

DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(Rev. 01/06)

PROJECT TITLE: The Bosque Center

ZONE MAP/DRG. FILE #

D-13/2009

DRB#:

EPC#:

WORK ORDER#:

LEGAL DESCRIPTION: Tract A-1, Spiritual Renewal Center Section 19, Township 11 North, Range 3 East, NMPM, Cit. Albuq.

CITY ADDRESS:

ENGINEERING FIRM: Miller Engineering Consultants
ADDRESS: 3500 Comanche NE Bldg. F
CITY, STATE: Albuquerque NMCONTACT: Verlyn Miller / JOHN JACQUEZ
PHONE: 505-888-7500
ZIP CODE: 87107OWNER: Episcopal Diocese of Rio Grande
ADDRESS: 6400 Coors Boulevard NW
CITY, STATE: Albuquerque NMCONTACT:
PHONE: 505-872-2351
ZIP CODE: 87107ARCHITECT: Gregory T. Hicks & Assoc.
ADDRESS: 110 Second St. SW Suite 204
CITY, STATE: Albuquerque NMCONTACT: MARCO ATENCIO
PHONE: 505-243-7492
ZIP CODE: 87102SURVEYOR: Terra Land Surveys, LLC
ADDRESS: P.O. Box 2532 Corrales NM
CITY, STATE: Albuquerque NMCONTACT: CHRIS MEDINA
PHONE: 505-792-0513
ZIP CODE: 87048

PROFESSIONAL LICENSED SURVEYOR SIGNATURE

LICENSE NO.

DATE

CONTRACTOR:

ADDRESS:

CITY, STATE:

CONTACT:

PHONE:

ZIP CODE:

TYPE OF SUBMITTAL:

- ☐ DRAINAGE REPORT
☐ DRAINAGE PLAN 1st SUBMITTAL
☒ DRAINAGE PLAN RESUBMITTAL
☐ CONCEPTUAL G & D PLAN
☒ GRADING PLAN
☐ EROSION CONTROL PLAN
☐ ENGINEER'S CERT (HYDROLOGY)
☐ CLOMR/LOMR
☐ TRAFFIC CIRCULATION LAYOUT
☐ ENGINEER/ARCHITECT CERT (TCL)
☐ ENGINEER/ARCHITECT (DRB SITE PLAN)
☐ OTHER

CHECK TYPE OF APPROVAL SOUGHT:

- ☐ SIA/FINANCIAL GUARANTEE RELEASE
☐ PRELIMINARY PLAT APPROVAL
☐ S. DEV. PLAN FOR SUB'D APPROVAL
☐ S. DEV. FOR BLDG. PERMIT APPROVAL
☐ SECTOR PLAN APPROVAL
☐ FINAL PLAT APPROVAL
☐ FOUNDATION PERMIT APPROVAL
☒ BUILDING PERMIT APPROVAL
☐ CERTIFICATE OF OCCUPANCY (PERM)
☐ CERTIFICATE OF OCCUPANCY (TEMP)
☐ GRADING PERMIT APPROVAL
☐ PAVING PERMIT APPROVAL
☐ WORK ORDER APPROVAL
☐ OTHER (SPECIFY)

WAS A PRE-DESIGN CONFERENCE ATTENDED:

- ☒ YES (WITH CURTIS CHERNE)
☐ NO
☐ COPY PROVIDED

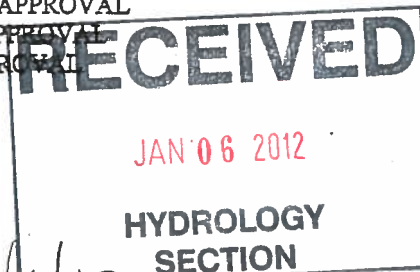
SUBMITTED BY: JOHN JACQUEZ

DATE:

1/6/12

Requests for approvals of Site Development Plans and/or Subdivision Plats shall be accompanied by a drainage submittal. The particular nature, location and scope to the proposed development define the degree of drainage detail. One or more of the following levels of submittal may be required based on the following:

1. Conceptual Grading and Drainage Plan: Required for approval of Site Development Plans greater than five (5) acres and Sector Plans.
2. Drainage Plans: Required for building permits, grading permits, paving permits and site plans less than five (5) acres.
3. Drainage Report: Required for subdivision containing more than ten (10) lots or constituting five (5) acres or more.

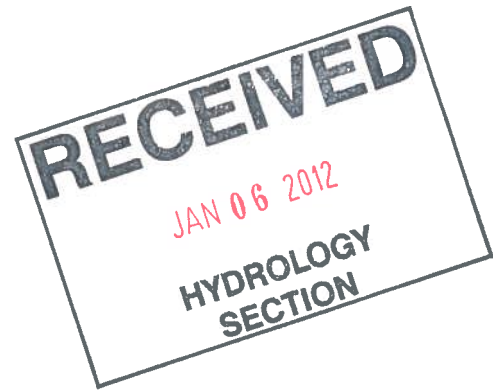




January 6, 2012

Mr. Curtis Cherne, P.E.
Principal Engineer, Planning Dept.
Development and Building Services
City of Albuquerque
P.O. Box 1293
Albuquerque, NM 87103

**RE: The Bosque Center, Grading and Drainage Plan
Engineer's Stamp Date 11/23/11 (D13/D009)**



Dear Mr. Cherne:

This letter is in response to your letter dated December 16, 2011 regarding the above mentioned project. The comments from your letter and MEC's responses are as follows:

1. AMAFCA approval is required.
See approval letter from AMAFCA dated December 23, 2011.
2. The plan appears to meet the sedimentation goals of the North Coors DMP; however it should be stated.
We have provided a statement in the conclusion on Sheet C-001 in the conclusion.
3. Provide the Volume Required, Volume Provided and WSE for each Water Harvesting Area on the Grading Plan. These Volumes are part of the Certification.
See the revised Grading and Drainage Plans Sheet C-100 and C-101.
4. I couldn't find the Pond 2 routing in the AHYMO output. Please direct or provide.
See the revised AHYMO model output in the revised Supplemental Drainage Calculations.
5. Please provide the AHYMO Summary Table.
See the revised AHYMO model output in the revised Supplemental Drainage Calculations.
6. The Q Max numbers in the AHYMO output do not match the numbers in the Hydrology Table.
See the revised Hydrology Table in the revised Supplemental Drainage Calculations.

7. The Peak Discharge Rate from Water Harvesting Area 1 in the AHYMO is 1.19 cfs. The rating curve for these pipes shows 1.05 cfs at an elevation on 96.

The rating curve is for 1-8" pipe, there are 3-8" pipes in Water Harvest Area 1. The values shown in the rating curves need to be multiplied by the number of pipes.

8. Seems a small berm is required on the east side of Water Harvesting Area 5 (not at spillway) to ensure the spillway is the low point.

The crest elevation of the existing concrete spillway is 93.0. The top of the existing concrete spillway elevation is 94.0 on both sides. These elevations are now shown on the Grading and Drainage Plan Sheet C-101.

If you have any questions or need any additional information, please feel free to contact our office.

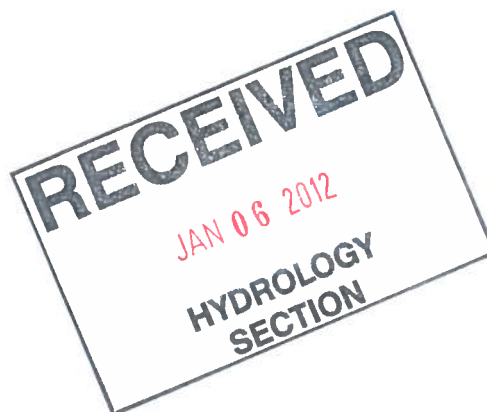
MILLER ENGINEERING CONSULTANTS, INC.



Verlyn A. Miller, P.E.
President

VAM:vam
Enclosures

Xc:file



Danny Hernandez, Chairman
Ronald D. Brown, Vice Chairman
Bruce M. Thomson, Secretary-Treasurer
Tim Eichenberg, Assistant Secretary-Treasurer
Daniel F. Lyon, Director

Jerry M. Lavato, P.E.
Executive Engineer



Albuquerque
Metropolitan
Arroyo
Flood
Control
Authority

2600 Prospect N.E., Albuquerque, NM 87107
Phone: (505) 884-2215 Fax: (505) 884-0214
Website: www.amafca.org

December 23, 2011

Mr. Verlyn A. Miller
Miller Engineering Consultants
3500 Comanche NE, Bldg. F
Albuquerque, NM 87107

Via: Electronic & Regular Mail

Re: The Bosque Center Grading & Drainage Plan, ZAP D-13
Engineer's Stamp Dated 11-23-11

Dear Mr. Miller:

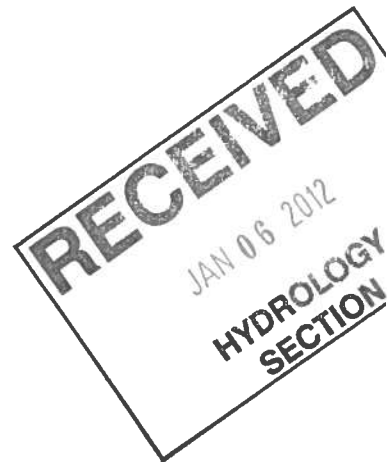
AMAFCA approves the Grading and Drainage Plan for the addition to the Bosque Center, aka Dominican Retreat. The proposed stormwater discharge rate meets the requirements of the North Coors Drainage Management Plan. Most of the potentially sediment-laden flow from west of Coors Boulevard will be intercepted by the Bosque Meadows Subdivision; therefore, the proposed ponding areas will satisfy AMAFCA's requirements for de-sedimentation and water quality treatment before discharging to the Corrales Main Canal.

You may call me at 884-2215 if you have further questions or require additional information.

Sincerely,
AMAFCA

Lynn M. Mazur, P.E., C.F.M.
Development Review Engineer

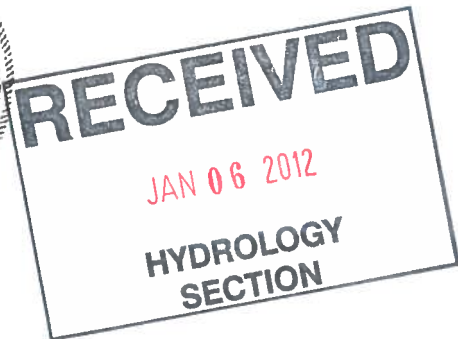
C: Curtis Cherne, COA Principal Engineer



THE BOSQUE CENTER
Episcopal Diocese of the Rio Grande
6400 Coors Boulevard NW
Albuquerque, New Mexico

Supplemental Drainage Calculations

RESUBMITTED January 5, 2012



Prepared By:



MILLER ENGINEERING CONSULTANTS

Engineers • Planners

3500 Comanche NE, Bldg. F
Albuquerque, New Mexico 87107
Phone: (505) 888-7500
Fax: (505) 888-3800

[illegible][illegible]

AHYMO PROGRAM SUMMARY TABLE (AHYMO_97) -
=01/05/2012
INPUT FILE = BOSQUE.DAT

- VERSION: 1997.02d RUN DATE (MON/DAY/YR)

USER NO.= AHYMO-I-9702dMillerEngr1

COMMAND	FROM TO HYDROGRAPH IDENTIFICATION	ID ID NO. NO.	PEAK AREA (SQ MI)	RUNOFF DISCHARGE (CFS)	TIME TO VOLUME (AC-FT)	CFS RUNOFF (INCHES)	PAGE = PEAK (HOURS)	PER ACRE	NOTATION
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*S*****
*S***** THE BOSQUE CENTER *****
*S***** NOVEMBER 2011 *****
*S***** PROJECT HYDROLOGY *****
*S***** 100-YEAR, 24-HOUR STORM *****
*S***** RAINFALL TYPE 2 - ZONE 1 *****
*S*****
START TIME= .00
*S*****
RAINFALL TYPE= 2 RAIN24= 2.660
*S*****
*S* PROPOSED FULLY DEVELOPED CONDITIONS *****
*S*****
*S* BASIN D *****
COMPUTE NM HYD 101.00 - 1 .00140 3.31 .136 1.81485 1.500 3.693 PER IMP= 57.30
*S* ROUTE THROUGH HARVEST AREA 1 ***** 3-8" OUTFLOW PIPES *****
ROUTE RESERVOIR 102.00 1 20 .00140 1.19 .135 1.81398 1.750 1.323 AC-FT= .061
*S* ROUTE THROUGH HARVEST AREA 2 ***** 3-8" OUTFLOW PIPES *****
ROUTE RESERVOIR 102.00 20 17 .00140 1.13 .135 1.81273 1.900 1.263 AC-FT= .007
*S* BASIN A *****
COMPUTE NM HYD 103.00 - 2 .00060 1.46 .061 1.91094 1.500 3.812 PER IMP= 64.00
*S**ADD OUTLET FROM HARVEST AREA 2 AND BASIN A *****
ADD HYD 103.10 17& 2 3 .00200 1.59 .196 1.84202 1.500 1.245
*S* BASIN C *****
COMPUTE NM HYD 104.00 - 4 .00130 1.86 .069 .99692 1.500 2.241 PER IMP= 25.00
*S**ADD OUTLET FROM HARVEST AREA 1 AND BASIN A AND BASIN C *****
ADD HYD 105.00 3& 4 5 .00330 3.46 .266 1.50902 1.500 1.637
*S* ROUTE THROUGH HARVEST AREA 4 ***** 16" OUTFLOW PIPE *****
ROUTE RESERVOIR 106.00 5 19 .00330 2.97 .266 1.50902 1.600 1.407 AC-FT= .014
*S* BASIN B *****
COMPUTE NM HYD 107.00 - 6 .00390 4.81 .155 .74649 1.500 1.926 PER IMP= 10.00
*S**ADD OUTLET FROM HARVEST AREA 4 AND BASIN B *****
ADD HYD 108.00 19& 6 7 .00720 7.69 .421 1.09593 1.500 1.670
*S* ROUTE THROUGH HARVEST AREA 5 *****
*S***NO OUTFLOW PIPE***SPILLWAY CREST ELEVATION TO DITCH IS 4993.0*****
ROUTE RESERVOIR 109.00 7 18 .00720 .13 .203 .52844 4.550 .028 AC-FT= .330
*S*****
FINISH
```

AHYMO PROGRAM (AHYMO_97) - - Version: 1997.02d
 RUN DATE (MON/DAY/YR) = 01/05/2012
 START TIME (HR:MIN:SEC) = 10:02:44 USER NO.= AHYMO-I-9702dMillerEngr1
 INPUT FILE = BOSQUE.DAT

*S*****
 *S***** THE BOSQUE CENTER *****
 *S***** NOVEMBER 2011 *****
 *S***** PROJECT HYDROLOGY *****
 *S***** 100-YEAR, 24-HOUR STORM *****
 *S***** RAINFALL TYPE 2 - ZONE 1 *****
 *S*****

START 0.00
 *S*****
 RAINFALL TYPE=2 RAIN QUARTER=0.0 RAIN ONE=1.87
 RAIN SIX=2.20 RAIN DAY=2.66 DT=0.05

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
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 2.5317 2.5328 2.5339 2.5350 2.5361 2.5372 2.5383
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 2.5469 2.5480 2.5490 2.5501 2.5512 2.5522 2.5533
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 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
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 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
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 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

*S*****

S PROPOSED FULLY DEVELOPED CONDITIONS *****

*S*****

S BASIN D *****

COMPUTE NM HYD ID=1 HYD NO=101.0 DA=0.0014 SQ MI
 PER A=0.0 PER B=0.0 PER C=42.7 PER D=57.3
 TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
 UNIT PEAK = 3.1671 CFS UNIT VOLUME = .9959 B = 526.28 P60 = 1.8700
 AREA = .000802 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 = 4.514851
 UNIT PEAK = 1.7407 CFS UNIT VOLUME = .9952 B = 388.14 P60 = 1.8700
 AREA = .000598 SQ MI IA = .35000 INCHES INF = .83000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

PRINT HYD ID=1 CODE=10

PARTIAL HYDROGRAPH 101.00

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	5.000	.0	10.000	.0	15.000	.0	20.000	.0
.500	.0	5.500	.0	10.500	.0	15.500	.0	20.500	.0
1.000	.0	6.000	.0	11.000	.0	16.000	.0	21.000	.0
1.500	3.3	6.500	.0	11.500	.0	16.500	.0	21.500	.0
2.000	.7	7.000	.0	12.000	.0	17.000	.0	22.000	.0
2.500	.1	7.500	.0	12.500	.0	17.500	.0	22.500	.0
3.000	.0	8.000	.0	13.000	.0	18.000	.0	23.000	.0
3.500	.0	8.500	.0	13.500	.0	18.500	.0	23.500	.0
4.000	.0	9.000	.0	14.000	.0	19.000	.0	24.000	.0

4.500 .0 9.500 .0 14.500 .0 19.500 .0

RUNOFF VOLUME = 1.81485 INCHES = .1355 ACRE-FEET

PEAK DISCHARGE RATE = 3.31 CFS AT 1.500 HOURS BASIN AREA = .0014 SQ. MI.

S ROUTE THROUGH HARVEST AREA 1 ***** 3-8" OUTFLOW PIPES *****

ROUTE RESERVOIR ID=20 HYD=102.0 INFLOW ID=1 CODE=20

OUTFLOW STORAGE DEPTH

0.00 0.00 4995.1

0.30 0.043 4995.5

3.00 0.097 4996.0

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
---------------	-----------------	----------------	-------------------	------------------

.00	.00	4995.10	.000	.00
1.00	.00	4995.10	.000	.00
2.00	.68	4995.63	.057	.99
3.00	.02	4995.41	.034	.24
4.00	.01	4995.29	.020	.14
5.00	.01	4995.21	.012	.08
6.00	.02	4995.17	.008	.05
7.00	.02	4995.15	.006	.04
8.00	.02	4995.14	.004	.03
9.00	.02	4995.13	.003	.02
10.00	.02	4995.13	.003	.02
11.00	.02	4995.13	.003	.02
12.00	.01	4995.12	.002	.02
13.00	.01	4995.12	.002	.02
14.00	.01	4995.12	.002	.01
15.00	.01	4995.12	.002	.01
16.00	.01	4995.12	.002	.01
17.00	.01	4995.12	.002	.01
18.00	.01	4995.12	.002	.01
19.00	.01	4995.12	.002	.01
20.00	.01	4995.12	.002	.01
21.00	.01	4995.11	.002	.01
22.00	.01	4995.11	.001	.01
23.00	.01	4995.11	.001	.01
24.00	.01	4995.11	.001	.01
25.00	.00	4995.11	.001	.01
26.00	.00	4995.10	.000	.00

PEAK DISCHARGE = 1.186 CFS - PEAK OCCURS AT HOUR 1.75

MAXIMUM WATER SURFACE ELEVATION = 4995.664

MAXIMUM STORAGE = .0607 AC-FT INCREMENTAL TIME= .050000HRS

PRINT HYD ID=20 CODE=10

PARTIAL HYDROGRAPH 102.00

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	6.000	.1	12.000	.0	18.000	.0	24.000	.0
.500	.0	6.500	.0	12.500	.0	18.500	.0	24.500	.0
1.000	.0	7.000	.0	13.000	.0	19.000	.0	25.000	.0
1.500	.2	7.500	.0	13.500	.0	19.500	.0	25.500	.0
2.000	1.0	8.000	.0	14.000	.0	20.000	.0	26.000	.0
2.500	.3	8.500	.0	14.500	.0	20.500	.0	26.500	.0

3.000	.2	9.000	.0	15.000	.0	21.000	.0	27.000	.0
3.500	.2	9.500	.0	15.500	.0	21.500	.0	27.500	.0
4.000	.1	10.000	.0	16.000	.0	22.000	.0	28.000	.0
4.500	.1	10.500	.0	16.500	.0	22.500	.0		
5.000	.1	11.000	.0	17.000	.0	23.000	.0		
5.500	.1	11.500	.0	17.500	.0	23.500	.0		

RUNOFF VOLUME = 1.81398 INCHES = .1354 ACRE-FEET
 PEAK DISCHARGE RATE = 1.19 CFS AT 1.750 HOURS BASIN AREA = .0014 SQ. MI.

S ROUTE THROUGH HARVEST AREA 2 ***** 3-8" OUTFLOW PIPES *****

ROUTE RESERVOIR ID=17 HYD=102.0 INFLOW ID=20 CODE=20

OUTFLOW STORAGE DEPTH

0.00	0.00	4994.5
1.20	0.0078	4995.0
4.00	0.0174	4995.5
5.25	0.0289	4996.0

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
---------------	-----------------	----------------	-------------------	------------------

.00	.00	4994.50	.000	.00
1.00	.00	4994.50	.000	.00
2.00	.99	4994.95	.007	1.07
3.00	.24	4994.60	.002	.25
4.00	.14	4994.56	.001	.15
5.00	.08	4994.54	.001	.09
6.00	.05	4994.52	.000	.06
7.00	.04	4994.52	.000	.04
8.00	.03	4994.51	.000	.03
9.00	.02	4994.51	.000	.02
10.00	.02	4994.51	.000	.02
11.00	.02	4994.51	.000	.02
12.00	.02	4994.51	.000	.02
13.00	.02	4994.51	.000	.02
14.00	.01	4994.51	.000	.01
15.00	.01	4994.51	.000	.01
16.00	.01	4994.51	.000	.01
17.00	.01	4994.51	.000	.01
18.00	.01	4994.50	.000	.01
19.00	.01	4994.50	.000	.01
20.00	.01	4994.50	.000	.01
21.00	.01	4994.50	.000	.01
22.00	.01	4994.50	.000	.01
23.00	.01	4994.50	.000	.01
24.00	.01	4994.50	.000	.01
25.00	.01	4994.50	.000	.01
26.00	.00	4994.50	.000	.00

PEAK DISCHARGE = 1.132 CFS - PEAK OCCURS AT HOUR 1.90

MAXIMUM WATER SURFACE ELEVATION = 4994.972

MAXIMUM STORAGE = .0074 AC-FT INCREMENTAL TIME= .050000HRS

PRINT HYD ID=17 CODE=10

PARTIAL HYDROGRAPH 102.00

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
-------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------

.000	.0	6.000	.1	12.000	.0	18.000	.0	24.000	.0
.500	.0	6.500	.0	12.500	.0	18.500	.0	24.500	.0
1.000	.0	7.000	.0	13.000	.0	19.000	.0	25.000	.0
1.500	.1	7.500	.0	13.500	.0	19.500	.0	25.500	.0
2.000	1.1	8.000	.0	14.000	.0	20.000	.0	26.000	.0
2.500	.4	8.500	.0	14.500	.0	20.500	.0	26.500	.0
3.000	.2	9.000	.0	15.000	.0	21.000	.0	27.000	.0
3.500	.2	9.500	.0	15.500	.0	21.500	.0	27.500	.0
4.000	.1	10.000	.0	16.000	.0	22.000	.0	28.000	.0
4.500	.1	10.500	.0	16.500	.0	22.500	.0		
5.000	.1	11.000	.0	17.000	.0	23.000	.0		
5.500	.1	11.500	.0	17.500	.0	23.500	.0		

RUNOFF VOLUME = 1.81273 INCHES = .1353 ACRE-FEET
 PEAK DISCHARGE RATE = 1.13 CFS AT 1.900 HOURS BASIN AREA = .0014 SQ. MI.

S BASIN A *****

COMPUTE NM HYD ID=2 HYD NO=103.0 DA=0.0006 SQ MI
 PER A=0.0 PER B=0.0 PER C=36.0 PER D=64.0
 TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
 UNIT PEAK = 1.5161 CFS UNIT VOLUME = .9928 B = 526.28 P60 = 1.8700
 AREA = .000384 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 = 4.514851
 UNIT PEAK = .62895 CFS UNIT VOLUME = .9821 B = 388.14 P60 = 1.8700
 AREA = .000216 SQ MI IA = .35000 INCHES INF = .83000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

PRINT HYD ID=2 CODE=10

PARTIAL HYDROGRAPH 103.00

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	5.000	.0	10.000	.0	15.000	.0	20.000	.0
.500	.0	5.500	.0	10.500	.0	15.500	.0	20.500	.0
1.000	.0	6.000	.0	11.000	.0	16.000	.0	21.000	.0
1.500	1.5	6.500	.0	11.500	.0	16.500	.0	21.500	.0
2.000	.3	7.000	.0	12.000	.0	17.000	.0	22.000	.0
2.500	.0	7.500	.0	12.500	.0	17.500	.0	22.500	.0
3.000	.0	8.000	.0	13.000	.0	18.000	.0	23.000	.0
3.500	.0	8.500	.0	13.500	.0	18.500	.0	23.500	.0
4.000	.0	9.000	.0	14.000	.0	19.000	.0	24.000	.0
4.500	.0	9.500	.0	14.500	.0	19.500	.0		

RUNOFF VOLUME = 1.91094 INCHES = .0611 ACRE-FEET
 PEAK DISCHARGE RATE = 1.46 CFS AT 1.500 HOURS BASIN AREA = .0006 SQ. MI.

*S**ADD OUTLET FROM HARVEST AREA 2 AND BASIN A *****

ADD HYD ID=3 HYD NO=103.1 ID I=17 ID II=2
 PRINT HYD ID=3 CODE=10

PARTIAL HYDROGRAPH 103.10

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	6.000	.1	12.000	.0	18.000	.0	24.000	.0
.500	.0	6.500	.1	12.500	.0	18.500	.0	24.500	.0
1.000	.0	7.000	.0	13.000	.0	19.000	.0	25.000	.0
1.500	1.6	7.500	.0	13.500	.0	19.500	.0	25.500	.0
2.000	1.4	8.000	.0	14.000	.0	20.000	.0	26.000	.0
2.500	.4	8.500	.0	14.500	.0	20.500	.0	26.500	.0
3.000	.3	9.000	.0	15.000	.0	21.000	.0	27.000	.0
3.500	.2	9.500	.0	15.500	.0	21.500	.0	27.500	.0
4.000	.2	10.000	.0	16.000	.0	22.000	.0	28.000	.0
4.500	.1	10.500	.0	16.500	.0	22.500	.0		
5.000	.1	11.000	.0	17.000	.0	23.000	.0		
5.500	.1	11.500	.0	17.500	.0	23.500	.0		

RUNOFF VOLUME = 1.84202 INCHES = .1965 ACRE-FEET
 PEAK DISCHARGE RATE = 1.59 CFS AT 1.500 HOURS BASIN AREA = .0020 SQ. MI.

S* BASIN C ***

COMPUTE NM HYD ID=4 HYD NO=104.0 DA=0.0013 SQ MI
 PER A=60.0 PER B=0.0 PER C=15.0 PER D=25.0
 TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
 UNIT PEAK = 1.2831 CFS UNIT VOLUME = .9911 B = 526.28 P60 = 1.8700
 AREA = .000325 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

K = .152120HR TP = .133300HR K/TP RATIO = 1.141188 SHAPE CONSTANT, N = 3.102909
 UNIT PEAK = 2.1219 CFS UNIT VOLUME = .9934 B = 290.11 P60 = 1.8700
 AREA = .000975 SQ MI IA = .59000 INCHES INF = 1.50200 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

PRINT HYD ID=4 CODE=10

PARTIAL HYDROGRAPH 104.00

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	5.000	.0	10.000	.0	15.000	.0	20.000	.0
.500	.0	5.500	.0	10.500	.0	15.500	.0	20.500	.0
1.000	.0	6.000	.0	11.000	.0	16.000	.0	21.000	.0
1.500	1.9	6.500	.0	11.500	.0	16.500	.0	21.500	.0
2.000	.3	7.000	.0	12.000	.0	17.000	.0	22.000	.0
2.500	.1	7.500	.0	12.500	.0	17.500	.0	22.500	.0
3.000	.0	8.000	.0	13.000	.0	18.000	.0	23.000	.0
3.500	.0	8.500	.0	13.500	.0	18.500	.0	23.500	.0
4.000	.0	9.000	.0	14.000	.0	19.000	.0	24.000	.0
4.500	.0	9.500	.0	14.500	.0	19.500	.0		

RUNOFF VOLUME = .99692 INCHES = .0691 ACRE-FEET
 PEAK DISCHARGE RATE = 1.86 CFS AT 1.500 HOURS BASIN AREA = .0013 SQ. MI.

ADD OUTLET FROM HARVEST AREA 1 AND BASIN A AND BASIN C **

ADD HYD ID=5 HYD NO=105.0 ID I=3 ID II=4
 PRINT HYD ID=5 CODE=10

PARTIAL HYDROGRAPH 105.00

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	6.000	.1	12.000	.0	18.000	.0	24.000	.0
.500	.0	6.500	.1	12.500	.0	18.500	.0	24.500	.0
1.000	.0	7.000	.1	13.000	.0	19.000	.0	25.000	.0
1.500	3.5	7.500	.1	13.500	.0	19.500	.0	25.500	.0
2.000	1.7	8.000	.0	14.000	.0	20.000	.0	26.000	.0
2.500	.5	8.500	.0	14.500	.0	20.500	.0	26.500	.0
3.000	.3	9.000	.0	15.000	.0	21.000	.0	27.000	.0
3.500	.2	9.500	.0	15.500	.0	21.500	.0	27.500	.0
4.000	.2	10.000	.0	16.000	.0	22.000	.0	28.000	.0
4.500	.1	10.500	.0	16.500	.0	22.500	.0		
5.000	.1	11.000	.0	17.000	.0	23.000	.0		
5.500	.1	11.500	.0	17.500	.0	23.500	.0		

RUNOFF VOLUME = 1.50902 INCHES = .2656 ACRE-FEET

PEAK DISCHARGE RATE = 3.46 CFS AT 1.500 HOURS BASIN AREA = .0033 SQ. MI.

S ROUTE THROUGH HARVEST AREA 4 ***** 16" OUTFLOW PIPE *****

ROUTE RESERVOIR ID=19 HYD=106.0 INFLOW ID=5 CODE=20

OUTFLOW STORAGE DEPTH

0.00 0.00 4992.5

0.60 0.004 4993.0

2.90 0.012 4993.5

4.20 0.044 4994.0

* * * * *

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
---------------	-----------------	----------------	-------------------	------------------

.00	.00	4992.50	.000	.00
1.00	.00	4992.50	.000	.00
2.00	1.69	4993.26	.008	1.79
3.00	.28	4992.74	.002	.29
4.00	.16	4992.64	.001	.16
5.00	.10	4992.59	.001	.10
6.00	.07	4992.56	.000	.07
7.00	.06	4992.55	.000	.06
8.00	.05	4992.54	.000	.05
9.00	.04	4992.53	.000	.04
10.00	.04	4992.53	.000	.04
11.00	.03	4992.53	.000	.03
12.00	.03	4992.52	.000	.03
13.00	.03	4992.52	.000	.03
14.00	.03	4992.52	.000	.03
15.00	.02	4992.52	.000	.03
16.00	.02	4992.52	.000	.02
17.00	.02	4992.52	.000	.02
18.00	.02	4992.52	.000	.02
19.00	.02	4992.52	.000	.02
20.00	.02	4992.52	.000	.02
21.00	.02	4992.52	.000	.02
22.00	.02	4992.52	.000	.02
23.00	.02	4992.52	.000	.02
24.00	.02	4992.52	.000	.02
25.00	.01	4992.51	.000	.01
26.00	.00	4992.50	.000	.00

PEAK DISCHARGE = 2.972 CFS - PEAK OCCURS AT HOUR 1.60
 MAXIMUM WATER SURFACE ELEVATION = 4993.528
 MAXIMUM STORAGE = .0138 AC-FT INCREMENTAL TIME= .050000HRS

PRINT HYD ID=19 CODE=10

PARTIAL HYDROGRAPH 106.00

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	6.000	.1	12.000	.0	18.000	.0	24.000	.0
.500	.0	6.500	.1	12.500	.0	18.500	.0	24.500	.0
1.000	.0	7.000	.1	13.000	.0	19.000	.0	25.000	.0
1.500	2.9	7.500	.1	13.500	.0	19.500	.0	25.500	.0
2.000	1.8	8.000	.0	14.000	.0	20.000	.0	26.000	.0
2.500	.6	8.500	.0	14.500	.0	20.500	.0	26.500	.0
3.000	.3	9.000	.0	15.000	.0	21.000	.0	27.000	.0
3.500	.2	9.500	.0	15.500	.0	21.500	.0	27.500	.0
4.000	.2	10.000	.0	16.000	.0	22.000	.0	28.000	.0
4.500	.1	10.500	.0	16.500	.0	22.500	.0		
5.000	.1	11.000	.0	17.000	.0	23.000	.0		
5.500	.1	11.500	.0	17.500	.0	23.500	.0		

RUNOFF VOLUME = 1.50902 INCHES = .2656 ACRE-FEET
 PEAK DISCHARGE RATE = 2.97 CFS AT 1.600 HOURS BASIN AREA = .0033 SQ. MI.

S BASIN B *****

COMPUTE NM HYD ID=6 HYD NO=107.0 DA=0.0039 SQ MI
 PER A=64.0 PER B=0.0 PER C=26.0 PER D=10.0
 TP=-0.1333 HR MASS RAIN=-1

K = .072649HR TP = .133300HR K/TP RATIO = .545000 SHAPE CONSTANT, N = 7.106420
 UNIT PEAK = 1.5397 CFS UNIT VOLUME = .9928 B = 526.28 P60 = 1.8700
 AREA = .000390 SQ MI IA = .10000 INCHES INF = .04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

K = .146981HR TP = .133300HR K/TP RATIO = 1.102634 SHAPE CONSTANT, N = 3.206118
 UNIT PEAK = 7.8525 CFS UNIT VOLUME = .9982 B = 298.22 P60 = 1.8700
 AREA = .003510 SQ MI IA = .56333 INCHES INF = 1.42733 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .050000

PRINT HYD ID=6 CODE=10

PARTIAL HYDROGRAPH 107.00

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	5.000	.0	10.000	.0	15.000	.0	20.000	.0
.500	.0	5.500	.0	10.500	.0	15.500	.0	20.500	.0
1.000	.0	6.000	.0	11.000	.0	16.000	.0	21.000	.0
1.500	4.8	6.500	.0	11.500	.0	16.500	.0	21.500	.0
2.000	.6	7.000	.0	12.000	.0	17.000	.0	22.000	.0
2.500	.1	7.500	.0	12.500	.0	17.500	.0	22.500	.0
3.000	.0	8.000	.0	13.000	.0	18.000	.0	23.000	.0
3.500	.0	8.500	.0	13.500	.0	18.500	.0	23.500	.0
4.000	.0	9.000	.0	14.000	.0	19.000	.0	24.000	.0
4.500	.0	9.500	.0	14.500	.0	19.500	.0		

RUNOFF VOLUME = .74649 INCHES = .1553 ACRE-FEET

PEAK DISCHARGE RATE = 4.81 CFS AT 1.500 HOURS BASIN AREA = .0039 SQ. MI.

*S**ADD OUTLET FROM HARVEST AREA 4 AND BASIN B *****

ADD HYD ID=7 HYD NO=108.0 ID I=19 ID II=6

PRINT HYD ID=7 CODE=10

PARTIAL HYDROGRAPH 108.00

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	6.000	.1	12.000	.0	18.000	.0	24.000	.0
.500	.0	6.500	.1	12.500	.0	18.500	.0	24.500	.0
1.000	.0	7.000	.1	13.000	.0	19.000	.0	25.000	.0
1.500	7.7	7.500	.1	13.500	.0	19.500	.0	25.500	.0
2.000	2.4	8.000	.1	14.000	.0	20.000	.0	26.000	.0
2.500	.7	8.500	.1	14.500	.0	20.500	.0	26.500	.0
3.000	.3	9.000	.0	15.000	.0	21.000	.0	27.000	.0
3.500	.2	9.500	.0	15.500	.0	21.500	.0	27.500	.0
4.000	.2	10.000	.0	16.000	.0	22.000	.0	28.000	.0
4.500	.1	10.500	.0	16.500	.0	22.500	.0		
5.000	.1	11.000	.0	17.000	.0	23.000	.0		
5.500	.1	11.500	.0	17.500	.0	23.500	.0		

RUNOFF VOLUME = 1.09593 INCHES = .4208 ACRE-FEET

PEAK DISCHARGE RATE = 7.69 CFS AT 1.500 HOURS BASIN AREA = .0072 SQ. MI.

S ROUTE THROUGH HARVEST AREA 5 *****

*S***NO OUTFLOW PIPE***SPILLWAY CREST ELEVATION TO DITCH IS 4993.0*****

ROUTE RESERVOIR ID=18 HYD=109.0 INFLOW ID=7 CODE=20

OUTFLOW STORAGE DEPTH

0	0.00	4992.0
0.10	0.33	4993.0
85.0	1.30	4994.0

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
---------------	-----------------	----------------	-------------------	------------------

.00	.00	4992.00	.000	.00
1.00	.00	4992.00	.000	.00
2.00	2.39	4992.75	.247	.07
3.00	.34	4992.96	.317	.10
4.00	.17	4993.00	.328	.10
5.00	.11	4993.00	.330	.12
6.00	.08	4993.00	.329	.10
7.00	.07	4992.99	.327	.10
8.00	.06	4992.98	.324	.10
9.00	.05	4992.97	.320	.10
10.00	.04	4992.96	.316	.10
11.00	.04	4992.94	.312	.09
12.00	.04	4992.93	.307	.09
13.00	.03	4992.92	.302	.09
14.00	.03	4992.90	.298	.09
15.00	.03	4992.89	.293	.09
16.00	.03	4992.87	.288	.09
17.00	.03	4992.86	.284	.09
18.00	.03	4992.84	.279	.08

19.00	.03	4992.83	.274	.08
20.00	.03	4992.82	.269	.08
21.00	.02	4992.80	.265	.08
22.00	.02	4992.79	.260	.08
23.00	.02	4992.78	.256	.08
24.00	.02	4992.76	.251	.08
25.00	.01	4992.75	.246	.07
26.00	.00	4992.73	.240	.07
27.00	.00	4992.71	.235	.07
28.00	.00	4992.69	.229	.07
29.00	.00	4992.68	.223	.07

PEAK DISCHARGE = .131 CFS - PEAK OCCURS AT HOUR 4.55
 MAXIMUM WATER SURFACE ELEVATION = 4993.000
 MAXIMUM STORAGE = .3304 AC-FT INCREMENTAL TIME= .050000HRS

PRINT HYD ID=18 CODE=10

PARTIAL HYDROGRAPH 109.00

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	6.000	.1	12.000	.1	18.000	.1	24.000	.1
.500	.0	6.500	.1	12.500	.1	18.500	.1	24.500	.1
1.000	.0	7.000	.1	13.000	.1	19.000	.1	25.000	.1
1.500	.0	7.500	.1	13.500	.1	19.500	.1	25.500	.1
2.000	.1	8.000	.1	14.000	.1	20.000	.1	26.000	.1
2.500	.1	8.500	.1	14.500	.1	20.500	.1	26.500	.1
3.000	.1	9.000	.1	15.000	.1	21.000	.1	27.000	.1
3.500	.1	9.500	.1	15.500	.1	21.500	.1	27.500	.1
4.000	.1	10.000	.1	16.000	.1	22.000	.1	28.000	.1
4.500	.1	10.500	.1	16.500	.1	22.500	.1	28.500	.1
5.000	.1	11.000	.1	17.000	.1	23.000	.1	29.000	.1
5.500	.1	11.500	.1	17.500	.1	23.500	.1	29.500	.1

RUNOFF VOLUME = .52844 INCHES = .2029 ACRE-FEET
 PEAK DISCHARGE RATE = .13 CFS AT 4.550 HOURS BASIN AREA = .0072 SQ. MI.

*S*****

FINISH

NORMAL PROGRAM FINISH END TIME (HR:MIN:SEC) = 10:02:44

Rating Curve for 1-8" pipe from harvest area 1

Project Description

Flow Element: Circular Orifice
Solve For: Discharge

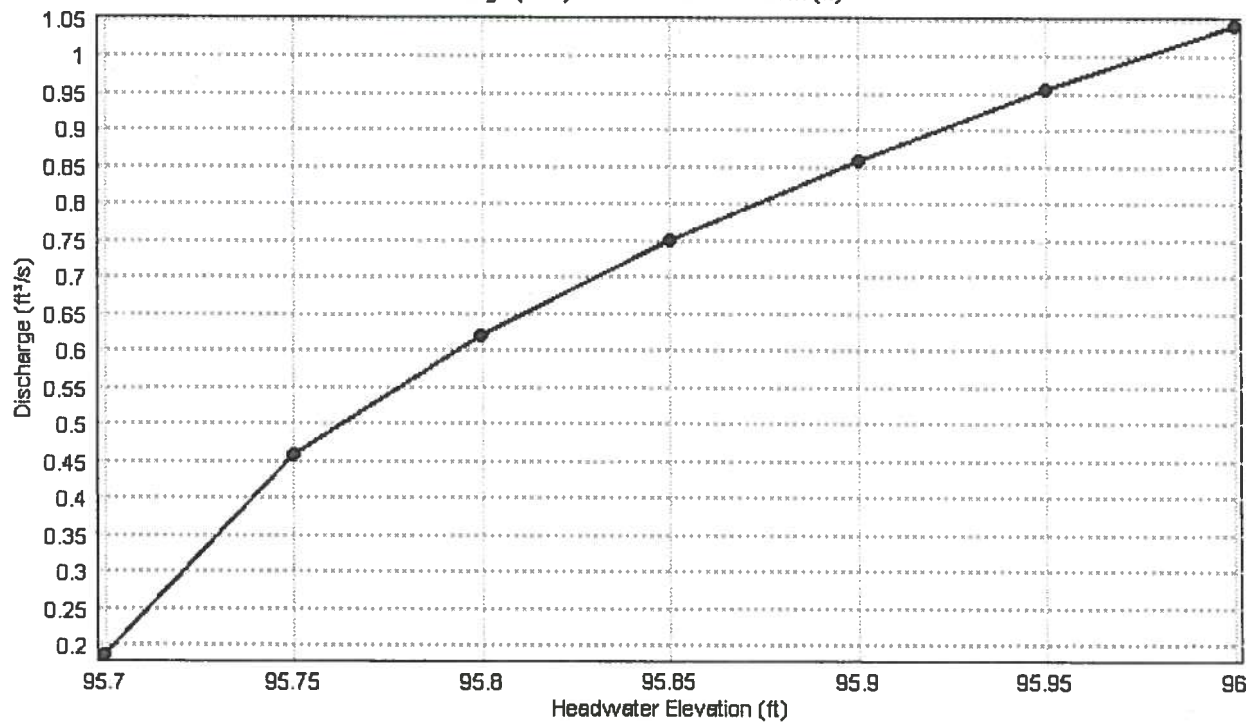
Input Data

Centroid Elevation: 95.69 ft
Tailwater Elevation: 95.16 ft
Discharge Coefficient: 0.67
Diameter: 0.67 ft

Attribute	Minimum	Maximum	Increment
Headwater Elevation (ft)	95.00	96.00	0.05

THE ARE 3-8" PIPES DRAINING
HAI

Worksheet: 1-8" pipe from harvest area 1
Discharge (ft³/s) vs Headwater Elevation (ft)



Rating Curve for 1-8' pipe leaving harvest area 2

Project Description

Flow Element: Circular Orifice
Solve For: Discharge

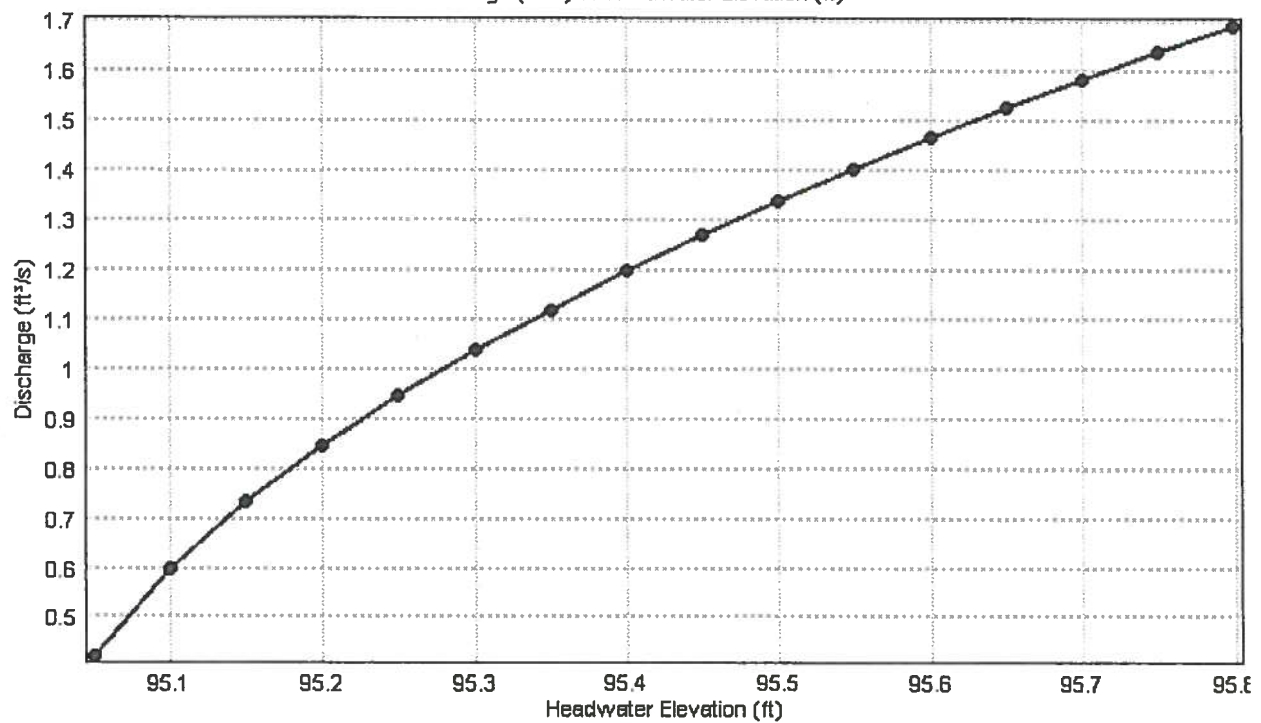
Input Data

Centroid Elevation: 95.00 ft
Tailwater Elevation: 94.22 ft
Discharge Coefficient: 0.67
Diameter: 0.67 ft

Attribute	Minimum	Maximum	Increment
Headwater Elevation (ft)	94.50	95.80	0.05

THERE ARE 3 PIPES DRAINING
HAZ

Worksheet: 1-8' pipe leaving harvest area 2
Discharge (ft³/s) vs Headwater Elevation (ft)



Rating Curve for 1-8" pipe from harvest area 3

Project Description

Flow Element: Circular Orifice
Solve For: Discharge

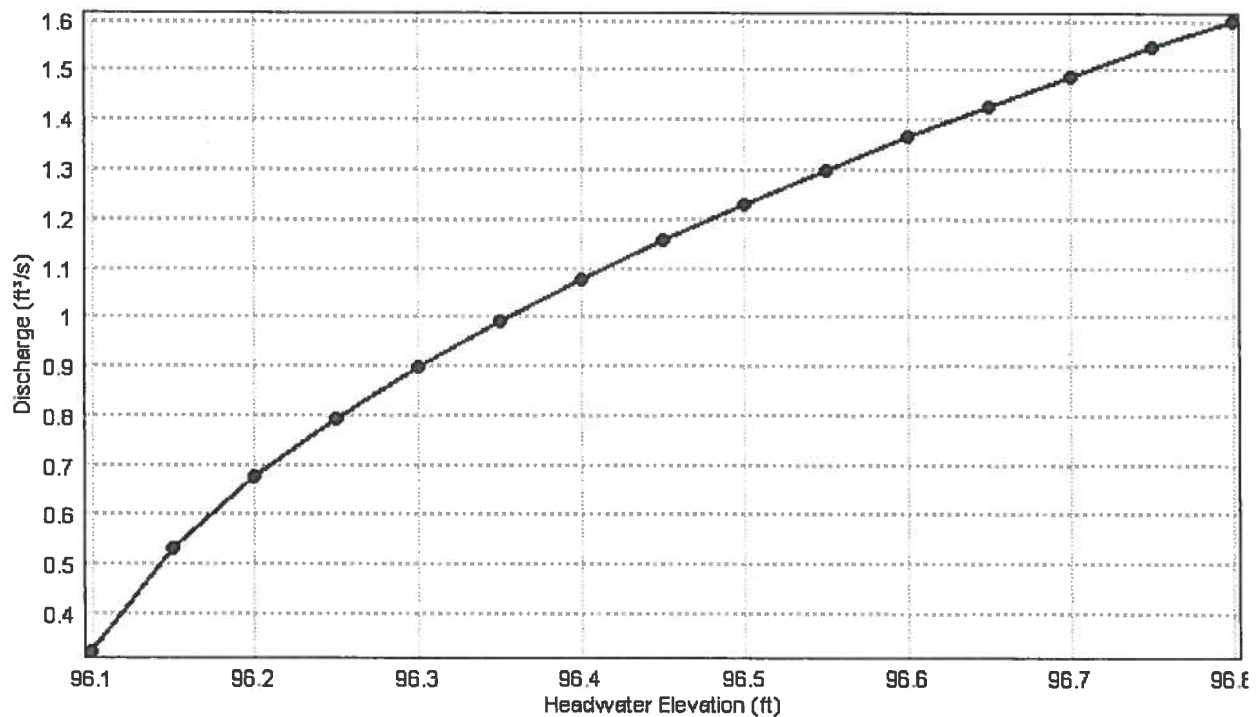
Input Data

Centroid Elevation: 96.07 ft
Tailwater Elevation: 94.63 ft
Discharge Coefficient: 0.67
Diameter: 0.67 ft

Attribute	Minimum	Maximum	Increment
Headwater Elevation (ft)	95.50	96.82	0.05

THERE ARE 2 PIPES
DRAINING HAZ

Worksheet: 1-8" pipe from harvest area 3
Discharge (ft³/s) vs Headwater Elevation (ft)



Rating Curve for Ex 16" CMP from harvest area 4

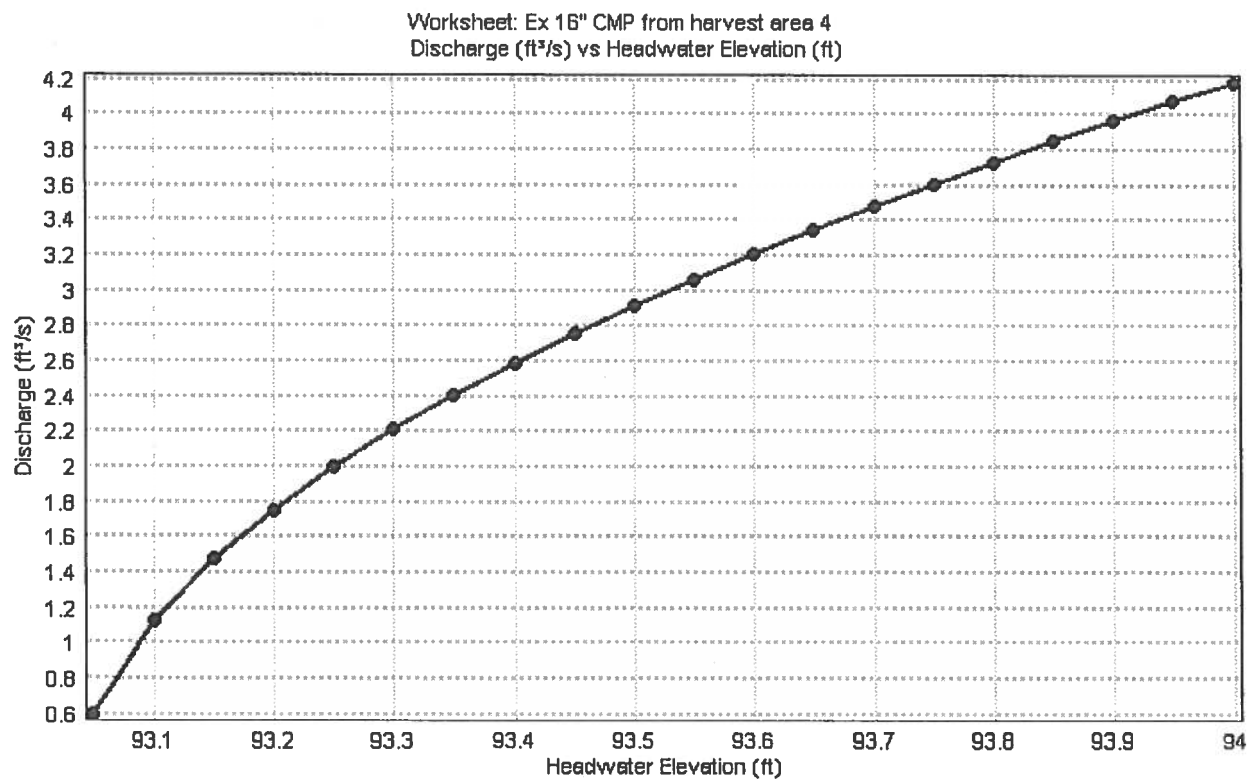
Project Description

Flow Element: Circular Orifice
Solve For: Discharge

Input Data

Centroid Elevation: 93.03 ft
Tailwater Elevation: 91.67 ft
Discharge Coefficient: 0.38
Diameter: 1.33 ft

Attribute	Minimum	Maximum	Increment
Headwater Elevation (ft)	92.50	94.00	0.05



Rating Curve for Ex Concrete Spillway from harvest area 5

Project Description

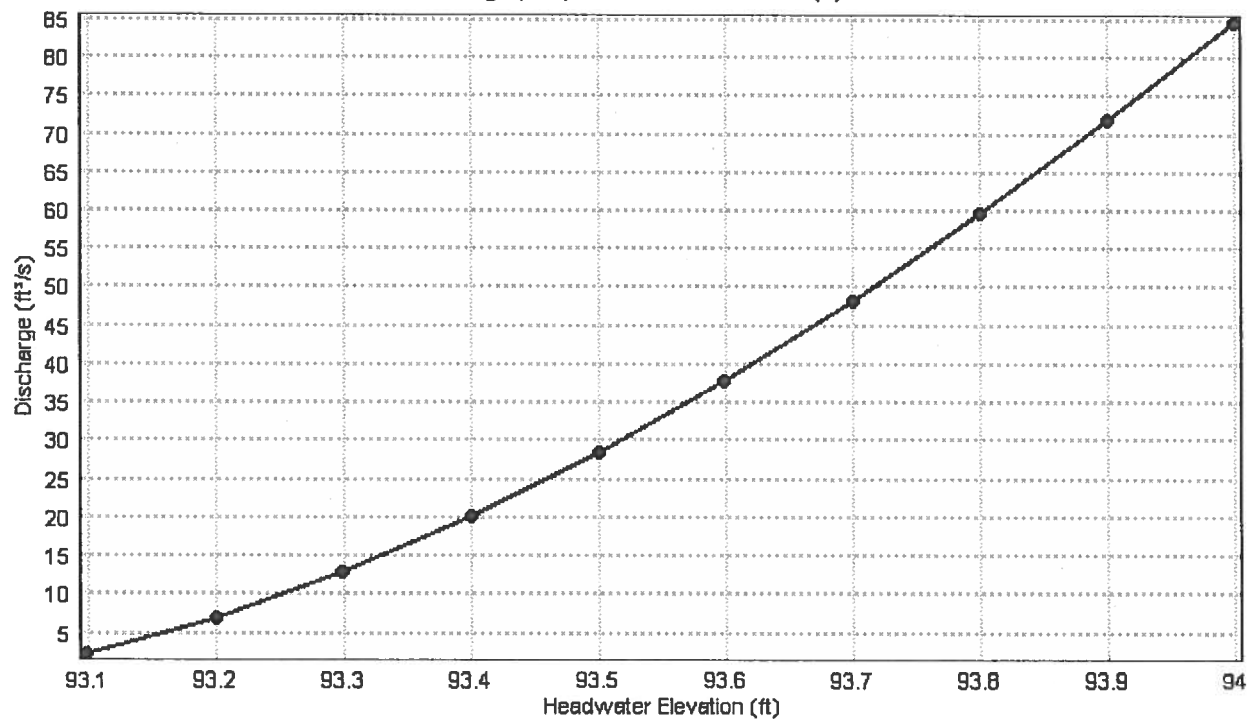
Flow Element: Broad Crested Weir
Solve For: Discharge

Input Data

Crest Elevation: 93.00 ft
Tailwater Elevation: 92.60 ft
Crest Surface Type: Gravel
Crest Breadth: 10.00 ft
Crest Length: 30.00 ft

Attribute	Minimum	Maximum	Increment
Headwater Elevation (ft)	93.00	94.00	0.10

Worksheet: Ex Concrete Spillway from harvest area 5
Discharge (ft³/s) vs Headwater Elevation (ft)



HARVESTING VOLUMES

1/2

#1

ELEV	SF	VOLUME	ACCUM	VOLUME
95.1	3370	1889 cf	1889	0.043 AF
95.5	4185	2305 cf	4194	<u>0.097 AF</u>
96.0	5035			

#2

94.5	570	338 cf	338 cf	0.0078 AF
95.0	780	418 cf	756 cf	0.0174 AF
95.5	890	488 cf	1244 cf	0.0286 AF
96.0	1060			

#3

95.5	69	50 cf	50 cf	0.0011
96.0	127	78 cf	128 cf	0.003
96.5	184			

#4

92.5	175 sf	173 cf	173 cf	0.004 AF
93.0	515 sf	349 cf	522 cf	0.012 AF
93.5	880 sf	1400 cf	1922 cf	0.044 AF
94.0	4722 sf			

LEAMPAD

ELEV	SF	VOLUME	Accum Vol
<u>#5</u>			
92.0	9600	14300 cf	14300 cf 0.33A
93.0	19000	42295 cf	56595 cf 1.30A
94.0	65590		

AMPAD