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
dnr.metrokc.gov/wlr

Section 4—Appendix C

July 2003

Prepared for:

King County
Department of Natural Resources and Parks
Water and Land Resources Division

201 S. Jackson St, Suite 600
Seattle, WA 98104
206-296-6519
http://www.metrokc.gov/

Prepared by:

AQUA TERRA CONSULTANTS
1509 Hewitt Avenue, Suite 121
Everett, Washington 98201
and
2685 Marine Way, Suite 1314
Mountain View, California 94043

In conjunction with King County

Alternative formats available

206-263-6317 TTY Relay: 711

Appendix C: Little Bear Creek UCI File

```
RUN

GLOBAL
  LITTLE BEAR CREEK
  *** PROJECT 20125; BEYERLEIN; 05/29/2003
  *** AQUA TERRA CONSULTANTS
  *** NO BEDROCK
  *** MONTHLY LZETP
  *** CHANGES FROM LBEAR26 (COMMENTS FROM TONY):
  ***   EXTEND CALIBRATION TO 2001/09/30
  ***   VARY TILL LZSN WITH SLOPE
  ***   VARY TILL INFILT WITH SLOPE
  ***   DECREASE TILL INTFW AND VARY WITH SLOPE AND LAND TYPE
  ***   INCREASE TILL IRC AND VARY WITH LAND TYPE
  ***   VARY TILL AGWRC WITH LAND TYPE
  ***   INCREASE OUTWASH BASETP TO 0.10
  ***   INCREASE IMPLND LSUR TO 150 FT
  *** RESET DEEPFR TO 0.0
  *** INCREASE TILL IRC
  *** DECREASE OUTWASH BASTETP FROM 0.10 TO 0.03
  *** INCREASE OUTWASH DEEPFR FROM 0.00 TO 0.05
  *** DECREASE TILL IRC
  *** DECREASE OUTWASH BASEETP FROM 0.03 TO 0.02
  *** INCREASE TILL BASTETP FROM 0.00 TO 0.02
  *** INCREASE TILL DEEPFR FROM 0.00 TO 0.05
  *** CHANGE OUTWASH AGWRC FROM 0.990 TO 0.996
  *** INCREASE TILL DEEPFR FROM 0.05 TO 0.10
  *** CHANGE FOREST TILL IRC FROM 0.5 TO 0.6
  *** CHANGE PASTURE TILL IRC FROM 0.4 TO 0.5
  *** INCREASE TILL FOREST AND PASTURE IRC TO 0.7; TILL LAWN TO 0.5
  *** INCREASE TILL PASTURE AND TILL LAWN INTFW
  *** CORRECTED FTABLES 10,30,50,60,80,140,150,170,180,200,210,230,250,270,290,300
  *** INCREASE TILL DEEPFR FROM 0.10 TO 0.12
  *** USE AVERAGE LBEAR PRECIP WITH 1.05 MULTIPLIER BASED ON
  ***   COTTAGE LAKE * 0.250 + JUANITA CR * 0.250 + NORWAY HILL * 0.250 +
  ***   SILVER LAKE * 0.250
  *** RESET TILL FOREST INFILT TO REGIONAL VALUES
  *** AGGREGATED PERLND AREAS BASED ON A MINIMUM OF 5% PER SUBBASIN
  *** REVISED ORIGINAL EIA VALUES
  *** SET IMPLND SLSUR TO 0.01; DECREASE TILL INTFW
  *** DECREASE TILL INTFW
  START       1996/10/01        END    2001/09/30
  RUN INTERP OUTPUT LEVEL    4
  RESUME     0 RUN     1                   UNIT SYSTEM     1
END GLOBAL

FILES
<File>  <Un#>   <-----------File Name------------------------------>***
<-ID->                                                             ***
WDM1       27   C:\Project\Puget\KCModel\Basins\MetData.WDM
WDM2       28   C:\Project\Puget\KCModel\Basins\LBear\OutputWQ.WDM
MESSU      25   C:\Project\Puget\KCModel\Basins\LBear\LBEARWQ.ECH
           61   C:\Project\Puget\KCModel\Basins\LBear\LBEARWQ51.L61
           62   C:\Project\Puget\KCModel\Basins\LBear\LBEARWQ51.L62
           63   C:\Project\Puget\KCModel\Basins\LBear\LBEARWQ51.L63
BINO       91   C:\Project\Puget\KCModel\Basins\LBear\LBEAR.HBN
END FILES

OPN SEQUENCE
    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
*** 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
*** EFFECTIVE IMPERVIOUS AREA
    IMPLND      91
    IMPLND      92
    IMPLND      93
    IMPLND      94
*** LITTLE BEAR CREEK
*** RCHRES FOR STREAM CHANNELS
    RCHRES      10
    RCHRES      20
    RCHRES      30
    RCHRES      40
    RCHRES      50
    RCHRES      60
    RCHRES      70
    RCHRES      80
    RCHRES      90
    RCHRES     100
    RCHRES     110
```

```
      RCHRES     120
      RCHRES     130
      RCHRES     140
      RCHRES     150
      RCHRES     160
      RCHRES     170
      RCHRES     180
      RCHRES     190
      RCHRES     200
      RCHRES     210
      RCHRES     220
      RCHRES     230
      RCHRES     240
      RCHRES     250
      RCHRES     260
      RCHRES     270
      RCHRES     280
      RCHRES     290
      RCHRES     300
    END INGRP
END OPN SEQUENCE

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

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
 124      ROCK, PAST/AG STEEP    1    1    1    1   61    0   91    0

 131      ROCK, FOR RES, FLAT    1    1    1    1   61    0   91    0
 132      ROCK, FOR RES, LOW     1    1    1    1   61    0   91    0
 133      ROCK, FOR RES, MED     1    1    1    1   61    0   91    0
 134      ROCK, FOR RES STEEP    1    1    1    1   61    0   91    0

 141      ROCK, LD RES, FLAT     1    1    1    1   61    0   91    0
 142      ROCK, LD RES, LOW      1    1    1    1   61    0   91    0
 143      ROCK, LD RES, MED      1    1    1    1   61    0   91    0
 144      ROCK, LD RES, STEEP    1    1    1    1   61    0   91    0

 151      ROCK, HD RES, FLAT     1    1    1    1   61    0   91    0
 152      ROCK, HD RES, LOW      1    1    1    1   61    0   91    0
 153      ROCK, HD RES, MED      1    1    1    1   61    0   91    0
 154      ROCK, HD RES, STEEP    1    1    1    1   61    0   91    0

 161      ROCK, COMM/IND FLAT    1    1    1    1   61    0   91    0
 162      ROCK, COMM/IND LOW     1    1    1    1   61    0   91    0
 163      ROCK, COMM/IND MED     1    1    1    1   61    0   91    0
 164      ROCK, COMM/IND STEEP   1    1    1    1   61    0   91    0
END GEN-INFO

*** Section PWATER ***

ACTIVITY
  <PLS > ************ Active Sections ****************************
  # -  # ATMP SNOW PWAT  SED  PST  PWG PQAL MSTL PEST NITR PHOS TRAC ***
 11  164    1    0    1    1    1    1    1    0    0    0    0    0
END ACTIVITY

PRINT-INFO
  <PLS > ********************* Print-flags ************************ PIVL  PYR
  # -  # ATMP SNOW PWAT  SED  PST  PWG PQAL MSTL PEST NITR PHOS TRAC  ***
 11  164    5         5    5    5    5    5                           1    9
END PRINT-INFO

BINARY-INFO
  <PLS > ********************* Print-flags ************************ PIVL  PYR
  # -  # ATMP SNOW PWAT  SED  PST  PWG PQAL MSTL PEST NITR PHOS TRAC  ***
 11  164    5         5    5    5    5    5                           1    9
END BINARY-INFO

*** Section ATEMP - Air Temperature ***

*** following elevation differences based on EVERETT (=606 ft)
ATEMP-DAT
  <PLS >     ELDAT    AIRTEMP ***
  # -  #      (ft)    (deg F) ***
 11          -159.      40.0
 12          -195.      40.0
 13          -207.      40.0
 14          -232.      40.0
 21          -165.      40.0
 22          -207.      40.0
 23          -233.      40.0
 24          -244.      40.0
 31          -159.      40.0
 32          -195.      40.0
 33          -207.      40.0
 34          -232.      40.0
 41          -164.      40.0
 42          -204.      40.0
 43          -230.      40.0
 44          -243.      40.0
 51          -193.      40.0
```

```
   52          -233.      40.0
   53          -255.      40.0
   54          -291.      40.0
   61          -270.      40.0
   62          -302.      40.0
   63          -329.      40.0
   64          -390.      40.0
   71          -329.      40.0
   72          -340.      40.0
   73          -329.      40.0
   74          -357.      40.0
   75          -428.      40.0
   76          -433.      40.0
   81          -336.      40.0
   82          -304.      40.0
   83          -336.      40.0
   84          -326.      40.0
   85          -408.      40.0
   86          -408.      40.0
  111          -159.      40.0
  112          -195.      40.0
  113          -207.      40.0
  114          -232.      40.0
  121          -165.      40.0
  122          -207.      40.0
  123          -233.      40.0
  124          -244.      40.0
  131          -159.      40.0
  132          -195.      40.0
  133          -207.      40.0
  134          -232.      40.0
  141          -164.      40.0
  142          -204.      40.0
  143          -230.      40.0
  144          -243.      40.0
  151          -193.      40.0
  152          -233.      40.0
  153          -255.      40.0
  154          -291.      40.0
  161          -270.      40.0
  162          -302.      40.0
  163          -329.      40.0
  164          -390.      40.0
  END ATEMP-DAT
  *** Section PWATER ***

  PWAT-PARM1
    <PLS >  PWATER variable monthly parameter value flags ***
    # -  # CSNO RTOP UZFG  VCS  VUZ  VNN VIFW VIRC  VLE   ***
   11  164    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                      8.0     0.080      350.     0.028      0.45    0.998
   12                      7.0     0.070      300.     0.072      0.45    0.998
   13                      6.0     0.060      250.     0.116      0.45    0.998
   14                      5.5     0.050      200.     0.195      0.45    0.998
***TILL PASTURE/AG
   21                      8.0     0.070      350.     0.026      0.45    0.997
   22                      7.0     0.060      300.     0.070      0.45    0.997
   23                      6.0     0.050      250.     0.116      0.45    0.997
   24                      5.5     0.040      200.     0.186      0.45    0.997
***TILL FOREST RESIDENTIAL
   31                      8.0     0.080      350.     0.028      0.45    0.998
   32                      7.0     0.070      300.     0.072      0.45    0.998
   33                      6.0     0.060      250.     0.116      0.45    0.998
   34                      5.5     0.050      200.     0.195      0.45    0.998
***TILL LOW DENSITY RES
   41                      8.0     0.040      350.     0.028      0.45    0.996
   42                      7.0     0.030      300.     0.070      0.45    0.996
   43                      6.0     0.025      250.     0.117      0.45    0.996
   44                      5.5     0.020      200.     0.180      0.45    0.996
***TILL HIGH DENSITY RES
```

```
   51                      8.0     0.040      350.     0.028      0.45    0.996
   52                      7.0     0.030      300.     0.071      0.45    0.996
   53                      6.0     0.025      250.     0.117      0.45    0.996
   54                      5.5     0.020      200.     0.169      0.45    0.996
***TILL COMMERCIAL/INDUSTRIAL
   61                      8.0     0.040      350.     0.030      0.45    0.996
   62                      7.0     0.030      300.     0.071      0.45    0.996
   63                      6.0     0.025      250.     0.114      0.45    0.996
   64                      5.5     0.020      200.     0.172      0.45    0.996
***OUTWASH
   71                     10.0     2.000      300.     0.089       0.3    0.996
   72                     10.0     1.400      300.     0.060       0.3    0.996
   73                     10.0     2.000      300.     0.089       0.3    0.996
   74                     10.0     0.800      300.     0.077       0.3    0.996
   75                     10.0     0.800      300.     0.067       0.3    0.996
   76                     10.0     0.800      300.     0.067       0.3    0.996
***SATURATED
   81                      4.0     2.000      150.     0.048       0.5    0.998
   82                      4.0     1.800      150.     0.043       0.5    0.998
   83                      4.0     2.000      150.     0.048       0.5    0.998
   84                      4.0     1.000      150.     0.043       0.5    0.998
   85                      4.0     1.000      150.     0.046       0.5    0.998
   86                      4.0     1.000      150.     0.075       0.5    0.998
***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
  END PWAT-PARM2

  PWAT-PARM3
    <PLS > ***  PWATER input info: Part 3
    # -  # ***PETMAX    PETMIN    INFEXP    INFILD    DEEPFR    BASETP    AGWETP
   11   14                          2.0       2.0      0.12      0.02      0.00
   21   24                          2.0       2.0      0.12      0.02      0.00
   31   34                          2.0       2.0      0.12      0.02      0.00
   41   44                          2.0       2.0      0.12      0.02      0.00
   51   54                          2.0       2.0      0.12      0.02      0.00
   61   64                          2.0       2.0      0.12      0.02      0.00

   71   76                          2.0       2.0      0.05      0.02      0.00

   81   86                         10.0       2.0      0.00       0.0      0.70

  111  114                          2.5       2.0      0.00        0.        0.
  121  124                          2.5       2.0      0.00        0.        0.
  131  134                          2.5       2.0      0.00        0.        0.
  141  144                          2.5       2.0      0.00        0.        0.
  151  154                          2.5       2.0      0.00        0.        0.
  161  164                          2.5       2.0      0.00        0.        0.
  END PWAT-PARM3
```

```
PWAT-PARM4
  <PLS >     PWATER input info: Part 4                                  ***
  # -  #     CEPSC      UZSN      NSUR     INTFW       IRC     LZETP ***
 11           0.20      1.50      0.35      1.00     0.700      0.70
 12           0.20      1.00      0.35      0.90     0.700      0.70
 13           0.20      0.60      0.35      0.80     0.700      0.70
 14           0.20      0.45      0.35      0.70     0.700      0.70

 21           0.15      0.90      0.30      0.90     0.700      0.40
 22           0.15      0.60      0.30      0.80     0.700      0.40
 23           0.15      0.45      0.30      0.70     0.700      0.40
 24           0.15      0.30      0.30      0.60     0.700      0.40

 31           0.20      1.50      0.35      1.00     0.700      0.70
 32           0.20      1.00      0.35      0.90     0.700      0.70
 33           0.20      0.60      0.35      0.80     0.700      0.70
 34           0.20      0.45      0.35      0.70     0.700      0.70

 41           0.10      0.75      0.25      0.80     0.500      0.25
 42           0.10      0.45      0.25      0.70     0.500      0.25
 43           0.10      0.30      0.25      0.60     0.500      0.25
 44           0.10      0.20      0.25      0.50     0.500      0.25

 51           0.10      0.75      0.25      0.80     0.500      0.25
 52           0.10      0.45      0.25      0.70     0.500      0.25
 53           0.10      0.30      0.25      0.60     0.500      0.25
 54           0.10      0.20      0.25      0.50     0.500      0.25

 61           0.10      0.75      0.25      0.80     0.500      0.25
 62           0.10      0.45      0.25      0.70     0.500      0.25
 63           0.10      0.30      0.25      0.60     0.500      0.25
 64           0.10      0.20      0.25      0.50     0.500      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     0.700      0.80
 82           0.15      3.00      0.50       1.0     0.700      0.80
 83           0.20      3.00      0.50       1.0     0.700      0.80
 84   86      0.10      3.00      0.50       1.0     0.700      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
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  .45  .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  .45  .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
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
  END PWAT-STATE1

*** Section PSTEMP - SOIL TEMPERATURE

  PSTEMP-PARM1
    #    # SLTV ULTV LGTV TSOP  ***
   11  164    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
  END PSTEMP-PARM2

  MON-ASLT
    #    #  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC  ***
   11  164 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  164 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-BSLT

  MON-ULTP1
    #    #  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC  ***
   11  164 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  164 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  164  48.  49.  50.  52.  53.  55.  56.  55.  53.  51.  50.  49.
  END MON-LGTP1

  PSTEMP-TEMPS
    #    #     AIRTC     SLTMP     ULTMP     LGTMP  ***
   11  164      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  164    1    1    1    1
  END PWT-PARM1

  PWT-PARM2
    #    #      ELEV     IDOXP     ICO2P     ADOXP     ACO2P  ***
***TILL FOREST
   11           447.      8.80      0.00      8.80      0.00
   12           411.      8.80      0.00      8.80      0.00
   13           399.      8.80      0.00      8.80      0.00
   14           374.      8.80      0.00      8.80      0.00
***TILL PASTURE/AG
   21           441.      8.80      0.00      8.80      0.00
```

```
   22           399.      8.80      0.00      8.80      0.00
   23           373.      8.80      0.00      8.80      0.00
   24           361.      8.80      0.00      8.80      0.00
***TILL FOREST RESIDENTIAL
   31           442.      8.80      0.00      8.80      0.00
   32           402.      8.80      0.00      8.80      0.00
   33           376.      8.80      0.00      8.80      0.00
   34           363.      8.80      0.00      8.80      0.00
***TILL LOW DENSITY RES
   41           442.      8.80      0.00      8.80      0.00
   42           402.      8.80      0.00      8.80      0.00
   43           376       8.80      0.00      8.80      0.00
   44           363.      8.80      0.00      8.80      0.00
***TILL HIGH DENSITY RES
   51           413.      8.80      0.00      8.80      0.00
   52           373.      8.80      0.00      8.80      0.00
   53           351.      8.80      0.00      8.80      0.00
   54           315.      8.80      0.00      8.80      0.00
***TILL COMMERCIAL/INDUSTRIAL
   61           336.      8.80      0.00      8.80      0.00
   62           304.      8.80      0.00      8.80      0.00
   63           277.      8.80      0.00      8.80      0.00
   64           216.      8.80      0.00      8.80      0.00
***OUTWASH
   71           277.      8.80      0.00      8.80      0.00
   72           266.      8.80      0.00      8.80      0.00
   73           249.      8.80      0.00      8.80      0.00
   74           249.      8.80      0.00      8.80      0.00
   75           178.      8.80      0.00      8.80      0.00
   76           172.      8.80      0.00      8.80      0.00
***SATURATED
   81           270.      8.80      0.00      8.80      0.00
   82           302.      8.80      0.00      8.80      0.00
   83           270.      8.80      0.00      8.80      0.00
   84           280.      8.80      0.00      8.80      0.00
   85           198.      8.80      0.00      8.80      0.00
   86           198.      8.80      0.00      8.80      0.00
***ROCK FOREST
  111           447.      8.80      0.00      8.80      0.00
  112           411.      8.80      0.00      8.80      0.00
  113           399.      8.80      0.00      8.80      0.00
  114           374.      8.80      0.00      8.80      0.00
***ROCK PASTURE/AG
  121           441.      8.80      0.00      8.80      0.00
  122           399.      8.80      0.00      8.80      0.00
  123           373.      8.80      0.00      8.80      0.00
  124           362.      8.80      0.00      8.80      0.00
***ROCK FOREST RES
  131           447.      8.80      0.00      8.80      0.00
  132           411.      8.80      0.00      8.80      0.00
  133           399.      8.80      0.00      8.80      0.00
  134           374.      8.80      0.00      8.80      0.00P
***ROCK LOW DENSITY RES
  141           442.      8.80      0.00      8.80      0.00
  142           402.      8.80      0.00      8.80      0.00
  143           376.      8.80      0.00      8.80      0.00
  144           363.      8.80      0.00      8.80      0.00
***ROCK HIGH DENSITY RES
  151           413.      8.80      0.00      8.80      0.00
  152           373.      8.80      0.00      8.80      0.00
  153           351.      8.80      0.00      8.80      0.00
  154           315.      8.80      0.00      8.80      0.00
***ROCK COMMERCIAL/INDUSTRIAL
  161           336.      8.80      0.00      8.80      0.00
  162           304.      8.80      0.00      8.80      0.00
  163           277.      8.80      0.00      8.80      0.00
  164           216.      8.80      0.00      8.80      0.00
  END PWT-PARM2

  MON-IFWDOX
    #     #  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC  ***
   11   164 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  164 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  164  0.5  0.5  0.5  0.5  0.4  0.4  0.4  0.4  0.4  0.5  0.5  0.5
  END MON-IFWCO2

  MON-GRNDCO2
    #    #  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC  ***
   11  164  0.5  0.5  0.5  0.5  0.5  0.5  0.5  0.5  0.5  0.5  0.5  0.5
  END MON-GRNDCO2

  PWT-GASES
*** <PLS>  Initial Concentrations ***
    #    #     SODOX     SOCO2     IODOX     IOCO2     AODOX     AOCO2  ***
   11  164       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      60.0
***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
  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

  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      0.30         2.         0.         2.
***TILL HIGH DENSITY RES
   51   54      0.12         2.         0.         2.
***TILL COMMERCIAL/INDUSTRIAL
   61   64     0.225         2.         0.         2.
***OUTWASH
   71            0.50         2.         0.         2.
   72            0.15         2.         0.         2.
   73           0.375         2.         0.         2.
   74            0.30         2.         0.         2.
   75           0.125         2.         0.         2.
   76           0.225         2.         0.         2.
***SATURATED
   81            0.60         2.         0.         2.
   82            0.20         2.         0.         2.
   83            0.45         2.         0.         2.
   84            0.36         2.         0.         2.
   85            0.15         2.         0.         2.
   86            0.27         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
  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 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
    #    # NQAL *** (1=NO3, 2=NH3, 3=PO4, 4=BOD, 5=ALK, 6=Silica, 7=E-Coli)
   11  164    7
  END NQUALS

    QUAL #1 NO3 ***
  QUAL-PROPS
    #    #<--QUALID-->    QTID  QSD VPFW VPFS  QSO  VQO QIFW VIQC QAGW VAQC ***
   11  164     NO2+NO3     LBS    0    0    0    2    1    1    3    1    3
  END QUAL-PROPS

  QUAL-INPUT
    #    #     SQO   POTFW   POTFS   ACQOP  SQOLIM   WSQOP    IOQC    AOQC  ***
   11   14                                            1.50
   71                                                 1.50
   81                                                 1.50
  111  114                                           1.50

   21   24                                            0.50
   72                                                 0.50
   82                                                 0.50
  121  124                                           0.50

   31   34                                            0.90
   73                                                 0.90
   83                                                 0.90
  131  134                                           0.90

   41   44                                            0.50
   74                                                 0.50
   84                                                 0.50
  141  144                                           0.50

   51   54                                            0.50
   75                                                 0.50
   85                                                 0.50
  151  154                                           0.50

   61   64                                            0.50
   76                                                 0.50
   86                                                 0.50
  161  164                                           0.50
  END QUAL-INPUT

  MON-ACCUM
            ACCUMULATION RATE   NO2 NO3 (lbs NO3-N/ac/day)              ***
    #    #  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC  ***
   11   14.0008.0008.0008 .002 .002 .002 .002 .002 .002.0008.0008.0008
```

```
 71     .0008.0008.0008 .002 .002 .002 .002 .002 .002.0008.0008.0008
 81     .0008.0008.0008 .002 .002 .002 .002 .002 .002.0008.0008.0008
111  114.0008.0008.0008 .002 .002 .002 .002 .002 .002.0008.0008.0008

 21   24.0025.0025.0025 .004 .009 .009 .009 .009 .009 .008 .005.0025
 72     .0025.0025.0025 .004 .009 .009 .009 .009 .009 .008 .005.0025
 82     .0025.0025.0025 .004 .009 .009 .009 .009 .009 .008 .005.0025
121  124.0025.0025.0025 .004 .009 .009 .009 .009 .009 .008 .005.0025

 31   34 .003 .003 .002 .002 .002 .002 .002 .002 .002 .002 .003 .003
 73      .003 .003 .002 .002 .002 .002 .002 .002 .002 .002 .003 .003
 83      .003 .003 .002 .002 .002 .002 .002 .002 .002 .002 .003 .003
131  134 .003 .003 .002 .002 .002 .002 .002 .002 .002 .002 .003 .003

 41   44 .006 .006  .01 .011 .011 .011 .011 .011 .011  .01 .006 .006
 74      .006 .006  .01 .011 .011 .011 .011 .011 .011  .01 .006 .006
 84      .006 .006  .01 .011 .011 .011 .011 .011 .011  .01 .006 .006
141  144 .006 .006  .01 .011 .011 .011 .011 .011 .011  .01 .006 .006

 51   54 .007 .007  .01 .012 .012 .012 .012 .012 .012  .01 .007 .007
 75      .007 .007  .01 .012 .012 .012 .012 .012 .012  .01 .007 .007
 85      .007 .007  .01 .012 .012 .012 .012 .012 .012  .01 .007 .007
151  154 .007 .007  .01 .012 .012 .012 .012 .012 .012  .01 .007 .007

 61   64 .008 .008 .011 .013 .013 .013 .013 .013 .013 .011 .008 .008
 76      .008 .008 .011 .013 .013 .013 .013 .013 .013 .011 .008 .008
 86      .008 .008 .011 .013 .013 .013 .013 .013 .013 .011 .008 .008
161  164 .008 .008 .011 .013 .013 .013 .013 .013 .013 .011 .008 .008
END MON-ACCUM

MON-SQOLIM
           Limiting Storage for NO2 NO3 (lbs NO3-N/ac)              ***
  #    #  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC  ***
 11   14.0007.0007.0012.0015.0015.0015.0015.0015.0015.0012 .001.0007
 71     .0007.0007.0012.0015.0015.0015.0015.0015.0015.0012 .001.0007
 81     .0007.0007.0012.0015.0015.0015.0015.0015.0015.0012 .001.0007
111  114.0007.0007.0012.0015.0015.0015.0015.0015.0015.0012 .001.0007

 21   24  .01  .01  .01 .015 .025 .025 .025 .025 .025 .019 .012  .01
 72       .01  .01  .01 .015 .025 .025 .025 .025 .025 .019 .012  .01
 82       .01  .01  .01 .015 .025 .025 .025 .025 .025 .019 .012  .01
121  124  .01  .01  .01 .015 .025 .025 .025 .025 .025 .019 .012  .01

 31   34 .003 .003 .003 .004 .004 .004 .004 .004 .004 .004 .003 .003
 73      .003 .003 .003 .004 .004 .004 .004 .004 .004 .004 .003 .003
 83      .003 .003 .003 .004 .004 .004 .004 .004 .004 .004 .003 .003
131  134 .003 .003 .003 .004 .004 .004 .004 .004 .004 .004 .003 .003

 41   44 .015 .020 .020 .025 .025 .025 .025 .025 .025 .020 .020 .015
 74      .015 .020 .020 .025 .025 .025 .025 .025 .025 .020 .020 .015
 84      .015 .020 .020 .025 .025 .025 .025 .025 .025 .020 .020 .015
141  144 .015 .020 .020 .025 .025 .025 .025 .025 .025 .020 .020 .015

 51   54 .025 .031 .031 .038 .038 .038 .038 .038 .038 .031 .031 .025
 75      .025 .031 .031 .038 .038 .038 .038 .038 .038 .031 .031 .025
 85      .025 .031 .031 .038 .038 .038 .038 .038 .038 .031 .031 .025
151  154 .025 .031 .031 .038 .038 .038 .038 .038 .038 .031 .031 .025

 61   64 .028 .034 .034 .041 .041 .041 .041 .041 .041 .034 .034 .028
 76      .028 .034 .034 .041 .041 .041 .041 .041 .041 .034 .034 .028
 86      .028 .034 .034 .041 .041 .041 .041 .041 .041 .034 .034 .028
161  164 .028 .034 .034 .041 .041 .041 .041 .041 .041 .034 .034 .028

END MON-SQOLIM

MON-IFLW-CONC
          Interflow Concentration of NO3-N (mg/l)                   ***
  #    #  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC  ***
 11   14  1.5  1.5  1.3  0.8  0.7  0.7  0.7  0.7  0.7  0.9  1.3  1.5
 71       1.5  1.5  1.3  0.8  0.7  0.7  0.7  0.7  0.7  0.9  1.3  1.5
 81       1.5  1.5  1.3  0.8  0.7  0.7  0.7  0.7  0.7  0.9  1.3  1.5
111  114  1.5  1.5  1.3  0.8  0.7  0.7  0.7  0.7  0.7  0.9  1.3  1.5

 21   24  3.7  3.3  3.0  2.5  2.0  2.0  2.0  2.0  2.1  2.7  3.0  3.5
 72       3.7  3.3  3.0  2.5  2.0  2.0  2.0  2.0  2.1  2.7  3.0  3.5
 82       3.7  3.3  3.0  2.5  2.0  2.0  2.0  2.0  2.1  2.7  3.0  3.5
```

```
  121  124  3.7  3.3  3.0  2.5  2.0  2.0  2.0  2.0  2.1  2.7  3.0  3.5

   31   34  1.6  1.6  1.4  1.0  0.7  0.7  0.7  0.7  0.8  1.1  1.4  1.6
   73       1.6  1.6  1.4  1.0  0.7  0.7  0.7  0.7  0.8  1.1  1.4  1.6
   83       1.6  1.6  1.4  1.0  0.7  0.7  0.7  0.7  0.8  1.1  1.4  1.6
  131  134  1.6  1.6  1.4  1.0  0.7  0.7  0.7  0.7  0.8  1.1  1.4  1.6

   41   44  1.7  1.7  1.5  1.1  0.7  0.7  0.7  0.7  0.8  1.2  1.5  1.7
   74       1.7  1.7  1.5  1.1  0.7  0.7  0.7  0.7  0.8  1.2  1.5  1.7
   84       1.7  1.7  1.5  1.1  0.7  0.7  0.7  0.7  0.8  1.2  1.5  1.7
  141  144  1.7  1.7  1.5  1.1  0.7  0.7  0.7  0.7  0.8  1.2  1.5  1.7

   51   54  1.8  1.8  1.6  1.2  1.0  1.0  1.0  1.0  1.0  1.2  1.6  1.8
   75       1.8  1.8  1.6  1.2  1.0  1.0  1.0  1.0  1.0  1.2  1.6  1.8
   85       1.8  1.8  1.6  1.2  1.0  1.0  1.0  1.0  1.0  1.2  1.6  1.8
  151  154  1.8  1.8  1.6  1.2  1.0  1.0  1.0  1.0  1.0  1.2  1.6  1.8

   61   64  1.2  1.2  1.2  1.2  1.2  1.2  1.2  1.2  1.2  1.2  1.2  1.2
   76       1.2  1.2  1.2  1.2  1.2  1.2  1.2  1.2  1.2  1.2  1.2  1.2
   86       1.2  1.2  1.2  1.2  1.2  1.2  1.2  1.2  1.2  1.2  1.2  1.2
  161  164  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)            ***
    #    #  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC  ***
   11   14  1.1  1.1  1.0  .90  .60  .60  .60  .60  .60  .80  1.0  1.1
   71       1.1  1.1  1.0  .90  .60  .60  .60  .60  .60  .80  1.0  1.1
   81       1.1  1.1  1.0  .90  .60  .60  .60  .60  .60  .80  1.0  1.1
  111  114  1.1  1.1  1.0  .90  .60  .60  .60  .60  .60  .80  1.0  1.1

   21   24  3.2  2.9  2.5  2.1  1.8  1.8  1.8  1.8  1.8  2.0  2.5  3.2
   72       3.2  2.9  2.5  2.1  1.8  1.8  1.8  1.8  1.8  2.0  2.5  3.2
   82       3.2  2.9  2.5  2.1  1.8  1.8  1.8  1.8  1.8  2.0  2.5  3.2
  121  124  3.2  2.9  2.5  2.1  1.8  1.8  1.8  1.8  1.8  2.0  2.5  3.2

   31   34  1.2  1.2  1.1  .80  .70  .70  .70  .70  .70  .80  1.1  1.2
   73       1.2  1.2  1.1  .80  .70  .70  .70  .70  .70  .80  1.1  1.2
   83       1.2  1.2  1.1  .80  .70  .70  .70  .70  .70  .80  1.1  1.2
  131  134  1.2  1.2  1.1  .80  .70  .70  .70  .70  .70  .80  1.1  1.2

   41   44  1.3  1.3  1.2  0.9  0.8  0.8  0.8  0.8  0.8  0.9  1.2  1.3
   74       1.3  1.3  1.2  0.9  0.8  0.8  0.8  0.8  0.8  0.9  1.2  1.3
   84       1.3  1.3  1.2  0.9  0.8  0.8  0.8  0.8  0.8  0.9  1.2  1.3
  141  144  1.3  1.3  1.2  0.9  0.8  0.8  0.8  0.8  0.8  0.9  1.2  1.3

   51   54  1.3  1.3  1.2  0.9  0.8  0.8  0.8  0.8  0.8  0.9  1.2  1.3
   75       1.3  1.3  1.2  0.9  0.8  0.8  0.8  0.8  0.8  0.9  1.2  1.3
   85       1.3  1.3  1.2  0.9  0.8  0.8  0.8  0.8  0.8  0.9  1.2  1.3
  151  154  1.3  1.3  1.2  0.9  0.8  0.8  0.8  0.8  0.8  0.9  1.2  1.3

   61   64  1.2  1.2  1.2  1.2  1.2  1.2  1.2  1.2  1.2  1.2  1.2  1.2
   76       1.2  1.2  1.2  1.2  1.2  1.2  1.2  1.2  1.2  1.2  1.2  1.2
   86       1.2  1.2  1.2  1.2  1.2  1.2  1.2  1.2  1.2  1.2  1.2  1.2
  161  164  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
    #    #<--QUALID-->    QTID  QSD VPFW VPFS  QSO  VQO QIFW VIQC QAGW VAQC ***
   11  164         NH3     LBS    0    0    0    2    1    1    3    1    3
  END QUAL-PROPS

  QUAL-INPUT
    #    #     SQO   POTFW   POTFS   ACQOP  SQOLIM   WSQOP    IOQC    AOQC ***
   11   14                                             1.50
   71                                                  1.50
   81                                                  1.50
  111  114                                             1.50

   21   24                                             0.50
   72                                                  0.50
   82                                                  0.50
  121  124                                             0.50

   31   34                                             0.90
```

```
 73                                                0.90
 83                                                0.90
131  134                                          0.90

 41   44                                          0.50
 74                                               0.50
 84                                               0.50
141  144                                          0.50

 51   54                                          0.50
 75                                               0.50
 85                                               0.50
151  154                                          0.50

 61   64                                          0.50
 76                                               0.50
 86                                               0.50
161  164                                          0.50
END QUAL-INPUT

MON-ACCUM
                ACCUMULATION RATE OF NH4 (lbs NH4-N/ac/day)           ***
  #    #  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC  ***
 11   14.0005.0005.0005.0005.0005.0005.0005.0005.0005.0005.0005.0005
 71      .0005.0005.0005.0005.0005.0005.0005.0005.0005.0005.0005.0005
 81      .0005.0005.0005.0005.0005.0005.0005.0005.0005.0005.0005.0005
111  114.0005.0005.0005.0005.0005.0005.0005.0005.0005.0005.0005.0005

 21   24.0005.0005 .001 .001 .001 .001 .001 .001 .001 .001 .001.0005
 72      .0005.0005 .001 .001 .001 .001 .001 .001 .001 .001 .001.0005
 82      .0005.0005 .001 .001 .001 .001 .001 .001 .001 .001 .001.0005
121  124.0005.0005 .001 .001 .001 .001 .001 .001 .001 .001 .001.0005

 31   34.0007.0007.0007.0012.0012.0012.0012.0012.0012.0012.0012.0007
 73      .0007.0007.0007.0012.0012.0012.0012.0012.0012.0012.0012.0007
 83      .0007.0007.0007.0012.0012.0012.0012.0012.0012.0012.0012.0007
131  134.0007.0007.0007.0012.0012.0012.0012.0012.0012.0012.0012.0007

 41   44.0012.0012.0012.0018.0018.0018.0018.0018.0018.0018.0018.0009
 74      .0012.0012.0012.0018.0018.0018.0018.0018.0018.0018.0018.0009
 84      .0012.0012.0012.0018.0018.0018.0018.0018.0018.0018.0018.0009
141  144.0012.0012.0012.0018.0018.0018.0018.0018.0018.0018.0018.0009

 51   54.0025.0025.0025.0032.0032.0032.0032.0032.0032.0032.0032.0025
 75      .0025.0025.0025.0032.0032.0032.0032.0032.0032.0032.0032.0025
 85      .0025.0025.0025.0032.0032.0032.0032.0032.0032.0032.0032.0025
151  154.0025.0025.0025.0032.0032.0032.0032.0032.0032.0032.0032.0025

 61   64.0049.0049.0049.0059.0059.0059.0059.0059.0059.0059.0059.0049
 76      .0049.0049.0049.0059.0059.0059.0059.0059.0059.0059.0059.0049
 86      .0049.0049.0049.0059.0059.0059.0059.0059.0059.0059.0059.0049
161  164.0049.0049.0049.0059.0059.0059.0059.0059.0059.0059.0059.0049
END MON-ACCUM

MON-SQOLIM
              Limiting Storage for NH4 (lbs NH4-N/ac)                 ***
  #    #  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC  ***
 11   14.0008.0008 .001.0015.0015.0015.0015.0015.0015.0015 .001.0008
 71      .0008.0008 .001.0015.0015.0015.0015.0015.0015.0015 .001.0008
 81      .0008.0008 .001.0015.0015.0015.0015.0015.0015.0015 .001.0008
111  114.0008.0008 .001.0015.0015.0015.0015.0015.0015.0015 .001.0008

 21   24.0015.0015 .003 .003 .003 .003 .003 .003 .003 .003 .003.0015
 72      .0015.0015 .003 .003 .003 .003 .003 .003 .003 .003 .003.0015
 82      .0015.0015 .003 .003 .003 .003 .003 .003 .003 .003 .003.0015
121  124.0015.0015 .003 .003 .003 .003 .003 .003 .003 .003 .003.0015

 31   34 .001 .001 .001.0012.0012.0012.0012.0012.0012.0012 .001 .001
 73      .001 .001 .001.0012.0012.0012.0012.0012.0012.0012 .001 .001
 83      .001 .001 .001.0012.0012.0012.0012.0012.0012.0012 .001 .001
131  134 .001 .001 .001.0012.0012.0012.0012.0012.0012.0012 .001 .001

 41   44 .005 .005 .005 .007 .007 .007 .007 .007 .007 .007 .005 .005
 74      .005 .005 .005 .007 .007 .007 .007 .007 .007 .007 .005 .005
 84      .005 .005 .005 .007 .007 .007 .007 .007 .007 .007 .005 .005
141  144 .005 .005 .005 .007 .007 .007 .007 .007 .007 .007 .005 .005
```

```
 51   54 .020 .020 .020 .026 .026 .026 .026 .026 .026 .026 .026 .020
 75      .020 .020 .020 .026 .026 .026 .026 .026 .026 .026 .026 .020
 85      .020 .020 .020 .026 .026 .026 .026 .026 .026 .026 .026 .020
151  154 .020 .020 .020 .026 .026 .026 .026 .026 .026 .026 .026 .020

 61   64 .036 .036 .036 .042 .042 .042 .042 .042 .042 .042 .036 .036
 76      .036 .036 .036 .042 .042 .042 .042 .042 .042 .042 .036 .036
 86      .036 .036 .036 .042 .042 .042 .042 .042 .042 .042 .036 .036
161  164 .036 .036 .036 .042 .042 .042 .042 .042 .042 .042 .036 .036
END MON-SQOLIM

MON-IFLW-CONC
          Interflow Concentration of NH4-N (mg/l)                    ***
  #    #  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC  ***
 11   14 .022 .021 .021 .021 .021 .021 .021 .021 .023 .024 .024 .023
 71      .022 .021 .021 .021 .021 .021 .021 .021 .023 .024 .024 .023
 81      .022 .021 .021 .021 .021 .021 .021 .021 .023 .024 .024 .023
111  114 .022 .021 .021 .021 .021 .021 .021 .021 .023 .024 .024 .023

 21   24 .160 .160 .160 .160 .160 .160 .160 .160 .160 .160 .160 .160
 72      .160 .160 .160 .160 .160 .160 .160 .160 .160 .160 .160 .160
 82      .160 .160 .160 .160 .160 .160 .160 .160 .160 .160 .160 .160
121  124 .160 .160 .160 .160 .160 .160 .160 .160 .160 .160 .160 .160

 31   34 .025 .024 .023 .023 .023 .023 .023 .024 .026 .027 .027 .026
 73      .025 .024 .023 .023 .023 .023 .023 .024 .026 .027 .027 .026
 83      .025 .024 .023 .023 .023 .023 .023 .024 .026 .027 .027 .026
131  134 .025 .024 .023 .023 .023 .023 .023 .024 .026 .027 .027 .026

 41   44 .032 .030 .028 .028 .028 .028 .028 .032 .035 .040 .040 .034
 74      .032 .030 .028 .028 .028 .028 .028 .032 .035 .040 .040 .034
 84      .032 .030 .028 .028 .028 .028 .028 .032 .035 .040 .040 .034
141  144 .032 .030 .028 .028 .028 .028 .028 .032 .035 .040 .040 .034

 51   54 .035 .035 .035 .035 .035 .035 .035 .035 .037 .040 .040 .035
 75      .035 .035 .035 .035 .035 .035 .035 .035 .037 .040 .040 .035
 85      .035 .035 .035 .035 .035 .035 .035 .035 .037 .040 .040 .035
151  154 .035 .035 .035 .035 .035 .035 .035 .035 .037 .040 .040 .035

 61   64 .070 .070 .070 .070 .070 .070 .070 .070 .070 .070 .070 .070
 76      .070 .070 .070 .070 .070 .070 .070 .070 .070 .070 .070 .070
 86      .070 .070 .070 .070 .070 .070 .070 .070 .070 .070 .070 .070
161  164 .070 .070 .070 .070 .070 .070 .070 .070 .070 .070 .070 .070
END MON-IFLW-CONC

MON-GRND-CONC
          Active Groundwater Concentration of NH4-N (mg/l)           ***
  #    #  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC  ***
 11   14 .013 .012 .012 .012 .012 .012 .012 .012 .013 .015 .015 .013
 71      .013 .012 .012 .012 .012 .012 .012 .012 .013 .015 .015 .013
 81      .013 .012 .012 .012 .012 .012 .012 .012 .013 .015 .015 .013
111  114 .013 .012 .012 .012 .012 .012 .012 .012 .013 .015 .015 .013

 21   24 .080 .080 .080 .080 .080 .080 .080 .080 .080 .080 .080 .080
 72      .080 .080 .080 .080 .080 .080 .080 .080 .080 .080 .080 .080
 82      .080 .080 .080 .080 .080 .080 .080 .080 .080 .080 .080 .080
121  124 .080 .080 .080 .080 .080 .080 .080 .080 .080 .080 .080 .080

 31   34 .014 .013 .011 .011 .011 .011 .011 .013 .016 .018 .018 .016
 73      .014 .013 .011 .011 .011 .011 .011 .013 .016 .018 .018 .016
 83      .014 .013 .011 .011 .011 .011 .011 .013 .016 .018 .018 .016
131  134 .014 .013 .011 .011 .011 .011 .011 .013 .016 .018 .018 .016

 41   44 .027 .024 .021 .021 .021 .021 .021 .023 .030 .032 .032 .030
 74      .027 .024 .021 .021 .021 .021 .021 .023 .030 .032 .032 .030
 84      .027 .024 .021 .021 .021 .021 .021 .023 .030 .032 .032 .030
141  144 .027 .024 .021 .021 .021 .021 .021 .023 .030 .032 .032 .030

 51   54 .029 .026 .023 .023 .023 .023 .023 .026 .033 .035 .035 .033
 75      .029 .026 .023 .023 .023 .023 .023 .026 .033 .035 .035 .033
 85      .029 .026 .023 .023 .023 .023 .023 .026 .033 .035 .035 .033
151  154 .029 .026 .023 .023 .023 .023 .023 .026 .033 .035 .035 .033

 61   64 .050 .050 .050 .050 .050 .050 .050 .050 .050 .050 .050 .050
 76      .050 .050 .050 .050 .050 .050 .050 .050 .050 .050 .050 .050
```

```
   86      .050 .050 .050 .050 .050 .050 .050 .050 .050 .050 .050 .050
  161  164 .050 .050 .050 .050 .050 .050 .050 .050 .050 .050 .050 .050
  END MON-GRND-CONC

*** QUAL #3 PO4
  QUAL-PROPS
    #    #<--QUALID-->    QTID  QSD VPFW VPFS  QSO  VQO QIFW VIQC QAGW VAQC  ***
   11  164          PO4     LBS    1    1    0    0    0    1    3    1    3
  END QUAL-PROPS

  QUAL-INPUT
    #    #     SQO   POTFW   POTFS   ACQOP  SQOLIM   WSQOP    IOQC    AOQC   ***
   11  164
  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 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.01 0.01
   71      0.01 0.01 0.01 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.01 0.01
   81      0.01 0.01 0.01 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.01 0.01
  111  114 0.01 0.01 0.01 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.01 0.01

   21   24  1.6  1.6  1.9  2.6  2.6  2.6  2.6  2.6  1.9  1.6  1.6  1.6
   72       1.6  1.6  1.9  2.6  2.6  2.6  2.6  2.6  1.9  1.6  1.6  1.6
   82       1.6  1.6  1.9  2.6  2.6  2.6  2.6  2.6  1.9  1.6  1.6  1.6
  121  124  1.6  1.6  1.9  2.6  2.6  2.6  2.6  2.6  1.9  1.6  1.6  1.6

   31   34  0.2  0.2  0.2  0.3  0.3  0.3  0.3  0.3  0.3  0.2  0.2  0.2
   73       0.2  0.2  0.2  0.3  0.3  0.3  0.3  0.3  0.3  0.2  0.2  0.2
   83       0.2  0.2  0.2  0.3  0.3  0.3  0.3  0.3  0.3  0.2  0.2  0.2
  131  134  0.2  0.2  0.2  0.3  0.3  0.3  0.3  0.3  0.3  0.2  0.2  0.2

   41   44  0.8  0.8  0.8  1.3  1.3  1.3  1.3  1.3  1.3  0.8  0.8  0.8
   74       0.8  0.8  0.8  1.3  1.3  1.3  1.3  1.3  1.3  0.8  0.8  0.8
   84       0.8  0.8  0.8  1.3  1.3  1.3  1.3  1.3  1.3  0.8  0.8  0.8
  141  144  0.8  0.8  0.8  1.3  1.3  1.3  1.3  1.3  1.3  0.8  0.8  0.8

   51   54  1.0  1.0  1.0  1.5  1.5  1.5  1.5  1.5  1.5  1.0  1.0  1.0
   75       1.0  1.0  1.0  1.5  1.5  1.5  1.5  1.5  1.5  1.0  1.0  1.0
   85       1.0  1.0  1.0  1.5  1.5  1.5  1.5  1.5  1.5  1.0  1.0  1.0
  151  154  1.0  1.0  1.0  1.5  1.5  1.5  1.5  1.5  1.5  1.0  1.0  1.0

   61   64  1.2  1.2  1.2  1.5  1.5  1.5  1.5  1.5  1.5  1.2  1.2  1.2
   76       1.2  1.2  1.2  1.5  1.5  1.5  1.5  1.5  1.5  1.2  1.2  1.2
   86       1.2  1.2  1.2  1.5  1.5  1.5  1.5  1.5  1.5  1.2  1.2  1.2
  161  164  1.2  1.2  1.2  1.5  1.5  1.5  1.5  1.5  1.5  1.2  1.2  1.2
  END MON-POTFW

  MON-IFLW-CONC
            Interflow Concentration of PO4-P (mg/l)                     ***
    #    #  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC  ***
   11   14 .007 .007 .007 .007 .009 .015 .015 .015 .013 .011 .009 .009
   71      .007 .007 .007 .007 .009 .015 .015 .015 .013 .011 .009 .009
   81      .007 .007 .007 .007 .009 .015 .015 .015 .013 .011 .009 .009
  111  114 .007 .007 .007 .007 .009 .015 .015 .015 .013 .011 .009 .009

   21   24  .13  .13  .13  .14  .16  .21  .21  .21  .20  .18  .14  .14
   72       .13  .13  .13  .14  .16  .21  .21  .21  .20  .18  .14  .14
   82       .13  .13  .13  .14  .16  .21  .21  .21  .20  .18  .14  .14
  121  124  .13  .13  .13  .14  .16  .21  .21  .21  .20  .18  .14  .14

   31   34 .013 .013 .013 .014 .018 .032 .032 .032 .027 .018 .015 .015
   73      .013 .013 .013 .014 .018 .032 .032 .032 .027 .018 .015 .015
   83      .013 .013 .013 .014 .018 .032 .032 .032 .027 .018 .015 .015
  131  134 .013 .013 .013 .014 .018 .032 .032 .032 .027 .018 .015 .015

   41   44 .019 .019 .020 .021 .027 .040 .040 .040 .034 .025 .020 .020
   74      .019 .019 .020 .021 .027 .040 .040 .040 .034 .025 .020 .020
   84      .019 .019 .020 .021 .027 .040 .040 .040 .034 .025 .020 .020
  141  144 .019 .019 .020 .021 .027 .040 .040 .040 .034 .025 .020 .020

   51   54 .023 .023 .025 .027 .032 .042 .044 .044 .042 .034 .031 .026
   75      .023 .023 .025 .027 .032 .042 .044 .044 .042 .034 .031 .026
   85      .023 .023 .025 .027 .032 .042 .044 .044 .042 .034 .031 .026
  151  154 .023 .023 .025 .027 .032 .042 .044 .044 .042 .034 .031 .026
```

```
   61   64 .036 .036 .038 .041 .050 .070 .070 .075 .070 .060 .050 .040
   76      .036 .036 .038 .041 .050 .070 .070 .075 .070 .060 .050 .040
   86      .036 .036 .038 .041 .050 .070 .070 .075 .070 .060 .050 .040
  161  164 .036 .036 .038 .041 .050 .070 .070 .075 .070 .060 .050 .040
  END MON-IFLW-CONC

  MON-GRND-CONC
            Active Groundwater Concentration of PO4-P (mg/l)            ***
    #    #  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC  ***
   11   14 .007 .007 .007 .008 .009 .012 .012 .012 .011 .010 .009 .009
   71      .007 .007 .007 .008 .009 .012 .012 .012 .011 .010 .009 .009
   81      .007 .007 .007 .008 .009 .012 .012 .012 .011 .010 .009 .009
  111  114 .007 .007 .007 .008 .009 .012 .012 .012 .011 .010 .009 .009

   21   24 .060 .060 .060 .075 .095 .120 .120 .120 .100 .100 .090 .090
   72      .060 .060 .060 .075 .095 .120 .120 .120 .100 .100 .090 .090
   82      .060 .060 .060 .075 .095 .120 .120 .120 .100 .100 .090 .090
  121  124 .060 .060 .060 .075 .095 .120 .120 .120 .100 .100 .090 .090

   31   34 .008 .008 .008 .010 .014 .018 .019 .019 .018 .017 .010 .010
   73      .008 .008 .008 .010 .014 .018 .019 .019 .018 .017 .010 .010
   83      .008 .008 .008 .010 .014 .018 .019 .019 .018 .017 .010 .010
  131  134 .008 .008 .008 .010 .014 .018 .019 .019 .018 .017 .010 .010

   41   44 .010 .010 .010 .012 .016 .022 .023 .023 .022 .022 .012 .012
   74      .010 .010 .010 .012 .016 .022 .023 .023 .022 .022 .012 .012
   84      .010 .010 .010 .012 .016 .022 .023 .023 .022 .022 .012 .012
  141  144 .010 .010 .010 .012 .016 .022 .023 .023 .022 .022 .012 .012

   51   54 .022 .022 .022 .022 .022 .030 .030 .030 .030 .022 .022 .022
   75      .022 .022 .022 .022 .022 .030 .030 .030 .030 .022 .022 .022
   85      .022 .022 .022 .022 .022 .030 .030 .030 .030 .022 .022 .022
  151  154 .022 .022 .022 .022 .022 .030 .030 .030 .030 .022 .022 .022

   61   64 .035 .035 .035 .035 .035 .045 .045 .045 .045 .045 .045 .035
   76      .035 .035 .035 .035 .035 .045 .045 .045 .045 .045 .045 .035
   86      .035 .035 .035 .035 .035 .045 .045 .045 .045 .045 .045 .035
  161  164 .035 .035 .035 .035 .035 .045 .045 .045 .045 .045 .045 .035
  END MON-GRND-CONC

*** QUAL #4 BOD/Organics
  QUAL-PROPS
    #    #<--QUALID-->    QTID  QSD VPFW VPFS  QSO  VQO QIFW VIQC QAGW VAQC  ***
   11  164BOD/Organics     LBS    0    0    0    2    1    1    3    1    3
  END QUAL-PROPS

  QUAL-INPUT
    #    #     SQO   POTFW   POTFS   ACQOP  SQOLIM   WSQOP    IOQC    AOQC   ***
   11   14                                            0.70
   71                                                 0.70
   81                                                 0.70
  111  114                                           0.70

   21   24                                            0.50
   72                                                 0.50
   82                                                 0.50
  121  124                                           0.50

   31   34                                            0.60
   73                                                 0.60
   83                                                 0.60
  131  134                                           0.60

   41   44                                            0.50
   74                                                 0.50
   84                                                 0.50
  141  144                                           0.50

   51   54                                            0.50
   75                                                 0.50
   85                                                 0.50
  151  154                                           0.50

   61   64                                            0.50
   76                                                 0.50
```

```
 86                                                    0.50
161  164                                              0.50
END QUAL-INPUT

MON-ACCUM
                      ACCUMULATION RATE FOR BOD/Organics (lbs/ac/day)  ***
 #     #  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC  ***
 11   14  .10  .10  .10  .14  .14  .14  .14  .14  .20  .20  .14  .10
 71       .10  .10  .10  .14  .14  .14  .14  .14  .20  .20  .14  .10
 81       .10  .10  .10  .14  .14  .14  .14  .14  .20  .20  .14  .10
111  114  .10  .10  .10  .14  .14  .14  .14  .14  .20  .20  .14  .10

 21   24  .14  .14  .14   .2   .2   .2   .2   .2  .22  .22  .14  .14
 72       .14  .14  .14   .2   .2   .2   .2   .2  .22  .22  .14  .14
 82       .14  .14  .14   .2   .2   .2   .2   .2  .22  .22  .14  .14
121  124  .14  .14  .14   .2   .2   .2   .2   .2  .22  .22  .14  .14

 31   34  .14  .14  .14  .18  .18  .18  .18  .18  .18  .14  .14  .14
 73       .14  .14  .14  .18  .18  .18  .18  .18  .18  .14  .14  .14
 83       .14  .14  .14  .18  .18  .18  .18  .18  .18  .14  .14  .14
131  134  .14  .14  .14  .18  .18  .18  .18  .18  .18  .14  .14  .14

 41   44  .17  .17  .17  .23  .23  .23  .23  .23  .23  .17  .17  .17
 74       .17  .17  .17  .23  .23  .23  .23  .23  .23  .17  .17  .17
 84       .17  .17  .17  .23  .23  .23  .23  .23  .23  .17  .17  .17
141  144  .17  .17  .17  .23  .23  .23  .23  .23  .23  .17  .17  .17

 51   54  .21  .21  .21  .28  .28  .28  .28  .28  .28  .21  .21  .21
 75       .21  .21  .21  .28  .28  .28  .28  .28  .28  .21  .21  .21
 85       .21  .21  .21  .28  .28  .28  .28  .28  .28  .21  .21  .21
151  154  .21  .21  .21  .28  .28  .28  .28  .28  .28  .21  .21  .21

 61   64  .18  .18  .18  .23  .23  .23  .23  .23  .23  .18  .18  .18
 76       .18  .18  .18  .23  .23  .23  .23  .23  .23  .18  .18  .18
 86       .18  .18  .18  .23  .23  .23  .23  .23  .23  .18  .18  .18
161  164  .18  .18  .18  .23  .23  .23  .23  .23  .23  .18  .18  .18
END MON-ACCUM

MON-SQOLIM
           Limiting Storage for BOD/Organics (lbs/ac)                 ***
  #     #  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC  ***
 11   14 0.60 0.60 0.60 0.80 0.80 0.80 0.80 0.80 1.20 1.20 0.60 0.60
 71      0.60 0.60 0.60 0.80 0.80 0.80 0.80 0.80 1.20 1.20 0.60 0.60
 81      0.60 0.60 0.60 0.80 0.80 0.80 0.80 0.80 1.20 1.20 0.60 0.60
111  114 0.60 0.60 0.60 0.80 0.80 0.80 0.80 0.80 1.20 1.20 0.60 0.60

 21   24 2.00 2.00 2.80 3.60 3.60 3.60 3.60 3.60 4.00 4.00 2.00 2.00
 72      2.00 2.00 2.80 3.60 3.60 3.60 3.60 3.60 4.00 4.00 2.00 2.00
 82      2.00 2.00 2.80 3.60 3.60 3.60 3.60 3.60 4.00 4.00 2.00 2.00
121  124 2.00 2.00 2.80 3.60 3.60 3.60 3.60 3.60 4.00 4.00 2.00 2.00

 31   34 1.00 1.00 1.00 1.30 1.30 1.30 1.30 1.30 1.70 1.70 1.00 1.00
 73      1.00 1.00 1.00 1.30 1.30 1.30 1.30 1.30 1.70 1.70 1.00 1.00
 83      1.00 1.00 1.00 1.30 1.30 1.30 1.30 1.30 1.70 1.70 1.00 1.00
131  134 1.00 1.00 1.00 1.30 1.30 1.30 1.30 1.30 1.70 1.70 1.00 1.00

 41   44 1.50 1.50 1.50 1.90 1.90 1.90 1.90 1.90 2.20 2.20 1.50 1.50
 74      1.50 1.50 1.50 1.90 1.90 1.90 1.90 1.90 2.20 2.20 1.50 1.50
 84      1.50 1.50 1.50 1.90 1.90 1.90 1.90 1.90 2.20 2.20 1.50 1.50
141  144 1.50 1.50 1.50 1.90 1.90 1.90 1.90 1.90 2.20 2.20 1.50 1.50

 51   54 2.40 2.40 2.40 3.20 3.20 3.20 3.20 3.20 4.00 4.00 2.40 2.40
 75      2.40 2.40 2.40 3.20 3.20 3.20 3.20 3.20 4.00 4.00 2.40 2.40
 85      2.40 2.40 2.40 3.20 3.20 3.20 3.20 3.20 4.00 4.00 2.40 2.40
151  154 2.40 2.40 2.40 3.20 3.20 3.20 3.20 3.20 4.00 4.00 2.40 2.40

 61   64 2.00 2.00 2.00 2.50 2.50 2.50 2.50 2.50 3.00 3.00 2.00 2.00
 76      2.00 2.00 2.00 2.50 2.50 2.50 2.50 2.50 3.00 3.00 2.00 2.00
 86      2.00 2.00 2.00 2.50 2.50 2.50 2.50 2.50 3.00 3.00 2.00 2.00
161  164 2.00 2.00 2.00 2.50 2.50 2.50 2.50 2.50 3.00 3.00 2.00 2.00
END MON-SQOLIM

MON-IFLW-CONC
          Interflow Concentration of BOD/Organics (mg/l)   ***
  #     #  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC  ***
 11   14 1.00 1.00 1.00 2.50 2.50 2.50 2.50 2.50 2.50 3.50 3.00 1.00
```

```
   71       1.00 1.00 1.00 2.50 2.50 2.50 2.50 2.50 2.50 3.50 3.00 1.00
   81       1.00 1.00 1.00 2.50 2.50 2.50 2.50 2.50 2.50 3.50 3.00 1.00
  111  114 1.00 1.00 1.00 2.50 2.50 2.50 2.50 2.50 2.50 3.50 3.00 1.00

   21   24  6.0  6.0  6.0  8.0  8.0  8.0  8.0  8.0 10.0 10.0  6.0  6.0
   72       6.0  6.0  6.0  8.0  8.0  8.0  8.0  8.0 10.0 10.0  6.0  6.0
   82       6.0  6.0  6.0  8.0  8.0  8.0  8.0  8.0 10.0 10.0  6.0  6.0
  121  124  6.0  6.0  6.0  8.0  8.0  8.0  8.0  8.0 10.0 10.0  6.0  6.0

   31   34  2.0  2.0  2.0  3.0  3.0  3.0  3.0  3.0  4.0  4.0  2.0  2.0
   73       2.0  2.0  2.0  3.0  3.0  3.0  3.0  3.0  4.0  4.0  2.0  2.0
   83       2.0  2.0  2.0  3.0  3.0  3.0  3.0  3.0  4.0  4.0  2.0  2.0
  131  134  2.0  2.0  2.0  3.0  3.0  3.0  3.0  3.0  4.0  4.0  2.0  2.0

   41   44  4.0  4.0  4.0  6.0  6.0  6.0  6.0  6.0  7.0  7.0  5.0  5.0
   74       4.0  4.0  4.0  6.0  6.0  6.0  6.0  6.0  7.0  7.0  5.0  5.0
   84       4.0  4.0  4.0  6.0  6.0  6.0  6.0  6.0  7.0  7.0  5.0  5.0
  141  144  4.0  4.0  4.0  6.0  6.0  6.0  6.0  6.0  7.0  7.0  5.0  5.0

   51   54  5.0  5.0  5.0  8.0  8.0  8.0  8.0  8.0  9.0  9.0  5.0  5.0
   75       5.0  5.0  5.0  8.0  8.0  8.0  8.0  8.0  9.0  9.0  5.0  5.0
   85       5.0  5.0  5.0  8.0  8.0  8.0  8.0  8.0  9.0  9.0  5.0  5.0
  151  154  5.0  5.0  5.0  8.0  8.0  8.0  8.0  8.0  9.0  9.0  5.0  5.0

   61   64  6.0  6.0  6.0  9.0  9.0  9.0  9.0  9.0 10.0 10.0  6.0  6.0
   76       6.0  6.0  6.0  9.0  9.0  9.0  9.0  9.0 10.0 10.0  6.0  6.0
   86       6.0  6.0  6.0  9.0  9.0  9.0  9.0  9.0 10.0 10.0  6.0  6.0
  161  164  6.0  6.0  6.0  9.0  9.0  9.0  9.0  9.0 10.0 10.0  6.0  6.0
  END MON-IFLW-CONC

  MON-GRND-CONC
              Active Groundwater Concentration of BOD/Organics (mg/l)  ***
    #    #  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC  ***
   11   14 2.00 2.00 2.00 2.50 2.50 2.50 2.50 2.50 2.50 2.50 2.00 2.00
   71       2.00 2.00 2.00 2.50 2.50 2.50 2.50 2.50 2.50 2.50 2.00 2.00
   81       2.00 2.00 2.00 2.50 2.50 2.50 2.50 2.50 2.50 2.50 2.00 2.00
  111  114 2.00 2.00 2.00 2.50 2.50 2.50 2.50 2.50 2.50 2.50 2.00 2.00

   21   24  7.0  7.0  7.0  8.0  8.0  8.0  8.0  8.0 10.0 10.0  7.0  7.0
   72       7.0  7.0  7.0  8.0  8.0  8.0  8.0  8.0 10.0 10.0  7.0  7.0
   82       7.0  7.0  7.0  8.0  8.0  8.0  8.0  8.0 10.0 10.0  7.0  7.0
  121  124  7.0  7.0  7.0  8.0  8.0  8.0  8.0  8.0 10.0 10.0  7.0  7.0

   31   34  2.0  2.0  2.0  3.0  3.0  3.0  3.0  3.0  4.0  4.0  2.0  2.0
   73       2.0  2.0  2.0  3.0  3.0  3.0  3.0  3.0  4.0  4.0  2.0  2.0
   83       2.0  2.0  2.0  3.0  3.0  3.0  3.0  3.0  4.0  4.0  2.0  2.0
  131  134  2.0  2.0  2.0  3.0  3.0  3.0  3.0  3.0  4.0  4.0  2.0  2.0

   41   44  4.0  4.0  4.0  5.0  5.0  5.0  5.0  5.0  6.0  6.0  4.0  4.0
   74       4.0  4.0  4.0  5.0  5.0  5.0  5.0  5.0  6.0  6.0  4.0  4.0
   84       4.0  4.0  4.0  5.0  5.0  5.0  5.0  5.0  6.0  6.0  4.0  4.0
  141  144  4.0  4.0  4.0  5.0  5.0  5.0  5.0  5.0  6.0  6.0  4.0  4.0

   51   54  4.5  4.5  4.5  7.0  7.0  7.0  7.0  7.0  8.0  8.0  4.5  4.5
   75       4.5  4.5  4.5  7.0  7.0  7.0  7.0  7.0  8.0  8.0  4.5  4.5
   75       4.5  4.5  4.5  7.0  7.0  7.0  7.0  7.0  8.0  8.0  4.5  4.5
  151  154  4.5  4.5  4.5  7.0  7.0  7.0  7.0  7.0  8.0  8.0  4.5  4.5

   61   64  5.0  5.0  5.0  8.0  8.0  8.0  8.0  8.0  9.0  9.0  5.0  5.0
   76       5.0  5.0  5.0  8.0  8.0  8.0  8.0  8.0  9.0  9.0  5.0  5.0
   86       5.0  5.0  5.0  8.0  8.0  8.0  8.0  8.0  9.0  9.0  5.0  5.0
  161  164  5.0  5.0  5.0  8.0  8.0  8.0  8.0  8.0  9.0  9.0  5.0  5.0
  END MON-GRND-CONC

*** QUAL # 5  Alkalinity
  QUAL-PROPS
    #    #<--QUALID-->    QTID  QSD VPFW VPFS  QSO  VQO QIFW VIQC QAGW VAQC  ***
   11  164  Alkalinity     LBS    0    0    0    2    1    1    3    1    3
  END QUAL-PROPS

  QUAL-INPUT
    #    #     SQO   POTFW   POTFS   ACQOP  SQOLIM   WSQOP    IOQC    AOQC   ***
   11   14      2.                                    0.70
   71           2.                                    0.70
   81           2.                                    0.70
  111  114      2.                                    0.70
```

```
 21   24      2.                                  0.50
 72           2.                                  0.50
 82           2.                                  0.50
121  124      2.                                  0.50

 31   34      2.                                  0.60
 73           2.                                  0.60
 83           2.                                  0.60
131  134      2.                                  0.60

 41   44      2.                                  0.50
 74           2.                                  0.50
 84           2.                                  0.50
141  144      2.                                  0.50

 51   54      2.                                  0.50
 75           2.                                  0.50
 85           2.                                  0.50
151  154      2.                                  0.50

 61   64      2.                                  0.50
 76           2.                                  0.50
 86           2.                                  0.50
161  164      2.                                  0.50
END QUAL-INPUT

MON-ACCUM
                ACCUMULATION RATE FOR Alkalinity (lbs CaCO3/ac/day)    ***
  #     #  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC  ***
 11    14 .10  .10  .10  .12  .12  .14  .14  .14  .12  .10  .10  .10
 71       .10  .10  .10  .12  .12  .14  .14  .14  .12  .10  .10  .10
 81       .10  .10  .10  .12  .12  .14  .14  .14  .12  .10  .10  .10
111  114 .10  .10  .10  .12  .12  .14  .14  .14  .12  .10  .10  .10

 21   24 .40  .40  .40  .42  .42  .44  .44  .44  .42  .40  .40  .40
 72      .40  .40  .40  .42  .42  .44  .44  .44  .42  .40  .40  .40
 82      .40  .40  .40  .42  .42  .44  .44  .44  .42  .40  .40  .40
121  124 .40  .40  .40  .42  .42  .44  .44  .44  .42  .40  .40  .40

 31   34 .10  .10  .10  .12  .12  .14  .14  .14  .12  .10  .10  .10
 73      .10  .10  .10  .12  .12  .14  .14  .14  .12  .10  .10  .10
 83      .10  .10  .10  .12  .12  .14  .14  .14  .12  .10  .10  .10
131  134 .10  .10  .10  .12  .12  .14  .14  .14  .12  .10  .10  .10

 41   44 .30  .30  .30  .32  .32  .34  .34  .34  .32  .30  .30  .30
 74      .30  .30  .30  .32  .32  .34  .34  .34  .32  .30  .30  .30
 84      .30  .30  .30  .32  .32  .34  .34  .34  .32  .30  .30  .30
141  144 .30  .30  .30  .32  .32  .34  .34  .34  .32  .30  .30  .30

 51   54 .40  .40  .40  .42  .42  .44  .44  .44  .42  .40  .40  .40
 75      .40  .40  .40  .42  .42  .44  .44  .44  .42  .40  .40  .40
 85      .40  .40  .40  .42  .42  .44  .44  .44  .42  .40  .40  .40
151  154 .40  .40  .40  .42  .42  .44  .44  .44  .42  .40  .40  .40

 61   64 .40  .40  .40  .42  .42  .44  .44  .44  .42  .40  .40  .40
 76      .40  .40  .40  .42  .42  .44  .44  .44  .42  .40  .40  .40
 86      .40  .40  .40  .42  .42  .44  .44  .44  .42  .40  .40  .40
161  164 .40  .40  .40  .42  .42  .44  .44  .44  .42  .40  .40  .40
END MON-ACCUM

MON-SQOLIM
                  Limiting Storage for Alkalinity (lbs CaCO3/ac)       ***
  #     #  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC  ***
 11    14 0.60 0.60 0.60 0.80 0.80 0.80 0.80 0.80 1.20 1.20 0.60 0.60
 71       0.60 0.60 0.60 0.80 0.80 0.80 0.80 0.80 1.20 1.20 0.60 0.60
 81       0.60 0.60 0.60 0.80 0.80 0.80 0.80 0.80 1.20 1.20 0.60 0.60
111  114 0.60 0.60 0.60 0.80 0.80 0.80 0.80 0.80 1.20 1.20 0.60 0.60

 21   24 1.60 1.60 1.60 2.00 2.00 2.20 2.20 2.20 2.00 2.00 1.60 1.60
 72      1.60 1.60 1.60 2.00 2.00 2.20 2.20 2.20 2.00 2.00 1.60 1.60
 82      1.60 1.60 1.60 2.00 2.00 2.20 2.20 2.20 2.00 2.00 1.60 1.60
121  124 1.60 1.60 1.60 2.00 2.00 2.20 2.20 2.20 2.00 2.00 1.60 1.60

 31   34 0.60 0.60 0.60 0.80 0.80 0.80 0.80 0.80 1.20 1.20 0.60 0.60
 73      0.60 0.60 0.60 0.80 0.80 0.80 0.80 0.80 1.20 1.20 0.60 0.60
```

```
 83       0.60 0.60 0.60 0.80 0.80 0.80 0.80 0.80 1.20 1.20 0.60 0.60
131  134 0.60 0.60 0.60 0.80 0.80 0.80 0.80 0.80 1.20 1.20 0.60 0.60

 41   44 1.20 1.20 1.20 1.30 1.30 1.40 1.40 1.40 1.30 1.30 1.20 1.20
 74      1.20 1.20 1.20 1.30 1.30 1.40 1.40 1.40 1.30 1.30 1.20 1.20
 84      1.20 1.20 1.20 1.30 1.30 1.40 1.40 1.40 1.30 1.30 1.20 1.20
141  144 1.20 1.20 1.20 1.30 1.30 1.40 1.40 1.40 1.30 1.30 1.20 1.20

 51   54 1.60 1.60 1.60 1.70 1.70 1.80 1.80 1.80 1.70 1.70 1.60 1.60
 75      1.60 1.60 1.60 1.70 1.70 1.80 1.80 1.80 1.70 1.70 1.60 1.60
 85      1.60 1.60 1.60 1.70 1.70 1.80 1.80 1.80 1.70 1.70 1.60 1.60
151  154 1.60 1.60 1.60 1.70 1.70 1.80 1.80 1.80 1.70 1.70 1.60 1.60

 61   64 1.60 1.60 1.60 2.00 2.00 2.20 2.20 2.20 2.00 2.00 1.60 1.60
 76      1.60 1.60 1.60 2.00 2.00 2.20 2.20 2.20 2.00 2.00 1.60 1.60
 86      1.60 1.60 1.60 2.00 2.00 2.20 2.20 2.20 2.00 2.00 1.60 1.60
161  164 1.60 1.60 1.60 2.00 2.00 2.20 2.20 2.20 2.00 2.00 1.60 1.60
END MON-SQOLIM

MON-IFLW-CONC
             Interflow Concentration of Alkalinity (mg CaCO3/l)      ***
  #    #  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC  ***
 11   14   3.   5.   9.  10.  12.  12.  12.  10.  10.   6.   4.   3.
 71        3.   5.   9.  10.  12.  12.  12.  10.  10.   6.   4.   3.
 81        3.   5.   9.  10.  12.  12.  12.  10.  10.   6.   4.   3.
111  114   3.   5.   9.  10.  12.  12.  12.  10.  10.   6.   4.   3.

 21   24  32.  32.  36.  36.  38.  38.  38.  38.  38.  36.  34.  32.
 72       32.  32.  36.  36.  38.  38.  38.  38.  38.  36.  34.  32.
 82       32.  32.  36.  36.  38.  38.  38.  38.  38.  36.  34.  32.
121  124  32.  32.  36.  36.  38.  38.  38.  38.  38.  36.  34.  32.

 31   34   6.   6.  12.  16.  22.  22.  22.  22.  22.  12.   8.   6.
 73        6.   6.  12.  16.  22.  22.  22.  22.  22.  12.   8.   6.
 83        6.   6.  12.  16.  22.  22.  22.  22.  22.  12.   8.   6.
131  134   6.   6.  12.  16.  22.  22.  22.  22.  22.  12.   8.   6.

 41   44  25.  25.  35.  38.  45.  45.  45.  45.  45.  35.  30.  25.
 74       25.  25.  35.  38.  45.  45.  45.  45.  45.  35.  30.  25.
 84       25.  25.  35.  38.  45.  45.  45.  45.  45.  35.  30.  25.
141  144  25.  25.  35.  38.  45.  45.  45.  45.  45.  35.  30.  25.

 51   54  50.  52.  65.  75.  75.  75.  75.  75.  75.  65.  57.  50.
 75       50.  52.  65.  75.  75.  75.  75.  75.  75.  65.  57.  50.
 85       50.  52.  65.  75.  75.  75.  75.  75.  75.  65.  57.  50.
151  154  50.  52.  65.  75.  75.  75.  75.  75.  75.  65.  57.  50.

 61   64  45.  45.  55.  57.  65.  65.  65.  65.  65.  55.  50.  45.
 76       45.  45.  55.  57.  65.  65.  65.  65.  65.  55.  50.  45.
 86       45.  45.  55.  57.  65.  65.  65.  65.  65.  55.  50.  45.
161  164  45.  45.  55.  57.  65.  65.  65.  65.  65.  55.  50.  45.
END MON-IFLW-CONC

MON-GRND-CONC
          Active Groundwater Concentration of Alkalinity (mg CaCO3/l) ***
  #    #  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC  ***
 11   14  17.  20.  21.  25.  28.  30.  30.  32.  33.  32.  25.  18.
 71       17.  20.  21.  25.  28.  30.  30.  32.  33.  32.  25.  18.
 81       17.  20.  21.  25.  28.  30.  30.  32.  33.  32.  25.  18.
111  114  17.  20.  21.  25.  28.  30.  30.  32.  33.  32.  25.  18.

 21   24  70.  70.  72.  73.  74.  76.  78.  79.  79.  79.  78.  73.
 72       70.  70.  72.  73.  74.  76.  78.  79.  79.  79.  78.  73.
 82       70.  70.  72.  73.  74.  76.  78.  79.  79.  79.  78.  73.
121  124  70.  70.  72.  73.  74.  76.  78.  79.  79.  79.  78.  73.

 31   34  35.  35.  37.  39.  41.  43.  47.  50.  50.  49.  47.  38.
 73       35.  35.  37.  39.  41.  43.  47.  50.  50.  49.  47.  38.
 83       35.  35.  37.  39.  41.  43.  47.  50.  50.  49.  47.  38.
131  134  35.  35.  37.  39.  41.  43.  47.  50.  50.  49.  47.  38.

 41   44  58.  58.  60.  62.  64.  68.  76.  80.  81.  80.  77.  60.
 74       58.  58.  60.  62.  64.  68.  76.  80.  81.  80.  77.  60.
 84       58.  58.  60.  62.  64.  68.  76.  80.  81.  80.  77.  60.
141  144  58.  58.  60.  62.  64.  68.  76.  80.  81.  80.  77.  60.
```

```
   51   54  90.  92.  94. 104. 107. 108. 115. 119. 119. 118. 110.  94.
   75       90.  92.  94. 104. 107. 108. 115. 119. 119. 118. 110.  94.
   85       90.  92.  94. 104. 107. 108. 115. 119. 119. 118. 110.  94.
  151  154  90.  92.  94. 104. 107. 108. 115. 119. 119. 118. 110.  94.

   61   64  90.  90.  90.  93.  94.  96.  98.  98.  98.  98.  97.  92.
   76       90.  90.  90.  93.  94.  96.  98.  98.  98.  98.  97.  92.
   86       90.  90.  90.  93.  94.  96.  98.  98.  98.  98.  97.  92.
  161  164  90.  90.  90.  93.  94.  96.  98.  98.  98.  98.  97.  92.
  END MON-GRND-CONC

*** QUAL #6 Silica
  QUAL-PROPS
    #    #<--QUALID-->    QTID  QSD VPFW VPFS  QSO  VQO QIFW VIQC QAGW VAQC  ***
   11  164      Silica     LBS    0    0    0    2    1    1    3    1    3
  END QUAL-PROPS

  QUAL-INPUT
    #    #     SQO   POTFW   POTFS   ACQOP  SQOLIM   WSQOP    IOQC    AOQC   ***
   11   14                                             0.70
   71                                                  0.70
   81                                                  0.70
  111  114                                             0.70

   21   24                                             0.50
   72                                                  0.50
   82                                                  0.50
  121  124                                             0.50

   31   34                                             0.60
   73                                                  0.60
   83                                                  0.60
  131  134                                             0.60

   41   44                                             0.50
   74                                                  0.50
   84                                                  0.50
  141  144                                             0.50

   51   54                                             0.50
   75                                                  0.50
   85                                                  0.50
  151  154                                             0.50

   61   64                                             0.50
   76                                                  0.50
   86                                                  0.50
  161  164                                             0.50
  END QUAL-INPUT

  MON-ACCUM
                       ACCUMULATION RATE FOR Silica (lbs/ac/day)        ***
    #     #  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC  ***
   11   14  .01  .01  .01  .01  .01  .01  .01  .01  .01  .01  .01  .01
   71       .01  .01  .01  .01  .01  .01  .01  .01  .01  .01  .01  .01
   81       .01  .01  .01  .01  .01  .01  .01  .01  .01  .01  .01  .01
  111  114  .01  .01  .01  .01  .01  .01  .01  .01  .01  .01  .01  .01

   21   24  .01  .01  .01  .01  .01  .01  .01  .01  .01  .01  .01  .01
   72       .01  .01  .01  .01  .01  .01  .01  .01  .01  .01  .01  .01
   82       .01  .01  .01  .01  .01  .01  .01  .01  .01  .01  .01  .01
  121  124  .01  .01  .01  .01  .01  .01  .01  .01  .01  .01  .01  .01

   31   34  .01  .01  .01  .01  .01  .01  .01  .01  .01  .01  .01  .01
   73       .01  .01  .01  .01  .01  .01  .01  .01  .01  .01  .01  .01
   83       .01  .01  .01  .01  .01  .01  .01  .01  .01  .01  .01  .01
  131  134  .01  .01  .01  .01  .01  .01  .01  .01  .01  .01  .01  .01

   41   44  .01  .01  .01  .01  .01  .01  .01  .01  .01  .01  .01  .01
   74       .01  .01  .01  .01  .01  .01  .01  .01  .01  .01  .01  .01
   84       .01  .01  .01  .01  .01  .01  .01  .01  .01  .01  .01  .01
  141  144  .01  .01  .01  .01  .01  .01  .01  .01  .01  .01  .01  .01

   51   54  .01  .01  .01  .01  .01  .01  .01  .01  .01  .01  .01  .01
   75       .01  .01  .01  .01  .01  .01  .01  .01  .01  .01  .01  .01
   85       .01  .01  .01  .01  .01  .01  .01  .01  .01  .01  .01  .01
```

```
151  154  .01  .01  .01  .01  .01  .01  .01  .01  .01  .01  .01  .01

 61   64  .01  .01  .01  .01  .01  .01  .01  .01  .01  .01  .01  .01
 76       .01  .01  .01  .01  .01  .01  .01  .01  .01  .01  .01  .01
 86       .01  .01  .01  .01  .01  .01  .01  .01  .01  .01  .01  .01
161  164  .01  .01  .01  .01  .01  .01  .01  .01  .01  .01  .01  .01
END MON-ACCUM

MON-SQOLIM
                Limiting Storage for Silica (lbs/ac)                ***
  #    #  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC  ***
 11   14 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10
 71      0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10
 81      0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10
111  114 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10

 21   24 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10
 72      0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10
 82      0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10
121  124 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10

 31   34 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10
 73      0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10
 83      0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10
131  134 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10

 41   44 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10
 74      0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10
 84      0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10
141  144 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10

 51   54 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10
 75      0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10
 85      0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10
151  154 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10

 61   64 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10
 76      0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10
 86      0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10
161  164 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10
END MON-SQOLIM

MON-IFLW-CONC
          Interflow Concentration of Silica (mg/l)                  ***
  #    #  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC  ***
 11   14   8.   8.  10.  10.  12.  14.  14.  14.  14.  14.  12.  10.
 71        8.   8.  10.  10.  12.  14.  14.  14.  14.  14.  12.  10.
 81        8.   8.  10.  10.  12.  14.  14.  14.  14.  14.  12.  10.
111  114   8.   8.  10.  10.  12.  14.  14.  14.  14.  14.  12.  10.

 21   24   8.   8.  10.  10.  12.  14.  14.  14.  14.  14.  12.  10.
 72        8.   8.  10.  10.  12.  14.  14.  14.  14.  14.  12.  10.
 82        8.   8.  10.  10.  12.  14.  14.  14.  14.  14.  12.  10.
121  124   8.   8.  10.  10.  12.  14.  14.  14.  14.  14.  12.  10.

 31   34   8.   8.  10.  10.  12.  14.  14.  14.  14.  14.  12.  10.
 73        8.   8.  10.  10.  12.  14.  14.  14.  14.  14.  12.  10.
 83        8.   8.  10.  10.  12.  14.  14.  14.  14.  14.  12.  10.
131  134   8.   8.  10.  10.  12.  14.  14.  14.  14.  14.  12.  10.

 41   44   8.   8.  10.  10.  12.  14.  14.  14.  14.  14.  12.  10.
 74        8.   8.  10.  10.  12.  14.  14.  14.  14.  14.  12.  10.
 84        8.   8.  10.  10.  12.  14.  14.  14.  14.  14.  12.  10.
141  144   8.   8.  10.  10.  12.  14.  14.  14.  14.  14.  12.  10.

 51   54   8.   8.  10.  10.  12.  14.  14.  14.  14.  14.  12.  10.
 75        8.   8.  10.  10.  12.  14.  14.  14.  14.  14.  12.  10.
 85        8.   8.  10.  10.  12.  14.  14.  14.  14.  14.  12.  10.
151  154   8.   8.  10.  10.  12.  14.  14.  14.  14.  14.  12.  10.

 61   64   8.   8.  10.  10.  12.  14.  14.  14.  14.  14.  12.  10.
 76        8.   8.  10.  10.  12.  14.  14.  14.  14.  14.  12.  10.
 86        8.   8.  10.  10.  12.  14.  14.  14.  14.  14.  12.  10.
161  164   8.   8.  10.  10.  12.  14.  14.  14.  14.  14.  12.  10.
END MON-IFLW-CONC
```

```
  MON-GRND-CONC
               Active Groundwater Concentration of Silica (mg/l)        ***
    #     #  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC  ***
   11    14  12.  12.  14.  16.  18.  20.  20.  20.  20.  20.  18.  14.
   71        12.  12.  14.  16.  18.  20.  20.  20.  20.  20.  18.  14.
   81        12.  12.  14.  16.  18.  20.  20.  20.  20.  20.  18.  14.
  111   114  12.  12.  14.  16.  18.  20.  20.  20.  20.  20.  18.  14.

   21    24  12.  12.  14.  16.  18.  20.  20.  20.  20.  20.  18.  14.
   72        12.  12.  14.  16.  18.  20.  20.  20.  20.  20.  18.  14.
   82        12.  12.  14.  16.  18.  20.  20.  20.  20.  20.  18.  14.
  121   124  12.  12.  14.  16.  18.  20.  20.  20.  20.  20.  18.  14.

   31    34  12.  12.  14.  16.  18.  20.  20.  20.  20.  20.  18.  14.
   73        12.  12.  14.  16.  18.  20.  20.  20.  20.  20.  18.  14.
   83        12.  12.  14.  16.  18.  20.  20.  20.  20.  20.  18.  14.
  131   134  12.  12.  14.  16.  18.  20.  20.  20.  20.  20.  18.  14.

   41    44  12.  12.  14.  16.  18.  20.  20.  20.  20.  20.  18.  14.
   74        12.  12.  14.  16.  18.  20.  20.  20.  20.  20.  18.  14.
   84        12.  12.  14.  16.  18.  20.  20.  20.  20.  20.  18.  14.
  141   144  12.  12.  14.  16.  18.  20.  20.  20.  20.  20.  18.  14.

   51    54  12.  12.  14.  16.  18.  20.  20.  20.  20.  20.  18.  14.
   75        12.  12.  14.  16.  18.  20.  20.  20.  20.  20.  18.  14.
   85        12.  12.  14.  16.  18.  20.  20.  20.  20.  20.  18.  14.
  151   154  12.  12.  14.  16.  18.  20.  20.  20.  20.  20.  18.  14.

   61    64  12.  12.  14.  16.  18.  20.  20.  20.  20.  20.  18.  14.
   76        12.  12.  14.  16.  18.  20.  20.  20.  20.  20.  18.  14.
   86        12.  12.  14.  16.  18.  20.  20.  20.  20.  20.  18.  14.
  161   164  12.  12.  14.  16.  18.  20.  20.  20.  20.  20.  18.  14.
  END MON-GRND-CONC

*** QUAL #7 E-Coli
  QUAL-PROPS
    #     #<--QUALID-->    QTID  QSD VPFW VPFS  QSO  VQO QIFW VIQC QAGW VAQC  ***
   11   164      E-Coli    10^9    0    0    0    2    1    1    1    1    1
  END QUAL-PROPS

  QUAL-INPUT
    #     #     SQO   POTFW   POTFS   ACQOP  SQOLIM   WSQOP    IOQC    AOQC   ***
   11    14                                            2.00
   71                                                  2.00
   81                                                  2.00
  111   114                                            2.00

   21    24                                            2.00
   72                                                  2.00
   82                                                  2.00
  121   124                                            2.00

   31    34                                            2.00
   73                                                  2.00
   83                                                  2.00
  131   134                                            2.00

   41    44                                            2.00
   74                                                  2.00
   84                                                  2.00
  141   144                                            2.00

   51    54                                            2.00
   75                                                  2.00
   85                                                  2.00
  151   154                                            2.00

   61    64                                            2.00
   76                                                  2.00
   86                                                  2.00
  161   164                                            2.00
  END QUAL-INPUT

  MON-ACCUM
                     ACCUMULATION RATE FOR E-Coli (10^9/ac/day)       ***
    #     #  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC  ***
```

```
 11   14  .04  .04  .04  .04  .04  .04  .04  .04  .04  .04  .04  .04
 71       .04  .04  .04  .04  .04  .04  .04  .04  .04  .04  .04  .04
 81       .04  .04  .04  .04  .04  .04  .04  .04  .04  .04  .04  .04
111  114  .04  .04  .04  .04  .04  .04  .04  .04  .04  .04  .04  .04

 21   24  .37  .37  .37  .37  .37  .37  .37  .37  .37  .37  .37  .37
 72       .37  .37  .37  .37  .37  .37  .37  .37  .37  .37  .37  .37
 82       .37  .37  .37  .37  .37  .37  .37  .37  .37  .37  .37  .37
121  124  .37  .37  .37  .37  .37  .37  .37  .37  .37  .37  .37  .37

 31   34  .08  .08  .08  .08  .08  .08  .08  .08  .08  .08  .08  .08
 73       .08  .08  .08  .08  .08  .08  .08  .08  .08  .08  .08  .08
 83       .08  .08  .08  .08  .08  .08  .08  .08  .08  .08  .08  .08
131  134  .08  .08  .08  .08  .08  .08  .08  .08  .08  .08  .08  .08

 41   44  .20  .20  .20  .20  .20  .20  .20  .20  .20  .20  .20  .20
 74       .20  .20  .20  .20  .20  .20  .20  .20  .20  .20  .20  .20
 84       .20  .20  .20  .20  .20  .20  .20  .20  .20  .20  .20  .20
141  144  .20  .20  .20  .20  .20  .20  .20  .20  .20  .20  .20  .20

 51   54  .30  .30  .30  .30  .30  .30  .30  .30  .30  .30  .30  .30
 75       .30  .30  .30  .30  .30  .30  .30  .30  .30  .30  .30  .30
 85       .30  .30  .30  .30  .30  .30  .30  .30  .30  .30  .30  .30
151  154  .30  .30  .30  .30  .30  .30  .30  .30  .30  .30  .30  .30

 61   64  .22  .22  .22  .22  .22  .22  .22  .22  .22  .22  .22  .22
 76       .22  .22  .22  .22  .22  .22  .22  .22  .22  .22  .22  .22
 86       .22  .22  .22  .22  .22  .22  .22  .22  .22  .22  .22  .22
161  164  .22  .22  .22  .22  .22  .22  .22  .22  .22  .22  .22  .22
END MON-ACCUM

MON-SQOLIM
                    Limiting Storage for E-Coli (10^9/ac)             ***
  #    #  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC  ***
 11   14  0.5  0.5  0.5  0.5  0.5  0.5  0.5  0.5  0.5  0.5  0.5  0.5
 71       0.5  0.5  0.5  0.5  0.5  0.5  0.5  0.5  0.5  0.5  0.5  0.5
 81       0.5  0.5  0.5  0.5  0.5  0.5  0.5  0.5  0.5  0.5  0.5  0.5
111  114  0.5  0.5  0.5  0.5  0.5  0.5  0.5  0.5  0.5  0.5  0.5  0.5

 21   24  2.4  2.4  2.4  2.4  2.4  2.4  2.4  2.4  2.4  2.4  2.4  2.4
 72       2.4  2.4  2.4  2.4  2.4  2.4  2.4  2.4  2.4  2.4  2.4  2.4
 82       2.4  2.4  2.4  2.4  2.4  2.4  2.4  2.4  2.4  2.4  2.4  2.4
121  124  2.4  2.4  2.4  2.4  2.4  2.4  2.4  2.4  2.4  2.4  2.4  2.4

 31   34  0.8  0.8  0.8  0.8  0.8  0.8  0.8  0.8  0.8  0.8  0.8  0.8
 73       0.8  0.8  0.8  0.8  0.8  0.8  0.8  0.8  0.8  0.8  0.8  0.8
 83       0.8  0.8  0.8  0.8  0.8  0.8  0.8  0.8  0.8  0.8  0.8  0.8
131  134  0.8  0.8  0.8  0.8  0.8  0.8  0.8  0.8  0.8  0.8  0.8  0.8

 41   44  1.2  1.2  1.2  1.2  1.2  1.2  1.2  1.2  1.2  1.2  1.2  1.2
 74       1.2  1.2  1.2  1.2  1.2  1.2  1.2  1.2  1.2  1.2  1.2  1.2
 84       1.2  1.2  1.2  1.2  1.2  1.2  1.2  1.2  1.2  1.2  1.2  1.2
141  144  1.2  1.2  1.2  1.2  1.2  1.2  1.2  1.2  1.2  1.2  1.2  1.2

 51   54  1.8  1.8  1.8  1.8  1.8  1.8  1.8  1.8  1.8  1.8  1.8  1.8
 75       1.8  1.8  1.8  1.8  1.8  1.8  1.8  1.8  1.8  1.8  1.8  1.8
 85       1.8  1.8  1.8  1.8  1.8  1.8  1.8  1.8  1.8  1.8  1.8  1.8
151  154  1.8  1.8  1.8  1.8  1.8  1.8  1.8  1.8  1.8  1.8  1.8  1.8

 61   64  0.7  0.7  0.7  0.7  0.7  0.7  0.7  0.7  0.7  0.7  0.7  0.7
 76       0.7  0.7  0.7  0.7  0.7  0.7  0.7  0.7  0.7  0.7  0.7  0.7
 86       0.7  0.7  0.7  0.7  0.7  0.7  0.7  0.7  0.7  0.7  0.7  0.7
161  164  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
          Interflow Concentration of E-Coli (10^9/ft3)                ***
  #    #  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC  ***
 11   144.E-54.E-54.E-54.E-54.E-54.E-54.E-54.E-54.E-54.E-54.E-54.E-5
 71     4.E-54.E-54.E-54.E-54.E-54.E-54.E-54.E-54.E-54.E-54.E-54.E-5
 81     4.E-54.E-54.E-54.E-54.E-54.E-54.E-54.E-54.E-54.E-54.E-54.E-5
111  1144.E-54.E-54.E-54.E-54.E-54.E-54.E-54.E-54.E-54.E-54.E-54.E-5

 21   242.E-42.E-42.E-42.E-42.E-42.E-42.E-42.E-42.E-42.E-42.E-42.E-4
 72     2.E-42.E-42.E-42.E-42.E-42.E-42.E-42.E-42.E-42.E-42.E-42.E-4
 82     2.E-42.E-42.E-42.E-42.E-42.E-42.E-42.E-42.E-42.E-42.E-42.E-4
```

```
  121  1242.E-42.E-42.E-42.E-42.E-42.E-42.E-42.E-42.E-42.E-42.E-42.E-4

   31   345.E-55.E-55.E-55.E-55.E-55.E-55.E-55.E-55.E-55.E-55.E-55.E-5
   73     5.E-55.E-55.E-55.E-55.E-55.E-55.E-55.E-55.E-55.E-55.E-55.E-5
   83     5.E-55.E-55.E-55.E-55.E-55.E-55.E-55.E-55.E-55.E-55.E-55.E-5
  131  1345.E-55.E-55.E-55.E-55.E-55.E-55.E-55.E-55.E-55.E-55.E-55.E-5

   41   441.E-41.E-41.E-41.E-41.E-41.E-41.E-41.E-41.E-41.E-41.E-41.E-4
   74     1.E-41.E-41.E-41.E-41.E-41.E-41.E-41.E-41.E-41.E-41.E-41.E-4
   84     1.E-41.E-41.E-41.E-41.E-41.E-41.E-41.E-41.E-41.E-41.E-41.E-4
  141  1441.E-41.E-41.E-41.E-41.E-41.E-41.E-41.E-41.E-41.E-41.E-41.E-4

   51   543.E-43.E-43.E-43.E-43.E-43.E-43.E-43.E-43.E-43.E-43.E-43.E-4
   75     3.E-43.E-43.E-43.E-43.E-43.E-43.E-43.E-43.E-43.E-43.E-43.E-4
   85     3.E-43.E-43.E-43.E-43.E-43.E-43.E-43.E-43.E-43.E-43.E-43.E-4
  151  1543.E-43.E-43.E-43.E-43.E-43.E-43.E-43.E-43.E-43.E-43.E-43.E-4

   61   647.E-57.E-57.E-57.E-57.E-57.E-57.E-57.E-57.E-57.E-57.E-57.E-5
   76     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
   86     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
  161  1647.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
              Active Groundwater Concentration of E-Coli (10^9/ft3)    ***
    #    #  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP  OCT  NOV  DEC  ***
   11   141.E-51.E-51.E-51.E-51.E-51.E-51.E-51.E-51.E-51.E-51.E-51.E-5
   71     1.E-51.E-51.E-51.E-51.E-51.E-51.E-51.E-51.E-51.E-51.E-51.E-5
   81     1.E-51.E-51.E-51.E-51.E-51.E-51.E-51.E-51.E-51.E-51.E-51.E-5
  111  1141.E-51.E-51.E-51.E-51.E-51.E-51.E-51.E-51.E-51.E-51.E-51.E-5

   21   245.E-55.E-55.E-55.E-55.E-55.E-55.E-55.E-55.E-55.E-55.E-55.E-5
   72     5.E-55.E-55.E-55.E-55.E-55.E-55.E-55.E-55.E-55.E-55.E-55.E-5
   82     5.E-55.E-55.E-55.E-55.E-55.E-55.E-55.E-55.E-55.E-55.E-55.E-5
  121  1245.E-55.E-55.E-55.E-55.E-55.E-55.E-55.E-55.E-55.E-55.E-55.E-5

   31   342.E-52.E-52.E-52.E-52.E-52.E-52.E-52.E-52.E-52.E-52.E-52.E-5
   73     2.E-52.E-52.E-52.E-52.E-52.E-52.E-52.E-52.E-52.E-52.E-52.E-5
   83     2.E-52.E-52.E-52.E-52.E-52.E-52.E-52.E-52.E-52.E-52.E-52.E-5
  131  1342.E-52.E-52.E-52.E-52.E-52.E-52.E-52.E-52.E-52.E-52.E-52.E-5

   41   443.E-53.E-53.E-53.E-53.E-53.E-53.E-53.E-53.E-53.E-53.E-53.E-5
   74     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
   84     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
  141  1443.E-53.E-53.E-53.E-53.E-53.E-53.E-53.E-53.E-53.E-53.E-53.E-5

   51   545.E-55.E-55.E-55.E-55.E-55.E-55.E-55.E-55.E-55.E-55.E-55.E-5
   75     5.E-55.E-55.E-55.E-55.E-55.E-55.E-55.E-55.E-55.E-55.E-55.E-5
   85     5.E-55.E-55.E-55.E-55.E-55.E-55.E-55.E-55.E-55.E-55.E-55.E-5
  151  1545.E-55.E-55.E-55.E-55.E-55.E-55.E-55.E-55.E-55.E-55.E-55.E-5

   61   643.E-53.E-53.E-53.E-53.E-53.E-53.E-53.E-53.E-53.E-53.E-53.E-5
   76     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
   86     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
  161  1643.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 BinaryOut
*** # -  #                     User  t-series Engl Metr Engl 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 (=60 ft)
 ATEMP-DAT
   <ILS >     ELDAT    AIRTEMP ***
   # -  #      (ft)    (deg F) ***
  91          -176.      40.0
  92          -216.      40.0
  93          -241.      40.0
  94          -253.      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           430.      34.0       0.3
  92           390.      34.0       0.3
  93           365.      34.0       0.3
  94           353.      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          0.020        2.     0.003     0.020
   92          0.020        2.     0.004     0.020
   93          0.020        2.     0.005     0.020
   94          0.020        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
    #    # NQAL *** (1=NO3, 2=NH3, 3=PO4, 4=BOD, 5=ALK, 6=Silica, 7=E-Coli)
    1  999    7
  END NQUALS

  QUAL-PROPS
    #    #<--QUALID-->    QTID  QSD VPFW  QSO  VQO  ***
    1  999     NO2+NO3     LBS    0    0    2    0
  END QUAL-PROPS

  QUAL-INPUT
    #    #     SQO   POTFW   ACQOP  SQOLIM   WSQOP  ***
   91          .06      0.    0.01  0.060    0.500
   92          .09      0.    0.02  0.120    0.500
   93          .20      0.    0.04  0.240    0.500
   94          .09      0.    0.02  0.120    0.500
  END QUAL-INPUT

  QUAL-PROPS
    #    #<--QUALID-->    QTID  QSD VPFW  QSO  VQO  ***
    1  999         NH3     LBS    0    0    2    0
  END QUAL-PROPS

  QUAL-INPUT
    #    #     SQO   POTFW   ACQOP  SQOLIM   WSQOP  ***
   91        0.003      0.   .0014  .0085    0.500
   92        0.005      0.   .0020  .0120    0.500
   93        0.009      0.   .0038  .0230    0.500
   94        0.004      0.   .0014  .0080    0.500
  END QUAL-INPUT

  QUAL-PROPS
    #    #<--QUALID-->    QTID  QSD VPFW  QSO  VQO  ***
    1  999         PO4     LBS    1    0    2    0
  END QUAL-PROPS

  QUAL-INPUT
    #    #     SQO   POTFW   ACQOP  SQOLIM   WSQOP  ***
   91        0.003     0.5   0.001   0.008   0.500
   92        0.006     0.5   0.002   0.012   0.500
   93        0.009     0.5   0.003   0.020   0.500
   94        0.006     0.5   0.002   0.012   0.500
  END QUAL-INPUT
```

```
  QUAL-PROPS
    #    #<--QUALID-->    QTID  QSD VPFW  QSO  VQO  ***
    1  999BOD/Organics     LBS    0    0    2    0
  END QUAL-PROPS

  QUAL-INPUT
    #    #     SQO   POTFW   ACQOP  SQOLIM   WSQOP  ***
   91          1.0      0.   0.11      1.5   0.500
   92          1.0      0.   0.11      1.5   0.500
   93          1.0      0.   0.11      1.5   0.500
   94          1.0      0.   0.11      1.5   0.500
  END QUAL-INPUT

  QUAL-PROPS
    #    #<--QUALID-->    QTID  QSD VPFW  QSO  VQO  ***
    1  999  Alkalinity     LBS    0    0    2    0
  END QUAL-PROPS

  QUAL-INPUT
    #    #     SQO   POTFW   ACQOP  SQOLIM   WSQOP  ***
   91         2.03      0.    0.22    0.92   0.500
   92         2.03      0.    0.23    0.95   0.500
   93         2.03      0.    0.24    0.92   0.500
   94         2.03      0.    0.21    0.96   0.500
  END QUAL-INPUT

  QUAL-PROPS
    #    #<--QUALID-->    QTID  QSD VPFW  QSO  VQO  ***
    1  999      Silica     LBS    0    0    2    0
  END QUAL-PROPS

  QUAL-INPUT
    #    #     SQO   POTFW   ACQOP  SQOLIM   WSQOP  ***
   91        0.003      0.   0.003   0.024   0.500
   92        0.003      0.   0.003   0.024   0.500
   93        0.003      0.   0.003   0.024   0.500
   94        0.003      0.   0.003   0.024   0.500
  END QUAL-INPUT

  QUAL-PROPS
    #    #<--QUALID-->    QTID  QSD VPFW  QSO  VQO  ***
    1  999      E-Coli    10^9    0    0    2    0
  END QUAL-PROPS

  QUAL-INPUT
    #    #     SQO   POTFW   ACQOP  SQOLIM   WSQOP  ***
   91         0.20      0.    0.07    0.45   0.500
   92         0.30      0.    0.12    0.70   0.500
   93         0.40      0.    0.15    0.90   0.500
   94         0.10      0.    0.05    0.25   0.500
  END QUAL-INPUT

END IMPLND

EXT SOURCES
<-Volume-> <Member> SsysSgap<--Mult-->Tran <-Target vols> <-Grp> <-Member->  ***
<Name>   # <Name> # tem strg<-factor->strg <Name>   #   #        <Name> # #  ***
WDM1  1001 PREC     ENGL        1.05  SAME PERLND   1 999 EXTNL  PREC
WDM1  1001 PREC     ENGL        1.05  SAME IMPLND   1 999 EXTNL  PREC
WDM1  1002 EVAP     ENGL        0.78  DIV  PERLND   1 999 EXTNL  PETINP
WDM1  1002 EVAP     ENGL        0.78  DIV  IMPLND   1 999 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    51 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  30 HYDR   RO     1                WDM2  1030 FLOW     ENGL      REPL
RCHRES  80 HYDR   RO     1                WDM2  1080 FLOW     ENGL      REPL
```

```
RCHRES 220 HYDR   RO     1                WDM2  1220 FLOW     ENGL      REPL
RCHRES 300 HYDR   RO     1                WDM2  1300 FLOW     ENGL      REPL

*** Outlet of Little Bear Creek near Woodinville: Station 0478
RCHRES 300 CONS   CON    1                WDM2  1301 ALKN     ENGL AGGR REPL
RCHRES 300 HTRCH  TW     1                WDM2  1302 WTEM     METR AGGR REPL
RCHRES 300 SEDTRN SSED   1                WDM2  1303 SAND     ENGL AGGR REPL
RCHRES 300 SEDTRN SSED   2                WDM2  1304 SILT     ENGL AGGR REPL
RCHRES 300 SEDTRN SSED   3                WDM2  1305 CLAY     ENGL AGGR REPL
RCHRES 300 SEDTRN SSED   4                WDM2  1306 SSED     ENGL AGGR REPL
RCHRES 300 GQUAL  DQAL   1                WDM2  1307 SLCA     ENGL AGGR REPL
 *** following factor of 0.1 converts from #cfu/l to #cfu/100ml
RCHRES 300 GQUAL  DQAL   2      0.1       WDM2  1308 ECOL     ENGL AGGR REPL
RCHRES 300 OXRX   DOX                     WDM2  1309 DOXX     ENGL AGGR REPL
RCHRES 300 OXRX   BOD                     WDM2  1310 BODX     ENGL AGGR REPL
RCHRES 300 NUTRX  DNUST  1                WDM2  1311 NO3X     ENGL AGGR REPL
RCHRES 300 NUTRX  DNUST  2                WDM2  1312 NH3X     ENGL AGGR REPL
RCHRES 300 NUTRX  DNUST  4                WDM2  1313 PO4X     ENGL AGGR REPL
RCHRES 300 PLANK  BENAL  1                WDM2  1314 BALG     ENGL AGGR REPL
RCHRES 300 PLANK  PKST3  1                WDM2  1315 ORGN     ENGL AGGR REPL
RCHRES 300 PLANK  PKST3  2                WDM2  1316 ORGP     ENGL AGGR REPL
RCHRES 300 PLANK  PKST3  3                WDM2  1317 ORGC     ENGL AGGR REPL
RCHRES 300 PLANK  PKST4  1                WDM2  1318 TNXX     ENGL AGGR REPL
RCHRES 300 PLANK  PKST4  2                WDM2  1319 TPXX     ENGL AGGR REPL
RCHRES 300 PHCARB PHST   1                WDM2  1320 TICX     ENGL AGGR REPL
RCHRES 300 PHCARB PHST   3                WDM2  1321 PHXX     ENGL AGGR REPL
*** Little Bear Creek at InterUrban Blvd
RCHRES  30 HTRCH  TW     1                WDM2  1402 WTEM     METR AGGR REPL
RCHRES  30 SEDTRN SSED   1                WDM2  1403 SAND     ENGL AGGR REPL
RCHRES  30 SEDTRN SSED   2                WDM2  1404 SILT     ENGL AGGR REPL
RCHRES  30 SEDTRN SSED   3                WDM2  1405 CLAY     ENGL AGGR REPL
RCHRES  30 SEDTRN SSED   4                WDM2  1406 SSED     ENGL AGGR REPL
RCHRES  30 OXRX   DOX                     WDM2  1409 DOXX     ENGL AGGR REPL
RCHRES  30 NUTRX  DNUST  1                WDM2  1411 NO3X     ENGL AGGR REPL
RCHRES  30 PLANK  BENAL  1                WDM2  1414 BALG     ENGL AGGR REPL
RCHRES  30 PLANK  PKST4  2                WDM2  1419 TPXX     ENGL AGGR REPL
*** Little Bear Creek at 51st Street SE
RCHRES  80 HTRCH  TW     1                WDM2  1502 WTEM     METR AGGR REPL
RCHRES  80 SEDTRN SSED   1                WDM2  1503 SAND     ENGL AGGR REPL
RCHRES  80 SEDTRN SSED   2                WDM2  1504 SILT     ENGL AGGR REPL
RCHRES  80 SEDTRN SSED   3                WDM2  1505 CLAY     ENGL AGGR REPL
RCHRES  80 SEDTRN SSED   4                WDM2  1506 SSED     ENGL AGGR REPL
RCHRES  80 OXRX   DOX                     WDM2  1509 DOXX     ENGL AGGR REPL
RCHRES  80 NUTRX  DNUST  1                WDM2  1511 NO3X     ENGL AGGR REPL
RCHRES  80 PLANK  PKST4  2                WDM2  1519 TPXX     ENGL AGGR REPL
*** Little Bear Creek at 228th Street SE
RCHRES 220 HTRCH  TW     1                WDM2  1602 WTEM     METR AGGR REPL
RCHRES 220 SEDTRN SSED   1                WDM2  1603 SAND     ENGL AGGR REPL
RCHRES 220 SEDTRN SSED   2                WDM2  1604 SILT     ENGL AGGR REPL
RCHRES 220 SEDTRN SSED   3                WDM2  1605 CLAY     ENGL AGGR REPL
RCHRES 220 SEDTRN SSED   4                WDM2  1606 SSED     ENGL AGGR REPL
RCHRES 220 OXRX   DOX                     WDM2  1609 DOXX     ENGL AGGR REPL
RCHRES 220 NUTRX  DNUST  1                WDM2  1611 NO3X     ENGL AGGR REPL
RCHRES 220 PLANK  BENAL  1                WDM2  1614 BALG     ENGL AGGR REPL
RCHRES 220 PLANK  PKST4  2                WDM2  1619 TPXX     ENGL AGGR REPL

RCHRES  10 HYDR   TAU       ***           WDM2  2010 TAUX     ENGL AGGR REPL
RCHRES  20 HYDR   TAU       ***           WDM2  2020 TAUX     ENGL AGGR REPL
RCHRES  30 HYDR   TAU       ***           WDM2  2030 TAUX     ENGL AGGR REPL
RCHRES  40 HYDR   TAU       ***           WDM2  2040 TAUX     ENGL AGGR REPL
RCHRES  50 HYDR   TAU       ***           WDM2  2050 TAUX     ENGL AGGR REPL
RCHRES  60 HYDR   TAU       ***           WDM2  2060 TAUX     ENGL AGGR REPL
RCHRES  70 HYDR   TAU       ***           WDM2  2070 TAUX     ENGL AGGR REPL
RCHRES  80 HYDR   TAU       ***           WDM2  2080 TAUX     ENGL AGGR REPL
RCHRES  90 HYDR   TAU       ***           WDM2  2090 TAUX     ENGL AGGR REPL
RCHRES 100 HYDR   TAU       ***           WDM2  2100 TAUX     ENGL AGGR REPL
RCHRES 110 HYDR   TAU       ***           WDM2  2110 TAUX     ENGL AGGR REPL
RCHRES 120 HYDR   TAU       ***           WDM2  2120 TAUX     ENGL AGGR REPL
RCHRES 130 HYDR   TAU       ***           WDM2  2130 TAUX     ENGL AGGR REPL
RCHRES 140 HYDR   TAU       ***           WDM2  2140 TAUX     ENGL AGGR REPL
RCHRES 150 HYDR   TAU       ***           WDM2  2150 TAUX     ENGL AGGR REPL
RCHRES 160 HYDR   TAU       ***           WDM2  2160 TAUX     ENGL AGGR REPL
RCHRES 170 HYDR   TAU       ***           WDM2  2170 TAUX     ENGL AGGR REPL
RCHRES 180 HYDR   TAU       ***           WDM2  2180 TAUX     ENGL AGGR REPL
RCHRES 190 HYDR   TAU       ***           WDM2  2190 TAUX     ENGL AGGR REPL
RCHRES 200 HYDR   TAU       ***           WDM2  2200 TAUX     ENGL AGGR REPL
```

```
RCHRES 210 HYDR   TAU       ***           WDM2  2210 TAUX     ENGL AGGR REPL
RCHRES 220 HYDR   TAU       ***           WDM2  2220 TAUX     ENGL AGGR REPL
RCHRES 230 HYDR   TAU       ***           WDM2  2230 TAUX     ENGL AGGR REPL
RCHRES 240 HYDR   TAU       ***           WDM2  2240 TAUX     ENGL AGGR REPL
RCHRES 250 HYDR   TAU       ***           WDM2  2250 TAUX     ENGL AGGR REPL
RCHRES 260 HYDR   TAU       ***           WDM2  2260 TAUX     ENGL AGGR REPL
RCHRES 270 HYDR   TAU       ***           WDM2  2270 TAUX     ENGL AGGR REPL
RCHRES 280 HYDR   TAU       ***           WDM2  2280 TAUX     ENGL AGGR REPL
RCHRES 290 HYDR   TAU       ***           WDM2  2290 TAUX     ENGL AGGR REPL
RCHRES 300 HYDR   TAU       ***           WDM2  2300 TAUX     ENGL AGGR REPL
RCHRES  10 HYDR   TAU       ***           WDM2  2310 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  10    ***
<-Source->                  <--Area-->     <-Target->   MBLK   ***
<Name>   #                  <-factor->     <Name>   #   Tbl#   ***
PERLND  11                     114.812     RCHRES  10      1
PERLND  21                      32.336     RCHRES  10      1
PERLND  41                      66.050     RCHRES  10      1
PERLND  51                     105.139     RCHRES  10      1
PERLND  52                      37.262     RCHRES  10      1
PERLND  31                      38.240     RCHRES  10      1
IMPLND  91                       5.463     RCHRES  10      4
IMPLND  92                      88.373     RCHRES  10      4
IMPLND  93                       4.814     RCHRES  10      4
IMPLND  94                       1.023     RCHRES  10      4

Sub Basin  20    ***
<-Source->                  <--Area-->     <-Target->   MBLK   ***
<Name>   #                  <-factor->     <Name>   #   Tbl#   ***
PERLND  11                      77.397     RCHRES  20      1
PERLND  21                      20.393     RCHRES  20      1
PERLND  41                      34.640     RCHRES  20      1
PERLND  31                      15.049     RCHRES  20      1
IMPLND  91                       2.150     RCHRES  20      4
IMPLND  92                       2.893     RCHRES  20      4
IMPLND  93                       0.248     RCHRES  20      4
IMPLND  94                       0.103     RCHRES  20      4

Sub Basin  30    ***
<-Source->                  <--Area-->     <-Target->   MBLK   ***
<Name>   #                  <-factor->     <Name>   #   Tbl#   ***
PERLND  11                      61.036     RCHRES  30      1
PERLND  12                      41.106     RCHRES  30      1
PERLND  21                      57.362     RCHRES  30      1
PERLND  41                      72.351     RCHRES  30      1
PERLND  51                      28.507     RCHRES  30      1
PERLND  31                      41.783     RCHRES  30      1
PERLND  71                      42.585     RCHRES  30      1
PERLND  74                      31.965     RCHRES  30      1
PERLND  81                      38.139     RCHRES  30      1
IMPLND  91                       7.185     RCHRES  30      4
IMPLND  92                      17.371     RCHRES  30      4
IMPLND  93                       2.479     RCHRES  30      4
IMPLND  94                       0.692     RCHRES  30      4

Sub Basin  40    ***
<-Source->                  <--Area-->     <-Target->   MBLK   ***
<Name>   #                  <-factor->     <Name>   #   Tbl#   ***
PERLND  21                       3.669     RCHRES  40      1
PERLND  41                       4.079     RCHRES  40      1
PERLND  32                       5.177     RCHRES  40      1
PERLND  71                      13.351     RCHRES  40      1
PERLND  72                       8.570     RCHRES  40      1
PERLND  74                       6.913     RCHRES  40      1
PERLND  73                       3.225     RCHRES  40      1
PERLND  81                       7.678     RCHRES  40      1
PERLND  84                       4.181     RCHRES  40      1
```

```
IMPLND  91                      0.904     RCHRES  40      4
IMPLND  92                      0.537     RCHRES  40      4
IMPLND  93                      0.062     RCHRES  40      4

Sub Basin  50    ***
<-Source->                 <--Area-->     <-Target->   MBLK   ***
<Name>   #                 <-factor->     <Name>   #   Tbl#   ***
PERLND  11                    108.120     RCHRES  50      1
PERLND  12                     46.927     RCHRES  50      1
PERLND  21                     29.065     RCHRES  50      1
PERLND  41                     67.356     RCHRES  50      1
PERLND  42                     21.791     RCHRES  50      1
PERLND  31                     43.822     RCHRES  50      1
IMPLND  91                      6.260     RCHRES  50      4
IMPLND  92                      4.003     RCHRES  50      4
IMPLND  93                      1.023     RCHRES  50      4
IMPLND  94                      0.062     RCHRES  50      4

Sub Basin  60    ***
<-Source->                 <--Area-->     <-Target->   MBLK   ***
<Name>   #                 <-factor->     <Name>   #   Tbl#   ***
PERLND  11                     72.931     RCHRES  60      1
PERLND  12                     27.145     RCHRES  60      1
PERLND  13                     14.027     RCHRES  60      1
PERLND  21                     23.128     RCHRES  60      1
PERLND  41                     40.115     RCHRES  60      1
PERLND  42                     20.548     RCHRES  60      1
PERLND  31                     30.394     RCHRES  60      1
IMPLND  91                      4.342     RCHRES  60      4
IMPLND  92                      3.001     RCHRES  60      4
IMPLND  93                      0.238     RCHRES  60      4

Sub Basin  70    ***
<-Source->                 <--Area-->     <-Target->   MBLK   ***
<Name>   #                 <-factor->     <Name>   #   Tbl#   ***
PERLND  11                     13.736     RCHRES  70      1
PERLND  12                     24.559     RCHRES  70      1
PERLND  13                     18.509     RCHRES  70      1
PERLND  41                     19.984     RCHRES  70      1
PERLND  42                     24.336     RCHRES  70      1
PERLND  31                     18.650     RCHRES  70      1
PERLND  71                     29.417     RCHRES  70      1
PERLND  72                     11.244     RCHRES  70      1
PERLND  74                     23.695     RCHRES  70      1
PERLND  81                     24.727     RCHRES  70      1
IMPLND  91                      3.813     RCHRES  70      4
IMPLND  92                      3.280     RCHRES  70      4

Sub Basin  80    ***
<-Source->                 <--Area-->     <-Target->   MBLK   ***
<Name>   #                 <-factor->     <Name>   #   Tbl#   ***
PERLND  11                     17.539     RCHRES  80      1
PERLND  12                     25.696     RCHRES  80      1
PERLND  21                      9.238     RCHRES  80      1
PERLND  22                      9.655     RCHRES  80      1
PERLND  41                     16.730     RCHRES  80      1
PERLND  42                     17.783     RCHRES  80      1
PERLND  31                     18.093     RCHRES  80      1
PERLND  71                     33.154     RCHRES  80      1
PERLND  74                     12.756     RCHRES  80      1
PERLND  83                     13.250     RCHRES  80      1
IMPLND  91                      3.383     RCHRES  80      4
IMPLND  92                      1.235     RCHRES  80      4

Sub Basin  90    ***
<-Source->                 <--Area-->     <-Target->   MBLK   ***
<Name>   #                 <-factor->     <Name>   #   Tbl#   ***
PERLND  11                     39.772     RCHRES  90      1
PERLND  12                     42.441     RCHRES  90      1
PERLND  41                     52.525     RCHRES  90      1
PERLND  31                     20.270     RCHRES  90      1
PERLND  71                     16.173     RCHRES  90      1
PERLND  74                     18.943     RCHRES  90      1
PERLND  81                     43.109     RCHRES  90      1
PERLND  85                     13.068     RCHRES  90      1
IMPLND  91                      4.057     RCHRES  90      4
```

```
IMPLND  92                      4.644     RCHRES  90      4
IMPLND  93                      0.186     RCHRES  90      4

Sub Basin  100    ***
<-Source->                 <--Area-->     <-Target->   MBLK   ***
<Name>   #                 <-factor->     <Name>   #   Tbl#   ***
PERLND  11                     80.644     RCHRES 100      1
PERLND  12                     36.743     RCHRES 100      1
PERLND  13                     30.760     RCHRES 100      1
PERLND  21                     23.630     RCHRES 100      1
PERLND  41                     62.754     RCHRES 100      1
PERLND  42                     36.527     RCHRES 100      1
PERLND  31                     47.452     RCHRES 100      1
PERLND  84                     19.719     RCHRES 100      1
IMPLND  91                      7.065     RCHRES 100      4
IMPLND  92                      4.850     RCHRES 100      4
IMPLND  93                      0.248     RCHRES 100      4

Sub Basin  110    ***
<-Source->                 <--Area-->     <-Target->   MBLK   ***
<Name>   #                 <-factor->     <Name>   #   Tbl#   ***
PERLND  11                     56.275     RCHRES 110      1
PERLND  41                     48.374     RCHRES 110      1
PERLND  31                     19.416     RCHRES 110      1
PERLND  71                     21.262     RCHRES 110      1
PERLND  74                     40.664     RCHRES 110      1
PERLND  81                     83.027     RCHRES 110      1
PERLND  84                     16.798     RCHRES 110      1
IMPLND  91                      4.562     RCHRES 110      4
IMPLND  92                      2.743     RCHRES 110      4
IMPLND  93                      0.981     RCHRES 110      4
IMPLND  94                      0.217     RCHRES 110      4

Sub Basin  120    ***
<-Source->                 <--Area-->     <-Target->   MBLK   ***
<Name>   #                 <-factor->     <Name>   #   Tbl#   ***
PERLND  11                    162.104     RCHRES 120      1
PERLND  21                     65.251     RCHRES 120      1
PERLND  41                    144.205     RCHRES 120      1
PERLND  31                     65.697     RCHRES 120      1
PERLND  71                     29.994     RCHRES 120      1
PERLND  74                     50.920     RCHRES 120      1
IMPLND  91                     11.539     RCHRES 120      4
IMPLND  92                     11.699     RCHRES 120      4
IMPLND  93                      1.467     RCHRES 120      4
IMPLND  94                      4.726     RCHRES 120      4

Sub Basin  130    ***
<-Source->                 <--Area-->     <-Target->   MBLK   ***
<Name>   #                 <-factor->     <Name>   #   Tbl#   ***
PERLND  11                     18.697     RCHRES 130      1
PERLND  12                     37.517     RCHRES 130      1
PERLND  41                     17.641     RCHRES 130      1
PERLND  42                     37.381     RCHRES 130      1
PERLND  32                     23.336     RCHRES 130      1
PERLND  71                     30.488     RCHRES 130      1
PERLND  74                     32.046     RCHRES 130      1
PERLND  81                     27.476     RCHRES 130      1
IMPLND  91                      4.452     RCHRES 130      4
IMPLND  92                      5.046     RCHRES 130      4
IMPLND  93                      0.816     RCHRES 130      4
IMPLND  94                      5.041     RCHRES 130      4

Sub Basin  140    ***
<-Source->                 <--Area-->     <-Target->   MBLK   ***
<Name>   #                 <-factor->     <Name>   #   Tbl#   ***
PERLND  11                     79.199     RCHRES 140      1
PERLND  41                     38.080     RCHRES 140      1
PERLND  42                     87.216     RCHRES 140      1
PERLND  31                     48.530     RCHRES 140      1
PERLND  71                     80.840     RCHRES 140      1
PERLND  74                     92.776     RCHRES 140      1
PERLND  73                     32.216     RCHRES 140      1
PERLND  81                    127.534     RCHRES 140      1
IMPLND  91                     12.798     RCHRES 140      4
IMPLND  92                     11.896     RCHRES 140      4
```

```
IMPLND  93                      1.612     RCHRES 140      4
IMPLND  94                      6.023     RCHRES 140      4

Sub Basin  150    ***
<-Source->                  <--Area-->     <-Target->   MBLK   ***
<Name>   #                  <-factor->     <Name>   #   Tbl#   ***
PERLND  11                     179.695     RCHRES 150      1
PERLND  12                     114.014     RCHRES 150      1
PERLND  21                      42.056     RCHRES 150      1
PERLND  41                     140.876     RCHRES 150      1
PERLND  42                      80.421     RCHRES 150      1
PERLND  51                      49.876     RCHRES 150      1
PERLND  31                     124.619     RCHRES 150      1
IMPLND  91                      17.803     RCHRES 150      4
IMPLND  92                      20.640     RCHRES 150      4
IMPLND  93                       4.143     RCHRES 150      4
IMPLND  94                      11.291     RCHRES 150      4

Sub Basin  160    ***
<-Source->                  <--Area-->     <-Target->   MBLK   ***
<Name>   #                  <-factor->     <Name>   #   Tbl#   ***
PERLND  11                      88.999     RCHRES 160      1
PERLND  12                      49.981     RCHRES 160      1
PERLND  41                      60.765     RCHRES 160      1
PERLND  42                      52.801     RCHRES 160      1
PERLND  31                      29.381     RCHRES 160      1
PERLND  32                      23.603     RCHRES 160      1
IMPLND  91                       7.569     RCHRES 160      4
IMPLND  92                       4.520     RCHRES 160      4
IMPLND  93                       0.310     RCHRES 160      4
IMPLND  94                       5.171     RCHRES 160      4

Sub Basin  170    ***
<-Source->                  <--Area-->     <-Target->   MBLK   ***
<Name>   #                  <-factor->     <Name>   #   Tbl#   ***
PERLND  11                      16.619     RCHRES 170      1
PERLND  12                      35.165     RCHRES 170      1
PERLND  41                      12.385     RCHRES 170      1
PERLND  42                      27.757     RCHRES 170      1
PERLND  51                      12.771     RCHRES 170      1
PERLND  31                       6.855     RCHRES 170      1
PERLND  32                      12.865     RCHRES 170      1
IMPLND  91                       2.817     RCHRES 170      4
IMPLND  92                       4.974     RCHRES 170      4
IMPLND  93                       0.186     RCHRES 170      4
IMPLND  94                       1.635     RCHRES 170      4

Sub Basin  180    ***
<-Source->                  <--Area-->     <-Target->   MBLK   ***
<Name>   #                  <-factor->     <Name>   #   Tbl#   ***
PERLND  11                      19.610     RCHRES 180      1
PERLND  12                      30.721     RCHRES 180      1
PERLND  41                      12.454     RCHRES 180      1
PERLND  71                      40.003     RCHRES 180      1
PERLND  74                      25.626     RCHRES 180      1
PERLND  73                      11.686     RCHRES 180      1
PERLND  81                      22.410     RCHRES 180      1
IMPLND  91                       2.322     RCHRES 180      4
IMPLND  92                       1.860     RCHRES 180      4
IMPLND  94                       7.090     RCHRES 180      4

Sub Basin  190    ***
<-Source->                  <--Area-->     <-Target->   MBLK   ***
<Name>   #                  <-factor->     <Name>   #   Tbl#   ***
PERLND  11                      11.452     RCHRES 190      1
PERLND  12                      16.286     RCHRES 190      1
PERLND  13                      13.120     RCHRES 190      1
PERLND  42                      27.383     RCHRES 190      1
PERLND  71                      47.569     RCHRES 190      1
PERLND  74                      26.936     RCHRES 190      1
PERLND  73                      12.185     RCHRES 190      1
PERLND  81                      30.503     RCHRES 190      1
IMPLND  91                       3.012     RCHRES 190      4
IMPLND  92                       1.761     RCHRES 190      4
IMPLND  93                       0.744     RCHRES 190      4
IMPLND  94                       0.515     RCHRES 190      4
```

```
Sub Basin  200    ***
<-Source->                <--Area-->     <-Target->   MBLK   ***
<Name>   #                <-factor->     <Name>   #   Tbl#   ***
PERLND  11                    73.122     RCHRES 200      1
PERLND  12                   128.563     RCHRES 200      1
PERLND  41                    51.004     RCHRES 200      1
PERLND  42                   102.627     RCHRES 200      1
PERLND  31                    60.310     RCHRES 200      1
PERLND  71                    78.374     RCHRES 200      1
PERLND  74                   105.953     RCHRES 200      1
PERLND  81                    45.658     RCHRES 200      1
IMPLND  91                    12.142     RCHRES 200      4
IMPLND  92                    19.411     RCHRES 200      4
IMPLND  93                     2.190     RCHRES 200      4
IMPLND  94                    17.568     RCHRES 200      4

Sub Basin  210    ***
<-Source->                <--Area-->     <-Target->   MBLK   ***
<Name>   #                <-factor->     <Name>   #   Tbl#   ***
PERLND  41                     6.710     RCHRES 210      1
PERLND  71                    19.446     RCHRES 210      1
PERLND  72                    20.596     RCHRES 210      1
PERLND  74                    18.380     RCHRES 210      1
PERLND  75                     8.679     RCHRES 210      1
PERLND  73                    10.095     RCHRES 210      1
PERLND  84                     5.934     RCHRES 210      1
IMPLND  91                     1.660     RCHRES 210      4
IMPLND  92                     4.483     RCHRES 210      4
IMPLND  93                     0.537     RCHRES 210      4
IMPLND  94                     3.232     RCHRES 210      4

Sub Basin  220    ***
<-Source->                <--Area-->     <-Target->   MBLK   ***
<Name>   #                <-factor->     <Name>   #   Tbl#   ***
PERLND  11                    48.323     RCHRES 220      1
PERLND  12                    49.706     RCHRES 220      1
PERLND  41                    53.516     RCHRES 220      1
PERLND  42                   100.976     RCHRES 220      1
PERLND  51                    34.221     RCHRES 220      1
PERLND  32                    75.243     RCHRES 220      1
PERLND  71                    57.536     RCHRES 220      1
PERLND  74                    88.920     RCHRES 220      1
PERLND  75                    51.594     RCHRES 220      1
IMPLND  91                    14.561     RCHRES 220      4
IMPLND  92                    43.988     RCHRES 220      4
IMPLND  93                     4.762     RCHRES 220      4
IMPLND  94                    11.633     RCHRES 220      4

Sub Basin  230    ***
<-Source->                <--Area-->     <-Target->   MBLK   ***
<Name>   #                <-factor->     <Name>   #   Tbl#   ***
PERLND  12                    28.660     RCHRES 230      1
PERLND  14                    15.800     RCHRES 230      1
PERLND  41                    11.524     RCHRES 230      1
PERLND  42                    26.093     RCHRES 230      1
PERLND  31                    15.801     RCHRES 230      1
PERLND  71                    33.672     RCHRES 230      1
PERLND  74                    24.504     RCHRES 230      1
PERLND  75                    15.328     RCHRES 230      1
IMPLND  91                     3.358     RCHRES 230      4
IMPLND  92                    10.165     RCHRES 230      4
IMPLND  93                     1.281     RCHRES 230      4
IMPLND  94                     7.410     RCHRES 230      4

Sub Basin  240    ***
<-Source->                <--Area-->     <-Target->   MBLK   ***
<Name>   #                <-factor->     <Name>   #   Tbl#   ***
PERLND  11                    56.675     RCHRES 240      1
PERLND  41                    32.719     RCHRES 240      1
PERLND  42                    57.482     RCHRES 240      1
PERLND  31                    28.586     RCHRES 240      1
PERLND  71                    66.689     RCHRES 240      1
PERLND  74                    54.286     RCHRES 240      1
PERLND  75                   102.978     RCHRES 240      1
IMPLND  91                     6.539     RCHRES 240      4
```

```
IMPLND  92                    63.936     RCHRES 240      4
IMPLND  93                     9.990     RCHRES 240      4
IMPLND  94                    18.159     RCHRES 240      4

Sub Basin  250    ***
<-Source->                 <--Area-->     <-Target->   MBLK   ***
<Name>   #                 <-factor->     <Name>   #   Tbl#   ***
PERLND  11                    61.567     RCHRES 250      1
PERLND  12                    35.668     RCHRES 250      1
PERLND  21                    29.191     RCHRES 250      1
PERLND  41                    63.579     RCHRES 250      1
PERLND  42                    40.331     RCHRES 250      1
PERLND  51                    29.695     RCHRES 250      1
PERLND  31                    36.533     RCHRES 250      1
PERLND  32                    23.213     RCHRES 250      1
PERLND  74                    23.455     RCHRES 250      1
IMPLND  91                     9.068     RCHRES 250      4
IMPLND  92                    10.253     RCHRES 250      4
IMPLND  93                     1.002     RCHRES 250      4

Sub Basin  260    ***
<-Source->                 <--Area-->     <-Target->   MBLK   ***
<Name>   #                 <-factor->     <Name>   #   Tbl#   ***
PERLND  11                    21.159     RCHRES 260      1
PERLND  21                    34.006     RCHRES 260      1
PERLND  41                    39.112     RCHRES 260      1
PERLND  51                    33.019     RCHRES 260      1
PERLND  31                    22.598     RCHRES 260      1
PERLND  71                    69.229     RCHRES 260      1
PERLND  74                    54.034     RCHRES 260      1
PERLND  75                    49.686     RCHRES 260      1
IMPLND  91                     5.772     RCHRES 260      4
IMPLND  92                    39.447     RCHRES 260      4
IMPLND  93                    12.107     RCHRES 260      4
IMPLND  94                    25.471     RCHRES 260      4

Sub Basin  270    ***
<-Source->                 <--Area-->     <-Target->   MBLK   ***
<Name>   #                 <-factor->     <Name>   #   Tbl#   ***
PERLND  11                    27.488     RCHRES 270      1
PERLND  41                    38.237     RCHRES 270      1
PERLND  51                    28.118     RCHRES 270      1
PERLND  71                    53.716     RCHRES 270      1
PERLND  74                    27.119     RCHRES 270      1
PERLND  75                    24.973     RCHRES 270      1
PERLND  73                    15.323     RCHRES 270      1
IMPLND  91                     4.048     RCHRES 270      4
IMPLND  92                    21.854     RCHRES 270      4
IMPLND  93                     9.897     RCHRES 270      4
IMPLND  94                    20.240     RCHRES 270      4

Sub Basin  280    ***
<-Source->                 <--Area-->     <-Target->   MBLK   ***
<Name>   #                 <-factor->     <Name>   #   Tbl#   ***
PERLND  42                    34.500     RCHRES 280      1
PERLND  51                    20.249     RCHRES 280      1
PERLND  52                    31.695     RCHRES 280      1
PERLND  31                    21.836     RCHRES 280      1
PERLND  74                    36.752     RCHRES 280      1
PERLND  75                    25.899     RCHRES 280      1
PERLND  73                    25.156     RCHRES 280      1
PERLND  84                    17.061     RCHRES 280      1
IMPLND  91                     5.103     RCHRES 280      4
IMPLND  92                    33.858     RCHRES 280      4
IMPLND  93                     7.541     RCHRES 280      4
IMPLND  94                    16.775     RCHRES 280      4

Sub Basin  290    ***
<-Source->                 <--Area-->     <-Target->   MBLK   ***
<Name>   #                 <-factor->     <Name>   #   Tbl#   ***
PERLND  11                    13.099     RCHRES 290      1
PERLND  41                    15.193     RCHRES 290      1
PERLND  51                    10.631     RCHRES 290      1
PERLND  71                    34.931     RCHRES 290      1
PERLND  74                    18.316     RCHRES 290      1
PERLND  75                    11.906     RCHRES 290      1
```

```
PERLND  73                    10.066     RCHRES 290      1
IMPLND  91                     2.134     RCHRES 290      4
IMPLND  92                     7.820     RCHRES 290      4
IMPLND  93                     2.727     RCHRES 290      4
IMPLND  94                     5.366     RCHRES 290      4

Sub Basin  300    ***
<-Source->                 <--Area-->     <-Target->   MBLK   ***
<Name>   #                 <-factor->     <Name>   #   Tbl#   ***
PERLND  41                    17.552     RCHRES 300      1
PERLND  51                    24.671     RCHRES 300      1
PERLND  74                    23.382     RCHRES 300      1
PERLND  75                    37.466     RCHRES 300      1
PERLND  73                    11.867     RCHRES 300      1
PERLND  84                    12.209     RCHRES 300      1
IMPLND  91                     1.798     RCHRES 300      4
IMPLND  92                    32.045     RCHRES 300      4
IMPLND  93                     3.223     RCHRES 300      4
IMPLND  94                    23.267     RCHRES 300      4
***
*** CHANNEL NETWORK LINKAGES ***
<-Source->                 <--Area-->     <-Target->   MBLK   ***
<Name>   #                 <-factor->     <Name>   #   Tbl#   ***
  *** LITTLE BEAR CREEK
RCHRES  10                                RCHRES  30      5
RCHRES  20                                RCHRES  30      5
RCHRES  30                                RCHRES  40      5
RCHRES  40                                RCHRES  80      5
RCHRES  50                                RCHRES  60      5
RCHRES  60                                RCHRES  70      5
RCHRES  70                                RCHRES  80      5
RCHRES  80                                RCHRES  90      5
RCHRES  90                                RCHRES 110      5
RCHRES 100                                RCHRES 110      5
RCHRES 110                                RCHRES 130      5
RCHRES 120                                RCHRES 130      5
RCHRES 130                                RCHRES 140      5
RCHRES 140                                RCHRES 190      5
RCHRES 150                                RCHRES 160      5
RCHRES 160                                RCHRES 180      5
RCHRES 170                                RCHRES 180      5
RCHRES 180                                RCHRES 190      5
RCHRES 190                                RCHRES 220      5
RCHRES 200                                RCHRES 220      5
RCHRES 210                                RCHRES 220      5
RCHRES 220                                RCHRES 240      5
RCHRES 230                                RCHRES 240      5
RCHRES 240                                RCHRES 260      5
RCHRES 250                                RCHRES 260      5
RCHRES 260                                RCHRES 280      5
RCHRES 270                                RCHRES 280      5
RCHRES 280                                RCHRES 300      5
RCHRES 290                                RCHRES 300      5
RCHRES 300                                RCHRES 999      5

END SCHEMATIC

RCHRES
  GEN-INFO
*** RCHRES       Name        Nexits   Unit Systems   Printer      BinaryOut
*** # -  #<------------------><---> User T-series  Engl Metr LKFG Engl Metr
***                                    in  out
   10     SILVER FIRS TRIB        1    1    1    1   62    0    0   91    0
   20     NW TRIB NEAR SUNSET     1    1    1    1   62    0    0   91    0
   30     U/S INTERURBAN BLVD     1    1    1    1   62    0    0   91    0
   40     D/S INTERURBAN BLVD     1    1    1    1   62    0    0   91    0
   50     E TRIB 1 U/S 65TH       1    1    1    1   62    0    0   91    0
   60     E TRIB 1 D/S 65TH       1    1    1    1   62    0    0   91    0
   70     E TRIB 1 INTERURBAN     1    1    1    1   62    0    0   91    0
   80     MAIN U/S OF 180TH       1    1    1    1   62    0    0   91    0
   90     MAIN D/S OF 180TH       1    1    1    1   62    0    0   91    0
  100     E TRIB 2 AT 190TH       1    1    1    1   62    0    0   91    0
  110     MAIN U/S OF 200TH       1    1    1    1   62    0    0   91    0
  120     WEST TRIB 1 AT 200TH    1    1    1    1   62    0    0   91    0
  130     MAIN U/S L BEAR RD      1    1    1    1   62    0    0   91    0
  140     MAIN AT MALTBY RD       1    1    1    1   62    0    0   91    0
```

```
150     GR DANE CR U/S 197TH    1    1    1    1   62    0    0   91    0
160     GR DANE CR D/S 197TH    1    1    1    1   62    0    0   91    0
170     E TRIB 4 U/S HWY 9      1    1    1    1   62    0    0   91    0
180     GR DANE CR MALTBY RD    1    1    1    1   62    0    0   91    0
190     MAIN U/S OF 224TH       1    1    1    1   62    0    0   91    0
200     CUTTHROAT CR HWY 9      1    1    1    1   62    0    0   91    0
210     E TRIB 6 U/S HWY 9      1    1    1    1   62    0    0   91    0
220     MAIN U/S OF 233RD       1    1    1    1   62    0    0   91    0
230     E TRIB 7 U/S HWY 9      1    1    1    1   62    0    0   91    0
240     MAIN U/S 244TH          1    1    1    1   62    0    0   91    0
250     ROWLAND CR NR 240TH     1    1    1    1   62    0    0   91    0
260     MAIN U/S OF SR 522      1    1    1    1   62    0    0   91    0
270     E TRIB 8 WOOD-SNO RD    1    1    1    1   62    0    0   91    0
280     MAIN D/S OF SR 522      1    1    1    1   62    0    0   91    0
290     E TRIB 9 U/S 177TH      1    1    1    1   62    0    0   91    0
300     MAIN AT SAMMAMISH R     1    1    1    1   62    0    0   91    0
END GEN-INFO

ACTIVITY
  RCHRES *************** Active Sections *****************
  # -  # HYFG ADFG CNFG HTFG SDFG GQFG OXFG NUFG PKFG PHFG                ***
 10  300    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 *********
 10  300    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 *********
 10  300    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
           *  *  *  *    *  *  *  *  *       *  *  *  *  *        ***
 10  300   0  1  1  1    4  0  0  0  0       0  0  0  0  0       2  2  2  2  2
END HYDR-PARM1

HYDR-PARM2
  RCHRES                                                                ***
  # -  #    FTABNO       LEN     DELTH     STCOR        KS      DB50      ***
<------><--------><--------><--------><--------><--------><-------->      ***
 10             10   1.16        90.     370.          0.5
 20             20   0.72        60.     370.          0.5
 30             30   0.68        35.     335.          0.5
 40             40   0.43        20.     315.          0.5
 50             50   1.01        80.     500.          0.5
 60             60   0.67       135.     365.          0.5
 70             70   0.52        50.     315.          0.5
 80             80   0.15         5.     310.          0.5
 90             90   0.64        25.     285.          0.5
100            100   1.17       115.     285.          0.5
110            110   0.73        55.     230.          0.5
120            120   1.01       150.     230.          0.5
130            130   0.30        20.     210.          0.5
140            140   0.84        35.     175.          0.5
150            150   1.50       150.     370.          0.5
160            160   0.73        80.     290.          0.5
170            170   0.70       210.     290.          0.5
180            180   0.88       115.     175.          0.5
190            190   0.70        20.     155.          0.5
200            200   1.23       235.     165.          0.5
210            210   0.60       245.     155.          0.5
220            220   0.69        25.     130.          0.5
230            230   0.64       270.     130.          0.5
240            240   0.97        30.     100.          0.5
250            250   1.49       300.     100.          0.5
260            260   0.95        30.      70.          0.5
270            270   0.78       230.      70.          0.5
280            280   0.37        15.      55.          0.5
```

```
290            290   0.85       245.      55.          0.5
300            300   0.81        35.      20.          0.5
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
<------><--------->    <---><---><---><---><---> *** <---><---><---><---><--->
 10  300  0.0           4.0
END HYDR-INIT

HT-BED-FLAGS
  RCHRES                ***
  # -  # BDFG TGFG TSTP ***
 10  300    2    3
END HT-BED-FLAGS

HEAT-PARM
  RCHRES ***  ELEV     ELDAT    CFSAEX    KATRAD     KCOND     KEVAP
  # -  # ***  (ft)      (ft)
 10           412.      352.      0.40       9.0      6.12      2.50
 20           408.      348.      0.40       9.0      6.12      2.50
 30           351.      291.      0.35       9.0      6.12      2.50
 40           326.      266.      0.35       9.0      6.12      2.50
 50           547.      487.      0.40       9.0      6.12      2.50
 60           406.      346.      0.40       9.0      6.12      2.50
 70           339.      279.      0.35       9.0      6.12      2.50
 80           318.      258.      0.35       9.0      6.12      2.50
 90           310.      250.      0.45       9.0      6.12      2.50
100           320.      260.      0.35       9.0      6.12      2.50
110           267.      207.      0.40       9.0      6.12      2.50
120           283.      223.      0.40       9.0      6.12      2.50
130           227.      167.      0.40       9.0      6.12      2.50
140           192.      132.      0.60       9.0      6.12      2.50
150           448.      388.      0.35       9.0      6.12      2.50
160           334.      274.      0.35       9.0      6.12      2.50
170           365.      305.      0.35       9.0      6.12      2.50
180           217.      157.      0.35       9.0      6.12      2.50
190           172.      112.      0.60       9.0      6.12      2.50
200           210.      150.      0.40       9.0      6.12      2.50
210           190.      130.      0.60       9.0      6.12      2.50
220           145.       85.      0.60       9.0      6.12      2.50
230           173.      113.      0.55       9.0      6.12      2.50
240           123.       63.      0.50       9.0      6.12      2.50
250           292.      232.      0.50       9.0      6.12      2.50
260            91.       31.      0.40       9.0      6.12      2.50
270           148.       88.      0.40       9.0      6.12      2.50
280            64.       -4.      0.35       9.0      6.12      2.50
290            90.       30.      0.40       9.0      6.12      2.50
300            39.      -19.      0.50       9.0      6.12      2.50
END HEAT-PARM

HT-BED-PARM
  RCHRES    MUDDEP     TGRND      KMUD     KGRND ***
  # -  #      (ft)    (degF)      (kcal/m2/C/hr) ***
 10  300       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  ***
 10  300  48.  49.  50.  50.  52.  54.  55.  54.  52.  51.  50.  49.
END MON-HT-TGRND

HEAT-INIT
  RCHRES        TW    AIRTMP ***
  # -  #   (deg F)   (deg F) ***
 10  300      50.0      40.0
END HEAT-INIT

SANDFG
  RCHRES       ***
  # -  # SDFG  ***
 10  300    3
END SANDFG
```

```
SED-GENPARM
  RCHRES    BEDWID    BEDWRN       POR  ***
  # -  #      (ft)      (ft)       (-)  ***
 10            6.0       3.0       0.4
 20            6.0       3.0       0.4
 30            6.0       3.0       0.4
 40            8.0       3.0       0.4
 50            6.0       3.0       0.4
 60            7.0       3.0       0.4
 70            7.0       3.0       0.4
 80            8.0       3.0       0.4
 90           10.0       3.0       0.4
100            6.0       3.0       0.4
110           14.0       3.0       0.4
120            6.0       3.0       0.4
130           14.0       3.0       0.4
140           12.0       3.0       0.4
150            5.0       3.0       0.4
160            6.0       3.0       0.4
170            6.0       3.0       0.4
180            7.0       3.0       0.4
190           14.0       3.0       0.4
200            6.0       3.0       0.4
210            6.0       3.0       0.4
220           12.0       3.0       0.4
230            6.0       3.0       0.4
240           14.0       3.0       0.4
250            7.0       3.0       0.4
260           15.0       3.0       0.4
270            6.0       3.0       0.4
280           11.0       3.0       0.4
290            6.0       3.0       0.4
300           11.0       3.0       0.4
END SED-GENPARM

SAND-PM
  RCHRES ***     D         W       RHO     KSAND    EXPSND
  # -  # ***  (in)  (in/sec)  (gm/cm3)
 10          0.005      0.02       2.5      0.91       1.4
 20          0.005      0.02       2.5      0.91       1.4
 30          0.005      0.02       2.5      0.78       1.4
 40          0.005      0.02       2.5      0.65       1.4
 50          0.005      0.02       2.5      0.65       1.4
 60          0.005      0.02       2.5      0.65       1.4
 70          0.005      0.02       2.5      0.65       1.4
 80          0.005      0.02       2.5      0.65       1.4
 90          0.005      0.02       2.5      0.65       1.4
100          0.005      0.02       2.5      0.65       1.4
110          0.005      0.02       2.5      0.65       1.4
120          0.005      0.02       2.5      0.65       1.4
130          0.005      0.02       2.5      0.65       1.4
140          0.005      0.02       2.5      0.65       1.4
150          0.005      0.02       2.5      0.65       1.4
160          0.005      0.02       2.5      0.65       1.4
170          0.005      0.02       2.5      0.65       1.4
180          0.005      0.02       2.5      0.65       1.4
190          0.005      0.02       2.5      0.65       1.4
200          0.005      0.02       2.5      0.65       1.4
210          0.005      0.02       2.5      0.65       1.4
220          0.005      0.02       2.5      0.78       1.4
230          0.005      0.02       2.5      0.91       1.4
240          0.005      0.02       2.5      0.91       1.4
250          0.005      0.02       2.5      0.91       1.4
260          0.005      0.02       2.5      0.91       1.4
270          0.005      0.02       2.5      0.91       1.4
280          0.005      0.02       2.5      0.91       1.4
290          0.005      0.02       2.5      0.91       1.4
300          0.005      0.02       2.5      0.91       1.4
END SAND-PM

SILT-CLAY-PM                      SILT PARAMETERS
  RCHRES ***     D         W       RHO      TAUCD     TAUCS          M
  # -  # ***  (in)  (in/sec)  (gm/cm3)  (lb/ft2)  (lb/ft2)  lb/ft2.d
 10        0.0006     .0035       2.2      0.06      1.00       0.5
 20        0.0006     .0035       2.2      0.05      0.40       0.5
```

```
   30         0.0006     .0035       2.2      0.05      0.55       0.5
   40         0.0006     .0035       2.2      0.36      0.92       0.5
   50         0.0006     .0035       2.2      0.42      1.30       0.5
   60         0.0006     .0035       2.2      1.20      3.45       0.5
   70         0.0006     .0035       2.2      0.60      1.30       0.5
   80         0.0006     .0035       2.2      0.40      1.06       0.5
   90         0.0006     .0035       2.2      0.36      0.60       0.5
  100         0.0006     .0035       2.2      0.45      1.05       0.5
  110         0.0006     .0035       2.2      0.65      1.05       0.5
  120         0.0006     .0035       2.2      0.90      1.75       0.5
  130         0.0006     .0035       2.2      0.60      1.35       0.5
  140         0.0006     .0035       2.2      0.27      0.95       0.5
  150         0.0006     .0035       2.2      0.60      2.05       0.5
  160         0.0006     .0035       2.2      0.75      1.95       0.5
  170         0.0006     .0035       2.2      1.05      2.15       0.5
  180         0.0006     .0035       2.2      0.90      1.65       0.5
  190         0.0006     .0035       2.2      0.37      0.95       0.5
  200         0.0006     .0035       2.2      1.05      2.75       0.5
  210         0.0006     .0035       2.2      1.35      1.95       0.5
  220         0.0006     .0035       2.2      0.75      0.85       0.5
  230         0.0006     .0035       2.2      0.37      0.90       0.5
  240         0.0006     .0035       2.2      0.03      0.35       0.5
  250         0.0006     .0035       2.2      0.15      0.55       0.5
  260         0.0006     .0035       2.2      0.03      0.35       0.5
  270         0.0006     .0035       2.2      0.27      0.85       0.5
  280         0.0006     .0035       2.2      0.03      0.40       0.5
  290         0.0006     .0035       2.2      0.18      0.60       0.5
  300         0.0006     .0035       2.2      0.03      0.70       0.5
  END SILT-CLAY-PM

  SILT-CLAY-PM                        CLAY PARAMETERS
*** RCHRES         D          W         RHO      TAUCD      TAUCS          M
*** x -  x      (in)   (in/sec)     gm/cm3     lb/ft2     lb/ft2  lb/ft2.d
   10         0.00006     .0004       2.0      0.06       1.00       0.5
   20         0.00006     .0004       2.0      0.05       0.40       0.5
   30         0.00006     .0004       2.0      0.05       0.55       0.5
   40         0.00006     .0004       2.0      0.36       0.92       0.5
   50         0.00006     .0004       2.0      0.42       1.30       0.5
   60         0.00006     .0004       2.0      1.20       3.45       0.5
   70         0.00006     .0004       2.0      0.60       1.30       0.5
   80         0.00006     .0004       2.0      0.40       1.06       0.5
   90         0.00006     .0004       2.0      0.36       0.60       0.5
  100         0.00006     .0004       2.0      0.45       1.05       0.5
  110         0.00006     .0004       2.0      0.65       1.05       0.5
  120         0.00006     .0004       2.0      0.90       1.75       0.5
  130         0.00006     .0004       2.0      0.60       1.35       0.5
  140         0.00006     .0004       2.0      0.27       0.95       0.5
  150         0.00006     .0004       2.0      0.60       2.05       0.5
  160         0.00006     .0004       2.0      0.75       1.95       0.5
  170         0.00006     .0004       2.0      1.05       2.15       0.5
  180         0.00006     .0004       2.0      0.90       1.65       0.5
  190         0.00006     .0004       2.0      0.37       0.95       0.5
  200         0.00006     .0004       2.0      1.05       2.75       0.5
  210         0.00006     .0004       2.0      1.35       1.95       0.5
  220         0.00006     .0004       2.0      0.75       0.85       0.5
  230         0.00006     .0004       2.0      0.37       0.90       0.5
  240         0.00006     .0004       2.0      0.03       0.35       0.5
  250         0.00006     .0004       2.0      0.15       0.55       0.5
  260         0.00006     .0004       2.0      0.03       0.35       0.5
  270         0.00006     .0004       2.0      0.27       0.85       0.5
  280         0.00006     .0004       2.0      0.03       0.40       0.5
  290         0.00006     .0004       2.0      0.18       0.60       0.5
  300         0.00006     .0004       2.0      0.03       0.70       0.5
  END SILT-CLAY-PM

  SSED-INIT
    RCHRES *** Suspended sed concs (mg/l)
    x -  x ***  Sand      Silt      Clay
   10  300       0.0       0.0       0.0
  END SSED-INIT

  BED-INIT
*** RCHRES    BEDDEP  Initial bed composition
*** x -  x      (ft)      Sand      Silt      Clay
   10            2.0      0.65      0.15      0.20
   20            2.0      0.65      0.15      0.20
```

```
 30            2.0      0.65      0.15      0.20
 40            2.0      0.65      0.15      0.20
 50            2.0      0.65      0.15      0.20
 60            2.0      0.65      0.15      0.20
 70            2.0      0.65      0.15      0.20
 80            2.0      0.65      0.15      0.20
 90            2.0      0.65      0.15      0.20
100            2.0      0.65      0.15      0.20
110            2.0      0.65      0.15      0.20
120            2.0      0.65      0.15      0.20
130            2.0      0.65      0.15      0.20
140            2.0      0.65      0.15      0.20
150            2.0      0.65      0.15      0.20
160            2.0      0.65      0.15      0.20
170            2.0      0.65      0.15      0.20
180            2.0      0.65      0.15      0.20
190            2.0      0.65      0.15      0.20
200            2.0      0.65      0.15      0.20
210            2.0      0.65      0.15      0.20
220            2.0      0.65      0.15      0.20
230            2.0      0.65      0.15      0.20
240            2.0      0.65      0.15      0.20
250            2.0      0.65      0.15      0.20
260            2.0      0.65      0.15      0.20
270            2.0      0.65      0.15      0.20
280            2.0      0.65      0.15      0.20
290            2.0      0.65      0.15      0.20
300            2.0      0.65      0.15      0.20
END BED-INIT

NCONS
  RCHRES      ***
  # -  #NCONS ***
 10  300    1
END NCONS

CONS-DATA
  RCHRES  Data for conservative constituent No. 1                   ***
  # -  #<---Substance-id--->      Conc        ID      CONV     QTYID ***
 10  300 Alkalinity as CaCO3      20.0      mg/l    16019.       LBS
END CONS-DATA

GQ-GENDATA
  RCHRES NGQL TPFG PHFG ROFG CDFG SDFG PYFG  LAT ***
  # -  #                                       ***
 10  300    2    1    1              1      47.8
END GQ-GENDATA

GQ-QALDATA
  RCHRES       Data for general constituent No. 1                   ***
  # -  #<-------GQID-------><----DQAL>    CONCID      CONV     QTYID ***
 10  300              Silica        5.        mg    16019.       LBS
END GQ-QALDATA

GQ-QALFG
  RCHRES HDRL OXID PHOT VOLT BIOD  GEN SDAS ***
  # -  #                                   ***
 10  300    0    0    0    0    0    1    0
END GQ-QALFG

GQ-GENDECAY
  RCHRES    FSTDEC     THFST ***
  # -  #                    ***
 10  300   0.00010      1.07
END GQ-GENDECAY

GQ-SEDDECAY
  RCHRES     KSUSP    THSUSP      KBED     THBED ***
  # -  #                                       ***
 10  300
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) ***
 10  300     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) ***
 10  300     0.001     0.001     0.001     0.001     0.001     0.001
END GQ-ADRATE

GQ-SEDCONC
  RCHRES     SQAL1     SQAL2     SQAL3     SQAL4     SQAL5     SQAL6 ***
  # -  #                                                            ***
 10  300
END GQ-SEDCONC

GQ-QALDATA
  RCHRES       Data for general constituent No. 2                   ***
  # -  #<-------GQID------->      DQAL    CONCID      CONV     QTYID ***
 10  300              E-Coli     200.0      #CFU 3.531E+07   10^9CFU
END GQ-QALDATA

GQ-QALFG
  RCHRES HDRL OXID PHOT VOLT BIOD  GEN SDAS ***
  # -  #                                   ***
 10  300    0    0    0    0    0    1    0
END GQ-QALFG

GQ-GENDECAY
  RCHRES    FSTDEC     THFST ***
  # -  #                    ***
 10  300       1.0      1.07
END GQ-GENDECAY

GQ-SEDDECAY
  RCHRES     KSUSP    THSUSP      KBED     THBED ***
  # -  #                                    ***
 10  300
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) ***
 10  300     .0001      .001      .001     .0001      .001      .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) ***
 10  300      150.      150.      150.       .25       .25       .25
END GQ-ADRATE

GQ-SEDCONC
  RCHRES     SQAL1     SQAL2     SQAL3     SQAL4     SQAL5     SQAL6 ***
  # -  #                                                            ***
 10  300
END GQ-SEDCONC

GQ-VALUES
  RCHRES      TWAT     PHVAL       ROC       CLD     SDCNC       PHY ***
  # -  #                                                            ***
 10  300
END GQ-VALUES

BENTH-FLAG
  RCHRES BENF ***
  # -  #      ***
 10  300    0
END BENTH-FLAG

OX-FLAGS
  RCHRES REAM ***
  # -  #      ***
 10  300    2
END OX-FLAGS

OX-GENPARM
  RCHRES    KBOD20     TCBOD    KODSET    SUPSAT ***
```

```
  # -  #       /hr       (-)   (ft/hr)       (-) ***
 10           .006     1.047      .027       1.3
 20           .006     1.047      .027       1.3
 30           .006     1.047      .027       1.3
 40           .006     1.047      .027       1.3
 50           .006     1.047      .027       1.3
 60           .006     1.047      .027       1.3
 70           .006     1.047      .027       1.3
 80           .006     1.047      .027       1.3
 90           .006     1.047      .027       1.3
100           .006     1.047      .027       1.3
110           .006     1.047      .027       1.3
120           .006     1.047      .027       1.3
130           .006     1.047      .027       1.3
140           .006     1.047      .027       1.3
150           .006     1.047      .027       1.3
160           .006     1.047      .027       1.3
170           .006     1.047      .027       1.3
180           .006     1.047      .027       1.3
190           .006     1.047      .027       1.3
200           .006     1.047      .027       1.3
210           .006     1.047      .027       1.3
220           .006     1.047      .027       1.3
230           .006     1.047      .027       1.3
240           .006     1.047      .027       1.3
250           .006     1.047      .027       1.3
260           .006     1.047      .027       1.3
270           .006     1.047      .027       1.3
280           .006     1.047      .027       1.3
290           .006     1.047      .027       1.3
300           .006     1.047      .027       1.3
END OX-GENPARM

OX-BENPARM
  RCHRES     BENOD     TCBEN     EXPOD  BRBOD(A)  BRBOD(2)    EXPREL***
  # -  #  mg/m2.hr                      mg/m2.hr  mg/m2.hr         ***
 10            50.     1.074      1.22      .001      .001      2.82
 20            50.     1.074      1.22      .001      .001      2.82
 30            50.     1.074      1.22      .001      .001      2.82
 40            50.     1.074      1.22      .001      .001      2.82
 50            50.     1.074      1.22      .001      .001      2.82
 60            50.     1.074      1.22      .001      .001      2.82
 70            50.     1.074      1.22      .001      .001      2.82
 80            50.     1.074      1.22      .001      .001      2.82
 90            50.     1.074      1.22      .001      .001      2.82
100            50.     1.074      1.22      .001      .001      2.82
110            50.     1.074      1.22      .001      .001      2.82
120            50.     1.074      1.22      .001      .001      2.82
130            50.     1.074      1.22      .001      .001      2.82
140            50.     1.074      1.22      .001      .001      2.82
150            50.     1.074      1.22      .001      .001      2.82
160            50.     1.074      1.22      .001      .001      2.82
170            50.     1.074      1.22      .001      .001      2.82
180            50.     1.074      1.22      .001      .001      2.82
190            50.     1.074      1.22      .001      .001      2.82
200            50.     1.074      1.22      .001      .001      2.82
210            50.     1.074      1.22      .001      .001      2.82
220            50.     1.074      1.22      .001      .001      2.82
230            50.     1.074      1.22      .001      .001      2.82
240            50.     1.074      1.22      .001      .001      2.82
250            50.     1.074      1.22      .001      .001      2.82
260            50.     1.074      1.22      .001      .001      2.82
270            50.     1.074      1.22      .001      .001      2.82
280            50.     1.074      1.22      .001      .001      2.82
290            50.     1.074      1.22      .001      .001      2.82
300            50.     1.074      1.22      .001      .001      2.82
END OX-BENPARM

OX-TCGINV
  RCHRES    TCGINV  ***
  # -  #       (-)  ***
 10  300      1.07
END OX-TCGINV

OX-INIT
  RCHRES       DOX       BOD     SATDO ***
```

```
  # -  #      mg/l      mg/l      mg/l ***
 10  300       14.       1.0       14.
END OX-INIT

NUT-FLAGS
  RCHRES  TAM  NO2  PO4  AMV  DEN ADNH ADPO PHFG ***
  # -  #                              ***
 10  300    1    0    1    0    1    0    1
END NUT-FLAGS

CONV-VAL1
  RCHRES      CVBO     CVBPC     CVBPN    BPCNTC ***
  # -  #     mg/mg  mols/mol  mols/mol           ***
 10  300      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***
 10  300       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 ***
 10           .015      .002     1.070      .002      1.04        5.
 20           .015      .002     1.070      .002      1.04        5.
 30           .015      .002     1.070      .002      1.04        5.
 40           .015      .002     1.070      .002      1.04        5.
 50           .015      .002     1.070      .002      1.04        5.
 60           .015      .002     1.070      .002      1.04        5.
 70           .015      .002     1.070      .002      1.04        5.
 80           .015      .002     1.070      .002      1.04        5.
 90           .015      .002     1.070      .002      1.04        5.
100           .015      .002     1.070      .002      1.04        5.
110           .015      .002     1.070      .002      1.04        5.
120           .015      .002     1.070      .002      1.04        5.
130           .015      .002     1.070      .002      1.04        5.
140           .015      .002     1.070      .002      1.04        5.
150           .015      .002     1.070      .002      1.04        5.
160           .015      .002     1.070      .002      1.04        5.
170           .015      .002     1.070      .002      1.04        5.
180           .015      .002     1.070      .002      1.04        5.
190           .015      .002     1.070      .002      1.04        5.
200           .015      .002     1.070      .002      1.04        5.
210           .015      .002     1.070      .002      1.04        5.
220           .015      .002     1.070      .002      1.04        5.
230           .015      .002     1.070      .002      1.04        5.
240           .015      .002     1.070      .002      1.04        5.
250           .015      .002     1.070      .002      1.04        5.
260           .015      .002     1.070      .002      1.04        5.
270           .015      .002     1.070      .002      1.04        5.
280           .015      .002     1.070      .002      1.04        5.
290           .015      .002     1.070      .002      1.04        5.
300           .015      .002     1.070      .002      1.04        5.
END NUT-NITDENIT

NUT-BEDCONC
  RCHRES       Bed concentrations of NH4 & PO4 (mg/mg)               ***
  # -  #  NH4-sand  NH4-silt  NH4-clay  PO4-sand  PO4-silt  PO4-clay ***
 10  300   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 ***
 10  300    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           ***
 10  300       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 ***
   10  300        0.        0.        0.        0.        0.        0.
  END NUT-ADSINIT

  PLNK-FLAGS
    RCHRES PHYF ZOOF BALF SDLT AMRF DECF NSFG ZFOO BNFG***
    # -  #                                             ***
   10  300    0    0    1    0    0    1    1    0    0
  END PLNK-FLAGS

  PLNK-PARM1
    RCHRES ***RATCLP    NONREF    LITSED     ALNPR      EXTB     MALGR    PARADF
    # -  # ***                                          /ft       /hr
   10  300       .68        .5        0.       .25       .20      .037
  END PLNK-PARM1

  PLNK-PARM2
    RCHRES *** CMMLT      CMMN     CMMNP      CMMP    TALGRH    TALGRL    TALGRM
    # -  # ***ly/min      mg/l      mg/l      mg/l     deg F     deg F     degF
   10  300      .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 ***
   10  300      .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 ***
   10  300                                     20.      0.01     0.120
  END PHYTO-PARM

  BENAL-PARM
    RCHRES      MBAL    CFBALR    CFBALG     ***
    # -  #     mg/m2                       ***
   10  300     2000.      0.36      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 ***
   10  300                          1000.       0.5       0.1       0.5
  END PLNK-INIT

  PH-PARM1
    RCHRES PHCN ALKC ***
    # -  #           ***
   10  300   50    1
  END PH-PARM1

  PH-PARM2
    RCHRES    CFCINV  BRCO2(1)  BRCO2(2)  ***
    # -  #            mg/m2/hr  mg/m2/hr  ***
   10  300      0.05        1.        1.
  END PH-PARM2

  PH-INIT
    RCHRES       TIC       CO2        PH ***
    # -  #      mg/l      mg/l           ***
   10  300       12.       10.       7.0
  END PH-INIT

END RCHRES

FTABLES

  FTABLE     10
 LITTLE BEAR CREEK AT 156TH; 2 FT DIA CULVERT; 10/17/02 *** revised 01/24/03
 ROWS COLS ***
    7    4
     DEPTH      AREA    VOLUME     DISCH  FLO-THRU ***
       (FT)   (ACRES)   (AC-FT)     (CFS)     (MIN) ***
     0.00      0.00      0.00      0.00
```

```
    0.25      0.14      0.02      0.10
    0.50      0.28      0.07      0.66
    0.75      0.42      0.16      1.96
    1.00      0.56      0.28      4.21
    3.75      1.76      3.44     24.38
    6.50      3.05     10.04    391.58
 END FTABLE 10

 FTABLE     20
 NORTHWEST TRIB AT 156TH; NO CULVERT FOUND; 10/17/02 ***
 ROWS COLS ***
    9    4
     DEPTH      AREA    VOLUME     DISCH  FLO-THRU ***
      (FT)   (ACRES)   (AC-FT)     (CFS)     (MIN) ***
       0.0       0.0       0.0       0.0       0.0
     0.250     0.044      0.01      0.05      85.5
     0.500     0.087      0.02      0.29      53.9
     0.750     0.131      0.05      0.87      41.1
     1.000     0.175      0.09      1.87      33.9
     3.750     0.792      1.42     61.43      16.7
     6.500     1.409      4.44    239.15      13.5
     9.250     2.291      9.33    569.49      11.9
    12.000     3.491     17.28   1163.12      10.8
 END FTABLE 20

 FTABLE     30
 LITTLE BEAR CREEK AT INTERURBAN BLVD; 4 FT DIA CULVERT; 10/17/02 ***
 *** revised 01/24/03 AND 05/29/03
 ROWS COLS ***
   10    4
     DEPTH      AREA    VOLUME     DISCH  FLO-THRU ***
      (FT)   (ACRES)   (AC-FT)     (CFS)     (MIN) ***
     0.00      0.00      0.00      0.00
     0.25      0.08      0.01      0.09
     0.50      0.17      0.04      0.54
     0.75      0.25      0.09      1.59
     1.00      0.33      0.16      3.43
     2.25      0.64      0.77     29.91
     3.50      1.24      1.83     59.75
     4.75      2.27      4.02     90.56
     6.00      3.30      7.50    115.51
     7.00      5.00     12.50    150.00
 END FTABLE 30

 FTABLE     40
 LITTLE BEAR CREEK D/S OF INTERURBAN BLVD; NO CULVERTS; 10/17/02 ***
 ROWS COLS ***
    9    4
     DEPTH      AREA    VOLUME     DISCH  FLO-THRU ***
      (FT)   (ACRES)   (AC-FT)     (CFS)     (MIN) ***
       0.0       0.0       0.0       0.0       0.0
     0.250     0.052      0.01      0.08      58.5
     0.500     0.104      0.03      0.51      36.8
     0.750     0.156      0.06      1.51      28.1
     1.000     0.208      0.10      3.26      23.2
     2.250     0.404      0.49     28.44      12.4
     3.500     0.782      1.16     77.29      10.9
     4.750     1.433      2.54    167.52      11.0
     6.000     2.085      4.74    321.23      10.7
 END FTABLE 40

 FTABLE     50
 EAST TRIB 1 (TROUT STREAM) AT 65TH; 1.5 FT DIA CULVERT; 10/17/02 ***
*** revised 01/24/03
 ROWS COLS ***
    7    4
     DEPTH      AREA    VOLUME     DISCH  FLO-THRU ***
      (FT)   (ACRES)   (AC-FT)     (CFS)     (MIN) ***
     0.00      0.00      0.00      0.00
     0.25      0.06      0.01      0.05
     0.50      0.12      0.03      0.29
     0.75      0.18      0.07      0.85
     1.00      0.25      0.12      1.82
     3.25      1.39      1.94      9.26
     5.50      2.56      6.37    282.00
 END FTABLE 50
```

```
 FTABLE     60
 EAST TRIB 1 (TROUT STREAM) AT INTERURBAN; 4 FT DIA CULVERT; 10/17/02 ***
*** revised 01/24/03
 ROWS COLS ***
    9    4
     DEPTH      AREA    VOLUME     DISCH  FLO-THRU ***
      (FT)   (ACRES)   (AC-FT)     (CFS)     (MIN) ***
     0.00      0.00      0.00      0.00
     0.25      0.04      0.01      0.07
     0.50      0.08      0.02      0.46
     0.75      0.12      0.05      1.35
     1.00      0.16      0.08      2.90
     2.25      1.08      0.86     12.65
     3.50      1.90      2.75     17.59
     4.75      2.57      5.54     50.61
     6.00      3.25      9.18     82.20
 END FTABLE 60

 FTABLE     70
 EAST TRIB 1 (TROUT STREAM) D/S OF INTERURBAN; NO CULVERTS; 10/17/02 ***
 ROWS COLS ***
    9    4
     DEPTH      AREA    VOLUME     DISCH  FLO-THRU ***
      (FT)   (ACRES)   (AC-FT)     (CFS)     (MIN) ***
       0.0       0.0       0.0       0.0       0.0
     0.250     0.032      0.01      0.05      57.5
     0.500     0.063      0.02      0.32      36.2
     0.750     0.095      0.04      0.93      27.6
     1.000     0.126      0.06      2.01      22.8
     2.250     0.299      0.32     17.99      13.0
     3.500     0.536      0.84     53.47      11.4
     4.750     1.339      1.87    113.32      12.0
     6.000     2.521      4.29    253.12      12.3
 END FTABLE 70

 FTABLE     80
 LITTLE BEAR CREEK AT 180TH; 2 FT DIA + 3X5 FT OVAL CULVERT; 10/17/02 ***
 *** revised 01/24/03
 ROWS COLS ***
    9    4
     DEPTH      AREA    VOLUME     DISCH  FLO-THRU ***
      (FT)   (ACRES)   (AC-FT)     (CFS)     (MIN) ***
     0.00      0.00     0.000      0.00
     0.25      0.02     0.010      0.07
     0.50      0.04     0.015      0.43
     0.75      0.06     0.020      1.28
     1.00      0.07     0.040      2.76
     2.75      0.51     0.350     40.83
     4.50      1.55     2.160     79.57
     6.25      2.60     5.790    112.80
     8.00      3.64     11.25    292.17
 END FTABLE 80

 FTABLE     90
 LITTLE BEAR CREEK AT 189TH; WOOD BRIDGE; 10/17/02 ***
 ROWS COLS ***
    9    4
     DEPTH      AREA    VOLUME     DISCH  FLO-THRU ***
      (FT)   (ACRES)   (AC-FT)     (CFS)     (MIN) ***
       0.0       0.0       0.0       0.0       0.0
     0.250     0.078      0.01      0.07      94.9
     0.500     0.155      0.04      0.47      59.8
     0.750     0.233      0.09      1.39      45.6
     1.000     0.310      0.16      2.99      37.7
     2.750     0.873      1.04     40.46      18.8
     4.500     3.297      3.77    132.08      20.7
     6.250     9.406     14.89    447.69      24.1
     8.000    15.515     36.69   1240.70      21.5
 END FTABLE 90

 FTABLE    100
 EAST TRIB 2; NO CULVERTS; 10/17/02 ***
 ROWS COLS ***
    9    4
     DEPTH      AREA    VOLUME     DISCH  FLO-THRU ***
```

```
     (FT)   (ACRES)   (AC-FT)     (CFS)     (MIN) ***
      0.0       0.0       0.0       0.0       0.0
    0.250     0.071      0.01      0.05     128.0
    0.500     0.142      0.04      0.32      80.6
    0.750     0.213      0.08      0.94      61.5
    1.000     0.284      0.14      2.03      50.8
    2.750     0.780      1.07     29.38      26.5
    4.500     6.027      5.34    112.17      34.5
    6.250    17.195     25.66    547.44      34.0
    8.000    28.364     65.52   1731.03      27.5
 END FTABLE100

 FTABLE    110
LITTLE BEAR CREEK U/S OF 200TH; NO CULVERTS; 10/17/02 ***
ROWS COLS ***
   9    4
    DEPTH      AREA    VOLUME     DISCH  FLO-THRU ***
     (FT)   (ACRES)   (AC-FT)     (CFS)     (MIN) ***
      0.0       0.0       0.0       0.0       0.0
    0.250     0.088      0.01      0.10      78.0
    0.500     0.177      0.04      0.65      49.1
    0.750     0.265      0.10      1.93      37.5
    1.000     0.354      0.18      4.15      30.9
    2.750     0.995      1.19     56.19      15.4
    4.500     3.761      4.30    183.44      17.0
    6.250    10.729     16.98    621.75      19.8
    8.000    17.697     41.85   1723.09      17.6
 END FTABLE110

 FTABLE    120
WEST TRIB 1; NO CULVERTS; 10/17/02 ***
ROWS COLS ***
   9    4
    DEPTH      AREA    VOLUME     DISCH  FLO-THRU ***
     (FT)   (ACRES)   (AC-FT)     (CFS)     (MIN) ***
      0.0       0.0       0.0       0.0       0.0
    0.250     0.061      0.01      0.06      89.9
    0.500     0.122      0.03      0.39      56.6
    0.750     0.184      0.07      1.16      43.2
    1.000     0.245      0.12      2.49      35.7
    2.750     0.673      0.93     36.11      18.6
    4.500     2.755      3.99    144.94      20.0
    6.250     3.826      9.75    427.70      16.6
    8.000     4.897     17.38    896.25      14.1
 END FTABLE120

 FTABLE    130
LITTLE BEAR CREEK AT LITTLE BEAR CREEK ROAD; BRIDGE; 10/17/02 ***
ROWS COLS ***
   9    4
    DEPTH      AREA    VOLUME     DISCH  FLO-THRU ***
     (FT)   (ACRES)   (AC-FT)     (CFS)     (MIN) ***
      0.0       0.0       0.0       0.0       0.0
    0.250     0.091      0.01      0.26      32.0
    0.500     0.182      0.05      1.64      20.2
    0.750     0.273      0.10      4.82      15.4
    1.000     0.364      0.18     10.38      12.7
    3.250     0.836      1.46    197.78       5.4
    5.500     1.425      4.00    639.20       4.5
    7.750     2.091      7.90   1389.89       4.1
   10.000     2.909     13.53   2535.71       3.9
 END FTABLE130

 FTABLE    140
LITTLE BEAR CREEK AT MALTBY RD; 3.5X8 FT BOX CULVERT; 10/17/02 ***
*** revised 01/24/03 AND 05/29/03
ROWS COLS ***
   9    4
    DEPTH      AREA    VOLUME     DISCH  FLO-THRU ***
     (FT)   (ACRES)   (AC-FT)     (CFS)     (MIN) ***
    0.00      0.00      0.00      0.00
    0.25      0.15      0.02      0.13
    0.50      0.31      0.08      0.84
    0.75      0.46      0.17      2.49
    1.00      0.61      0.31      5.35
    2.75      6.80      4.23     87.66
```

```
    4.50     12.17     21.78    188.00
    6.25     16.27     46.66    273.24
    7.50     22.00     76.00    400.00
 END FTABLE140

 FTABLE    150
GREAT DANE CREEK AT 188TH; 4 FT DIA CULVERT; 10/17/02 *** revised 01/24/03
ROWS COLS ***
   8    4
    DEPTH      AREA    VOLUME     DISCH  FLO-THRU ***
     (FT)   (ACRES)   (AC-FT)     (CFS)     (MIN) ***
    0.00      0.00      0.00      0.00
    0.25      0.09      0.01      0.05
    0.50      0.18      0.05      0.32
    0.75      0.27      0.10      0.95
    1.00      0.36      0.18      2.05
    5.75      2.09      6.01    110.45
   10.50      3.82     20.05    176.67
   15.25      5.55     42.28    238.85
 END FTABLE150

 FTABLE    160
GREAT DANE CREEK D/S OF 197TH; NO CULVERT FOUND; 10/17/02 ***
ROWS COLS ***
   9    4
    DEPTH      AREA    VOLUME     DISCH  FLO-THRU ***
     (FT)   (ACRES)   (AC-FT)     (CFS)     (MIN) ***
      0.0       0.0       0.0       0.0       0.0
    0.250     0.088      0.01      0.12      64.6
    0.500     0.177      0.04      0.79      40.7
    0.750     0.265      0.10      2.33      31.1
    1.000     0.354      0.18      5.01      25.7
    5.750     1.018      3.19    289.15       8.0
   10.500     1.858     10.02   1053.33       6.9
   15.250     2.699     20.84   2442.77       6.2
   20.000     3.539     35.66   4590.22       5.6
 END FTABLE160

 FTABLE    170
EAST TRIB 4 AT HWY 9; 2? FT DIA CULVERT; 10/17/02 *** revised 01/24/03
ROWS COLS ***
   6    4
    DEPTH      AREA    VOLUME     DISCH  FLO-THRU ***
     (FT)   (ACRES)   (AC-FT)     (CFS)     (MIN) ***
    0.00      0.00      0.00      0.00
    0.25      0.04      0.01      0.09
    0.50      0.09      0.02      0.56
    0.75      0.13      0.05      1.64
    1.00      0.17      0.08      3.54
    5.75      0.87      2.26    225.00
 END FTABLE170

 FTABLE    180
GREAT DANE CREEK AT MALTBY RD; 3.5X6 FT BOX CULVERT; 10/17/02 ***
*** revised 01/24/03
ROWS COLS ***
   8    4
    DEPTH      AREA    VOLUME     DISCH  FLO-THRU ***
     (FT)   (ACRES)   (AC-FT)     (CFS)     (MIN) ***
    0.00      0.00      0.00      0.00
    0.25      0.11      0.01      0.14
    0.50      0.21      0.05      0.86
    0.75      0.32      0.12      2.54
    1.00      0.43      0.21      5.47
    2.75      0.80      1.29     72.27
    4.50     10.60     11.37    142.68
    6.25     15.97     34.62    326.96
 END FTABLE180

 FTABLE    190
LITTLE BEAR CREEK AT 228TH (SUBSTITUTE LOCATION); BRIDGE; 10/17/02 ***
ROWS COLS ***
   9    4
    DEPTH      AREA    VOLUME     DISCH  FLO-THRU ***
     (FT)   (ACRES)   (AC-FT)     (CFS)     (MIN) ***
      0.0       0.0       0.0       0.0       0.0
```

```
    0.250     0.212      0.03      0.19     102.8
    0.500     0.424      0.11      1.19      64.7
    0.750     0.636      0.24      3.51      49.4
    1.000     0.848      0.42      7.55      40.8
    4.500     1.962      6.27    302.57      15.0
    8.000     2.333     13.79    913.39      11.0
   11.500     6.873     25.73   1684.02      11.1
   15.000    16.970     67.45   3628.04      13.5
 END FTABLE190

 FTABLE    200
CUTTHROAT CREEK AT HWY 9; 2 FT DIA CULVERT; 10/17/02 *** revised 01/24/03
ROWS COLS ***
   6    4
    DEPTH      AREA    VOLUME     DISCH  FLO-THRU ***
     (FT)   (ACRES)   (AC-FT)     (CFS)     (MIN) ***
    0.00      0.00      0.00      0.00
    0.25      0.08      0.01      0.07
    0.50      0.15      0.04      0.45
    0.75      0.22      0.08      1.31
    1.00      0.30      0.15      2.83
    5.75      1.53      3.97    195.52
 END FTABLE200

 FTABLE    210
EAST TRIB 6 AT HWY 9; 2? FT DIA CULVERT; 10/17/02 *** revised 01/24/03
ROWS COLS ***
   6    4
    DEPTH      AREA    VOLUME     DISCH  FLO-THRU ***
     (FT)   (ACRES)   (AC-FT)     (CFS)     (MIN) ***
    0.00      0.00      0.00      0.00
    0.25      0.04      0.01      0.10
    0.50      0.07      0.02      0.65
    0.75      0.11      0.04      1.92
    1.00      0.15      0.07      4.13
    5.75      0.75      1.94    238.24
 END FTABLE210

 FTABLE    220
LITTLE BEAR CREEK AT 233RD; BRIDGE; 10/17/02 ***
ROWS COLS ***
   9    4
    DEPTH      AREA    VOLUME     DISCH  FLO-THRU ***
     (FT)   (ACRES)   (AC-FT)     (CFS)     (MIN) ***
      0.0       0.0       0.0       0.0       0.0
    0.250     0.209      0.03      0.21      90.0
    0.500     0.418      0.10      1.34      56.7
    0.750     0.627      0.24      3.95      43.2
    1.000     0.836      0.42      8.50      35.7
    3.250     2.258      4.32    182.17      17.2
    5.500     6.064     12.53    560.46      16.2
    7.750    11.395     32.18   1430.11      16.3
   10.000    16.727     63.81   3038.92      15.2
 END FTABLE220

 FTABLE    230
EAST TRIB 7 AT HWY 9; 2 FT DIA CULVERT; 10/17/02 *** revised 01/24/03
ROWS COLS ***
   7    4
    DEPTH      AREA    VOLUME     DISCH  FLO-THRU ***
     (FT)   (ACRES)   (AC-FT)     (CFS)     (MIN) ***
    0.00      0.00      0.00      0.00
    0.25      0.04      0.01      0.10
    0.50      0.08      0.02      0.66
    0.75      0.12      0.04      1.95
    1.00      0.16      0.08      4.20
    5.75      0.80      2.07     68.34
   10.50      1.63      7.85    137.00
 END FTABLE230

 FTABLE    240
LITTLE BEAR CREEK AT 58TH; BRIDGE; 10/17/02 ***
ROWS COLS ***
   9    4
    DEPTH      AREA    VOLUME     DISCH  FLO-THRU ***
     (FT)   (ACRES)   (AC-FT)     (CFS)     (MIN) ***
```

```
      0.0       0.0       0.0       0.0       0.0
    0.250     0.294      0.04      0.19     136.9
    0.500     0.588      0.15      1.24      86.2
    0.750     0.882      0.33      3.65      65.8
    1.000     1.176      0.59      7.86      54.3
    3.250     2.058      4.58    149.65      22.2
    5.500     2.375      9.56    424.35      16.4
    7.750     7.819     17.19    770.96      16.2
   10.000    23.515     52.44   1651.33      23.1
 END FTABLE240

 FTABLE    250
ROWLAND CREEK NEAR 240TH; 2.5 FT DIA CULVERT; 10/17/02 *** revised 01/24/03
ROWS COLS ***
   6    4
    DEPTH      AREA    VOLUME     DISCH  FLO-THRU ***
     (FT)   (ACRES)   (AC-FT)     (CFS)     (MIN) ***
    0.00      0.00      0.00      0.00
    0.25      0.09      0.01      0.07
    0.50      0.18      0.05      0.46
    0.75      0.27      0.10      1.35
    1.00      0.36      0.18      2.90
    5.75      1.82      4.89    203.87
 END FTABLE250

 FTABLE    260
LITTLE BEAR CREEK AT SR 522 (NO ACCESS); BOX CULVERT?; 10/17/02 ***
ROWS COLS ***
   9    4
    DEPTH      AREA    VOLUME     DISCH  FLO-THRU ***
     (FT)   (ACRES)   (AC-FT)     (CFS)     (MIN) ***
      0.0       0.0       0.0       0.0       0.0
    0.250     0.288      0.04      0.20     132.7
    0.500     0.576      0.14      1.25      83.6
    0.750     0.864      0.32      3.69      63.8
    1.000     1.152      0.58      7.94      52.6
    3.250     2.034      4.50    151.35      21.6
    5.500     2.380      9.46    430.72      15.9
    7.750     2.725     15.20    825.47      13.4
   10.000    23.030     41.68   1450.11      20.9
 END FTABLE260

 FTABLE    270
EAST TRIB 8 AT WOODINVILLE-SNOHOMISH RD; 3 FT DIA CULVERT; 10/17/02 ***
*** revised 01/24/03
ROWS COLS ***
   7    4
    DEPTH      AREA    VOLUME     DISCH  FLO-THRU ***
     (FT)   (ACRES)   (AC-FT)     (CFS)     (MIN) ***
    0.00      0.00      0.00      0.00
    0.25      0.05      0.01      0.09
    0.50      0.10      0.02      0.55
    0.75      0.14      0.05      1.63
    1.00      0.19      0.09      3.51
    5.75      0.68      2.32     67.75
   10.50      1.09      6.28    112.05
 END FTABLE270

 FTABLE    280
LITTLE BEAR CREEK D/S OF SR 522; NO CULVERTS?; 10/17/02 ***
ROWS COLS ***
   9    4
    DEPTH      AREA    VOLUME     DISCH  FLO-THRU ***
     (FT)   (ACRES)   (AC-FT)     (CFS)     (MIN) ***
      0.0       0.0       0.0       0.0       0.0
    0.250     0.112      0.01      0.25      40.5
    0.500     0.224      0.06      1.59      25.5
    0.750     0.336      0.13      4.70      19.5
    1.000     0.448      0.22     10.12      16.1
    4.500     0.807      2.71    362.62       5.4
    8.000     0.933      5.76   1060.58       3.9
   11.500     1.058      9.24   2041.33       3.3
   15.000     3.588     16.77   3351.32       3.6
 END FTABLE280

 FTABLE    290
```

```
 EAST TRIB 9 AT RR TRACKS; 3 FT DIA CULVERT; 10/17/02 *** revised 01/24/03
 ROWS COLS ***
    8    4
     DEPTH      AREA    VOLUME     DISCH  FLO-THRU ***
      (FT)   (ACRES)   (AC-FT)     (CFS)     (MIN) ***
     0.00      0.00      0.00      0.00
     0.25      0.05      0.01      0.09
     0.50      0.10      0.03      0.55
     0.75      0.16      0.06      1.61
     1.00      0.21      0.10      3.47
     5.75      0.70      2.50     42.15
    10.50      1.19      6.74     87.91
    15.25      2.65     15.85    127.71
  END FTABLE290

  FTABLE    300
 LITTLE BEAR CREEK AT 178TH; 8X12 FT ARCH CULVERT; 10/17/02***revised 01/24/03
 ROWS COLS ***
    8    4
     DEPTH      AREA    VOLUME     DISCH  FLO-THRU ***
      (FT)   (ACRES)   (AC-FT)     (CFS)     (MIN) ***
     0.00      0.00      0.00      0.00
     0.25      0.25      0.03      0.26
     0.50      0.49      0.12      1.65
     0.75      0.74      0.28      4.85
     1.00      0.98      0.49     10.45
     4.50      1.77      5.94    159.54
     8.00      2.04     12.61    461.33
    11.50      2.32     20.24    721.67
  END FTABLE300

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       4.0           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
  END MASS-LINK    2

  MASS-LINK        3
PERLND     PWATER AGWO       0.0833333     RCHRES         INFLOW IVOL
  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       4.0           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
IMRLND     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

  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
```