1.50 HOURS: BEDMAT = 376.78 (TONS) = .1730 (AC-FT bulked)
TOTAL SED = 417.83 (TONS) = .1918 (AC-FT bulked)

PEAK BULKING FACTOR = 1.144361 = 276702. (PPM-W)

	WEIGHT (TONS)	UNBULKED VOLUME (AC-FT)	BULKED VOLUME (AC-FT)	CONCENTRATION BY WEIGHT (PPM)	AVERAGE BULKING FACTOR
WASHMAT =	118.26	.0328	.0543	31946.	
BEDMAT =	909.47	.2525	.4176	202420.	
TOTAL SEDIMENT =	1027.72	.2854	.4719	222874.	1.108224

SEDIMENT TRANSPORT CAPACITY: 7.04276 AC-FT/SQ MI (bulked) = 23.9674 TONS/ACRE (at Porosity=0.395)

PRINT HYD ID=11 CODE=1

PARTIAL HYDROGRAPH 133.51

RUNOFF VOLUME = .73789 INCHES = 2.6367 ACRE-FEET
PEAK DISCHARGE RATE = 95.20 CFS AT 1.500 HOURS BASIN AREA = .0670 SQ. MI.

ADD HYD ID=10 HYD NO=133.50 ID I=10 ID II=11
PRINT HYD ID=10 CODE=1

PARTIAL HYDROGRAPH 133.52

RUNOFF VOLUME = .72588 INCHES = 2.9538 ACRE-FEET
PEAK DISCHARGE RATE = 106.60 CFS AT 1.500 HOURS BASIN AREA = .0763 SQ. MI.

COMPUTE NM HYD

ID=11 HYD NO=133.52 DA=0.0485 SQ MI
PER A=5.00 PER B=65.00 PER C=30.00 PER D=0.00
TP=-0.1333 HR MASS RAIN=-1

K = .125089HR TP = .133300HR K/TP RATIO = .938402 SHAPE CONSTANT, N = 3.768397
UNIT PEAK = 123.50 CFS UNIT VOLUME = 1.001 B = 339.42 P60 = 1.8700
AREA = .048500 SQ MI IA = .46250 INCHES INF = 1.14500 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

PRINT HYD ID=11 CODE=1

PARTIAL HYDROGRAPH 133.52

RUNOFF VOLUME = .73789 INCHES = 1.9087 ACRE-FEET
PEAK DISCHARGE RATE = 68.85 CFS AT 1.500 HOURS BASIN AREA = .0485 SQ. MI.

SED WASH LOAD ID=11 K=0.14 C=0.25

P=1.0 LS=0.375

IMPERVIOUS=0.0 FACTOR=3.0

SEDIMENT YIELD (Wash Mat.) = 57.5 (TONS) WASH LOAD CONCENTRATION = 21672 (ppm-w)
PERCENTAGE IMPERVIOUS AREA = .000 WASH LOAD FACTOR = 3.00000

PRINT HYD ID=11 CODE=1

PARTIAL HYDROGRAPH 133.52

RUNOFF VOLUME = .73789 INCHES = 1.9087 ACRE-FEET
PEAK DISCHARGE RATE = 68.85 CFS AT 1.500 HOURS BASIN AREA = .0485 SQ. MI.

SEDIMENT TRANS

ID=11 IDS=5 CODE=1
A=0.0002 B=4.19 C=0.19 D=-2.55

NUMB WASH=-1 NUMB SECTIONS=9

FLOW	VELOCITY	WIDTH
(CFS)	(FPS)	(FT)
5.00	3.05	9.07
10.00	3.73	10.90
25.00	4.84	14.34
40.00	5.50	16.71
55.00	5.99	18.61
65.00	6.26	19.71

70.00 6.38 20.22
75.00 6.50 20.71
85.00 6.70 21.65

Use wash load from SED WASH LOAD command - Concentration = 21672 (PPM-w)

* * * * *

TIME (HRS)	WATER FLOW (CFS)	VELOCITY (FT/SEC)	HYD. DEPTH (FT)	WIDTH (FT)	WASHLOAD CONC. (PPM-w)	BED MAT. TRANSPORT (CFS)	BED CONC. (PPM-w)	TOTAL CONC. (PPM-w)	BULKING FACTOR	ACCU. SEDIMENT (TONS)
.000	.00	.000	.000	.00	21672.	.00	0.	21672.	1.0000	.00
.050	.00	.000	.000	.00	21672.	.00	0.	21672.	1.0000	.00
.100	.00	.000	.000	.00	21672.	.00	0.	21672.	1.0000	.00
.150	.00	.000	.000	.00	21672.	.00	0.	21672.	1.0000	.00
.200	.00	.000	.000	.00	21672.	.00	0.	21672.	1.0000	.00
.250	.00	.000	.000	.00	21672.	.00	0.	21672.	1.0000	.00
.300	.00	.000	.000	.00	21672.	.00	0.	21672.	1.0000	.00
.350	.00	.000	.000	.00	21672.	.00	0.	21672.	1.0000	.00
.400	.00	.000	.000	.00	21672.	.00	0.	21672.	1.0000	.00
.450	.00	.000	.000	.00	21672.	.00	0.	21672.	1.0000	.00
.500	.00	.000	.000	.00	21672.	.00	0.	21672.	1.0000	.00
.550	.00	.000	.000	.00	21672.	.00	0.	21672.	1.0000	.00
.600	.00	.000	.000	.00	21672.	.00	0.	21672.	1.0000	.00
.650	.00	.000	.000	.00	21672.	.00	0.	21672.	1.0000	.00
.700	.00	.000	.000	.00	21672.	.00	0.	21672.	1.0000	.00
.750	.00	.000	.000	.00	21672.	.00	0.	21672.	1.0000	.00
.800	.00	.000	.000	.00	21672.	.00	0.	21672.	1.0000	.00
.850	.00	.000	.000	.00	21672.	.00	0.	21672.	1.0000	.00
.900	.00	.000	.000	.00	21672.	.00	0.	21672.	1.0000	.00
.950	.00	.000	.000	.00	21672.	.00	0.	21672.	1.0000	.00
1.000	.00	.000	.000	.00	21672.	.00	0.	21672.	1.0000	.00
1.050	.00	.000	.000	.00	21672.	.00	0.	21672.	1.0000	.00
1.100	.00	.000	.000	.00	21672.	.00	0.	21672.	1.0000	.00
1.150	.00	.000	.000	.00	21672.	.00	0.	21672.	1.0000	.00
1.200	.00	.000	.000	.00	21672.	.00	0.	21672.	1.0000	.00
1.250	.00	.000	.000	.00	21672.	.00	0.	21672.	1.0000	.00
1.300	.00	.000	.000	.00	21672.	.00	0.	21672.	1.0000	.00
1.350	7.05	3.386	.212	9.82	21672.	.26	87846.	105912.	1.0447	4.69
1.400	28.76	5.038	.382	14.93	21672.	2.31	175184.	189984.	1.0885	42.58
1.450	55.55	6.006	.495	18.67	21672.	6.32	231699.	244557.	1.1222	143.58
1.500	68.85	6.353	.539	20.10	21672.	8.75	251986.	264179.	1.1355	282.41
1.550	64.53	6.248	.525	19.66	21672.	7.94	245953.	258342.	1.1314	408.63
1.600	52.50	5.919	.485	18.29	21672.	5.80	226550.	239579.	1.1189	501.53
1.650	40.35	5.514	.437	16.75	21672.	3.87	202648.	216487.	1.1043	564.14
1.700	30.34	5.114	.391	15.18	21672.	2.50	179496.	194143.	1.0909	605.19
1.750	22.24	4.701	.345	13.71	21672.	1.55	156092.	171579.	1.0782	631.06
1.800	16.05	4.306	.303	12.29	21672.	.94	134296.	150586.	1.0669	647.04
1.850	11.83	3.933	.266	11.32	21672.	.58	114547.	131581.	1.0572	657.11
1.900	9.17	3.645	.237	10.60	21672.	.38	100067.	117657.	1.0503	663.97
1.950	7.39	3.432	.217	9.95	21672.	.28	90003.	107985.	1.0457	669.00
2.000	6.14	3.250	.199	9.49	21672.	.21	81653.	99962.	1.0419	672.83
2.050	5.22	3.092	.185	9.15	21672.	.16	74644.	93231.	1.0388	675.85
2.100	4.51	2.989	.175	8.60	21672.	.13	70191.	88956.	1.0368	678.32
2.150	3.93	2.905	.168	8.04	21672.	.11	66611.	85519.	1.0353	680.38
2.200	3.43	2.821	.161	7.57	21672.	.09	63085.	82134.	1.0338	682.10
2.250	3.01	2.735	.153	7.16	21672.	.07	59555.	78748.	1.0323	683.55
2.300	2.63	2.646	.146	6.80	21672.	.06	56033.	75368.	1.0308	684.75
2.350	2.30	2.557	.139	6.49	21672.	.05	52545.	72022.	1.0293	685.75
2.400	2.02	2.466	.131	6.22	21672.	.04	49116.	68732.	1.0279	686.59

2.450	1.76	2.376	.124	5.98	21672.	.03	45768.	65522.	1.0265	687.28
2.500	1.54	2.285	.117	5.77	21672.	.03	42523.	62409.	1.0251	687.86
2.550	1.35	2.195	.110	5.58	21672.	.02	39397.	59412.	1.0238	688.34
2.600	1.18	2.105	.104	5.42	21672.	.02	36405.	56543.	1.0226	688.74
2.650	1.04	2.017	.097	5.28	21672.	.01	33556.	53813.	1.0215	689.07
2.700	.91	1.946	.092	5.05	21672.	.01	31329.	51679.	1.0206	689.35
2.750	.79	1.882	.088	4.81	21672.	.01	29393.	49823.	1.0198	689.58

TIME (HRS)	WATER FLOW (CFS)	VELOCITY (FT/SEC)	HYD. DEPTH (FT)	WIDTH (FT)	WASHLOAD CONC. (PPM-W)	BED MAT. TRANSPORT (CFS)	BED CONC. (PPM-W)	TOTAL CONC. (PPM-W)	BULKING FACTOR	ACCU. SEDIMENT (TONS)
2.800	.69	1.821	.083	4.57	21672.	.01	27573.	48079.	1.0191	689.78
2.850	.61	1.761	.079	4.35	21672.	.01	25863.	46440.	1.0184	689.94
2.900	.53	1.703	.075	4.14	21672.	.00	24257.	44901.	1.0177	690.08
2.950	.47	1.647	.072	3.94	21672.	.00	22747.	43455.	1.0171	690.20
3.000	.41	1.593	.068	3.75	21672.	.00	21330.	42097.	1.0166	690.30
3.050	.36	1.541	.065	3.56	21672.	.00	19999.	40822.	1.0161	690.39
3.100	.31	1.491	.062	3.39	21672.	.00	18750.	39625.	1.0156	690.46
3.150	.27	1.442	.059	3.22	21672.	.00	17577.	38502.	1.0151	690.52
3.200	.24	1.395	.056	3.07	21672.	.00	16476.	37447.	1.0147	690.57
3.250	.21	1.349	.053	2.92	21672.	.00	15443.	36458.	1.0143	690.62
3.300	.18	1.305	.051	2.78	21672.	.00	14474.	35530.	1.0139	690.66
3.350	.16	1.262	.048	2.64	21672.	.00	13565.	34659.	1.0135	690.69
3.400	.14	1.221	.046	2.51	21672.	.00	12712.	33843.	1.0132	690.72
3.450	.12	1.181	.044	2.39	21672.	.00	11913.	33077.	1.0129	690.74
3.500	.11	1.142	.041	2.27	21672.	.00	11163.	32359.	1.0126	690.76
3.550	.09	1.105	.039	2.16	21672.	.00	10459.	31685.	1.0123	690.78
3.600	.08	1.068	.037	2.06	21672.	.00	9800.	31054.	1.0121	690.79
3.650	.07	1.033	.036	1.96	21672.	.00	9182.	30462.	1.0119	690.80
3.700	.06	1.000	.034	1.86	21672.	.00	8602.	29907.	1.0116	690.81
3.750	.06	.967	.032	1.77	21672.	.00	8059.	29387.	1.0114	690.82
3.800	.05	.935	.031	1.68	21672.	.00	7550.	28899.	1.0112	690.83
3.850	.04	.904	.029	1.60	21672.	.00	7072.	28442.	1.0110	690.84
3.900	.04	.875	.028	1.52	21672.	.00	6625.	28014.	1.0109	690.85
3.950	.03	.846	.026	1.45	21672.	.00	6206.	27613.	1.0107	690.85
4.000	.03	.818	.025	1.38	21672.	.00	5813.	27237.	1.0106	690.85
4.050	.02	.792	.024	1.31	21672.	.00	5445.	26884.	1.0104	690.86
4.100	.02	.766	.023	1.25	21672.	.00	5100.	26554.	1.0103	690.86
4.150	.02	.741	.022	1.19	21672.	.00	4777.	26245.	1.0102	690.86
4.200	.02	.716	.021	1.13	21672.	.00	4474.	25955.	1.0101	690.87
4.250	.01	.693	.020	1.07	21672.	.00	4190.	25683.	1.0099	690.87
4.300	.01	.670	.019	1.02	21672.	.00	3925.	25429.	1.0098	690.87
4.350	.01	.648	.018	.97	21672.	.00	3676.	25190.	1.0098	690.87
4.400	.01	.627	.017	.92	21672.	.00	3443.	24967.	1.0097	690.87
4.450	.01	.606	.016	.88	21672.	.00	3224.	24758.	1.0096	690.88
4.500	.01	.561	.014	.78	21672.	.00	2768.	24321.	1.0094	690.88
4.550	.00	.484	.011	.63	21672.	.00	2067.	23651.	1.0091	690.88
4.600	.00	.395	.008	.46	21672.	.00	1384.	22997.	1.0089	690.88

AT PEAK FLOW OF 68.853 WITH TIME AT 1.50 HOURS: BEDMAT = 262.47 (TONS) = .1205 (AC-FT bulked)

PEAK BULKING FACTOR = 1.135481 = 264179. (PPM-W)

TOTAL SED = 282.41 (TONS) = .1297 (AC-FT bulked)

WEIGHT (TONS)	UNBULKED VOLUME (AC-FT)	BULKED VOLUME (AC-FT)	CONCENTRATION BY WEIGHT (PPM)	AVERAGE BULKING FACTOR
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WASHMAT = 57.46 .0160 .0264 21672.
BEDMAT = 633.41 .1759 .2908 196259.
TOTAL SEDIMENT = 690.88 .1918 .3172 210319. 1.100503

SEDIMENT TRANSPORT CAPACITY: 6.54035 AC-FT/SQ MI (bulkcd) = 22.2576 TONS/ACRE (at Porosity=0.395)

PRINT HYD ID=11 CODE=1

PARTIAL HYDROGRAPH 133.52

RUNOFF VOLUME = .73789 INCHES = 1.9087 ACRE-FEET
PEAK DISCHARGE RATE = 68.85 CFS AT 1.500 HOURS BASIN AREA = .0485 SQ. MI.

*S UNDEVELOPED, OFF-SITE FLOW ENTERING POND

ADD HYD ID=11 HYD NO=133.50 ID I=10 ID II=11

PRINT HYD ID=11 CODE=1

PARTIAL HYDROGRAPH 133.50

RUNOFF VOLUME = .73055 INCHES = 4.8625 ACRE-FEET
PEAK DISCHARGE RATE = 175.46 CFS AT 1.500 HOURS BASIN AREA = .1248 SQ. MI.

* *****

*S FLOW ENTERING STREET AT NW CORNER OF SITE

COMPUTE NM HYD

ID=13 HYD NO=133.53 DA=0.0025 SQ MI

PER A=0.00 PER B=100.00 PER C=0.00 PER D=0.00

TP=-0.1333 HR MASS RAIN=-1

K = .130992HR TP = .133300HR K/TP RATIO = .982685 SHAPE CONSTANT, N = 3.593450
UNIT PEAK = 6.1344 CFS UNIT VOLUME = .9990 B = 327.09 P60 = 1.8700
AREA = .002500 SQ MI IA = .50000 INCHES INF = 1.25000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

PRINT HYD ID=13 CODE=1

PARTIAL HYDROGRAPH 133.53

RUNOFF VOLUME = .66636 INCHES = .0888 ACRE-FEET
PEAK DISCHARGE RATE = 3.23 CFS AT 1.500 HOURS BASIN AREA = .0025 SQ. MI.

SED WASH LOAD ID=13 K=0.17 C=0.25
P=1.0 LS=0.824
IMPERVIOUS=0.0 FACTOR=3.0
SEDIMENT YIELD (Wash Mat.) = 5.0 (TONS) WASH LOAD CONCENTRATION = 39459 (ppm-w)
PERCENTAGE IMPERVIOUS AREA = .000 WASH LOAD FACTOR = 3.00000

PRINT HYD ID=13 CODE=1

PARTIAL HYDROGRAPH 133.53

RUNOFF VOLUME = .66636 INCHES = .0888 ACRE-FEET
PEAK DISCHARGE RATE = 3.23 CFS AT 1.500 HOURS BASIN AREA = .0025 SQ. MI.

* *****

COMPUTE NM HYD ID=14 HYD NO=133.54 DA=0.0173 SQ MI
PER A=15.00 PER B=70.00 PER C=15.00 PER D=0.00
TP=-0.1333 HR MASS RAIN=-1

K = .132127HR TP = .133300HR K/TP RATIO = .991200 SHAPE CONSTANT, N = 3.562051
UNIT PEAK = 42.157 CFS UNIT VOLUME = 1.001 B = 324.83 P60 = 1.8700
AREA = .017300 SQ MI IA = .50000 INCHES INF = 1.25000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

PRINT HYD ID=14 CODE=1

PARTIAL HYDROGRAPH 133.54

RUNOFF VOLUME = .66636 INCHES = .6148 ACRE-FEET
PEAK DISCHARGE RATE = 22.19 CFS AT 1.500 HOURS BASIN AREA = .0173 SQ. MI.

SED WASH LOAD ID=14 K=0.09 C=0.25

P=1.0 LS=0.251

IMPERVIOUS=0.0 FACTOR=3.0

SEDIMENT YIELD (Wash Mat.) = 7.0 (TONS) WASH LOAD CONCENTRATION = 8253 (ppm-w)
PERCENTAGE IMPERVIOUS AREA = .000 WASH LOAD FACTOR = 3.00000

PRINT HYD ID=14 CODE=1

PARTIAL HYDROGRAPH 133.54

RUNOFF VOLUME = .66636 INCHES = .6148 ACRE-FEET
PEAK DISCHARGE RATE = 22.19 CFS AT 1.500 HOURS BASIN AREA = .0173 SQ. MI.

SEDIMENT TRANS ID=14 IDS=6 CODE=1

A=0.0002 B=4.19 C=0.19 D=-2.55

NUMB WASH=-1 NUMB SECTIONS=9

FLOW	VELOCITY	WIDTH
(CFS)	(FPS)	(FT)
2.00	1.63	12.78
5.00	2.06	17.99
10.00	2.41	24.53
14.00	2.58	28.75
17.00	2.70	31.28
20.00	2.79	33.67
23.00	2.88	35.74
27.00	2.99	38.25
30.00	3.06	39.98

Use wash load from SED WASH LOAD command - Concentration = 8253 (PPM-W)

* * * * *

WATER	HYD.	WASHLOAD	BED MAT.	BED	TOTAL	BULKING	ACCUM.
-------	------	----------	----------	-----	-------	---------	--------

TIME (HRS)	FLOW (CFS)	VELOCITY (FT/SEC)	DEPTH (FT)	WIDTH (FT)	CONC. (PPM-W)	TRANSPORT CONC. (CFS) (PPM-W)	CONC. (PPM-W)	FACTOR	SEDIMENT (TONS)
.000	.00	.000	.000	.00	8253.	.00 0.	8253.	1.0000	.00
.050	.00	.000	.000	.00	8253.	.00 0.	8253.	1.0000	.00
.100	.00	.000	.000	.00	8253.	.00 0.	8253.	1.0000	.00
.150	.00	.000	.000	.00	8253.	.00 0.	8253.	1.0000	.00
.200	.00	.000	.000	.00	8253.	.00 0.	8253.	1.0000	.00
.250	.00	.000	.000	.00	8253.	.00 0.	8253.	1.0000	.00
.300	.00	.000	.000	.00	8253.	.00 0.	8253.	1.0000	.00
.350	.00	.000	.000	.00	8253.	.00 0.	8253.	1.0000	.00
.400	.00	.000	.000	.00	8253.	.00 0.	8253.	1.0000	.00
.450	.00	.000	.000	.00	8253.	.00 0.	8253.	1.0000	.00
.500	.00	.000	.000	.00	8253.	.00 0.	8253.	1.0000	.00
.550	.00	.000	.000	.00	8253.	.00 0.	8253.	1.0000	.00
.600	.00	.000	.000	.00	8253.	.00 0.	8253.	1.0000	.00
.650	.00	.000	.000	.00	8253.	.00 0.	8253.	1.0000	.00
.700	.00	.000	.000	.00	8253.	.00 0.	8253.	1.0000	.00
.750	.00	.000	.000	.00	8253.	.00 0.	8253.	1.0000	.00
.800	.00	.000	.000	.00	8253.	.00 0.	8253.	1.0000	.00
.850	.00	.000	.000	.00	8253.	.00 0.	8253.	1.0000	.00
.900	.00	.000	.000	.00	8253.	.00 0.	8253.	1.0000	.00
.950	.00	.000	.000	.00	8253.	.00 0.	8253.	1.0000	.00
1.000	.00	.000	.000	.00	8253.	.00 0.	8253.	1.0000	.00
1.050	.00	.000	.000	.00	8253.	.00 0.	8253.	1.0000	.00
1.100	.00	.000	.000	.00	8253.	.00 0.	8253.	1.0000	.00
1.150	.00	.000	.000	.00	8253.	.00 0.	8253.	1.0000	.00
1.200	.00	.000	.000	.00	8253.	.00 0.	8253.	1.0000	.00
1.250	.00	.000	.000	.00	8253.	.00 0.	8253.	1.0000	.00
1.300	.00	.000	.000	.00	8253.	.00 0.	8253.	1.0000	.00
1.350	2.05	1.642	.097	12.87	8253.	.01 17131.	25105.	1.0097	.30
1.400	8.86	2.353	.163	23.04	8253.	.12 34750.	42442.	1.0167	2.50
1.450	17.67	2.722	.204	31.82	8253.	.32 45649.	53168.	1.0212	8.08
1.500	22.19	2.857	.221	35.18	8253.	.44 49786.	57241.	1.0229	15.64
1.550	21.01	2.822	.217	34.37	8253.	.41 48653.	56126.	1.0224	22.66
1.600	17.19	2.706	.202	31.43	8253.	.31 45200.	52726.	1.0210	28.03
1.650	13.19	2.551	.185	27.89	8253.	.21 40352.	47955.	1.0190	31.76
1.700	9.80	2.401	.168	24.27	8253.	.14 36130.	43800.	1.0173	34.28
1.750	7.06	2.241	.152	20.68	8253.	.09 31577.	39319.	1.0154	35.91
1.800	4.98	2.058	.135	17.96	8253.	.05 26721.	34541.	1.0135	36.91
1.850	3.61	1.913	.121	15.57	8253.	.03 23148.	31025.	1.0121	37.56
1.900	2.80	1.793	.110	14.17	8253.	.02 20384.	28306.	1.0110	38.01
1.950	2.31	1.700	.102	13.32	8253.	.02 18335.	26290.	1.0102	38.36
2.000	1.96	1.622	.095	12.65	8253.	.01 16720.	24700.	1.0096	38.64
2.050	1.69	1.570	.091	11.87	8253.	.01 15681.	23678.	1.0092	38.87
2.100	1.48	1.520	.086	11.25	8253.	.01 14733.	22745.	1.0088	39.07
2.150	1.30	1.472	.082	10.73	8253.	.01 13837.	21864.	1.0084	39.23
2.200	1.15	1.424	.078	10.28	8253.	.01 12969.	21010.	1.0081	39.37
2.250	1.01	1.375	.074	9.88	8253.	.00 12121.	20176.	1.0078	39.48
2.300	.89	1.332	.071	9.44	8253.	.00 11390.	19457.	1.0075	39.58
2.350	.79	1.291	.068	9.00	8253.	.00 10710.	18787.	1.0072	39.67
2.400	.69	1.251	.065	8.58	8253.	.00 10069.	18158.	1.0070	39.74
2.450	.61	1.212	.062	8.19	8253.	.00 9467.	17565.	1.0067	39.80
2.500	.54	1.174	.059	7.81	8253.	.00 8901.	17008.	1.0065	39.85
2.550	.47	1.138	.056	7.45	8253.	.00 8368.	16484.	1.0063	39.90
2.600	.42	1.102	.053	7.10	8253.	.00 7866.	15991.	1.0061	39.94
2.650	.37	1.068	.051	6.78	8253.	.00 7395.	15527.	1.0060	39.97
2.700	.32	1.035	.049	6.46	8253.	.00 6951.	15091.	1.0058	40.00
2.750	.29	1.003	.046	6.16	8253.	.00 6534.	14680.	1.0056	40.02

TIME (HRS)	WATER FLOW (CFS)	HYD. VELOCITY (FT/SEC)	DEPTH (FT)	WIDTH (FT)	WASHLOAD CONC. (PPM-W)	BED MAT. TRANSPORT (CFS)	BED CONC. (PPM-W)	TOTAL CONC. (PPM-W)	BULKING FACTOR	ACCU. SEDIMENT (TONS)
2.800	.25	.972	.044	5.88	8253.	.00	6142.	14295.	1.0055	40.04
2.850	.22	.942	.042	5.61	8253.	.00	5774.	13932.	1.0053	40.06
2.900	.20	.912	.040	5.35	8253.	.00	5427.	13591.	1.0052	40.07
2.950	.17	.884	.038	5.10	8253.	.00	5101.	13270.	1.0051	40.09
3.000	.15	.857	.037	4.87	8253.	.00	4794.	12969.	1.0050	40.10
3.050	.13	.830	.035	4.64	8253.	.00	4506.	12685.	1.0048	40.11
3.100	.12	.804	.033	4.43	8253.	.00	4235.	12419.	1.0047	40.12
3.150	.10	.779	.032	4.22	8253.	.00	3980.	12168.	1.0046	40.12
3.200	.09	.755	.030	4.03	8253.	.00	3741.	11933.	1.0046	40.13
3.250	.08	.732	.029	3.84	8253.	.00	3516.	11711.	1.0045	40.14
3.300	.07	.709	.028	3.66	8253.	.00	3304.	11503.	1.0044	40.14
3.350	.06	.687	.026	3.49	8253.	.00	3105.	11307.	1.0043	40.14
3.400	.06	.666	.025	3.33	8253.	.00	2918.	11124.	1.0042	40.15
3.450	.05	.645	.024	3.18	8253.	.00	2743.	10951.	1.0042	40.15
3.500	.04	.625	.023	3.03	8253.	.00	2578.	10788.	1.0041	40.15
3.550	.04	.606	.022	2.89	8253.	.00	2422.	10635.	1.0041	40.16
3.600	.03	.587	.021	2.76	8253.	.00	2276.	10492.	1.0040	40.16
3.650	.03	.568	.020	2.63	8253.	.00	2139.	10357.	1.0039	40.16
3.700	.03	.551	.019	2.51	8253.	.00	2010.	10230.	1.0039	40.16
3.750	.02	.534	.018	2.39	8253.	.00	1889.	10111.	1.0039	40.16
3.800	.02	.517	.017	2.28	8253.	.00	1775.	9999.	1.0038	40.16
3.850	.02	.501	.016	2.18	8253.	.00	1668.	9894.	1.0038	40.16
3.900	.02	.486	.016	2.08	8253.	.00	1568.	9795.	1.0037	40.17
3.950	.01	.470	.015	1.98	8253.	.00	1473.	9702.	1.0037	40.17
4.000	.01	.456	.014	1.89	8253.	.00	1384.	9615.	1.0037	40.17
4.050	.01	.442	.014	1.80	8253.	.00	1301.	9532.	1.0036	40.17
4.100	.01	.428	.013	1.72	8253.	.00	1222.	9455.	1.0036	40.17
4.150	.01	.415	.012	1.64	8253.	.00	1149.	9383.	1.0036	40.17
4.200	.01	.402	.012	1.56	8253.	.00	1079.	9315.	1.0035	40.17
4.250	.01	.374	.011	1.41	8253.	.00	938.	9176.	1.0035	40.17
4.300	.00	.319	.008	1.11	8253.	.00	685.	8926.	1.0034	40.17
4.350	.00	.252	.006	.78	8253.	.00	430.	8676.	1.0033	40.17

AT PEAK FLOW OF 22.187 WITH TIME AT 1.50 HOURS: BEDMAT = 13.27 (TONS) = .0061 (AC-FT bulked)
TOTAL SED = 15.64 (TONS) = .0072 (AC-FT bulked)

PEAK BULKING FACTOR = 1.022912 = 57241. (PPM-W)

WEIGHT (TONS)	UNBULKED VOLUME (AC-FT)	BULKED VOLUME (AC-FT)	CONCENTRATION BY WEIGHT (PPM)	AVERAGE BULKING FACTOR
WASHMAT = 6.95	.0019	.0032	8253.	
BEDMAT = 33.22	.0092	.0153	38232.	
TOTAL SEDIMENT = 40.17	.0112	.0184	45868.	1.018141

SEDIMENT TRANSPORT CAPACITY: 1.06609 AC-FT/SQ MI (bulked) = 3.6280 TONS/ACRE (at Porosity=0.395)

PRINT HYD ID=14 CODE=1

PARTIAL HYDROGRAPH 133.54

RUNOFF VOLUME = .66636 INCHES = .6148 ACRE-FEET
PEAK DISCHARGE RATE = 22.19 CFS AT 1.500 HOURS BASIN AREA = .0173 SQ. MI.

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COMPUTE NM HYD

ID=7 HYD NO=101.00 DA=0.0065 SQ MI
PER A=0.00 PER B=26.20 PER C=26.20 PER D=47.60
TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106428
UNIT PEAK = 12.215 CFS UNIT VOLUME = .9983 B = 526.28 P60 = 1.8700
AREA = .003094 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

K = .118429HR TP = .133300HR K/TP RATIO = .888442 SHAPE CONSTANT, N = 3.992479
UNIT PEAK = 9.0623 CFS UNIT VOLUME = .9998 B = 354.67 P60 = 1.8700
AREA = .003406 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

PRINT HYD ID=7 CODE=1

PARTIAL HYDROGRAPH 101.00

RUNOFF VOLUME = 1.58264 INCHES = .5486 ACRE-FEET
PEAK DISCHARGE RATE = 13.83 CFS AT 1.500 HOURS BASIN AREA = .0065 SQ. MI.

*S OFFSITE FLOW PLUS AREA 101

ADD HYD ID=6 HYD NO=101.01 ID I=6 ID II=7
PRINT HYD ID=6 CODE=1

PARTIAL HYDROGRAPH 101.01

RUNOFF VOLUME = .91878 INCHES = .7595 ACRE-FEET
PEAK DISCHARGE RATE = 21.24 CFS AT 1.500 HOURS BASIN AREA = .0155 SQ. MI.

COMPUTE NM HYD

ID=7 HYD NO=102.00 DA=0.0054 SQ MI
PER A=0.00 PER B=26.20 PER C=26.20 PER D=47.60
TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106428
UNIT PEAK = 10.148 CFS UNIT VOLUME = .9981 B = 526.28 P60 = 1.8700
AREA = .002570 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

K = .118429HR TP = .133300HR K/TP RATIO = .888442 SHAPE CONSTANT, N = 3.992479
UNIT PEAK = 7.5287 CFS UNIT VOLUME = .9996 B = 354.67 P60 = 1.8700
AREA = .002830 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

PRINT HYD ID=7 CODE=1

PARTIAL HYDROGRAPH 102.00

RUNOFF VOLUME = 1.58264 INCHES = .4558 ACRE-FEET
 PEAK DISCHARGE RATE = 11.49 CFS AT 1.500 HOURS BASIN AREA = .0054 SQ. MI.

COMPUTE NM HYD

ID=8 HYD NO=103.00 DA=0.0057 SQ MI
 PER A=0.00 PER B=26.20 PER C=26.20 PER D=47.60
 TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106428
 UNIT PEAK = 10.712 CFS UNIT VOLUME = .9981 B = 526.28 P60 = 1.8700
 AREA = .002713 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

K = .118429HR TP = .133300HR K/TP RATIO = .888442 SHAPE CONSTANT, N = 3.992479
 UNIT PEAK = 7.9469 CFS UNIT VOLUME = .9996 B = 354.67 P60 = 1.8700
 AREA = .002987 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

PRINT HYD

ID=8 CODE=1

PARTIAL HYDROGRAPH 103.00

RUNOFF VOLUME = 1.58264 INCHES = .4811 ACRE-FEET
 PEAK DISCHARGE RATE = 12.13 CFS AT 1.500 HOURS BASIN AREA = .0057 SQ. MI.

COMPUTE NM HYD

ID=4 HYD NO=104.00 DA=0.0088 SQ MI
 PER A=0.00 PER B=26.20 PER C=26.20 PER D=47.60
 TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106428
 UNIT PEAK = 16.538 CFS UNIT VOLUME = .9985 B = 526.28 P60 = 1.8700
 AREA = .004189 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

PRINT HYD

ID=4 CODE=1

PARTIAL HYDROGRAPH 104.00

RUNOFF VOLUME = 1.58264 INCHES = .7428 ACRE-FEET
 PEAK DISCHARGE RATE = 18.71 CFS AT 1.500 HOURS BASIN AREA = .0088 SQ. MI.

ADD HYD
 PRINT HYD

ID=6 HYD NO=104.12 ID I=6 ID II=7
 ID=6 CODE=1

PARTIAL HYDROGRAPH 104.12

RUNOFF VOLUME = 1.09029 INCHES = 1.2153 ACRE-FEET
 PEAK DISCHARGE RATE = 32.72 CFS AT 1.500 HOURS BASIN AREA = .0209 SQ. MI.

ADD HYD ID=6 HYD NO=104.13 ID I=6 ID II=8
 PRINT HYD ID=6 CODE=1

PARTIAL HYDROGRAPH 104.13

RUNOFF VOLUME = 1.19578 INCHES = 1.6964 ACRE-FEET
 PEAK DISCHARGE RATE = 44.85 CFS AT 1.500 HOURS BASIN AREA = .0266 SQ. MI.

*S FLOW EXITING AREA 104 TO CHANNEL
 ADD HYD ID=6 HYD NO=104.14 ID I=6 ID II=4
 PRINT HYD ID=6 CODE=1

PARTIAL HYDROGRAPH 104.14

RUNOFF VOLUME = 1.29194 INCHES = 2.4392 ACRE-FEET
 PEAK DISCHARGE RATE = 63.57 CFS AT 1.500 HOURS BASIN AREA = .0354 SQ. MI.

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COMPUTE NM HYD ID=7 HYD NO=105.00 DA=0.0060 SQ MI
 PER A=0.00 PER B=26.20 PER C=26.20 PER D=47.60
 TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106428
 UNIT PEAK = 11.276 CFS UNIT VOLUME = .9981 B = 526.28 P60 = 1.8700
 AREA = .002856 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

K = .118429HR TP = .133300HR K/TP RATIO = .888442 SHAPE CONSTANT, N = 3.992479
 UNIT PEAK = 8.3652 CFS UNIT VOLUME = .9996 B = 354.67 P60 = 1.8700
 AREA = .003144 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

PRINT HYD ID=7 CODE=1
 PARTIAL HYDROGRAPH 105.00

RUNOFF VOLUME = 1.58264 INCHES = .5064 ACRE-FEET
 PEAK DISCHARGE RATE = 12.77 CFS AT 1.500 HOURS BASIN AREA = .0060 SQ. MI.

COMPUTE NM HYD ID=8 HYD NO=106.00 DA=0.0067 SQ MI
 PER A=0.00 PER B=26.20 PER C=26.20 PER D=47.60

TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106428
UNIT PEAK = 12.591 CFS UNIT VOLUME = .9983 B = 526.28 P60 = 1.8700
AREA = .003189 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

K = .118429HR TP = .133300HR K/TP RATIO = .888442 SHAPE CONSTANT, N = 3.992479
UNIT PEAK = 9.3411 CFS UNIT VOLUME = .9998 B = 354.67 P60 = 1.8700
AREA = .003511 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

PRINT HYD ID=8 CODE=1

PARTIAL HYDROGRAPH 106.00

RUNOFF VOLUME = 1.58264 INCHES = .5655 ACRE-FEET
PEAK DISCHARGE RATE = 14.25 CFS AT 1.500 HOURS BASIN AREA = .0067 SQ. MI.

*S FLOW ENTERING 98TH STREET SD AT PARKWEST

ADD HYD ID=7 HYD NO=105.01 ID I=7 ID II=8
PRINT HYD ID=7 CODE=1

PARTIAL HYDROGRAPH 105.01

RUNOFF VOLUME = 1.58259 INCHES = 1.0719 ACRE-FEET
PEAK DISCHARGE RATE = 27.02 CFS AT 1.500 HOURS BASIN AREA = .0127 SQ. MI.

*S FLOW EXITING AREA 107 TO CHANNEL

COMPUTE NM HYD ID=8 HYD NO=107.00 DA=0.0069 SQ MI
PER A=0.00 PER B=26.20 PER C=26.20 PER D=47.60
TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106428
UNIT PEAK = 12.967 CFS UNIT VOLUME = .9983 B = 526.28 P60 = 1.8700
AREA = .003284 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

K = .118429HR TP = .133300HR K/TP RATIO = .888442 SHAPE CONSTANT, N = 3.992479
UNIT PEAK = 9.6199 CFS UNIT VOLUME = .9998 B = 354.67 P60 = 1.8700
AREA = .003616 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

PRINT HYD ID=8 CODE=1

PARTIAL HYDROGRAPH 107.00

RUNOFF VOLUME = 1.58264 INCHES = .5824 ACRE-FEET
PEAK DISCHARGE RATE = 14.68 CFS AT 1.500 HOURS BASIN AREA = .0069 SQ. MI.

*S ONSITE FLOW ENTERING CHANNEL FROM THE SOUTH
ADD HYD ID=6 HYD NO=107.01 ID I=6 ID II=8
PRINT HYD ID=6 CODE=1

PARTIAL HYDROGRAPH 107.01

RUNOFF VOLUME = 1.33935 INCHES = 3.0216 ACRE-FEET
PEAK DISCHARGE RATE = 78.24 CFS AT 1.500 HOURS BASIN AREA = .0423 SQ. MI.

COMPUTE NM HYD ID=1 HYD NO=108.00 DA=0.0046 SQ MI
PER A=0.00 PER B=26.20 PER C=26.20 PER D=47.60
TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106428
UNIT PEAK = 8.6447 CFS UNIT VOLUME = .9978 B = 526.28 P60 = 1.8700
AREA = .002190 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

K = .118429HR TP = .133300HR K/TP RATIO = .888442 SHAPE CONSTANT, N = 3.992479
UNIT PEAK = 6.4133 CFS UNIT VOLUME = .9994 B = 354.67 P60 = 1.8700
AREA = .002410 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

PRINT HYD ID=1 CODE=1

PARTIAL HYDROGRAPH 108.00

RUNOFF VOLUME = 1.58264 INCHES = .3883 ACRE-FEET
PEAK DISCHARGE RATE = 9.79 CFS AT 1.500 HOURS BASIN AREA = .0046 SQ. MI.

COMPUTE NM HYD ID=8 HYD NO=110.00 DA=0.0062 SQ MI
PER A=0.00 PER B=26.20 PER C=26.20 PER D=47.60
TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106428
UNIT PEAK = 11.651 CFS UNIT VOLUME = .9981 B = 526.28 P60 = 1.8700
AREA = .002951 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

K = .118429HR TP = .133300HR K/TP RATIO = .888442 SHAPE CONSTANT, N = 3.992479
UNIT PEAK = 8.6440 CFS UNIT VOLUME = .9998 B = 354.67 P60 = 1.8700
AREA = .003249 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

PRINT HYD ID=8 CODE=1

PARTIAL HYDROGRAPH 110.00

RUNOFF VOLUME = 1.58264 INCHES = .5233 ACRE-FEET

PEAK DISCHARGE RATE = 13.19 CFS AT 1.500 HOURS BASIN AREA = .0062 SQ. MI.

ADD HYD ID=8 HYD NO=110.01 ID I=1 ID II=8
PRINT HYD ID=8 CODE=1

PARTIAL HYDROGRAPH 110.01

RUNOFF VOLUME = 1.58258 INCHES = .9116 ACRE-FEET
PEAK DISCHARGE RATE = 22.98 CFS AT 1.500 HOURS BASIN AREA = .0108 SQ. MI.

COMPUTE NM HYD ID=4 HYD NO=109.00 DA=0.0036 SQ MI
PER A=0.00 PER B=26.20 PER C=26.20 PER D=47.60
TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106428
UNIT PEAK = 6.7654 CFS UNIT VOLUME = .9975 B = 526.28 P60 = 1.8700
AREA = .001714 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

K = .118429HR TP = .133300HR K/TP RATIO = .888442 SHAPE CONSTANT, N = 3.992479
UNIT PEAK = 5.0191 CFS UNIT VOLUME = .9988 B = 354.67 P60 = 1.8700
AREA = .001886 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

PRINT HYD ID=4 CODE=1

PARTIAL HYDROGRAPH 109.00

RUNOFF VOLUME = 1.58264 INCHES = .3039 ACRE-FEET
PEAK DISCHARGE RATE = 7.66 CFS AT 1.500 HOURS BASIN AREA = .0036 SQ. MI.

*S FLOW ENTERING 98TH STREET SD AT UNSER
ADD HYD ID=4 HYD NO=108.01 ID I=4 ID II=8
PRINT HYD ID=4 CODE=1

PARTIAL HYDROGRAPH 108.01

RUNOFF VOLUME = 1.58257 INCHES = 1.2154 ACRE-FEET
PEAK DISCHARGE RATE = 30.64 CFS AT 1.500 HOURS BASIN AREA = .0144 SQ. MI.

*S TOTAL ON-SITE FLOW TO 98TH STREET SD
ADD HYD ID=1 HYD NO=108.02 ID I=4 ID II=7
PRINT HYD ID=1 CODE=1

PARTIAL HYDROGRAPH 108.02

RUNOFF VOLUME = 1.58258 INCHES = 2.2873 ACRE-FEET

PEAK DISCHARGE RATE = 57.66 CFS AT 1.500 HOURS BASIN AREA = .0271 SQ. MI.

*

COMPUTE NM HYD

ID=4 HYD NO=111.10 DA=0.0025 SQ MI

PER A=0.00 PER B=0.00 PER C=45.00 PER D=55.00

TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106428
UNIT PEAK = 5.4286 CFS UNIT VOLUME = .9971 B = 526.28 P60 = 1.8700
AREA = .001375 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

K = .105867HR TP = .133300HR K/TP RATIO = .794199 SHAPE CONSTANT, N = 4.514858
UNIT PEAK = 3.2758 CFS UNIT VOLUME = .9982 B = 388.14 P60 = 1.8700
AREA = .001125 SQ MI IA = .35000 INCHES INF = .83000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

PRINT HYD ID=4 CODE=1

PARTIAL HYDROGRAPH 111.10

RUNOFF VOLUME = 1.78186 INCHES = .2376 ACRE-FEET
PEAK DISCHARGE RATE = 5.84 CFS AT 1.500 HOURS BASIN AREA = .0025 SQ. MI.

*S FLOW TO BRIDGE EXCLUDING UNIT 3

ADD HYD

ID=4 HYD NO=111.11 ID I=4 ID II=5

PRINT HYD

ID=4 CODE=1

PARTIAL HYDROGRAPH 111.11

RUNOFF VOLUME = .57161 INCHES = 35.1102 ACRE-FEET
PEAK DISCHARGE RATE = 525.98 CFS AT 1.800 HOURS BASIN AREA = 1.1517 SQ. MI.

*S FLOW TO BRIDGE INCLUDING UNIT 3

ADD HYD

ID=4 HYD NO=111.12 ID I=4 ID II=6

PRINT HYD

ID=4 CODE=1

PARTIAL HYDROGRAPH 111.12

RUNOFF VOLUME = .59881 INCHES = 38.1318 ACRE-FEET
PEAK DISCHARGE RATE = 550.18 CFS AT 1.800 HOURS BASIN AREA = 1.1940 SQ. MI.

*

COMPUTE NM HYD

ID=15 HYD NO=112.00 DA=0.0017 SQ MI

PER A=0.00 PER B=26.20 PER C=26.20 PER D=47.60

TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106428

UNIT PEAK = 3.1948 CFS UNIT VOLUME = .9959 B = 526.28 P60 = 1.8700
AREA = .00809 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

K = .118429HR TP = .133300HR K/TP RATIO = .888442 SHAPE CONSTANT, N = 3.992479
UNIT PEAK = 2.3701 CFS UNIT VOLUME = .9955 B = 354.67 P60 = 1.8700
AREA = .00891 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

PRINT HYD ID=15 CODE=1

PARTIAL HYDROGRAPH 112.00

RUNOFF VOLUME = 1.58264 INCHES = .1435 ACRE-FEET
PEAK DISCHARGE RATE = 3.63 CFS AT 1.500 HOURS BASIN AREA = .0017 SQ. MI.

COMPUTE NM HYD

ID=16 HYD NO=113.00 DA=0.0058 SQ MI
PER A=0.00 PER B=26.20 PER C=26.20 PER D=47.60
TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106428
UNIT PEAK = 10.900 CFS UNIT VOLUME = .9981 B = 526.28 P60 = 1.8700
AREA = .002761 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

K = .118429HR TP = .133300HR K/TP RATIO = .888442 SHAPE CONSTANT, N = 3.992479
UNIT PEAK = 8.0863 CFS UNIT VOLUME = .9996 B = 354.67 P60 = 1.8700
AREA = .003039 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

PRINT HYD ID=16 CODE=1

PARTIAL HYDROGRAPH 113.00

RUNOFF VOLUME = 1.58264 INCHES = .4896 ACRE-FEET
PEAK DISCHARGE RATE = 12.34 CFS AT 1.500 HOURS BASIN AREA = .0058 SQ. MI.

COMPUTE NM HYD

ID=17 HYD NO=114.00 DA=0.0069 SQ MI
PER A=0.00 PER B=26.20 PER C=26.20 PER D=47.60
TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106428
UNIT PEAK = 12.967 CFS UNIT VOLUME = .9983 B = 526.28 P60 = 1.8700
AREA = .003284 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

K = .118429HR TP = .133300HR K/TP RATIO = .888442 SHAPE CONSTANT, N = 3.992479
UNIT PEAK = 9.6199 CFS UNIT VOLUME = .9998 B = 354.67 P60 = 1.8700
AREA = .003616 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

PRINT HYD ID=17 CODE=1

PARTIAL HYDROGRAPH 114.00

RUNOFF VOLUME = 1.58264 INCHES = .5824 ACRE-FEET
PEAK DISCHARGE RATE = 14.68 CFS AT 1.500 HOURS BASIN AREA = .0069 SQ. MI.

ADD HYD ID=15 HYD NO=114.01 ID I=15 ID II=16
PRINT HYD ID=15 CODE=1

PARTIAL HYDROGRAPH 114.01

RUNOFF VOLUME = 1.58256 INCHES = .6330 ACRE-FEET
PEAK DISCHARGE RATE = 15.97 CFS AT 1.500 HOURS BASIN AREA = .0075 SQ. MI.

ADD HYD ID=15 HYD NO=114.02 ID I=15 ID II=17
PRINT HYD ID=15 CODE=1

PARTIAL HYDROGRAPH 114.02

RUNOFF VOLUME = 1.58257 INCHES = 1.2154 ACRE-FEET
PEAK DISCHARGE RATE = 30.65 CFS AT 1.500 HOURS BASIN AREA = .0144 SQ. MI.

* *****

COMPUTE NM HYD

ID=16 HYD NO=116.10 DA=0.0041 SQ MI
PER A=0.00 PER B=26.20 PER C=26.20 PER D=47.60
TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106428
UNIT PEAK = 7.7050 CFS UNIT VOLUME = .9978 B = 526.28 P60 = 1.8700
AREA = .001952 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

PRINT HYD ID=16 CODE=1

PARTIAL HYDROGRAPH 116.10

RUNOFF VOLUME = 1.58264 INCHES = .3461 ACRE-FEET
PEAK DISCHARGE RATE = 8.73 CFS AT 1.500 HOURS BASIN AREA = .0041 SQ. MI.

ADD HYD ID=15 HYD NO=116.01 ID I=15 ID II=16
PRINT HYD ID=15 CODE=1

PARTIAL HYDROGRAPH 116.01

RUNOFF VOLUME = 1.58257 INCHES = 1.5615 ACRE-FEET
 PEAK DISCHARGE RATE = 39.37 CFS AT 1.500 HOURS BASIN AREA = .0185 SQ. MI.

COMPUTE NM HYD

ID=16 HYD NO=116.20 DA=0.0024 SQ MI
 PER A=0.00 PER B=26.20 PER C=26.20 PER D=47.60
 TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106428
 UNIT PEAK = 4.5103 CFS UNIT VOLUME = .9966 B = 526.28 P60 = 1.8700
 AREA = .001142 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

K = .118429HR TP = .133300HR K/TP RATIO = .888442 SHAPE CONSTANT, N = 3.992479
 UNIT PEAK = 3.3461 CFS UNIT VOLUME = .9975 B = 354.67 P60 = 1.8700
 AREA = .001258 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

PRINT HYD

ID=16 CODE=1

PARTIAL HYDROGRAPH 116.20

RUNOFF VOLUME = 1.58264 INCHES = .2026 ACRE-FEET
 PEAK DISCHARGE RATE = 5.12 CFS AT 1.500 HOURS BASIN AREA = .0024 SQ. MI.

ADD HYD

ID=15 HYD NO=116.02 ID I=15 ID II=16

PRINT HYD

ID=15 CODE=1

PARTIAL HYDROGRAPH 116.02

RUNOFF VOLUME = 1.58257 INCHES = 1.7640 ACRE-FEET
 PEAK DISCHARGE RATE = 44.49 CFS AT 1.500 HOURS BASIN AREA = .0209 SQ. MI.

COMPUTE NM HYD

ID=16 HYD NO=117.00 DA=0.0049 SQ MI
 PER A=0.00 PER B=25.00 PER C=25.00 PER D=50.00
 TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106428
 UNIT PEAK = 9.6727 CFS UNIT VOLUME = .9981 B = 526.28 P60 = 1.8700
 AREA = .002450 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

K = .118429HR TP = .133300HR K/TP RATIO = .888442 SHAPE CONSTANT, N = 3.992479
 UNIT PEAK = 6.5187 CFS UNIT VOLUME = .9994 B = 354.67 P60 = 1.8700
 AREA = .002450 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

PRINT HYD ID=16 CODE=1

PARTIAL HYDROGRAPH 117.00

RUNOFF VOLUME = 1.62132 INCHES = .4237 ACRE-FEET
PEAK DISCHARGE RATE = 10.57 CFS AT 1.500 HOURS BASIN AREA = .0049 SQ. MI.

*S FLOW ENTERING CHANNEL FROM THE NORTH AT THE BRIDGE

ADD HYD ID=15 HYD NO=116.03 ID I=15 ID II=16

PRINT HYD ID=15 CODE=1

PARTIAL HYDROGRAPH 116.03

RUNOFF VOLUME = 1.58992 INCHES = 2.1877 ACRE-FEET
PEAK DISCHARGE RATE = 55.05 CFS AT 1.500 HOURS BASIN AREA = .0258 SQ. MI.

* *****

*S TOTAL FLOW IN CHANNEL AT BRIDGE

ADD HYD ID=4 HYD NO=111.12 ID I=4 ID II=15

PRINT HYD ID=4 CODE=1

PARTIAL HYDROGRAPH 111.12

RUNOFF VOLUME = .61977 INCHES = 40.3195 ACRE-FEET
PEAK DISCHARGE RATE = 567.59 CFS AT 1.800 HOURS BASIN AREA = 1.2198 SQ. MI.

* *****

COMPUTE NM HYD

ID=5 HYD NO=111.20 DA=0.0015 SQ MI
PER A=0.00 PER B=0.00 PER C=45.00 PER D=55.00
TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106428
UNIT PEAK = 3.2571 CFS UNIT VOLUME = .9959 B = 526.28 P60 = 1.8700
AREA = .000825 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

K = .105867HR TP = .133300HR K/TP RATIO = .794199 SHAPE CONSTANT, N = 4.514858
UNIT PEAK = 1.9655 CFS UNIT VOLUME = .9952 B = 388.14 P60 = 1.8700
AREA = .000675 SQ MI IA = .35000 INCHES INF = .83000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

PRINT HYD ID=5 CODE=1

PARTIAL HYDROGRAPH 111.20

RUNOFF VOLUME = 1.78186 INCHES = .1425 ACRE-FEET
PEAK DISCHARGE RATE = 3.51 CFS AT 1.500 HOURS BASIN AREA = .0015 SQ. MI.

ADD HYD ID=4 HYD NO=111.00 ID I=4 ID II=5
PRINT HYD ID=4 CODE=1

PARTIAL HYDROGRAPH 111.00

RUNOFF VOLUME = .62120 INCHES = 40.4621 ACRE-FEET
PEAK DISCHARGE RATE = 568.75 CFS AT 1.800 HOURS BASIN AREA = 1.2213 SQ. MI.

*S TOTAL FLOW IN CHANNEL AT UNSER WITHOUT UNIT 5 EAST OF PARKWEST DR.
ADD HYD ID=4 HYD NO=111.00 ID I=4 ID II=7
PRINT HYD ID=4 CODE=1

PARTIAL HYDROGRAPH 111.00

RUNOFF VOLUME = .63109 INCHES = 41.5340 ACRE-FEET
PEAK DISCHARGE RATE = 577.28 CFS AT 1.800 HOURS BASIN AREA = 1.2340 SQ. MI.

* *****

COMPUTE NM HYD ID=15 HYD NO=120.00 DA=0.0067 SQ MI
PER A=0.00 PER B=26.20 PER C=26.20 PER D=47.60
TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106428
UNIT PEAK = 12.591 CFS UNIT VOLUME = .9983 B = 526.28 P60 = 1.8700
AREA = .003189 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

K = .118429HR TP = .133300HR K/TP RATIO = .888442 SHAPE CONSTANT, N = 3.992479
UNIT PEAK = 9.3411 CFS UNIT VOLUME = .9998 B = 354.67 P60 = 1.8700
AREA = .003511 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

PRINT HYD ID=15 CODE=1

PARTIAL HYDROGRAPH 120.00

RUNOFF VOLUME = 1.58264 INCHES = .5655 ACRE-FEET
PEAK DISCHARGE RATE = 14.25 CFS AT 1.500 HOURS BASIN AREA = .0067 SQ. MI.

COMPUTE NM HYD ID=16 HYD NO=119.00 DA=0.0056 SQ MI
PER A=0.00 PER B=26.20 PER C=26.20 PER D=47.60
TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106428
UNIT PEAK = 10.524 CFS UNIT VOLUME = .9981 B = 526.28 P60 = 1.8700
AREA = .002666 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

K = .118429HR TP = .133300HR K/TP RATIO = .888442 SHAPE CONSTANT, N = 3.992479
UNIT PEAK = 7.8075 CFS UNIT VOLUME = .9996 B = 354.67 P60 = 1.8700
AREA = .002934 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

PRINT HYD ID=16 CODE=1

PARTIAL HYDROGRAPH 119.00

RUNOFF VOLUME = 1.58264 INCHES = .4727 ACRE-FEET
PEAK DISCHARGE RATE = 11.91 CFS AT 1.500 HOURS BASIN AREA = .0056 SQ. MI.

ADD HYD ID=15 HYD NO=119.01 ID I=15 ID II=16

PRINT HYD ID=15 CODE=1

PARTIAL HYDROGRAPH 119.01

RUNOFF VOLUME = 1.58259 INCHES = 1.0382 ACRE-FEET
PEAK DISCHARGE RATE = 26.17 CFS AT 1.500 HOURS BASIN AREA = .0123 SQ. MI.

COMPUTE NM HYD

ID=16 HYD NO=118.00 DA=0.0059 SQ MI
PER A=0.00 PER B=26.20 PER C=26.20 PER D=47.60
TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106428
UNIT PEAK = 11.088 CFS UNIT VOLUME = .9981 B = 526.28 P60 = 1.8700
AREA = .002808 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

K = .118429HR TP = .133300HR K/TP RATIO = .888442 SHAPE CONSTANT, N = 3.992479
UNIT PEAK = 8.2257 CFS UNIT VOLUME = .9996 B = 354.67 P60 = 1.8700
AREA = .003092 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

PRINT HYD ID=16 CODE=1

PARTIAL HYDROGRAPH 118.00

RUNOFF VOLUME = 1.58264 INCHES = .4980 ACRE-FEET
PEAK DISCHARGE RATE = 12.55 CFS AT 1.500 HOURS BASIN AREA = .0059 SQ. MI.

*S TOTAL FLOW IN RUNDOWN TO CHANNEL

ADD HYD ID=15 HYD NO=118.01 ID I=15 ID II=16

PRINT HYD ID=15 CODE=1

PARTIAL HYDROGRAPH 118.01

RUNOFF VOLUME = 1.58259 INCHES = 1.5362 ACRE-FEET
PEAK DISCHARGE RATE = 38.72 CFS AT 1.500 HOURS BASIN AREA = .0182 SQ. MI.

*S TOTAL FLOW IN CHANNEL AT UNSER EXITING THE SITE
ADD HYD ID=2 HYD NO=111.00 ID I=4 ID II=15
PRINT HYD ID=2 CODE=1

PARTIAL HYDROGRAPH 111.00

RUNOFF VOLUME = .64492 INCHES = 43.0702 ACRE-FEET
PEAK DISCHARGE RATE = 589.50 CFS AT 1.800 HOURS BASIN AREA = 1.2522 SQ. MI.

* *****

COMPUTE NM HYD ID=15 HYD NO=115.00 DA=0.0019 SQ MI
PER A=0.00 PER B=26.20 PER C=26.20 PER D=47.60
TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106428
UNIT PEAK = 3.5706 CFS UNIT VOLUME = .9959 B = 526.28 P60 = 1.8700
AREA = .000904 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

K = .118429HR TP = .133300HR K/TP RATIO = .888442 SHAPE CONSTANT, N = 3.992479
UNIT PEAK = 2.6490 CFS UNIT VOLUME = .9962 B = 354.67 P60 = 1.8700
AREA = .000996 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

PRINT HYD ID=15 CODE=1

PARTIAL HYDROGRAPH 115.00

RUNOFF VOLUME = 1.58264 INCHES = .1604 ACRE-FEET
PEAK DISCHARGE RATE = 4.05 CFS AT 1.500 HOURS BASIN AREA = .0019 SQ. MI.

COMPUTE NM HYD ID=16 HYD NO=121.00 DA=0.0027 SQ MI
PER A=0.00 PER B=26.20 PER C=26.20 PER D=47.60
TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106428
UNIT PEAK = 5.0740 CFS UNIT VOLUME = .9971 B = 526.28 P60 = 1.8700
AREA = .001285 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

K = .118429HR TP = .133300HR K/TP RATIO = .888442 SHAPE CONSTANT, N = 3.992479
UNIT PEAK = 3.7643 CFS UNIT VOLUME = .9979 B = 354.67 P60 = 1.8700
AREA = .001415 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

PRINT HYD ID=16 CODE=1

PARTIAL HYDROGRAPH 121.00

RUNOFF VOLUME = 1.58264 INCHES = .2279 ACRE-FEET
PEAK DISCHARGE RATE = 5.75 CFS AT 1.500 HOURS BASIN AREA = .0027 SQ. MI.

ADD HYD ID=15 HYD NO=121.01 ID I=15 ID II=16
PRINT HYD ID=15 CODE=1

PARTIAL HYDROGRAPH 121.01

RUNOFF VOLUME = 1.58251 INCHES = .3882 ACRE-FEET
PEAK DISCHARGE RATE = 9.81 CFS AT 1.500 HOURS BASIN AREA = .0046 SQ. MI.

COMPUTE NM HYD

ID=16 HYD NO=122.00 DA=0.0009 SQ MI
PER A=0.00 PER B=5.00 PER C=5.00 PER D=90.00
TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106428
UNIT PEAK = 3.1979 CFS UNIT VOLUME = .9959 B = 526.28 P60 = 1.8700
AREA = .000810 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

K = .118429HR TP = .133300HR K/TP RATIO = .888442 SHAPE CONSTANT, N = 3.992479
UNIT PEAK = .23946 CFS UNIT VOLUME = .9466 B = 354.67 P60 = 1.8700
AREA = .000090 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

PRINT HYD ID=16 CODE=1

PARTIAL HYDROGRAPH 122.00

RUNOFF VOLUME = 2.26606 INCHES = .1088 ACRE-FEET
PEAK DISCHARGE RATE = 2.38 CFS AT 1.500 HOURS BASIN AREA = .0009 SQ. MI.

*S ON-SITE FLOW TO POND
ADD HYD ID=15 HYD NO=122.01 ID I=15 ID II=16
PRINT HYD ID=15 CODE=1

PARTIAL HYDROGRAPH 122.01

RUNOFF VOLUME = 1.69431 INCHES = .4970 ACRE-FEET
PEAK DISCHARGE RATE = 12.19 CFS AT 1.500 HOURS BASIN AREA = .0055 SQ. MI.

*S TOTAL FLOW TO POND

ADD HYD ID=11 HYD NO=122.02 ID I=11 ID II=15
PRINT HYD ID=11 CODE=1

PARTIAL HYDROGRAPH 122.02

RUNOFF VOLUME = .77123 INCHES = 5.3595 ACRE-FEET
PEAK DISCHARGE RATE = 187.64 CFS AT 1.500 HOURS BASIN AREA = .1303 SQ. MI.

PUNCH HYD ID=11
*S ROUTE HYDROGRAPH THRU POND
ROUTE RESERVOIR ID=12 HYD NO=133.50 INFLOW ID=11 CODE=5
OUTFLOW (CFS) STORAGE (AC FT) ELEV (FT)
0.0 0.00 04.00
1.6 0.06 04.50
2.3 1.23 05.00
2.8 1.86 05.50
3.3 2.50 06.00
3.6 3.14 06.50
4.0 3.78 07.00
4.3 4.42 07.50
4.6 5.07 08.00

* * * * *

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
.00	.00	4.00	.000	.00
.25	.00	4.00	.000	.00
.50	.00	4.00	.000	.00
.75	.00	4.00	.000	.00
1.00	.00	4.00	.000	.00
1.25	.87	4.02	.003	.07
1.50	187.64	5.15	1.420	2.45
1.75	61.13	7.15	3.971	4.09
2.00	18.06	7.61	4.567	4.37
2.25	8.41	7.74	4.735	4.45
2.50	4.29	7.77	4.769	4.46
2.75	2.22	7.75	4.742	4.45
3.00	1.16	7.70	4.684	4.42
3.25	.61	7.65	4.611	4.39
3.50	.34	7.58	4.530	4.35
3.75	.20	7.52	4.446	4.31
4.00	.13	7.45	4.361	4.27
4.25	.08	7.39	4.275	4.23
4.50	.07	7.32	4.189	4.19
4.75	.05	7.25	4.104	4.15
5.00	.05	7.19	4.020	4.11
5.25	.05	7.12	3.937	4.07
5.50	.06	7.06	3.854	4.03
5.75	.06	6.99	3.772	4.00
6.00	.06	6.93	3.691	3.94
6.25	.07	6.87	3.612	3.89
6.50	.07	6.81	3.533	3.85
6.75	.07	6.75	3.456	3.80
7.00	.07	6.69	3.379	3.75
7.25	.07	6.63	3.304	3.70
7.50	.07	6.57	3.229	3.66
7.75	.07	6.51	3.156	3.61
8.00	.07	6.46	3.083	3.57
8.25	.07	6.40	3.011	3.54

8.50	.07	6.34	2.939	3.51
8.75	.06	6.29	2.869	3.47
9.00	.06	6.23	2.799	3.44
9.25	.06	6.18	2.729	3.41
9.50	.06	6.13	2.660	3.38
9.75	.06	6.07	2.592	3.34
10.00	.06	6.02	2.525	3.31
10.25	.06	5.97	2.458	3.27
10.50	.06	5.92	2.392	3.22
10.75	.06	5.87	2.327	3.17
11.00	.06	5.82	2.264	3.12
11.25	.06	5.77	2.201	3.07
11.50	.06	5.72	2.139	3.02
11.75	.05	5.67	2.079	2.97
12.00	.05	5.62	2.019	2.92
12.25	.05	5.58	1.960	2.88
12.50	.05	5.53	1.902	2.83
12.75	.05	5.49	1.845	2.79
13.00	.05	5.44	1.789	2.74
13.25	.05	5.40	1.734	2.70
13.50	.05	5.36	1.680	2.66
13.75	.05	5.31	1.626	2.61

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
14.00	.05	5.27	1.574	2.57
14.25	.05	5.23	1.522	2.53
14.50	.05	5.19	1.471	2.49
14.75	.05	5.15	1.421	2.45
15.00	.05	5.11	1.372	2.41
15.25	.05	5.07	1.323	2.37
15.50	.05	5.04	1.276	2.34
15.75	.05	5.00	1.229	2.30
16.00	.05	4.98	1.182	2.27
16.25	.04	4.96	1.137	2.24
16.50	.04	4.94	1.091	2.22
16.75	.04	4.92	1.047	2.19
17.00	.04	4.90	1.003	2.16
17.25	.04	4.88	.959	2.14
17.50	.04	4.87	.916	2.11
17.75	.04	4.85	.874	2.09
18.00	.04	4.83	.832	2.06
18.25	.04	4.81	.790	2.04
18.50	.04	4.79	.749	2.01
18.75	.04	4.78	.709	1.99
19.00	.04	4.76	.669	1.96
19.25	.04	4.74	.629	1.94
19.50	.04	4.73	.590	1.92
19.75	.04	4.71	.552	1.89
20.00	.04	4.69	.514	1.87
20.25	.04	4.68	.476	1.85
20.50	.04	4.66	.439	1.83
20.75	.04	4.65	.402	1.80
21.00	.04	4.63	.366	1.78
21.25	.04	4.62	.330	1.76
21.50	.04	4.60	.295	1.74
21.75	.04	4.59	.260	1.72
22.00	.04	4.57	.225	1.70
22.25	.04	4.56	.191	1.68

22.50	.04	4.54	.157	1.66
22.75	.04	4.53	.124	1.64
23.00	.04	4.51	.091	1.62
23.25	.04	4.49	.059	1.56
23.50	.03	4.29	.034	.91
23.75	.03	4.17	.020	.54
24.00	.03	4.10	.012	.33
24.25	.01	4.06	.007	.20
24.50	.00	4.04	.004	.11
24.75	.00	4.02	.002	.07
25.00	.00	4.01	.001	.04
25.25	.00	4.01	.001	.02
25.50	.00	4.00	.000	.01
25.75	.00	4.00	.000	.01
26.00	.00	4.00	.000	.00

PEAK DISCHARGE = 4.461 CFS - PEAK OCCURS AT HOUR 2.50
MAXIMUM WATER SURFACE ELEVATION = 7.769
MAXIMUM STORAGE = 4.7694 AC-FT INCREMENTAL TIME= .050000HRS

PRINT HYD ID=12 CODE=1

PARTIAL HYDROGRAPH 133.50

RUNOFF VOLUME = .77123 INCHES = 5.3595 ACRE-FEET
PEAK DISCHARGE RATE = 4.46 CFS AT 2.500 HOURS BASIN AREA = .1303 SQ. MI.

* *****

COMPUTE NM HYD ID=15 HYD NO=123.00 DA=0.0022 SQ MI
PER A=0.00 PER B=5.00 PER C=5.00 PER D=90.00
TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106428
UNIT PEAK = 7.8171 CFS UNIT VOLUME = .9978 B = 526.28 P60 = 1.8700
AREA = .001980 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

K = .118429HR TP = .133300HR K/TP RATIO = .888442 SHAPE CONSTANT, N = 3.992479
UNIT PEAK = .58535 CFS UNIT VOLUME = .9808 B = 354.67 P60 = 1.8700
AREA = .000220 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

PRINT HYD ID=15 CODE=1

PARTIAL HYDROGRAPH 123.00

RUNOFF VOLUME = 2.26606 INCHES = .2659 ACRE-FEET
PEAK DISCHARGE RATE = 5.80 CFS AT 1.500 HOURS BASIN AREA = .0022 SQ. MI.

ADD HYD ID=15 HYD NO=123.01 ID I=15 ID II=13
PRINT HYD ID=15 CODE=1

PARTIAL HYDROGRAPH 123.01

RUNOFF VOLUME = 1.41507 INCHES = .3547 ACRE-FEET
PEAK DISCHARGE RATE = 9.03 CFS AT 1.500 HOURS BASIN AREA = .0047 SQ. MI.

*S FLOW FROM LAVA BLUFF TO OURAY SD INCLUDING OFFSITE SHEET FLOW

ADD HYD ID=15 HYD NO=123.02 ID I=15 ID II=14
PRINT HYD ID=15 CODE=1

PARTIAL HYDROGRAPH 123.02

RUNOFF VOLUME = .82630 INCHES = .9695 ACRE-FEET
PEAK DISCHARGE RATE = 31.22 CFS AT 1.500 HOURS BASIN AREA = .0220 SQ. MI.

COMPUTE NM HYD

ID=16 HYD NO=124.00 DA=0.0311 SQ MI
PER A=0.00 PER B=26.20 PER C=26.20 PER D=47.60
TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106428
UNIT PEAK = 58.445 CFS UNIT VOLUME = .9990 B = 526.28 P60 = 1.8700
AREA = .014804 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

K = .118429HR TP = .133300HR K/TP RATIO = .888442 SHAPE CONSTANT, N = 3.992479
UNIT PEAK = 43.359 CFS UNIT VOLUME = 1.001 B = 354.67 P60 = 1.8700
AREA = .016296 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

PRINT HYD ID=16 CODE=1

PARTIAL HYDROGRAPH 124.00

RUNOFF VOLUME = 1.58264 INCHES = 2.6251 ACRE-FEET
PEAK DISCHARGE RATE = 66.10 CFS AT 1.500 HOURS BASIN AREA = .0311 SQ. MI.

*S UNPONDED FLOW TO INLETS AT OURAY

ADD HYD ID=15 HYD NO=124.01 ID I=15 ID II=16
PRINT HYD ID=15 CODE=1

PARTIAL HYDROGRAPH 124.01

RUNOFF VOLUME = 1.26928 INCHES = 3.5946 ACRE-FEET
PEAK DISCHARGE RATE = 97.32 CFS AT 1.500 HOURS BASIN AREA = .0531 SQ. MI.

*S TOTAL ONSITE FLOW TO OURAY SD

ADD HYD ID=12 HYD NO=124.02 ID I=12 ID II=15
PRINT HYD ID=12 CODE=1

PARTIAL HYDROGRAPH 124.02

RUNOFF VOLUME = .91542 INCHES = 8.9540 ACRE-FEET
PEAK DISCHARGE RATE = 99.77 CFS AT 1.500 HOURS BASIN AREA = .1834 SQ. MI.

* *****

COMPUTE NM HYD ID=15 HYD NO=133.2 DA=0.0210 SQ MI
PER A=0.00 PER B=5.00 PER C=5.00 PER D=90.00
TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106428
UNIT PEAK = 74.618 CFS UNIT VOLUME = .9990 B = 526.28 P60 = 1.8700
AREA = .018900 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

K = .118429HR TP = .133300HR K/TP RATIO = .888442 SHAPE CONSTANT, N = 3.992479
UNIT PEAK = 5.5874 CFS UNIT VOLUME = .9991 B = 354.67 P60 = 1.8700
AREA = .002100 SQ MI IA = .42500 INCHES INF = 1.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

PRINT HYD ID=15 CODE=1

PARTIAL HYDROGRAPH 133.20

RUNOFF VOLUME = 2.26606 INCHES = 2.5380 ACRE-FEET
PEAK DISCHARGE RATE = 55.26 CFS AT 1.500 HOURS BASIN AREA = .0210 SQ. MI.

*S EXISTING FLOW TO OURAY SD

ADD HYD ID=14 HYD NO=133.01 ID I=15 ID II=9

PRINT HYD ID=14 CODE=1

PARTIAL HYDROGRAPH 133.01

RUNOFF VOLUME = .65129 INCHES = 10.8721 ACRE-FEET
PEAK DISCHARGE RATE = 166.75 CFS AT 1.600 HOURS BASIN AREA = .3130 SQ. MI.

*S TOTAL FLOW TO OURAY STORM DRAIN

ADD HYD ID=3 HYD NO=133.02 ID I=12 ID II=14

PRINT HYD ID=3 CODE=1

PARTIAL HYDROGRAPH 133.02

RUNOFF VOLUME = .74888 INCHES = 19.8262 ACRE-FEET
PEAK DISCHARGE RATE = 254.57 CFS AT 1.550 HOURS BASIN AREA = .4964 SQ. MI.

FINISH

NORMAL PROGRAM FINISH END TIME (HR:MIN:SEC) = 07:42:49

APPENDIX B

HYDRAULIC CALCULATIONS

TABLE OF CONTENTS

- A. PRELIMINARY FLOOD PLAIN STUDY FOR LADERA ARROYO**
- B. POND VOLUME CALCULATIONS**

PRELIMINARY FLOODPLAIN STUDY FOR LADERA ARROYO

A:\LADERA.OUT

Page: 1

Thursday February 24, 1994 02:20:29 pm

1*****

* HEC-2 WATER SURFACE PROFILES *

* U.S. ARMY CORPS OF ENGINEERS

* *

* HYDROLOGIC ENGINEERING CENTER

* Version 4.6.2; May 1991 *

* 609 SECOND STREET, SUITE D

* *

* DAVIS, CALIFORNIA 95616-4687

* RUN DATE 24FEB94 TIME 13:39:10 *

* (916) 756-1104

* *

X	X	XXXXXX	XXXX		XXXX
X	X	X	X	X	X
X	X	X	X		X
XXXXXX	XXXX	X		XXXX	XXXX
X	X	X	X		X
X	X	X	X	X	X
X	X	XXXXXX	XXXX		XXXXXX

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THIS RUN EXECUTED 24FEB94 13:39:10

HEC-2 WATER SURFACE PROFILES

Version 4.6.2; May 1991

T1 PRELIMINARY FLOODPLAIN STUDY OF THE LADERA ARROYO THROUGH PARKWEST SUBD.
T2 ABOVE UNCER BLVD.
T3 CRITICAL DEPTH

J1	ICHECK	INQ	NINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	FQ
----	--------	-----	------	------	------	--------	-------	---	------	----

2.				-1.				5.		
----	--	--	--	-----	--	--	--	----	--	--

J2	NPROF	IPLT	PRFVS	XSECV	XSECH	FN	ALLDC	IBW	CHNIM	ITRACE
----	-------	------	-------	-------	-------	----	-------	-----	-------	--------

1.		-1.			-1.					
----	--	-----	--	--	-----	--	--	--	--	--

J6	IHLQ	ICOPY	SUBDIV	STRTDS	RMILE
----	------	-------	--------	--------	-------

1.

NC	.023	.023	.023	.1	.3
QT	1.	687.			

1

PAGE 2

PAGE 3

PAGE 4

1

CCHV= .100 CEHV= .300
*SECNO 15.000

NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

CRITICAL DEPTH

SUMMARY PRINTOUT TABLE 150

SEENO	XLCH	ELTRD	ELLC	ELMIN	Q	CNSEL	CRINS	EG	10*KS	VCH	AREA	.01K
*	15.000	.00	.00	.00	687.00	4.00	4.00	5.41	61.28	9.52	72.13	87.76
	15.000	.00	.00	.00	687.00	3.03	4.00	6.13	182.18	14.14	48.59	50.90
	15.000	.00	.00	.00	687.00	2.79	4.00	6.68	249.20	15.82	43.42	43.52

1
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PAGE 8

CRITICAL DEPTH

SUMMARY PRINTOUT TABLE 150

SEENO	Q	CNSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
*	15.000	687.00	4.00	.00	-1.00	26.02	.00
	15.000	687.00	3.03	-.98	-1.97	22.11	.00
	15.000	687.00	2.79	-.24	-2.21	21.15	.00

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SUMMARY OF ERRORS AND SPECIAL NOTES

CAUTION SEENO= 15.000 PROFILE= 1 CRITICAL DEPTH ASSUMED

POND VOLUME CALCULATIONS

POND-2 Version: 4.01
S/N: 88020607

PARKWEST POND

CALCULATED 10-03-1993 18:44:56
DISK FILE : C:\PARKWEST.VOL

Planimeter scale: 1 inch = 1 ft.

Elevation (ft)	Planimeter (sq. in.)	Area (acres)	$A1+A2+\text{sqr}(A1 \times A2)$ (acres)	Volume (acre-ft)	Volume Sum (acre-ft)
5,198.00	0.00	0.00	0.00	0.00	0.00
5,199.00	5,760.00	0.13	0.13	0.04	0.04
5,200.00	14,560.00	0.33	0.68	0.23	0.27
5,201.00	25,600.00	0.59	1.37	0.46	0.72
5,202.00	34,240.00	0.79	2.05	0.68	1.41
5,203.00	40,640.00	0.93	2.58	0.86	2.27
5,204.00	51,520.00	1.18	3.17	1.06	3.32
5,205.00	55,200.00	1.27	3.67	1.22	4.55
5,206.00	55,520.00	1.27	3.81	1.27	5.82
5,207.00	56,000.00	1.29	3.84	1.28	7.10
5,207.77	*I*	1.29	3.87	0.99	8.09
5,208.00	56,320.00	1.29	3.87	1.29	8.39

I ----> Interpolated area from closest two planimeter readings.

* Incremental volume computed by the Conic Method for Reservoir Volumes.

APPENDIX C

PLATES AND REFERENCES

TABLE OF CONTENTS

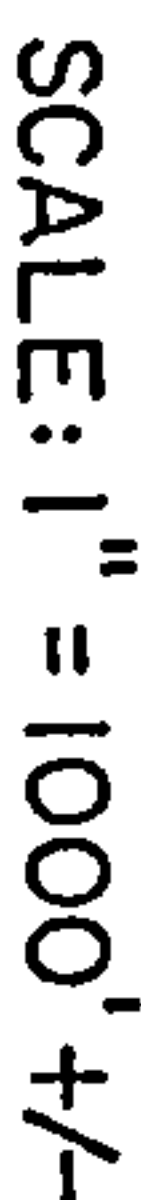
A. PLATES

LADERA AND WEST BLUFF WATERSHEDS
OFF-SITE DRAINAGE BASINS
FEMA FLOODPLAIN MAP
SCS SOIL CLASSIFICATION
TRANSITION DETAIL

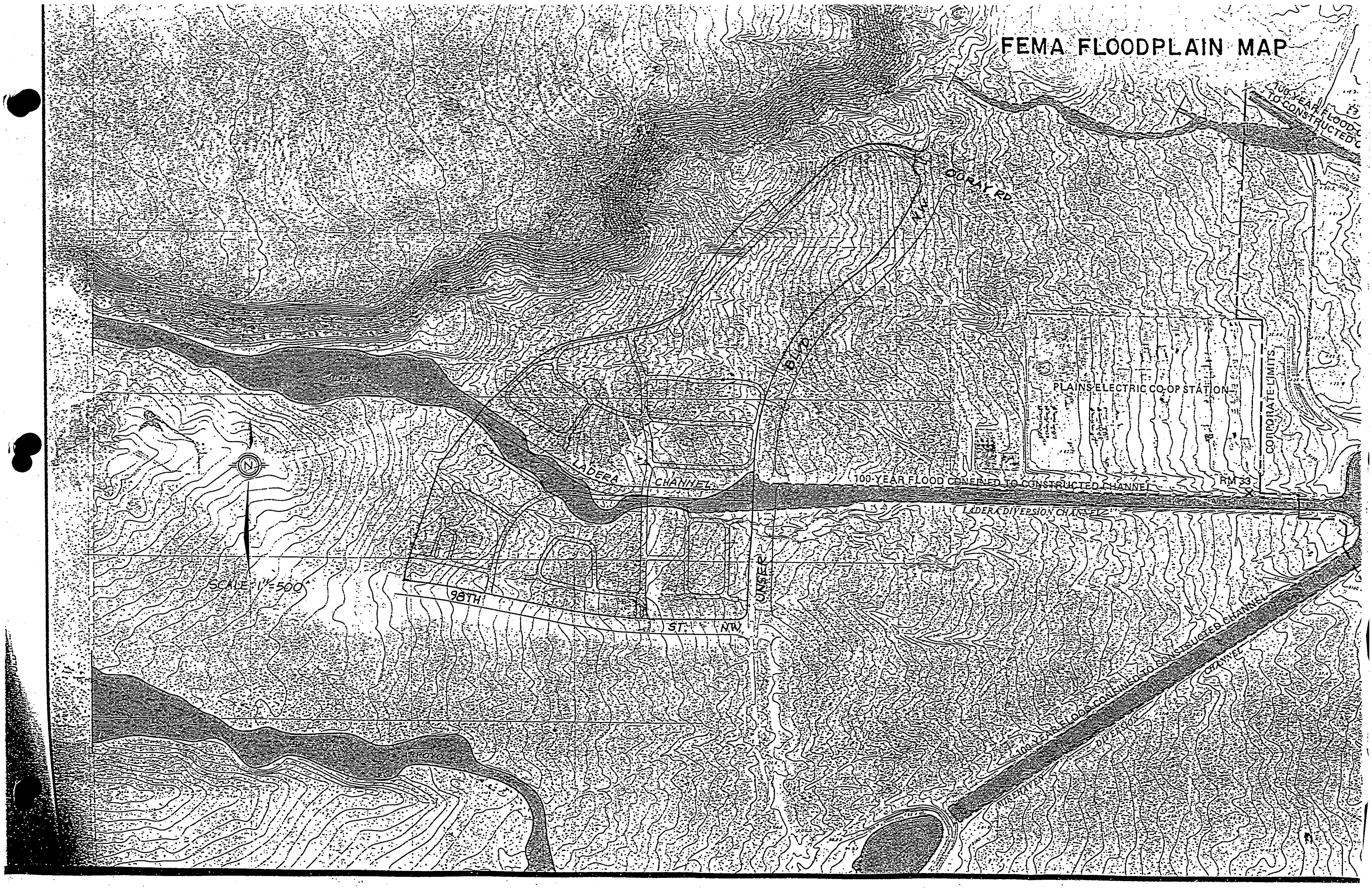
B. REFERENCES

- 1) FINAL LADERA DAM #15 HYDROLOGY AND SEDIMENT ISSUES
TABLE A-2
TABLE A-3
TABLE A-7
- 2) SAD NO. 215
- 3) 2-4-94 CSC AND COA MEETING REPORT FORM
- 4) NORTHWEST MESA DRAINAGE MANAGEMENT PLAN
TABLE 1
TABLE 2

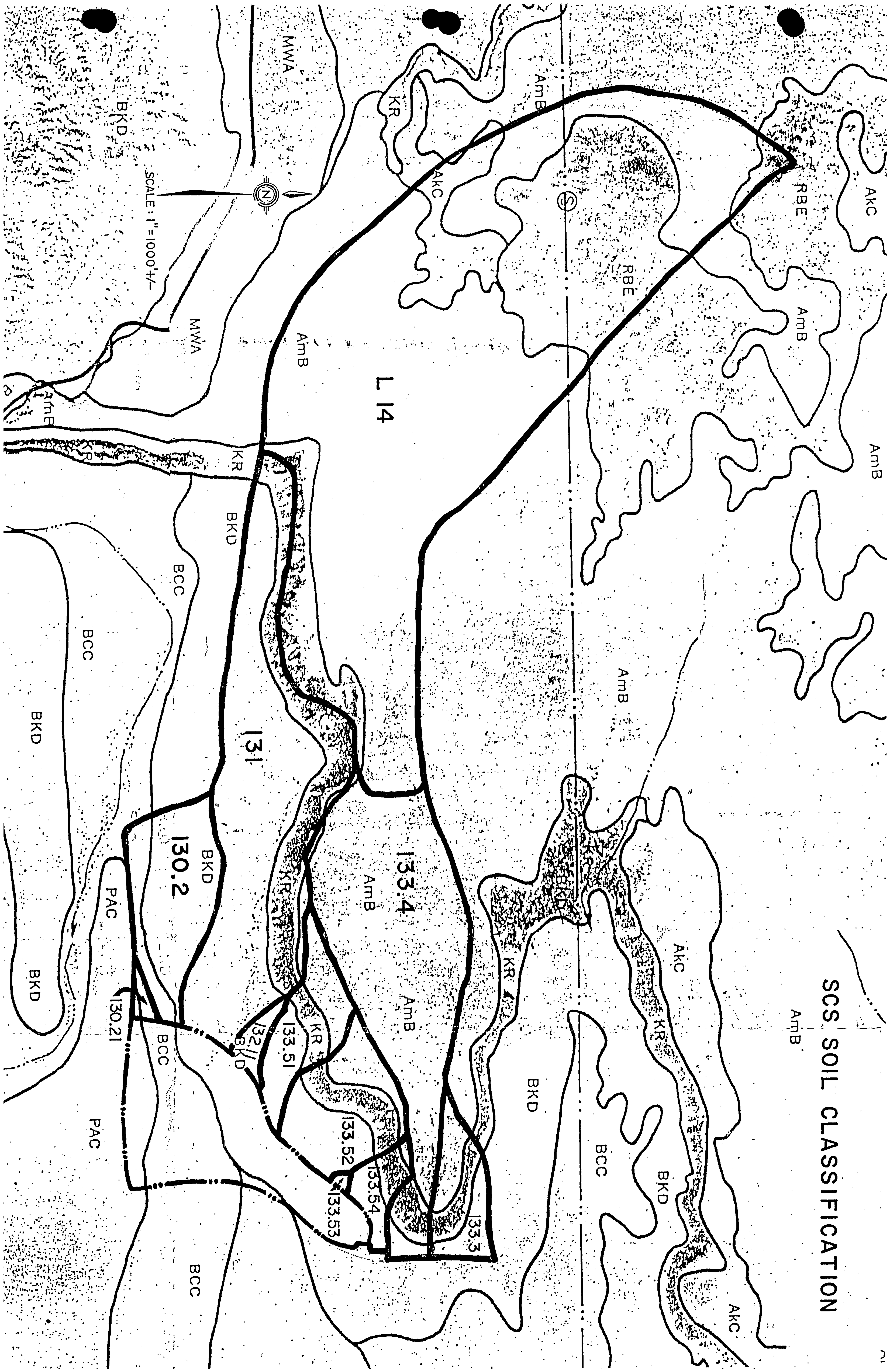
FEB. 91

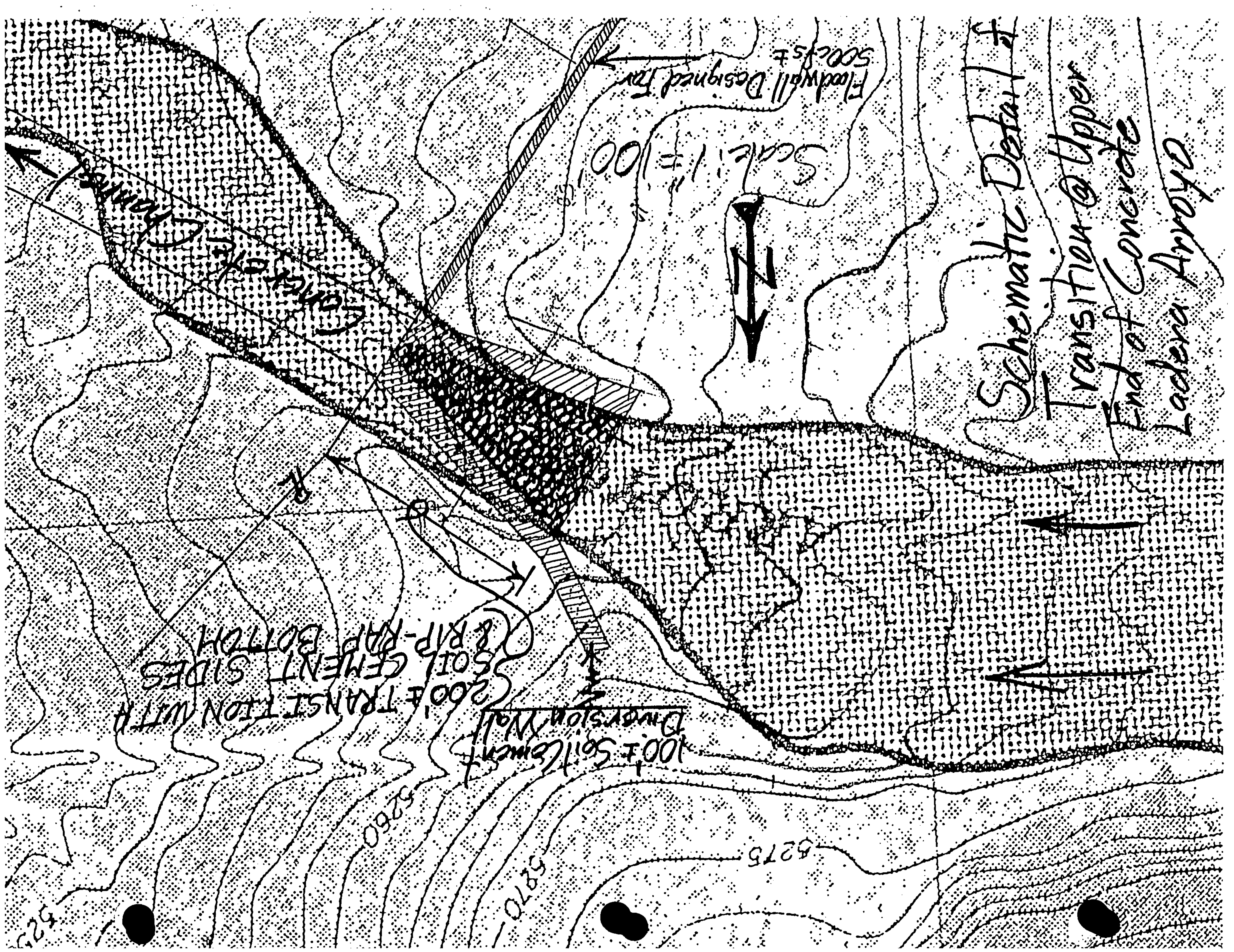


FEMA FLOODPLAIN MAP



SCS SOIL CLASSIFICATION





Schematic Detail of
Transition @ Upper
End of Concrete
Ladera Arroyo

Scale: 1" = 100'

Flood Wall Designed for
500 cfs

100' Soil Cement
Diversion Wall

200' Transition with
Soil Cement Sides
& RIP-RAP BOTTOM

5275

5270

5260

525

TABLE A-2

RR 143-18-030

Behanah-Houston Trg

EXISTING CONDITIONS BASIN SUMMARY

BASIN	TOTAL AREA (SQ. MI.)	TREATMENT TYPE PERCENTAGES				TIME TO PEAK (HRS)	RUNOFF VOLUME (AC-FT)	PEAK DISCHARGE (CFS)
		A	B	C	D			
1**	0.270	35.56	26.67	37.78	0.00	0.2048	8.781	241.9
2**	0.110	43.64	29.09	27.27	0.00	0.1367	3.308	119.1
3**	0.490	62.04	17.96	20.00	0.00	0.3563	13.199	224.1
4**	0.270	62.22	17.78	20.00	0.00	0.2351	7.267	177.0
5**	0.910	47.47	32.53	20.00	0.00	0.4614	26.068	349.9
6**	0.060	80.00	0.00	20.00	0.00	0.1333	1.494	53.6
7**	0.360	66.67	13.33	20.00	0.00	0.3277	9.50	174.5
9**	5.820	80.00	0.00	20.00	0.00	0.4608	144.933	1900.5
10A**	3.060	78.69	1.31	20.00	0.00	0.5656	76.651	823.6
10B**	1.050	71.62	3.81	24.57	0.00	0.3772	27.682	444.7
130.2**	0.069	74.20	5.80	20.00	0.00	0.1603	1.763	54.9
130.3**	0.039	80.00	0.00	20.00	0.00	0.2043	0.971	24.2
130.4*	0.089	74.61	2.25	18.65	4.49	0.2908	2.938	51.9
130*	0.188	59.57	8.51	14.89	17.02	0.3459	8.658	128.8
L-14**	0.800	69.00	8.00	23.00	0.00	0.3459	34.030	425.2
131**	0.301	54.75	3.99	41.26	0.00	0.3695	10.331	174.2
132.1**	0.038	58.50	14.13	16.84	10.53	0.2942	1.535	26.0
130.1*	0.067	58.51	8.96	14.63	17.91	0.2180	3.148	64.7
132	0.095	64.84	9.47	16.21	9.47	0.2774	3.664	66.2
133.3**	0.037	51.89	6.49	41.62	0.00	0.1333	1.287	45.7
133.4**	0.255	80.00	0.00	20.00	0.00	0.3518	7.225	121.1
133.5**	0.183	60.24	7.16	28.22	4.37	0.1489	6.568	207.8
133*	0.242	58.18	9.09	14.55	18.18	0.3361	11.439	176.1
133.1	0.133	22.60	35.88	5.65	35.88	0.2893	8.930	144.5
133.2	0.071	12.39	42.25	3.10	42.25	0.2346	5.261	96.5
L-15**	1.150	74.43	1.74	23.83	0.00	0.3116	33.873	661.6
135**	0.636	51.77	13.96	29.40	4.87	0.3159	23.916	442.7
136*	0.056	45.71	14.29	11.43	28.57	0.2698	3.255	55.4
137	0.076	10.53	43.42	2.63	43.42	0.2922	5.729	90.7
134**	0.375	8.99	71.91	8.99	10.11	1.3877	17.108	82.2
101.1,101.2	0.062	72.38	4.76	18.10	4.76	0.2705	2.084	39.1
101.4	0.005	69.33	6.67	17.33	6.67	0.2322	0.170	3.6
102.1,102.2	0.045	66.21	8.62	16.55	8.62	0.2148	1.703	37.6
103.1,103.2	0.046	72.90	4.44	18.23	4.44	0.1639	1.516	43.1
103.4	0.003	57.14	14.29	14.28	14.29	0.1612	0.144	3.8
104.1,104.2	0.015	53.33	16.67	13.33	16.67	0.1333	0.704	20.5
201.1,201.2	0.017	43.64	22.73	10.91	22.73	0.1333	0.910	25.3
201.4	0.003	0.48	3.81	0.48	95.24	0.1333	0.399	8.7
202.1,202.2	0.026	60.61	12.12	15.15	12.12	0.1712	1.064	27.1
202.4	0.003	1.00	8.00	1.00	90.00	0.1333	0.371	8.2
203.1,203.2	0.025	4.18	33.42	4.18	58.23	0.1333	2.238	53.8
204.1,204.2	0.015	33.81	28.87	8.45	28.87	0.1583	0.905	21.7
204.4	0.003	1.25	10.00	1.25	87.50	0.1333	0.293	6.5
205.1,205.2	0.008	1.84	14.69	1.84	81.63	0.1333	0.862	19.4
301.1,301.2	0.020	4.00	32.00	4.00	60.00	0.4948	1.874	20.5
302.1,302.2	0.122	3.82	30.52	3.82	61.85	0.5336	11.419	117.8

TABLE A-3

FULLY DEVELOPED CONDITIONS BASIN SUMMARY

BASIN	TOTAL AREATREATMENT TYPE PERCENTAGES (SQ. MI.)				TIME TO PEAK (HRS)	RUNOFF VOLUME DISCHARGE		
	A	B	C	D		(AC-FT)	(CFS)	
1*	0.270	16.91	38.90	17.97	26.21	0.1584	15.459	382.51
2*	0.110	2.79	42.78	5.58	48.85	0.1333	8.661	209.12
3*	0.490	26.29	36.42	8.47	28.82	0.2715	28.039	479.23
4*	0.270	3.38	35.70	4.34	56.59	0.1604	23.147	480.34
5*	0.910	14.12	44.80	5.95	35.13	0.3496	58.597	814.25
6*	0.060	4.22	33.76	4.22	57.80	0.1333	5.204	120.86
7*	0.360	4.10	40.19	4.92	50.79	0.2161	28.898	525.27
9*	5.820	40.00	25.00	10.00	25.00	0.3497	303.571	4321.49
10A*	3.060	47.11	20.85	11.97	20.07	0.4285	143.582	1782.210A
10B*	1.050	25.81	33.36	8.85	31.98	0.2991	66.692	1083.910B
130.2	0.069	3.91	34.07	4.22	57.80	0.1346	6.203	148.7130.2
130.3	0.039	4.22	33.76	4.22	57.80	0.1714	3.504	74.0130.3
130.4	0.089	4.22	33.76	4.22	57.80	0.2523	7.996	134.8130.4
130	0.188	4.22	33.76	4.22	57.80	0.2422	16.892	293.6130
L-14*	0.800	69.00	8.00	23.00	0.00	0.3413	24.030	429.5L-14
131*	0.301	38.70	17.47	29.17	14.66	0.2930	14.593	264.0131
132.1*	0.038	4.06	38.03	4.68	53.24	0.2413	3.257	57.5132.1
130.1	0.067	4.22	33.76	4.22	57.80	0.1881	6.020	121.5130.1
132	0.095	4.22	33.76	4.22	57.80	0.2403	8.545	149.6132
133.3*	0.037	51.89	6.49	41.62	0.00	0.1333	1.287	45.7133.3
133.4*	0.255	80.00	0.00	20.00	0.00	0.3375	7.225	125.6133.4
133.5*	0.183	37.76	23.15	17.69	21.40	0.1333	9.749	283.0133.5
133	0.242	4.22	33.76	4.22	57.80	0.2564	21.743	362.5133
133.1	0.133	4.22	33.76	4.22	57.80	0.2404	11.950	209.0133.1
133.2*	0.071	4.22	33.76	4.22	57.80	0.1940	6.379	126.2133.2
L-15*	1.150	74.43	1.74	23.83	0.00	0.3076	33.873	669.1L-15
135*	0.636	51.77	13.96	29.40	4.87	0.3074	23.916	452.8135
136	0.056	4.22	33.76	4.22	57.80	0.2728	5.031	81.7136
137*	0.076	5.06	40.45	5.06	49.43	0.2875	6.239	99.4137
134**	0.375	9.0	72.00	9.0	10.00	0.3877	16.487	78.6134
101.1,101.2	0.062	1.98	15.87	1.98	80.16	0.2214	6.890	121.2
101.1,101.2								
101.4	0.005	0.00	0.00	0.00	100.00	0.1937	0.619	11.4101.4
102.1,102.2	0.045	2.34	18.69	2.34	76.64	0.1690	4.861	98.3
102.1,102.2								
103.1,103.2	0.046	2.51	20.05	2.51	74.93	0.1403	4.842	108.3
103.1,103.2								
103.4	0.003	0.00	0.00	0.00	100.00	0.1378	0.426	9.1103.4
104.1,104.2	0.015	1.38	11.06	1.38	86.17	0.1333	1.766	39.3
104.1,104.2								
201.1,201.2	0.017	1.75	14.00	1.75	82.50	0.1333	1.939	43.5
201.1,201.2								
201.4	0.003	0.00	0.00	0.00	100.00	0.1333	0.413	8.9201.4

TABLE A-7

FULLY DEVELOPED CONDITIONS MODEL

100-YR 6-HR STORM

ANALYSIS POINT	HYDRO- GRAPH ID	DESCRIPTION	PEAK DISCHG (CFS)	RUNOFF VOLUME (AC-FT)	MAX. W.S. ELEV.	EMER. SPILL CREST ELEV.	EMER. SPILL FLOWS
10A	POND LADW	LAD. WEST DET. RES. OUTFLOW (FUTURE CONDITION)	2705.1	396.4	---	---	---
10A	PONDS	LADERA DIV. (EXIST. COND.)	---	---	---	---	---
POND5	POND5	LADERA DAM #5 OUTFLOW	194.1	108.6	5335.6	5337.0	NO
POND9	POND9	LADERA DAM #9 OUTFLOW	84.9	125.2	5274.0	5276.0	NO
POND12	IN12 POND12	LADERA DAM #12 INFLOW LADERA DAM #12 OUTFLOW	2926.5 2744.9	580.6 576.5	5211.3	5211.3	YES
LADERA	BLUFDIV	LAD. DAM #12 OUTFLOW TO #13	1175.0	444.3			
POND13	POND13	LAD. #12 DIVERS. TO W. BLUFF LADERA DAM #13 OUTFLOW	1569.5 1069.6	132.2 448.0	5193.5	5193.5	YES
LADCHAN	132.04	LADERA CHANNEL AT DAM #14	577.7	52.5			
POND14	POND14	LADERA DAM #14 OUTFLOW	881.1	510.3	5124.3	5124.0	YES
14DIV	LADOURAI	LAD #14 DIVERS TO W. BLUFF	100.0	178.4			
QUICK	133.27	QUICKWATER CHANNEL	899.0	51.1			
RINCON	136.05	RINCONADA CHANNEL	1011.1	61.2			
POND15	134.09 POND15	TOTAL LAD. #15 INFLOW LADERA #15 OUTFLOW	2019.1 104.3	468.0 237.1	5108.5	5112.0	NO
31	531.6	WEST MESA DIVERSION UPSTREAM OF I-40	881.8	115.7			
621	622.4	I-40 INTERCEPTOR UPSTRM OF I-40 POND	1997.0	244.1			
I40POND	I40POND	I-40 INTERCEPTOR USTREAM JCT. WITH W. MESA DIV.	1702.3	244.0			
622	622.5	I-40 INTERCEPTOR DWNSTRM OF JCT. WITH W. MESA DIV.	2379.4	359.7			
702	TOTWB	WEST BLUFF OUTFALL	2586.8	597.1			

1. Ponds #11 and #12 are combined and expanded.

DRAINAGE ANALYSIS REPORT
SPECIAL ASSESSMENT
DISTRICT NO. 215
UNSER BOULEVARD AND
98th STREET

Greiner
Engineering

LADERA CHANNEL

A. GENERAL

The Ladera Channel is similar to the Mirehaven Channel in that it carries runoff to the Ladera Detention area. The proposed easement for the Ladera Channel is slightly North of the existing arroyo. An approved report exists for Ladera and is entitled "Engineer's Report on Design and Costs for the Ladera Storm Drainage Diversion and Detention Facility: Upstream Channel Study (100-Year Storm Routine)", September, 1975, by Denny-Gross and Associates. A flow of 750 cfs was obtained from this report and will be used for the design analysis of the crossing structure.

B. CROSSING STRUCTURE

The proposed crossing structure consists of three - 10' x 4' concrete box culverts. Upstream grading will be required to divert the existing channel to the proposed CBC location. The diversion was required to straighten the channel resulting in a more desirable overall alignment. The upstream diversion is temporary and will be removed when the channel is improved upstream. Channel improvement will occur when the adjacent land is developed. Due to the difference in grade resulting from the relocation of the channel and the limitations of the vertical alignment, the structure will need a gabion drop structure upstream. In addition, some downstream grading and slope protection will also be needed.

C. OFFSITE DRAINAGE

The system provided by others utilize side ditches and berms to divert drainage to either the Ladera Channel or to the 98th Street storm sewer. Drainage from Basin C1 would be diverted to a drop inlet at 98th Street. Drainage from Basins D and C3 would be diverted to the Ladera Channel directly. The 98th Street storm sewer is sized to carry developed right-of-way flows which are collected at the intersection of 98th Street and Unser Boulevard and collect developed flows from Basin B2.

D. 98TH STREET DRAINAGE

Planned improvements for 98th Street include a 4-lane divided roadway with a 106 foot Right-of-Way. A storm sewer will collect runoff from within the right-of-way of 98th Street only. The storm sewer will be located in the median at 98th Street and begins at Station 20+00 and connects to the 48 in. storm drain within the Unser Boulevard right-of-way. The beginning location of the storm sewer is in this case dependant on the DPM design criteria for the 10-year event. The criteria states that one 12 foot dry lane in each direction must be maintained during the 10-year storm event. Station 20+00 is where this criteria is exceeded.

Drop inlets located adjacent to the 98th Street and Unser Boulevard intersection receive offsite runoff from Basins B2 and C1. Although these systems are designed to accept fully developed flows, the inlets are sized to pick up only the existing runoff. When development of these basins occur, either storm sewers will be extended at these locations or additional drop inlets will need to be built. The connector pipes and remaining outfall system will be designed to carry the future developed runoff.

OURAY SYSTEM

A. GENERAL

Hydrology for the Ouray system was generated by this report. Basins E, G and H will all drain to the proposed Ouray system under the ultimate conditions, however, the phasing of SAD 215 and the remainder of Unser Boulevard has created a situation where only the runoff from Basin E will be facilitated by the Ouray system at this time. This condition will change when the remainder of Unser Boulevard is built.

The proposed design for SAD 215 will be to build the ultimate storm sewer directly under Unser Boulevard and Ouray Road.

B. OUTFALL SYSTEM

Construction of Unser Boulevard has required diverting drainage to central collection points. In the case of the Mirehaven channel and the Ladera Channel, these systems already exist. The case of the Ouray system however is a different situation. Drainage will be relocated from natural small water courses to the right-of-way of Ouray. Currently no storm drain facilities exist. A 60" RCP storm drain is proposed to realign the drainage course. This infrastructure is designed to carry the flows from Basins E, G and H along with the developed flows from the Unser Boulevard right-of-way. The system will carry the runoff from the collection points in Unser Boulevard through Ouray Road back to the original drainage course located approximately 2200 feet east of Unser Boulevard. The pipe is to be located on the north side of the Ouray Road alignment.

Outfall from the 60" RCP is to be into an existing AMAFCA channel which is part of the Ladera Detention facility. The exact location and detail design of the 60" RCP and the outfall into the channel will be determined during the following design phase of this project. At that time the extent of utility or drainage easement needs will be determined. A plan view of the Ouray system is provided as an Exhibit.

C. OFFSITE DRAINAGE

As mentioned, three basins discharge to the Ouray system, E, G and H. For construction of SAD 215 only Basin E offsite drainage is of concern. The drainage from Basins G and H have been calculated and the outfall system is designed to handle these flows but the offsite improvements need not be discussed here.

Runoff originating from Basin E will be collected at one central location at the Ouray and Unser Boulevard intersection. Drainage is diverted north via a berm parallel to Unser Boulevard outside of the right-of-way. The drainage patterns are a result of meetings with the appropriate land owners and are intended to be consistant with proposed future drainage improvements for Basin E. A more detailed description of these improvements is provided in Exhibit I. The inlets would be sized for the existing undeveloped conditions. However, the downstream capacity of the pipes will carry the developed flows. This will provide the capability for extension of the system into Basin E for fully developed conditions. It is assumed that the unnamed channel between the Ladera Detention Facility and the 60" outfall will carry the proposed undeveloped flows.

SCALE: 1" = 500'

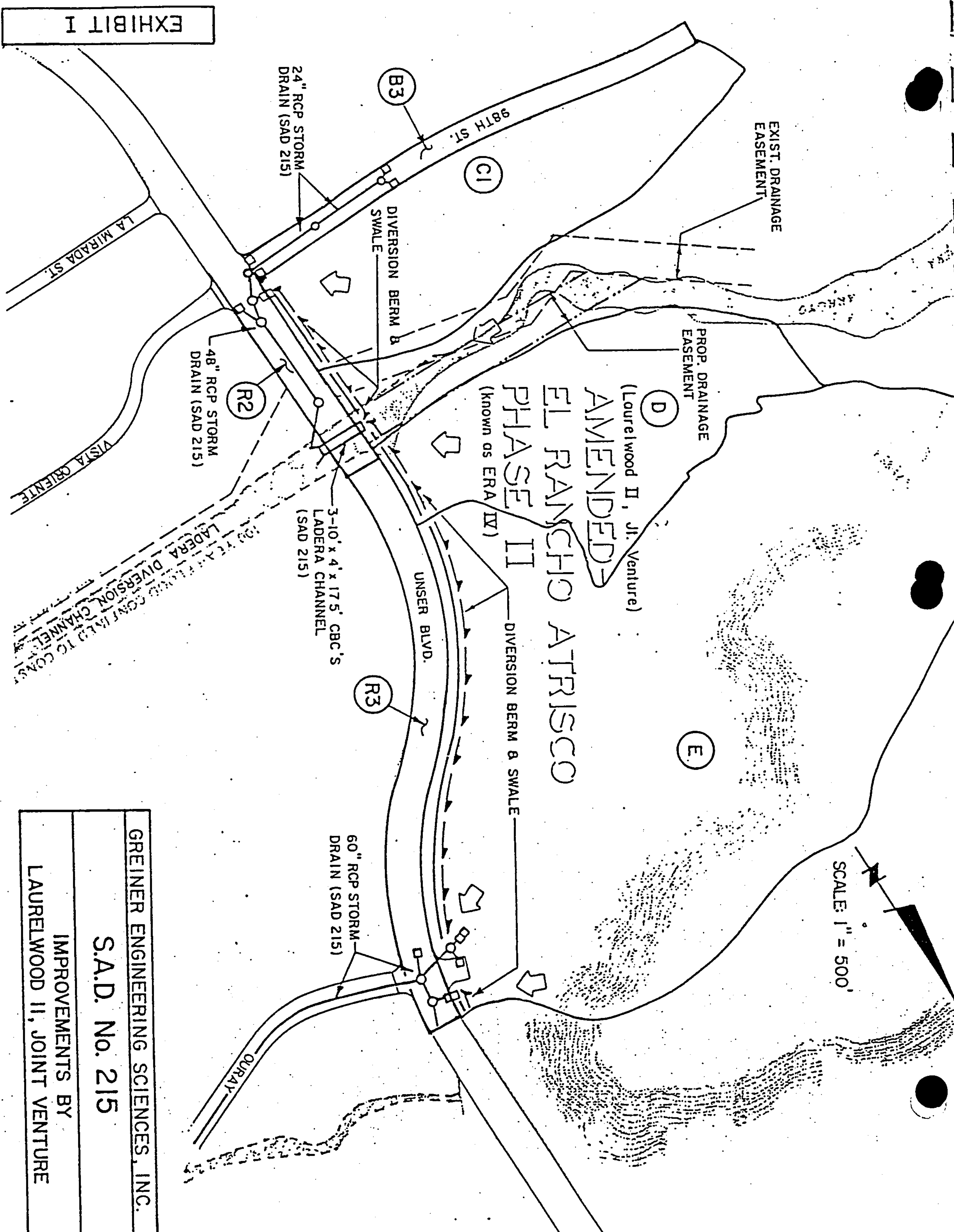


EXHIBIT I

GREINER ENGINEERING SCIENCES, INC.

S.A.D. No. 215

IMPROVEMENTS BY
LAURELWOOD II, JOINT VENTURE

MEETING AND TELEPHONE
REPORT FORM

CLIENT: STH

FILE IN RED ROPE FILE: 143-18-030

PROJECT: Parkwest

- - 040

DATE: 2-4-94

- - -

TELEPHONE CONVERSATION ☐

MEETING ☒

WITH WHOM Gilbert Aldaz

WITH WHOM _____

Richard Dourte

IMPORTANT POINTS: For city maintenance, must have standard COA
concrete channel with freeboard to energy grade line
to intercept flows from National Park to the pond
in a separate ROW from the street.

Below the pond sheet flow over TC will be accepted
Provide an inlet that will transport sediment where
the swale enters the street near Monument Dr. intersection.
and tie directly to Oway Storm drain

Do not use a second pond if it can be avoided. the
city would rather have vertical walls at the upper pond.
Slope paving may be used if it is constructed below
scour depth and if the Park service will maintain it.

FOLLOW UP: AASTO Road Barrier guideline must be
met for verticle drops next to the street

FROM: Bills McCarty

TABLE 1

DEVELOPED UPSTREAM SUB-BASIN PEAK DISCHARGE

SUB BASIN NUMBER	AREA IN SQ. MT.	FULLY DEVELOPED CONDITIONS HYDROGRAPH			EXISTING CONDITIONS HYDROGRAPH		
		TOTAL RUNOFF IN AC. FT.	PEAK DISCHARGE IN CFS	TIME OF PEAK IN HRS	TOTAL RUNOFF IN AC. FT.	PEAK DISCHARGE IN CFS	TIME OF PEAK IN HRS
L9	5.82	308	4531	0.90	---	---	---
L10	3.07	146	2822	0.71	---	---	---
L9+10	8.89	454	6811	0.81	---	---	---
L14	0.80	39	988	0.56	---	---	---
L15	1.15	33	797	0.62	---	---	---
M9	0.96	48	833	0.77	33	600	0.81
M10	0.36	20	422	0.67	11	207	0.69
M1	10.66	540	5175	1.31	---	---	---
M2	1.48	87	1209	0.95	---	---	---
M3	3.28	158	2088	1.00	---	---	---
M1+2+3	15.42	785	6546	1.27	311	2513	1.19
M4	1.43	64	1064	0.83	43	555	1.02
M5	2.63	112	1958	0.81	79	1406	0.83
M4+5	4.06	177	2583	0.83	122	1816	0.83
M14	0.30	11	282	0.56	---	---	---
M15	0.20	6	155	0.60	---	---	---
M6	0.98	32	606	0.77	---	---	---
M7	0.64	30	560	0.75	---	---	---
M16	0.17	6	189	0.50	---	---	---
M8	1.19	41	848	0.69	---	---	---

TABLE 2

DEVELOPED SUB-BASIN CHARACTERISTICS & FLOWRATES
(See Factor Definitions in Appendix A)

EN	A	L	S	T _c	T _p	K	I	P	CN ₂	V	Q
133.2	0.071	2000	0.012	0.248	0.165	0.083	52	48	69	3.8	132
133.3	0.037	1600	0.133	0.167*	0.111	0.056	52	48	69	2.0	97
133.4	0.255	11000	0.042	0.570	0.330	0.190	52	48	69	13.7	231
133.5	0.183	3800	0.057	0.224	0.112	0.056	52	48	69	9.8	481
134	0.375	-----	-----	-----	-----	-----	10	90	61	5.3	43
135	0.636	7200	0.040	0.419	0.279	0.140	21	79	68	19.0	355
136	0.056	3000	0.021	0.274	0.183	0.091	57	43	69	3.2	104
137	0.076	3400	0.013	0.363	0.242	0.121	58	42	69	4.4	112
138	0.115	2000	0.028	0.179	0.120	0.060	58	42	69	6.7	311
139	0.019	900	0.022	0.167*	0.111	0.056	58	42	69	1.1	55
140	0.133	4900	0.041	0.309	0.206	0.103	58	42	69	8.0	234
141	0.043	2500	0.043	0.180	0.120	0.060	58	42	69	2.5	116
142	0.023	1000	0.026	0.167*	0.111	0.056	58	42	69	1.3	66
143	0.193	3550	0.028	0.279	0.186	0.093	58	42	69	11.2	358
144	0.149	2500	0.045	0.177	0.118	0.059	58	42	69	8.7	411
145	0.069	1200	0.020	0.167*	0.111	0.056	58	42	69	4.0	200
146	0.061	2350	0.046	0.168	0.112	0.056	58	42	69	3.5	177
147	0.118	4050	0.029	0.305	0.203	0.102	58	42	69	6.8	202
148	0.045	600	0.028	0.167*	0.111	0.056	75	25	69	3.2	165
149	0.064	1550	0.014	0.192	0.128	0.164	58	42	69	3.7	164
150	0.037	2400	0.044	0.173	0.116	0.058	58	42	69	2.1	104
151	0.066	1300	0.035	0.167*	0.111	0.056	58	42	69	3.8	191
152	0.046	1050	0.023	0.167*	0.111	0.056	58	42	69	2.7	133
153	0.103	2850	0.036	0.214	0.142	0.071	58	42	69	6.0	239
154	0.036	1500	0.040	0.167*	0.111	0.056	72	28	69	2.4	127
155	0.148	3550	0.021	0.312	0.208	0.104	58	42	69	8.6	249

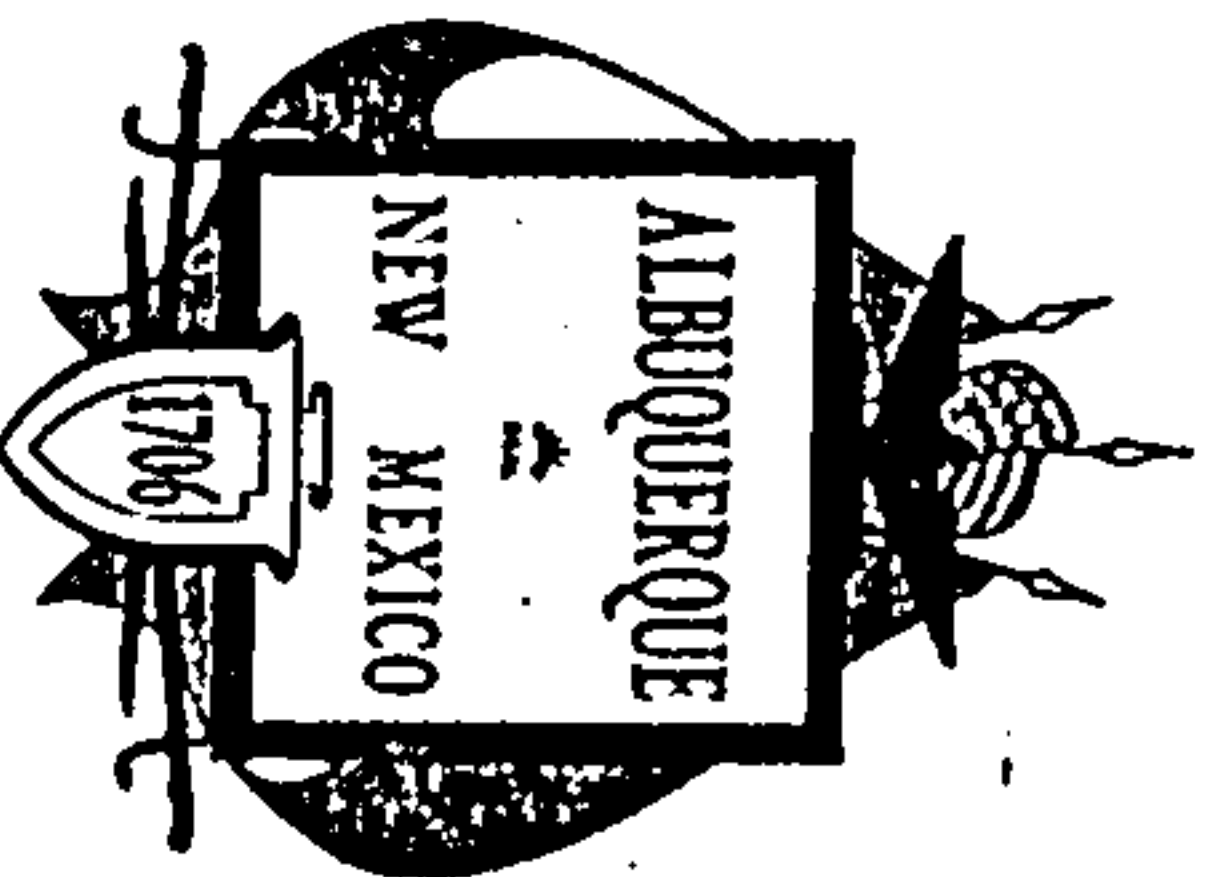
DEVELOPED SUB-BASIN CHARACTERISTICS & FLOWRATES
(See Factor Definitions in Appendix A)

BN	A	L	S	T _c	T _p	K	I	P	CN ₂	V	Q
119	0.025	1500	0.091	0.167*	0.111	0.056	41	59	69	1.1	54
120	0.065	1500	0.020	0.167*	0.111	0.056	58	42	69	3.8	188
121	0.102	2300	0.029	0.197	0.131	0.066	58	42	69	5.9	256
122	0.264	4400	0.050	0.263	0.175	0.088	58	42	69	15.4	513
123	0.092	2950	0.064	0.176	0.117	0.059	58	42	69	5.3	255
124	0.507	7750	0.043	0.431	0.288	0.144	58	42	69	29.5	641
125	0.293	5600	0.052	0.312	0.208	0.104	58	42	69	49.4	493
126	0.810	11250	0.039	0.597	0.398	0.199	58	42	69	47.2	774
127	0.055	500	0.080	0.167*	0.111	0.056	58	42	69	3.2	160
127.1	0.040	1600	0.019	0.175	0.117	0.059	58	42	69	2.3	110
128	0.108	2600	0.035	0.201	0.134	0.067	58	42	69	6.3	269
128.1	0.468	7700	0.040	0.441	0.294	0.147	58	42	69	27.2	580
129	0.533	4500	0.022	0.367	0.245	0.123	56	44	69	30.3	752
129.1	0.588	6350	0.043	0.370	0.247	0.124	56	44	69	33.4	822
130	0.188	2500	0.024	0.226	0.151	0.075	58	42	69	10.9	421
130.1	0.067	2200	0.024	0.205	0.137	0.068	58	42	69	3.9	163
130.2	0.069	2400	0.052	0.167*	0.111	0.056	58	42	69	4.0	200
130.3	0.039	1500	0.080	0.167*	0.111	0.056	58	42	69	2.3	115
130.4	0.089	2800	0.019	0.270	0.180	0.090	58	42	69	5.2	170
131	0.301	9500	0.040	0.519	0.346	0.173	38	62	69	13.0	228
132	0.095	700	0.020	0.167*	0.111	0.056	55	45	69	5.3	263
132.1	0.038	2200	0.086	0.167	0.111	0.056	55	45	69	2.1	105
133	0.242	3200	0.023	0.278	0.185	0.093	58	48	69	13.0	408
133.1	0.133	2300	0.009	0.309	0.206	0.103	52	48	69	7.1	205

APPENDIX D

COA AND AMAFCA COMMENTS AND RESPONSES

- A. AMENDMENT #1
 - COA COMMENTS #1 MARCH 10, 1994
 - CSC RESPONSE MARCH 16, 1994
- B. AMAFCA COMMENTS
 - AMAFCA LETTER MARCH 28, 1994
 - CSC RESPONSE MARCH 30, 1994
- C. COA COMMENTS #2 APRIL 1, 1994
 - CSC RESPONSE APRIL 1, 1994
- D. COA APPROVAL FOR PRELIMINARY PLAT, APRIL 7, 1994



City of Albuquerque
P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

March 10, 1994

James D. Hughes, P.E.
Community Sciences Corp.
P.O. Box 1328
Corrales, N.M. 87048

RE: DRAINAGE REPORT FOR PARKWEST/LAURELWOOD II SUBD (H-9/DID)
RECEIVED FEBRUARY 25, 1994 FOR PRELIMINARY PLAT APPROVAL
ENGINEER'S STAMP DATED 2-24-94

Dear Mr. Hughes:

Based on the information included in the submittal referenced above, City Hydrology has the following comments that must be addressed prior to Preliminary Plat approval:

1. Several locations on Table 2 exceed the Design Criteria cited on page 2. Even though the sidewalk has been deferred, the street cross section must still be constructed to be .33' higher than the top of curb at the right of way line. Due to complications with water meter boxes and ADA requirements, it may be more practical to design for a criteria where the right of way line is .18' higher than the top of curb.
2. Who owns & maintains the islands at Wedgewood Court & the bulge on Creekwood Avenue. Have Transportation or Parks accepted responsibility for them.
3. On sheet 1, what is the elevation at the bottom of the slopes at the rear of Lots 7-12. Provide a detail for typical lot with a slope at the rear. The Typical Lot Detail must show the relationship between the Pad Elevation and the other proposed elevations. Why is the side yard swale on the property line. Provide a section across the lot transverse to the swale.
4. On Sheet 3 there are several proposed spot elevations of 0.00 between Gardenbrook Place & Wedgewood Avenue. Since the other elevations are around 50.0, it is assumed that these are incorrect.

CONTINUED ON PAGE 2

March 10, 1994

James D. Hughes, P.E.

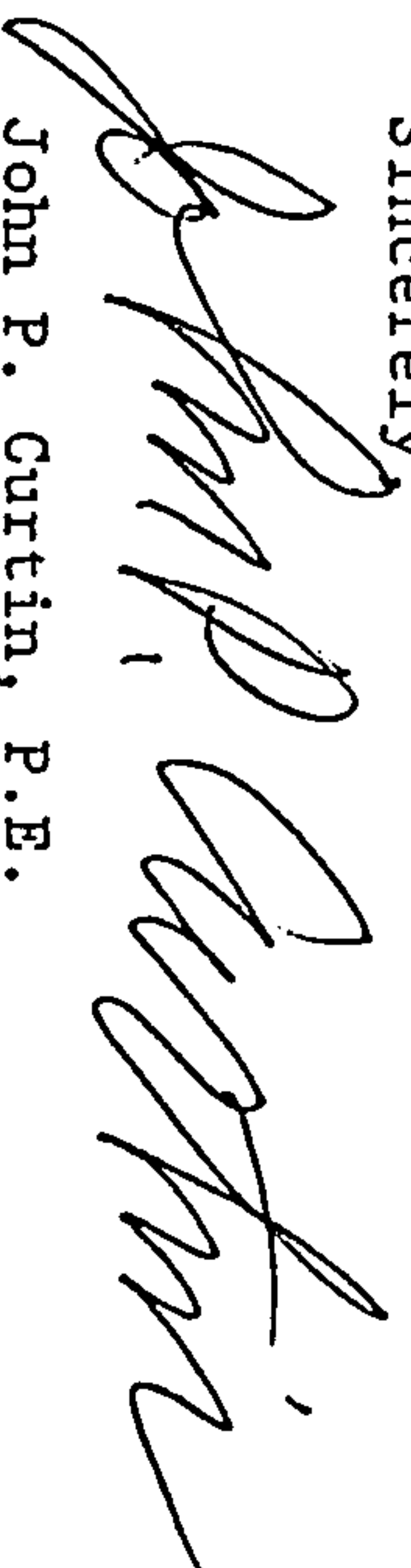
PARKWEST/LAURELWOOD II SUBD (H-9/D1D)

Page 2 of 2

5. City Maintenance has the following requirements for the Detention (?) Pond on Sheet 7:
 - a. Retaining walls must be constructed of reinforced concrete not reinforced masonry block.
 - b. The bench between retaining walls must be a minimum of 10' wide.
 - c. Access to each bench must be provided for power mower equipment used by City crews.If you have any questions about these requirements, contact Glen Jurgensen at 291-6214.
6. AMAFCA must approve sediment control measures for the detention/sedimentation pond. Provide a copy of AMAFCA's approval letter with the drainage submittal.
7. How does backyard drainage flow through the walls to the channel on Sheet 8? Check with AMAFCA for their requirements on how the flow cross their access road & enters the channel.
8. Submit preliminary design for each proposed storm drain. Include a copy of the Infrastructure List in the drainage submittal.

If you have any questions about this project, You may contact me at 768-2727.

Sincerely



John P. Curtin, P.E.
Civil Engineer/Hydrology

c: Fred Aguirre, DRB

WPHYD/8361/jpc

TABLE 2

FLOW CHARACTERISTICS AT KEY INTERSECTIONS

STREET	LOCATION	ST. WIDTH	% SLOPE	Q100	Dn	Dc	Vn	Vc	AREA	TOP WIDTH	EG	F	*POOL DEPTH
WEDGEWOOD CT	5+50	20 MOUNT	1.58	4.66	0.22	0.24	2.33	1.98	2.00	20.23	0.31	1.31	0.32
STONEMOOD	SADDLEBROOK	22 STAND	0.50	26.46	0.56	0.54	3.16	3.40	8.38	22.29	0.72	0.91	
GARDENBROOK	WINDWARD	25 MOUNT	2.72	11.62	0.28	0.34	3.60	2.43	3.23	25.74	0.48	1.79	0.45
MILLSTREAM	WINDWARD	25 MOUNT	2.50	12.26	0.28	0.34	3.58	2.47	3.42	25.81	0.48	1.73	0.46
SKYBROOK	MEADOWBROOK	25 MOUNT	1.00	14.41	0.34	0.36	2.89	2.64	4.99	26.25	0.47	1.17	0.50
MEADOWBROOK	13+00	25 MOUNT	2.42	8.06	0.22	0.29	3.10	2.21	2.60	23.67	0.40	1.65	0.38
STONECREEK	SUNSTONE	25 MOUNT	0.60	9.90	0.33	0.32	2.12	2.33	4.67	26.25	0.40	0.89	
FIELDSTONE	SUNSTONE	25 MOUNT	2.34	7.75	0.25	0.29	3.03	2.13	2.56	23.47	0.39	1.62	0.38
WESTBROOK	CREEKWOOD	25 MOUNT	2.00	3.67	0.20	0.23	2.38	1.81	1.54	18.10	0.29	1.44	0.29
OAKBROOK	20+00	25 MOUNT	2.24	12.47	0.29	0.35	3.49	2.48	3.57	25.87	0.48	1.66	0.47
OAKBROOK	CREEKWOOD	25 MOUNT	1.07	12.47	0.33	0.35	2.77	2.48	4.50	26.21	0.45	1.18	0.47
CREEKWOOD	OAKBROOK	25 MOUNT	2.95	9.38	0.26	0.31	3.47	2.30	2.71	24.15	0.44	1.83	0.41
LAVA BLUFF	PARKWEST	25 MOUNT	3.00	4.10	0.20	0.24	2.85	1.85	1.44	17.47	0.32	1.75	0.31
SMOKERISE	STONEMOOD	25 MOUNT	1.50	14.41	0.32	0.36	3.26	2.64	4.43	26.18	0.49	1.40	0.50
CREEKWOOD	STONEMOOD	25 MOUNT	1.04	12.05	0.32	0.34	2.71	2.46	4.44	26.19	0.44	1.16	0.46
SADDLEBROOK	STONEMOOD	25 MOUNT	2.95	12.69	0.28	0.35	3.82	2.53	3.32	25.77	0.51	1.88	0.47
WEDGEWOOD AVE	WINDWARD DR	26 STAND	1.80	21.27	0.41	0.48	3.39	2.97	5.33	26.21	0.66	1.56	0.65
MEADOWBROOK	14+00	26 STAND	0.50	22.47	0.52	0.49	2.77	3.05	8.12	26.26	0.64	0.88	
MEADOWBROOK	PARKWEST	26 STAND	0.50	27.31	0.55	0.53	3.01	3.26	9.08	26.28	0.70	0.90	
SUNSTONE	FIELDSTONE	26 STAND	0.60	23.23	0.51	0.50	2.96	3.09	7.84	26.26	0.64	0.95	
CREEKWOOD	PARKWEST	26 STAND	0.50	30.98	0.58	0.56	3.16	3.38	9.81	26.30	0.74	0.91	
WINDWARD	18+00	28 STAND	1.00	54.61	0.63	0.71	4.74	3.97	11.53	28.32	0.88	1.31	1.02
WINDWARD	PARKWEST	28 STAND	2.82	64.07	0.55	0.76	6.87	4.21	9.33	28.28	0.78	1.11	1.07
PARKWEST	S. CHANNEL	36 MOUNT	0.50	14.84	0.34	0.37	2.06	2.38	7.20	37.25	0.48	0.83	
PARKWEST	CREEKWOOD	36 MOUNT	0.55	8.82	0.34	0.31	1.76	2.14	5.01	32.93	0.38	0.80	
LAVA BLUFF	PHASE LINE US	36 MOUNT	2.50	9.91	0.29	0.32	3.31	2.19	2.99	25.42	0.44	1.70	0.41
LAVA BLUFF	SUMP	36 MOUNT	2.50	12.33	0.29	0.35	3.49	2.29	3.53	27.64	0.48	1.72	0.45
LAVA BLUFF	25+50	36 MOUNT	6.54	9.13	0.22	0.31	4.64	2.16	1.97	20.53	0.56	2.64	0.40
LAVA BLUFF	OURAY	36 MOUNT	1.82	9.13	0.38	0.31	2.86	2.16	3.19	26.26	0.40	1.45	0.40
PARKWEST	N. CHANNEL	36 STAND	0.55	55.66	0.69	0.68	3.60	3.69	15.47	36.34	0.89	0.97	

* POOL DEPTH = Dc + (1.25Vc^2)/(2g)

P.O. Box 1328
Corralca, New Mexico 87048
Tel (505) 897-0000
Fax (505) 898-5195

community
sciences
corporation

March 16, 1994

Mr. John P. Curtin, P.E.
City of Albuquerque
P.O. Box 1293
Albuquerque, NM 87103

RE: Amendment #1 to Drainage Report for Parkwest Subdivision

Dear Mr. Curtin;

The Drainage Report for Parkwest Subdivision has been amended to include Units 2 and 4. This area was previously referred to as Tract B in the Drainage Report. The drainage comments per your letter dated March 10, 1994 have also been addressed. The comments below correspond numerically with your comments.

1. Table 2 is used to establish where transitions from mountable to standard curb is needed. Conservative flows were considered by using entire basin flows when the basin area approximated the street flow. Skybrook Drive has adequate capacity in the mountable curb until the intersection of Meadowbrook Avenue where it will transition to standard curb and gutter. It was also determined that Windward Drive exceeded capacity at station 18 + 00 with a flow of 54.61 cfs. On sheet 4 of the grading plan a 24" storm drain is shown which will intercept 20 cfs and divert it to the Ladera Channel as discussed in the report on pages 4 and 5. Removing this 20 cfs will meet the criteria at both station 18 + 00 and at the Parkwest Drive intersection. In addition, as discussed on page 5, a weir on the north edge of Windward Drive will discharge most of the remaining flow to the channel prior to reaching Parkwest Drive. Final DRC design calculations will establish this diversion amount. The other area of concern is Parkwest Drive on the north side of the channel. This flow is over estimated since the rear yards of Block 9, Lots 10 through 17 drain to the channel instead of to the street and Basin 117 may be discharged directly to the channel instead of Parkwest Drive depending on final design. Since the flow is less than 55.66 cfs and is subcritical, the normal depth will be less than the 0.69' published in Table 2. The line for Parkwest Drive at Creekwood Avenue was added to illustrate that this is where Parkwest Drive must transition to standard curb and gutter. With these considerations taken into account, the hydraulic criteria will be met with the final DRC plans. Finally, the street criteria of 0.33' will be met and to resolve the problem with the water meter boxes, a special water meter installation detail which accommodates the slope will be used on the DRC plans. We have enclosed a revised Table 2 with this amendment.
2. The islands and bulge shall be maintained by the homeowner's association. They will have an encroachment agreement to maintain landscaping within the street right-of-way.
3. With the final design the rear yard slope will extend to the swale and be below the pad as indicated on the "Typical Rear Yard Detail" which has been added to the sheets at the end of this amendment. Common side yard swales are being used with a cedar fence on the property line unless a retaining wall is required. A cross-section showing this, with a 1.3' maximum step between pads without retaining will be provided on the DRC plans.

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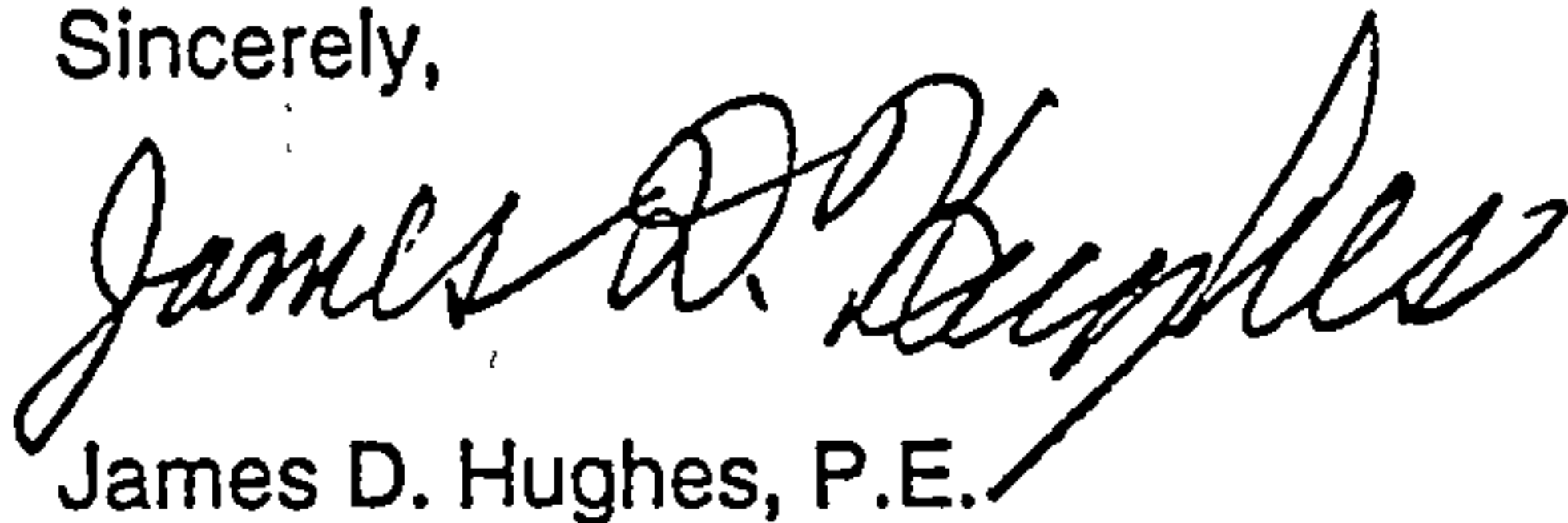
4. The incorrect spot elevations of 0.00 have been removed and this sheet has been re-submitted with this amendment.
5. These maintenance requirements are subject to final design and can be incorporated with final sizing of the pond at that time. The infrastructure list is worded to leave the type of construction material and sizes to final design.
6. The sediment control measures will be addressed as part of the DRC review. AMAFCA will review the plans and approve them at that time.
7. The drainage will flow over the top of the floodwall through holes in the rear yard fence. Both AMAFCA and COA will be contacted and their design requirements will be met for construction within the drainage right-of-way.
8. Preliminary design for all storm drains is based on the flow (Q) and friction slope (f's) of the storm drain at full pipe flow and a minimum diameter of 24". Since the street slope exceeds the friction slope for each of these storm drains, partial pipe flow will occur and the HGL will be contained within the pipe. As part of the final design, the HGL from the existing storm drains will be extended through the proposed construction to illustrate the capacity of the storm drain meeting the DPM criteria. A copy of the infrastructure list is submitted with this submittal.

AMENDMENT FOR UNITS 2 AND 4

The Drainage Report previously identified "Tract B" for "Future Units 2 and 4". The layout for this area has been completed and added to this submittal. As discussed on page 5 of the Drainage Report, this area has already been analyzed for developed conditions with free discharge to the Ouray Storm Drain. The flow will be collected in Monument Drive along the eastern edge of the site and conveyed north to the Ouray Storm Drain. The outfall from the pond will be limited to approximately 5 cfs and therefore contained in a 24" storm drain from the pond to Monument Drive, and then to the Ouray Storm Drain. This same storm drain has capacity to intercept flow from Monument Drive as the street capacity is exceeded. Off-site flows will still be intercepted as before and discharged to the Ouray Storm Drain. Final design of the pond will limit the outfall in order to maintain the current capacity of the Ouray Storm Drain and free discharge from Units 2 and 4. Please substitute revised sheets 1, 3 and 7 and add sheet 9 and 10 to the original report. These sheets reflect the grading of Units 2 and 4; all other design information remaining unchanged.

If you have any further comments or questions, please contact me at 897-0000.

Sincerely,



James D. Hughes, P.E.

enclosures: COA comments dated March 10, 1994
Preliminary Grading and Drainage Plan Sheets 1,3,7,8A and 8B
Infrastructure List

JDH/lch
CSC#143-18-620/143-18AE.REP

PR 143-18-050

DANIEL W. COOK, CHAIRMAN

PAT D. HIGDON, VICE-CHAIRMAN

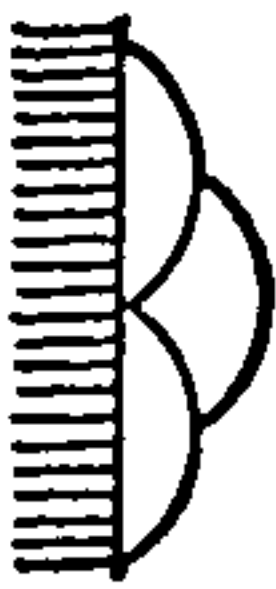
RONALD BROWN, SECRETARY-TREASURER

GENEVA WEEKER, ASST. SECRETARY-TREASURER

MICHAEL MURPHY, DIRECTOR

MAR 30 1994

LARRY A. BLAIR
EXECUTIVE ENGINEER



**Albuquerque
Metropolitan
Arroyo
Flood
Control
Authority**

2600 PROSPECT N.E. - ALBUQUERQUE, N.M. 87107
TELEPHONE (505) 884-2215

March 28, 1994

James D. Hughes, P.E.
Community Sciences Corp.
PO Box 1328
Corrales, NM 87048

RE: Parkwest Subdivision - Ladera Channel (H9)

Dear Doug:

AMAFCA staff has reviewed your letter of March 8, 1994, and discussed your proposed channel configuration at a recent staff meeting. We have prepared the following comments in response to your letter.

- a. We believe that the freeboard for 100-year flows should be maintained within the channel section. Maintaining freeboard at the property line exposes the channel and property line wall to damage and increased maintenance over a more conventional design.
- b. A channel design for AMAFCA maintenance should include the following section:
 - 15' surfaced maintenance road
 - lined channel (tinted concrete or soil cement) to carry 100-year storm and freeboard
 - 12' access road (not surfaced)
- c. We have no information that AMAFCA has accepted the Unser Boulevard crossing of the Ladera Channel for maintenance. Therefore, we believe that the City of Albuquerque currently maintains this segment of the Ladera Arroyo.
- d. We call your attention to the following provisions of AMAFCA's Drainage Policy Resolution #1975-8:

AMAFCA shall have maintenance responsibility for the North and South Diversion Channels and other facilities constructed using AMAFCA funds.

James D. Hughes, PE
March 28, 1994
Page 2

The City of Albuquerque and/or Bernalillo County within the area of their governmental jurisdiction shall have maintenance and operation responsibilities for drainage and flood control facilities within their geographic boundaries that are not otherwise assigned in this statement.

AMAFCA's acceptance of a channel not constructed using AMAFCA funds will require approval of a maintenance agreement by AMAFCA's Board of Directors. This agreement will require construction to meet AMAFCA's specific standards and requirements.

Please let us know if you require further clarification of the information presented in this letter.

Sincerely,
AMAFCA



Clifford E. Anderson, P.E. & L.S.
Drainage Engineer

CEA:ij

copy: Fred Aguirre, Hydrologist, City of Albuquerque PWD

c:\wpwin\cliff\prkwest.ltr

community
sciences
corporation

March 30, 1994

Mr. Cliff Anderson
AMAFCA
2600 Prospect NE
Albuquerque, NM 87107

RE: Parkwest Subdivision Drainage

Dear Mr. Anderson,

The enclosed table summarizes the time of concentration calculations used for the Parkwest Drainage Report. This information will be submitted in a revised drainage report next week which will address both the City of Albuquerque's and AMAFCA's comments.

The AHYMO for the report has also been updated due to the input error which you found. This did not affect the discharge; however, it did reduce the volume of sediment to the pond. Therefore, the revised "Summary of Sediment Transport" table is also included. Thank you for pointing out this error.

If you have any further comments or questions, please contact me at 897-0000.

Sincerely,



Billy McCarty
Project Manager

BM:ml

enclosures: Table 1A
Table 4
Northwest Mesa Drainage Management Plan Table 1 and 2

CSC#143-18-036/143-18AF.REP

P.O. Box 1128
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City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

April 1, 1994

James D. Hughes, P.E.
Community Sciences Corp.
P.O. Box 1328
Corrales, N.M. 87048

RE: DRAINAGE REPORT FOR PARKWEST/LAURELWOOD II SUBD (H-9/D1D)
RECEIVED MARCH 18, 1994 FOR PRELIMINARY PLAT APPROVAL
ENGINEER'S STAMP DATED 3-16-94

Dear Mr. Hughes:

Based on the information included in the submittal referenced above, City Hydrology has the following comments that must be addressed prior to Preliminary Plat approval:

1. Submittal of a bound amendment is not necessary because new & revised material can be easily inserted into the three ring binder that has already been submitted. Provide a copy of the revised Table 2 which was not enclosed in Amendment #1. Submit a Table of the criteria used to size each storm drain proposed. Table should include size, slope, Q100 and Q capacity.
2. AMAFCA has comments on the section proposed for the Ladera Channel that must be addressed to their satisfaction. Table on Sheet 8 for the channel is confusing. Explain how freeboard was calculated. Clarify what Rec'd Depth is. Move the EG column to the far right to emphasize that it is a separate criteria.
3. At the meeting on March 28, 1994; the National Park Service requested that a softer scheme for the channel and detention pond along Lava Bluffs be considered. Details of any scheme for this system must be submitted with the drainage plan so that Glen Jurgensen can review it for compliance with City Maintenance requirements.

If you have any questions about this project, You may contact me at 768-2727.

Sincerely,

John P. Curtin, P.E.
Civil Engineer/Hydrology

c: Fred Aguirre
Glenn Jurgensen

WPHYD/8361/jpc

April 1, 1994

Mr. John Curtin
City of Albuquerque
P.O. Box 1293
Albuquerque, NM 87103

RE: Parkwest Subdivision Drainage Report comments dated April 1, 1994

Dear Mr. Curtin;

The drainage comments per your letter dated April 1, 1994 have been addressed as follows. Each comment below corresponds numerically with your comments.

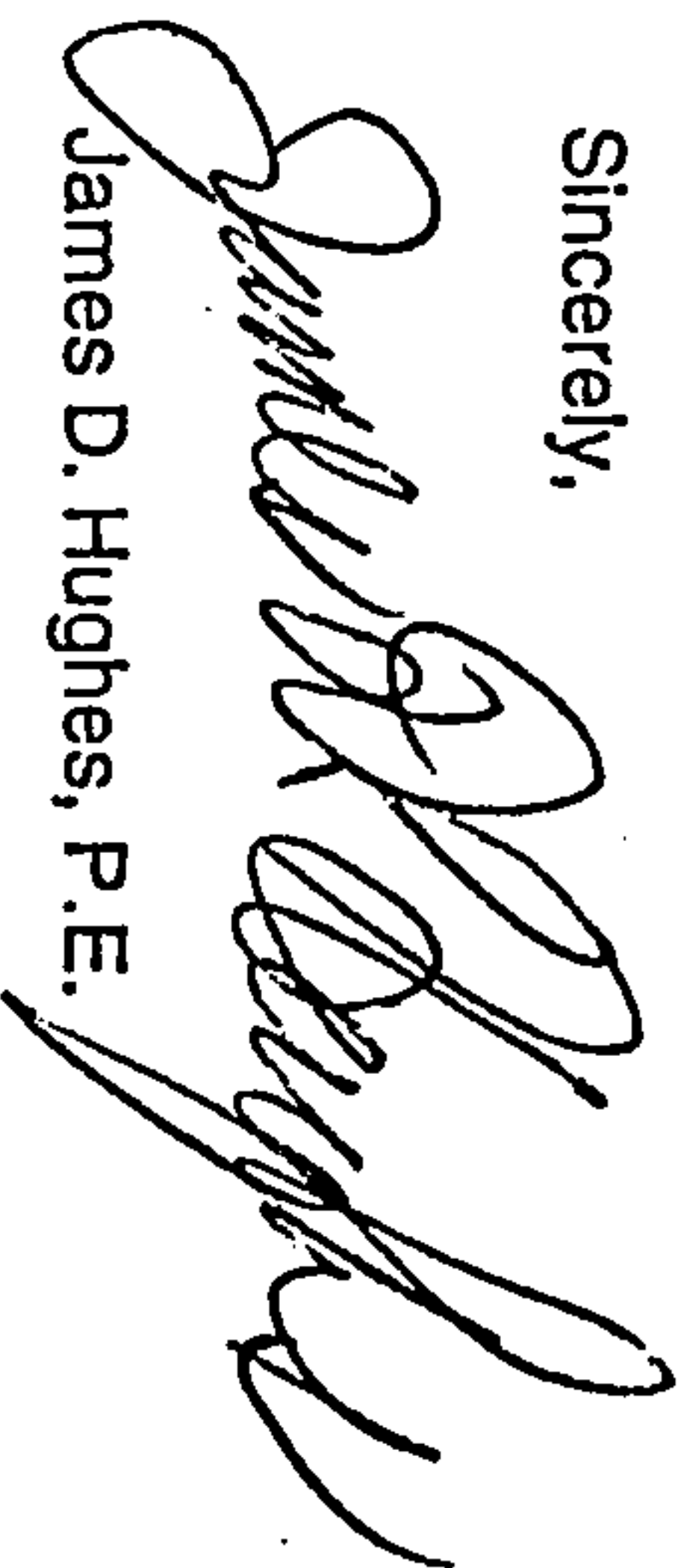
1. The enclosed tables (Tables 4 and 5) address your concerns about street and storm drain capacity. Please note that Table 2 has been revised to include Units 2 and 4. The top of curb, energy grade line and pool depth requirements will be met at all intersections. Also, based on Table 5, for the preliminary street profiles all of the storm drains will maintain the design flows with partially filled pipe flow and the minimum 24 inch diameter.
2. The AMAFCA comments have been addressed separately. I am enclosing a copy of a letter from Sivage Thomas Homes dated March 31, 1994, which explains the agreement between AMAFCA and Sivage Thomas Homes. Also enclosed is Table 6 which is a reprint of the one on Sheet 8. This table includes the freeboard calculation formula and column heading definitions. The energy grade line (EG) column has been moved to the right. However, at the March 28, 1994 meeting AMAFCA stated that EG is not a criteria for hard lined channels since the hydraulics are easily maintained.
3. We will continue to work with the National Park Service and Glen Jurgensen as we design the channel and detention pond along Lava Bluff Drive. The type and color of the channel lining and pond will have to be approved with the DRC plans.

These tables will be added to a revised drainage report which will incorporate all of your comments and AMAFCA's. The revised report will be submitted next week in order to incorporate all of the changes into one volume; however, all of AMAFCA's and your comments have been addressed at this time.

April 1, 1994
Mr. John Curtin
Page 2

If you have any further questions about this project, please contact me at 897-0000.

Sincerely,



James D. Hughes, P.E.

Enclosures: Table 2, Table 5, Table 6

Letter dated March 31, 1994 from Sivage Thomas Homes

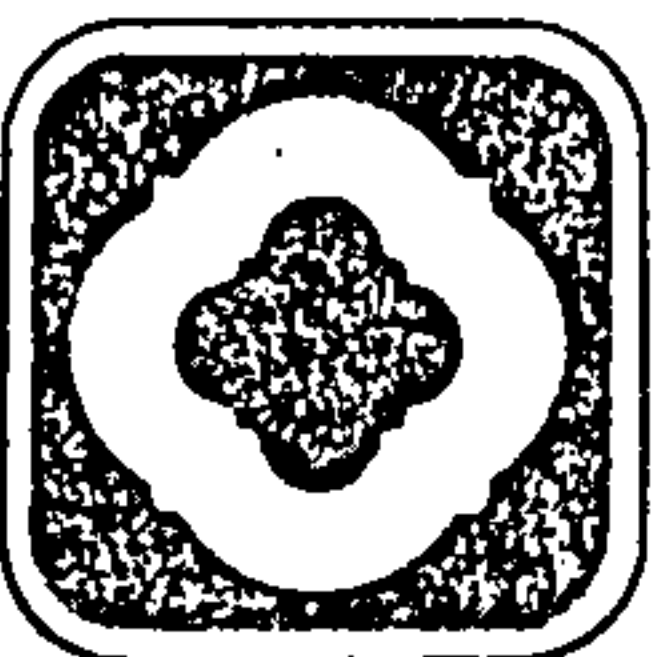
Letter dated April 1, 1994 City of Albuquerque

cc: Sivage Thomas Homes
Cliff Anderson, AMAFCA

JDH/ich

CSC#143-18-036/Apr-004.Let

SIVAGE THOMAS HOMES



Mr. D. Hughes, P.E.

March 31, 1994

COMMUNITY SCIENCES CORPORATION

P. O. Box 1328

Corrales

New Mexico 87048

SUBJECT: ParkWest Subdivision, AMAFCA Ladera Channel (H9)

Dear Doug:

With respect to the March 28, 1994 AMAFCA letter regarding channel design a modification has been agreed to with Mr. John Kelly of AMAFCA. The total right-of-way width shall be 60 feet. The indicated 15 foot service road shall be 14 feet. The indicated 12 foot 4x4 access road shall be 10 feet wide. Other criteria in the March 28 letter remain the same.

In addition, please find enclosed three sheets giving AMAFCA's requested fence details for installation at the concrete transition area at Unser. Where a combination of vertical and sloped concrete is necessary between bottom of channel and top of adjacent grade, AMAFCA prefers the vertical portion at the extreme outwards edge with the sloped concrete surface beginning at the base of the vertical wall. The fence is needed when the vertical wall is three feet or more in height.

Sincerely,

SIVAGE THOMAS HOMES, INC.


Ellery A. Biathrow, Jr., P.E.
Development Director

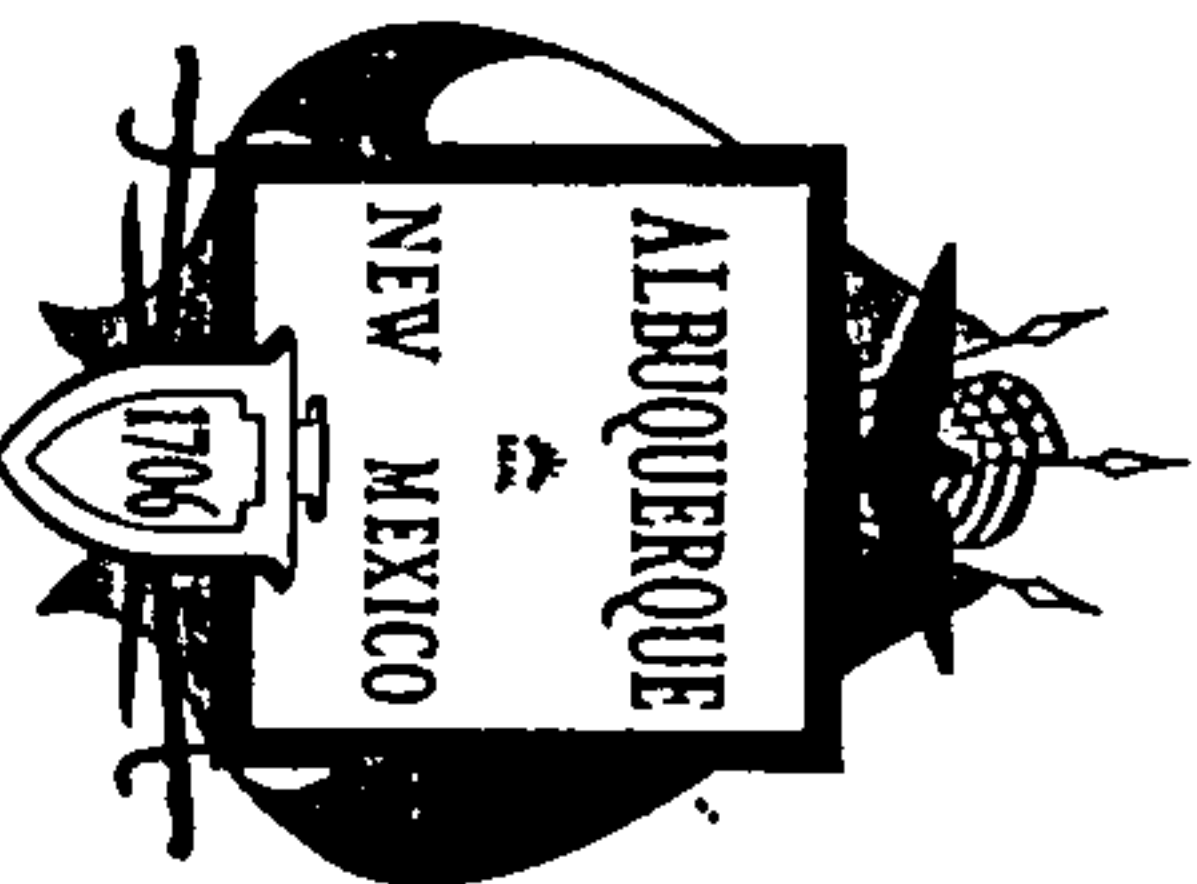
EAB:ms

Enclosure(s): As stated

rc: J. Kelly (AMAFCA)
B. McCarty (CSC)

F.N.: W.WPSt.ParkWt01.Constr.03319403

RR 143-18-030



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

April 7, 1994

APR 13 1994

James D. Hughes, P.E.
Community Sciences Corp.
P.O. Box 1328
Corrales, N.M. 87048

RE: LETTER DATED 3-16-94 FOR PARKWEST/LAURELWOOD II SUBD (H-9/D1D)
RECEIVED APRIL 4, 1994 FOR PRELIMINARY PLAT APPROVAL

Dear Mr. Hughes:

Based on the information included in the letter referenced above, City Hydrology approves this project for Preliminary Plat.

If you have any questions about this project, You may contact me at 768-2727.

Sincerely,

John P. Curtin, P.E.
Civil Engineer/Hydrology

c: Fred Aguirre

WPHYD/8361/jpc