''S: Set alarm--For sensor # 2273, Cub Cr below Blue Water Level PT,
the following alarm values are defined:

Absolute Max.	Absolute Min.	Positive Rate of Change Rate/Time	Positive Rate of Change Threshold	Negative Rate of Change Rate/Time	Negative Rate of Change Threshold
3.00 ft enabled	undefined disabled	1.00 ft/ 30min enabled	1.00 ft	undefined disabled	undefined

Maximum acceptable time between reports = 48.0 hours , alarm is enabled
Alarms set to flash on terminals : 0

Change the Absolute Max. alarm value (y/n) ?

#: 5733

Site ID: 2270

URBAN DRAINAGE AND FLOOD CONTROL DISTRICT

SYSTEM MAINTENANCE RECORD

DIAD INC.

Service Log

Site Name: Cub Ck below Blue *Date:* 27-Mar-97 *Time:* 14:56

Service Type: Start Up *Technician:* RJB *Status:* OK

Configuration Changes

Part #	*Location*
TB H 566	2270
TX H 833	2270
BY H 9556	2270

Transducer Calibration

Port	*A*	*B*	*Std Error*
2273	0.0898	-0.02	0.009

B = BV

Test Transmissions

Port	*Time*	*Count*	*Pressure*	*Predicted*
2273	15:12	26	1.01	28
2273	15:12	80	3.10	82
2273	15:13	130	5.06	133
2273	15:13	180	6.99	183
2273	15:14	234	9.11	238
2270	15:19	1		0
2270	15:24	2		0

M = 11.14

Settings and Performance

Switches: 2270-0012-1112-11011

Jumpers: W10,W4

Eprom: B

Fwd Power 8.0

Rev Power: 0.1

Frequency:

Deviation:

Battery Tests

Battery #	*Volts -O*	*Volts-T*
BY H 9556	12.86	12.70

07-May-97

Problem:

Action Taken:

Site Notes:

Follow-Up:

```
Device: 2014 Rcvd: 155   09/12/1996-13:50:49                Sep 12 96 13:52:05   2
  NS: NovaStar  Help    Options    Utilities    Setup    Quit

 Z Device Definitions DDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD NovaLynx Systems, Inc. \
 3                                                                              [
 3 Device             ID          Tag          Name                             [
 3 Identification   : 2273        2273         Cub Cr below Blue                [
 3                                                                              [
 3 Device             Type name                                                 [
 3 Type             : Water Level PT                                           [
 3                    Z Setup device calibration DDDDDDD NovaLynx Systems, Inc. \
 3 Data               3                                                         [
 3 Calibration      :3 Divisor     Base value  Data type   Calibration time     [
 3                    3 11.2108    -0.2        Signed      03/27/1996-16:28:17 [
 3 Data               3 11.0534    0 — RL      Signed      05/12/1992-01:00:00 [
 3 Checking         :3                                                         [
 3                    3    RL = 0.00                                          [
 3 Data               3                                                       [
 3 Storage          :3    B = -0.20                                          [
 3                    3                                                       [
 3 Save changes   <:3    BV = -0.20                                          [
 3                    3                                                       [
```

See 3/27/97

Press [F1] for Help

```
        Is this value O.K. (y/n) ? y                          Apr 11 94 13:58:53   2
   imary record  356 updated
Data file updated


Enter sensor # to calibrate ( <ESC> to exit ) 2253
Sensor # 2253 is Rosedale Water Level PT


     The present base value is 0.000000 feet
     The present increment size is 0.500000 feet per increment

     Change the base value (y/n) ? n

     Change the increment size (y/n) ? y

          Enter new increment size in feet per increment .09047

          The new increment size is 0.090470 feet per increment
          Is this value O.K. (y/n) ? y
Primary record  357 updated
Data file updated


Enter sensor # to calibrate ( <ESC> to exit )
Sensor: 42   Data: 0    04/11/94 13:59:28                 Apr 11 94 13:59:28   2
r imary record  357 updated
. .ca file updated


Enter sensor # to calibrate ( <ESC> to exit ) 2273
Sensor # 2273 is Cub Cr below Blue Water Level PT


     The present base value is 0.000000 feet
     The present increment size is 0.500000 feet per increment

     Change the base value (y/n) ? n

     Change the increment size (y/n) ? y

          Enter new increment size in feet per increment .09047

          The new increment size is 0.090470 feet per increment
          Is this value O.K. (y/n) ? y
Primary record  358 updated
Data file updated


Enter sensor # to calibrate ( <ESC> to exit )
```

Device: 4704 Rcvd. 10 10/16/1997-15:41:40 Oct 16 97 15:42:53

NS: NovaStar Help Assign Setup Test Quit

Setup tables — NovaLynx Systems, Inc.

Table number	: 64		Index (ft)	Table (cfs)
			0.0	0
			1.0	10 ✓
Name	: Cub Creek below Blue Cree		1.5	50 ✓
Interpolate	: LogLog		1.9	100 ✓
Extrapolate	: Yes		2.6	250 ✓
			3.2	463 ← *FIS/10-yr*
	Index	Tabl	3.4	500 ✓
Units	: feet	cubi	4.5	1000 ✓
Abbreviated	: ft	cfs	6.0	1742 ← *FIS/50-yr*
Precision	: 1	0	6.7	2500 ✓
Offset	: 0.0		7.0	2891 ← *FIS/100-yr*
Opening	: 0.0	< Press [Ente	7.3	3000 ✓
			10.5	8535 ← *FIS/500-yr*

USGS/CWCB PZF = 2.2'

✓ Tom Browning's DN calcs.

Press [F1] for Help

Device: 1366 Rcvd: 0 10/16/1997 15:43:52 Oct 16 97 15:43:51

NS: NovaStar Help Options Display Quit

Enter Device ID: 2273

Data Display

2273 Cub Cr below Blue

Water Level PT

Date	Time	feet	cubic feet/second	Raw	Alarm
06/07/1997	19:17:35	1.69	70	19	
06/07/1997	19:10:05	1.79	82	20	
06/07/1997	18:58:50	1.87	95	21	
06/07/1997	18:51:20	1.95	109	22	
06/07/1997	18:43:50	2.04	124	23	
06/07/1997	18:41:05	1.95	109	22	
06/07/1997	18:32:35	2.04	124	23	
06/07/1997	18:25:05	2.13	140	24	
06/07/1997	18:17:35	2.22	158	25	
06/07/1997	18:02:35	2.31	178 ✓ *Peak*	26	
06/07/1997	17:55:05	2.13	140	24	
06/07/1997	17:51:20	2.04	124	23	
06/07/1997	17:47:35	1.95	109	22	
06/07/1997	17:43:50	1.87	95	21	
06/07/1997	17:36:20	1.69	70	19	

Press [F1] for Help

USGS/CWCB Estimate
Range 120-210 cfs

Cub Creek, 10 cfs
Worksheet for Irregular Channel

Rx from Tom Browning 10-16-97

Project Description	
Project File	c:\haestad\fmw\cubcrk-1.fm2
Worksheet	Cub Creek at UDFCD gage
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Water Elevation

Input Data				
Channel Slope	0.027500 ft/ft			
Elevation range: 2.20 ft to 10.50 ft.				
Station (ft)	Elevation (ft)	Start Station	End Station	Roughness
5.00	9.00	5.00	30.00	0.045
10.00	8.00	30.00	38.00	0.075
21.00	4.20	38.00	75.00	0.065
22.00	4.00			
26.00	2.60			
28.00	3.50			
30.00	4.00			
34.00	3.50			
38.00	3.70			
39.00	3.00			
41.00	2.20 ← PZF			
43.00	2.80			
45.00	2.90			
48.00	2.90			
51.00	3.00			
52.00	3.60			
53.00	4.20			
55.00	5.00			
62.00	10.00			
75.00	10.50			
Discharge	10.00 cfs			

Results		
Wtd. Mannings Coefficient	0.061	
Water Surface Elevation	3.15	ft
Flow Area	5.21	ft²
Wetted Perimeter	15.84	ft
Top Width	15.29	ft
Height	0.95	ft
Critical Depth	3.04	ft
Critical Slope	0.091243	ft/ft
Velocity	1.92	ft/s
Velocity Head	0.06	ft
Specific Energy	3.21	ft
Froude Number	0.58	

ft.

Stage	Q cfs
0.0	0
1.0	10 cfs
1.5	50 cfs
1.9	100
2.6	250
3.4	500
4.5	1000
6.7	2500
7.3	3000

Cub Creek, 50 cfs
Worksheet for Irregular Channel

Project Description	
Project File	c:\haestad\fmw\cubcrk-1.fm2
Worksheet	Cub Creek at UDFCD gage
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Water Elevation

Input Data		
Channel Slope	0.027500	ft/ft

Elevation range: 2.20 ft to 10.50 ft.

Station (ft)	Elevation (ft)	Start Station	End Station	Roughness
5.00	9.00	5.00	30.00	0.045
10.00	8.00	30.00	38.00	0.075
21.00	4.20	38.00	75.00	0.065
22.00	4.00			
26.00	2.60			
28.00	3.50			
30.00	4.00			
34.00	3.50			
38.00	3.70			
39.00	3.00			
41.00	2.20			
43.00	2.80			
45.00	2.90			
48.00	2.90			
51.00	3.00			
52.00	3.60			
53.00	4.20			
55.00	5.00			
62.00	10.00			
75.00	10.50			

Discharge	50.00	cfs

Results		
Wtd. Mannings Coefficient	0.054	
Water Surface Elevation	3.71	ft
Flow Area	15.65	ft²
Wetted Perimeter	26.97	ft
Top Width	25.88	ft
Height	1.51	ft
Critical Depth	3.52	ft
Critical Slope	0.063749	ft/ft
Velocity	3.20	ft/s
Velocity Head	0.16	ft
Specific Energy	3.87	ft
Froude Number	0.72	

Cub Creek, 100 cfs
Worksheet for Irregular Channel

Project Description	
Project File	c:\haestad\fmw\cubcrk-1.fm2
Worksheet	Cub Creek at UDFCD gage
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Water Elevation

Input Data		
Channel Slope	0.027500	ft/ft

Elevation range: 2.20 ft to 10.50 ft.

Station (ft)	Elevation (ft)	Start Station	End Station	Roughness
5.00	9.00	5.00	30.00	0.045
10.00	8.00	30.00	38.00	0.075
21.00	4.20	38.00	75.00	0.065
22.00	4.00			
26.00	2.60			
28.00	3.50			
30.00	4.00			
34.00	3.50			
38.00	3.70			
39.00	3.00			
41.00	2.20			
43.00	2.80			
45.00	2.90			
48.00	2.90			
51.00	3.00			
52.00	3.60			
53.00	4.20			
55.00	5.00			
62.00	10.00			
75.00	10.50			

Discharge	100.00	cfs

Results		
Wtd. Mannings Coefficient	0.056	
Water Surface Elevation	4.08	ft
Flow Area	26.34	ft²
Wetted Perimeter	32.51	ft
Top Width	31.21	ft
Height	1.88	ft
Critical Depth	3.90	ft
Critical Slope	0.052134	ft/ft
Velocity	3.80	ft/s
Velocity Head	0.22	ft
Specific Energy	4.30	ft
Froude Number	0.73	

Cub Creek 250 cfs
Worksheet for Irregular Channel

Project Description	
Project File	c:\haestad\fmw\cubcrk-1.fm2
Worksheet	Cub Creek at UDFCD gage
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Water Elevation

Input Data		
Channel Slope	0.027500	ft/ft

Elevation range: 2.20 ft to 10.50 ft.

Station (ft)	Elevation (ft)	Start Station	End Station	Roughness
5.00	9.00	5.00	30.00	0.045
10.00	8.00	30.00	38.00	0.075
21.00	4.20	38.00	75.00	0.065
22.00	4.00			
26.00	2.60			
28.00	3.50			
30.00	4.00			
34.00	3.50			
38.00	3.70			
39.00	3.00			
41.00	2.20			
43.00	2.80			
45.00	2.90			
48.00	2.90			
51.00	3.00			
52.00	3.60			
53.00	4.20			
55.00	5.00			
62.00	10.00			
75.00	10.50			

Discharge	250.00	cfs

Results		
Wtd. Mannings Coefficient	0.059	
Water Surface Elevation	4.77	ft
Flow Area	49.27	ft²
Wetted Perimeter	36.64	ft
Top Width	35.08	ft
Height	2.57	ft
Critical Depth	4.51	ft
Critical Slope	0.049977	ft/ft
Velocity	5.07	ft/s
Velocity Head	0.40	ft
Specific Energy	5.17	ft
Froude Number	0.75	

Cub Creek, 500 cfs
Worksheet for Irregular Channel

Project Description	
Project File	c:\haestad\fmw\cubcrk-1.fm2
Worksheet	Cub Creek at UDFCD gage
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Water Elevation

Input Data		
Channel Slope	0.027500	ft/ft

Elevation range: 2.20 ft to 10.50 ft.

Station (ft)	Elevation (ft)	Start Station	End Station	Roughness
5.00	9.00	5.00	30.00	0.045
10.00	8.00	30.00	38.00	0.075
21.00	4.20	38.00	75.00	0.065
22.00	4.00			
26.00	2.60			
28.00	3.50			
30.00	4.00			
34.00	3.50			
38.00	3.70			
39.00	3.00			
41.00	2.20			
43.00	2.80			
45.00	2.90			
48.00	2.90			
51.00	3.00			
52.00	3.60			
53.00	4.20			
55.00	5.00			
62.00	10.00			
75.00	10.50			

Discharge	500.00	cfs

Results		
Wtd. Mannings Coefficient	0.059	
Water Surface Elevation	5.55	ft
Flow Area	77.97	ft²
Wetted Perimeter	40.57	ft
Top Width	38.67	ft
Height	3.35	ft
Critical Depth	5.24	ft
Critical Slope	0.045190	ft/ft
Velocity	6.41	ft/s
Velocity Head	0.64	ft
Specific Energy	6.19	ft
Froude Number	0.80	

Cub Creek 1000 cfs
Worksheet for Irregular Channel

Project Description	
Project File	c:\haestad\fmw\cubcrk-1.fm2
Worksheet	Cub Creek at UDFCD gage
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Water Elevation

Input Data		
Channel Slope	0.027500 ft/ft	
Elevation range: 2.20 ft to 10.50 ft.		
Discharge	1,000.00	cfs

Station (ft)	Elevation (ft)	Start Station	End Station	Roughness
5.00	9.00	5.00	30.00	0.045
10.00	8.00	30.00	38.00	0.075
21.00	4.20	38.00	75.00	0.065
22.00	4.00			
26.00	2.60			
28.00	3.50			
30.00	4.00			
34.00	3.50			
38.00	3.70			
39.00	3.00			
41.00	2.20			
43.00	2.80			
45.00	2.90			
48.00	2.90			
51.00	3.00			
52.00	3.60			
53.00	4.20			
55.00	5.00			
62.00	10.00			
75.00	10.50			

Results		
Wtd. Mannings Coefficient	0.059	
Water Surface Elevation	6.66	ft
Flow Area	123.62	ft²
Wetted Perimeter	45.89	ft
Top Width	43.44	ft
Height	4.46	ft
Critical Depth	6.32	ft
Critical Slope	0.039748	ft/ft
Velocity	8.09	ft/s
Velocity Head	1.02	ft
Specific Energy	7.68	ft
Froude Number	0.85	

Cub Creek, 2500 cfs
Worksheet for Irregular Channel

Project Description	
Project File	c:\haestad\fmw\cubcrk-1.fm2
Worksheet	Cub Creek at UDFCD gage
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Water Elevation

Input Data		
Channel Slope	0.027500 ft/ft	
Elevation range: 2.20 ft to 10.50 ft.		
Discharge	2,500.00	cfs

Station (ft)	Elevation (ft)	Start Station	End Station	Roughness
5.00	9.00	5.00	30.00	0.045
10.00	8.00	30.00	38.00	0.075
21.00	4.20	38.00	75.00	0.065
22.00	4.00			
26.00	2.60			
28.00	3.50			
30.00	4.00			
34.00	3.50			
38.00	3.70			
39.00	3.00			
41.00	2.20			
43.00	2.80			
45.00	2.90			
48.00	2.90			
51.00	3.00			
52.00	3.60			
53.00	4.20			
55.00	5.00			
62.00	10.00			
75.00	10.50			

Results		
Wtd. Mannings Coefficient	0.058	
Water Surface Elevation	8.91	ft
Flow Area	233.01	ft²
Wetted Perimeter	58.49	ft
Top Width	55.01	ft
Height	6.71	ft
Critical Depth	8.63	ft
Critical Slope	0.033142	ft/ft
Velocity	10.73	ft/s
Velocity Head	1.79	ft
Specific Energy	10.70	ft
Froude Number	0.92	

Cub Creek, 3000 cfs
Worksheet for Irregular Channel

Project Description	
Project File	c:\haestad\fmw\cubcrk-1.fm2
Worksheet	Cub Creek at UDFCD gage
Flow Element	Irregular Channel
Method	Manning's Formula
Solve For	Water Elevation

Input Data		
Channel Slope	0.027500 ft/ft	
Elevation range: 2.20 ft to 10.50 ft.		
Discharge	3,000.00	cfs

Station (ft)	Elevation (ft)	Start Station	End Station	Roughness
0.00	10.50	0.00	30.00	0.045
5.00	9.00	30.00	38.00	0.075
10.00	8.00	38.00	75.00	0.065
21.00	4.20			
22.00	4.00			
26.00	2.60			
28.00	3.50			
30.00	4.00			
34.00	3.50			
38.00	3.70			
39.00	3.00			
41.00	2.20			
43.00	2.80			
45.00	2.90			
48.00	2.90			
51.00	3.00			
52.00	3.60			
53.00	4.20			
55.00	5.00			
62.00	10.00			
75.00	10.50			

Results		
Wtd. Mannings Coefficient	0.057	
Water Surface Elevation	9.46	ft
Flow Area	264.41	ft²
Wetted Perimeter	61.53	ft
Top Width	57.80	ft
Height	7.26	ft
Critical Depth	9.23	ft
Critical Slope	0.031890	ft/ft
Velocity	11.35	ft/s
Velocity Head	2.00	ft
Specific Energy	11.46	ft

Device: 753 Rcvd: 88 10/13/1997-11:58:23 Oct 13 97 11:58:25 2

NS: NovaStar Help Assign Setup Test Quit

Rev.

Setup tables NovaLynx Systems, Inc.

Table number : 64 + HMS

Name : Cub Creek below Blue Cree

Interpolate : LogLog

Extrapolate : Yes

Units : feet

Abbreviated : ft

Precision : 1

Offset : 0.0

Opening : 0.0 <- Press [Ente

Index (ft)	Table (cfs)
0.0	0
1.7	100
2.3	200 ← 6-7-97
3.2	463 — 10yr
4.5	1000
6.0	1742 — 50yr
7.0	2891 — 100yr
10.5	8535 — 500yr

Index Tabl

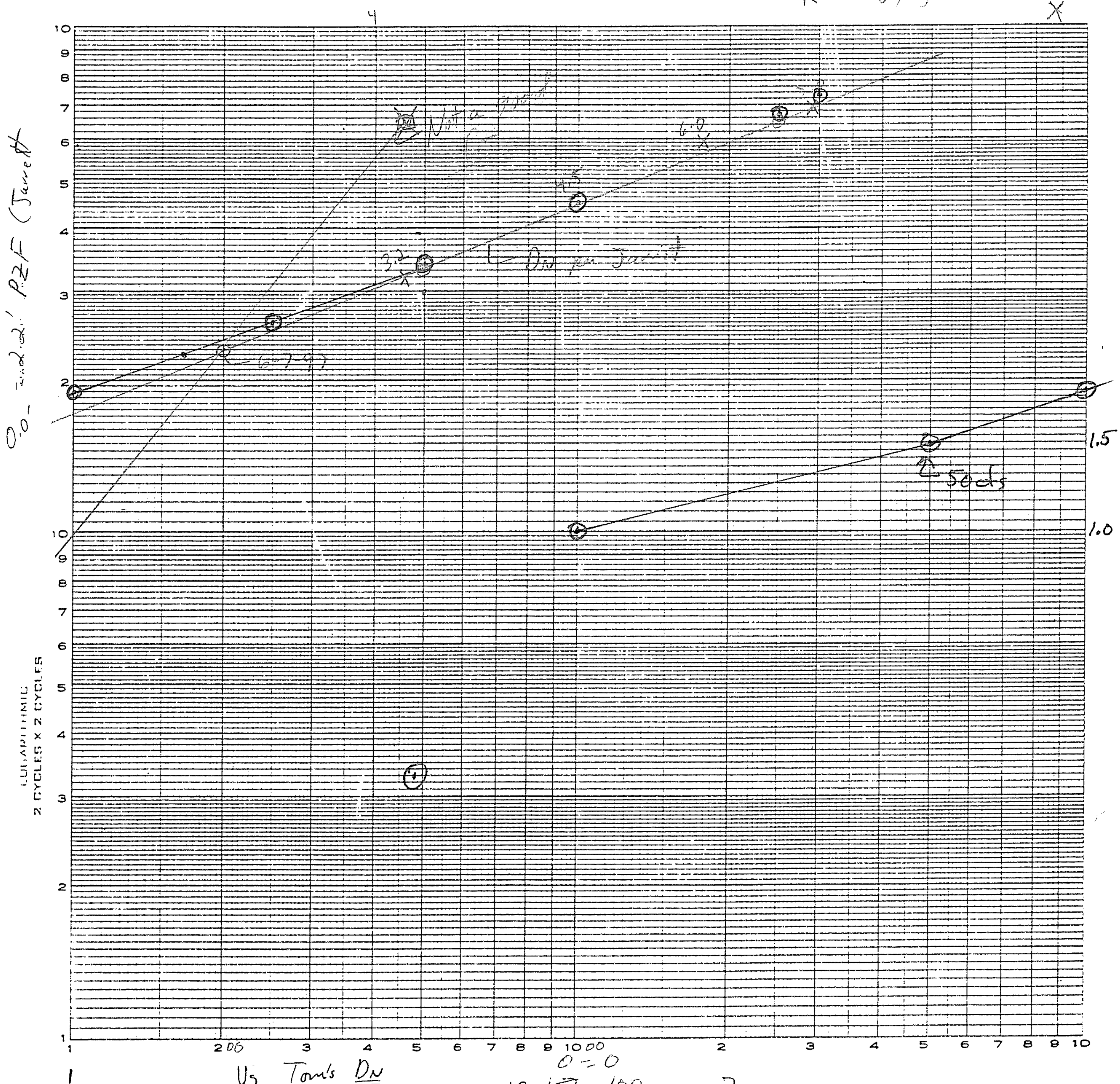
cubi

cfs

Press [F1] for Help

Revised Guess
10-13-97
KGS

X = FEMA Station
≈ 18,100
Reasonable fit w/ Jarrett Dw



0 = 0
1.9 ~~1.7~~ = 100
2.3 = 200 (6-~~X~~-97) - Jarrett ?
2.6 = 250
3.2 = 460 10-yr
3.4 = 500
4.5 = 1000 (Jarrett)
6.0 = 1740 50-yr
7.0 = 2890 100-yr
10.5 = 8540 500-yr

1' = 100 cfs

1273 Cub Cr below Pine
Water Level FT

Date	Time	feet	cubic feet/second	Raw	Alarm
06/07/1997	22:58:49	1.33	70	15	
06/07/1997	22:55:04	1.42	77	16	
06/07/1997	22:51:19	1.33	70	15	
06/07/1997	22:47:35	1.42	77	16	
06/07/1997	22:36:21	1.33	70	15	
06/07/1997	22:32:34	1.42	77	16	
06/07/1997	22:17:34	1.33	70	15	
06/07/1997	22:02:34	1.42	77	16	
06/07/1997	21:47:34	1.33	70	15	
06/07/1997	21:32:34	1.42	77	16	
06/07/1997	21:28:40	1.33	70	15	
06/07/1997	20:45:49	1.42	77	16	
06/07/1997	20:40:05	1.51	84	17	
06/07/1997	20:36:19	1.42	77	16	
06/07/1997	19:58:50	1.51	84	17	
06/07/1997	19:36:20	1.60	91	18	
06/07/1997	19:[illegible]:35	1.69	99	19	
06/07/1997	19:10:05	1.78	110	20	
06/07/1997	18:58:50	1.87	124	21	
06/07/1997	18:51:20	1.95	138	22	
06/07/1997	18:45:50	2.04	153	23	
06/07/1997	18:40:05	1.95	138	22	
06/07/1997	18:32:35	2.04	153	23	
06/07/1997	18:25:05	2.13	169	24	
06/07/1997	18:17:35	2.22	185	25	
06/07/1997	18:02:35	2.31	203	26	
06/07/1997	17:55:05	2.13	169	24	
06/07/1997	17:51:20	2.04	153	23	
06/07/1997	17:47:35	1.95	138	22	
06/07/1997	17:43:50	1.87	124	21	
06/07/1997	17:36:20	1.69	99	19	
06/07/1997	17:28:51	1.60	91	18	
06/07/1997	17:25:05	1.51	84	17	
06/07/1997	17:21:20	1.42	77	16	
06/07/1997	17:17:35	1.33	70	15	
06/07/1997	17:10:06	1.24	64	14	
06/07/1997	16:40:05	1.15	57	13	
06/07/1997	16:10:06	1.06	51	12	
06/07/1997	16:06:20	1.06	51	12	
06/07/1997	15:32:35	0.97	45	11	
06/07/1997	15:28:50	1.06	51	12	
06/07/1997	1[illegible]:21:20	0.97	45	11	
06/07/1997	12:17:35	1.06	51	12	
06/07/1997	10:13:50	0.97	45	11	
06/07/1997	10:04:20	1.06	51	12	
06/07/1997	06:43:51	0.97	45	11	
06/07/1997	04:16:06	1.06	51	12	
06/07/1997	03:47:35	1.06	51	12	
06/07/1997	02:21:21	1.15	57	13	

← Jarrett peak estimate
170 cfs – 210 cfs
D_N – D_c

Oct 13 97 12:25:22

NS: NovaStar Help Options Display Quit

3 Enter Device ID: 2273

2 Data Display

2273 Cub Cr below Mine

Water Level FT

Date	Time	feet	cubic feet/second	Raw	Alarm
06/07/1997	19:16:45	1.66	67	19	
06/07/1997	19:09:16	1.78	71	20	
06/07/1997	18:56:00	1.87	75	21	
06/07/1997	18:50:30	1.95	78	22	
06/07/1997	18:43:00	2.04	82	23	
06/07/1997	18:39:15	1.95	78	22	
06/07/1997	18:31:46	2.04	82	23	
06/07/1997	18:24:15	2.13	85	24	
06/07/1997	18:16:45	2.22	89	25	
06/07/1997	18:01:45	2.31	93	26	
06/07/1997	17:54:16	2.13	85	24	
06/07/1997	17:50:32	2.04	82	23	
06/07/1997	17:46:46	1.95	78	22	
06/07/1997	17:43:02	1.87	75	21	
06/07/1997	17:35:31	1.69	67	19	

Before

Press CF11 for Help

Oct 13 97 12:27:01

NS: NovaStar Help Options Display Quit

3 Enter Device ID: 2273

2 Data Display

2273 Cub Cr below Mine

Water Level FT

Date	Time	feet	cubic feet/second	Raw	Alarm
06/07/1997	19:16:45	1.69	99	19	
06/07/1997	19:09:16	1.78	110	20	
06/07/1997	18:56:00	1.87	124	21	
06/07/1997	18:50:30	1.95	138	22	
06/07/1997	18:43:00	2.04	153	23	
06/07/1997	18:39:15	1.95	138	22	
06/07/1997	18:31:46	2.04	153	23	
06/07/1997	18:24:15	2.13	169	24	
06/07/1997	18:16:45	2.22	185	25	
06/07/1997	18:01:45	2.31	203	26	
06/07/1997	17:54:16	2.13	169	24	
06/07/1997	17:50:32	2.04	153	23	
06/07/1997	17:46:46	1.95	138	22	
06/07/1997	17:43:02	1.87	124	21	
06/07/1997	17:35:31	1.69	99	19	

After

Press CF11 for Help

Rating #2273 Cub G. below Blue G.

U.S. GEOLOGICAL SURVEY
WATER RESOURCES DIVISION
Branch of Regional Research, CR
Denver, Colorado 80225

Number of pages (including cover sheet): 2 Date/Time: 7/14 @ 3pm

ADDRESSEE INFORMATION:

Name: Kevin Stewart

Telephone number: 455-6277

Telefax number: -7880

SENDER INFORMATION

Name: Bob Jarrett

Telephone number: 236-6447

Telefax number: -5034

Comments: Kevin, I had a little trouble compare your ratings to mine (Cussionera Bowing) I just used the PZF (part of zero flow) for each - could be off somewhat. Look this over & we can discuss later. Also, plotted USGS flood frequency curve at our gage @ Bear Creek (~200 yds U/S) w/ Gunnison paleoflood data. Tom & I got more paleoflood data which I need to incorporate.

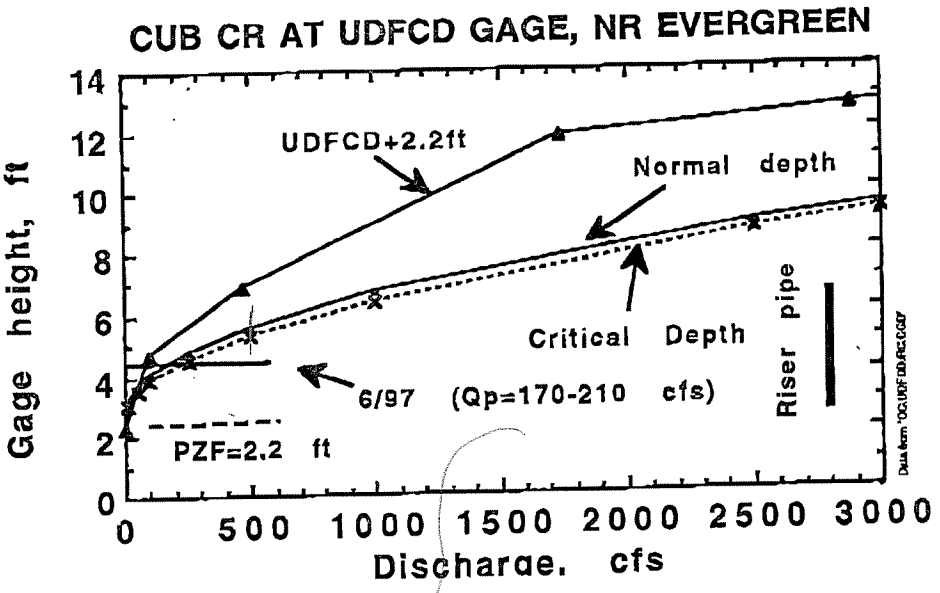
Bob

Phone w/ Bob · Gage location ≈ 55' u/s of bridge
n = ~~0.055~~ 0.055 to 0.06 Channel
0.09 for dense veg.
weighted

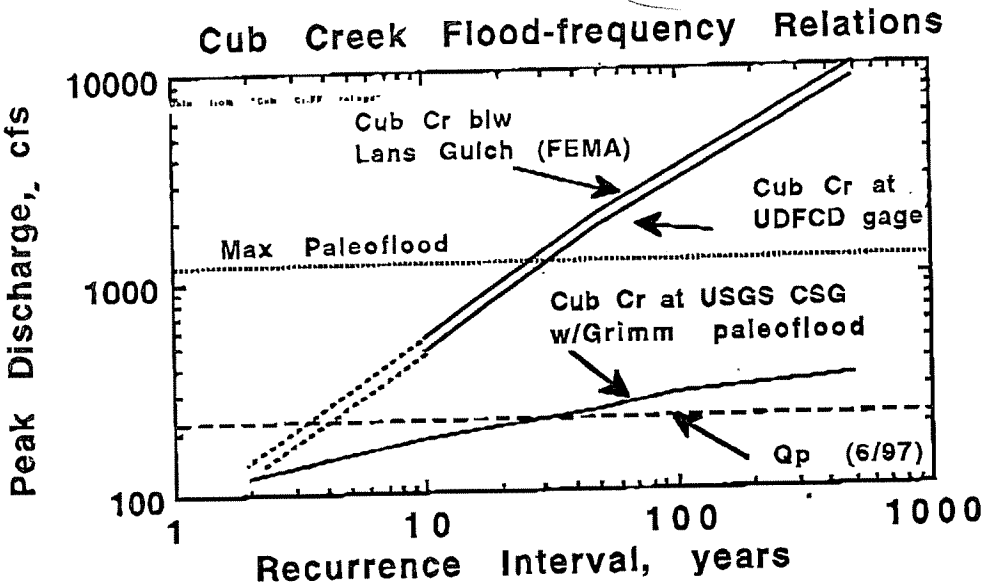
Event

Preliminary

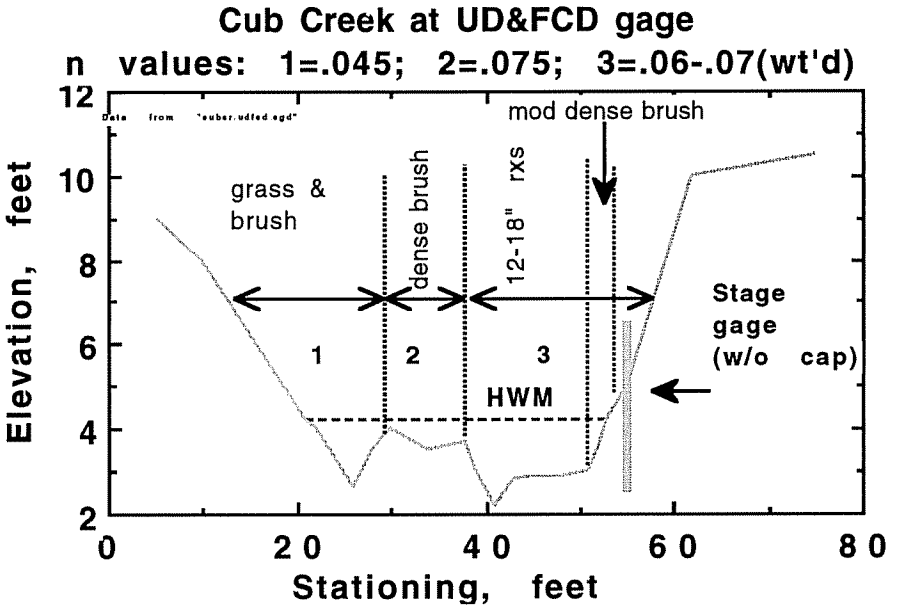
6-7-97



ALERT Gage Record
HW = 2.31'
93 cfs



Use this work to adjust 2273 rating. Re-plot Curve from FIS @ location u/s of bridge & compare w/ Bob's / Tom's.



=> from Bob Jarrett, USGS
@ meeting in Buffalo Co.
@ Jeffco

URBAN DRAINAGE AND FLOOD CONTROL DISTRICT
2480 W. 26th Avenue, Suite 156B, Denver, CO 80211
Tel: (303) 455-6277 • FAX: (303) 455-7880

FAX TRANSMITTAL/LETTER

Date: 7-24-97

To: Bob Jarrett

Company: USGS

FAX Number: 236-5034 Telephone Number: 6447

From: Kevin Stewart

Number of pages transmitted 5 (not including this sheet) OK@5:41 PM

To be followed by original in the mail: ☐ Yes ☒ No

Subject: Station 2273, Cub Creek below Blue Cr.

MESSAGE: Bob,

Here's the information you asked for on July 16. Sorry it took so long to put together.

We have the entire electronic archive for the Bear Creek FDN. Note the install dates for stream gages on the last page. Let me know if you would like more data on this. Thanks for your help with the rating table.

P.S. New record rainfall @ NWS-Stapleton, July 19, 3.83" in less than 1-hour. "Official" Denver rain for that event 0.59" 2 Station relocated to DIA? Interesting!

FAXLTR.DOC

UDFCD ALERT Base Station...NovaStar Node 2

Date Time

07/24/1997-16:48:35

Cub Creek below Blue Creek

DeviceID	2273	2273	2273	2273	2273	2273	2273	2273	2273
StatType	max	max	tmax	min	tmin	dif	vols	cnt	inst
DataType	level	rated	level	rated	level	level	rated	level	level
Units	ft	cfs	time	cfs	time	ft	AF	#	ft
1day at 24:00:00									
06/30/97	0.43	17	12:41	14	16:11	0.00	30	20	0.34
06/29/97	0.43	17	23:29	14	23:59	-0.09	33	67	0.34
06/28/97	0.43	17	16:11	17	16:11	0.00	34	2	0.43
06/27/97	0.43	17	16:10	17	16:10	0.00	34	3	0.43
06/26/97	0.43	17	16:10	17	16:10	0.00	34	2	0.43
06/25/97	0.43	17	16:10	17	16:10	0.00	34	2	0.43
06/24/97	0.52	21	16:10	17	16:14	-0.09	37	59	0.43
06/23/97	0.52	21	19:10	17	18:59	0.00	40	28	0.52
06/22/97	0.52	21	16:10	21	16:10	0.00	41	2	0.52
06/21/97	0.52	21	16:10	21	16:10	0.00	41	2	0.52
06/20/97	0.61	24	11:51	21	16:10	-0.09	45	13	0.52
06/19/97	0.61	24	16:10	24	16:10	0.00	48	2	0.61
06/18/97	0.70	28	05:14	24	16:10	-0.09	49	42	0.61
06/17/97	0.70	28	23:47	24	23:40	0.00	55	8	0.70
06/16/97	0.70	28	16:10	28	16:10	0.00	55	2	0.70
06/15/97	0.79	32	22:40	28	22:44	-0.09	60	71	0.70
06/14/97	0.97	39	02:06	32	16:10	-0.09	66	12	0.79
06/13/97	1.06	42	17:32	35	23:44	-0.18	81	9	0.88
06/12/97	1.06	42	22:32	38	15:51	0.09	77	12	1.06
06/11/97	1.06	42	09:25	39	09:36	-0.09	79	22	0.97
06/10/97	1.24	49	04:10	42	17:06	-0.18	90	18	1.06
06/09/97	1.33	53	23:47	46	17:29	-0.09	100	23	1.24
06/08/97	1.60	64	16:47	53	23:17	0.00	112	33	1.33
06/07/97	2.31	93	18:02	39	15:32	0.09	95	49	1.33
06/06/97	1.33	53	23:13	17	04:10	0.81	50	23	1.24
06/05/97	0.43	17	16:10	17	16:10	0.00	34	2	0.43
06/04/97	0.43	17	16:10	17	16:10	0.00	34	2	0.43
06/03/97	0.52	21	07:21	17	16:09	0.00	34	34	0.43
06/02/97	0.52	21	23:06	17	23:13	-0.09	39	47	0.43
06/01/97	0.52	21	16:09	21	16:09	0.00	41	2	0.52
TOTALS:	2.31	93	18:02	14	23:59	-0.18	1602	613	20.32

New Record H.W. for this station

Annual Peaks:

'96 May 29 0.51' @ 17:09

'95 May 30 1.45' @ 18:59

'94 April 13 0.54' @ 19:15

'93 { May 16 & July 20 } 0.90' @ { 15:03 / 18:16 }

'92 August 24 0.81' @ 12:55

UDFCD ALERT Base Station...NovaStar Node 2

Group Name	Date	Time
UPPER BEAR CREEK RAIN	07/24/1997	16:29:05

DeviceID	2210	2230	2240	2250	2260	2270	2280
StatType	rain	rain	rain	rain	rain	rain	rain
DataType	precip	precip	precip	precip	precip	precip	precip
Units	in	in	in	in	in	in	in
1day at 24:00:00							
06/30/97	0.00	0.00	0.00	0.00	0.00	0.00	0.00
06/29/97	0.00	0.00	0.00	0.00	0.00	0.04	0.00
06/28/97	0.00		0.00	0.00	0.00	0.00	0.00
06/27/97	0.04	0.08	0.08	0.04	0.04	0.12	0.16
06/26/97	0.00	0.00		0.00	0.04	0.00	0.00
06/25/97	0.04	0.00	0.00	0.04	0.00	0.04	0.04
06/24/97	0.20	0.00	0.12	0.04	0.08	0.04	0.04
06/23/97	0.20	0.08	0.04	0.08	0.04	0.04	0.04
06/22/97	0.00	0.00	0.00	0.00	0.04	0.04	0.08
06/21/97	0.00	0.00	0.00	0.00	0.00	0.00	0.00
06/20/97	0.00	0.00	0.00	0.00	0.00	0.00	0.00
06/19/97	0.00	0.00	0.00	0.00	0.00	0.00	0.00
06/18/97	0.00	0.04	0.12	0.00	0.00	0.08	0.08
06/17/97	0.00	0.04	0.04	0.04	0.00	0.00	0.00
06/16/97	0.04	0.04	0.04	0.00	0.04	0.08	0.04
06/15/97	0.00	0.00	0.00	0.04	0.00	0.00	0.04
06/14/97	0.00	0.08	0.08	0.04	0.12	0.08	0.08
06/13/97	0.55	1.10	0.31	0.98	0.35	0.24	0.39
06/12/97	0.24	0.12	0.04	0.35	0.31	0.20	0.08
06/11/97	0.08	0.00	0.00	0.12	0.04	0.04	0.00
06/10/97	0.04	0.04	0.08	0.20	0.00	0.04	0.04
06/09/97	0.20	0.20	0.20	0.08	0.20	0.16	0.08
06/08/97	0.12	0.00	0.39	0.20	0.08	0.00	0.04
06/07/97	0.51	0.24	0.28	0.51	0.94	0.59	0.20
06/06/97	1.81	2.36	1.89	2.64	2.01	1.69	2.01
06/05/97	0.00	0.00	0.00	0.00	0.04	0.00	0.00
06/04/97	0.00	0.00	0.00	0.00	0.04	0.00	0.00
06/03/97	0.00	0.00	0.00	0.00	0.00	0.00	0.00
06/02/97	0.16	0.04	0.12	0.12	0.00	0.12	0.43
06/01/97	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTALS:	4.21	4.45	3.82	5.51	4.41	3.62	3.86

UDFCD ALERT Base Station...NovaStar Node 2

Group Name	Date	Time
LOWER BEAR CREEK RAIN	07/24/1997	16:29:10

DeviceID	2240	2310	2320	2330	2340	2350	2360	2370
StatType	rain	rain	rain	rain	rain	rain	rain	rain
DataType	precip	precip	precip	precip	precip	precip	precip	precip
Units	in	in	in	in	in	in	in	in
1day at 24:00:00								
06/30/97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
06/29/97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
06/28/97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
06/27/97	0.08	0.08	0.04	0.00	0.04	0.16	0.12	0.00
06/26/97		0.00	0.00	0.00	0.00	0.00	0.00	0.00
06/25/97	0.00	0.12	0.12	0.00	0.04	0.04	0.04	0.16
06/24/97	0.12	0.08	0.08	0.51	0.16	0.16	0.04	0.20
06/23/97	0.04	0.04	0.04	0.12	0.08	0.08	0.04	0.04
06/22/97	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00
06/21/97	0.00	0.00	0.00	0.08	0.00	0.00	0.04	0.00
06/20/97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
06/19/97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
06/18/97	0.12	0.00	0.00	0.28	0.00	0.04	0.08	0.00
06/17/97	0.04	0.00	0.00	0.16	0.00	0.04	0.00	0.04
06/16/97	0.04	0.04	0.04	0.00	0.00	0.04	0.04	0.00
06/15/97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
06/14/97	0.08	0.16	0.12	0.04	0.04	0.08	0.12	0.12
06/13/97	0.31	0.16	0.24	0.43	0.28	0.31	0.75	0.28
06/12/97	0.04	0.12	0.12	0.08	0.16	0.04	0.00	0.04
06/11/97	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00
06/10/97	0.08	0.08	0.12	0.16	0.00	0.12	0.16	0.08
06/09/97	0.20	0.39	0.51	0.20	0.51	0.39	0.35	0.16
06/08/97	0.39	0.51	0.51	0.63	0.31	0.43	0.31	0.31
06/07/97	0.28	0.16	0.24	0.16	0.28	0.31	0.79	0.16
06/06/97	1.89	1.46	1.54	1.02	1.57	1.18	1.38	0.91
06/05/97	0.00	0.04	0.08	0.00	0.00	0.04	0.04	0.00
06/04/97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
06/03/97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
06/02/97	0.12	0.12	0.08	0.31	0.04	0.04	0.47	0.12
06/01/97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTALS:	3.82	3.58	3.86	4.21	3.50	3.50	4.76	2.64

ALERT WATER LEVELS & STREAMFLOWS
7-DAY STATISTICAL SUMMARY

1995

UDFCD Node 1 > Enhanced ALERT Base Station & Weather Bulletin Board
Date Time
01/11/96 09:50:22

DeviceID	2273	2273	2273	2273	2273	2273	2273	2273	2273	2273	2273	2270
StatType	max	max	dmax	tmax	min	min	dmin	tmin	mean	vols	cnt	rain
DataType	level	rated	level	level	level	rated	level	level	rated	rated	level	precip
Units	ft	cfs	date	time	ft	cfs	date	time	cfs	AF	#	in
7 days at 24:00:00												
09/30/95	0.27	11	09/30/95	17:35	0.18	7	09/30/95	17:39	8	111	149	0.43
09/23/95	0.27	11	09/23/95	16:31	0.18	7	09/23/95	02:08	8	108	23	0.79
09/16/95	0.18	7	09/12/95	04:31	0.18	7	09/12/95	04:31	7	100	5	0.20
09/09/95	0.27	11	09/08/95	16:31	0.18	7	09/09/95	16:31	9	128	9	0.75
09/02/95	0.18	7	08/30/95	04:30	0.18	7	08/30/95	04:30	7	100	7	0.08
08/26/95	0.27	11	08/23/95	17:15	0.18	7	08/26/95	16:30	7	101	15	0.20
08/19/95	0.36	14	08/19/95	04:30	0.18	7	08/19/95	16:30	10	134	10	0.51
08/12/95	___	___	___	___	___	___	___	___	___	___	0	0.20
08/05/95	___	___	___	___	___	___	___	___	___	___	0	0.24
07/29/95	___	___	___	___	___	___	___	___	___	___	0	0.08
07/22/95	0.27	11	07/18/95	14:48	0.18	7	07/20/95	04:30	7	101	8	0.28
07/15/95	0.27	11	07/10/95	11:30	0.18	7	07/15/95	16:30	8	111	21	0.20
07/08/95	0.63	25	07/02/95	11:26	0.27	11	07/08/95	16:30	19	268	92	0.12
07/01/95	0.72	29	06/29/95	15:37	0.54	22	07/01/95	16:37	24	336	37	1.18
06/24/95	0.90	36	06/18/95	00:48	0.63	25	06/24/95	16:41	29	398	116	0.35
06/17/95	1.09	43	06/17/95	21:33	0.81	33	06/17/95	16:29	36	504	115	0.75
06/10/95	1.18	47	06/10/95	13:44	0.81	33	06/08/95	02:21	41	564	135	1.46
06/03/95	1.45	58	05/30/95	18:59	1.00	40	05/28/95	16:29	47	655	103	1.85
05/27/95	1.36	54	05/21/95	05:44	0.90	36	05/25/95	14:29	43	602	66	0.91
05/20/95	1.36	54	05/20/95	23:29	0.90	36	05/18/95	09:32	42	585	139	2.48
05/13/95	1.00	40	05/11/95	18:17	0.81	33	05/09/95	12:43	36	502	31	0.63
05/06/95	1.00	40	05/06/95	23:58	0.63	25	04/30/95	11:54	32	450	170	0.83
04/29/95	0.63	25	04/29/95	16:28	0.27	11	04/24/95	14:01	18	251	48	1.81
04/22/95	0.45	18	04/20/95	08:58	0.18	7	04/18/95	04:46	11	155	163	1.26
04/15/95	0.54	22	04/10/95	14:24	0.18	7	04/13/95	14:12	11	150	166	0.39
04/08/95	0.27	11	04/08/95	22:46	0.18	7	04/08/95	22:50	7	101	15	0.24
04/01/95	___	___	___	___	___	___	___	___	___	___	0	0.51
TOTALS:	1.45	58	05/30/95	18:59	0.18	7	04/08/95	22:50	20	6517	1643	18.70

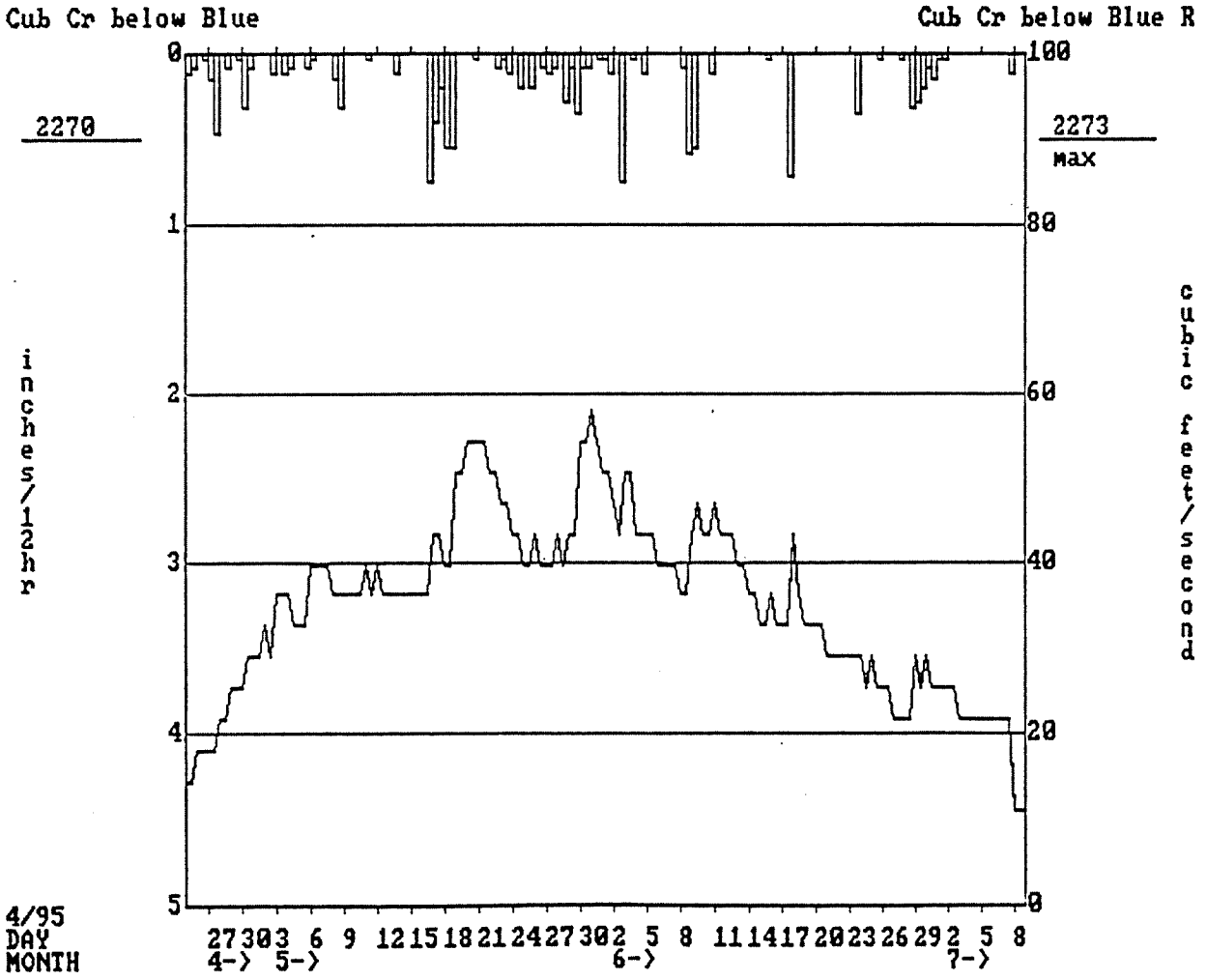
Prior record H.W. event

SENSOR NUMBER	STATION NAME	SENSOR TYPE
2273	Cub Creek below Blue Cr	Water Level PT
2270	Cub Creek below Blue Cr	Precipitation

UDFCD ALERT BASE STATION
SIGNIFICANT EVENT STATISTICS & HYDROGRAPH PLOT

NO SINGLE EVENT TO REPORT

1995 SPRING RUNOFF PLOT



CAVEAT: The data on this page does not represent an official record. The ALERT database contains a certain amount of erroneous data and therefore, the above summary should not be considered accurate without further verification (Ref: UDFCD Disclaimer Notice). Limited efforts have been made to identify erroneous data. If further documentation is desired, contact the Urban Drainage and Flood Control District at (303) 455-6277.

URBAN DRAINAGE AND FLOOD CONTROL DISTRICT
ALERT STREAMFLOW AND WATER LEVEL SENSORS
RECORD HIGH WATER MEASUREMENTS
DECEMBER, 1996

ALERT STREAM GAGE STATION NAME	STATION ID NO.	PEAK STAGE	PEAK FLOW	PEAK DATE	PEAK TIME	INSTALL DATE	NOTES
Gross Reservoir SBC	4370 (37)			unknown		unknown	
Eldorado Springs SB	4380 (38)			unknown		unknown	
Boulder Falls BC	4390 (39)			unknown		unknown	
Tunnel BC	4400 (40)			unknown		unknown	
Fourmile BC/FM	4410 (41)			unknown		unknown	
Bridge BC	4420 (42)			unknown		unknown	
Rowena LHC	4430 (43)			unknown		unknown	
James Creek	4440 (44)			unknown		unknown	
Lower Lefthand	4450 (45)			unknown		unknown	
Middle SSV	4460 (46)			unknown		unknown	
Little Narrows SSV	4470 (47)			unknown		unknown	
• North St. Vrain	48			unknown		unknown	Discontinued 96/05/31
Button Rock Reservoir	4483					96/05/??	
Carr Street	103	27.2	3,010	91/07/22	15:11	88/05/30	
Ralston Reservoir	113	47.0	100	90/07/23	04:39	88/09/23	
Croke Pump Station	123	3.4	200	95/06/04	18:52	89/08/02	
Simms Street	133	3.0	890	95/06/04	20:16	90/10/25	
Leyden Reservoir	203	5.0	0	95/05/18	03:28	88/05/30	
Leyden Confluence	213	3.0	1,720	91/07/22	14:34	89/08/02	
Sports Complex	323	3.7	440	91/07/22	14:22	89/07/03	
Van Bibber @ Hwy 93	333	3.6	560	95/05/18	01:09	90/08/14	
Montview Park	403	6.4	740	91/06/06	16:59	88/06/09	
Kelly Dam	413	52.4	80	91/06/06	19:54	88/09/22	
Expo Park	423	64.7	310	91/06/06	19:34	88/05/21	
Expo Park/HL Canal	424	4.3		91/06/06	17:27	90/04/03	
Utah Park	429 (433)	42.3	190	91/06/06	18:02	88/05/21	
Havana Park	503	7.8	420	91/06/06	16:50	88/05/26	Peak missed, last report 7.8'
Harvard Gulch Park	603 (903)	24.1	650	96/07/12	21:00	89/07/26	
Harvard @ Jackson	613 (913)	13.9	990	91/05/23	15:34	89/07/26	
Temple Pond	633 (4603)	65.0	1,250	88/08/17	18:30	87/05/29	H.W. from field survey
Goldsmith @ Eastman	643 (4613)	83.9	1,460	91/08/02	18:31	89/09/06	
Toll Gate @ 6th	703	5.0	1,450	92/07/15	18:40	89/11/07	
Horseshoe Park Drop	713	2.0	910	92/07/15	17:30	89/07/17	
WTG above Conf Pond	723	1.8	510	92/08/23	18:03	89/07/26	
Confluence Pond	724	2.9	750	91/06/06	17:06	89/07/26	
No Name @ Quincy	733	1.6	70	95/07/19	18:08	90/08/13	
Sable Ditch @ 18th	803	3.1	240	91/06/06	16:38	89/08/03	
Granby Ditch @ 6th	813	8.1	40	91/06/06	18.28	89/08/03	
ETG @ Buckley	823	3.7	1,610	91/06/06	17:45	89/08/03	
Maple Grove Reservoir	1003	27.37	300+	95/05/17	09:16	85/06/02	Air-filled Fabridam stretched
Lena @ Nolte Pond	1023	50.0	700	87/06/08	23:02	85/06/07	
Lena @ US Highway 6	1043	20.2	140	91/07/12	17:11	85/06/02	
Louisville Dwy 'D'	1103 (3007)	71.2	27	93/06/17	23:45	88/05/30	
Gunbarrel	1113	17.4	18	94/06/20	17:16	91/12/01	
Brmfld 3207/Pond6	1203 (3210)	35.7	21	95/05/17	14:59	89/03/23	
• Hidden Lake	1303	No measurements				90/08/13	Discontinued 92/11/04
Upper Sloan Det.	1403 (4703)	35.0	50	94/06/02	N.A.	87/05/30	H.W. from field survey
Englewood Dam	1603 (5413)	82.6	151	95/05/17	16:04	87/06/11	
Holly Dam	1613 (5403)	48.5	110	88/08/17	18:03	87/05/29	
Slaughterhouse Glch	1623 (5703)	52.2	50	96/08/22	16:49	89/03/28	
S. Platte @ Dartmouth	1629	7.22	9,620	95/06/04	17:58	90/03/14	
Cherry Cr @ Market	1699	6.73	1,770	94/08/10	22:50	90/04/20	
Shop Creek	1714	3.26	205	95/07/15	22:38	95/04/28	
Cherry Cr @ Steele	1723	297.9	1,400	95/08/18	24:00	91/04/08	
Sand Creek Park	1803 (4403)	1.3	180	91/06/06	19:04	89/03/24	Relocated 90/08/13
• Toll Gate at mouth	1804 (4404)					89/03/24	Discontinued 90/08/13
Sand Cr near mouth	1813	~~2.3~~	~~2,760~~	~~80/07/09~~	~~20:40~~	90/05/01	→ 2.58' 3350 cfs 97/07/19 18:54
Niver Detention	1903 (4203)	55.1	80	89/06/03	19:02	87/05/30	
Evergreen Lake	2223 (1523)	0.90	680	95/06/18	00:22	92/06/03	
Bear Cr below Cub	2233 (1533)	7.1	1,350	92/08/24	08:26	91/04/09	
Cold Sprg Glch conf	2243 (1543)	2.6	700	95/06/09	04:56	91/04/25	
Rosedale	2253 (1563)	4.6	1,780	95/06/18	04:30	92/05/07	
Cub Cr below Blue	2273 (1573)	~~1.4~~ 2.3	~~60~~ 90	~~95/05/30~~	~~18:59~~	92/05/12	97/08/07 18:02
Morrison	2329	6.40	885	95/06/09	06:25	94/04/08	
Red Rocks Park	2373 (1598)	2.3	60	93/04/21	07:36	92/10/27	

NOTES: *First Boulder County gages installed 1979*
First QNX Base Station operational 85/08/21
Boulder County Jail Repeater installed 89/06/22
(####) indicates earlier Sensor ID, pre-96/06/07 for Boulder County, pre-94 for Bear Creek and pre-90 for all others

Sn = HWRECORD.DOC
12-13-96

Call from Bob

Device: 2087 Rcvd: 918 07/07/1997-14:39:16 Jul 7 97 14:40:25 0
NS: NovaStar Help Options Display Quit
ZY @DDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD\
3 Enter Device ID: 2273
Z Data Display DDDDDDDDDDDDDDDDDDDDDDDDDDDDDD3
32273 Cub Cr below Blue
3Water Level PT

3Date	Time	feet	cubic feet/second	Raw	Alarm
306/29/1997	14:41:04	0.34	14	4	
306/29/1997	13:59:49	0.43	17	5	
306/29/1997	13:56:03	0.34	14	4	
306/29/1997	01:11:05	0.43	17	5	
306/28/1997	16:11:05	0.43	17	5	
306/28/1997	04:10:48	0.43	17	5	
306/27/1997	16:10:40	0.43	17	5	
306/27/1997	13:10:46	0.43	17	5	
306/27/1997	13:07:02	11.56	4553	129	
306/27/1997	13:03:16	5.28	613	59	alarm
306/27/1997	04:10:47	0.43	17	5	
306/26/1997	16:10:48	0.43	17	5	
306/26/1997	04:10:48	0.43	17	5	
306/25/1997	16:10:49	0.43	17	5	
306/25/1997	04:10:49	0.43	17	5	

Press [F1] for Help

← Bob Jarrett @ 1PM
X-Sectn Surveyed

$0.00 involved from USGS, part of Jarrett's work

Plains Hydro Project underway.
- Tom Browning, CWCB the lead
- Involve paleo-hyd & work done in Grand Junction USGS Office by Ed Vail.
- We will be involved also (KGS coordinate thru Bill)
- Will look @ Box Elder G. project & Cherry Cr. basin hydro / PMF, etc.
  Asked for contact in Aurora (KGS Bruce Rindahl)
- Will Thomas, former USGS involved, statistical regression expert
- Vail's regression work validates use of CUHP for Box Elder
- FEMA's way off base on this one!! w/ TM-1

(OVER)

3: define_rating
Rating table 64 Cub Creek below Blue Creek
Sensor 2273 Cub Cr below Blue
SENSOR TYPE USING TABLE: 8 Water Level PT
RATING TABLE UNITS: cubic feet/second
UNITS ABBREVIATION: cfs
INTERPOLATION TYPE: linear interpolation
EXTRAPOLATION ALLOWED: YES
TABLE VALUES:

ft	cfs	ft	cfs	ft	cfs	ft	cfs
0	0						
2.5	100						
3.5	200						
4	300						
4.7	463						
9.6	1742						
10.5	2891						
14.1	8535						

Revise fit to better Jarrett Rating

Enter the rating table name (RETURN for no change)
Enter F9 for a list of the EDIT keys

Event of June 7? 1997

≈ 200 cfs

(170 - 210 cfs per Jarrett & Browning)

4.5'
- 2.2 PZF
2.3' = 200 Alert Peak 2.31'

Jay 2.~~31~~' = ~~2150~~
↑ ALERT Peak

FLOOD CONTROL DISTRICT-68-URBAN DRAINAGE AND

DATE 4-12-94	BY KOS	PAGE 1	OF 1	FILE NO.:
PROJECT Bear Creek FDN				
SUBJECT 2273				

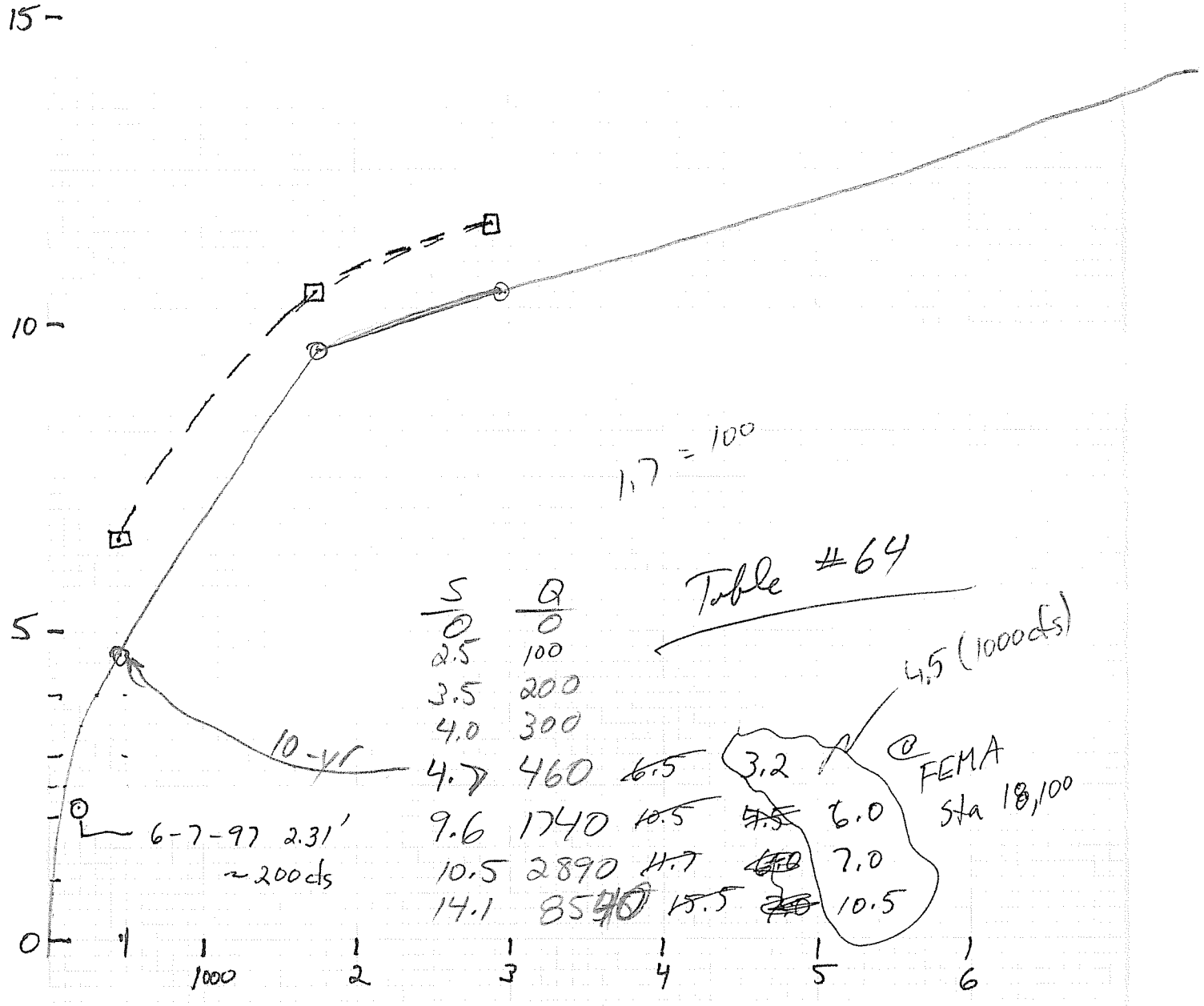
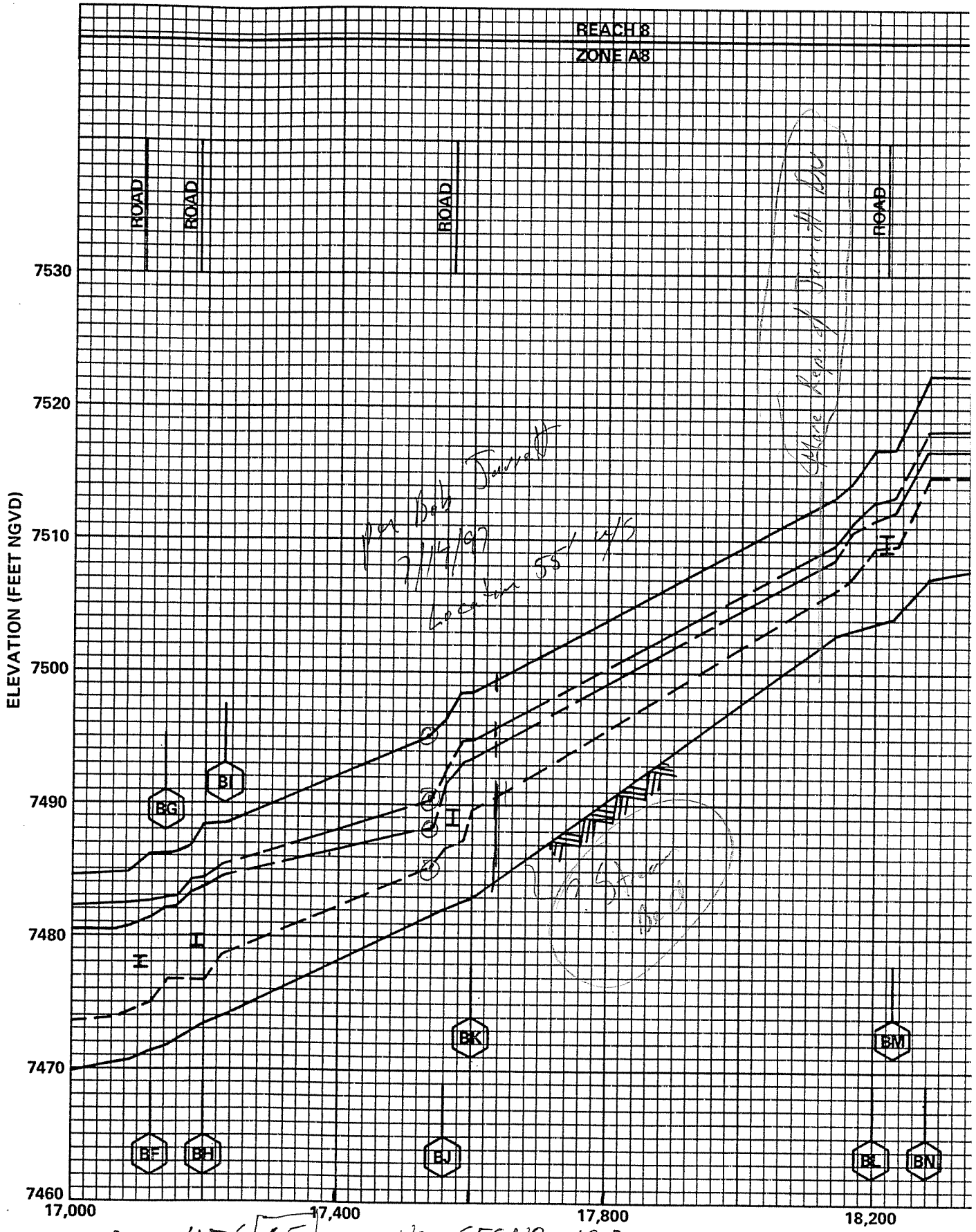


Table #64

S/0	Q/0			
2.5	100			
3.5	200			
4.0	300			
4.7	460	~~6.5~~	3.2	
9.6	1740	~~10.5~~	~~7.5~~ 6.0	
10.5	2890	~~11.7~~	~~6.0~~ 7.0	
14.1	~~8540~~	~~15.5~~	~~7.0~~ 10.5	

4.5 (1000 cfs) @ FEMA Sta 18,100

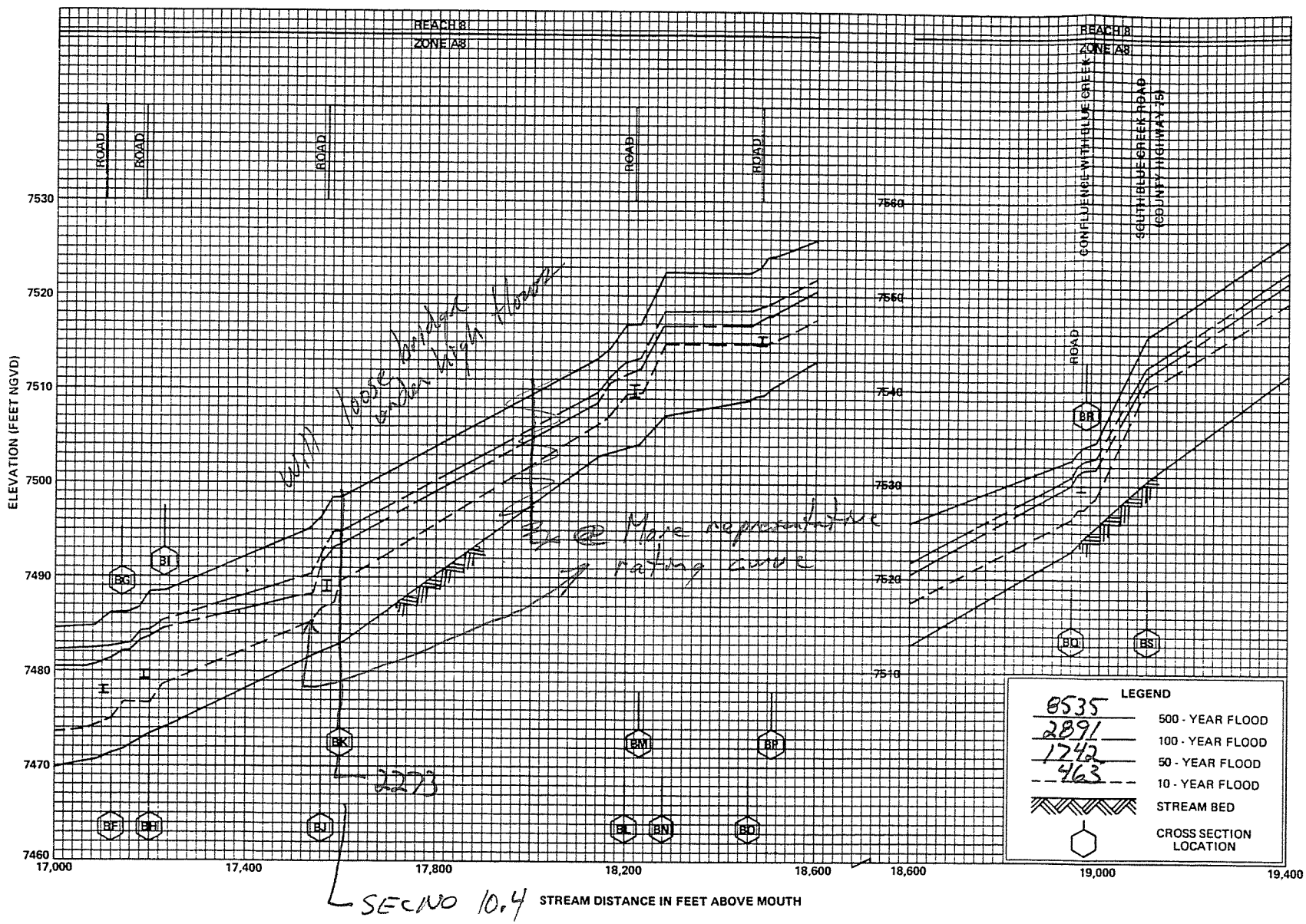


@ 10.2

D_{10}	4.7'	6.5
50	9.6'	10.5
100	10.5	11.7
500	14.1	15.5

Use SECNO 10.2

~55' u/s



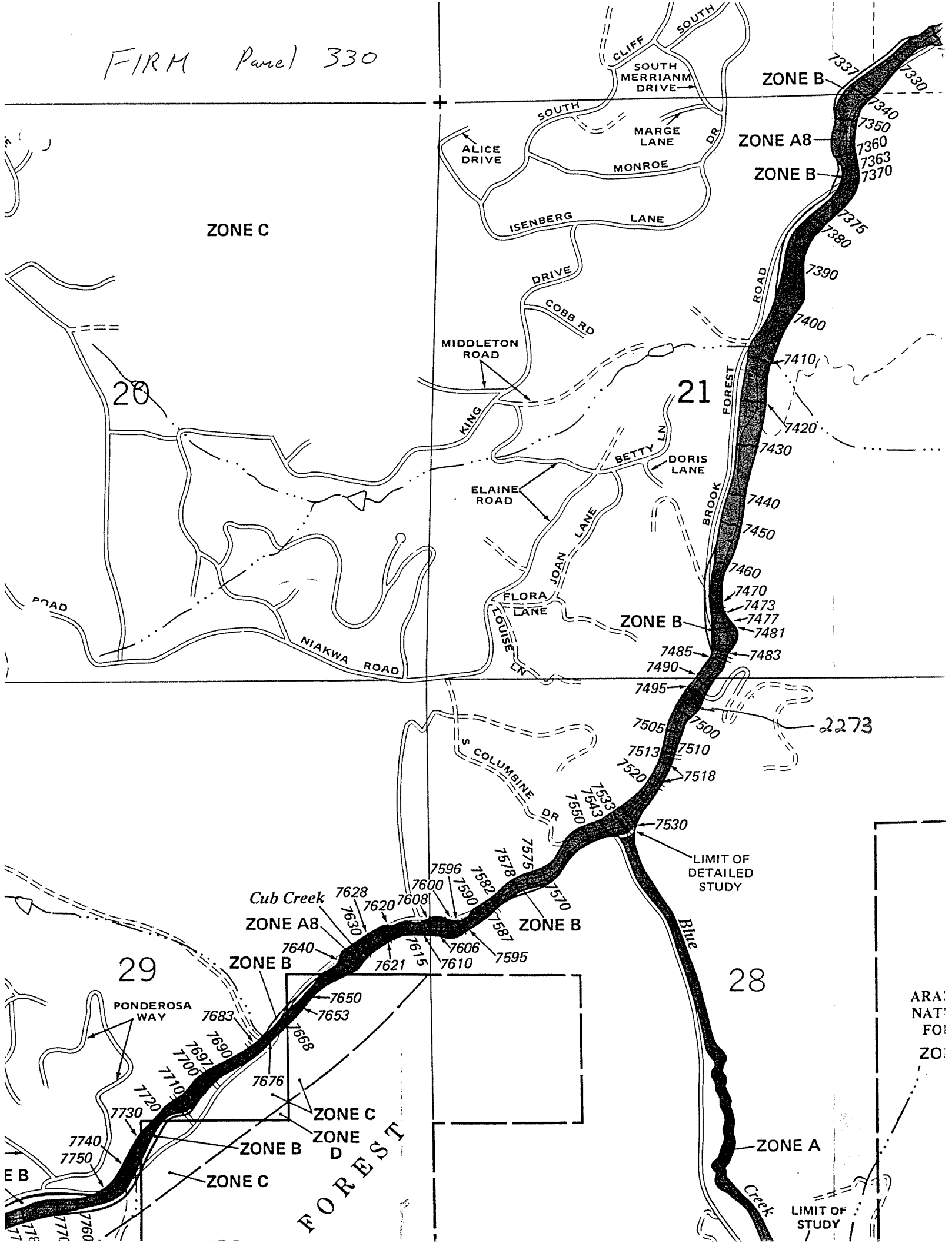
FLOOD PROFILES

CUB CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

JEFFERSON COUNTY, CO
(UNINCORPORATED AREAS)

120P


FIRM Panel 330
CLIFF
SOUTH
SOUTH MERRIANM DRIVE
ALICE DRIVE
SOUTH
MARGE LANE
DR
MONROE
ISENBERG
LANE
ZONE C
DRIVE
COBB RD
MIDDLETON ROAD
20
21
KING
BETTY LN
DORIS LANE
ELAINE ROAD
JOAN LANE
FLORA LANE
LOUISE LN
NIAKWA ROAD
ROAD
FOREST
ROAD
BROOK
ZONE B
ZONE A8
ZONE B
7337
7330
7340
7350
7360
7363
7370
7375
7380
7390
7400
7410
7420
7430
7440
7450
7460
7470
7473
7477
7481
7485
7483
7490
7495
7505
7500
2273
7513
7510
7520
7518
S COLUMBINE DR
7533
7543
7550
7530
LIMIT OF DETAILED STUDY
7596
7600
7582
7575
7578
7590
7570
7608
7628
7620
7630
Cub Creek
ZONE A8
7640
ZONE B
7587
7606
7595
7615
7610
7621
ZONE B
29
28
Blue
PONDEROSA WAY
7650
7653
7683
7668
7690
7697
7700
7710
7720
7676
7730
ZONE C
ZONE D
7740
7750
ZONE B
ZONE C
FOREST
ZONE A
Creek
LIMIT OF STUDY

#: 92 Site ID: 1570

URBAN DRAINAGE AND FLOOD CONTROL DISTRICT
SYSTEM MAINTENANCE RECORD
DIAD INC.

Service Log

Site Name: CUB CK BELOW BLUE
Service Type: BEGIN
Date: 5/12/92
Tech: ~~DGV~~
Time: 1045
Status: OK

Configuration Changes

Part #	Location
BY H 9054	1570
PT D 49015	1570
TB H 566	1570
TX H 840	1570

Transducer Calibration

Port	0-P Volts	Span P	Span V

Test Transmissions

Port	Time	Count	Pressure
1570	7	1202	
1570	1158	6	
1573	1145	13	0.50
1573	1146	29	1.00
1573	1147	54	2.05
1573	1148	79	3.00
1573	1149	132	5.00
1573	1150	183	7.00
1573	1151	236	9.00
1573	1152	249	9.50
1573	1153	9	0.35

Settings and Performance

Switches: 157000191112
Jumpers: 4,10 14:11011
Prom:
Fwd Power: 7.3
Rev Power: 0.1
Frequency:
Deviation:

Battery Tests:

Battery	Volts-O	Volts-T
BY H 9054	13.12	12.84

Action Taken: Completed Install, Test/Calib PT

Site Notes:

Follow Up Req'd: Need Photos

8/6/92