
King County Watershed Modeling Services – Green River Water Quality Assessment, and Sammamish- Washington, Analysis and Modeling Program Watershed Modeling Calibration Report

In Progress



King County

Department of Natural Resources and Parks
Water and Land Resources Division

Science Section

King Street Center, KSC-NR-0600
201 South Jackson Street, Suite 600
Seattle, WA 98104
206-296-6519 TTY Relay: 711
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Section 6—Appendix A

July 2003

Prepared for:



King County

Department of Natural Resources and Parks
Water and Land Resources Division

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Prepared by:

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Mountain View, California 94043

In conjunction with King County

Alternative formats available

206-263-6317 TTY Relay: 711

Appendix A: North Creek UCI File

RUN

GLOBAL

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NORTH CREEK
*** PROJECT 20125; BEYERLEIN; 05/29/2003
*** AQUA TERRA CONSULTANTS
*** BASED ON LITTLE BEAR CREEK: LBEAR51.UCI
*** REVISED PERLND AREAS BASED ON NEW EIA VALUES
*** SET PREC MFACT=1.12 (BASED ON SILVER LAKE TO WATERSHED AVERAGE RATIO)
*** HALVE TILL AND OUTWASH LZSN
*** SET DEEPFR=0.0
*** HALVE OUTWASH INFILT
*** REDUCE EXTERNAL GROUNDWATER FROM 7000 AC TO 4000 AC
*** DECREASE TILL AND SATURATED IRC
*** DECREASE TILL INTFW
*** DECREASE TILL AND OUTWASH UZSN
*** USE PREC WITH WEIGHTED THRASHERS CORNER (STARTING 2000/10/25) DSN=119
*** REDUCE EXTERNAL GROUNDWATER FROM 4000 AC TO 2000 AC
*** INCREASE DEEPFR FROM 0.00 TO 0.02
*** SET AGWRC TO 0.996
*** INCREASE DEEPFR FROM 0.02 TO 0.03
*** PREC MFACT=1.13; INCREASE BASETP FROM 0.02 TO 0.03
*** INCREASE DEEPFR TO 0.06; INCREASE EXTERNAL GW TO 4000 AC
*** INCREASE TILL AND OUTWASH UZSN
*** TRANSFER SUBBASIN 151,161,311 GW TO 351 (STREAM DRY U/S 228TH)
*** DECREASE EXTERNAL GW FROM 4000 AC TO 3000 AC
*** INCREASE TILL DEEPFR FROM 0.06 TO 0.07
*** INCREASE OUTWASH DEEPFR FROM 0.03 TO 0.06
*** CORRECTED ERROR IN PERLND 950 PREC AND EVAP
*** AGGREGATE PERLND AREAS TO MINIMUM OF 5% OF SUBBASIN AREA
*** REVISED ORIGINAL EIA VALUES
*** SET IMPLND SLSUR=0.01; DECREASE TILL INTFW
START      1992/10/01      END      2001/09/30
RUN INTERP OUTPUT LEVEL      4
RESUME     0 RUN      1      UNIT SYSTEM      1
    
```

END GLOBAL

FILES

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<File> <Un#> <-----File Name----->***
<-ID->      ***
WDM1      27  C:\Project\Puget\KCMODEL\Basins\MetData.WDM
WDM2      28  C:\Project\Puget\KCMODEL\Basins\North\OutputWQ.WDM
MESSU     25  C:\Project\Puget\KCMODEL\BASINS\North\NORTHWQ.ECH
           61  C:\Project\Puget\KCMODEL\BASINS\North\NORTHWQ1.L61
           62  C:\Project\Puget\KCMODEL\BASINS\North\NORTHWQ1.L62
           63  C:\Project\Puget\KCMODEL\BASINS\North\NORTHWQ1.L63
BINO      91  C:\Project\Puget\KCMODEL\BASINS\North\NORTH.HBN
END FILES
    
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OPN SEQUENCE

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INGRP      INDELT 00:15
*** TILL FOREST
    PERLND    11
    PERLND    12
    PERLND    13
    PERLND    14
*** TILL PASTURE/AG
    PERLND    21
    PERLND    22
    PERLND    23
    PERLND    24
*** TILL FOREST RESIDENTIAL
    PERLND    31
    PERLND    32
    PERLND    33
    PERLND    34
*** TILL LOW DENSITY RESIDENTIAL
    PERLND    41
    PERLND    42
    PERLND    43
    PERLND    44
*** TILL HIGH DENSITY RESIDENTIAL
    PERLND    51
    PERLND    52
    PERLND    53
    PERLND    54
    
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*** TILL COMMERCIAL/INDUSTRIAL
    PERLND      61
    PERLND      62
    PERLND      63
    PERLND      64
*** OUTWASH
    PERLND      71
    PERLND      72
    PERLND      73
    PERLND      74
    PERLND      75
    PERLND      76
*** SATURATED
    PERLND      81
    PERLND      82
    PERLND      83
    PERLND      84
    PERLND      85
    PERLND      86
*** ROCK FOREST
    PERLND***   111
    PERLND***   112
    PERLND***   113
    PERLND***   114
*** ROCK PASTURE/AG
    PERLND***   121
    PERLND***   122
    PERLND***   123
    PERLND***   124
*** ROCK FOREST RESIDENTIAL
    PERLND***   131
    PERLND***   132
    PERLND***   133
    PERLND***   134
*** ROCK LOW DENSITY RESIDENTIAL
    PERLND***   141
    PERLND***   142
    PERLND***   143
    PERLND***   144
*** ROCK HIGH DENSITY RESIDENTIAL
    PERLND***   151
    PERLND***   152
    PERLND***   153
    PERLND***   154
*** ROCK COMMERCIAL/INDUSTRIAL
    PERLND***   161
    PERLND***   162
    PERLND***   163
    PERLND***   164
*** GROUNDWATER FROM OUTSIDE OF WATERSHED
    PERLND      950

*** EFFECTIVE IMPERVIOUS AREA
    IMPLND      91
    IMPLND      92
    IMPLND      93
    IMPLND      94
*** NORTH CREEK
*** RCHRES FOR STREAM CHANNELS
*** SITKA CREEK
    RCHRES      151
*** PENNY CREEK
    RCHRES      161
    RCHRES      171
    RCHRES      181
    RCHRES      191
*** SILVER/TAMBARK CREEK
    RCHRES      241
    RCHRES      251
    RCHRES      261
    RCHRES      271
    RCHRES      281
*** FILBERT CREEK
    RCHRES      291
*** NORTH CREEK
    RCHRES      311

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RCHRES 321
RCHRES 331
RCHRES 341
RCHRES 351
RCHRES 361
RCHRES 371
RCHRES 381
RCHRES 391
RCHRES 401
END INGRP
END OPN SEQUENCE

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COPY
TIMESERIES
# - # NPT NMN ***
1 999 1
END TIMESERIES
END COPY

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PERLND
GEN-INFO
*** <PLS ><-----Name----->NBLKS Unit-systems Printer BinaryOut
*** # - # User t-series Engl Metr Engl Metr
*** in out
11 TILL, FOREST, FLAT 1 1 1 1 61 0 91 0
12 TILL, FOREST, LOW 1 1 1 1 61 0 91 0
13 TILL, FOREST, MED 1 1 1 1 61 0 91 0
14 TILL, FOREST, STEEP 1 1 1 1 61 0 91 0

21 TILL, PAST/AG, FLAT 1 1 1 1 61 0 91 0
22 TILL, PAST/AG, LOW 1 1 1 1 61 0 91 0
23 TILL, PAST/AG, MED 1 1 1 1 61 0 91 0
24 TILL, PAST/AG STEEP 1 1 1 1 61 0 91 0

31 TILL, FOR RES, FLAT 1 1 1 1 61 0 91 0
32 TILL, FOR RES, LOW 1 1 1 1 61 0 91 0
33 TILL, FOR RES, MED 1 1 1 1 61 0 91 0
34 TILL, FOR RES STEEP 1 1 1 1 61 0 91 0

41 TILL, LD RES, FLAT 1 1 1 1 61 0 91 0
42 TILL, LD RES, LOW 1 1 1 1 61 0 91 0
43 TILL, LD RES, MED 1 1 1 1 61 0 91 0
44 TILL, LD RES, STEEP 1 1 1 1 61 0 91 0

51 TILL, HD RES, FLAT 1 1 1 1 61 0 91 0
52 TILL, HD RES, LOW 1 1 1 1 61 0 91 0
53 TILL, HD RES, MED 1 1 1 1 61 0 91 0
54 TILL, HD RES, STEEP 1 1 1 1 61 0 91 0

61 TILL, COMM/IND FLAT 1 1 1 1 61 0 91 0
62 TILL, COMM/IND LOW 1 1 1 1 61 0 91 0
63 TILL, COMM/IND MED 1 1 1 1 61 0 91 0
64 TILL, COMM/IND STEEP 1 1 1 1 61 0 91 0

71 OUTWASH, FOREST 1 1 1 1 61 0 91 0
72 OUTWASH, PASTURE 1 1 1 1 61 0 91 0
73 OUTWASH, FOR RES 1 1 1 1 61 0 91 0
74 OUTWASH, LD RES 1 1 1 1 61 0 91 0
75 OUTWASH, HD RES 1 1 1 1 61 0 91 0
76 OUTWASH, COMM/IND 1 1 1 1 61 0 91 0

81 SATURATED, FOREST 1 1 1 1 61 0 91 0
82 SATURATED, PAST/AG 1 1 1 1 61 0 91 0
83 SATURATED, FOR RES 1 1 1 1 61 0 91 0
84 SATURATED, LD RES 1 1 1 1 61 0 91 0
85 SATURATED, HD RES 1 1 1 1 61 0 91 0
86 SATURATED, COMM/IND 1 1 1 1 61 0 91 0

111 ROCK, FOREST, FLAT 1 1 1 1 61 0 91 0
112 ROCK, FOREST, LOW 1 1 1 1 61 0 91 0
113 ROCK, FOREST, MED 1 1 1 1 61 0 91 0
114 ROCK, FOREST, STEEP 1 1 1 1 61 0 91 0

121 ROCK, PAST/AG, FLAT 1 1 1 1 61 0 91 0
122 ROCK, PAST/AG, LOW 1 1 1 1 61 0 91 0
123 ROCK, PAST/AG, MED 1 1 1 1 61 0 91 0

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62      -214.    40.0
63      -328.    40.0
64      -355.    40.0
71      -335.    40.0
72      -375.    40.0
73      -335.    40.0
74      -356.    40.0
75      -367.    40.0
76      -429.    40.0
81      -333.    40.0
82      -325.    40.0
83      -333.    40.0
84      -310.    40.0
85      -325.    40.0
86      -293.    40.0
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112     -239.    40.0
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134     -355.    40.0
141     -181.    40.0
142     -216.    40.0
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152     -202.    40.0
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154     -349.    40.0
161     -148.    40.0
162     -214.    40.0
163     -328.    40.0
164     -355.    40.0
950     -    1.    40.0

```

END ATEMP-DAT

PWAT-PARM1

<PLS > PWATER variable monthly parameter value flags ***

- # CSNO RTOP UZFG VCS VUZ VNN VIFW VIRC VLE ***

11 950 0 0 0 0 0 0 0 0 1

END PWAT-PARM1

PWAT-PARM2

<PLS > PWATER input info: Part 2 ***

#	-	#	***FOREST	LZSN	INFILT	LSUR	SLSUR	KVARY	AGWRC
***TILL FOREST									
11				4.0	0.080	350.	0.024	0.45	0.996
12				3.5	0.070	300.	0.075	0.45	0.996
13				3.0	0.060	250.	0.124	0.45	0.996
14				2.5	0.050	200.	0.203	0.45	0.996
***TILL PASTURE/AG									
21				4.0	0.070	350.	0.025	0.45	0.996
22				3.5	0.060	300.	0.068	0.45	0.996
23				3.0	0.050	250.	0.116	0.45	0.996
24				2.5	0.040	200.	0.184	0.45	0.996
***TILL FOREST RESIDENTIAL									
31				4.0	0.080	350.	0.024	0.45	0.996
32				3.5	0.070	300.	0.075	0.45	0.996
33				3.0	0.060	250.	0.124	0.45	0.996
34				2.5	0.050	200.	0.203	0.45	0.996
***TILL LOW DENSITY RES									
41				4.0	0.040	350.	0.024	0.45	0.996
42				3.5	0.030	300.	0.070	0.45	0.996
43				3.0	0.025	250.	0.119	0.45	0.996
44				2.5	0.020	200.	0.180	0.45	0.996
***TILL HIGH DENSITY RES									
51				4.0	0.040	350.	0.023	0.45	0.996
52				3.5	0.030	300.	0.068	0.45	0.996
53				3.0	0.025	250.	0.116	0.45	0.996
54				2.5	0.020	200.	0.181	0.45	0.996
***TILL COMMERCIAL/INDUSTRIAL									

North Creek UCI File

61	4.0	0.040	350.	0.024	0.45	0.996			
62	3.5	0.030	300.	0.068	0.45	0.996			
63	3.0	0.025	250.	0.120	0.45	0.996			
64	2.5	0.020	200.	0.186	0.45	0.996			
***OUTWASH									
71	5.0	1.000	300.	0.082	0.3	0.996			
72	5.0	0.700	300.	0.046	0.3	0.996			
73	5.0	1.000	300.	0.082	0.3	0.996			
74	5.0	0.400	300.	0.059	0.3	0.996			
75	5.0	0.400	300.	0.049	0.3	0.996			
76	5.0	0.400	300.	0.040	0.3	0.996			
***SATURATED									
81	4.0	2.000	150.	0.048	0.5	0.996			
82	4.0	1.800	150.	0.022	0.5	0.996			
83	4.0	2.000	150.	0.048	0.5	0.996			
84	4.0	1.000	150.	0.026	0.5	0.996			
85	4.0	1.000	150.	0.040	0.5	0.996			
86	4.0	1.000	150.	0.032	0.5	0.996			
***ROCK FOREST									
111	4.0000	0.0500	400.	0.0100	0.5000	0.9920			
112	4.0000	0.0500	400.	0.0500	0.5000	0.9920			
113	4.0000	0.0500	400.	0.1000	0.5000	0.9920			
114	4.0000	0.0500	400.	0.2000	0.5000	0.9920			
***ROCK PASTURE/AG									
121	4.0000	0.0500	400.	0.0100	0.5000	0.9920			
122	4.0000	0.0500	400.	0.0500	0.5000	0.9920			
123	4.0000	0.0500	400.	0.1000	0.5000	0.9920			
124	4.0000	0.0500	400.	0.2000	0.5000	0.9920			
***ROCK FOREST RES									
131	4.0000	0.0500	400.	0.0100	0.5000	0.9920			
132	4.0000	0.0500	400.	0.0500	0.5000	0.9920			
133	4.0000	0.0500	400.	0.1000	0.5000	0.9920			
134	4.0000	0.0500	400.	0.2000	0.5000	0.9920			
***ROCK LOW DENSITY RES									
141	4.0000	0.0300	400.	0.0100	0.5000	0.9920			
142	4.0000	0.0300	400.	0.0200	0.5000	0.9920			
143	4.0000	0.0300	400.	0.1000	0.5000	0.9920			
144	4.0000	0.0300	400.	0.2000	0.5000	0.9920			
***ROCK HIGH DENSITY RES									
151	4.0000	0.0300	400.	0.0100	0.5000	0.9920			
152	4.0000	0.0300	400.	0.0500	0.5000	0.9920			
153	4.0000	0.0300	400.	0.1000	0.5000	0.9920			
154	4.0000	0.0300	400.	0.2000	0.5000	0.9920			
***ROCK COMMERCIAL/INDUSTRIAL									
161	4.0000	0.0300	400.	0.0100	0.5000	0.9920			
162	4.0000	0.0300	400.	0.0500	0.5000	0.9920			
163	4.0000	0.0300	400.	0.1000	0.5000	0.9920			
164	4.0000	0.0300	400.	0.2000	0.5000	0.9920			
***EXTERNAL GROUNDWATER									
950	4.5	0.060	400.	0.100	0.5	0.999			
END PWAT-PARM2									
PWAT-PARM3									
<PLS > *** PWATER input info: Part 3									
#	-	#	***PETMAX	PETMIN	INFEXP	INFILD	DEEPFR	BASETP	AGWETP
11	-	14			2.0	2.0	0.07	0.03	0.00
21	-	24			2.0	2.0	0.07	0.03	0.00
31	-	34			2.0	2.0	0.07	0.03	0.00
41	-	44			2.0	2.0	0.07	0.03	0.00
51	-	54			2.0	2.0	0.07	0.03	0.00
61	-	64			2.0	2.0	0.07	0.03	0.00
71	-	76			2.0	2.0	0.06	0.03	0.00
81	-	86			10.0	2.0	0.00	0.03	0.70
111	-	114			2.5000	2.0000	.00	0.	0.
121	-	124			2.5000	2.0000	.00	0.	0.
131	-	134			2.5000	2.0000	.00	0.	0.
141	-	144			2.5000	2.0000	.00	0.	0.
151	-	154			2.5000	2.0000	.00	0.	0.
161	-	164			2.5000	2.0000	.00	0.	0.
***EXTERNAL GROUNDWATER									
950					2.0	2.0	0.00	0.0	0.00
END PWAT-PARM3									

PWAT-PARM4		PWATER input info: Part 4					***
<PLS >		CEPSC	UZSN	NSUR	INTFW	IRC	LZETP ***
#	- #						
11		0.20	1.50	0.35	1.0	0.500	0.70
12		0.20	1.00	0.35	0.9	0.400	0.70
13		0.20	0.60	0.35	0.8	0.300	0.70
14		0.20	0.45	0.35	0.7	0.200	0.70
21		0.15	0.90	0.30	0.9	0.500	0.40
22		0.15	0.60	0.30	0.8	0.400	0.40
23		0.15	0.45	0.30	0.7	0.300	0.40
24		0.15	0.30	0.30	0.6	0.200	0.40
31		0.20	1.50	0.35	1.0	0.500	0.70
32		0.20	1.00	0.35	0.9	0.400	0.70
33		0.20	0.60	0.35	0.8	0.300	0.70
34		0.20	0.45	0.35	0.7	0.200	0.70
41		0.10	0.75	0.25	0.8	0.400	0.25
42		0.10	0.45	0.25	0.7	0.300	0.25
43		0.10	0.30	0.25	0.6	0.250	0.25
44		0.10	0.20	0.25	0.5	0.200	0.25
51		0.10	0.75	0.25	0.8	0.400	0.25
52		0.10	0.45	0.25	0.7	0.300	0.25
53		0.10	0.30	0.25	0.6	0.250	0.25
54		0.10	0.20	0.25	0.5	0.200	0.25
61		0.10	0.75	0.25	0.8	0.400	0.25
62		0.10	0.45	0.25	0.7	0.300	0.25
63		0.10	0.30	0.25	0.6	0.250	0.25
64		0.10	0.20	0.25	0.5	0.200	0.25
71		0.20	0.75	0.35	0.0	0.700	0.70
72		0.15	0.75	0.30	0.0	0.700	0.40
73		0.20	0.75	0.35	0.0	0.700	0.70
74	76	0.10	0.75	0.25	0.0	0.700	0.25
81		0.20	3.00	0.50	1.0	0.500	0.80
82		0.15	3.00	0.50	1.0	0.500	0.80
83		0.20	3.00	0.50	1.0	0.500	0.80
84	86	0.10	3.00	0.50	1.0	0.500	0.80
111		0.2000	0.500	0.3500	15.000	0.7000	0.7000
112		0.2000	0.400	0.3500	15.000	0.4000	0.7000
113		0.2000	0.300	0.3500	15.000	0.3000	0.7000
114		0.2000	0.200	0.3500	15.000	0.2000	0.7000
121		0.1500	0.300	0.2500	15.000	0.7000	0.2500
122		0.1500	0.200	0.2500	15.000	0.4000	0.2500
123		0.1500	0.150	0.2500	15.000	0.3000	0.2500
124		0.1500	0.100	0.2500	15.000	0.2000	0.2500
131		0.2000	0.500	0.3500	15.000	0.7000	0.7000
132		0.2000	0.400	0.3500	15.000	0.4000	0.7000
133		0.2000	0.300	0.3500	15.000	0.3000	0.7000
134		0.2000	0.200	0.3500	15.000	0.2000	0.7000
141		0.1000	0.200	0.2500	15.000	0.7000	0.2500
142		0.1000	0.150	0.2500	15.000	0.4000	0.2500
143		0.1000	0.100	0.2500	15.000	0.3000	0.2500
144		0.1000	0.050	0.2500	15.000	0.2000	0.2500
151		0.1000	0.200	0.2500	15.000	0.7000	0.2500
152		0.1000	0.150	0.2500	15.000	0.4000	0.2500
153		0.1000	0.100	0.2500	15.000	0.3000	0.2500
154		0.1000	0.050	0.2500	15.000	0.2000	0.2500
161		0.1000	0.200	0.2500	15.000	0.7000	0.2500
162		0.1000	0.150	0.2500	15.000	0.4000	0.2500
163		0.1000	0.100	0.2500	15.000	0.3000	0.2500
164		0.1000	0.050	0.2500	15.000	0.2000	0.2500
***EXTERNAL GROUNDWATER							
950		0.15	0.30	0.30	6.0	0.500	0.40
END PWAT-PARM4							

MON-LZETPARM

#	#	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	***
11	14	.60	.60	.60	.60	.70	.70	.70	.70	.70	.60	.60	.60	
21	24	.20	.20	.20	.25	.30	.35	.40	.40	.40	.35	.30	.20	
31	34	.60	.60	.60	.60	.70	.70	.70	.70	.70	.60	.60	.60	
41	64	.15	.15	.20	.20	.25	.25	.25	.25	.25	.20	.20	.15	
71		.60	.60	.60	.60	.60	.70	.70	.70	.70	.60	.60	.60	
72		.20	.20	.20	.25	.30	.35	.40	.40	.40	.35	.30	.20	
73		.60	.60	.60	.60	.60	.70	.70	.70	.70	.60	.60	.60	
74	76	.15	.15	.20	.20	.25	.25	.25	.25	.25	.20	.20	.15	
81	86	.50	.50	.50	.60	.70	.75	.80	.80	.75	.70	.60	.50	
111	114	.30	.30	.30	.40	.50	.60	.70	.70	.70	.50	.30	.30	
121	124	.20	.20	.20	.25	.25	.25	.25	.25	.25	.25	.20	.20	
131	134	.30	.30	.30	.40	.50	.60	.70	.70	.70	.50	.30	.30	
141	164	.15	.15	.20	.20	.25	.25	.25	.25	.25	.20	.20	.15	
950		.20	.20	.20	.25	.30	.35	.40	.40	.40	.35	.30	.20	

END MON-LZETPARM

PWAT-STATE1

<PLS > *** Initial conditions at start of simulation

#	-	#	***	CEPS	SURS	UZS	IFWS	LZS	AGWS	GWVS
11				0.00	0.0	0.50	0.0	2.5	5.00	0.03
12				0.00	0.0	0.30	0.0	2.5	5.00	0.03
13				0.00	0.0	0.20	0.0	2.5	5.00	0.03
14				0.00	0.0	0.15	0.0	2.5	5.00	0.03
21				0.00	0.0	0.40	0.0	2.5	5.00	0.03
22				0.00	0.0	0.25	0.0	2.5	5.00	0.03
23				0.00	0.0	0.15	0.0	2.5	5.00	0.03
24				0.00	0.0	0.12	0.0	2.5	5.00	0.03
31				0.00	0.0	0.50	0.0	2.5	5.00	0.03
32				0.00	0.0	0.30	0.0	2.5	5.00	0.03
33				0.00	0.0	0.20	0.0	2.5	5.00	0.03
34				0.00	0.0	0.15	0.0	2.5	5.00	0.03
41				0.00	0.0	0.25	0.0	2.5	5.00	0.03
42				0.00	0.0	0.15	0.0	2.5	5.00	0.03
43				0.00	0.0	0.10	0.0	2.5	5.00	0.03
44				0.00	0.0	0.06	0.0	2.5	5.00	0.03
51				0.00	0.0	0.25	0.0	2.5	5.00	0.03
52				0.00	0.0	0.15	0.0	2.5	5.00	0.03
53				0.00	0.0	0.10	0.0	2.5	5.00	0.03
54				0.00	0.0	0.06	0.0	2.5	5.00	0.03
61				0.00	0.0	0.25	0.0	2.5	5.00	0.03
62				0.00	0.0	0.15	0.0	2.5	5.00	0.03
63				0.00	0.0	0.10	0.0	2.5	5.00	0.03
64				0.00	0.0	0.06	0.0	2.5	5.00	0.03
71				0.00	0.0	0.25	0.0	3.0	5.00	0.05
72				0.00	0.0	0.25	0.0	3.0	5.00	0.05
73				0.00	0.0	0.25	0.0	3.0	5.00	0.05
74	76			0.00	0.0	0.25	0.0	3.0	5.00	0.05
81				0.00	0.0	0.20	0.0	3.2	5.00	0.02
82				0.00	0.0	0.20	0.0	3.2	5.00	0.02
83				0.00	0.0	0.20	0.0	3.2	5.00	0.02
84	86			0.00	0.0	0.20	0.0	3.2	5.00	0.02
111				0.	0.	0.0150	0.	1.50	2.90	.07
112				0.	0.	0.0100	0.	1.45	3.00	.06
113				0.	0.	0.0080	0.	1.40	3.10	.06
114				0.	0.	0.0060	0.	1.40	3.10	.06
121				0.	0.	0.0150	0.	1.50	2.90	.07
122				0.	0.	0.0100	0.	1.45	3.00	.06
122				0.	0.	0.0080	0.	1.40	3.10	.06
123				0.	0.	0.0060	0.	1.40	3.10	.06
131				0.	0.	0.0150	0.	1.50	2.90	.07

132	0.	0.	0.0100	0.	1.45	3.00	.06
133	0.	0.	0.0080	0.	1.40	3.10	.06
134	0.	0.	0.0060	0.	1.40	3.10	.06
141	0.	0.	0.0100	0.	3.00	2.70	.28
142	0.	0.	0.0080	0.	3.00	2.80	.23
143	0.	0.	0.0040	0.	3.00	2.80	.23
144	0.	0.	0.0020	0.	3.00	2.90	.22
151	0.	0.	0.0100	0.	3.00	2.70	.28
152	0.	0.	0.0080	0.	3.00	2.80	.23
153	0.	0.	0.0040	0.	3.00	2.80	.23
154	0.	0.	0.0020	0.	3.00	2.90	.22
161	0.	0.	0.0100	0.	3.00	2.70	.28
162	0.	0.	0.0080	0.	3.00	2.80	.23
163	0.	0.	0.0040	0.	3.00	2.80	.23
164	0.	0.	0.0020	0.	3.00	2.90	.22
950	0.00	0.0	0.20	0.0	2.5	5.00	0.03

END PWAT-STATE1

*** Section PSTEMP - SOIL TEMPERATURE

PSTEMP-PARM1
 # # SLTV ULTV LGTV TSOP ***
 11 164 1 1 1 1
 950 1 1 1 1
 END PSTEMP-PARM1

PSTEMP-PARM2
 # # ASLT BSLT ULTP1 ULTP2 LGTP1 LGTP2 ***
 11 164 32.0 0.95 32.0 0.90 32.0 0.0
 950 32.0 0.95 32.0 0.90 32.0 0.0
 END PSTEMP-PARM2

MON-ASLT
 # # JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC ***
 11 950 36.0 37.0 39.5 43.0 47.5 53.5 57.5 57.5 52.5 45.5 42.0 37.5
 END MON-ASLT

MON-BSLT
 # # JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC ***
 11 950 0.25 0.25 0.25 0.25 0.30 0.30 0.30 0.30 0.30 0.30 0.25 0.25
 END MON-BSLT

MON-ULTP1
 # # JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC ***
 11 950 38.0 38.0 39.0 42.0 43.0 44.0 44.0 44.0 43.0 39.0 38.0 38.0
 END MON-ULTP1

MON-ULTP2
 # # JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC ***
 11 950 0.25 0.25 0.25 0.25 0.25 0.30 0.30 0.30 0.30 0.30 0.25 0.25
 END MON-ULTP2

MON-LGTP1
 # # JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC ***
 11 950 48. 49. 50. 52. 53. 55. 56. 55. 53. 51. 50. 49.
 END MON-LGTP1

PSTEMP-TEMPS
 # # AIRTC SLTMP ULTMP LGTMP ***
 11 950 50.0 55.0 60.0 60.0
 END PSTEMP-TEMPS

*** Section PWTGAS - Water Temperature and Dissolved Oxygen & CO2

PWT-PARM1
 <PLS> Flags for PWTGAS ***
 # # IDV ICV GDV GCV ***
 11 950 1 1 1 1
 END PWT-PARM1

PWT-PARM2
 # # ELEV IDOXP ICO2P ADOXP ACO2P ***

```

***TILL FOREST
  11      418.      8.80      0.00      8.80      0.00
  12      367.      8.80      0.00      8.80      0.00
  13      304.      8.80      0.00      8.80      0.00
  14      251.      8.80      0.00      8.80      0.00
***TILL PASTURE/AG
  21      409.      8.80      0.00      8.80      0.00
  22      372.      8.80      0.00      8.80      0.00
  23      303.      8.80      0.00      8.80      0.00
  24      259.      8.80      0.00      8.80      0.00
***TILL FOREST RESIDENTIAL
  31      418.      8.80      0.00      8.80      0.00
  32      367.      8.80      0.00      8.80      0.00
  33      304.      8.80      0.00      8.80      0.00
  34      251.      8.80      0.00      8.80      0.00
***TILL LOW DENSITY RES
  41      425.      8.80      0.00      8.80      0.00
  42      390.      8.80      0.00      8.80      0.00
  43      330.      8.80      0.00      8.80      0.00
  44      283.      8.80      0.00      8.80      0.00
***TILL HIGH DENSITY RES
  51      452.      8.80      0.00      8.80      0.00
  52      404.      8.80      0.00      8.80      0.00
  53      338.      8.80      0.00      8.80      0.00
  54      257.      8.80      0.00      8.80      0.00
***TILL COMMERCIAL/INDUSTRIAL
  61      458.      8.80      0.00      8.80      0.00
  62      392.      8.80      0.00      8.80      0.00
  63      278.      8.80      0.00      8.80      0.00
  64      251.      8.80      0.00      8.80      0.00
***OUTWASH
  71      271.      8.80      0.00      8.80      0.00
  72      231.      8.80      0.00      8.80      0.00
  73      271.      8.80      0.00      8.80      0.00
  74      250.      8.80      0.00      8.80      0.00
  75      239.      8.80      0.00      8.80      0.00
  76      177.      8.80      0.00      8.80      0.00
***SATURATED
  81      273.      8.80      0.00      8.80      0.00
  82      281.      8.80      0.00      8.80      0.00
  83      273.      8.80      0.00      8.80      0.00
  84      296.      8.80      0.00      8.80      0.00
  85      281.      8.80      0.00      8.80      0.00
  86      313.      8.80      0.00      8.80      0.00
***ROCK FOREST
 111      418.      8.80      0.00      8.80      0.00
 112      367.      8.80      0.00      8.80      0.00
 113      304.      8.80      0.00      8.80      0.00
 114      251.      8.80      0.00      8.80      0.00
***ROCK PASTURE/AG
 121      409.      8.80      0.00      8.80      0.00
 122      372.      8.80      0.00      8.80      0.00
 123      303.      8.80      0.00      8.80      0.00
 124      259.      8.80      0.00      8.80      0.00
***ROCK FOREST RES
 131      418.      8.80      0.00      8.80      0.00
 132      367.      8.80      0.00      8.80      0.00
 133      304.      8.80      0.00      8.80      0.00
 134      251.      8.80      0.00      8.80      0.00P
***ROCK LOW DENSITY RES
 141      425.      8.80      0.00      8.80      0.00
 142      390.      8.80      0.00      8.80      0.00
 143      330.      8.80      0.00      8.80      0.00
 144      283.      8.80      0.00      8.80      0.00
***ROCK HIGH DENSITY RES
 151      452.      8.80      0.00      8.80      0.00
 152      404.      8.80      0.00      8.80      0.00
 153      338.      8.80      0.00      8.80      0.00
 154      257.      8.80      0.00      8.80      0.00
***ROCK COMMERCIAL/INDUSTRIAL
 161      458.      8.80      0.00      8.80      0.00
 162      392.      8.80      0.00      8.80      0.00
 163      278.      8.80      0.00      8.80      0.00
 164      251.      8.80      0.00      8.80      0.00
 950      251.      8.80      0.00      8.80      0.00
END PWT-PARM2

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MON-IFWDOX
# # JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC ***
11 950 11.0 10.0 10.0 10.0 9.0 7.0 6.0 6.0 7.0 9.0 10.0 11.0
END MON-IFWDOX

MON-GRNDDOX
# # JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC ***
11 950 10.0 9.0 9.0 9.0 8.0 7.0 6.0 6.0 7.0 8.0 9.0 10.0
END MON-GRNDDOX

MON-IFWCO2
# # JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC ***
11 950 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3
END MON-IFWCO2

MON-GRNDCO2
# # JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC ***
11 950 0.45 0.45 0.45 0.45 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.45
END MON-GRNDCO2

PWT-GASES
*** <PLS> Initial Concentrations ***
# # SODOX SOCO2 IODOX IOCO2 AODOX AOCO2 ***
11 950 9.0 0.2 9.0 0.2 9.0 0.1
END PWT-GASES

*** Section SEDMNT - Sediment

SED-PARM1
*** <PLS > Sediment parameters 1
*** x - x CRV VSIV SDOP
11 164 1 0 1
END SED-PARM1

SED-PARM2
*** <PLS > SMPF KRER JRER AFFIX COVER NVSI
*** x - x (/day) lb/ac-day

***TILL FOREST
11 14 1.0 0.500 2.0 0.003 0.0 10.0
***TILL PASTURE/AG
21 24 1.0 0.500 2.0 0.003 0.0 30.0
***TILL FOREST RESIDENTIAL
31 34 1.0 0.500 2.0 0.003 0.0 15.0
***TILL LOW DENSITY RES
41 44 1.0 0.500 2.0 0.003 0.0 40.0
***TILL HIGH DENSITY RES
51 54 1.0 0.500 2.0 0.003 0.0 50.0
***TILL COMMERCIAL/INDUSTRIAL
61 64 1.0 0.500 2.0 0.003 0.0 100.0
***OUTWASH
71 1.0 0.550 2.0 0.003 0.0 10.0
72 1.0 0.550 2.0 0.003 0.0 20.0
73 1.0 0.550 2.0 0.003 0.0 15.0
74 1.0 0.550 2.0 0.003 0.0 30.0
75 1.0 0.550 2.0 0.003 0.0 50.0
76 1.0 0.550 2.0 0.003 0.0 100.0
***SATURATED
81 1.0 0.650 2.0 0.010 0.0 10.0
82 1.0 0.650 2.0 0.010 0.0 20.0
83 1.0 0.650 2.0 0.010 0.0 15.0
84 1.0 0.650 2.0 0.010 0.0 30.0
85 1.0 0.650 2.0 0.010 0.0 50.0
86 1.0 0.650 2.0 0.010 0.0 100.0
***ROCK FOREST
111 1.0 0.400 2.0 0.001 0.0 10.0
112 1.0 0.400 2.0 0.001 0.0 10.0
113 1.0 0.400 2.0 0.001 0.0 10.0
114 1.0 0.400 2.0 0.001 0.0 10.0
***ROCK PASTURE/AG
121 1.0 0.400 2.0 0.001 0.0 40.0
122 1.0 0.400 2.0 0.001 0.0 40.0
123 1.0 0.400 2.0 0.001 0.0 40.0
124 1.0 0.400 2.0 0.001 0.0 40.0
***ROCK FOREST RES

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131      1.0    0.400    2.0    0.001    0.0    15.0
132      1.0    0.400    2.0    0.001    0.0    15.0
133      1.0    0.400    2.0    0.001    0.0    15.0
134      1.0    0.400    2.0    0.001    0.0    15.0
***ROCK LOW DENSITY RES
141      1.0    0.400    2.0    0.001    0.0    40.0
142      1.0    0.400    2.0    0.001    0.0    40.0
143      1.0    0.400    2.0    0.001    0.0    40.0
144      1.0    0.400    2.0    0.001    0.0    40.0
***ROCK HIGH DENSITY RES
151      1.0    0.500    2.0    0.001    0.0    60.0
152      1.0    0.500    2.0    0.001    0.0    60.0
153      1.0    0.500    2.0    0.001    0.0    60.0
154      1.0    0.500    2.0    0.001    0.0    60.0
***ROCK COMMERCIAL/INDUSTRIAL
161      1.0    0.600    2.0    0.001    0.0    100.0
162      1.0    0.600    2.0    0.001    0.0    100.0
163      1.0    0.600    2.0    0.001    0.0    100.0
164      1.0    0.600    2.0    0.001    0.0    100.0
END SED-PARM2

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SED-PARM3
*** <PLS > Sediment parameter 3
*** x - x      KSER      JSER      KGER      JGER
***TILL FOREST
  11  14      0.20      2.      0.      2.
***TILL PASTURE/AG
  21  24      0.20      2.      0.      2.
***TILL FOREST RESIDENTIAL
  31  34      0.30      2.      0.      2.
***TILL LOW DENSITY RES
  41  44      0.09      2.      0.      2.
***TILL HIGH DENSITY RES
  51  54      0.09      2.      0.      2.
***TILL COMMERCIAL/INDUSTRIAL
  61  64      0.15      2.      0.      2.
***OUTWASH
  71      0.20      2.      0.      2.
  72      0.20      2.      0.      2.
  73      0.30      2.      0.      2.
  74      0.09      2.      0.      2.
  75      0.09      2.      0.      2.
  76      0.15      2.      0.      2.
***SATURATED
  81      0.10      2.      0.      2.
  82      0.10      2.      0.      2.
  83      0.15      2.      0.      2.
  84      0.09      2.      0.      2.
  85      0.09      2.      0.      2.
  86      0.15      2.      0.      2.
***ROCK FOREST
 111      0.10      2.0      0.0      2.0
 112      0.10      2.0      0.0      2.0
 113      0.10      2.0      0.0      2.0
 114      0.10      2.0      0.0      2.0
***ROCK PASTURE/AG
 121      0.13      2.0      0.0      2.0
 122      0.13      2.0      0.0      2.0
 123      0.13      2.0      0.0      2.0
 124      0.13      2.0      0.0      2.0
***ROCK FOREST RES
 131      0.12      2.0      0.0      2.0
 132      0.12      2.0      0.0      2.0
 133      0.12      2.0      0.0      2.0
 134      0.12      2.0      0.0      2.0
***ROCK LOW DENSITY RES
 141      0.13      2.0      0.0      2.0
 142      0.13      2.0      0.0      2.0
 143      0.13      2.0      0.0      2.0
 144      0.13      2.0      0.0      2.0
***ROCK HIGH DENSITY RES
 151      0.22      2.0      0.0      2.0
 152      0.22      2.0      0.0      2.0
 153      0.22      2.0      0.0      2.0
 154      0.22      2.0      0.0      2.0
***ROCK COMMERCIAL/INDUSTRIAL

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161          0.22          2.0          0.0          2.0
162          0.22          2.0          0.0          2.0
163          0.22          2.0          0.0          2.0
164          0.22          2.0          0.0          2.0
END SED-PARM3

```

MON-COVER

```

*** <PLS > Monthly values for erosion related cover
*** x - x JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
***TILL FOREST
  11  14  0.97  0.97  0.97  0.97  0.97  0.97  0.97  0.97  0.97  0.97  0.97
***TILL PASTURE/AG
  21  24  0.65  0.60  0.55  0.50  0.55  0.65  0.75  0.85  0.85  0.80  0.80  0.70
***TILL FOREST RESIDENTIAL
  31  34  0.93  0.93  0.93  0.94  0.96  0.96  0.96  0.96  0.96  0.94  0.93  0.93
***TILL LOW DENSITY RES
  41  44  0.90  0.90  0.90  0.91  0.93  0.93  0.93  0.93  0.93  0.91  0.90  0.90
***TILL HIGH DENSITY RES
  51  54  0.70  0.70  0.70  0.73  0.75  0.75  0.75  0.75  0.75  0.73  0.70  0.70
***TILL COMMERCIAL/INDUSTRIAL
  61  64  0.60  0.60  0.60  0.65  0.67  0.69  0.69  0.69  0.67  0.65  0.60  0.60
***OUTWASH
  71          0.97  0.97  0.97  0.97  0.97  0.97  0.97  0.97  0.97  0.97  0.97  0.97
  72          0.65  0.60  0.55  0.50  0.55  0.65  0.75  0.85  0.85  0.80  0.80  0.70
  73          0.93  0.93  0.93  0.94  0.96  0.96  0.96  0.96  0.96  0.94  0.93  0.93
  74          0.90  0.90  0.90  0.91  0.93  0.93  0.93  0.93  0.93  0.91  0.90  0.90
  75          0.70  0.70  0.70  0.73  0.75  0.75  0.75  0.75  0.75  0.73  0.70  0.70
  76          0.60  0.60  0.60  0.65  0.67  0.69  0.69  0.69  0.67  0.65  0.60  0.60
***SATURATED
  81          0.97  0.97  0.97  0.97  0.97  0.97  0.97  0.97  0.97  0.97  0.97  0.97
  82          0.65  0.60  0.55  0.50  0.55  0.65  0.75  0.85  0.85  0.80  0.80  0.70
  83          0.93  0.93  0.93  0.94  0.96  0.96  0.96  0.96  0.96  0.94  0.93  0.93
  84          0.90  0.90  0.90  0.91  0.93  0.93  0.93  0.93  0.93  0.91  0.90  0.90
  85          0.70  0.70  0.70  0.73  0.75  0.75  0.75  0.75  0.75  0.73  0.70  0.70
  86          0.60  0.60  0.60  0.65  0.67  0.69  0.69  0.69  0.67  0.65  0.60  0.60
***ROCK FOREST
 111 114  0.97  0.97  0.97  0.97  0.97  0.97  0.97  0.97  0.97  0.97  0.97  0.97
***ROCK PASTURE/AG
 121 124  0.65  0.60  0.55  0.50  0.55  0.65  0.75  0.85  0.85  0.80  0.80  0.70
***ROCK FOREST RES
 131 134  0.93  0.93  0.93  0.94  0.96  0.96  0.96  0.96  0.96  0.94  0.93  0.93
***ROCK LOW DENSITY RES
 141 144  0.90  0.90  0.90  0.91  0.93  0.93  0.93  0.93  0.93  0.91  0.90  0.90
***ROCK HIGH DENSITY RES
 151 154  0.70  0.70  0.70  0.73  0.75  0.75  0.75  0.75  0.75  0.73  0.70  0.70
***ROCK COMMERCIAL/INDUSTRIAL
 161 164  0.60  0.60  0.60  0.65  0.67  0.69  0.69  0.69  0.67  0.65  0.60  0.60
END MON-COVER

```

SED-STOR

```

*** <PLS >
*** x - x Detached sediment storage (tons/acre)
***TILL FOREST
  11  14          0.05
***TILL PASTURE/AG
  21  24          0.12
***TILL FOREST RESIDENTIAL
  31  34          0.06
***TILL LOW DENSITY RES
  41  44          0.06
***TILL HIGH DENSITY RES
  51  54          0.05
***TILL COMMERCIAL/INDUSTRIAL
  61  64          0.07
***OUTWASH
  71          0.07
  72          0.12
  73          0.06
  74          0.06
  75          0.05
  76          0.12
***SATURATED
  81          0.05
  82          0.12
  83          0.06
  84          0.06

```



```

85          0.05
86          0.12
***ROCK FOREST
111         0.03
112         0.03
113         0.03
114         0.03
***ROCK PASTURE/AG
121         0.03
122         0.03
123         0.03
124         0.03
***ROCK FOREST RES
131         0.03
132         0.03
133         0.03
134         0.03
***ROCK LOW DENSITY RES
141         0.03
142         0.03
143         0.03
144         0.03
***ROCK HIGH DENSITY RES
151         0.03
152         0.03
153         0.03
154         0.03
***ROCK COMMERCIAL/INDUSTRIAL
161         0.03
162         0.03
163         0.03
164         0.03
END SED-STOR

*** Section PQUAL - Water Quality Constituents ***

NQUALS
*** <PLS >
# # NQUAL *** (1=NO3, 2=NH3, 3=PO4, 4=BOD, 5=ALK, 6=Silica, 7=E-Coli)
11 950 7
END NQUALS

PQL-AD-FLAGS
***
*** < PLS> QUAL1 QUAL2 QUAL3 QUAL4 QUAL5 QUAL6 QUAL7 QUAL8 QUAL9 QUAL10
*** x - x <F><C> <F><C> <F><C> <F><C> <F><C> <F><C> <F><C> <F><C> <F><C> <F><C>
11 950 0 -1 0 -1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
END PQL-AD-FLAGS

QUAL-PROPS
*** <PLS > Identifiers and Flags
*** x - x QUALID QTID QSD VPFW VPFS QSO VQO QIFW VIQC QAGW VAQC
11 950NO2+NO3 LBS 0 0 0 2 1 1 3 1 3
END QUAL-PROPS

QUAL-INPUT
***
*** Storage on surface and nonseasonal parameters
*** SQO POTFW POTFS ACQOP SQOLIM WSQOP IOQC AOQC
*** <PLS > qty/ac qty/ton qty/ton qty/ ac.day qty/ac in/hr qty/ft3 qty/ft3
*** x - x
11 14 0. 0. 0. 0. 1.e-6 1.5 0. 0.
21 24 0. 0. 0. 0. 1.e-6 0.5 0. 0.
31 34 0. 0. 0. 0. 1.e-6 0.9 0. 0.
41 64 0. 0. 0. 0. 1.e-6 0.5 0. 0.
71 0. 0. 0. 0. 0. 1.e-6 1.5 0. 0.
72 0. 0. 0. 0. 0. 1.e-6 0.5 0. 0.
73 0. 0. 0. 0. 0. 1.e-6 0.9 0. 0.
74 76 0. 0. 0. 0. 1.e-6 0.5 0. 0.
81 0. 0. 0. 0. 0. 1.e-6 1.5 0. 0.
82 0. 0. 0. 0. 0. 1.e-6 0.5 0. 0.
83 0. 0. 0. 0. 0. 1.e-6 0.9 0. 0.
84 950 0. 0. 0. 0. 1.e-6 0.5 0. 0.
END QUAL-INPUT

MON-ACCUM
ACCUMULATION RATE NO2 NO3 (lbs NO3-N/ac/day) ***

```

```

*** x - x JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
11 14.0002.0002.0002.0002.0006.0006.0006.0006.0006.0006.0002.0002
21 24.0006.0006.0006.0006.0012.0027.0027.0027.0027.0027.0024.0015
31 34.0009.0009.0009.0006.0006.0006.0006.0006.0006.0006.0006.0009
41 44.0018.0018.00180.003.0033.0033.0033.0033.0033.00330.003.0018
51 54.0021.0021.00210.003.0036.0036.0036.0036.0036.00360.003.0021
61 64.0024.0024.0024.0033.0039.0039.0039.0039.0039.0039.0033.0024
71 .0002.0002.0002.0002.0006.0006.0006.0006.0006.0006.0002.0002
72 .0006.0006.0006.0006.0012.0027.0027.0027.0027.0027.0024.0015
73 .0009.0009.0009.0006.0006.0006.0006.0006.0006.0006.0006.0009
74 .0018.0018.00180.003.0033.0033.0033.0033.0033.00330.003.0018
75 .0021.0021.00210.003.0036.0036.0036.0036.0036.00360.003.0021
76 .0024.0024.0024.0033.0039.0039.0039.0039.0039.0039.0033.0024
81 .0002.0002.0002.0002.0006.0006.0006.0006.0006.0006.0002.0002
82 .0006.0006.0006.0006.0012.0027.0027.0027.0027.0027.0024.0015
83 .0009.0009.0009.0006.0006.0006.0006.0006.0006.0006.0006.0009
84 .0018.0018.00180.003.0033.0033.0033.0033.0033.00330.003.0018
85 .0021.0021.00210.003.0036.0036.0036.0036.0036.00360.003.0021
86 .0024.0024.0024.0033.0039.0039.0039.0039.0039.0039.0033.0024
950 0.0080.0080.0080.0110.0130.0130.0130.0130.0130.0130.0110.008
END MON-ACCUM

```

MON-SQOLIM

Limiting Storage for NO2 NO3 (lbs NO3-N/ac)

```

*** x - x JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
11 14.0004.0004.0004.0006.0012.0012.0012.0012.0012.0012.0006.0006
21 240.0060.0060.0060.0060.0090.0150.0150.0150.0150.015.0114.0072
31 34.0018.0018.0018.0018.0024.0024.0024.0024.0024.0024.0024.0018
41 440.0090.0090.0120.0120.0150.0150.0150.0150.0150.0150.0120.012
51 540.0150.015.0186.0186.0228.0228.0228.0228.0228.0228.0186.0186
61 64.0168.0168.0204.0204.0246.0246.0246.0246.0246.0246.0204.0204
71 .0004.0004.0004.0006.0012.0012.0012.0012.0012.0012.0006.0006
72 0.0060.0060.0060.0060.0090.0150.0150.0150.0150.015.0114.0072
73 .0018.0018.0018.0018.0024.0024.0024.0024.0024.0024.0024.0018
74 0.0090.0090.0120.0120.0150.0150.0150.0150.0150.0150.0120.012
75 0.0150.015.0186.0186.0228.0228.0228.0228.0228.0228.0186.0186
76 .0168.0168.0204.0204.0246.0246.0246.0246.0246.0246.0204.0204
81 .0004.0004.0004.0006.0012.0012.0012.0012.0012.0012.0006.0006
82 0.0060.0060.0060.0060.0090.0150.0150.0150.0150.015.0114.0072
83 .0018.0018.0018.0018.0024.0024.0024.0024.0024.0024.0024.0018
84 0.0090.0090.0120.0120.0150.0150.0150.0150.0150.0150.0120.012
85 0.0150.015.0186.0186.0228.0228.0228.0228.0228.0228.0186.0186
86 .0168.0168.0204.0204.0246.0246.0246.0246.0246.0246.0204.0204
950 0.0280.0280.0340.0340.0410.0410.0410.0410.0410.0410.0340.034
END MON-SQOLIM

```

MON-IFLW-CONC

Interflow Concentration of NO3-N (mg/l)

```

*** x - x JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
11 14 1.05 1.05 0.75 0.65 0.4 0.35 0.35 0.35 0.35 0.35 0.63 0.91
21 24 10.5 11.1 4.95 4.5 3.75 3 3 3 3 3.15 8.1 9
31 0.8 0.8 0.48 0.42 0.3 0.21 0.21 0.21 0.21 0.24 0.55 0.7
32 34 1.6 1.6 1.6 1.4 1. 0.7 0.7 0.7 0.7 0.8 1.1 1.4
41 44 1.19 1.19 0.68 0.6 0.44 0.28 0.28 0.28 0.28 0.32 0.84 1.05
51 54 1.26 1.26 0.72 0.64 0.48 0.4 0.4 0.4 0.4 0.4 0.84 1.12
61 64 2.4 2.4 1.8 1.8 1.8 1.8 1.8 1.8 1.8 2.4 2.4
71 1.05 1.05 0.75 0.65 0.4 0.35 0.35 0.35 0.35 0.35 0.63 0.91
72 10.5 11.1 4.95 4.5 3.75 3 3 3 3 3.15 8.1 9
73 0.8 0.8 0.48 0.42 0.3 0.21 0.21 0.21 0.21 0.24 0.55 0.7
74 1.19 1.19 0.68 0.6 0.44 0.28 0.28 0.28 0.28 0.32 0.84 1.05
75 1.26 1.26 0.72 0.64 0.48 0.4 0.4 0.4 0.4 0.4 0.84 1.12
76 2.4 2.4 1.8 1.8 1.8 1.8 1.8 1.8 1.8 2.4 2.4
81 1.05 1.05 0.75 0.65 0.4 0.35 0.35 0.35 0.35 0.35 0.63 0.91
82 10.5 11.1 4.95 4.5 3.75 3 3 3 3 3.15 8.1 9
83 0.8 0.8 0.48 0.42 0.3 0.21 0.21 0.21 0.21 0.24 0.55 0.7
84 1.19 1.19 0.68 0.6 0.44 0.28 0.28 0.28 0.28 0.32 0.84 1.05
85 1.26 1.26 0.72 0.64 0.48 0.4 0.4 0.4 0.4 0.4 0.84 1.12
86 2.4 2.4 1.8 1.8 1.8 1.8 1.8 1.8 1.8 2.4 2.4
950 1.2 1.2 1.2 1.2 1.2 1.2 1.2 1.2 1.2 1.2 1.2 1.2
END MON-IFLW-CONC

```

MON-GRND-CONC

Active Groundwater Concentration of NO3-N (mg/l)

```

*** x - x JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
11 14 0.22 0.22 0.22 0.2 0.18 0.12 0.12 0.12 0.12 0.12 0.16 0.2
21 24 16 16 12.8 11.2 9.6 9.6 9.6 9.6 9.6 10.4 16 16

```

```

31      0.6 0.6 0.48 0.44 0.32 0.28 0.28 0.28 0.28 0.28 0.4 0.55
32 34 1.2 1.2 1.2 1.1 0.8 0.7 0.7 0.7 0.7 0.7 0.8 1.1
41 440.8450.845 0.65 0.6 0.45 0.4 0.4 0.4 0.4 0.4 0.40.585 0.78
54 0.78 0.78 0.65 0.6 0.45 0.4 0.4 0.4 0.4 0.4 0.4 0.54 0.72
61 64 2.4 2.4 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 2.4 2.4
71      0.22 0.22 0.22 0.2 0.18 0.12 0.12 0.12 0.12 0.12 0.12 0.16 0.2
72      16 16 12.8 11.2 9.6 9.6 9.6 9.6 9.6 9.6 10.4 16 16
73      0.6 0.6 0.48 0.44 0.32 0.28 0.28 0.28 0.28 0.28 0.4 0.55
74 0.8450.845 0.65 0.6 0.45 0.4 0.4 0.4 0.4 0.4 0.40.585 0.78
75 0.78 0.78 0.65 0.6 0.45 0.4 0.4 0.4 0.4 0.4 0.4 0.54 0.72
76 2.4 2.4 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 2.4 2.4
81      0.22 0.22 0.22 0.2 0.18 0.12 0.12 0.12 0.12 0.12 0.12 0.16 0.2
82      16 16 12.8 11.2 9.6 9.6 9.6 9.6 9.6 9.6 10.4 16 16
83      0.6 0.6 0.48 0.44 0.32 0.28 0.28 0.28 0.28 0.28 0.4 0.55
84 0.8450.845 0.65 0.6 0.45 0.4 0.4 0.4 0.4 0.4 0.40.585 0.78
85 0.78 0.78 0.65 0.6 0.45 0.4 0.4 0.4 0.4 0.4 0.4 0.54 0.72
86 2.4 2.4 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 2.4 2.4
950 1.2 1.2 1.2 1.2 1.2 1.2 1.2 1.2 1.2 1.2 1.2 1.2 1.2
END MON-GRND-CONC

```

```

*** QUAL #2 NH3
QUAL-PROPS
*** <PLS > Identifiers and Flags
*** x - x QUALID QTID QSD VPFW VPFS QSO VQO QIFW VIQC QAGW VAQC
11 950NH3 LBS 0 0 0 2 1 1 3 1 3
END QUAL-PROPS

```

```

QUAL-INPUT
*** Storage on surface and nonseasonal parameters
*** SQO POTFW POTFS ACQOP SQOLIM WSQOP IOQC AOQC
*** <PLS > qty/ac qty/ton qty/ton qty/ qty/ qty/ac in/hr qty/ft3 qty/ft3
*** x - x ac.day
11 14 0. 0. 0. 0. 1.e-6 1.5 0. 0.
21 24 0. 0. 0. 0. 1.e-6 0.5 0. 0.
31 34 0. 0. 0. 0. 1.e-6 0.9 0. 0.
41 64 0. 0. 0. 0. 1.e-6 0.5 0. 0.
71 0. 0. 0. 0. 1.e-6 1.5 0. 0.
72 0. 0. 0. 0. 1.e-6 0.5 0. 0.
73 0. 0. 0. 0. 1.e-6 0.9 0. 0.
74 76 0. 0. 0. 0. 1.e-6 0.5 0. 0.
81 0. 0. 0. 0. 1.e-6 1.5 0. 0.
82 0. 0. 0. 0. 1.e-6 0.5 0. 0.
83 0. 0. 0. 0. 1.e-6 0.9 0. 0.
84 950 0. 0. 0. 0. 1.e-6 0.5 0. 0.
END QUAL-INPUT

```

```

MON-ACCUM
*** <PLS > Value at start of each month for accum rate of QUALOF (lb/ac.day)
*** x - x JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
11 14.0002.0002.0002.0002.0002.0002.0002.0002.0002.0002.0002.0002
21 24.0002.0002.0003.0004.0004.0004.0004.0004.0004.0004.0004.0002
31 34.0004.0004.0004.0005.0005.0005.0005.0005.0005.0005.0005.0004
41 44.0005.0005.00050.0010.0010.0010.0010.0010.0010.0010.001.0004
51 540.0010.0010.001.0015.0015.0015.0015.0015.0015.0015.00150.001
61 64.0025.0025.00250.0030.0030.0030.0030.0030.0030.0030.003.0025
71 .0002.0002.0002.0002.0002.0002.0002.0002.0002.0002.0002.0002
72 .0002.0002.0003.0004.0004.0004.0004.0004.0004.0004.0004.0002
73 .0004.0004.0004.0005.0005.0005.0005.0005.0005.0005.0005.0004
74 .0005.0005.00050.0010.0010.0010.0010.0010.0010.0010.001.0004
75 0.0010.0010.001.0015.0015.0015.0015.0015.0015.0015.00150.001
76 .0025.0025.00250.0030.0030.0030.0030.0030.0030.0030.003.0025
81 .0002.0002.0002.0002.0002.0002.0002.0002.0002.0002.0002.0002
82 .0002.0002.0003.0004.0004.0004.0004.0004.0004.0004.0004.0002
83 .0004.0004.0004.0005.0005.0005.0005.0005.0005.0005.0005.0004
84 .0005.0005.00050.0010.0010.0010.0010.0010.0010.0010.001.0004
85 0.0010.0010.001.0015.0015.0015.0015.0015.0015.0015.00150.001
86 950.0025.0025.00250.0030.0030.0030.0030.0030.0030.0030.003.0025
END MON-ACCUM

```

```

MON-SQOLIM
*** <PLS > Value at start of month for limiting storage of QUALOF (lb/ac)
*** x - x JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
11 14.0008.00080.0010.0010.0010.0010.0010.0010.0010.0010.001.0008
21 240.0020.0020.0020.0020.0020.0020.0020.0020.0020.0020.002
31 34.0015.0015.0015.0015.0015.0015.0015.0015.0015.0015.0015
41 44.0038.0038.0038.0045.0045.0045.0045.0045.0045.0045.0038.0038

```

```

51 54 0.01 0.01 0.010.0120.0120.0120.0120.0120.0120.0120.012 0.01
61 640.0180.0180.018 0.02 0.02 0.02 0.02 0.02 0.02 0.020.0180.018
71 .0008.00080.0010.0010.0010.0010.0010.0010.0010.0010.0010.001.0008
72 0.0020.0020.0020.0020.0020.0020.0020.0020.0020.0020.0020.002
73 .0015.0015.0015.0015.0015.0015.0015.0015.0015.0015.0015.0015
74 .0038.0038.0038.0045.0045.0045.0045.0045.0045.0045.0038.0038
75 0.01 0.01 0.010.0120.0120.0120.0120.0120.0120.0120.012 0.01
76 0.0180.0180.018 0.02 0.02 0.02 0.02 0.02 0.02 0.020.0180.018
81 .0008.00080.0010.0010.0010.0010.0010.0010.0010.0010.001.0008
82 0.0020.0020.0020.0020.0020.0020.0020.0020.0020.0020.0020.002
83 .0015.0015.0015.0015.0015.0015.0015.0015.0015.0015.0015.0015
84 .0038.0038.0038.0045.0045.0045.0045.0045.0045.0045.0038.0038
85 0.01 0.01 0.010.0120.0120.0120.0120.0120.0120.0120.012 0.01
86 0.0180.0180.018 0.02 0.02 0.02 0.02 0.02 0.02 0.020.0180.018
950 0.0360.0360.036 0.04 0.04 0.04 0.04 0.04 0.04 0.040.0360.036
END MON-SQOLIM

```

MON-IFLW-CONC

```

*** <PLS > Conc of QUAL in interflow outflow for each month (qty/ft3)
*** x - x JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
11 14.0264.0252.0147.0147.0147.0147.0147.0147.0147.0161.0168.0276
21 240.1920.1920.1120.1120.1120.1120.1120.1120.1120.1120.1120.192
31 34 0.03.0288.0161.0161.0161.0161.0161.0161.0168.0182.0189.0312
41 44.03840.036.0196.0196.0196.0196.0196.0196.0224.02450.028.0408
51 540.0420.042.0245.0245.0245.0245.0245.0245.0245.02590.0280.042
61 640.0840.0840.0490.0490.0490.0490.0490.0490.0490.0490.0490.084
71 .0264.0252.0147.0147.0147.0147.0147.0147.0147.0161.0168.0276
72 0.1920.1920.1120.1120.1120.1120.1120.1120.1120.1120.1120.192
73 0.03.0288.0161.0161.0161.0161.0161.0161.0168.0182.0189.0312
74 .03840.036.0196.0196.0196.0196.0196.0196.0224.02450.028.0408
75 0.0420.042.0245.0245.0245.0245.0245.0245.0245.02590.0280.042
76 0.0840.0840.0490.0490.0490.0490.0490.0490.0490.0490.0490.084
81 .0264.0252.0147.0147.0147.0147.0147.0147.0147.0161.0168.0276
82 0.1920.1920.1120.1120.1120.1120.1120.1120.1120.1120.1120.192
83 0.03.0288.0161.0161.0161.0161.0161.0161.0168.0182.0189.0312
84 .03840.036.0196.0196.0196.0196.0196.0196.0224.02450.028.0408
85 0.0420.042.0245.0245.0245.0245.0245.0245.0245.02590.0280.042
86 9500.0840.0840.0490.0490.0490.0490.0490.0490.0490.0490.0490.084
END MON-IFLW-CONC

```

MON-GRND-CONC

```

*** <PLS > Value at start of month for conc of QUAL in groundwater (qty/ft3)
*** x - x JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
11 14.0156.0144.0084.0084.0084.0084.0084.0084.0084.0091.0098.0156
21 240.0960.0960.0560.0560.0560.0560.0560.0560.0560.0560.0560.096
31 34.0168.0156.0077.0077.0077.0077.0077.0077.0091.0112.0126.0192
41 44.0324.0288.0147.0147.0147.0147.0147.0147.01610.021.02240.036
51 54.0348.0312.0161.0161.0161.0161.0161.0161.0182.0231.0245.0396
61 64 0.06 0.060.0350.0350.0350.0350.0350.0350.0350.0350.035 0.06
71 .0156.0144.0084.0084.0084.0084.0084.0084.0084.0091.0098.0156
72 0.0960.0960.0560.0560.0560.0560.0560.0560.0560.0560.0560.096
73 .0168.0156.0077.0077.0077.0077.0077.0077.0091.0112.0126.0192
74 .0324.0288.0147.0147.0147.0147.0147.0147.01610.021.02240.036
75 .0348.0312.0161.0161.0161.0161.0161.0161.0182.0231.0245.0396
76 0.06 0.060.0350.0350.0350.0350.0350.0350.0350.0350.035 0.06
81 .0156.0144.0084.0084.0084.0084.0084.0084.0084.0091.0098.0156
82 0.0960.0960.0560.0560.0560.0560.0560.0560.0560.0560.0560.096
83 .0168.0156.0077.0077.0077.0077.0077.0077.0091.0112.0126.0192
84 .0324.0288.0147.0147.0147.0147.0147.0147.01610.021.02240.036
85 .0348.0312.0161.0161.0161.0161.0161.0161.0182.0231.0245.0396
86 950 0.06 0.060.0350.0350.0350.0350.0350.0350.0350.0350.035 0.06
END MON-GRND-CONC

```

QUAL-PROPS

```

*** <PLS > Identifiers and Flags
*** x - x QUALID QTID QSD VPFW VPFS QSO VQO QIFW VIQC QAGW VAQC
11 86PO4 LBS 1 1 0 0 0 1 3 1 3
950 PO4 LBS 0 1 0 0 0 1 3 1 3
END QUAL-PROPS

```

QUAL-INPUT

```

*** Storage on surface and nonseasonal parameters
*** SQO POTFW POTFS ACQOP SQOLIM WSQOP IOQC AOQC
*** <PLS > qty/ac qty/ton qty/ton qty/ qty/ac in/hr qty/ft3 qty/ft3
*** x - x ac.day
11 950 0. 0. 0. 0. 1.e-6 1.64 0. 0.

```

END QUAL-INPUT

MON-POTFW

```

*** <PLS > Value at start of each month for washoff potency factor (lb/ton)
*** x - x JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
11 14 0.01 0.01 0.01 0.01 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.01
21 24 80 80 19 19 23 26 26 26 26 19 95 80
31 34 0.16 0.16 0.16 0.16 0.24 0.24 0.24 0.24 0.24 0.24 0.24 0.16
41 44 0.64 0.64 0.64 0.64 0.88 1.04 1.04 1.04 1.04 1.04 1.04 0.64
51 54 0.8 0.8 0.8 0.8 0.96 1.2 1.2 1.2 1.2 1.2 1.2 0.8
61 64 0.6 0.6 0.6 0.6 0.7 0.75 0.75 0.75 0.75 0.75 0.75 0.6
71 0.01 0.01 0.01 0.01 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.01
72 80 80 19 19 23 26 26 26 26 19 95 80
73 0.16 0.16 0.16 0.16 0.24 0.24 0.24 0.24 0.24 0.24 0.24 0.16
74 0.64 0.64 0.64 0.64 0.88 1.04 1.04 1.04 1.04 1.04 1.04 0.64
75 0.8 0.8 0.8 0.8 0.96 1.2 1.2 1.2 1.2 1.2 1.2 0.8
76 0.6 0.6 0.6 0.6 0.7 0.75 0.75 0.75 0.75 0.75 0.75 0.6
81 0.01 0.01 0.01 0.01 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.01
82 80 80 19 19 23 26 26 26 26 19 95 80
83 0.16 0.16 0.16 0.16 0.24 0.24 0.24 0.24 0.24 0.24 0.24 0.16
84 0.64 0.64 0.64 0.64 0.88 1.04 1.04 1.04 1.04 1.04 1.04 0.64
85 0.8 0.8 0.8 0.8 0.96 1.2 1.2 1.2 1.2 1.2 1.2 0.8
86 0.6 0.6 0.6 0.6 0.7 0.75 0.75 0.75 0.75 0.75 0.75 0.6
950 1.2 1.2 1.2 1.2 1.4 1.5 1.5 1.5 1.5 1.5 1.5 1.2
END MON-POTFW

```

MON-IFLW-CONC

```

*** <PLS > Conc of QUAL in interflow outflow for each month (qty/ft3)
*** x - x JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
11 14.0042.0042.0042.0048.0054.0066.0091.0105.0105.0105.00910.007
21 24 0.78 0.78 0.78 0.84 0.9 1.02 1.71 1.89 1.89 1.89 1.71 1.35
31 34.0078.0078.00780.0090.012.0144.0196.0224.0224.0224.01890.014
41 44.0171.0171.0171.0189.02250.027.0378.0432.0432.0432.03670.027
51 54.0069.0069.0069.00750.009.01050.014.0151.0158.0158.0151.0115
61 640.4860.4860.486 0.540.675 0.810.975 1.051.1251.125 1.05 0.75
71 .0042.0042.0042.0048.0054.0066.0091.0105.0105.0105.00910.007
72 0.78 0.78 0.78 0.84 0.9 1.02 1.71 1.89 1.89 1.89 1.71 1.35
73 .0078.0078.00780.0090.012.0144.0196.0224.0224.0224.01890.014
74 .0171.0171.0171.0189.02250.027.0378.0432.0432.0432.03670.027
75 .0069.0069.0069.00750.009.01050.014.0151.0158.0158.0151.0115
76 0.4860.4860.486 0.540.675 0.810.975 1.051.1251.125 1.05 0.75
81 .0042.0042.0042.0048.0054.0066.0091.0105.0105.0105.00910.007
82 0.78 0.78 0.78 0.84 0.9 1.02 1.71 1.89 1.89 1.89 1.71 1.35
83 .0078.0078.00780.0090.012.0144.0196.0224.0224.0224.01890.014
84 .0171.0171.0171.0189.02250.027.0378.0432.0432.0432.03670.027
85 .0069.0069.0069.00750.009.01050.014.0151.0158.0158.0151.0115
86 0.4860.4860.486 0.540.675 0.810.975 1.051.1251.125 1.05 0.75
950 0.0360.0360.036 0.04 0.05 0.060.065 0.070.0750.075 0.07 0.05
END MON-IFLW-CONC

```

MON-GRND-CONC

```

*** <PLS > Value at start of month for conc of QUAL in groundwater (qty/ft3)
*** x - x JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
11 14.0035.0035.0035.0035.00350.004.0054.0072.0072.0072.0066.0066
21 24 0.36 0.36 0.36 0.36 0.36 0.450.855 1.08 1.08 1.08 0.99 0.9
31 34.0048.0048.0048.0048.00480.006.0098.0133.0133.0133.0112.0084
41 440.0050.0050.0050.0050.0050.006.0096.0138.0138.01380.0120.009
51 540.0110.0110.0110.0110.0110.011.01320.0180.0180.018.01680.015
61 64.1575.1575.1575.1575.1575.15750.1750.2250.2250.225 0.21 0.19
71 .0035.0035.0035.0035.00350.004.0054.0072.0072.0072.0066.0066
72 0.36 0.36 0.36 0.36 0.36 0.450.855 1.08 1.08 1.08 0.99 0.9
73 .0048.0048.0048.0048.00480.006.0098.0133.0133.0133.0112.0084
74 0.0050.0050.0050.0050.0050.006.0096.0138.0138.01380.0120.009
75 0.0110.0110.0110.0110.0110.011.01320.0180.0180.018.01680.015
76 .1575.1575.1575.1575.1575.15750.1750.2250.2250.225 0.21 0.19
81 .0035.0035.0035.0035.00350.004.0054.0072.0072.0072.0066.0066
82 0.36 0.36 0.36 0.36 0.36 0.450.855 1.08 1.08 1.08 0.99 0.9
83 .0048.0048.0048.0048.00480.006.0098.0133.0133.0133.0112.0084
84 0.0050.0050.0050.0050.0050.006.0096.0138.0138.01380.0120.009
85 0.0110.0110.0110.0110.0110.011.01320.0180.0180.018.01680.015
86 .1575.1575.1575.1575.1575.15750.1750.2250.2250.225 0.21 0.19
950 0.0350.0350.0350.0350.0350.0350.0350.0450.0450.0450.0420.038
END MON-GRND-CONC

```

QUAL-PROPS

*** <PLS > Identifiers and Flags

```
*** x - x   QUALID      QTID  QSD VPFW VPFS  QSO  VQO QIFW VIQC QAGW VAQC
    11 950BOD/Organics  LBS    0  0  0    2   1  1  3   1  3
END QUAL-PROPS
```

QUAL-INPUT

```
*** Storage on surface and nonseasonal parameters
*** SQO POTFW POTFS ACQOP SQOLIM WSQOP IOQC AOQC
*** <PLS > qty/ac qty/ton qty/ton qty/ ac.day qty/ac in/hr qty/ft3 qty/ft3
*** x - x
    11 14      0.      0.      0.      0.  1.e-6  0.7  0.  0.
    21 24      0.      0.      0.      0.  1.e-6  0.5  0.  0.
    31 34      0.      0.      0.      0.  1.e-6  0.6  0.  0.
    41 64      0.      0.      0.      0.  1.e-6  0.5  0.  0.
    71      0.      0.      0.      0.  1.e-6  0.7  0.  0.
    72      0.      0.      0.      0.  1.e-6  0.5  0.  0.
    73      0.      0.      0.      0.  1.e-6  0.6  0.  0.
    74 76      0.      0.      0.      0.  1.e-6  0.5  0.  0.
    81      0.      0.      0.      0.  1.e-6  0.7  0.  0.
    82      0.      0.      0.      0.  1.e-6  0.5  0.  0.
    83      0.      0.      0.      0.  1.e-6  0.6  0.  0.
    84 950     0.      0.      0.      0.  1.e-6  0.5  0.  0.
END QUAL-INPUT
```

MON-ACCUM

```
*** <PLS > Value at start of each month for accum rate of QUALOF (lb/ac.day)
*** x - x   JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
    11 14  1.2 1.2 1.2 1.68 1.68 1.68 1.68 1.68 2.4 2.4 1.68 1.2
    21 24  1.4 1.4 1.4 2 2 2 2 2 2.2 2.2 1.4 1.4
    31 34  1.12 1.12 1.12 1.44 1.44 1.44 1.44 1.44 1.44 1.12 1.12 1.12
    41 440.0850.0850.0850.1150.1150.1150.1150.1150.1150.0850.0850.085
    51 540.1050.1050.105 0.14 0.14 0.14 0.14 0.14 0.14 0.140.1050.1050.105
    61 64 0.09 0.09 0.090.1150.1150.1150.1150.1150.115 0.09 0.09 0.09
    71 1.2 1.2 1.2 1.68 1.68 1.68 1.68 1.68 2.4 2.4 1.68 1.2
    72 1.4 1.4 1.4 2 2 2 2 2 2.2 2.2 1.4 1.4
    73 1.12 1.12 1.12 1.44 1.44 1.44 1.44 1.44 1.44 1.12 1.12 1.12
    74 0.0850.0850.0850.1150.1150.1150.1150.1150.1150.0850.0850.085
    75 0.1050.1050.105 0.14 0.14 0.14 0.14 0.14 0.14 0.140.1050.1050.105
    76 0.09 0.09 0.090.1150.1150.1150.1150.1150.115 0.09 0.09 0.09
    81 1.2 1.2 1.2 1.68 1.68 1.68 1.68 1.68 2.4 2.4 1.68 1.2
    82 1.4 1.4 1.4 2 2 2 2 2 2.2 2.2 1.4 1.4
    83 1.12 1.12 1.12 1.44 1.44 1.44 1.44 1.44 1.44 1.12 1.12 1.12
    84 0.0850.0850.0850.1150.1150.1150.1150.1150.1150.0850.0850.085
    85 0.1050.1050.105 0.14 0.14 0.14 0.14 0.14 0.14 0.140.1050.1050.105
    86 0.09 0.09 0.090.1150.1150.1150.1150.1150.115 0.09 0.09 0.09
    950 0.18 0.18 0.18 0.23 0.23 0.23 0.23 0.23 0.23 0.18 0.18 0.18
END MON-ACCUM
```

MON-SQOLIM

```
*** <PLS > Value at start of month for limiting storage of QUALOF (lb/ac)
*** x - x   JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
    11 14 14.4 14.4 14.4 19.2 19.2 19.2 19.2 19.2 28.8 28.8 14.4 14.4
    21 24 40 40 56 72 72 72 72 72 80 80 40 40
    31 34 16 16 16 20.8 20.8 20.8 20.8 20.8 27.2 27.2 16 16
    41 44 1.5 1.5 1.5 1.9 1.9 1.9 1.9 1.9 2.2 2.2 1.5 1.5
    51 54 2.4 2.4 2.4 3.2 3.2 3.2 3.2 3.2 4 4 2.4 2.4
    61 64 2 2 2 2.5 2.5 2.5 2.5 2.5 3 3 2 2
    71 14.4 14.4 14.4 19.2 19.2 19.2 19.2 19.2 19.2 28.8 28.8 14.4 14.4
    72 40 40 56 72 72 72 72 72 80 80 40 40
    73 16 16 16 20.8 20.8 20.8 20.8 20.8 27.2 27.2 16 16
    74 1.5 1.5 1.5 1.9 1.9 1.9 1.9 1.9 2.2 2.2 1.5 1.5
    75 2.4 2.4 2.4 3.2 3.2 3.2 3.2 3.2 4 4 2.4 2.4
    76 2 2 2 2.5 2.5 2.5 2.5 2.5 3 3 2 2
    81 14.4 14.4 14.4 19.2 19.2 19.2 19.2 19.2 19.2 28.8 28.8 14.4 14.4
    82 40 40 56 72 72 72 72 72 80 80 40 40
    83 16 16 16 20.8 20.8 20.8 20.8 20.8 27.2 27.2 16 16
    84 1.5 1.5 1.5 1.9 1.9 1.9 1.9 1.9 2.2 2.2 1.5 1.5
    85 2.4 2.4 2.4 3.2 3.2 3.2 3.2 3.2 4 4 2.4 2.4
    86 2 2 2 2.5 2.5 2.5 2.5 2.5 3 3 2 2
    950 2. 2. 2. 2.5 2.5 2.5 2.5 2.5 3. 3. 2. 2.
END MON-SQOLIM
```

MON-IFLW-CONC

```
*** <PLS > Conc of QUAL in interflow outflow for each month (qty/ft3)
*** x - x   JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
    11 14 4 4 4 10 10 10 10 10 10 14 12 4
    21 24 90 90 90 120 120 120 120 120 150 150 90 90
```

```

31 34 6 6 6 9 9 9 9 9 12 12 6 6
41 44 4. 4. 4. 6. 6. 6. 6. 6. 7. 7. 5. 5.
51 54 5. 5. 5. 8. 8. 8. 8. 8. 9. 9. 5. 5.
61 64 6. 6. 6. 9. 9. 9. 9. 9. 10. 10. 6. 6.
71 4 4 4 10 10 10 10 10 10 14 12 4
72 90 90 90 120 120 120 120 120 150 150 90 90
73 6 6 6 9 9 9 9 9 12 12 6 6
74 4. 4. 4. 6. 6. 6. 6. 6. 7. 7. 5. 5.
75 5. 5. 5. 8. 8. 8. 8. 8. 9. 9. 5. 5.
76 6. 6. 6. 9. 9. 9. 9. 9. 10. 10. 6. 6.
81 4 4 4 10 10 10 10 10 10 14 12 4
82 90 90 90 120 120 120 120 120 150 150 90 90
83 6 6 6 9 9 9 9 9 12 12 6 6
84 4. 4. 4. 6. 6. 6. 6. 6. 7. 7. 5. 5.
85 5. 5. 5. 8. 8. 8. 8. 8. 9. 9. 5. 5.
86 950 6. 6. 6. 9. 9. 9. 9. 9. 10. 10. 6. 6.
END MON-IFLW-CONC

```

MON-GRND-CONC

```

*** <PLS > Value at start of month for conc of QUAL in groundwater (qty/ft3)
*** x - x JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
11 14 5 5 5 6.25 6.25 6.25 6.25 6.25 6.25 6.25 5 5
21 24 70 70 70 80 80 80 80 80 100 100 70 70
31 34 4 4 4 6 6 6 6 6 8 8 4 4
41 44 4.8 4.8 4.8 6 6 6 6 6 7.2 7.2 4.8 4.8
51 54 1.8 1.8 1.8 2.8 2.8 2.8 2.8 2.8 3.2 3.2 1.8 1.8
61 64 10 10 10 16 16 16 16 16 18 18 10 10
71 5 5 5 6.25 6.25 6.25 6.25 6.25 6.25 6.25 6.25 5 5
72 70 70 70 80 80 80 80 80 100 100 70 70
73 4 4 4 6 6 6 6 6 8 8 4 4
74 4.8 4.8 4.8 6 6 6 6 6 7.2 7.2 4.8 4.8
75 1.8 1.8 1.8 2.8 2.8 2.8 2.8 2.8 3.2 3.2 1.8 1.8
76 10 10 10 16 16 16 16 16 18 18 10 10
81 5 5 5 6.25 6.25 6.25 6.25 6.25 6.25 6.25 6.25 5 5
82 70 70 70 80 80 80 80 80 100 100 70 70
83 4 4 4 6 6 6 6 6 8 8 4 4
84 4.8 4.8 4.8 6 6 6 6 6 7.2 7.2 4.8 4.8
86 10 10 10 16 16 16 16 16 18 18 10 10
950 5. 5. 5. 8. 8. 8. 8. 8. 9. 9. 5. 5.
END MON-GRND-CONC

```

QUAL-PROPS

```

*** <PLS > Identifiers and Flags
*** x - x QUALID QTID QSD VPFW VPFS QSO VQO QIFW VIQC QAGW VAQC
11 950Alkalinity LBS 0 0 0 2 1 1 3 1 3
END QUAL-PROPS

```

QUAL-INPUT

```

*** Storage on surface and nonseasonal parameters
*** SQO POTFW POTFS ACQOP SQOLIM WSQOP IOQC AOQC
*** <PLS > qty/ac qty/ton qty/ton qty/ qty/ ac.day in/hr qty/ft3 qty/ft3
*** x - x
11 14 2. 0. 0. 0. 1.e-6 0.7 0. 0.
21 24 2. 0. 0. 0. 1.e-6 0.5 0. 0.
31 34 2. 0. 0. 0. 1.e-6 0.6 0. 0.
41 64 2. 0. 0. 0. 1.e-6 0.5 0. 0.
71 2. 0. 0. 0. 1.e-6 0.7 0. 0.
72 2. 0. 0. 0. 1.e-6 0.5 0. 0.
73 2. 0. 0. 0. 1.e-6 0.6 0. 0.
74 76 2. 0. 0. 0. 1.e-6 0.5 0. 0.
81 2. 0. 0. 0. 1.e-6 0.7 0. 0.
82 2. 0. 0. 0. 1.e-6 0.5 0. 0.
83 2. 0. 0. 0. 1.e-6 0.6 0. 0.
84 950 2. 0. 0. 0. 1.e-6 0.5 0. 0.
END QUAL-INPUT

```

MON-ACCUM

```

*** <PLS > Value at start of each month for accum rate of QUALOF (lb/ac.day)
*** x - x JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
11 14 0.1 0.1 0.12 0.14 0.14 0.14 0.14 0.14 0.12 0.1 0.1 0.1
21 24 0.4 0.4 0.42 0.44 0.44 0.44 0.44 0.44 0.42 0.4 0.4 0.4
31 34 0.1 0.1 0.12 0.14 0.14 0.14 0.14 0.14 0.12 0.1 0.1 0.1
41 44 0.3 0.3 0.32 0.34 0.34 0.34 0.34 0.34 0.32 0.3 0.3 0.3
51 64 0.4 0.4 0.42 0.44 0.44 0.44 0.44 0.44 0.42 0.4 0.4 0.4
71 0.1 0.1 0.12 0.14 0.14 0.14 0.14 0.14 0.12 0.1 0.1 0.1
72 0.4 0.4 0.42 0.44 0.44 0.44 0.44 0.44 0.42 0.4 0.4 0.4

```

```

73      0.1  0.1  0.12  0.14  0.14  0.14  0.14  0.14  0.12  0.1  0.1  0.1
74      0.3  0.3  0.32  0.34  0.34  0.34  0.34  0.34  0.32  0.3  0.3  0.3
75  76  0.4  0.4  0.42  0.44  0.44  0.44  0.44  0.44  0.42  0.4  0.4  0.4
81      0.1  0.1  0.12  0.14  0.14  0.14  0.14  0.14  0.14  0.12  0.1  0.1  0.1
82      0.4  0.4  0.42  0.44  0.44  0.44  0.44  0.44  0.42  0.4  0.4  0.4
83      0.1  0.1  0.12  0.14  0.14  0.14  0.14  0.14  0.12  0.1  0.1  0.1
84      0.3  0.3  0.32  0.34  0.34  0.34  0.34  0.34  0.32  0.3  0.3  0.3
85  950 0.4  0.4  0.42  0.44  0.44  0.44  0.44  0.44  0.42  0.4  0.4  0.4
END MON-ACCUM

```

MON-SQOLIM

```

*** <PLS > Value at start of month for limiting storage of QUALOF (lb/ac)
*** x - x JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
11  14  0.6  0.6  0.6  0.8  0.8  0.8  0.8  0.8  1.2  1.2  0.6  0.6
21  24  1.6  1.6  1.6  2.1  2.2  2.2  2.1  2.1  2.  2.  1.6  1.6
31  34  0.6  0.6  0.6  0.8  0.8  0.8  0.8  0.8  1.2  1.2  0.6  0.6
41  44  1.2  1.2  1.3  1.4  1.4  1.4  1.4  1.4  1.3  1.3  1.2  1.2
51  54  1.6  1.6  1.6  1.7  1.8  1.8  1.8  1.8  1.7  1.7  1.6  1.6
61  64  1.6  1.6  1.6  2.  2.  2.2  2.2  2.2  2.  2.  1.6  1.6
71      0.6  0.6  0.6  0.8  0.8  0.8  0.8  0.8  1.2  1.2  0.6  0.6
72      1.6  1.6  1.6  2.1  2.2  2.2  2.1  2.1  2.  2.  1.6  1.6
73      0.6  0.6  0.6  0.8  0.8  0.8  0.8  0.8  1.2  1.2  0.6  0.6
74      1.2  1.2  1.3  1.4  1.4  1.4  1.4  1.4  1.3  1.3  1.2  1.2
75      1.6  1.6  1.6  1.7  1.8  1.8  1.8  1.8  1.7  1.7  1.6  1.6
76      1.6  1.6  1.6  2.  2.  2.2  2.2  2.2  2.  2.  1.6  1.6
81      0.6  0.6  0.6  0.8  0.8  0.8  0.8  0.8  1.2  1.2  0.6  0.6
82      1.6  1.6  1.6  2.1  2.2  2.2  2.1  2.1  2.  2.  1.6  1.6
83      0.6  0.6  0.6  0.8  0.8  0.8  0.8  0.8  1.2  1.2  0.6  0.6
84      1.2  1.2  1.3  1.4  1.4  1.4  1.4  1.4  1.3  1.3  1.2  1.2
85      1.6  1.6  1.6  1.7  1.8  1.8  1.8  1.8  1.7  1.7  1.6  1.6
86  950 1.6  1.6  1.6  2.  2.  2.2  2.2  2.2  2.  2.  1.6  1.6
END MON-SQOLIM

```

MON-IFLW-CONC

```

*** <PLS > Conc of QUAL in interflow outflow for each month (qty/ft3)
*** x - x JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
11  14  3.  5.  10.  12.  12.  12.  12.  12.  10.  4.  3.
21  24  32.  32.  36.  36.  38.  38.  38.  38.  36.  34.  32.
31  34  6.  6.  16.  22.  22.  22.  22.  22.  12.  8.  6.
41  44  25.  25.  38.  45.  45.  45.  45.  45.  35.  30.  25.
51  54  50.  52.  65.  75.  75.  75.  75.  75.  65.  57.  50.
61  64  45.  45.  57.  65.  65.  65.  65.  65.  55.  50.  45.
71      3.  5.  10.  12.  12.  12.  12.  12.  10.  4.  3.
72      32.  32.  36.  36.  38.  38.  38.  38.  36.  34.  32.
73      6.  6.  16.  22.  22.  22.  22.  22.  12.  8.  6.
74      25.  25.  38.  45.  45.  45.  45.  45.  35.  30.  25.
75      50.  52.  65.  75.  75.  75.  75.  75.  65.  57.  50.
76      45.  45.  57.  65.  65.  65.  65.  65.  55.  50.  45.
81      3.  5.  10.  12.  12.  12.  12.  12.  10.  4.  3.
82      32.  32.  36.  36.  38.  38.  38.  38.  36.  34.  32.
83      6.  6.  16.  22.  22.  22.  22.  22.  12.  8.  6.
84      25.  25.  38.  45.  45.  45.  45.  45.  35.  30.  25.
85      50.  52.  65.  75.  75.  75.  75.  75.  65.  57.  50.
86  950 45.  45.  57.  65.  65.  65.  65.  65.  55.  50.  45.
END MON-IFLW-CONC

```

MON-GRND-CONC

```

*** <PLS > Value at start of month for conc of QUAL in groundwater (qty/ft3)
*** x - x JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
11  14  17.  20.  24.  30.  33.  35.  37.  39.  40.  33.  25.  18.
21  24  70.  70.  73.  74.  76.  77.  78.  79.  79.  79.  78.  73.
31  34  35.  35.  41.  43.  47.  50.  50.  50.  49.  47.  38.
41  44  58.  58.  62.  72.  80.  80.  80.  80.  81.  80.  77.  60.
51  54  90.  92.  94.  108.  115.  118.  118.  118.  118.  115.  110.  94.
61  64  90.  90.  93.  96.  98.  98.  98.  98.  98.  98.  97.  92.
71      17.  20.  24.  30.  33.  35.  37.  39.  40.  33.  25.  18.
72      70.  70.  73.  74.  76.  77.  78.  79.  79.  79.  78.  73.
73      35.  35.  41.  43.  47.  50.  50.  50.  50.  49.  47.  38.
74      58.  58.  62.  72.  80.  80.  80.  80.  81.  80.  77.  60.
75      90.  92.  94.  108.  115.  118.  118.  118.  118.  115.  110.  94.
76      90.  90.  93.  96.  98.  98.  98.  98.  98.  98.  97.  92.
81      17.  20.  24.  30.  33.  35.  37.  39.  40.  33.  25.  18.
82      70.  70.  73.  74.  76.  77.  78.  79.  79.  79.  78.  73.
83      35.  35.  41.  43.  47.  50.  50.  50.  50.  49.  47.  38.
84      58.  58.  62.  72.  80.  80.  80.  80.  81.  80.  77.  60.
85      90.  92.  94.  108.  115.  118.  118.  118.  118.  115.  110.  94.

```



```

86 950 90. 90. 93. 96. 98. 98. 98. 98. 98. 98. 97. 92.
END MON-GRND-CONC

QUAL-PROPS
*** <PLS > Identifiers and Flags
*** x - x   QUALID      QTID  QSD  VPFW  VPFS  QSO  VQO  QIFW  VIQC  QAGW  VAQC
11 950Silica          LBS    0    0    0    2    1    1    3    1    3
END QUAL-PROPS

QUAL-INPUT
***          Storage on surface and nonseasonal parameters
***          SQO  POTFW  POTFS  ACQOP  SQOLIM  WSQOP  IOQC  AOQC
*** <PLS >  qty/ac qty/ton qty/ton  qty/  qty/ac  in/hr  qty/ft3  qty/ft3
*** x - x          ac.day
11 14      0.    0.    0.    0.    1.e-6  0.7    0.    0.
21 24      0.    0.    0.    0.    1.e-6  0.5    0.    0.
31 34      0.    0.    0.    0.    1.e-6  0.6    0.    0.
41 64      0.    0.    0.    0.    1.e-6  0.5    0.    0.
71        0.    0.    0.    0.    1.e-6  0.7    0.    0.
72        0.    0.    0.    0.    1.e-6  0.5    0.    0.
73        0.    0.    0.    0.    1.e-6  0.6    0.    0.
74 76      0.    0.    0.    0.    1.e-6  0.5    0.    0.
81        0.    0.    0.    0.    1.e-6  0.7    0.    0.
82        0.    0.    0.    0.    1.e-6  0.5    0.    0.
83        0.    0.    0.    0.    1.e-6  0.6    0.    0.
84 950     0.    0.    0.    0.    1.e-6  0.5    0.    0.
END QUAL-INPUT

MON-ACCUM
*** <PLS > Value at start of each month for accum rate of QUALOF (lb/ac.day)
*** x - x   JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC
11 950 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01
END MON-ACCUM

MON-SQOLIM
*** <PLS > Value at start of month for limiting storage of QUALOF (lb/ac)
*** x - x   JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC
11 950 0.1  0.1  0.1  0.1  0.1  0.1  0.1  0.1  0.1  0.1  0.1  0.1
END MON-SQOLIM

MON-IFLW-CONC
*** <PLS > Conc of QUAL in interflow outflow for each month (qty/ft3)
*** x - x   JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC
11 950 8.   8.   10.  10.  12.  14.  14.  14.  14.  14.  12.  10.
END MON-IFLW-CONC

MON-GRND-CONC
*** <PLS > Value at start of month for conc of QUAL in groundwater (qty/ft3)
*** x - x   JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC
11 950 12.  12.  14.  16.  18.  20.  20.  20.  20.  20.  18.  14.
END MON-GRND-CONC

QUAL-PROPS
*** <PLS > Identifiers and Flags
*** x - x   QUALID      QTID  QSD  VPFW  VPFS  QSO  VQO  QIFW  VIQC  QAGW  VAQC
11 950E-Coli          10^9    0    0    0    2    1    1    1    1    1
END QUAL-PROPS

QUAL-INPUT
***          Storage on surface and nonseasonal parameters
***          SQO  POTFW  POTFS  ACQOP  SQOLIM  WSQOP  IOQC  AOQC
*** <PLS >  qty/ac qty/ton qty/ton  qty/  qty/ac  in/hr  qty/ft3  qty/ft3
*** x - x          ac.day
11 950     0.    0.    0.    0.    1.e-6  2.    0.    0.
END QUAL-INPUT

MON-ACCUM
*** <PLS > Value at start of each month for accum rate of QUALOF (lb/ac.day)
*** x - x   JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC
11 14 0.04 0.04 0.04 0.04 0.04 0.8  0.8  0.8  0.8  0.8  0.04 0.04
21 24 0.37 0.37 0.37 0.37 0.37 92.5 92.5 92.5 92.5 92.5 0.37 0.37
31 34 2.4  2.4  2.4  2.4  2.4  4.8  4.8  4.8  4.8  4.8  2.4  2.4
41 44 6    6    6    6    6    12  12  12  12  12  6    6
51 54 9    9    9    9    9    18  18  18  18  18  9    9
61 64 2.2  2.2  2.2  2.2  2.2  4.4  4.4  4.4  4.4  4.4  2.2  2.2
71    0.04 0.04 0.04 0.04 0.04 0.8  0.8  0.8  0.8  0.8  0.04 0.04

```

```

72      0.37 0.37 0.37 0.37 0.37 92.5 92.5 92.5 92.5 92.5 0.37 0.37
73      2.4 2.4 2.4 2.4 2.4 4.8 4.8 4.8 4.8 4.8 2.4 2.4
74      6 6 6 6 6 12 12 12 12 12 6 6
75      9 9 9 9 9 18 18 18 18 18 9 9
76      2.2 2.2 2.2 2.2 2.2 4.4 4.4 4.4 4.4 4.4 2.2 2.2
81      0.04 0.04 0.04 0.04 0.04 0.8 0.8 0.8 0.8 0.8 0.04 0.04
82      0.37 0.37 0.37 0.37 0.37 92.5 92.5 92.5 92.5 92.5 0.37 0.37
83      2.4 2.4 2.4 2.4 2.4 4.8 4.8 4.8 4.8 4.8 2.4 2.4
84      6 6 6 6 6 12 12 12 12 12 6 6
85      9 9 9 9 9 18 18 18 18 18 9 9
86      2.2 2.2 2.2 2.2 2.2 4.4 4.4 4.4 4.4 4.4 2.2 2.2
950     0.22 0.22 0.22 0.22 0.22 0.22 0.22 0.22 0.22 0.22 0.22 0.22
END MON-ACCUM

```

MON-SQOLIM

```

*** <PLS > Value at start of month for limiting storage of QUALOF (lb/ac)
*** x - x JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
11 14 0.5 0.5 0.5 0.5 0.5 10 10 10 10 10 0.5 0.5
21 24 2.4 2.4 2.4 2.4 2.4 600 600 600 600 600 2.4 2.4
31 34 24 24 24 24 24 48 48 48 48 48 24 24
41 44 36 36 36 36 36 72 72 72 72 72 36 36
51 54 54 54 54 54 54 108 108 108 108 108 54 54
61 64 7 7 7 7 7 0.7 0.7 0.7 0.7 0.7 7 7
71 0.5 0.5 0.5 0.5 0.5 10 10 10 10 10 0.5 0.5
72 2.4 2.4 2.4 2.4 2.4 600 600 600 600 600 2.4 2.4
73 24 24 24 24 24 48 48 48 48 48 24 24
74 36 36 36 36 36 72 72 72 72 72 36 36
75 54 54 54 54 54 108 108 108 108 108 54 54
76 7 7 7 7 7 0.7 0.7 0.7 0.7 0.7 7 7
81 0.5 0.5 0.5 0.5 0.5 10 10 10 10 10 0.5 0.5
82 2.4 2.4 2.4 2.4 2.4 600 600 600 600 600 2.4 2.4
83 24 24 24 24 24 48 48 48 48 48 24 24
84 36 36 36 36 36 72 72 72 72 72 36 36
85 54 54 54 54 54 108 108 108 108 108 54 54
86 7 7 7 7 7 0.7 0.7 0.7 0.7 0.7 7 7
950 0.7 0.7 0.7 0.7 0.7 0.7 0.7 0.7 0.7 0.7 0.7 0.7
END MON-SQOLIM

```

MON-IFLW-CONC

```

*** <PLS > Conc of QUAL in interflow outflow for each month (qty/ft3)
*** x - x JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
11 144.e-64.e-64.e-64.e-64.e-64.e-54.e-54.e-54.e-54.e-54.e-64.e-6
21 242.e-52.e-52.e-52.e-52.e-5.0002.0002.0002.0002.00022.e-52.e-5
31 345.e-65.e-65.e-65.e-65.e-65.e-55.e-55.e-55.e-55.e-55.e-65.e-6
41 441.e-51.e-51.e-51.e-51.e-5.0001.0001.0001.0001.00011.e-51.e-5
51 543.e-53.e-53.e-53.e-53.e-5.0003.0003.0003.0003.00033.e-53.e-5
61 647.e-67.e-67.e-67.e-67.e-67.e-57.e-57.e-57.e-57.e-57.e-67.e-6
71 4.e-64.e-64.e-64.e-64.e-64.e-54.e-54.e-54.e-54.e-54.e-64.e-6
72 2.e-52.e-52.e-52.e-52.e-5.0002.0002.0002.0002.00022.e-52.e-5
73 5.e-65.e-65.e-65.e-65.e-65.e-55.e-55.e-55.e-55.e-55.e-65.e-6
74 1.e-51.e-51.e-51.e-51.e-5.0001.0001.0001.0001.00011.e-51.e-5
75 3.e-53.e-53.e-53.e-53.e-5.0003.0003.0003.0003.00033.e-53.e-5
76 7.e-67.e-67.e-67.e-67.e-67.e-57.e-57.e-57.e-57.e-57.e-67.e-6
81 4.e-64.e-64.e-64.e-64.e-64.e-54.e-54.e-54.e-54.e-54.e-64.e-6
82 2.e-52.e-52.e-52.e-52.e-5.0002.0002.0002.0002.00022.e-52.e-5
83 5.e-65.e-65.e-65.e-65.e-65.e-55.e-55.e-55.e-55.e-55.e-65.e-6
84 1.e-51.e-51.e-51.e-51.e-5.0001.0001.0001.0001.00011.e-51.e-5
85 3.e-53.e-53.e-53.e-53.e-5.0003.0003.0003.0003.00033.e-53.e-5
86 7.e-67.e-67.e-67.e-67.e-67.e-57.e-57.e-57.e-57.e-57.e-67.e-6
950 7.e-57.e-57.e-57.e-57.e-57.e-57.e-57.e-57.e-57.e-57.e-57.e-5
END MON-IFLW-CONC

```

MON-GRND-CONC

```

*** <PLS > Value at start of month for conc of QUAL in groundwater (qty/ft3)
*** x - x JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
11 141.e-61.e-61.e-61.e-61.e-61.e-51.e-51.e-51.e-51.e-51.e-61.e-6
21 245.e-65.e-65.e-65.e-65.e-65.e-55.e-55.e-55.e-55.e-55.e-65.e-6
31 342.e-62.e-62.e-62.e-62.e-62.e-52.e-52.e-52.e-52.e-52.e-62.e-6
41 443.e-63.e-63.e-63.e-63.e-63.e-53.e-53.e-53.e-53.e-53.e-63.e-6
51 545.e-65.e-65.e-65.e-65.e-65.e-55.e-55.e-55.e-55.e-55.e-65.e-6
61 643.e-63.e-63.e-63.e-63.e-63.e-53.e-53.e-53.e-53.e-53.e-63.e-6
71 1.e-61.e-61.e-61.e-61.e-61.e-51.e-51.e-51.e-51.e-51.e-61.e-6
72 5.e-65.e-65.e-65.e-65.e-65.e-55.e-55.e-55.e-55.e-55.e-65.e-6
73 2.e-62.e-62.e-62.e-62.e-62.e-52.e-52.e-52.e-52.e-52.e-62.e-6
74 3.e-63.e-63.e-63.e-63.e-63.e-53.e-53.e-53.e-53.e-53.e-63.e-6
75 5.e-65.e-65.e-65.e-65.e-65.e-55.e-55.e-55.e-55.e-55.e-65.e-6

```

```

76      3.e-63.e-63.e-63.e-63.e-63.e-63.e-53.e-53.e-53.e-53.e-53.e-63.e-6
81      1.e-61.e-61.e-61.e-61.e-61.e-61.e-51.e-51.e-51.e-51.e-51.e-61.e-6
82      5.e-65.e-65.e-65.e-65.e-65.e-55.e-55.e-55.e-55.e-55.e-65.e-6
83      2.e-62.e-62.e-62.e-62.e-62.e-62.e-52.e-52.e-52.e-52.e-52.e-62.e-6
84      3.e-63.e-63.e-63.e-63.e-63.e-63.e-53.e-53.e-53.e-53.e-53.e-63.e-6
85      2.e-62.e-62.e-62.e-62.e-62.e-62.e-52.e-52.e-52.e-52.e-52.e-62.e-6
86      3.e-63.e-63.e-63.e-63.e-63.e-63.e-53.e-53.e-53.e-53.e-53.e-63.e-6
950     3.e-53.e-53.e-53.e-53.e-53.e-53.e-53.e-53.e-53.e-53.e-53.e-5
END MON-GRND-CONC

```

END PERLND

IMPLND

```

GEN-INFO
<ILS ><-----Name----->      Unit-systems      Printer      ***
# - #                               User  t-series  Engr Metr    ***
                               in  out
91      LD RESIDENTIAL EIA          1    1    1    63    0    91    0
92      HD RESIDENTIAL EIA          1    1    1    63    0    91    0
93      COMMERCIAL/INDUSTR          1    1    1    63    0    91    0
94      ROAD EIA                    1    1    1    63    0    91    0
END GEN-INFO

```

```

ACTIVITY
<ILS > ***** Active Sections ****
# - # ATMP SNOW IWAT SLDS IWTG IQAL ***
1 999 1 0 1 1 1 1
END ACTIVITY

```

```

PRINT-INFO
<ILS > ***** Print-flags ***** PIVL  PYR
# - # ATMP SNOW IWAT SLDS IWTG IQAL *****
1 999 5 0 5 5 5 5 1 9
END PRINT-INFO

```

```

BINARY-INFO
<ILS > ***** Print-flags ***** PIVL  PYR
# - # ATMP SNOW IWAT SLDS IWTG IQAL *****
1 999 5 0 5 5 5 5 1 9
END BINARY-INFO

```

*** following elevation differences based on EVERETT (=606 ft)

```

ATEMP-DAT
<ILS >      ELDAT      AIRTEMP ***
# - #      (ft)      (deg F) ***
91      -166.      40.0
92      -211.      40.0
93      -276.      40.0
94      -331.      40.0
END ATEMP-DAT

```

```

IWAT-PARM1
<ILS >      Flags      ***
# - # CSNO RTOP  VRS  VNN  RTLI  ***
1 999 0 0 0 0 0
END IWAT-PARM1

```

```

IWAT-PARM2
<ILS >      ***
# - #      LSUR      SLSUR      NSUR      RETSC ***
91      150.00  0.0100  0.1000  0.1000
92      150.00  0.0100  0.1000  0.1000
93      150.00  0.0100  0.1000  0.1000
94      150.00  0.0100  0.1000  0.1000
END IWAT-PARM2

```

```

IWAT-PARM3
<ILS >      ***
# - #      PETMAX  PETMIN ***
91
92
93
94
END IWAT-PARM3

```

```

IWAT-STATE1
<ILS > IWATER state variables ***
# - #      RETS      SURS      ***

```

```

91      0.0000  0.0000
92      0.0000  0.0000
93      0.0000  0.0000
94      0.0000  0.0000
END IWAT-STATE1

```

```

IWT-PARM1
# # WTFV CSNO ***
1 999 1 0
END IWT-PARM1

```

```

IWT-PARM2
# # ELEV AWTF BWTF ***
91 440. 34.0 0.3
92 395. 34.0 0.3
93 330. 34.0 0.3
94 275. 34.0 0.3
END IWT-PARM2

```

```

MON-AWTF
<ILS > Values of AWTF at start of each month (degF) ***
# - # JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC ***
1 999 28.0 30.0 32.0 32.0 37.0 42.0 42.0 42.0 39.0 33.0 30.0 28.0
END MON-AWTF

```

```

MON-BWTF
<ILS > Values of BWTF at start of each month (degF/degF) ***
# - # JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC ***
1 999 .55 .55 .60 .60 .60 .60 .60 .60 .60 .55 .55 .55
END MON-BWTF

```

*** Section SOLIDS - Sediment

```

SLD-PARM1
<ILS > Flags ***
# - # VASD VRSD SDOP ***
1 999 0 0 1
END SLD-PARM1

```

```

SLD-PARM2
*** KEIM JEIM ACCSDP REMSDP
<ILS > ***
# - # *** tons/ /day
# - # *** ac.day
91 0.010 2. 0.003 0.020
92 0.010 2. 0.004 0.020
93 0.010 2. 0.005 0.020
94 0.010 2. 0.003 0.020
END SLD-PARM2

```

```

SLD-STOR
<ILS > Solids storage (tons/acre) ***
# - # ***
91 0.03
92 0.04
93 0.04
94 0.02
END SLD-STOR

```

*** Section IQUAL - Water Quality Constituents

```

NQUALS
*** <ILS >
*** x - xNQUAL
91 94 7
END NQUALS

```

```

IQL-AD-FLAGS
*** Atmospheric Deposition Flags
*** < ILS> QUAL1 QUAL2 QUAL3 QUAL4 QUAL5 QUAL6 QUAL7 QUAL8 QUAL9 QUAL10
*** x - x <F><C> <F><C> <F><C> <F><C> <F><C> <F><C> <F><C> <F><C> <F><C> <F><C>
91 94 0 -1 0 -1 0 0 0 0 0 0 0 0 0 0 0 0 0 0
END IQL-AD-FLAGS

```

```

QUAL-PROPS
*** <ILS > Identifiers and Flags
*** x - x QUALID QTID QSD VPFW QSO VQO

```

```

91  94NO2+NO3          LBS      0      0      2      0
END QUAL-PROPS

QUAL-INPUT
***      Storage on surface and nonseasonal parameters
***      SQO  POTFW  ACQOP  SQOLIM  WSQOP
*** <ILS > qty/ac qty/ton  qty/  qty/ac  in/hr
*** x - x      ac.day
91      0.06      0.    0.003  0.036  0.5
92      0.09      0.    0.006  0.072  0.5
93      0.2       0.    0.012  0.144  0.5
94      0.09      0.    0.006  0.072  0.5
END QUAL-INPUT

QUAL-PROPS
*** <ILS > Identifiers and Flags
*** x - x      QUALID  QTID  QSD  VPFW  QSO  VQO
91  94NH3          LBS      0      0      2      0
END QUAL-PROPS

QUAL-INPUT
***      Storage on surface and nonseasonal parameters
***      SQO  POTFW  ACQOP  SQOLIM  WSQOP
*** <ILS > qty/ac qty/ton  qty/  qty/ac  in/hr
*** x - x      ac.day
91      0.003      0.    0.0007  0.0042  0.5
92      0.005      0.    0.001  0.006  0.5
93      0.009      0.    0.0019  0.0115  0.5
94      0.004      0.    0.0007  0.004  0.5
END QUAL-INPUT

QUAL-PROPS
*** <ILS > Identifiers and Flags
*** x - x      QUALID  QTID  QSD  VPFW  QSO  VQO
91  94PO4          LBS      1      0      2      0
END QUAL-PROPS

QUAL-INPUT
***      Storage on surface and nonseasonal parameters
***      SQO  POTFW  ACQOP  SQOLIM  WSQOP
*** <ILS > qty/ac qty/ton  qty/  qty/ac  in/hr
*** x - x      ac.day
91      0.003      0.5  0.0005  0.004  0.5
92      0.006      0.5  0.001  0.006  0.5
93      0.009      0.5  0.0015  0.01  0.5
94      0.006      0.5  0.001  0.006  0.5
END QUAL-INPUT

QUAL-PROPS
*** <ILS > Identifiers and Flags
*** x - x      QUALID  QTID  QSD  VPFW  QSO  VQO
91  94BOD/Organics  LBS      0      0      2      0
END QUAL-PROPS

QUAL-INPUT
***      Storage on surface and nonseasonal parameters
***      SQO  POTFW  ACQOP  SQOLIM  WSQOP
*** <ILS > qty/ac qty/ton  qty/  qty/ac  in/hr
*** x - x      ac.day
91  94      1.      0.    0.055  0.75  0.5
END QUAL-INPUT

QUAL-PROPS
*** <ILS > Identifiers and Flags
*** x - x      QUALID  QTID  QSD  VPFW  QSO  VQO
91  94Alkalinity    LBS      0      0      2      0
END QUAL-PROPS

QUAL-INPUT
***      Storage on surface and nonseasonal parameters
***      SQO  POTFW  ACQOP  SQOLIM  WSQOP
*** <ILS > qty/ac qty/ton  qty/  qty/ac  in/hr
*** x - x      ac.day
91      2.03      0.    0.22  0.92  0.5
92      2.03      0.    0.23  0.95  0.5
93      2.03      0.    0.24  0.92  0.5

```

```

94      2.03      0.      0.21      0.96      0.5
END QUAL-INPUT

QUAL-PROPS
*** <ILS >      Identifiers and Flags
*** x - x      QUALID      QTID      QSD      VPFW      QSO      VQO
91      94Silica      LBS      0      0      2      0
END QUAL-PROPS

QUAL-INPUT
***      Storage on surface and nonseasonal parameters
***      SQO      POTFW      ACQOP      SQOLIM      WSQOP
*** <ILS >      qty/ac      qty/ton      qty/      qty/ac      in/hr
*** x - x      ac.day
91      94      0.003      0.      0.003      0.024      0.5
END QUAL-INPUT

QUAL-PROPS
*** <ILS >      Identifiers and Flags
*** x - x      QUALID      QTID      QSD      VPFW      QSO      VQO
91      94E-Coli      10^9      0      0      2      0
END QUAL-PROPS

QUAL-INPUT
***      Storage on surface and nonseasonal parameters
***      SQO      POTFW      ACQOP      SQOLIM      WSQOP
*** <ILS >      qty/ac      qty/ton      qty/      qty/ac      in/hr
*** x - x      ac.day
91      0.2      0.      0.07      0.45      0.5
92      0.3      0.      0.12      0.7      0.5
93      0.4      0.      0.15      0.9      0.5
94      0.1      0.      0.05      0.25      0.5
END QUAL-INPUT

END IMPLND

EXT SOURCES
***PREC 112 IS EVERETT/SILVER LAKE (OCT 1948 - SEP 2002)
***PREC 113 IS EVERETT/ALDERWOOD (OCT 1948 - SEP 2002)
***PREC 119 IS SILVER LAKE (40%) + THRASHERS CORNER (60%) STARTING 2000/10/25
***RCHRES 161 IS SILVER LAKE
***RCHRES 171 IS RUGGS LAKE
***RCHRES 181 IS THOMAS LAKE
<-Volume-> <Member> SsysSgap<--Mult-->Tran <-Target vols> <-Grp> <-Member-> ***
<Name> # <Name> # tem strg<-factor->strg <Name> # # <Name> # # ***
**** ATM DEPOSITION
*** The conversion factor for (mg/l) to (lb/cf) = 6.245E-5.
*** We are dividing this by 2 to take the average from 2 stations.
WDM1 2001 NO3D ENGL 3.122E-5SAME PERLND 1 999 EXTNL PQADCN 1 1
WDM1 2001 NO3D ENGL 3.122E-5SAME IMPLND 1 999 EXTNL IQADCN 1
WDM1 2002 NO3D ENGL 3.122E-5SAME PERLND 1 999 EXTNL PQADCN 1 1
WDM1 2002 NO3D ENGL 3.122E-5SAME IMPLND 1 999 EXTNL IQADCN 1
WDM1 2011 NH3D ENGL 3.122E-5SAME PERLND 1 999 EXTNL PQADCN 2 1
WDM1 2011 NH3D ENGL 3.122E-5SAME IMPLND 1 999 EXTNL IQADCN 2
WDM1 2012 NH3D ENGL 3.122E-5SAME PERLND 1 999 EXTNL PQADCN 2 1
WDM1 2012 NH3D ENGL 3.122E-5SAME IMPLND 1 999 EXTNL IQADCN 2

WDM1 1005 PREC ENGL 1.13 PERLND 1 999 EXTNL PREC
WDM1 1005 PREC ENGL 1.13 IMPLND 1 999 EXTNL PREC
WDM1 1001 PREC *** ENGL 1.13 PERLND 1 999 EXTNL PREC
WDM1 1001 PREC *** ENGL 1.13 IMPLND 1 999 EXTNL PREC
WDM1 1002 EVAP ENGL 0.79 PERLND 1 999 EXTNL PETINP
WDM1 1002 EVAP ENGL 0.79 IMPLND 1 999 EXTNL PETINP
WDM1 1005 PREC ENGL 1.13 RCHRES 161 EXTNL PREC
WDM1 1001 PREC *** ENGL 1.13 RCHRES 161 EXTNL PREC
WDM1 1002 EVAP ENGL 0.79 RCHRES 161 EXTNL POTEV
WDM1 1005 PREC ENGL 1.13 RCHRES 171 EXTNL PREC
WDM1 1001 PREC *** ENGL 1.13 RCHRES 171 EXTNL PREC
WDM1 1002 EVAP ENGL 0.79 RCHRES 171 EXTNL POTEV
WDM1 1005 PREC ENGL 1.13 RCHRES 181 EXTNL PREC
WDM1 1001 PREC *** ENGL 1.13 RCHRES 181 EXTNL PREC
WDM1 1002 EVAP ENGL 0.79 RCHRES 181 EXTNL POTEV
WDM1 1006 PREC ENGL 1.11 PERLND 950 EXTNL PREC
WDM1 1001 PREC *** ENGL 1.11 PERLND 950 EXTNL PREC
WDM1 1002 EVAP ENGL 0.80 PERLND 950 EXTNL PETINP
WDM1 80 ATEM ENGL 1. SAME PERLND 1 999 EXTNL GATMP

```

```

WDM1 80 ATEM ENGL 1. SAME IMPLND 1 999 EXTNL GATMP
WDM1 80 ATEM ENGL 1. SAME RCHRES 1 999 EXTNL GATMP
WDM1 82 DEWP ENGL 1. SAME RCHRES 1 999 EXTNL DEWTMP
WDM1 83 AWND ENGL 1. DIV RCHRES 1 999 EXTNL WIND
WDM1 52 SOLR ENGL 1. DIV RCHRES 1 999 EXTNL SOLRAD
WDM1 84 CLOU ENGL 1. SAME RCHRES 1 999 EXTNL CLOUD
END EXT SOURCES

```

EXT TARGETS

```

<-Volume-> <-Grp> <-Member-><--Mult-->Tran <-Volume-> <Member> Tsys Tgap Amd ***
<Name> # <Name> # <-factor->strg <Name> # <Name> tem strg strg***

```

*** RCHRES 171 results -

```

RCHRES 171 HYDR RO 1 1 WDM2 1400 FLOW ENGL REPL
RCHRES 171 HTRCH TW 1 WDM2 1402 WTEM METR AGGR REPL
RCHRES 171 OXRX DOX WDM2 1409 DOXX ENGL AGGR REPL
RCHRES 171 PLANK PKST4 2 WDM2 1419 TPXX ENGL AGGR REPL
RCHRES 171 PHCARB PHST 3 WDM2 1421 PHXX ENGL AGGR REPL

```

*** RCHRES 331 results -

```

RCHRES 331 HYDR RO 1 1 WDM2 1500 FLOW ENGL REPL
RCHRES 331 HTRCH TW 1 WDM2 1502 WTEM METR AGGR REPL
RCHRES 331 SEDTRN SSED 4 WDM2 1506 SSED ENGL AGGR REPL
RCHRES 331 OXRX DOX WDM2 1509 DOXX ENGL AGGR REPL
RCHRES 331 NUTRX DNUST 1 WDM2 1511 NO3X ENGL AGGR REPL
RCHRES 331 PLANK PKST4 2 WDM2 1519 TPXX ENGL AGGR REPL
RCHRES 331 PHCARB PHST 3 WDM2 1521 PHXX ENGL AGGR REPL

```

*** RCHRES 391 results -

```

RCHRES 391 HYDR RO 1 1 WDM2 1600 FLOW ENGL REPL
RCHRES 391 HTRCH TW 1 WDM2 1602 WTEM METR AGGR REPL
RCHRES 391 SEDTRN SSED 4 WDM2 1606 SSED ENGL AGGR REPL
RCHRES 391 OXRX DOX WDM2 1609 DOXX ENGL AGGR REPL
RCHRES 391 NUTRX DNUST 1 WDM2 1611 NO3X ENGL AGGR REPL
RCHRES 391 PLANK BALCLA 1 WDM2 1614 BALG ENGL AGGR REPL
RCHRES 391 PLANK PKST4 2 WDM2 1619 TPXX ENGL AGGR REPL
RCHRES 391 PHCARB PHST 3 WDM2 1621 PHXX ENGL AGGR REPL

```

*** RCHRES 391 (Catchment Outlet) results -

```

RCHRES 401 HYDR RO 1 1 WDM2 1300 FLOW ENGL REPL
RCHRES 401 CONS CON 1 WDM2 1301 ALKN ENGL AGGR REPL
RCHRES 401 HTRCH TW 1 WDM2 1302 WTEM METR AGGR REPL
RCHRES 401 SEDTRN SSED 1 WDM2 1303 SAND ENGL AGGR REPL
RCHRES 401 SEDTRN SSED 2 WDM2 1304 SILT ENGL AGGR REPL
RCHRES 401 SEDTRN SSED 3 WDM2 1305 CLAY ENGL AGGR REPL
RCHRES 401 SEDTRN SSED 4 WDM2 1306 SSED ENGL AGGR REPL
RCHRES 401 GQUAL DQAL 1 WDM2 1307 SLCA ENGL AGGR REPL

```

*** following factor of 0.1 converts from #cfu/1 to #cfu/100ml

```

RCHRES 401 GQUAL DQAL 2 0.1 WDM2 1308 ECOL ENGL AGGR REPL
RCHRES 401 OXRX DOX WDM2 1309 DOXX ENGL AGGR REPL
RCHRES 401 OXRX BOD WDM2 1310 BODX ENGL AGGR REPL
RCHRES 401 NUTRX DNUST 1 WDM2 1311 NO3X ENGL AGGR REPL
RCHRES 401 NUTRX DNUST 2 WDM2 1312 NH3X ENGL AGGR REPL
RCHRES 401 NUTRX DNUST 4 WDM2 1313 PO4X ENGL AGGR REPL
RCHRES 401 PLANK BALCLA 1 WDM2 1314 BALG ENGL AGGR REPL
RCHRES 401 PLANK PKST3 4 WDM2 1315 ORGN ENGL AGGR REPL
RCHRES 401 PLANK PKST3 5 WDM2 1316 ORGP ENGL AGGR REPL
RCHRES 401 PLANK PKST3 6 WDM2 1317 ORGC ENGL AGGR REPL
RCHRES 401 PLANK PKST4 1 WDM2 1318 TNXX ENGL AGGR REPL
RCHRES 401 PLANK PKST4 2 WDM2 1319 TPXX ENGL AGGR REPL
RCHRES 401 PHCARB PHST 1 WDM2 1320 TICX ENGL AGGR REPL
RCHRES 401 PHCARB PHST 3 WDM2 1321 PHXX ENGL AGGR REPL

```

```

RCHRES 151 HYDR TAU WDM2 2001 TAUX ENGL AGGR REPL
RCHRES 161 HYDR TAU WDM2 2002 TAUX ENGL AGGR REPL
RCHRES 171 HYDR TAU WDM2 2003 TAUX ENGL AGGR REPL
RCHRES 181 HYDR TAU WDM2 2004 TAUX ENGL AGGR REPL
RCHRES 191 HYDR TAU WDM2 2005 TAUX ENGL AGGR REPL
RCHRES 241 HYDR TAU WDM2 2006 TAUX ENGL AGGR REPL
RCHRES 251 HYDR TAU WDM2 2007 TAUX ENGL AGGR REPL
RCHRES 261 HYDR TAU WDM2 2008 TAUX ENGL AGGR REPL
RCHRES 271 HYDR TAU WDM2 2009 TAUX ENGL AGGR REPL
RCHRES 281 HYDR TAU WDM2 2010 TAUX ENGL AGGR REPL
RCHRES 291 HYDR TAU WDM2 2011 TAUX ENGL AGGR REPL
RCHRES 311 HYDR TAU WDM2 2012 TAUX ENGL AGGR REPL
RCHRES 321 HYDR TAU WDM2 2013 TAUX ENGL AGGR REPL

```

RCHRES 331 HYDR TAU	WDM2 2014 TAUX	ENGL AGGR REPL
RCHRES 341 HYDR TAU	WDM2 2015 TAUX	ENGL AGGR REPL
RCHRES 351 HYDR TAU	WDM2 2016 TAUX	ENGL AGGR REPL
RCHRES 361 HYDR TAU	WDM2 2017 TAUX	ENGL AGGR REPL
RCHRES 371 HYDR TAU	WDM2 2018 TAUX	ENGL AGGR REPL
RCHRES 381 HYDR TAU	WDM2 2019 TAUX	ENGL AGGR REPL
RCHRES 391 HYDR TAU	WDM2 2020 TAUX	ENGL AGGR REPL
RCHRES 401 HYDR TAU	WDM2 2021 TAUX	ENGL AGGR REPL

END EXT TARGETS

NETWORK

```
<-Volume> <-Grp> <-Member-><--Mult-->Tran <-Target vols> <-Grp> <-Member-> ***
<Name> # <Name> # #<-factor->strg <Name> # # <Name> # # ***
END NETWORK
```

SCHEMATIC

```
<-Source-> <--Area--> <-Target-> MBLK ***
<Name> # <-factor-> <Name> # Tbl# ***
Sub Basin 151 ***
<-Source-> <--Area--> <-Target-> MBLK ***
<Name> # <-factor-> <Name> # Tbl# ***
PERLND 41 97.292 RCHRES 151 2
PERLND 51 249.690 RCHRES 151 2
PERLND 61 33.612 RCHRES 151 2
PERLND 31 81.841 RCHRES 151 2
IMPLND 91 5.784 RCHRES 151 4
IMPLND 92 134.401 RCHRES 151 4
IMPLND 93 25.031 RCHRES 151 4
IMPLND 94 34.807 RCHRES 151 4
PERLND 41 97.292 RCHRES 351 3
PERLND 51 249.690 RCHRES 351 3
PERLND 61 33.612 RCHRES 351 3
PERLND 31 81.841 RCHRES 351 3
```

```
Sub Basin 161 ***
<-Source-> <--Area--> <-Target-> MBLK ***
<Name> # <-factor-> <Name> # Tbl# ***
PERLND 11 47.420 RCHRES 161 2
PERLND 41 133.374 RCHRES 161 2
PERLND 51 237.175 RCHRES 161 2
PERLND 61 41.358 RCHRES 161 2
PERLND 31 65.075 RCHRES 161 2
PERLND 86 38.475 RCHRES 161 2
IMPLND 91 10.028 RCHRES 161 4
IMPLND 92 118.755 RCHRES 161 4
IMPLND 93 34.525 RCHRES 161 4
IMPLND 94 41.212 RCHRES 161 4
PERLND 11 47.420 RCHRES 351 3
PERLND 41 133.374 RCHRES 351 3
PERLND 51 237.175 RCHRES 351 3
PERLND 61 41.358 RCHRES 351 3
PERLND 31 65.075 RCHRES 351 3
PERLND 86 38.475 RCHRES 351 3
```

```
Sub Basin 171 ***
<-Source-> <--Area--> <-Target-> MBLK ***
<Name> # <-factor-> <Name> # Tbl# ***
PERLND 11 106.970 RCHRES 171 1
PERLND 21 37.225 RCHRES 171 1
PERLND 41 189.186 RCHRES 171 1
PERLND 51 175.256 RCHRES 171 1
PERLND 31 109.563 RCHRES 171 1
IMPLND 91 15.652 RCHRES 171 4
IMPLND 92 69.757 RCHRES 171 4
IMPLND 93 2.459 RCHRES 171 4
IMPLND 94 5.917 RCHRES 171 4
```

```
Sub Basin 181 ***
<-Source-> <--Area--> <-Target-> MBLK ***
<Name> # <-factor-> <Name> # Tbl# ***
PERLND 11 126.529 RCHRES 181 1
PERLND 21 123.038 RCHRES 181 1
PERLND 41 170.008 RCHRES 181 1
PERLND 51 123.504 RCHRES 181 1
PERLND 31 93.820 RCHRES 181 1
```


PERLND	72	56.479	RCHRES	181	1
PERLND	74	88.333	RCHRES	181	1
PERLND	82	82.639	RCHRES	181	1
PERLND	83	99.626	RCHRES	181	1
IMPLND	91	18.225	RCHRES	181	4
IMPLND	92	54.458	RCHRES	181	4
IMPLND	93	7.645	RCHRES	181	4
IMPLND	94	14.643	RCHRES	181	4
Sub Basin 191 ***					
<-Source-> <--Area--> <-Target-> MBLK ***					
<Name> # <-factor-> <Name> # Tbl# ***					
PERLND	11	70.924	RCHRES	191	1
PERLND	41	204.985	RCHRES	191	1
PERLND	51	173.664	RCHRES	191	1
PERLND	31	88.946	RCHRES	191	1
PERLND	71	97.431	RCHRES	191	1
PERLND	74	133.121	RCHRES	191	1
PERLND	84	50.930	RCHRES	191	1
IMPLND	91	17.215	RCHRES	191	4
IMPLND	92	82.330	RCHRES	191	4
IMPLND	93	4.721	RCHRES	191	4
IMPLND	94	5.031	RCHRES	191	4
Sub Basin 241 ***					
<-Source-> <--Area--> <-Target-> MBLK ***					
<Name> # <-factor-> <Name> # Tbl# ***					
PERLND	41	72.814	RCHRES	241	1
PERLND	51	86.307	RCHRES	241	1
PERLND	31	45.762	RCHRES	241	1
PERLND	71	52.643	RCHRES	241	1
PERLND	74	128.266	RCHRES	241	1
PERLND	75	199.940	RCHRES	241	1
PERLND	73	61.395	RCHRES	241	1
IMPLND	91	13.294	RCHRES	241	4
IMPLND	92	104.762	RCHRES	241	4
IMPLND	93	3.492	RCHRES	241	4
IMPLND	94	6.449	RCHRES	241	4
Sub Basin 251 ***					
<-Source-> <--Area--> <-Target-> MBLK ***					
<Name> # <-factor-> <Name> # Tbl# ***					
PERLND	11	82.736	RCHRES	251	1
PERLND	21	66.913	RCHRES	251	1
PERLND	41	86.963	RCHRES	251	1
PERLND	51	47.293	RCHRES	251	1
PERLND	31	45.956	RCHRES	251	1
PERLND	74	28.250	RCHRES	251	1
PERLND	73	27.188	RCHRES	251	1
PERLND	84	31.428	RCHRES	251	1
IMPLND	91	7.762	RCHRES	251	4
IMPLND	92	25.119	RCHRES	251	4
IMPLND	93	3.605	RCHRES	251	4
IMPLND	94	0.258	RCHRES	251	4
Sub Basin 261 ***					
<-Source-> <--Area--> <-Target-> MBLK ***					
<Name> # <-factor-> <Name> # Tbl# ***					
PERLND	11	32.640	RCHRES	261	1
PERLND	21	57.980	RCHRES	261	1
PERLND	41	80.520	RCHRES	261	1
PERLND	31	34.704	RCHRES	261	1
PERLND	71	84.429	RCHRES	261	1
PERLND	72	29.001	RCHRES	261	1
PERLND	74	75.963	RCHRES	261	1
PERLND	81	36.791	RCHRES	261	1
IMPLND	91	8.495	RCHRES	261	4
IMPLND	92	14.520	RCHRES	261	4
IMPLND	93	1.147	RCHRES	261	4
IMPLND	94	0.217	RCHRES	261	4
Sub Basin 271 ***					
<-Source-> <--Area--> <-Target-> MBLK ***					
<Name> # <-factor-> <Name> # Tbl# ***					
PERLND	11	39.831	RCHRES	271	1
PERLND	41	97.802	RCHRES	271	1

PERLND	71	131.956	RCHRES	271	1
PERLND	72	43.106	RCHRES	271	1
PERLND	74	84.545	RCHRES	271	1
PERLND	75	33.197	RCHRES	271	1
PERLND	73	46.136	RCHRES	271	1
PERLND	84	59.239	RCHRES	271	1
IMPLND	91	10.210	RCHRES	271	4
IMPLND	92	15.764	RCHRES	271	4
IMPLND	93	1.477	RCHRES	271	4
Sub Basin 281 ***					
<-Source->					
<Name> #		<--Area-->	<-Target->		MBLK ***
<-factor->			<Name> #		Tbl# ***
PERLND	11	38.170	RCHRES	281	1
PERLND	21	69.805	RCHRES	281	1
PERLND	41	82.793	RCHRES	281	1
PERLND	61	31.412	RCHRES	281	1
PERLND	71	67.168	RCHRES	281	1
PERLND	74	95.506	RCHRES	281	1
PERLND	75	86.357	RCHRES	281	1
PERLND	73	41.610	RCHRES	281	1
IMPLND	91	9.907	RCHRES	281	4
IMPLND	92	62.412	RCHRES	281	4
IMPLND	93	5.083	RCHRES	281	4
IMPLND	94	8.724	RCHRES	281	4
Sub Basin 291 ***					
<-Source->					
<Name> #		<--Area-->	<-Target->		MBLK ***
<-factor->			<Name> #		Tbl# ***
PERLND	11	88.613	RCHRES	291	1
PERLND	41	83.710	RCHRES	291	1
PERLND	42	44.643	RCHRES	291	1
PERLND	51	58.340	RCHRES	291	1
PERLND	31	62.783	RCHRES	291	1
PERLND	71	28.457	RCHRES	291	1
PERLND	74	70.211	RCHRES	291	1
PERLND	76	27.645	RCHRES	291	1
IMPLND	91	12.202	RCHRES	291	4
IMPLND	92	31.043	RCHRES	291	4
IMPLND	93	1.901	RCHRES	291	4
IMPLND	94	25.429	RCHRES	291	4
Sub Basin 311 ***					
<-Source->					
<Name> #		<--Area-->	<-Target->		MBLK ***
<-factor->			<Name> #		Tbl# ***
PERLND	11	69.180	RCHRES	311	2
PERLND	41	139.882	RCHRES	311	2
PERLND	51	363.147	RCHRES	311	2
PERLND	31	67.368	RCHRES	311	2
IMPLND	91	9.624	RCHRES	311	4
IMPLND	92	151.074	RCHRES	311	4
IMPLND	93	30.052	RCHRES	311	4
IMPLND	94	11.264	RCHRES	311	4
PERLND	11	69.180	RCHRES	351	3
PERLND	41	139.882	RCHRES	351	3
PERLND	51	363.147	RCHRES	351	3
PERLND	31	67.368	RCHRES	351	3
Sub Basin 321 ***					
<-Source->					
<Name> #		<--Area-->	<-Target->		MBLK ***
<-factor->			<Name> #		Tbl# ***
PERLND	11	23.097	RCHRES	321	1
PERLND	41	53.255	RCHRES	321	1
PERLND	51	120.434	RCHRES	321	1
PERLND	31	29.425	RCHRES	321	1
PERLND	74	37.170	RCHRES	321	1
PERLND	75	25.499	RCHRES	321	1
IMPLND	91	5.566	RCHRES	321	4
IMPLND	92	67.670	RCHRES	321	4
IMPLND	93	8.760	RCHRES	321	4
IMPLND	94	14.104	RCHRES	321	4
Sub Basin 331 ***					
<-Source->					
<Name> #		<--Area-->	<-Target->		MBLK ***
<-factor->			<Name> #		Tbl# ***
PERLND	11	189.300	RCHRES	331	1

PERLND	41	258.051	RCHRES	331	1
PERLND	51	164.270	RCHRES	331	1
PERLND	31	127.186	RCHRES	331	1
PERLND	71	118.569	RCHRES	331	1
PERLND	74	134.310	RCHRES	331	1
PERLND	81	176.667	RCHRES	331	1
IMPLND	91	22.775	RCHRES	331	4
IMPLND	92	84.354	RCHRES	331	4
IMPLND	93	11.064	RCHRES	331	4
IMPLND	94	23.928	RCHRES	331	4
Sub Basin 341 ***					
<-Source->		<--Area-->	<-Target->		MBLK ***
<Name>	#	<-factor->	<Name>	#	Tbl# ***
PERLND	11	58.670	RCHRES	341	1
PERLND	41	108.565	RCHRES	341	1
PERLND	51	110.630	RCHRES	341	1
PERLND	31	55.443	RCHRES	341	1
PERLND	71	79.227	RCHRES	341	1
PERLND	74	67.259	RCHRES	341	1
PERLND	75	72.864	RCHRES	341	1
PERLND	81	61.186	RCHRES	341	1
IMPLND	91	11.389	RCHRES	341	4
IMPLND	92	71.648	RCHRES	341	4
IMPLND	93	12.779	RCHRES	341	4
IMPLND	94	11.868	RCHRES	341	4
Sub Basin 351 ***					
<-Source->		<--Area-->	<-Target->		MBLK ***
<Name>	#	<-factor->	<Name>	#	Tbl# ***
PERLND	11	88.777	RCHRES	351	1
PERLND	41	130.045	RCHRES	351	1
PERLND	51	99.493	RCHRES	351	1
PERLND	31	63.709	RCHRES	351	1
PERLND	71	101.771	RCHRES	351	1
PERLND	72	57.940	RCHRES	351	1
PERLND	74	136.409	RCHRES	351	1
PERLND	75	83.942	RCHRES	351	1
PERLND	81	146.047	RCHRES	351	1
PERLND	84	64.996	RCHRES	351	1
IMPLND	91	16.675	RCHRES	351	4
IMPLND	92	76.798	RCHRES	351	4
IMPLND	93	10.806	RCHRES	351	4
IMPLND	94	11.084	RCHRES	351	4
Sub Basin 361 ***					
<-Source->		<--Area-->	<-Target->		MBLK ***
<Name>	#	<-factor->	<Name>	#	Tbl# ***
PERLND	11	65.145	RCHRES	361	1
PERLND	41	137.143	RCHRES	361	1
PERLND	31	52.992	RCHRES	361	1
PERLND	71	112.393	RCHRES	361	1
PERLND	74	112.086	RCHRES	361	1
PERLND	75	66.338	RCHRES	361	1
PERLND	73	47.243	RCHRES	361	1
PERLND	81	149.337	RCHRES	361	1
IMPLND	91	15.019	RCHRES	361	4
IMPLND	92	38.719	RCHRES	361	4
IMPLND	93	3.626	RCHRES	361	4
IMPLND	94	1.489	RCHRES	361	4
Sub Basin 371 ***					
<-Source->		<--Area-->	<-Target->		MBLK ***
<Name>	#	<-factor->	<Name>	#	Tbl# ***
PERLND	11	51.197	RCHRES	371	1
PERLND	41	93.118	RCHRES	371	1
PERLND	51	34.901	RCHRES	371	1
PERLND	31	45.833	RCHRES	371	1
PERLND	71	80.201	RCHRES	371	1
PERLND	74	99.113	RCHRES	371	1
PERLND	75	37.711	RCHRES	371	1
PERLND	73	38.276	RCHRES	371	1
PERLND	81	57.339	RCHRES	371	1
PERLND	84	39.890	RCHRES	371	1
IMPLND	91	12.746	RCHRES	371	4
IMPLND	92	28.642	RCHRES	371	4

```

IMPLND 93          0.888      RCHRES 371      4
IMPLND 94          21.757     RCHRES 371      4

Sub Basin 381      ***
<-Source->          <--Area-->      <-Target->      MBLK      ***
<Name> #            <-factor->      <Name> #      Tbl#      ***
PERLND 41           145.087     RCHRES 381      1
PERLND 51           184.235     RCHRES 381      1
PERLND 31           167.868     RCHRES 381      1
PERLND 71           266.230     RCHRES 381      1
PERLND 74           317.096     RCHRES 381      1
PERLND 75           308.261     RCHRES 381      1
PERLND 73           133.853     RCHRES 381      1
PERLND 81           184.742     RCHRES 381      1
IMPLND 91           31.676      RCHRES 381      4
IMPLND 92           216.952     RCHRES 381      4
IMPLND 93           36.240      RCHRES 381      4
IMPLND 94           58.214      RCHRES 381      4

Sub Basin 391      ***
<-Source->          <--Area-->      <-Target->      MBLK      ***
<Name> #            <-factor->      <Name> #      Tbl#      ***
PERLND 11           131.076     RCHRES 391      1
PERLND 12           73.789      RCHRES 391      1
PERLND 13           89.424      RCHRES 391      1
PERLND 21           94.864      RCHRES 391      1
PERLND 41           145.070     RCHRES 391      1
PERLND 42           150.791     RCHRES 391      1
PERLND 31           144.679     RCHRES 391      1
PERLND 71           125.852     RCHRES 391      1
PERLND 74           234.667     RCHRES 391      1
PERLND 73           70.933      RCHRES 391      1
IMPLND 91           30.802      RCHRES 391      4
IMPLND 92           40.160      RCHRES 391      4
IMPLND 93           5.651       RCHRES 391      4
IMPLND 94           1.952       RCHRES 391      4

Sub Basin 401      ***
<-Source->          <--Area-->      <-Target->      MBLK      ***
<Name> #            <-factor->      <Name> #      Tbl#      ***
PERLND 14           202.276     RCHRES 401      1
PERLND 41           188.872     RCHRES 401      1
PERLND 51           86.361      RCHRES 401      1
PERLND 71           76.818      RCHRES 401      1
PERLND 72           119.174     RCHRES 401      1
PERLND 74           231.623     RCHRES 401      1
PERLND 75           204.340     RCHRES 401      1
IMPLND 91           14.894      RCHRES 401      4
IMPLND 92           122.800     RCHRES 401      4
IMPLND 93           25.548      RCHRES 401      4
IMPLND 94           65.849      RCHRES 401      4
***
*** GROUNDWATER FROM OUTSIDE OF WATERSHED (SNOHOMISH CO DNR MODEL)
PERLND 950          1000.00     RCHRES 361      3
PERLND 950          1000.00     RCHRES 371      3
PERLND 950          1000.00     RCHRES 381      3
PERLND 950          1000.00     RCHRES 391      3
***
*** CHANNEL NETWORK LINKAGES ***
<-Source->          <--Area-->      <-Target->      MBLK      ***
<Name> #            <-factor->      <Name> #      Tbl#      ***
*** SITKA CREEK
RCHRES 151          RCHRES 331      5
*** PENNY CREEK
RCHRES 161          RCHRES 171      5
RCHRES 171          RCHRES 181      5
RCHRES 181          RCHRES 191      6
RCHRES 181          RCHRES 191      7
RCHRES 191          RCHRES 351      5
*** SILVER/TAMBARK CREEK
RCHRES 241          RCHRES 281      5
RCHRES 251          RCHRES 261      5
RCHRES 261          RCHRES 271      5
RCHRES 271          RCHRES 281      5
RCHRES 281          RCHRES 371      5
*** FILBERT CREEK

```

```

RCHRES 291          RCHRES 371          6
RCHRES 291          RCHRES 371          7
  *** NORTH CREEK
RCHRES 311          RCHRES 321          5
RCHRES 321          RCHRES 331          5
RCHRES 331          RCHRES 341          5
RCHRES 341          RCHRES 351          5
RCHRES 351          RCHRES 361          5
RCHRES 361          RCHRES 371          5
RCHRES 371          RCHRES 381          5
RCHRES 381          RCHRES 391          5
RCHRES 391          RCHRES 401          5
RCHRES 401          RCHRES 999          5
  
```

END SCHEMATIC

RCHRES

```

GEN-INFO
*** RCHRES          Name          Nexits      Unit Systems      Printer          BinaryOut
*** # - #<-----><-----> User T-series  Engr Metr LKFG Engr Metr
***
      in  out
151  SITKA CREEK          1  1  1  1  62  0  0  91  0
161  SILVER LAKE         1  1  1  1  62  0  1  91  0
171  RUGGS LAKE          1  1  1  1  62  0  1  91  0
181  THOMAS LAKE         2  1  1  1  62  0  1  91  0
191  PENNY CREEK         1  1  1  1  62  0  0  91  0
241  UPPER SILVER CREEK  1  1  1  1  62  0  0  91  0
251  TAMBARK CR AT 164TH  1  1  1  1  62  0  0  91  0
261  TAMBARK CR AT 180TH  1  1  1  1  62  0  0  91  0
271  TAMBARK CR NR SR527  1  1  1  1  62  0  0  91  0
281  SILVER CREEK         1  1  1  1  62  0  0  91  0
291  FILBERT CREEK       2  1  1  1  62  0  0  91  0
311  NORTH CR AT 112TH    1  1  1  1  62  0  0  91  0
321  NORTH CR AT 128TH    1  1  1  1  62  0  0  91  0
331  NORTH CR AT 154TH    1  1  1  1  62  0  0  91  0
341  NORTH CR AT 164TH    1  1  1  1  62  0  0  91  0
351  NORTH CR AT 183RD    1  1  1  1  62  0  0  91  0
361  NORTH CONF W/SILVER  1  1  1  1  62  0  0  91  0
371  NORTH CR AT SR527    1  1  1  1  62  0  0  91  0
381  NORTH CR AT 228TH    1  1  1  1  62  0  0  91  0
391  NORTH CR AT 240TH    1  1  1  1  62  0  0  91  0
401  NORTH CR AT MOUTH    1  1  1  1  62  0  0  91  0
END GEN-INFO
  
```

ACTIVITY

```

RCHRES ***** Active Sections *****
# - # HYFG ADFG CNFG HTFG SDFG GQFG OXFG NUFQ PKFG PHFG *****
151 401 1 1 1 1 1 1 1 1 1 1 1
END ACTIVITY
  
```

PRINT-INFO

```

RCHRES ***** Printout Flags ***** PIVL PYR
# - # HYDR ADCA CONS HEAT SED GQL OXRX NUTR PLNK PHCB *****
151 401 5 5 5 5 5 5 5 5 5 5 5 1 9
END PRINT-INFO
  
```

BINARY-INFO

```

RCHRES ***** Printout Flags ***** PIVL PYR
# - # HYDR ADCA CONS HEAT SED GQL OXRX NUTR PLNK PHCB *****
151 401 5 5 5 5 5 5 5 5 5 5 5 1 9
END BINARY-INFO
  
```

HYDR-PARM1

```

RCHRES          Flags for each HYDR Section          ***
# - # VC A1 A2 A3 ODFVFG for each *** ODGTFG for each  FUNCT for each
      FG FG FG FG possible exit *** possible exit  possible exit
      * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
151 171 0 1 1 1 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 2 2 2 2 2
181     0 1 1 1 4 5 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 2 2 2 2 2
191 281 0 1 1 1 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 2 2 2 2 2
291     0 1 1 1 4 5 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 2 2 2 2 2
311 401 0 1 1 1 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 2 2 2 2 2
END HYDR-PARM1
  
```

HYDR-PARM2

```

RCHRES          ***NEED TO INPUT ACTUAL LEN VALUES          ***
  
```

```

# - # FTABNO LEN DELTH STCOR KS DB50 ***
<-----><-----><-----><-----><-----><-----><----->
151 151 0.37 46. 0. 0.5 0.10
161 161 0.58 13. 0. 0.5 0.10
171 171 1.47 43. 0. 0.5 0.10
181 181 1.24 3. 0. 0.5 0.10
191 191 2.84 161. 0. 0.5 0.10
241 241 1.07 134. 0. 0.5 0.10
251 251 0.52 23. 0. 0.5 0.10
261 261 1.08 26. 0. 0.5 0.10
271 271 1.87 177. 0. 0.5 0.10
281 281 0.81 52. 0. 0.5 0.10
291 291 1.20 210. 0. 0.5 0.10
311 311 1.40 62. 0. 0.5 0.10
321 321 1.00 66. 0. 0.5 0.10
331 331 1.85 98. 0. 0.5 0.10
341 341 0.66 36. 0. 0.5 0.10
351 351 1.14 56. 0. 0.5 0.10
361 361 1.89 82. 0. 0.5 0.10
371 371 1.18 39. 0. 0.5 0.10
381 381 1.21 46. 0. 0.5 0.10
391 391 1.01 23. 0. 0.5 0.10
401 401 1.95 20. 0. 0.5 0.10
END HYDR-PARM2

```

```

HYDR-INIT
RCHRES Initial conditions for each HYDR section ***
# - # *** VOL Initial value of COLIND Initial value of OUTDGT
*** ac-ft for each possible exit for each possible exit
<-----><-----><-----><-----><-----><-----><----->
151 0.0 4.0
161 2400.0 4.0
171 0.0 4.0
181 55.0 4.0 5.0
191 281 0.0 4.0
291 0.0 4.0 5.0
311 401 0.0 4.0
END HYDR-INIT

```

```

HT-BED-FLAGS
RCHRES ***
# - # BDFG TGFG TSTP ***
151 401 2 3
END HT-BED-FLAGS

```

```

HEAT-PARM
RCHRES *** ELEV ELDAT CFSAXE KATRAD KCOND KEVAP
# - # *** (ft) (ft)
151 416.6 -189.3 0.65 9.0 6.12 2.50
161 436.4 -169.5 0.65 9.0 6.12 2.50
171 418.7 -187.2 0.70 9.0 6.12 2.50
181 397.6 -208.3 0.65 9.0 6.12 2.50
191 349.2 -256.7 0.60 9.0 6.12 2.50
241 246.2 -359.7 0.50 9.0 6.12 2.50
251 376.2 -229.7 0.65 9.0 6.12 2.50
261 359.9 -246.0 0.65 9.0 6.12 2.50
271 270.5 -335.4 0.65 9.0 6.12 2.50
281 154.0 -451.9 0.60 9.0 6.12 2.50
291 265.8 -340.1 0.55 9.0 6.12 2.50
311 484.7 -121.2 0.65 9.0 6.12 2.50
321 423.7 -182.2 0.60 9.0 6.12 2.50
331 329.6 -276.3 0.60 9.0 6.12 2.50
341 273.2 -332.7 0.65 9.0 6.12 2.50
351 230.2 -375.7 0.65 9.0 6.12 2.50
361 171.6 -434.3 0.65 9.0 6.12 2.50
371 119.4 -486.5 0.65 9.0 6.12 2.50
381 88.7 -517.3 0.65 9.0 6.12 2.50
391 51.6 -554.4 0.65 9.0 6.12 2.50
401 28.4 -577.6 0.70 9.0 6.12 2.50
END HEAT-PARM

```

```

HT-BED-PARM
RCHRES MUDDEP TGRND KMUD KGRND ***
# - # (ft) (degF) (kcal/m2/C/hr) ***
151 401 2.0 80. 1.42
END HT-BED-PARM

```

```

MON-HT-TGRND
  RCHRES      Temperature of ground (degF)      ***
  #   #   JAN   FEB   MAR   APR   MAY   JUN   JUL   AUG   SEP   OCT   NOV   DEC   ***
151 401 46.  47.  48.  50.  52.  56.  57.  56.  55.  50.  49.  47.
END MON-HT-TGRND
  
```

```

HEAT-INIT
  RCHRES      TW      AIRTMP ***
  # - #      (deg F)  (deg F) ***
151 401      50.0    40.0
END HEAT-INIT
  
```

```

SANDFG
  RCHRES      ***
  # - # SDFG   ***
151 401      3
END SANDFG
  
```

```

SED-GENPARM
  RCHRES      BEDWID      BEDWRN      POR      ***
  # - #      (ft)        (ft)        (-)        ***
151          8.0          4.0          0.4
161          8.0          4.0          0.4
171          8.0          4.0          0.4
181          8.0          4.0          0.4
191          8.0          4.0          0.4
241          8.0          4.0          0.4
251          8.0          4.0          0.4
261          8.0          4.0          0.4
271          8.0          4.0          0.4
281          8.0          4.0          0.4
291          8.0          4.0          0.4
311          8.0          4.0          0.4
321          8.0          4.0          0.4
331          8.0          4.0          0.4
341          8.0          4.0          0.4
351          8.0          4.0          0.4
361          8.0          4.0          0.4
371          8.0          4.0          0.4
381          8.0          4.0          0.4
391          8.0          4.0          0.4
401          8.0          4.0          0.4
END SED-GENPARM
  
```

```

SAND-PM
  RCHRES ***      D      W      RHO      KSAND      EXPSND
  # - # ***      (in)  (in/sec) (gm/cm3)
151          0.005    0.02    2.5      0.65      1.4
161          0.005    0.02    2.5      0.65      1.4
171          0.005    0.02    2.5      0.65      1.4
181          0.005    0.02    2.5      0.65      1.4
191          0.005    0.02    2.5      0.52      1.4
241          0.005    0.02    2.5      0.52      1.4
251          0.005    0.02    2.5      0.52      1.4
261          0.005    0.02    2.5      0.52      1.4
271          0.005    0.02    2.5      0.52      1.4
281          0.005    0.02    2.5      0.52      1.4
291          0.005    0.02    2.5      0.52      1.4
311          0.005    0.02    2.5      0.52      1.4
321          0.005    0.02    2.5      0.52      1.4
331          0.005    0.02    2.5      0.52      1.4
341          0.005    0.02    2.5      0.52      1.4
351          0.005    0.02    2.5      0.65      1.4
361          0.005    0.02    2.5      0.39      1.4
371          0.005    0.02    2.5      0.39      1.4
381          0.005    0.02    2.5      0.52      1.4
391          0.005    0.02    2.5      0.65      1.4
401          0.005    0.02    2.5      0.78      1.4
END SAND-PM
  
```

```

SILT-CLAY-PM
  RCHRES ***      D      W      SILT PARAMETERS
  # - # ***      (in)  (in/sec) (gm/cm3) (lb/ft2) (lb/ft2) lb/ft2.d
151          0.0006    .0035    2.2      2.50      2.90      0.5
161          0.0006    .0035    2.2      1.0E-10    1.0      0.5
  
```

171	0.0006	.0035	2.2	1.0E-2	1.0	0.5
181	0.0006	.0035	2.2	5.0E-5	1.0	0.5
191	0.0006	.0035	2.2	0.40	1.60	0.5
241	0.0006	.0035	2.2	0.55	1.20	0.5
251	0.0006	.0035	2.2	0.26	0.70	0.5
261	0.0006	.0035	2.2	0.08	0.40	0.5
271	0.0006	.0035	2.2	0.80	1.70	0.5
281	0.0006	.0035	2.2	0.60	1.80	0.5
291	0.0006	.0035	2.2	1.25	2.50	0.5
311	0.0006	.0035	2.2	0.16	0.28	0.5
321	0.0006	.0035	2.2	0.55	1.40	0.5
331	0.0006	.0035	2.2	0.40	0.90	0.5
341	0.0006	.0035	2.2	0.45	1.60	0.5
351	0.0006	.0035	2.2	0.35	1.40	0.5
361	0.0006	.0035	2.2	0.35	1.10	0.5
371	0.0006	.0035	2.2	0.40	1.60	0.5
381	0.0006	.0035	2.2	0.50	1.70	0.5
391	0.0006	.0035	2.2	0.26	0.85	0.5
401	0.0006	.0035	2.2	0.06	0.40	0.5

END SILT-CLAY-PM

SILT-CLAY-PM

*** RCHRES		D	W	CLAY PARAMETERS			M
*** x - x		(in)	(in/sec)	RHO	TAUCD	TAUCS	lb/ft2.d
				gm/cm3	lb/ft2	lb/ft2	
151	0.00006	.0004	2.0	2.0	2.50	2.90	0.5
161	0.00006	.0004	2.0	1.0E-10	1.0	1.0	0.5
171	0.00006	.0004	2.0	1.0E-2	1.0	1.0	0.5
181	0.00006	.0004	2.0	5.0E-5	1.0	1.0	0.5
191	0.00006	.0004	2.0	0.40	1.60	1.60	0.5
241	0.00006	.0004	2.0	0.55	1.20	1.20	0.5
251	0.00006	.0004	2.0	0.26	0.70	0.70	0.5
261	0.00006	.0004	2.0	0.08	0.40	0.40	0.5
271	0.00006	.0004	2.0	0.80	1.70	1.70	0.5
281	0.00006	.0004	2.0	0.60	1.80	1.80	0.5
291	0.00006	.0004	2.0	1.25	2.50	2.50	0.5
311	0.00006	.0004	2.0	0.16	0.28	0.28	0.5
321	0.00006	.0004	2.0	0.55	1.40	1.40	0.5
331	0.00006	.0004	2.0	0.40	0.90	0.90	0.5
341	0.00006	.0004	2.0	0.45	1.60	1.60	0.5
351	0.00006	.0004	2.0	0.35	1.40	1.40	0.5
361	0.00006	.0004	2.0	0.35	1.10	1.10	0.5
371	0.00006	.0004	2.0	0.40	1.60	1.60	0.5
381	0.00006	.0004	2.0	0.50	1.70	1.70	0.5
391	0.00006	.0004	2.0	0.26	0.85	0.85	0.5
401	0.00006	.0004	2.0	0.06	0.40	0.40	0.5

END SILT-CLAY-PM

SSED-INIT

RCHRES ***		Suspended sed concs (mg/l)		
x - x	***	Sand	Silt	Clay
151	401	0.0	0.0	0.0

END SSED-INIT

BED-INIT

*** RCHRES		BEDDEP	Initial bed composition		
*** x - x		(ft)	Sand	Silt	Clay
151	2.0	0.65	0.15	0.20	0.20
161	2.0	0.65	0.15	0.20	0.20
171	2.0	0.65	0.15	0.20	0.20
181	2.0	0.65	0.15	0.20	0.20
191	2.0	0.65	0.15	0.20	0.20
241	2.0	0.65	0.15	0.20	0.20
251	2.0	0.65	0.15	0.20	0.20
261	2.0	0.65	0.15	0.20	0.20
271	2.0	0.65	0.15	0.20	0.20
281	2.0	0.65	0.15	0.20	0.20
291	2.0	0.65	0.15	0.20	0.20
311	2.0	0.65	0.15	0.20	0.20
321	2.0	0.65	0.15	0.20	0.20
331	2.0	0.65	0.15	0.20	0.20
341	2.0	0.65	0.15	0.20	0.20
351	2.0	0.65	0.15	0.20	0.20
361	2.0	0.65	0.15	0.20	0.20
371	2.0	0.65	0.15	0.20	0.20
381	2.0	0.65	0.15	0.20	0.20
391	2.0	0.65	0.15	0.20	0.20

401 2.0 0.65 0.15 0.20
 END BED-INIT

NCONS
 RCHRES ***
 # - #NCONS ***
 151 401 1
 END NCONS

CONS-DATA
 RCHRES Data for conservative constituent No. 1 ***
 # - #<---Substance-id---> Conc ID CONV QTYID ***
 151 401 Alkalinity as CaCO3 20.0 mg/l 16019. LBS
 END CONS-DATA

GQ-GENDATA
 RCHRES NGQL TPGF PHFG ROFG CDFG SDFG PYFG LAT ***
 # - # ***
 151 401 2 1 1 1 47.8
 END GQ-GENDATA

GQ-QALDATA
 RCHRES Data for general constituent No. 1 ***
 # - #<-----GQID-----><----DQAL> CONCID CONV QTYID ***
 151 401 Silica 5. mg 16019. LBS
 END GQ-QALDATA

GQ-QALFG
 RCHRES HDRL OXID PHOT VOLT BIOD GEN SDAS ***
 # - # ***
 151 401 0 0 0 0 0 1 0
 END GQ-QALFG

GQ-GENDECAY
 RCHRES FSTDEC THFST ***
 # - # ***
 151 401 0.00010 1.07
 END GQ-GENDECAY

GQ-SEDDECAY
 RCHRES KSUSP THSUSP KBED THBED ***
 # - # ***
 151 401
 END GQ-SEDDECAY

GQ-KD
 RCHRES Partition coefficients ***
 # - # ADPM(1,1) ADPM(2,1) ADPM(3,1) ADPM(4,1) ADPM(5,1) ADPM(6,1) ***
 151 401 0.001 0.001 0.001 0.001 0.001 0.001
 END GQ-KD

GQ-ADRATE
 RCHRES Adsorption/desorption rate parameters ***
 # - # ADPM(1,2) ADPM(2,2) ADPM(3,2) ADPM(4,2) ADPM(5,2) ADPM(6,2) ***
 151 401 0.001 0.001 0.001 0.001 0.001 0.001
 END GQ-ADRATE

GQ-SEDCONC
 RCHRES SQAL1 SQAL2 SQAL3 SQAL4 SQAL5 SQAL6 ***
 # - # ***
 151 401
 END GQ-SEDCONC

GQ-QALDATA
 RCHRES Data for general constituent No. 2 ***
 # - #<-----GQID-----> DQAL CONCID CONV QTYID ***
 151 401 E-Coli 200.0 #CFU 3.531E+07 10^9CFU
 END GQ-QALDATA

GQ-QALFG
 RCHRES HDRL OXID PHOT VOLT BIOD GEN SDAS ***
 # - # ***
 151 401 0 0 0 0 0 1 0
 END GQ-QALFG

GQ-GENDECAY

```

RCHRES      FSTDEC      THFST ***
# - #      ***
151 401      1.0      1.07
END GQ-GENDECAY

GQ-SEDDECAY
RCHRES      KSUSP      THSUSP      KBED      THBED ***
# - #      ***
151 401
END GQ-SEDDECAY

GQ-KD
RCHRES      Partition coefficients ***
# - # ADFM(1,1) ADFM(2,1) ADFM(3,1) ADFM(4,1) ADFM(5,1) ADFM(6,1) ***
151 401      .0001      .001      .001      .0001      .001      .001
END GQ-KD

GQ-ADRATE
RCHRES      Adsorption/desorption rate parameters ***
# - # ADFM(1,2) ADFM(2,2) ADFM(3,2) ADFM(4,2) ADFM(5,2) ADFM(6,2) ***
151 401      150.      150.      150.      .25      .25      .25
END GQ-ADRATE

GQ-SEDCONC
RCHRES      SQAL1      SQAL2      SQAL3      SQAL4      SQAL5      SQAL6 ***
# - #      ***
151 401
END GQ-SEDCONC

GQ-VALUES
RCHRES      TWAT      PHVAL      ROC      CLD      SDCNC      PHY ***
# - #      ***
151 401
END GQ-VALUES

BENTH-FLAG
RCHRES BENF ***
# - #      ***
151 401      0
END BENTH-FLAG

OX-FLAGS
RCHRES REAM ***
# - #      ***
151 401      2
END OX-FLAGS

OX-GENPARM
RCHRES      KBOD20      TCBOB      KODSET      SUPSAT ***
# - #      /hr      (-)      (ft/hr)      (-) ***
151      .006      1.047      .027      1.3
161      .006      1.047      .027      1.3
171      .006      1.047      .027      1.3
181      .006      1.047      .027      1.3
191      .006      1.047      .027      1.3
241      .006      1.047      .027      1.3
251      .006      1.047      .027      1.3
261      .006      1.047      .027      1.3
271      .006      1.047      .027      1.3
281      .006      1.047      .027      1.3
291      .006      1.047      .027      1.3
311      .006      1.047      .027      1.3
321      .006      1.047      .027      1.3
331      .006      1.047      .027      1.3
341      .006      1.047      .027      1.3
351      .006      1.047      .027      1.3
361      .006      1.047      .027      1.3
371      .006      1.047      .027      1.3
381      .006      1.047      .027      1.3
391      .006      1.047      .027      1.3
401      .006      1.047      .027      1.3
END OX-GENPARM

OX-BENPARM
RCHRES      BENOD      TC BEN      EXPOD      BRBOD (A)      BRBOD (2)      EXPREL ***
# - #      mg/m2.hr      mg/m2.hr      mg/m2.hr      ***

```

151	50.	1.074	1.22	.001	.001	2.82
161	50.	1.074	1.22	.001	.001	2.82
171	50.	1.074	1.22	.001	.001	2.82
181	50.	1.074	1.22	.001	.001	2.82
191	50.	1.074	1.22	.001	.001	2.82
241	50.	1.074	1.22	.001	.001	2.82
251	50.	1.074	1.22	.001	.001	2.82
261	50.	1.074	1.22	.001	.001	2.82
271	50.	1.074	1.22	.001	.001	2.82
281	50.	1.074	1.22	.001	.001	2.82
291	50.	1.074	1.22	.001	.001	2.82
311	50.	1.074	1.22	.001	.001	2.82
321	50.	1.074	1.22	.001	.001	2.82
331	50.	1.074	1.22	.001	.001	2.82
341	50.	1.074	1.22	.001	.001	2.82
351	50.	1.074	1.22	.001	.001	2.82
361	50.	1.074	1.22	.001	.001	2.82
371	50.	1.074	1.22	.001	.001	2.82
381	50.	1.074	1.22	.001	.001	2.82
391	50.	1.074	1.22	.001	.001	2.82
401	50.	1.074	1.22	.001	.001	2.82

END OX-BENPARM

OX-TCGINV

RCHRES	TCGINV	***
# - #	(-)	***
151 401	1.07	

END OX-TCGINV

OX-INIT

RCHRES	DOX	BOD	SATDO	***
# - #	mg/l	mg/l	mg/l	***
151 401	14.	1.0	14.	

END OX-INIT

NUT-FLAGS

RCHRES	TAM	NO2	PO4	AMV	DEN	ADNH	ADPO	PHFG	***
# - #									***
151 401	1	0	1	0	1	0	1		

END NUT-FLAGS

CONV-VAL1

RCHRES	CVBO	CVBPC	CVBPN	BPCNTC	***
# - #	mg/mg	mols/mol	mols/mol		***
151 401	1.63	106.	16.	49.	

END CONV-VAL1

NUT-BENPARM

RCHRES	BRTAM(1)	BRTAM(2)	BRPO4(1)	BRPO4(2)	ANAER***
# - #	mg/m2.hr	mg/m2.hr	mg/m2.hr	mg/m2.hr	mg/l***
151 401	0.0	0.0	0.0	0.0	.001

END NUT-BENPARM

NUT-NITDENIT

RCHRES	KTAM20	KNO220	TCNIT	KNO320	TCDEN	DENOXT	***
# - #	/hr	/hr		/hr		mg/l	***
151	.015	.002	1.070	.002	1.04	5.	
161	.015	.002	1.070	.002	1.04	5.	
171	.015	.002	1.070	.002	1.04	5.	
181	.015	.002	1.070	.002	1.04	5.	
191	.015	.002	1.070	.002	1.04	5.	
241	.015	.002	1.070	.002	1.04	5.	
251	.015	.002	1.070	.002	1.04	5.	
261	.015	.002	1.070	.002	1.04	5.	
271	.015	.002	1.070	.002	1.04	5.	
281	.015	.002	1.070	.002	1.04	5.	
291	.015	.002	1.070	.002	1.04	5.	
311	.015	.002	1.070	.002	1.04	5.	
321	.015	.002	1.070	.002	1.04	5.	
331	.015	.002	1.070	.002	1.04	8.	
341	.015	.002	1.070	.002	1.04	5.	
351	.015	.002	1.070	.002	1.04	5.	
361	.015	.002	1.070	.002	1.04	5.	
371	.015	.002	1.070	.002	1.04	5.	
381	.015	.002	1.070	.002	1.04	5.	
391	.015	.002	1.070	.002	1.04	5.	

401 .015 .002 1.070 .002 1.04 5.
 END NUT-NITDENIT

NUT-BEDCONC

RCHRES Bed concentrations of NH4 & PO4 (mg/kg) ***
 # - # NH4-sand NH4-silt NH4-clay PO4-sand PO4-silt PO4-clay ***
 151 401 0.00010 0.00020 0.00030 0.00005 0.00030 0.00040
 END NUT-BEDCONC

NUT-ADSPARM

RCHRES Partition coefficients for NH4 AND PO4 (l/mg) ***
 # - # NH4-sand NH4-silt NH4-clay PO4-sand PO4-silt PO4-clay ***
 151 401 0.0001 0.0001 0.0001 10. 10. 10.
 END NUT-ADSPARM

NUT-DINIT

RCHRES NO3 TAM NO2 PO4 PH ***
 # - # mg/l mg/l mg/l mg/l ***
 151 401 1.0 .05 .030 7.
 END NUT-DINIT

NUT-ADSINIT

RCHRES Initial suspended NH4 and PO4 concentrations (mg/mg) ***
 # - # NH4-sand NH4-silt NH4-clay PO4-sand PO4-silt PO4-clay ***
 151 401 0. 0. 0. 0. 0. 0.
 END NUT-ADSINIT

PLNK-FLAGS

RCHRES PHYF ZOOF BALF SDLT AMRF DECF NSFG ZFOO BNFG***
 # - # ***
 151 0 0 1 0 0 1 1 0 0
 161 181 1 0 1 0 0 1 1 0 0
 191 321 0 0 1 0 0 1 1 0 0
 331 1 0 1 0 0 1 1 0 0
 341 0 0 1 0 0 1 1 0 0
 351 1 0 1 0 0 1 1 0 0
 361 0 0 1 0 0 1 1 0 0
 371 381 1 0 1 0 0 1 1 0 0
 391 401 0 0 1 0 0 1 1 0 0
 END PLNK-FLAGS

PLNK-PARM1

RCHRES ***RATCLP NONREF LITSED ALNPR EXTB MALGR PARADF
 # - # *** /ft /hr
 151 321 .68 .5 0. .25 .20 .039
 331 .68 .5 0. .25 .20 .050
 341 401 .68 .5 0. .25 .20 .039
 END PLNK-PARM1

PLNK-PARM2

RCHRES *** CMLLT CMMN CMMNP CIMP TALGRH TALGRL TALGRM
 # - # ***ly/min mg/l mg/l mg/l deg F deg F degF
 151 401 .010 0.025 .0001 .005 95. 43.0 68.
 END PLNK-PARM2

PLNK-PARM3

RCHRES ALR20 ALDH ALDL OXALD NALDH PALDH ***
 # - # /hr /hr /hr /hr mg/l mg/l ***
 151 401 .005 .001 .001 .03 .010 .002
 END PLNK-PARM3

PHYTO-PARM

RCHRES SEED MXSTAY OREF CLALDH PHYSET REFSET ***
 # - # mg/l mg/l ug/l ft/hr ft/hr ***
 151 20. 0.01 0.120
 161 181 1.0 1.5 20. 20. 0.01 0.120
 191 321 20. 0.01 0.120
 331 1.0 1.5 250. 20. 0.02 0.250
 341 20. 0.01 0.120
 351 1.0 1.5 440. 20. 0.01 0.120
 361 20. 0.01 0.120
 371 381 1.0 1.5 500. 20. 0.01 0.120
 391 401 20. 0.01 0.120
 END PHYTO-PARM

BENAL-PARM

```

RCHRES      MBAL      CFBALR      CFBALG      ***
# - #      mg/m2      ***
151 401      2000.      0.34      0.33
END BENAL-PARM

```

```

PLNK-INIT
RCHRES      PHYTO      ZOO      BENAL      ORN      ORP      ORC ***
# - #      mg/l      org/l      mg/m2      mg/l      mg/l      mg/l ***
151 401      0.5      1000.      0.06      0.02      0.5
END PLNK-INIT

```

```

PH-PARM1
RCHRES      PHCN      ALKC      ***
# - #      ***
151 401      50      1
END PH-PARM1

```

```

PH-PARM2
RCHRES      CFCINV      BRCO2 (1)      BRCO2 (2)      ***
# - #      mg/m2/hr      mg/m2/hr      ***
151 401      0.05      1.      1.
END PH-PARM2

```

```

PH-INIT
RCHRES      TIC      CO2      PH ***
# - #      mg/l      mg/l      ***
151 401      12.      10.      7.0
END PH-INIT

```

END RCHRES

FTABLES

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FTABLE      401
**** NORTH CREEK Confluence with Sammamish River *****
***SNOHOMISH CO DNR MODEL FTABLE 100
Rows      COLUMNS ***
12      4
DEPTH      AREA      VOLUME      OUTFLOW ***
(FT)      (ACRES)      (ACRE-FT)      (FT3/S) ***
0.00      0.00      0.00      0.0
1.04      7.2      7.82      48.0
1.55      10.8      16.31      119.0
2.12      17.4      34.52      239.0
2.99      23.0      63.74      477.0
3.39      24.3      79.96      607.0
3.64      25.0      88.84      693.0
3.97      26.0      99.61      802.0
4.44      26.5      116.58      965.0
4.94      27.2      300.31      1160.0
5.64      59.0      596.12      1500.0
6.18      75.7      1404.92      1800.0
END FTABLE401

```

```

FTABLE      391
**** NORTH CREEK AT 240th Street SE *****
***SNOHOMISH CO DNR MODEL FTABLE 110
Rows      COLUMNS ***
12      4
DEPTH      AREA      VOLUME      OUTFLOW ***
(FT)      (ACRES)      (ACRE-FT)      (FT3/S) ***
0.00      0.0      0.00      0.0
2.26      2.8      2.31      45.0
3.30      3.1      4.27      113.0
4.05      3.6      6.80      225.0
5.14      4.7      11.29      450.0
5.59      5.1      13.71      572.0
5.85      5.5      15.22      652.0
6.14      6.5      17.22      755.0
6.55      10.2      21.41      908.0
7.00      10.8      26.39      1092.0
7.80      10.9      35.42      1412.0
10.17      11.3      48.79      1694.0
END FTABLE391

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FTABLE      381
**** NORTH CREEK AT 228th Street SE *****

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***SNOHOMISH CO DNR MODEL FTABLE 120
Rows  COLUMNS ***
 12    4
DEPTH  AREA      VOLUME    OUTFLOW ***
(FT)   (ACRES)     (ACRE-FT) (FT3/S) ***
0.00   0.0         0.00      0.0
1.25   3.0         3.03      42.0
1.93   3.8         5.95      106.0
2.80   8.9         11.27     211.0
4.06   13.6        23.36     422.0
4.61   15.8        30.26     537.0
4.96   17.3        35.07     612.0
5.46   19.9        42.53     708.0
6.30   21.1        55.59     851.0
6.98   22.2        73.07     1023.0
7.52   23.1        100.29    1323.0
7.54   24.9        123.90    1587.0
END FTABLE381

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```

FTABLE 371
**** NORTH CREEK AT SR 527 Bothell Everett Highway ****
***SNOHOMISH CO DNR MODEL FTABLES 140+150+160
Rows Cols      ***
 12    4
Depth      Area      Volume    Outflow1
(ft)       (acres)   (acre-ft) (cfs) ***
0.000000  0.000000  0.000000  0.000000
1.190000  1.600000  1.480000  41.00000
1.810000  9.196552  9.260000  103.00000
2.510000  13.47435  20.14217  206.00000
3.540000  16.55505  36.58655  411.00000
4.950000  19.46388  54.98857  527.00000
5.060000  19.95337  58.26103  604.00000
5.260000  20.67971  63.19549  703.00000
5.810000  22.13493  75.42756  852.00000
6.950000  24.33008  96.48009  1034.000
9.630000  28.54566  149.8242  1337.000
12.80000  40.83788  217.2316  1604.000
END FTABLE371

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```

FTABLE 361
**** NORTH CREEK Confluence with Silver Creek ****
***SNOHOMISH CO DNR MODEL FTABLES 170+180
Rows Cols      ***
 13    4
Depth      Area      Volume    Outflow1
(ft)       (acres)   (acre-ft) (cfs) ***
0.000000  0.000000  0.000000  0.000000
1.260000  6.000270  4.967568  34.00000
1.830000  7.353514  8.608378  86.00000
2.440000  10.36759  13.74000  172.00000
3.110000  14.62891  22.30182  344.00000
3.390000  16.76818  26.84636  446.00000
3.550000  18.08491  29.61182  514.00000
3.730000  19.29873  32.94545  602.00000
3.860000  19.96143  35.49286  668.00000
3.980000  20.69102  38.04633  736.00000
4.110000  21.42224  40.66592  804.00000
4.260000  22.28673  43.94776  899.00000
5.000000  112.5982  61.53261  1370.000
END FTABLE361

```

```

FTABLE 351
**** NORTH CREEK AT 183RD ****
***SNOHOMISH CO DNR MODEL FTABLE 190
Rows  COLUMNS ***
 12    4
DEPTH  AREA      VOLUME    OUTFLOW ***
(FT)   (ACRES)     (ACRE-FT) (FT3/S) ***
0.00   0.0         0.00      0.0
1.73   25.9        6.83      34.0
2.40   30.8        17.21     86.0
3.00   35.1        35.11     171.0
3.93   48.8        68.33     342.0
4.52   54.6        90.12     445.0
4.97   57.1        103.43    514.0

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5.45      60.2      119.47     605.0
5.65      61.9      130.65     674.0
5.81      63.6      141.11     744.0
5.94      65.1      151.45     817.0
6.12      67.2      165.79     917.0
END FTABLE351

```

```

FTABLE      341
**** NORTH CREEK AT 164TH (850 FT D/S)****
***SNOHOMISH CO DNR MODEL FTABLE 195
  Rows      COLUMNS ***
    12       4
DEPTH      AREA      VOLUME      OUTFLOW ***
(Ft)       (ACRES)     (ACRE-FT)   (FT3/S) ***
0.00      0.0        0.00        0.0
1.08      1.82       1.31        28.0
1.64      2.37       2.47        71.0
2.27      3.94       4.43        141.0
3.19      5.57       8.24        282.0
3.68      6.11       10.71       382.0
4.06      6.58       12.68       469.0
4.44      7.00       14.95       572.0
4.72      7.26       16.69       653.0
5.00      7.52       18.43       736.0
5.26      7.81       20.22       824.0
5.58      8.18       22.65       946.0
END FTABLE341

```

```

FTABLE      331
**** NORTH CREEK AT 154TH EXTENDED****
***SNOHOMISH CO DNR MODEL FTABLE 200
  Rows      COLUMNS ***
    12       4
DEPTH      AREA      VOLUME      OUTFLOW ***
(Ft)       (ACRES)     (ACRE-FT)   (FT3/S) ***
0.00      0.0        0.00        0.0
1.09      5.09       2.62        24.0
1.62      8.60       5.61        61.0
2.17      14.29      10.36       122.0
2.85      22.27      19.52       244.0
3.10      27.05      27.46       345.0
3.24      29.13      32.69       416.0
3.41      31.19      38.42       509.0
3.52      32.65      42.76       581.0
3.63      34.06      47.06       656.0
3.74      35.44      51.41       734.0
3.88      37.11      57.35       841.0
END FTABLE331

```

```

FTABLE      321
**** NORTH CREEK AT 128th Street SE ****
***SNOHOMISH CO DNR MODEL FTABLES 210+220
  Rows Cols      ***
    12     4
    Depth      Area      Volume      Outflow1      ***
      (ft)     (acres)   (acre-ft)   (cfs) ***
0.000000    0.000000    0.000000    0.000000
0.930000    1.905057    1.136207    21.00000
1.450000    2.799655    2.032759    52.00000
3.260000    5.794082    5.551224    104.0000
9.100000    12.31740    17.14767    208.0000
11.36000    15.49654    26.11754    297.0000
11.52000    16.85583    31.34667    360.0000
11.67000    19.61518    46.77772    443.0000
11.74000    20.51487    52.78421    508.0000
11.86000    20.87434    54.20105    575.0000
11.93000    21.10404    55.21754    644.0000
12.07000    21.63342    57.32053    741.0000
END FTABLE321

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```

FTABLE      311
**** NORTH CREEK AT 112th Street SE ****
***SNOHOMISH CO DNR MODEL FTABLES 230+240
  Rows Cols      ***
    12     4
    Depth      Area      Volume      Outflow1      ***

```

(ft)	(acres)	(acre-ft)	(cfs)	***
0.000000	0.000000	0.000000	0.000000	
2.530000	5.173125	0.696875	15.00000	
3.130000	7.736818	1.402955	36.00000	
3.990000	11.72959	2.879474	73.00000	
5.550000	20.24891	7.843158	145.0000	
7.280000	29.85604	15.70128	216.0000	
7.520000	31.26995	17.35840	268.0000	
7.740000	32.65936	19.15075	339.0000	
7.930000	33.72703	20.62596	394.0000	
8.030000	34.64949	21.70976	453.0000	
8.120000	35.75471	22.98118	515.0000	
8.230000	36.95441	24.56735	602.0000	

END FTABLE311

FTABLE 291
 **** FILBERT CREEK AT 208th Street SE ****
 ***SNOHOMISH CO DNR MODEL FTABLES 410+415+425+430

Rows	Cols	***				***
12	5					
Depth	Area	Volume	Outflow1	Outflow2	***	
(ft)	(acres)	(acre-ft)	(cfs)	(cfs)	***	
0.000000	0.000000	0.000000	0.000000	0.000000		
1.020000	1.499091	0.693227	3.200000	0.000000		
1.760000	5.435080	2.943389	7.500000	0.400000		
3.100000	8.613849	7.304046	12.90000	3.100000		
5.620000	16.52434	17.95137	18.70000	13.30000		
5.890000	17.66841	19.40467	22.30000	20.70000		
5.990000	18.12806	19.97996	24.50000	24.40000		
6.120000	18.70262	20.72784	27.50000	29.30000		
6.190000	19.05738	21.15055	29.10000	32.90000		
6.260000	19.45214	21.60325	31.10000	37.10000		
6.320000	19.73193	21.96843	33.30000	40.60000		
6.390000	20.02669	22.37114	35.90000	44.70000		

END FTABLE291

FTABLE 281
 **** SILVER CREEK AT CONFLUENCE ****
 ***SNOHOMISH CO DNR MODEL FTABLES 500+503

Rows	Cols	***				***
09	4					
Depth	Area	Volume	Outflow1	***		
(ft)	(acres)	(acre-ft)	(cfs)	***		
0.000000	0.000000	0.000000	0.000000			
2.500000	0.711667	1.603333	53.51000			
5.000000	1.409667	4.046667	149.5600			
7.500000	3.421000	8.550000	277.0000			
10.00000	5.525333	13.25667	435.9700			
10.25000	5.807667	13.74333	459.7000			
10.50000	6.091000	14.25000	484.4500			
10.75000	6.374333	14.76667	510.5600			
11.00000	6.657667	15.31333	538.2700			

END FTABLE281

FTABLE 271
 **** TAMBARK CREEK AT CONFLUENCE WITH SILVER CREEK****
 ***SNOHOMISH CO DNR MODEL FTABLES 510+515

Rows	Cols	***				***
09	4					
Depth	Area	Volume	Outflow1	***		
(ft)	(acres)	(acre-ft)	(cfs)	***		
0.000000	0.000000	0.000000	0.000000			
0.500000	2.057800	0.990000	3.570000			
1.000000	4.176300	2.550000	7.140000			
1.500000	7.210400	5.390000	11.79000			
2.000000	11.06300	9.970000	20.71000			
2.750000	16.10550	20.30500	35.66000			
3.500000	21.29000	34.96500	55.09000			
4.250000	25.89200	52.37250	77.93000			
5.000000	29.62400	73.30000	103.2600			

END FTABLE271

FTABLE 261
 **** TAMBARK CREEK AT 180TH****
 ***SNOHOMISH CO DNR MODEL FTABLES 560+570

Rows Cols ***


```

15      4
  Depth      Area      Volume      Outflow1      ***
  (ft)      (acres)    (acre-ft)    (cfs)      ***
0.000000    0.100000    0.000000    0.000000
0.500000    0.180000    0.083000    1.000000
1.000000    0.280000    0.198000    2.000000
1.500000    0.400000    0.368000    3.000000
2.000000    0.600000    0.618000    4.000000
2.500000    0.850000    0.981000    10.000000
3.000000    1.070000    1.461000    13.000000
3.500000    1.300000    2.053000    17.000000
4.000000    43.400000    13.22800    20.000000
5.000000    73.000000    69.32800    25.000000
6.000000    104.7000    147.6780    28.000000
7.000000    138.1000    250.1780    32.000000
8.000000    160.2500    372.0530    34.000000
9.000000    189.6500    511.3030    38.000000
10.000000   219.0500    671.5530    40.000000
END FTABLE261

```

```

FTABLE      251
**** TAMBARK CREEK AT 164TH****
***SNOHOMISH CO DNR MODEL FTABLES 580+590
Rows Cols      ***
12      4
  Depth      Area      Volume      Outflow1      ***
  (ft)      (acres)    (acre-ft)    (cfs)      ***
0.000000    0.005000    0.000000    0.000000
0.500000    0.058000    0.017000    1.500000
1.000000    0.090000    0.054000    2.800000
1.500000    0.120000    0.106000    8.000000
2.000000    0.250000    0.199000    13.000000
2.500000    0.400000    0.361000    17.000000
3.000000    0.550000    0.599000    20.000000
3.500000    0.720000    0.916000    22.000000
3.990000    0.848000    1.300500    25.000000
5.000000    11.310000    7.439000    28.000000
8.000000    48.50700    56.36900    36.000000
12.000000   95.30300    163.6090    300.000000
END FTABLE251

```

```

FTABLE      241
**** UPPER SILVER CREEK AT 196TH****
***SNOHOMISH CO DNR MODEL FTABLES 525+535
Rows Cols      ***
09      4
  Depth      Area      Volume      Outflow1      ***
  (ft)      (acres)    (acre-ft)    (cfs)      ***
0.000000    0.000000    0.000000    0.000000
0.500000    0.444000    0.200000    6.600000
1.000000    0.518000    0.440000    21.220000
1.500000    10.30790    5.501795    42.660000
2.000000    11.85526    7.270513    70.900000
2.250000    13.22141    8.469310    91.070000
2.500000    16.29779    11.05789    113.960000
2.750000    19.98767    19.55867    139.960000
3.000000    25.77100    28.41900    169.390000
END FTABLE241

```

```

FTABLE      191
**** PENNY CREEK AT MOUTH****
***SNOHOMISH CO DNR MODEL FTABLES 605+610+615
Rows Cols      ***
12      4
  Depth      Area      Volume      Outflow1      ***
  (ft)      (acres)    (acre-ft)    (cfs)      ***
0.000000    0.000000    0.000000    0.000000
0.310000    0.910000    0.980000    14.800000
0.540000    62.54927    106.8682    49.020000
1.660000    131.2667    271.7055    83.240000
2.080000    160.3440    355.6349    117.460000
2.460000    185.9190    440.9996    151.680000
2.770000    204.1614    510.8316    185.900000
3.480000    243.8604    674.3707    220.120000
3.830000    263.4761    756.3448    254.340000
4.170000    282.4591    835.5353    288.560000

```

4.490000 300.2566 909.9487 322.7800
 4.890000 323.3159 1008.910 484.0000
 END FTABLE191

FTABLE 181
 ***THOMAS LAKE
 ***FTABLE DEVELOPED BY SNOHOMISH CO (GREGG FARRIS) USING HEC-RAS
 ***revised 12/03/99 WITH NEW FARRIS DATA
 ***SNOHOMISH CO DNR MODEL FTABLES 630+635+650
 Rows Cols ***
 20 5

Depth (ft)	Area (acres)	Volume (acre-ft)	Outflow1 (cfs)	Outflow2 (cfs)	***
0.000000	0.000000	0.000000	0.000000	0.000000	
4.000000	18.36782	55.25008	0.000000	0.100000	
4.050000	18.61385	55.82415	2.000000	0.400000	
4.130000	19.03351	56.89267	5.000000	0.800000	
4.210000	19.44316	57.96118	10.00000	1.400000	
4.280000	19.80161	58.89488	15.00000	1.700000	
4.350000	20.18460	59.99351	20.00000	1.900000	
4.420000	20.55366	61.17871	25.00000	2.200000	
4.470000	20.82727	62.16100	30.00000	2.500000	
4.540000	21.20632	63.54621	35.00000	2.700000	
4.630000	21.70082	65.23433	40.00000	3.000000	
4.830000	22.97780	69.28545	50.00000	3.200000	
4.940000	23.85998	71.69545	55.00000	3.300000	
5.040000	24.66578	74.26851	60.00000	3.300000	
5.150000	25.58162	76.91411	65.00000	3.400000	
5.250000	26.40603	79.66284	70.00000	3.500000	
5.460000	28.13628	85.35716	80.00000	3.700000	
5.890000	31.63611	98.12121	100.0000	4.000000	
6.330000	39.44985	121.5890	120.0000	4.200000	
6.830000	42.28000	163.9102	200.0000	5.000000	

 END FTABLE181

FTABLE 171
 *** ORIGINAL RUGGS LAKE (USGS STUDY)
 ***SNOHOMISH CO DNR MODEL FTABLES 665+660+670
 Rows Cols ***
 05 4

Depth (ft)	Area (acres)	Volume (acre-ft)	Outflow1 (cfs)	***
0.000000	0.000000	0.000000	0.000000	
0.500000	2.092485	1.927114	5.000000	
1.500000	5.418297	10.20775	25.00000	
2.250000	22.67756	40.69372	100.0000	
5.000000	75.77000	137.7600	175.0000	

 END FTABLE171

FTABLE 161
 *** SILVER LAKE
 *** Revised FTABLE based on City of Everett data
 *** Min allowed elev 429.8
 *** Channel invert 430.8
 *** Max allowed elev 433.0
 ***SNOHOMISH CO DNR MODEL FTABLE 685
 Rows Cols (NCL3A) ***
 11 4

Depth (ft)	Area (acres)	Volume (acre-ft)	Lake Outlet (cfs)	Elev 1988NGVD (ft)	***
0.0	0.0	0.0	0.	380.6	
49.2	120.	2362.	0.	429.8	
50.0	122.	2400.	0.	430.6	
50.2	124.	2425.	0.	430.8	
51.0	130.	2526.	4.	431.6	
52.0	138.	2664.	10.	432.6	
52.4	141.	2719.	14.	433.0	
53.0	145.	2801.	20.	433.6	
53.4	147.	2865.	27.	434.0	
54.7	156.	3074.	50.	435.3	
55.4	160.	3186.	100.	436.0	

 END FTABLE161

FTABLE 151
 *** Sitka Creek Outfall at 4th Drive SE ****

***SNOHOMISH CO DNR MODEL FTABLES 825+830+845

Rows	Cols	***		
16	4			
Depth (ft)	Area (acres)	Volume (acre-ft)	Outflow1 (cfs)	***
0.000000	0.000000	0.000000	0.000000	
0.880000	0.230020	0.454016	4.700000	
1.290000	0.367339	0.736951	11.10000	
3.940000	2.161368	4.301486	35.50000	
4.710000	2.619276	5.137895	43.70000	
4.830000	2.760250	5.414000	52.40000	
4.930000	2.973056	5.647315	60.80000	
4.990000	3.575139	5.871204	67.30000	
5.030000	3.999861	6.060463	73.10000	
5.070000	4.424583	6.229722	79.40000	
5.110000	4.839306	6.398981	85.70000	
5.160000	5.392708	6.680556	94.50000	
5.270000	6.658194	7.396019	117.5000	
5.330000	7.330278	7.769907	130.3000	
5.380000	7.953681	8.171481	143.9000	
5.460000	8.923125	8.810000	164.6000	

END FTABLE151

END FTABLES

MASS-LINK

<Volume>	<-Grp>	<-Member->	<--Mult-->	<Target>	<-Grp>	<-Member->	***
<Name>	<Name>	#	<-factor->	<Name>	<Name>	#	***
MASS-LINK	1						
conversion from acre-inches to acre-ft (1/12)							***
PERLND	PWATER	PERO	0.0833333	RCHRES	INFLOW	IVOL	
PERLND	SEDMNT	SOSED	1	0.05	RCHRES	INFLOW	ISED 1
PERLND	SEDMNT	SOSED	1	0.70	RCHRES	INFLOW	ISED 2
PERLND	SEDMNT	SOSED	1	0.25	RCHRES	INFLOW	ISED 3
PERLND	PWTGAS	POHT	1.	RCHRES	INFLOW	IHEAT	
PERLND	PWTGAS	PODOXM	1.	RCHRES	INFLOW	OXIF	1
PERLND	PWATER	SURO	5.0	RCHRES	INFLOW	PHIF	1
PERLND	PWTGAS	IOCO2M	40.	RCHRES	INFLOW	PHIF	1
PERLND	PWTGAS	AOCO2M	40.	RCHRES	INFLOW	PHIF	1
PERLND	PQUAL	POQUAL	1	1.	RCHRES	INFLOW	NUIF1 1
PERLND	PQUAL	POQUAL	2	1.	RCHRES	INFLOW	NUIF1 2
PERLND	PQUAL	POQUAL	3	1.	RCHRES	INFLOW	NUIF1 4
PERLND	PQUAL	POQUAL	4	0.40	RCHRES	INFLOW	OXIF 2
PERLND	PQUAL	POQUAL	4	0.040	RCHRES	INFLOW	PKIF 3
PERLND	PQUAL	POQUAL	4	0.0030	RCHRES	INFLOW	PKIF 4
PERLND	PQUAL	POQUAL	4	1.	RCHRES	INFLOW	PKIF 5
PERLND	PQUAL	IOQUAL	5	1.	RCHRES	INFLOW	ICON 1
PERLND	PQUAL	AOQUAL	5	1.	RCHRES	INFLOW	ICON 1
PERLND	PWATER	SURO	12.	RCHRES	INFLOW	ICON 1	
PERLND	PQUAL	POQUAL	6	1.	RCHRES	INFLOW	IDQAL 1
PERLND	PQUAL	POQUAL	7	1.	RCHRES	INFLOW	IDQAL 2

END MASS-LINK 1

MASS-LINK 2

PERLND	PWATER	SURO	0.0833333	RCHRES	INFLOW	IVOL	
PERLND	PWATER	IFWO	0.0833333	RCHRES	INFLOW	IVOL	
PERLND	SEDMNT	SOSED	1	0.05	RCHRES	INFLOW	ISED 1
PERLND	SEDMNT	SOSED	1	0.70	RCHRES	INFLOW	ISED 2
PERLND	SEDMNT	SOSED	1	0.25	RCHRES	INFLOW	ISED 3
PERLND	PWTGAS	SOHT	1.	RCHRES	INFLOW	IHEAT	
PERLND	PWTGAS	IOHT	1.	RCHRES	INFLOW	IHEAT	
PERLND	PWTGAS	SODOXM	1.	RCHRES	INFLOW	OXIF	1
PERLND	PWTGAS	IODOXM	1.	RCHRES	INFLOW	OXIF	1
PERLND	PWATER	SURO	5.0	RCHRES	INFLOW	PHIF	1
PERLND	PWTGAS	IOCO2M	40.	RCHRES	INFLOW	PHIF	1
PERLND	PQUAL	SOQUAL	1	1.	RCHRES	INFLOW	NUIF1 1
PERLND	PQUAL	IOQUAL	1	1.	RCHRES	INFLOW	NUIF1 1
PERLND	PQUAL	SOQUAL	2	1.	RCHRES	INFLOW	NUIF1 2
PERLND	PQUAL	IOQUAL	2	1.	RCHRES	INFLOW	NUIF1 2
PERLND	PQUAL	SOQUAL	3	1.	RCHRES	INFLOW	NUIF1 4
PERLND	PQUAL	IOQUAL	3	1.	RCHRES	INFLOW	NUIF1 4
PERLND	PQUAL	SOQUAL	4	0.40	RCHRES	INFLOW	OXIF 2
PERLND	PQUAL	IOQUAL	4	0.40	RCHRES	INFLOW	OXIF 2
PERLND	PQUAL	SOQUAL	4	0.040	RCHRES	INFLOW	PKIF 3
PERLND	PQUAL	IOQUAL	4	0.040	RCHRES	INFLOW	PKIF 3
PERLND	PQUAL	SOQUAL	4	0.0030	RCHRES	INFLOW	PKIF 4

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PERLND    PQUAL    IOQUAL  4    0.0030    RCHRES    INFLOW PKIF  4
PERLND    PQUAL    SOQUAL  4     1.        RCHRES    INFLOW PKIF  5
PERLND    PQUAL    IOQUAL  4     1.        RCHRES    INFLOW PKIF  5
PERLND    PWATER   SURO     12.       RCHRES    INFLOW ICON  1
PERLND    PQUAL    IOQUAL  5     1.        RCHRES    INFLOW ICON  1
PERLND    PQUAL    SOQUAL  6     1.        RCHRES    INFLOW IDQAL 1
PERLND    PQUAL    IOQUAL  6     1.        RCHRES    INFLOW IDQAL 1
PERLND    PQUAL    SOQUAL  7     1.        RCHRES    INFLOW IDQAL 2
PERLND    PQUAL    IOQUAL  7     1.        RCHRES    INFLOW IDQAL 2
  END MASS-LINK      2

  MASS-LINK          3
PERLND    PWATER   AGWO     0.0833333 RCHRES    INFLOW IVOL
PERLND    PWTGAS   AOHT     1.         RCHRES    INFLOW IHEAT
PERLND    PWTGAS   AODOXM    1.         RCHRES    INFLOW OXIF  1
PERLND    PWTGAS   AOCO2M   40.        RCHRES    INFLOW PHIF  1
PERLND    PQUAL    AOQUAL  1     1.         RCHRES    INFLOW NUIF1 1
PERLND    PQUAL    AOQUAL  2     1.         RCHRES    INFLOW NUIF1 2
PERLND    PQUAL    AOQUAL  3     1.         RCHRES    INFLOW NUIF1 4
PERLND    PQUAL    AOQUAL  4     0.40      RCHRES    INFLOW OXIF  2
PERLND    PQUAL    AOQUAL  4     0.040    RCHRES    INFLOW PKIF  3
PERLND    PQUAL    AOQUAL  4     0.0030   RCHRES    INFLOW PKIF  4
PERLND    PQUAL    AOQUAL  4     1.         RCHRES    INFLOW PKIF  5
PERLND    PQUAL    AOQUAL  5     1.         RCHRES    INFLOW ICON  1
PERLND    PQUAL    AOQUAL  6     1.         RCHRES    INFLOW IDQAL 1
PERLND    PQUAL    AOQUAL  7     1.         RCHRES    INFLOW IDQAL 2
  END MASS-LINK      3

  MASS-LINK          4
IMPLND    IWATER   SURO     0.0833333 RCHRES    INFLOW IVOL
IMPLND    SOLIDS   SOSLD  1     0.05      RCHRES    INFLOW ISED  1
IMPLND    SOLIDS   SOSLD  1     0.70      RCHRES    INFLOW ISED  2
IMPLND    SOLIDS   SOSLD  1     0.25      RCHRES    INFLOW ISED  3
IMPLND    IWTGAS   SOHT     1.         RCHRES    INFLOW IHEAT
IMPLND    IWTGAS   SODOXM    1.         RCHRES    INFLOW OXIF  1
IMPLND    IWATER   SURO     5.0        RCHRES    INFLOW PHIF  1
IMPLND    IQUAL    SOQUAL  1     1.         RCHRES    INFLOW NUIF1 1
IMPLND    IQUAL    SOQUAL  2     1.         RCHRES    INFLOW NUIF1 2
IMPLND    IQUAL    SOQUAL  3     1.         RCHRES    INFLOW NUIF1 4
IMPLND    IQUAL    SOQUAL  4     0.40      RCHRES    INFLOW OXIF  2
IMPLND    IQUAL    SOQUAL  4     0.040    RCHRES    INFLOW PKIF  3
IMPLND    IQUAL    SOQUAL  4     0.0030   RCHRES    INFLOW PKIF  4
IMPLND    IQUAL    SOQUAL  4     1.         RCHRES    INFLOW PKIF  5
IMPLND    IWATER   SURO     12.        RCHRES    INFLOW ICON  1
IMPLND    IQUAL    SOQUAL  6     1.         RCHRES    INFLOW IDQAL 1
IMPLND    IQUAL    SOQUAL  7     1.         RCHRES    INFLOW IDQAL 2
  END MASS-LINK      4

  MASS-LINK          5
RCHRES    ROFLOW                                RCHRES    INFLOW
  END MASS-LINK      5

  MASS-LINK          6
RCHRES    OFLOW   OVOL    1                                RCHRES    INFLOW IVOL
  END MASS-LINK      6

  MASS-LINK          7
RCHRES    OFLOW   OVOL    2                                RCHRES    INFLOW IVOL
  END MASS-LINK      7

  MASS-LINK          8
COPY      OUTPUT   MEAN                                RCHRES    INFLOW IVOL
  END MASS-LINK      8

  MASS-LINK          11
PERLND    PWATER   PERO     0.0833333 COPY      INPUT  MEAN
  END MASS-LINK      11

  MASS-LINK          12
PERLND    PWATER   SURO     0.0833333 COPY      INPUT  MEAN
PERLND    PWATER   IFWO     0.0833333 COPY      INPUT  MEAN
  END MASS-LINK      12

  MASS-LINK          13
PERLND    PWATER   AGWO     0.0833333 COPY      INPUT  MEAN
  END MASS-LINK      13

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    MASS-LINK          14
IMPLND      IWATER  SURO      0.0833333  COPY      INPUT  MEAN
    END MASS-LINK     14

    MASS-LINK          15
RCHRES      ROFLOW          COPY      INPUT  MEAN
    END MASS-LINK     15

    MASS-LINK          16
RCHRES      OFLOW  OVOL    1      COPY      INPUT  MEAN
    END MASS-LINK     16

    MASS-LINK          17
RCHRES      OFLOW  OVOL    2      COPY      INPUT  MEAN
    END MASS-LINK     17

    MASS-LINK          20
COPY        OUTPUT  MEAN          COPY      INPUT  MEAN
    END MASS-LINK     20

END MASS-LINK

END RUN

```