

# FILTRATION PLANT RESERVOIR ROUTING

MOORE, GARDNER AND ASSOCIATES INC.

12/18/79

USERS NAME

B NELSON

QUEUE INFORMATION

PRIORITY 1

JOB NUMBER 00009

DATA ENTRY STATION 00

LOG NUMBER 00001

DESTINATION STATION 00

SUSPENSION 00000

RUN TIMES H M S

I/O INFORMATION

CARD INPUT 0-00-16

00155 CARDS INPUT

LINE OUTPUT 0-01-00

00595 LINES OUTPUT/PER COPY

CPU 0-01-59

00001 COPY REQUESTED

TOTAL 0-03-15

JOB ENDED BECAUSE, ABORT CODE 0  
SPECIFIED TASKS ARE COMPLETED.

// JOB, B NELSON, P=1, TAPE=COMPIL

SYSTEM REQUIREMENTS  
SPECIFIED

MAGNETIC TAPE DRIVE, TAPE=COMPIL

// JOB,B NELSON,P=1,TAPE=COMPIL

// LIST

// REWIND TAPE

// PUNCH

MACGREGOR DOWNS PHASE II JOB #500097 FLOOD ROUTING THRU FILTRATION RESERVOIR

// CARD DATA

0.0	0.0
0.86	80.0
1.75	225.0
2.67	413.0
3.66	636.0
4.70	889.0
5.79	1169.0
6.95	1473.0
8.16	1800.0
9.41	2148.0
10.72	2516.0
12.07	3200.0

// CARD DATA

// \$

// REWIND TAPE

// XEQ FLOOD

// TAPE DATA

10 YEAR FLOOD ROUTING

27 12 27 374.70 0.50

0.0
9.45
47.25
100.8
176.4
270.9
378.0
465.1
560.7
611.1
630.0
617.4
579.2
529.2
472.5
415.8
352.8
308.7
264.6
233.1
201.6
176.4
151.2
132.3
113.4
94.5
81.9

// TAPE DATA

// REWIND TAPE

// XEQ FLOOD

// TAPE DATA

50 YEAR FLOOD ROUTING THRU FILTRATION LAKE

27 12 19 374.70 0.50

0.0  
18.75  
93.75  
200.0  
350.0  
537.5  
750.0  
962.5  
1112.5  
1212.5  
1250.0  
1225.0  
1150.0  
1050.0  
937.5  
825.0  
700.0  
612.5  
525.0  
462.5  
400.0  
350.0  
300.0  
262.5  
225.0  
187.5  
162.5

// TAPE DATA  
// REWIND TAPE  
// XEQ FLOOD  
// TAPE DATA

100 YEAR FLOOD ROUTING THRU FILTRATION LAKE

27 12 15 374.70 0.50

0.0  
25.5  
127.5  
272.0  
476.0  
731.0  
1020.0  
1309.0  
1513.0  
1649.0  
1700.0  
1666.0  
1564.0  
1420.0  
1275.0  
1122.0  
952.0  
833.0  
714.0  
629.0  
544.0  
476.0

408.0  
357.0  
306.0  
255.0  
221.0  
// TAPE DATA  
// REWIND TAPE  
// XEQ FLOOD  
// TAPE DATA  
500 YEAR FLOOD ROUTING THRU FILTRATION RESERVOIR  
27 12 12 374.70 0.50

0.0  
48.0  
240.0  
512.0  
896.0  
1376.0  
1920.0  
2464.0  
2848.0  
3104.0  
3200.0  
3136.0  
2944.0  
2688.0  
2400.0  
2112.0  
1792.0  
1568.0  
1344.0  
1184.0  
1024.0  
896.0  
768.0  
672.0  
576.0  
480.0  
416.0

// TAPE DATA  
// XEQ STOPT  
50 0097 1382 DC  
// EOJ

MACGREGOR DOWNS PHASE II

FLOOD ROUTING THROUGH RESERVOIRS

MACGREGOR DOWNS PHASE II JOB #500097 FLOOD ROUTING THRU FILTRATION RESERVOIR  
 10 YEAR FLOOD ROUTING

INPUT VERIFICATION

NO. INFLOWS NO. STORAGE DELTA T POOL ELEV<sup>W</sup> ELEV INCR  
 27. 12. 27. 374.70 0.50

INFLOW IN CFS

0.00  
 9.45  
 47.25  
 100.80  
 176.40  
 270.90  
 378.00  
 485.10  
 560.70  
 611.10  
 630.00  
 617.40  
 579.20  
 529.20  
 472.50  
 415.80  
 352.80  
 308.70  
 264.60  
 233.10  
 201.60  
 176.40  
 151.20  
 132.30  
 113.40  
 94.50  
 81.90

STORAGE DISCHARGE

0.00 0.00  
 0.86 80.00  
 1.75 225.00  
 2.67 413.00  
 3.66 636.00  
 4.70 889.00  
 5.79 1169.00

6.95	1473.00
8.16	1800.00
9.41	2148.00
10.72	2516.00
12.07	3200.00

FLOOD ROUTING THROUGH RESERVOIRS  
MACGREGOR DOWNS PHASE II JOB #500097 FLOOD ROUTING THRU FILTRATION RESERVOIR  
10 YEAR FLOOD ROUTING

TIME (MIN)	INFLOW HYDROGRAPH (CFS)	OUTFLOW HYDROGRAPH (CFS)
0.	0.00	0.00
27.	9.45	0.66
54.	47.25	4.54
81.	100.80	14.27
108.	176.40	31.70
135.	270.90	58.60
162.	378.00	106.38
189.	485.10	182.19
216.	560.70	269.63
243.	611.10	359.46
270.	630.00	435.40
297.	617.40	493.51
324.	579.20	525.84
351.	529.20	534.59
378.	472.50	524.18
405.	415.80	499.48
432.	352.00	463.93
459.	308.70	422.83
486.	264.60	383.37
513.	233.10	345.16
540.	201.60	308.86
567.	176.40	274.81
594.	151.20	243.28
621.	132.30	216.33

MACGREGOR DOWNS PHASE II JOB #500097 FLOOD ROUTING THRU FILTRATION RESERVOIR  
10 YEAR FLOOD ROUTING

MAX. INFLOW= 630.00 CFS AT 270. MINUTES

MAX. OUTFLOW= 534.59 CFS AT 351. MINUTES

MAX. POOL ELEV. ATTAINED= 376.47 FT ABOVE DATUM

STORAGE AT MAX POOL ELEV= 3.209 MILLION CU FT.



FLOOD ROUTING THROUGH RESERVOIRS

MACGREGOR DOWNS PHASE II JOB #500097 FLOOD ROUTING THRU FILTRATION RESERVOIR  
 50 YEAR FLOOD ROUTING THRU FILTRATION LAKE

INPUT VERIFICATION

NO. INFLOWS	NO. STORAGE	DELTA T	POOL ELEV	ELEV INCR
27.	12.	19.	374.70	0.50

INFLOW IN CFS

0.00  
 16.75  
 93.75  
 200.00  
 350.00  
 537.50  
 750.00  
 962.50  
 1112.50  
 1212.50  
 1250.00  
 1225.00  
 1150.00  
 1050.00  
 937.50  
 825.00  
 700.00  
 612.50  
 525.00  
 462.50  
 400.00  
 350.00  
 300.00  
 262.50  
 225.00  
 187.50  
 162.50

STORAGE DISCHARGE

0.00	0.00
0.86	80.00
1.75	225.00
2.67	413.00
3.66	636.00
4.70	889.00
5.79	1169.00

6.95	1473.00
8.16	1800.00
9.41	2148.00
10.72	2516.00
12.07	3200.00

FLOOD ROUTING THROUGH RESERVOIRS  
MACGREGOR DOWNS PHASE II JOB #500097 FLOOD ROUTING THRU FILTRATION RESERVOIR  
50 YEAR FLOOD ROUTING THRU FILTRATION LAKE

TIME (MIN)	INFLOW HYDROGRAPH (CFS)	OUTFLOW HYDROGRAPH (CFS)
0.	0.00	0.00
19.	18.75	0.94
38.	93.75	6.51
57.	200.00	20.64
76.	350.00	46.26
95.	537.50	90.62
114.	750.00	184.62
133.	962.50	315.56
152.	1112.50	471.02
171.	1212.50	628.38
190.	1250.00	774.67
209.	1225.00	887.40
228.	1150.00	963.98
247.	1050.00	998.72
266.	937.50	997.45
285.	825.00	967.77
304.	700.00	915.33
323.	612.50	851.00
342.	525.00	782.26
361.	462.50	711.99
380.	400.00	643.61
399.	350.00	581.98
418.	300.00	523.50
437.	262.50	468.37

FLOOD ROUTING THROUGH RESERVOIRS

PAGE 3

MACGREGOR DOWNS, PHASE II JOB #500097 FLOOD ROUTING THRU FILTRATION RESERVOIR  
50 YEAR FLOOD ROUTING THRU FILTRATION LAKE

MAX. INFLOW= 1250.00 CFS AT 190. MINUTES

MAX. OUTFLOW= 998.72 CFS AT 247. MINUTES

MAX. POOL ELEV. ATTAINED= 377.39 FT ABOVE DATUM

STORAGE AT MAX POOL ELEV= 5.127 MILLION CU FT

FLOOD ROUTING THROUGH RESERVOIRS

MACGREGOR DOWNS PHASE II JOB #500097 FLOOD ROUTING THRU FILTRATION RESERVOIR  
100 YEAR FLOOD ROUTING THRU FILTRATION LAKE

INPUT VERIFICATION

NO. INFLOWS	NO. STORAGE	DELTA T	POOL ELEV	ELEV INCR
27.	12.	15.	374.70	0.50

INFLOW IN CFS

0.00  
25.50  
127.50  
272.00  
476.00  
731.00  
1020.00  
1309.00  
1513.00  
1649.00  
1700.00  
1666.00  
1564.00  
1428.00  
1275.00  
1122.00  
952.00  
833.00  
714.00  
629.00  
544.00  
476.00  
408.00  
357.00  
306.00  
255.00  
221.00

STORAGE	DISCHARGE
0.00	0.00
0.86	80.00
1.75	225.00
2.67	415.00
3.66	636.00
4.70	889.00
5.78	1169.00

6.95	1473.00
8.16	1800.00
9.41	2148.00
10.72	2516.00
12.07	3200.00

FLOOD ROUTING THROUGH RESERVOIRS  
MACREGOR DOWNS PHASE II JOB #500097 FLOOD ROUTING THRU FILTRATION RESERVOIR  
100 YEAR FLOOD ROUTING THRU FILTRATION LAKE

TIME (MIN)	INFLOW HYDROGRAPH (CFS)	OUTFLOW HYDROGRAPH (CFS)
0.	0.00	0.00
15.	25.50	1.02
30.	127.50	7.08
45.	272.00	22.57
60.	476.00	50.81
75.	731.00	105.88
90.	1020.00	211.02
105.	1309.00	368.35
120.	1513.00	556.12
135.	1649.00	752.61
150.	1710.00	936.82
165.	1666.00	1091.46
180.	1564.00	1200.51
195.	1428.00	1262.85
210.	1275.00	1281.55
225.	1122.00	1264.03
240.	952.00	1216.13
255.	833.00	1148.22
270.	714.00	1070.57
285.	629.00	987.86
300.	544.00	904.69
315.	476.00	826.05
330.	408.00	750.26
345.	357.00	677.69
360.	306.00	611.16

FLOOD ROUTING THROUGH RESERVOIRS

MACGREGOR DOWNS PHASE II JOB #500097 FLOOD ROUTING THRU FILTRATION RESERVOIR  
100 YEAR FLOOD ROUTING THRU FILTRATION LAKE

MAX. INFLOW= 1700.00 CFS AT 150. MINUTES

MAX. OUTFLOW= 1281.55 CFS AT 210. MINUTES

MAX. POOL ELEV. ATTAINED= 377.88 FT ABOVE DATUM

STORAGE AT MAX POOL ELEV= 6.219 MILLION CU FT



FLOOD ROUTING THROUGH RESERVOIRS

PAGE 1

MACGREGOR DOWNS PHASE II JOB #500097 FLOOD ROUTING THRU FILTRATION RESERVOIR  
 500 YEAR FLOOD ROUTING THRU FILTRATION RESERVOIR

INPUT VERIFICATION

NO. INFLOWS	NO. STORAGE	DELTA T	POOL ELEV	ELEV INCR
27.	12.	12.	374.70	0.50

INFLOW IN CFS

0.00  
 48.00  
 240.00  
 512.00  
 896.00  
 1376.00  
 1920.00  
 2464.00  
 2848.00  
 3104.00  
 3200.00  
 3136.00  
 2944.00  
 2680.00  
 2400.00  
 2112.00  
 1792.00  
 1568.00  
 1344.00  
 1184.00  
 1024.00  
 896.00  
 768.00  
 672.00  
 576.00  
 480.00  
 416.00

STORAGE	DISCHARGE
0.00	0.00
0.86	80.00
1.75	225.00
2.67	413.00
3.66	636.00
4.70	889.00
5.79	1169.00

6.95	1473.00
8.16	1800.00
9.41	2148.00
10.72	2516.00
12.07	3200.00

FLOOD ROUTING THROUGH RESERVOIRS  
MACGREGOR DOWNS PHASE II JOB #500097 FLOOD ROUTING THRU FILTRATION RESERVOIR  
500 YEAR FLOOD ROUTING THRU FILTRATION RESERVOIR

TIME (MIN)	INFLOW HYDROGRAPH (CFS)	OUTFLOW HYDROGRAPH (CFS)
0.	0.00	0.00
12.	48.00	1.55
24.	240.00	10.78
36.	512.00	34.45
48.	896.00	77.64
60.	1376.00	193.56
72.	1920.00	385.44
84.	2464.00	655.16
96.	2848.00	981.92
108.	3104.00	1322.29
120.	3200.00	1642.46
132.	3136.00	1916.08
144.	2944.00	2120.84
156.	2688.00	2248.31
168.	2400.00	2302.62
180.	2112.00	2294.06
192.	1792.00	2231.22
204.	1568.00	2130.12
216.	1344.00	2007.30
228.	1184.00	1871.88
240.	1024.00	1733.80
252.	896.00	1596.58
264.	768.00	1461.33
276.	672.00	1333.51
288.	576.00	1211.17

FLOOD ROUTING THROUGH RESERVOIRS

PAGE 3

MACGREGOR DOWNS PHASE II JOB #500097 FLOOD ROUTING THRU FILTRATION RESERVOIR  
500 YEAR FLOOD ROUTING THRU FILTRATION RESERVOIR

MAX. INFLOW= 3200.00 CFS AT 120. MINUTES

MAX. OUTFLOW= 2302.62 CFS AT 168. MINUTES

MAX. POOL ELEV. ATTAINED= 379.41 FT ABOVE DATUM

STORAGE AT MAX. POOL ELEV= 9.960 MILLION CU FT