# APPENDIX G:
# MODEL OUTPUT FOR TMDL

TMDL output file for subsegment 090105 ..... 1
TMDL output file for subsegment 090204 ..... 40
TMDL output file for subsegment 090207 ..... 70

## TMDL output file for subsegment 090105

```
LA-QUAL Version 8.00
Louisiana Department of Environmental Quality
Input file is D:\Pearl\PEARLRIVERFromH\TMDL\Seg090105_TMDL_Update.txt
Output produced at 15:16 on 11/28/2007
$$$ DATA TYPE 1 (TITLES AND CONTROL CARDS) $$$
CARD TYPE       CONTROL TITLES
TITLE01         Pearl River DO Modeling 090105
TITLE02         COEF-1 Run
Control   YES   METRIC UNITS
ENDATA01
$$$ DATA TYPE 2 (MODEL OPTIONS) $$$
CARD TYPE       MODEL OPTION
MODOPT    NO   TEMPERATURE
MODOPT    NO   SALINITY
MODOPT    NO   CONSERVATIVE MATERIAL #1 = CHLORIDES              IN  mg/L
MODOPT    NO   CONSERVATIVE MATERIAL #2 = SULFATES               IN  mg/L
MODOPT   YES   DISSOLVED OXYGEN
MODOPT   YES   BOD1
MODOPT    NO   BOD2
MODOPT   YES   NITROGEN SERIES  = Nitrate/nitrite
MODOPT    NO   PHOSPHORUS
MODOPT    NO   CHLOROPHYLL A
MODOPT    NO   MACROPHYTES
MODOPT    NO   COLIFORM
MODOPT    NO   NONCONSERVATIVE MATERIAL
ENDATA02
$$$ DATA TYPE 3 (PROGRAM CONSTANTS) $$$
CARD TYPE       DESCRIPTION OF CONSTANT                    VALUE
PROGRAM         MAXImum Iteration Limit          =      5000.00000
PROGRAM         HYDRaulic calculation method      =        2.00000 (widths and depths)
PROGRAM         BOD OXYGEN UPTAKE RATE            =        1.00000 mg O/mg BOD
PROGRAM         NCM OXYGEN UPTAKE RATE            =        1.00000 mg O/mg NCM
PROGRAM         KL MINIMUM                        =        0.70000 meters/day
PROGRAM         INHIBITION CONTROL VALUE          =        3.00000 (inhibit all rates but SOD)
PROGRAM         ORGN OXYGEN UPTAKE RATE           =        0.00000 mg O/mg N
PROGRAM         NH3 OXYGEN UPTAKE RATE            =        0.00000 mg O/mg N
PROGRAM         K2 MAXIMUM                        =       25.00000 per day
PROGRAM         SOD                               =       10.00000 gm/sq m/day
ENDATA03
$$$ DATA TYPE 4 (TEMPERATURE CORRECTION CONSTANTS FOR RATE COEFFICIENTS) $$$
 CARD TYPE     RATE CODE     THETA VALUE
ENDATA04
$$$ CONSTANTS TYPE 5 (TEMPERATURE DATA) $$$
CARD TYPE       DESCRIPTION OF CONSTANT                    VALUE
ENDATA05
$$$ DATA TYPE 6 (ALGAE CONSTANTS) $$$
CARD TYPE       DESCRIPTION OF CONSTANT                    VALUE
```

```
ENDATA06
$$$ DATA TYPE 7 (MACROPHYTE CONSTANTS) $$$
CARD TYPE      DESCRIPTION OF CONSTANT                    VALUE
ENDATA07
$$$ DATA TYPE 8 (REACH IDENTIFICATION DATA) $$$
                                    BEGIN      END    ELEM   REACH    ELEMS  BEGIN   END
CARD TYPE  REACH  ID  NAME                        REACH     REACH  LENGTH  LENGTH   PER RCH  ELEM  ELEM
                                     km        km      km      km            NUM    NUM
REACH ID    1  PA  Pearl River to Above  A          7.77  TO   7.69   0.0400    0.08     2      1     2
REACH ID    2  IA  Include A                      7.69  TO   7.57   0.0625    0.12     2      3     4
REACH ID    3  I1  Include Stream 1                 7.57  TO   7.49   0.0400    0.08     2      5     6
REACH ID    4  IB  Include B                      7.49  TO   6.76   0.0725    0.72    10      7    16
REACH ID    5  IC  Include C                      6.76  TO   5.99   0.0770    0.77    10     17    26
REACH ID    6  I2  Include Stream 2                 5.99  TO   4.80   0.0790    1.18    15     27    41
REACH ID    7  ID  Include D                      4.80  TO   2.91   0.0948    1.89    20     42    61
REACH ID    8  IE  Include E                      2.91  TO   1.17   0.0868    1.74    20     62    81
REACH ID    9  IF  Include F                      1.17  TO   0.12   0.0530    1.06    20     82   101
REACH ID   10  TL  To Lock 3                       0.12  TO   0.00   0.0575    0.12     2    102   103
ENDATA08
$$$ DATA TYPE 9 (ADVECTIVE HYDRAULIC COEFFICIENTS) $$$
CARD TYPE  REACH  ID     WIDTH     WIDTH     WIDTH     DEPTH     DEPTH     DEPTH    SLOPE   MANNINGS
                "A"       "B"       "C"       "D"       "E"       "F"              "N"
HYDRO-1     1  PA     0.000     0.000    44.700     0.000     0.000     0.990   0.00010   0.025
HYDRO-1     2  IA     0.000     0.000    44.700     0.000     0.000     0.990   0.00010   0.025
HYDRO-1     3  I1     0.000     0.000    44.700     0.000     0.000     0.990   0.00010   0.025
HYDRO-1     4  IB     0.000     0.000    44.700     0.000     0.000     0.990   0.00010   0.025
HYDRO-1     5  IC     0.000     0.000    43.750     0.000     0.000     1.180   0.00010   0.025
HYDRO-1     6  I2     0.000     0.000    62.750     0.000     0.000     2.070   0.00010   0.025
HYDRO-1     7  ID     0.000     0.000    82.700     0.000     0.000     2.770   0.00010   0.025
HYDRO-1     8  IE     0.000     0.000    67.700     0.000     0.000     2.290   0.00010   0.025
HYDRO-1     9  IF     0.000     0.000    58.900     0.000     0.000     2.080   0.00010   0.025
HYDRO-1    10  TL     0.000     0.000    65.100     0.000     0.000     2.340   0.00010   0.025
ENDATA09
$$$ DATA TYPE 10 (DISPERSIVE HYDRAULIC COEFFICIENTS) $$$
CARD TYPE  REACH  ID    TIDAL    DISPERSION    DISPERSION    DISPERSION    DISPERSION
                RANGE      "A"          "B"          "C"          "D"
ENDATA10
$$$ DATA TYPE 11 (INITIAL CONDITIONS) $$$
CARD TYPE     REACH  ID     TEMP    SALIN     DO     NH3    NO3+2    PHOS    CHL A    MACRO
INITIAL         1  PA    31.60    0.00    5.00   0.10   0.04    0.05    1.00    0.00
INITIAL         2  IA    31.60    0.00    5.00   0.10   0.04    0.05    1.00    0.00
INITIAL         3  I1    31.60    0.00    5.00   0.10   0.04    0.05    1.00    0.00
INITIAL         4  IB    32.10    0.00    5.00   0.10   0.04    0.05    1.00    0.00
INITIAL         5  IC    31.70    0.00    5.00   0.10   0.04    0.05    1.00    0.00
INITIAL         6  I2    31.70    0.00    5.00   0.10   0.04    0.05    1.00    0.00
INITIAL         7  ID    31.00    0.00    5.00   0.10   0.04    0.05    1.00    0.00
INITIAL         8  IE    31.40    0.00    5.00   0.10   0.04    0.05    1.00    0.00
INITIAL         9  IF    31.50    0.00    5.00   0.10   0.04    0.05    1.00    0.00
INITIAL        10  TL    31.50    0.00    5.00   0.10   0.04    0.05    1.00    0.00
ENDATA11
```

```
$$$ DATA TYPE 12 (REAERATION, SEDIMENT OXYGEN DEMAND, BOD COEFFICIENTS) $$$
                                                    BOD    ANAER                    BOD2    ANAER
CARD    RCH  RCH  K2                K2     K2     K2   BKGRND    BOD     BOD     CONV    BOD2    BOD2    BOD2    CONV    BOD2
TYPE    NUM   ID  OPT              "A"    "B"    "C"    SOD    DECAY    SETT   TO SOD   DECAY   DECAY    SETT   TO SOD   DECAY
                                        g/m²/d  per day    m/d          per day  per day    m/d          per day
COEF-1    1   PA   3 OCONNER-DOBB   0.000   0.000   0.000   0.120   0.065   0.010   1.000   0.001   0.010   0.000   0.000   0.000
COEF-1    2   IA   3 OCONNER-DOBB   0.000   0.000   0.000   0.120   0.065   0.010   1.000   0.001   0.010   0.000   0.000   0.000
COEF-1    3   I1   3 OCONNER-DOBB   0.000   0.000   0.000   0.120   0.065   0.010   1.000   0.001   0.010   0.000   0.000   0.000
COEF-1    4   IB   3 OCONNER-DOBB   0.000   0.000   0.000   0.840   0.065   0.010   1.000   0.001   0.010   0.000   0.000   0.000
COEF-1    5   IC   3 OCONNER-DOBB   0.000   0.000   0.000   0.840   0.065   0.010   1.000   0.001   0.010   0.000   0.000   0.000
COEF-1    6   I2   3 OCONNER-DOBB   0.000   0.000   0.000   0.120   0.065   0.010   1.000   0.001   0.010   0.000   0.000   0.000
COEF-1    7   ID   3 OCONNER-DOBB   0.000   0.000   0.000   0.120   0.065   0.010   1.000   0.001   0.010   0.000   0.000   0.000
COEF-1    8   IE   3 OCONNER-DOBB   0.000   0.000   0.000   0.120   0.065   0.010   1.000   0.001   0.010   0.000   0.000   0.000
COEF-1    9   IF   3 OCONNER-DOBB   0.000   0.000   0.000   0.120   0.072   0.010   1.000   0.001   0.010   0.000   0.000   0.000
COEF-1   10   TL   3 OCONNER-DOBB   0.000   0.000   0.000   0.120   0.072   0.010   1.000   0.001   0.010   0.000   0.000   0.000
ENDATA12
$$$ DATA TYPE 13 (NITROGEN AND PHOSPHORUS COEFFICIENTS) $$$
CARD TYPE     REACH  ID     ORG-N    ORG-N   ORGN CONV     NH3     NH3     PHOS    DENIT
                          DECA     SETT  TO NH3 SRCE    DECA    SRCE    SRCE    RATE
COEF-2          1   PA     0.050    0.010    1.000    0.100   0.000   0.000   0.001
COEF-2          2   IA     0.050    0.010    1.000    0.100   0.000   0.000   0.001
COEF-2          3   I1     0.050    0.010    1.000    0.100   0.000   0.000   0.001
COEF-2          4   IB     0.050    0.010    1.000    0.100   0.000   0.000   0.001
COEF-2          5   IC     0.050    0.010    1.000    0.100   0.000   0.000   0.001
COEF-2          6   I2     0.050    0.010    1.000    0.100   0.000   0.000   0.001
COEF-2          7   ID     0.050    0.010    1.000    0.100   0.000   0.000   0.001
COEF-2          8   IE     0.050    0.010    1.000    0.100   0.000   0.000   0.001
COEF-2          9   IF     0.050    0.010    1.000    0.100   0.000   0.000   0.001
COEF-2         10   TL     0.050    0.010    1.000    0.100   0.000   0.000   0.001
ENDATA13
$$$ DATA TYPE 14 (ALGAE AND MACROPHYTE COEFFICIENTS) $$$
CARD TYPE     REACH  ID    SECCHI   ALGAE:    ALGAE   ALG CONV    ALGAE    ALGAE    MACRO    MACRO
                          DEPTH    CHL A     SETT    TO SOD     GROW     RESP     GROW     RESP
COEF-3          1   PA     3.00    0.000    0.00    0.00    0.00    0.00    0.00    0.00
COEF-3          2   IA     3.00    0.000    0.00    0.00    0.00    0.00    0.00    0.00
COEF-3          3   I1     3.00    0.000    0.00    0.00    0.00    0.00    0.00    0.00
COEF-3          4   IB     3.00    0.000    0.00    0.00    0.00    0.00    0.00    0.00
COEF-3          5   IC     3.00    0.000    0.00    0.00    0.00    0.00    0.00    0.00
COEF-3          6   I2     3.00    0.000    0.00    0.00    0.00    0.00    0.00    0.00
COEF-3          7   ID     3.00    0.000    0.00    0.00    0.00    0.00    0.00    0.00
COEF-3          8   IE     3.00    0.000    0.00    0.00    0.00    0.00    0.00    0.00
COEF-3          9   IF     3.00    0.000    0.00    0.00    0.00    0.00    0.00    0.00
COEF-3         10   TL     3.00    0.000    0.00    0.00    0.00    0.00    0.00    0.00
ENDATA14
$$$ DATA TYPE 15 (COLIFORM AND NONCONSERVATIVE COEFFICIENTS) $$$
CARD TYPE     REACH  ID   COLIFORM     NCM     NCM   NCM CONV
                         DIE-OFF    DECAY    SETT    TO SOD
COEF-4          1   PA     3.000    0.000    0.000    0.000
COEF-4          2   IA     3.000    0.000    0.000    0.000
COEF-4          3   I1     3.000    0.000    0.000    0.000
```

```
COEF-4        4  IB     3.000    0.000    0.000    0.000
COEF-4        5  IC     3.000    0.000    0.000    0.000
COEF-4        6  I2     3.000    0.000    0.000    0.000
COEF-4        7  ID     3.000    0.000    0.000    0.000
COEF-4        8  IE     3.000    0.000    0.000    0.000
COEF-4        9  IF     3.000    0.000    0.000    0.000
COEF-4       10  TL     3.000    0.000    0.000    0.000
ENDATA15
$$$ DATA TYPE 16 (INCREMENTAL DATA FOR FLOW, TEMPERATURE, SALINITY, AND CONSERVATIVES) $$$
CARD TYPE     REACH  ID     OUTFLOW    INFLOW    TEMP    SALIN    CM-I    CM-II  IN/DIST  OUT/DIST
INCR-1        1  PA     0.00000    0.00000    30.00    0.00    0.00    0.00  0.00000  0.00000
INCR-1        2  IA     0.00000    0.00000    30.00    0.00    0.00    0.00  0.00000  0.00000
INCR-1        3  I1     0.00000    0.00000    30.00    0.00    0.00    0.00  0.00000  0.00000
INCR-1        4  IB     0.00000    0.13000    30.00    0.00    0.00    0.00  0.17931  0.00000
INCR-1        5  IC     0.00000    0.00000    30.00    0.00    0.00    0.00  0.00000  0.00000
INCR-1        6  I2     0.00000    1.03000    30.00    0.00    0.00    0.00  0.86920  0.00000
INCR-1        7  ID     0.00000    0.00000    30.00    0.00    0.00    0.00  0.00000  0.00000
INCR-1        8  IE     0.00000    0.00000    30.00    0.00    0.00    0.00  0.00000  0.00000
INCR-1        9  IF     0.00000    0.50000    30.00    0.00    0.00    0.00  0.47170  0.00000
INCR-1       10  TL     0.00000    0.00000    30.00    0.00    0.00    0.00  0.00000  0.00000
ENDATA16
$$$ DATA TYPE 17 (INCREMENTAL DATA FOR DO, BOD, AND NITROGEN) $$$
CARD TYPE     REACH  ID     DO     BOD    ORG-N    NH3-N    NO3-N    BOD#2
INCR-2        1  PA     5.00    0.00    0.00    0.00    0.00    0.00
INCR-2        2  IA     5.00    0.00    0.00    0.00    0.00    0.00
INCR-2        3  I1     5.00    0.00    0.00    0.00    0.00    0.00
INCR-2        4  IB     5.00    3.60    0.00    0.10    0.50    0.00
INCR-2        5  IC     5.00    0.00    0.00    0.00    0.00    0.00
INCR-2        6  I2     5.00    5.80    0.00    0.10    0.50    0.00
INCR-2        7  ID     5.00    0.00    0.00    0.00    0.00    0.00
INCR-2        8  IE     5.00    0.00    0.00    0.00    0.00    0.00
INCR-2        9  IF     5.00    5.80    0.00    0.10    0.50    0.00
INCR-2       10  TL     5.00    0.00    0.00    0.00    0.00    0.00
ENDATA17
$$$ DATA TYPE 18 (INCREMENTAL DATA FOR PHOSPHORUS, CHLOROPHYLL, COLIFORM, AND NONCONSERVATIVES) $$$
 CARD TYPE     REACH  ID     PHOS    CHL A    COLI    NCM
INCR-3        1  PA     0.00    0.00    0.00    0.00
INCR-3        2  IA     0.00    0.00    0.00    0.00
INCR-3        3  I1     0.00    0.00    0.00    0.00
INCR-3        4  IB     0.00    0.00    0.00    0.00
INCR-3        5  IC     0.00    0.00    0.00    0.00
INCR-3        6  I2     0.00    0.00    0.00    0.00
INCR-3        7  ID     0.00    0.00    0.00    0.00
INCR-3        8  IE     0.00    0.00    0.00    0.00
INCR-3        9  IF     0.00    0.00    0.00    0.00
INCR-3       10  TL     0.00    0.00    0.00    0.00
ENDATA18
$$$ DATA TYPE 19 (NONPOINT SOURCE DATA) $$$
CARD TYPE     REACH  ID     BOD#1    ORG-N    COLI    NCM    DO    BOD#2
ENDATA19
```

```
$$$ DATA TYPE 20 (HEADWATER FOR FLOW, TEMPERATURE, SALINITY AND CONSERVATIVES) $$$
CARD TYPE    ELEMENT   NAME              UNIT    FLOW    FLOW    TEMP    SALIN     CM-I    CM-II
                                          m³/s     cfs   deg C     ppt     mg/L     mg/L
HDWTR-1        1             Headwater    0   0.00283    0.100   30.00     0.00     0.000     0.000
ENDATA20
$$$ DATA TYPE 21 (HEADWATER DATA FOR DO, BOD, AND NITROGEN) $$$
CARD TYPE    ELEMENT   NAME                    DO    BOD#1    ORG-N    NH3-N    NO3-N    BOD#2
                                            mg/L     mg/L     mg/L     mg/L     mg/L     mg/L
HDWTR-2        1             Headwater       5.00     3.60     0.00     0.10     0.50     0.00
ENDATA21
$$$ DATA TYPE 22 (HEADWATER DATA FOR PHOSPHORUS, CHLOROPHYLL, COLIFORM, AND NONCONSERVATIVES) $$$
CARD TYPE    ELEMENT   NAME                   PHOS    CHL A     COLI      NCM
                                            mg/L     mg/L     mg/L     mg/L
HDWTR-3        1             Headwater       0.00     0.00     0.00     0.00
ENDATA22
$$$ DATA TYPE 23 (JUNCTION DATA) $$$
CARD TYPE   JUNCTION   UPSTRM    RIVER    NAME
         ELEMENT  ELEMENT    KILOM
ENDATA23
$$$ DATA TYPE 24 (WASTELOAD DATA FOR FLOW, TEMPERATURE, SALINITY, AND CONSERVATIVES) $$$
CARD TYPE  ELEMENT    RKILO  NAME                FLOW      FLOW    FLOW   TEMP    SALIN     CM-I    CM-II
                                            m³/s      cfs     MGD   deg C     ppt     mg/L     mg/L
WSTLD-1      1      7.77  test              0.00000    0.00000    0.000   20.00     0.00     0.000     0.000
ENDATA24
$$$ DATA TYPE 25 (WASTELOAD DATA FOR DO, BOD, AND NITROGEN) $$$
                                                 % BOD                    %
CARD TYPE    ELEMENT   NAME                   DO      BOD     RMVL    ORG-N    NH3-N   NITRIF    NO3-N    BOD#2
                                            mg/L     mg/L             mg/L     mg/L             mg/L     mg/L
WSTLD-2        1    test                   0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00
ENDATA25
$$$ DATA TYPE 26 (WASTELOAD DATA FOR PHOSPHORUS, CHLOROPHYLL, COLIFORM, AND NONCONSERVATIVES) $$$
CARD TYPE    ELEMENT   NAME                  PHOS    CHL A     COLI      NCM
                                            mg/L     mg/L     mg/L     mg/L
WSTLD-3        1    test                   0.00     0.00     0.00     0.00
ENDATA26
$$$ DATA TYPE 27 (LOWER BOUNDARY CONDITIONS) $$$
CARD TYPE    CONSTITUENT                CONCENTRATION
ENDATA27
$$$ DATA TYPE 28 (DAM DATA) $$$
CARD TYPE    ELEMENT   NAME              EQN      "A"      "B"      "H"
ENDATA28
$$$ DATA TYPE 29 (SENSITIVITY ANALYSIS DATA) $$$
CARD TYPE      PARAMETER    COL 1    COL 2    COL 3    COL 4    COL 5    COL 6    COL 7    COL 8
SENSITIV       VELOCITY    -30.0     30.0      0.0      0.0      0.0      0.0      0.0      0.0
SENSITIV       DISPERSI    -30.0     30.0      0.0      0.0      0.0      0.0      0.0      0.0
SENSITIV       REAERATI    -30.0     30.0      0.0      0.0      0.0      0.0      0.0      0.0
SENSITIV       BOD DECA    -30.0     30.0      0.0      0.0      0.0      0.0      0.0      0.0
SENSITIV       BOD SETT    -30.0     30.0      0.0      0.0      0.0      0.0      0.0      0.0
SENSITIV       BENTHAL     -30.0     30.0      0.0      0.0      0.0      0.0      0.0      0.0
ENDATA29
```

```
$$$ DATA TYPE 30 (PLOT CONTROL CARDS) $$$
NUMBER OF PLOTS =  2
NUMBER OF REACHES IN PLOT 1 =  10
PLOT RCH  1  2  3  4  5  6  7  8  9 10
NUMBER OF REACHES IN PLOT 2 =   3
PLOT RCH  6  7  8
ENDATA30
$$$ DATA TYPE 31 (OVERLAY PLOT DATA) $$$
ENDATA31
    .....NO ERRORS DETECTED IN INPUT DATA
    .....HYDRAULIC CALCULATIONS COMPLETED
    .....TRIDIAGONAL MATRIX TERMS INITIALIZED
    .....OXYGEN DEPENDENT RATES CONVERGENT IN   5 ITERATIONS
    .....CONSTITUENT CALCULATIONS COMPLETED
INTERMEDIATE REPORT
 Dissolved Oxygen                                  Pearl River DO Modeling 090105
    mg/L                                                 COEF-1 Run
 ID  RCH  ELEM      +0      +1      +2      +3      +4      +5      +6      +7      +8      +9
 PA   1    1      6.63    6.97
 IA   2    3      7.09    7.13
 I1   3    5      7.12    7.08
 IB   4    7      5.13    5.03    5.01    5.00    5.00    5.00    5.01    5.01    5.01    5.02
 IC   5   17      5.02    5.02    5.03    5.03    5.04    5.05    5.06    5.07    5.09    5.10
 I2   6   27      5.34    5.41    5.44    5.45    5.46    5.46    5.46    5.46    5.46    5.46
 I2   6   37      5.46    5.46    5.46    5.46    5.46
 ID   7   42      5.48    5.50    5.52    5.54    5.57    5.59    5.62    5.64    5.67    5.69
 ID   7   52      5.72    5.74    5.77    5.79    5.82    5.85    5.87    5.90    5.92    5.95
 IE   8   62      5.97    6.00    6.02    6.04    6.07    6.09    6.11    6.13    6.15    6.17
 IE   8   72      6.19    6.21    6.23    6.25    6.26    6.28    6.30    6.32    6.33    6.35
 IF   9   82      6.33    6.31    6.29    6.27    6.25    6.24    6.22    6.20    6.19    6.18
 IF   9   92      6.16    6.15    6.14    6.12    6.11    6.10    6.09    6.08    6.07    6.06
 TL  10  102      6.06    6.04
INTERMEDIATE REPORT
 Effective BOD                                     Pearl River DO Modeling 090105
    mg/L                                                 COEF-1 Run
 ID  RCH  ELEM      +0      +1      +2      +3      +4      +5      +6      +7      +8      +9
 PA   1    1      1.91    1.01
 IA   2    3      0.42    0.18
 I1   3    5      0.09    0.09
 IB   4    7      2.28    2.47    2.54    2.57    2.59    2.60    2.61    2.62    2.62    2.63
 IC   5   17      2.52    2.42    2.32    2.22    2.13    2.05    1.96    1.88    1.81    1.75
 I2   6   27      2.92    3.47    3.79    3.99    4.13    4.24    4.31    4.38    4.42    4.47
 I2   6   37      4.50    4.53    4.55    4.57    4.59
 ID   7   42      4.48    4.38    4.27    4.17    4.07    3.97    3.88    3.79    3.70    3.61
 ID   7   52      3.52    3.44    3.36    3.27    3.20    3.12    3.04    2.97    2.90    2.83
 IE   8   62      2.79    2.74    2.70    2.66    2.62    2.58    2.54    2.50    2.46    2.43
 IE   8   72      2.39    2.35    2.32    2.28    2.25    2.21    2.18    2.15    2.11    2.08
 IF   9   82      2.14    2.20    2.26    2.31    2.36    2.41    2.45    2.50    2.54    2.58
 IF   9   92      2.62    2.65    2.69    2.72    2.76    2.79    2.82    2.85    2.87    2.90
 TL  10  102      2.88    2.77
```

INTERMEDIATE REPORT
Biochemical Oxygen Demand — Pearl River DO Modeling 090105
mg/L — COEF-1 Run

| ID | RCH | ELEM | +0 | +1 | +2 | +3 | +4 | +5 | +6 | +7 | +8 | +9 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PA | 1 | 1 | 1.91 | 1.01 | | | | | | | | |
| IA | 2 | 3 | 0.42 | 0.18 | | | | | | | | |
| I1 | 3 | 5 | 0.09 | 0.09 | | | | | | | | |
| IB | 4 | 7 | 2.28 | 2.47 | 2.54 | 2.57 | 2.59 | 2.60 | 2.61 | 2.62 | 2.62 | 2.63 |
| IC | 5 | 17 | 2.52 | 2.42 | 2.32 | 2.22 | 2.13 | 2.05 | 1.96 | 1.88 | 1.81 | 1.75 |
| I2 | 6 | 27 | 2.92 | 3.47 | 3.79 | 3.99 | 4.13 | 4.24 | 4.31 | 4.38 | 4.42 | 4.47 |
| I2 | 6 | 37 | 4.50 | 4.53 | 4.55 | 4.57 | 4.59 | | | | | |
| ID | 7 | 42 | 4.48 | 4.38 | 4.27 | 4.17 | 4.07 | 3.97 | 3.88 | 3.79 | 3.70 | 3.61 |
| ID | 7 | 52 | 3.52 | 3.44 | 3.36 | 3.27 | 3.20 | 3.12 | 3.04 | 2.97 | 2.90 | 2.83 |
| IE | 8 | 62 | 2.79 | 2.74 | 2.70 | 2.66 | 2.62 | 2.58 | 2.54 | 2.50 | 2.46 | 2.43 |
| IE | 8 | 72 | 2.39 | 2.35 | 2.32 | 2.28 | 2.25 | 2.21 | 2.18 | 2.15 | 2.11 | 2.08 |
| IF | 9 | 82 | 2.14 | 2.20 | 2.26 | 2.31 | 2.36 | 2.41 | 2.45 | 2.50 | 2.54 | 2.58 |
| IF | 9 | 92 | 2.62 | 2.65 | 2.69 | 2.72 | 2.76 | 2.79 | 2.82 | 2.85 | 2.87 | 2.90 |
| TL | 10 | 102 | 2.88 | 2.77 | | | | | | | | |

INTERMEDIATE REPORT
Organic Nitrogen — Pearl River DO Modeling 090105
mg/L — COEF-1 Run

| ID | RCH | ELEM | +0 | +1 | +2 | +3 | +4 | +5 | +6 | +7 | +8 | +9 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PA | 1 | 1 | 0.00 | 0.00 | | | | | | | | |
| IA | 2 | 3 | 0.00 | 0.00 | | | | | | | | |
| I1 | 3 | 5 | 0.00 | 0.00 | | | | | | | | |
| IB | 4 | 7 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| IC | 5 | 17 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| I2 | 6 | 27 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| I2 | 6 | 37 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | |
| ID | 7 | 42 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| ID | 7 | 52 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| IE | 8 | 62 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| IE | 8 | 72 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| IF | 9 | 82 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| IF | 9 | 92 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| TL | 10 | 102 | 0.00 | 0.00 | | | | | | | | |

INTERMEDIATE REPORT
Ammonia Nitrogen — Pearl River DO Modeling 090105
mg/L — COEF-1 Run

| ID | RCH | ELEM | +0 | +1 | +2 | +3 | +4 | +5 | +6 | +7 | +8 | +9 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PA | 1 | 1 | 0.04 | 0.01 | | | | | | | | |
| IA | 2 | 3 | 0.00 | 0.00 | | | | | | | | |
| I1 | 3 | 5 | 0.00 | 0.00 | | | | | | | | |
| IB | 4 | 7 | 0.05 | 0.06 | 0.06 | 0.06 | 0.06 | 0.06 | 0.06 | 0.06 | 0.06 | 0.06 |
| IC | 5 | 17 | 0.06 | 0.05 | 0.05 | 0.04 | 0.04 | 0.04 | 0.03 | 0.03 | 0.03 | 0.03 |
| I2 | 6 | 27 | 0.05 | 0.05 | 0.06 | 0.06 | 0.06 | 0.06 | 0.07 | 0.07 | 0.07 | 0.07 |
| I2 | 6 | 37 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | | | | | |
| ID | 7 | 42 | 0.07 | 0.06 | 0.06 | 0.06 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.04 |
| ID | 7 | 52 | 0.04 | 0.04 | 0.04 | 0.04 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 |
| IE | 8 | 62 | 0.03 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| IE | 8 | 72 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.01 | 0.01 |
| IF | 9 | 82 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.03 | 0.03 |
| IF | 9 | 92 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 |
| TL | 10 | 102 | 0.03 | 0.04 | | | | | | | | |

INTERMEDIATE REPORT

Nitrate+Nitrite Nitrogen — Pearl River DO Modeling 090105

mg/L — COEF-1 Run

| ID | RCH | ELEM | +0 | +1 | +2 | +3 | +4 | +5 | +6 | +7 | +8 | +9 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PA | 1 | 1 | 0.53 | 0.53 | | | | | | | | |
| IA | 2 | 3 | 0.49 | 0.44 | | | | | | | | |
| I1 | 3 | 5 | 0.41 | 0.38 | | | | | | | | |
| IB | 4 | 7 | 0.50 | 0.51 | 0.52 | 0.52 | 0.52 | 0.52 | 0.52 | 0.52 | 0.52 | 0.52 |
| IC | 5 | 17 | 0.53 | 0.53 | 0.53 | 0.53 | 0.54 | 0.54 | 0.54 | 0.54 | 0.54 | 0.54 |
| I2 | 6 | 27 | 0.53 | 0.53 | 0.52 | 0.52 | 0.52 | 0.52 | 0.52 | 0.52 | 0.52 | 0.52 |
| I2 | 6 | 37 | 0.52 | 0.52 | 0.52 | 0.52 | 0.52 | | | | | |
| ID | 7 | 42 | 0.52 | 0.53 | 0.53 | 0.53 | 0.53 | 0.53 | 0.53 | 0.54 | 0.54 | 0.54 |
| ID | 7 | 52 | 0.54 | 0.54 | 0.54 | 0.54 | 0.54 | 0.54 | 0.54 | 0.54 | 0.55 | 0.55 |
| IE | 8 | 62 | 0.55 | 0.55 | 0.55 | 0.55 | 0.55 | 0.55 | 0.55 | 0.55 | 0.55 | 0.55 |
| IE | 8 | 72 | 0.55 | 0.55 | 0.55 | 0.55 | 0.55 | 0.55 | 0.55 | 0.55 | 0.55 | 0.55 |
| IF | 9 | 82 | 0.55 | 0.54 | 0.54 | 0.54 | 0.54 | 0.54 | 0.54 | 0.54 | 0.54 | 0.54 |
| IF | 9 | 92 | 0.54 | 0.54 | 0.54 | 0.54 | 0.54 | 0.54 | 0.54 | 0.53 | 0.53 | 0.53 |
| TL | 10 | 102 | 0.53 | 0.52 | | | | | | | | |

INTERMEDIATE REPORT

Total Nitrogen — Pearl River DO Modeling 090105

mg/L — COEF-1 Run

| ID | RCH | ELEM | +0 | +1 | +2 | +3 | +4 | +5 | +6 | +7 | +8 | +9 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PA | 1 | 1 | 0.57 | 0.54 | | | | | | | | |
| IA | 2 | 3 | 0.49 | 0.44 | | | | | | | | |
| I1 | 3 | 5 | 0.41 | 0.39 | | | | | | | | |
| IB | 4 | 7 | 0.55 | 0.57 | 0.57 | 0.58 | 0.58 | 0.58 | 0.58 | 0.58 | 0.58 | 0.58 |
| IC | 5 | 17 | 0.58 | 0.58 | 0.58 | 0.58 | 0.58 | 0.57 | 0.57 | 0.57 | 0.57 | 0.57 |
| I2 | 6 | 27 | 0.58 | 0.58 | 0.58 | 0.58 | 0.59 | 0.59 | 0.59 | 0.59 | 0.59 | 0.59 |
| I2 | 6 | 37 | 0.59 | 0.59 | 0.59 | 0.59 | 0.59 | | | | | |
| ID | 7 | 42 | 0.59 | 0.59 | 0.59 | 0.59 | 0.59 | 0.58 | 0.58 | 0.58 | 0.58 | 0.58 |
| ID | 7 | 52 | 0.58 | 0.58 | 0.58 | 0.58 | 0.58 | 0.58 | 0.57 | 0.57 | 0.57 | 0.57 |
| IE | 8 | 62 | 0.57 | 0.57 | 0.57 | 0.57 | 0.57 | 0.57 | 0.57 | 0.57 | 0.57 | 0.57 |
| IE | 8 | 72 | 0.57 | 0.57 | 0.56 | 0.56 | 0.56 | 0.56 | 0.56 | 0.56 | 0.56 | 0.56 |
| IF | 9 | 82 | 0.56 | 0.56 | 0.56 | 0.56 | 0.56 | 0.56 | 0.56 | 0.56 | 0.56 | 0.57 |
| IF | 9 | 92 | 0.57 | 0.57 | 0.57 | 0.57 | 0.57 | 0.57 | 0.57 | 0.57 | 0.57 | 0.57 |
| TL | 10 | 102 | 0.57 | 0.55 | | | | | | | | |

INTERMEDIATE REPORT

Chlorophyll a — Pearl River DO Modeling 090105

µg/L — COEF-1 Run

| ID | RCH | ELEM | +0 | +1 | +2 | +3 | +4 | +5 | +6 | +7 | +8 | +9 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PA | 1 | 1 | 1.00 | 1.00 | | | | | | | | |
| IA | 2 | 3 | 1.00 | 1.00 | | | | | | | | |
| I1 | 3 | 5 | 1.00 | 1.00 | | | | | | | | |
| IB | 4 | 7 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| IC | 5 | 17 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| I2 | 6 | 27 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

```
 I2    6   37       1.00     1.00     1.00     1.00     1.00
 ID    7   42       1.00     1.00     1.00     1.00     1.00     1.00     1.00     1.00     1.00     1.00
 ID    7   52       1.00     1.00     1.00     1.00     1.00     1.00     1.00     1.00     1.00     1.00
 IE    8   62       1.00     1.00     1.00     1.00     1.00     1.00     1.00     1.00     1.00     1.00
 IE    8   72       1.00     1.00     1.00     1.00     1.00     1.00     1.00     1.00     1.00     1.00
 IF    9   82       1.00     1.00     1.00     1.00     1.00     1.00     1.00     1.00     1.00     1.00
 IF    9   92       1.00     1.00     1.00     1.00     1.00     1.00     1.00     1.00     1.00     1.00
 TL   10  102       1.00     1.00
INTERMEDIATE REPORT
 Temperature                                   Pearl River DO Modeling 090105
   deg C                                       COEF-1 Run
 ID  RCH  ELEM       +0       +1       +2       +3       +4       +5       +6       +7       +8       +9
 PA    1    1      31.60    31.60
 IA    2    3      31.60    31.60
 I1    3    5      31.85    32.10
 IB    4    7      32.06    32.02    31.98    31.94    31.90    31.86    31.82    31.78    31.74    31.70
 IC    5   17      31.70    31.70    31.70    31.70    31.70    31.70    31.70    31.70    31.70    31.70
 I2    6   27      31.65    31.61    31.56    31.51    31.47    31.42    31.37    31.33    31.28    31.23
 I2    6   37      31.19    31.14    31.09    31.05    31.00
 ID    7   42      31.02    31.04    31.06    31.08    31.10    31.12    31.14    31.16    31.18    31.20
 ID    7   52      31.22    31.24    31.26    31.28    31.30    31.32    31.34    31.36    31.38    31.40
 IE    8   62      31.40    31.41    31.41    31.42    31.42    31.43    31.43    31.44    31.44    31.45
 IE    8   72      31.45    31.46    31.47    31.47    31.48    31.48    31.49    31.49    31.50    31.50
 IF    9   82      31.50    31.50    31.50    31.50    31.50    31.50    31.50    31.50    31.50    31.50
 IF    9   92      31.50    31.50    31.50    31.50    31.50    31.50    31.50    31.50    31.50    31.50
 TL   10  102      31.50    31.50
INTERMEDIATE REPORT
 Salinity                                      Pearl River DO Modeling 090105
   ppt                                         COEF-1 Run
 ID  RCH  ELEM       +0       +1       +2       +3       +4       +5       +6       +7       +8       +9
 PA    1    1       0.00     0.00
 IA    2    3       0.00     0.00
 I1    3    5       0.00     0.00
 IB    4    7       0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00
 IC    5   17       0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00
 I2    6   27       0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00
 I2    6   37       0.00     0.00     0.00     0.00     0.00
 ID    7   42       0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00
 ID    7   52       0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00
 IE    8   62       0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00
 IE    8   72       0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00
 IF    9   82       0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00
 IF    9   92       0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00
 TL   10  102       0.00     0.00
INTERMEDIATE REPORT
 River Distance                                Pearl River DO Modeling 090105
   km                                          COEF-1 Run
 ID  RCH  ELEM       +0       +1       +2       +3       +4       +5       +6       +7       +8       +9
 PA    1    1        8.       8.
 IA    2    3        8.       8.
```

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| I1 | 3 | 5 | 8. | 7. | | | | | | | | |
| IB | 4 | 7 | 7. | 7. | 7. | 7. | 7. | 7. | 7. | 7. | 7. | 7. |
| IC | 5 | 17 | 7. | 7. | 7. | 6. | 6. | 6. | 6. | 6. | 6. | 6. |
| I2 | 6 | 27 | 6. | 6. | 6. | 6. | 6. | 6. | 5. | 5. | 5. | 5. |
| I2 | 6 | 37 | 5. | 5. | 5. | 5. | 5. | | | | | |
| ID | 7 | 42 | 5. | 5. | 5. | 4. | 4. | 4. | 4. | 4. | 4. | 4. |
| ID | 7 | 52 | 4. | 4. | 4. | 3. | 3. | 3. | 3. | 3. | 3. | 3. |
| IE | 8 | 62 | 3. | 3. | 3. | 3. | 2. | 2. | 2. | 2. | 2. | 2. |
| IE | 8 | 72 | 2. | 2. | 2. | 2. | 2. | 2. | 1. | 1. | 1. | 1. |
| IF | 9 | 82 | 1. | 1. | 1. | 1. | 1. | 1. | 1. | 1. | 1. | 1. |
| IF | 9 | 92 | 1. | 1. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| TL | 10 | 102 | 0. | 0. | | | | | | | | |

INTERMEDIATE REPORT

Flow — Pearl River DO Modeling 090105

$m^3/s$ — COEF-1 Run

| ID | RCH | ELEM | +0 | +1 | +2 | +3 | +4 | +5 | +6 | +7 | +8 | +9 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PA | 1 | 1 | 0.0 | 0.0 | | | | | | | | |
| IA | 2 | 3 | 0.0 | 0.0 | | | | | | | | |
| I1 | 3 | 5 | 0.0 | 0.0 | | | | | | | | |
| IB | 4 | 7 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| IC | 5 | 17 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| I2 | 6 | 27 | 0.2 | 0.3 | 0.3 | 0.4 | 0.5 | 0.5 | 0.6 | 0.7 | 0.8 | 0.8 |
| I2 | 6 | 37 | 0.9 | 1.0 | 1.0 | 1.1 | 1.2 | | | | | |
| ID | 7 | 42 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 |
| ID | 7 | 52 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 |
| IE | 8 | 62 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 |
| IE | 8 | 72 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 |
| IF | 9 | 82 | 1.2 | 1.2 | 1.2 | 1.3 | 1.3 | 1.3 | 1.3 | 1.4 | 1.4 | 1.4 |
| IF | 9 | 92 | 1.4 | 1.5 | 1.5 | 1.5 | 1.5 | 1.6 | 1.6 | 1.6 | 1.6 | 1.7 |
| TL | 10 | 102 | 1.7 | 1.7 | | | | | | | | |

INTERMEDIATE REPORT

Dispersion — Pearl River DO Modeling 090105

$m^2/s$ — COEF-1 Run

| ID | RCH | ELEM | +0 | +1 | +2 | +3 | +4 | +5 | +6 | +7 | +8 | +9 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PA | 1 | 1 | 0.0 | 0.0 | | | | | | | | |
| IA | 2 | 3 | 0.0 | 0.0 | | | | | | | | |
| I1 | 3 | 5 | 0.0 | 0.0 | | | | | | | | |
| IB | 4 | 7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| IC | 5 | 17 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| I2 | 6 | 27 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| I2 | 6 | 37 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | | | |
| ID | 7 | 42 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| ID | 7 | 52 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| IE | 8 | 62 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| IE | 8 | 72 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| IF | 9 | 82 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| IF | 9 | 92 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| TL | 10 | 102 | 0.0 | 0.0 | | | | | | | | |

INTERMEDIATE REPORT

Advective Velocity — Pearl River DO Modeling 090105

m/s COEF-1 Run

| ID | RCH | ELEM | +0 | +1 | +2 | +3 | +4 | +5 | +6 | +7 | +8 | +9 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PA | 1 | 1 | 0.0 | 0.0 | | | | | | | | |
| IA | 2 | 3 | 0.0 | 0.0 | | | | | | | | |
| I1 | 3 | 5 | 0.0 | 0.0 | | | | | | | | |
| IB | 4 | 7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| IC | 5 | 17 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| I2 | 6 | 27 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| I2 | 6 | 37 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | | | |
| ID | 7 | 42 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| ID | 7 | 52 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| IE | 8 | 62 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| IE | 8 | 72 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| IF | 9 | 82 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| IF | 9 | 92 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| TL | 10 | 102 | 0.0 | 0.0 | | | | | | | | |

INTERMEDIATE REPORT

Depth Pearl River DO Modeling 090105

m COEF-1 Run

| ID | RCH | ELEM | +0 | +1 | +2 | +3 | +4 | +5 | +6 | +7 | +8 | +9 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PA | 1 | 1 | 1.0 | 1.0 | | | | | | | | |
| IA | 2 | 3 | 1.0 | 1.0 | | | | | | | | |
| I1 | 3 | 5 | 1.0 | 1.0 | | | | | | | | |
| IB | 4 | 7 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| IC | 5 | 17 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 |
| I2 | 6 | 27 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 |
| I2 | 6 | 37 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | | | | | |
| ID | 7 | 42 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 |
| ID | 7 | 52 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 |
| IE | 8 | 62 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 |
| IE | 8 | 72 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 |
| IF | 9 | 82 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 |
| IF | 9 | 92 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 |
| TL | 10 | 102 | 2.3 | 2.3 | | | | | | | | |

INTERMEDIATE REPORT

Width Pearl River DO Modeling 090105

m COEF-1 Run

| ID | RCH | ELEM | +0 | +1 | +2 | +3 | +4 | +5 | +6 | +7 | +8 | +9 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PA | 1 | 1 | 44.7 | 44.7 | | | | | | | | |
| IA | 2 | 3 | 44.7 | 44.7 | | | | | | | | |
| I1 | 3 | 5 | 44.7 | 44.7 | | | | | | | | |
| IB | 4 | 7 | 44.7 | 44.7 | 44.7 | 44.7 | 44.7 | 44.7 | 44.7 | 44.7 | 44.7 | 44.7 |
| IC | 5 | 17 | 43.8 | 43.8 | 43.8 | 43.8 | 43.8 | 43.8 | 43.8 | 43.8 | 43.8 | 43.8 |
| I2 | 6 | 27 | 62.8 | 62.8 | 62.8 | 62.8 | 62.8 | 62.8 | 62.8 | 62.8 | 62.8 | 62.8 |
| I2 | 6 | 37 | 62.8 | 62.8 | 62.8 | 62.8 | 62.8 | | | | | |
| ID | 7 | 42 | 82.7 | 82.7 | 82.7 | 82.7 | 82.7 | 82.7 | 82.7 | 82.7 | 82.7 | 82.7 |
| ID | 7 | 52 | 82.7 | 82.7 | 82.7 | 82.7 | 82.7 | 82.7 | 82.7 | 82.7 | 82.7 | 82.7 |
| IE | 8 | 62 | 67.7 | 67.7 | 67.7 | 67.7 | 67.7 | 67.7 | 67.7 | 67.7 | 67.7 | 67.7 |
| IE | 8 | 72 | 67.7 | 67.7 | 67.7 | 67.7 | 67.7 | 67.7 | 67.7 | 67.7 | 67.7 | 67.7 |
| IF | 9 | 82 | 58.9 | 58.9 | 58.9 | 58.9 | 58.9 | 58.9 | 58.9 | 58.9 | 58.9 | 58.9 |

```
 IF    9   92       58.9     58.9     58.9     58.9     58.9     58.9     58.9     58.9     58.9     58.9
 TL   10  102       65.1     65.1
INTERMEDIATE REPORT
 Cross-Sectional Area                          Pearl River DO Modeling 090105
   m²                                                COEF-1 Run
 ID  RCH  ELEM       +0       +1       +2       +3       +4       +5       +6       +7       +8       +9
 PA    1    1       44.3     44.3
 IA    2    3       44.3     44.3
 I1    3    5       44.3     44.3
 IB    4    7       44.3     44.3     44.3     44.3     44.3     44.3     44.3     44.3     44.3     44.3
 IC    5   17       51.6     51.6     51.6     51.6     51.6     51.6     51.6     51.6     51.6     51.6
 I2    6   27      129.9    129.9    129.9    129.9    129.9    129.9    129.9    129.9    129.9    129.9
 I2    6   37      129.9    129.9    129.9    129.9    129.9
 ID    7   42      229.1    229.1    229.1    229.1    229.1    229.1    229.1    229.1    229.1    229.1
 ID    7   52      229.1    229.1    229.1    229.1    229.1    229.1    229.1    229.1    229.1    229.1
 IE    8   62      155.0    155.0    155.0    155.0    155.0    155.0    155.0    155.0    155.0    155.0
 IE    8   72      155.0    155.0    155.0    155.0    155.0    155.0    155.0    155.0    155.0    155.0
 IF    9   82      122.5    122.5    122.5    122.5    122.5    122.5    122.5    122.5    122.5    122.5
 IF    9   92      122.5    122.5    122.5    122.5    122.5    122.5    122.5    122.5    122.5    122.5
 TL   10  102      152.3    152.3
INTERMEDIATE REPORT
 Reaeration Rate                               Pearl River DO Modeling 090105
   per day                                           COEF-1 Run
 ID  RCH  ELEM       +0       +1       +2       +3       +4       +5       +6       +7       +8       +9
 PA    1    1      0.874    0.874
 IA    2    3      0.874    0.874
 I1    3    5      0.878    0.882
 IB    4    7      0.881    0.880    0.880    0.879    0.879    0.878    0.877    0.877    0.876    0.876
 IC    5   17      0.735    0.735    0.735    0.735    0.735    0.735    0.735    0.735    0.735    0.735
 I2    6   27      0.418    0.418    0.418    0.417    0.417    0.417    0.416    0.416    0.416    0.415
 I2    6   37      0.415    0.415    0.414    0.414    0.414
 ID    7   42      0.309    0.309    0.310    0.310    0.310    0.310    0.310    0.310    0.310    0.310
 ID    7   52      0.310    0.311    0.311    0.311    0.311    0.311    0.311    0.311    0.311    0.311
 IE    8   62      0.377    0.377    0.377    0.377    0.377    0.377    0.377    0.377    0.377    0.377
 IE    8   72      0.377    0.377    0.377    0.377    0.377    0.377    0.377    0.377    0.377    0.377
 IF    9   82      0.415    0.415    0.415    0.415    0.415    0.415    0.415    0.415    0.415    0.415
 IF    9   92      0.415    0.415    0.415    0.415    0.415    0.415    0.415    0.415    0.415    0.415
 TL   10  102      0.369    0.369
INTERMEDIATE REPORT
 BOD Decay Rate                                Pearl River DO Modeling 090105
   per day                                           COEF-1 Run
 ID  RCH  ELEM       +0       +1       +2       +3       +4       +5       +6       +7       +8       +9
 PA    1    1      0.11     0.11
 IA    2    3      0.11     0.11
 I1    3    5      0.11     0.11
 IB    4    7      0.11     0.11     0.11     0.11     0.11     0.11     0.11     0.11     0.11     0.11
 IC    5   17      0.11     0.11     0.11     0.11     0.11     0.11     0.11     0.11     0.11     0.11
 I2    6   27      0.11     0.11     0.11     0.11     0.11     0.11     0.11     0.11     0.11     0.11
 I2    6   37      0.11     0.11     0.11     0.11     0.11
 ID    7   42      0.11     0.11     0.11     0.11     0.11     0.11     0.11     0.11     0.11     0.11
```

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ID | 7 | 52 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 |
| IE | 8 | 62 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 |
| IE | 8 | 72 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 |
| IF | 9 | 82 | 0.12 | 0.12 | 0.12 | 0.12 | 0.12 | 0.12 | 0.12 | 0.12 | 0.12 | 0.12 |
| IF | 9 | 92 | 0.12 | 0.12 | 0.12 | 0.12 | 0.12 | 0.12 | 0.12 | 0.12 | 0.12 | 0.12 |
| TL | 10 | 102 | 0.12 | 0.12 | | | | | | | | |

INTERMEDIATE REPORT

BOD Settling Rate — Pearl River DO Modeling 090105

per day — COEF-1 Run

| ID | RCH | ELEM | +0 | +1 | +2 | +3 | +4 | +5 | +6 | +7 | +8 | +9 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PA | 1 | 1 | 0.01 | 0.01 | | | | | | | | |
| IA | 2 | 3 | 0.01 | 0.01 | | | | | | | | |
| I1 | 3 | 5 | 0.01 | 0.01 | | | | | | | | |
| IB | 4 | 7 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| IC | 5 | 17 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| I2 | 6 | 27 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| I2 | 6 | 37 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | | | | | |
| ID | 7 | 42 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| ID | 7 | 52 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| IE | 8 | 62 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| IE | 8 | 72 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| IF | 9 | 82 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| IF | 9 | 92 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| TL | 10 | 102 | 0.01 | 0.01 | | | | | | | | |

INTERMEDIATE REPORT

Ammonia Decay Rate — Pearl River DO Modeling 090105

per day — COEF-1 Run

| ID | RCH | ELEM | +0 | +1 | +2 | +3 | +4 | +5 | +6 | +7 | +8 | +9 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PA | 1 | 1 | 0.24 | 0.24 | | | | | | | | |
| IA | 2 | 3 | 0.25 | 0.25 | | | | | | | | |
| I1 | 3 | 5 | 0.25 | 0.26 | | | | | | | | |
| IB | 4 | 7 | 0.24 | 0.24 | 0.24 | 0.24 | 0.24 | 0.24 | 0.23 | 0.23 | 0.23 | 0.23 |
| IC | 5 | 17 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 |
| I2 | 6 | 27 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 |
| I2 | 6 | 37 | 0.23 | 0.23 | 0.23 | 0.22 | 0.22 | | | | | |
| ID | 7 | 42 | 0.22 | 0.22 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 |
| ID | 7 | 52 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 |
| IE | 8 | 62 | 0.23 | 0.24 | 0.24 | 0.24 | 0.24 | 0.24 | 0.24 | 0.24 | 0.24 | 0.24 |
| IE | 8 | 72 | 0.24 | 0.24 | 0.24 | 0.24 | 0.24 | 0.24 | 0.24 | 0.24 | 0.24 | 0.24 |
| IF | 9 | 82 | 0.24 | 0.24 | 0.24 | 0.24 | 0.24 | 0.24 | 0.24 | 0.24 | 0.24 | 0.24 |
| IF | 9 | 92 | 0.24 | 0.24 | 0.24 | 0.24 | 0.24 | 0.24 | 0.24 | 0.24 | 0.24 | 0.24 |
| TL | 10 | 102 | 0.24 | 0.24 | | | | | | | | |

INTERMEDIATE REPORT

Sediment Oxygen Demand — Pearl River DO Modeling 090105

$g/m^2/d$ — COEF-1 Run

| ID | RCH | ELEM | +0 | +1 | +2 | +3 | +4 | +5 | +6 | +7 | +8 | +9 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PA | 1 | 1 | 0.27 | 0.26 | | | | | | | | |
| IA | 2 | 3 | 0.25 | 0.25 | | | | | | | | |
| I1 | 3 | 5 | 0.25 | 0.26 | | | | | | | | |
| IB | 4 | 7 | 1.83 | 1.82 | 1.82 | 1.82 | 1.81 | 1.81 | 1.80 | 1.80 | 1.79 | 1.79 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| IC | 5 | 17 | 1.79 | 1.79 | 1.79 | 1.78 | 1.78 | 1.78 | 1.78 | 1.78 | 1.78 | 1.78 |
| I2 | 6 | 27 | 0.29 | 0.30 | 0.30 | 0.30 | 0.30 | 0.30 | 0.30 | 0.30 | 0.30 | 0.30 |
| I2 | 6 | 37 | 0.30 | 0.30 | 0.30 | 0.30 | 0.30 | | | | | |
| ID | 7 | 42 | 0.30 | 0.30 | 0.30 | 0.30 | 0.29 | 0.29 | 0.29 | 0.29 | 0.29 | 0.29 |
| ID | 7 | 52 | 0.29 | 0.29 | 0.29 | 0.29 | 0.29 | 0.29 | 0.28 | 0.28 | 0.28 | 0.28 |
| IE | 8 | 62 | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 |
| IE | 8 | 72 | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 | 0.27 |
| IF | 9 | 82 | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 |
| IF | 9 | 92 | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 | 0.29 | 0.29 |
| TL | 10 | 102 | 0.29 | 0.28 | | | | | | | | |

CONDENSED CAPSULE SUMMARY FOR Headwater

| DIST | FLOW | TEMP | SALN | DO | REAER EBOD1 | BOD1 EBOD2 | BOD2 ORGN | NH3 | CHLA | RATE | DECA | SETT DECA | SETT DECA | SOD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| km | m³/s | deg C | ppt | mg/L | mg/L | mg/L | mg/L µg/L | 1/da | 1/da | 1/da | 1/da | 1/da | 1/da | g/m²/d |
| HDWTR | 0.00283 | 30.00 | 0.00 | 5.00 | 3.60 | 0.00 | 0.00 0.10 | 1.00 | | | | | | |
| 7.73 | 0.00283 | 31.60 | 0.00 | 6.63 | 1.91 | 0.00 | 0.00 0.04 | 1.00 | 0.87 | 0.11 | 0.01 | 0.01 | 0.00 0.24 | 0.27 |
| 7.69 | 0.00283 | 31.60 | 0.00 | 6.97 | 1.01 | 0.00 | 0.00 0.01 | 1.00 | 0.87 | 0.11 | 0.01 | 0.01 | 0.00 0.24 | 0.26 |
| 7.63 | 0.00283 | 31.60 | 0.00 | 7.09 | 0.42 | 0.00 | 0.00 0.00 | 1.00 | 0.87 | 0.11 | 0.01 | 0.01 | 0.00 0.25 | 0.25 |
| 7.57 | 0.00283 | 31.60 | 0.00 | 7.13 | 0.18 | 0.00 | 0.00 0.00 | 1.00 | 0.87 | 0.11 | 0.01 | 0.01 | 0.00 0.25 | 0.25 |
| 7.53 | 0.00283 | 31.85 | 0.00 | 7.12 | 0.09 | 0.00 | 0.00 0.00 | 1.00 | 0.88 | 0.11 | 0.01 | 0.01 | 0.00 0.25 | 0.25 |
| 7.49 | 0.00283 | 32.10 | 0.00 | 7.08 | 0.09 | 0.00 | 0.00 0.00 | 1.00 | 0.88 | 0.11 | 0.01 | 0.01 | 0.00 0.26 | 0.26 |
| 7.41 | 0.01583 | 32.06 | 0.00 | 5.13 | 2.28 | 0.00 | 0.00 0.05 | 1.00 | 0.88 | 0.11 | 0.01 | 0.01 | 0.00 0.24 | 1.83 |
| 7.34 | 0.02883 | 32.02 | 0.00 | 5.03 | 2.47 | 0.00 | 0.00 0.06 | 1.00 | 0.88 | 0.11 | 0.01 | 0.01 | 0.00 0.24 | 1.82 |
| 7.27 | 0.04183 | 31.98 | 0.00 | 5.01 | 2.54 | 0.00 | 0.00 0.06 | 1.00 | 0.88 | 0.11 | 0.01 | 0.01 | 0.00 0.24 | 1.82 |
| 7.19 | 0.05483 | 31.94 | 0.00 | 5.00 | 2.57 | 0.00 | 0.00 0.06 | 1.00 | 0.88 | 0.11 | 0.01 | 0.01 | 0.00 0.24 | 1.82 |
| 7.12 | 0.06783 | 31.90 | 0.00 | 5.00 | 2.59 | 0.00 | 0.00 0.06 | 1.00 | 0.88 | 0.11 | 0.01 | 0.01 | 0.00 0.24 | 1.81 |
| 7.05 | 0.08083 | 31.86 | 0.00 | 5.00 | 2.60 | 0.00 | 0.00 0.06 | 1.00 | 0.88 | 0.11 | 0.01 | 0.01 | 0.00 0.24 | 1.81 |
| 6.98 | 0.09383 | 31.82 | 0.00 | 5.01 | 2.61 | 0.00 | 0.00 0.06 | 1.00 | 0.88 | 0.11 | 0.01 | 0.01 | 0.00 0.23 | 1.80 |
| 6.90 | 0.10683 | 31.78 | 0.00 | 5.01 | 2.62 | 0.00 | 0.00 0.06 | 1.00 | 0.88 | 0.11 | 0.01 | 0.01 | 0.00 0.23 | 1.80 |
| 6.83 | 0.11983 | 31.74 | 0.00 | 5.01 | 2.62 | 0.00 | 0.00 0.06 | 1.00 | 0.88 | 0.11 | 0.01 | 0.01 | 0.00 0.23 | 1.79 |
| 6.76 | 0.13283 | 31.70 | 0.00 | 5.02 | 2.63 | 0.00 | 0.00 0.06 | 1.00 | 0.88 | 0.11 | 0.01 | 0.01 | 0.00 0.23 | 1.79 |
| 6.68 | 0.13283 | 31.70 | 0.00 | 5.02 | 2.52 | 0.00 | 0.00 0.06 | 1.00 | 0.73 | 0.11 | 0.01 | 0.01 | 0.00 0.23 | 1.79 |
| 6.61 | 0.13283 | 31.70 | 0.00 | 5.02 | 2.42 | 0.00 | 0.00 0.05 | 1.00 | 0.73 | 0.11 | 0.01 | 0.01 | 0.00 0.23 | 1.79 |
| 6.53 | 0.13283 | 31.70 | 0.00 | 5.03 | 2.32 | 0.00 | 0.00 0.05 | 1.00 | 0.73 | 0.11 | 0.01 | 0.01 | 0.00 0.23 | 1.79 |
| 6.45 | 0.13283 | 31.70 | 0.00 | 5.03 | 2.22 | 0.00 | 0.00 0.04 | 1.00 | 0.73 | 0.11 | 0.01 | 0.01 | 0.00 0.23 | 1.78 |
| 6.37 | 0.13283 | 31.70 | 0.00 | 5.04 | 2.13 | 0.00 | 0.00 0.04 | 1.00 | 0.73 | 0.11 | 0.01 | 0.01 | 0.00 0.23 | 1.78 |
| 6.30 | 0.13283 | 31.70 | 0.00 | 5.05 | 2.05 | 0.00 | 0.00 0.04 | 1.00 | 0.73 | 0.11 | 0.01 | 0.01 | 0.00 0.23 | 1.78 |
| 6.22 | 0.13283 | 31.70 | 0.00 | 5.06 | 1.96 | 0.00 | 0.00 0.03 | 1.00 | 0.73 | 0.11 | 0.01 | 0.01 | 0.00 0.23 | 1.78 |
| 6.14 | 0.13283 | 31.70 | 0.00 | 5.07 | 1.88 | 0.00 | 0.00 0.03 | 1.00 | 0.73 | 0.11 | 0.01 | 0.01 | 0.00 0.23 | 1.78 |
| 6.07 | 0.13283 | 31.70 | 0.00 | 5.09 | 1.81 | 0.00 | 0.00 0.03 | 1.00 | 0.73 | 0.11 | 0.01 | 0.01 | 0.00 0.23 | 1.78 |
| 5.99 | 0.13283 | 31.70 | 0.00 | 5.10 | 1.75 | 0.00 | 0.00 0.03 | 1.00 | 0.73 | 0.11 | 0.01 | 0.01 | 0.00 0.23 | 1.78 |
| 5.91 | 0.20150 | 31.65 | 0.00 | 5.34 | 2.92 | 0.00 | 0.00 0.05 | 1.00 | 0.42 | 0.11 | 0.01 | 0.01 | 0.00 0.23 | 0.29 |
| 5.83 | 0.27017 | 31.61 | 0.00 | 5.41 | 3.47 | 0.00 | 0.00 0.05 | 1.00 | 0.42 | 0.11 | 0.01 | 0.01 | 0.00 0.23 | 0.30 |
| 5.75 | 0.33883 | 31.56 | 0.00 | 5.44 | 3.79 | 0.00 | 0.00 0.06 | 1.00 | 0.42 | 0.11 | 0.01 | 0.01 | 0.00 0.23 | 0.30 |
| 5.67 | 0.40750 | 31.51 | 0.00 | 5.45 | 3.99 | 0.00 | 0.00 0.06 | 1.00 | 0.42 | 0.11 | 0.01 | 0.01 | 0.00 0.23 | 0.30 |
| 5.59 | 0.47617 | 31.47 | 0.00 | 5.46 | 4.13 | 0.00 | 0.00 0.06 | 1.00 | 0.42 | 0.11 | 0.01 | 0.01 | 0.00 0.23 | 0.30 |
| 5.52 | 0.54483 | 31.42 | 0.00 | 5.46 | 4.24 | 0.00 | 0.00 0.06 | 1.00 | 0.42 | 0.11 | 0.01 | 0.01 | 0.00 0.23 | 0.30 |
| 5.44 | 0.61350 | 31.37 | 0.00 | 5.46 | 4.31 | 0.00 | 0.00 0.07 | 1.00 | 0.42 | 0.11 | 0.01 | 0.01 | 0.00 0.23 | 0.30 |
| 5.36 | 0.68217 | 31.33 | 0.00 | 5.46 | 4.38 | 0.00 | 0.00 0.07 | 1.00 | 0.42 | 0.11 | 0.01 | 0.01 | 0.00 0.23 | 0.30 |
| 5.28 | 0.75083 | 31.28 | 0.00 | 5.46 | 4.42 | 0.00 | 0.00 0.07 | 1.00 | 0.42 | 0.11 | 0.01 | 0.01 | 0.00 0.23 | 0.30 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5.20 | 0.81950 | 31.23 | 0.00 | 5.46 | 4.47 | 0.00 | 0.00 | 0.07 | 1.00 | 0.42 | 0.11 | 0.01 | 0.01 | 0.00 | 0.23 | 0.30 |
| 5.12 | 0.88817 | 31.19 | 0.00 | 5.46 | 4.50 | 0.00 | 0.00 | 0.07 | 1.00 | 0.42 | 0.11 | 0.01 | 0.01 | 0.00 | 0.23 | 0.30 |
| 5.04 | 0.95683 | 31.14 | 0.00 | 5.46 | 4.53 | 0.00 | 0.00 | 0.07 | 1.00 | 0.41 | 0.11 | 0.01 | 0.01 | 0.00 | 0.23 | 0.30 |
| 4.96 | 1.02550 | 31.09 | 0.00 | 5.46 | 4.55 | 0.00 | 0.00 | 0.07 | 1.00 | 0.41 | 0.11 | 0.01 | 0.01 | 0.00 | 0.23 | 0.30 |
| 4.88 | 1.09417 | 31.05 | 0.00 | 5.46 | 4.57 | 0.00 | 0.00 | 0.07 | 1.00 | 0.41 | 0.11 | 0.01 | 0.01 | 0.00 | 0.22 | 0.30 |
| 4.80 | 1.16283 | 31.00 | 0.00 | 5.46 | 4.59 | 0.00 | 0.00 | 0.07 | 1.00 | 0.41 | 0.11 | 0.01 | 0.01 | 0.00 | 0.22 | 0.30 |
| 4.71 | 1.16283 | 31.02 | 0.00 | 5.48 | 4.48 | 0.00 | 0.00 | 0.07 | 1.00 | 0.31 | 0.11 | 0.00 | 0.01 | 0.00 | 0.22 | 0.30 |
| 4.62 | 1.16283 | 31.04 | 0.00 | 5.50 | 4.38 | 0.00 | 0.00 | 0.06 | 1.00 | 0.31 | 0.11 | 0.00 | 0.01 | 0.00 | 0.22 | 0.30 |
| 4.52 | 1.16283 | 31.06 | 0.00 | 5.52 | 4.27 | 0.00 | 0.00 | 0.06 | 1.00 | 0.31 | 0.11 | 0.00 | 0.01 | 0.00 | 0.23 | 0.30 |
| 4.43 | 1.16283 | 31.08 | 0.00 | 5.54 | 4.17 | 0.00 | 0.00 | 0.06 | 1.00 | 0.31 | 0.11 | 0.00 | 0.01 | 0.00 | 0.23 | 0.30 |
| 4.33 | 1.16283 | 31.10 | 0.00 | 5.57 | 4.07 | 0.00 | 0.00 | 0.05 | 1.00 | 0.31 | 0.11 | 0.00 | 0.01 | 0.00 | 0.23 | 0.29 |
| 4.24 | 1.16283 | 31.12 | 0.00 | 5.59 | 3.97 | 0.00 | 0.00 | 0.05 | 1.00 | 0.31 | 0.11 | 0.00 | 0.01 | 0.00 | 0.23 | 0.29 |
| 4.14 | 1.16283 | 31.14 | 0.00 | 5.62 | 3.88 | 0.00 | 0.00 | 0.05 | 1.00 | 0.31 | 0.11 | 0.00 | 0.01 | 0.00 | 0.23 | 0.29 |
| 4.05 | 1.16283 | 31.16 | 0.00 | 5.64 | 3.79 | 0.00 | 0.00 | 0.05 | 1.00 | 0.31 | 0.11 | 0.00 | 0.01 | 0.00 | 0.23 | 0.29 |
| 3.95 | 1.16283 | 31.18 | 0.00 | 5.67 | 3.70 | 0.00 | 0.00 | 0.05 | 1.00 | 0.31 | 0.11 | 0.00 | 0.01 | 0.00 | 0.23 | 0.29 |
| 3.86 | 1.16283 | 31.20 | 0.00 | 5.69 | 3.61 | 0.00 | 0.00 | 0.04 | 1.00 | 0.31 | 0.11 | 0.00 | 0.01 | 0.00 | 0.23 | 0.29 |
| 3.76 | 1.16283 | 31.22 | 0.00 | 5.72 | 3.52 | 0.00 | 0.00 | 0.04 | 1.00 | 0.31 | 0.11 | 0.00 | 0.01 | 0.00 | 0.23 | 0.29 |
| 3.67 | 1.16283 | 31.24 | 0.00 | 5.74 | 3.44 | 0.00 | 0.00 | 0.04 | 1.00 | 0.31 | 0.11 | 0.00 | 0.01 | 0.00 | 0.23 | 0.29 |
| 3.57 | 1.16283 | 31.26 | 0.00 | 5.77 | 3.36 | 0.00 | 0.00 | 0.04 | 1.00 | 0.31 | 0.11 | 0.00 | 0.01 | 0.00 | 0.23 | 0.29 |
| 3.48 | 1.16283 | 31.28 | 0.00 | 5.79 | 3.27 | 0.00 | 0.00 | 0.04 | 1.00 | 0.31 | 0.11 | 0.00 | 0.01 | 0.00 | 0.23 | 0.29 |
| 3.38 | 1.16283 | 31.30 | 0.00 | 5.82 | 3.20 | 0.00 | 0.00 | 0.03 | 1.00 | 0.31 | 0.11 | 0.00 | 0.01 | 0.00 | 0.23 | 0.29 |
| 3.29 | 1.16283 | 31.32 | 0.00 | 5.85 | 3.12 | 0.00 | 0.00 | 0.03 | 1.00 | 0.31 | 0.11 | 0.00 | 0.01 | 0.00 | 0.23 | 0.29 |
| 3.19 | 1.16283 | 31.34 | 0.00 | 5.87 | 3.04 | 0.00 | 0.00 | 0.03 | 1.00 | 0.31 | 0.11 | 0.00 | 0.01 | 0.00 | 0.23 | 0.28 |
| 3.10 | 1.16283 | 31.36 | 0.00 | 5.90 | 2.97 | 0.00 | 0.00 | 0.03 | 1.00 | 0.31 | 0.11 | 0.00 | 0.01 | 0.00 | 0.23 | 0.28 |
| 3.00 | 1.16283 | 31.38 | 0.00 | 5.92 | 2.90 | 0.00 | 0.00 | 0.03 | 1.00 | 0.31 | 0.11 | 0.00 | 0.01 | 0.00 | 0.23 | 0.28 |
| 2.91 | 1.16283 | 31.40 | 0.00 | 5.95 | 2.83 | 0.00 | 0.00 | 0.03 | 1.00 | 0.31 | 0.11 | 0.00 | 0.01 | 0.00 | 0.23 | 0.28 |
| 2.82 | 1.16283 | 31.40 | 0.00 | 5.97 | 2.79 | 0.00 | 0.00 | 0.03 | 1.00 | 0.38 | 0.11 | 0.01 | 0.01 | 0.00 | 0.23 | 0.28 |
| 2.74 | 1.16283 | 31.41 | 0.00 | 6.00 | 2.74 | 0.00 | 0.00 | 0.02 | 1.00 | 0.38 | 0.11 | 0.01 | 0.01 | 0.00 | 0.24 | 0.28 |
| 2.65 | 1.16283 | 31.41 | 0.00 | 6.02 | 2.70 | 0.00 | 0.00 | 0.02 | 1.00 | 0.38 | 0.11 | 0.01 | 0.01 | 0.00 | 0.24 | 0.28 |
| 2.56 | 1.16283 | 31.42 | 0.00 | 6.04 | 2.66 | 0.00 | 0.00 | 0.02 | 1.00 | 0.38 | 0.11 | 0.01 | 0.01 | 0.00 | 0.24 | 0.28 |
| 2.48 | 1.16283 | 31.42 | 0.00 | 6.07 | 2.62 | 0.00 | 0.00 | 0.02 | 1.00 | 0.38 | 0.11 | 0.01 | 0.01 | 0.00 | 0.24 | 0.28 |
| 2.39 | 1.16283 | 31.43 | 0.00 | 6.09 | 2.58 | 0.00 | 0.00 | 0.02 | 1.00 | 0.38 | 0.11 | 0.01 | 0.01 | 0.00 | 0.24 | 0.28 |
| 2.30 | 1.16283 | 31.43 | 0.00 | 6.11 | 2.54 | 0.00 | 0.00 | 0.02 | 1.00 | 0.38 | 0.11 | 0.01 | 0.01 | 0.00 | 0.24 | 0.28 |
| 2.22 | 1.16283 | 31.44 | 0.00 | 6.13 | 2.50 | 0.00 | 0.00 | 0.02 | 1.00 | 0.38 | 0.11 | 0.01 | 0.01 | 0.00 | 0.24 | 0.28 |
| 2.13 | 1.16283 | 31.44 | 0.00 | 6.15 | 2.46 | 0.00 | 0.00 | 0.02 | 1.00 | 0.38 | 0.11 | 0.01 | 0.01 | 0.00 | 0.24 | 0.28 |
| 2.04 | 1.16283 | 31.45 | 0.00 | 6.17 | 2.43 | 0.00 | 0.00 | 0.02 | 1.00 | 0.38 | 0.11 | 0.01 | 0.01 | 0.00 | 0.24 | 0.28 |
| 1.96 | 1.16283 | 31.45 | 0.00 | 6.19 | 2.39 | 0.00 | 0.00 | 0.02 | 1.00 | 0.38 | 0.11 | 0.01 | 0.01 | 0.00 | 0.24 | 0.28 |
| 1.87 | 1.16283 | 31.46 | 0.00 | 6.21 | 2.35 | 0.00 | 0.00 | 0.02 | 1.00 | 0.38 | 0.11 | 0.01 | 0.01 | 0.00 | 0.24 | 0.28 |
| 1.78 | 1.16283 | 31.47 | 0.00 | 6.23 | 2.32 | 0.00 | 0.00 | 0.02 | 1.00 | 0.38 | 0.11 | 0.01 | 0.01 | 0.00 | 0.24 | 0.28 |
| 1.70 | 1.16283 | 31.47 | 0.00 | 6.25 | 2.28 | 0.00 | 0.00 | 0.02 | 1.00 | 0.38 | 0.11 | 0.01 | 0.01 | 0.00 | 0.24 | 0.28 |
| 1.61 | 1.16283 | 31.48 | 0.00 | 6.26 | 2.25 | 0.00 | 0.00 | 0.02 | 1.00 | 0.38 | 0.11 | 0.01 | 0.01 | 0.00 | 0.24 | 0.28 |
| 1.52 | 1.16283 | 31.48 | 0.00 | 6.28 | 2.21 | 0.00 | 0.00 | 0.02 | 1.00 | 0.38 | 0.11 | 0.01 | 0.01 | 0.00 | 0.24 | 0.28 |
| 1.44 | 1.16283 | 31.49 | 0.00 | 6.30 | 2.18 | 0.00 | 0.00 | 0.02 | 1.00 | 0.38 | 0.11 | 0.01 | 0.01 | 0.00 | 0.24 | 0.28 |
| 1.35 | 1.16283 | 31.49 | 0.00 | 6.32 | 2.15 | 0.00 | 0.00 | 0.02 | 1.00 | 0.38 | 0.11 | 0.01 | 0.01 | 0.00 | 0.24 | 0.28 |
| 1.26 | 1.16283 | 31.50 | 0.00 | 6.33 | 2.11 | 0.00 | 0.00 | 0.01 | 1.00 | 0.38 | 0.11 | 0.01 | 0.01 | 0.00 | 0.24 | 0.28 |
| 1.17 | 1.16283 | 31.50 | 0.00 | 6.35 | 2.08 | 0.00 | 0.00 | 0.01 | 1.00 | 0.38 | 0.11 | 0.01 | 0.01 | 0.00 | 0.24 | 0.27 |
| 1.12 | 1.18783 | 31.50 | 0.00 | 6.33 | 2.14 | 0.00 | 0.00 | 0.02 | 1.00 | 0.42 | 0.12 | 0.01 | 0.01 | 0.00 | 0.24 | 0.28 |
| 1.07 | 1.21283 | 31.50 | 0.00 | 6.31 | 2.20 | 0.00 | 0.00 | 0.02 | 1.00 | 0.42 | 0.12 | 0.01 | 0.01 | 0.00 | 0.24 | 0.28 |
| 1.02 | 1.23783 | 31.50 | 0.00 | 6.29 | 2.26 | 0.00 | 0.00 | 0.02 | 1.00 | 0.42 | 0.12 | 0.01 | 0.01 | 0.00 | 0.24 | 0.28 |
| 0.96 | 1.26283 | 31.50 | 0.00 | 6.27 | 2.31 | 0.00 | 0.00 | 0.02 | 1.00 | 0.42 | 0.12 | 0.01 | 0.01 | 0.00 | 0.24 | 0.28 |

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.91 | 1.28783 | 31.50 | 0.00 | 6.25 | 2.36 | 0.00 | 0.00 | 0.02 | 1.00 | 0.42 | 0.12 | 0.01 | 0.01 | 0.00 | 0.24 | 0.28 | | | | | | | | | | |
| 0.86 | 1.31283 | 31.50 | 0.00 | 6.24 | 2.41 | 0.00 | 0.00 | 0.02 | 1.00 | 0.42 | 0.12 | 0.01 | 0.01 | 0.00 | 0.24 | 0.28 | | | | | | | | | | |
| 0.80 | 1.33783 | 31.50 | 0.00 | 6.22 | 2.45 | 0.00 | 0.00 | 0.02 | 1.00 | 0.42 | 0.12 | 0.01 | 0.01 | 0.00 | 0.24 | 0.28 | | | | | | | | | | |
| 0.75 | 1.36283 | 31.50 | 0.00 | 6.20 | 2.50 | 0.00 | 0.00 | 0.02 | 1.00 | 0.42 | 0.12 | 0.01 | 0.01 | 0.00 | 0.24 | 0.28 | | | | | | | | | | |
| 0.70 | 1.38783 | 31.50 | 0.00 | 6.19 | 2.54 | 0.00 | 0.00 | 0.03 | 1.00 | 0.42 | 0.12 | 0.01 | 0.01 | 0.00 | 0.24 | 0.28 | | | | | | | | | | |
| 0.65 | 1.41283 | 31.50 | 0.00 | 6.18 | 2.58 | 0.00 | 0.00 | 0.03 | 1.00 | 0.42 | 0.12 | 0.01 | 0.01 | 0.00 | 0.24 | 0.28 | | | | | | | | | | |
| 0.59 | 1.43783 | 31.50 | 0.00 | 6.16 | 2.62 | 0.00 | 0.00 | 0.03 | 1.00 | 0.42 | 0.12 | 0.01 | 0.01 | 0.00 | 0.24 | 0.28 | | | | | | | | | | |
| 0.54 | 1.46283 | 31.50 | 0.00 | 6.15 | 2.65 | 0.00 | 0.00 | 0.03 | 1.00 | 0.42 | 0.12 | 0.01 | 0.01 | 0.00 | 0.24 | 0.28 | | | | | | | | | | |
| 0.49 | 1.48783 | 31.50 | 0.00 | 6.14 | 2.69 | 0.00 | 0.00 | 0.03 | 1.00 | 0.42 | 0.12 | 0.01 | 0.01 | 0.00 | 0.24 | 0.28 | | | | | | | | | | |
| 0.43 | 1.51283 | 31.50 | 0.00 | 6.12 | 2.72 | 0.00 | 0.00 | 0.03 | 1.00 | 0.42 | 0.12 | 0.01 | 0.01 | 0.00 | 0.24 | 0.28 | | | | | | | | | | |
| 0.38 | 1.53783 | 31.50 | 0.00 | 6.11 | 2.76 | 0.00 | 0.00 | 0.03 | 1.00 | 0.42 | 0.12 | 0.01 | 0.01 | 0.00 | 0.24 | 0.28 | | | | | | | | | | |
| 0.33 | 1.56283 | 31.50 | 0.00 | 6.10 | 2.79 | 0.00 | 0.00 | 0.03 | 1.00 | 0.42 | 0.12 | 0.01 | 0.01 | 0.00 | 0.24 | 0.28 | | | | | | | | | | |
| 0.27 | 1.58783 | 31.50 | 0.00 | 6.09 | 2.82 | 0.00 | 0.00 | 0.03 | 1.00 | 0.42 | 0.12 | 0.01 | 0.01 | 0.00 | 0.24 | 0.28 | | | | | | | | | | |
| 0.22 | 1.61283 | 31.50 | 0.00 | 6.08 | 2.85 | 0.00 | 0.00 | 0.03 | 1.00 | 0.42 | 0.12 | 0.01 | 0.01 | 0.00 | 0.24 | 0.28 | | | | | | | | | | |
| 0.17 | 1.63783 | 31.50 | 0.00 | 6.07 | 2.87 | 0.00 | 0.00 | 0.03 | 1.00 | 0.42 | 0.12 | 0.01 | 0.01 | 0.00 | 0.24 | 0.29 | | | | | | | | | | |
| 0.12 | 1.66283 | 31.50 | 0.00 | 6.06 | 2.90 | 0.00 | 0.00 | 0.03 | 1.00 | 0.42 | 0.12 | 0.01 | 0.01 | 0.00 | 0.24 | 0.29 | | | | | | | | | | |
| 0.06 | 1.66283 | 31.50 | 0.00 | 6.06 | 2.88 | 0.00 | 0.00 | 0.03 | 1.00 | 0.37 | 0.12 | 0.01 | 0.01 | 0.00 | 0.24 | 0.29 | | | | | | | | | | |
| 0.00 | 1.66283 | 31.50 | 0.00 | 6.04 | 2.77 | 0.00 | 0.00 | 0.04 | 1.00 | 0.37 | 0.12 | 0.01 | 0.01 | 0.00 | 0.24 | 0.28 | | | | | | | | | | |

EXPANDED CAPSULE SUMMARY FOR Headwater

| IOR | REACH | DIST | FLOW | TEMP | SALN | DO | EBOD1 | EBOD2 | ORG-N | NH3 | CHLA | DISP | DEPTH | WIDTH | ADVEC VELO | MEAN VELO | DO SAT | REAER RATE | BOD1 DECA | BOD1 SETT | BOD2 DECA | BOD2 SETT | NH3 DECA | SOD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | km | m³/s | deg C | ppt | mg/L | mg/L | mg/L | mg/L | mg/L | µg/L | m²/s | m | m | m/s | m/s | mg/L | 1/da | 1/da | 1/da | 1/da | 1/da | 1/da | g/m²/d |
| | HDWTR | | 0.003 | 30.0 | 0.0 | 5.0 | 3.6 | 0.0 | 0.0 | 0.1 | 1.0 | | | | | | | | | | | | | |
| | WASTELOAD # 001 (test) ENTERS HERE WITHOUT ANY FLOW | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | PA 1 | 7.73 | 0.003 | 31.6 | 0.0 | 6.6 | 1.9 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 0.99 | 44.7 | 0.000 | 0.000 | 7.4 | 0.874 | 0.11 | 0.01 | 0.01 | 0.00 | 0.24 | 0.27 |
| 2 | PA 1 | 7.69 | 0.003 | 31.6 | 0.0 | 7.0 | 1.0 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 0.99 | 44.7 | 0.000 | 0.000 | 7.4 | 0.874 | 0.11 | 0.01 | 0.01 | 0.00 | 0.24 | 0.26 |
| 3 | IA 2 | 7.63 | 0.003 | 31.6 | 0.0 | 7.1 | 0.4 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 0.99 | 44.7 | 0.000 | 0.000 | 7.4 | 0.874 | 0.11 | 0.01 | 0.01 | 0.00 | 0.25 | 0.25 |
| 4 | IA 2 | 7.57 | 0.003 | 31.6 | 0.0 | 7.1 | 0.2 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 0.99 | 44.7 | 0.000 | 0.000 | 7.4 | 0.874 | 0.11 | 0.01 | 0.01 | 0.00 | 0.25 | 0.25 |
| 5 | I1 3 | 7.53 | 0.003 | 31.8 | 0.0 | 7.1 | 0.1 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 0.99 | 44.7 | 0.000 | 0.000 | 7.3 | 0.878 | 0.11 | 0.01 | 0.01 | 0.00 | 0.25 | 0.25 |
| 6 | I1 3 | 7.49 | 0.003 | 32.1 | 0.0 | 7.1 | 0.1 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 0.99 | 44.7 | 0.000 | 0.000 | 7.3 | 0.882 | 0.11 | 0.01 | 0.01 | 0.00 | 0.26 | 0.26 |
| 7 | IB 4 | 7.41 | 0.016 | 32.1 | 0.0 | 5.1 | 2.3 | 0.0 | 0.0 | 0.1 | 1.0 | 0.0 | 0.99 | 44.7 | 0.000 | 0.000 | 7.3 | 0.881 | 0.11 | 0.01 | 0.01 | 0.00 | 0.24 | 1.83 |
| 8 | IB 4 | 7.34 | 0.029 | 32.0 | 0.0 | 5.0 | 2.5 | 0.0 | 0.0 | 0.1 | 1.0 | 0.0 | 0.99 | 44.7 | 0.001 | 0.001 | 7.3 | 0.880 | 0.11 | 0.01 | 0.01 | 0.00 | 0.24 | 1.82 |
| 9 | IB 4 | 7.27 | 0.042 | 32.0 | 0.0 | 5.0 | 2.5 | 0.0 | 0.0 | 0.1 | 1.0 | 0.0 | 0.99 | 44.7 | 0.001 | 0.001 | 7.3 | 0.880 | 0.11 | 0.01 | 0.01 | 0.00 | 0.24 | 1.82 |
| 10 | IB 4 | 7.19 | 0.055 | 31.9 | 0.0 | 5.0 | 2.6 | 0.0 | 0.0 | 0.1 | 1.0 | 0.0 | 0.99 | 44.7 | 0.001 | 0.001 | 7.3 | 0.879 | 0.11 | 0.01 | 0.01 | 0.00 | 0.24 | 1.82 |
| 11 | IB 4 | 7.12 | 0.068 | 31.9 | 0.0 | 5.0 | 2.6 | 0.0 | 0.0 | 0.1 | 1.0 | 0.0 | 0.99 | 44.7 | 0.002 | 0.002 | 7.3 | 0.879 | 0.11 | 0.01 | 0.01 | 0.00 | 0.24 | 1.81 |
| 12 | IB 4 | 7.05 | 0.081 | 31.9 | 0.0 | 5.0 | 2.6 | 0.0 | 0.0 | 0.1 | 1.0 | 0.0 | 0.99 | 44.7 | 0.002 | 0.002 | 7.3 | 0.878 | 0.11 | 0.01 | 0.01 | 0.00 | 0.24 | 1.81 |
| 13 | IB 4 | 6.98 | 0.094 | 31.8 | 0.0 | 5.0 | 2.6 | 0.0 | 0.0 | 0.1 | 1.0 | 0.0 | 0.99 | 44.7 | 0.002 | 0.002 | 7.3 | 0.877 | 0.11 | 0.01 | 0.01 | 0.00 | 0.23 | 1.80 |
| 14 | IB 4 | 6.90 | 0.107 | 31.8 | 0.0 | 5.0 | 2.6 | 0.0 | 0.0 | 0.1 | 1.0 | 0.0 | 0.99 | 44.7 | 0.002 | 0.002 | 7.3 | 0.877 | 0.11 | 0.01 | 0.01 | 0.00 | 0.23 | 1.80 |
| 15 | IB 4 | 6.83 | 0.120 | 31.7 | 0.0 | 5.0 | 2.6 | 0.0 | 0.0 | 0.1 | 1.0 | 0.0 | 0.99 | 44.7 | 0.003 | 0.003 | 7.3 | 0.876 | 0.11 | 0.01 | 0.01 | 0.00 | 0.23 | 1.79 |
| 16 | IB 4 | 6.76 | 0.133 | 31.7 | 0.0 | 5.0 | 2.6 | 0.0 | 0.0 | 0.1 | 1.0 | 0.0 | 0.99 | 44.7 | 0.003 | 0.003 | 7.3 | 0.876 | 0.11 | 0.01 | 0.01 | 0.00 | 0.23 | 1.79 |
| 17 | IC 5 | 6.68 | 0.133 | 31.7 | 0.0 | 5.0 | 2.5 | 0.0 | 0.0 | 0.1 | 1.0 | 0.0 | 1.18 | 43.8 | 0.003 | 0.003 | 7.3 | 0.735 | 0.11 | 0.01 | 0.01 | 0.00 | 0.23 | 1.79 |
| 18 | IC 5 | 6.61 | 0.133 | 31.7 | 0.0 | 5.0 | 2.4 | 0.0 | 0.0 | 0.1 | 1.0 | 0.0 | 1.18 | 43.8 | 0.003 | 0.003 | 7.3 | 0.735 | 0.11 | 0.01 | 0.01 | 0.00 | 0.23 | 1.79 |
| 19 | IC 5 | 6.53 | 0.133 | 31.7 | 0.0 | 5.0 | 2.3 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 1.18 | 43.8 | 0.003 | 0.003 | 7.3 | 0.735 | 0.11 | 0.01 | 0.01 | 0.00 | 0.23 | 1.79 |
| 20 | IC 5 | 6.45 | 0.133 | 31.7 | 0.0 | 5.0 | 2.2 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 1.18 | 43.8 | 0.003 | 0.003 | 7.3 | 0.735 | 0.11 | 0.01 | 0.01 | 0.00 | 0.23 | 1.78 |
| 21 | IC 5 | 6.37 | 0.133 | 31.7 | 0.0 | 5.0 | 2.1 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 1.18 | 43.8 | 0.003 | 0.003 | 7.3 | 0.735 | 0.11 | 0.01 | 0.01 | 0.00 | 0.23 | 1.78 |
| 22 | IC 5 | 6.30 | 0.133 | 31.7 | 0.0 | 5.1 | 2.0 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 1.18 | 43.8 | 0.003 | 0.003 | 7.3 | 0.735 | 0.11 | 0.01 | 0.01 | 0.00 | 0.23 | 1.78 |
| 23 | IC 5 | 6.22 | 0.133 | 31.7 | 0.0 | 5.1 | 2.0 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 1.18 | 43.8 | 0.003 | 0.003 | 7.3 | 0.735 | 0.11 | 0.01 | 0.01 | 0.00 | 0.23 | 1.78 |
| 24 | IC 5 | 6.14 | 0.133 | 31.7 | 0.0 | 5.1 | 1.9 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 1.18 | 43.8 | 0.003 | 0.003 | 7.3 | 0.735 | 0.11 | 0.01 | 0.01 | 0.00 | 0.23 | 1.78 |
| 25 | IC 5 | 6.07 | 0.133 | 31.7 | 0.0 | 5.1 | 1.8 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 1.18 | 43.8 | 0.003 | 0.003 | 7.3 | 0.735 | 0.11 | 0.01 | 0.01 | 0.00 | 0.23 | 1.78 |
| 26 | IC 5 | 5.99 | 0.133 | 31.7 | 0.0 | 5.1 | 1.7 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 1.18 | 43.8 | 0.003 | 0.003 | 7.3 | 0.735 | 0.11 | 0.01 | 0.01 | 0.00 | 0.23 | 1.78 |

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 27 | I2 | 6 | 5.91 | 0.201 | 31.7 | 0.0 | 5.3 | 2.9 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 2.07 | 62.8 | 0.002 | 0.002 | 7.3 | 0.418 | 0.11 | 0.01 | 0.01 | 0.00 | 0.23 | 0.29 |
| 28 | I2 | 6 | 5.83 | 0.270 | 31.6 | 0.0 | 5.4 | 3.5 | 0.0 | 0.0 | 0.1 | 1.0 | 0.0 | 2.07 | 62.8 | 0.002 | 0.002 | 7.4 | 0.418 | 0.11 | 0.01 | 0.01 | 0.00 | 0.23 | 0.30 |
| 29 | I2 | 6 | 5.75 | 0.339 | 31.6 | 0.0 | 5.4 | 3.8 | 0.0 | 0.0 | 0.1 | 1.0 | 0.0 | 2.07 | 62.8 | 0.003 | 0.003 | 7.4 | 0.418 | 0.11 | 0.01 | 0.01 | 0.00 | 0.23 | 0.30 |
| 30 | I2 | 6 | 5.67 | 0.407 | 31.5 | 0.0 | 5.5 | 4.0 | 0.0 | 0.0 | 0.1 | 1.0 | 0.0 | 2.07 | 62.8 | 0.003 | 0.003 | 7.4 | 0.417 | 0.11 | 0.01 | 0.01 | 0.00 | 0.23 | 0.30 |
| 31 | I2 | 6 | 5.59 | 0.476 | 31.5 | 0.0 | 5.5 | 4.1 | 0.0 | 0.0 | 0.1 | 1.0 | 0.0 | 2.07 | 62.8 | 0.004 | 0.004 | 7.4 | 0.417 | 0.11 | 0.01 | 0.01 | 0.00 | 0.23 | 0.30 |
| 32 | I2 | 6 | 5.52 | 0.545 | 31.4 | 0.0 | 5.5 | 4.2 | 0.0 | 0.0 | 0.1 | 1.0 | 0.0 | 2.07 | 62.8 | 0.004 | 0.004 | 7.4 | 0.417 | 0.11 | 0.01 | 0.01 | 0.00 | 0.23 | 0.30 |
| 33 | I2 | 6 | 5.44 | 0.613 | 31.4 | 0.0 | 5.5 | 4.3 | 0.0 | 0.0 | 0.1 | 1.0 | 0.0 | 2.07 | 62.8 | 0.005 | 0.005 | 7.4 | 0.416 | 0.11 | 0.01 | 0.01 | 0.00 | 0.23 | 0.30 |
| 34 | I2 | 6 | 5.36 | 0.682 | 31.3 | 0.0 | 5.5 | 4.4 | 0.0 | 0.0 | 0.1 | 1.0 | 0.0 | 2.07 | 62.8 | 0.005 | 0.005 | 7.4 | 0.416 | 0.11 | 0.01 | 0.01 | 0.00 | 0.23 | 0.30 |
| 35 | I2 | 6 | 5.28 | 0.751 | 31.3 | 0.0 | 5.5 | 4.4 | 0.0 | 0.0 | 0.1 | 1.0 | 0.0 | 2.07 | 62.8 | 0.006 | 0.006 | 7.4 | 0.416 | 0.11 | 0.01 | 0.01 | 0.00 | 0.23 | 0.30 |
| 36 | I2 | 6 | 5.20 | 0.819 | 31.2 | 0.0 | 5.5 | 4.5 | 0.0 | 0.0 | 0.1 | 1.0 | 0.0 | 2.07 | 62.8 | 0.006 | 0.006 | 7.4 | 0.415 | 0.11 | 0.01 | 0.01 | 0.00 | 0.23 | 0.30 |
| 37 | I2 | 6 | 5.12 | 0.888 | 31.2 | 0.0 | 5.5 | 4.5 | 0.0 | 0.0 | 0.1 | 1.0 | 0.0 | 2.07 | 62.8 | 0.007 | 0.007 | 7.4 | 0.415 | 0.11 | 0.01 | 0.01 | 0.00 | 0.23 | 0.30 |
| 38 | I2 | 6 | 5.04 | 0.957 | 31.1 | 0.0 | 5.5 | 4.5 | 0.0 | 0.0 | 0.1 | 1.0 | 0.0 | 2.07 | 62.8 | 0.007 | 0.007 | 7.4 | 0.415 | 0.11 | 0.01 | 0.01 | 0.00 | 0.23 | 0.30 |
| 39 | I2 | 6 | 4.96 | 1.025 | 31.1 | 0.0 | 5.5 | 4.6 | 0.0 | 0.0 | 0.1 | 1.0 | 0.0 | 2.07 | 62.8 | 0.008 | 0.008 | 7.4 | 0.414 | 0.11 | 0.01 | 0.01 | 0.00 | 0.23 | 0.30 |
| 40 | I2 | 6 | 4.88 | 1.094 | 31.0 | 0.0 | 5.5 | 4.6 | 0.0 | 0.0 | 0.1 | 1.0 | 0.0 | 2.07 | 62.8 | 0.008 | 0.008 | 7.4 | 0.414 | 0.11 | 0.01 | 0.01 | 0.00 | 0.22 | 0.30 |
| 41 | I2 | 6 | 4.80 | 1.163 | 31.0 | 0.0 | 5.5 | 4.6 | 0.0 | 0.0 | 0.1 | 1.0 | 0.0 | 2.07 | 62.8 | 0.009 | 0.009 | 7.4 | 0.414 | 0.11 | 0.01 | 0.01 | 0.00 | 0.22 | 0.30 |
| 42 | ID | 7 | 4.71 | 1.163 | 31.0 | 0.0 | 5.5 | 4.5 | 0.0 | 0.0 | 0.1 | 1.0 | 0.0 | 2.77 | 82.7 | 0.005 | 0.005 | 7.4 | 0.309 | 0.11 | 0.00 | 0.01 | 0.00 | 0.22 | 0.30 |
| 43 | ID | 7 | 4.62 | 1.163 | 31.0 | 0.0 | 5.5 | 4.4 | 0.0 | 0.0 | 0.1 | 1.0 | 0.0 | 2.77 | 82.7 | 0.005 | 0.005 | 7.4 | 0.309 | 0.11 | 0.00 | 0.01 | 0.00 | 0.22 | 0.30 |
| 44 | ID | 7 | 4.52 | 1.163 | 31.1 | 0.0 | 5.5 | 4.3 | 0.0 | 0.0 | 0.1 | 1.0 | 0.0 | 2.77 | 82.7 | 0.005 | 0.005 | 7.4 | 0.310 | 0.11 | 0.00 | 0.01 | 0.00 | 0.23 | 0.30 |
| 45 | ID | 7 | 4.43 | 1.163 | 31.1 | 0.0 | 5.5 | 4.2 | 0.0 | 0.0 | 0.1 | 1.0 | 0.0 | 2.77 | 82.7 | 0.005 | 0.005 | 7.4 | 0.310 | 0.11 | 0.00 | 0.01 | 0.00 | 0.23 | 0.30 |
| 46 | ID | 7 | 4.33 | 1.163 | 31.1 | 0.0 | 5.6 | 4.1 | 0.0 | 0.0 | 0.1 | 1.0 | 0.0 | 2.77 | 82.7 | 0.005 | 0.005 | 7.4 | 0.310 | 0.11 | 0.00 | 0.01 | 0.00 | 0.23 | 0.29 |
| 47 | ID | 7 | 4.24 | 1.163 | 31.1 | 0.0 | 5.6 | 4.0 | 0.0 | 0.0 | 0.1 | 1.0 | 0.0 | 2.77 | 82.7 | 0.005 | 0.005 | 7.4 | 0.310 | 0.11 | 0.00 | 0.01 | 0.00 | 0.23 | 0.29 |
| 48 | ID | 7 | 4.14 | 1.163 | 31.1 | 0.0 | 5.6 | 3.9 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 2.77 | 82.7 | 0.005 | 0.005 | 7.4 | 0.310 | 0.11 | 0.00 | 0.01 | 0.00 | 0.23 | 0.29 |
| 49 | ID | 7 | 4.05 | 1.163 | 31.2 | 0.0 | 5.6 | 3.8 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 2.77 | 82.7 | 0.005 | 0.005 | 7.4 | 0.310 | 0.11 | 0.00 | 0.01 | 0.00 | 0.23 | 0.29 |
| 50 | ID | 7 | 3.95 | 1.163 | 31.2 | 0.0 | 5.7 | 3.7 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 2.77 | 82.7 | 0.005 | 0.005 | 7.4 | 0.310 | 0.11 | 0.00 | 0.01 | 0.00 | 0.23 | 0.29 |
| 51 | ID | 7 | 3.86 | 1.163 | 31.2 | 0.0 | 5.7 | 3.6 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 2.77 | 82.7 | 0.005 | 0.005 | 7.4 | 0.310 | 0.11 | 0.00 | 0.01 | 0.00 | 0.23 | 0.29 |
| 52 | ID | 7 | 3.76 | 1.163 | 31.2 | 0.0 | 5.7 | 3.5 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 2.77 | 82.7 | 0.005 | 0.005 | 7.4 | 0.310 | 0.11 | 0.00 | 0.01 | 0.00 | 0.23 | 0.29 |
| 53 | ID | 7 | 3.67 | 1.163 | 31.2 | 0.0 | 5.7 | 3.4 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 2.77 | 82.7 | 0.005 | 0.005 | 7.4 | 0.311 | 0.11 | 0.00 | 0.01 | 0.00 | 0.23 | 0.29 |
| 54 | ID | 7 | 3.57 | 1.163 | 31.3 | 0.0 | 5.8 | 3.4 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 2.77 | 82.7 | 0.005 | 0.005 | 7.4 | 0.311 | 0.11 | 0.00 | 0.01 | 0.00 | 0.23 | 0.29 |
| 55 | ID | 7 | 3.48 | 1.163 | 31.3 | 0.0 | 5.8 | 3.3 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 2.77 | 82.7 | 0.005 | 0.005 | 7.4 | 0.311 | 0.11 | 0.00 | 0.01 | 0.00 | 0.23 | 0.29 |
| 56 | ID | 7 | 3.38 | 1.163 | 31.3 | 0.0 | 5.8 | 3.2 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 2.77 | 82.7 | 0.005 | 0.005 | 7.4 | 0.311 | 0.11 | 0.00 | 0.01 | 0.00 | 0.23 | 0.29 |
| 57 | ID | 7 | 3.29 | 1.163 | 31.3 | 0.0 | 5.8 | 3.1 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 2.77 | 82.7 | 0.005 | 0.005 | 7.4 | 0.311 | 0.11 | 0.00 | 0.01 | 0.00 | 0.23 | 0.29 |
| 58 | ID | 7 | 3.19 | 1.163 | 31.3 | 0.0 | 5.9 | 3.0 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 2.77 | 82.7 | 0.005 | 0.005 | 7.4 | 0.311 | 0.11 | 0.00 | 0.01 | 0.00 | 0.23 | 0.28 |
| 59 | ID | 7 | 3.10 | 1.163 | 31.4 | 0.0 | 5.9 | 3.0 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 2.77 | 82.7 | 0.005 | 0.005 | 7.4 | 0.311 | 0.11 | 0.00 | 0.01 | 0.00 | 0.23 | 0.28 |
| 60 | ID | 7 | 3.00 | 1.163 | 31.4 | 0.0 | 5.9 | 2.9 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 2.77 | 82.7 | 0.005 | 0.005 | 7.4 | 0.311 | 0.11 | 0.00 | 0.01 | 0.00 | 0.23 | 0.28 |
| 61 | ID | 7 | 2.91 | 1.163 | 31.4 | 0.0 | 5.9 | 2.8 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 2.77 | 82.7 | 0.005 | 0.005 | 7.4 | 0.311 | 0.11 | 0.00 | 0.01 | 0.00 | 0.23 | 0.28 |
| 62 | IE | 8 | 2.82 | 1.163 | 31.4 | 0.0 | 6.0 | 2.8 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 2.29 | 67.7 | 0.008 | 0.008 | 7.4 | 0.377 | 0.11 | 0.01 | 0.01 | 0.00 | 0.23 | 0.28 |
| 63 | IE | 8 | 2.74 | 1.163 | 31.4 | 0.0 | 6.0 | 2.7 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 2.29 | 67.7 | 0.008 | 0.008 | 7.4 | 0.377 | 0.11 | 0.01 | 0.01 | 0.00 | 0.24 | 0.28 |
| 64 | IE | 8 | 2.65 | 1.163 | 31.4 | 0.0 | 6.0 | 2.7 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 2.29 | 67.7 | 0.008 | 0.008 | 7.4 | 0.377 | 0.11 | 0.01 | 0.01 | 0.00 | 0.24 | 0.28 |
| 65 | IE | 8 | 2.56 | 1.163 | 31.4 | 0.0 | 6.0 | 2.7 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 2.29 | 67.7 | 0.008 | 0.008 | 7.4 | 0.377 | 0.11 | 0.01 | 0.01 | 0.00 | 0.24 | 0.28 |
| 66 | IE | 8 | 2.48 | 1.163 | 31.4 | 0.0 | 6.1 | 2.6 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 2.29 | 67.7 | 0.008 | 0.008 | 7.4 | 0.377 | 0.11 | 0.01 | 0.01 | 0.00 | 0.24 | 0.28 |
| 67 | IE | 8 | 2.39 | 1.163 | 31.4 | 0.0 | 6.1 | 2.6 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 2.29 | 67.7 | 0.008 | 0.008 | 7.4 | 0.377 | 0.11 | 0.01 | 0.01 | 0.00 | 0.24 | 0.28 |
| 68 | IE | 8 | 2.30 | 1.163 | 31.4 | 0.0 | 6.1 | 2.5 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 2.29 | 67.7 | 0.008 | 0.008 | 7.4 | 0.377 | 0.11 | 0.01 | 0.01 | 0.00 | 0.24 | 0.28 |
| 69 | IE | 8 | 2.22 | 1.163 | 31.4 | 0.0 | 6.1 | 2.5 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 2.29 | 67.7 | 0.008 | 0.008 | 7.4 | 0.377 | 0.11 | 0.01 | 0.01 | 0.00 | 0.24 | 0.28 |
| 70 | IE | 8 | 2.13 | 1.163 | 31.4 | 0.0 | 6.2 | 2.5 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 2.29 | 67.7 | 0.008 | 0.008 | 7.4 | 0.377 | 0.11 | 0.01 | 0.01 | 0.00 | 0.24 | 0.28 |
| 71 | IE | 8 | 2.04 | 1.163 | 31.4 | 0.0 | 6.2 | 2.4 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 2.29 | 67.7 | 0.008 | 0.008 | 7.4 | 0.377 | 0.11 | 0.01 | 0.01 | 0.00 | 0.24 | 0.28 |
| 72 | IE | 8 | 1.96 | 1.163 | 31.5 | 0.0 | 6.2 | 2.4 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 2.29 | 67.7 | 0.008 | 0.008 | 7.4 | 0.377 | 0.11 | 0.01 | 0.01 | 0.00 | 0.24 | 0.28 |

EXPANDED CAPSULE SUMMARY FOR Headwater

| IOR | REACH | DIST | FLOW | TEMP | SALN | DO | EBOD1 | EBOD2 | ORG-N | NH3 | CHLA | ADVEC DISP | MEAN DEPTH | DO WIDTH | REAER VELO | BOD1 VELO | BOD1 SAT | BOD2 RATE | BOD2 DECA | BOD2 SETT | NH3 DECA | NH3 SETT | DECA | SOD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | km | m³/s | deg C | ppt | mg/L | mg/L | mg/L | mg/L | µg/L | m²/s | m | m | m/s | m/s | mg/L | 1/da | 1/da | 1/da | 1/da | 1/da | 1/da | 1/da | 1/da | g/m²/d |

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 73 | IE | 8 | 1.87 | 1.163 | 31.5 | 0.0 | 6.2 | 2.4 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 2.29 | 67.7 | 0.008 | 0.008 | 7.4 | 0.377 | 0.11 | 0.01 | 0.01 | 0.00 | 0.24 | 0.28 |
| 74 | IE | 8 | 1.78 | 1.163 | 31.5 | 0.0 | 6.2 | 2.3 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 2.29 | 67.7 | 0.008 | 0.008 | 7.4 | 0.377 | 0.11 | 0.01 | 0.01 | 0.00 | 0.24 | 0.28 |
| 75 | IE | 8 | 1.70 | 1.163 | 31.5 | 0.0 | 6.2 | 2.3 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 2.29 | 67.7 | 0.008 | 0.008 | 7.4 | 0.377 | 0.11 | 0.01 | 0.01 | 0.00 | 0.24 | 0.28 |
| 76 | IE | 8 | 1.61 | 1.163 | 31.5 | 0.0 | 6.3 | 2.2 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 2.29 | 67.7 | 0.008 | 0.008 | 7.4 | 0.377 | 0.11 | 0.01 | 0.01 | 0.00 | 0.24 | 0.28 |
| 77 | IE | 8 | 1.52 | 1.163 | 31.5 | 0.0 | 6.3 | 2.2 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 2.29 | 67.7 | 0.008 | 0.008 | 7.4 | 0.377 | 0.11 | 0.01 | 0.01 | 0.00 | 0.24 | 0.28 |
| 78 | IE | 8 | 1.44 | 1.163 | 31.5 | 0.0 | 6.3 | 2.2 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 2.29 | 67.7 | 0.008 | 0.008 | 7.4 | 0.377 | 0.11 | 0.01 | 0.01 | 0.00 | 0.24 | 0.28 |
| 79 | IE | 8 | 1.35 | 1.163 | 31.5 | 0.0 | 6.3 | 2.1 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 2.29 | 67.7 | 0.008 | 0.008 | 7.4 | 0.377 | 0.11 | 0.01 | 0.01 | 0.00 | 0.24 | 0.28 |
| 80 | IE | 8 | 1.26 | 1.163 | 31.5 | 0.0 | 6.3 | 2.1 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 2.29 | 67.7 | 0.008 | 0.008 | 7.4 | 0.377 | 0.11 | 0.01 | 0.01 | 0.00 | 0.24 | 0.28 |
| 81 | IE | 8 | 1.17 | 1.163 | 31.5 | 0.0 | 6.3 | 2.1 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 2.29 | 67.7 | 0.008 | 0.008 | 7.4 | 0.377 | 0.11 | 0.01 | 0.01 | 0.00 | 0.24 | 0.27 |
| 82 | IF | 9 | 1.12 | 1.188 | 31.5 | 0.0 | 6.3 | 2.1 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 2.08 | 58.9 | 0.010 | 0.010 | 7.4 | 0.415 | 0.12 | 0.01 | 0.01 | 0.00 | 0.24 | 0.28 |
| 83 | IF | 9 | 1.07 | 1.213 | 31.5 | 0.0 | 6.3 | 2.2 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 2.08 | 58.9 | 0.010 | 0.010 | 7.4 | 0.415 | 0.12 | 0.01 | 0.01 | 0.00 | 0.24 | 0.28 |
| 84 | IF | 9 | 1.02 | 1.238 | 31.5 | 0.0 | 6.3 | 2.3 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 2.08 | 58.9 | 0.010 | 0.010 | 7.4 | 0.415 | 0.12 | 0.01 | 0.01 | 0.00 | 0.24 | 0.28 |
| 85 | IF | 9 | 0.96 | 1.263 | 31.5 | 0.0 | 6.3 | 2.3 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 2.08 | 58.9 | 0.010 | 0.010 | 7.4 | 0.415 | 0.12 | 0.01 | 0.01 | 0.00 | 0.24 | 0.28 |
| 86 | IF | 9 | 0.91 | 1.288 | 31.5 | 0.0 | 6.3 | 2.4 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 2.08 | 58.9 | 0.011 | 0.011 | 7.4 | 0.415 | 0.12 | 0.01 | 0.01 | 0.00 | 0.24 | 0.28 |
| 87 | IF | 9 | 0.86 | 1.313 | 31.5 | 0.0 | 6.2 | 2.4 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 2.08 | 58.9 | 0.011 | 0.011 | 7.4 | 0.415 | 0.12 | 0.01 | 0.01 | 0.00 | 0.24 | 0.28 |
| 88 | IF | 9 | 0.80 | 1.338 | 31.5 | 0.0 | 6.2 | 2.5 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 2.08 | 58.9 | 0.011 | 0.011 | 7.4 | 0.415 | 0.12 | 0.01 | 0.01 | 0.00 | 0.24 | 0.28 |
| 89 | IF | 9 | 0.75 | 1.363 | 31.5 | 0.0 | 6.2 | 2.5 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 2.08 | 58.9 | 0.011 | 0.011 | 7.4 | 0.415 | 0.12 | 0.01 | 0.01 | 0.00 | 0.24 | 0.28 |
| 90 | IF | 9 | 0.70 | 1.388 | 31.5 | 0.0 | 6.2 | 2.5 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 2.08 | 58.9 | 0.011 | 0.011 | 7.4 | 0.415 | 0.12 | 0.01 | 0.01 | 0.00 | 0.24 | 0.28 |
| 91 | IF | 9 | 0.65 | 1.413 | 31.5 | 0.0 | 6.2 | 2.6 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 2.08 | 58.9 | 0.012 | 0.012 | 7.4 | 0.415 | 0.12 | 0.01 | 0.01 | 0.00 | 0.24 | 0.28 |
| 92 | IF | 9 | 0.59 | 1.438 | 31.5 | 0.0 | 6.2 | 2.6 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 2.08 | 58.9 | 0.012 | 0.012 | 7.4 | 0.415 | 0.12 | 0.01 | 0.01 | 0.00 | 0.24 | 0.28 |
| 93 | IF | 9 | 0.54 | 1.463 | 31.5 | 0.0 | 6.1 | 2.7 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 2.08 | 58.9 | 0.012 | 0.012 | 7.4 | 0.415 | 0.12 | 0.01 | 0.01 | 0.00 | 0.24 | 0.28 |
| 94 | IF | 9 | 0.49 | 1.488 | 31.5 | 0.0 | 6.1 | 2.7 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 2.08 | 58.9 | 0.012 | 0.012 | 7.4 | 0.415 | 0.12 | 0.01 | 0.01 | 0.00 | 0.24 | 0.28 |
| 95 | IF | 9 | 0.43 | 1.513 | 31.5 | 0.0 | 6.1 | 2.7 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 2.08 | 58.9 | 0.012 | 0.012 | 7.4 | 0.415 | 0.12 | 0.01 | 0.01 | 0.00 | 0.24 | 0.28 |
| 96 | IF | 9 | 0.38 | 1.538 | 31.5 | 0.0 | 6.1 | 2.8 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 2.08 | 58.9 | 0.013 | 0.013 | 7.4 | 0.415 | 0.12 | 0.01 | 0.01 | 0.00 | 0.24 | 0.28 |
| 97 | IF | 9 | 0.33 | 1.563 | 31.5 | 0.0 | 6.1 | 2.8 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 2.08 | 58.9 | 0.013 | 0.013 | 7.4 | 0.415 | 0.12 | 0.01 | 0.01 | 0.00 | 0.24 | 0.28 |
| 98 | IF | 9 | 0.27 | 1.588 | 31.5 | 0.0 | 6.1 | 2.8 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 2.08 | 58.9 | 0.013 | 0.013 | 7.4 | 0.415 | 0.12 | 0.01 | 0.01 | 0.00 | 0.24 | 0.28 |
| 99 | IF | 9 | 0.22 | 1.613 | 31.5 | 0.0 | 6.1 | 2.8 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 2.08 | 58.9 | 0.013 | 0.013 | 7.4 | 0.415 | 0.12 | 0.01 | 0.01 | 0.00 | 0.24 | 0.28 |
| 100 | IF | 9 | 0.17 | 1.638 | 31.5 | 0.0 | 6.1 | 2.9 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 2.08 | 58.9 | 0.013 | 0.013 | 7.4 | 0.415 | 0.12 | 0.01 | 0.01 | 0.00 | 0.24 | 0.29 |
| 101 | IF | 9 | 0.12 | 1.663 | 31.5 | 0.0 | 6.1 | 2.9 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 2.08 | 58.9 | 0.014 | 0.014 | 7.4 | 0.415 | 0.12 | 0.01 | 0.01 | 0.00 | 0.24 | 0.29 |
| 102 | TL | 10 | 0.06 | 1.663 | 31.5 | 0.0 | 6.1 | 2.9 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 2.34 | 65.1 | 0.011 | 0.011 | 7.4 | 0.369 | 0.12 | 0.01 | 0.01 | 0.00 | 0.24 | 0.29 |
| 103 | TL | 10 | 0.00 | 1.663 | 31.5 | 0.0 | 6.0 | 2.8 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 2.34 | 65.1 | 0.011 | 0.011 | 7.4 | 0.369 | 0.12 | 0.01 | 0.01 | 0.00 | 0.24 | 0.28 |

SPECIAL REPORT: Headwater

WATER QUALITY CONSTITUENT VALUES

| ELEM NO. | ENDING km | TEMP deg C | SALN ppt | CM-I * | CM-II * | DO mg/L | BOD1 mg/L | BOD2 mg/L | EBOD#1 mg/L | EBOD#2 mg/L | ORG-N mg/L | NH3-N mg/L | NO3-N mg/L | TOTN µg/L | PHOS ** | CHL A #/100mL | MACRO * | COLI | NCM |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 7.730 | 31.60 | 0.0 | 0.0 | 0.0 | 6.63 | 1.91 | 0.00 | 1.91 | 0.00 | 0.00 | 0.04 | 0.53 | 0.57 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 2 | 7.690 | 31.60 | 0.0 | 0.0 | 0.0 | 6.97 | 1.01 | 0.00 | 1.01 | 0.00 | 0.00 | 0.01 | 0.53 | 0.54 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 3 | 7.628 | 31.60 | 0.0 | 0.0 | 0.0 | 7.09 | 0.42 | 0.00 | 0.42 | 0.00 | 0.00 | 0.00 | 0.49 | 0.49 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 4 | 7.565 | 31.60 | 0.0 | 0.0 | 0.0 | 7.13 | 0.18 | 0.00 | 0.18 | 0.00 | 0.00 | 0.00 | 0.44 | 0.44 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 5 | 7.525 | 31.85 | 0.0 | 0.0 | 0.0 | 7.12 | 0.09 | 0.00 | 0.09 | 0.00 | 0.00 | 0.00 | 0.41 | 0.41 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 6 | 7.485 | 32.10 | 0.0 | 0.0 | 0.0 | 7.08 | 0.09 | 0.00 | 0.09 | 0.00 | 0.00 | 0.00 | 0.38 | 0.39 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 7 | 7.412 | 32.06 | 0.0 | 0.0 | 0.0 | 5.13 | 2.28 | 0.00 | 2.28 | 0.00 | 0.00 | 0.05 | 0.50 | 0.55 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 8 | 7.340 | 32.02 | 0.0 | 0.0 | 0.0 | 5.03 | 2.47 | 0.00 | 2.47 | 0.00 | 0.00 | 0.06 | 0.51 | 0.57 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 9 | 7.267 | 31.98 | 0.0 | 0.0 | 0.0 | 5.01 | 2.54 | 0.00 | 2.54 | 0.00 | 0.00 | 0.06 | 0.52 | 0.57 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 10 | 7.195 | 31.94 | 0.0 | 0.0 | 0.0 | 5.00 | 2.57 | 0.00 | 2.57 | 0.00 | 0.00 | 0.06 | 0.52 | 0.58 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 11 | 7.122 | 31.90 | 0.0 | 0.0 | 0.0 | 5.00 | 2.59 | 0.00 | 2.59 | 0.00 | 0.00 | 0.06 | 0.52 | 0.58 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 12 | 7.050 | 31.86 | 0.0 | 0.0 | 0.0 | 5.00 | 2.60 | 0.00 | 2.60 | 0.00 | 0.00 | 0.06 | 0.52 | 0.58 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 13 | 6.977 | 31.82 | 0.0 | 0.0 | 0.0 | 5.01 | 2.61 | 0.00 | 2.61 | 0.00 | 0.00 | 0.06 | 0.52 | 0.58 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 14 | 6.905 | 31.78 | 0.0 | 0.0 | 0.0 | 5.01 | 2.62 | 0.00 | 2.62 | 0.00 | 0.00 | 0.06 | 0.52 | 0.58 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 15 | 6.832 | 31.74 | 0.0 | 0.0 | 0.0 | 5.01 | 2.62 | 0.00 | 2.62 | 0.00 | 0.00 | 0.06 | 0.52 | 0.58 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |

| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 16 | 6.760 | 31.70 | 0.0 | 0.0 | 0.0 | 5.02 | 2.63 | 0.00 | 2.63 | 0.00 | 0.00 | 0.06 | 0.52 | 0.58 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 17 | 6.683 | 31.70 | 0.0 | 0.0 | 0.0 | 5.02 | 2.52 | 0.00 | 2.52 | 0.00 | 0.00 | 0.06 | 0.53 | 0.58 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 18 | 6.606 | 31.70 | 0.0 | 0.0 | 0.0 | 5.02 | 2.42 | 0.00 | 2.42 | 0.00 | 0.00 | 0.05 | 0.53 | 0.58 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 19 | 6.529 | 31.70 | 0.0 | 0.0 | 0.0 | 5.03 | 2.32 | 0.00 | 2.32 | 0.00 | 0.00 | 0.05 | 0.53 | 0.58 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 20 | 6.452 | 31.70 | 0.0 | 0.0 | 0.0 | 5.03 | 2.22 | 0.00 | 2.22 | 0.00 | 0.00 | 0.04 | 0.53 | 0.58 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 21 | 6.375 | 31.70 | 0.0 | 0.0 | 0.0 | 5.04 | 2.13 | 0.00 | 2.13 | 0.00 | 0.00 | 0.04 | 0.54 | 0.58 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 22 | 6.298 | 31.70 | 0.0 | 0.0 | 0.0 | 5.05 | 2.05 | 0.00 | 2.05 | 0.00 | 0.00 | 0.04 | 0.54 | 0.57 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 23 | 6.221 | 31.70 | 0.0 | 0.0 | 0.0 | 5.06 | 1.96 | 0.00 | 1.96 | 0.00 | 0.00 | 0.03 | 0.54 | 0.57 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 24 | 6.144 | 31.70 | 0.0 | 0.0 | 0.0 | 5.07 | 1.88 | 0.00 | 1.88 | 0.00 | 0.00 | 0.03 | 0.54 | 0.57 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 25 | 6.067 | 31.70 | 0.0 | 0.0 | 0.0 | 5.09 | 1.81 | 0.00 | 1.81 | 0.00 | 0.00 | 0.03 | 0.54 | 0.57 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 26 | 5.990 | 31.70 | 0.0 | 0.0 | 0.0 | 5.10 | 1.75 | 0.00 | 1.75 | 0.00 | 0.00 | 0.03 | 0.54 | 0.57 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 27 | 5.911 | 31.65 | 0.0 | 0.0 | 0.0 | 5.34 | 2.92 | 0.00 | 2.92 | 0.00 | 0.00 | 0.05 | 0.53 | 0.58 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 28 | 5.832 | 31.61 | 0.0 | 0.0 | 0.0 | 5.41 | 3.47 | 0.00 | 3.47 | 0.00 | 0.00 | 0.05 | 0.53 | 0.58 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 29 | 5.753 | 31.56 | 0.0 | 0.0 | 0.0 | 5.44 | 3.79 | 0.00 | 3.79 | 0.00 | 0.00 | 0.06 | 0.52 | 0.58 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 30 | 5.674 | 31.51 | 0.0 | 0.0 | 0.0 | 5.45 | 3.99 | 0.00 | 3.99 | 0.00 | 0.00 | 0.06 | 0.52 | 0.58 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 31 | 5.595 | 31.47 | 0.0 | 0.0 | 0.0 | 5.46 | 4.13 | 0.00 | 4.13 | 0.00 | 0.00 | 0.06 | 0.52 | 0.59 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 32 | 5.516 | 31.42 | 0.0 | 0.0 | 0.0 | 5.46 | 4.24 | 0.00 | 4.24 | 0.00 | 0.00 | 0.06 | 0.52 | 0.59 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 33 | 5.437 | 31.37 | 0.0 | 0.0 | 0.0 | 5.46 | 4.31 | 0.00 | 4.31 | 0.00 | 0.00 | 0.07 | 0.52 | 0.59 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 34 | 5.358 | 31.33 | 0.0 | 0.0 | 0.0 | 5.46 | 4.38 | 0.00 | 4.38 | 0.00 | 0.00 | 0.07 | 0.52 | 0.59 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 35 | 5.279 | 31.28 | 0.0 | 0.0 | 0.0 | 5.46 | 4.42 | 0.00 | 4.42 | 0.00 | 0.00 | 0.07 | 0.52 | 0.59 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 36 | 5.200 | 31.23 | 0.0 | 0.0 | 0.0 | 5.46 | 4.47 | 0.00 | 4.47 | 0.00 | 0.00 | 0.07 | 0.52 | 0.59 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 37 | 5.121 | 31.19 | 0.0 | 0.0 | 0.0 | 5.46 | 4.50 | 0.00 | 4.50 | 0.00 | 0.00 | 0.07 | 0.52 | 0.59 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 38 | 5.042 | 31.14 | 0.0 | 0.0 | 0.0 | 5.46 | 4.53 | 0.00 | 4.53 | 0.00 | 0.00 | 0.07 | 0.52 | 0.59 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 39 | 4.963 | 31.09 | 0.0 | 0.0 | 0.0 | 5.46 | 4.55 | 0.00 | 4.55 | 0.00 | 0.00 | 0.07 | 0.52 | 0.59 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 40 | 4.884 | 31.05 | 0.0 | 0.0 | 0.0 | 5.46 | 4.57 | 0.00 | 4.57 | 0.00 | 0.00 | 0.07 | 0.52 | 0.59 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 41 | 4.805 | 31.00 | 0.0 | 0.0 | 0.0 | 5.46 | 4.59 | 0.00 | 4.59 | 0.00 | 0.00 | 0.07 | 0.52 | 0.59 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 42 | 4.710 | 31.02 | 0.0 | 0.0 | 0.0 | 5.48 | 4.48 | 0.00 | 4.48 | 0.00 | 0.00 | 0.07 | 0.52 | 0.59 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 43 | 4.615 | 31.04 | 0.0 | 0.0 | 0.0 | 5.50 | 4.38 | 0.00 | 4.38 | 0.00 | 0.00 | 0.06 | 0.53 | 0.59 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 44 | 4.521 | 31.06 | 0.0 | 0.0 | 0.0 | 5.52 | 4.27 | 0.00 | 4.27 | 0.00 | 0.00 | 0.06 | 0.53 | 0.59 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 45 | 4.426 | 31.08 | 0.0 | 0.0 | 0.0 | 5.54 | 4.17 | 0.00 | 4.17 | 0.00 | 0.00 | 0.06 | 0.53 | 0.59 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 46 | 4.331 | 31.10 | 0.0 | 0.0 | 0.0 | 5.57 | 4.07 | 0.00 | 4.07 | 0.00 | 0.00 | 0.05 | 0.53 | 0.59 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 47 | 4.237 | 31.12 | 0.0 | 0.0 | 0.0 | 5.59 | 3.97 | 0.00 | 3.97 | 0.00 | 0.00 | 0.05 | 0.53 | 0.58 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 48 | 4.142 | 31.14 | 0.0 | 0.0 | 0.0 | 5.62 | 3.88 | 0.00 | 3.88 | 0.00 | 0.00 | 0.05 | 0.53 | 0.58 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 49 | 4.047 | 31.16 | 0.0 | 0.0 | 0.0 | 5.64 | 3.79 | 0.00 | 3.79 | 0.00 | 0.00 | 0.05 | 0.54 | 0.58 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 50 | 3.952 | 31.18 | 0.0 | 0.0 | 0.0 | 5.67 | 3.70 | 0.00 | 3.70 | 0.00 | 0.00 | 0.05 | 0.54 | 0.58 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 51 | 3.858 | 31.20 | 0.0 | 0.0 | 0.0 | 5.69 | 3.61 | 0.00 | 3.61 | 0.00 | 0.00 | 0.04 | 0.54 | 0.58 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 52 | 3.763 | 31.22 | 0.0 | 0.0 | 0.0 | 5.72 | 3.52 | 0.00 | 3.52 | 0.00 | 0.00 | 0.04 | 0.54 | 0.58 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 53 | 3.668 | 31.24 | 0.0 | 0.0 | 0.0 | 5.74 | 3.44 | 0.00 | 3.44 | 0.00 | 0.00 | 0.04 | 0.54 | 0.58 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 54 | 3.573 | 31.26 | 0.0 | 0.0 | 0.0 | 5.77 | 3.36 | 0.00 | 3.36 | 0.00 | 0.00 | 0.04 | 0.54 | 0.58 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 55 | 3.479 | 31.28 | 0.0 | 0.0 | 0.0 | 5.79 | 3.27 | 0.00 | 3.27 | 0.00 | 0.00 | 0.04 | 0.54 | 0.58 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 56 | 3.384 | 31.30 | 0.0 | 0.0 | 0.0 | 5.82 | 3.20 | 0.00 | 3.20 | 0.00 | 0.00 | 0.03 | 0.54 | 0.58 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 57 | 3.289 | 31.32 | 0.0 | 0.0 | 0.0 | 5.85 | 3.12 | 0.00 | 3.12 | 0.00 | 0.00 | 0.03 | 0.54 | 0.58 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 58 | 3.194 | 31.34 | 0.0 | 0.0 | 0.0 | 5.87 | 3.04 | 0.00 | 3.04 | 0.00 | 0.00 | 0.03 | 0.54 | 0.57 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 59 | 3.100 | 31.36 | 0.0 | 0.0 | 0.0 | 5.90 | 2.97 | 0.00 | 2.97 | 0.00 | 0.00 | 0.03 | 0.54 | 0.57 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 60 | 3.005 | 31.38 | 0.0 | 0.0 | 0.0 | 5.92 | 2.90 | 0.00 | 2.90 | 0.00 | 0.00 | 0.03 | 0.55 | 0.57 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 61 | 2.910 | 31.40 | 0.0 | 0.0 | 0.0 | 5.95 | 2.83 | 0.00 | 2.83 | 0.00 | 0.00 | 0.03 | 0.55 | 0.57 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 62 | 2.823 | 31.40 | 0.0 | 0.0 | 0.0 | 5.97 | 2.79 | 0.00 | 2.79 | 0.00 | 0.00 | 0.03 | 0.55 | 0.57 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 63 | 2.737 | 31.41 | 0.0 | 0.0 | 0.0 | 6.00 | 2.74 | 0.00 | 2.74 | 0.00 | 0.00 | 0.02 | 0.55 | 0.57 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 64 | 2.650 | 31.41 | 0.0 | 0.0 | 0.0 | 6.02 | 2.70 | 0.00 | 2.70 | 0.00 | 0.00 | 0.02 | 0.55 | 0.57 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 65 | 2.563 | 31.42 | 0.0 | 0.0 | 0.0 | 6.04 | 2.66 | 0.00 | 2.66 | 0.00 | 0.00 | 0.02 | 0.55 | 0.57 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |

| | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 66 | 2.476 | 31.42 | 0.0 | 0.0 | 0.0 | 6.07 | 2.62 | 0.00 | 2.62 | 0.00 | 0.00 | 0.02 | 0.55 | 0.57 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 67 | 2.389 | 31.43 | 0.0 | 0.0 | 0.0 | 6.09 | 2.58 | 0.00 | 2.58 | 0.00 | 0.00 | 0.02 | 0.55 | 0.57 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 68 | 2.303 | 31.43 | 0.0 | 0.0 | 0.0 | 6.11 | 2.54 | 0.00 | 2.54 | 0.00 | 0.00 | 0.02 | 0.55 | 0.57 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 69 | 2.216 | 31.44 | 0.0 | 0.0 | 0.0 | 6.13 | 2.50 | 0.00 | 2.50 | 0.00 | 0.00 | 0.02 | 0.55 | 0.57 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 70 | 2.129 | 31.44 | 0.0 | 0.0 | 0.0 | 6.15 | 2.46 | 0.00 | 2.46 | 0.00 | 0.00 | 0.02 | 0.55 | 0.57 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 71 | 2.042 | 31.45 | 0.0 | 0.0 | 0.0 | 6.17 | 2.43 | 0.00 | 2.43 | 0.00 | 0.00 | 0.02 | 0.55 | 0.57 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 72 | 1.956 | 31.45 | 0.0 | 0.0 | 0.0 | 6.19 | 2.39 | 0.00 | 2.39 | 0.00 | 0.00 | 0.02 | 0.55 | 0.57 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 73 | 1.869 | 31.46 | 0.0 | 0.0 | 0.0 | 6.21 | 2.35 | 0.00 | 2.35 | 0.00 | 0.00 | 0.02 | 0.55 | 0.57 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 74 | 1.782 | 31.47 | 0.0 | 0.0 | 0.0 | 6.23 | 2.32 | 0.00 | 2.32 | 0.00 | 0.00 | 0.02 | 0.55 | 0.56 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 75 | 1.695 | 31.47 | 0.0 | 0.0 | 0.0 | 6.25 | 2.28 | 0.00 | 2.28 | 0.00 | 0.00 | 0.02 | 0.55 | 0.56 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 76 | 1.609 | 31.48 | 0.0 | 0.0 | 0.0 | 6.26 | 2.25 | 0.00 | 2.25 | 0.00 | 0.00 | 0.02 | 0.55 | 0.56 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 77 | 1.522 | 31.48 | 0.0 | 0.0 | 0.0 | 6.28 | 2.21 | 0.00 | 2.21 | 0.00 | 0.00 | 0.02 | 0.55 | 0.56 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 78 | 1.435 | 31.49 | 0.0 | 0.0 | 0.0 | 6.30 | 2.18 | 0.00 | 2.18 | 0.00 | 0.00 | 0.02 | 0.55 | 0.56 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 79 | 1.348 | 31.49 | 0.0 | 0.0 | 0.0 | 6.32 | 2.15 | 0.00 | 2.15 | 0.00 | 0.00 | 0.02 | 0.55 | 0.56 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 80 | 1.262 | 31.50 | 0.0 | 0.0 | 0.0 | 6.33 | 2.11 | 0.00 | 2.11 | 0.00 | 0.00 | 0.01 | 0.55 | 0.56 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 81 | 1.175 | 31.50 | 0.0 | 0.0 | 0.0 | 6.35 | 2.08 | 0.00 | 2.08 | 0.00 | 0.00 | 0.01 | 0.55 | 0.56 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 82 | 1.122 | 31.50 | 0.0 | 0.0 | 0.0 | 6.33 | 2.14 | 0.00 | 2.14 | 0.00 | 0.00 | 0.02 | 0.55 | 0.56 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 83 | 1.069 | 31.50 | 0.0 | 0.0 | 0.0 | 6.31 | 2.20 | 0.00 | 2.20 | 0.00 | 0.00 | 0.02 | 0.54 | 0.56 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 84 | 1.016 | 31.50 | 0.0 | 0.0 | 0.0 | 6.29 | 2.26 | 0.00 | 2.26 | 0.00 | 0.00 | 0.02 | 0.54 | 0.56 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 85 | 0.963 | 31.50 | 0.0 | 0.0 | 0.0 | 6.27 | 2.31 | 0.00 | 2.31 | 0.00 | 0.00 | 0.02 | 0.54 | 0.56 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 86 | 0.910 | 31.50 | 0.0 | 0.0 | 0.0 | 6.25 | 2.36 | 0.00 | 2.36 | 0.00 | 0.00 | 0.02 | 0.54 | 0.56 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 87 | 0.857 | 31.50 | 0.0 | 0.0 | 0.0 | 6.24 | 2.41 | 0.00 | 2.41 | 0.00 | 0.00 | 0.02 | 0.54 | 0.56 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 88 | 0.804 | 31.50 | 0.0 | 0.0 | 0.0 | 6.22 | 2.45 | 0.00 | 2.45 | 0.00 | 0.00 | 0.02 | 0.54 | 0.56 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 89 | 0.751 | 31.50 | 0.0 | 0.0 | 0.0 | 6.20 | 2.50 | 0.00 | 2.50 | 0.00 | 0.00 | 0.02 | 0.54 | 0.56 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 90 | 0.698 | 31.50 | 0.0 | 0.0 | 0.0 | 6.19 | 2.54 | 0.00 | 2.54 | 0.00 | 0.00 | 0.03 | 0.54 | 0.56 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 91 | 0.645 | 31.50 | 0.0 | 0.0 | 0.0 | 6.18 | 2.58 | 0.00 | 2.58 | 0.00 | 0.00 | 0.03 | 0.54 | 0.57 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 92 | 0.592 | 31.50 | 0.0 | 0.0 | 0.0 | 6.16 | 2.62 | 0.00 | 2.62 | 0.00 | 0.00 | 0.03 | 0.54 | 0.57 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 93 | 0.539 | 31.50 | 0.0 | 0.0 | 0.0 | 6.15 | 2.65 | 0.00 | 2.65 | 0.00 | 0.00 | 0.03 | 0.54 | 0.57 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 94 | 0.486 | 31.50 | 0.0 | 0.0 | 0.0 | 6.14 | 2.69 | 0.00 | 2.69 | 0.00 | 0.00 | 0.03 | 0.54 | 0.57 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 95 | 0.433 | 31.50 | 0.0 | 0.0 | 0.0 | 6.12 | 2.72 | 0.00 | 2.72 | 0.00 | 0.00 | 0.03 | 0.54 | 0.57 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 96 | 0.380 | 31.50 | 0.0 | 0.0 | 0.0 | 6.11 | 2.76 | 0.00 | 2.76 | 0.00 | 0.00 | 0.03 | 0.54 | 0.57 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 97 | 0.327 | 31.50 | 0.0 | 0.0 | 0.0 | 6.10 | 2.79 | 0.00 | 2.79 | 0.00 | 0.00 | 0.03 | 0.54 | 0.57 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 98 | 0.274 | 31.50 | 0.0 | 0.0 | 0.0 | 6.09 | 2.82 | 0.00 | 2.82 | 0.00 | 0.00 | 0.03 | 0.54 | 0.57 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 99 | 0.221 | 31.50 | 0.0 | 0.0 | 0.0 | 6.08 | 2.85 | 0.00 | 2.85 | 0.00 | 0.00 | 0.03 | 0.53 | 0.57 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 100 | 0.168 | 31.50 | 0.0 | 0.0 | 0.0 | 6.07 | 2.87 | 0.00 | 2.87 | 0.00 | 0.00 | 0.03 | 0.53 | 0.57 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 101 | 0.115 | 31.50 | 0.0 | 0.0 | 0.0 | 6.06 | 2.90 | 0.00 | 2.90 | 0.00 | 0.00 | 0.03 | 0.53 | 0.57 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 102 | 0.058 | 31.50 | 0.0 | 0.0 | 0.0 | 6.06 | 2.88 | 0.00 | 2.88 | 0.00 | 0.00 | 0.03 | 0.53 | 0.57 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 103 | 0.000 | 31.50 | 0.0 | 0.0 | 0.0 | 6.04 | 2.77 | 0.00 | 2.77 | 0.00 | 0.00 | 0.04 | 0.52 | 0.55 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |

SPECIAL REPORT: Headwater

BIOLOGICAL AND PHYSICAL COEFFICIENTS

| ELEM NO. | ENDING DIST | SAT D.O. | REAER RATE | BOD#1 DECAY | BOD#1 SETT | ABOD#1 DECAY | BOD#1 DECAY | BOD#2 SETT | ABOD#2 DECAY | FULL SOD | CORR SOD | ORG-N DECAY | ORG-N SETT | NH3 DECAY | NH3 SRCE | DENIT RATE | PO4 SRCE | ALG PROD | MAC PROD | COLI DECAY | NCM DECAY | NCM SETT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | km | mg/L | 1/da | 1/da | 1/da | 1/da | 1/da | 1/da | 1/da | * | * | 1/da | 1/da | 1/da | * | 1/da | * | ** | ** | 1/da | 1/da | 1/da |
| 1 | 7.730 | 7.35 | 0.87 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.27 | 0.27 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.09 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2 | 7.690 | 7.35 | 0.87 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.26 | 0.26 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.09 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3 | 7.628 | 7.35 | 0.87 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.25 | 0.25 | 0.06 | 0.01 | 0.25 | 0.00 | 0.00 | 0.00 | 0.09 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4 | 7.565 | 7.35 | 0.87 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.25 | 0.25 | 0.06 | 0.01 | 0.25 | 0.00 | 0.00 | 0.00 | 0.09 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 7.525 | 7.32 | 0.88 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.25 | 0.25 | 0.06 | 0.01 | 0.25 | 0.00 | 0.00 | 0.00 | 0.09 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6 | 7.485 | 7.29 | 0.88 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.26 | 0.26 | 0.06 | 0.01 | 0.26 | 0.00 | 0.00 | 0.00 | 0.09 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7 | 7.412 | 7.30 | 0.88 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 1.83 | 1.83 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.09 | 0.00 | 0.00 | 0.00 | 0.00 |

| | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8 | 7.340 | 7.30 | 0.88 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 1.82 | 1.82 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.09 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9 | 7.267 | 7.31 | 0.88 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 1.82 | 1.82 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.09 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10 | 7.195 | 7.31 | 0.88 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 1.82 | 1.82 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.09 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11 | 7.122 | 7.32 | 0.88 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 1.81 | 1.81 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.09 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12 | 7.050 | 7.32 | 0.88 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 1.81 | 1.81 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.09 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13 | 6.977 | 7.33 | 0.88 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 1.80 | 1.80 | 0.06 | 0.01 | 0.23 | 0.00 | 0.00 | 0.00 | 0.09 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14 | 6.905 | 7.33 | 0.88 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 1.80 | 1.80 | 0.06 | 0.01 | 0.23 | 0.00 | 0.00 | 0.00 | 0.09 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15 | 6.832 | 7.34 | 0.88 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 1.79 | 1.79 | 0.06 | 0.01 | 0.23 | 0.00 | 0.00 | 0.00 | 0.09 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16 | 6.760 | 7.34 | 0.88 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 1.79 | 1.79 | 0.06 | 0.01 | 0.23 | 0.00 | 0.00 | 0.00 | 0.09 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17 | 6.683 | 7.34 | 0.73 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 1.79 | 1.79 | 0.06 | 0.01 | 0.23 | 0.00 | 0.00 | 0.00 | 0.09 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18 | 6.606 | 7.34 | 0.73 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 1.79 | 1.79 | 0.06 | 0.01 | 0.23 | 0.00 | 0.00 | 0.00 | 0.09 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19 | 6.529 | 7.34 | 0.73 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 1.79 | 1.79 | 0.06 | 0.01 | 0.23 | 0.00 | 0.00 | 0.00 | 0.09 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20 | 6.452 | 7.34 | 0.73 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 1.78 | 1.78 | 0.06 | 0.01 | 0.23 | 0.00 | 0.00 | 0.00 | 0.09 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21 | 6.375 | 7.34 | 0.73 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 1.78 | 1.78 | 0.06 | 0.01 | 0.23 | 0.00 | 0.00 | 0.00 | 0.09 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22 | 6.298 | 7.34 | 0.73 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 1.78 | 1.78 | 0.06 | 0.01 | 0.23 | 0.00 | 0.00 | 0.00 | 0.09 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23 | 6.221 | 7.34 | 0.73 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 1.78 | 1.78 | 0.06 | 0.01 | 0.23 | 0.00 | 0.00 | 0.00 | 0.09 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24 | 6.144 | 7.34 | 0.73 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 1.78 | 1.78 | 0.06 | 0.01 | 0.23 | 0.00 | 0.00 | 0.00 | 0.09 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25 | 6.067 | 7.34 | 0.73 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 1.78 | 1.78 | 0.06 | 0.01 | 0.23 | 0.00 | 0.00 | 0.00 | 0.09 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26 | 5.990 | 7.34 | 0.73 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 1.78 | 1.78 | 0.06 | 0.01 | 0.23 | 0.00 | 0.00 | 0.00 | 0.09 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27 | 5.911 | 7.35 | 0.42 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.29 | 0.29 | 0.06 | 0.01 | 0.23 | 0.00 | 0.00 | 0.00 | 0.09 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28 | 5.832 | 7.35 | 0.42 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.30 | 0.30 | 0.06 | 0.01 | 0.23 | 0.00 | 0.00 | 0.00 | 0.09 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29 | 5.753 | 7.36 | 0.42 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.30 | 0.30 | 0.06 | 0.01 | 0.23 | 0.00 | 0.00 | 0.00 | 0.09 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30 | 5.674 | 7.37 | 0.42 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.30 | 0.30 | 0.06 | 0.01 | 0.23 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31 | 5.595 | 7.37 | 0.42 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.30 | 0.30 | 0.06 | 0.01 | 0.23 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32 | 5.516 | 7.38 | 0.42 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.30 | 0.30 | 0.06 | 0.01 | 0.23 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33 | 5.437 | 7.38 | 0.42 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.30 | 0.30 | 0.06 | 0.01 | 0.23 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34 | 5.358 | 7.39 | 0.42 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.30 | 0.30 | 0.06 | 0.01 | 0.23 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35 | 5.279 | 7.39 | 0.42 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.30 | 0.30 | 0.06 | 0.01 | 0.23 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36 | 5.200 | 7.40 | 0.42 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.30 | 0.30 | 0.06 | 0.01 | 0.23 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37 | 5.121 | 7.41 | 0.42 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.30 | 0.30 | 0.06 | 0.01 | 0.23 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38 | 5.042 | 7.41 | 0.41 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.30 | 0.30 | 0.06 | 0.01 | 0.23 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39 | 4.963 | 7.42 | 0.41 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.30 | 0.30 | 0.06 | 0.01 | 0.23 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40 | 4.884 | 7.42 | 0.41 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.30 | 0.30 | 0.06 | 0.01 | 0.22 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41 | 4.805 | 7.43 | 0.41 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.30 | 0.30 | 0.06 | 0.01 | 0.22 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42 | 4.710 | 7.43 | 0.31 | 0.11 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.30 | 0.30 | 0.06 | 0.00 | 0.22 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43 | 4.615 | 7.42 | 0.31 | 0.11 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.30 | 0.30 | 0.06 | 0.00 | 0.22 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44 | 4.521 | 7.42 | 0.31 | 0.11 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.30 | 0.30 | 0.06 | 0.00 | 0.23 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45 | 4.426 | 7.42 | 0.31 | 0.11 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.30 | 0.30 | 0.06 | 0.00 | 0.23 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46 | 4.331 | 7.42 | 0.31 | 0.11 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.29 | 0.29 | 0.06 | 0.00 | 0.23 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47 | 4.237 | 7.41 | 0.31 | 0.11 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.29 | 0.29 | 0.06 | 0.00 | 0.23 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48 | 4.142 | 7.41 | 0.31 | 0.11 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.29 | 0.29 | 0.06 | 0.00 | 0.23 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49 | 4.047 | 7.41 | 0.31 | 0.11 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.29 | 0.29 | 0.06 | 0.00 | 0.23 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50 | 3.952 | 7.41 | 0.31 | 0.11 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.29 | 0.29 | 0.06 | 0.00 | 0.23 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51 | 3.858 | 7.40 | 0.31 | 0.11 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.29 | 0.29 | 0.06 | 0.00 | 0.23 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52 | 3.763 | 7.40 | 0.31 | 0.11 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.29 | 0.29 | 0.06 | 0.00 | 0.23 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53 | 3.668 | 7.40 | 0.31 | 0.11 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.29 | 0.29 | 0.06 | 0.00 | 0.23 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54 | 3.573 | 7.40 | 0.31 | 0.11 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.29 | 0.29 | 0.06 | 0.00 | 0.23 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55 | 3.479 | 7.39 | 0.31 | 0.11 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.29 | 0.29 | 0.06 | 0.00 | 0.23 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56 | 3.384 | 7.39 | 0.31 | 0.11 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.29 | 0.29 | 0.06 | 0.00 | 0.23 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57 | 3.289 | 7.39 | 0.31 | 0.11 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.29 | 0.29 | 0.06 | 0.00 | 0.23 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |

| | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 58 | 3.194 | 7.39 | 0.31 | 0.11 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.28 | 0.28 | 0.06 | 0.00 | 0.23 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59 | 3.100 | 7.38 | 0.31 | 0.11 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.28 | 0.28 | 0.06 | 0.00 | 0.23 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60 | 3.005 | 7.38 | 0.31 | 0.11 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.28 | 0.28 | 0.06 | 0.00 | 0.23 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61 | 2.910 | 7.38 | 0.31 | 0.11 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.28 | 0.28 | 0.06 | 0.00 | 0.23 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62 | 2.823 | 7.38 | 0.38 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.28 | 0.28 | 0.06 | 0.01 | 0.23 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63 | 2.737 | 7.38 | 0.38 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.28 | 0.28 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64 | 2.650 | 7.38 | 0.38 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.28 | 0.28 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65 | 2.563 | 7.38 | 0.38 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.28 | 0.28 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66 | 2.476 | 7.38 | 0.38 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.28 | 0.28 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67 | 2.389 | 7.38 | 0.38 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.28 | 0.28 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68 | 2.303 | 7.37 | 0.38 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.28 | 0.28 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69 | 2.216 | 7.37 | 0.38 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.28 | 0.28 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70 | 2.129 | 7.37 | 0.38 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.28 | 0.28 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71 | 2.042 | 7.37 | 0.38 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.28 | 0.28 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 72 | 1.956 | 7.37 | 0.38 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.28 | 0.28 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 73 | 1.869 | 7.37 | 0.38 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.28 | 0.28 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 74 | 1.782 | 7.37 | 0.38 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.28 | 0.28 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 75 | 1.695 | 7.37 | 0.38 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.28 | 0.28 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 76 | 1.609 | 7.37 | 0.38 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.28 | 0.28 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 77 | 1.522 | 7.37 | 0.38 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.28 | 0.28 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 78 | 1.435 | 7.37 | 0.38 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.28 | 0.28 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 79 | 1.348 | 7.37 | 0.38 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.28 | 0.28 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 80 | 1.262 | 7.37 | 0.38 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.28 | 0.28 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 81 | 1.175 | 7.37 | 0.38 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.27 | 0.27 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 82 | 1.122 | 7.37 | 0.42 | 0.12 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.28 | 0.28 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 83 | 1.069 | 7.37 | 0.42 | 0.12 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.28 | 0.28 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 84 | 1.016 | 7.37 | 0.42 | 0.12 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.28 | 0.28 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 85 | 0.963 | 7.37 | 0.42 | 0.12 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.28 | 0.28 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 86 | 0.910 | 7.37 | 0.42 | 0.12 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.28 | 0.28 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 87 | 0.857 | 7.37 | 0.42 | 0.12 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.28 | 0.28 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 88 | 0.804 | 7.37 | 0.42 | 0.12 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.28 | 0.28 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 89 | 0.751 | 7.37 | 0.42 | 0.12 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.28 | 0.28 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 90 | 0.698 | 7.37 | 0.42 | 0.12 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.28 | 0.28 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 91 | 0.645 | 7.37 | 0.42 | 0.12 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.28 | 0.28 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 92 | 0.592 | 7.37 | 0.42 | 0.12 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.28 | 0.28 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 93 | 0.539 | 7.37 | 0.42 | 0.12 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.28 | 0.28 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 94 | 0.486 | 7.37 | 0.42 | 0.12 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.28 | 0.28 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 95 | 0.433 | 7.37 | 0.42 | 0.12 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.28 | 0.28 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 96 | 0.380 | 7.37 | 0.42 | 0.12 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.28 | 0.28 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 97 | 0.327 | 7.37 | 0.42 | 0.12 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.28 | 0.28 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 98 | 0.274 | 7.37 | 0.42 | 0.12 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.28 | 0.28 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 99 | 0.221 | 7.37 | 0.42 | 0.12 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.28 | 0.28 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 100 | 0.168 | 7.37 | 0.42 | 0.12 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.29 | 0.29 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 101 | 0.115 | 7.37 | 0.42 | 0.12 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.29 | 0.29 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 102 | 0.058 | 7.37 | 0.37 | 0.12 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.29 | 0.29 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 103 | 0.000 | 7.37 | 0.37 | 0.12 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.28 | 0.28 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |

SPECIAL REPORT: Headwater

HYDRAULIC PARAMETER VALUES

| ELEM NO. | BEGIN DIST | ENDING DIST | FLOW VELO | ADVCTV | DEPTH | WIDTH | VOLUME AREA | SURFACE AREA | PRISM | X-SECT VELO | TIDAL | TIDAL VELO | DISPRSN | MEAN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

| | km | km | m³/s | m/s | m | m | m³ | m² | m² | m³ | m/s | m²/s | m/s | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 7.77 | 7.73 | 0.0028 | 0.000 | 0.99 | 44.7 | 1770. | 1788.0 | 44.3 | 0. | 0.000 | 0.000 | 0.000 |
| 2 | 7.73 | 7.69 | 0.0028 | 0.000 | 0.99 | 44.7 | 1770. | 1788.0 | 44.3 | 0. | 0.000 | 0.000 | 0.000 |
| 3 | 7.69 | 7.63 | 0.0028 | 0.000 | 0.99 | 44.7 | 2766. | 2793.8 | 44.3 | 0. | 0.000 | 0.000 | 0.000 |
| 4 | 7.63 | 7.57 | 0.0028 | 0.000 | 0.99 | 44.7 | 2766. | 2793.8 | 44.3 | 0. | 0.000 | 0.000 | 0.000 |
| 5 | 7.57 | 7.53 | 0.0028 | 0.000 | 0.99 | 44.7 | 1770. | 1788.0 | 44.3 | 0. | 0.000 | 0.000 | 0.000 |
| 6 | 7.53 | 7.49 | 0.0028 | 0.000 | 0.99 | 44.7 | 1770. | 1788.0 | 44.3 | 0. | 0.000 | 0.000 | 0.000 |
| 7 | 7.49 | 7.41 | 0.0158 | 0.000 | 0.99 | 44.7 | 3208. | 3240.8 | 44.3 | 0. | 0.000 | 0.000 | 0.000 |
| 8 | 7.41 | 7.34 | 0.0288 | 0.001 | 0.99 | 44.7 | 3208. | 3240.8 | 44.3 | 0. | 0.000 | 0.000 | 0.001 |
| 9 | 7.34 | 7.27 | 0.0418 | 0.001 | 0.99 | 44.7 | 3208. | 3240.8 | 44.3 | 0. | 0.000 | 0.000 | 0.001 |
| 10 | 7.27 | 7.19 | 0.0548 | 0.001 | 0.99 | 44.7 | 3208. | 3240.8 | 44.3 | 0. | 0.000 | 0.001 | 0.001 |
| 11 | 7.19 | 7.12 | 0.0678 | 0.002 | 0.99 | 44.7 | 3208. | 3240.8 | 44.3 | 0. | 0.000 | 0.001 | 0.002 |
| 12 | 7.12 | 7.05 | 0.0808 | 0.002 | 0.99 | 44.7 | 3208. | 3240.8 | 44.3 | 0. | 0.000 | 0.001 | 0.002 |
| 13 | 7.05 | 6.98 | 0.0938 | 0.002 | 0.99 | 44.7 | 3208. | 3240.8 | 44.3 | 0. | 0.000 | 0.001 | 0.002 |
| 14 | 6.98 | 6.90 | 0.1068 | 0.002 | 0.99 | 44.7 | 3208. | 3240.8 | 44.3 | 0. | 0.000 | 0.001 | 0.002 |
| 15 | 6.90 | 6.83 | 0.1198 | 0.003 | 0.99 | 44.7 | 3208. | 3240.8 | 44.3 | 0. | 0.000 | 0.001 | 0.003 |
| 16 | 6.83 | 6.76 | 0.1328 | 0.003 | 0.99 | 44.7 | 3208. | 3240.8 | 44.3 | 0. | 0.000 | 0.001 | 0.003 |
| 17 | 6.76 | 6.68 | 0.1328 | 0.003 | 1.18 | 43.8 | 3975. | 3368.8 | 51.6 | 0. | 0.000 | 0.001 | 0.003 |
| 18 | 6.68 | 6.61 | 0.1328 | 0.003 | 1.18 | 43.8 | 3975. | 3368.8 | 51.6 | 0. | 0.000 | 0.001 | 0.003 |
| 19 | 6.61 | 6.53 | 0.1328 | 0.003 | 1.18 | 43.8 | 3975. | 3368.8 | 51.6 | 0. | 0.000 | 0.001 | 0.003 |
| 20 | 6.53 | 6.45 | 0.1328 | 0.003 | 1.18 | 43.8 | 3975. | 3368.8 | 51.6 | 0. | 0.000 | 0.001 | 0.003 |
| 21 | 6.45 | 6.37 | 0.1328 | 0.003 | 1.18 | 43.8 | 3975. | 3368.8 | 51.6 | 0. | 0.000 | 0.001 | 0.003 |
| 22 | 6.37 | 6.30 | 0.1328 | 0.003 | 1.18 | 43.8 | 3975. | 3368.8 | 51.6 | 0. | 0.000 | 0.001 | 0.003 |
| 23 | 6.30 | 6.22 | 0.1328 | 0.003 | 1.18 | 43.8 | 3975. | 3368.8 | 51.6 | 0. | 0.000 | 0.001 | 0.003 |
| 24 | 6.22 | 6.14 | 0.1328 | 0.003 | 1.18 | 43.8 | 3975. | 3368.8 | 51.6 | 0. | 0.000 | 0.001 | 0.003 |
| 25 | 6.14 | 6.07 | 0.1328 | 0.003 | 1.18 | 43.8 | 3975. | 3368.8 | 51.6 | 0. | 0.000 | 0.001 | 0.003 |
| 26 | 6.07 | 5.99 | 0.1328 | 0.003 | 1.18 | 43.8 | 3975. | 3368.8 | 51.6 | 0. | 0.000 | 0.001 | 0.003 |
| 27 | 5.99 | 5.91 | 0.2015 | 0.002 | 2.07 | 62.8 | 10262. | 4957.2 | 129.9 | 0. | 0.000 | 0.001 | 0.002 |
| 28 | 5.91 | 5.83 | 0.2702 | 0.002 | 2.07 | 62.8 | 10262. | 4957.2 | 129.9 | 0. | 0.000 | 0.002 | 0.002 |
| 29 | 5.83 | 5.75 | 0.3388 | 0.003 | 2.07 | 62.8 | 10262. | 4957.2 | 129.9 | 0. | 0.000 | 0.002 | 0.003 |
| 30 | 5.75 | 5.67 | 0.4075 | 0.003 | 2.07 | 62.8 | 10262. | 4957.2 | 129.9 | 0. | 0.000 | 0.003 | 0.003 |
| 31 | 5.67 | 5.59 | 0.4762 | 0.004 | 2.07 | 62.8 | 10262. | 4957.2 | 129.9 | 0. | 0.000 | 0.003 | 0.004 |
| 32 | 5.59 | 5.52 | 0.5448 | 0.004 | 2.07 | 62.8 | 10262. | 4957.2 | 129.9 | 0. | 0.000 | 0.004 | 0.004 |
| 33 | 5.52 | 5.44 | 0.6135 | 0.005 | 2.07 | 62.8 | 10262. | 4957.2 | 129.9 | 0. | 0.000 | 0.004 | 0.005 |
| 34 | 5.44 | 5.36 | 0.6822 | 0.005 | 2.07 | 62.8 | 10262. | 4957.2 | 129.9 | 0. | 0.000 | 0.004 | 0.005 |
| 35 | 5.36 | 5.28 | 0.7508 | 0.006 | 2.07 | 62.8 | 10262. | 4957.2 | 129.9 | 0. | 0.000 | 0.005 | 0.006 |
| 36 | 5.28 | 5.20 | 0.8195 | 0.006 | 2.07 | 62.8 | 10262. | 4957.2 | 129.9 | 0. | 0.000 | 0.005 | 0.006 |
| 37 | 5.20 | 5.12 | 0.8882 | 0.007 | 2.07 | 62.8 | 10262. | 4957.2 | 129.9 | 0. | 0.000 | 0.006 | 0.007 |
| 38 | 5.12 | 5.04 | 0.9568 | 0.007 | 2.07 | 62.8 | 10262. | 4957.2 | 129.9 | 0. | 0.000 | 0.006 | 0.007 |
| 39 | 5.04 | 4.96 | 1.0255 | 0.008 | 2.07 | 62.8 | 10262. | 4957.2 | 129.9 | 0. | 0.000 | 0.007 | 0.008 |
| 40 | 4.96 | 4.88 | 1.0942 | 0.008 | 2.07 | 62.8 | 10262. | 4957.2 | 129.9 | 0. | 0.000 | 0.007 | 0.008 |
| 41 | 4.88 | 4.80 | 1.1628 | 0.009 | 2.07 | 62.8 | 10262. | 4957.2 | 129.9 | 0. | 0.000 | 0.008 | 0.009 |
| 42 | 4.80 | 4.71 | 1.1628 | 0.005 | 2.77 | 82.7 | 21705. | 7835.8 | 229.1 | 0. | 0.000 | 0.005 | 0.005 |
| 43 | 4.71 | 4.62 | 1.1628 | 0.005 | 2.77 | 82.7 | 21705. | 7835.8 | 229.1 | 0. | 0.000 | 0.005 | 0.005 |
| 44 | 4.62 | 4.52 | 1.1628 | 0.005 | 2.77 | 82.7 | 21705. | 7835.8 | 229.1 | 0. | 0.000 | 0.005 | 0.005 |
| 45 | 4.52 | 4.43 | 1.1628 | 0.005 | 2.77 | 82.7 | 21705. | 7835.8 | 229.1 | 0. | 0.000 | 0.005 | 0.005 |
| 46 | 4.43 | 4.33 | 1.1628 | 0.005 | 2.77 | 82.7 | 21705. | 7835.8 | 229.1 | 0. | 0.000 | 0.005 | 0.005 |
| 47 | 4.33 | 4.24 | 1.1628 | 0.005 | 2.77 | 82.7 | 21705. | 7835.8 | 229.1 | 0. | 0.000 | 0.005 | 0.005 |
| 48 | 4.24 | 4.14 | 1.1628 | 0.005 | 2.77 | 82.7 | 21705. | 7835.8 | 229.1 | 0. | 0.000 | 0.005 | 0.005 |
| 49 | 4.14 | 4.05 | 1.1628 | 0.005 | 2.77 | 82.7 | 21705. | 7835.8 | 229.1 | 0. | 0.000 | 0.005 | 0.005 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 50 | 4.05 | 3.95 | 1.1628 | 0.005 | 2.77 | 82.7 | 21705. | 7835.8 | 229.1 | 0. | 0.000 | 0.005 | 0.005 |
| 51 | 3.95 | 3.86 | 1.1628 | 0.005 | 2.77 | 82.7 | 21705. | 7835.8 | 229.1 | 0. | 0.000 | 0.005 | 0.005 |
| 52 | 3.86 | 3.76 | 1.1628 | 0.005 | 2.77 | 82.7 | 21705. | 7835.8 | 229.1 | 0. | 0.000 | 0.005 | 0.005 |
| 53 | 3.76 | 3.67 | 1.1628 | 0.005 | 2.77 | 82.7 | 21705. | 7835.8 | 229.1 | 0. | 0.000 | 0.005 | 0.005 |
| 54 | 3.67 | 3.57 | 1.1628 | 0.005 | 2.77 | 82.7 | 21705. | 7835.8 | 229.1 | 0. | 0.000 | 0.005 | 0.005 |
| 55 | 3.57 | 3.48 | 1.1628 | 0.005 | 2.77 | 82.7 | 21705. | 7835.8 | 229.1 | 0. | 0.000 | 0.005 | 0.005 |
| 56 | 3.48 | 3.38 | 1.1628 | 0.005 | 2.77 | 82.7 | 21705. | 7835.8 | 229.1 | 0. | 0.000 | 0.005 | 0.005 |
| 57 | 3.38 | 3.29 | 1.1628 | 0.005 | 2.77 | 82.7 | 21705. | 7835.8 | 229.1 | 0. | 0.000 | 0.005 | 0.005 |
| 58 | 3.29 | 3.19 | 1.1628 | 0.005 | 2.77 | 82.7 | 21705. | 7835.8 | 229.1 | 0. | 0.000 | 0.005 | 0.005 |
| 59 | 3.19 | 3.10 | 1.1628 | 0.005 | 2.77 | 82.7 | 21705. | 7835.8 | 229.1 | 0. | 0.000 | 0.005 | 0.005 |
| 60 | 3.10 | 3.00 | 1.1628 | 0.005 | 2.77 | 82.7 | 21705. | 7835.8 | 229.1 | 0. | 0.000 | 0.005 | 0.005 |
| 61 | 3.00 | 2.91 | 1.1628 | 0.005 | 2.77 | 82.7 | 21705. | 7835.8 | 229.1 | 0. | 0.000 | 0.005 | 0.005 |
| 62 | 2.91 | 2.82 | 1.1628 | 0.008 | 2.29 | 67.7 | 13449. | 5873.0 | 155.0 | 0. | 0.000 | 0.007 | 0.008 |
| 63 | 2.82 | 2.74 | 1.1628 | 0.008 | 2.29 | 67.7 | 13449. | 5873.0 | 155.0 | 0. | 0.000 | 0.007 | 0.008 |
| 64 | 2.74 | 2.65 | 1.1628 | 0.008 | 2.29 | 67.7 | 13449. | 5873.0 | 155.0 | 0. | 0.000 | 0.007 | 0.008 |
| 65 | 2.65 | 2.56 | 1.1628 | 0.008 | 2.29 | 67.7 | 13449. | 5873.0 | 155.0 | 0. | 0.000 | 0.007 | 0.008 |
| 66 | 2.56 | 2.48 | 1.1628 | 0.008 | 2.29 | 67.7 | 13449. | 5873.0 | 155.0 | 0. | 0.000 | 0.007 | 0.008 |
| 67 | 2.48 | 2.39 | 1.1628 | 0.008 | 2.29 | 67.7 | 13449. | 5873.0 | 155.0 | 0. | 0.000 | 0.007 | 0.008 |
| 68 | 2.39 | 2.30 | 1.1628 | 0.008 | 2.29 | 67.7 | 13449. | 5873.0 | 155.0 | 0. | 0.000 | 0.007 | 0.008 |
| 69 | 2.30 | 2.22 | 1.1628 | 0.008 | 2.29 | 67.7 | 13449. | 5873.0 | 155.0 | 0. | 0.000 | 0.007 | 0.008 |
| 70 | 2.22 | 2.13 | 1.1628 | 0.008 | 2.29 | 67.7 | 13449. | 5873.0 | 155.0 | 0. | 0.000 | 0.007 | 0.008 |
| 71 | 2.13 | 2.04 | 1.1628 | 0.008 | 2.29 | 67.7 | 13449. | 5873.0 | 155.0 | 0. | 0.000 | 0.007 | 0.008 |
| 72 | 2.04 | 1.96 | 1.1628 | 0.008 | 2.29 | 67.7 | 13449. | 5873.0 | 155.0 | 0. | 0.000 | 0.007 | 0.008 |
| 73 | 1.96 | 1.87 | 1.1628 | 0.008 | 2.29 | 67.7 | 13449. | 5873.0 | 155.0 | 0. | 0.000 | 0.007 | 0.008 |
| 74 | 1.87 | 1.78 | 1.1628 | 0.008 | 2.29 | 67.7 | 13449. | 5873.0 | 155.0 | 0. | 0.000 | 0.007 | 0.008 |
| 75 | 1.78 | 1.70 | 1.1628 | 0.008 | 2.29 | 67.7 | 13449. | 5873.0 | 155.0 | 0. | 0.000 | 0.007 | 0.008 |
| 76 | 1.70 | 1.61 | 1.1628 | 0.008 | 2.29 | 67.7 | 13449. | 5873.0 | 155.0 | 0. | 0.000 | 0.007 | 0.008 |
| 77 | 1.61 | 1.52 | 1.1628 | 0.008 | 2.29 | 67.7 | 13449. | 5873.0 | 155.0 | 0. | 0.000 | 0.007 | 0.008 |
| 78 | 1.52 | 1.44 | 1.1628 | 0.008 | 2.29 | 67.7 | 13449. | 5873.0 | 155.0 | 0. | 0.000 | 0.007 | 0.008 |
| 79 | 1.44 | 1.35 | 1.1628 | 0.008 | 2.29 | 67.7 | 13449. | 5873.0 | 155.0 | 0. | 0.000 | 0.007 | 0.008 |
| 80 | 1.35 | 1.26 | 1.1628 | 0.008 | 2.29 | 67.7 | 13449. | 5873.0 | 155.0 | 0. | 0.000 | 0.007 | 0.008 |
| 81 | 1.26 | 1.17 | 1.1628 | 0.008 | 2.29 | 67.7 | 13449. | 5873.0 | 155.0 | 0. | 0.000 | 0.007 | 0.008 |
| 82 | 1.17 | 1.12 | 1.1878 | 0.010 | 2.08 | 58.9 | 6493. | 3121.7 | 122.5 | 0. | 0.000 | 0.008 | 0.010 |
| 83 | 1.12 | 1.07 | 1.2128 | 0.010 | 2.08 | 58.9 | 6493. | 3121.7 | 122.5 | 0. | 0.000 | 0.008 | 0.010 |
| 84 | 1.07 | 1.02 | 1.2378 | 0.010 | 2.08 | 58.9 | 6493. | 3121.7 | 122.5 | 0. | 0.000 | 0.009 | 0.010 |
| 85 | 1.02 | 0.96 | 1.2628 | 0.010 | 2.08 | 58.9 | 6493. | 3121.7 | 122.5 | 0. | 0.000 | 0.009 | 0.010 |
| 86 | 0.96 | 0.91 | 1.2878 | 0.011 | 2.08 | 58.9 | 6493. | 3121.7 | 122.5 | 0. | 0.000 | 0.009 | 0.011 |
| 87 | 0.91 | 0.86 | 1.3128 | 0.011 | 2.08 | 58.9 | 6493. | 3121.7 | 122.5 | 0. | 0.000 | 0.009 | 0.011 |
| 88 | 0.86 | 0.80 | 1.3378 | 0.011 | 2.08 | 58.9 | 6493. | 3121.7 | 122.5 | 0. | 0.000 | 0.009 | 0.011 |
| 89 | 0.80 | 0.75 | 1.3628 | 0.011 | 2.08 | 58.9 | 6493. | 3121.7 | 122.5 | 0. | 0.000 | 0.009 | 0.011 |
| 90 | 0.75 | 0.70 | 1.3878 | 0.011 | 2.08 | 58.9 | 6493. | 3121.7 | 122.5 | 0. | 0.000 | 0.010 | 0.011 |
| 91 | 0.70 | 0.65 | 1.4128 | 0.012 | 2.08 | 58.9 | 6493. | 3121.7 | 122.5 | 0. | 0.000 | 0.010 | 0.012 |
| 92 | 0.65 | 0.59 | 1.4378 | 0.012 | 2.08 | 58.9 | 6493. | 3121.7 | 122.5 | 0. | 0.000 | 0.010 | 0.012 |
| 93 | 0.59 | 0.54 | 1.4628 | 0.012 | 2.08 | 58.9 | 6493. | 3121.7 | 122.5 | 0. | 0.000 | 0.010 | 0.012 |
| 94 | 0.54 | 0.49 | 1.4878 | 0.012 | 2.08 | 58.9 | 6493. | 3121.7 | 122.5 | 0. | 0.000 | 0.010 | 0.012 |
| 95 | 0.49 | 0.43 | 1.5128 | 0.012 | 2.08 | 58.9 | 6493. | 3121.7 | 122.5 | 0. | 0.000 | 0.011 | 0.012 |
| 96 | 0.43 | 0.38 | 1.5378 | 0.013 | 2.08 | 58.9 | 6493. | 3121.7 | 122.5 | 0. | 0.000 | 0.011 | 0.013 |
| 97 | 0.38 | 0.33 | 1.5628 | 0.013 | 2.08 | 58.9 | 6493. | 3121.7 | 122.5 | 0. | 0.000 | 0.011 | 0.013 |
| 98 | 0.33 | 0.27 | 1.5878 | 0.013 | 2.08 | 58.9 | 6493. | 3121.7 | 122.5 | 0. | 0.000 | 0.011 | 0.013 |
| 99 | 0.27 | 0.22 | 1.6128 | 0.013 | 2.08 | 58.9 | 6493. | 3121.7 | 122.5 | 0. | 0.000 | 0.011 | 0.013 |

```
 100   0.22   0.17    1.6378  0.013   2.08   58.9    6493.    3121.7  122.5      0.  0.000    0.011  0.013
 101   0.17   0.12    1.6628  0.014   2.08   58.9    6493.    3121.7  122.5      0.  0.000    0.012  0.014
 102   0.12   0.06    1.6628  0.011   2.34   65.1    8759.    3743.2  152.3      0.  0.000    0.010  0.011
 103   0.06   0.00    1.6628  0.011   2.34   65.1    8759.    3743.2  152.3      0.  0.000    0.010  0.011
FINAL REPORT            Headwater                        Pearl River DO Modeling 090105
REACH NO.  1    Pearl River to Above   A                    COEF-1 Run
************************************************************ REACH INPUTS ************************************************************
ELEM  TYPE      FLOW    TEMP    SALN    CM-I    CM-II    DO  BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN    NH3  NO3+2   PHOS  CHL A    COLI    NCM
NO.               deg C    ppt    mg/L    mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   µg/L  #/100mL
  1  HDWTR    0.00283  30.00    0.00    0.00    0.00  5.00  3.60  0.00  3.60  0.00  0.00  0.10  0.50  0.00  1.00    0.00   0.00
************************************************** HYDRAULIC PARAMETER VALUES **************************************************
ELEM   BEGIN  ENDING     FLOW  PCT  ADVCTV   TRAVEL   DEPTH   WIDTH    VOLUME    SURFACE  X-SECT    TIDAL   TIDAL   DISPRSN    MEAN
 NO.   DIST    DIST          EFF    VELO     TIME                          AREA    AREA     PRISM    VELO            VELO
       km      km      m³/s          m/s    days      m      m       m³       m²      m²       m³     m/s     m²/s    m/s
  1   7.77    7.73   0.00283  0.0  0.00006    7.23   0.99  44.70  1770.12   1788.00  44.25     0.00  0.000    0.000  0.000
  2   7.73    7.69   0.00283  0.0  0.00006    7.23   0.99  44.70  1770.12   1788.00  44.25     0.00  0.000    0.000  0.000
 TOT                                  14.47                3540.24    3576.00
 AVG                            0.0001          0.99  44.70                    44.25
 CUM                                  14.47
********************************************** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********************************************
ELEM  ENDING  SAT    REAER  BOD#1 BOD#1 ABOD#1  BOD#2 BOD#2 ABOD#2  BKGD  FULL  CORR   ORGN ORGN    NH3   NH3 DENIT   PO4   ALG   MAC   COLI    NCM    NCM
NO.    DIST  D.O.   RATE  DECAY SETT DECAY  DECAY  SETT  DECAY   SOD   SOD   SOD DECAY SETT DECAY SRCE   RATE SRCE PROD PROD DECAY DECAY   SETT
            mg/L    1/da   1/da  1/da   1/da   1/da  1/da   1/da    *     *     *    1/da  1/da   1/da    *    1/da    *    **    **    1/da   1/da   1/da
  1   7.730  7.35    0.87   0.11  0.01   0.00   0.01  0.00   0.00  0.25  0.27  0.27   0.06  0.01   0.24  0.00   0.00  0.00  0.09  0.00   0.00   0.00   0.00
  2   7.690  7.35    0.87   0.11  0.01   0.00   0.01  0.00   0.00  0.25  0.26  0.26   0.06  0.01   0.24  0.00   0.00  0.00  0.09  0.00   0.00   0.00   0.00
AVG 20 DEG C RATE    0.71   0.06  0.01   0.00   0.01  0.00   0.00  0.12              0.05  0.01   0.10  0.00   0.00  0.00              3.00   0.00   0.00
*   g/m²/d          **   mg/L/day
************************************************** WATER QUALITY CONSTITUENT VALUES **************************************************
ELEM  ENDING   TEMP  SALN    CM-I    CM-II    DO   BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN    NH3  NO3+2   TOTN   PHOS  CHL A   MACRO    COLI    NCM
NO.    DIST  DEG C   PPT    mg/L    mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   µg/L   g/m³  #/100mL
  1   7.730  31.60  0.00    0.00    0.00  6.63   1.91   0.00   1.91   0.00   0.00   0.04   0.53   0.57   0.05   1.00    0.00      0.   0.00
  2   7.690  31.60  0.00    0.00    0.00  6.97   1.01   0.00   1.01   0.00   0.00   0.01   0.53   0.54   0.05   1.00    0.00      0.   0.00
FINAL REPORT            Headwater                        Pearl River DO Modeling 090105
REACH NO.  2    Include A                                COEF-1 Run
************************************************************ REACH INPUTS ************************************************************
ELEM  TYPE      FLOW    TEMP    SALN    CM-I    CM-II    DO  BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN    NH3  NO3+2   PHOS  CHL A    COLI    NCM
NO.               deg C    ppt    mg/L    mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   µg/L  #/100mL
  3  UPR RCH   0.00283  31.60    0.00    0.00    0.00  6.97  1.01  0.00  1.01  0.00  0.00  0.01  0.53  0.05  1.00    0.00   0.00
************************************************** HYDRAULIC PARAMETER VALUES **************************************************
ELEM   BEGIN  ENDING     FLOW  PCT  ADVCTV   TRAVEL   DEPTH   WIDTH    VOLUME    SURFACE  X-SECT    TIDAL   TIDAL   DISPRSN    MEAN
 NO.   DIST    DIST          EFF    VELO     TIME                          AREA    AREA     PRISM    VELO            VELO
       km      km      m³/s          m/s    days      m      m       m³       m²      m²       m³     m/s     m²/s    m/s
  3   7.69    7.63   0.00283  0.0  0.00006   11.30   0.99  44.70  2765.81   2793.75  44.25     0.00  0.000    0.000  0.000
  4   7.63    7.57   0.00283  0.0  0.00006   11.30   0.99  44.70  2765.81   2793.75  44.25     0.00  0.000    0.000  0.000
 TOT                                  22.61                5531.63    5587.50
 AVG                            0.0001          0.99  44.70                    44.25
 CUM                                  37.08
********************************************** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********************************************
ELEM  ENDING  SAT    REAER  BOD#1 BOD#1 ABOD#1  BOD#2 BOD#2 ABOD#2  BKGD  FULL  CORR   ORGN ORGN    NH3   NH3 DENIT   PO4   ALG   MAC   COLI    NCM    NCM
NO.    DIST  D.O.   RATE  DECAY SETT DECAY  DECAY  SETT  DECAY   SOD   SOD   SOD DECAY SETT DECAY SRCE   RATE SRCE PROD PROD DECAY DECAY   SETT
```

```
          mg/L   1/da  1/da  1/da  1/da  1/da  1/da  1/da   *    *    *   1/da  1/da  1/da   *   1/da   *   **   **   1/da  1/da  1/da
  3   7.628 7.35   0.87  0.11 0.01  0.00  0.01 0.00  0.00 0.25 0.25 0.25  0.06 0.01  0.25 0.00  0.00 0.00 0.09 0.00  0.00  0.00  0.00
  4   7.565 7.35   0.87  0.11 0.01  0.00  0.01 0.00  0.00 0.25 0.25 0.25  0.06 0.01  0.25 0.00  0.00 0.00 0.09 0.00  0.00  0.00  0.00
 AVG 20 DEG C RATE    0.71  0.06 0.01  0.00  0.01 0.00  0.00 0.12            0.05 0.01  0.10 0.00  0.00 0.00            3.00  0.00  0.00
 *  g/m²/d          **   mg/L/day
 ************************************************ WATER QUALITY CONSTITUENT VALUES ************************************************
 ELEM  ENDING  TEMP  SALN    CM-I   CM-II   DO  BOD#1  BOD#2 EBOD#1 EBOD#2  ORGN   NH3  NO3+2  TOTN  PHOS  CHL A  MACRO    COLI    NCM
 NO.    DIST  DEG C  PPT    mg/L    mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  µg/L   g/m³  #/100mL
  3   7.628 31.60 0.00    0.00    0.00 7.09  0.42  0.00  0.42  0.00  0.00  0.00  0.49  0.49  0.05  1.00  0.00      0.   0.00
  4   7.565 31.60 0.00    0.00    0.00 7.13  0.18  0.00  0.18  0.00  0.00  0.00  0.44  0.44  0.05  1.00  0.00      0.   0.00
FINAL REPORT            Headwater                        Pearl River DO Modeling 090105
REACH NO.  3    Include Stream 1                         COEF-1 Run
 ********************************************************** REACH INPUTS **********************************************************
 ELEM  TYPE      FLOW    TEMP    SALN    CM-I   CM-II    DO  BOD#1  BOD#2 EBOD#1 EBOD#2  ORGN   NH3  NO3+2  PHOS  CHL A    COLI    NCM
 NO.                deg C    ppt    mg/L    mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  µg/L  #/100mL
   5  UPR RCH  0.00283  31.60    0.00    0.00    0.00 7.13  0.18  0.00  0.18  0.00  0.00  0.00  0.44  0.05  1.00    0.00   0.00
 ********************************************************* HYDRAULIC PARAMETER VALUES *********************************************
 ELEM  BEGIN  ENDING     FLOW  PCT  ADVCTV   TRAVEL  DEPTH  WIDTH   VOLUME   SURFACE  X-SECT    TIDAL  TIDAL  DISPRSN   MEAN
  NO.   DIST   DIST          EFF    VELO     TIME                          AREA   AREA    PRISM   VELO           VELO
        km     km      m³/s          m/s    days     m      m      m³       m²     m²       m³    m/s    m²/s    m/s
   5   7.57   7.53   0.00283  0.0  0.00006    7.23   0.99  44.70  1770.12   1788.00  44.25    0.00  0.000    0.000  0.000
   6   7.53   7.49   0.00283  0.0  0.00006    7.23   0.99  44.70  1770.12   1788.00  44.25    0.00  0.000    0.000  0.000
  TOT                                  14.47                3540.24   3576.00
  AVG                          0.0001          0.99  44.70                  44.25
  CUM                                  51.54
 ************************************************ BIOLOGICAL AND PHYSICAL COEFFICIENTS ************************************************
 ELEM  ENDING  SAT    REAER  BOD#1 BOD#1 ABOD#1  BOD#2 BOD#2 ABOD#2  BKGD  FULL  CORR   ORGN ORGN   NH3  NH3 DENIT  PO4  ALG  MAC  COLI   NCM   NCM
 NO.    DIST  D.O.   RATE  DECAY  SETT  DECAY  DECAY  SETT  DECAY   SOD   SOD   SOD DECAY  SETT DECAY SRCE  RATE SRCE PROD PROD DECAY DECAY  SETT
          mg/L   1/da  1/da  1/da  1/da  1/da  1/da  1/da   *    *    *   1/da  1/da  1/da   *   1/da   *   **   **   1/da  1/da  1/da
  5   7.525 7.32   0.88  0.11 0.01  0.00  0.01 0.00  0.00 0.25 0.25 0.25  0.06 0.01  0.25 0.00  0.00 0.00 0.09 0.00  0.00  0.00  0.00
  6   7.485 7.29   0.88  0.11 0.01  0.00  0.01 0.00  0.00 0.26 0.26 0.26  0.06 0.01  0.26 0.00  0.00 0.00 0.09 0.00  0.00  0.00  0.00
 AVG 20 DEG C RATE    0.71  0.06 0.01  0.00  0.01 0.00  0.00 0.12            0.05 0.01  0.10 0.00  0.00 0.00            3.00  0.00  0.00
 *  g/m²/d          **   mg/L/day
 ************************************************ WATER QUALITY CONSTITUENT VALUES ************************************************
 ELEM  ENDING  TEMP  SALN    CM-I   CM-II   DO  BOD#1  BOD#2 EBOD#1 EBOD#2  ORGN   NH3  NO3+2  TOTN  PHOS  CHL A  MACRO    COLI    NCM
 NO.    DIST  DEG C  PPT    mg/L    mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  µg/L   g/m³  #/100mL
  5   7.525 31.85 0.00    0.00    0.00 7.12  0.09  0.00  0.09  0.00  0.00  0.00  0.41  0.41  0.05  1.00  0.00      0.   0.00
  6   7.485 32.10 0.00    0.00    0.00 7.08  0.09  0.00  0.09  0.00  0.00  0.00  0.38  0.39  0.05  1.00  0.00      0.   0.00
FINAL REPORT            Headwater                        Pearl River DO Modeling 090105
REACH NO.  4    Include B                                COEF-1 Run
 ********************************************************** REACH INPUTS **********************************************************
 ELEM  TYPE      FLOW    TEMP    SALN    CM-I   CM-II    DO  BOD#1  BOD#2 EBOD#1 EBOD#2  ORGN   NH3  NO3+2  PHOS  CHL A    COLI    NCM
 NO.                deg C    ppt    mg/L    mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  µg/L  #/100mL
   7  UPR RCH  0.00283  32.10    0.00    0.00    0.00 7.08  0.09  0.00  0.09  0.00  0.00  0.00  0.38  0.05  1.00    0.00   0.00
 EACH  INCR    0.01300  30.00    0.00    0.00    0.00 5.00  3.60  0.00            0.00  0.10  0.50  0.00    0.00   0.00
 ********************************************************* HYDRAULIC PARAMETER VALUES *********************************************
 ELEM  BEGIN  ENDING     FLOW  PCT  ADVCTV   TRAVEL  DEPTH  WIDTH   VOLUME   SURFACE  X-SECT    TIDAL  TIDAL  DISPRSN   MEAN
  NO.   DIST   DIST          EFF    VELO     TIME                          AREA   AREA    PRISM   VELO           VELO
        km     km      m³/s          m/s    days     m      m      m³       m²     m²       m³    m/s    m²/s    m/s
   7   7.49   7.41   0.01583  0.0  0.00036    2.35   0.99  44.70  3208.34   3240.75  44.25    0.00  0.000    0.000  0.000
```

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8 | 7.41 | 7.34 | 0.02883 | 0.0 | 0.00065 | 1.29 | 0.99 | 44.70 | 3208.34 | 3240.75 | 44.25 | 0.00 | 0.000 | 0.000 | 0.001 |
| 9 | 7.34 | 7.27 | 0.04183 | 0.0 | 0.00095 | 0.89 | 0.99 | 44.70 | 3208.34 | 3240.75 | 44.25 | 0.00 | 0.000 | 0.000 | 0.001 |
| 10 | 7.27 | 7.19 | 0.05483 | 0.0 | 0.00124 | 0.68 | 0.99 | 44.70 | 3208.34 | 3240.75 | 44.25 | 0.00 | 0.000 | 0.001 | 0.001 |
| 11 | 7.19 | 7.12 | 0.06783 | 0.0 | 0.00153 | 0.55 | 0.99 | 44.70 | 3208.34 | 3240.75 | 44.25 | 0.00 | 0.000 | 0.001 | 0.002 |
| 12 | 7.12 | 7.05 | 0.08083 | 0.0 | 0.00183 | 0.46 | 0.99 | 44.70 | 3208.34 | 3240.75 | 44.25 | 0.00 | 0.000 | 0.001 | 0.002 |
| 13 | 7.05 | 6.98 | 0.09383 | 0.0 | 0.00212 | 0.40 | 0.99 | 44.70 | 3208.34 | 3240.75 | 44.25 | 0.00 | 0.000 | 0.001 | 0.002 |
| 14 | 6.98 | 6.90 | 0.10683 | 0.0 | 0.00241 | 0.35 | 0.99 | 44.70 | 3208.34 | 3240.75 | 44.25 | 0.00 | 0.000 | 0.001 | 0.002 |
| 15 | 6.90 | 6.83 | 0.11983 | 0.0 | 0.00271 | 0.31 | 0.99 | 44.70 | 3208.34 | 3240.75 | 44.25 | 0.00 | 0.000 | 0.001 | 0.003 |
| 16 | 6.83 | 6.76 | 0.13283 | 0.0 | 0.00300 | 0.28 | 0.99 | 44.70 | 3208.34 | 3240.75 | 44.25 | 0.00 | 0.000 | 0.001 | 0.003 |
| TOT | | | | | 7.54 | | | | 32083.43 | 32407.50 | | | | | |
| AVG | | | | | 0.0011 | | 0.99 | 44.70 | | | 44.25 | | | | |
| CUM | | | | | 59.08 | | | | | | | | | | |

********** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********

| ELEM NO. | ENDING DIST | SAT D.O. | REAER RATE | BOD#1 DECAY | BOD#1 SETT | ABOD#1 DECAY | BOD#2 DECAY | BOD#2 SETT | ABOD#2 DECAY | BKGD SOD | FULL SOD | CORR SOD | ORGN DECAY | ORGN SETT | NH3 DECAY | NH3 SRCE | DENIT RATE | PO4 SRCE | ALG PROD | MAC PROD | COLI DECAY | NCM DECAY | NCM SETT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | mg/L | 1/da | 1/da | 1/da | 1/da | 1/da | 1/da | 1/da | * | * | * | 1/da | 1/da | 1/da | * | 1/da | * | ** | ** | 1/da | 1/da | 1/da |
| 7 | 7.412 | 7.30 | 0.88 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 1.80 | 1.83 | 1.83 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.09 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8 | 7.340 | 7.30 | 0.88 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 1.79 | 1.82 | 1.82 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.09 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9 | 7.267 | 7.31 | 0.88 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 1.79 | 1.82 | 1.82 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.09 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10 | 7.195 | 7.31 | 0.88 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 1.78 | 1.82 | 1.82 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.09 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11 | 7.122 | 7.32 | 0.88 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 1.78 | 1.81 | 1.81 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.09 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12 | 7.050 | 7.32 | 0.88 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 1.77 | 1.81 | 1.81 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.09 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13 | 6.977 | 7.33 | 0.88 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 1.77 | 1.80 | 1.80 | 0.06 | 0.01 | 0.23 | 0.00 | 0.00 | 0.00 | 0.09 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14 | 6.905 | 7.33 | 0.88 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 1.76 | 1.80 | 1.80 | 0.06 | 0.01 | 0.23 | 0.00 | 0.00 | 0.00 | 0.09 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15 | 6.832 | 7.34 | 0.88 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 1.76 | 1.79 | 1.79 | 0.06 | 0.01 | 0.23 | 0.00 | 0.00 | 0.00 | 0.09 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16 | 6.760 | 7.34 | 0.88 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 1.75 | 1.79 | 1.79 | 0.06 | 0.01 | 0.23 | 0.00 | 0.00 | 0.00 | 0.09 | 0.00 | 0.00 | 0.00 | 0.00 |
| AVG 20 DEG C RATE | | | 0.71 | 0.06 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.84 | | | 0.05 | 0.01 | 0.10 | 0.00 | 0.00 | 0.00 | | | 3.00 | 0.00 | 0.00 |

* g/m²/d ** mg/L/day

********** WATER QUALITY CONSTITUENT VALUES **********

| ELEM NO. | ENDING DIST | TEMP DEG C | SALN PPT | CM-I mg/L | CM-II mg/L | DO mg/L | BOD#1 mg/L | BOD#2 mg/L | EBOD#1 mg/L | EBOD#2 mg/L | ORGN mg/L | NH3 mg/L | NO3+2 mg/L | TOTN mg/L | PHOS µg/L | CHL A g/m³ | MACRO | COLI #/100mL | NCM |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7 | 7.412 | 32.06 | 0.00 | 0.00 | 0.00 | 5.13 | 2.28 | 0.00 | 2.28 | 0.00 | 0.00 | 0.05 | 0.50 | 0.55 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 8 | 7.340 | 32.02 | 0.00 | 0.00 | 0.00 | 5.03 | 2.47 | 0.00 | 2.47 | 0.00 | 0.00 | 0.06 | 0.51 | 0.57 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 9 | 7.267 | 31.98 | 0.00 | 0.00 | 0.00 | 5.01 | 2.54 | 0.00 | 2.54 | 0.00 | 0.00 | 0.06 | 0.52 | 0.57 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 10 | 7.195 | 31.94 | 0.00 | 0.00 | 0.00 | 5.00 | 2.57 | 0.00 | 2.57 | 0.00 | 0.00 | 0.06 | 0.52 | 0.58 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 11 | 7.122 | 31.90 | 0.00 | 0.00 | 0.00 | 5.00 | 2.59 | 0.00 | 2.59 | 0.00 | 0.00 | 0.06 | 0.52 | 0.58 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 12 | 7.050 | 31.86 | 0.00 | 0.00 | 0.00 | 5.00 | 2.60 | 0.00 | 2.60 | 0.00 | 0.00 | 0.06 | 0.52 | 0.58 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 13 | 6.977 | 31.82 | 0.00 | 0.00 | 0.00 | 5.01 | 2.61 | 0.00 | 2.61 | 0.00 | 0.00 | 0.06 | 0.52 | 0.58 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 14 | 6.905 | 31.78 | 0.00 | 0.00 | 0.00 | 5.01 | 2.62 | 0.00 | 2.62 | 0.00 | 0.00 | 0.06 | 0.52 | 0.58 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 15 | 6.832 | 31.74 | 0.00 | 0.00 | 0.00 | 5.01 | 2.62 | 0.00 | 2.62 | 0.00 | 0.00 | 0.06 | 0.52 | 0.58 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 16 | 6.760 | 31.70 | 0.00 | 0.00 | 0.00 | 5.02 | 2.63 | 0.00 | 2.63 | 0.00 | 0.00 | 0.06 | 0.52 | 0.58 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |

FINAL REPORT Headwater Pearl River DO Modeling 090105

REACH NO. 5 Include C COEF-1 Run

********** REACH INPUTS **********

| ELEM NO. | TYPE | FLOW deg C | TEMP ppt | SALN mg/L | CM-I mg/L | CM-II mg/L | DO mg/L | BOD#1 mg/L | BOD#2 mg/L | EBOD#1 mg/L | EBOD#2 mg/L | ORGN mg/L | NH3 mg/L | NO3+2 mg/L | PHOS µg/L | CHL A #/100mL | COLI | NCM |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 17 | UPR RCH | 0.13283 | 31.70 | 0.00 | 0.00 | 0.00 | 5.02 | 2.63 | 0.00 | 2.63 | 0.00 | 0.00 | 0.06 | 0.52 | 0.05 | 1.00 | 0.00 | 0.00 |

********** HYDRAULIC PARAMETER VALUES **********

| ELEM NO. | BEGIN DIST | ENDING DIST | FLOW EFF | PCT | ADVCTV VELO | TRAVEL TIME | DEPTH | WIDTH | VOLUME AREA | SURFACE AREA | X-SECT PRISM | TIDAL VELO | TIDAL VELO | DISPRSN | MEAN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

| | km | km | m³/s | m/s | days | m | m | m³ | m² | m² | m³ | m/s | m²/s | m/s | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 17 | 6.76 | 6.68 | 0.13283 | 0.0 | 0.00257 | 0.35 | 1.18 | 43.75 | 3975.12 | 3368.75 | 51.62 | | 0.00 | 0.000 | 0.001 | 0.003 |
| 18 | 6.68 | 6.61 | 0.13283 | 0.0 | 0.00257 | 0.35 | 1.18 | 43.75 | 3975.12 | 3368.75 | 51.62 | | 0.00 | 0.000 | 0.001 | 0.003 |
| 19 | 6.61 | 6.53 | 0.13283 | 0.0 | 0.00257 | 0.35 | 1.18 | 43.75 | 3975.12 | 3368.75 | 51.62 | | 0.00 | 0.000 | 0.001 | 0.003 |
| 20 | 6.53 | 6.45 | 0.13283 | 0.0 | 0.00257 | 0.35 | 1.18 | 43.75 | 3975.12 | 3368.75 | 51.62 | | 0.00 | 0.000 | 0.001 | 0.003 |
| 21 | 6.45 | 6.37 | 0.13283 | 0.0 | 0.00257 | 0.35 | 1.18 | 43.75 | 3975.12 | 3368.75 | 51.62 | | 0.00 | 0.000 | 0.001 | 0.003 |
| 22 | 6.37 | 6.30 | 0.13283 | 0.0 | 0.00257 | 0.35 | 1.18 | 43.75 | 3975.12 | 3368.75 | 51.62 | | 0.00 | 0.000 | 0.001 | 0.003 |
| 23 | 6.30 | 6.22 | 0.13283 | 0.0 | 0.00257 | 0.35 | 1.18 | 43.75 | 3975.12 | 3368.75 | 51.62 | | 0.00 | 0.000 | 0.001 | 0.003 |
| 24 | 6.22 | 6.14 | 0.13283 | 0.0 | 0.00257 | 0.35 | 1.18 | 43.75 | 3975.12 | 3368.75 | 51.62 | | 0.00 | 0.000 | 0.001 | 0.003 |
| 25 | 6.14 | 6.07 | 0.13283 | 0.0 | 0.00257 | 0.35 | 1.18 | 43.75 | 3975.12 | 3368.75 | 51.62 | | 0.00 | 0.000 | 0.001 | 0.003 |
| 26 | 6.07 | 5.99 | 0.13283 | 0.0 | 0.00257 | 0.35 | 1.18 | 43.75 | 3975.12 | 3368.75 | 51.62 | | 0.00 | 0.000 | 0.001 | 0.003 |
| TOT | | | | | 3.46 | | | | 39751.25 | 33687.50 | | | | | | |
| AVG | | | | 0.0026 | | | 1.18 | 43.75 | | | 51.62 | | | | | |
| CUM | | | | | 62.55 | | | | | | | | | | | |

********** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********

| ELEM NO. | ENDING DIST | SAT D.O. | REAER RATE | BOD#1 DECAY | BOD#1 SETT | ABOD#1 DECAY | BOD#2 DECAY | BOD#2 SETT | ABOD#2 DECAY | BKGD SOD | FULL SOD | CORR SOD | ORGN DECAY | ORGN SETT | NH3 DECAY | NH3 SRCE | DENIT RATE | PO4 SRCE | ALG PROD | MAC PROD | COLI DECAY | NCM DECAY | NCM SETT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | mg/L | 1/da | 1/da | 1/da | 1/da | 1/da | 1/da | 1/da | 1/da | * | * | * | 1/da | 1/da | 1/da | * | 1/da | * | ** | ** | 1/da | 1/da | 1/da |
| 17 | 6.683 | 7.34 | 0.73 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 1.75 | 1.79 | 1.79 | 0.06 | 0.01 | 0.23 | 0.00 | 0.00 | 0.00 | 0.09 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18 | 6.606 | 7.34 | 0.73 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 1.75 | 1.79 | 1.79 | 0.06 | 0.01 | 0.23 | 0.00 | 0.00 | 0.00 | 0.09 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19 | 6.529 | 7.34 | 0.73 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 1.75 | 1.79 | 1.79 | 0.06 | 0.01 | 0.23 | 0.00 | 0.00 | 0.00 | 0.09 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20 | 6.452 | 7.34 | 0.73 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 1.75 | 1.78 | 1.78 | 0.06 | 0.01 | 0.23 | 0.00 | 0.00 | 0.00 | 0.09 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21 | 6.375 | 7.34 | 0.73 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 1.75 | 1.78 | 1.78 | 0.06 | 0.01 | 0.23 | 0.00 | 0.00 | 0.00 | 0.09 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22 | 6.298 | 7.34 | 0.73 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 1.75 | 1.78 | 1.78 | 0.06 | 0.01 | 0.23 | 0.00 | 0.00 | 0.00 | 0.09 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23 | 6.221 | 7.34 | 0.73 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 1.75 | 1.78 | 1.78 | 0.06 | 0.01 | 0.23 | 0.00 | 0.00 | 0.00 | 0.09 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24 | 6.144 | 7.34 | 0.73 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 1.75 | 1.78 | 1.78 | 0.06 | 0.01 | 0.23 | 0.00 | 0.00 | 0.00 | 0.09 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25 | 6.067 | 7.34 | 0.73 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 1.75 | 1.78 | 1.78 | 0.06 | 0.01 | 0.23 | 0.00 | 0.00 | 0.00 | 0.09 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26 | 5.990 | 7.34 | 0.73 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 1.75 | 1.78 | 1.78 | 0.06 | 0.01 | 0.23 | 0.00 | 0.00 | 0.00 | 0.09 | 0.00 | 0.00 | 0.00 | 0.00 |
| AVG 20 DEG C RATE | | | 0.59 | 0.06 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.84 | | | 0.05 | 0.01 | 0.10 | 0.00 | 0.00 | 0.00 | | | 3.00 | 0.00 | 0.00 |

* g/m²/d ** mg/L/day

********** WATER QUALITY CONSTITUENT VALUES **********

| ELEM NO. | ENDING DIST | TEMP DEG C | SALN PPT | CM-I mg/L | CM-II mg/L | DO mg/L | BOD#1 mg/L | BOD#2 mg/L | EBOD#1 mg/L | EBOD#2 mg/L | ORGN mg/L | NH3 mg/L | NO3+2 mg/L | TOTN mg/L | PHOS µg/L | CHL A g/m³ | MACRO | COLI #/100mL | NCM |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 17 | 6.683 | 31.70 | 0.00 | 0.00 | 0.00 | 5.02 | 2.52 | 0.00 | 2.52 | 0.00 | 0.00 | 0.06 | 0.53 | 0.58 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 18 | 6.606 | 31.70 | 0.00 | 0.00 | 0.00 | 5.02 | 2.42 | 0.00 | 2.42 | 0.00 | 0.00 | 0.05 | 0.53 | 0.58 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 19 | 6.529 | 31.70 | 0.00 | 0.00 | 0.00 | 5.03 | 2.32 | 0.00 | 2.32 | 0.00 | 0.00 | 0.05 | 0.53 | 0.58 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 20 | 6.452 | 31.70 | 0.00 | 0.00 | 0.00 | 5.03 | 2.22 | 0.00 | 2.22 | 0.00 | 0.00 | 0.04 | 0.53 | 0.58 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 21 | 6.375 | 31.70 | 0.00 | 0.00 | 0.00 | 5.04 | 2.13 | 0.00 | 2.13 | 0.00 | 0.00 | 0.04 | 0.54 | 0.58 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 22 | 6.298 | 31.70 | 0.00 | 0.00 | 0.00 | 5.05 | 2.05 | 0.00 | 2.05 | 0.00 | 0.00 | 0.04 | 0.54 | 0.57 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 23 | 6.221 | 31.70 | 0.00 | 0.00 | 0.00 | 5.06 | 1.96 | 0.00 | 1.96 | 0.00 | 0.00 | 0.03 | 0.54 | 0.57 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 24 | 6.144 | 31.70 | 0.00 | 0.00 | 0.00 | 5.07 | 1.88 | 0.00 | 1.88 | 0.00 | 0.00 | 0.03 | 0.54 | 0.57 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 25 | 6.067 | 31.70 | 0.00 | 0.00 | 0.00 | 5.09 | 1.81 | 0.00 | 1.81 | 0.00 | 0.00 | 0.03 | 0.54 | 0.57 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 26 | 5.990 | 31.70 | 0.00 | 0.00 | 0.00 | 5.10 | 1.75 | 0.00 | 1.75 | 0.00 | 0.00 | 0.03 | 0.54 | 0.57 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |

FINAL REPORT Headwater Pearl River DO Modeling 090105
REACH NO. 6 Include Stream 2 COEF-1 Run

********** REACH INPUTS **********

| ELEM NO. | TYPE | FLOW deg C | TEMP ppt | SALN mg/L | CM-I mg/L | CM-II mg/L | DO mg/L | BOD#1 mg/L | BOD#2 mg/L | EBOD#1 mg/L | EBOD#2 mg/L | ORGN mg/L | NH3 mg/L | NO3+2 mg/L | PHOS µg/L | CHL A #/100mL | COLI | NCM |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 27 | UPR RCH | 0.13283 | 31.70 | 0.00 | 0.00 | 0.00 | 5.10 | 1.75 | 0.00 | 1.75 | 0.00 | 0.00 | 0.03 | 0.54 | 0.05 | 1.00 | 0.00 | 0.00 |
| EACH | INCR | 0.06867 | 30.00 | 0.00 | 0.00 | 0.00 | 5.00 | 5.80 | 0.00 | | 0.00 | 0.10 | 0.50 | 0.00 | 0.00 | 0.00 | | |

********** HYDRAULIC PARAMETER VALUES **********

| ELEM NO. | BEGIN DIST km | ENDING DIST km | FLOW m³/s | PCT EFF | ADVCTV VELO m/s | TIME days | TRAVEL m | DEPTH m | WIDTH m | VOLUME m³ | SURFACE AREA m² | X-SECT AREA m² | TIDAL PRISM m³ | TIDAL VELO m/s | TIDAL VELO m²/s | DISPRSN m/s | MEAN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 27 | 5.99 | 5.91 | 0.20150 | 0.0 | 0.00155 | 0.59 | 2.07 | 62.75 | 10261.51 | 4957.25 | 129.89 | 0.00 | 0.000 | 0.001 | 0.002 | | |
| 28 | 5.91 | 5.83 | 0.27017 | 0.0 | 0.00208 | 0.44 | 2.07 | 62.75 | 10261.51 | 4957.25 | 129.89 | 0.00 | 0.000 | 0.002 | 0.002 | | |
| 29 | 5.83 | 5.75 | 0.33883 | 0.0 | 0.00261 | 0.35 | 2.07 | 62.75 | 10261.51 | 4957.25 | 129.89 | 0.00 | 0.000 | 0.002 | 0.003 | | |
| 30 | 5.75 | 5.67 | 0.40750 | 0.0 | 0.00314 | 0.29 | 2.07 | 62.75 | 10261.51 | 4957.25 | 129.89 | 0.00 | 0.000 | 0.003 | 0.003 | | |
| 31 | 5.67 | 5.59 | 0.47617 | 0.0 | 0.00367 | 0.25 | 2.07 | 62.75 | 10261.51 | 4957.25 | 129.89 | 0.00 | 0.000 | 0.003 | 0.004 | | |
| 32 | 5.59 | 5.52 | 0.54483 | 0.0 | 0.00419 | 0.22 | 2.07 | 62.75 | 10261.51 | 4957.25 | 129.89 | 0.00 | 0.000 | 0.004 | 0.004 | | |
| 33 | 5.52 | 5.44 | 0.61350 | 0.0 | 0.00472 | 0.19 | 2.07 | 62.75 | 10261.51 | 4957.25 | 129.89 | 0.00 | 0.000 | 0.004 | 0.005 | | |
| 34 | 5.44 | 5.36 | 0.68217 | 0.0 | 0.00525 | 0.17 | 2.07 | 62.75 | 10261.51 | 4957.25 | 129.89 | 0.00 | 0.000 | 0.004 | 0.005 | | |
| 35 | 5.36 | 5.28 | 0.75083 | 0.0 | 0.00578 | 0.16 | 2.07 | 62.75 | 10261.51 | 4957.25 | 129.89 | 0.00 | 0.000 | 0.005 | 0.006 | | |
| 36 | 5.28 | 5.20 | 0.81950 | 0.0 | 0.00631 | 0.14 | 2.07 | 62.75 | 10261.51 | 4957.25 | 129.89 | 0.00 | 0.000 | 0.005 | 0.006 | | |
| 37 | 5.20 | 5.12 | 0.88817 | 0.0 | 0.00684 | 0.13 | 2.07 | 62.75 | 10261.51 | 4957.25 | 129.89 | 0.00 | 0.000 | 0.006 | 0.007 | | |
| 38 | 5.12 | 5.04 | 0.95683 | 0.0 | 0.00737 | 0.12 | 2.07 | 62.75 | 10261.51 | 4957.25 | 129.89 | 0.00 | 0.000 | 0.006 | 0.007 | | |
| 39 | 5.04 | 4.96 | 1.02550 | 0.0 | 0.00789 | 0.12 | 2.07 | 62.75 | 10261.51 | 4957.25 | 129.89 | 0.00 | 0.000 | 0.007 | 0.008 | | |
| 40 | 4.96 | 4.88 | 1.09417 | 0.0 | 0.00842 | 0.11 | 2.07 | 62.75 | 10261.51 | 4957.25 | 129.89 | 0.00 | 0.000 | 0.007 | 0.008 | | |
| 41 | 4.88 | 4.80 | 1.16283 | 0.0 | 0.00895 | 0.10 | 2.07 | 62.75 | 10261.51 | 4957.25 | 129.89 | 0.00 | 0.000 | 0.008 | 0.009 | | |
| TOT | | | | | 3.39 | | | | 153922.59 | 74358.75 | | | | | | | |
| AVG | | | | 0.0040 | | | 2.07 | 62.75 | | | 129.89 | | | | | | |
| CUM | | | | | 65.94 | | | | | | | | | | | | |

********** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********

| ELEM NO. | ENDING DIST mg/L | SAT D.O. | REAER RATE 1/da | BOD#1 DECAY 1/da | BOD#1 SETT 1/da | ABOD#1 DECAY 1/da | BOD#2 DECAY 1/da | BOD#2 SETT 1/da | ABOD#2 DECAY * | BKGD SOD * | FULL SOD * | CORR SOD 1/da | ORGN DECAY 1/da | ORGN SETT 1/da | NH3 DECAY * | NH3 SRCE 1/da | DENIT RATE * | PO4 SRCE ** | ALG PROD ** | MAC PROD 1/da | COLI DECAY 1/da | NCM DECAY 1/da | NCM SETT 1/da |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 27 | 5.911 | 7.35 | 0.42 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.25 | 0.29 | 0.29 | 0.06 | 0.01 | 0.23 | 0.00 | 0.00 | 0.00 | 0.09 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28 | 5.832 | 7.35 | 0.42 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.25 | 0.30 | 0.30 | 0.06 | 0.01 | 0.23 | 0.00 | 0.00 | 0.00 | 0.09 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29 | 5.753 | 7.36 | 0.42 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.25 | 0.30 | 0.30 | 0.06 | 0.01 | 0.23 | 0.00 | 0.00 | 0.00 | 0.09 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30 | 5.674 | 7.37 | 0.42 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.25 | 0.30 | 0.30 | 0.06 | 0.01 | 0.23 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31 | 5.595 | 7.37 | 0.42 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.25 | 0.30 | 0.30 | 0.06 | 0.01 | 0.23 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32 | 5.516 | 7.38 | 0.42 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.25 | 0.30 | 0.30 | 0.06 | 0.01 | 0.23 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33 | 5.437 | 7.38 | 0.42 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.25 | 0.30 | 0.30 | 0.06 | 0.01 | 0.23 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34 | 5.358 | 7.39 | 0.42 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.24 | 0.30 | 0.30 | 0.06 | 0.01 | 0.23 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35 | 5.279 | 7.39 | 0.42 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.24 | 0.30 | 0.30 | 0.06 | 0.01 | 0.23 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36 | 5.200 | 7.40 | 0.42 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.24 | 0.30 | 0.30 | 0.06 | 0.01 | 0.23 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37 | 5.121 | 7.41 | 0.42 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.24 | 0.30 | 0.30 | 0.06 | 0.01 | 0.23 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38 | 5.042 | 7.41 | 0.41 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.24 | 0.30 | 0.30 | 0.06 | 0.01 | 0.23 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39 | 4.963 | 7.42 | 0.41 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.24 | 0.30 | 0.30 | 0.06 | 0.01 | 0.23 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40 | 4.884 | 7.42 | 0.41 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.24 | 0.30 | 0.30 | 0.06 | 0.01 | 0.22 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41 | 4.805 | 7.43 | 0.41 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.24 | 0.30 | 0.30 | 0.06 | 0.01 | 0.22 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| AVG 20 DEG C RATE | | | 0.34 | 0.06 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.12 | | | 0.05 | 0.00 | 0.10 | 0.00 | 0.00 | 0.00 | | | 3.00 | 0.00 | 0.00 |

* g/m²/d ** mg/L/day

********** WATER QUALITY CONSTITUENT VALUES **********

| ELEM NO. | ENDING DIST | TEMP DEG C | SALN PPT | CM-I mg/L | CM-II mg/L | DO mg/L | BOD#1 mg/L | BOD#2 mg/L | EBOD#1 mg/L | EBOD#2 mg/L | ORGN mg/L | NH3 mg/L | NO3+2 mg/L | TOTN mg/L | PHOS µg/L | CHL A g/m³ | MACRO | COLI #/100mL | NCM |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 27 | 5.911 | 31.65 | 0.00 | 0.00 | 0.00 | 5.34 | 2.92 | 0.00 | 2.92 | 0.00 | 0.00 | 0.05 | 0.53 | 0.58 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 28 | 5.832 | 31.61 | 0.00 | 0.00 | 0.00 | 5.41 | 3.47 | 0.00 | 3.47 | 0.00 | 0.00 | 0.05 | 0.53 | 0.58 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 29 | 5.753 | 31.56 | 0.00 | 0.00 | 0.00 | 5.44 | 3.79 | 0.00 | 3.79 | 0.00 | 0.00 | 0.06 | 0.52 | 0.58 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 30 | 5.674 | 31.51 | 0.00 | 0.00 | 0.00 | 5.45 | 3.99 | 0.00 | 3.99 | 0.00 | 0.00 | 0.06 | 0.52 | 0.58 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |

| | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 31 | 5.595 | 31.47 | 0.00 | 0.00 | 0.00 | 5.46 | 4.13 | 0.00 | 4.13 | 0.00 | 0.00 | 0.06 | 0.52 | 0.59 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 32 | 5.516 | 31.42 | 0.00 | 0.00 | 0.00 | 5.46 | 4.24 | 0.00 | 4.24 | 0.00 | 0.00 | 0.06 | 0.52 | 0.59 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 33 | 5.437 | 31.37 | 0.00 | 0.00 | 0.00 | 5.46 | 4.31 | 0.00 | 4.31 | 0.00 | 0.00 | 0.07 | 0.52 | 0.59 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 34 | 5.358 | 31.33 | 0.00 | 0.00 | 0.00 | 5.46 | 4.38 | 0.00 | 4.38 | 0.00 | 0.00 | 0.07 | 0.52 | 0.59 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 35 | 5.279 | 31.28 | 0.00 | 0.00 | 0.00 | 5.46 | 4.42 | 0.00 | 4.42 | 0.00 | 0.00 | 0.07 | 0.52 | 0.59 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 36 | 5.200 | 31.23 | 0.00 | 0.00 | 0.00 | 5.46 | 4.47 | 0.00 | 4.47 | 0.00 | 0.00 | 0.07 | 0.52 | 0.59 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 37 | 5.121 | 31.19 | 0.00 | 0.00 | 0.00 | 5.46 | 4.50 | 0.00 | 4.50 | 0.00 | 0.00 | 0.07 | 0.52 | 0.59 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 38 | 5.042 | 31.14 | 0.00 | 0.00 | 0.00 | 5.46 | 4.53 | 0.00 | 4.53 | 0.00 | 0.00 | 0.07 | 0.52 | 0.59 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 39 | 4.963 | 31.09 | 0.00 | 0.00 | 0.00 | 5.46 | 4.55 | 0.00 | 4.55 | 0.00 | 0.00 | 0.07 | 0.52 | 0.59 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 40 | 4.884 | 31.05 | 0.00 | 0.00 | 0.00 | 5.46 | 4.57 | 0.00 | 4.57 | 0.00 | 0.00 | 0.07 | 0.52 | 0.59 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 41 | 4.805 | 31.00 | 0.00 | 0.00 | 0.00 | 5.46 | 4.59 | 0.00 | 4.59 | 0.00 | 0.00 | 0.07 | 0.52 | 0.59 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |

FINAL REPORT Headwater Pearl River DO Modeling 090105
REACH NO. 7 Include D COEF-1 Run
********** REACH INPUTS **********

| ELEM NO. | TYPE | FLOW deg C | TEMP ppt | SALN mg/L | CM-I mg/L | CM-II mg/L | DO mg/L | BOD#1 mg/L | BOD#2 mg/L | EBOD#1 mg/L | EBOD#2 mg/L | ORGN mg/L | NH3 mg/L | NO3+2 mg/L | PHOS µg/L | CHL A #/100mL | COLI | NCM |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 42 | UPR RCH | 1.16283 | 31.00 | 0.00 | 0.00 | 0.00 | 5.46 | 4.59 | 0.00 | 4.59 | 0.00 | 0.00 | 0.07 | 0.52 | 0.05 | 1.00 | 0.00 | 0.00 |

********** HYDRAULIC PARAMETER VALUES **********

| ELEM NO. | BEGIN DIST km | ENDING DIST km | FLOW EFF m³/s | PCT VELO m/s | ADVCTV TIME days | TRAVEL m | DEPTH m | WIDTH m | VOLUME m³ | SURFACE AREA m² | X-SECT AREA m² | TIDAL PRISM m³ | TIDAL VELO m/s | TIDAL VELO m²/s | DISPRSN m/s | MEAN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 42 | 4.80 | 4.71 | 1.16283 | 0.0 | 0.00508 | 0.22 | 2.77 | 82.70 | 21705.23 | 7835.82 | 229.08 | 0.00 | 0.000 | 0.005 | 0.005 | |
| 43 | 4.71 | 4.62 | 1.16283 | 0.0 | 0.00508 | 0.22 | 2.77 | 82.70 | 21705.23 | 7835.82 | 229.08 | 0.00 | 0.000 | 0.005 | 0.005 | |
| 44 | 4.62 | 4.52 | 1.16283 | 0.0 | 0.00508 | 0.22 | 2.77 | 82.70 | 21705.23 | 7835.82 | 229.08 | 0.00 | 0.000 | 0.005 | 0.005 | |
| 45 | 4.52 | 4.43 | 1.16283 | 0.0 | 0.00508 | 0.22 | 2.77 | 82.70 | 21705.23 | 7835.82 | 229.08 | 0.00 | 0.000 | 0.005 | 0.005 | |
| 46 | 4.43 | 4.33 | 1.16283 | 0.0 | 0.00508 | 0.22 | 2.77 | 82.70 | 21705.23 | 7835.82 | 229.08 | 0.00 | 0.000 | 0.005 | 0.005 | |
| 47 | 4.33 | 4.24 | 1.16283 | 0.0 | 0.00508 | 0.22 | 2.77 | 82.70 | 21705.23 | 7835.82 | 229.08 | 0.00 | 0.000 | 0.005 | 0.005 | |
| 48 | 4.24 | 4.14 | 1.16283 | 0.0 | 0.00508 | 0.22 | 2.77 | 82.70 | 21705.23 | 7835.82 | 229.08 | 0.00 | 0.000 | 0.005 | 0.005 | |
| 49 | 4.14 | 4.05 | 1.16283 | 0.0 | 0.00508 | 0.22 | 2.77 | 82.70 | 21705.23 | 7835.82 | 229.08 | 0.00 | 0.000 | 0.005 | 0.005 | |
| 50 | 4.05 | 3.95 | 1.16283 | 0.0 | 0.00508 | 0.22 | 2.77 | 82.70 | 21705.23 | 7835.82 | 229.08 | 0.00 | 0.000 | 0.005 | 0.005 | |
| 51 | 3.95 | 3.86 | 1.16283 | 0.0 | 0.00508 | 0.22 | 2.77 | 82.70 | 21705.23 | 7835.82 | 229.08 | 0.00 | 0.000 | 0.005 | 0.005 | |
| 52 | 3.86 | 3.76 | 1.16283 | 0.0 | 0.00508 | 0.22 | 2.77 | 82.70 | 21705.23 | 7835.82 | 229.08 | 0.00 | 0.000 | 0.005 | 0.005 | |
| 53 | 3.76 | 3.67 | 1.16283 | 0.0 | 0.00508 | 0.22 | 2.77 | 82.70 | 21705.23 | 7835.82 | 229.08 | 0.00 | 0.000 | 0.005 | 0.005 | |
| 54 | 3.67 | 3.57 | 1.16283 | 0.0 | 0.00508 | 0.22 | 2.77 | 82.70 | 21705.23 | 7835.82 | 229.08 | 0.00 | 0.000 | 0.005 | 0.005 | |
| 55 | 3.57 | 3.48 | 1.16283 | 0.0 | 0.00508 | 0.22 | 2.77 | 82.70 | 21705.23 | 7835.82 | 229.08 | 0.00 | 0.000 | 0.005 | 0.005 | |
| 56 | 3.48 | 3.38 | 1.16283 | 0.0 | 0.00508 | 0.22 | 2.77 | 82.70 | 21705.23 | 7835.82 | 229.08 | 0.00 | 0.000 | 0.005 | 0.005 | |
| 57 | 3.38 | 3.29 | 1.16283 | 0.0 | 0.00508 | 0.22 | 2.77 | 82.70 | 21705.23 | 7835.82 | 229.08 | 0.00 | 0.000 | 0.005 | 0.005 | |
| 58 | 3.29 | 3.19 | 1.16283 | 0.0 | 0.00508 | 0.22 | 2.77 | 82.70 | 21705.23 | 7835.82 | 229.08 | 0.00 | 0.000 | 0.005 | 0.005 | |
| 59 | 3.19 | 3.10 | 1.16283 | 0.0 | 0.00508 | 0.22 | 2.77 | 82.70 | 21705.23 | 7835.82 | 229.08 | 0.00 | 0.000 | 0.005 | 0.005 | |
| 60 | 3.10 | 3.00 | 1.16283 | 0.0 | 0.00508 | 0.22 | 2.77 | 82.70 | 21705.23 | 7835.82 | 229.08 | 0.00 | 0.000 | 0.005 | 0.005 | |
| 61 | 3.00 | 2.91 | 1.16283 | 0.0 | 0.00508 | 0.22 | 2.77 | 82.70 | 21705.23 | 7835.82 | 229.08 | 0.00 | 0.000 | 0.005 | 0.005 | |
| TOT | | | | | 4.32 | | | 434104.81 | 156716.53 | | | | | | | |
| AVG | | | | 0.0051 | | 2.77 | 82.70 | | | | 229.08 | | | | | |
| CUM | | | | | 70.26 | | | | | | | | | | | |

********** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********

| ELEM NO. | ENDING DIST | SAT D.O. mg/L | REAER RATE 1/da | BOD#1 DECAY 1/da | BOD#1 SETT 1/da | ABOD#1 DECAY 1/da | BOD#2 DECAY 1/da | BOD#2 SETT 1/da | ABOD#2 DECAY 1/da | BKGD SOD * | FULL SOD * | CORR SOD * | ORGN DECAY 1/da | ORGN SETT 1/da | ORGN SRCE * | NH3 RATE 1/da | NH3 SRCE * | DENIT PROD ** | PO4 PROD ** | ALG DECAY 1/da | MAC DECAY 1/da | COLI SETT 1/da | NCM | NCM |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 42 | 4.710 | 7.43 | 0.31 | 0.11 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.24 | 0.30 | 0.30 | 0.06 | 0.00 | 0.22 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 43 | 4.615 | 7.42 | 0.31 | 0.11 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.24 | 0.30 | 0.30 | 0.06 | 0.00 | 0.22 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | |

| | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 44 | 4.521 | 7.42 | 0.31 | 0.11 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.24 | 0.30 | 0.30 | 0.06 | 0.00 | 0.23 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45 | 4.426 | 7.42 | 0.31 | 0.11 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.24 | 0.30 | 0.30 | 0.06 | 0.00 | 0.23 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46 | 4.331 | 7.42 | 0.31 | 0.11 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.24 | 0.29 | 0.29 | 0.06 | 0.00 | 0.23 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47 | 4.237 | 7.41 | 0.31 | 0.11 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.24 | 0.29 | 0.29 | 0.06 | 0.00 | 0.23 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48 | 4.142 | 7.41 | 0.31 | 0.11 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.24 | 0.29 | 0.29 | 0.06 | 0.00 | 0.23 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49 | 4.047 | 7.41 | 0.31 | 0.11 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.24 | 0.29 | 0.29 | 0.06 | 0.00 | 0.23 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50 | 3.952 | 7.41 | 0.31 | 0.11 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.24 | 0.29 | 0.29 | 0.06 | 0.00 | 0.23 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51 | 3.858 | 7.40 | 0.31 | 0.11 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.24 | 0.29 | 0.29 | 0.06 | 0.00 | 0.23 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52 | 3.763 | 7.40 | 0.31 | 0.11 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.24 | 0.29 | 0.29 | 0.06 | 0.00 | 0.23 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53 | 3.668 | 7.40 | 0.31 | 0.11 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.24 | 0.29 | 0.29 | 0.06 | 0.00 | 0.23 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54 | 3.573 | 7.40 | 0.31 | 0.11 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.24 | 0.29 | 0.29 | 0.06 | 0.00 | 0.23 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55 | 3.479 | 7.39 | 0.31 | 0.11 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.24 | 0.29 | 0.29 | 0.06 | 0.00 | 0.23 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56 | 3.384 | 7.39 | 0.31 | 0.11 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.24 | 0.29 | 0.29 | 0.06 | 0.00 | 0.23 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57 | 3.289 | 7.39 | 0.31 | 0.11 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.24 | 0.29 | 0.29 | 0.06 | 0.00 | 0.23 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58 | 3.194 | 7.39 | 0.31 | 0.11 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.25 | 0.28 | 0.28 | 0.06 | 0.00 | 0.23 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59 | 3.100 | 7.38 | 0.31 | 0.11 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.25 | 0.28 | 0.28 | 0.06 | 0.00 | 0.23 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60 | 3.005 | 7.38 | 0.31 | 0.11 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.25 | 0.28 | 0.28 | 0.06 | 0.00 | 0.23 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61 | 2.910 | 7.38 | 0.31 | 0.11 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.25 | 0.28 | 0.28 | 0.06 | 0.00 | 0.23 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |

AVG 20 DEG C RATE 0.25 0.06 0.00 0.00 0.01 0.00 0.00 0.12 0.05 0.00 0.10 0.00 0.00 0.00 3.00 0.00 0.00

* g/m²/d ** mg/L/day

********** WATER QUALITY CONSTITUENT VALUES **********

| ELEM NO. | ENDING DIST | TEMP DEG C | SALN PPT | CM-I mg/L | CM-II mg/L | DO mg/L | BOD#1 mg/L | BOD#2 mg/L | EBOD#1 mg/L | EBOD#2 mg/L | ORGN mg/L | NH3 mg/L | NO3+2 mg/L | TOTN mg/L | PHOS µg/L | CHL A g/m³ | MACRO | COLI #/100mL | NCM |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 42 | 4.710 | 31.02 | 0.00 | 0.00 | 0.00 | 5.48 | 4.48 | 0.00 | 4.48 | 0.00 | 0.00 | 0.07 | 0.52 | 0.59 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 43 | 4.615 | 31.04 | 0.00 | 0.00 | 0.00 | 5.50 | 4.38 | 0.00 | 4.38 | 0.00 | 0.00 | 0.06 | 0.53 | 0.59 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 44 | 4.521 | 31.06 | 0.00 | 0.00 | 0.00 | 5.52 | 4.27 | 0.00 | 4.27 | 0.00 | 0.00 | 0.06 | 0.53 | 0.59 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 45 | 4.426 | 31.08 | 0.00 | 0.00 | 0.00 | 5.54 | 4.17 | 0.00 | 4.17 | 0.00 | 0.00 | 0.06 | 0.53 | 0.59 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 46 | 4.331 | 31.10 | 0.00 | 0.00 | 0.00 | 5.57 | 4.07 | 0.00 | 4.07 | 0.00 | 0.00 | 0.05 | 0.53 | 0.59 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 47 | 4.237 | 31.12 | 0.00 | 0.00 | 0.00 | 5.59 | 3.97 | 0.00 | 3.97 | 0.00 | 0.00 | 0.05 | 0.53 | 0.58 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 48 | 4.142 | 31.14 | 0.00 | 0.00 | 0.00 | 5.62 | 3.88 | 0.00 | 3.88 | 0.00 | 0.00 | 0.05 | 0.53 | 0.58 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 49 | 4.047 | 31.16 | 0.00 | 0.00 | 0.00 | 5.64 | 3.79 | 0.00 | 3.79 | 0.00 | 0.00 | 0.05 | 0.54 | 0.58 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 50 | 3.952 | 31.18 | 0.00 | 0.00 | 0.00 | 5.67 | 3.70 | 0.00 | 3.70 | 0.00 | 0.00 | 0.05 | 0.54 | 0.58 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 51 | 3.858 | 31.20 | 0.00 | 0.00 | 0.00 | 5.69 | 3.61 | 0.00 | 3.61 | 0.00 | 0.00 | 0.04 | 0.54 | 0.58 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 52 | 3.763 | 31.22 | 0.00 | 0.00 | 0.00 | 5.72 | 3.52 | 0.00 | 3.52 | 0.00 | 0.00 | 0.04 | 0.54 | 0.58 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 53 | 3.668 | 31.24 | 0.00 | 0.00 | 0.00 | 5.74 | 3.44 | 0.00 | 3.44 | 0.00 | 0.00 | 0.04 | 0.54 | 0.58 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 54 | 3.573 | 31.26 | 0.00 | 0.00 | 0.00 | 5.77 | 3.36 | 0.00 | 3.36 | 0.00 | 0.00 | 0.04 | 0.54 | 0.58 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 55 | 3.479 | 31.28 | 0.00 | 0.00 | 0.00 | 5.79 | 3.27 | 0.00 | 3.27 | 0.00 | 0.00 | 0.04 | 0.54 | 0.58 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 56 | 3.384 | 31.30 | 0.00 | 0.00 | 0.00 | 5.82 | 3.20 | 0.00 | 3.20 | 0.00 | 0.00 | 0.03 | 0.54 | 0.58 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 57 | 3.289 | 31.32 | 0.00 | 0.00 | 0.00 | 5.85 | 3.12 | 0.00 | 3.12 | 0.00 | 0.00 | 0.03 | 0.54 | 0.58 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 58 | 3.194 | 31.34 | 0.00 | 0.00 | 0.00 | 5.87 | 3.04 | 0.00 | 3.04 | 0.00 | 0.00 | 0.03 | 0.54 | 0.57 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 59 | 3.100 | 31.36 | 0.00 | 0.00 | 0.00 | 5.90 | 2.97 | 0.00 | 2.97 | 0.00 | 0.00 | 0.03 | 0.54 | 0.57 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 60 | 3.005 | 31.38 | 0.00 | 0.00 | 0.00 | 5.92 | 2.90 | 0.00 | 2.90 | 0.00 | 0.00 | 0.03 | 0.55 | 0.57 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 61 | 2.910 | 31.40 | 0.00 | 0.00 | 0.00 | 5.95 | 2.83 | 0.00 | 2.83 | 0.00 | 0.00 | 0.03 | 0.55 | 0.57 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |

FINAL REPORT Headwater Pearl River DO Modeling 090105

REACH NO. 8 Include E COEF-1 Run

********** REACH INPUTS **********

| ELEM NO. | TYPE | FLOW deg C | TEMP ppt | SALN mg/L | CM-I mg/L | CM-II mg/L | DO mg/L | BOD#1 mg/L | BOD#2 mg/L | EBOD#1 mg/L | EBOD#2 mg/L | ORGN mg/L | NH3 mg/L | NO3+2 mg/L | PHOS µg/L | CHL A #/100mL | COLI | NCM |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 62 | UPR RCH | 1.16283 | 31.40 | 0.00 | 0.00 | 0.00 | 5.95 | 2.83 | 0.00 | 2.83 | 0.00 | 0.00 | 0.03 | 0.55 | 0.05 | 1.00 | 0.00 | 0.00 |

********** HYDRAULIC PARAMETER VALUES **********

| ELEM NO. | BEGIN DIST km | ENDING DIST km | FLOW m³/s | PCT EFF | VELO m/s | ADVCTV TIME days | TRAVEL m | DEPTH m | WIDTH m³ | AREA m² | VOLUME m² | AREA m³ | SURFACE PRISM m/s | X-SECT VELO m²/s | TIDAL VELO m/s | TIDAL | DISPRSN | MEAN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 62 | 2.91 | 2.82 | 1.16283 | 0.0 | 0.00750 | 0.13 | 2.29 | 67.70 | 13449.11 | 5872.97 | 155.03 | 0.00 | 0.000 | 0.007 | 0.008 | | | |
| 63 | 2.82 | 2.74 | 1.16283 | 0.0 | 0.00750 | 0.13 | 2.29 | 67.70 | 13449.11 | 5872.97 | 155.03 | 0.00 | 0.000 | 0.007 | 0.008 | | | |
| 64 | 2.74 | 2.65 | 1.16283 | 0.0 | 0.00750 | 0.13 | 2.29 | 67.70 | 13449.11 | 5872.97 | 155.03 | 0.00 | 0.000 | 0.007 | 0.008 | | | |
| 65 | 2.65 | 2.56 | 1.16283 | 0.0 | 0.00750 | 0.13 | 2.29 | 67.70 | 13449.11 | 5872.97 | 155.03 | 0.00 | 0.000 | 0.007 | 0.008 | | | |
| 66 | 2.56 | 2.48 | 1.16283 | 0.0 | 0.00750 | 0.13 | 2.29 | 67.70 | 13449.11 | 5872.97 | 155.03 | 0.00 | 0.000 | 0.007 | 0.008 | | | |
| 67 | 2.48 | 2.39 | 1.16283 | 0.0 | 0.00750 | 0.13 | 2.29 | 67.70 | 13449.11 | 5872.97 | 155.03 | 0.00 | 0.000 | 0.007 | 0.008 | | | |
| 68 | 2.39 | 2.30 | 1.16283 | 0.0 | 0.00750 | 0.13 | 2.29 | 67.70 | 13449.11 | 5872.97 | 155.03 | 0.00 | 0.000 | 0.007 | 0.008 | | | |
| 69 | 2.30 | 2.22 | 1.16283 | 0.0 | 0.00750 | 0.13 | 2.29 | 67.70 | 13449.11 | 5872.97 | 155.03 | 0.00 | 0.000 | 0.007 | 0.008 | | | |
| 70 | 2.22 | 2.13 | 1.16283 | 0.0 | 0.00750 | 0.13 | 2.29 | 67.70 | 13449.11 | 5872.97 | 155.03 | 0.00 | 0.000 | 0.007 | 0.008 | | | |
| 71 | 2.13 | 2.04 | 1.16283 | 0.0 | 0.00750 | 0.13 | 2.29 | 67.70 | 13449.11 | 5872.97 | 155.03 | 0.00 | 0.000 | 0.007 | 0.008 | | | |
| 72 | 2.04 | 1.96 | 1.16283 | 0.0 | 0.00750 | 0.13 | 2.29 | 67.70 | 13449.11 | 5872.97 | 155.03 | 0.00 | 0.000 | 0.007 | 0.008 | | | |
| 73 | 1.96 | 1.87 | 1.16283 | 0.0 | 0.00750 | 0.13 | 2.29 | 67.70 | 13449.11 | 5872.97 | 155.03 | 0.00 | 0.000 | 0.007 | 0.008 | | | |
| 74 | 1.87 | 1.78 | 1.16283 | 0.0 | 0.00750 | 0.13 | 2.29 | 67.70 | 13449.11 | 5872.97 | 155.03 | 0.00 | 0.000 | 0.007 | 0.008 | | | |
| 75 | 1.78 | 1.70 | 1.16283 | 0.0 | 0.00750 | 0.13 | 2.29 | 67.70 | 13449.11 | 5872.97 | 155.03 | 0.00 | 0.000 | 0.007 | 0.008 | | | |
| 76 | 1.70 | 1.61 | 1.16283 | 0.0 | 0.00750 | 0.13 | 2.29 | 67.70 | 13449.11 | 5872.97 | 155.03 | 0.00 | 0.000 | 0.007 | 0.008 | | | |
| 77 | 1.61 | 1.52 | 1.16283 | 0.0 | 0.00750 | 0.13 | 2.29 | 67.70 | 13449.11 | 5872.97 | 155.03 | 0.00 | 0.000 | 0.007 | 0.008 | | | |
| 78 | 1.52 | 1.44 | 1.16283 | 0.0 | 0.00750 | 0.13 | 2.29 | 67.70 | 13449.11 | 5872.97 | 155.03 | 0.00 | 0.000 | 0.007 | 0.008 | | | |
| 79 | 1.44 | 1.35 | 1.16283 | 0.0 | 0.00750 | 0.13 | 2.29 | 67.70 | 13449.11 | 5872.97 | 155.03 | 0.00 | 0.000 | 0.007 | 0.008 | | | |
| 80 | 1.35 | 1.26 | 1.16283 | 0.0 | 0.00750 | 0.13 | 2.29 | 67.70 | 13449.11 | 5872.97 | 155.03 | 0.00 | 0.000 | 0.007 | 0.008 | | | |
| 81 | 1.26 | 1.17 | 1.16283 | 0.0 | 0.00750 | 0.13 | 2.29 | 67.70 | 13449.11 | 5872.97 | 155.03 | 0.00 | 0.000 | 0.007 | 0.008 | | | |
| TOT | | | | | 2.68 | | | 268982.22 | 117459.52 | | | | | | | | | |
| AVG | | | | 0.0075 | | | 2.29 | 67.70 | | | 155.03 | | | | | | | |
| CUM | | | | | 72.94 | | | | | | | | | | | | | |

********** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********

| ELEM NO. | ENDING DIST mg/L | SAT D.O. | REAER RATE 1/da | DECAY 1/da | BOD#1 SETT 1/da | BOD#1 DECAY 1/da | ABOD#1 DECAY 1/da | BOD#2 SETT * | BOD#2 DECAY * | ABOD#2 SOD * | BKGD SOD 1/da | FULL DECAY 1/da | CORR SOD * | ORGN SETT 1/da | ORGN DECAY * | NH3 SRCE ** | NH3 RATE ** | DENIT SRCE 1/da | PO4 PROD 1/da | ALG PROD 1/da | MAC DECAY 1/da | COLI DECAY 1/da | NCM SETT 1/da | NCM |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 62 | 2.823 | 7.38 | 0.38 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.25 | 0.28 | 0.28 | 0.06 | 0.01 | 0.23 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 63 | 2.737 | 7.38 | 0.38 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.25 | 0.28 | 0.28 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 64 | 2.650 | 7.38 | 0.38 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.25 | 0.28 | 0.28 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 65 | 2.563 | 7.38 | 0.38 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.25 | 0.28 | 0.28 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 66 | 2.476 | 7.38 | 0.38 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.25 | 0.28 | 0.28 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 67 | 2.389 | 7.38 | 0.38 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.25 | 0.28 | 0.28 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 68 | 2.303 | 7.37 | 0.38 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.25 | 0.28 | 0.28 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 69 | 2.216 | 7.37 | 0.38 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.25 | 0.28 | 0.28 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 70 | 2.129 | 7.37 | 0.38 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.25 | 0.28 | 0.28 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 71 | 2.042 | 7.37 | 0.38 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.25 | 0.28 | 0.28 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 72 | 1.956 | 7.37 | 0.38 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.25 | 0.28 | 0.28 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 73 | 1.869 | 7.37 | 0.38 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.25 | 0.28 | 0.28 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 74 | 1.782 | 7.37 | 0.38 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.25 | 0.28 | 0.28 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 75 | 1.695 | 7.37 | 0.38 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.25 | 0.28 | 0.28 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 76 | 1.609 | 7.37 | 0.38 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.25 | 0.28 | 0.28 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 77 | 1.522 | 7.37 | 0.38 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.25 | 0.28 | 0.28 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 78 | 1.435 | 7.37 | 0.38 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.25 | 0.28 | 0.28 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 79 | 1.348 | 7.37 | 0.38 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.25 | 0.28 | 0.28 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 80 | 1.262 | 7.37 | 0.38 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.25 | 0.28 | 0.28 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 81 | 1.175 | 7.37 | 0.38 | 0.11 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.25 | 0.27 | 0.27 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | |

AVG 20 DEG C RATE 0.31 0.06 0.00 0.00 0.01 0.00 0.00 0.12 0.05 0.00 0.10 0.00 0.00 0.00 3.00 0.00 0.00
* g/m²/d ** mg/L/day

********** WATER QUALITY CONSTITUENT VALUES **********

| ELEM NO. | ENDING DIST | TEMP DEG C | SALN PPT | CM-I mg/L | CM-II mg/L | DO mg/L | BOD#1 mg/L | BOD#2 mg/L | EBOD#1 mg/L | EBOD#2 mg/L | ORGN mg/L | NH3 mg/L | NO3+2 mg/L | TOTN mg/L | PHOS µg/L | CHL A g/m³ | MACRO | COLI #/100mL | NCM |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 62 | 2.823 | 31.40 | 0.00 | 0.00 | 0.00 | 5.97 | 2.79 | 0.00 | 2.79 | 0.00 | 0.00 | 0.03 | 0.55 | 0.57 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 63 | 2.737 | 31.41 | 0.00 | 0.00 | 0.00 | 6.00 | 2.74 | 0.00 | 2.74 | 0.00 | 0.00 | 0.02 | 0.55 | 0.57 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 64 | 2.650 | 31.41 | 0.00 | 0.00 | 0.00 | 6.02 | 2.70 | 0.00 | 2.70 | 0.00 | 0.00 | 0.02 | 0.55 | 0.57 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 65 | 2.563 | 31.42 | 0.00 | 0.00 | 0.00 | 6.04 | 2.66 | 0.00 | 2.66 | 0.00 | 0.00 | 0.02 | 0.55 | 0.57 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 66 | 2.476 | 31.42 | 0.00 | 0.00 | 0.00 | 6.07 | 2.62 | 0.00 | 2.62 | 0.00 | 0.00 | 0.02 | 0.55 | 0.57 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 67 | 2.389 | 31.43 | 0.00 | 0.00 | 0.00 | 6.09 | 2.58 | 0.00 | 2.58 | 0.00 | 0.00 | 0.02 | 0.55 | 0.57 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 68 | 2.303 | 31.43 | 0.00 | 0.00 | 0.00 | 6.11 | 2.54 | 0.00 | 2.54 | 0.00 | 0.00 | 0.02 | 0.55 | 0.57 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 69 | 2.216 | 31.44 | 0.00 | 0.00 | 0.00 | 6.13 | 2.50 | 0.00 | 2.50 | 0.00 | 0.00 | 0.02 | 0.55 | 0.57 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 70 | 2.129 | 31.44 | 0.00 | 0.00 | 0.00 | 6.15 | 2.46 | 0.00 | 2.46 | 0.00 | 0.00 | 0.02 | 0.55 | 0.57 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 71 | 2.042 | 31.45 | 0.00 | 0.00 | 0.00 | 6.17 | 2.43 | 0.00 | 2.43 | 0.00 | 0.00 | 0.02 | 0.55 | 0.57 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 72 | 1.956 | 31.45 | 0.00 | 0.00 | 0.00 | 6.19 | 2.39 | 0.00 | 2.39 | 0.00 | 0.00 | 0.02 | 0.55 | 0.57 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 73 | 1.869 | 31.46 | 0.00 | 0.00 | 0.00 | 6.21 | 2.35 | 0.00 | 2.35 | 0.00 | 0.00 | 0.02 | 0.55 | 0.57 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 74 | 1.782 | 31.47 | 0.00 | 0.00 | 0.00 | 6.23 | 2.32 | 0.00 | 2.32 | 0.00 | 0.00 | 0.02 | 0.55 | 0.56 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 75 | 1.695 | 31.47 | 0.00 | 0.00 | 0.00 | 6.25 | 2.28 | 0.00 | 2.28 | 0.00 | 0.00 | 0.02 | 0.55 | 0.56 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 76 | 1.609 | 31.48 | 0.00 | 0.00 | 0.00 | 6.26 | 2.25 | 0.00 | 2.25 | 0.00 | 0.00 | 0.02 | 0.55 | 0.56 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 77 | 1.522 | 31.48 | 0.00 | 0.00 | 0.00 | 6.28 | 2.21 | 0.00 | 2.21 | 0.00 | 0.00 | 0.02 | 0.55 | 0.56 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 78 | 1.435 | 31.49 | 0.00 | 0.00 | 0.00 | 6.30 | 2.18 | 0.00 | 2.18 | 0.00 | 0.00 | 0.02 | 0.55 | 0.56 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 79 | 1.348 | 31.49 | 0.00 | 0.00 | 0.00 | 6.32 | 2.15 | 0.00 | 2.15 | 0.00 | 0.00 | 0.02 | 0.55 | 0.56 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 80 | 1.262 | 31.50 | 0.00 | 0.00 | 0.00 | 6.33 | 2.11 | 0.00 | 2.11 | 0.00 | 0.00 | 0.01 | 0.55 | 0.56 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 81 | 1.175 | 31.50 | 0.00 | 0.00 | 0.00 | 6.35 | 2.08 | 0.00 | 2.08 | 0.00 | 0.00 | 0.01 | 0.55 | 0.56 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |

FINAL REPORT Headwater Pearl River DO Modeling 090105
REACH NO. 9 Include F COEF-1 Run

********** REACH INPUTS **********

| ELEM NO. | TYPE | FLOW deg C | TEMP ppt | SALN mg/L | CM-I mg/L | CM-II mg/L | DO mg/L | BOD#1 mg/L | BOD#2 mg/L | EBOD#1 mg/L | EBOD#2 mg/L | ORGN mg/L | NH3 mg/L | NO3+2 mg/L | PHOS µg/L | CHL A | COLI #/100mL | NCM |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 82 | UPR RCH | 1.16283 | 31.50 | 0.00 | 0.00 | 0.00 | 6.35 | 2.08 | 0.00 | 2.08 | 0.00 | 0.00 | 0.01 | 0.55 | 0.05 | 1.00 | 0.00 | 0.00 |
| EACH | INCR | 0.02500 | 30.00 | 0.00 | 0.00 | 0.00 | 5.00 | 5.80 | 0.00 | | 0.00 | 0.10 | 0.50 | 0.00 | 0.00 | 0.00 | | |

********** HYDRAULIC PARAMETER VALUES **********

| ELEM NO. | BEGIN DIST km | ENDING DIST km | FLOW EFF m³/s | PCT VELO m/s | ADVCTV TIME days | TRAVEL m | DEPTH m | WIDTH m³ | VOLUME m² | SURFACE AREA m² | X-SECT AREA m³ | TIDAL PRISM m/s | TIDAL VELO m²/s | DISPRSN m/s | MEAN VELO |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 82 | 1.17 | 1.12 | 1.18783 | 0.0 | 0.00970 | 0.06 | 2.08 | 58.90 | 6493.14 | 3121.70 | 122.51 | 0.00 | 0.000 | 0.008 | 0.010 |
| 83 | 1.12 | 1.07 | 1.21283 | 0.0 | 0.00990 | 0.06 | 2.08 | 58.90 | 6493.14 | 3121.70 | 122.51 | 0.00 | 0.000 | 0.008 | 0.010 |
| 84 | 1.07 | 1.02 | 1.23783 | 0.0 | 0.01010 | 0.06 | 2.08 | 58.90 | 6493.14 | 3121.70 | 122.51 | 0.00 | 0.000 | 0.009 | 0.010 |
| 85 | 1.02 | 0.96 | 1.26283 | 0.0 | 0.01031 | 0.06 | 2.08 | 58.90 | 6493.14 | 3121.70 | 122.51 | 0.00 | 0.000 | 0.009 | 0.010 |
| 86 | 0.96 | 0.91 | 1.28783 | 0.0 | 0.01051 | 0.06 | 2.08 | 58.90 | 6493.14 | 3121.70 | 122.51 | 0.00 | 0.000 | 0.009 | 0.011 |
| 87 | 0.91 | 0.86 | 1.31283 | 0.0 | 0.01072 | 0.06 | 2.08 | 58.90 | 6493.14 | 3121.70 | 122.51 | 0.00 | 0.000 | 0.009 | 0.011 |
| 88 | 0.86 | 0.80 | 1.33783 | 0.0 | 0.01092 | 0.06 | 2.08 | 58.90 | 6493.14 | 3121.70 | 122.51 | 0.00 | 0.000 | 0.009 | 0.011 |
| 89 | 0.80 | 0.75 | 1.36283 | 0.0 | 0.01112 | 0.06 | 2.08 | 58.90 | 6493.14 | 3121.70 | 122.51 | 0.00 | 0.000 | 0.009 | 0.011 |
| 90 | 0.75 | 0.70 | 1.38783 | 0.0 | 0.01133 | 0.05 | 2.08 | 58.90 | 6493.14 | 3121.70 | 122.51 | 0.00 | 0.000 | 0.010 | 0.011 |
| 91 | 0.70 | 0.65 | 1.41283 | 0.0 | 0.01153 | 0.05 | 2.08 | 58.90 | 6493.14 | 3121.70 | 122.51 | 0.00 | 0.000 | 0.010 | 0.012 |
| 92 | 0.65 | 0.59 | 1.43783 | 0.0 | 0.01174 | 0.05 | 2.08 | 58.90 | 6493.14 | 3121.70 | 122.51 | 0.00 | 0.000 | 0.010 | 0.012 |
| 93 | 0.59 | 0.54 | 1.46283 | 0.0 | 0.01194 | 0.05 | 2.08 | 58.90 | 6493.14 | 3121.70 | 122.51 | 0.00 | 0.000 | 0.010 | 0.012 |
| 94 | 0.54 | 0.49 | 1.48783 | 0.0 | 0.01214 | 0.05 | 2.08 | 58.90 | 6493.14 | 3121.70 | 122.51 | 0.00 | 0.000 | 0.010 | 0.012 |
| 95 | 0.49 | 0.43 | 1.51283 | 0.0 | 0.01235 | 0.05 | 2.08 | 58.90 | 6493.14 | 3121.70 | 122.51 | 0.00 | 0.000 | 0.011 | 0.012 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 96 | 0.43 | 0.38 | 1.53783 | 0.0 | 0.01255 | 0.05 | 2.08 | 58.90 | 6493.14 | 3121.70 | 122.51 | 0.00 | 0.000 | 0.011 | 0.013 |
| 97 | 0.38 | 0.33 | 1.56283 | 0.0 | 0.01276 | 0.05 | 2.08 | 58.90 | 6493.14 | 3121.70 | 122.51 | 0.00 | 0.000 | 0.011 | 0.013 |
| 98 | 0.33 | 0.27 | 1.58783 | 0.0 | 0.01296 | 0.05 | 2.08 | 58.90 | 6493.14 | 3121.70 | 122.51 | 0.00 | 0.000 | 0.011 | 0.013 |
| 99 | 0.27 | 0.22 | 1.61283 | 0.0 | 0.01316 | 0.05 | 2.08 | 58.90 | 6493.14 | 3121.70 | 122.51 | 0.00 | 0.000 | 0.011 | 0.013 |
| 100 | 0.22 | 0.17 | 1.63783 | 0.0 | 0.01337 | 0.05 | 2.08 | 58.90 | 6493.14 | 3121.70 | 122.51 | 0.00 | 0.000 | 0.011 | 0.013 |
| 101 | 0.17 | 0.12 | 1.66283 | 0.0 | 0.01357 | 0.05 | 2.08 | 58.90 | 6493.14 | 3121.70 | 122.51 | 0.00 | 0.000 | 0.012 | 0.014 |
| TOT | | | | | 1.07 | | | | 129862.70 | 62433.99 | | | | | |
| AVG | | | | | 0.0115 | | 2.08 | 58.90 | | | 122.51 | | | | |
| CUM | | | | | 74.00 | | | | | | | | | | |

********** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********

| ELEM NO. | ENDING DIST | SAT D.O. | REAER RATE | BOD#1 DECAY | BOD#1 SETT | BOD#1 DECAY | ABOD#1 DECAY | BOD#2 SETT | BOD#2 DECAY | ABOD#2 SOD | BKGD SOD | FULL SOD | CORR DECAY | ORGN SETT | ORGN DECAY | NH3 SRCE | NH3 RATE | DENIT SRCE | PO4 PROD | ALG PROD | MAC DECAY | COLI DECAY | NCM SETT | NCM |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | mg/L | 1/da | 1/da | 1/da | 1/da | 1/da | 1/da | 1/da | * | * | * | 1/da | 1/da | 1/da | * | 1/da | * | ** | ** | 1/da | 1/da | 1/da | | |
| 82 | 1.122 | 7.37 | 0.42 | 0.12 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.25 | 0.28 | 0.28 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 83 | 1.069 | 7.37 | 0.42 | 0.12 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.25 | 0.28 | 0.28 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 84 | 1.016 | 7.37 | 0.42 | 0.12 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.25 | 0.28 | 0.28 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 85 | 0.963 | 7.37 | 0.42 | 0.12 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.25 | 0.28 | 0.28 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 86 | 0.910 | 7.37 | 0.42 | 0.12 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.25 | 0.28 | 0.28 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 87 | 0.857 | 7.37 | 0.42 | 0.12 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.25 | 0.28 | 0.28 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 88 | 0.804 | 7.37 | 0.42 | 0.12 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.25 | 0.28 | 0.28 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 89 | 0.751 | 7.37 | 0.42 | 0.12 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.25 | 0.28 | 0.28 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 90 | 0.698 | 7.37 | 0.42 | 0.12 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.25 | 0.28 | 0.28 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 91 | 0.645 | 7.37 | 0.42 | 0.12 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.25 | 0.28 | 0.28 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 92 | 0.592 | 7.37 | 0.42 | 0.12 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.25 | 0.28 | 0.28 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 93 | 0.539 | 7.37 | 0.42 | 0.12 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.25 | 0.28 | 0.28 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 94 | 0.486 | 7.37 | 0.42 | 0.12 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.25 | 0.28 | 0.28 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 95 | 0.433 | 7.37 | 0.42 | 0.12 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.25 | 0.28 | 0.28 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 96 | 0.380 | 7.37 | 0.42 | 0.12 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.25 | 0.28 | 0.28 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 97 | 0.327 | 7.37 | 0.42 | 0.12 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.25 | 0.28 | 0.28 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 98 | 0.274 | 7.37 | 0.42 | 0.12 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.25 | 0.28 | 0.28 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 99 | 0.221 | 7.37 | 0.42 | 0.12 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.25 | 0.28 | 0.28 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 100 | 0.168 | 7.37 | 0.42 | 0.12 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.25 | 0.29 | 0.29 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 101 | 0.115 | 7.37 | 0.42 | 0.12 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.25 | 0.29 | 0.29 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | |
| AVG 20 DEG C RATE | | | 0.34 | 0.07 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.12 | | | 0.05 | 0.00 | 0.10 | 0.00 | 0.00 | 0.00 | | | 3.00 | 0.00 | 0.00 | |

* g/m²/d ** mg/L/day

********** WATER QUALITY CONSTITUENT VALUES **********

| ELEM NO. | ENDING DIST | TEMP DEG C | SALN PPT | CM-I mg/L | CM-II mg/L | DO mg/L | BOD#1 mg/L | BOD#2 mg/L | EBOD#1 mg/L | EBOD#2 mg/L | ORGN mg/L | NH3 mg/L | NO3+2 mg/L | TOTN µg/L | PHOS g/m³ | CHL A #/100mL | MACRO | COLI | NCM |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 82 | 1.122 | 31.50 | 0.00 | 0.00 | 0.00 | 6.33 | 2.14 | 0.00 | 2.14 | 0.00 | 0.00 | 0.02 | 0.55 | 0.56 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 83 | 1.069 | 31.50 | 0.00 | 0.00 | 0.00 | 6.31 | 2.20 | 0.00 | 2.20 | 0.00 | 0.00 | 0.02 | 0.54 | 0.56 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 84 | 1.016 | 31.50 | 0.00 | 0.00 | 0.00 | 6.29 | 2.26 | 0.00 | 2.26 | 0.00 | 0.00 | 0.02 | 0.54 | 0.56 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 85 | 0.963 | 31.50 | 0.00 | 0.00 | 0.00 | 6.27 | 2.31 | 0.00 | 2.31 | 0.00 | 0.00 | 0.02 | 0.54 | 0.56 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 86 | 0.910 | 31.50 | 0.00 | 0.00 | 0.00 | 6.25 | 2.36 | 0.00 | 2.36 | 0.00 | 0.00 | 0.02 | 0.54 | 0.56 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 87 | 0.857 | 31.50 | 0.00 | 0.00 | 0.00 | 6.24 | 2.41 | 0.00 | 2.41 | 0.00 | 0.00 | 0.02 | 0.54 | 0.56 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 88 | 0.804 | 31.50 | 0.00 | 0.00 | 0.00 | 6.22 | 2.45 | 0.00 | 2.45 | 0.00 | 0.00 | 0.02 | 0.54 | 0.56 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 89 | 0.751 | 31.50 | 0.00 | 0.00 | 0.00 | 6.20 | 2.50 | 0.00 | 2.50 | 0.00 | 0.00 | 0.02 | 0.54 | 0.56 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 90 | 0.698 | 31.50 | 0.00 | 0.00 | 0.00 | 6.19 | 2.54 | 0.00 | 2.54 | 0.00 | 0.00 | 0.03 | 0.54 | 0.56 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 91 | 0.645 | 31.50 | 0.00 | 0.00 | 0.00 | 6.18 | 2.58 | 0.00 | 2.58 | 0.00 | 0.00 | 0.03 | 0.54 | 0.57 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 92 | 0.592 | 31.50 | 0.00 | 0.00 | 0.00 | 6.16 | 2.62 | 0.00 | 2.62 | 0.00 | 0.00 | 0.03 | 0.54 | 0.57 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 93 | 0.539 | 31.50 | 0.00 | 0.00 | 0.00 | 6.15 | 2.65 | 0.00 | 2.65 | 0.00 | 0.00 | 0.03 | 0.54 | 0.57 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |

```
 94   0.486 31.50 0.00    0.00    0.00  6.14  2.69  0.00  2.69  0.00  0.00  0.03  0.54  0.57  0.05  1.00   0.00     0.   0.00
 95   0.433 31.50 0.00    0.00    0.00  6.12  2.72  0.00  2.72  0.00  0.00  0.03  0.54  0.57  0.05  1.00   0.00     0.   0.00
 96   0.380 31.50 0.00    0.00    0.00  6.11  2.76  0.00  2.76  0.00  0.00  0.03  0.54  0.57  0.05  1.00   0.00     0.   0.00
 97   0.327 31.50 0.00    0.00    0.00  6.10  2.79  0.00  2.79  0.00  0.00  0.03  0.54  0.57  0.05  1.00   0.00     0.   0.00
 98   0.274 31.50 0.00    0.00    0.00  6.09  2.82  0.00  2.82  0.00  0.00  0.03  0.54  0.57  0.05  1.00   0.00     0.   0.00
 99   0.221 31.50 0.00    0.00    0.00  6.08  2.85  0.00  2.85  0.00  0.00  0.03  0.53  0.57  0.05  1.00   0.00     0.   0.00
100   0.168 31.50 0.00    0.00    0.00  6.07  2.87  0.00  2.87  0.00  0.00  0.03  0.53  0.57  0.05  1.00   0.00     0.   0.00
101   0.115 31.50 0.00    0.00    0.00  6.06  2.90  0.00  2.90  0.00  0.00  0.03  0.53  0.57  0.05  1.00   0.00     0.   0.00
FINAL REPORT            Headwater                    Pearl River DO Modeling 090105
REACH NO. 10   To Lock 3                            COEF-1 Run
************************************************************ REACH INPUTS ************************************************************
ELEM  TYPE      FLOW    TEMP    SALN    CM-I   CM-II    DO  BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN    NH3  NO3+2   PHOS  CHL A    COLI    NCM
NO.             deg C    ppt    mg/L    mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   µg/L  #/100mL
102  UPR RCH  1.66283  31.50    0.00    0.00    0.00  6.06  2.90  0.00  2.90  0.00  0.00  0.03  0.53  0.05  1.00   0.00    0.00
************************************************** HYDRAULIC PARAMETER VALUES **************************************************
ELEM  BEGIN  ENDING     FLOW  PCT  ADVCTV   TRAVEL   DEPTH  WIDTH   VOLUME   SURFACE  X-SECT    TIDAL  TIDAL  DISPRSN   MEAN
NO.   DIST   DIST       EFF   VELO    TIME                          AREA    AREA    PRISM   VELO          VELO
      km     km      m³/s      m/s   days     m      m      m³      m²      m²      m³     m/s    m²/s    m/s
102   0.12   0.06   1.66283   0.0  0.01092   0.06   2.34  65.10  8759.20  3743.25  152.33    0.00  0.000   0.010  0.011
103   0.06   0.00   1.66283   0.0  0.01092   0.06   2.34  65.10  8759.20  3743.25  152.33    0.00  0.000   0.010  0.011
TOT                                  0.12                17518.41   7486.50
AVG                            0.0109          2.34  65.10                152.33
CUM                                 74.13
********************************************** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********************************************
ELEM  ENDING  SAT   REAER  BOD#1 BOD#1 ABOD#1  BOD#2 BOD#2 ABOD#2  BKGD  FULL  CORR   ORGN  ORGN   NH3   NH3  DENIT   PO4   ALG   MAC   COLI   NCM   NCM
NO.   DIST  D.O.   RATE  DECAY  SETT  DECAY  DECAY  SETT  DECAY   SOD   SOD   SOD  DECAY  SETT  DECAY  SRCE   RATE  SRCE  PROD  PROD  DECAY  DECAY  SETT
          mg/L   1/da   1/da  1/da   1/da   1/da  1/da   1/da    *     *     *   1/da  1/da   1/da     *   1/da     *    **    **   1/da   1/da   1/da
102   0.058  7.37   0.37   0.12  0.01   0.00   0.01  0.00   0.00  0.25  0.29  0.29  0.06  0.01   0.24  0.00   0.00  0.00  0.08  0.00   0.00   0.00   0.00
103   0.000  7.37   0.37   0.12  0.01   0.00   0.01  0.00   0.00  0.25  0.28  0.28  0.06  0.01   0.24  0.00   0.00  0.00  0.08  0.00   0.00   0.00   0.00
AVG 20 DEG C RATE    0.30   0.07  0.00   0.00   0.01  0.00   0.00  0.12              0.05  0.00   0.10  0.00   0.00  0.00              3.00   0.00   0.00
*  g/m²/d          **   mg/L/day
********************************************** WATER QUALITY CONSTITUENT VALUES **********************************************
ELEM  ENDING  TEMP  SALN    CM-I   CM-II    DO  BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN    NH3  NO3+2   TOTN   PHOS  CHL A  MACRO    COLI    NCM
NO.   DIST  DEG C   PPT    mg/L    mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   µg/L   g/m³  #/100mL
102   0.058 31.50 0.00    0.00    0.00  6.06  2.88  0.00  2.88  0.00  0.00  0.03  0.53  0.57  0.05  1.00   0.00     0.   0.00
103   0.000 31.50 0.00    0.00    0.00  6.04  2.77  0.00  2.77  0.00  0.00  0.04  0.52  0.55  0.05  1.00   0.00     0.   0.00
STREAM SUMMARY                                       Pearl River DO Modeling 090105
        Headwater                                    COEF-1 Run
TRAVEL TIME      =        74.13 DAYS
MAXIMUM EFFLUENT =         0.00 PERCENT
FLOW             =  0.00283 TO   1.66283   m³/s
DISPERSION       =  0.0000  TO   0.0116    m²/s
VELOCITY         =  0.00006 TO   0.01357   m/s
DEPTH            =  0.99    TO   2.77      m
WIDTH            =  43.75   TO   82.70     m
BOD DECAY        =   0.11   TO   0.12      per day
NH3 DECAY        =   0.22   TO   0.26      per day
SOD              =   0.25   TO   1.83      g/m²/d
NH3 SOURCE       =   0.00   TO   0.00      g/m²/d
REAERATION       =   0.31   TO   0.88      per day
```

BOD SETTLING = 0.00 TO 0.01 per day
ORG-N DECAY = 0.06 TO 0.06 per day
ORG-N SETTLING = 0.00 TO 0.01 per day
TEMPERATURE = 31.00 TO 32.10 deg C
DISSOLVED OXYGEN = 5.00 TO 7.13 mg/L
Pearl River DO Modeling 090105
COEF-1 Run
REACH SUMMARY REPORT FOR Headwater

| RCH NO. | REACH NAME | BEGIN DIST km | ENDING DIST km | REACH LENGTH km | TRAVEL TIME days | FLOW AT EOR m3/s | AVERAGE VELO m/s | AVG DEPTH m | AVG WIDTH m | FLOW AT EOR cfs | AVERAGE VELO fps | AVG DEPTH ft | AVG WIDTH ft |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Pearl River to Above A | 7.77 | 7.69 | 0.08 | 14.47 | 0.00283 | 0.00006 | 0.990 | 44.70 | 0.100 | 0.000 | 3.248 | 146.66 |
| 2 | Include A | 7.69 | 7.57 | 0.12 | 22.61 | 0.00283 | 0.00006 | 0.990 | 44.70 | 0.100 | 0.000 | 3.248 | 146.66 |
| 3 | Include Stream 1 | 7.57 | 7.49 | 0.08 | 14.47 | 0.00283 | 0.00006 | 0.990 | 44.70 | 0.100 | 0.000 | 3.248 | 146.66 |
| 4 | Include B | 7.49 | 6.76 | 0.72 | 7.54 | 0.13283 | 0.00111 | 0.990 | 44.70 | 4.690 | 0.004 | 3.248 | 146.66 |
| 5 | Include C | 6.76 | 5.99 | 0.77 | 3.46 | 0.13283 | 0.00257 | 1.180 | 43.75 | 4.690 | 0.008 | 3.872 | 143.54 |
| 6 | Include Stream 2 | 5.99 | 4.80 | 1.18 | 3.39 | 1.16283 | 0.00404 | 2.070 | 62.75 | 41.060 | 0.013 | 6.792 | 205.88 |
| 7 | Include D | 4.80 | 2.91 | 1.89 | 4.32 | 1.16283 | 0.00508 | 2.770 | 82.70 | 41.060 | 0.017 | 9.088 | 271.34 |
| 8 | Include E | 2.91 | 1.17 | 1.74 | 2.68 | 1.16283 | 0.00750 | 2.290 | 67.70 | 41.060 | 0.025 | 7.513 | 222.12 |
| 9 | Include F | 1.17 | 0.12 | 1.06 | 1.07 | 1.66283 | 0.01151 | 2.080 | 58.90 | 58.715 | 0.038 | 6.824 | 193.25 |
| 10 | To Lock 3 | 0.12 | 0.00 | 0.12 | 0.12 | 1.66283 | 0.01092 | 2.340 | 65.10 | 58.715 | 0.036 | 7.678 | 213.59 |

DISSOLVED OXYGEN LOADING FOR REACH 1: Headwater

| IOR | UPMN ADV | UPTR ADV | LOWR ADV | UPMN DISP | UPTR DISP | LOWR DISP | INCR IN | INCR OUT | NONP IN | NONP OUT | WSLD IN | WITH DECA | REAE DECA | BOD1 DECA | NH3-N DECA | ORG-N BKGD | NCM BOD1 | SOD ALG | SOD NCM | SOD PHOT | SOD RESP | ALG PHOT | ALG OUT | MAC IN | TOT | TOT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1. | 0. | -2. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 1. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | -2.5 | 2.5 | 0.00 | |
| 2 | 2. | 0. | -2. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 1. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | -2.4 | 2.4 | 0.00 | |
| 3 | 2. | 0. | -2. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 1. | 0. | 0. | 0. | 0. | -1. | 0. | 0. | 0. | 0. | 0. | 0. | -2.6 | 2.6 | 0.00 | |
| 4 | 2. | 0. | -2. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 1. | 0. | 0. | 0. | 0. | -1. | 0. | 0. | 0. | 0. | 0. | 0. | -2.5 | 2.5 | 0.00 | |
| 5 | 2. | 0. | -2. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | -2.2 | 2.2 | 0.00 | |
| 6 | 2. | 0. | -2. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | -2.2 | 2.2 | 0.00 | |
| 7 | 2. | 0. | -7. | 0. | 0. | 0. | 6. | 0. | 0. | 0. | 0. | 6. | -1. | 0. | 0. | 0. | -6. | 0. | 0. | 0. | 0. | 0. | 0. | -13.8 | 13.8 | 0.00 |
| 8 | 7. | 0. | -13. | 0. | 0. | 0. | 6. | 0. | 0. | 0. | 0. | 6. | -1. | 0. | 0. | 0. | -6. | 0. | 0. | 0. | 0. | 0. | 0. | -19.3 | 19.3 | 0.00 |
| 9 | 13. | 0. | -18. | 0. | 0. | 0. | 6. | 0. | 0. | 0. | 0. | 6. | -1. | 0. | 0. | 0. | -6. | 0. | 0. | 0. | 0. | 0. | 0. | -24.9 | 24.9 | 0.00 |
| 10 | 18. | 0. | -24. | 0. | 0. | 0. | 6. | 0. | 0. | 0. | 0. | 7. | -1. | 0. | 0. | 0. | -6. | 0. | 0. | 0. | 0. | 0. | 0. | -30.5 | 30.5 | 0.00 |
| 11 | 24. | 0. | -29. | 0. | 0. | 0. | 6. | 0. | 0. | 0. | 0. | 7. | -1. | 0. | 0. | 0. | -6. | 0. | 0. | 0. | 0. | 0. | 0. | -36.1 | 36.1 | 0.00 |
| 12 | 29. | 0. | -35. | 0. | 0. | 0. | 6. | 0. | 0. | 0. | 0. | 7. | -1. | 0. | 0. | 0. | -6. | 0. | 0. | 0. | 0. | 0. | 0. | -41.7 | 41.7 | 0.00 |
| 13 | 35. | 0. | -41. | 0. | 0. | 0. | 6. | 0. | 0. | 0. | 0. | 7. | -1. | 0. | 0. | 0. | -6. | 0. | 0. | 0. | 0. | 0. | 0. | -47.4 | 47.4 | 0.00 |
| 14 | 41. | 0. | -46. | 0. | 0. | 0. | 6. | 0. | 0. | 0. | 0. | 7. | -1. | 0. | 0. | 0. | -6. | 0. | 0. | 0. | 0. | 0. | 0. | -53.0 | 53.0 | 0.00 |
| 15 | 46. | 0. | -52. | 0. | 0. | 0. | 6. | 0. | 0. | 0. | 0. | 7. | -1. | 0. | 0. | 0. | -6. | 0. | 0. | 0. | 0. | 0. | 0. | -58.7 | 58.7 | 0.00 |
| 16 | 52. | 0. | -58. | 0. | 0. | 0. | 6. | 0. | 0. | 0. | 0. | 7. | -1. | 0. | 0. | 0. | -6. | 0. | 0. | 0. | 0. | 0. | 0. | -64.3 | 64.3 | 0.00 |
| 17 | 58. | 0. | -58. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 7. | -1. | 0. | 0. | 0. | -6. | 0. | 0. | 0. | 0. | 0. | 0. | -64.7 | 64.7 | 0.00 |
| 18 | 58. | 0. | -58. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 7. | -1. | 0. | 0. | 0. | -6. | 0. | 0. | 0. | 0. | 0. | 0. | -64.7 | 64.7 | 0.00 |
| 19 | 58. | 0. | -58. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 7. | -1. | 0. | 0. | 0. | -6. | 0. | 0. | 0. | 0. | 0. | 0. | -64.7 | 64.7 | 0.00 |
| 20 | 58. | 0. | -58. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 7. | -1. | 0. | 0. | 0. | -6. | 0. | 0. | 0. | 0. | 0. | 0. | -64.8 | 64.8 | 0.00 |
| 21 | 58. | 0. | -58. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 7. | -1. | 0. | 0. | 0. | -6. | 0. | 0. | 0. | 0. | 0. | 0. | -64.8 | 64.8 | 0.00 |
| 22 | 58. | 0. | -58. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 7. | -1. | 0. | 0. | 0. | -6. | 0. | 0. | 0. | 0. | 0. | 0. | -64.9 | 64.9 | 0.00 |
| 23 | 58. | 0. | -58. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 7. | -1. | 0. | 0. | 0. | -6. | 0. | 0. | 0. | 0. | 0. | 0. | -65.0 | 65.0 | 0.00 |
| 24 | 58. | 0. | -58. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 7. | -1. | 0. | 0. | 0. | -6. | 0. | 0. | 0. | 0. | 0. | 0. | -65.1 | 65.1 | 0.00 |
| 25 | 58. | 0. | -58. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 7. | -1. | 0. | 0. | 0. | -6. | 0. | 0. | 0. | 0. | 0. | 0. | -65.2 | 65.2 | 0.00 |
| 26 | 58. | 0. | -59. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 7. | -1. | 0. | 0. | 0. | -6. | 0. | 0. | 0. | 0. | 0. | 0. | -65.3 | 65.3 | 0.00 |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 27 | 59. | 0. | -93. | 0. | 0. | 0. | 30. | 0. | 0. | 0. | 0. | 9. | -3. | 0. | 0. | 0. | -1. | 0. | 0. | 0. | 1. | 0. | 0. | -97.7 | 97.7 | 0.00 | | |
| 28 | 93. | 0. | -126. | 0. | 0. | 0. | 30. | 0. | 0. | 0. | 0. | 8. | -4. | 0. | 0. | 0. | -1. | 0. | 0. | 0. | 1. | 0. | 0. | -131.8 | 131.8 | 0.00 | | |
| 29 | 126. | 0. | -159. | 0. | 0. | 0. | 30. | 0. | 0. | 0. | 0. | 8. | -4. | 0. | 0. | 0. | -1. | 0. | 0. | 0. | 1. | 0. | 0. | -165.1 | 165.1 | 0.00 | | |
| 30 | 159. | 0. | -192. | 0. | 0. | 0. | 30. | 0. | 0. | 0. | 0. | 8. | -5. | 0. | 0. | 0. | -1. | 0. | 0. | 0. | 1. | 0. | 0. | -198.1 | 198.1 | 0.00 | | |
| 31 | 192. | 0. | -225. | 0. | 0. | 0. | 30. | 0. | 0. | 0. | 0. | 8. | -5. | 0. | 0. | 0. | -1. | 0. | 0. | 0. | 1. | 0. | 0. | -230.8 | 230.8 | 0.00 | | |
| 32 | 225. | 0. | -257. | 0. | 0. | 0. | 30. | 0. | 0. | 0. | 0. | 8. | -5. | 0. | 0. | 0. | -1. | 0. | 0. | 0. | 1. | 0. | 0. | -263.3 | 263.3 | 0.00 | | |
| 33 | 257. | 0. | -289. | 0. | 0. | 0. | 30. | 0. | 0. | 0. | 0. | 8. | -5. | 0. | 0. | 0. | -1. | 0. | 0. | 0. | 1. | 0. | 0. | -295.8 | 295.8 | 0.00 | | |
| 34 | 289. | 0. | -322. | 0. | 0. | 0. | 30. | 0. | 0. | 0. | 0. | 8. | -5. | 0. | 0. | 0. | -1. | 0. | 0. | 0. | 1. | 0. | 0. | -328.2 | 328.2 | 0.00 | | |
| 35 | 322. | 0. | -354. | 0. | 0. | 0. | 30. | 0. | 0. | 0. | 0. | 8. | -5. | 0. | 0. | 0. | -1. | 0. | 0. | 0. | 1. | 0. | 0. | -360.6 | 360.6 | 0.00 | | |
| 36 | 354. | 0. | -386. | 0. | 0. | 0. | 30. | 0. | 0. | 0. | 0. | 8. | -5. | 0. | 0. | 0. | -1. | 0. | 0. | 0. | 1. | 0. | 0. | -392.9 | 392.9 | 0.00 | | |
| 37 | 386. | 0. | -419. | 0. | 0. | 0. | 30. | 0. | 0. | 0. | 0. | 8. | -5. | 0. | 0. | 0. | -1. | 0. | 0. | 0. | 1. | 0. | 0. | -425.3 | 425.3 | 0.00 | | |
| 38 | 419. | 0. | -451. | 0. | 0. | 0. | 30. | 0. | 0. | 0. | 0. | 8. | -5. | 0. | 0. | 0. | -1. | 0. | 0. | 0. | 1. | 0. | 0. | -457.6 | 457.6 | 0.00 | | |
| 39 | 451. | 0. | -483. | 0. | 0. | 0. | 30. | 0. | 0. | 0. | 0. | 8. | -5. | 0. | 0. | 0. | -1. | 0. | 0. | 0. | 1. | 0. | 0. | -489.9 | 489.9 | 0.00 | | |
| 40 | 483. | 0. | -516. | 0. | 0. | 0. | 30. | 0. | 0. | 0. | 0. | 8. | -5. | 0. | 0. | 0. | -1. | 0. | 0. | 0. | 1. | 0. | 0. | -522.3 | 522.3 | 0.00 | | |
| 41 | 516. | 0. | -548. | 0. | 0. | 0. | 30. | 0. | 0. | 0. | 0. | 8. | -5. | 0. | 0. | 0. | -1. | 0. | 0. | 0. | 1. | 0. | 0. | -554.6 | 554.6 | 0.00 | | |
| 42 | 548. | 0. | -550. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 13. | -10. | 0. | 0. | 0. | -2. | 0. | 0. | 0. | 2. | 0. | 0. | -563.0 | 563.0 | 0.00 | | |
| 43 | 550. | 0. | -552. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 13. | -10. | 0. | 0. | 0. | -2. | 0. | 0. | 0. | 2. | 0. | 0. | -564.9 | 564.9 | 0.00 | | |
| 44 | 552. | 0. | -555. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 13. | -10. | 0. | 0. | 0. | -2. | 0. | 0. | 0. | 2. | 0. | 0. | -566.9 | 566.9 | 0.00 | | |
| 45 | 555. | 0. | -557. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 13. | -10. | 0. | 0. | 0. | -2. | 0. | 0. | 0. | 2. | 0. | 0. | -569.0 | 569.0 | 0.00 | | |
| 46 | 557. | 0. | -559. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 12. | -10. | 0. | 0. | 0. | -2. | 0. | 0. | 0. | 2. | 0. | 0. | -571.2 | 571.2 | 0.00 | | |
| 47 | 559. | 0. | -562. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 12. | -9. | 0. | 0. | 0. | -2. | 0. | 0. | 0. | 2. | 0. | 0. | -573.4 | 573.4 | 0.00 | | |
| 48 | 562. | 0. | -564. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 12. | -9. | 0. | 0. | 0. | -2. | 0. | 0. | 0. | 2. | 0. | 0. | -575.6 | 575.6 | 0.00 | | |
| 49 | 564. | 0. | -567. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 12. | -9. | 0. | 0. | 0. | -2. | 0. | 0. | 0. | 2. | 0. | 0. | -577.9 | 577.9 | 0.00 | | |
| 50 | 567. | 0. | -569. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 12. | -9. | 0. | 0. | 0. | -2. | 0. | 0. | 0. | 2. | 0. | 0. | -580.3 | 580.3 | 0.00 | | |
| 51 | 569. | 0. | -572. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 12. | -9. | 0. | 0. | 0. | -2. | 0. | 0. | 0. | 2. | 0. | 0. | -582.6 | 582.6 | 0.00 | | |
| 52 | 572. | 0. | -574. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 11. | -8. | 0. | 0. | 0. | -2. | 0. | 0. | 0. | 2. | 0. | 0. | -585.0 | 585.0 | 0.00 | | |
| 53 | 574. | 0. | -577. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 11. | -8. | 0. | 0. | 0. | -2. | 0. | 0. | 0. | 2. | 0. | 0. | -587.4 | 587.4 | 0.00 | | |
| 54 | 577. | 0. | -580. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 11. | -8. | 0. | 0. | 0. | -2. | 0. | 0. | 0. | 2. | 0. | 0. | -589.8 | 589.8 | 0.00 | | |
| 55 | 580. | 0. | -582. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 11. | -8. | 0. | 0. | 0. | -2. | 0. | 0. | 0. | 2. | 0. | 0. | -592.2 | 592.2 | 0.00 | | |
| 56 | 582. | 0. | -585. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 11. | -8. | 0. | 0. | 0. | -2. | 0. | 0. | 0. | 2. | 0. | 0. | -594.6 | 594.6 | 0.00 | | |
| 57 | 585. | 0. | -587. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 10. | -7. | 0. | 0. | 0. | -2. | 0. | 0. | 0. | 2. | 0. | 0. | -597.1 | 597.1 | 0.00 | | |
| 58 | 587. | 0. | -590. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 10. | -7. | 0. | 0. | 0. | -2. | 0. | 0. | 0. | 2. | 0. | 0. | -599.5 | 599.5 | 0.00 | | |
| 59 | 590. | 0. | -593. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 10. | -7. | 0. | 0. | 0. | -2. | 0. | 0. | 0. | 2. | 0. | 0. | -601.9 | 601.9 | 0.00 | | |

DISSOLVED OXYGEN LOADING FOR REACH 1: Headwater

| IOR | UPMN ADV | UPTR ADV | LOWR ADV | UPMN DISP | UPTR DISP | LOWR DISP | INCR IN | INCR OUT | IN | NONP IN | WSLD OUT | WITH DECA | REAE DECA | BOD1 DECA | NH3-N DECA | ORG-N BKGD | NCM BOD1 | SOD ALG | SOD NCM | SOD PHOT | SOD RESP | ALG PHOT | ALG OUT | MAC IN | TOT | TOT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 60 | 593. | 0. | -595. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 10. | -7. | 0. | 0. | 0. | -2. | 0. | 0. | 0. | 2. | 0. | 0. | -604.3 | 604.3 | 0.00 | |
| 61 | 595. | 0. | -598. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 10. | -7. | 0. | 0. | 0. | -2. | 0. | 0. | 0. | 2. | 0. | 0. | -606.6 | 606.6 | 0.00 | |
| 62 | 598. | 0. | -600. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 7. | -4. | 0. | 0. | 0. | -1. | 0. | 0. | 0. | 1. | 0. | 0. | -605.9 | 605.9 | 0.00 | |
| 63 | 600. | 0. | -603. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 7. | -4. | 0. | 0. | 0. | -1. | 0. | 0. | 0. | 1. | 0. | 0. | -608.3 | 608.3 | 0.00 | |
| 64 | 603. | 0. | -605. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 7. | -4. | 0. | 0. | 0. | -1. | 0. | 0. | 0. | 1. | 0. | 0. | -610.6 | 610.6 | 0.00 | |
| 65 | 605. | 0. | -607. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 7. | -4. | 0. | 0. | 0. | -1. | 0. | 0. | 0. | 1. | 0. | 0. | -612.8 | 612.8 | 0.00 | |
| 66 | 607. | 0. | -609. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 7. | -4. | 0. | 0. | 0. | -1. | 0. | 0. | 0. | 1. | 0. | 0. | -615.0 | 615.0 | 0.00 | |
| 67 | 609. | 0. | -612. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 7. | -4. | 0. | 0. | 0. | -1. | 0. | 0. | 0. | 1. | 0. | 0. | -617.2 | 617.2 | 0.00 | |
| 68 | 612. | 0. | -614. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 6. | -4. | 0. | 0. | 0. | -1. | 0. | 0. | 0. | 1. | 0. | 0. | -619.3 | 619.3 | 0.00 | |
| 69 | 614. | 0. | -616. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 6. | -4. | 0. | 0. | 0. | -1. | 0. | 0. | 0. | 1. | 0. | 0. | -621.3 | 621.3 | 0.00 | |
| 70 | 616. | 0. | -618. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 6. | -4. | 0. | 0. | 0. | -1. | 0. | 0. | 0. | 1. | 0. | 0. | -623.3 | 623.3 | 0.00 | |
| 71 | 618. | 0. | -620. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 6. | -4. | 0. | 0. | 0. | -1. | 0. | 0. | 0. | 1. | 0. | 0. | -625.2 | 625.2 | 0.00 | |
| 72 | 620. | 0. | -622. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 6. | -4. | 0. | 0. | 0. | -1. | 0. | 0. | 0. | 1. | 0. | 0. | -627.1 | 627.1 | 0.00 | |
| 73 | 622. | 0. | -624. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 6. | -3. | 0. | 0. | 0. | -1. | 0. | 0. | 0. | 1. | 0. | 0. | -629.0 | 629.0 | 0.00 | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 74 | 624. | 0. | -626. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 6. | -3. | 0. | 0. | 0. | -1. | 0. | 0. | 0. | 1. | 0. | 0. | -630.8 | 630.8 | 0.00 |
| 75 | 626. | 0. | -628. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 6. | -3. | 0. | 0. | 0. | -1. | 0. | 0. | 0. | 1. | 0. | 0. | -632.6 | 632.6 | 0.00 |
| 76 | 628. | 0. | -629. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 6. | -3. | 0. | 0. | 0. | -1. | 0. | 0. | 0. | 1. | 0. | 0. | -634.3 | 634.3 | 0.00 |
| 77 | 629. | 0. | -631. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 6. | -3. | 0. | 0. | 0. | -1. | 0. | 0. | 0. | 1. | 0. | 0. | -636.0 | 636.0 | 0.00 |
| 78 | 631. | 0. | -633. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 5. | -3. | 0. | 0. | 0. | -1. | 0. | 0. | 0. | 1. | 0. | 0. | -637.7 | 637.7 | 0.00 |
| 79 | 633. | 0. | -635. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 5. | -3. | 0. | 0. | 0. | -1. | 0. | 0. | 0. | 1. | 0. | 0. | -639.3 | 639.3 | 0.00 |
| 80 | 635. | 0. | -636. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 5. | -3. | 0. | 0. | 0. | -1. | 0. | 0. | 0. | 1. | 0. | 0. | -640.9 | 640.9 | 0.00 |
| 81 | 636. | 0. | -638. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 5. | -3. | 0. | 0. | 0. | -1. | 0. | 0. | 0. | 1. | 0. | 0. | -642.5 | 642.5 | 0.00 |
| 82 | 638. | 0. | -649. | 0. | 0. | 0. | 11. | 0. | 0. | 0. | 0. | 3. | -2. | 0. | 0. | 0. | -1. | 0. | 0. | 0. | 1. | 0. | 0. | -651.9 | 651.9 | 0.00 |
| 83 | 649. | 0. | -661. | 0. | 0. | 0. | 11. | 0. | 0. | 0. | 0. | 3. | -2. | 0. | 0. | 0. | -1. | 0. | 0. | 0. | 1. | 0. | 0. | -663.6 | 663.6 | 0.00 |
| 84 | 661. | 0. | -673. | 0. | 0. | 0. | 11. | 0. | 0. | 0. | 0. | 3. | -2. | 0. | 0. | 0. | -1. | 0. | 0. | 0. | 1. | 0. | 0. | -675.2 | 675.2 | 0.00 |
| 85 | 673. | 0. | -684. | 0. | 0. | 0. | 11. | 0. | 0. | 0. | 0. | 3. | -2. | 0. | 0. | 0. | -1. | 0. | 0. | 0. | 1. | 0. | 0. | -686.9 | 686.9 | 0.00 |
| 86 | 684. | 0. | -696. | 0. | 0. | 0. | 11. | 0. | 0. | 0. | 0. | 3. | -2. | 0. | 0. | 0. | -1. | 0. | 0. | 0. | 1. | 0. | 0. | -698.5 | 698.5 | 0.00 |
| 87 | 696. | 0. | -707. | 0. | 0. | 0. | 11. | 0. | 0. | 0. | 0. | 3. | -2. | 0. | 0. | 0. | -1. | 0. | 0. | 0. | 1. | 0. | 0. | -710.2 | 710.2 | 0.00 |
| 88 | 707. | 0. | -719. | 0. | 0. | 0. | 11. | 0. | 0. | 0. | 0. | 3. | -2. | 0. | 0. | 0. | -1. | 0. | 0. | 0. | 1. | 0. | 0. | -721.8 | 721.8 | 0.00 |
| 89 | 719. | 0. | -731. | 0. | 0. | 0. | 11. | 0. | 0. | 0. | 0. | 3. | -2. | 0. | 0. | 0. | -1. | 0. | 0. | 0. | 1. | 0. | 0. | -733.5 | 733.5 | 0.00 |
| 90 | 731. | 0. | -742. | 0. | 0. | 0. | 11. | 0. | 0. | 0. | 0. | 3. | -2. | 0. | 0. | 0. | -1. | 0. | 0. | 0. | 1. | 0. | 0. | -745.2 | 745.2 | 0.00 |
| 91 | 742. | 0. | -754. | 0. | 0. | 0. | 11. | 0. | 0. | 0. | 0. | 3. | -2. | 0. | 0. | 0. | -1. | 0. | 0. | 0. | 1. | 0. | 0. | -756.9 | 756.9 | 0.00 |
| 92 | 754. | 0. | -766. | 0. | 0. | 0. | 11. | 0. | 0. | 0. | 0. | 3. | -2. | 0. | 0. | 0. | -1. | 0. | 0. | 0. | 1. | 0. | 0. | -768.5 | 768.5 | 0.00 |
| 93 | 766. | 0. | -777. | 0. | 0. | 0. | 11. | 0. | 0. | 0. | 0. | 3. | -2. | 0. | 0. | 0. | -1. | 0. | 0. | 0. | 1. | 0. | 0. | -780.2 | 780.2 | 0.00 |
| 94 | 777. | 0. | -789. | 0. | 0. | 0. | 11. | 0. | 0. | 0. | 0. | 3. | -2. | 0. | 0. | 0. | -1. | 0. | 0. | 0. | 1. | 0. | 0. | -791.9 | 791.9 | 0.00 |
| 95 | 789. | 0. | -801. | 0. | 0. | 0. | 11. | 0. | 0. | 0. | 0. | 3. | -2. | 0. | 0. | 0. | -1. | 0. | 0. | 0. | 1. | 0. | 0. | -803.6 | 803.6 | 0.00 |
| 96 | 801. | 0. | -812. | 0. | 0. | 0. | 11. | 0. | 0. | 0. | 0. | 3. | -2. | 0. | 0. | 0. | -1. | 0. | 0. | 0. | 1. | 0. | 0. | -815.3 | 815.3 | 0.00 |
| 97 | 812. | 0. | -824. | 0. | 0. | 0. | 11. | 0. | 0. | 0. | 0. | 3. | -2. | 0. | 0. | 0. | -1. | 0. | 0. | 0. | 1. | 0. | 0. | -827.0 | 827.0 | 0.00 |
| 98 | 824. | 0. | -836. | 0. | 0. | 0. | 11. | 0. | 0. | 0. | 0. | 3. | -2. | 0. | 0. | 0. | -1. | 0. | 0. | 0. | 1. | 0. | 0. | -838.7 | 838.7 | 0.00 |
| 99 | 836. | 0. | -847. | 0. | 0. | 0. | 11. | 0. | 0. | 0. | 0. | 3. | -2. | 0. | 0. | 0. | -1. | 0. | 0. | 0. | 1. | 0. | 0. | -850.4 | 850.4 | 0.00 |
| 100 | 847. | 0. | -859. | 0. | 0. | 0. | 11. | 0. | 0. | 0. | 0. | 3. | -2. | 0. | 0. | 0. | -1. | 0. | 0. | 0. | 1. | 0. | 0. | -862.1 | 862.1 | 0.00 |
| 101 | 859. | 0. | -871. | 0. | 0. | 0. | 11. | 0. | 0. | 0. | 0. | 4. | -2. | 0. | 0. | 0. | -1. | 0. | 0. | 0. | 1. | 0. | 0. | -873.8 | 873.8 | 0.00 |
| 102 | 871. | 0. | -871. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 4. | -3. | 0. | 0. | 0. | -1. | 0. | 0. | 0. | 1. | 0. | 0. | -875.5 | 875.5 | 0.00 |
| 103 | 871. | 0. | -868. | 0. | 0. | -5. | 0. | 0. | 0. | 0. | 0. | 4. | -3. | 0. | 0. | 0. | -1. | 0. | 0. | 0. | 1. | 0. | 0. | -876.4 | 876.4 | 0.00 |

Pearl River DO Modeling 090105
COEF-1 Run
INPUT/OUTPUT LOADING SUMMARY

| | FLOW | DO | BOD#1 | BOD#2 | ORG-N | NH3-N | NO3-N | PHOS | CHL A | NCM |
|---|---|---|---|---|---|---|---|---|---|---|
| | m³/s | kg/d | kg/d | kg/d | kg/d | kg/d | kg/d | kg/d | | |
| HEADWATER FLOW | 0.003 | 1.2 | 0.9 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| INCREMENTAL INFLOW | 1.660 | 717.1 | 807.1 | 0.0 | 0.0 | 14.3 | 71.7 | 0.0 | 0.0 | 0.0 |
| INCREMENTAL OUTFLOW | 0.000 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| WASTELOADS | 0.000 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| WITHDRAWLS | 0.000 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| FLOW THRU LOWER BNDRY | -1.663 | -867.5 | -397.5 | 0.0 | 0.0 | -5.1 | -74.6 | 0.0 | 0.0 | 0.0 |
| DISPERSION THRU LOWER BNDRY | | -4.9 | -13.0 | 0.0 | 0.0 | 0.3 | -2.3 | 0.0 | 0.0 | 0.0 |
| DISPERSION THRU HDWTR BNDRY | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| NON-POINT INPUT | | 0.0 | 0.0 | 0.0 | 0.0 | | | | | 0.0 |
| NATURAL REAERATION | | 682.3 | | | | | | | | |
| DAM REAERATION | | 0.0 | | | | | | | | |
| BACKGROUND SOD | | -222.5 | | | | | | | | |
| BOD#1 DECAY | | -377.9 | -377.9 | | | | | | | |
| BOD#1 SETTLING | | -19.7 | -19.7 | | | | | | | |
| ANAEROBIC BOD#1 DECAY | | | 0.0 | | | | | | | |
| BOD#2 DECAY | | 0.0 | | 0.0 | | | | | | |
| BOD#2 SETTLING | | 0.0 | | 0.0 | | | | | | |
| ANAEROBIC BOD#2 DECAY | | | | 0.0 | | | | | | |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| ORG-N DECAY | | 0.0 | | | 0.0 | 0.0 | | | | |
| ORG-N SETTLING | | | | | 0.0 | 0.0 | | | | |
| NH3 DECAY | | 0.0 | | | | -9.6 | 9.6 | | | |
| BACKGROUND NH3 SOURCE | | | | | | 0.0 | | | | |
| OTHER DENITRIFICATION | | | | | | | 0.0 | | | |
| PHOSPHORUS SOURCE | | | | | | | | 0.0 | | |
| ALGAE PHOTOSYNTHESIS | | 91.8 | | | | 0.0 | -4.6 | 0.0 | 0.0 | |
| ALGAE RESPIRATION | | 0.0 | | | | 0.0 | | 0.0 | 0.0 | |
| ALGAE SETTLING | | 0.0 | | | | | | | 0.0 | |
| MACRO PHOTOSYNTHESIS | | 0.0 | | | | 0.0 | 0.0 | 0.0 | | |
| NCM DECAY | | 0.0 | | | | | | | | 0.0 |
| NCM SETTLING | | 0.0 | | | | | | | | 0.0 |
| TOTAL INPUTS | 1.663 | 1492.4 | 808.0 | 0.0 | 0.0 | 14.7 | 81.4 | 0.0 | 0.0 | 0.0 |
| TOTAL OUTPUTS | -1.663 | -1492.4 | -808.0 | 0.0 | 0.0 | -14.7 | -81.4 | 0.0 | 0.0 | 0.0 |
| NET CONVERGENCE ERROR | 0.000 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

.....EXECUTION COMPLETED

## TMDL output file for subsegment 090204

```
LA-QUAL Version 8.00
Louisiana Department of Environmental Quality
Input file is C:\Documents and Settings\msievers\My Documents\Files\TETRA\Pearl River\Pearl_DO\TMDL\Seg090204_TMDL_Update_0608.txt
Output produced at 15:26 on 09/06/2008
$$$ DATA TYPE 1 (TITLES AND CONTROL CARDS) $$$
CARD TYPE      CONTROL TITLES
TITLE01        Pearl River DO Modeling 090204
TITLE02        COEF-1 Run
Control   YES   METRIC UNITS
ENDATA01
$$$ DATA TYPE 2 (MODEL OPTIONS) $$$
CARD TYPE      MODEL OPTION
MODOPT    NO   TEMPERATURE
MODOPT    NO   SALINITY
MODOPT    NO   CONSERVATIVE MATERIAL #1 = CHLORIDES              IN  mg/L
MODOPT    NO   CONSERVATIVE MATERIAL #2 = SULFATES               IN  mg/L
MODOPT   YES   DISSOLVED OXYGEN
MODOPT   YES   BOD1
MODOPT    NO   BOD2
MODOPT   YES   NITROGEN SERIES  = Nitrate/nitrite
MODOPT    NO   PHOSPHORUS
MODOPT    NO   CHLOROPHYLL A
MODOPT    NO   MACROPHYTES
MODOPT    NO   COLIFORM
MODOPT    NO   NONCONSERVATIVE MATERIAL
ENDATA02
$$$ DATA TYPE 3 (PROGRAM CONSTANTS) $$$
CARD TYPE      DESCRIPTION OF CONSTANT                    VALUE
PROGRAM        MAXImum Iteration Limit          =      5000.00000
PROGRAM        HYDRaulic calculation method      =        2.00000 (widths and depths)
PROGRAM        BOD OXYGEN UPTAKE RATE           =        1.00000 mg O/mg BOD
PROGRAM        NCM OXYGEN UPTAKE RATE           =        1.00000 mg O/mg NCM
PROGRAM        KL MINIMUM                       =        0.70000 meters/day
PROGRAM        INHIBITION CONTROL VALUE         =        3.00000 (inhibit all rates but SOD)
PROGRAM        ORGN OXYGEN UPTAKE RATE          =        0.00000 mg O/mg N
PROGRAM        NH3 OXYGEN UPTAKE RATE           =        0.00000 mg O/mg N
PROGRAM        K2 MAXIMUM                       =       25.00000 per day
ENDATA03
$$$ DATA TYPE 4 (TEMPERATURE CORRECTION CONSTANTS FOR RATE COEFFICIENTS) $$$
 CARD TYPE     RATE CODE     THETA VALUE
ENDATA04
$$$ CONSTANTS TYPE 5 (TEMPERATURE DATA) $$$
CARD TYPE      DESCRIPTION OF CONSTANT                    VALUE
ENDATA05
$$$ DATA TYPE 6 (ALGAE CONSTANTS) $$$
CARD TYPE      DESCRIPTION OF CONSTANT                    VALUE
ENDATA06
```

```
$$$ DATA TYPE 7 (MACROPHYTE CONSTANTS) $$$
CARD TYPE      DESCRIPTION OF CONSTANT                    VALUE
ENDATA07
$$$ DATA TYPE 8 (REACH IDENTIFICATION DATA) $$$
                                        BEGIN      END    ELEM   REACH    ELEMS  BEGIN   END
CARD TYPE  REACH  ID  NAME                          REACH     REACH  LENGTH  LENGTH   PER RCH  ELEM  ELEM
                                          km        km      km      km            NUM    NUM
REACH ID    1  LA  Lock 3 to Below A                23.00  TO  21.50  0.3000    1.50     5      1     5
REACH ID    2  IB  Below A to Below B               21.50  TO  20.50  0.2000    1.00     5      6    10
REACH ID    3  IC  Below B to Below C               20.50  TO  19.00  0.3000    1.50     5     11    15
REACH ID    4  ID  Below C to Lock 2                19.00  TO  17.78  0.3050    1.22     4     16    19
REACH ID    5  IE  Lock 2 (Church) to ABTalisheek   17.78  TO  13.43  0.2900    4.35    15     20    34
REACH ID    6  I1  AB to Talisheek                  13.43  TO  11.98  0.2900    1.45     5     35    39
REACH ID    7  IG  Talisheek to Below G             11.98  TO  10.40  0.3950    1.58     4     40    43
REACH ID    8  IH  Below G to Below H               10.40  TO   7.40  0.3000    3.00    10     44    53
REACH ID    9  II  Below H to Evans Creek            7.40  TO   5.45  0.3900    1.95     5     54    58
REACH ID   10  EP  Evans Creek to Possible Stream    5.45  TO   4.70  0.2500    0.75     3     59    61
REACH ID   11  PJ  Possible Stream to Junior High    4.70  TO   3.40  0.3250    1.30     4     62    65
REACH ID   12  IJ  Junior High to Spillway           3.40  TO   2.70  0.3500    0.70     2     66    67
REACH ID   13  IK  Spillway to Lock 1                2.70  TO   0.00  0.3000    2.70     9     68    76
ENDATA08
$$$ DATA TYPE 9 (ADVECTIVE HYDRAULIC COEFFICIENTS) $$$
CARD TYPE  REACH  ID     WIDTH     WIDTH     WIDTH     DEPTH     DEPTH     DEPTH     SLOPE   MANNINGS
                         "A"       "B"       "C"       "D"       "E"       "F"       "N"
HYDRO-1     1  LA     0.000     0.000    55.100     0.000     0.000     2.210   0.00010   0.025
HYDRO-1     2  IB     0.000     0.000    55.100     0.000     0.000     2.210   0.00010   0.025
HYDRO-1     3  IC     0.000     0.000    55.100     0.000     0.000     2.210   0.00010   0.025
HYDRO-1     4  ID     0.000     0.000    59.300     0.000     0.000     2.110   0.00010   0.025
HYDRO-1     5  IE     0.000     0.000    62.900     0.000     0.000     1.910   0.00010   0.025
HYDRO-1     6  I1     0.000     0.000    62.900     0.000     0.000     1.910   0.00010   0.025
HYDRO-1     7  IG     0.000     0.000    69.500     0.000     0.000     3.750   0.00010   0.025
HYDRO-1     8  IH     0.000     0.000    49.600     0.000     0.000     1.640   0.00010   0.025
HYDRO-1     9  II     0.000     0.000    98.100     0.000     0.000     2.250   0.00010   0.025
HYDRO-1    10  EP     0.000     0.000    98.100     0.000     0.000     2.250   0.00010   0.025
HYDRO-1    11  PJ     0.000     0.000    98.100     0.000     0.000     2.250   0.00010   0.025
HYDRO-1    12  IJ     0.000     0.000    58.900     0.000     0.000     1.810   0.00010   0.025
HYDRO-1    13  IK     0.000     0.000    85.700     0.000     0.000     2.260   0.00010   0.025
ENDATA09
$$$ DATA TYPE 10 (DISPERSIVE HYDRAULIC COEFFICIENTS) $$$
CARD TYPE  REACH  ID    TIDAL    DISPERSION    DISPERSION    DISPERSION    DISPERSION
                        RANGE      "A"           "B"           "C"           "D"
ENDATA10
$$$ DATA TYPE 11 (INITIAL CONDITIONS) $$$
CARD TYPE     REACH  ID     TEMP    SALIN      DO      NH3    NO3+2     PHOS    CHL A    MACRO
INITIAL         1  LA     32.10     0.00     5.00     0.10     0.20     0.07     1.50     0.00
INITIAL         2  IB     32.10     0.00     5.00     0.10     0.20     0.07     1.50     0.00
INITIAL         3  IC     32.10     0.00     5.00     0.10     0.20     0.07     1.50     0.00
INITIAL         4  ID     31.70     0.00     5.00     0.10     0.32     0.07     0.80     0.00
INITIAL         5  IE     31.80     0.00     5.00     0.10     0.15     0.07     3.60     0.00
INITIAL         6  I1     31.80     0.00     5.00     0.10     0.15     0.07     3.60     0.00
```

```
INITIAL      7  IG    29.80    0.00    5.00    0.10    0.09    0.06    0.80    0.00
INITIAL      8  IH    30.90    0.00    5.00    0.10    0.04    0.06    4.20    0.00
INITIAL      9  II    30.80    0.00    5.00    0.11    0.06    0.06    7.30    0.00
INITIAL     10  EP    30.80    0.00    5.00    0.10    0.06    0.06    7.30    0.00
INITIAL     11  PJ    30.80    0.00    5.00    0.10    0.06    0.06    7.30    0.00
INITIAL     12  IJ    31.10    0.00    5.00    0.10    0.06    0.06    9.80    0.00
INITIAL     13  IK    31.60    0.00    5.00    0.10    0.04    0.03    2.30    0.00
ENDATA11
$$$ DATA TYPE 12 (REAERATION, SEDIMENT OXYGEN DEMAND, BOD COEFFICIENTS) $$$
                                                  BOD    ANAER                BOD2    ANAER
CARD    RCH  RCH  K2            K2     K2     K2  BKGRND    BOD     BOD    CONV    BOD2    BOD2    BOD2    CONV    BOD2
TYPE    NUM   ID  OPT          "A"    "B"    "C"    SOD   DECAY    SETT  TO SOD   DECAY   DECAY    SETT  TO SOD   DECAY
                                     g/m²/d  per day    m/d          per day  per day     m/d         per day
COEF-1    1  LA   3 OCONNER-DOBB   0.000   0.000   0.000   0.310   0.060   0.100   1.000   0.001   0.010   0.000   0.000   0.000
COEF-1    2  IB   3 OCONNER-DOBB   0.000   0.000   0.000   0.310   0.060   0.100   1.000   0.001   0.010   0.000   0.000   0.000
COEF-1    3  IC   3 OCONNER-DOBB   0.000   0.000   0.000   0.250   0.060   0.100   1.000   0.001   0.010   0.000   0.000   0.000
COEF-1    4  ID   3 OCONNER-DOBB   0.000   0.000   0.000   0.250   0.060   0.100   1.000   0.001   0.010   0.000   0.000   0.000
COEF-1    5  IE   3 OCONNER-DOBB   0.000   0.000   0.000   0.060   0.060   0.100   1.000   0.001   0.010   0.000   0.000   0.000
COEF-1    6  I1   3 OCONNER-DOBB   0.000   0.000   0.000   1.950   0.060   0.100   1.000   0.001   0.010   0.000   0.000   0.000
COEF-1    7  IG   3 OCONNER-DOBB   0.000   0.000   0.000   0.190   0.060   0.100   1.000   0.001   0.010   0.000   0.000   0.000
COEF-1    8  IH   3 OCONNER-DOBB   0.000   0.000   0.000   0.190   0.060   0.100   1.000   0.001   0.010   0.000   0.000   0.000
COEF-1    9  II   3 OCONNER-DOBB   0.000   0.000   0.000   0.820   0.060   0.100   1.000   0.001   0.010   0.000   0.000   0.000
COEF-1   10  EP   3 OCONNER-DOBB   0.000   0.000   0.000   0.570   0.060   0.100   1.000   0.001   0.010   0.000   0.000   0.000
COEF-1   11  PJ   3 OCONNER-DOBB   0.000   0.000   0.000   0.570   0.060   0.100   1.000   0.001   0.010   0.000   0.000   0.000
COEF-1   12  IJ   3 OCONNER-DOBB   0.000   0.000   0.000   0.500   0.060   0.100   1.000   0.001   0.010   0.000   0.000   0.000
COEF-1   13  IK   3 OCONNER-DOBB   0.000   0.000   0.000   0.000   0.060   0.100   1.000   0.001   0.010   0.000   0.000   0.000
ENDATA12
$$$ DATA TYPE 13 (NITROGEN AND PHOSPHORUS COEFFICIENTS) $$$
CARD TYPE    REACH  ID     ORG-N    ORG-N   ORGN CONV     NH3     NH3    PHOS    DENIT
                          DECA    SETT  TO NH3 SRCE    DECA    SRCE    SRCE    RATE
COEF-2         1  LA     0.050   0.010   1.000   0.100   0.000   0.000   0.001
COEF-2         2  IB     0.050   0.010   1.000   0.100   0.000   0.000   0.001
COEF-2         3  IC     0.050   0.010   1.000   0.100   0.000   0.000   0.001
COEF-2         4  ID     0.050   0.010   1.000   0.100   0.000   0.000   0.001
COEF-2         5  IE     0.050   0.010   1.000   0.100   0.000   0.000   0.001
COEF-2         6  I1     0.050   0.010   1.000   0.100   0.000   0.000   0.001
COEF-2         7  IG     0.050   0.010   1.000   0.100   0.000   0.000   0.001
COEF-2         8  IH     0.050   0.010   1.000   0.100   0.000   0.000   0.001
COEF-2         9  II     0.050   0.010   1.000   0.100   0.000   0.000   0.001
COEF-2        10  EP     0.050   0.010   1.000   0.100   0.000   0.000   0.001
COEF-2        11  PJ     0.050   0.010   1.000   0.100   0.000   0.000   0.001
COEF-2        12  IJ     0.050   0.010   1.000   0.100   0.000   0.000   0.001
COEF-2        13  IK     0.050   0.010   1.000   0.100   0.000   0.000   0.001
ENDATA13
$$$ DATA TYPE 14 (ALGAE AND MACROPHYTE COEFFICIENTS) $$$
CARD TYPE    REACH  ID    SECCHI   ALGAE:    ALGAE   ALG CONV    ALGAE    ALGAE    MACRO    MACRO
                          DEPTH    CHL A    SETT    TO SOD     GROW     RESP     GROW     RESP
COEF-3         1  LA      3.00    0.000    0.00     0.00      0.00     0.00     0.00     0.00
COEF-3         2  IB      3.00    0.000    0.00     0.00      0.00     0.00     0.00     0.00
COEF-3         3  IC      3.00    0.000    0.00     0.00      0.00     0.00     0.00     0.00
```

```
COEF-3      4  ID     3.00   0.000   0.00   0.00    0.00   0.00   0.00   0.00
COEF-3      5  IE     3.00   0.000   0.00   0.00    0.00   0.00   0.00   0.00
COEF-3      6  I1     3.00   0.000   0.00   0.00    0.00   0.00   0.00   0.00
COEF-3      7  IG     3.00   0.000   0.00   0.00    0.00   0.00   0.00   0.00
COEF-3      8  IH     3.00   0.000   0.00   0.00    0.00   0.00   0.00   0.00
COEF-3      9  II     3.00   0.000   0.00   0.00    0.00   0.00   0.00   0.00
COEF-3     10  EP     3.00   0.000   0.00   0.00    0.00   0.00   0.00   0.00
COEF-3     11  PJ     3.00   0.000   0.00   0.00    0.00   0.00   0.00   0.00
COEF-3     12  IJ     3.00   0.000   0.00   0.00    0.00   0.00   0.00   0.00
COEF-3     13  IK     3.00   0.000   0.00   0.00    0.00   0.00   0.00   0.00
ENDATA14
$$$ DATA TYPE 15 (COLIFORM AND NONCONSERVATIVE COEFFICIENTS) $$$
CARD TYPE    REACH  ID   COLIFORM    NCM     NCM   NCM CONV
                      DIE-OFF   DECAY    SETT    TO SOD
COEF-4      1  LA    3.000   0.000   0.000   0.000
COEF-4      2  IB    3.000   0.000   0.000   0.000
COEF-4      3  IC    3.000   0.000   0.000   0.000
COEF-4      4  ID    3.000   0.000   0.000   0.000
COEF-4      5  IE    3.000   0.000   0.000   0.000
COEF-4      6  I1    3.000   0.000   0.000   0.000
COEF-4      7  IG    3.000   0.000   0.000   0.000
COEF-4      8  IH    3.000   0.000   0.000   0.000
COEF-4      9  II    3.000   0.000   0.000   0.000
COEF-4     10  EP    3.000   0.000   0.000   0.000
COEF-4     11  PJ    3.000   0.000   0.000   0.000
COEF-4     12  IJ    3.000   0.000   0.000   0.000
COEF-4     13  IK    3.000   0.000   0.000   0.000
ENDATA15
$$$ DATA TYPE 16 (INCREMENTAL DATA FOR FLOW, TEMPERATURE, SALINITY, AND CONSERVATIVES) $$$
CARD TYPE    REACH  ID    OUTFLOW   INFLOW    TEMP   SALIN    CM-I   CM-II  IN/DIST  OUT/DIST
INCR-1      1  LA    0.00000   0.00000   30.00   0.00   0.00   0.00  0.00000  0.00000
INCR-1      2  IB    0.00000   0.00000   30.00   0.00   0.00   0.00  0.00000  0.00000
INCR-1      3  IC    0.00000   0.00000   30.00   0.00   0.00   0.00  0.00000  0.00000
INCR-1      4  ID    0.00000   0.87000   30.00   0.00   0.00   0.00  0.71312  0.00000
INCR-1      5  IE    0.00000   0.28000   30.00   0.00   0.00   0.00  0.06437  0.00000
INCR-1      6  I1    0.00000   0.00000   30.00   0.00   0.00   0.00  0.00000  0.00000
INCR-1      7  IG    0.00000   0.59000   30.00   0.00   0.00   0.00  0.37342  0.00000
INCR-1      8  IH    0.00000   0.00000   30.00   0.00   0.00   0.00  0.00000  0.00000
INCR-1      9  II    0.00000   0.00000   30.00   0.00   0.00   0.00  0.00000  0.00000
INCR-1     10  EP    0.00000   0.00000   30.00   0.00   0.00   0.00  0.00000  0.00000
INCR-1     11  PJ    0.00000   0.30000   30.00   0.00   0.00   0.00  0.23077  0.00000
INCR-1     12  IJ    0.00000   0.00000   30.00   0.00   0.00   0.00  0.00000  0.00000
INCR-1     13  IK    0.00000   0.00000   30.00   0.00   0.00   0.00  0.00000  0.00000
ENDATA16
$$$ DATA TYPE 17 (INCREMENTAL DATA FOR DO, BOD, AND NITROGEN) $$$
CARD TYPE    REACH  ID     DO    BOD   ORG-N   NH3-N   NO3-N   BOD#2
INCR-2      1  LA    5.00   0.00   0.00   0.00   0.00   0.00
INCR-2      2  IB    5.00   0.00   0.00   0.00   0.00   0.00
INCR-2      3  IC    5.00   0.00   0.00   0.00   0.00   0.00
INCR-2      4  ID    5.00   1.98   0.00   0.50   0.10   0.00
```

```
INCR-2        5  IE      5.00     3.96     0.00     0.50     0.10     0.00
INCR-2        6  I1      5.00     3.96     0.00     0.50     0.10     0.00
INCR-2        7  IG      5.00     5.94     0.00     1.00     0.10     0.00
INCR-2        8  IH      5.00     0.00     0.00     0.00     0.00     0.00
INCR-2        9  II      5.00     0.00     0.00     0.00     0.00     0.00
INCR-2       10  EP      5.00     0.00     0.00     0.00     0.00     0.00
INCR-2       11  PJ      5.00     5.94     0.00     0.50     0.10     0.00
INCR-2       12  IJ      5.00     0.00     0.00     0.00     0.00     0.00
INCR-2       13  IK      5.00     0.00     0.00     0.00     0.00     0.00
ENDATA17
$$$ DATA TYPE 18 (INCREMENTAL DATA FOR PHOSPHORUS, CHLOROPHYLL, COLIFORM, AND NONCONSERVATIVES) $$$
 CARD TYPE     REACH  ID      PHOS     CHL A     COLI      NCM
INCR-3        1  LA      0.00     0.00     0.00     0.00
INCR-3        2  IB      0.00     0.00     0.00     0.00
INCR-3        3  IC      0.00     0.00     0.00     0.00
INCR-3        4  ID      0.00     0.00     0.00     0.00
INCR-3        5  IE      0.00     0.00     0.00     0.00
INCR-3        6  I1      0.00     0.00     0.00     0.00
INCR-3        7  IG      0.00     0.00     0.00     0.00
INCR-3        8  IH      0.00     0.00     0.00     0.00
INCR-3        9  II      0.00     0.00     0.00     0.00
INCR-3       10  EP      0.00     0.00     0.00     0.00
INCR-3       11  PJ      0.00     0.00     0.00     0.00
INCR-3       12  IJ      0.00     0.00     0.00     0.00
INCR-3       13  IK      0.00     0.00     0.00     0.00
ENDATA18
$$$ DATA TYPE 19 (NONPOINT SOURCE DATA) $$$
CARD TYPE     REACH  ID      BOD#1     ORG-N     COLI      NCM       DO     BOD#2
ENDATA19
$$$ DATA TYPE 20 (HEADWATER FOR FLOW, TEMPERATURE, SALINITY AND CONSERVATIVES) $$$
CARD TYPE     ELEMENT   NAME              UNIT     FLOW     FLOW    TEMP    SALIN     CM-I     CM-II
                                            m³/s     cfs   deg C      ppt     mg/L     mg/L
HDWTR-1        1             Headwater   0   0.00283    0.100   30.00     0.00     0.000     0.000
ENDATA20
$$$ DATA TYPE 21 (HEADWATER DATA FOR DO, BOD, AND NITROGEN) $$$
CARD TYPE     ELEMENT   NAME                    DO     BOD#1     ORG-N     NH3-N     NO3-N     BOD#2
                                             mg/L     mg/L     mg/L     mg/L     mg/L     mg/L
HDWTR-2        1             Headwater       5.00      0.40      0.00      0.50      0.10      0.00
ENDATA21
$$$ DATA TYPE 22 (HEADWATER DATA FOR PHOSPHORUS, CHLOROPHYLL, COLIFORM, AND NONCONSERVATIVES) $$$
CARD TYPE     ELEMENT   NAME                    PHOS     CHL A      COLI      NCM
                                             mg/L     mg/L     mg/L     mg/L
HDWTR-3        1             Headwater       0.00      0.00      0.00      0.00
ENDATA22
$$$ DATA TYPE 23 (JUNCTION DATA) $$$
CARD TYPE   JUNCTION   UPSTRM    RIVER     NAME
          ELEMENT  ELEMENT    KILOM
ENDATA23
$$$ DATA TYPE 24 (WASTELOAD DATA FOR FLOW, TEMPERATURE, SALINITY, AND CONSERVATIVES) $$$
CARD TYPE  ELEMENT    RKILO  NAME                FLOW      FLOW     FLOW    TEMP    SALIN     CM-I     CM-II
```

```
                                    m³/s      cfs     MGD   deg C     ppt     mg/L     mg/L
WSTLD-1      20     17.78  Church            0.00008   0.00278   0.002   30.00     0.00     0.000     0.000
WSTLD-1      66      3.40  Junior High       0.00019   0.00665   0.004   30.00     0.00     0.000     0.000
ENDATA24
$$$ DATA TYPE 25 (WASTELOAD DATA FOR DO, BOD, AND NITROGEN) $$$
                                                % BOD                    %
CARD TYPE    ELEMENT   NAME                  DO      BOD      RMVL    ORG-N    NH3-N   NITRIF    NO3-N    BOD#2
                                    mg/L     mg/L            mg/L     mg/L            mg/L     mg/L
WSTLD-2      20    Church                 5.00   103.50     0.00     0.00    15.00     0.00     0.00     0.00
WSTLD-2      66    Junior High            5.00    69.00     0.00     0.00    10.00     0.00     0.00     0.00
ENDATA25
$$$ DATA TYPE 26 (WASTELOAD DATA FOR PHOSPHORUS, CHLOROPHYLL, COLIFORM, AND NONCONSERVATIVES) $$$
CARD TYPE    ELEMENT   NAME                  PHOS    CHL A     COLI      NCM
                                    mg/L     mg/L     mg/L     mg/L
WSTLD-3      20    Church                 0.00     0.00     0.00     0.00
WSTLD-3      66    Junior High            0.00     0.00     0.00     0.00
ENDATA26
$$$ DATA TYPE 27 (LOWER BOUNDARY CONDITIONS) $$$
CARD TYPE    CONSTITUENT                CONCENTRATION
ENDATA27
$$$ DATA TYPE 28 (DAM DATA) $$$
CARD TYPE    ELEMENT   NAME              EQN     "A"     "B"     "H"
ENDATA28
$$$ DATA TYPE 29 (SENSITIVITY ANALYSIS DATA) $$$
CARD TYPE      PARAMETER    COL 1    COL 2    COL 3    COL 4    COL 5    COL 6    COL 7    COL 8
SENSITIV       VELOCITY    -30.0     30.0      0.0      0.0      0.0      0.0      0.0      0.0
SENSITIV       DISPERSI    -30.0     30.0      0.0      0.0      0.0      0.0      0.0      0.0
SENSITIV       REAERATI    -30.0     30.0      0.0      0.0      0.0      0.0      0.0      0.0
SENSITIV       BOD DECA    -30.0     30.0      0.0      0.0      0.0      0.0      0.0      0.0
SENSITIV       BOD SETT    -30.0     30.0      0.0      0.0      0.0      0.0      0.0      0.0
SENSITIV       BENTHAL     -30.0     30.0      0.0      0.0      0.0      0.0      0.0      0.0
ENDATA29
$$$ DATA TYPE 30 (PLOT CONTROL CARDS) $$$
NUMBER OF PLOTS =  1
NUMBER OF REACHES IN PLOT 1 =  13
PLOT RCH  1  2  3  4  5  6  7  8  9 10 11 12 13
ENDATA30
$$$ DATA TYPE 31 (OVERLAY PLOT DATA) $$$
ENDATA31
    .....NO ERRORS DETECTED IN INPUT DATA
    .....HYDRAULIC CALCULATIONS COMPLETED
    .....TRIDIAGONAL MATRIX TERMS INITIALIZED
    .....OXYGEN DEPENDENT RATES CONVERGENT IN   5 ITERATIONS
    .....CONSTITUENT CALCULATIONS COMPLETED
 ***** WARNING:  NEGATIVE CONCENTRATIONS SET TO ZERO FOR Nitrate+Nitrite Nitrogen
    .....GRAPHICS DATA FOR PLOT 1 WRITTEN TO UNIT 11
INTERMEDIATE REPORT
 Dissolved Oxygen                                  Pearl River DO Modeling 090204
    mg/L                                        COEF-1 Run
  ID   RCH  ELEM       +0       +1       +2       +3       +4       +5       +6       +7       +8       +9
```

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LA | 1 | 1 | 6.82 | 6.86 | 6.86 | 6.86 | 6.86 | | | | | |
| IB | 2 | 6 | 6.86 | 6.86 | 6.86 | 6.86 | 6.86 | | | | | |
| IC | 3 | 11 | 6.99 | 6.97 | 6.95 | 6.93 | 6.91 | | | | | |
| ID | 4 | 16 | 5.67 | 5.71 | 5.75 | 5.79 | | | | | | |
| IE | 5 | 20 | 6.04 | 6.24 | 6.40 | 6.54 | 6.65 | 6.74 | 6.82 | 6.88 | 6.94 | 6.98 |
| IE | 5 | 30 | 7.02 | 7.05 | 7.08 | 7.11 | 7.13 | | | | | |
| I1 | 6 | 35 | 6.56 | 6.08 | 5.67 | 5.32 | 5.03 | | | | | |
| IG | 7 | 40 | 5.37 | 5.61 | 5.79 | 5.95 | | | | | | |
| IH | 8 | 44 | 6.04 | 6.12 | 6.21 | 6.29 | 6.37 | 6.45 | 6.53 | 6.61 | 6.69 | 6.76 |
| II | 9 | 54 | 6.73 | 6.71 | 6.71 | 6.71 | 6.72 | | | | | |
| EP | 10 | 59 | 6.79 | 6.86 | 6.93 | | | | | | | |
| PJ | 11 | 62 | 6.94 | 6.95 | 6.98 | 7.01 | | | | | | |
| IJ | 12 | 66 | 6.99 | 6.92 | | | | | | | | |
| IK | 13 | 68 | 6.97 | 7.02 | 7.07 | 7.11 | 7.15 | 7.19 | 7.23 | 7.26 | 7.28 | |

INTERMEDIATE REPORT

Effective BOD — Pearl River DO Modeling 090204

mg/L — COEF-1 Run

| ID | RCH | ELEM | +0 | +1 | +2 | +3 | +4 | +5 | +6 | +7 | +8 | +9 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LA | 1 | 1 | 0.02 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | |
| IB | 2 | 6 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | |
| IC | 3 | 11 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | | | | | |
| ID | 4 | 16 | 1.47 | 1.48 | 1.48 | 1.48 | | | | | | |
| IE | 5 | 20 | 1.43 | 1.38 | 1.33 | 1.29 | 1.25 | 1.21 | 1.18 | 1.15 | 1.13 | 1.11 |
| IE | 5 | 30 | 1.09 | 1.07 | 1.05 | 1.03 | 1.02 | | | | | |
| I1 | 6 | 35 | 0.96 | 0.91 | 0.86 | 0.81 | 0.77 | | | | | |
| IG | 7 | 40 | 1.21 | 1.53 | 1.76 | 1.94 | | | | | | |
| IH | 8 | 44 | 1.89 | 1.83 | 1.78 | 1.73 | 1.68 | 1.64 | 1.59 | 1.55 | 1.50 | 1.46 |
| II | 9 | 54 | 1.34 | 1.23 | 1.13 | 1.04 | 0.95 | | | | | |
| EP | 10 | 59 | 0.90 | 0.85 | 0.81 | | | | | | | |
| PJ | 11 | 62 | 0.95 | 1.07 | 1.18 | 1.27 | | | | | | |
| IJ | 12 | 66 | 1.24 | 1.19 | | | | | | | | |
| IK | 13 | 68 | 1.13 | 1.07 | 1.02 | 0.97 | 0.92 | 0.87 | 0.83 | 0.79 | 0.75 | |

INTERMEDIATE REPORT

Biochemical Oxygen Demand — Pearl River DO Modeling 090204

mg/L — COEF-1 Run

| ID | RCH | ELEM | +0 | +1 | +2 | +3 | +4 | +5 | +6 | +7 | +8 | +9 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LA | 1 | 1 | 0.02 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | |
| IB | 2 | 6 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | |
| IC | 3 | 11 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | | | | | |
| ID | 4 | 16 | 1.47 | 1.48 | 1.48 | 1.48 | | | | | | |
| IE | 5 | 20 | 1.43 | 1.38 | 1.33 | 1.29 | 1.25 | 1.21 | 1.18 | 1.15 | 1.13 | 1.11 |
| IE | 5 | 30 | 1.09 | 1.07 | 1.05 | 1.03 | 1.02 | | | | | |
| I1 | 6 | 35 | 0.96 | 0.91 | 0.86 | 0.81 | 0.77 | | | | | |
| IG | 7 | 40 | 1.21 | 1.53 | 1.76 | 1.94 | | | | | | |
| IH | 8 | 44 | 1.89 | 1.83 | 1.78 | 1.73 | 1.68 | 1.64 | 1.59 | 1.55 | 1.50 | 1.46 |
| II | 9 | 54 | 1.34 | 1.23 | 1.13 | 1.04 | 0.95 | | | | | |
| EP | 10 | 59 | 0.90 | 0.85 | 0.81 | | | | | | | |
| PJ | 11 | 62 | 0.95 | 1.07 | 1.18 | 1.27 | | | | | | |
| IJ | 12 | 66 | 1.24 | 1.19 | | | | | | | | |
| IK | 13 | 68 | 1.13 | 1.07 | 1.02 | 0.97 | 0.92 | 0.87 | 0.83 | 0.79 | 0.75 | |

INTERMEDIATE REPORT
Organic Nitrogen Pearl River DO Modeling 090204
mg/L COEF-1 Run

| ID | RCH | ELEM | +0 | +1 | +2 | +3 | +4 | +5 | +6 | +7 | +8 | +9 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LA | 1 | 1 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | |
| IB | 2 | 6 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | |
| IC | 3 | 11 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | |
| ID | 4 | 16 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | |
| IE | 5 | 20 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| IE | 5 | 30 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | |
| I1 | 6 | 35 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | |
| IG | 7 | 40 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | |
| IH | 8 | 44 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| II | 9 | 54 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | |
| EP | 10 | 59 | 0.00 | 0.00 | 0.00 | | | | | | | |
| PJ | 11 | 62 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | |
| IJ | 12 | 66 | 0.00 | 0.00 | | | | | | | | |
| IK | 13 | 68 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |

INTERMEDIATE REPORT
Ammonia Nitrogen Pearl River DO Modeling 090204
mg/L COEF-1 Run

| ID | RCH | ELEM | +0 | +1 | +2 | +3 | +4 | +5 | +6 | +7 | +8 | +9 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LA | 1 | 1 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | |
| IB | 2 | 6 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | |
| IC | 3 | 11 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | |
| ID | 4 | 16 | 0.33 | 0.34 | 0.34 | 0.34 | | | | | | |
| IE | 5 | 20 | 0.31 | 0.28 | 0.26 | 0.24 | 0.22 | 0.20 | 0.19 | 0.18 | 0.17 | 0.16 |
| IE | 5 | 30 | 0.15 | 0.14 | 0.14 | 0.13 | 0.13 | | | | | |
| I1 | 6 | 35 | 0.12 | 0.11 | 0.10 | 0.09 | 0.09 | | | | | |
| IG | 7 | 40 | 0.16 | 0.21 | 0.24 | 0.27 | | | | | | |
| IH | 8 | 44 | 0.26 | 0.25 | 0.24 | 0.23 | 0.22 | 0.21 | 0.21 | 0.20 | 0.19 | 0.19 |
| II | 9 | 54 | 0.16 | 0.15 | 0.13 | 0.11 | 0.10 | | | | | |
| EP | 10 | 59 | 0.09 | 0.09 | 0.08 | | | | | | | |
| PJ | 11 | 62 | 0.09 | 0.09 | 0.10 | 0.10 | | | | | | |
| IJ | 12 | 66 | 0.10 | 0.10 | | | | | | | | |
| IK | 13 | 68 | 0.09 | 0.08 | 0.08 | 0.07 | 0.06 | 0.06 | 0.06 | 0.05 | 0.05 | |

INTERMEDIATE REPORT
Nitrate+Nitrite Nitrogen Pearl River DO Modeling 090204
mg/L COEF-1 Run

| ID | RCH | ELEM | +0 | +1 | +2 | +3 | +4 | +5 | +6 | +7 | +8 | +9 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LA | 1 | 1 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | |
| IB | 2 | 6 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | |
| IC | 3 | 11 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | |
| ID | 4 | 16 | 0.10 | 0.17 | 0.20 | 0.20 | | | | | | |
| IE | 5 | 20 | 0.23 | 0.25 | 0.27 | 0.28 | 0.29 | 0.31 | 0.31 | 0.32 | 0.33 | 0.33 |
| IE | 5 | 30 | 0.34 | 0.34 | 0.34 | 0.35 | 0.35 | | | | | |
| I1 | 6 | 35 | 0.35 | 0.36 | 0.36 | 0.37 | 0.37 | | | | | |
| IG | 7 | 40 | 0.37 | 0.37 | 0.37 | 0.38 | | | | | | |
| IH | 8 | 44 | 0.38 | 0.39 | 0.40 | 0.40 | 0.41 | 0.41 | 0.41 | 0.42 | 0.42 | 0.42 |
| II | 9 | 54 | 0.42 | 0.43 | 0.43 | 0.42 | 0.42 | | | | | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| EP | 10 | 59 | 0.42 | 0.41 | 0.41 | | | | | | |
| PJ | 11 | 62 | 0.39 | 0.37 | 0.36 | 0.34 | | | | | |
| IJ | 12 | 66 | 0.34 | 0.34 | | | | | | | |
| IK | 13 | 68 | 0.35 | 0.35 | 0.35 | 0.35 | 0.36 | 0.36 | 0.36 | 0.36 | 0.36 |

INTERMEDIATE REPORT

Total Nitrogen — Pearl River DO Modeling 090204

mg/L — COEF-1 Run

| ID | RCH | ELEM | +0 | +1 | +2 | +3 | +4 | +5 | +6 | +7 | +8 | +9 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LA | 1 | 1 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | |
| IB | 2 | 6 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | |
| IC | 3 | 11 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | |
| ID | 4 | 16 | 0.44 | 0.51 | 0.53 | 0.54 | | | | | | |
| IE | 5 | 20 | 0.54 | 0.53 | 0.52 | 0.52 | 0.51 | 0.51 | 0.51 | 0.50 | 0.50 | 0.49 |
| IE | 5 | 30 | 0.49 | 0.49 | 0.48 | 0.48 | 0.47 | | | | | |
| I1 | 6 | 35 | 0.47 | 0.47 | 0.46 | 0.46 | 0.46 | | | | | |
| IG | 7 | 40 | 0.53 | 0.58 | 0.62 | 0.64 | | | | | | |
| IH | 8 | 44 | 0.64 | 0.64 | 0.63 | 0.63 | 0.63 | 0.62 | 0.62 | 0.61 | 0.61 | 0.61 |
| II | 9 | 54 | 0.59 | 0.57 | 0.55 | 0.54 | 0.52 | | | | | |
| EP | 10 | 59 | 0.51 | 0.50 | 0.49 | | | | | | | |
| PJ | 11 | 62 | 0.48 | 0.47 | 0.45 | 0.44 | | | | | | |
| IJ | 12 | 66 | 0.44 | 0.44 | | | | | | | | |
| IK | 13 | 68 | 0.43 | 0.43 | 0.43 | 0.42 | 0.42 | 0.42 | 0.41 | 0.41 | 0.41 | |

INTERMEDIATE REPORT

Chlorophyll a — Pearl River DO Modeling 090204

µg/L — COEF-1 Run

| ID | RCH | ELEM | +0 | +1 | +2 | +3 | +4 | +5 | +6 | +7 | +8 | +9 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LA | 1 | 1 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | | | | | |
| IB | 2 | 6 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | | | | | |
| IC | 3 | 11 | 1.36 | 1.22 | 1.08 | 0.94 | 0.80 | | | | | |
| ID | 4 | 16 | 1.50 | 2.20 | 2.90 | 3.60 | | | | | | |
| IE | 5 | 20 | 3.60 | 3.60 | 3.60 | 3.60 | 3.60 | 3.60 | 3.60 | 3.60 | 3.60 | 3.60 |
| IE | 5 | 30 | 3.60 | 3.60 | 3.60 | 3.60 | 3.60 | | | | | |
| I1 | 6 | 35 | 3.04 | 2.48 | 1.92 | 1.36 | 0.80 | | | | | |
| IG | 7 | 40 | 1.65 | 2.50 | 3.35 | 4.20 | | | | | | |
| IH | 8 | 44 | 4.51 | 4.82 | 5.13 | 5.44 | 5.75 | 6.06 | 6.37 | 6.68 | 6.99 | 7.30 |
| II | 9 | 54 | 7.30 | 7.30 | 7.30 | 7.30 | 7.30 | | | | | |
| EP | 10 | 59 | 7.30 | 7.30 | 7.30 | | | | | | | |
| PJ | 11 | 62 | 7.93 | 8.55 | 9.18 | 9.80 | | | | | | |
| IJ | 12 | 66 | 6.05 | 2.30 | | | | | | | | |
| IK | 13 | 68 | 2.30 | 2.30 | 2.30 | 2.30 | 2.30 | 2.30 | 2.30 | 2.30 | 2.30 | |

INTERMEDIATE REPORT

Temperature — Pearl River DO Modeling 090204

deg C — COEF-1 Run

| ID | RCH | ELEM | +0 | +1 | +2 | +3 | +4 | +5 | +6 | +7 | +8 | +9 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LA | 1 | 1 | 32.10 | 32.10 | 32.10 | 32.10 | 32.10 | | | | | |
| IB | 2 | 6 | 32.10 | 32.10 | 32.10 | 32.10 | 32.10 | | | | | |
| IC | 3 | 11 | 32.02 | 31.94 | 31.86 | 31.78 | 31.70 | | | | | |
| ID | 4 | 16 | 31.73 | 31.75 | 31.77 | 31.80 | | | | | | |
| IE | 5 | 20 | 31.80 | 31.80 | 31.80 | 31.80 | 31.80 | 31.80 | 31.80 | 31.80 | 31.80 | 31.80 |
| IE | 5 | 30 | 31.80 | 31.80 | 31.80 | 31.80 | 31.80 | | | | | |

```
 I1    6   35      31.40    31.00    30.60    30.20    29.80
 IG    7   40      30.07    30.35    30.62    30.90
 IH    8   44      30.89    30.88    30.87    30.86    30.85    30.84    30.83    30.82    30.81    30.80
 II    9   54      30.80    30.80    30.80    30.80    30.80
 EP   10   59      30.80    30.80    30.80
 PJ   11   62      30.88    30.95    31.02    31.10
 IJ   12   66      31.35    31.60
 IK   13   68      31.60    31.60    31.60    31.60    31.60    31.60    31.60    31.60    31.60
INTERMEDIATE REPORT
 Salinity                                   Pearl River DO Modeling 090204
   ppt                                      COEF-1 Run
 ID  RCH  ELEM      +0      +1      +2      +3      +4      +5      +6      +7      +8      +9
 LA    1    1      0.00    0.00    0.00    0.00    0.00
 IB    2    6      0.00    0.00    0.00    0.00    0.00
 IC    3   11      0.00    0.00    0.00    0.00    0.00
 ID    4   16      0.00    0.00    0.00    0.00
 IE    5   20      0.00    0.00    0.00    0.00    0.00    0.00    0.00    0.00    0.00    0.00
 IE    5   30      0.00    0.00    0.00    0.00    0.00
 I1    6   35      0.00    0.00    0.00    0.00    0.00
 IG    7   40      0.00    0.00    0.00    0.00
 IH    8   44      0.00    0.00    0.00    0.00    0.00    0.00    0.00    0.00    0.00    0.00
 II    9   54      0.00    0.00    0.00    0.00    0.00
 EP   10   59      0.00    0.00    0.00
 PJ   11   62      0.00    0.00    0.00    0.00
 IJ   12   66      0.00    0.00
 IK   13   68      0.00    0.00    0.00    0.00    0.00    0.00    0.00    0.00    0.00
INTERMEDIATE REPORT
 Reaeration Rate                            Pearl River DO Modeling 090204
   per day                                  COEF-1 Run
 ID  RCH  ELEM      +0      +1      +2      +3      +4      +5      +6      +7      +8      +9
 LA    1    1      0.395   0.395   0.395   0.395   0.395
 IB    2    6      0.395   0.395   0.395   0.395   0.395
 IC    3   11      0.394   0.394   0.393   0.393   0.392
 ID    4   16      0.411   0.411   0.411   0.412
 IE    5   20      0.455   0.455   0.455   0.455   0.455   0.455   0.455   0.455   0.455   0.455
 IE    5   30      0.455   0.455   0.455   0.455   0.455
 I1    6   35      0.452   0.448   0.445   0.442   0.439
 IG    7   40      0.225   0.226   0.227   0.228
 IH    8   44      0.521   0.521   0.521   0.521   0.521   0.521   0.521   0.521   0.521   0.521
 II    9   54      0.379   0.379   0.379   0.379   0.379
 EP   10   59      0.379   0.379   0.379
 PJ   11   62      0.380   0.380   0.381   0.381
 IJ   12   66      0.476   0.478
 IK   13   68      0.383   0.383   0.383   0.383   0.383   0.383   0.383   0.383   0.383
INTERMEDIATE REPORT
 BOD Decay Rate                             Pearl River DO Modeling 090204
   per day                                  COEF-1 Run
 ID  RCH  ELEM      +0      +1      +2      +3      +4      +5      +6      +7      +8      +9
 LA    1    1      0.10    0.10    0.10    0.10    0.10
 IB    2    6      0.10    0.10    0.10    0.10    0.10
```

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| IC | 3 | 11 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | | | | | |
| ID | 4 | 16 | 0.10 | 0.10 | 0.10 | 0.10 | | | | | | |
| IE | 5 | 20 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| IE | 5 | 30 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | | | | | |
| I1 | 6 | 35 | 0.10 | 0.10 | 0.10 | 0.10 | 0.09 | | | | | |
| IG | 7 | 40 | 0.10 | 0.10 | 0.10 | 0.10 | | | | | | |
| IH | 8 | 44 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| II | 9 | 54 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | | | | | |
| EP | 10 | 59 | 0.10 | 0.10 | 0.10 | | | | | | | |
| PJ | 11 | 62 | 0.10 | 0.10 | 0.10 | 0.10 | | | | | | |
| IJ | 12 | 66 | 0.10 | 0.10 | | | | | | | | |
| IK | 13 | 68 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | |

INTERMEDIATE REPORT

BOD Settling Rate — Pearl River DO Modeling 090204

per day — COEF-1 Run

| ID | RCH | ELEM | +0 | +1 | +2 | +3 | +4 | +5 | +6 | +7 | +8 | +9 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LA | 1 | 1 | 0.06 | 0.06 | 0.06 | 0.06 | 0.06 | | | | | |
| IB | 2 | 6 | 0.06 | 0.06 | 0.06 | 0.06 | 0.06 | | | | | |
| IC | 3 | 11 | 0.06 | 0.06 | 0.06 | 0.06 | 0.06 | | | | | |
| ID | 4 | 16 | 0.06 | 0.06 | 0.06 | 0.06 | | | | | | |
| IE | 5 | 20 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 |
| IE | 5 | 30 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | | | | | |
| I1 | 6 | 35 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | | | | | |
| IG | 7 | 40 | 0.03 | 0.03 | 0.03 | 0.03 | | | | | | |
| IH | 8 | 44 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| II | 9 | 54 | 0.06 | 0.06 | 0.06 | 0.06 | 0.06 | | | | | |
| EP | 10 | 59 | 0.06 | 0.06 | 0.06 | | | | | | | |
| PJ | 11 | 62 | 0.06 | 0.06 | 0.06 | 0.06 | | | | | | |
| IJ | 12 | 66 | 0.07 | 0.07 | | | | | | | | |
| IK | 13 | 68 | 0.06 | 0.06 | 0.06 | 0.06 | 0.06 | 0.06 | 0.06 | 0.06 | 0.06 | |

INTERMEDIATE REPORT

Ammonia Decay Rate — Pearl River DO Modeling 090204

per day — COEF-1 Run

| ID | RCH | ELEM | +0 | +1 | +2 | +3 | +4 | +5 | +6 | +7 | +8 | +9 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LA | 1 | 1 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | | | | | |
| IB | 2 | 6 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | | | | | |
| IC | 3 | 11 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | | | | | |
| ID | 4 | 16 | 0.24 | 0.24 | 0.24 | 0.24 | | | | | | |
| IE | 5 | 20 | 0.24 | 0.24 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 |
| IE | 5 | 30 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | | | | | |
| I1 | 6 | 35 | 0.24 | 0.23 | 0.22 | 0.21 | 0.20 | | | | | |
| IG | 7 | 40 | 0.21 | 0.21 | 0.22 | 0.23 | | | | | | |
| IH | 8 | 44 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 |
| II | 9 | 54 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | | | | | |
| EP | 10 | 59 | 0.23 | 0.23 | 0.23 | | | | | | | |
| PJ | 11 | 62 | 0.23 | 0.23 | 0.23 | 0.24 | | | | | | |
| IJ | 12 | 66 | 0.24 | 0.24 | | | | | | | | |
| IK | 13 | 68 | 0.24 | 0.24 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | |

INTERMEDIATE REPORT

Sediment Oxygen Demand — Pearl River DO Modeling 090204

g/m²/d COEF-1 Run

| ID | RCH | ELEM | +0 | +1 | +2 | +3 | +4 | +5 | +6 | +7 | +8 | +9 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LA | 1 | 1 | 0.67 | 0.66 | 0.66 | 0.66 | 0.66 | | | | | |
| IB | 2 | 6 | 0.66 | 0.66 | 0.66 | 0.66 | 0.66 | | | | | |
| IC | 3 | 11 | 0.53 | 0.53 | 0.53 | 0.52 | 0.52 | | | | | |
| ID | 4 | 16 | 0.72 | 0.72 | 0.72 | 0.72 | | | | | | |
| IE | 5 | 20 | 0.32 | 0.31 | 0.30 | 0.30 | 0.29 | 0.29 | 0.28 | 0.28 | 0.28 | 0.27 |
| IE | 5 | 30 | 0.27 | 0.27 | 0.27 | 0.26 | 0.26 | | | | | |
| I1 | 6 | 35 | 4.12 | 4.02 | 3.91 | 3.81 | 3.71 | | | | | |
| IG | 7 | 40 | 0.51 | 0.56 | 0.60 | 0.63 | | | | | | |
| IH | 8 | 44 | 0.62 | 0.61 | 0.61 | 0.60 | 0.59 | 0.59 | 0.58 | 0.58 | 0.57 | 0.56 |
| II | 9 | 54 | 1.79 | 1.78 | 1.76 | 1.75 | 1.74 | | | | | |
| EP | 10 | 59 | 1.24 | 1.24 | 1.23 | | | | | | | |
| PJ | 11 | 62 | 1.25 | 1.28 | 1.29 | 1.31 | | | | | | |
| IJ | 12 | 66 | 1.18 | 1.19 | | | | | | | | |
| IK | 13 | 68 | 0.15 | 0.14 | 0.13 | 0.13 | 0.12 | 0.12 | 0.11 | 0.10 | 0.10 | |

EXPANDED CAPSULE SUMMARY FOR Headwater

| IOR | REACH | DIST km | FLOW m³/s | TEMP deg C | SALN ppt | DO mg/L | EBOD1 mg/L | EBOD2 mg/L | ORG-N µg/L | NH3 mg/L | CHLA µg/L | ADVEC DISP m²/s | MEAN DEPTH m | DO WIDTH m | REAER VELO m/s | BOD1 VELO m/s | BOD1 SAT mg/L | BOD2 RATE 1/da | BOD2 DECA 1/da | NH3 SETT 1/da | NH3 DECA 1/da | CHLA SETT 1/da | CHLA DECA 1/da | SOD g/m²/d |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | HDWTR | | 0.003 | 30.0 | 0.0 | 5.0 | 0.4 | 0.0 | 0.0 | 0.5 | 1.5 | | | | | | | | | | | | | |
| 1 | LA 1 | 22.70 | 0.003 | 32.1 | 0.0 | 6.8 | 0.0 | 0.0 | 0.0 | 0.0 | 1.5 | 0.0 | 2.21 | 55.1 | 0.000 | 0.000 | 7.3 | 0.395 | 0.10 | 0.06 | 0.01 | 0.00 | 0.25 | 0.67 |
| 2 | LA 1 | 22.40 | 0.003 | 32.1 | 0.0 | 6.9 | 0.0 | 0.0 | 0.0 | 0.0 | 1.5 | 0.0 | 2.21 | 55.1 | 0.000 | 0.000 | 7.3 | 0.395 | 0.10 | 0.06 | 0.01 | 0.00 | 0.25 | 0.66 |
| 3 | LA 1 | 22.10 | 0.003 | 32.1 | 0.0 | 6.9 | 0.0 | 0.0 | 0.0 | 0.0 | 1.5 | 0.0 | 2.21 | 55.1 | 0.000 | 0.000 | 7.3 | 0.395 | 0.10 | 0.06 | 0.01 | 0.00 | 0.25 | 0.66 |
| 4 | LA 1 | 21.80 | 0.003 | 32.1 | 0.0 | 6.9 | 0.0 | 0.0 | 0.0 | 0.0 | 1.5 | 0.0 | 2.21 | 55.1 | 0.000 | 0.000 | 7.3 | 0.395 | 0.10 | 0.06 | 0.01 | 0.00 | 0.25 | 0.66 |
| 5 | LA 1 | 21.50 | 0.003 | 32.1 | 0.0 | 6.9 | 0.0 | 0.0 | 0.0 | 0.0 | 1.5 | 0.0 | 2.21 | 55.1 | 0.000 | 0.000 | 7.3 | 0.395 | 0.10 | 0.06 | 0.01 | 0.00 | 0.25 | 0.66 |
| 6 | IB 2 | 21.30 | 0.003 | 32.1 | 0.0 | 6.9 | 0.0 | 0.0 | 0.0 | 0.0 | 1.5 | 0.0 | 2.21 | 55.1 | 0.000 | 0.000 | 7.3 | 0.395 | 0.10 | 0.06 | 0.01 | 0.00 | 0.25 | 0.66 |
| 7 | IB 2 | 21.10 | 0.003 | 32.1 | 0.0 | 6.9 | 0.0 | 0.0 | 0.0 | 0.0 | 1.5 | 0.0 | 2.21 | 55.1 | 0.000 | 0.000 | 7.3 | 0.395 | 0.10 | 0.06 | 0.01 | 0.00 | 0.25 | 0.66 |
| 8 | IB 2 | 20.90 | 0.003 | 32.1 | 0.0 | 6.9 | 0.0 | 0.0 | 0.0 | 0.0 | 1.5 | 0.0 | 2.21 | 55.1 | 0.000 | 0.000 | 7.3 | 0.395 | 0.10 | 0.06 | 0.01 | 0.00 | 0.25 | 0.66 |
| 9 | IB 2 | 20.70 | 0.003 | 32.1 | 0.0 | 6.9 | 0.0 | 0.0 | 0.0 | 0.0 | 1.5 | 0.0 | 2.21 | 55.1 | 0.000 | 0.000 | 7.3 | 0.395 | 0.10 | 0.06 | 0.01 | 0.00 | 0.25 | 0.66 |
| 10 | IB 2 | 20.50 | 0.003 | 32.1 | 0.0 | 6.9 | 0.0 | 0.0 | 0.0 | 0.0 | 1.5 | 0.0 | 2.21 | 55.1 | 0.000 | 0.000 | 7.3 | 0.395 | 0.10 | 0.06 | 0.01 | 0.00 | 0.25 | 0.66 |
| 11 | IC 3 | 20.20 | 0.003 | 32.0 | 0.0 | 7.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.4 | 0.0 | 2.21 | 55.1 | 0.000 | 0.000 | 7.3 | 0.394 | 0.10 | 0.06 | 0.01 | 0.00 | 0.25 | 0.53 |
| 12 | IC 3 | 19.90 | 0.003 | 31.9 | 0.0 | 7.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.2 | 0.0 | 2.21 | 55.1 | 0.000 | 0.000 | 7.3 | 0.394 | 0.10 | 0.06 | 0.01 | 0.00 | 0.25 | 0.53 |
| 13 | IC 3 | 19.60 | 0.003 | 31.9 | 0.0 | 7.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.1 | 0.0 | 2.21 | 55.1 | 0.000 | 0.000 | 7.3 | 0.393 | 0.10 | 0.06 | 0.01 | 0.00 | 0.25 | 0.53 |
| 14 | IC 3 | 19.30 | 0.003 | 31.8 | 0.0 | 6.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.9 | 0.0 | 2.21 | 55.1 | 0.000 | 0.000 | 7.3 | 0.393 | 0.10 | 0.06 | 0.01 | 0.00 | 0.25 | 0.52 |
| 15 | IC 3 | 19.00 | 0.003 | 31.7 | 0.0 | 6.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.8 | 0.0 | 2.21 | 55.1 | 0.000 | 0.000 | 7.3 | 0.392 | 0.10 | 0.06 | 0.01 | 0.00 | 0.25 | 0.52 |
| 16 | ID 4 | 18.69 | 0.220 | 31.7 | 0.0 | 5.7 | 1.5 | 0.0 | 0.0 | 0.3 | 1.5 | 0.0 | 2.11 | 59.3 | 0.002 | 0.002 | 7.3 | 0.411 | 0.10 | 0.06 | 0.01 | 0.00 | 0.24 | 0.72 |
| 17 | ID 4 | 18.39 | 0.438 | 31.8 | 0.0 | 5.7 | 1.5 | 0.0 | 0.0 | 0.3 | 2.2 | 0.0 | 2.11 | 59.3 | 0.003 | 0.003 | 7.3 | 0.411 | 0.10 | 0.06 | 0.01 | 0.00 | 0.24 | 0.72 |
| 18 | ID 4 | 18.08 | 0.655 | 31.8 | 0.0 | 5.7 | 1.5 | 0.0 | 0.0 | 0.3 | 2.9 | 0.0 | 2.11 | 59.3 | 0.005 | 0.005 | 7.3 | 0.411 | 0.10 | 0.06 | 0.01 | 0.00 | 0.24 | 0.72 |
| 19 | ID 4 | 17.78 | 0.873 | 31.8 | 0.0 | 5.8 | 1.5 | 0.0 | 0.0 | 0.3 | 3.6 | 0.0 | 2.11 | 59.3 | 0.007 | 0.007 | 7.3 | 0.412 | 0.10 | 0.06 | 0.01 | 0.00 | 0.24 | 0.72 |
| | WASTELOAD # 020 (Church) ENTERS HERE | | | | | | | | | | | | | | | | | | | | | | | |
| 20 | IE 5 | 17.49 | 0.892 | 31.8 | 0.0 | 6.0 | 1.4 | 0.0 | 0.0 | 0.3 | 3.6 | 0.0 | 1.91 | 62.9 | 0.007 | 0.007 | 7.3 | 0.455 | 0.10 | 0.07 | 0.01 | 0.00 | 0.24 | 0.32 |
| 21 | IE 5 | 17.20 | 0.910 | 31.8 | 0.0 | 6.2 | 1.4 | 0.0 | 0.0 | 0.3 | 3.6 | 0.0 | 1.91 | 62.9 | 0.008 | 0.008 | 7.3 | 0.455 | 0.10 | 0.07 | 0.01 | 0.00 | 0.24 | 0.31 |
| 22 | IE 5 | 16.91 | 0.929 | 31.8 | 0.0 | 6.4 | 1.3 | 0.0 | 0.0 | 0.3 | 3.6 | 0.0 | 1.91 | 62.9 | 0.008 | 0.008 | 7.3 | 0.455 | 0.10 | 0.07 | 0.01 | 0.00 | 0.25 | 0.30 |
| 23 | IE 5 | 16.62 | 0.948 | 31.8 | 0.0 | 6.5 | 1.3 | 0.0 | 0.0 | 0.2 | 3.6 | 0.0 | 1.91 | 62.9 | 0.008 | 0.008 | 7.3 | 0.455 | 0.10 | 0.07 | 0.01 | 0.00 | 0.25 | 0.30 |
| 24 | IE 5 | 16.33 | 0.966 | 31.8 | 0.0 | 6.6 | 1.2 | 0.0 | 0.0 | 0.2 | 3.6 | 0.0 | 1.91 | 62.9 | 0.008 | 0.008 | 7.3 | 0.455 | 0.10 | 0.07 | 0.01 | 0.00 | 0.25 | 0.29 |
| 25 | IE 5 | 16.04 | 0.985 | 31.8 | 0.0 | 6.7 | 1.2 | 0.0 | 0.0 | 0.2 | 3.6 | 0.0 | 1.91 | 62.9 | 0.008 | 0.008 | 7.3 | 0.455 | 0.10 | 0.07 | 0.01 | 0.00 | 0.25 | 0.29 |
| 26 | IE 5 | 15.75 | 1.004 | 31.8 | 0.0 | 6.8 | 1.2 | 0.0 | 0.0 | 0.2 | 3.6 | 0.0 | 1.91 | 62.9 | 0.008 | 0.008 | 7.3 | 0.455 | 0.10 | 0.07 | 0.01 | 0.00 | 0.25 | 0.28 |
| 27 | IE 5 | 15.46 | 1.022 | 31.8 | 0.0 | 6.9 | 1.2 | 0.0 | 0.0 | 0.2 | 3.6 | 0.0 | 1.91 | 62.9 | 0.009 | 0.009 | 7.3 | 0.455 | 0.10 | 0.07 | 0.01 | 0.00 | 0.25 | 0.28 |
| 28 | IE 5 | 15.17 | 1.041 | 31.8 | 0.0 | 6.9 | 1.1 | 0.0 | 0.0 | 0.2 | 3.6 | 0.0 | 1.91 | 62.9 | 0.009 | 0.009 | 7.3 | 0.455 | 0.10 | 0.07 | 0.01 | 0.00 | 0.25 | 0.28 |

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 29 | IE | 5 | 14.88 | 1.060 | 31.8 | 0.0 | 7.0 | 1.1 | 0.0 | 0.0 | 0.2 | 3.6 | 0.0 | 1.91 | 62.9 | 0.009 | 0.009 | 7.3 | 0.455 | 0.10 | 0.07 | 0.01 | 0.00 | 0.25 | 0.27 |
| 30 | IE | 5 | 14.59 | 1.078 | 31.8 | 0.0 | 7.0 | 1.1 | 0.0 | 0.0 | 0.2 | 3.6 | 0.0 | 1.91 | 62.9 | 0.009 | 0.009 | 7.3 | 0.455 | 0.10 | 0.07 | 0.01 | 0.00 | 0.25 | 0.27 |
| 31 | IE | 5 | 14.30 | 1.097 | 31.8 | 0.0 | 7.1 | 1.1 | 0.0 | 0.0 | 0.1 | 3.6 | 0.0 | 1.91 | 62.9 | 0.009 | 0.009 | 7.3 | 0.455 | 0.10 | 0.07 | 0.01 | 0.00 | 0.25 | 0.27 |
| 32 | IE | 5 | 14.01 | 1.116 | 31.8 | 0.0 | 7.1 | 1.1 | 0.0 | 0.0 | 0.1 | 3.6 | 0.0 | 1.91 | 62.9 | 0.009 | 0.009 | 7.3 | 0.455 | 0.10 | 0.07 | 0.01 | 0.00 | 0.25 | 0.27 |
| 33 | IE | 5 | 13.72 | 1.134 | 31.8 | 0.0 | 7.1 | 1.0 | 0.0 | 0.0 | 0.1 | 3.6 | 0.0 | 1.91 | 62.9 | 0.009 | 0.009 | 7.3 | 0.455 | 0.10 | 0.07 | 0.01 | 0.00 | 0.25 | 0.26 |
| 34 | IE | 5 | 13.43 | 1.153 | 31.8 | 0.0 | 7.1 | 1.0 | 0.0 | 0.0 | 0.1 | 3.6 | 0.0 | 1.91 | 62.9 | 0.010 | 0.010 | 7.3 | 0.455 | 0.10 | 0.07 | 0.01 | 0.00 | 0.25 | 0.26 |
| 35 | I1 | 6 | 13.14 | 1.153 | 31.4 | 0.0 | 6.6 | 1.0 | 0.0 | 0.0 | 0.1 | 3.0 | 0.0 | 1.91 | 62.9 | 0.010 | 0.010 | 7.4 | 0.452 | 0.10 | 0.07 | 0.01 | 0.00 | 0.24 | 4.12 |
| 36 | I1 | 6 | 12.85 | 1.153 | 31.0 | 0.0 | 6.1 | 0.9 | 0.0 | 0.0 | 0.1 | 2.5 | 0.0 | 1.91 | 62.9 | 0.010 | 0.010 | 7.4 | 0.448 | 0.10 | 0.07 | 0.01 | 0.00 | 0.23 | 4.02 |
| 37 | I1 | 6 | 12.56 | 1.153 | 30.6 | 0.0 | 5.7 | 0.9 | 0.0 | 0.0 | 0.1 | 1.9 | 0.0 | 1.91 | 62.9 | 0.010 | 0.010 | 7.5 | 0.445 | 0.10 | 0.07 | 0.01 | 0.00 | 0.22 | 3.91 |
| 38 | I1 | 6 | 12.27 | 1.153 | 30.2 | 0.0 | 5.3 | 0.8 | 0.0 | 0.0 | 0.1 | 1.4 | 0.0 | 1.91 | 62.9 | 0.010 | 0.010 | 7.5 | 0.442 | 0.10 | 0.07 | 0.01 | 0.00 | 0.21 | 3.81 |
| 39 | I1 | 6 | 11.98 | 1.153 | 29.8 | 0.0 | 5.0 | 0.8 | 0.0 | 0.0 | 0.1 | 0.8 | 0.0 | 1.91 | 62.9 | 0.010 | 0.010 | 7.6 | 0.439 | 0.09 | 0.07 | 0.01 | 0.00 | 0.20 | 3.71 |
| 40 | IG | 7 | 11.58 | 1.300 | 30.1 | 0.0 | 5.4 | 1.2 | 0.0 | 0.0 | 0.2 | 1.6 | 0.0 | 3.75 | 69.5 | 0.005 | 0.005 | 7.5 | 0.225 | 0.10 | 0.03 | 0.01 | 0.00 | 0.21 | 0.51 |
| 41 | IG | 7 | 11.19 | 1.448 | 30.3 | 0.0 | 5.6 | 1.5 | 0.0 | 0.0 | 0.2 | 2.5 | 0.0 | 3.75 | 69.5 | 0.006 | 0.006 | 7.5 | 0.226 | 0.10 | 0.03 | 0.01 | 0.00 | 0.21 | 0.56 |
| 42 | IG | 7 | 10.79 | 1.595 | 30.6 | 0.0 | 5.8 | 1.8 | 0.0 | 0.0 | 0.2 | 3.3 | 0.0 | 3.75 | 69.5 | 0.006 | 0.006 | 7.5 | 0.227 | 0.10 | 0.03 | 0.01 | 0.00 | 0.22 | 0.60 |
| 43 | IG | 7 | 10.40 | 1.743 | 30.9 | 0.0 | 5.9 | 1.9 | 0.0 | 0.0 | 0.3 | 4.2 | 0.0 | 3.75 | 69.5 | 0.007 | 0.007 | 7.4 | 0.228 | 0.10 | 0.03 | 0.01 | 0.00 | 0.23 | 0.63 |
| 44 | IH | 8 | 10.10 | 1.743 | 30.9 | 0.0 | 6.0 | 1.9 | 0.0 | 0.0 | 0.3 | 4.5 | 0.0 | 1.64 | 49.6 | 0.021 | 0.021 | 7.4 | 0.521 | 0.10 | 0.08 | 0.01 | 0.00 | 0.23 | 0.62 |
| 45 | IH | 8 | 9.80 | 1.743 | 30.9 | 0.0 | 6.1 | 1.8 | 0.0 | 0.0 | 0.2 | 4.8 | 0.0 | 1.64 | 49.6 | 0.021 | 0.021 | 7.4 | 0.521 | 0.10 | 0.08 | 0.01 | 0.00 | 0.23 | 0.61 |
| 46 | IH | 8 | 9.50 | 1.743 | 30.9 | 0.0 | 6.2 | 1.8 | 0.0 | 0.0 | 0.2 | 5.1 | 0.0 | 1.64 | 49.6 | 0.021 | 0.021 | 7.4 | 0.521 | 0.10 | 0.08 | 0.01 | 0.00 | 0.23 | 0.61 |
| 47 | IH | 8 | 9.20 | 1.743 | 30.9 | 0.0 | 6.3 | 1.7 | 0.0 | 0.0 | 0.2 | 5.4 | 0.0 | 1.64 | 49.6 | 0.021 | 0.021 | 7.4 | 0.521 | 0.10 | 0.08 | 0.01 | 0.00 | 0.23 | 0.60 |
| 48 | IH | 8 | 8.90 | 1.743 | 30.9 | 0.0 | 6.4 | 1.7 | 0.0 | 0.0 | 0.2 | 5.8 | 0.0 | 1.64 | 49.6 | 0.021 | 0.021 | 7.4 | 0.521 | 0.10 | 0.08 | 0.01 | 0.00 | 0.23 | 0.59 |
| 49 | IH | 8 | 8.60 | 1.743 | 30.8 | 0.0 | 6.5 | 1.6 | 0.0 | 0.0 | 0.2 | 6.1 | 0.0 | 1.64 | 49.6 | 0.021 | 0.021 | 7.5 | 0.521 | 0.10 | 0.08 | 0.01 | 0.00 | 0.23 | 0.59 |
| 50 | IH | 8 | 8.30 | 1.743 | 30.8 | 0.0 | 6.5 | 1.6 | 0.0 | 0.0 | 0.2 | 6.4 | 0.0 | 1.64 | 49.6 | 0.021 | 0.021 | 7.5 | 0.521 | 0.10 | 0.08 | 0.01 | 0.00 | 0.23 | 0.58 |
| 51 | IH | 8 | 8.00 | 1.743 | 30.8 | 0.0 | 6.6 | 1.5 | 0.0 | 0.0 | 0.2 | 6.7 | 0.0 | 1.64 | 49.6 | 0.021 | 0.021 | 7.5 | 0.521 | 0.10 | 0.08 | 0.01 | 0.00 | 0.23 | 0.58 |
| 52 | IH | 8 | 7.70 | 1.743 | 30.8 | 0.0 | 6.7 | 1.5 | 0.0 | 0.0 | 0.2 | 7.0 | 0.0 | 1.64 | 49.6 | 0.021 | 0.021 | 7.5 | 0.521 | 0.10 | 0.08 | 0.01 | 0.00 | 0.23 | 0.57 |
| 53 | IH | 8 | 7.40 | 1.743 | 30.8 | 0.0 | 6.8 | 1.5 | 0.0 | 0.0 | 0.2 | 7.3 | 0.0 | 1.64 | 49.6 | 0.021 | 0.021 | 7.5 | 0.521 | 0.10 | 0.08 | 0.01 | 0.00 | 0.23 | 0.56 |
| 54 | II | 9 | 7.01 | 1.743 | 30.8 | 0.0 | 6.7 | 1.3 | 0.0 | 0.0 | 0.2 | 7.3 | 0.0 | 2.25 | 98.1 | 0.008 | 0.008 | 7.5 | 0.379 | 0.10 | 0.06 | 0.01 | 0.00 | 0.23 | 1.79 |
| 55 | II | 9 | 6.62 | 1.743 | 30.8 | 0.0 | 6.7 | 1.2 | 0.0 | 0.0 | 0.1 | 7.3 | 0.0 | 2.25 | 98.1 | 0.008 | 0.008 | 7.5 | 0.379 | 0.10 | 0.06 | 0.01 | 0.00 | 0.23 | 1.78 |
| 56 | II | 9 | 6.23 | 1.743 | 30.8 | 0.0 | 6.7 | 1.1 | 0.0 | 0.0 | 0.1 | 7.3 | 0.0 | 2.25 | 98.1 | 0.008 | 0.008 | 7.5 | 0.379 | 0.10 | 0.06 | 0.01 | 0.00 | 0.23 | 1.76 |
| 57 | II | 9 | 5.84 | 1.743 | 30.8 | 0.0 | 6.7 | 1.0 | 0.0 | 0.0 | 0.1 | 7.3 | 0.0 | 2.25 | 98.1 | 0.008 | 0.008 | 7.5 | 0.379 | 0.10 | 0.06 | 0.01 | 0.00 | 0.23 | 1.75 |
| 58 | II | 9 | 5.45 | 1.743 | 30.8 | 0.0 | 6.7 | 1.0 | 0.0 | 0.0 | 0.1 | 7.3 | 0.0 | 2.25 | 98.1 | 0.008 | 0.008 | 7.5 | 0.379 | 0.10 | 0.06 | 0.01 | 0.00 | 0.23 | 1.74 |
| 59 | EP | 10 | 5.20 | 1.743 | 30.8 | 0.0 | 6.8 | 0.9 | 0.0 | 0.0 | 0.1 | 7.3 | 0.0 | 2.25 | 98.1 | 0.008 | 0.008 | 7.5 | 0.379 | 0.10 | 0.06 | 0.01 | 0.00 | 0.23 | 1.24 |
| 60 | EP | 10 | 4.95 | 1.743 | 30.8 | 0.0 | 6.9 | 0.9 | 0.0 | 0.0 | 0.1 | 7.3 | 0.0 | 2.25 | 98.1 | 0.008 | 0.008 | 7.5 | 0.379 | 0.10 | 0.06 | 0.01 | 0.00 | 0.23 | 1.24 |
| 61 | EP | 10 | 4.70 | 1.743 | 30.8 | 0.0 | 6.9 | 0.8 | 0.0 | 0.0 | 0.1 | 7.3 | 0.0 | 2.25 | 98.1 | 0.008 | 0.008 | 7.5 | 0.379 | 0.10 | 0.06 | 0.01 | 0.00 | 0.23 | 1.23 |
| 62 | PJ | 11 | 4.38 | 1.818 | 30.9 | 0.0 | 6.9 | 1.0 | 0.0 | 0.0 | 0.1 | 7.9 | 0.0 | 2.25 | 98.1 | 0.008 | 0.008 | 7.4 | 0.380 | 0.10 | 0.06 | 0.01 | 0.00 | 0.23 | 1.25 |
| 63 | PJ | 11 | 4.05 | 1.893 | 31.0 | 0.0 | 7.0 | 1.1 | 0.0 | 0.0 | 0.1 | 8.6 | 0.0 | 2.25 | 98.1 | 0.009 | 0.009 | 7.4 | 0.380 | 0.10 | 0.06 | 0.01 | 0.00 | 0.23 | 1.28 |
| 64 | PJ | 11 | 3.73 | 1.968 | 31.0 | 0.0 | 7.0 | 1.2 | 0.0 | 0.0 | 0.1 | 9.2 | 0.0 | 2.25 | 98.1 | 0.009 | 0.009 | 7.4 | 0.381 | 0.10 | 0.06 | 0.01 | 0.00 | 0.23 | 1.29 |
| 65 | PJ | 11 | 3.40 | 2.043 | 31.1 | 0.0 | 7.0 | 1.3 | 0.0 | 0.0 | 0.1 | 9.8 | 0.0 | 2.25 | 98.1 | 0.009 | 0.009 | 7.4 | 0.381 | 0.10 | 0.06 | 0.01 | 0.00 | 0.24 | 1.31 |
| WASTELOAD # 066 (Junior High) ENTERS HERE | | | | | | | | | | | | | | | | | | | | | | | | | |
| 66 | IJ | 12 | 3.05 | 2.043 | 31.4 | 0.0 | 7.0 | 1.2 | 0.0 | 0.0 | 0.1 | 6.1 | 0.0 | 1.81 | 58.9 | 0.019 | 0.019 | 7.4 | 0.476 | 0.10 | 0.07 | 0.01 | 0.00 | 0.24 | 1.18 |
| 67 | IJ | 12 | 2.70 | 2.043 | 31.6 | 0.0 | 6.9 | 1.2 | 0.0 | 0.0 | 0.1 | 2.3 | 0.0 | 1.81 | 58.9 | 0.019 | 0.019 | 7.4 | 0.478 | 0.10 | 0.07 | 0.01 | 0.00 | 0.24 | 1.19 |
| 68 | IK | 13 | 2.40 | 2.043 | 31.6 | 0.0 | 7.0 | 1.1 | 0.0 | 0.0 | 0.1 | 2.3 | 0.0 | 2.26 | 85.7 | 0.011 | 0.011 | 7.4 | 0.383 | 0.10 | 0.06 | 0.01 | 0.00 | 0.24 | 0.15 |
| 69 | IK | 13 | 2.10 | 2.043 | 31.6 | 0.0 | 7.0 | 1.1 | 0.0 | 0.0 | 0.1 | 2.3 | 0.0 | 2.26 | 85.7 | 0.011 | 0.011 | 7.4 | 0.383 | 0.10 | 0.06 | 0.01 | 0.00 | 0.24 | 0.14 |
| 70 | IK | 13 | 1.80 | 2.043 | 31.6 | 0.0 | 7.1 | 1.0 | 0.0 | 0.0 | 0.1 | 2.3 | 0.0 | 2.26 | 85.7 | 0.011 | 0.011 | 7.4 | 0.383 | 0.10 | 0.06 | 0.01 | 0.00 | 0.25 | 0.13 |
| 71 | IK | 13 | 1.50 | 2.043 | 31.6 | 0.0 | 7.1 | 1.0 | 0.0 | 0.0 | 0.1 | 2.3 | 0.0 | 2.26 | 85.7 | 0.011 | 0.011 | 7.4 | 0.383 | 0.10 | 0.06 | 0.01 | 0.00 | 0.25 | 0.13 |

EXPANDED CAPSULE SUMMARY FOR Headwater

| IOR | REACH | DIST | FLOW | TEMP | SALN | DO | EBOD1 | EBOD2 | ORG-N | NH3 | CHLA | DISP | DEPTH | WIDTH | ADVEC VELO | MEAN VELO | DO SAT | REAER RATE | BOD1 DECA | BOD1 SETT | BOD2 DECA | BOD2 SETT | NH3 DECA | SOD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | km | m³/s | deg C | ppt | mg/L | mg/L | mg/L | mg/L | mg/L | µg/L | m²/s | m | m | m/s | m/s | mg/L | 1/da | 1/da | 1/da | 1/da | 1/da | 1/da | g/m²/d |
| 72 | IK | 13 | 1.20 | 2.043 | 31.6 | 0.0 | 7.2 | 0.9 | 0.0 | 0.0 | 0.1 | 2.3 | 0.0 | 2.26 | 85.7 | 0.011 | 0.011 | 7.4 | 0.383 | 0.10 | 0.06 | 0.01 | 0.00 | 0.25 | 0.12 |
| 73 | IK | 13 | 0.90 | 2.043 | 31.6 | 0.0 | 7.2 | 0.9 | 0.0 | 0.0 | 0.1 | 2.3 | 0.0 | 2.26 | 85.7 | 0.011 | 0.011 | 7.4 | 0.383 | 0.10 | 0.06 | 0.01 | 0.00 | 0.25 | 0.12 |

| | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 74 | IK 13 | 0.60 | 2.043 | 31.6 | 0.0 | 7.2 | 0.8 | 0.0 | 0.0 | 0.1 | 2.3 | 0.0 | 2.26 | 85.7 | 0.011 | 0.011 | 7.4 | 0.383 | 0.10 | 0.06 | 0.01 | 0.00 | 0.25 | 0.11 |
| 75 | IK 13 | 0.30 | 2.043 | 31.6 | 0.0 | 7.3 | 0.8 | 0.0 | 0.0 | 0.1 | 2.3 | 0.0 | 2.26 | 85.7 | 0.011 | 0.011 | 7.4 | 0.383 | 0.10 | 0.06 | 0.01 | 0.00 | 0.25 | 0.10 |
| 76 | IK 13 | 0.00 | 2.043 | 31.6 | 0.0 | 7.3 | 0.7 | 0.0 | 0.0 | 0.0 | 2.3 | 0.0 | 2.26 | 85.7 | 0.011 | 0.011 | 7.4 | 0.383 | 0.10 | 0.06 | 0.01 | 0.00 | 0.25 | 0.10 |

SPECIAL REPORT: Headwater

WATER QUALITY CONSTITUENT VALUES

| ELEM NO. | ENDING km | TEMP deg C | SALN ppt | CM-I * | CM-II * | DO mg/L | BOD1 mg/L | BOD2 mg/L | EBOD#1 mg/L | EBOD#2 mg/L | ORG-N mg/L | NH3-N mg/L | NO3-N µg/L | TOTN ** | PHOS #/100mL | CHL A * | MACRO | COLI | NCM |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 22.700 | 32.10 | 0.0 | 0.0 | 0.0 | 6.82 | 0.02 | 0.00 | 0.02 | 0.00 | 0.00 | 0.01 | 0.00 | 0.01 | 0.07 | 1.5 | 0.0 | 0. | 0.00 |
| 2 | 22.400 | 32.10 | 0.0 | 0.0 | 0.0 | 6.86 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.07 | 1.5 | 0.0 | 0. | 0.00 |
| 3 | 22.100 | 32.10 | 0.0 | 0.0 | 0.0 | 6.86 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.07 | 1.5 | 0.0 | 0. | 0.00 |
| 4 | 21.800 | 32.10 | 0.0 | 0.0 | 0.0 | 6.86 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.07 | 1.5 | 0.0 | 0. | 0.00 |
| 5 | 21.500 | 32.10 | 0.0 | 0.0 | 0.0 | 6.86 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.07 | 1.5 | 0.0 | 0. | 0.00 |
| 6 | 21.300 | 32.10 | 0.0 | 0.0 | 0.0 | 6.86 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.07 | 1.5 | 0.0 | 0. | 0.00 |
| 7 | 21.100 | 32.10 | 0.0 | 0.0 | 0.0 | 6.86 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.07 | 1.5 | 0.0 | 0. | 0.00 |
| 8 | 20.900 | 32.10 | 0.0 | 0.0 | 0.0 | 6.86 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.07 | 1.5 | 0.0 | 0. | 0.00 |
| 9 | 20.700 | 32.10 | 0.0 | 0.0 | 0.0 | 6.86 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.07 | 1.5 | 0.0 | 0. | 0.00 |
| 10 | 20.500 | 32.10 | 0.0 | 0.0 | 0.0 | 6.86 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.07 | 1.5 | 0.0 | 0. | 0.00 |
| 11 | 20.200 | 32.02 | 0.0 | 0.0 | 0.0 | 6.99 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.07 | 1.4 | 0.0 | 0. | 0.00 |
| 12 | 19.900 | 31.94 | 0.0 | 0.0 | 0.0 | 6.97 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.07 | 1.2 | 0.0 | 0. | 0.00 |
| 13 | 19.600 | 31.86 | 0.0 | 0.0 | 0.0 | 6.95 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.07 | 1.1 | 0.0 | 0. | 0.00 |
| 14 | 19.300 | 31.78 | 0.0 | 0.0 | 0.0 | 6.93 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.07 | 0.9 | 0.0 | 0. | 0.00 |
| 15 | 19.000 | 31.70 | 0.0 | 0.0 | 0.0 | 6.91 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.07 | 0.8 | 0.0 | 0. | 0.00 |
| 16 | 18.695 | 31.73 | 0.0 | 0.0 | 0.0 | 5.67 | 1.47 | 0.00 | 1.47 | 0.00 | 0.00 | 0.33 | 0.10 | 0.44 | 0.07 | 1.5 | 0.0 | 0. | 0.00 |
| 17 | 18.390 | 31.75 | 0.0 | 0.0 | 0.0 | 5.71 | 1.48 | 0.00 | 1.48 | 0.00 | 0.00 | 0.34 | 0.17 | 0.51 | 0.07 | 2.2 | 0.0 | 0. | 0.00 |
| 18 | 18.085 | 31.77 | 0.0 | 0.0 | 0.0 | 5.75 | 1.48 | 0.00 | 1.48 | 0.00 | 0.00 | 0.34 | 0.20 | 0.53 | 0.07 | 2.9 | 0.0 | 0. | 0.00 |
| 19 | 17.780 | 31.80 | 0.0 | 0.0 | 0.0 | 5.79 | 1.48 | 0.00 | 1.48 | 0.00 | 0.00 | 0.34 | 0.20 | 0.54 | 0.07 | 3.6 | 0.0 | 0. | 0.00 |
| 20 | 17.490 | 31.80 | 0.0 | 0.0 | 0.0 | 6.04 | 1.43 | 0.00 | 1.43 | 0.00 | 0.00 | 0.31 | 0.23 | 0.54 | 0.07 | 3.6 | 0.0 | 0. | 0.00 |
| 21 | 17.200 | 31.80 | 0.0 | 0.0 | 0.0 | 6.24 | 1.38 | 0.00 | 1.38 | 0.00 | 0.00 | 0.28 | 0.25 | 0.53 | 0.07 | 3.6 | 0.0 | 0. | 0.00 |
| 22 | 16.910 | 31.80 | 0.0 | 0.0 | 0.0 | 6.40 | 1.33 | 0.00 | 1.33 | 0.00 | 0.00 | 0.26 | 0.27 | 0.52 | 0.07 | 3.6 | 0.0 | 0. | 0.00 |
| 23 | 16.620 | 31.80 | 0.0 | 0.0 | 0.0 | 6.54 | 1.29 | 0.00 | 1.29 | 0.00 | 0.00 | 0.24 | 0.28 | 0.52 | 0.07 | 3.6 | 0.0 | 0. | 0.00 |
| 24 | 16.330 | 31.80 | 0.0 | 0.0 | 0.0 | 6.65 | 1.25 | 0.00 | 1.25 | 0.00 | 0.00 | 0.22 | 0.29 | 0.51 | 0.07 | 3.6 | 0.0 | 0. | 0.00 |
| 25 | 16.040 | 31.80 | 0.0 | 0.0 | 0.0 | 6.74 | 1.21 | 0.00 | 1.21 | 0.00 | 0.00 | 0.20 | 0.31 | 0.51 | 0.07 | 3.6 | 0.0 | 0. | 0.00 |
| 26 | 15.750 | 31.80 | 0.0 | 0.0 | 0.0 | 6.82 | 1.18 | 0.00 | 1.18 | 0.00 | 0.00 | 0.19 | 0.31 | 0.51 | 0.07 | 3.6 | 0.0 | 0. | 0.00 |
| 27 | 15.460 | 31.80 | 0.0 | 0.0 | 0.0 | 6.88 | 1.15 | 0.00 | 1.15 | 0.00 | 0.00 | 0.18 | 0.32 | 0.50 | 0.07 | 3.6 | 0.0 | 0. | 0.00 |
| 28 | 15.170 | 31.80 | 0.0 | 0.0 | 0.0 | 6.94 | 1.13 | 0.00 | 1.13 | 0.00 | 0.00 | 0.17 | 0.33 | 0.50 | 0.07 | 3.6 | 0.0 | 0. | 0.00 |
| 29 | 14.880 | 31.80 | 0.0 | 0.0 | 0.0 | 6.98 | 1.11 | 0.00 | 1.11 | 0.00 | 0.00 | 0.16 | 0.33 | 0.49 | 0.07 | 3.6 | 0.0 | 0. | 0.00 |
| 30 | 14.590 | 31.80 | 0.0 | 0.0 | 0.0 | 7.02 | 1.09 | 0.00 | 1.09 | 0.00 | 0.00 | 0.15 | 0.34 | 0.49 | 0.07 | 3.6 | 0.0 | 0. | 0.00 |
| 31 | 14.300 | 31.80 | 0.0 | 0.0 | 0.0 | 7.05 | 1.07 | 0.00 | 1.07 | 0.00 | 0.00 | 0.14 | 0.34 | 0.49 | 0.07 | 3.6 | 0.0 | 0. | 0.00 |
| 32 | 14.010 | 31.80 | 0.0 | 0.0 | 0.0 | 7.08 | 1.05 | 0.00 | 1.05 | 0.00 | 0.00 | 0.14 | 0.34 | 0.48 | 0.07 | 3.6 | 0.0 | 0. | 0.00 |
| 33 | 13.720 | 31.80 | 0.0 | 0.0 | 0.0 | 7.11 | 1.03 | 0.00 | 1.03 | 0.00 | 0.00 | 0.13 | 0.35 | 0.48 | 0.07 | 3.6 | 0.0 | 0. | 0.00 |
| 34 | 13.430 | 31.80 | 0.0 | 0.0 | 0.0 | 7.13 | 1.02 | 0.00 | 1.02 | 0.00 | 0.00 | 0.13 | 0.35 | 0.47 | 0.07 | 3.6 | 0.0 | 0. | 0.00 |
| 35 | 13.140 | 31.40 | 0.0 | 0.0 | 0.0 | 6.56 | 0.96 | 0.00 | 0.96 | 0.00 | 0.00 | 0.12 | 0.35 | 0.47 | 0.07 | 3.0 | 0.0 | 0. | 0.00 |
| 36 | 12.850 | 31.00 | 0.0 | 0.0 | 0.0 | 6.08 | 0.91 | 0.00 | 0.91 | 0.00 | 0.00 | 0.11 | 0.36 | 0.47 | 0.07 | 2.5 | 0.0 | 0. | 0.00 |
| 37 | 12.560 | 30.60 | 0.0 | 0.0 | 0.0 | 5.67 | 0.86 | 0.00 | 0.86 | 0.00 | 0.00 | 0.10 | 0.36 | 0.46 | 0.06 | 1.9 | 0.0 | 0. | 0.00 |
| 38 | 12.270 | 30.20 | 0.0 | 0.0 | 0.0 | 5.32 | 0.81 | 0.00 | 0.81 | 0.00 | 0.00 | 0.09 | 0.37 | 0.46 | 0.06 | 1.4 | 0.0 | 0. | 0.00 |
| 39 | 11.980 | 29.80 | 0.0 | 0.0 | 0.0 | 5.03 | 0.77 | 0.00 | 0.77 | 0.00 | 0.00 | 0.09 | 0.37 | 0.46 | 0.06 | 0.8 | 0.0 | 0. | 0.00 |
| 40 | 11.585 | 30.07 | 0.0 | 0.0 | 0.0 | 5.37 | 1.21 | 0.00 | 1.21 | 0.00 | 0.00 | 0.16 | 0.37 | 0.53 | 0.06 | 1.6 | 0.0 | 0. | 0.00 |
| 41 | 11.190 | 30.35 | 0.0 | 0.0 | 0.0 | 5.61 | 1.53 | 0.00 | 1.53 | 0.00 | 0.00 | 0.21 | 0.37 | 0.58 | 0.06 | 2.5 | 0.0 | 0. | 0.00 |
| 42 | 10.795 | 30.62 | 0.0 | 0.0 | 0.0 | 5.79 | 1.76 | 0.00 | 1.76 | 0.00 | 0.00 | 0.24 | 0.37 | 0.62 | 0.06 | 3.3 | 0.0 | 0. | 0.00 |
| 43 | 10.400 | 30.90 | 0.0 | 0.0 | 0.0 | 5.95 | 1.94 | 0.00 | 1.94 | 0.00 | 0.00 | 0.27 | 0.38 | 0.64 | 0.06 | 4.2 | 0.0 | 0. | 0.00 |

| | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 44 | 10.100 | 30.89 | 0.0 | 0.0 | 0.0 | 6.04 | 1.89 | 0.00 | 1.89 | 0.00 | 0.00 | 0.26 | 0.38 | 0.64 | 0.06 | 4.5 | 0.0 | 0. | 0.00 |
| 45 | 9.800 | 30.88 | 0.0 | 0.0 | 0.0 | 6.12 | 1.83 | 0.00 | 1.83 | 0.00 | 0.00 | 0.25 | 0.39 | 0.64 | 0.06 | 4.8 | 0.0 | 0. | 0.00 |
| 46 | 9.500 | 30.87 | 0.0 | 0.0 | 0.0 | 6.21 | 1.78 | 0.00 | 1.78 | 0.00 | 0.00 | 0.24 | 0.40 | 0.63 | 0.06 | 5.1 | 0.0 | 0. | 0.00 |
| 47 | 9.200 | 30.86 | 0.0 | 0.0 | 0.0 | 6.29 | 1.73 | 0.00 | 1.73 | 0.00 | 0.00 | 0.23 | 0.40 | 0.63 | 0.06 | 5.4 | 0.0 | 0. | 0.00 |
| 48 | 8.900 | 30.85 | 0.0 | 0.0 | 0.0 | 6.37 | 1.68 | 0.00 | 1.68 | 0.00 | 0.00 | 0.22 | 0.41 | 0.63 | 0.06 | 5.8 | 0.0 | 0. | 0.00 |
| 49 | 8.600 | 30.84 | 0.0 | 0.0 | 0.0 | 6.45 | 1.64 | 0.00 | 1.64 | 0.00 | 0.00 | 0.21 | 0.41 | 0.62 | 0.06 | 6.1 | 0.0 | 0. | 0.00 |
| 50 | 8.300 | 30.83 | 0.0 | 0.0 | 0.0 | 6.53 | 1.59 | 0.00 | 1.59 | 0.00 | 0.00 | 0.21 | 0.41 | 0.62 | 0.06 | 6.4 | 0.0 | 0. | 0.00 |
| 51 | 8.000 | 30.82 | 0.0 | 0.0 | 0.0 | 6.61 | 1.55 | 0.00 | 1.55 | 0.00 | 0.00 | 0.20 | 0.42 | 0.61 | 0.06 | 6.7 | 0.0 | 0. | 0.00 |
| 52 | 7.700 | 30.81 | 0.0 | 0.0 | 0.0 | 6.69 | 1.50 | 0.00 | 1.50 | 0.00 | 0.00 | 0.19 | 0.42 | 0.61 | 0.06 | 7.0 | 0.0 | 0. | 0.00 |
| 53 | 7.400 | 30.80 | 0.0 | 0.0 | 0.0 | 6.76 | 1.46 | 0.00 | 1.46 | 0.00 | 0.00 | 0.19 | 0.42 | 0.61 | 0.06 | 7.3 | 0.0 | 0. | 0.00 |
| 54 | 7.010 | 30.80 | 0.0 | 0.0 | 0.0 | 6.73 | 1.34 | 0.00 | 1.34 | 0.00 | 0.00 | 0.16 | 0.42 | 0.59 | 0.06 | 7.3 | 0.0 | 0. | 0.00 |
| 55 | 6.620 | 30.80 | 0.0 | 0.0 | 0.0 | 6.71 | 1.23 | 0.00 | 1.23 | 0.00 | 0.00 | 0.15 | 0.43 | 0.57 | 0.06 | 7.3 | 0.0 | 0. | 0.00 |
| 56 | 6.230 | 30.80 | 0.0 | 0.0 | 0.0 | 6.71 | 1.13 | 0.00 | 1.13 | 0.00 | 0.00 | 0.13 | 0.43 | 0.55 | 0.06 | 7.3 | 0.0 | 0. | 0.00 |
| 57 | 5.840 | 30.80 | 0.0 | 0.0 | 0.0 | 6.71 | 1.04 | 0.00 | 1.04 | 0.00 | 0.00 | 0.11 | 0.42 | 0.54 | 0.06 | 7.3 | 0.0 | 0. | 0.00 |
| 58 | 5.450 | 30.80 | 0.0 | 0.0 | 0.0 | 6.72 | 0.95 | 0.00 | 0.95 | 0.00 | 0.00 | 0.10 | 0.42 | 0.52 | 0.06 | 7.3 | 0.0 | 0. | 0.00 |
| 59 | 5.200 | 30.80 | 0.0 | 0.0 | 0.0 | 6.79 | 0.90 | 0.00 | 0.90 | 0.00 | 0.00 | 0.09 | 0.42 | 0.51 | 0.06 | 7.3 | 0.0 | 0. | 0.00 |
| 60 | 4.950 | 30.80 | 0.0 | 0.0 | 0.0 | 6.86 | 0.85 | 0.00 | 0.85 | 0.00 | 0.00 | 0.09 | 0.41 | 0.50 | 0.06 | 7.3 | 0.0 | 0. | 0.00 |
| 61 | 4.700 | 30.80 | 0.0 | 0.0 | 0.0 | 6.93 | 0.81 | 0.00 | 0.81 | 0.00 | 0.00 | 0.08 | 0.41 | 0.49 | 0.06 | 7.3 | 0.0 | 0. | 0.00 |
| 62 | 4.375 | 30.88 | 0.0 | 0.0 | 0.0 | 6.94 | 0.95 | 0.00 | 0.95 | 0.00 | 0.00 | 0.09 | 0.39 | 0.48 | 0.06 | 7.9 | 0.0 | 0. | 0.00 |
| 63 | 4.050 | 30.95 | 0.0 | 0.0 | 0.0 | 6.95 | 1.07 | 0.00 | 1.07 | 0.00 | 0.00 | 0.09 | 0.37 | 0.47 | 0.06 | 8.6 | 0.0 | 0. | 0.00 |
| 64 | 3.725 | 31.02 | 0.0 | 0.0 | 0.0 | 6.98 | 1.18 | 0.00 | 1.18 | 0.00 | 0.00 | 0.10 | 0.36 | 0.45 | 0.06 | 9.2 | 0.0 | 0. | 0.00 |
| 65 | 3.400 | 31.10 | 0.0 | 0.0 | 0.0 | 7.01 | 1.27 | 0.00 | 1.27 | 0.00 | 0.00 | 0.10 | 0.34 | 0.44 | 0.06 | 9.8 | 0.0 | 0. | 0.00 |
| 66 | 3.050 | 31.35 | 0.0 | 0.0 | 0.0 | 6.99 | 1.24 | 0.00 | 1.24 | 0.00 | 0.00 | 0.10 | 0.34 | 0.44 | 0.04 | 6.1 | 0.0 | 0. | 0.00 |
| 67 | 2.700 | 31.60 | 0.0 | 0.0 | 0.0 | 6.92 | 1.19 | 0.00 | 1.19 | 0.00 | 0.00 | 0.10 | 0.34 | 0.44 | 0.03 | 2.3 | 0.0 | 0. | 0.00 |
| 68 | 2.400 | 31.60 | 0.0 | 0.0 | 0.0 | 6.97 | 1.13 | 0.00 | 1.13 | 0.00 | 0.00 | 0.09 | 0.35 | 0.43 | 0.03 | 2.3 | 0.0 | 0. | 0.00 |
| 69 | 2.100 | 31.60 | 0.0 | 0.0 | 0.0 | 7.02 | 1.07 | 0.00 | 1.07 | 0.00 | 0.00 | 0.08 | 0.35 | 0.43 | 0.03 | 2.3 | 0.0 | 0. | 0.00 |
| 70 | 1.800 | 31.60 | 0.0 | 0.0 | 0.0 | 7.07 | 1.02 | 0.00 | 1.02 | 0.00 | 0.00 | 0.08 | 0.35 | 0.43 | 0.03 | 2.3 | 0.0 | 0. | 0.00 |
| 71 | 1.500 | 31.60 | 0.0 | 0.0 | 0.0 | 7.11 | 0.97 | 0.00 | 0.97 | 0.00 | 0.00 | 0.07 | 0.35 | 0.42 | 0.03 | 2.3 | 0.0 | 0. | 0.00 |
| 72 | 1.200 | 31.60 | 0.0 | 0.0 | 0.0 | 7.15 | 0.92 | 0.00 | 0.92 | 0.00 | 0.00 | 0.06 | 0.36 | 0.42 | 0.03 | 2.3 | 0.0 | 0. | 0.00 |
| 73 | 0.900 | 31.60 | 0.0 | 0.0 | 0.0 | 7.19 | 0.87 | 0.00 | 0.87 | 0.00 | 0.00 | 0.06 | 0.36 | 0.42 | 0.03 | 2.3 | 0.0 | 0. | 0.00 |
| 74 | 0.600 | 31.60 | 0.0 | 0.0 | 0.0 | 7.23 | 0.83 | 0.00 | 0.83 | 0.00 | 0.00 | 0.06 | 0.36 | 0.41 | 0.03 | 2.3 | 0.0 | 0. | 0.00 |
| 75 | 0.300 | 31.60 | 0.0 | 0.0 | 0.0 | 7.26 | 0.79 | 0.00 | 0.79 | 0.00 | 0.00 | 0.05 | 0.36 | 0.41 | 0.03 | 2.3 | 0.0 | 0. | 0.00 |
| 76 | 0.000 | 31.60 | 0.0 | 0.0 | 0.0 | 7.28 | 0.75 | 0.00 | 0.75 | 0.00 | 0.00 | 0.05 | 0.36 | 0.41 | 0.03 | 2.3 | 0.0 | 0. | 0.00 |

SPECIAL REPORT: Headwater

BIOLOGICAL AND PHYSICAL COEFFICIENTS

| ELEM NO. | ENDING DIST km | SAT D.O. mg/L | REAER RATE 1/da | BOD#1 DECAY 1/da | BOD#1 SETT 1/da | ABOD#1 DECAY 1/da | BOD#1 DECAY 1/da | BOD#1 SETT * | BOD#2 DECAY * | ABOD#2 SOD 1/da | FULL SOD 1/da | CORR DECAY * | ORG-N SETT ** | ORG-N DECAY ** | NH3 SRCE 1/da | NH3 RATE 1/da | DENIT SRCE 1/da | PO4 PROD | ALG PROD | MAC DECAY | COLI DECAY | NCM DECAY | NCM SETT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 22.700 | 7.29 | 0.39 | 0.10 | 0.06 | 0.00 | 0.01 | 0.00 | 0.00 | 0.67 | 0.67 | 0.06 | 0.01 | 0.25 | 0.00 | 0.00 | 0.00 | 0.13 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 2 | 22.400 | 7.29 | 0.39 | 0.10 | 0.06 | 0.00 | 0.01 | 0.00 | 0.00 | 0.66 | 0.66 | 0.06 | 0.01 | 0.25 | 0.00 | 0.00 | 0.00 | 0.13 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 3 | 22.100 | 7.29 | 0.39 | 0.10 | 0.06 | 0.00 | 0.01 | 0.00 | 0.00 | 0.66 | 0.66 | 0.06 | 0.01 | 0.25 | 0.00 | 0.00 | 0.00 | 0.13 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 4 | 21.800 | 7.29 | 0.39 | 0.10 | 0.06 | 0.00 | 0.01 | 0.00 | 0.00 | 0.66 | 0.66 | 0.06 | 0.01 | 0.25 | 0.00 | 0.00 | 0.00 | 0.13 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 5 | 21.500 | 7.29 | 0.39 | 0.10 | 0.06 | 0.00 | 0.01 | 0.00 | 0.00 | 0.66 | 0.66 | 0.06 | 0.01 | 0.25 | 0.00 | 0.00 | 0.00 | 0.13 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 6 | 21.300 | 7.29 | 0.39 | 0.10 | 0.06 | 0.00 | 0.01 | 0.00 | 0.00 | 0.66 | 0.66 | 0.06 | 0.01 | 0.25 | 0.00 | 0.00 | 0.00 | 0.13 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 7 | 21.100 | 7.29 | 0.39 | 0.10 | 0.06 | 0.00 | 0.01 | 0.00 | 0.00 | 0.66 | 0.66 | 0.06 | 0.01 | 0.25 | 0.00 | 0.00 | 0.00 | 0.13 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 8 | 20.900 | 7.29 | 0.39 | 0.10 | 0.06 | 0.00 | 0.01 | 0.00 | 0.00 | 0.66 | 0.66 | 0.06 | 0.01 | 0.25 | 0.00 | 0.00 | 0.00 | 0.13 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 9 | 20.700 | 7.29 | 0.39 | 0.10 | 0.06 | 0.00 | 0.01 | 0.00 | 0.00 | 0.66 | 0.66 | 0.06 | 0.01 | 0.25 | 0.00 | 0.00 | 0.00 | 0.13 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 10 | 20.500 | 7.29 | 0.39 | 0.10 | 0.06 | 0.00 | 0.01 | 0.00 | 0.00 | 0.66 | 0.66 | 0.06 | 0.01 | 0.25 | 0.00 | 0.00 | 0.00 | 0.13 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 11 | 20.200 | 7.30 | 0.39 | 0.10 | 0.06 | 0.00 | 0.01 | 0.00 | 0.00 | 0.53 | 0.53 | 0.06 | 0.01 | 0.25 | 0.00 | 0.00 | 0.00 | 0.12 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 12 | 19.900 | 7.31 | 0.39 | 0.10 | 0.06 | 0.00 | 0.01 | 0.00 | 0.00 | 0.53 | 0.53 | 0.06 | 0.01 | 0.25 | 0.00 | 0.00 | 0.00 | 0.11 | 0.00 | 0.00 | 0.00 | 0.00 | |

| | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 13 | 19.600 | 7.32 | 0.39 | 0.10 | 0.06 | 0.00 | 0.01 | 0.00 | 0.00 | 0.53 | 0.53 | 0.06 | 0.01 | 0.25 | 0.00 | 0.00 | 0.00 | 0.09 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14 | 19.300 | 7.33 | 0.39 | 0.10 | 0.06 | 0.00 | 0.01 | 0.00 | 0.00 | 0.52 | 0.52 | 0.06 | 0.01 | 0.25 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15 | 19.000 | 7.34 | 0.39 | 0.10 | 0.06 | 0.00 | 0.01 | 0.00 | 0.00 | 0.52 | 0.52 | 0.06 | 0.01 | 0.25 | 0.00 | 0.00 | 0.00 | 0.07 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16 | 18.695 | 7.34 | 0.41 | 0.10 | 0.06 | 0.00 | 0.01 | 0.00 | 0.00 | 0.72 | 0.72 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.13 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17 | 18.390 | 7.34 | 0.41 | 0.10 | 0.06 | 0.00 | 0.01 | 0.00 | 0.00 | 0.72 | 0.72 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.19 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18 | 18.085 | 7.33 | 0.41 | 0.10 | 0.06 | 0.00 | 0.01 | 0.00 | 0.00 | 0.72 | 0.72 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19 | 17.780 | 7.33 | 0.41 | 0.10 | 0.06 | 0.00 | 0.01 | 0.00 | 0.00 | 0.72 | 0.72 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.31 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20 | 17.490 | 7.33 | 0.45 | 0.10 | 0.07 | 0.00 | 0.01 | 0.00 | 0.00 | 0.32 | 0.32 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.31 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21 | 17.200 | 7.33 | 0.45 | 0.10 | 0.07 | 0.00 | 0.01 | 0.00 | 0.00 | 0.31 | 0.31 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.31 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22 | 16.910 | 7.33 | 0.45 | 0.10 | 0.07 | 0.00 | 0.01 | 0.00 | 0.00 | 0.30 | 0.30 | 0.06 | 0.01 | 0.25 | 0.00 | 0.00 | 0.00 | 0.31 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23 | 16.620 | 7.33 | 0.45 | 0.10 | 0.07 | 0.00 | 0.01 | 0.00 | 0.00 | 0.30 | 0.30 | 0.06 | 0.01 | 0.25 | 0.00 | 0.00 | 0.00 | 0.31 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24 | 16.330 | 7.33 | 0.45 | 0.10 | 0.07 | 0.00 | 0.01 | 0.00 | 0.00 | 0.29 | 0.29 | 0.06 | 0.01 | 0.25 | 0.00 | 0.00 | 0.00 | 0.31 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25 | 16.040 | 7.33 | 0.45 | 0.10 | 0.07 | 0.00 | 0.01 | 0.00 | 0.00 | 0.29 | 0.29 | 0.06 | 0.01 | 0.25 | 0.00 | 0.00 | 0.00 | 0.31 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26 | 15.750 | 7.33 | 0.45 | 0.10 | 0.07 | 0.00 | 0.01 | 0.00 | 0.00 | 0.28 | 0.28 | 0.06 | 0.01 | 0.25 | 0.00 | 0.00 | 0.00 | 0.31 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27 | 15.460 | 7.33 | 0.45 | 0.10 | 0.07 | 0.00 | 0.01 | 0.00 | 0.00 | 0.28 | 0.28 | 0.06 | 0.01 | 0.25 | 0.00 | 0.00 | 0.00 | 0.31 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28 | 15.170 | 7.33 | 0.45 | 0.10 | 0.07 | 0.00 | 0.01 | 0.00 | 0.00 | 0.28 | 0.28 | 0.06 | 0.01 | 0.25 | 0.00 | 0.00 | 0.00 | 0.31 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29 | 14.880 | 7.33 | 0.45 | 0.10 | 0.07 | 0.00 | 0.01 | 0.00 | 0.00 | 0.27 | 0.27 | 0.06 | 0.01 | 0.25 | 0.00 | 0.00 | 0.00 | 0.31 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30 | 14.590 | 7.33 | 0.45 | 0.10 | 0.07 | 0.00 | 0.01 | 0.00 | 0.00 | 0.27 | 0.27 | 0.06 | 0.01 | 0.25 | 0.00 | 0.00 | 0.00 | 0.31 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31 | 14.300 | 7.33 | 0.45 | 0.10 | 0.07 | 0.00 | 0.01 | 0.00 | 0.00 | 0.27 | 0.27 | 0.06 | 0.01 | 0.25 | 0.00 | 0.00 | 0.00 | 0.31 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32 | 14.010 | 7.33 | 0.45 | 0.10 | 0.07 | 0.00 | 0.01 | 0.00 | 0.00 | 0.27 | 0.27 | 0.06 | 0.01 | 0.25 | 0.00 | 0.00 | 0.00 | 0.31 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33 | 13.720 | 7.33 | 0.45 | 0.10 | 0.07 | 0.00 | 0.01 | 0.00 | 0.00 | 0.26 | 0.26 | 0.06 | 0.01 | 0.25 | 0.00 | 0.00 | 0.00 | 0.31 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34 | 13.430 | 7.33 | 0.45 | 0.10 | 0.07 | 0.00 | 0.01 | 0.00 | 0.00 | 0.26 | 0.26 | 0.06 | 0.01 | 0.25 | 0.00 | 0.00 | 0.00 | 0.31 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35 | 13.140 | 7.38 | 0.45 | 0.10 | 0.07 | 0.00 | 0.01 | 0.00 | 0.00 | 4.12 | 4.12 | 0.06 | 0.01 | 0.24 | 0.00 | 0.00 | 0.00 | 0.26 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36 | 12.850 | 7.43 | 0.45 | 0.10 | 0.07 | 0.00 | 0.01 | 0.00 | 0.00 | 4.02 | 4.02 | 0.06 | 0.01 | 0.23 | 0.00 | 0.00 | 0.00 | 0.21 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37 | 12.560 | 7.48 | 0.45 | 0.10 | 0.07 | 0.00 | 0.01 | 0.00 | 0.00 | 3.91 | 3.91 | 0.06 | 0.01 | 0.22 | 0.00 | 0.00 | 0.00 | 0.16 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38 | 12.270 | 7.53 | 0.44 | 0.10 | 0.07 | 0.00 | 0.01 | 0.00 | 0.00 | 3.81 | 3.81 | 0.06 | 0.01 | 0.21 | 0.00 | 0.00 | 0.00 | 0.11 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39 | 11.980 | 7.58 | 0.44 | 0.09 | 0.07 | 0.00 | 0.01 | 0.00 | 0.00 | 3.71 | 3.71 | 0.06 | 0.01 | 0.20 | 0.00 | 0.00 | 0.00 | 0.06 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40 | 11.585 | 7.55 | 0.22 | 0.10 | 0.03 | 0.00 | 0.01 | 0.00 | 0.00 | 0.51 | 0.51 | 0.06 | 0.00 | 0.21 | 0.00 | 0.00 | 0.00 | 0.13 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41 | 11.190 | 7.51 | 0.23 | 0.10 | 0.03 | 0.00 | 0.01 | 0.00 | 0.00 | 0.56 | 0.56 | 0.06 | 0.00 | 0.21 | 0.00 | 0.00 | 0.00 | 0.20 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42 | 10.795 | 7.48 | 0.23 | 0.10 | 0.03 | 0.00 | 0.01 | 0.00 | 0.00 | 0.60 | 0.60 | 0.06 | 0.00 | 0.22 | 0.00 | 0.00 | 0.00 | 0.27 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43 | 10.400 | 7.44 | 0.23 | 0.10 | 0.03 | 0.00 | 0.01 | 0.00 | 0.00 | 0.63 | 0.63 | 0.06 | 0.00 | 0.23 | 0.00 | 0.00 | 0.00 | 0.35 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44 | 10.100 | 7.44 | 0.52 | 0.10 | 0.08 | 0.00 | 0.01 | 0.00 | 0.00 | 0.62 | 0.62 | 0.06 | 0.01 | 0.23 | 0.00 | 0.00 | 0.00 | 0.37 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45 | 9.800 | 7.45 | 0.52 | 0.10 | 0.08 | 0.00 | 0.01 | 0.00 | 0.00 | 0.61 | 0.61 | 0.06 | 0.01 | 0.23 | 0.00 | 0.00 | 0.00 | 0.40 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46 | 9.500 | 7.45 | 0.52 | 0.10 | 0.08 | 0.00 | 0.01 | 0.00 | 0.00 | 0.61 | 0.61 | 0.06 | 0.01 | 0.23 | 0.00 | 0.00 | 0.00 | 0.42 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47 | 9.200 | 7.45 | 0.52 | 0.10 | 0.08 | 0.00 | 0.01 | 0.00 | 0.00 | 0.60 | 0.60 | 0.06 | 0.01 | 0.23 | 0.00 | 0.00 | 0.00 | 0.45 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48 | 8.900 | 7.45 | 0.52 | 0.10 | 0.08 | 0.00 | 0.01 | 0.00 | 0.00 | 0.59 | 0.59 | 0.06 | 0.01 | 0.23 | 0.00 | 0.00 | 0.00 | 0.47 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49 | 8.600 | 7.45 | 0.52 | 0.10 | 0.08 | 0.00 | 0.01 | 0.00 | 0.00 | 0.59 | 0.59 | 0.06 | 0.01 | 0.23 | 0.00 | 0.00 | 0.00 | 0.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50 | 8.300 | 7.45 | 0.52 | 0.10 | 0.08 | 0.00 | 0.01 | 0.00 | 0.00 | 0.58 | 0.58 | 0.06 | 0.01 | 0.23 | 0.00 | 0.00 | 0.00 | 0.52 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51 | 8.000 | 7.45 | 0.52 | 0.10 | 0.08 | 0.00 | 0.01 | 0.00 | 0.00 | 0.58 | 0.58 | 0.06 | 0.01 | 0.23 | 0.00 | 0.00 | 0.00 | 0.55 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52 | 7.700 | 7.45 | 0.52 | 0.10 | 0.08 | 0.00 | 0.01 | 0.00 | 0.00 | 0.57 | 0.57 | 0.06 | 0.01 | 0.23 | 0.00 | 0.00 | 0.00 | 0.57 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53 | 7.400 | 7.46 | 0.52 | 0.10 | 0.08 | 0.00 | 0.01 | 0.00 | 0.00 | 0.56 | 0.56 | 0.06 | 0.01 | 0.23 | 0.00 | 0.00 | 0.00 | 0.60 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54 | 7.010 | 7.46 | 0.38 | 0.10 | 0.06 | 0.00 | 0.01 | 0.00 | 0.00 | 1.79 | 1.79 | 0.06 | 0.01 | 0.23 | 0.00 | 0.00 | 0.00 | 0.60 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55 | 6.620 | 7.46 | 0.38 | 0.10 | 0.06 | 0.00 | 0.01 | 0.00 | 0.00 | 1.78 | 1.78 | 0.06 | 0.01 | 0.23 | 0.00 | 0.00 | 0.00 | 0.60 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56 | 6.230 | 7.46 | 0.38 | 0.10 | 0.06 | 0.00 | 0.01 | 0.00 | 0.00 | 1.76 | 1.76 | 0.06 | 0.01 | 0.23 | 0.00 | 0.00 | 0.00 | 0.60 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57 | 5.840 | 7.46 | 0.38 | 0.10 | 0.06 | 0.00 | 0.01 | 0.00 | 0.00 | 1.75 | 1.75 | 0.06 | 0.01 | 0.23 | 0.00 | 0.00 | 0.00 | 0.60 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58 | 5.450 | 7.46 | 0.38 | 0.10 | 0.06 | 0.00 | 0.01 | 0.00 | 0.00 | 1.74 | 1.74 | 0.06 | 0.01 | 0.23 | 0.00 | 0.00 | 0.00 | 0.60 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59 | 5.200 | 7.46 | 0.38 | 0.10 | 0.06 | 0.00 | 0.01 | 0.00 | 0.00 | 1.24 | 1.24 | 0.06 | 0.01 | 0.23 | 0.00 | 0.00 | 0.00 | 0.60 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60 | 4.950 | 7.46 | 0.38 | 0.10 | 0.06 | 0.00 | 0.01 | 0.00 | 0.00 | 1.24 | 1.24 | 0.06 | 0.01 | 0.23 | 0.00 | 0.00 | 0.00 | 0.60 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61 | 4.700 | 7.46 | 0.38 | 0.10 | 0.06 | 0.00 | 0.01 | 0.00 | 0.00 | 1.23 | 1.23 | 0.06 | 0.01 | 0.23 | 0.00 | 0.00 | 0.00 | 0.60 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62 | 4.375 | 7.45 | 0.38 | 0.10 | 0.06 | 0.00 | 0.01 | 0.00 | 0.00 | 1.25 | 1.25 | 0.06 | 0.01 | 0.23 | 0.00 | 0.00 | 0.00 | 0.65 | 0.00 | 0.00 | 0.00 | 0.00 |

```
 63   4.050 7.44   0.38 0.10 0.06  0.00 0.01 0.00  0.00 1.28 1.28  0.06 0.01  0.23 0.00  0.00 0.00 0.71 0.00  0.00  0.00 0.00
 64   3.725 7.43   0.38 0.10 0.06  0.00 0.01 0.00  0.00 1.29 1.29  0.06 0.01  0.23 0.00  0.00 0.00 0.76 0.00  0.00  0.00 0.00
 65   3.400 7.42   0.38 0.10 0.06  0.00 0.01 0.00  0.00 1.31 1.31  0.06 0.01  0.24 0.00  0.00 0.00 0.82 0.00  0.00  0.00 0.00
 66   3.050 7.39   0.48 0.10 0.07  0.00 0.01 0.00  0.00 1.18 1.18  0.06 0.01  0.24 0.00  0.00 0.00 0.51 0.00  0.00  0.00 0.00
 67   2.700 7.35   0.48 0.10 0.07  0.00 0.01 0.00  0.00 1.19 1.19  0.06 0.01  0.24 0.00  0.00 0.00 0.20 0.00  0.00  0.00 0.00
 68   2.400 7.35   0.38 0.10 0.06  0.00 0.01 0.00  0.00 0.15 0.15  0.06 0.01  0.24 0.00  0.00 0.00 0.20 0.00  0.00  0.00 0.00
 69   2.100 7.35   0.38 0.10 0.06  0.00 0.01 0.00  0.00 0.14 0.14  0.06 0.01  0.24 0.00  0.00 0.00 0.20 0.00  0.00  0.00 0.00
 70   1.800 7.35   0.38 0.10 0.06  0.00 0.01 0.00  0.00 0.13 0.13  0.06 0.01  0.25 0.00  0.00 0.00 0.20 0.00  0.00  0.00 0.00
 71   1.500 7.35   0.38 0.10 0.06  0.00 0.01 0.00  0.00 0.13 0.13  0.06 0.01  0.25 0.00  0.00 0.00 0.20 0.00  0.00  0.00 0.00
 72   1.200 7.35   0.38 0.10 0.06  0.00 0.01 0.00  0.00 0.12 0.12  0.06 0.01  0.25 0.00  0.00 0.00 0.20 0.00  0.00  0.00 0.00
 73   0.900 7.35   0.38 0.10 0.06  0.00 0.01 0.00  0.00 0.12 0.12  0.06 0.01  0.25 0.00  0.00 0.00 0.20 0.00  0.00  0.00 0.00
 74   0.600 7.35   0.38 0.10 0.06  0.00 0.01 0.00  0.00 0.11 0.11  0.06 0.01  0.25 0.00  0.00 0.00 0.20 0.00  0.00  0.00 0.00
 75   0.300 7.35   0.38 0.10 0.06  0.00 0.01 0.00  0.00 0.10 0.10  0.06 0.01  0.25 0.00  0.00 0.00 0.20 0.00  0.00  0.00 0.00
 76   0.000 7.35   0.38 0.10 0.06  0.00 0.01 0.00  0.00 0.10 0.10  0.06 0.01  0.25 0.00  0.00 0.00 0.20 0.00  0.00  0.00 0.00
FINAL REPORT          Headwater                    Pearl River DO Modeling 090204
REACH NO.  1   Lock 3 to Below A                   COEF-1 Run
************************************************************ REACH INPUTS ************************************************************
ELEM  TYPE      FLOW    TEMP    SALN    CM-I   CM-II    DO  BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN    NH3  NO3+2   PHOS  CHL A    COLI    NCM
NO.               deg C    ppt    mg/L    mg/L  mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   µg/L  #/100mL
  1  HDWTR    0.00283  30.00    0.00    0.00    0.00  5.00  0.40  0.00  0.40  0.00  0.00  0.50  0.10  0.00  1.50    0.00    0.00
***************************************************** HYDRAULIC PARAMETER VALUES *****************************************************
ELEM  BEGIN  ENDING     FLOW  PCT  ADVCTV   TRAVEL   DEPTH   WIDTH   VOLUME   SURFACE  X-SECT    TIDAL   TIDAL   DISPRSN    MEAN
 NO.   DIST   DIST          EFF    VELO     TIME                          AREA    AREA    PRISM    VELO            VELO
       km     km      m³/s          m/s    days     m      m      m³       m²      m²      m³     m/s     m²/s    m/s
  1  23.00  22.70   0.00283  0.0  0.00002  149.30   2.21  55.10  36531.30  16530.00  121.77    0.00  0.000    0.000  0.000
  2  22.70  22.40   0.00283  0.0  0.00002  149.30   2.21  55.10  36531.30  16530.00  121.77    0.00  0.000    0.000  0.000
  3  22.40  22.10   0.00283  0.0  0.00002  149.30   2.21  55.10  36531.30  16530.00  121.77    0.00  0.000    0.000  0.000
  4  22.10  21.80   0.00283  0.0  0.00002  149.30   2.21  55.10  36531.30  16530.00  121.77    0.00  0.000    0.000  0.000
  5  21.80  21.50   0.00283  0.0  0.00002  149.30   2.21  55.10  36531.30  16530.00  121.77    0.00  0.000    0.000  0.000
 TOT                                  746.50                182656.48  82650.00
 AVG                            0.0000          2.21  55.10                  121.77
 CUM                                  746.50
************************************************ BIOLOGICAL AND PHYSICAL COEFFICIENTS ************************************************
ELEM  ENDING  SAT    REAER  BOD#1 BOD#1 ABOD#1  BOD#2 BOD#2 ABOD#2  BKGD  FULL  CORR   ORGN  ORGN    NH3   NH3  DENIT   PO4   ALG   MAC   COLI    NCM    NCM
NO.    DIST  D.O.   RATE  DECAY  SETT  DECAY  DECAY  SETT  DECAY   SOD   SOD   SOD  DECAY  SETT  DECAY  SRCE   RATE  SRCE  PROD  PROD  DECAY  DECAY   SETT
          mg/L    1/da   1/da  1/da   1/da   1/da  1/da   1/da    *     *     *    1/da  1/da   1/da    *    1/da    *    **    **    1/da   1/da   1/da
  1  22.700  7.29   0.39  0.10  0.06   0.00   0.01  0.00   0.00  0.66  0.67  0.67   0.06  0.01   0.25  0.00   0.00  0.00  0.13  0.00   0.00   0.00   0.00
  2  22.400  7.29   0.39  0.10  0.06   0.00   0.01  0.00   0.00  0.66  0.66  0.66   0.06  0.01   0.25  0.00   0.00  0.00  0.13  0.00   0.00   0.00   0.00
  3  22.100  7.29   0.39  0.10  0.06   0.00   0.01  0.00   0.00  0.66  0.66  0.66   0.06  0.01   0.25  0.00   0.00  0.00  0.13  0.00   0.00   0.00   0.00
  4  21.800  7.29   0.39  0.10  0.06   0.00   0.01  0.00   0.00  0.66  0.66  0.66   0.06  0.01   0.25  0.00   0.00  0.00  0.13  0.00   0.00   0.00   0.00
  5  21.500  7.29   0.39  0.10  0.06   0.00   0.01  0.00   0.00  0.66  0.66  0.66   0.06  0.01   0.25  0.00   0.00  0.00  0.13  0.00   0.00   0.00   0.00
AVG 20 DEG C RATE    0.32  0.06  0.05   0.00   0.01  0.00   0.00  0.31              0.05  0.00   0.10  0.00   0.00  0.00              3.00   0.00   0.00
*  g/m²/d          **   mg/L/day
************************************************ WATER QUALITY CONSTITUENT VALUES ************************************************
ELEM  ENDING   TEMP  SALN    CM-I   CM-II    DO   BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN    NH3  NO3+2   TOTN   PHOS  CHL A  MACRO    COLI    NCM
NO.    DIST  DEG C   PPT    mg/L    mg/L  mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   µg/L   g/m³  #/100mL
  1  22.700  32.10  0.00    0.00    0.00  6.82   0.02   0.00   0.02   0.00   0.00   0.01   0.00   0.01   0.07   1.50   0.00      0.   0.00
  2  22.400  32.10  0.00    0.00    0.00  6.86   0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.07   1.50   0.00      0.   0.00
  3  22.100  32.10  0.00    0.00    0.00  6.86   0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.07   1.50   0.00      0.   0.00
  4  21.800  32.10  0.00    0.00    0.00  6.86   0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.07   1.50   0.00      0.   0.00
```

```
  5  21.500  32.10  0.00    0.00    0.00  6.86  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.07  1.50   0.00      0.   0.00
FINAL REPORT            Headwater                    Pearl River DO Modeling 090204
REACH NO.  2   Below A to Below B                     COEF-1 Run
*********************************************************** REACH INPUTS ***********************************************************
ELEM  TYPE      FLOW    TEMP    SALN    CM-I   CM-II    DO  BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN    NH3  NO3+2   PHOS  CHL A    COLI    NCM
NO.                 deg C     ppt    mg/L    mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L   µg/L  #/100mL
  6  UPR RCH   0.00283   32.10    0.00    0.00    0.00  6.86  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.07  1.50    0.00    0.00
************************************************** HYDRAULIC PARAMETER VALUES **************************************************
ELEM  BEGIN  ENDING     FLOW  PCT  ADVCTV   TRAVEL  DEPTH  WIDTH   VOLUME   SURFACE X-SECT    TIDAL  TIDAL  DISPRSN   MEAN
 NO.   DIST   DIST          EFF    VELO     TIME                          AREA   AREA    PRISM   VELO           VELO
       km     km       m³/s          m/s    days     m      m       m³       m²     m²       m³    m/s     m²/s    m/s
  6  21.50   21.30   0.00283  0.0  0.00002   99.53   2.21   55.10  24354.20   11020.00  121.77     0.00  0.000    0.000  0.000
  7  21.30   21.10   0.00283  0.0  0.00002   99.53   2.21   55.10  24354.20   11020.00  121.77     0.00  0.000    0.000  0.000
  8  21.10   20.90   0.00283  0.0  0.00002   99.53   2.21   55.10  24354.20   11020.00  121.77     0.00  0.000    0.000  0.000
  9  20.90   20.70   0.00283  0.0  0.00002   99.53   2.21   55.10  24354.20   11020.00  121.77     0.00  0.000    0.000  0.000
 10  20.70   20.50   0.00283  0.0  0.00002   99.53   2.21   55.10  24354.20   11020.00  121.77     0.00  0.000    0.000  0.000
 TOT                                  497.66                121771.00   55100.00
 AVG                            0.0000          2.21   55.10                  121.77
 CUM                                 1244.16
********************************************** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********************************************
ELEM  ENDING  SAT   REAER  BOD#1 BOD#1 ABOD#1  BOD#2 BOD#2 ABOD#2  BKGD  FULL  CORR   ORGN ORGN   NH3   NH3 DENIT   PO4   ALG   MAC   COLI   NCM   NCM
NO.    DIST  D.O.   RATE  DECAY SETT  DECAY  DECAY  SETT  DECAY   SOD   SOD   SOD  DECAY  SETT  DECAY SRCE   RATE SRCE  PROD  PROD  DECAY  DECAY   SETT
          mg/L   1/da  1/da  1/da   1/da   1/da  1/da   1/da    *     *     *    1/da  1/da   1/da    *    1/da    *    **    **    1/da   1/da   1/da
  6  21.300  7.29   0.39  0.10  0.06   0.00   0.01  0.00   0.00  0.66  0.66  0.66   0.06  0.01   0.25  0.00   0.00  0.00  0.13  0.00   0.00   0.00   0.00
  7  21.100  7.29   0.39  0.10  0.06   0.00   0.01  0.00   0.00  0.66  0.66  0.66   0.06  0.01   0.25  0.00   0.00  0.00  0.13  0.00   0.00   0.00   0.00
  8  20.900  7.29   0.39  0.10  0.06   0.00   0.01  0.00   0.00  0.66  0.66  0.66   0.06  0.01   0.25  0.00   0.00  0.00  0.13  0.00   0.00   0.00   0.00
  9  20.700  7.29   0.39  0.10  0.06   0.00   0.01  0.00   0.00  0.66  0.66  0.66   0.06  0.01   0.25  0.00   0.00  0.00  0.13  0.00   0.00   0.00   0.00
 10  20.500  7.29   0.39  0.10  0.06   0.00   0.01  0.00   0.00  0.66  0.66  0.66   0.06  0.01   0.25  0.00   0.00  0.00  0.13  0.00   0.00   0.00   0.00
AVG 20 DEG C RATE    0.32  0.06  0.05   0.00   0.01  0.00   0.00  0.31              0.05  0.00   0.10  0.00   0.00  0.00              3.00   0.00   0.00
*  g/m²/d          **   mg/L/day
************************************************** WATER QUALITY CONSTITUENT VALUES **************************************************
ELEM  ENDING   TEMP  SALN    CM-I   CM-II   DO  BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN    NH3  NO3+2   TOTN   PHOS  CHL A  MACRO    COLI    NCM
NO.    DIST  DEG C   PPT    mg/L    mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L   µg/L   g/m³  #/100mL
  6  21.300  32.10  0.00    0.00    0.00  6.86  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.07  1.50   0.00      0.   0.00
  7  21.100  32.10  0.00    0.00    0.00  6.86  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.07  1.50   0.00      0.   0.00
  8  20.900  32.10  0.00    0.00    0.00  6.86  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.07  1.50   0.00      0.   0.00
  9  20.700  32.10  0.00    0.00    0.00  6.86  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.07  1.50   0.00      0.   0.00
 10  20.500  32.10  0.00    0.00    0.00  6.86  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.07  1.50   0.00      0.   0.00
FINAL REPORT            Headwater                    Pearl River DO Modeling 090204
REACH NO.  3   Below B to Below C                     COEF-1 Run
*********************************************************** REACH INPUTS ***********************************************************
ELEM  TYPE      FLOW    TEMP    SALN    CM-I   CM-II    DO  BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN    NH3  NO3+2   PHOS  CHL A    COLI    NCM
NO.                 deg C     ppt    mg/L    mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L   µg/L  #/100mL
 11  UPR RCH   0.00283   32.10    0.00    0.00    0.00  6.86  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.07  1.50    0.00    0.00
************************************************** HYDRAULIC PARAMETER VALUES **************************************************
ELEM  BEGIN  ENDING     FLOW  PCT  ADVCTV   TRAVEL  DEPTH  WIDTH   VOLUME   SURFACE X-SECT    TIDAL  TIDAL  DISPRSN   MEAN
 NO.   DIST   DIST          EFF    VELO     TIME                          AREA   AREA    PRISM   VELO           VELO
       km     km       m³/s          m/s    days     m      m       m³       m²     m²       m³    m/s     m²/s    m/s
 11  20.50   20.20   0.00283  0.0  0.00002  149.30   2.21   55.10  36531.30   16530.00  121.77     0.00  0.000    0.000  0.000
 12  20.20   19.90   0.00283  0.0  0.00002  149.30   2.21   55.10  36531.30   16530.00  121.77     0.00  0.000    0.000  0.000
```

```
 13  19.90  19.60   0.00283  0.0  0.00002  149.30   2.21   55.10  36531.30  16530.00  121.77     0.00  0.000     0.000  0.000
 14  19.60  19.30   0.00283  0.0  0.00002  149.30   2.21   55.10  36531.30  16530.00  121.77     0.00  0.000     0.000  0.000
 15  19.30  19.00   0.00283  0.0  0.00002  149.30   2.21   55.10  36531.30  16530.00  121.77     0.00  0.000     0.000  0.000
TOT                                  746.50            182656.48   82650.00
AVG                          0.0000          2.21   55.10                121.77
CUM                                 1990.66
********************************************** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********************************************
ELEM  ENDING  SAT   REAER  BOD#1 BOD#1 ABOD#1  BOD#2 BOD#2 ABOD#2  BKGD  FULL  CORR   ORGN ORGN   NH3  NH3 DENIT  PO4  ALG  MAC  COLI   NCM   NCM
NO.   DIST  D.O.   RATE  DECAY SETT DECAY DECAY SETT DECAY  SOD  SOD  SOD DECAY SETT DECAY SRCE  RATE SRCE PROD PROD DECAY DECAY  SETT
          mg/L   1/da  1/da 1/da  1/da  1/da 1/da  1/da   *    *    *   1/da 1/da  1/da   *   1/da   *   **   **   1/da  1/da  1/da
 11  20.200 7.30   0.39  0.10 0.06  0.00  0.01 0.00  0.00 0.53 0.53 0.53  0.06 0.01  0.25 0.00  0.00 0.00 0.12 0.00  0.00  0.00  0.00
 12  19.900 7.31   0.39  0.10 0.06  0.00  0.01 0.00  0.00 0.53 0.53 0.53  0.06 0.01  0.25 0.00  0.00 0.00 0.11 0.00  0.00  0.00  0.00
 13  19.600 7.32   0.39  0.10 0.06  0.00  0.01 0.00  0.00 0.53 0.53 0.53  0.06 0.01  0.25 0.00  0.00 0.00 0.09 0.00  0.00  0.00  0.00
 14  19.300 7.33   0.39  0.10 0.06  0.00  0.01 0.00  0.00 0.52 0.52 0.52  0.06 0.01  0.25 0.00  0.00 0.00 0.08 0.00  0.00  0.00  0.00
 15  19.000 7.34   0.39  0.10 0.06  0.00  0.01 0.00  0.00 0.52 0.52 0.52  0.06 0.01  0.25 0.00  0.00 0.00 0.07 0.00  0.00  0.00  0.00
AVG 20 DEG C RATE    0.32  0.06 0.05  0.00  0.01 0.00  0.00 0.25            0.05 0.00  0.10 0.00  0.00 0.00            3.00  0.00  0.00
*  g/m²/d          **   mg/L/day
********************************************** WATER QUALITY CONSTITUENT VALUES **********************************************
ELEM  ENDING  TEMP  SALN    CM-I   CM-II   DO  BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN   NH3  NO3+2  TOTN  PHOS  CHL A  MACRO    COLI    NCM
NO.   DIST  DEG C  PPT    mg/L    mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  µg/L   g/m³  #/100mL
 11  20.200 32.02 0.00    0.00    0.00 6.99 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.07 1.36 0.00    0.   0.00
 12  19.900 31.94 0.00    0.00    0.00 6.97 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.07 1.22 0.00    0.   0.00
 13  19.600 31.86 0.00    0.00    0.00 6.95 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.07 1.08 0.00    0.   0.00
 14  19.300 31.78 0.00    0.00    0.00 6.93 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.07 0.94 0.00    0.   0.00
 15  19.000 31.70 0.00    0.00    0.00 6.91 0.01 0.00 0.01 0.00 0.00 0.00 0.00 0.00 0.07 0.80 0.00    0.   0.00
FINAL REPORT          Headwater                    Pearl River DO Modeling 090204
REACH NO.  4   Below C to Lock 2                   COEF-1 Run
********************************************************** REACH INPUTS **********************************************************
ELEM  TYPE      FLOW    TEMP    SALN    CM-I   CM-II    DO  BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN   NH3  NO3+2  PHOS  CHL A    COLI    NCM
NO.               deg C    ppt    mg/L    mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  µg/L  #/100mL
 16  UPR RCH  0.00283  31.70    0.00    0.00    0.00 6.91 0.01 0.00 0.01 0.00 0.00 0.00 0.00 0.07 0.80    0.00    0.00
EACH  INCR    0.21750  30.00    0.00    0.00    0.00 5.00 1.98 0.00            0.00 0.50 0.10 0.00    0.00    0.00
********************************************************** HYDRAULIC PARAMETER VALUES **********************************************
ELEM  BEGIN  ENDING     FLOW  PCT  ADVCTV   TRAVEL  DEPTH  WIDTH   VOLUME   SURFACE  X-SECT    TIDAL  TIDAL  DISPRSN   MEAN
 NO.  DIST   DIST          EFF    VELO     TIME                          AREA    AREA    PRISM   VELO           VELO
       km     km       m³/s          m/s    days     m      m      m³       m²      m²      m³    m/s     m²/s    m/s
 16  19.00  18.69   0.22033  0.0  0.00176    2.00  2.11  59.30  38162.51  18086.50  125.12     0.00  0.000    0.002  0.002
 17  18.69  18.39   0.43783  0.0  0.00350    1.01  2.11  59.30  38162.51  18086.50  125.12     0.00  0.000    0.003  0.003
 18  18.39  18.08   0.65533  0.0  0.00524    0.67  2.11  59.30  38162.51  18086.50  125.12     0.00  0.000    0.005  0.005
 19  18.08  17.78   0.87283  0.0  0.00698    0.51  2.11  59.30  38162.51  18086.50  125.12     0.00  0.000    0.006  0.007
TOT                                  4.19            152650.05   72346.00
AVG                          0.0034          2.11   59.30                125.12
CUM                                 1994.85
********************************************** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********************************************
ELEM  ENDING  SAT   REAER  BOD#1 BOD#1 ABOD#1  BOD#2 BOD#2 ABOD#2  BKGD  FULL  CORR   ORGN ORGN   NH3  NH3 DENIT  PO4  ALG  MAC  COLI   NCM   NCM
NO.   DIST  D.O.   RATE  DECAY SETT DECAY DECAY SETT DECAY  SOD  SOD  SOD DECAY SETT DECAY SRCE  RATE SRCE PROD PROD DECAY DECAY  SETT
          mg/L   1/da  1/da 1/da  1/da  1/da 1/da  1/da   *    *    *   1/da 1/da  1/da   *   1/da   *   **   **   1/da  1/da  1/da
 16  18.695 7.34   0.41  0.10 0.06  0.00  0.01 0.00  0.00 0.52 0.72 0.72  0.06 0.01  0.24 0.00  0.00 0.00 0.13 0.00  0.00  0.00  0.00
 17  18.390 7.34   0.41  0.10 0.06  0.00  0.01 0.00  0.00 0.52 0.72 0.72  0.06 0.01  0.24 0.00  0.00 0.00 0.19 0.00  0.00  0.00  0.00
 18  18.085 7.33   0.41  0.10 0.06  0.00  0.01 0.00  0.00 0.52 0.72 0.72  0.06 0.01  0.24 0.00  0.00 0.00 0.25 0.00  0.00  0.00  0.00
```

```
 19  17.780 7.33   0.41  0.10 0.06  0.00  0.01 0.00  0.00 0.53 0.72 0.72  0.06 0.01  0.24 0.00  0.00 0.00 0.31 0.00  0.00  0.00  0.00
AVG 20 DEG C RATE    0.33  0.06 0.05  0.00  0.01 0.00  0.00 0.25           0.05 0.00  0.10 0.00  0.00 0.00           3.00  0.00  0.00
*  g/m²/d         **  mg/L/day
************************************************ WATER QUALITY CONSTITUENT VALUES ************************************************
ELEM  ENDING  TEMP  SALN    CM-I   CM-II   DO  BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN   NH3  NO3+2   TOTN  PHOS  CHL A  MACRO    COLI    NCM
NO.    DIST  DEG C  PPT    mg/L    mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  µg/L   g/m³  #/100mL
 16  18.695 31.73 0.00    0.00    0.00  5.67  1.47  0.00  1.47  0.00  0.00  0.33  0.10  0.44  0.07  1.50  0.00     0.   0.00
 17  18.390 31.75 0.00    0.00    0.00  5.71  1.48  0.00  1.48  0.00  0.00  0.34  0.17  0.51  0.07  2.20  0.00     0.   0.00
 18  18.085 31.77 0.00    0.00    0.00  5.75  1.48  0.00  1.48  0.00  0.00  0.34  0.20  0.53  0.07  2.90  0.00     0.   0.00
 19  17.780 31.80 0.00    0.00    0.00  5.79  1.48  0.00  1.48  0.00  0.00  0.34  0.20  0.54  0.07  3.60  0.00     0.   0.00
FINAL REPORT            Headwater                    Pearl River DO Modeling 090204
REACH NO.  5   Lock 2 (Church) to ABTalisheek              COEF-1 Run
************************************************************ REACH INPUTS ************************************************************
ELEM  TYPE      FLOW    TEMP    SALN    CM-I   CM-II    DO  BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN   NH3  NO3+2   PHOS  CHL A    COLI    NCM
NO.              deg C    ppt    mg/L    mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  µg/L  #/100mL
 20  UPR RCH  0.87283  31.80    0.00    0.00    0.00  5.79  1.48  0.00  1.48  0.00  0.00  0.34  0.20  0.07  3.60    0.00   0.00
EACH  INCR    0.01867  30.00    0.00    0.00    0.00  5.00  3.96  0.00            0.00  0.50  0.10  0.00    0.00   0.00
 20  WSTLD   0.00008  30.00    0.00    0.00    0.00  5.00 103.50  0.00 103.50  0.00  0.00 15.00  0.00  0.00  0.00    0.00   0.00
************************************************** HYDRAULIC PARAMETER VALUES **************************************************
ELEM  BEGIN  ENDING     FLOW  PCT  ADVCTV   TRAVEL  DEPTH  WIDTH   VOLUME   SURFACE X-SECT   TIDAL  TIDAL  DISPRSN   MEAN
NO.   DIST   DIST        EFF   VELO    TIME                        AREA   AREA    PRISM   VELO          VELO
       km     km      m³/s     m/s    days     m      m      m³      m²     m²      m³     m/s    m²/s    m/s
 20  17.78  17.49   0.89158  0.0  0.00742   0.45   1.91  62.90  34840.31  18241.00  120.14    0.00  0.000    0.006  0.007
 21  17.49  17.20   0.91024  0.0  0.00758   0.44   1.91  62.90  34840.31  18241.00  120.14    0.00  0.000    0.006  0.008
 22  17.20  16.91   0.92891  0.0  0.00773   0.43   1.91  62.90  34840.31  18241.00  120.14    0.00  0.000    0.006  0.008
 23  16.91  16.62   0.94758  0.0  0.00789   0.43   1.91  62.90  34840.31  18241.00  120.14    0.00  0.000    0.006  0.008
 24  16.62  16.33   0.96624  0.0  0.00804   0.42   1.91  62.90  34840.31  18241.00  120.14    0.00  0.000    0.006  0.008
 25  16.33  16.04   0.98491  0.0  0.00820   0.41   1.91  62.90  34840.31  18241.00  120.14    0.00  0.000    0.007  0.008
 26  16.04  15.75   1.00358  0.0  0.00835   0.40   1.91  62.90  34840.31  18241.00  120.14    0.00  0.000    0.007  0.008
 27  15.75  15.46   1.02224  0.0  0.00851   0.39   1.91  62.90  34840.31  18241.00  120.14    0.00  0.000    0.007  0.009
 28  15.46  15.17   1.04091  0.0  0.00866   0.39   1.91  62.90  34840.31  18241.00  120.14    0.00  0.000    0.007  0.009
 29  15.17  14.88   1.05958  0.0  0.00882   0.38   1.91  62.90  34840.31  18241.00  120.14    0.00  0.000    0.007  0.009
 30  14.88  14.59   1.07824  0.0  0.00897   0.37   1.91  62.90  34840.31  18241.00  120.14    0.00  0.000    0.007  0.009
 31  14.59  14.30   1.09691  0.0  0.00913   0.37   1.91  62.90  34840.31  18241.00  120.14    0.00  0.000    0.007  0.009
 32  14.30  14.01   1.11558  0.0  0.00929   0.36   1.91  62.90  34840.31  18241.00  120.14    0.00  0.000    0.007  0.009
 33  14.01  13.72   1.13424  0.0  0.00944   0.36   1.91  62.90  34840.31  18241.00  120.14    0.00  0.000    0.007  0.009
 34  13.72  13.43   1.15291  0.0  0.00960   0.35   1.91  62.90  34840.31  18241.00  120.14    0.00  0.000    0.008  0.010
TOT                                  5.95            522604.66  273615.00
AVG                            0.0085          1.91  62.90                  120.14
CUM                            2000.81
************************************************ BIOLOGICAL AND PHYSICAL COEFFICIENTS ************************************************
ELEM  ENDING  SAT    REAER  BOD#1 BOD#1 ABOD#1  BOD#2 BOD#2 ABOD#2  BKGD  FULL  CORR   ORGN  ORGN    NH3   NH3  DENIT   PO4   ALG   MAC   COLI    NCM    NCM
NO.    DIST  D.O.   RATE  DECAY SETT DECAY DECAY  SETT DECAY  SOD   SOD   SOD DECAY  SETT DECAY SRCE  RATE SRCE PROD PROD DECAY DECAY  SETT
          mg/L   1/da  1/da  1/da  1/da  1/da 1/da  1/da   *     *     *   1/da 1/da  1/da   *   1/da   *   **   **   1/da  1/da  1/da
 20  17.490 7.33   0.45  0.10 0.07  0.00  0.01 0.00  0.00 0.13 0.32 0.32  0.06 0.01  0.24 0.00  0.00 0.00 0.31 0.00  0.00  0.00  0.00
 21  17.200 7.33   0.45  0.10 0.07  0.00  0.01 0.00  0.00 0.13 0.31 0.31  0.06 0.01  0.24 0.00  0.00 0.00 0.31 0.00  0.00  0.00  0.00
 22  16.910 7.33   0.45  0.10 0.07  0.00  0.01 0.00  0.00 0.13 0.30 0.30  0.06 0.01  0.25 0.00  0.00 0.00 0.31 0.00  0.00  0.00  0.00
 23  16.620 7.33   0.45  0.10 0.07  0.00  0.01 0.00  0.00 0.13 0.30 0.30  0.06 0.01  0.25 0.00  0.00 0.00 0.31 0.00  0.00  0.00  0.00
 24  16.330 7.33   0.45  0.10 0.07  0.00  0.01 0.00  0.00 0.13 0.29 0.29  0.06 0.01  0.25 0.00  0.00 0.00 0.31 0.00  0.00  0.00  0.00
 25  16.040 7.33   0.45  0.10 0.07  0.00  0.01 0.00  0.00 0.13 0.29 0.29  0.06 0.01  0.25 0.00  0.00 0.00 0.31 0.00  0.00  0.00  0.00
```

```
 26  15.750 7.33   0.45  0.10 0.07  0.00  0.01 0.00  0.00 0.13 0.28 0.28  0.06 0.01  0.25 0.00  0.00 0.00 0.31 0.00  0.00  0.00  0.00
 27  15.460 7.33   0.45  0.10 0.07  0.00  0.01 0.00  0.00 0.13 0.28 0.28  0.06 0.01  0.25 0.00  0.00 0.00 0.31 0.00  0.00  0.00  0.00
 28  15.170 7.33   0.45  0.10 0.07  0.00  0.01 0.00  0.00 0.13 0.28 0.28  0.06 0.01  0.25 0.00  0.00 0.00 0.31 0.00  0.00  0.00  0.00
 29  14.880 7.33   0.45  0.10 0.07  0.00  0.01 0.00  0.00 0.13 0.27 0.27  0.06 0.01  0.25 0.00  0.00 0.00 0.31 0.00  0.00  0.00  0.00
 30  14.590 7.33   0.45  0.10 0.07  0.00  0.01 0.00  0.00 0.13 0.27 0.27  0.06 0.01  0.25 0.00  0.00 0.00 0.31 0.00  0.00  0.00  0.00
 31  14.300 7.33   0.45  0.10 0.07  0.00  0.01 0.00  0.00 0.13 0.27 0.27  0.06 0.01  0.25 0.00  0.00 0.00 0.31 0.00  0.00  0.00  0.00
 32  14.010 7.33   0.45  0.10 0.07  0.00  0.01 0.00  0.00 0.13 0.27 0.27  0.06 0.01  0.25 0.00  0.00 0.00 0.31 0.00  0.00  0.00  0.00
 33  13.720 7.33   0.45  0.10 0.07  0.00  0.01 0.00  0.00 0.13 0.26 0.26  0.06 0.01  0.25 0.00  0.00 0.00 0.31 0.00  0.00  0.00  0.00
 34  13.430 7.33   0.45  0.10 0.07  0.00  0.01 0.00  0.00 0.13 0.26 0.26  0.06 0.01  0.25 0.00  0.00 0.00 0.31 0.00  0.00  0.00  0.00
AVG 20 DEG C RATE    0.37  0.06 0.05  0.00  0.01 0.00  0.00 0.06          0.05 0.01  0.10 0.00  0.00 0.00          3.00  0.00  0.00
*  g/m²/d        **  mg/L/day
************************************************ WATER QUALITY CONSTITUENT VALUES ************************************************
ELEM  ENDING  TEMP  SALN    CM-I   CM-II   DO  BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN   NH3  NO3+2   TOTN  PHOS  CHL A  MACRO    COLI    NCM
NO.    DIST  DEG C  PPT    mg/L    mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L   µg/L   g/m³  #/100mL
 20  17.490 31.80 0.00    0.00    0.00  6.04  1.43  0.00  1.43  0.00  0.00  0.31  0.23  0.54  0.07  3.60  0.00     0.   0.00
 21  17.200 31.80 0.00    0.00    0.00  6.24  1.38  0.00  1.38  0.00  0.00  0.28  0.25  0.53  0.07  3.60  0.00     0.   0.00
 22  16.910 31.80 0.00    0.00    0.00  6.40  1.33  0.00  1.33  0.00  0.00  0.26  0.27  0.52  0.07  3.60  0.00     0.   0.00
 23  16.620 31.80 0.00    0.00    0.00  6.54  1.29  0.00  1.29  0.00  0.00  0.24  0.28  0.52  0.07  3.60  0.00     0.   0.00
 24  16.330 31.80 0.00    0.00    0.00  6.65  1.25  0.00  1.25  0.00  0.00  0.22  0.29  0.51  0.07  3.60  0.00     0.   0.00
 25  16.040 31.80 0.00    0.00    0.00  6.74  1.21  0.00  1.21  0.00  0.00  0.20  0.31  0.51  0.07  3.60  0.00     0.   0.00
 26  15.750 31.80 0.00    0.00    0.00  6.82  1.18  0.00  1.18  0.00  0.00  0.19  0.31  0.51  0.07  3.60  0.00     0.   0.00
 27  15.460 31.80 0.00    0.00    0.00  6.88  1.15  0.00  1.15  0.00  0.00  0.18  0.32  0.50  0.07  3.60  0.00     0.   0.00
 28  15.170 31.80 0.00    0.00    0.00  6.94  1.13  0.00  1.13  0.00  0.00  0.17  0.33  0.50  0.07  3.60  0.00     0.   0.00
 29  14.880 31.80 0.00    0.00    0.00  6.98  1.11  0.00  1.11  0.00  0.00  0.16  0.33  0.49  0.07  3.60  0.00     0.   0.00
 30  14.590 31.80 0.00    0.00    0.00  7.02  1.09  0.00  1.09  0.00  0.00  0.15  0.34  0.49  0.07  3.60  0.00     0.   0.00
 31  14.300 31.80 0.00    0.00    0.00  7.05  1.07  0.00  1.07  0.00  0.00  0.14  0.34  0.49  0.07  3.60  0.00     0.   0.00
 32  14.010 31.80 0.00    0.00    0.00  7.08  1.05  0.00  1.05  0.00  0.00  0.14  0.34  0.48  0.07  3.60  0.00     0.   0.00
 33  13.720 31.80 0.00    0.00    0.00  7.11  1.03  0.00  1.03  0.00  0.00  0.13  0.35  0.48  0.07  3.60  0.00     0.   0.00
 34  13.430 31.80 0.00    0.00    0.00  7.13  1.02  0.00  1.02  0.00  0.00  0.13  0.35  0.47  0.07  3.60  0.00     0.   0.00
FINAL REPORT          Headwater                    Pearl River DO Modeling 090204
REACH NO.  6   AB to Talisheek                     COEF-1 Run
************************************************** REACH INPUTS **************************************************
ELEM  TYPE      FLOW    TEMP    SALN    CM-I   CM-II    DO  BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN   NH3  NO3+2  PHOS  CHL A    COLI    NCM
NO.             deg C    ppt    mg/L    mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L   µg/L  #/100mL
 35  UPR RCH  1.15291  31.80    0.00    0.00   0.00  7.13  1.02  0.00  1.02  0.00  0.00  0.13  0.35  0.07  3.60    0.00   0.00
************************************************ HYDRAULIC PARAMETER VALUES ************************************************
ELEM  BEGIN  ENDING     FLOW  PCT  ADVCTV   TRAVEL  DEPTH  WIDTH   VOLUME   SURFACE  X-SECT    TIDAL  TIDAL  DISPRSN   MEAN
 NO.  DIST   DIST        EFF   VELO    TIME                          AREA    AREA    PRISM   VELO           VELO
       km     km       m³/s          m/s   days     m      m      m³       m²      m²      m³    m/s     m²/s    m/s
 35  13.43  13.14   1.15291  0.0  0.00960   0.35   1.91  62.90  34840.31  18241.00  120.14    0.00  0.000    0.008  0.010
 36  13.14  12.85   1.15291  0.0  0.00960   0.35   1.91  62.90  34840.31  18241.00  120.14    0.00  0.000    0.008  0.010
 37  12.85  12.56   1.15291  0.0  0.00960   0.35   1.91  62.90  34840.31  18241.00  120.14    0.00  0.000    0.008  0.010
 38  12.56  12.27   1.15291  0.0  0.00960   0.35   1.91  62.90  34840.31  18241.00  120.14    0.00  0.000    0.008  0.010
 39  12.27  11.98   1.15291  0.0  0.00960   0.35   1.91  62.90  34840.31  18241.00  120.14    0.00  0.000    0.008  0.010
 TOT                                 1.75            174201.55  91205.00
 AVG                          0.0096          1.91  62.90                 120.14
 CUM                                2002.56
************************************************ BIOLOGICAL AND PHYSICAL COEFFICIENTS ************************************************
ELEM  ENDING  SAT   REAER  BOD#1 BOD#1 ABOD#1  BOD#2 BOD#2 ABOD#2  BKGD  FULL  CORR   ORGN  ORGN   NH3   NH3  DENIT  PO4   ALG   MAC   COLI   NCM   NCM
NO.    DIST  D.O.   RATE  DECAY  SETT  DECAY  DECAY  SETT  DECAY   SOD   SOD   SOD  DECAY  SETT  DECAY  SRCE   RATE  SRCE  PROD  PROD  DECAY  DECAY  SETT
```

```
          mg/L   1/da  1/da  1/da  1/da  1/da  1/da  1/da   *    *    *   1/da  1/da  1/da   *   1/da   *   **   **   1/da  1/da  1/da
 35  13.140 7.38   0.45  0.10 0.07  0.00  0.01 0.00  0.00 4.00 4.12 4.12  0.06 0.01  0.24 0.00  0.00 0.00 0.26 0.00  0.00  0.00  0.00
 36  12.850 7.43   0.45  0.10 0.07  0.00  0.01 0.00  0.00 3.90 4.02 4.02  0.06 0.01  0.23 0.00  0.00 0.00 0.21 0.00  0.00  0.00  0.00
 37  12.560 7.48   0.45  0.10 0.07  0.00  0.01 0.00  0.00 3.80 3.91 3.91  0.06 0.01  0.22 0.00  0.00 0.00 0.16 0.00  0.00  0.00  0.00
 38  12.270 7.53   0.44  0.10 0.07  0.00  0.01 0.00  0.00 3.71 3.81 3.81  0.06 0.01  0.21 0.00  0.00 0.00 0.11 0.00  0.00  0.00  0.00
 39  11.980 7.58   0.44  0.09 0.07  0.00  0.01 0.00  0.00 3.61 3.71 3.71  0.06 0.01  0.20 0.00  0.00 0.00 0.06 0.00  0.00  0.00  0.00
AVG 20 DEG C RATE    0.37  0.06 0.05  0.00  0.01 0.00  0.00 1.95          0.05 0.01  0.10 0.00  0.00 0.00          3.00  0.00  0.00
*  g/m²/d          **   mg/L/day
************************************************** WATER QUALITY CONSTITUENT VALUES **************************************************
ELEM  ENDING  TEMP SALN    CM-I   CM-II   DO  BOD#1  BOD#2 EBOD#1 EBOD#2  ORGN   NH3  NO3+2  TOTN  PHOS  CHL A  MACRO    COLI    NCM
NO.    DIST  DEG C  PPT    mg/L    mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  µg/L   g/m³  #/100mL
 35  13.140 31.40 0.00    0.00    0.00  6.56  0.96  0.00  0.96  0.00  0.00  0.12  0.35  0.47  0.07  3.04   0.00     0.   0.00
 36  12.850 31.00 0.00    0.00    0.00  6.08  0.91  0.00  0.91  0.00  0.00  0.11  0.36  0.47  0.07  2.48   0.00     0.   0.00
 37  12.560 30.60 0.00    0.00    0.00  5.67  0.86  0.00  0.86  0.00  0.00  0.10  0.36  0.46  0.06  1.92   0.00     0.   0.00
 38  12.270 30.20 0.00    0.00    0.00  5.32  0.81  0.00  0.81  0.00  0.00  0.09  0.37  0.46  0.06  1.36   0.00     0.   0.00
 39  11.980 29.80 0.00    0.00    0.00  5.03  0.77  0.00  0.77  0.00  0.00  0.09  0.37  0.46  0.06  0.80   0.00     0.   0.00
FINAL REPORT            Headwater                    Pearl River DO Modeling 090204
REACH NO.  7   Talisheek to Below G                   COEF-1 Run
************************************************************** REACH INPUTS **************************************************************
ELEM  TYPE      FLOW    TEMP    SALN    CM-I   CM-II   DO  BOD#1  BOD#2 EBOD#1 EBOD#2  ORGN   NH3  NO3+2  PHOS  CHL A   COLI    NCM
NO.               deg C    ppt    mg/L    mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  µg/L  #/100mL
 40  UPR RCH  1.15291  29.80    0.00    0.00    0.00  5.03  0.77  0.00  0.77  0.00  0.00  0.09  0.37  0.06  0.80    0.00   0.00
EACH  INCR    0.14750  30.00    0.00    0.00    0.00  5.00  5.94  0.00            0.00  1.00  0.10  0.00    0.00   0.00
************************************************** HYDRAULIC PARAMETER VALUES **************************************************
ELEM  BEGIN  ENDING     FLOW  PCT  ADVCTV   TRAVEL  DEPTH  WIDTH   VOLUME   SURFACE  X-SECT    TIDAL  TIDAL  DISPRSN   MEAN
NO.   DIST   DIST          EFF    VELO    TIME                      AREA   AREA    PRISM   VELO          VELO
       km     km      m³/s          m/s    days     m      m      m³       m²     m²       m³    m/s    m²/s    m/s
 40  11.98  11.58   1.30041  0.0  0.00499    0.92   3.75  69.50 102946.88  27452.50  260.62    0.00  0.000    0.007  0.005
 41  11.58  11.19   1.44791  0.0  0.00556    0.82   3.75  69.50 102946.88  27452.50  260.62    0.00  0.000    0.008  0.006
 42  11.19  10.79   1.59541  0.0  0.00612    0.75   3.75  69.50 102946.88  27452.50  260.62    0.00  0.000    0.009  0.006
 43  10.79  10.40   1.74291  0.0  0.00669    0.68   3.75  69.50 102946.88  27452.50  260.62    0.00  0.000    0.009  0.007
 TOT                                  3.17            411787.50  109810.00
 AVG                          0.0058          3.75  69.50                 260.62
 CUM                                2005.73
********************************************** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********************************************
ELEM  ENDING  SAT   REAER  BOD#1 BOD#1 ABOD#1  BOD#2 BOD#2 ABOD#2  BKGD  FULL  CORR  ORGN ORGN   NH3  NH3 DENIT  PO4  ALG  MAC  COLI   NCM   NCM
NO.   DIST  D.O.   RATE  DECAY  SETT  DECAY  DECAY  SETT  DECAY   SOD   SOD   SOD DECAY  SETT DECAY SRCE  RATE SRCE PROD PROD DECAY DECAY  SETT
          mg/L   1/da  1/da  1/da  1/da  1/da  1/da  1/da   *    *    *   1/da  1/da  1/da   *   1/da   *   **   **   1/da  1/da  1/da
 40  11.585 7.55   0.22  0.10 0.03  0.00  0.01 0.00  0.00 0.36 0.51 0.51  0.06 0.00  0.21 0.00  0.00 0.00 0.13 0.00  0.00  0.00  0.00
 41  11.190 7.51   0.23  0.10 0.03  0.00  0.01 0.00  0.00 0.36 0.56 0.56  0.06 0.00  0.21 0.00  0.00 0.00 0.20 0.00  0.00  0.00  0.00
 42  10.795 7.48   0.23  0.10 0.03  0.00  0.01 0.00  0.00 0.37 0.60 0.60  0.06 0.00  0.22 0.00  0.00 0.00 0.27 0.00  0.00  0.00  0.00
 43  10.400 7.44   0.23  0.10 0.03  0.00  0.01 0.00  0.00 0.38 0.63 0.63  0.06 0.00  0.23 0.00  0.00 0.00 0.35 0.00  0.00  0.00  0.00
AVG 20 DEG C RATE    0.19  0.06 0.03  0.00  0.01 0.00  0.00 0.19          0.05 0.00  0.10 0.00  0.00 0.00          3.00  0.00  0.00
*  g/m²/d          **   mg/L/day
************************************************** WATER QUALITY CONSTITUENT VALUES **************************************************
ELEM  ENDING  TEMP SALN    CM-I   CM-II   DO  BOD#1  BOD#2 EBOD#1 EBOD#2  ORGN   NH3  NO3+2  TOTN  PHOS  CHL A  MACRO    COLI    NCM
NO.    DIST  DEG C  PPT    mg/L    mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  µg/L   g/m³  #/100mL
 40  11.585 30.07 0.00    0.00    0.00  5.37  1.21  0.00  1.21  0.00  0.00  0.16  0.37  0.53  0.06  1.65   0.00     0.   0.00
 41  11.190 30.35 0.00    0.00    0.00  5.61  1.53  0.00  1.53  0.00  0.00  0.21  0.37  0.58  0.06  2.50   0.00     0.   0.00
 42  10.795 30.62 0.00    0.00    0.00  5.79  1.76  0.00  1.76  0.00  0.00  0.24  0.37  0.62  0.06  3.35   0.00     0.   0.00
```

```
 43  10.400  30.90  0.00    0.00    0.00  5.95  1.94  0.00  1.94  0.00  0.00  0.27  0.38  0.64  0.06  4.20   0.00     0.   0.00
FINAL REPORT            Headwater                    Pearl River DO Modeling 090204
REACH NO.  8   Below G to Below H                      COEF-1 Run
*************************************************************** REACH INPUTS ***************************************************************
ELEM  TYPE      FLOW    TEMP    SALN    CM-I   CM-II    DO  BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN    NH3  NO3+2   PHOS  CHL A    COLI    NCM
NO.                  deg C     ppt    mg/L    mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   µg/L  #/100mL
 44  UPR RCH  1.74291  30.90    0.00    0.00    0.00  5.95  1.94  0.00  1.94  0.00  0.00  0.27  0.38  0.06  4.20   0.00   0.00
************************************************** HYDRAULIC PARAMETER VALUES **************************************************
ELEM  BEGIN  ENDING     FLOW  PCT  ADVCTV   TRAVEL   DEPTH  WIDTH   VOLUME   SURFACE  X-SECT    TIDAL   TIDAL   DISPRSN    MEAN
NO.   DIST   DIST          EFF    VELO     TIME                          AREA    AREA    PRISM    VELO            VELO
       km     km       m³/s          m/s    days      m      m       m³       m²      m²       m³     m/s     m²/s    m/s
 44  10.40   10.10   1.74291   0.0  0.02143    0.16    1.64   49.60  24403.20   14880.00   81.34     0.00   0.000    0.015   0.021
 45  10.10    9.80   1.74291   0.0  0.02143    0.16    1.64   49.60  24403.20   14880.00   81.34     0.00   0.000    0.015   0.021
 46   9.80    9.50   1.74291   0.0  0.02143    0.16    1.64   49.60  24403.20   14880.00   81.34     0.00   0.000    0.015   0.021
 47   9.50    9.20   1.74291   0.0  0.02143    0.16    1.64   49.60  24403.20   14880.00   81.34     0.00   0.000    0.015   0.021
 48   9.20    8.90   1.74291   0.0  0.02143    0.16    1.64   49.60  24403.20   14880.00   81.34     0.00   0.000    0.015   0.021
 49   8.90    8.60   1.74291   0.0  0.02143    0.16    1.64   49.60  24403.20   14880.00   81.34     0.00   0.000    0.015   0.021
 50   8.60    8.30   1.74291   0.0  0.02143    0.16    1.64   49.60  24403.20   14880.00   81.34     0.00   0.000    0.015   0.021
 51   8.30    8.00   1.74291   0.0  0.02143    0.16    1.64   49.60  24403.20   14880.00   81.34     0.00   0.000    0.015   0.021
 52   8.00    7.70   1.74291   0.0  0.02143    0.16    1.64   49.60  24403.20   14880.00   81.34     0.00   0.000    0.015   0.021
 53   7.70    7.40   1.74291   0.0  0.02143    0.16    1.64   49.60  24403.20   14880.00   81.34     0.00   0.000    0.015   0.021
TOT                                   1.62                 244032.02  148800.00
AVG                            0.0214            1.64   49.60                   81.34
CUM                                2007.35
************************************************** BIOLOGICAL AND PHYSICAL COEFFICIENTS **************************************************
ELEM  ENDING  SAT    REAER  BOD#1 BOD#1 ABOD#1  BOD#2 BOD#2 ABOD#2  BKGD  FULL  CORR   ORGN  ORGN    NH3   NH3  DENIT   PO4   ALG   MAC   COLI    NCM    NCM
NO.    DIST  D.O.   RATE  DECAY  SETT  DECAY  DECAY  SETT  DECAY   SOD   SOD   SOD  DECAY  SETT  DECAY  SRCE  RATE  SRCE  PROD  PROD  DECAY  DECAY   SETT
          mg/L    1/da   1/da   1/da   1/da   1/da   1/da   1/da    *     *     *    1/da  1/da   1/da     *    1/da     *    **    **    1/da   1/da   1/da
 44  10.100  7.44   0.52   0.10  0.08   0.00   0.01  0.00   0.00  0.38  0.62  0.62   0.06  0.01   0.23  0.00   0.00  0.00  0.37  0.00   0.00   0.00   0.00
 45   9.800  7.45   0.52   0.10  0.08   0.00   0.01  0.00   0.00  0.38  0.61  0.61   0.06  0.01   0.23  0.00   0.00  0.00  0.40  0.00   0.00   0.00   0.00
 46   9.500  7.45   0.52   0.10  0.08   0.00   0.01  0.00   0.00  0.38  0.61  0.61   0.06  0.01   0.23  0.00   0.00  0.00  0.42  0.00   0.00   0.00   0.00
 47   9.200  7.45   0.52   0.10  0.08   0.00   0.01  0.00   0.00  0.38  0.60  0.60   0.06  0.01   0.23  0.00   0.00  0.00  0.45  0.00   0.00   0.00   0.00
 48   8.900  7.45   0.52   0.10  0.08   0.00   0.01  0.00   0.00  0.38  0.59  0.59   0.06  0.01   0.23  0.00   0.00  0.00  0.47  0.00   0.00   0.00   0.00
 49   8.600  7.45   0.52   0.10  0.08   0.00   0.01  0.00   0.00  0.38  0.59  0.59   0.06  0.01   0.23  0.00   0.00  0.00  0.50  0.00   0.00   0.00   0.00
 50   8.300  7.45   0.52   0.10  0.08   0.00   0.01  0.00   0.00  0.38  0.58  0.58   0.06  0.01   0.23  0.00   0.00  0.00  0.52  0.00   0.00   0.00   0.00
 51   8.000  7.45   0.52   0.10  0.08   0.00   0.01  0.00   0.00  0.38  0.58  0.58   0.06  0.01   0.23  0.00   0.00  0.00  0.55  0.00   0.00   0.00   0.00
 52   7.700  7.45   0.52   0.10  0.08   0.00   0.01  0.00   0.00  0.38  0.57  0.57   0.06  0.01   0.23  0.00   0.00  0.00  0.57  0.00   0.00   0.00   0.00
 53   7.400  7.46   0.52   0.10  0.08   0.00   0.01  0.00   0.00  0.38  0.56  0.56   0.06  0.01   0.23  0.00   0.00  0.00  0.60  0.00   0.00   0.00   0.00
AVG 20 DEG C RATE    0.43   0.06  0.06   0.00   0.01  0.00   0.00  0.19              0.05  0.01   0.10  0.00   0.00  0.00              3.00   0.00   0.00
*   g/m²/d          **   mg/L/day
************************************************** WATER QUALITY CONSTITUENT VALUES **************************************************
ELEM  ENDING   TEMP  SALN    CM-I   CM-II    DO  BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN    NH3  NO3+2   TOTN   PHOS  CHL A  MACRO    COLI    NCM
NO.    DIST  DEG C   PPT    mg/L    mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   µg/L   g/m³  #/100mL
 44  10.100  30.89  0.00    0.00    0.00  6.04  1.89  0.00  1.89  0.00  0.00  0.26  0.38  0.64  0.06  4.51   0.00     0.   0.00
 45   9.800  30.88  0.00    0.00    0.00  6.12  1.83  0.00  1.83  0.00  0.00  0.25  0.39  0.64  0.06  4.82   0.00     0.   0.00
 46   9.500  30.87  0.00    0.00    0.00  6.21  1.78  0.00  1.78  0.00  0.00  0.24  0.40  0.63  0.06  5.13   0.00     0.   0.00
 47   9.200  30.86  0.00    0.00    0.00  6.29  1.73  0.00  1.73  0.00  0.00  0.23  0.40  0.63  0.06  5.44   0.00     0.   0.00
 48   8.900  30.85  0.00    0.00    0.00  6.37  1.68  0.00  1.68  0.00  0.00  0.22  0.41  0.63  0.06  5.75   0.00     0.   0.00
 49   8.600  30.84  0.00    0.00    0.00  6.45  1.64  0.00  1.64  0.00  0.00  0.21  0.41  0.62  0.06  6.06   0.00     0.   0.00
 50   8.300  30.83  0.00    0.00    0.00  6.53  1.59  0.00  1.59  0.00  0.00  0.21  0.41  0.62  0.06  6.37   0.00     0.   0.00
```

```
 51   8.000  30.82  0.00    0.00    0.00  6.61  1.55  0.00  1.55  0.00  0.00  0.20  0.42  0.61  0.06  6.68   0.00     0.   0.00
 52   7.700  30.81  0.00    0.00    0.00  6.69  1.50  0.00  1.50  0.00  0.00  0.19  0.42  0.61  0.06  6.99   0.00     0.   0.00
 53   7.400  30.80  0.00    0.00    0.00  6.76  1.46  0.00  1.46  0.00  0.00  0.19  0.42  0.61  0.06  7.30   0.00     0.   0.00
FINAL REPORT            Headwater                    Pearl River DO Modeling 090204
REACH NO.  9   Below H to Evans Creek                    COEF-1 Run
************************************************************ REACH INPUTS ************************************************************
 ELEM  TYPE      FLOW    TEMP    SALN    CM-I   CM-II    DO  BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN    NH3  NO3+2   PHOS  CHL A    COLI    NCM
 NO.               deg C    ppt    mg/L    mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   µg/L  #/100mL
  54  UPR RCH  1.74291  30.80    0.00    0.00    0.00  6.76  1.46  0.00  1.46  0.00  0.00  0.19  0.42  0.06  7.30   0.00   0.00
************************************************************ HYDRAULIC PARAMETER VALUES ************************************************************
 ELEM  BEGIN  ENDING     FLOW  PCT  ADVCTV   TRAVEL  DEPTH  WIDTH   VOLUME   SURFACE  X-SECT    TIDAL  TIDAL  DISPRSN   MEAN
 NO.   DIST   DIST          EFF   VELO    TIME                          AREA   AREA    PRISM   VELO          VELO
       km     km       m³/s          m/s   days     m      m       m³       m²      m²       m³    m/s    m²/s    m/s
  54   7.40   7.01   1.74291  0.0  0.00790    0.57   2.25  98.10  86082.75  38259.00  220.72    0.00  0.000    0.007  0.008
  55   7.01   6.62   1.74291  0.0  0.00790    0.57   2.25  98.10  86082.75  38259.00  220.72    0.00  0.000    0.007  0.008
  56   6.62   6.23   1.74291  0.0  0.00790    0.57   2.25  98.10  86082.75  38259.00  220.72    0.00  0.000    0.007  0.008
  57   6.23   5.84   1.74291  0.0  0.00790    0.57   2.25  98.10  86082.75  38259.00  220.72    0.00  0.000    0.007  0.008
  58   5.84   5.45   1.74291  0.0  0.00790    0.57   2.25  98.10  86082.75  38259.00  220.72    0.00  0.000    0.007  0.008
 TOT                                   2.86            430413.75  191295.00
 AVG                          0.0079          2.25  98.10                  220.73
 CUM                                2010.20
************************************************************ BIOLOGICAL AND PHYSICAL COEFFICIENTS ************************************************************
 ELEM  ENDING  SAT   REAER  BOD#1 BOD#1 ABOD#1  BOD#2 BOD#2 ABOD#2  BKGD  FULL  CORR   ORGN ORGN   NH3   NH3 DENIT   PO4   ALG   MAC   COLI   NCM   NCM
 NO.    DIST  D.O.   RATE  DECAY  SETT  DECAY  DECAY  SETT  DECAY   SOD   SOD   SOD  DECAY  SETT  DECAY  SRCE   RATE  SRCE  PROD  PROD  DECAY  DECAY   SETT
          mg/L   1/da   1/da  1/da   1/da   1/da  1/da   1/da   1/da    *     *     *    1/da  1/da   1/da    *    1/da    *    **    **    1/da   1/da   1/da
  54   7.010  7.46   0.38  0.10  0.06   0.00   0.01  0.00   0.00  1.62  1.79  1.79   0.06  0.01   0.23  0.00   0.00  0.00  0.60  0.00   0.00   0.00   0.00
  55   6.620  7.46   0.38  0.10  0.06   0.00   0.01  0.00   0.00  1.62  1.78  1.78   0.06  0.01   0.23  0.00   0.00  0.00  0.60  0.00   0.00   0.00   0.00
  56   6.230  7.46   0.38  0.10  0.06   0.00   0.01  0.00   0.00  1.62  1.76  1.76   0.06  0.01   0.23  0.00   0.00  0.00  0.60  0.00   0.00   0.00   0.00
  57   5.840  7.46   0.38  0.10  0.06   0.00   0.01  0.00   0.00  1.62  1.75  1.75   0.06  0.01   0.23  0.00   0.00  0.00  0.60  0.00   0.00   0.00   0.00
  58   5.450  7.46   0.38  0.10  0.06   0.00   0.01  0.00   0.00  1.62  1.74  1.74   0.06  0.01   0.23  0.00   0.00  0.00  0.60  0.00   0.00   0.00   0.00
 AVG 20 DEG C RATE    0.31  0.06  0.04   0.00   0.01  0.00   0.00  0.82            0.05  0.00   0.10  0.00   0.00  0.00            3.00   0.00   0.00
 *  g/m²/d          **   mg/L/day
************************************************************ WATER QUALITY CONSTITUENT VALUES ************************************************************
 ELEM  ENDING   TEMP  SALN    CM-I   CM-II    DO  BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN    NH3  NO3+2   TOTN   PHOS  CHL A  MACRO    COLI    NCM
 NO.    DIST  DEG C   PPT    mg/L    mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   µg/L   g/m³  #/100mL
  54   7.010  30.80  0.00    0.00    0.00  6.73  1.34  0.00  1.34  0.00  0.00  0.16  0.42  0.59  0.06  7.30   0.00     0.   0.00
  55   6.620  30.80  0.00    0.00    0.00  6.71  1.23  0.00  1.23  0.00  0.00  0.15  0.43  0.57  0.06  7.30   0.00     0.   0.00
  56   6.230  30.80  0.00    0.00    0.00  6.71  1.13  0.00  1.13  0.00  0.00  0.13  0.43  0.55  0.06  7.30   0.00     0.   0.00
  57   5.840  30.80  0.00    0.00    0.00  6.71  1.04  0.00  1.04  0.00  0.00  0.11  0.42  0.54  0.06  7.30   0.00     0.   0.00
  58   5.450  30.80  0.00    0.00    0.00  6.72  0.95  0.00  0.95  0.00  0.00  0.10  0.42  0.52  0.06  7.30   0.00     0.   0.00
FINAL REPORT            Headwater                    Pearl River DO Modeling 090204
REACH NO. 10   Evans Creek to Possible Stream                    COEF-1 Run
************************************************************ REACH INPUTS ************************************************************
 ELEM  TYPE      FLOW    TEMP    SALN    CM-I   CM-II    DO  BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN    NH3  NO3+2   PHOS  CHL A    COLI    NCM
 NO.               deg C    ppt    mg/L    mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   µg/L  #/100mL
  59  UPR RCH  1.74291  30.80    0.00    0.00    0.00  6.72  0.95  0.00  0.95  0.00  0.00  0.10  0.42  0.06  7.30   0.00   0.00
************************************************************ HYDRAULIC PARAMETER VALUES ************************************************************
 ELEM  BEGIN  ENDING     FLOW  PCT  ADVCTV   TRAVEL  DEPTH  WIDTH   VOLUME   SURFACE  X-SECT    TIDAL  TIDAL  DISPRSN   MEAN
 NO.   DIST   DIST          EFF   VELO    TIME                          AREA   AREA    PRISM   VELO          VELO
       km     km       m³/s          m/s   days     m      m       m³       m²      m²       m³    m/s    m²/s    m/s
```

```
 59   5.45   5.20   1.74291  0.0  0.00790    0.37   2.25  98.10  55181.25  24525.00  220.72     0.00  0.000    0.007  0.008
 60   5.20   4.95   1.74291  0.0  0.00790    0.37   2.25  98.10  55181.25  24525.00  220.72     0.00  0.000    0.007  0.008
 61   4.95   4.70   1.74291  0.0  0.00790    0.37   2.25  98.10  55181.25  24525.00  220.72     0.00  0.000    0.007  0.008
 TOT                                  1.10            165543.73   73575.00
 AVG                          0.0079          2.25   98.10                 220.72
 CUM                                2011.30
********************************************** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********************************************
ELEM  ENDING  SAT   REAER  BOD#1 BOD#1 ABOD#1  BOD#2 BOD#2 ABOD#2  BKGD  FULL  CORR   ORGN ORGN   NH3  NH3 DENIT  PO4  ALG  MAC  COLI   NCM   NCM
NO.   DIST  D.O.   RATE  DECAY SETT DECAY DECAY SETT DECAY  SOD  SOD  SOD DECAY SETT DECAY SRCE  RATE SRCE PROD PROD DECAY DECAY  SETT
          mg/L   1/da  1/da 1/da  1/da  1/da 1/da  1/da   *    *    *   1/da 1/da  1/da   *   1/da   *   **   **   1/da  1/da  1/da
 59   5.200  7.46   0.38  0.10 0.06  0.00  0.01 0.00  0.00 1.13  1.24  1.24  0.06 0.01  0.23 0.00  0.00 0.00 0.60 0.00  0.00  0.00  0.00
 60   4.950  7.46   0.38  0.10 0.06  0.00  0.01 0.00  0.00 1.13  1.24  1.24  0.06 0.01  0.23 0.00  0.00 0.00 0.60 0.00  0.00  0.00  0.00
 61   4.700  7.46   0.38  0.10 0.06  0.00  0.01 0.00  0.00 1.13  1.23  1.23  0.06 0.01  0.23 0.00  0.00 0.00 0.60 0.00  0.00  0.00  0.00
AVG 20 DEG C RATE    0.31  0.06 0.04  0.00  0.01 0.00  0.00 0.57            0.05 0.00  0.10 0.00  0.00 0.00            3.00  0.00  0.00
*  g/m²/d          **  mg/L/day
********************************************** WATER QUALITY CONSTITUENT VALUES **********************************************
ELEM  ENDING  TEMP  SALN    CM-I   CM-II   DO  BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN   NH3  NO3+2  TOTN  PHOS  CHL A  MACRO    COLI    NCM
NO.   DIST  DEG C  PPT    mg/L    mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  µg/L   g/m³  #/100mL
 59   5.200  30.80  0.00    0.00    0.00  6.79  0.90  0.00  0.90  0.00  0.00  0.09  0.42  0.51  0.06  7.30  0.00      0.   0.00
 60   4.950  30.80  0.00    0.00    0.00  6.86  0.85  0.00  0.85  0.00  0.00  0.09  0.41  0.50  0.06  7.30  0.00      0.   0.00
 61   4.700  30.80  0.00    0.00    0.00  6.93  0.81  0.00  0.81  0.00  0.00  0.08  0.41  0.49  0.06  7.30  0.00      0.   0.00
FINAL REPORT            Headwater                        Pearl River DO Modeling 090204
REACH NO. 11   Possible Stream to Junior High                  COEF-1 Run
********************************************************** REACH INPUTS **********************************************************
ELEM  TYPE      FLOW    TEMP    SALN    CM-I   CM-II    DO  BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN   NH3  NO3+2  PHOS  CHL A    COLI    NCM
NO.                deg C    ppt    mg/L    mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  µg/L  #/100mL
 62  UPR RCH   1.74291  30.80    0.00    0.00    0.00  6.93  0.81  0.00  0.81  0.00  0.00  0.08  0.41  0.06  7.30    0.00   0.00
EACH  INCR     0.07500  30.00    0.00    0.00    0.00  5.00  5.94  0.00            0.00  0.50  0.10  0.00    0.00   0.00
******************************************************* HYDRAULIC PARAMETER VALUES *******************************************************
ELEM  BEGIN  ENDING     FLOW  PCT  ADVCTV   TRAVEL   DEPTH  WIDTH   VOLUME   SURFACE  X-SECT    TIDAL  TIDAL  DISPRSN   MEAN
NO.   DIST   DIST          EFF    VELO     TIME                          AREA   AREA    PRISM   VELO           VELO
       km     km      m³/s          m/s    days     m      m       m³       m²      m²       m³     m/s     m²/s    m/s
 62   4.70   4.38   1.81791  0.0  0.00824    0.46   2.25  98.10  71735.62  31882.50  220.72     0.00  0.000    0.007  0.008
 63   4.38   4.05   1.89291  0.0  0.00858    0.44   2.25  98.10  71735.62  31882.50  220.72     0.00  0.000    0.008  0.009
 64   4.05   3.73   1.96791  0.0  0.00892    0.42   2.25  98.10  71735.62  31882.50  220.72     0.00  0.000    0.008  0.009
 65   3.73   3.40   2.04291  0.0  0.00926    0.41   2.25  98.10  71735.62  31882.50  220.72     0.00  0.000    0.008  0.009
 TOT                                  1.72            286942.50  127530.00
 AVG                          0.0087          2.25   98.10                 220.72
 CUM                                2013.03
********************************************** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********************************************
ELEM  ENDING  SAT   REAER  BOD#1 BOD#1 ABOD#1  BOD#2 BOD#2 ABOD#2  BKGD  FULL  CORR   ORGN ORGN   NH3  NH3 DENIT  PO4  ALG  MAC  COLI   NCM   NCM
NO.   DIST  D.O.   RATE  DECAY SETT DECAY DECAY SETT DECAY  SOD  SOD  SOD DECAY SETT DECAY SRCE  RATE SRCE PROD PROD DECAY DECAY  SETT
          mg/L   1/da  1/da 1/da  1/da  1/da 1/da  1/da   *    *    *   1/da 1/da  1/da   *   1/da   *   **   **   1/da  1/da  1/da
 62   4.375  7.45   0.38  0.10 0.06  0.00  0.01 0.00  0.00 1.13  1.25  1.25  0.06 0.01  0.23 0.00  0.00 0.00 0.65 0.00  0.00  0.00  0.00
 63   4.050  7.44   0.38  0.10 0.06  0.00  0.01 0.00  0.00 1.14  1.28  1.28  0.06 0.01  0.23 0.00  0.00 0.00 0.71 0.00  0.00  0.00  0.00
 64   3.725  7.43   0.38  0.10 0.06  0.00  0.01 0.00  0.00 1.14  1.29  1.29  0.06 0.01  0.23 0.00  0.00 0.00 0.76 0.00  0.00  0.00  0.00
 65   3.400  7.42   0.38  0.10 0.06  0.00  0.01 0.00  0.00 1.15  1.31  1.31  0.06 0.01  0.24 0.00  0.00 0.00 0.82 0.00  0.00  0.00  0.00
AVG 20 DEG C RATE    0.31  0.06 0.04  0.00  0.01 0.00  0.00 0.57            0.05 0.00  0.10 0.00  0.00 0.00            3.00  0.00  0.00
*  g/m²/d          **  mg/L/day
********************************************** WATER QUALITY CONSTITUENT VALUES **********************************************
```

```
 ELEM  ENDING  TEMP SALN    CM-I   CM-II   DO  BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN   NH3  NO3+2   TOTN  PHOS  CHL A  MACRO    COLI    NCM
 NO.    DIST  DEG C  PPT    mg/L    mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L   µg/L   g/m³  #/100mL
  62   4.375  30.88  0.00    0.00    0.00  6.94  0.95  0.00  0.95  0.00  0.00  0.09  0.39  0.48  0.06  7.93   0.00      0.   0.00
  63   4.050  30.95  0.00    0.00    0.00  6.95  1.07  0.00  1.07  0.00  0.00  0.09  0.37  0.47  0.06  8.55   0.00      0.   0.00
  64   3.725  31.02  0.00    0.00    0.00  6.98  1.18  0.00  1.18  0.00  0.00  0.10  0.36  0.45  0.06  9.18   0.00      0.   0.00
  65   3.400  31.10  0.00    0.00    0.00  7.01  1.27  0.00  1.27  0.00  0.00  0.10  0.34  0.44  0.06  9.80   0.00      0.   0.00
FINAL REPORT            Headwater                        Pearl River DO Modeling 090204
REACH NO. 12    Junior High to Spillway                   COEF-1 Run
*********************************************************** REACH INPUTS ***********************************************************
 ELEM  TYPE      FLOW    TEMP    SALN    CM-I   CM-II    DO  BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN   NH3  NO3+2   PHOS  CHL A    COLI    NCM
 NO.                deg C    ppt    mg/L    mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L   µg/L  #/100mL
  66  UPR RCH   2.04291  31.10    0.00    0.00    0.00  7.01  1.27  0.00  1.27  0.00  0.00  0.10  0.34  0.06  9.80    0.00    0.00
  66  WSTLD    0.00019  30.00    0.00    0.00    0.00  5.00 69.00  0.00 69.00  0.00  0.00 10.00  0.00  0.00  0.00    0.00    0.00
************************************************** HYDRAULIC PARAMETER VALUES **************************************************
 ELEM  BEGIN  ENDING     FLOW  PCT  ADVCTV   TRAVEL  DEPTH  WIDTH   VOLUME   SURFACE  X-SECT    TIDAL  TIDAL  DISPRSN   MEAN
 NO.   DIST   DIST        EFF   VELO    TIME                          AREA   AREA    PRISM   VELO          VELO
       km     km       m³/s        m/s   days     m     m      m³       m²      m²      m³    m/s    m²/s    m/s
  66   3.40   3.05   2.04310  0.0  0.01916    0.21   1.81  58.90  37313.15  20615.00  106.61    0.00  0.000    0.015  0.019
  67   3.05   2.70   2.04310  0.0  0.01916    0.21   1.81  58.90  37313.15  20615.00  106.61    0.00  0.000    0.015  0.019
 TOT                                   0.42              74626.30  41230.00
 AVG                            0.0192          1.81  58.90                 106.61
 CUM                                2013.45
********************************************** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********************************************
 ELEM  ENDING  SAT   REAER  BOD#1 BOD#1 ABOD#1  BOD#2 BOD#2 ABOD#2  BKGD  FULL  CORR   ORGN ORGN   NH3   NH3 DENIT   PO4   ALG   MAC   COLI   NCM   NCM
 NO.    DIST  D.O.   RATE  DECAY  SETT  DECAY  DECAY  SETT  DECAY   SOD   SOD   SOD DECAY  SETT  DECAY SRCE   RATE SRCE  PROD  PROD DECAY DECAY   SETT
          mg/L   1/da  1/da  1/da  1/da  1/da  1/da  1/da   *     *     *    1/da  1/da  1/da    *    1/da    *    **    **   1/da  1/da  1/da
  66   3.050  7.39   0.48  0.10  0.07   0.00   0.01  0.00  0.00  1.02  1.18  1.18   0.06  0.01   0.24  0.00   0.00  0.00  0.51  0.00   0.00   0.00   0.00
  67   2.700  7.35   0.48  0.10  0.07   0.00   0.01  0.00  0.00  1.04  1.19  1.19   0.06  0.01   0.24  0.00   0.00  0.00  0.20  0.00   0.00   0.00   0.00
AVG 20 DEG C RATE    0.39  0.06  0.06   0.00   0.01  0.00  0.00  0.50              0.05  0.01   0.10  0.00   0.00  0.00              3.00   0.00   0.00
*   g/m²/d          **   mg/L/day
*************************************************** WATER QUALITY CONSTITUENT VALUES ***************************************************
 ELEM  ENDING  TEMP SALN    CM-I   CM-II   DO  BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN   NH3  NO3+2   TOTN  PHOS  CHL A  MACRO    COLI    NCM
 NO.    DIST  DEG C  PPT    mg/L    mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L   µg/L   g/m³  #/100mL
  66   3.050  31.35  0.00    0.00    0.00  6.99  1.24  0.00  1.24  0.00  0.00  0.10  0.34  0.44  0.04  6.05   0.00      0.   0.00
  67   2.700  31.60  0.00    0.00    0.00  6.92  1.19  0.00  1.19  0.00  0.00  0.10  0.34  0.44  0.03  2.30   0.00      0.   0.00
FINAL REPORT            Headwater                        Pearl River DO Modeling 090204
REACH NO. 13    Spillway to Lock 1                        COEF-1 Run
*********************************************************** REACH INPUTS ***********************************************************
 ELEM  TYPE      FLOW    TEMP    SALN    CM-I   CM-II    DO  BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN   NH3  NO3+2   PHOS  CHL A    COLI    NCM
 NO.                deg C    ppt    mg/L    mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L   µg/L  #/100mL
  68  UPR RCH   2.04310  31.60    0.00    0.00    0.00  6.92  1.19  0.00  1.19  0.00  0.00  0.10  0.34  0.03  2.30    0.00    0.00
************************************************** HYDRAULIC PARAMETER VALUES **************************************************
 ELEM  BEGIN  ENDING     FLOW  PCT  ADVCTV   TRAVEL  DEPTH  WIDTH   VOLUME   SURFACE  X-SECT    TIDAL  TIDAL  DISPRSN   MEAN
 NO.   DIST   DIST        EFF   VELO    TIME                          AREA   AREA    PRISM   VELO          VELO
       km     km       m³/s        m/s   days     m     m      m³       m²      m²      m³    m/s    m²/s    m/s
  68   2.70   2.40   2.04310  0.0  0.01055    0.33   2.26  85.70  58104.60  25710.00  193.68    0.00  0.000    0.010  0.011
  69   2.40   2.10   2.04310  0.0  0.01055    0.33   2.26  85.70  58104.60  25710.00  193.68    0.00  0.000    0.010  0.011
  70   2.10   1.80   2.04310  0.0  0.01055    0.33   2.26  85.70  58104.60  25710.00  193.68    0.00  0.000    0.010  0.011
  71   1.80   1.50   2.04310  0.0  0.01055    0.33   2.26  85.70  58104.60  25710.00  193.68    0.00  0.000    0.010  0.011
  72   1.50   1.20   2.04310  0.0  0.01055    0.33   2.26  85.70  58104.60  25710.00  193.68    0.00  0.000    0.010  0.011
```

```
 73   1.20   0.90   2.04310   0.0   0.01055    0.33   2.26   85.70  58104.60   25710.00  193.68     0.00   0.000    0.010   0.011
 74   0.90   0.60   2.04310   0.0   0.01055    0.33   2.26   85.70  58104.60   25710.00  193.68     0.00   0.000    0.010   0.011
 75   0.60   0.30   2.04310   0.0   0.01055    0.33   2.26   85.70  58104.60   25710.00  193.68     0.00   0.000    0.010   0.011
 76   0.30   0.00   2.04310   0.0   0.01055    0.33   2.26   85.70  58104.60   25710.00  193.68     0.00   0.000    0.010   0.011
TOT                                   2.96            522941.38  231390.00
AVG                            0.0105          2.26   85.70                  193.68
CUM                                 2016.41
********************************************** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********************************************
ELEM  ENDING  SAT   REAER  BOD#1 BOD#1 ABOD#1  BOD#2 BOD#2 ABOD#2  BKGD  FULL  CORR   ORGN ORGN   NH3   NH3 DENIT  PO4  ALG  MAC  COLI   NCM   NCM
NO.   DIST  D.O.   RATE  DECAY  SETT  DECAY  DECAY  SETT  DECAY   SOD   SOD   SOD  DECAY  SETT  DECAY  SRCE  RATE  SRCE  PROD  PROD  DECAY  DECAY   SETT
          mg/L   1/da   1/da  1/da   1/da   1/da  1/da   1/da    *     *     *   1/da  1/da   1/da    *   1/da    *    **    **   1/da   1/da   1/da
 68   2.400  7.35   0.38   0.10  0.06   0.00   0.01  0.00   0.00  0.00  0.15  0.15   0.06  0.01   0.24  0.00   0.00  0.00  0.20  0.00   0.00   0.00   0.00
 69   2.100  7.35   0.38   0.10  0.06   0.00   0.01  0.00   0.00  0.00  0.14  0.14   0.06  0.01   0.24  0.00   0.00  0.00  0.20  0.00   0.00   0.00   0.00
 70   1.800  7.35   0.38   0.10  0.06   0.00   0.01  0.00   0.00  0.00  0.13  0.13   0.06  0.01   0.25  0.00   0.00  0.00  0.20  0.00   0.00   0.00   0.00
 71   1.500  7.35   0.38   0.10  0.06   0.00   0.01  0.00   0.00  0.00  0.13  0.13   0.06  0.01   0.25  0.00   0.00  0.00  0.20  0.00   0.00   0.00   0.00
 72   1.200  7.35   0.38   0.10  0.06   0.00   0.01  0.00   0.00  0.00  0.12  0.12   0.06  0.01   0.25  0.00   0.00  0.00  0.20  0.00   0.00   0.00   0.00
 73   0.900  7.35   0.38   0.10  0.06   0.00   0.01  0.00   0.00  0.00  0.12  0.12   0.06  0.01   0.25  0.00   0.00  0.00  0.20  0.00   0.00   0.00   0.00
 74   0.600  7.35   0.38   0.10  0.06   0.00   0.01  0.00   0.00  0.00  0.11  0.11   0.06  0.01   0.25  0.00   0.00  0.00  0.20  0.00   0.00   0.00   0.00
 75   0.300  7.35   0.38   0.10  0.06   0.00   0.01  0.00   0.00  0.00  0.10  0.10   0.06  0.01   0.25  0.00   0.00  0.00  0.20  0.00   0.00   0.00   0.00
 76   0.000  7.35   0.38   0.10  0.06   0.00   0.01  0.00   0.00  0.00  0.10  0.10   0.06  0.01   0.25  0.00   0.00  0.00  0.20  0.00   0.00   0.00   0.00
AVG 20 DEG C RATE    0.31   0.06  0.04   0.00   0.01  0.00   0.00  0.00            0.05  0.00   0.10  0.00   0.00  0.00            3.00   0.00   0.00
*  g/m²/d          **   mg/L/day
********************************************** WATER QUALITY CONSTITUENT VALUES **********************************************
ELEM  ENDING  TEMP  SALN    CM-I   CM-II   DO   BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN    NH3  NO3+2   TOTN   PHOS  CHL A   MACRO    COLI    NCM
NO.   DIST  DEG C   PPT    mg/L    mg/L  mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L    µg/L    g/m³  #/100mL
 68   2.400  31.60  0.00    0.00    0.00  6.97   1.13   0.00   1.13   0.00   0.00   0.09   0.35   0.43   0.03   2.30   0.00      0.   0.00
 69   2.100  31.60  0.00    0.00    0.00  7.02   1.07   0.00   1.07   0.00   0.00   0.08   0.35   0.43   0.03   2.30   0.00      0.   0.00
 70   1.800  31.60  0.00    0.00    0.00  7.07   1.02   0.00   1.02   0.00   0.00   0.08   0.35   0.43   0.03   2.30   0.00      0.   0.00
 71   1.500  31.60  0.00    0.00    0.00  7.11   0.97   0.00   0.97   0.00   0.00   0.07   0.35   0.42   0.03   2.30   0.00      0.   0.00
 72   1.200  31.60  0.00    0.00    0.00  7.15   0.92   0.00   0.92   0.00   0.00   0.06   0.36   0.42   0.03   2.30   0.00      0.   0.00
 73   0.900  31.60  0.00    0.00    0.00  7.19   0.87   0.00   0.87   0.00   0.00   0.06   0.36   0.42   0.03   2.30   0.00      0.   0.00
 74   0.600  31.60  0.00    0.00    0.00  7.23   0.83   0.00   0.83   0.00   0.00   0.06   0.36   0.41   0.03   2.30   0.00      0.   0.00
 75   0.300  31.60  0.00    0.00    0.00  7.26   0.79   0.00   0.79   0.00   0.00   0.05   0.36   0.41   0.03   2.30   0.00      0.   0.00
 76   0.000  31.60  0.00    0.00    0.00  7.28   0.75   0.00   0.75   0.00   0.00   0.05   0.36   0.41   0.03   2.30   0.00      0.   0.00
STREAM SUMMARY                                    Pearl River DO Modeling 090204
      Headwater                                 COEF-1 Run
TRAVEL TIME      =       2016.41 DAYS
MAXIMUM EFFLUENT  =          0.01 PERCENT
FLOW            =  0.00283 TO    2.04310   m³/s
DISPERSION       =  0.0000  TO    0.0150    m²/s
VELOCITY         =  0.00002 TO    0.02143   m/s
DEPTH           =  1.64    TO    3.75      m
WIDTH           =  49.60   TO   98.10      m
BOD DECAY        =    0.09   TO    0.10      per day
NH3 DECAY        =    0.20   TO    0.25      per day
SOD             =    0.10   TO    4.12      g/m²/d
NH3 SOURCE       =    0.00   TO    0.00      g/m²/d
REAERATION       =    0.22   TO    0.52      per day
BOD SETTLING     =    0.03   TO    0.08      per day
ORG-N DECAY      =    0.06   TO    0.06      per day
```

ORG-N SETTLING = 0.00 TO 0.01 per day
TEMPERATURE = 29.80 TO 32.10 deg C
DISSOLVED OXYGEN = 5.03 TO 7.28 mg/L
Pearl River DO Modeling 090204
COEF-1 Run
REACH SUMMARY REPORT FOR Headwater

| RCH NO. | REACH NAME | BEGIN DIST km | ENDING DIST km | REACH LENGTH km | TRAVEL TIME days | FLOW AT EOR m3/s | AVERAGE VELO m/s | AVG DEPTH m | AVG WIDTH m | FLOW AT EOR cfs | AVERAGE VELO fps | AVG DEPTH ft | AVG WIDTH ft |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Lock 3 to Below A | 23.00 | 21.50 | 1.50 | 746.50 | 0.00283 | 0.00002 | 2.210 | 55.10 | 0.100 | 0.000 | 7.251 | 180.78 |
| 2 | Below A to Below B | 21.50 | 20.50 | 1.00 | 497.66 | 0.00283 | 0.00002 | 2.210 | 55.10 | 0.100 | 0.000 | 7.251 | 180.78 |
| 3 | Below B to Below C | 20.50 | 19.00 | 1.50 | 746.50 | 0.00283 | 0.00002 | 2.210 | 55.10 | 0.100 | 0.000 | 7.251 | 180.78 |
| 4 | Below C to Lock 2 | 19.00 | 17.78 | 1.22 | 4.19 | 0.87283 | 0.00337 | 2.110 | 59.30 | 30.820 | 0.011 | 6.923 | 194.56 |
| 5 | Lock 2 (Church) to ABTalisheek | 17.78 | 13.43 | 4.35 | 5.95 | 1.15291 | 0.00846 | 1.910 | 62.90 | 40.709 | 0.028 | 6.267 | 206.37 |
| 6 | AB to Talisheek | 13.43 | 11.98 | 1.45 | 1.75 | 1.15291 | 0.00960 | 1.910 | 62.90 | 40.709 | 0.031 | 6.267 | 206.37 |
| 7 | Talisheek to Below G | 11.98 | 10.40 | 1.58 | 3.17 | 1.74291 | 0.00577 | 3.750 | 69.50 | 61.542 | 0.019 | 12.304 | 228.03 |
| 8 | Below G to Below H | 10.40 | 7.40 | 3.00 | 1.62 | 1.74291 | 0.02143 | 1.640 | 49.60 | 61.542 | 0.070 | 5.381 | 162.74 |
| 9 | Below H to Evans Creek | 7.40 | 5.45 | 1.95 | 2.86 | 1.74291 | 0.00790 | 2.250 | 98.10 | 61.542 | 0.026 | 7.382 | 321.87 |
| 10 | Evans Creek to Possible Stream | 5.45 | 4.70 | 0.75 | 1.10 | 1.74291 | 0.00790 | 2.250 | 98.10 | 61.542 | 0.026 | 7.382 | 321.87 |
| 11 | Possible Stream to Junior High | 4.70 | 3.40 | 1.30 | 1.72 | 2.04291 | 0.00873 | 2.250 | 98.10 | 72.135 | 0.029 | 7.382 | 321.87 |
| 12 | Junior High to Spillway | 3.40 | 2.70 | 0.70 | 0.42 | 2.04310 | 0.01916 | 1.810 | 58.90 | 72.142 | 0.063 | 5.939 | 193.25 |
| 13 | Spillway to Lock 1 | 2.70 | 0.00 | 2.70 | 2.96 | 2.04310 | 0.01055 | 2.260 | 85.70 | 72.142 | 0.035 | 7.415 | 281.18 |

DISSOLVED OXYGEN LOADING FOR REACH 1: Headwater

| IOR | UPMN ADV | UPTR ADV | LOWR ADV | UPMN DISP | UPTR DISP | LOWR DISP | INCR IN | INCR OUT | NONP IN | WSLD IN | WITH OUT | REAE IN | BOD1 DECA | NH3-N DECA | ORG-N DECA | NCM BKGD | SOD BOD1 | SOD ALG | SOD NCM | SOD PHOT | ALG RESP | ALG PHOT | MAC OUT | TOT IN | TOT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1. | 0. | -2. | 0. | 0. | 0. | 0. | 0. | 0. | 7. | 0. | 0. | 0. | -11. | 0. | 0. | 0. | 5. | 0. | 0. | -12.7 | 12.7 | 0.00 | | |
| 2 | 2. | 0. | -2. | 0. | 0. | 0. | 0. | 0. | 0. | 6. | 0. | 0. | 0. | -11. | 0. | 0. | 0. | 5. | 0. | 0. | -12.7 | 12.7 | 0.00 | | |
| 3 | 2. | 0. | -2. | 0. | 0. | 0. | 0. | 0. | 0. | 6. | 0. | 0. | 0. | -11. | 0. | 0. | 0. | 5. | 0. | 0. | -12.7 | 12.7 | 0.00 | | |
| 4 | 2. | 0. | -2. | 0. | 0. | 0. | 0. | 0. | 0. | 6. | 0. | 0. | 0. | -11. | 0. | 0. | 0. | 5. | 0. | 0. | -12.7 | 12.7 | 0.00 | | |
| 5 | 2. | 0. | -2. | 0. | 0. | 0. | 0. | 0. | 0. | 6. | 0. | 0. | 0. | -11. | 0. | 0. | 0. | 5. | 0. | 0. | -12.7 | 12.7 | 0.00 | | |
| 6 | 2. | 0. | -2. | 0. | 0. | 0. | 0. | 0. | 0. | 4. | 0. | 0. | 0. | -7. | 0. | 0. | 0. | 3. | 0. | 0. | -9.0 | 9.0 | 0.00 | | |
| 7 | 2. | 0. | -2. | 0. | 0. | 0. | 0. | 0. | 0. | 4. | 0. | 0. | 0. | -7. | 0. | 0. | 0. | 3. | 0. | 0. | -9.0 | 9.0 | 0.00 | | |
| 8 | 2. | 0. | -2. | 0. | 0. | 0. | 0. | 0. | 0. | 4. | 0. | 0. | 0. | -7. | 0. | 0. | 0. | 3. | 0. | 0. | -9.0 | 9.0 | 0.00 | | |
| 9 | 2. | 0. | -2. | 0. | 0. | 0. | 0. | 0. | 0. | 4. | 0. | 0. | 0. | -7. | 0. | 0. | 0. | 3. | 0. | 0. | -9.0 | 9.0 | 0.00 | | |
| 10 | 2. | 0. | -2. | 0. | 0. | 0. | 0. | 0. | 0. | 4. | 0. | 0. | 0. | -7. | 0. | 0. | 0. | 3. | 0. | 0. | -9.0 | 9.0 | 0.00 | | |
| 11 | 2. | 0. | -2. | 0. | 0. | 0. | 0. | 0. | 0. | 5. | 0. | 0. | 0. | -9. | 0. | 0. | 0. | 4. | 0. | 0. | -10.5 | 10.5 | 0.00 | | |
| 12 | 2. | 0. | -2. | 0. | 0. | 0. | 0. | 0. | 0. | 5. | 0. | 0. | 0. | -9. | 0. | 0. | 0. | 4. | 0. | 0. | -10.5 | 10.5 | 0.00 | | |
| 13 | 2. | 0. | -2. | 0. | 0. | 0. | 0. | 0. | 0. | 5. | 0. | 0. | 0. | -9. | 0. | 0. | 0. | 3. | 0. | 0. | -10.4 | 10.4 | 0.00 | | |
| 14 | 2. | 0. | -2. | 0. | 0. | 0. | 0. | 0. | 0. | 6. | 0. | 0. | 0. | -9. | 0. | 0. | 0. | 3. | 0. | 0. | -10.4 | 10.4 | 0.00 | | |
| 15 | 2. | 0. | -2. | 0. | 0. | 0. | 0. | 0. | 0. | 6. | 0. | 0. | 0. | -9. | 0. | 0. | 0. | 3. | 0. | 0. | -10.4 | 10.4 | 0.00 | | |
| 16 | 2. | 0. | -108. | 0. | 0. | 0. | 94. | 0. | 0. | 0. | 0. | 26. | -6. | 0. | 0. | 0. | -9. | -4. | 0. | 0. | 5. | 0. | 0. | -126.7 | 126.7 | 0.00 |
| 17 | 108. | 0. | -216. | 0. | 0. | 0. | 94. | 0. | 0. | 0. | 0. | 26. | -6. | 0. | 0. | 0. | -9. | -4. | 0. | 0. | 7. | 0. | 0. | -234.7 | 234.7 | 0.00 |
| 18 | 216. | 0. | -325. | 0. | 0. | 0. | 94. | 0. | 0. | 0. | 0. | 25. | -6. | 0. | 0. | 0. | -9. | -4. | 0. | 0. | 10. | 0. | 0. | -344.3 | 344.3 | 0.00 |
| 19 | 325. | 0. | -437. | 0. | 0. | 0. | 94. | 0. | 0. | 0. | 0. | 24. | -6. | 0. | 0. | 0. | -10. | -4. | 0. | 0. | 12. | 0. | 0. | -455.4 | 455.4 | 0.00 |
| 20 | 437. | 0. | -465. | 0. | 0. | 0. | 8. | 0. | 0. | 0. | 0. | 20. | -5. | 0. | 0. | 0. | -2. | -3. | 0. | 0. | 11. | 0. | 0. | -476.0 | 476.0 | 0.00 |
| 21 | 465. | 0. | -491. | 0. | 0. | 0. | 8. | 0. | 0. | 0. | 0. | 17. | -5. | 0. | 0. | 0. | -2. | -3. | 0. | 0. | 11. | 0. | 0. | -501.2 | 501.2 | 0.00 |
| 22 | 491. | 0. | -514. | 0. | 0. | 0. | 8. | 0. | 0. | 0. | 0. | 15. | -5. | 0. | 0. | 0. | -2. | -3. | 0. | 0. | 11. | 0. | 0. | -524.2 | 524.2 | 0.00 |
| 23 | 514. | 0. | -535. | 0. | 0. | 0. | 8. | 0. | 0. | 0. | 0. | 13. | -5. | 0. | 0. | 0. | -2. | -3. | 0. | 0. | 11. | 0. | 0. | -545.3 | 545.3 | 0.00 |
| 24 | 535. | 0. | -555. | 0. | 0. | 0. | 8. | 0. | 0. | 0. | 0. | 11. | -4. | 0. | 0. | 0. | -2. | -3. | 0. | 0. | 11. | 0. | 0. | -564.9 | 564.9 | 0.00 |
| 25 | 555. | 0. | -574. | 0. | 0. | 0. | 8. | 0. | 0. | 0. | 0. | 9. | -4. | 0. | 0. | 0. | -2. | -3. | 0. | 0. | 11. | 0. | 0. | -583.2 | 583.2 | 0.00 |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 26 | 574. | 0. | -591. | 0. | 0. | 0. | 8. | 0. | 0. | 0. | 0. | 8. | -4. | 0. | 0. | 0. | -2. | -3. | 0. | 0. | 11. | 0. | 0. | -600.6 | 600.6 | 0.00 |
| 27 | 591. | 0. | -608. | 0. | 0. | 0. | 8. | 0. | 0. | 0. | 0. | 7. | -4. | 0. | 0. | 0. | -2. | -3. | 0. | 0. | 11. | 0. | 0. | -617.1 | 617.1 | 0.00 |
| 28 | 608. | 0. | -624. | 0. | 0. | 0. | 8. | 0. | 0. | 0. | 0. | 6. | -4. | 0. | 0. | 0. | -2. | -3. | 0. | 0. | 11. | 0. | 0. | -632.9 | 632.9 | 0.00 |
| 29 | 624. | 0. | -639. | 0. | 0. | 0. | 8. | 0. | 0. | 0. | 0. | 5. | -4. | 0. | 0. | 0. | -2. | -3. | 0. | 0. | 11. | 0. | 0. | -648.2 | 648.2 | 0.00 |
| 30 | 639. | 0. | -654. | 0. | 0. | 0. | 8. | 0. | 0. | 0. | 0. | 5. | -4. | 0. | 0. | 0. | -2. | -3. | 0. | 0. | 11. | 0. | 0. | -663.0 | 663.0 | 0.00 |
| 31 | 654. | 0. | -669. | 0. | 0. | 0. | 8. | 0. | 0. | 0. | 0. | 4. | -4. | 0. | 0. | 0. | -2. | -3. | 0. | 0. | 11. | 0. | 0. | -677.3 | 677.3 | 0.00 |
| 32 | 669. | 0. | -683. | 0. | 0. | 0. | 8. | 0. | 0. | 0. | 0. | 4. | -4. | 0. | 0. | 0. | -2. | -3. | 0. | 0. | 11. | 0. | 0. | -691.4 | 691.4 | 0.00 |
| 33 | 683. | 0. | -697. | 0. | 0. | 0. | 8. | 0. | 0. | 0. | 0. | 4. | -4. | 0. | 0. | 0. | -2. | -2. | 0. | 0. | 11. | 0. | 0. | -705.1 | 705.1 | 0.00 |
| 34 | 697. | 0. | -710. | 0. | 0. | 0. | 8. | 0. | 0. | 0. | 0. | 3. | -4. | 0. | 0. | 0. | -2. | -2. | 0. | 0. | 11. | 0. | 0. | -718.6 | 718.6 | 0.00 |
| 35 | 710. | 0. | -653. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 13. | -3. | 0. | 0. | 0. | -73. | -2. | 0. | 0. | 9. | 0. | 0. | -732.0 | 732.0 | 0.00 |
| 36 | 653. | 0. | -605. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 21. | -3. | 0. | 0. | 0. | -71. | -2. | 0. | 0. | 7. | 0. | 0. | -681.7 | 681.7 | 0.00 |
| 37 | 605. | 0. | -565. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 28. | -3. | 0. | 0. | 0. | -69. | -2. | 0. | 0. | 5. | 0. | 0. | -638.9 | 638.9 | 0.00 |
| 38 | 565. | 0. | -530. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 34. | -3. | 0. | 0. | 0. | -68. | -2. | 0. | 0. | 4. | 0. | 0. | -602.5 | 602.5 | 0.00 |
| 39 | 530. | 0. | -501. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 39. | -3. | 0. | 0. | 0. | -66. | -2. | 0. | 0. | 2. | 0. | 0. | -571.6 | 571.6 | 0.00 |
| 40 | 501. | 0. | -603. | 0. | 0. | 0. | 64. | 0. | 0. | 0. | 0. | 50. | -12. | 0. | 0. | 0. | -10. | -4. | 0. | 0. | 13. | 0. | 0. | -629.2 | 629.2 | 0.00 |
| 41 | 603. | 0. | -701. | 0. | 0. | 0. | 64. | 0. | 0. | 0. | 0. | 44. | -15. | 0. | 0. | 0. | -10. | -5. | 0. | 0. | 21. | 0. | 0. | -731.9 | 731.9 | 0.00 |
| 42 | 701. | 0. | -798. | 0. | 0. | 0. | 64. | 0. | 0. | 0. | 0. | 39. | -18. | 0. | 0. | 0. | -10. | -6. | 0. | 0. | 28. | 0. | 0. | -832.5 | 832.5 | 0.00 |
| 43 | 798. | 0. | -896. | 0. | 0. | 0. | 64. | 0. | 0. | 0. | 0. | 35. | -20. | 0. | 0. | 0. | -10. | -7. | 0. | 0. | 36. | 0. | 0. | -932.8 | 932.8 | 0.00 |
| 44 | 896. | 0. | -909. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 18. | -5. | 0. | 0. | 0. | -6. | -4. | 0. | 0. | 9. | 0. | 0. | -922.7 | 922.7 | 0.00 |
| 45 | 909. | 0. | -922. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 17. | -4. | 0. | 0. | 0. | -6. | -4. | 0. | 0. | 10. | 0. | 0. | -935.4 | 935.4 | 0.00 |
| 46 | 922. | 0. | -935. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 16. | -4. | 0. | 0. | 0. | -6. | -3. | 0. | 0. | 10. | 0. | 0. | -947.9 | 947.9 | 0.00 |
| 47 | 935. | 0. | -947. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 15. | -4. | 0. | 0. | 0. | -6. | -3. | 0. | 0. | 11. | 0. | 0. | -960.3 | 960.3 | 0.00 |
| 48 | 947. | 0. | -959. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 14. | -4. | 0. | 0. | 0. | -6. | -3. | 0. | 0. | 12. | 0. | 0. | -972.4 | 972.4 | 0.00 |
| 49 | 959. | 0. | -972. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 13. | -4. | 0. | 0. | 0. | -6. | -3. | 0. | 0. | 12. | 0. | 0. | -984.3 | 984.3 | 0.00 |
| 50 | 972. | 0. | -984. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 12. | -4. | 0. | 0. | 0. | -6. | -3. | 0. | 0. | 13. | 0. | 0. | -996.1 | 996.1 | 0.00 |
| 51 | 984. | 0. | -995. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 11. | -4. | 0. | 0. | 0. | -6. | -3. | 0. | 0. | 13. | 0. | 0. | -1007.7 | 1007.7 | 0.00 |
| 52 | 995. | 0. | -1007. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 10. | -4. | 0. | 0. | 0. | -6. | -3. | 0. | 0. | 14. | 0. | 0. | -1019.2 | 1019.2 | 0.00 |
| 53 | 1007. | 0. | -1019. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 9. | -4. | 0. | 0. | 0. | -6. | -3. | 0. | 0. | 15. | 0. | 0. | -1030.5 | 1030.5 | 0.00 |
| 54 | 1019. | 0. | -1014. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 24. | -11. | 0. | 0. | 0. | -62. | -7. | 0. | 0. | 52. | 0. | 0. | -1093.8 | 1093.8 | 0.00 |
| 55 | 1014. | 0. | -1011. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 24. | -10. | 0. | 0. | 0. | -62. | -6. | 0. | 0. | 52. | 0. | 0. | -1089.6 | 1089.6 | 0.00 |
| 56 | 1011. | 0. | -1010. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 24. | -10. | 0. | 0. | 0. | -62. | -6. | 0. | 0. | 52. | 0. | 0. | -1087.2 | 1087.2 | 0.00 |
| 57 | 1010. | 0. | -1010. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 24. | -9. | 0. | 0. | 0. | -62. | -5. | 0. | 0. | 52. | 0. | 0. | -1086.1 | 1086.1 | 0.00 |
| 58 | 1010. | 0. | -1011. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 24. | -8. | 0. | 0. | 0. | -62. | -5. | 0. | 0. | 52. | 0. | 0. | -1086.0 | 1086.0 | 0.00 |
| 59 | 1011. | 0. | -1023. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 14. | -5. | 0. | 0. | 0. | -28. | -3. | 0. | 0. | 33. | 0. | 0. | -1058.3 | 1058.3 | 0.00 |

DISSOLVED OXYGEN LOADING FOR REACH 1: Headwater

| IOR | UPMN ADV | UPTR ADV | LOWR ADV | UPMN DISP | UPTR DISP | LOWR DISP | INCR IN | INCR OUT | NONP IN | WSLD IN | WSLD OUT | WITH IN | REAE DECA | BOD1 DECA | NH3-N DECA | ORG-N BKGD | NCM BOD1 | SOD ALG | SOD NCM | SOD PHOT | SOD RESP | ALG PHOT | ALG OUT | MAC IN | TOT | TOT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 60 | 1023. | 0. | -1033. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 12. | -5. | 0. | 0. | 0. | -28. | -3. | 0. | 0. | 33. | 0. | 0. | -1068.4 | 1068.4 | 0.00 |
| 61 | 1033. | 0. | -1043. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 11. | -4. | 0. | 0. | 0. | -28. | -3. | 0. | 0. | 33. | 0. | 0. | -1077.6 | 1077.6 | 0.00 |
| 62 | 1043. | 0. | -1089. | 0. | 0. | 0. | 32. | 0. | 0. | 0. | 0. | 14. | -7. | 0. | 0. | 0. | -36. | -4. | 0. | 0. | 47. | 0. | 0. | -1136.1 | 1136.1 | 0.00 |
| 63 | 1089. | 0. | -1137. | 0. | 0. | 0. | 32. | 0. | 0. | 0. | 0. | 13. | -8. | 0. | 0. | 0. | -36. | -4. | 0. | 0. | 51. | 0. | 0. | -1185.7 | 1185.7 | 0.00 |
| 64 | 1137. | 0. | -1187. | 0. | 0. | 0. | 32. | 0. | 0. | 0. | 0. | 12. | -8. | 0. | 0. | 0. | -36. | -5. | 0. | 0. | 55. | 0. | 0. | -1236.6 | 1236.6 | 0.00 |
| 65 | 1187. | 0. | -1238. | 0. | 0. | 0. | 32. | 0. | 0. | 0. | 0. | 11. | -9. | 0. | 0. | 0. | -37. | -5. | 0. | 0. | 59. | 0. | 0. | -1288.8 | 1288.8 | 0.00 |
| 66 | 1238. | 0. | -1235. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 7. | -5. | 0. | 0. | 0. | -21. | -3. | 0. | 0. | 19. | 0. | 0. | -1263.9 | 1263.9 | 0.00 |
| 67 | 1235. | 0. | -1221. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 8. | -5. | 0. | 0. | 0. | -21. | -3. | 0. | 0. | 7. | 0. | 0. | -1250.0 | 1250.0 | 0.00 |
| 68 | 1221. | 0. | -1230. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 9. | -7. | 0. | 0. | 0. | 0. | -4. | 0. | 0. | 11. | 0. | 0. | -1240.8 | 1240.8 | 0.00 |
| 69 | 1230. | 0. | -1239. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 7. | -6. | 0. | 0. | 0. | 0. | -4. | 0. | 0. | 11. | 0. | 0. | -1249.1 | 1249.1 | 0.00 |
| 70 | 1239. | 0. | -1247. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 6. | -6. | 0. | 0. | 0. | 0. | -3. | 0. | 0. | 11. | 0. | 0. | -1256.8 | 1256.8 | 0.00 |
| 71 | 1247. | 0. | -1255. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 5. | -6. | 0. | 0. | 0. | 0. | -3. | 0. | 0. | 11. | 0. | 0. | -1264.1 | 1264.1 | 0.00 |
| 72 | 1255. | 0. | -1262. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 5. | -5. | 0. | 0. | 0. | 0. | -3. | 0. | 0. | 11. | 0. | 0. | -1271.0 | 1271.0 | 0.00 |

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 73 | 1262. | 0. | -1269. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 4. | -5. | 0. | 0. | 0. | 0. | -3. | 0. | 0. | 11. | 0. | 0. | -1277.4 | 1277.4 | 0.00 |
| 74 | 1269. | 0. | -1276. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 3. | -5. | 0. | 0. | 0. | 0. | -3. | 0. | 0. | 11. | 0. | 0. | -1283.5 | 1283.5 | 0.00 |
| 75 | 1276. | 0. | -1282. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 2. | -5. | 0. | 0. | 0. | 0. | -3. | 0. | 0. | 11. | 0. | 0. | -1289.2 | 1289.2 | 0.00 |
| 76 | 1282. | 0. | -1285. | 0. | 0. | -2. | 0. | 0. | 0. | 0. | 0. | 2. | -4. | 0. | 0. | 0. | 0. | -3. | 0. | 0. | 11. | 0. | 0. | -1294.8 | 1294.8 | 0.00 |

Pearl River DO Modeling 090204

COEF-1 Run

INPUT/OUTPUT LOADING SUMMARY

| | FLOW | DO | BOD#1 | BOD#2 | ORG-N | NH3-N | NO3-N | PHOS | CHL A | NCM |
|---|---|---|---|---|---|---|---|---|---|---|
| | m³/s | kg/d | kg/d | kg/d | kg/d | kg/d | kg/d | kg/d | | |
| HEADWATER FLOW | 0.003 | 1.2 | 0.1 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| INCREMENTAL INFLOW | 2.040 | 881.3 | 701.4 | 0.0 | 0.0 | 113.6 | 17.6 | 0.0 | 0.0 | 0.0 |
| INCREMENTAL OUTFLOW | 0.000 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| WASTELOADS | 0.000 | 0.1 | 1.8 | 0.0 | 0.0 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 |
| WITHDRAWLS | 0.000 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| FLOW THRU LOWER BNDRY | -2.043 | -1285.4 | -131.6 | 0.0 | 0.0 | -8.4 | -63.3 | 0.0 | 0.0 | 0.0 |
| DISPERSION THRU LOWER BNDRY | | -2.5 | -0.8 | 0.0 | 0.0 | 0.1 | -0.3 | 0.0 | 0.0 | 0.0 |
| DISPERSION THRU HDWTR BNDRY | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| NON-POINT INPUT | | 0.0 | 0.0 | 0.0 | 0.0 | | | | | 0.0 |
| NATURAL REAERATION | | 1014.5 | | | | | | | | |
| DAM REAERATION | | 0.0 | | | | | | | | |
| BACKGROUND SOD | | -1231.0 | | | | | | | | |
| BOD#1 DECAY | | -359.5 | -359.5 | | | | | | | |
| BOD#1 SETTLING | | -211.5 | -211.5 | | | | | | | |
| ANAEROBIC BOD#1 DECAY | | | 0.0 | | | | | | | |
| BOD#2 DECAY | | 0.0 | | 0.0 | | | | | | |
| BOD#2 SETTLING | | 0.0 | | 0.0 | | | | | | |
| ANAEROBIC BOD#2 DECAY | | | | 0.0 | | | | | | |
| ORG-N DECAY | | 0.0 | | | 0.0 | 0.0 | | | | |
| ORG-N SETTLING | | | | | 0.0 | 0.0 | | | | |
| NH3 DECAY | | 0.0 | | | | -105.9 | 105.9 | | | |
| BACKGROUND NH3 SOURCE | | | | | | 0.0 | | | | |
| OTHER DENITRIFICATION | | | | | | | 0.0 | | | |
| PHOSPHORUS SOURCE | | | | | | | | 0.0 | | |
| ALGAE PHOTOSYNTHESIS | | 1192.7 | | | | 0.0 | -59.6 | 0.0 | 0.0 | |
| ALGAE RESPIRATION | | 0.0 | | | | 0.0 | | 0.0 | 0.0 | |
| ALGAE SETTLING | | 0.0 | | | | | | | 0.0 | |
| MACRO PHOTOSYNTHESIS | | 0.0 | | | | 0.0 | 0.0 | 0.0 | | |
| NCM DECAY | | 0.0 | | | | | | | | 0.0 |
| NCM SETTLING | | 0.0 | | | | | | | | 0.0 |
| TOTAL INPUTS | 2.043 | 3089.8 | 703.3 | 0.0 | 0.0 | 114.1 | 123.5 | 0.0 | 0.0 | 0.0 |
| TOTAL OUTPUTS | -2.043 | -3089.8 | -703.3 | 0.0 | 0.0 | -114.3 | -123.3 | 0.0 | 0.0 | 0.0 |
| NET CONVERGENCE ERROR | 0.000 | 0.0 | 0.0 | 0.0 | 0.0 | -0.3 | 0.3 | 0.0 | 0.0 | 0.0 |

.....EXECUTION COMPLETED

## TMDL output file for subsegment 090207

```
LA-QUAL Version 8.00
Louisiana Department of Environmental Quality
Input file is D:\Pearl\PEARLRIVERFromH\TMDL\Seg090207_TMDL_Update.txt
Output produced at 15:16 on 11/28/2007
$$$ DATA TYPE 1 (TITLES AND CONTROL CARDS) $$$
CARD TYPE      CONTROL TITLES
TITLE01        Middle/Middle West Rivers DO Modeling - 090207
TITLE02        COEF-1 Run
Control   YES   METRIC UNITS
ENDATA01
$$$ DATA TYPE 2 (MODEL OPTIONS) $$$
CARD TYPE      MODEL OPTION
MODOPT    NO   TEMPERATURE
MODOPT    NO   SALINITY
MODOPT    NO   CONSERVATIVE MATERIAL #1 = CHLORIDES              IN  mg/L
MODOPT    NO   CONSERVATIVE MATERIAL #2 = SULFATES               IN  mg/L
MODOPT   YES   DISSOLVED OXYGEN
MODOPT   YES   BOD1
MODOPT    NO   BOD2
MODOPT   YES   NITROGEN SERIES  = Nitrate/nitrite
MODOPT    NO   PHOSPHORUS
MODOPT    NO   CHLOROPHYLL A
MODOPT    NO   MACROPHYTES
MODOPT    NO   COLIFORM
MODOPT    NO   NONCONSERVATIVE MATERIAL
ENDATA02
$$$ DATA TYPE 3 (PROGRAM CONSTANTS) $$$
CARD TYPE      DESCRIPTION OF CONSTANT                    VALUE
PROGRAM        MAXImum Iteration Limit          =      5000.00000
PROGRAM        HYDRaulic calculation method      =        2.00000 (widths and depths)
PROGRAM        BOD OXYGEN UPTAKE RATE            =        1.00000 mg O/mg BOD
PROGRAM        NCM OXYGEN UPTAKE RATE            =        1.00000 mg O/mg NCM
PROGRAM        KL MINIMUM                        =        0.70000 meters/day
PROGRAM        INHIBITION CONTROL VALUE          =        3.00000 (inhibit all rates but SOD)
PROGRAM        ORGN OXYGEN UPTAKE RATE           =        0.00000 mg O/mg N
PROGRAM        NH3 OXYGEN UPTAKE RATE            =        0.00000 mg O/mg N
PROGRAM        DISPERSION Equation               =        2.00000 (values entered as a function of D,Q,Vtidal)
PROGRAM        OCEAN Exchange Ratio              =        1.00000
PROGRAM        TIDE Height                       =        0.60000 meters
PROGRAM        TIDAL Period                      =       25.00000 hours
PROGRAM        PERIOD of Tidal Rise              =       12.50000 hours
PROGRAM        K2 MAXIMUM                        =       10.00000 per day
ENDATA03
$$$ DATA TYPE 4 (TEMPERATURE CORRECTION CONSTANTS FOR RATE COEFFICIENTS) $$$
 CARD TYPE     RATE CODE     THETA VALUE
ENDATA04
$$$ CONSTANTS TYPE 5 (TEMPERATURE DATA) $$$
```

```
CARD TYPE      DESCRIPTION OF CONSTANT                    VALUE
ENDATA05
$$$ DATA TYPE 6 (ALGAE CONSTANTS) $$$
CARD TYPE      DESCRIPTION OF CONSTANT                    VALUE
ENDATA06
$$$ DATA TYPE 7 (MACROPHYTE CONSTANTS) $$$
CARD TYPE      DESCRIPTION OF CONSTANT                    VALUE
ENDATA07
$$$ DATA TYPE 8 (REACH IDENTIFICATION DATA) $$$
                                    BEGIN      END    ELEM   REACH    ELEMS  BEGIN   END
CARD TYPE  REACH  ID  NAME                          REACH     REACH  LENGTH  LENGTH   PER RCH  ELEM  ELEM
                                     km         km      km      km            NUM   NUM
REACH ID    1  H1  Headwaters-MR-A                  22.11  TO  21.30  0.2700    0.81     3      1     3
REACH ID    2  M1  MR-B before split of MR/MRWest   21.30  TO  20.30  0.2500    1.00     4      4     7
REACH ID    3  M2  MR-C/MRWest-D                    20.30  TO  18.80  0.3000    1.50     5      8    12
REACH ID    4  M3  MR-E/MRWest-G                    18.80  TO  15.20  0.3000    3.60    12     13    24
REACH ID    5  M4  MR-H                             15.20  TO  12.80  0.3000    2.40     8     25    32
REACH ID    6  M5  MRWest-J                         12.80  TO  12.00  0.2000    0.80     4     33    36
REACH ID    7  M6                                   12.00  TO  10.60  0.3500    1.40     4     37    40
REACH ID    8  M7  MREast-(L)/MRWest-(M)/MR-(N)     10.60  TO   8.20  0.2400    2.40    10     41    50
REACH ID    9  M8                                    8.20  TO   6.40  0.3000    1.80     6     51    56
REACH ID   10  M9  MRWest-O                          6.40  TO   4.50  0.3800    1.90     5     57    61
REACH ID   11  N1                                    4.50  TO   4.20  0.1500    0.30     2     62    63
REACH ID   12  N2                                    4.20  TO   3.50  0.3500    0.70     2     64    65
REACH ID   13  N3  MRWest-P                          3.50  TO   1.70  0.3000    1.80     6     66    71
REACH ID   14  N4                                    1.70  TO   1.50  0.1000    0.20     2     72    73
REACH ID   15  N5  MRWest-Q                          1.50  TO   0.15  0.2700    1.35     5     74    78
REACH ID   16  N6                                    0.15  TO   0.00  0.1500    0.15     1     79    79
ENDATA08
$$$ DATA TYPE 9 (ADVECTIVE HYDRAULIC COEFFICIENTS) $$$
CARD TYPE  REACH  ID     WIDTH     WIDTH     WIDTH     DEPTH     DEPTH     DEPTH     SLOPE   MANNINGS
                        "A"       "B"       "C"       "D"       "E"       "F"               "N"
HYDRO-1     1  H1      0.000     0.000    52.600     0.000     0.000     1.710   0.00010   0.025
HYDRO-1     2  M1      0.000     0.000    45.200     0.000     0.000     4.920   0.00010   0.025
HYDRO-1     3  M2      0.000     0.000    63.000     0.000     0.000     2.480   0.00010   0.025
HYDRO-1     4  M3      0.000     0.000   103.500     0.000     0.000     4.050   0.00010   0.025
HYDRO-1     5  M4      0.000     0.000   116.500     0.000     0.000     5.470   0.00010   0.025
HYDRO-1     6  M5      0.000     0.000   116.500     0.000     0.000     5.470   0.00010   0.025
HYDRO-1     7  M6      0.000     0.000   116.500     0.000     0.000     5.470   0.00010   0.025
HYDRO-1     8  M7      0.000     0.000   224.750     0.000     0.000     6.650   0.00010   0.025
HYDRO-1     9  M8      0.000     0.000   224.750     0.000     0.000     6.650   0.00010   0.025
HYDRO-1    10  M9      0.000     0.000   260.200     0.000     0.000     4.330   0.00010   0.025
HYDRO-1    11  N1      0.000     0.000   236.940     0.000     0.000     5.700   0.00010   0.025
HYDRO-1    12  N2      0.000     0.000   236.940     0.000     0.000     5.700   0.00010   0.025
HYDRO-1    13  N3      0.000     0.000   236.940     0.000     0.000     5.700   0.00010   0.025
HYDRO-1    14  N4      0.000     0.000   110.000     0.000     0.000     5.700   0.00010   0.025
HYDRO-1    15  N5      0.000     0.000   110.000     0.000     0.000     5.700   0.00010   0.025
HYDRO-1    16  N6      0.000     0.000   110.000     0.000     0.000     5.700   0.00010   0.025
ENDATA09
$$$ DATA TYPE 10 (DISPERSIVE HYDRAULIC COEFFICIENTS) $$$
```

```
CARD TYPE  REACH ID    TIDAL    DISPERSION    DISPERSION    DISPERSION    DISPERSION
                RANGE      "A"         "B"         "C"         "D"
HYDR       1  H1    1.00     1.000       0.000       0.000       0.000
HYDR       2  M1    1.00     1.000       0.000       0.000       0.000
HYDR       3  M2    1.00     1.000       0.000       0.000       0.000
HYDR       4  M3    1.00     1.000       0.000       0.000       0.000
HYDR       5  M4    1.00     1.000       0.000       0.000       0.000
HYDR       6  M5    1.00     1.000       0.000       0.000       0.000
HYDR       7  M6    1.00     1.000       0.000       0.000       0.000
HYDR       8  M7    1.00     1.000       0.000       0.000       0.000
HYDR       9  M8    1.00     1.000       0.000       0.000       0.000
HYDR      10  M9    1.00     1.000       0.000       0.000       0.000
HYDR      11  N1    1.00     1.000       0.000       0.000       0.000
HYDR      12  N2    1.00     1.000       0.000       0.000       0.000
HYDR      13  N3    1.00     1.000       0.000       0.000       0.000
HYDR      14  N4    1.00     1.000       0.000       0.000       0.000
HYDR      15  N5    1.00     1.000       0.000       0.000       0.000
HYDR      16  N6    1.00     1.000       0.000       0.000       0.000
ENDATA10
$$$ DATA TYPE 11 (INITIAL CONDITIONS) $$$
CARD TYPE    REACH ID    TEMP    SALIN     DO     NH3    NO3+2    PHOS    CHL A    MACRO
INITIAL      1  H1    27.80    0.00    5.00    0.10    0.04    0.05    1.00    0.00
INITIAL      2  M1    28.60    0.00    5.00    0.10    0.04    0.05    1.00    0.00
INITIAL      3  M2    30.60    0.00    5.00    0.10    0.04    0.05    1.00    0.00
INITIAL      4  M3    30.40    0.00    5.00    0.10    0.04    0.05    1.00    0.00
INITIAL      5  M4    30.50    0.00    5.00    0.10    0.04    0.05    1.00    0.00
INITIAL      6  M5    31.00    0.00    5.00    0.10    0.04    0.05    1.00    0.00
INITIAL      7  M6    31.00    0.00    5.00    0.10    0.04    0.05    1.00    0.00
INITIAL      8  M7    30.50    0.00    5.00    0.10    0.04    0.05    1.00    0.00
INITIAL      9  M8    30.50    0.00    5.00    0.10    0.04    0.05    1.00    0.00
INITIAL     10  M9    30.50    0.00    5.00    0.10    0.04    0.05    1.00    0.00
INITIAL     11  N1    30.50    0.00    5.00    0.10    0.04    0.05    1.00    0.00
INITIAL     12  N2    30.50    0.00    5.00    0.10    0.04    0.05    1.00    0.00
INITIAL     13  N3    30.70    0.00    5.00    0.10    0.04    0.05    1.00    0.00
INITIAL     14  N4    30.70    0.00    5.00    0.10    0.04    0.05    1.00    0.00
INITIAL     15  N5    30.50    0.00    5.00    0.10    0.04    0.05    1.00    0.00
INITIAL     16  N6    30.50    0.00    5.00    0.10    0.04    0.05    1.00    0.00
ENDATA11
$$$ DATA TYPE 12 (REAERATION, SEDIMENT OXYGEN DEMAND, BOD COEFFICIENTS) $$$
                                                    BOD    ANAER                    BOD2    ANAER
CARD    RCH  RCH  K2              K2     K2     K2  BKGRND    BOD     BOD    CONV    BOD2    BOD2    BOD2    CONV    BOD2
TYPE    NUM  ID  OPT            "A"    "B"    "C"    SOD   DECAY    SETT  TO SOD   DECAY   DECAY    SETT  TO SOD   DECAY
                                      g/m²/d per day    m/d         per day per day    m/d         per day
COEF-1    1  H1   3 OCONNER-DOBB  0.000  0.000  0.000  0.980  0.040  0.100  1.000  0.001  0.010  0.000  0.000  0.000
COEF-1    2  M1   3 OCONNER-DOBB  0.000  0.000  0.000  1.300  0.040  0.100  1.000  0.001  0.010  0.000  0.000  0.000
COEF-1    3  M2   3 OCONNER-DOBB  0.000  0.000  0.000  0.330  0.040  0.100  1.000  0.001  0.010  0.000  0.000  0.000
COEF-1    4  M3   3 OCONNER-DOBB  0.000  0.000  0.000  0.980  0.040  0.100  1.000  0.001  0.010  0.000  0.000  0.000
COEF-1    5  M4   3 OCONNER-DOBB  0.000  0.000  0.000  0.980  0.040  0.100  1.000  0.001  0.010  0.000  0.000  0.000
COEF-1    6  M5   3 OCONNER-DOBB  0.000  0.000  0.000  0.650  0.040  0.100  1.000  0.001  0.010  0.000  0.000  0.000
COEF-1    7  M6   3 OCONNER-DOBB  0.000  0.000  0.000  0.650  0.040  0.100  1.000  0.001  0.010  0.000  0.000  0.000
```

```
COEF-1    8  M7   3 OCONNER-DOBB    0.000    0.000    0.000    0.650    0.040    0.100    1.000    0.001    0.010    0.000    0.000    0.000
COEF-1    9  M8   3 OCONNER-DOBB    0.000    0.000    0.000    0.650    0.040    0.100    1.000    0.001    0.010    0.000    0.000    0.000
COEF-1   10  M9   3 OCONNER-DOBB    0.000    0.000    0.000    0.650    0.040    0.100    1.000    0.001    0.010    0.000    0.000    0.000
COEF-1   11  N1   3 OCONNER-DOBB    0.000    0.000    0.000    0.030    0.040    0.100    1.000    0.001    0.010    0.000    0.000    0.000
COEF-1   12  N2   3 OCONNER-DOBB    0.000    0.000    0.000    0.030    0.040    0.100    1.000    0.001    0.010    0.000    0.000    0.000
COEF-1   13  N3   3 OCONNER-DOBB    0.000    0.000    0.000    0.030    0.040    0.100    1.000    0.001    0.010    0.000    0.000    0.000
COEF-1   14  N4   3 OCONNER-DOBB    0.000    0.000    0.000    0.030    0.040    0.100    1.000    0.001    0.010    0.000    0.000    0.000
COEF-1   15  N5   3 OCONNER-DOBB    0.000    0.000    0.000    0.030    0.040    0.100    1.000    0.001    0.010    0.000    0.000    0.000
COEF-1   16  N6   3 OCONNER-DOBB    0.000    0.000    0.000    0.030    0.040    0.100    1.000    0.001    0.010    0.000    0.000    0.000
ENDATA12
$$$ DATA TYPE 13 (NITROGEN AND PHOSPHORUS COEFFICIENTS) $$$
CARD TYPE     REACH  ID      ORG-N     ORG-N   ORGN CONV      NH3      NH3     PHOS     DENIT
                          DECA     SETT  TO NH3 SRCE    DECA     SRCE     SRCE     RATE
COEF-2          1  H1     0.050    0.010    1.000    0.100    0.000    0.000    0.001
COEF-2          2  M1     0.050    0.010    1.000    0.100    0.000    0.000    0.001
COEF-2          3  M2     0.050    0.010    1.000    0.100    0.000    0.000    0.001
COEF-2          4  M3     0.050    0.010    1.000    0.100    0.000    0.000    0.001
COEF-2          5  M4     0.050    0.010    1.000    0.100    0.000    0.000    0.001
COEF-2          6  M5     0.050    0.010    1.000    0.100    0.000    0.000    0.001
COEF-2          7  M6     0.050    0.010    1.000    0.100    0.000    0.000    0.001
COEF-2          8  M7     0.050    0.010    1.000    0.100    0.000    0.000    0.001
COEF-2          9  M8     0.050    0.010    1.000    0.100    0.000    0.000    0.001
COEF-2         10  M9     0.050    0.010    1.000    0.100    0.000    0.000    0.001
COEF-2         11  N1     0.050    0.010    1.000    0.100    0.000    0.000    0.001
COEF-2         12  N2     0.050    0.010    1.000    0.100    0.000    0.000    0.001
COEF-2         13  N3     0.050    0.010    1.000    0.100    0.000    0.000    0.001
COEF-2         14  N4     0.050    0.010    1.000    0.100    0.000    0.000    0.001
COEF-2         15  N5     0.050    0.010    1.000    0.100    0.000    0.000    0.001
COEF-2         16  N6     0.050    0.010    1.000    0.100    0.000    0.000    0.001
ENDATA13
$$$ DATA TYPE 14 (ALGAE AND MACROPHYTE COEFFICIENTS) $$$
CARD TYPE     REACH  ID     SECCHI   ALGAE:    ALGAE   ALG CONV    ALGAE    ALGAE    MACRO    MACRO
                          DEPTH     CHL A     SETT     TO SOD     GROW     RESP     GROW     RESP
COEF-3          1  H1     3.00     0.000    0.00     0.00     0.00     0.00     0.00     0.00
COEF-3          2  M1     3.00     0.000    0.00     0.00     0.00     0.00     0.00     0.00
COEF-3          3  M2     3.00     0.000    0.00     0.00     0.00     0.00     0.00     0.00
COEF-3          4  M3     3.00     0.000    0.00     0.00     0.00     0.00     0.00     0.00
COEF-3          5  M4     3.00     0.000    0.00     0.00     0.00     0.00     0.00     0.00
COEF-3          6  M5     3.00     0.000    0.00     0.00     0.00     0.00     0.00     0.00
COEF-3          7  M6     3.00     0.000    0.00     0.00     0.00     0.00     0.00     0.00
COEF-3          8  M7     3.00     0.000    0.00     0.00     0.00     0.00     0.00     0.00
COEF-3          9  M8     3.00     0.000    0.00     0.00     0.00     0.00     0.00     0.00
COEF-3         10  M9     3.00     0.000    0.00     0.00     0.00     0.00     0.00     0.00
COEF-3         11  N1     3.00     0.000    0.00     0.00     0.00     0.00     0.00     0.00
COEF-3         12  N2     3.00     0.000    0.00     0.00     0.00     0.00     0.00     0.00
COEF-3         13  N3     3.00     0.000    0.00     0.00     0.00     0.00     0.00     0.00
COEF-3         14  N4     3.00     0.000    0.00     0.00     0.00     0.00     0.00     0.00
COEF-3         15  N5     3.00     0.000    0.00     0.00     0.00     0.00     0.00     0.00
COEF-3         16  N6     3.00     0.000    0.00     0.00     0.00     0.00     0.00     0.00
ENDATA14
```

```
$$$ DATA TYPE 15 (COLIFORM AND NONCONSERVATIVE COEFFICIENTS) $$$
CARD TYPE     REACH  ID   COLIFORM      NCM      NCM   NCM CONV
                       DIE-OFF    DECAY     SETT    TO SOD
COEF-4          1  H1     0.000    0.000    0.000    0.000
COEF-4          2  M1     0.000    0.000    0.000    0.000
COEF-4          3  M2     0.000    0.000    0.000    0.000
COEF-4          4  M3     0.000    0.000    0.000    0.000
COEF-4          5  M4     0.000    0.000    0.000    0.000
COEF-4          6  M5     0.000    0.000    0.000    0.000
COEF-4          7  M6     0.000    0.000    0.000    0.000
COEF-4          8  M7     0.000    0.000    0.000    0.000
COEF-4          9  M8     0.000    0.000    0.000    0.000
COEF-4         10  M9     0.000    0.000    0.000    0.000
COEF-4         11  N1     0.000    0.000    0.000    0.000
COEF-4         12  N2     0.000    0.000    0.000    0.000
COEF-4         13  N3     0.000    0.000    0.000    0.000
COEF-4         14  N4     0.000    0.000    0.000    0.000
COEF-4         15  N5     0.000    0.000    0.000    0.000
COEF-4         16  N6     0.000    0.000    0.000    0.000
ENDATA15
$$$ DATA TYPE 16 (INCREMENTAL DATA FOR FLOW, TEMPERATURE, SALINITY, AND CONSERVATIVES) $$$
CARD TYPE     REACH  ID     OUTFLOW     INFLOW      TEMP     SALIN      CM-I     CM-II   IN/DIST  OUT/DIST
INCR-1          1  H1     0.00000     0.69700     30.00      0.00      0.00      0.00   0.86049   0.00000
INCR-1          2  M1     0.00000     2.48700     30.00      0.00      0.00      0.00   2.48700   0.00000
INCR-1          3  M2     0.00000     4.45500     30.00      0.00      0.00      0.00   2.97000   0.00000
INCR-1          4  M3     0.00000     3.08400     30.00      0.00      0.00      0.00   0.85667   0.00000
INCR-1          5  M4     0.00000     1.50000     30.00      0.00      0.00      0.00   0.62500   0.00000
INCR-1          6  M5     0.00000     1.50000     30.00      0.00      0.00      0.00   1.87500   0.00000
INCR-1          7  M6     0.00000     1.50000     30.00      0.00      0.00      0.00   1.07143   0.00000
INCR-1          8  M7     0.00000     1.50000     30.00      0.00      0.00      0.00   0.62500   0.00000
INCR-1          9  M8     0.00000     1.50000     30.00      0.00      0.00      0.00   0.83333   0.00000
INCR-1         10  M9     0.00000     1.50000     30.00      0.00      0.00      0.00   0.78947   0.00000
INCR-1         11  N1     0.00000     1.50000     30.00      0.00      0.00      0.00   5.00000   0.00000
INCR-1         12  N2     0.00000     1.50000     30.00      0.00      0.00      0.00   2.14286   0.00000
INCR-1         13  N3     0.00000     1.50000     30.00      0.00      0.00      0.00   0.83333   0.00000
INCR-1         14  N4     0.00000     1.50000     30.00      0.00      0.00      0.00   7.50000   0.00000
INCR-1         15  N5     0.00000     1.50000     30.00      0.00      0.00      0.00   1.11111   0.00000
INCR-1         16  N6     0.00000     1.50000     30.00      0.00      0.00      0.00  10.00000   0.00000
ENDATA16
$$$ DATA TYPE 17 (INCREMENTAL DATA FOR DO, BOD, AND NITROGEN) $$$
CARD TYPE     REACH  ID       DO      BOD     ORG-N     NH3-N     NO3-N     BOD#2
INCR-2          1  H1     5.00     0.05     0.30      0.00      0.20      0.00
INCR-2          2  M1     5.00     0.05     0.30      0.00      0.20      0.00
INCR-2          3  M2     5.00     0.05     0.30      0.00      0.20      0.00
INCR-2          4  M3     5.00     0.42     0.30      0.00      0.20      0.00
INCR-2          5  M4     5.00     0.42     0.30      0.00      0.20      0.00
INCR-2          6  M5     5.00     1.06     0.30      0.00      0.20      0.00
INCR-2          7  M6     5.00     1.06     0.30      0.00      0.20      0.00
INCR-2          8  M7     5.00     1.06     0.30      0.00      0.20      0.00
INCR-2          9  M8     5.00     1.06     0.30      0.00      0.20      0.00
```

```
INCR-2      10  M9     5.00   1.06   0.30   0.00   0.20   0.00
INCR-2      11  N1     5.00   0.63   0.30   0.00   0.20   0.00
INCR-2      12  N2     5.00   0.63   0.30   0.00   0.20   0.00
INCR-2      13  N3     5.00   0.63   0.30   0.00   0.20   0.00
INCR-2      14  N4     5.00   0.63   0.30   0.00   0.20   0.00
INCR-2      15  N5     5.00   0.85   0.30   0.00   0.20   0.00
INCR-2      16  N6     5.00   0.85   0.30   0.00   0.20   0.00
ENDATA17
$$$ DATA TYPE 18 (INCREMENTAL DATA FOR PHOSPHORUS, CHLOROPHYLL, COLIFORM, AND NONCONSERVATIVES) $$$
 CARD TYPE    REACH  ID     PHOS   CHL A   COLI    NCM
INCR-3       1  H1     0.00   0.00   0.00   0.00
INCR-3       2  M1     0.00   0.00   0.00   0.00
INCR-3       3  M2     0.00   0.00   0.00   0.00
INCR-3       4  M3     0.00   0.00   0.00   0.00
INCR-3       5  M4     0.00   0.00   0.00   0.00
INCR-3       6  M5     0.00   0.00   0.00   0.00
INCR-3       7  M6     0.00   0.00   0.00   0.00
INCR-3       8  M7     0.00   0.00   0.00   0.00
INCR-3       9  M8     0.00   0.00   0.00   0.00
INCR-3      10  M9     0.00   0.00   0.00   0.00
INCR-3      11  N1     0.00   0.00   0.00   0.00
INCR-3      12  N2     0.00   0.00   0.00   0.00
INCR-3      13  N3     0.00   0.00   0.00   0.00
INCR-3      14  N4     0.00   0.00   0.00   0.00
INCR-3      15  N5     0.00   0.00   0.00   0.00
INCR-3      16  N6     0.00   0.00   0.00   0.00
ENDATA18
$$$ DATA TYPE 19 (NONPOINT SOURCE DATA) $$$
CARD TYPE    REACH  ID    BOD#1   ORG-N   COLI    NCM     DO    BOD#2
ENDATA19
$$$ DATA TYPE 20 (HEADWATER FOR FLOW, TEMPERATURE, SALINITY AND CONSERVATIVES) $$$
CARD TYPE    ELEMENT  NAME            UNIT    FLOW    FLOW    TEMP   SALIN    CM-I    CM-II
                                     m³/s    cfs   deg C    ppt    mg/L    mg/L
HDWTR-1      1        Headwater   0   1.11000   39.195   30.00    0.00    0.000    0.000
ENDATA20
$$$ DATA TYPE 21 (HEADWATER DATA FOR DO, BOD, AND NITROGEN) $$$
CARD TYPE    ELEMENT  NAME                DO    BOD#1   ORG-N   NH3-N   NO3-N   BOD#2
                                     mg/L    mg/L    mg/L    mg/L    mg/L    mg/L
HDWTR-2      1        Headwater      5.00    0.42    0.00    0.10    0.10    0.00
ENDATA21
$$$ DATA TYPE 22 (HEADWATER DATA FOR PHOSPHORUS, CHLOROPHYLL, COLIFORM, AND NONCONSERVATIVES) $$$
CARD TYPE    ELEMENT  NAME                PHOS    CHL A   COLI    NCM
                                     mg/L    mg/L    mg/L    mg/L
HDWTR-3      1        Headwater      0.00    0.00    0.00    0.00
ENDATA22
$$$ DATA TYPE 23 (JUNCTION DATA) $$$
CARD TYPE   JUNCTION  UPSTRM   RIVER   NAME
        ELEMENT  ELEMENT   KILOM
ENDATA23
$$$ DATA TYPE 24 (WASTELOAD DATA FOR FLOW, TEMPERATURE, SALINITY, AND CONSERVATIVES) $$$
```

```
CARD TYPE  ELEMENT    RKILO  NAME                  FLOW      FLOW     FLOW    TEMP    SALIN     CM-I     CM-II
                                                   m³/s      cfs      MGD   deg C     ppt      mg/L     mg/L
WSTLD-1       1      22.11  test                 0.00000   0.00000   0.000   20.00    0.00     0.000     0.000
ENDATA24
$$$ DATA TYPE 25 (WASTELOAD DATA FOR DO, BOD, AND NITROGEN) $$$
                                                        % BOD                    %
CARD TYPE     ELEMENT   NAME                    DO      BOD      RMVL     ORG-N    NH3-N    NITRIF    NO3-N    BOD#2
                                              mg/L     mg/L             mg/L     mg/L             mg/L     mg/L
WSTLD-2         1     test                   0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00
ENDATA25
$$$ DATA TYPE 26 (WASTELOAD DATA FOR PHOSPHORUS, CHLOROPHYLL, COLIFORM, AND NONCONSERVATIVES) $$$
CARD TYPE     ELEMENT   NAME                    PHOS     CHL A     COLI      NCM
                                              mg/L     mg/L     mg/L     mg/L
WSTLD-3         1     test                   0.00     0.00     0.00     0.00
ENDATA26
$$$ DATA TYPE 27 (LOWER BOUNDARY CONDITIONS) $$$
CARD TYPE    CONSTITUENT                  CONCENTRATION
LOWER BC     TEMPERATURE                    =     26.250     deg C
LOWER BC     SALINITY                     =     0.000     ppt
LOWER BC     CONSERVATIVE MATERIAL I          =     7.625     mg/L
LOWER BC     CONSERVATIVE MATERIAL II         =     0.000     mg/L
LOWER BC     DISSOLVED OXYGEN                 =     5.000     mg/L
LOWER BC     BIOCHEMICAL OXYGEN DEMAND        =     4.000     mg/L
LOWER BC     ORGANIC NITROGEN                 =     0.000     mg/L
LOWER BC     AMMONIA NITROGEN                 =     0.000     mg/L
LOWER BC     NITRATE + NITRITE                =     0.000     mg/L
LOWER BC     PHOSPHORUS                       =     0.000     mg/L
LOWER BC     CHLOROPHYLL A                    =     0.000     µg/L
LOWER BC     COLIFORM                         =     0.000     #/100 mL
LOWER BC     NONCONSERVATIVE MATERIAL         =     11.160
ENDATA27
$$$ DATA TYPE 28 (DAM DATA) $$$
CARD TYPE     ELEMENT   NAME                EQN      "A"      "B"      "H"
ENDATA28
$$$ DATA TYPE 29 (SENSITIVITY ANALYSIS DATA) $$$
CARD TYPE       PARAMETER     COL 1     COL 2     COL 3     COL 4     COL 5     COL 6     COL 7     COL 8
SENSITIV        TRANGE       -30.0      30.0       0.0       0.0       0.0       0.0       0.0       0.0
SENSITIV        OXR          -30.0      30.0       0.0       0.0       0.0       0.0       0.0       0.0
SENSITIV        VELOCITY     -30.0      30.0       0.0       0.0       0.0       0.0       0.0       0.0
SENSITIV        DISPERSI     -30.0      30.0       0.0       0.0       0.0       0.0       0.0       0.0
SENSITIV        REAERATI     -30.0      30.0       0.0       0.0       0.0       0.0       0.0       0.0
SENSITIV        BOD DECA     -30.0      30.0       0.0       0.0       0.0       0.0       0.0       0.0
SENSITIV        BOD SETT     -30.0      30.0       0.0       0.0       0.0       0.0       0.0       0.0
SENSITIV        BENTHAL      -30.0      30.0       0.0       0.0       0.0       0.0       0.0       0.0
ENDATA29
$$$ DATA TYPE 30 (PLOT CONTROL CARDS) $$$
NUMBER OF PLOTS =  1
NUMBER OF REACHES IN PLOT 1 =  16
PLOT RCH  1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16
ENDATA30
```

$$$ DATA TYPE 31 (OVERLAY PLOT DATA) $$$
ENDATA31
.....NO ERRORS DETECTED IN INPUT DATA
.....HYDRAULIC CALCULATIONS COMPLETED
.....TRIDIAGONAL MATRIX TERMS INITIALIZED
.....OXYGEN DEPENDENT RATES CONVERGENT IN 4 ITERATIONS
.....CONSTITUENT CALCULATIONS COMPLETED
INTERMEDIATE REPORT
Dissolved Oxygen Middle/Middle West Rivers DO Modeling - 090207
mg/L COEF-1 Run

| ID | RCH | ELEM | +0 | +1 | +2 | +3 | +4 | +5 | +6 | +7 | +8 | +9 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| H1 | 1 | 1 | 5.06 | 5.11 | 5.13 | | | | | | | |
| M1 | 2 | 4 | 5.10 | 5.08 | 5.07 | 5.07 | | | | | | |
| M2 | 3 | 8 | 5.12 | 5.15 | 5.18 | 5.20 | 5.22 | | | | | |
| M3 | 4 | 13 | 5.22 | 5.23 | 5.24 | 5.24 | 5.25 | 5.25 | 5.25 | 5.26 | 5.26 | 5.26 |
| M3 | 4 | 23 | 5.26 | 5.27 | | | | | | | | |
| M4 | 5 | 25 | 5.28 | 5.28 | 5.29 | 5.29 | 5.30 | 5.30 | 5.30 | 5.31 | | |
| M5 | 6 | 33 | 5.32 | 5.32 | 5.33 | 5.34 | | | | | | |
| M6 | 7 | 37 | 5.36 | 5.37 | 5.39 | 5.41 | | | | | | |
| M7 | 8 | 41 | 5.44 | 5.46 | 5.49 | 5.51 | 5.54 | 5.56 | 5.58 | 5.60 | 5.62 | 5.64 |
| M8 | 9 | 51 | 5.66 | 5.68 | 5.69 | 5.71 | 5.72 | 5.74 | | | | |
| M9 | 10 | 57 | 5.75 | 5.76 | 5.78 | 5.79 | 5.80 | | | | | |
| N1 | 11 | 62 | 5.80 | 5.81 | | | | | | | | |
| N2 | 12 | 64 | 5.85 | 5.89 | | | | | | | | |
| N3 | 13 | 66 | 5.93 | 5.97 | 6.01 | 6.05 | 6.08 | 6.11 | | | | |
| N4 | 14 | 72 | 6.08 | 6.07 | | | | | | | | |
| N5 | 15 | 74 | 6.07 | 6.08 | 6.08 | 6.09 | 6.07 | | | | | |
| N6 | 16 | 79 | 5.82 | | | | | | | | | |

INTERMEDIATE REPORT
Effective BOD Middle/Middle West Rivers DO Modeling - 090207
mg/L COEF-1 Run

| ID | RCH | ELEM | +0 | +1 | +2 | +3 | +4 | +5 | +6 | +7 | +8 | +9 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| H1 | 1 | 1 | 0.36 | 0.31 | 0.26 | | | | | | | |
| M1 | 2 | 4 | 0.20 | 0.17 | 0.15 | 0.14 | | | | | | |
| M2 | 3 | 8 | 0.12 | 0.11 | 0.10 | 0.09 | 0.09 | | | | | |
| M3 | 4 | 13 | 0.10 | 0.11 | 0.11 | 0.12 | 0.12 | 0.13 | 0.14 | 0.14 | 0.15 | 0.15 |
| M3 | 4 | 23 | 0.15 | 0.16 | | | | | | | | |
| M4 | 5 | 25 | 0.16 | 0.16 | 0.16 | 0.16 | 0.16 | 0.17 | 0.17 | 0.17 | | |
| M5 | 6 | 33 | 0.19 | 0.22 | 0.23 | 0.25 | | | | | | |
| M6 | 7 | 37 | 0.27 | 0.28 | 0.30 | 0.31 | | | | | | |
| M7 | 8 | 41 | 0.31 | 0.31 | 0.31 | 0.31 | 0.31 | 0.31 | 0.31 | 0.31 | 0.31 | 0.31 |
| M8 | 9 | 51 | 0.31 | 0.32 | 0.32 | 0.32 | 0.32 | 0.33 | | | | |
| M9 | 10 | 57 | 0.33 | 0.33 | 0.34 | 0.34 | 0.34 | | | | | |
| N1 | 11 | 62 | 0.35 | 0.35 | | | | | | | | |
| N2 | 12 | 64 | 0.36 | 0.36 | | | | | | | | |
| N3 | 13 | 66 | 0.35 | 0.35 | 0.35 | 0.34 | 0.34 | 0.34 | | | | |
| N4 | 14 | 72 | 0.35 | 0.35 | | | | | | | | |
| N5 | 15 | 74 | 0.36 | 0.36 | 0.36 | 0.37 | 0.45 | | | | | |
| N6 | 16 | 79 | 1.18 | | | | | | | | | |

INTERMEDIATE REPORT

Biochemical Oxygen Demand Middle/Middle West Rivers DO Modeling - 090207
mg/L COEF-1 Run

| ID | RCH | ELEM | +0 | +1 | +2 | +3 | +4 | +5 | +6 | +7 | +8 | +9 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| H1 | 1 | 1 | 0.36 | 0.31 | 0.26 | | | | | | | |
| M1 | 2 | 4 | 0.20 | 0.17 | 0.15 | 0.14 | | | | | | |
| M2 | 3 | 8 | 0.12 | 0.11 | 0.10 | 0.09 | 0.09 | | | | | |
| M3 | 4 | 13 | 0.10 | 0.11 | 0.11 | 0.12 | 0.12 | 0.13 | 0.14 | 0.14 | 0.15 | 0.15 |
| M3 | 4 | 23 | 0.15 | 0.16 | | | | | | | | |
| M4 | 5 | 25 | 0.16 | 0.16 | 0.16 | 0.16 | 0.16 | 0.17 | 0.17 | 0.17 | | |
| M5 | 6 | 33 | 0.19 | 0.22 | 0.23 | 0.25 | | | | | | |
| M6 | 7 | 37 | 0.27 | 0.28 | 0.30 | 0.31 | | | | | | |
| M7 | 8 | 41 | 0.31 | 0.31 | 0.31 | 0.31 | 0.31 | 0.31 | 0.31 | 0.31 | 0.31 | 0.31 |
| M8 | 9 | 51 | 0.31 | 0.32 | 0.32 | 0.32 | 0.32 | 0.33 | | | | |
| M9 | 10 | 57 | 0.33 | 0.33 | 0.34 | 0.34 | 0.34 | | | | | |
| N1 | 11 | 62 | 0.35 | 0.35 | | | | | | | | |
| N2 | 12 | 64 | 0.36 | 0.36 | | | | | | | | |
| N3 | 13 | 66 | 0.35 | 0.35 | 0.35 | 0.34 | 0.34 | 0.34 | | | | |
| N4 | 14 | 72 | 0.35 | 0.35 | | | | | | | | |
| N5 | 15 | 74 | 0.36 | 0.36 | 0.36 | 0.37 | 0.45 | | | | | |
| N6 | 16 | 79 | 1.18 | | | | | | | | | |

INTERMEDIATE REPORT

Organic Nitrogen Middle/Middle West Rivers DO Modeling - 090207
mg/L COEF-1 Run

| ID | RCH | ELEM | +0 | +1 | +2 | +3 | +4 | +5 | +6 | +7 | +8 | +9 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| H1 | 1 | 1 | 0.04 | 0.08 | 0.11 | | | | | | | |
| M1 | 2 | 4 | 0.16 | 0.18 | 0.20 | 0.21 | | | | | | |
| M2 | 3 | 8 | 0.22 | 0.23 | 0.24 | 0.25 | 0.25 | | | | | |
| M3 | 4 | 13 | 0.25 | 0.25 | 0.25 | 0.25 | 0.24 | 0.24 | 0.24 | 0.24 | 0.24 | 0.24 |
| M3 | 4 | 23 | 0.24 | 0.24 | | | | | | | | |
| M4 | 5 | 25 | 0.24 | 0.24 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | | |
| M5 | 6 | 33 | 0.23 | 0.23 | 0.23 | 0.23 | | | | | | |
| M6 | 7 | 37 | 0.23 | 0.23 | 0.23 | 0.23 | | | | | | |
| M7 | 8 | 41 | 0.22 | 0.22 | 0.22 | 0.21 | 0.21 | 0.21 | 0.21 | 0.20 | 0.20 | 0.20 |
| M8 | 9 | 51 | 0.20 | 0.20 | 0.19 | 0.19 | 0.19 | 0.19 | | | | |
| M9 | 10 | 57 | 0.19 | 0.19 | 0.18 | 0.18 | 0.18 | | | | | |
| N1 | 11 | 62 | 0.19 | 0.19 | | | | | | | | |
| N2 | 12 | 64 | 0.19 | 0.19 | | | | | | | | |
| N3 | 13 | 66 | 0.19 | 0.19 | 0.19 | 0.18 | 0.18 | 0.18 | | | | |
| N4 | 14 | 72 | 0.19 | 0.19 | | | | | | | | |
| N5 | 15 | 74 | 0.19 | 0.19 | 0.19 | 0.19 | 0.19 | | | | | |
| N6 | 16 | 79 | 0.15 | | | | | | | | | |

INTERMEDIATE REPORT

Ammonia Nitrogen Middle/Middle West Rivers DO Modeling - 090207
mg/L COEF-1 Run

| ID | RCH | ELEM | +0 | +1 | +2 | +3 | +4 | +5 | +6 | +7 | +8 | +9 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| H1 | 1 | 1 | 0.08 | 0.07 | 0.06 | | | | | | | |
| M1 | 2 | 4 | 0.04 | 0.04 | 0.03 | 0.03 | | | | | | |
| M2 | 3 | 8 | 0.03 | 0.02 | 0.02 | 0.02 | 0.02 | | | | | |
| M3 | 4 | 13 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.03 | 0.03 | 0.03 | 0.03 |
| M3 | 4 | 23 | 0.03 | 0.03 | | | | | | | | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| M4 | 5 | 25 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.04 | 0.04 | |
| M5 | 6 | 33 | 0.04 | 0.04 | 0.04 | 0.03 | | | | | |
| M6 | 7 | 37 | 0.04 | 0.04 | 0.04 | 0.04 | | | | | |
| M7 | 8 | 41 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 |
| M8 | 9 | 51 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | | | | |
| M9 | 10 | 57 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | | | | | |
| N1 | 11 | 62 | 0.04 | 0.04 | | | | | | | | |
| N2 | 12 | 64 | 0.04 | 0.04 | | | | | | | | |
| N3 | 13 | 66 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | | | | |
| N4 | 14 | 72 | 0.04 | 0.04 | | | | | | | | |
| N5 | 15 | 74 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | | | | | |
| N6 | 16 | 79 | 0.03 | | | | | | | | | |

INTERMEDIATE REPORT

Nitrate+Nitrite Nitrogen — Middle/Middle West Rivers DO Modeling - 090207

mg/L — COEF-1 Run

| ID | RCH | ELEM | +0 | +1 | +2 | +3 | +4 | +5 | +6 | +7 | +8 | +9 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| H1 | 1 | 1 | 0.12 | 0.13 | 0.14 | | | | | | | |
| M1 | 2 | 4 | 0.16 | 0.17 | 0.17 | 0.18 | | | | | | |
| M2 | 3 | 8 | 0.18 | 0.18 | 0.19 | 0.19 | 0.19 | | | | | |
| M3 | 4 | 13 | 0.19 | 0.19 | 0.19 | 0.19 | 0.19 | 0.19 | 0.19 | 0.19 | 0.19 | 0.19 |
| M3 | 4 | 23 | 0.19 | 0.19 | | | | | | | | |
| M4 | 5 | 25 | 0.19 | 0.19 | 0.19 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | | |
| M5 | 6 | 33 | 0.20 | 0.20 | 0.20 | 0.20 | | | | | | |
| M6 | 7 | 37 | 0.20 | 0.20 | 0.20 | 0.20 | | | | | | |
| M7 | 8 | 41 | 0.20 | 0.20 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 |
| M8 | 9 | 51 | 0.21 | 0.22 | 0.22 | 0.22 | 0.22 | 0.22 | | | | |
| M9 | 10 | 57 | 0.22 | 0.22 | 0.22 | 0.23 | 0.23 | | | | | |
| N1 | 11 | 62 | 0.23 | 0.23 | | | | | | | | |
| N2 | 12 | 64 | 0.23 | 0.23 | | | | | | | | |
| N3 | 13 | 66 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | | | | |
| N4 | 14 | 72 | 0.23 | 0.23 | | | | | | | | |
| N5 | 15 | 74 | 0.23 | 0.23 | 0.23 | 0.23 | 0.22 | | | | | |
| N6 | 16 | 79 | 0.18 | | | | | | | | | |

INTERMEDIATE REPORT

Total Nitrogen — Middle/Middle West Rivers DO Modeling - 090207

mg/L — COEF-1 Run

| ID | RCH | ELEM | +0 | +1 | +2 | +3 | +4 | +5 | +6 | +7 | +8 | +9 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| H1 | 1 | 1 | 0.24 | 0.28 | 0.31 | | | | | | | |
| M1 | 2 | 4 | 0.36 | 0.38 | 0.40 | 0.42 | | | | | | |
| M2 | 3 | 8 | 0.43 | 0.44 | 0.45 | 0.45 | 0.46 | | | | | |
| M3 | 4 | 13 | 0.46 | 0.46 | 0.46 | 0.46 | 0.46 | 0.46 | 0.46 | 0.46 | 0.46 | 0.46 |
| M3 | 4 | 23 | 0.46 | 0.46 | | | | | | | | |
| M4 | 5 | 25 | 0.46 | 0.46 | 0.46 | 0.46 | 0.46 | 0.46 | 0.46 | 0.46 | | |
| M5 | 6 | 33 | 0.46 | 0.46 | 0.46 | 0.46 | | | | | | |
| M6 | 7 | 37 | 0.46 | 0.46 | 0.46 | 0.46 | | | | | | |
| M7 | 8 | 41 | 0.46 | 0.46 | 0.46 | 0.46 | 0.46 | 0.46 | 0.46 | 0.46 | 0.46 | 0.46 |
| M8 | 9 | 51 | 0.46 | 0.46 | 0.46 | 0.45 | 0.45 | 0.45 | | | | |
| M9 | 10 | 57 | 0.45 | 0.45 | 0.45 | 0.45 | 0.45 | | | | | |
| N1 | 11 | 62 | 0.45 | 0.46 | | | | | | | | |
| N2 | 12 | 64 | 0.46 | 0.46 | | | | | | | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| N3 | 13 | 66 | 0.46 | 0.46 | 0.45 | 0.45 | 0.45 | 0.45 |
| N4 | 14 | 72 | 0.46 | 0.46 | | | | |
| N5 | 15 | 74 | 0.46 | 0.46 | 0.46 | 0.46 | 0.45 | |
| N6 | 16 | 79 | 0.36 | | | | | |

INTERMEDIATE REPORT

Chlorophyll a — Middle/Middle West Rivers DO Modeling - 090207

µg/L — COEF-1 Run

| ID | RCH | ELEM | +0 | +1 | +2 | +3 | +4 | +5 | +6 | +7 | +8 | +9 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| H1 | 1 | 1 | 1.00 | 1.00 | 1.00 | | | | | | | |
| M1 | 2 | 4 | 1.00 | 1.00 | 1.00 | 1.00 | | | | | | |
| M2 | 3 | 8 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | | | |
| M3 | 4 | 13 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| M3 | 4 | 23 | 1.00 | 1.00 | | | | | | | | |
| M4 | 5 | 25 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | |
| M5 | 6 | 33 | 1.00 | 1.00 | 1.00 | 1.00 | | | | | | |
| M6 | 7 | 37 | 1.00 | 1.00 | 1.00 | 1.00 | | | | | | |
| M7 | 8 | 41 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| M8 | 9 | 51 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | | |
| M9 | 10 | 57 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | | | |
| N1 | 11 | 62 | 1.00 | 1.00 | | | | | | | | |
| N2 | 12 | 64 | 1.00 | 1.00 | | | | | | | | |
| N3 | 13 | 66 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | | |
| N4 | 14 | 72 | 1.00 | 1.00 | | | | | | | | |
| N5 | 15 | 74 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | | | |
| N6 | 16 | 79 | 0.00 | | | | | | | | | |

INTERMEDIATE REPORT

Temperature — Middle/Middle West Rivers DO Modeling - 090207

deg C — COEF-1 Run

| ID | RCH | ELEM | +0 | +1 | +2 | +3 | +4 | +5 | +6 | +7 | +8 | +9 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| H1 | 1 | 1 | 28.07 | 28.33 | 28.60 | | | | | | | |
| M1 | 2 | 4 | 29.10 | 29.60 | 30.10 | 30.60 | | | | | | |
| M2 | 3 | 8 | 30.56 | 30.52 | 30.48 | 30.44 | 30.40 | | | | | |
| M3 | 4 | 13 | 30.41 | 30.42 | 30.42 | 30.43 | 30.44 | 30.45 | 30.46 | 30.47 | 30.48 | 30.48 |
| M3 | 4 | 23 | 30.49 | 30.50 | | | | | | | | |
| M4 | 5 | 25 | 30.56 | 30.62 | 30.69 | 30.75 | 30.81 | 30.88 | 30.94 | 31.00 | | |
| M5 | 6 | 33 | 31.00 | 31.00 | 31.00 | 31.00 | | | | | | |
| M6 | 7 | 37 | 30.88 | 30.75 | 30.62 | 30.50 | | | | | | |
| M7 | 8 | 41 | 30.50 | 30.50 | 30.50 | 30.50 | 30.50 | 30.50 | 30.50 | 30.50 | 30.50 | 30.50 |
| M8 | 9 | 51 | 30.50 | 30.50 | 30.50 | 30.50 | 30.50 | 30.50 | | | | |
| M9 | 10 | 57 | 30.50 | 30.50 | 30.50 | 30.50 | 30.50 | | | | | |
| N1 | 11 | 62 | 30.50 | 30.50 | | | | | | | | |
| N2 | 12 | 64 | 30.60 | 30.70 | | | | | | | | |
| N3 | 13 | 66 | 30.70 | 30.70 | 30.70 | 30.70 | 30.70 | 30.70 | | | | |
| N4 | 14 | 72 | 30.60 | 30.50 | | | | | | | | |
| N5 | 15 | 74 | 30.50 | 30.50 | 30.50 | 30.50 | 30.50 | | | | | |
| N6 | 16 | 79 | 26.25 | | | | | | | | | |

INTERMEDIATE REPORT

Salinity — Middle/Middle West Rivers DO Modeling - 090207

ppt — COEF-1 Run

| ID | RCH | ELEM | +0 | +1 | +2 | +3 | +4 | +5 | +6 | +7 | +8 | +9 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| H1 | 1 | 1 | 0.00 | 0.00 | 0.00 | | | | | | |
| M1 | 2 | 4 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | |
| M2 | 3 | 8 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | |
| M3 | 4 | 13 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| M3 | 4 | 23 | 0.00 | 0.00 | | | | | | | | |
| M4 | 5 | 25 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | |
| M5 | 6 | 33 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | |
| M6 | 7 | 37 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | |
| M7 | 8 | 41 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| M8 | 9 | 51 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | |
| M9 | 10 | 57 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | |
| N1 | 11 | 62 | 0.00 | 0.00 | | | | | | | | |
| N2 | 12 | 64 | 0.00 | 0.00 | | | | | | | | |
| N3 | 13 | 66 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | |
| N4 | 14 | 72 | 0.00 | 0.00 | | | | | | | | |
| N5 | 15 | 74 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | |
| N6 | 16 | 79 | 0.00 | | | | | | | | | |

INTERMEDIATE REPORT

River Distance — Middle/Middle West Rivers DO Modeling - 090207

km — COEF-1 Run

| ID | RCH | ELEM | +0 | +1 | +2 | +3 | +4 | +5 | +6 | +7 | +8 | +9 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| H1 | 1 | 1 | 22. | 22. | 21. | | | | | | | |
| M1 | 2 | 4 | 21. | 21. | 21. | 20. | | | | | | |
| M2 | 3 | 8 | 20. | 20. | 19. | 19. | 19. | | | | | |
| M3 | 4 | 13 | 18. | 18. | 18. | 18. | 17. | 17. | 17. | 16. | 16. | 16. |
| M3 | 4 | 23 | 16. | 15. | | | | | | | | |
| M4 | 5 | 25 | 15. | 15. | 14. | 14. | 14. | 13. | 13. | 13. | | |
| M5 | 6 | 33 | 13. | 12. | 12. | 12. | | | | | | |
| M6 | 7 | 37 | 12. | 11. | 11. | 11. | | | | | | |
| M7 | 8 | 41 | 10. | 10. | 10. | 10. | 9. | 9. | 9. | 9. | 8. | 8. |
| M8 | 9 | 51 | 8. | 8. | 7. | 7. | 7. | 6. | | | | |
| M9 | 10 | 57 | 6. | 6. | 5. | 5. | 4. | | | | | |
| N1 | 11 | 62 | 4. | 4. | | | | | | | | |
| N2 | 12 | 64 | 4. | 4. | | | | | | | | |
| N3 | 13 | 66 | 3. | 3. | 3. | 2. | 2. | 2. | | | | |
| N4 | 14 | 72 | 2. | 2. | | | | | | | | |
| N5 | 15 | 74 | 1. | 1. | 1. | 0. | 0. | | | | | |
| N6 | 16 | 79 | 0. | | | | | | | | | |

INTERMEDIATE REPORT

Flow — Middle/Middle West Rivers DO Modeling - 090207

$m^3/s$ — COEF-1 Run

| ID | RCH | ELEM | +0 | +1 | +2 | +3 | +4 | +5 | +6 | +7 | +8 | +9 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| H1 | 1 | 1 | 1.3 | 1.6 | 1.8 | | | | | | | |
| M1 | 2 | 4 | 2.4 | 3.1 | 3.7 | 4.3 | | | | | | |
| M2 | 3 | 8 | 5.2 | 6.1 | 7.0 | 7.9 | 8.7 | | | | | |
| M3 | 4 | 13 | 9.0 | 9.3 | 9.5 | 9.8 | 10.0 | 10.3 | 10.5 | 10.8 | 11.1 | 11.3 |
| M3 | 4 | 23 | 11.6 | 11.8 | | | | | | | | |
| M4 | 5 | 25 | 12.0 | 12.2 | 12.4 | 12.6 | 12.8 | 13.0 | 13.1 | 13.3 | | |
| M5 | 6 | 33 | 13.7 | 14.1 | 14.5 | 14.8 | | | | | | |
| M6 | 7 | 37 | 15.2 | 15.6 | 16.0 | 16.3 | | | | | | |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M7 | 8 | 41 | 16.5 | 16.6 | 16.8 | 16.9 | 17.1 | 17.2 | 17.4 | 17.5 | 17.7 | 17.8 |
| M8 | 9 | 51 | 18.1 | 18.3 | 18.6 | 18.8 | 19.1 | 19.3 | | | | |
| M9 | 10 | 57 | 19.6 | 19.9 | 20.2 | 20.5 | 20.8 | | | | | |
| N1 | 11 | 62 | 21.6 | 22.3 | | | | | | | | |
| N2 | 12 | 64 | 23.1 | 23.8 | | | | | | | | |
| N3 | 13 | 66 | 24.1 | 24.3 | 24.6 | 24.8 | 25.1 | 25.3 | | | | |
| N4 | 14 | 72 | 26.1 | 26.8 | | | | | | | | |
| N5 | 15 | 74 | 27.1 | 27.4 | 27.7 | 28.0 | 28.3 | | | | | |
| N6 | 16 | 79 | 29.8 | | | | | | | | | |

INTERMEDIATE REPORT

Dispersion — Middle/Middle West Rivers DO Modeling - 090207

m²/s — COEF-1 Run

| ID | RCH | ELEM | +0 | +1 | +2 | +3 | +4 | +5 | +6 | +7 | +8 | +9 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| H1 | 1 | 1 | 1.0 | 1.0 | 1.0 | | | | | | | |
| M1 | 2 | 4 | 1.0 | 1.0 | 1.0 | 1.0 | | | | | | |
| M2 | 3 | 8 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | | | | | |
| M3 | 4 | 13 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| M3 | 4 | 23 | 1.0 | 1.0 | | | | | | | | |
| M4 | 5 | 25 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | | |
| M5 | 6 | 33 | 1.0 | 1.0 | 1.0 | 1.0 | | | | | | |
| M6 | 7 | 37 | 1.0 | 1.0 | 1.0 | 1.0 | | | | | | |
| M7 | 8 | 41 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| M8 | 9 | 51 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | | | | |
| M9 | 10 | 57 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | | | | | |
| N1 | 11 | 62 | 1.0 | 1.0 | | | | | | | | |
| N2 | 12 | 64 | 1.0 | 1.0 | | | | | | | | |
| N3 | 13 | 66 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | | | | |
| N4 | 14 | 72 | 1.0 | 1.0 | | | | | | | | |
| N5 | 15 | 74 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | | | | | |
| N6 | 16 | 79 | 1.0 | | | | | | | | | |

INTERMEDIATE REPORT

Advective Velocity — Middle/Middle West Rivers DO Modeling - 090207

m/s — COEF-1 Run

| ID | RCH | ELEM | +0 | +1 | +2 | +3 | +4 | +5 | +6 | +7 | +8 | +9 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| H1 | 1 | 1 | 0.0 | 0.0 | 0.0 | | | | | | | |
| M1 | 2 | 4 | 0.0 | 0.0 | 0.0 | 0.0 | | | | | | |
| M2 | 3 | 8 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | | | | | |
| M3 | 4 | 13 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| M3 | 4 | 23 | 0.0 | 0.0 | | | | | | | | |
| M4 | 5 | 25 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | |
| M5 | 6 | 33 | 0.0 | 0.0 | 0.0 | 0.0 | | | | | | |
| M6 | 7 | 37 | 0.0 | 0.0 | 0.0 | 0.0 | | | | | | |
| M7 | 8 | 41 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| M8 | 9 | 51 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | | |
| M9 | 10 | 57 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | | | |
| N1 | 11 | 62 | 0.0 | 0.0 | | | | | | | | |
| N2 | 12 | 64 | 0.0 | 0.0 | | | | | | | | |
| N3 | 13 | 66 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | | |
| N4 | 14 | 72 | 0.0 | 0.0 | | | | | | | | |
| N5 | 15 | 74 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | | | |

N6 16 79 0.0

INTERMEDIATE REPORT

Depth — Middle/Middle West Rivers DO Modeling - 090207

m — COEF-1 Run

| ID | RCH | ELEM | +0 | +1 | +2 | +3 | +4 | +5 | +6 | +7 | +8 | +9 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| H1 | 1 | 1 | 1.7 | 1.7 | 1.7 | | | | | | | |
| M1 | 2 | 4 | 4.9 | 4.9 | 4.9 | 4.9 | | | | | | |
| M2 | 3 | 8 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | | | | | |
| M3 | 4 | 13 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 |
| M3 | 4 | 23 | 4.1 | 4.1 | | | | | | | | |
| M4 | 5 | 25 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | | |
| M5 | 6 | 33 | 5.5 | 5.5 | 5.5 | 5.5 | | | | | | |
| M6 | 7 | 37 | 5.5 | 5.5 | 5.5 | 5.5 | | | | | | |
| M7 | 8 | 41 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 |
| M8 | 9 | 51 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | | | | |
| M9 | 10 | 57 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | | | | | |
| N1 | 11 | 62 | 5.7 | 5.7 | | | | | | | | |
| N2 | 12 | 64 | 5.7 | 5.7 | | | | | | | | |
| N3 | 13 | 66 | 5.7 | 5.7 | 5.7 | 5.7 | 5.7 | 5.7 | | | | |
| N4 | 14 | 72 | 5.7 | 5.7 | | | | | | | | |
| N5 | 15 | 74 | 5.7 | 5.7 | 5.7 | 5.7 | 5.7 | | | | | |
| N6 | 16 | 79 | 5.7 | | | | | | | | | |

INTERMEDIATE REPORT

Width — Middle/Middle West Rivers DO Modeling - 090207

m — COEF-1 Run

| ID | RCH | ELEM | +0 | +1 | +2 | +3 | +4 | +5 | +6 | +7 | +8 | +9 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| H1 | 1 | 1 | 52.6 | 52.6 | 52.6 | | | | | | | |
| M1 | 2 | 4 | 45.2 | 45.2 | 45.2 | 45.2 | | | | | | |
| M2 | 3 | 8 | 63.0 | 63.0 | 63.0 | 63.0 | 63.0 | | | | | |
| M3 | 4 | 13 | 103.5 | 103.5 | 103.5 | 103.5 | 103.5 | 103.5 | 103.5 | 103.5 | 103.5 | 103.5 |
| M3 | 4 | 23 | 103.5 | 103.5 | | | | | | | | |
| M4 | 5 | 25 | 116.5 | 116.5 | 116.5 | 116.5 | 116.5 | 116.5 | 116.5 | 116.5 | | |
| M5 | 6 | 33 | 116.5 | 116.5 | 116.5 | 116.5 | | | | | | |
| M6 | 7 | 37 | 116.5 | 116.5 | 116.5 | 116.5 | | | | | | |
| M7 | 8 | 41 | 224.8 | 224.8 | 224.8 | 224.8 | 224.8 | 224.8 | 224.8 | 224.8 | 224.8 | 224.8 |
| M8 | 9 | 51 | 224.8 | 224.8 | 224.8 | 224.8 | 224.8 | 224.8 | | | | |
| M9 | 10 | 57 | 260.2 | 260.2 | 260.2 | 260.2 | 260.2 | | | | | |
| N1 | 11 | 62 | 236.9 | 236.9 | | | | | | | | |
| N2 | 12 | 64 | 236.9 | 236.9 | | | | | | | | |
| N3 | 13 | 66 | 236.9 | 236.9 | 236.9 | 236.9 | 236.9 | 236.9 | | | | |
| N4 | 14 | 72 | 110.0 | 110.0 | | | | | | | | |
| N5 | 15 | 74 | 110.0 | 110.0 | 110.0 | 110.0 | 110.0 | | | | | |
| N6 | 16 | 79 | 110.0 | | | | | | | | | |

INTERMEDIATE REPORT

Cross-Sectional Area — Middle/Middle West Rivers DO Modeling - 090207

$m^2$ — COEF-1 Run

| ID | RCH | ELEM | +0 | +1 | +2 | +3 | +4 | +5 | +6 | +7 | +8 | +9 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| H1 | 1 | 1 | 89.9 | 89.9 | 89.9 | | | | | | | |
| M1 | 2 | 4 | 222.4 | 222.4 | 222.4 | 222.4 | | | | | | |
| M2 | 3 | 8 | 156.2 | 156.2 | 156.2 | 156.2 | 156.2 | | | | | |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M3 | 4 | 13 | 419.2 | 419.2 | 419.2 | 419.2 | 419.2 | 419.2 | 419.2 | 419.2 | 419.2 | 419.2 |
| M3 | 4 | 23 | 419.2 | 419.2 | | | | | | | | |
| M4 | 5 | 25 | 637.3 | 637.3 | 637.3 | 637.3 | 637.3 | 637.3 | 637.3 | 637.3 | | |
| M5 | 6 | 33 | 637.3 | 637.3 | 637.3 | 637.3 | | | | | | |
| M6 | 7 | 37 | 637.3 | 637.3 | 637.3 | 637.3 | | | | | | |
| M7 | 8 | 41 | 1494.6 | 1494.6 | 1494.6 | 1494.6 | 1494.6 | 1494.6 | 1494.6 | 1494.6 | 1494.6 | 1494.6 |
| M8 | 9 | 51 | 1494.6 | 1494.6 | 1494.6 | 1494.6 | 1494.6 | 1494.6 | | | | |
| M9 | 10 | 57 | 1126.7 | 1126.7 | 1126.7 | 1126.7 | 1126.7 | | | | | |
| N1 | 11 | 62 | 1350.6 | 1350.6 | | | | | | | | |
| N2 | 12 | 64 | 1350.6 | 1350.6 | | | | | | | | |
| N3 | 13 | 66 | 1350.6 | 1350.6 | 1350.6 | 1350.6 | 1350.6 | 1350.6 | | | | |
| N4 | 14 | 72 | 627.0 | 627.0 | | | | | | | | |
| N5 | 15 | 74 | 627.0 | 627.0 | 627.0 | 627.0 | 627.0 | | | | | |
| N6 | 16 | 79 | 627.0 | | | | | | | | | |

INTERMEDIATE REPORT

Reaeration Rate — Middle/Middle West Rivers DO Modeling - 090207

per day — COEF-1 Run

| ID | RCH | ELEM | +0 | +1 | +2 | +3 | +4 | +5 | +6 | +7 | +8 | +9 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| H1 | 1 | 1 | 0.476 | 0.478 | 0.481 | | | | | | | |
| M1 | 2 | 4 | 0.168 | 0.170 | 0.171 | 0.173 | | | | | | |
| M2 | 3 | 8 | 0.343 | 0.343 | 0.342 | 0.342 | 0.342 | | | | | |
| M3 | 4 | 13 | 0.209 | 0.209 | 0.209 | 0.209 | 0.209 | 0.210 | 0.210 | 0.210 | 0.210 | 0.210 |
| M3 | 4 | 23 | 0.210 | 0.210 | | | | | | | | |
| M4 | 5 | 25 | 0.155 | 0.156 | 0.156 | 0.156 | 0.156 | 0.156 | 0.156 | 0.157 | | |
| M5 | 6 | 33 | 0.157 | 0.157 | 0.157 | 0.157 | | | | | | |
| M6 | 7 | 37 | 0.156 | 0.156 | 0.156 | 0.155 | | | | | | |
| M7 | 8 | 41 | 0.128 | 0.128 | 0.128 | 0.128 | 0.128 | 0.128 | 0.128 | 0.128 | 0.128 | 0.128 |
| M8 | 9 | 51 | 0.128 | 0.128 | 0.128 | 0.128 | 0.128 | 0.128 | | | | |
| M9 | 10 | 57 | 0.196 | 0.196 | 0.196 | 0.196 | 0.196 | | | | | |
| N1 | 11 | 62 | 0.149 | 0.149 | | | | | | | | |
| N2 | 12 | 64 | 0.149 | 0.150 | | | | | | | | |
| N3 | 13 | 66 | 0.150 | 0.150 | 0.150 | 0.150 | 0.150 | 0.150 | | | | |
| N4 | 14 | 72 | 0.149 | 0.149 | | | | | | | | |
| N5 | 15 | 74 | 0.149 | 0.149 | 0.149 | 0.149 | 0.149 | | | | | |
| N6 | 16 | 79 | 0.138 | | | | | | | | | |

INTERMEDIATE REPORT

BOD Decay Rate — Middle/Middle West Rivers DO Modeling - 090207

per day — COEF-1 Run

| ID | RCH | ELEM | +0 | +1 | +2 | +3 | +4 | +5 | +6 | +7 | +8 | +9 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| H1 | 1 | 1 | 0.06 | 0.06 | 0.06 | | | | | | | |
| M1 | 2 | 4 | 0.06 | 0.06 | 0.06 | 0.07 | | | | | | |
| M2 | 3 | 8 | 0.06 | 0.06 | 0.06 | 0.06 | 0.06 | | | | | |
| M3 | 4 | 13 | 0.06 | 0.06 | 0.06 | 0.06 | 0.06 | 0.06 | 0.06 | 0.06 | 0.06 | 0.06 |
| M3 | 4 | 23 | 0.06 | 0.06 | | | | | | | | |
| M4 | 5 | 25 | 0.06 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | | |
| M5 | 6 | 33 | 0.07 | 0.07 | 0.07 | 0.07 | | | | | | |
| M6 | 7 | 37 | 0.07 | 0.07 | 0.07 | 0.06 | | | | | | |
| M7 | 8 | 41 | 0.06 | 0.06 | 0.06 | 0.06 | 0.06 | 0.06 | 0.06 | 0.06 | 0.06 | 0.06 |
| M8 | 9 | 51 | 0.06 | 0.06 | 0.06 | 0.06 | 0.06 | 0.06 | | | | |
| M9 | 10 | 57 | 0.06 | 0.06 | 0.06 | 0.06 | 0.06 | | | | | |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N1 | 11 | 62 | 0.06 | 0.06 | | | | | | | | |
| N2 | 12 | 64 | 0.07 | 0.07 | | | | | | | | |
| N3 | 13 | 66 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | | | | |
| N4 | 14 | 72 | 0.07 | 0.06 | | | | | | | | |
| N5 | 15 | 74 | 0.06 | 0.06 | 0.06 | 0.06 | 0.06 | | | | | |
| N6 | 16 | 79 | 0.05 | | | | | | | | | |

INTERMEDIATE REPORT

BOD Settling Rate Middle/Middle West Rivers DO Modeling - 090207

per day COEF-1 Run

| ID | RCH | ELEM | +0 | +1 | +2 | +3 | +4 | +5 | +6 | +7 | +8 | +9 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| H1 | 1 | 1 | 0.07 | 0.07 | 0.07 | | | | | | | |
| M1 | 2 | 4 | 0.03 | 0.03 | 0.03 | 0.03 | | | | | | |
| M2 | 3 | 8 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | | | | | |
| M3 | 4 | 13 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 |
| M3 | 4 | 23 | 0.03 | 0.03 | | | | | | | | |
| M4 | 5 | 25 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | | |
| M5 | 6 | 33 | 0.02 | 0.02 | 0.02 | 0.02 | | | | | | |
| M6 | 7 | 37 | 0.02 | 0.02 | 0.02 | 0.02 | | | | | | |
| M7 | 8 | 41 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 |
| M8 | 9 | 51 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | | | | |
| M9 | 10 | 57 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | | | | | |
| N1 | 11 | 62 | 0.02 | 0.02 | | | | | | | | |
| N2 | 12 | 64 | 0.02 | 0.02 | | | | | | | | |
| N3 | 13 | 66 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | | | | |
| N4 | 14 | 72 | 0.02 | 0.02 | | | | | | | | |
| N5 | 15 | 74 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | | | | | |
| N6 | 16 | 79 | 0.02 | | | | | | | | | |

INTERMEDIATE REPORT

Ammonia Decay Rate Middle/Middle West Rivers DO Modeling - 090207

per day COEF-1 Run

| ID | RCH | ELEM | +0 | +1 | +2 | +3 | +4 | +5 | +6 | +7 | +8 | +9 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| H1 | 1 | 1 | 0.17 | 0.18 | 0.18 | | | | | | | |
| M1 | 2 | 4 | 0.19 | 0.20 | 0.21 | 0.21 | | | | | | |
| M2 | 3 | 8 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | | | | | |
| M3 | 4 | 13 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 |
| M3 | 4 | 23 | 0.21 | 0.21 | | | | | | | | |
| M4 | 5 | 25 | 0.21 | 0.22 | 0.22 | 0.22 | 0.22 | 0.22 | 0.22 | 0.22 | | |
| M5 | 6 | 33 | 0.22 | 0.22 | 0.22 | 0.22 | | | | | | |
| M6 | 7 | 37 | 0.22 | 0.22 | 0.22 | 0.21 | | | | | | |
| M7 | 8 | 41 | 0.21 | 0.21 | 0.21 | 0.22 | 0.22 | 0.22 | 0.22 | 0.22 | 0.22 | 0.22 |
| M8 | 9 | 51 | 0.22 | 0.22 | 0.22 | 0.22 | 0.22 | 0.22 | | | | |
| M9 | 10 | 57 | 0.22 | 0.22 | 0.22 | 0.22 | 0.22 | | | | | |
| N1 | 11 | 62 | 0.22 | 0.22 | | | | | | | | |
| N2 | 12 | 64 | 0.22 | 0.22 | | | | | | | | |
| N3 | 13 | 66 | 0.22 | 0.22 | 0.22 | 0.22 | 0.22 | 0.22 | | | | |
| N4 | 14 | 72 | 0.22 | 0.22 | | | | | | | | |
| N5 | 15 | 74 | 0.22 | 0.22 | 0.22 | 0.22 | 0.22 | | | | | |
| N6 | 16 | 79 | 0.15 | | | | | | | | | |

INTERMEDIATE REPORT

Sediment Oxygen Demand Middle/Middle West Rivers DO Modeling - 090207

g/m²/d COEF-1 Run

| ID | RCH | ELEM | +0 | +1 | +2 | +3 | +4 | +5 | +6 | +7 | +8 | +9 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| H1 | 1 | 1 | 1.67 | 1.69 | 1.72 | | | | | | | |
| M1 | 2 | 4 | 2.33 | 2.40 | 2.47 | 2.55 | | | | | | |
| M2 | 3 | 8 | 0.66 | 0.65 | 0.65 | 0.65 | 0.65 | | | | | |
| M3 | 4 | 13 | 1.90 | 1.90 | 1.90 | 1.91 | 1.91 | 1.91 | 1.91 | 1.91 | 1.91 | 1.92 |
| M3 | 4 | 23 | 1.92 | 1.92 | | | | | | | | |
| M4 | 5 | 25 | 1.93 | 1.93 | 1.94 | 1.95 | 1.96 | 1.97 | 1.97 | 1.98 | | |
| M5 | 6 | 33 | 1.32 | 1.33 | 1.33 | 1.33 | | | | | | |
| M6 | 7 | 37 | 1.32 | 1.32 | 1.31 | 1.30 | | | | | | |
| M7 | 8 | 41 | 1.30 | 1.30 | 1.30 | 1.30 | 1.30 | 1.30 | 1.30 | 1.30 | 1.30 | 1.30 |
| M8 | 9 | 51 | 1.30 | 1.30 | 1.30 | 1.30 | 1.30 | 1.30 | | | | |
| M9 | 10 | 57 | 1.30 | 1.30 | 1.30 | 1.30 | 1.30 | | | | | |
| N1 | 11 | 62 | 0.10 | 0.10 | | | | | | | | |
| N2 | 12 | 64 | 0.10 | 0.10 | | | | | | | | |
| N3 | 13 | 66 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | | | | |
| N4 | 14 | 72 | 0.10 | 0.10 | | | | | | | | |
| N5 | 15 | 74 | 0.10 | 0.10 | 0.10 | 0.11 | 0.12 | | | | | |
| N6 | 16 | 79 | 0.18 | | | | | | | | | |

CONDENSED CAPSULE SUMMARY FOR Headwater

| DIST | FLOW | TEMP | SALN | DO | EBOD1 | EBOD2 | REAER | ORGN | BOD1 | NH3 | BOD1 | CHLA | BOD2 | RATE | BOD2 | DECA | NH3 | SETT | DECA | SETT | DECA | SOD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| km | m³/s | deg C | ppt | mg/L | mg/L | mg/L | mg/L | µg/L | 1/da | 1/da | 1/da | 1/da | 1/da | 1/da | 1/da | 1/da | | | | | | g/m²/d |
| HDWTR | 1.11000 | 30.00 | 0.00 | 5.00 | 0.42 | 0.00 | 0.00 | 0.10 | 1.00 | | | | | | | | | | | | | |
| 21.84 | 1.34233 | 28.07 | 0.00 | 5.06 | 0.36 | 0.00 | 0.04 | 0.08 | 1.00 | 0.48 | 0.06 | 0.07 | 0.01 | 0.00 | 0.17 | | | | | | | 1.67 |
| 21.57 | 1.57467 | 28.33 | 0.00 | 5.11 | 0.31 | 0.00 | 0.08 | 0.07 | 1.00 | 0.48 | 0.06 | 0.07 | 0.01 | 0.00 | 0.18 | | | | | | | 1.69 |
| 21.30 | 1.80700 | 28.60 | 0.00 | 5.13 | 0.26 | 0.00 | 0.11 | 0.06 | 1.00 | 0.48 | 0.06 | 0.07 | 0.01 | 0.00 | 0.18 | | | | | | | 1.72 |
| 21.05 | 2.42875 | 29.10 | 0.00 | 5.10 | 0.20 | 0.00 | 0.16 | 0.04 | 1.00 | 0.17 | 0.06 | 0.03 | 0.01 | 0.00 | 0.19 | | | | | | | 2.33 |
| 20.80 | 3.05050 | 29.60 | 0.00 | 5.08 | 0.17 | 0.00 | 0.18 | 0.04 | 1.00 | 0.17 | 0.06 | 0.03 | 0.01 | 0.00 | 0.20 | | | | | | | 2.40 |
| 20.55 | 3.67225 | 30.10 | 0.00 | 5.07 | 0.15 | 0.00 | 0.20 | 0.03 | 1.00 | 0.17 | 0.06 | 0.03 | 0.01 | 0.00 | 0.21 | | | | | | | 2.47 |
| 20.30 | 4.29400 | 30.60 | 0.00 | 5.07 | 0.14 | 0.00 | 0.21 | 0.03 | 1.00 | 0.17 | 0.07 | 0.03 | 0.01 | 0.00 | 0.21 | | | | | | | 2.55 |
| 20.00 | 5.18500 | 30.56 | 0.00 | 5.12 | 0.12 | 0.00 | 0.22 | 0.03 | 1.00 | 0.34 | 0.06 | 0.05 | 0.01 | 0.00 | 0.21 | | | | | | | 0.66 |
| 19.70 | 6.07600 | 30.52 | 0.00 | 5.15 | 0.11 | 0.00 | 0.23 | 0.02 | 1.00 | 0.34 | 0.06 | 0.05 | 0.01 | 0.00 | 0.21 | | | | | | | 0.65 |
| 19.40 | 6.96700 | 30.48 | 0.00 | 5.18 | 0.10 | 0.00 | 0.24 | 0.02 | 1.00 | 0.34 | 0.06 | 0.05 | 0.01 | 0.00 | 0.21 | | | | | | | 0.65 |
| 19.10 | 7.85800 | 30.44 | 0.00 | 5.20 | 0.09 | 0.00 | 0.25 | 0.02 | 1.00 | 0.34 | 0.06 | 0.05 | 0.01 | 0.00 | 0.21 | | | | | | | 0.65 |
| 18.80 | 8.74900 | 30.40 | 0.00 | 5.22 | 0.09 | 0.00 | 0.25 | 0.02 | 1.00 | 0.34 | 0.06 | 0.05 | 0.01 | 0.00 | 0.21 | | | | | | | 0.65 |
| 18.50 | 9.00600 | 30.41 | 0.00 | 5.22 | 0.10 | 0.00 | 0.25 | 0.02 | 1.00 | 0.21 | 0.06 | 0.03 | 0.01 | 0.00 | 0.21 | | | | | | | 1.90 |
| 18.20 | 9.26300 | 30.42 | 0.00 | 5.23 | 0.11 | 0.00 | 0.25 | 0.02 | 1.00 | 0.21 | 0.06 | 0.03 | 0.01 | 0.00 | 0.21 | | | | | | | 1.90 |
| 17.90 | 9.52000 | 30.42 | 0.00 | 5.24 | 0.11 | 0.00 | 0.25 | 0.02 | 1.00 | 0.21 | 0.06 | 0.03 | 0.01 | 0.00 | 0.21 | | | | | | | 1.90 |
| 17.60 | 9.77700 | 30.43 | 0.00 | 5.24 | 0.12 | 0.00 | 0.25 | 0.02 | 1.00 | 0.21 | 0.06 | 0.03 | 0.01 | 0.00 | 0.21 | | | | | | | 1.91 |
| 17.30 | 10.03400 | 30.44 | 0.00 | 5.25 | 0.12 | 0.00 | 0.24 | 0.02 | 1.00 | 0.21 | 0.06 | 0.03 | 0.01 | 0.00 | 0.21 | | | | | | | 1.91 |
| 17.00 | 10.29100 | 30.45 | 0.00 | 5.25 | 0.13 | 0.00 | 0.24 | 0.02 | 1.00 | 0.21 | 0.06 | 0.03 | 0.01 | 0.00 | 0.21 | | | | | | | 1.91 |
| 16.70 | 10.54800 | 30.46 | 0.00 | 5.25 | 0.14 | 0.00 | 0.24 | 0.03 | 1.00 | 0.21 | 0.06 | 0.03 | 0.01 | 0.00 | 0.21 | | | | | | | 1.91 |
| 16.40 | 10.80500 | 30.47 | 0.00 | 5.26 | 0.14 | 0.00 | 0.24 | 0.03 | 1.00 | 0.21 | 0.06 | 0.03 | 0.01 | 0.00 | 0.21 | | | | | | | 1.91 |
| 16.10 | 11.06200 | 30.48 | 0.00 | 5.26 | 0.15 | 0.00 | 0.24 | 0.03 | 1.00 | 0.21 | 0.06 | 0.03 | 0.01 | 0.00 | 0.21 | | | | | | | 1.91 |
| 15.80 | 11.31900 | 30.48 | 0.00 | 5.26 | 0.15 | 0.00 | 0.24 | 0.03 | 1.00 | 0.21 | 0.06 | 0.03 | 0.01 | 0.00 | 0.21 | | | | | | | 1.92 |
| 15.50 | 11.57600 | 30.49 | 0.00 | 5.26 | 0.15 | 0.00 | 0.24 | 0.03 | 1.00 | 0.21 | 0.06 | 0.03 | 0.01 | 0.00 | 0.21 | | | | | | | 1.92 |
| 15.20 | 11.83300 | 30.50 | 0.00 | 5.27 | 0.16 | 0.00 | 0.24 | 0.03 | 1.00 | 0.21 | 0.06 | 0.03 | 0.01 | 0.00 | 0.21 | | | | | | | 1.92 |
| 14.90 | 12.02050 | 30.56 | 0.00 | 5.28 | 0.16 | 0.00 | 0.24 | 0.03 | 1.00 | 0.16 | 0.06 | 0.02 | 0.01 | 0.00 | 0.21 | | | | | | | 1.93 |
| 14.60 | 12.20800 | 30.62 | 0.00 | 5.28 | 0.16 | 0.00 | 0.24 | 0.03 | 1.00 | 0.16 | 0.07 | 0.02 | 0.01 | 0.00 | 0.22 | | | | | | | 1.93 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 14.30 | 12.39550 | 30.69 | 0.00 | 5.29 | 0.16 | 0.00 | 0.23 | 0.03 | 1.00 | 0.16 | 0.07 | 0.02 | 0.01 | 0.00 | 0.22 | 1.94 |
| 14.00 | 12.58300 | 30.75 | 0.00 | 5.29 | 0.16 | 0.00 | 0.23 | 0.03 | 1.00 | 0.16 | 0.07 | 0.02 | 0.01 | 0.00 | 0.22 | 1.95 |
| 13.70 | 12.77050 | 30.81 | 0.00 | 5.30 | 0.16 | 0.00 | 0.23 | 0.03 | 1.00 | 0.16 | 0.07 | 0.02 | 0.01 | 0.00 | 0.22 | 1.96 |
| 13.40 | 12.95800 | 30.88 | 0.00 | 5.30 | 0.17 | 0.00 | 0.23 | 0.03 | 1.00 | 0.16 | 0.07 | 0.02 | 0.01 | 0.00 | 0.22 | 1.97 |
| 13.10 | 13.14550 | 30.94 | 0.00 | 5.30 | 0.17 | 0.00 | 0.23 | 0.04 | 1.00 | 0.16 | 0.07 | 0.02 | 0.01 | 0.00 | 0.22 | 1.97 |
| 12.80 | 13.33300 | 31.00 | 0.00 | 5.31 | 0.17 | 0.00 | 0.23 | 0.04 | 1.00 | 0.16 | 0.07 | 0.02 | 0.01 | 0.00 | 0.22 | 1.98 |
| 12.60 | 13.70800 | 31.00 | 0.00 | 5.32 | 0.19 | 0.00 | 0.23 | 0.04 | 1.00 | 0.16 | 0.07 | 0.02 | 0.01 | 0.00 | 0.22 | 1.32 |
| 12.40 | 14.08300 | 31.00 | 0.00 | 5.32 | 0.22 | 0.00 | 0.23 | 0.04 | 1.00 | 0.16 | 0.07 | 0.02 | 0.01 | 0.00 | 0.22 | 1.33 |
| 12.20 | 14.45800 | 31.00 | 0.00 | 5.33 | 0.23 | 0.00 | 0.23 | 0.04 | 1.00 | 0.16 | 0.07 | 0.02 | 0.01 | 0.00 | 0.22 | 1.33 |
| 12.00 | 14.83300 | 31.00 | 0.00 | 5.34 | 0.25 | 0.00 | 0.23 | 0.03 | 1.00 | 0.16 | 0.07 | 0.02 | 0.01 | 0.00 | 0.22 | 1.33 |
| 11.65 | 15.20800 | 30.88 | 0.00 | 5.36 | 0.27 | 0.00 | 0.23 | 0.04 | 1.00 | 0.16 | 0.07 | 0.02 | 0.01 | 0.00 | 0.22 | 1.32 |
| 11.30 | 15.58300 | 30.75 | 0.00 | 5.37 | 0.28 | 0.00 | 0.23 | 0.04 | 1.00 | 0.16 | 0.07 | 0.02 | 0.01 | 0.00 | 0.22 | 1.32 |
| 10.95 | 15.95800 | 30.62 | 0.00 | 5.39 | 0.30 | 0.00 | 0.23 | 0.04 | 1.00 | 0.16 | 0.07 | 0.02 | 0.01 | 0.00 | 0.22 | 1.31 |
| 10.60 | 16.33300 | 30.50 | 0.00 | 5.41 | 0.31 | 0.00 | 0.23 | 0.04 | 1.00 | 0.16 | 0.06 | 0.02 | 0.01 | 0.00 | 0.21 | 1.30 |
| 10.36 | 16.48300 | 30.50 | 0.00 | 5.44 | 0.31 | 0.00 | 0.22 | 0.04 | 1.00 | 0.13 | 0.06 | 0.02 | 0.01 | 0.00 | 0.21 | 1.30 |
| 10.12 | 16.63300 | 30.50 | 0.00 | 5.46 | 0.31 | 0.00 | 0.22 | 0.04 | 1.00 | 0.13 | 0.06 | 0.02 | 0.01 | 0.00 | 0.21 | 1.30 |
| 9.88 | 16.78300 | 30.50 | 0.00 | 5.49 | 0.31 | 0.00 | 0.22 | 0.04 | 1.00 | 0.13 | 0.06 | 0.02 | 0.01 | 0.00 | 0.21 | 1.30 |
| 9.64 | 16.93300 | 30.50 | 0.00 | 5.51 | 0.31 | 0.00 | 0.21 | 0.04 | 1.00 | 0.13 | 0.06 | 0.02 | 0.01 | 0.00 | 0.22 | 1.30 |
| 9.40 | 17.08300 | 30.50 | 0.00 | 5.54 | 0.31 | 0.00 | 0.21 | 0.04 | 1.00 | 0.13 | 0.06 | 0.02 | 0.01 | 0.00 | 0.22 | 1.30 |
| 9.16 | 17.23300 | 30.50 | 0.00 | 5.56 | 0.31 | 0.00 | 0.21 | 0.04 | 1.00 | 0.13 | 0.06 | 0.02 | 0.01 | 0.00 | 0.22 | 1.30 |
| 8.92 | 17.38300 | 30.50 | 0.00 | 5.58 | 0.31 | 0.00 | 0.21 | 0.04 | 1.00 | 0.13 | 0.06 | 0.02 | 0.01 | 0.00 | 0.22 | 1.30 |
| 8.68 | 17.53300 | 30.50 | 0.00 | 5.60 | 0.31 | 0.00 | 0.20 | 0.04 | 1.00 | 0.13 | 0.06 | 0.02 | 0.01 | 0.00 | 0.22 | 1.30 |
| 8.44 | 17.68299 | 30.50 | 0.00 | 5.62 | 0.31 | 0.00 | 0.20 | 0.04 | 1.00 | 0.13 | 0.06 | 0.02 | 0.01 | 0.00 | 0.22 | 1.30 |
| 8.20 | 17.83299 | 30.50 | 0.00 | 5.64 | 0.31 | 0.00 | 0.20 | 0.04 | 1.00 | 0.13 | 0.06 | 0.02 | 0.01 | 0.00 | 0.22 | 1.30 |
| 7.90 | 18.08299 | 30.50 | 0.00 | 5.66 | 0.31 | 0.00 | 0.20 | 0.04 | 1.00 | 0.13 | 0.06 | 0.02 | 0.01 | 0.00 | 0.22 | 1.30 |
| 7.60 | 18.33299 | 30.50 | 0.00 | 5.68 | 0.32 | 0.00 | 0.20 | 0.04 | 1.00 | 0.13 | 0.06 | 0.02 | 0.01 | 0.00 | 0.22 | 1.30 |
| 7.30 | 18.58299 | 30.50 | 0.00 | 5.69 | 0.32 | 0.00 | 0.19 | 0.04 | 1.00 | 0.13 | 0.06 | 0.02 | 0.01 | 0.00 | 0.22 | 1.30 |
| 7.00 | 18.83299 | 30.50 | 0.00 | 5.71 | 0.32 | 0.00 | 0.19 | 0.04 | 1.00 | 0.13 | 0.06 | 0.02 | 0.01 | 0.00 | 0.22 | 1.30 |
| 6.70 | 19.08299 | 30.50 | 0.00 | 5.72 | 0.32 | 0.00 | 0.19 | 0.04 | 1.00 | 0.13 | 0.06 | 0.02 | 0.01 | 0.00 | 0.22 | 1.30 |
| 6.40 | 19.33299 | 30.50 | 0.00 | 5.74 | 0.33 | 0.00 | 0.19 | 0.04 | 1.00 | 0.13 | 0.06 | 0.02 | 0.01 | 0.00 | 0.22 | 1.30 |
| 6.02 | 19.63299 | 30.50 | 0.00 | 5.75 | 0.33 | 0.00 | 0.19 | 0.04 | 1.00 | 0.20 | 0.06 | 0.03 | 0.01 | 0.00 | 0.22 | 1.30 |
| 5.64 | 19.93299 | 30.50 | 0.00 | 5.76 | 0.33 | 0.00 | 0.19 | 0.04 | 1.00 | 0.20 | 0.06 | 0.03 | 0.01 | 0.00 | 0.22 | 1.30 |
| 5.26 | 20.23299 | 30.50 | 0.00 | 5.78 | 0.34 | 0.00 | 0.18 | 0.04 | 1.00 | 0.20 | 0.06 | 0.03 | 0.01 | 0.00 | 0.22 | 1.30 |
| 4.88 | 20.53299 | 30.50 | 0.00 | 5.79 | 0.34 | 0.00 | 0.18 | 0.04 | 1.00 | 0.20 | 0.06 | 0.03 | 0.01 | 0.00 | 0.22 | 1.30 |
| 4.50 | 20.83299 | 30.50 | 0.00 | 5.80 | 0.34 | 0.00 | 0.18 | 0.04 | 1.00 | 0.20 | 0.06 | 0.03 | 0.01 | 0.00 | 0.22 | 1.30 |
| 4.35 | 21.58299 | 30.50 | 0.00 | 5.80 | 0.35 | 0.00 | 0.19 | 0.04 | 1.00 | 0.15 | 0.06 | 0.02 | 0.01 | 0.00 | 0.22 | 0.10 |
| 4.20 | 22.33299 | 30.50 | 0.00 | 5.81 | 0.35 | 0.00 | 0.19 | 0.04 | 1.00 | 0.15 | 0.06 | 0.02 | 0.01 | 0.00 | 0.22 | 0.10 |
| 3.85 | 23.08299 | 30.60 | 0.00 | 5.85 | 0.36 | 0.00 | 0.19 | 0.04 | 1.00 | 0.15 | 0.07 | 0.02 | 0.01 | 0.00 | 0.22 | 0.10 |
| 3.50 | 23.83299 | 30.70 | 0.00 | 5.89 | 0.36 | 0.00 | 0.19 | 0.04 | 1.00 | 0.15 | 0.07 | 0.02 | 0.01 | 0.00 | 0.22 | 0.10 |
| 3.20 | 24.08299 | 30.70 | 0.00 | 5.93 | 0.35 | 0.00 | 0.19 | 0.04 | 1.00 | 0.15 | 0.07 | 0.02 | 0.01 | 0.00 | 0.22 | 0.10 |
| 2.90 | 24.33299 | 30.70 | 0.00 | 5.97 | 0.35 | 0.00 | 0.19 | 0.04 | 1.00 | 0.15 | 0.07 | 0.02 | 0.01 | 0.00 | 0.22 | 0.10 |
| 2.60 | 24.58299 | 30.70 | 0.00 | 6.01 | 0.35 | 0.00 | 0.19 | 0.04 | 1.00 | 0.15 | 0.07 | 0.02 | 0.01 | 0.00 | 0.22 | 0.10 |
| 2.30 | 24.83299 | 30.70 | 0.00 | 6.05 | 0.34 | 0.00 | 0.18 | 0.04 | 1.00 | 0.15 | 0.07 | 0.02 | 0.01 | 0.00 | 0.22 | 0.10 |
| 2.00 | 25.08299 | 30.70 | 0.00 | 6.08 | 0.34 | 0.00 | 0.18 | 0.04 | 1.00 | 0.15 | 0.07 | 0.02 | 0.01 | 0.00 | 0.22 | 0.10 |
| 1.70 | 25.33299 | 30.70 | 0.00 | 6.11 | 0.34 | 0.00 | 0.18 | 0.04 | 1.00 | 0.15 | 0.07 | 0.02 | 0.01 | 0.00 | 0.22 | 0.10 |
| 1.60 | 26.08299 | 30.60 | 0.00 | 6.08 | 0.35 | 0.00 | 0.19 | 0.04 | 1.00 | 0.15 | 0.07 | 0.02 | 0.01 | 0.00 | 0.22 | 0.10 |
| 1.50 | 26.83299 | 30.50 | 0.00 | 6.07 | 0.35 | 0.00 | 0.19 | 0.04 | 1.00 | 0.15 | 0.06 | 0.02 | 0.01 | 0.00 | 0.22 | 0.10 |
| 1.23 | 27.13299 | 30.50 | 0.00 | 6.07 | 0.36 | 0.00 | 0.19 | 0.04 | 1.00 | 0.15 | 0.06 | 0.02 | 0.01 | 0.00 | 0.22 | 0.10 |
| 0.96 | 27.43299 | 30.50 | 0.00 | 6.08 | 0.36 | 0.00 | 0.19 | 0.04 | 1.00 | 0.15 | 0.06 | 0.02 | 0.01 | 0.00 | 0.22 | 0.10 |
| 0.69 | 27.73299 | 30.50 | 0.00 | 6.08 | 0.36 | 0.00 | 0.19 | 0.04 | 1.00 | 0.15 | 0.06 | 0.02 | 0.01 | 0.00 | 0.22 | 0.10 |

| | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.42 | 28.03299 | 30.50 | 0.00 | 6.09 | 0.37 | 0.00 | 0.19 | 0.04 | 1.00 | 0.15 | 0.06 | 0.02 | 0.01 | 0.00 | 0.22 | 0.11 | | | | | | | | |
| 0.15 | 28.33299 | 30.50 | 0.00 | 6.07 | 0.45 | 0.00 | 0.19 | 0.04 | 1.00 | 0.15 | 0.06 | 0.02 | 0.01 | 0.00 | 0.22 | 0.12 | | | | | | | | |
| 0.00 | 29.83299 | 26.25 | 0.00 | 5.82 | 1.18 | 0.00 | 0.15 | 0.03 | 0.00 | 0.14 | 0.05 | 0.02 | 0.01 | 0.00 | 0.15 | 0.18 | | | | | | | | |

EXPANDED CAPSULE SUMMARY FOR Headwater

| IOR | REACH | DIST | FLOW | TEMP | SALN | DO | EBOD1 | EBOD2 | ORG-N | NH3 | CHLA | DISP | DEPTH | WIDTH | ADVEC VELO | MEAN VELO | DO SAT | REAER RATE | BOD1 DECA | BOD1 SETT | BOD2 DECA | BOD2 SETT | NH3 DECA | SOD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | km | m³/s | deg C | ppt | mg/L | mg/L | mg/L | mg/L | mg/L | µg/L | m²/s | m | m | m/s | m/s | mg/L | 1/da | 1/da | 1/da | 1/da | 1/da | 1/da | 1/da | g/m²/d |
| | HDWTR | 1.110 | 30.0 | 0.0 | 5.0 | 0.4 | 0.0 | 0.0 | 0.1 | 1.0 | | | | | | | | | | | | | | |
| | WASTELOAD # 001 (test) ENTERS HERE WITHOUT ANY FLOW | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | H1 1 | 21.84 | 1.342 | 28.1 | 0.0 | 5.1 | 0.4 | 0.0 | 0.0 | 0.1 | 1.0 | 1.0 | 1.71 | 52.6 | 0.015 | 0.015 | 7.8 | 0.476 | 0.06 | 0.07 | 0.01 | 0.00 | 0.17 | 1.67 |
| 2 | H1 1 | 21.57 | 1.575 | 28.3 | 0.0 | 5.1 | 0.3 | 0.0 | 0.1 | 0.1 | 1.0 | 1.0 | 1.71 | 52.6 | 0.018 | 0.018 | 7.8 | 0.478 | 0.06 | 0.07 | 0.01 | 0.00 | 0.18 | 1.69 |
| 3 | H1 1 | 21.30 | 1.807 | 28.6 | 0.0 | 5.1 | 0.3 | 0.0 | 0.1 | 0.1 | 1.0 | 1.0 | 1.71 | 52.6 | 0.020 | 0.020 | 7.7 | 0.481 | 0.06 | 0.07 | 0.01 | 0.00 | 0.18 | 1.72 |
| 4 | M1 2 | 21.05 | 2.429 | 29.1 | 0.0 | 5.1 | 0.2 | 0.0 | 0.2 | 0.0 | 1.0 | 1.0 | 4.92 | 45.2 | 0.011 | 0.011 | 7.7 | 0.168 | 0.06 | 0.03 | 0.01 | 0.00 | 0.19 | 2.33 |
| 5 | M1 2 | 20.80 | 3.050 | 29.6 | 0.0 | 5.1 | 0.2 | 0.0 | 0.2 | 0.0 | 1.0 | 1.0 | 4.92 | 45.2 | 0.014 | 0.014 | 7.6 | 0.170 | 0.06 | 0.03 | 0.01 | 0.00 | 0.20 | 2.40 |
| 6 | M1 2 | 20.55 | 3.672 | 30.1 | 0.0 | 5.1 | 0.2 | 0.0 | 0.2 | 0.0 | 1.0 | 1.0 | 4.92 | 45.2 | 0.017 | 0.017 | 7.5 | 0.171 | 0.06 | 0.03 | 0.01 | 0.00 | 0.21 | 2.47 |
| 7 | M1 2 | 20.30 | 4.294 | 30.6 | 0.0 | 5.1 | 0.1 | 0.0 | 0.2 | 0.0 | 1.0 | 1.0 | 4.92 | 45.2 | 0.019 | 0.019 | 7.5 | 0.173 | 0.07 | 0.03 | 0.01 | 0.00 | 0.21 | 2.55 |
| 8 | M2 3 | 20.00 | 5.185 | 30.6 | 0.0 | 5.1 | 0.1 | 0.0 | 0.2 | 0.0 | 1.0 | 1.0 | 2.48 | 63.0 | 0.033 | 0.033 | 7.5 | 0.343 | 0.06 | 0.05 | 0.01 | 0.00 | 0.21 | 0.66 |
| 9 | M2 3 | 19.70 | 6.076 | 30.5 | 0.0 | 5.2 | 0.1 | 0.0 | 0.2 | 0.0 | 1.0 | 1.0 | 2.48 | 63.0 | 0.039 | 0.039 | 7.5 | 0.343 | 0.06 | 0.05 | 0.01 | 0.00 | 0.21 | 0.65 |
| 10 | M2 3 | 19.40 | 6.967 | 30.5 | 0.0 | 5.2 | 0.1 | 0.0 | 0.2 | 0.0 | 1.0 | 1.0 | 2.48 | 63.0 | 0.045 | 0.045 | 7.5 | 0.342 | 0.06 | 0.05 | 0.01 | 0.00 | 0.21 | 0.65 |
| 11 | M2 3 | 19.10 | 7.858 | 30.4 | 0.0 | 5.2 | 0.1 | 0.0 | 0.2 | 0.0 | 1.0 | 1.0 | 2.48 | 63.0 | 0.050 | 0.050 | 7.5 | 0.342 | 0.06 | 0.05 | 0.01 | 0.00 | 0.21 | 0.65 |
| 12 | M2 3 | 18.80 | 8.749 | 30.4 | 0.0 | 5.2 | 0.1 | 0.0 | 0.2 | 0.0 | 1.0 | 1.0 | 2.48 | 63.0 | 0.056 | 0.056 | 7.5 | 0.342 | 0.06 | 0.05 | 0.01 | 0.00 | 0.21 | 0.65 |
| 13 | M3 4 | 18.50 | 9.006 | 30.4 | 0.0 | 5.2 | 0.1 | 0.0 | 0.2 | 0.0 | 1.0 | 1.0 | 4.05 | 103.5 | 0.021 | 0.021 | 7.5 | 0.209 | 0.06 | 0.03 | 0.01 | 0.00 | 0.21 | 1.90 |
| 14 | M3 4 | 18.20 | 9.263 | 30.4 | 0.0 | 5.2 | 0.1 | 0.0 | 0.2 | 0.0 | 1.0 | 1.0 | 4.05 | 103.5 | 0.022 | 0.022 | 7.5 | 0.209 | 0.06 | 0.03 | 0.01 | 0.00 | 0.21 | 1.90 |
| 15 | M3 4 | 17.90 | 9.520 | 30.4 | 0.0 | 5.2 | 0.1 | 0.0 | 0.2 | 0.0 | 1.0 | 1.0 | 4.05 | 103.5 | 0.023 | 0.023 | 7.5 | 0.209 | 0.06 | 0.03 | 0.01 | 0.00 | 0.21 | 1.90 |
| 16 | M3 4 | 17.60 | 9.777 | 30.4 | 0.0 | 5.2 | 0.1 | 0.0 | 0.2 | 0.0 | 1.0 | 1.0 | 4.05 | 103.5 | 0.023 | 0.023 | 7.5 | 0.209 | 0.06 | 0.03 | 0.01 | 0.00 | 0.21 | 1.91 |
| 17 | M3 4 | 17.30 | 10.034 | 30.4 | 0.0 | 5.2 | 0.1 | 0.0 | 0.2 | 0.0 | 1.0 | 1.0 | 4.05 | 103.5 | 0.024 | 0.024 | 7.5 | 0.209 | 0.06 | 0.03 | 0.01 | 0.00 | 0.21 | 1.91 |
| 18 | M3 4 | 17.00 | 10.291 | 30.5 | 0.0 | 5.3 | 0.1 | 0.0 | 0.2 | 0.0 | 1.0 | 1.0 | 4.05 | 103.5 | 0.025 | 0.025 | 7.5 | 0.210 | 0.06 | 0.03 | 0.01 | 0.00 | 0.21 | 1.91 |
| 19 | M3 4 | 16.70 | 10.548 | 30.5 | 0.0 | 5.3 | 0.1 | 0.0 | 0.2 | 0.0 | 1.0 | 1.0 | 4.05 | 103.5 | 0.025 | 0.025 | 7.5 | 0.210 | 0.06 | 0.03 | 0.01 | 0.00 | 0.21 | 1.91 |
| 20 | M3 4 | 16.40 | 10.805 | 30.5 | 0.0 | 5.3 | 0.1 | 0.0 | 0.2 | 0.0 | 1.0 | 1.0 | 4.05 | 103.5 | 0.026 | 0.026 | 7.5 | 0.210 | 0.06 | 0.03 | 0.01 | 0.00 | 0.21 | 1.91 |
| 21 | M3 4 | 16.10 | 11.062 | 30.5 | 0.0 | 5.3 | 0.1 | 0.0 | 0.2 | 0.0 | 1.0 | 1.0 | 4.05 | 103.5 | 0.026 | 0.026 | 7.5 | 0.210 | 0.06 | 0.03 | 0.01 | 0.00 | 0.21 | 1.91 |
| 22 | M3 4 | 15.80 | 11.319 | 30.5 | 0.0 | 5.3 | 0.1 | 0.0 | 0.2 | 0.0 | 1.0 | 1.0 | 4.05 | 103.5 | 0.027 | 0.027 | 7.5 | 0.210 | 0.06 | 0.03 | 0.01 | 0.00 | 0.21 | 1.92 |
| 23 | M3 4 | 15.50 | 11.576 | 30.5 | 0.0 | 5.3 | 0.2 | 0.0 | 0.2 | 0.0 | 1.0 | 1.0 | 4.05 | 103.5 | 0.028 | 0.028 | 7.5 | 0.210 | 0.06 | 0.03 | 0.01 | 0.00 | 0.21 | 1.92 |
| 24 | M3 4 | 15.20 | 11.833 | 30.5 | 0.0 | 5.3 | 0.2 | 0.0 | 0.2 | 0.0 | 1.0 | 1.0 | 4.05 | 103.5 | 0.028 | 0.028 | 7.5 | 0.210 | 0.06 | 0.03 | 0.01 | 0.00 | 0.21 | 1.92 |
| 25 | M4 5 | 14.90 | 12.020 | 30.6 | 0.0 | 5.3 | 0.2 | 0.0 | 0.2 | 0.0 | 1.0 | 1.0 | 5.47 | 116.5 | 0.019 | 0.019 | 7.5 | 0.155 | 0.06 | 0.02 | 0.01 | 0.00 | 0.21 | 1.93 |
| 26 | M4 5 | 14.60 | 12.208 | 30.6 | 0.0 | 5.3 | 0.2 | 0.0 | 0.2 | 0.0 | 1.0 | 1.0 | 5.47 | 116.5 | 0.019 | 0.019 | 7.5 | 0.156 | 0.07 | 0.02 | 0.01 | 0.00 | 0.22 | 1.93 |
| 27 | M4 5 | 14.30 | 12.395 | 30.7 | 0.0 | 5.3 | 0.2 | 0.0 | 0.2 | 0.0 | 1.0 | 1.0 | 5.47 | 116.5 | 0.019 | 0.020 | 7.5 | 0.156 | 0.07 | 0.02 | 0.01 | 0.00 | 0.22 | 1.94 |
| 28 | M4 5 | 14.00 | 12.583 | 30.8 | 0.0 | 5.3 | 0.2 | 0.0 | 0.2 | 0.0 | 1.0 | 1.0 | 5.47 | 116.5 | 0.020 | 0.020 | 7.5 | 0.156 | 0.07 | 0.02 | 0.01 | 0.00 | 0.22 | 1.95 |
| 29 | M4 5 | 13.70 | 12.770 | 30.8 | 0.0 | 5.3 | 0.2 | 0.0 | 0.2 | 0.0 | 1.0 | 1.0 | 5.47 | 116.5 | 0.020 | 0.021 | 7.5 | 0.156 | 0.07 | 0.02 | 0.01 | 0.00 | 0.22 | 1.96 |
| 30 | M4 5 | 13.40 | 12.958 | 30.9 | 0.0 | 5.3 | 0.2 | 0.0 | 0.2 | 0.0 | 1.0 | 1.0 | 5.47 | 116.5 | 0.020 | 0.022 | 7.4 | 0.156 | 0.07 | 0.02 | 0.01 | 0.00 | 0.22 | 1.97 |
| 31 | M4 5 | 13.10 | 13.145 | 30.9 | 0.0 | 5.3 | 0.2 | 0.0 | 0.2 | 0.0 | 1.0 | 1.0 | 5.47 | 116.5 | 0.021 | 0.022 | 7.4 | 0.156 | 0.07 | 0.02 | 0.01 | 0.00 | 0.22 | 1.97 |
| 32 | M4 5 | 12.80 | 13.333 | 31.0 | 0.0 | 5.3 | 0.2 | 0.0 | 0.2 | 0.0 | 1.0 | 1.0 | 5.47 | 116.5 | 0.021 | 0.023 | 7.4 | 0.157 | 0.07 | 0.02 | 0.01 | 0.00 | 0.22 | 1.98 |
| 33 | M5 6 | 12.60 | 13.708 | 31.0 | 0.0 | 5.3 | 0.2 | 0.0 | 0.2 | 0.0 | 1.0 | 1.0 | 5.47 | 116.5 | 0.022 | 0.023 | 7.4 | 0.157 | 0.07 | 0.02 | 0.01 | 0.00 | 0.22 | 1.32 |
| 34 | M5 6 | 12.40 | 14.083 | 31.0 | 0.0 | 5.3 | 0.2 | 0.0 | 0.2 | 0.0 | 1.0 | 1.0 | 5.47 | 116.5 | 0.022 | 0.024 | 7.4 | 0.157 | 0.07 | 0.02 | 0.01 | 0.00 | 0.22 | 1.33 |
| 35 | M5 6 | 12.20 | 14.458 | 31.0 | 0.0 | 5.3 | 0.2 | 0.0 | 0.2 | 0.0 | 1.0 | 1.0 | 5.47 | 116.5 | 0.023 | 0.025 | 7.4 | 0.157 | 0.07 | 0.02 | 0.01 | 0.00 | 0.22 | 1.33 |
| 36 | M5 6 | 12.00 | 14.833 | 31.0 | 0.0 | 5.3 | 0.3 | 0.0 | 0.2 | 0.0 | 1.0 | 1.0 | 5.47 | 116.5 | 0.023 | 0.025 | 7.4 | 0.157 | 0.07 | 0.02 | 0.01 | 0.00 | 0.22 | 1.33 |
| 37 | M6 7 | 11.65 | 15.208 | 30.9 | 0.0 | 5.4 | 0.3 | 0.0 | 0.2 | 0.0 | 1.0 | 1.0 | 5.47 | 116.5 | 0.024 | 0.026 | 7.4 | 0.156 | 0.07 | 0.02 | 0.01 | 0.00 | 0.22 | 1.32 |
| 38 | M6 7 | 11.30 | 15.583 | 30.8 | 0.0 | 5.4 | 0.3 | 0.0 | 0.2 | 0.0 | 1.0 | 1.0 | 5.47 | 116.5 | 0.024 | 0.027 | 7.5 | 0.156 | 0.07 | 0.02 | 0.01 | 0.00 | 0.22 | 1.32 |
| 39 | M6 7 | 10.95 | 15.958 | 30.6 | 0.0 | 5.4 | 0.3 | 0.0 | 0.2 | 0.0 | 1.0 | 1.0 | 5.47 | 116.5 | 0.025 | 0.028 | 7.5 | 0.156 | 0.07 | 0.02 | 0.01 | 0.00 | 0.22 | 1.31 |
| 40 | M6 7 | 10.60 | 16.333 | 30.5 | 0.0 | 5.4 | 0.3 | 0.0 | 0.2 | 0.0 | 1.0 | 1.0 | 5.47 | 116.5 | 0.026 | 0.029 | 7.5 | 0.155 | 0.06 | 0.02 | 0.01 | 0.00 | 0.21 | 1.30 |
| 41 | M7 8 | 10.36 | 16.483 | 30.5 | 0.0 | 5.4 | 0.3 | 0.0 | 0.2 | 0.0 | 1.0 | 1.0 | 6.65 | 224.8 | 0.011 | 0.013 | 7.5 | 0.128 | 0.06 | 0.02 | 0.01 | 0.00 | 0.21 | 1.30 |

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 42 | M7 | 8 | 10.12 | 16.633 | 30.5 | 0.0 | 5.5 | 0.3 | 0.0 | 0.2 | 0.0 | 1.0 | 1.0 | 6.65 | 224.8 | 0.011 | 0.013 | 7.5 | 0.128 | 0.06 | 0.02 | 0.01 | 0.00 | 0.21 | 1.30 |
| 43 | M7 | 8 | 9.88 | 16.783 | 30.5 | 0.0 | 5.5 | 0.3 | 0.0 | 0.2 | 0.0 | 1.0 | 1.0 | 6.65 | 224.8 | 0.011 | 0.014 | 7.5 | 0.128 | 0.06 | 0.02 | 0.01 | 0.00 | 0.21 | 1.30 |
| 44 | M7 | 8 | 9.64 | 16.933 | 30.5 | 0.0 | 5.5 | 0.3 | 0.0 | 0.2 | 0.0 | 1.0 | 1.0 | 6.65 | 224.8 | 0.011 | 0.014 | 7.5 | 0.128 | 0.06 | 0.02 | 0.01 | 0.00 | 0.22 | 1.30 |
| 45 | M7 | 8 | 9.40 | 17.083 | 30.5 | 0.0 | 5.5 | 0.3 | 0.0 | 0.2 | 0.0 | 1.0 | 1.0 | 6.65 | 224.8 | 0.011 | 0.014 | 7.5 | 0.128 | 0.06 | 0.02 | 0.01 | 0.00 | 0.22 | 1.30 |
| 46 | M7 | 8 | 9.16 | 17.233 | 30.5 | 0.0 | 5.6 | 0.3 | 0.0 | 0.2 | 0.0 | 1.0 | 1.0 | 6.65 | 224.8 | 0.012 | 0.015 | 7.5 | 0.128 | 0.06 | 0.02 | 0.01 | 0.00 | 0.22 | 1.30 |
| 47 | M7 | 8 | 8.92 | 17.383 | 30.5 | 0.0 | 5.6 | 0.3 | 0.0 | 0.2 | 0.0 | 1.0 | 1.0 | 6.65 | 224.8 | 0.012 | 0.015 | 7.5 | 0.128 | 0.06 | 0.02 | 0.01 | 0.00 | 0.22 | 1.30 |
| 48 | M7 | 8 | 8.68 | 17.533 | 30.5 | 0.0 | 5.6 | 0.3 | 0.0 | 0.2 | 0.0 | 1.0 | 1.0 | 6.65 | 224.8 | 0.012 | 0.016 | 7.5 | 0.128 | 0.06 | 0.02 | 0.01 | 0.00 | 0.22 | 1.30 |
| 49 | M7 | 8 | 8.44 | 17.683 | 30.5 | 0.0 | 5.6 | 0.3 | 0.0 | 0.2 | 0.0 | 1.0 | 1.0 | 6.65 | 224.8 | 0.012 | 0.016 | 7.5 | 0.128 | 0.06 | 0.02 | 0.01 | 0.00 | 0.22 | 1.30 |
| 50 | M7 | 8 | 8.20 | 17.833 | 30.5 | 0.0 | 5.6 | 0.3 | 0.0 | 0.2 | 0.0 | 1.0 | 1.0 | 6.65 | 224.8 | 0.012 | 0.017 | 7.5 | 0.128 | 0.06 | 0.02 | 0.01 | 0.00 | 0.22 | 1.30 |
| 51 | M8 | 9 | 7.90 | 18.083 | 30.5 | 0.0 | 5.7 | 0.3 | 0.0 | 0.2 | 0.0 | 1.0 | 1.0 | 6.65 | 224.8 | 0.012 | 0.017 | 7.5 | 0.128 | 0.06 | 0.02 | 0.01 | 0.00 | 0.22 | 1.30 |
| 52 | M8 | 9 | 7.60 | 18.333 | 30.5 | 0.0 | 5.7 | 0.3 | 0.0 | 0.2 | 0.0 | 1.0 | 1.0 | 6.65 | 224.8 | 0.012 | 0.018 | 7.5 | 0.128 | 0.06 | 0.02 | 0.01 | 0.00 | 0.22 | 1.30 |
| 53 | M8 | 9 | 7.30 | 18.583 | 30.5 | 0.0 | 5.7 | 0.3 | 0.0 | 0.2 | 0.0 | 1.0 | 1.0 | 6.65 | 224.8 | 0.012 | 0.018 | 7.5 | 0.128 | 0.06 | 0.02 | 0.01 | 0.00 | 0.22 | 1.30 |
| 54 | M8 | 9 | 7.00 | 18.833 | 30.5 | 0.0 | 5.7 | 0.3 | 0.0 | 0.2 | 0.0 | 1.0 | 1.0 | 6.65 | 224.8 | 0.013 | 0.019 | 7.5 | 0.128 | 0.06 | 0.02 | 0.01 | 0.00 | 0.22 | 1.30 |
| 55 | M8 | 9 | 6.70 | 19.083 | 30.5 | 0.0 | 5.7 | 0.3 | 0.0 | 0.2 | 0.0 | 1.0 | 1.0 | 6.65 | 224.8 | 0.013 | 0.019 | 7.5 | 0.128 | 0.06 | 0.02 | 0.01 | 0.00 | 0.22 | 1.30 |
| 56 | M8 | 9 | 6.40 | 19.333 | 30.5 | 0.0 | 5.7 | 0.3 | 0.0 | 0.2 | 0.0 | 1.0 | 1.0 | 6.65 | 224.8 | 0.013 | 0.020 | 7.5 | 0.128 | 0.06 | 0.02 | 0.01 | 0.00 | 0.22 | 1.30 |
| 57 | M9 | 10 | 6.02 | 19.633 | 30.5 | 0.0 | 5.8 | 0.3 | 0.0 | 0.2 | 0.0 | 1.0 | 1.0 | 4.33 | 260.2 | 0.017 | 0.028 | 7.5 | 0.196 | 0.06 | 0.03 | 0.01 | 0.00 | 0.22 | 1.30 |
| 58 | M9 | 10 | 5.64 | 19.933 | 30.5 | 0.0 | 5.8 | 0.3 | 0.0 | 0.2 | 0.0 | 1.0 | 1.0 | 4.33 | 260.2 | 0.018 | 0.029 | 7.5 | 0.196 | 0.06 | 0.03 | 0.01 | 0.00 | 0.22 | 1.30 |
| 59 | M9 | 10 | 5.26 | 20.233 | 30.5 | 0.0 | 5.8 | 0.3 | 0.0 | 0.2 | 0.0 | 1.0 | 1.0 | 4.33 | 260.2 | 0.018 | 0.030 | 7.5 | 0.196 | 0.06 | 0.03 | 0.01 | 0.00 | 0.22 | 1.30 |
| 60 | M9 | 10 | 4.88 | 20.533 | 30.5 | 0.0 | 5.8 | 0.3 | 0.0 | 0.2 | 0.0 | 1.0 | 1.0 | 4.33 | 260.2 | 0.018 | 0.031 | 7.5 | 0.196 | 0.06 | 0.03 | 0.01 | 0.00 | 0.22 | 1.30 |
| 61 | M9 | 10 | 4.50 | 20.833 | 30.5 | 0.0 | 5.8 | 0.3 | 0.0 | 0.2 | 0.0 | 1.0 | 1.0 | 4.33 | 260.2 | 0.018 | 0.032 | 7.5 | 0.196 | 0.06 | 0.03 | 0.01 | 0.00 | 0.22 | 1.30 |
| 62 | N1 | 11 | 4.35 | 21.583 | 30.5 | 0.0 | 5.8 | 0.3 | 0.0 | 0.2 | 0.0 | 1.0 | 1.0 | 5.70 | 236.9 | 0.016 | 0.027 | 7.5 | 0.149 | 0.06 | 0.02 | 0.01 | 0.00 | 0.22 | 0.10 |
| 63 | N1 | 11 | 4.20 | 22.333 | 30.5 | 0.0 | 5.8 | 0.4 | 0.0 | 0.2 | 0.0 | 1.0 | 1.0 | 5.70 | 236.9 | 0.017 | 0.028 | 7.5 | 0.149 | 0.06 | 0.02 | 0.01 | 0.00 | 0.22 | 0.10 |
| 64 | N2 | 12 | 3.85 | 23.083 | 30.6 | 0.0 | 5.9 | 0.4 | 0.0 | 0.2 | 0.0 | 1.0 | 1.0 | 5.70 | 236.9 | 0.017 | 0.029 | 7.5 | 0.149 | 0.07 | 0.02 | 0.01 | 0.00 | 0.22 | 0.10 |
| 65 | N2 | 12 | 3.50 | 23.833 | 30.7 | 0.0 | 5.9 | 0.4 | 0.0 | 0.2 | 0.0 | 1.0 | 1.0 | 5.70 | 236.9 | 0.018 | 0.030 | 7.5 | 0.150 | 0.07 | 0.02 | 0.01 | 0.00 | 0.22 | 0.10 |
| 66 | N3 | 13 | 3.20 | 24.083 | 30.7 | 0.0 | 5.9 | 0.4 | 0.0 | 0.2 | 0.0 | 1.0 | 1.0 | 5.70 | 236.9 | 0.018 | 0.030 | 7.5 | 0.150 | 0.07 | 0.02 | 0.01 | 0.00 | 0.22 | 0.10 |
| 67 | N3 | 13 | 2.90 | 24.333 | 30.7 | 0.0 | 6.0 | 0.3 | 0.0 | 0.2 | 0.0 | 1.0 | 1.0 | 5.70 | 236.9 | 0.018 | 0.031 | 7.5 | 0.150 | 0.07 | 0.02 | 0.01 | 0.00 | 0.22 | 0.10 |
| 68 | N3 | 13 | 2.60 | 24.583 | 30.7 | 0.0 | 6.0 | 0.3 | 0.0 | 0.2 | 0.0 | 1.0 | 1.0 | 5.70 | 236.9 | 0.018 | 0.032 | 7.5 | 0.150 | 0.07 | 0.02 | 0.01 | 0.00 | 0.22 | 0.10 |
| 69 | N3 | 13 | 2.30 | 24.833 | 30.7 | 0.0 | 6.0 | 0.3 | 0.0 | 0.2 | 0.0 | 1.0 | 1.0 | 5.70 | 236.9 | 0.018 | 0.032 | 7.5 | 0.150 | 0.07 | 0.02 | 0.01 | 0.00 | 0.22 | 0.10 |
| 70 | N3 | 13 | 2.00 | 25.083 | 30.7 | 0.0 | 6.1 | 0.3 | 0.0 | 0.2 | 0.0 | 1.0 | 1.0 | 5.70 | 236.9 | 0.019 | 0.033 | 7.5 | 0.150 | 0.07 | 0.02 | 0.01 | 0.00 | 0.22 | 0.10 |
| 71 | N3 | 13 | 1.70 | 25.333 | 30.7 | 0.0 | 6.1 | 0.3 | 0.0 | 0.2 | 0.0 | 1.0 | 1.0 | 5.70 | 236.9 | 0.019 | 0.034 | 7.5 | 0.150 | 0.07 | 0.02 | 0.01 | 0.00 | 0.22 | 0.10 |
| 72 | N4 | 14 | 1.60 | 26.083 | 30.6 | 0.0 | 6.1 | 0.3 | 0.0 | 0.2 | 0.0 | 1.0 | 1.0 | 5.70 | 110.0 | 0.042 | 0.073 | 7.5 | 0.149 | 0.07 | 0.02 | 0.01 | 0.00 | 0.22 | 0.10 |

EXPANDED CAPSULE SUMMARY FOR Headwater

| IOR | REACH | | DIST | FLOW | TEMP | SALN | DO | EBOD1 | EBOD2 | ORG-N | NH3 | CHLA | DISP | DEPTH | WIDTH | ADVEC VELO | MEAN VELO | DO SAT | REAER RATE | BOD1 DECA | BOD1 SETT | BOD2 DECA | BOD2 SETT | NH3 DECA | SOD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | km | m³/s | deg C | ppt | mg/L | mg/L | mg/L | mg/L | mg/L | µg/L | m²/s | m | m | m/s | m/s | mg/L | 1/da | 1/da | 1/da | 1/da | 1/da | 1/da | g/m²/d |
| 73 | N4 | 14 | 1.50 | 26.833 | 30.5 | 0.0 | 6.1 | 0.4 | 0.0 | 0.2 | 0.0 | 1.0 | 1.0 | 5.70 | 110.0 | 0.043 | 0.074 | 7.5 | 0.149 | 0.06 | 0.02 | 0.01 | 0.00 | 0.22 | 0.10 |
| 74 | N5 | 15 | 1.23 | 27.133 | 30.5 | 0.0 | 6.1 | 0.4 | 0.0 | 0.2 | 0.0 | 1.0 | 1.0 | 5.70 | 110.0 | 0.043 | 0.075 | 7.5 | 0.149 | 0.06 | 0.02 | 0.01 | 0.00 | 0.22 | 0.10 |
| 75 | N5 | 15 | 0.96 | 27.433 | 30.5 | 0.0 | 6.1 | 0.4 | 0.0 | 0.2 | 0.0 | 1.0 | 1.0 | 5.70 | 110.0 | 0.044 | 0.075 | 7.5 | 0.149 | 0.06 | 0.02 | 0.01 | 0.00 | 0.22 | 0.10 |
| 76 | N5 | 15 | 0.69 | 27.733 | 30.5 | 0.0 | 6.1 | 0.4 | 0.0 | 0.2 | 0.0 | 1.0 | 1.0 | 5.70 | 110.0 | 0.044 | 0.076 | 7.5 | 0.149 | 0.06 | 0.02 | 0.01 | 0.00 | 0.22 | 0.10 |
| 77 | N5 | 15 | 0.42 | 28.033 | 30.5 | 0.0 | 6.1 | 0.4 | 0.0 | 0.2 | 0.0 | 1.0 | 1.0 | 5.70 | 110.0 | 0.045 | 0.077 | 7.5 | 0.149 | 0.06 | 0.02 | 0.01 | 0.00 | 0.22 | 0.11 |
| 78 | N5 | 15 | 0.15 | 28.333 | 30.5 | 0.0 | 6.1 | 0.4 | 0.0 | 0.2 | 0.0 | 1.0 | 1.0 | 5.70 | 110.0 | 0.045 | 0.077 | 7.5 | 0.149 | 0.06 | 0.02 | 0.01 | 0.00 | 0.22 | 0.12 |
| 79 | N6 | 16 | 0.00 | 29.833 | 26.2 | 0.0 | 5.8 | 1.2 | 0.0 | 0.2 | 0.0 | 0.0 | 1.0 | 5.70 | 110.0 | 0.048 | 0.078 | 8.1 | 0.138 | 0.05 | 0.02 | 0.01 | 0.00 | 0.15 | 0.18 |

SPECIAL REPORT: Headwater

WATER QUALITY CONSTITUENT VALUES

| ELEM NO. | ENDING km | TEMP deg C | SALN ppt | CM-I * | CM-II * | DO mg/L | BOD1 mg/L | BOD2 mg/L | EBOD#1 mg/L | EBOD#2 mg/L | ORG-N mg/L | NH3-N mg/L | NO3-N µg/L | TOTN ** | PHOS | CHL A | MACRO #/100mL | COLI | NCM * |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 21.840 | 28.07 | 0.0 | 0.0 | 0.0 | 5.06 | 0.36 | 0.00 | 0.36 | 0.00 | 0.04 | 0.08 | 0.12 | 0.24 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 2 | 21.570 | 28.33 | 0.0 | 0.0 | 0.0 | 5.11 | 0.31 | 0.00 | 0.31 | 0.00 | 0.08 | 0.07 | 0.13 | 0.28 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 3 | 21.300 | 28.60 | 0.0 | 0.0 | 0.0 | 5.13 | 0.26 | 0.00 | 0.26 | 0.00 | 0.11 | 0.06 | 0.14 | 0.31 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 4 | 21.050 | 29.10 | 0.0 | 0.0 | 0.0 | 5.10 | 0.20 | 0.00 | 0.20 | 0.00 | 0.16 | 0.04 | 0.16 | 0.36 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |

| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5 | 20.800 | 29.60 | 0.0 | 0.0 | 0.0 | 5.08 | 0.17 | 0.00 | 0.17 | 0.00 | 0.18 | 0.04 | 0.17 | 0.38 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 6 | 20.550 | 30.10 | 0.0 | 0.0 | 0.0 | 5.07 | 0.15 | 0.00 | 0.15 | 0.00 | 0.20 | 0.03 | 0.17 | 0.40 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 7 | 20.300 | 30.60 | 0.0 | 0.0 | 0.0 | 5.07 | 0.14 | 0.00 | 0.14 | 0.00 | 0.21 | 0.03 | 0.18 | 0.42 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 8 | 20.000 | 30.56 | 0.0 | 0.0 | 0.0 | 5.12 | 0.12 | 0.00 | 0.12 | 0.00 | 0.22 | 0.03 | 0.18 | 0.43 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 9 | 19.700 | 30.52 | 0.0 | 0.0 | 0.0 | 5.15 | 0.11 | 0.00 | 0.11 | 0.00 | 0.23 | 0.02 | 0.18 | 0.44 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 10 | 19.400 | 30.48 | 0.0 | 0.0 | 0.0 | 5.18 | 0.10 | 0.00 | 0.10 | 0.00 | 0.24 | 0.02 | 0.19 | 0.45 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 11 | 19.100 | 30.44 | 0.0 | 0.0 | 0.0 | 5.20 | 0.09 | 0.00 | 0.09 | 0.00 | 0.25 | 0.02 | 0.19 | 0.45 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 12 | 18.800 | 30.40 | 0.0 | 0.0 | 0.0 | 5.22 | 0.09 | 0.00 | 0.09 | 0.00 | 0.25 | 0.02 | 0.19 | 0.46 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 13 | 18.500 | 30.41 | 0.0 | 0.0 | 0.0 | 5.22 | 0.10 | 0.00 | 0.10 | 0.00 | 0.25 | 0.02 | 0.19 | 0.46 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 14 | 18.200 | 30.42 | 0.0 | 0.0 | 0.0 | 5.23 | 0.11 | 0.00 | 0.11 | 0.00 | 0.25 | 0.02 | 0.19 | 0.46 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 15 | 17.900 | 30.42 | 0.0 | 0.0 | 0.0 | 5.24 | 0.11 | 0.00 | 0.11 | 0.00 | 0.25 | 0.02 | 0.19 | 0.46 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 16 | 17.600 | 30.43 | 0.0 | 0.0 | 0.0 | 5.24 | 0.12 | 0.00 | 0.12 | 0.00 | 0.25 | 0.02 | 0.19 | 0.46 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 17 | 17.300 | 30.44 | 0.0 | 0.0 | 0.0 | 5.25 | 0.12 | 0.00 | 0.12 | 0.00 | 0.24 | 0.02 | 0.19 | 0.46 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 18 | 17.000 | 30.45 | 0.0 | 0.0 | 0.0 | 5.25 | 0.13 | 0.00 | 0.13 | 0.00 | 0.24 | 0.02 | 0.19 | 0.46 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 19 | 16.700 | 30.46 | 0.0 | 0.0 | 0.0 | 5.25 | 0.14 | 0.00 | 0.14 | 0.00 | 0.24 | 0.03 | 0.19 | 0.46 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 20 | 16.400 | 30.47 | 0.0 | 0.0 | 0.0 | 5.26 | 0.14 | 0.00 | 0.14 | 0.00 | 0.24 | 0.03 | 0.19 | 0.46 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 21 | 16.100 | 30.48 | 0.0 | 0.0 | 0.0 | 5.26 | 0.15 | 0.00 | 0.15 | 0.00 | 0.24 | 0.03 | 0.19 | 0.46 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 22 | 15.800 | 30.48 | 0.0 | 0.0 | 0.0 | 5.26 | 0.15 | 0.00 | 0.15 | 0.00 | 0.24 | 0.03 | 0.19 | 0.46 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 23 | 15.500 | 30.49 | 0.0 | 0.0 | 0.0 | 5.26 | 0.15 | 0.00 | 0.15 | 0.00 | 0.24 | 0.03 | 0.19 | 0.46 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 24 | 15.200 | 30.50 | 0.0 | 0.0 | 0.0 | 5.27 | 0.16 | 0.00 | 0.16 | 0.00 | 0.24 | 0.03 | 0.19 | 0.46 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 25 | 14.900 | 30.56 | 0.0 | 0.0 | 0.0 | 5.28 | 0.16 | 0.00 | 0.16 | 0.00 | 0.24 | 0.03 | 0.19 | 0.46 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 26 | 14.600 | 30.62 | 0.0 | 0.0 | 0.0 | 5.28 | 0.16 | 0.00 | 0.16 | 0.00 | 0.24 | 0.03 | 0.19 | 0.46 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 27 | 14.300 | 30.69 | 0.0 | 0.0 | 0.0 | 5.29 | 0.16 | 0.00 | 0.16 | 0.00 | 0.23 | 0.03 | 0.19 | 0.46 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 28 | 14.000 | 30.75 | 0.0 | 0.0 | 0.0 | 5.29 | 0.16 | 0.00 | 0.16 | 0.00 | 0.23 | 0.03 | 0.20 | 0.46 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 29 | 13.700 | 30.81 | 0.0 | 0.0 | 0.0 | 5.30 | 0.16 | 0.00 | 0.16 | 0.00 | 0.23 | 0.03 | 0.20 | 0.46 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 30 | 13.400 | 30.88 | 0.0 | 0.0 | 0.0 | 5.30 | 0.17 | 0.00 | 0.17 | 0.00 | 0.23 | 0.03 | 0.20 | 0.46 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 31 | 13.100 | 30.94 | 0.0 | 0.0 | 0.0 | 5.30 | 0.17 | 0.00 | 0.17 | 0.00 | 0.23 | 0.04 | 0.20 | 0.46 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 32 | 12.800 | 31.00 | 0.0 | 0.0 | 0.0 | 5.31 | 0.17 | 0.00 | 0.17 | 0.00 | 0.23 | 0.04 | 0.20 | 0.46 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 33 | 12.600 | 31.00 | 0.0 | 0.0 | 0.0 | 5.32 | 0.19 | 0.00 | 0.19 | 0.00 | 0.23 | 0.04 | 0.20 | 0.46 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 34 | 12.400 | 31.00 | 0.0 | 0.0 | 0.0 | 5.32 | 0.22 | 0.00 | 0.22 | 0.00 | 0.23 | 0.04 | 0.20 | 0.46 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 35 | 12.200 | 31.00 | 0.0 | 0.0 | 0.0 | 5.33 | 0.23 | 0.00 | 0.23 | 0.00 | 0.23 | 0.04 | 0.20 | 0.46 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 36 | 12.000 | 31.00 | 0.0 | 0.0 | 0.0 | 5.34 | 0.25 | 0.00 | 0.25 | 0.00 | 0.23 | 0.03 | 0.20 | 0.46 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 37 | 11.650 | 30.88 | 0.0 | 0.0 | 0.0 | 5.36 | 0.27 | 0.00 | 0.27 | 0.00 | 0.23 | 0.04 | 0.20 | 0.46 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 38 | 11.300 | 30.75 | 0.0 | 0.0 | 0.0 | 5.37 | 0.28 | 0.00 | 0.28 | 0.00 | 0.23 | 0.04 | 0.20 | 0.46 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 39 | 10.950 | 30.62 | 0.0 | 0.0 | 0.0 | 5.39 | 0.30 | 0.00 | 0.30 | 0.00 | 0.23 | 0.04 | 0.20 | 0.46 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 40 | 10.600 | 30.50 | 0.0 | 0.0 | 0.0 | 5.41 | 0.31 | 0.00 | 0.31 | 0.00 | 0.23 | 0.04 | 0.20 | 0.46 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 41 | 10.360 | 30.50 | 0.0 | 0.0 | 0.0 | 5.44 | 0.31 | 0.00 | 0.31 | 0.00 | 0.22 | 0.04 | 0.20 | 0.46 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 42 | 10.120 | 30.50 | 0.0 | 0.0 | 0.0 | 5.46 | 0.31 | 0.00 | 0.31 | 0.00 | 0.22 | 0.04 | 0.20 | 0.46 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 43 | 9.880 | 30.50 | 0.0 | 0.0 | 0.0 | 5.49 | 0.31 | 0.00 | 0.31 | 0.00 | 0.22 | 0.04 | 0.21 | 0.46 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 44 | 9.640 | 30.50 | 0.0 | 0.0 | 0.0 | 5.51 | 0.31 | 0.00 | 0.31 | 0.00 | 0.21 | 0.04 | 0.21 | 0.46 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 45 | 9.400 | 30.50 | 0.0 | 0.0 | 0.0 | 5.54 | 0.31 | 0.00 | 0.31 | 0.00 | 0.21 | 0.04 | 0.21 | 0.46 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 46 | 9.160 | 30.50 | 0.0 | 0.0 | 0.0 | 5.56 | 0.31 | 0.00 | 0.31 | 0.00 | 0.21 | 0.04 | 0.21 | 0.46 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 47 | 8.920 | 30.50 | 0.0 | 0.0 | 0.0 | 5.58 | 0.31 | 0.00 | 0.31 | 0.00 | 0.21 | 0.04 | 0.21 | 0.46 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 48 | 8.680 | 30.50 | 0.0 | 0.0 | 0.0 | 5.60 | 0.31 | 0.00 | 0.31 | 0.00 | 0.20 | 0.04 | 0.21 | 0.46 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 49 | 8.440 | 30.50 | 0.0 | 0.0 | 0.0 | 5.62 | 0.31 | 0.00 | 0.31 | 0.00 | 0.20 | 0.04 | 0.21 | 0.46 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 50 | 8.200 | 30.50 | 0.0 | 0.0 | 0.0 | 5.64 | 0.31 | 0.00 | 0.31 | 0.00 | 0.20 | 0.04 | 0.21 | 0.46 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 51 | 7.900 | 30.50 | 0.0 | 0.0 | 0.0 | 5.66 | 0.31 | 0.00 | 0.31 | 0.00 | 0.20 | 0.04 | 0.21 | 0.46 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 52 | 7.600 | 30.50 | 0.0 | 0.0 | 0.0 | 5.68 | 0.32 | 0.00 | 0.32 | 0.00 | 0.20 | 0.04 | 0.22 | 0.46 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 53 | 7.300 | 30.50 | 0.0 | 0.0 | 0.0 | 5.69 | 0.32 | 0.00 | 0.32 | 0.00 | 0.19 | 0.04 | 0.22 | 0.46 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 54 | 7.000 | 30.50 | 0.0 | 0.0 | 0.0 | 5.71 | 0.32 | 0.00 | 0.32 | 0.00 | 0.19 | 0.04 | 0.22 | 0.45 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |

| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 55 | 6.700 | 30.50 | 0.0 | 0.0 | 0.0 | 5.72 | 0.32 | 0.00 | 0.32 | 0.00 | 0.19 | 0.04 | 0.22 | 0.45 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 56 | 6.400 | 30.50 | 0.0 | 0.0 | 0.0 | 5.74 | 0.33 | 0.00 | 0.33 | 0.00 | 0.19 | 0.04 | 0.22 | 0.45 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 57 | 6.020 | 30.50 | 0.0 | 0.0 | 0.0 | 5.75 | 0.33 | 0.00 | 0.33 | 0.00 | 0.19 | 0.04 | 0.22 | 0.45 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 58 | 5.640 | 30.50 | 0.0 | 0.0 | 0.0 | 5.76 | 0.33 | 0.00 | 0.33 | 0.00 | 0.19 | 0.04 | 0.22 | 0.45 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 59 | 5.260 | 30.50 | 0.0 | 0.0 | 0.0 | 5.78 | 0.34 | 0.00 | 0.34 | 0.00 | 0.18 | 0.04 | 0.22 | 0.45 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 60 | 4.880 | 30.50 | 0.0 | 0.0 | 0.0 | 5.79 | 0.34 | 0.00 | 0.34 | 0.00 | 0.18 | 0.04 | 0.23 | 0.45 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 61 | 4.500 | 30.50 | 0.0 | 0.0 | 0.0 | 5.80 | 0.34 | 0.00 | 0.34 | 0.00 | 0.18 | 0.04 | 0.23 | 0.45 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 62 | 4.350 | 30.50 | 0.0 | 0.0 | 0.0 | 5.80 | 0.35 | 0.00 | 0.35 | 0.00 | 0.19 | 0.04 | 0.23 | 0.45 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 63 | 4.200 | 30.50 | 0.0 | 0.0 | 0.0 | 5.81 | 0.35 | 0.00 | 0.35 | 0.00 | 0.19 | 0.04 | 0.23 | 0.46 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 64 | 3.850 | 30.60 | 0.0 | 0.0 | 0.0 | 5.85 | 0.36 | 0.00 | 0.36 | 0.00 | 0.19 | 0.04 | 0.23 | 0.46 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 65 | 3.500 | 30.70 | 0.0 | 0.0 | 0.0 | 5.89 | 0.36 | 0.00 | 0.36 | 0.00 | 0.19 | 0.04 | 0.23 | 0.46 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 66 | 3.200 | 30.70 | 0.0 | 0.0 | 0.0 | 5.93 | 0.35 | 0.00 | 0.35 | 0.00 | 0.19 | 0.04 | 0.23 | 0.46 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 67 | 2.900 | 30.70 | 0.0 | 0.0 | 0.0 | 5.97 | 0.35 | 0.00 | 0.35 | 0.00 | 0.19 | 0.04 | 0.23 | 0.46 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 68 | 2.600 | 30.70 | 0.0 | 0.0 | 0.0 | 6.01 | 0.35 | 0.00 | 0.35 | 0.00 | 0.19 | 0.04 | 0.23 | 0.45 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 69 | 2.300 | 30.70 | 0.0 | 0.0 | 0.0 | 6.05 | 0.34 | 0.00 | 0.34 | 0.00 | 0.18 | 0.04 | 0.23 | 0.45 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 70 | 2.000 | 30.70 | 0.0 | 0.0 | 0.0 | 6.08 | 0.34 | 0.00 | 0.34 | 0.00 | 0.18 | 0.04 | 0.23 | 0.45 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 71 | 1.700 | 30.70 | 0.0 | 0.0 | 0.0 | 6.11 | 0.34 | 0.00 | 0.34 | 0.00 | 0.18 | 0.04 | 0.23 | 0.45 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 72 | 1.600 | 30.60 | 0.0 | 0.0 | 0.0 | 6.08 | 0.35 | 0.00 | 0.35 | 0.00 | 0.19 | 0.04 | 0.23 | 0.46 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 73 | 1.500 | 30.50 | 0.0 | 0.0 | 0.0 | 6.07 | 0.35 | 0.00 | 0.35 | 0.00 | 0.19 | 0.04 | 0.23 | 0.46 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 74 | 1.230 | 30.50 | 0.0 | 0.0 | 0.0 | 6.07 | 0.36 | 0.00 | 0.36 | 0.00 | 0.19 | 0.04 | 0.23 | 0.46 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 75 | 0.960 | 30.50 | 0.0 | 0.0 | 0.0 | 6.08 | 0.36 | 0.00 | 0.36 | 0.00 | 0.19 | 0.04 | 0.23 | 0.46 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 76 | 0.690 | 30.50 | 0.0 | 0.0 | 0.0 | 6.08 | 0.36 | 0.00 | 0.36 | 0.00 | 0.19 | 0.04 | 0.23 | 0.46 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 77 | 0.420 | 30.50 | 0.0 | 0.0 | 0.0 | 6.09 | 0.37 | 0.00 | 0.37 | 0.00 | 0.19 | 0.04 | 0.23 | 0.46 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 78 | 0.150 | 30.50 | 0.0 | 0.0 | 0.0 | 6.07 | 0.45 | 0.00 | 0.45 | 0.00 | 0.19 | 0.04 | 0.22 | 0.45 | 0.05 | 1.0 | 0.0 | 0. | 0.00 |
| 79 | 0.000 | 26.25 | 0.0 | 0.0 | 0.0 | 5.82 | 1.18 | 0.00 | 1.18 | 0.00 | 0.15 | 0.03 | 0.18 | 0.36 | 0.00 | 0.0 | 0.0 | 0. | 0.00 |

SPECIAL REPORT: Headwater

BIOLOGICAL AND PHYSICAL COEFFICIENTS

| ELEM NO. | ENDING DIST km | SAT D.O. mg/L | REAER RATE 1/da | BOD#1 DECAY 1/da | BOD#1 SETT 1/da | ABOD#1 DECAY 1/da | BOD#1 SETT 1/da | BOD#2 DECAY 1/da | ABOD#2 SOD * | FULL SOD * | CORR DECAY 1/da | ORG-N SETT * | ORG-N DECAY ** | NH3 SRCE ** | NH3 RATE 1/da | DENIT SRCE 1/da | PO4 PROD | ALG PROD | MAC DECAY | COLI DECAY | NCM SETT | NCM |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 21.840 | 7.82 | 0.48 | 0.06 | 0.07 | 0.00 | 0.01 | 0.00 | 0.00 | 1.67 | 1.67 | 0.06 | 0.01 | 0.17 | 0.00 | 0.00 | 0.00 | 0.07 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2 | 21.570 | 7.78 | 0.48 | 0.06 | 0.07 | 0.00 | 0.01 | 0.00 | 0.00 | 1.69 | 1.69 | 0.06 | 0.01 | 0.18 | 0.00 | 0.00 | 0.00 | 0.07 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3 | 21.300 | 7.75 | 0.48 | 0.06 | 0.07 | 0.00 | 0.01 | 0.00 | 0.00 | 1.72 | 1.72 | 0.06 | 0.01 | 0.18 | 0.00 | 0.00 | 0.00 | 0.07 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4 | 21.050 | 7.68 | 0.17 | 0.06 | 0.03 | 0.00 | 0.01 | 0.00 | 0.00 | 2.33 | 2.33 | 0.06 | 0.00 | 0.19 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 20.800 | 7.61 | 0.17 | 0.06 | 0.03 | 0.00 | 0.01 | 0.00 | 0.00 | 2.40 | 2.40 | 0.06 | 0.00 | 0.20 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6 | 20.550 | 7.55 | 0.17 | 0.06 | 0.03 | 0.00 | 0.01 | 0.00 | 0.00 | 2.47 | 2.47 | 0.06 | 0.00 | 0.21 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7 | 20.300 | 7.48 | 0.17 | 0.07 | 0.03 | 0.00 | 0.01 | 0.00 | 0.00 | 2.55 | 2.55 | 0.06 | 0.00 | 0.21 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8 | 20.000 | 7.49 | 0.34 | 0.06 | 0.05 | 0.00 | 0.01 | 0.00 | 0.00 | 0.66 | 0.66 | 0.06 | 0.01 | 0.21 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9 | 19.700 | 7.49 | 0.34 | 0.06 | 0.05 | 0.00 | 0.01 | 0.00 | 0.00 | 0.65 | 0.65 | 0.06 | 0.01 | 0.21 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10 | 19.400 | 7.50 | 0.34 | 0.06 | 0.05 | 0.00 | 0.01 | 0.00 | 0.00 | 0.65 | 0.65 | 0.06 | 0.01 | 0.21 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11 | 19.100 | 7.50 | 0.34 | 0.06 | 0.05 | 0.00 | 0.01 | 0.00 | 0.00 | 0.65 | 0.65 | 0.06 | 0.01 | 0.21 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12 | 18.800 | 7.51 | 0.34 | 0.06 | 0.05 | 0.00 | 0.01 | 0.00 | 0.00 | 0.65 | 0.65 | 0.06 | 0.01 | 0.21 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13 | 18.500 | 7.51 | 0.21 | 0.06 | 0.03 | 0.00 | 0.01 | 0.00 | 0.00 | 1.90 | 1.90 | 0.06 | 0.00 | 0.21 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14 | 18.200 | 7.50 | 0.21 | 0.06 | 0.03 | 0.00 | 0.01 | 0.00 | 0.00 | 1.90 | 1.90 | 0.06 | 0.00 | 0.21 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15 | 17.900 | 7.50 | 0.21 | 0.06 | 0.03 | 0.00 | 0.01 | 0.00 | 0.00 | 1.90 | 1.90 | 0.06 | 0.00 | 0.21 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16 | 17.600 | 7.50 | 0.21 | 0.06 | 0.03 | 0.00 | 0.01 | 0.00 | 0.00 | 1.91 | 1.91 | 0.06 | 0.00 | 0.21 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17 | 17.300 | 7.50 | 0.21 | 0.06 | 0.03 | 0.00 | 0.01 | 0.00 | 0.00 | 1.91 | 1.91 | 0.06 | 0.00 | 0.21 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18 | 17.000 | 7.50 | 0.21 | 0.06 | 0.03 | 0.00 | 0.01 | 0.00 | 0.00 | 1.91 | 1.91 | 0.06 | 0.00 | 0.21 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19 | 16.700 | 7.50 | 0.21 | 0.06 | 0.03 | 0.00 | 0.01 | 0.00 | 0.00 | 1.91 | 1.91 | 0.06 | 0.00 | 0.21 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20 | 16.400 | 7.50 | 0.21 | 0.06 | 0.03 | 0.00 | 0.01 | 0.00 | 0.00 | 1.91 | 1.91 | 0.06 | 0.00 | 0.21 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |

| | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 21 | 16.100 | 7.50 | 0.21 | 0.06 | 0.03 | 0.00 | 0.01 | 0.00 | 0.00 | 1.91 | 1.91 | 0.06 | 0.00 | 0.21 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22 | 15.800 | 7.50 | 0.21 | 0.06 | 0.03 | 0.00 | 0.01 | 0.00 | 0.00 | 1.92 | 1.92 | 0.06 | 0.00 | 0.21 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23 | 15.500 | 7.49 | 0.21 | 0.06 | 0.03 | 0.00 | 0.01 | 0.00 | 0.00 | 1.92 | 1.92 | 0.06 | 0.00 | 0.21 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24 | 15.200 | 7.49 | 0.21 | 0.06 | 0.03 | 0.00 | 0.01 | 0.00 | 0.00 | 1.92 | 1.92 | 0.06 | 0.00 | 0.21 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25 | 14.900 | 7.49 | 0.16 | 0.06 | 0.02 | 0.00 | 0.01 | 0.00 | 0.00 | 1.93 | 1.93 | 0.06 | 0.00 | 0.21 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26 | 14.600 | 7.48 | 0.16 | 0.07 | 0.02 | 0.00 | 0.01 | 0.00 | 0.00 | 1.93 | 1.93 | 0.06 | 0.00 | 0.22 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27 | 14.300 | 7.47 | 0.16 | 0.07 | 0.02 | 0.00 | 0.01 | 0.00 | 0.00 | 1.94 | 1.94 | 0.06 | 0.00 | 0.22 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28 | 14.000 | 7.46 | 0.16 | 0.07 | 0.02 | 0.00 | 0.01 | 0.00 | 0.00 | 1.95 | 1.95 | 0.06 | 0.00 | 0.22 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29 | 13.700 | 7.45 | 0.16 | 0.07 | 0.02 | 0.00 | 0.01 | 0.00 | 0.00 | 1.96 | 1.96 | 0.06 | 0.00 | 0.22 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30 | 13.400 | 7.45 | 0.16 | 0.07 | 0.02 | 0.00 | 0.01 | 0.00 | 0.00 | 1.97 | 1.97 | 0.06 | 0.00 | 0.22 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31 | 13.100 | 7.44 | 0.16 | 0.07 | 0.02 | 0.00 | 0.01 | 0.00 | 0.00 | 1.97 | 1.97 | 0.06 | 0.00 | 0.22 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32 | 12.800 | 7.43 | 0.16 | 0.07 | 0.02 | 0.00 | 0.01 | 0.00 | 0.00 | 1.98 | 1.98 | 0.06 | 0.00 | 0.22 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33 | 12.600 | 7.43 | 0.16 | 0.07 | 0.02 | 0.00 | 0.01 | 0.00 | 0.00 | 1.32 | 1.32 | 0.06 | 0.00 | 0.22 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34 | 12.400 | 7.43 | 0.16 | 0.07 | 0.02 | 0.00 | 0.01 | 0.00 | 0.00 | 1.33 | 1.33 | 0.06 | 0.00 | 0.22 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35 | 12.200 | 7.43 | 0.16 | 0.07 | 0.02 | 0.00 | 0.01 | 0.00 | 0.00 | 1.33 | 1.33 | 0.06 | 0.00 | 0.22 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36 | 12.000 | 7.43 | 0.16 | 0.07 | 0.02 | 0.00 | 0.01 | 0.00 | 0.00 | 1.33 | 1.33 | 0.06 | 0.00 | 0.22 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37 | 11.650 | 7.45 | 0.16 | 0.07 | 0.02 | 0.00 | 0.01 | 0.00 | 0.00 | 1.32 | 1.32 | 0.06 | 0.00 | 0.22 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38 | 11.300 | 7.46 | 0.16 | 0.07 | 0.02 | 0.00 | 0.01 | 0.00 | 0.00 | 1.32 | 1.32 | 0.06 | 0.00 | 0.22 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39 | 10.950 | 7.48 | 0.16 | 0.07 | 0.02 | 0.00 | 0.01 | 0.00 | 0.00 | 1.31 | 1.31 | 0.06 | 0.00 | 0.22 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40 | 10.600 | 7.49 | 0.16 | 0.06 | 0.02 | 0.00 | 0.01 | 0.00 | 0.00 | 1.30 | 1.30 | 0.06 | 0.00 | 0.21 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41 | 10.360 | 7.49 | 0.13 | 0.06 | 0.02 | 0.00 | 0.01 | 0.00 | 0.00 | 1.30 | 1.30 | 0.06 | 0.00 | 0.21 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42 | 10.120 | 7.49 | 0.13 | 0.06 | 0.02 | 0.00 | 0.01 | 0.00 | 0.00 | 1.30 | 1.30 | 0.06 | 0.00 | 0.21 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43 | 9.880 | 7.49 | 0.13 | 0.06 | 0.02 | 0.00 | 0.01 | 0.00 | 0.00 | 1.30 | 1.30 | 0.06 | 0.00 | 0.21 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44 | 9.640 | 7.49 | 0.13 | 0.06 | 0.02 | 0.00 | 0.01 | 0.00 | 0.00 | 1.30 | 1.30 | 0.06 | 0.00 | 0.22 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45 | 9.400 | 7.49 | 0.13 | 0.06 | 0.02 | 0.00 | 0.01 | 0.00 | 0.00 | 1.30 | 1.30 | 0.06 | 0.00 | 0.22 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46 | 9.160 | 7.49 | 0.13 | 0.06 | 0.02 | 0.00 | 0.01 | 0.00 | 0.00 | 1.30 | 1.30 | 0.06 | 0.00 | 0.22 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47 | 8.920 | 7.49 | 0.13 | 0.06 | 0.02 | 0.00 | 0.01 | 0.00 | 0.00 | 1.30 | 1.30 | 0.06 | 0.00 | 0.22 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48 | 8.680 | 7.49 | 0.13 | 0.06 | 0.02 | 0.00 | 0.01 | 0.00 | 0.00 | 1.30 | 1.30 | 0.06 | 0.00 | 0.22 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49 | 8.440 | 7.49 | 0.13 | 0.06 | 0.02 | 0.00 | 0.01 | 0.00 | 0.00 | 1.30 | 1.30 | 0.06 | 0.00 | 0.22 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50 | 8.200 | 7.49 | 0.13 | 0.06 | 0.02 | 0.00 | 0.01 | 0.00 | 0.00 | 1.30 | 1.30 | 0.06 | 0.00 | 0.22 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51 | 7.900 | 7.49 | 0.13 | 0.06 | 0.02 | 0.00 | 0.01 | 0.00 | 0.00 | 1.30 | 1.30 | 0.06 | 0.00 | 0.22 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52 | 7.600 | 7.49 | 0.13 | 0.06 | 0.02 | 0.00 | 0.01 | 0.00 | 0.00 | 1.30 | 1.30 | 0.06 | 0.00 | 0.22 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53 | 7.300 | 7.49 | 0.13 | 0.06 | 0.02 | 0.00 | 0.01 | 0.00 | 0.00 | 1.30 | 1.30 | 0.06 | 0.00 | 0.22 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54 | 7.000 | 7.49 | 0.13 | 0.06 | 0.02 | 0.00 | 0.01 | 0.00 | 0.00 | 1.30 | 1.30 | 0.06 | 0.00 | 0.22 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55 | 6.700 | 7.49 | 0.13 | 0.06 | 0.02 | 0.00 | 0.01 | 0.00 | 0.00 | 1.30 | 1.30 | 0.06 | 0.00 | 0.22 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56 | 6.400 | 7.49 | 0.13 | 0.06 | 0.02 | 0.00 | 0.01 | 0.00 | 0.00 | 1.30 | 1.30 | 0.06 | 0.00 | 0.22 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57 | 6.020 | 7.49 | 0.20 | 0.06 | 0.03 | 0.00 | 0.01 | 0.00 | 0.00 | 1.30 | 1.30 | 0.06 | 0.00 | 0.22 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58 | 5.640 | 7.49 | 0.20 | 0.06 | 0.03 | 0.00 | 0.01 | 0.00 | 0.00 | 1.30 | 1.30 | 0.06 | 0.00 | 0.22 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59 | 5.260 | 7.49 | 0.20 | 0.06 | 0.03 | 0.00 | 0.01 | 0.00 | 0.00 | 1.30 | 1.30 | 0.06 | 0.00 | 0.22 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60 | 4.880 | 7.49 | 0.20 | 0.06 | 0.03 | 0.00 | 0.01 | 0.00 | 0.00 | 1.30 | 1.30 | 0.06 | 0.00 | 0.22 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61 | 4.500 | 7.49 | 0.20 | 0.06 | 0.03 | 0.00 | 0.01 | 0.00 | 0.00 | 1.30 | 1.30 | 0.06 | 0.00 | 0.22 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62 | 4.350 | 7.49 | 0.15 | 0.06 | 0.02 | 0.00 | 0.01 | 0.00 | 0.00 | 0.10 | 0.10 | 0.06 | 0.00 | 0.22 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63 | 4.200 | 7.49 | 0.15 | 0.06 | 0.02 | 0.00 | 0.01 | 0.00 | 0.00 | 0.10 | 0.10 | 0.06 | 0.00 | 0.22 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64 | 3.850 | 7.48 | 0.15 | 0.07 | 0.02 | 0.00 | 0.01 | 0.00 | 0.00 | 0.10 | 0.10 | 0.06 | 0.00 | 0.22 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65 | 3.500 | 7.47 | 0.15 | 0.07 | 0.02 | 0.00 | 0.01 | 0.00 | 0.00 | 0.10 | 0.10 | 0.06 | 0.00 | 0.22 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66 | 3.200 | 7.47 | 0.15 | 0.07 | 0.02 | 0.00 | 0.01 | 0.00 | 0.00 | 0.10 | 0.10 | 0.06 | 0.00 | 0.22 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67 | 2.900 | 7.47 | 0.15 | 0.07 | 0.02 | 0.00 | 0.01 | 0.00 | 0.00 | 0.10 | 0.10 | 0.06 | 0.00 | 0.22 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68 | 2.600 | 7.47 | 0.15 | 0.07 | 0.02 | 0.00 | 0.01 | 0.00 | 0.00 | 0.10 | 0.10 | 0.06 | 0.00 | 0.22 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69 | 2.300 | 7.47 | 0.15 | 0.07 | 0.02 | 0.00 | 0.01 | 0.00 | 0.00 | 0.10 | 0.10 | 0.06 | 0.00 | 0.22 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70 | 2.000 | 7.47 | 0.15 | 0.07 | 0.02 | 0.00 | 0.01 | 0.00 | 0.00 | 0.10 | 0.10 | 0.06 | 0.00 | 0.22 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |

| | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 71 | 1.700 | 7.47 | 0.15 | 0.07 | 0.02 | 0.00 | 0.01 | 0.00 | 0.00 | 0.10 | 0.10 | 0.06 | 0.00 | 0.22 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 72 | 1.600 | 7.48 | 0.15 | 0.07 | 0.02 | 0.00 | 0.01 | 0.00 | 0.00 | 0.10 | 0.10 | 0.06 | 0.00 | 0.22 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 73 | 1.500 | 7.49 | 0.15 | 0.06 | 0.02 | 0.00 | 0.01 | 0.00 | 0.00 | 0.10 | 0.10 | 0.06 | 0.00 | 0.22 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 74 | 1.230 | 7.49 | 0.15 | 0.06 | 0.02 | 0.00 | 0.01 | 0.00 | 0.00 | 0.10 | 0.10 | 0.06 | 0.00 | 0.22 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 75 | 0.960 | 7.49 | 0.15 | 0.06 | 0.02 | 0.00 | 0.01 | 0.00 | 0.00 | 0.10 | 0.10 | 0.06 | 0.00 | 0.22 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 76 | 0.690 | 7.49 | 0.15 | 0.06 | 0.02 | 0.00 | 0.01 | 0.00 | 0.00 | 0.10 | 0.10 | 0.06 | 0.00 | 0.22 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 77 | 0.420 | 7.49 | 0.15 | 0.06 | 0.02 | 0.00 | 0.01 | 0.00 | 0.00 | 0.11 | 0.11 | 0.06 | 0.00 | 0.22 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 78 | 0.150 | 7.49 | 0.15 | 0.06 | 0.02 | 0.00 | 0.01 | 0.00 | 0.00 | 0.12 | 0.12 | 0.06 | 0.00 | 0.22 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 79 | 0.000 | 8.08 | 0.14 | 0.05 | 0.02 | 0.00 | 0.01 | 0.00 | 0.00 | 0.18 | 0.18 | 0.06 | 0.00 | 0.15 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

SPECIAL REPORT: Headwater

HYDRAULIC PARAMETER VALUES

| ELEM NO. | BEGIN DIST | ENDING DIST | FLOW | ADVCTV VELO | DEPTH | WIDTH | VOLUME | SURFACE AREA | X-SECT AREA | TIDAL PRISM | TIDAL VELO | DISPRSN | MEAN VELO |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | km | km | m³/s | m/s | m | m | m³ | m² | m² | m³ | m/s | m²/s | m/s |
| 1 | 22.11 | 21.84 | 1.3423 | 0.015 | 1.71 | 52.6 | 24285. | 14202.0 | 89.9 | 8521. | 0.002 | 1.000 | 0.015 |
| 2 | 21.84 | 21.57 | 1.5747 | 0.018 | 1.71 | 52.6 | 24285. | 14202.0 | 89.9 | 17042. | 0.004 | 1.000 | 0.018 |
| 3 | 21.57 | 21.30 | 1.8070 | 0.020 | 1.71 | 52.6 | 24285. | 14202.0 | 89.9 | 25564. | 0.006 | 1.000 | 0.020 |
| 4 | 21.30 | 21.05 | 2.4288 | 0.011 | 4.92 | 45.2 | 55596. | 11300.0 | 222.4 | 32344. | 0.003 | 1.000 | 0.011 |
| 5 | 21.05 | 20.80 | 3.0505 | 0.014 | 4.92 | 45.2 | 55596. | 11300.0 | 222.4 | 39124. | 0.004 | 1.000 | 0.014 |
| 6 | 20.80 | 20.55 | 3.6722 | 0.017 | 4.92 | 45.2 | 55596. | 11300.0 | 222.4 | 45904. | 0.005 | 1.000 | 0.017 |
| 7 | 20.55 | 20.30 | 4.2940 | 0.019 | 4.92 | 45.2 | 55596. | 11300.0 | 222.4 | 52684. | 0.005 | 1.000 | 0.019 |
| 8 | 20.30 | 20.00 | 5.1850 | 0.033 | 2.48 | 63.0 | 46872. | 18900.0 | 156.2 | 64024. | 0.009 | 1.000 | 0.033 |
| 9 | 20.00 | 19.70 | 6.0760 | 0.039 | 2.48 | 63.0 | 46872. | 18900.0 | 156.2 | 75364. | 0.011 | 1.000 | 0.039 |
| 10 | 19.70 | 19.40 | 6.9670 | 0.045 | 2.48 | 63.0 | 46872. | 18900.0 | 156.2 | 86704. | 0.012 | 1.000 | 0.045 |
| 11 | 19.40 | 19.10 | 7.8580 | 0.050 | 2.48 | 63.0 | 46872. | 18900.0 | 156.2 | 98044. | 0.014 | 1.000 | 0.050 |
| 12 | 19.10 | 18.80 | 8.7490 | 0.056 | 2.48 | 63.0 | 46872. | 18900.0 | 156.2 | 109384. | 0.016 | 1.000 | 0.056 |
| 13 | 18.80 | 18.50 | 9.0060 | 0.021 | 4.05 | 103.5 | 125753. | 31050.0 | 419.2 | 128014. | 0.007 | 1.000 | 0.021 |
| 14 | 18.50 | 18.20 | 9.2630 | 0.022 | 4.05 | 103.5 | 125753. | 31050.0 | 419.2 | 146644. | 0.008 | 1.000 | 0.022 |
| 15 | 18.20 | 17.90 | 9.5200 | 0.023 | 4.05 | 103.5 | 125753. | 31050.0 | 419.2 | 165274. | 0.009 | 1.000 | 0.023 |
| 16 | 17.90 | 17.60 | 9.7770 | 0.023 | 4.05 | 103.5 | 125753. | 31050.0 | 419.2 | 183904. | 0.010 | 1.000 | 0.023 |
| 17 | 17.60 | 17.30 | 10.0340 | 0.024 | 4.05 | 103.5 | 125753. | 31050.0 | 419.2 | 202534. | 0.011 | 1.000 | 0.024 |
| 18 | 17.30 | 17.00 | 10.2910 | 0.025 | 4.05 | 103.5 | 125753. | 31050.0 | 419.2 | 221164. | 0.012 | 1.000 | 0.025 |
| 19 | 17.00 | 16.70 | 10.5480 | 0.025 | 4.05 | 103.5 | 125753. | 31050.0 | 419.2 | 239794. | 0.013 | 1.000 | 0.025 |
| 20 | 16.70 | 16.40 | 10.8050 | 0.026 | 4.05 | 103.5 | 125753. | 31050.0 | 419.2 | 258424. | 0.014 | 1.000 | 0.026 |
| 21 | 16.40 | 16.10 | 11.0620 | 0.026 | 4.05 | 103.5 | 125753. | 31050.0 | 419.2 | 277054. | 0.015 | 1.000 | 0.026 |
| 22 | 16.10 | 15.80 | 11.3190 | 0.027 | 4.05 | 103.5 | 125753. | 31050.0 | 419.2 | 295684. | 0.016 | 1.000 | 0.027 |
| 23 | 15.80 | 15.50 | 11.5760 | 0.028 | 4.05 | 103.5 | 125753. | 31050.0 | 419.2 | 314314. | 0.017 | 1.000 | 0.028 |
| 24 | 15.50 | 15.20 | 11.8330 | 0.028 | 4.05 | 103.5 | 125753. | 31050.0 | 419.2 | 332944. | 0.018 | 1.000 | 0.028 |
| 25 | 15.20 | 14.90 | 12.0205 | 0.019 | 5.47 | 116.5 | 191176. | 34950.0 | 637.3 | 353914. | 0.012 | 1.000 | 0.019 |
| 26 | 14.90 | 14.60 | 12.2080 | 0.019 | 5.47 | 116.5 | 191176. | 34950.0 | 637.3 | 374884. | 0.013 | 1.000 | 0.019 |
| 27 | 14.60 | 14.30 | 12.3955 | 0.019 | 5.47 | 116.5 | 191176. | 34950.0 | 637.3 | 395854. | 0.014 | 1.000 | 0.020 |
| 28 | 14.30 | 14.00 | 12.5830 | 0.020 | 5.47 | 116.5 | 191176. | 34950.0 | 637.3 | 416824. | 0.015 | 1.000 | 0.020 |
| 29 | 14.00 | 13.70 | 12.7705 | 0.020 | 5.47 | 116.5 | 191176. | 34950.0 | 637.3 | 437794. | 0.015 | 1.000 | 0.021 |
| 30 | 13.70 | 13.40 | 12.9580 | 0.020 | 5.47 | 116.5 | 191176. | 34950.0 | 637.3 | 458764. | 0.016 | 1.000 | 0.022 |
| 31 | 13.40 | 13.10 | 13.1455 | 0.021 | 5.47 | 116.5 | 191176. | 34950.0 | 637.3 | 479734. | 0.017 | 1.000 | 0.022 |
| 32 | 13.10 | 12.80 | 13.3330 | 0.021 | 5.47 | 116.5 | 191176. | 34950.0 | 637.3 | 500704. | 0.017 | 1.000 | 0.023 |
| 33 | 12.80 | 12.60 | 13.7080 | 0.022 | 5.47 | 116.5 | 127451. | 23300.0 | 637.3 | 514684. | 0.018 | 1.000 | 0.023 |
| 34 | 12.60 | 12.40 | 14.0830 | 0.022 | 5.47 | 116.5 | 127451. | 23300.0 | 637.3 | 528664. | 0.018 | 1.000 | 0.024 |
| 35 | 12.40 | 12.20 | 14.4580 | 0.023 | 5.47 | 116.5 | 127451. | 23300.0 | 637.3 | 542644. | 0.019 | 1.000 | 0.025 |
| 36 | 12.20 | 12.00 | 14.8330 | 0.023 | 5.47 | 116.5 | 127451. | 23300.0 | 637.3 | 556624. | 0.019 | 1.000 | 0.025 |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 37 | 12.00 | 11.65 | 15.2080 | 0.024 | 5.47 | 116.5 | 223039. | 40775.0 | 637.3 | 581089. | 0.020 | 1.000 | 0.026 |
| 38 | 11.65 | 11.30 | 15.5830 | 0.024 | 5.47 | 116.5 | 223039. | 40775.0 | 637.3 | 605554. | 0.021 | 1.000 | 0.027 |
| 39 | 11.30 | 10.95 | 15.9580 | 0.025 | 5.47 | 116.5 | 223039. | 40775.0 | 637.3 | 630019. | 0.022 | 1.000 | 0.028 |
| 40 | 10.95 | 10.60 | 16.3330 | 0.026 | 5.47 | 116.5 | 223039. | 40775.0 | 637.3 | 654484. | 0.023 | 1.000 | 0.029 |
| 41 | 10.60 | 10.36 | 16.4830 | 0.011 | 6.65 | 224.8 | 358701. | 53940.0 | 1494.6 | 686848. | 0.010 | 1.000 | 0.013 |
| 42 | 10.36 | 10.12 | 16.6330 | 0.011 | 6.65 | 224.8 | 358701. | 53940.0 | 1494.6 | 719212. | 0.011 | 1.000 | 0.013 |
| 43 | 10.12 | 9.88 | 16.7830 | 0.011 | 6.65 | 224.8 | 358701. | 53940.0 | 1494.6 | 751576. | 0.011 | 1.000 | 0.014 |
| 44 | 9.88 | 9.64 | 16.9330 | 0.011 | 6.65 | 224.8 | 358701. | 53940.0 | 1494.6 | 783940. | 0.012 | 1.000 | 0.014 |
| 45 | 9.64 | 9.40 | 17.0830 | 0.011 | 6.65 | 224.8 | 358701. | 53940.0 | 1494.6 | 816304. | 0.012 | 1.000 | 0.014 |
| 46 | 9.40 | 9.16 | 17.2330 | 0.012 | 6.65 | 224.8 | 358701. | 53940.0 | 1494.6 | 848668. | 0.013 | 1.000 | 0.015 |
| 47 | 9.16 | 8.92 | 17.3830 | 0.012 | 6.65 | 224.8 | 358701. | 53940.0 | 1494.6 | 881032. | 0.013 | 1.000 | 0.015 |
| 48 | 8.92 | 8.68 | 17.5330 | 0.012 | 6.65 | 224.8 | 358701. | 53940.0 | 1494.6 | 913396. | 0.014 | 1.000 | 0.016 |
| 49 | 8.68 | 8.44 | 17.6830 | 0.012 | 6.65 | 224.8 | 358701. | 53940.0 | 1494.6 | 945760. | 0.014 | 1.000 | 0.016 |
| 50 | 8.44 | 8.20 | 17.8330 | 0.012 | 6.65 | 224.8 | 358701. | 53940.0 | 1494.6 | 978124. | 0.015 | 1.000 | 0.017 |
| 51 | 8.20 | 7.90 | 18.0830 | 0.012 | 6.65 | 224.8 | 448376. | 67425.0 | 1494.6 | 1018579. | 0.015 | 1.000 | 0.017 |
| 52 | 7.90 | 7.60 | 18.3330 | 0.012 | 6.65 | 224.8 | 448376. | 67425.0 | 1494.6 | 1059034. | 0.016 | 1.000 | 0.018 |
| 53 | 7.60 | 7.30 | 18.5830 | 0.012 | 6.65 | 224.8 | 448376. | 67425.0 | 1494.6 | 1099489. | 0.016 | 1.000 | 0.018 |
| 54 | 7.30 | 7.00 | 18.8330 | 0.013 | 6.65 | 224.8 | 448376. | 67425.0 | 1494.6 | 1139944. | 0.017 | 1.000 | 0.019 |
| 55 | 7.00 | 6.70 | 19.0830 | 0.013 | 6.65 | 224.8 | 448376. | 67425.0 | 1494.6 | 1180399. | 0.018 | 1.000 | 0.019 |
| 56 | 6.70 | 6.40 | 19.3330 | 0.013 | 6.65 | 224.8 | 448376. | 67425.0 | 1494.6 | 1220854. | 0.018 | 1.000 | 0.020 |
| 57 | 6.40 | 6.02 | 19.6330 | 0.017 | 4.33 | 260.2 | 428133. | 98876.0 | 1126.7 | 1280179. | 0.025 | 1.000 | 0.028 |
| 58 | 6.02 | 5.64 | 19.9330 | 0.018 | 4.33 | 260.2 | 428133. | 98876.0 | 1126.7 | 1339505. | 0.026 | 1.000 | 0.029 |
| 59 | 5.64 | 5.26 | 20.2330 | 0.018 | 4.33 | 260.2 | 428133. | 98876.0 | 1126.7 | 1398830. | 0.028 | 1.000 | 0.030 |
| 60 | 5.26 | 4.88 | 20.5330 | 0.018 | 4.33 | 260.2 | 428133. | 98876.0 | 1126.7 | 1458156. | 0.029 | 1.000 | 0.031 |
| 61 | 4.88 | 4.50 | 20.8330 | 0.018 | 4.33 | 260.2 | 428133. | 98876.0 | 1126.7 | 1517482. | 0.030 | 1.000 | 0.032 |
| 62 | 4.50 | 4.35 | 21.5830 | 0.016 | 5.70 | 236.9 | 202584. | 35541.0 | 1350.6 | 1538806. | 0.025 | 1.000 | 0.027 |
| 63 | 4.35 | 4.20 | 22.3330 | 0.017 | 5.70 | 236.9 | 202584. | 35541.0 | 1350.6 | 1560131. | 0.026 | 1.000 | 0.028 |
| 64 | 4.20 | 3.85 | 23.0830 | 0.017 | 5.70 | 236.9 | 472695. | 82929.0 | 1350.6 | 1609888. | 0.026 | 1.000 | 0.029 |
| 65 | 3.85 | 3.50 | 23.8330 | 0.018 | 5.70 | 236.9 | 472695. | 82929.0 | 1350.6 | 1659646. | 0.027 | 1.000 | 0.030 |
| 66 | 3.50 | 3.20 | 24.0830 | 0.018 | 5.70 | 236.9 | 405167. | 71082.0 | 1350.6 | 1702295. | 0.028 | 1.000 | 0.030 |
| 67 | 3.20 | 2.90 | 24.3330 | 0.018 | 5.70 | 236.9 | 405167. | 71082.0 | 1350.6 | 1744944. | 0.029 | 1.000 | 0.031 |
| 68 | 2.90 | 2.60 | 24.5830 | 0.018 | 5.70 | 236.9 | 405167. | 71082.0 | 1350.6 | 1787594. | 0.029 | 1.000 | 0.032 |
| 69 | 2.60 | 2.30 | 24.8330 | 0.018 | 5.70 | 236.9 | 405167. | 71082.0 | 1350.6 | 1830243. | 0.030 | 1.000 | 0.032 |
| 70 | 2.30 | 2.00 | 25.0830 | 0.019 | 5.70 | 236.9 | 405167. | 71082.0 | 1350.6 | 1872892. | 0.031 | 1.000 | 0.033 |
| 71 | 2.00 | 1.70 | 25.3330 | 0.019 | 5.70 | 236.9 | 405167. | 71082.0 | 1350.6 | 1915541. | 0.032 | 1.000 | 0.034 |
| 72 | 1.70 | 1.60 | 26.0830 | 0.042 | 5.70 | 110.0 | 62700. | 11000.0 | 627.0 | 1922141. | 0.068 | 1.000 | 0.073 |
| 73 | 1.60 | 1.50 | 26.8330 | 0.043 | 5.70 | 110.0 | 62700. | 11000.0 | 627.0 | 1928741. | 0.068 | 1.000 | 0.074 |
| 74 | 1.50 | 1.23 | 27.1330 | 0.043 | 5.70 | 110.0 | 169290. | 29700.0 | 627.0 | 1946561. | 0.069 | 1.000 | 0.075 |
| 75 | 1.23 | 0.96 | 27.4330 | 0.044 | 5.70 | 110.0 | 169290. | 29700.0 | 627.0 | 1964381. | 0.070 | 1.000 | 0.075 |
| 76 | 0.96 | 0.69 | 27.7330 | 0.044 | 5.70 | 110.0 | 169290. | 29700.0 | 627.0 | 1982201. | 0.070 | 1.000 | 0.076 |
| 77 | 0.69 | 0.42 | 28.0330 | 0.045 | 5.70 | 110.0 | 169290. | 29700.0 | 627.0 | 2000021. | 0.071 | 1.000 | 0.077 |
| 78 | 0.42 | 0.15 | 28.3330 | 0.045 | 5.70 | 110.0 | 169290. | 29700.0 | 627.0 | 2017841. | 0.072 | 1.000 | 0.077 |
| 79 | 0.15 | 0.00 | 29.8330 | 0.048 | 5.70 | 110.0 | 94050. | 16500.0 | 627.0 | 2027741. | 0.072 | 1.000 | 0.078 |

FINAL REPORT Headwater Middle/Middle West Rivers DO Modeling - 090207
REACH NO. 1 Headwaters-MR-A COEF-1 Run

********** REACH INPUTS **********

| ELEM NO. | TYPE | FLOW deg C | TEMP ppt | SALN mg/L | CM-I mg/L | CM-II mg/L | DO mg/L | BOD#1 mg/L | BOD#2 mg/L | EBOD#1 mg/L | EBOD#2 mg/L | ORGN mg/L | NH3 mg/L | NO3+2 mg/L | PHOS µg/L | CHL A #/100mL | COLI | NCM |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | HDWTR | 1.11000 | 30.00 | 0.00 | 0.00 | 0.00 | 5.00 | 0.42 | 0.00 | 0.42 | 0.00 | 0.00 | 0.10 | 0.10 | 0.00 | 1.00 | 0.00 | 0.00 |
| EACH | INCR | 0.23233 | 30.00 | 0.00 | 0.00 | 0.00 | 5.00 | 0.05 | 0.00 | | 0.30 | 0.00 | 0.20 | 0.00 | 0.00 | 0.00 | | |

```
************************************************ HYDRAULIC PARAMETER VALUES ************************************************
ELEM  BEGIN ENDING    FLOW  PCT  ADVCTV  TRAVEL  DEPTH  WIDTH   VOLUME   SURFACE X-SECT   TIDAL  TIDAL  DISPRSN   MEAN
 NO.  DIST  DIST        EFF   VELO    TIME                     AREA   AREA    PRISM   VELO          VELO
      km    km      m³/s        m/s   days     m     m      m³      m²     m²      m³    m/s    m²/s    m/s
  1  22.11  21.84  1.34233  0.0  0.01492   0.21   1.71  52.60  24285.42  14202.00  89.95  8521.20  0.002    1.000  0.015
  2  21.84  21.57  1.57467  0.0  0.01751   0.18   1.71  52.60  24285.42  14202.00  89.95 17042.40  0.004    1.000  0.018
  3  21.57  21.30  1.80700  0.0  0.02009   0.16   1.71  52.60  24285.42  14202.00  89.95 25563.60  0.006    1.000  0.020
 TOT                                  0.54            72856.26  42606.00
 AVG                          0.0173         1.71  52.60                 89.95
 CUM                                  0.54
********************************************** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********************************************
ELEM  ENDING SAT   REAER BOD#1 BOD#1 ABOD#1  BOD#2 BOD#2 ABOD#2  BKGD  FULL  CORR  ORGN ORGN   NH3  NH3 DENIT  PO4  ALG  MAC  COLI   NCM   NCM
NO.   DIST D.O.   RATE DECAY SETT DECAY DECAY SETT DECAY  SOD  SOD  SOD DECAY SETT DECAY SRCE  RATE SRCE PROD PROD DECAY DECAY  SETT
         mg/L   1/da  1/da 1/da  1/da  1/da 1/da  1/da   *    *    *   1/da 1/da  1/da   *   1/da   *   **   **  1/da  1/da  1/da
  1  21.840 7.82   0.48  0.06 0.07  0.00  0.01 0.00  0.00 1.63 1.67 1.67  0.06 0.01  0.17 0.00  0.00 0.00 0.07 0.00  0.00  0.00  0.00
  2  21.570 7.78   0.48  0.06 0.07  0.00  0.01 0.00  0.00 1.66 1.69 1.69  0.06 0.01  0.18 0.00  0.00 0.00 0.07 0.00  0.00  0.00  0.00
  3  21.300 7.75   0.48  0.06 0.07  0.00  0.01 0.00  0.00 1.68 1.72 1.72  0.06 0.01  0.18 0.00  0.00 0.00 0.07 0.00  0.00  0.00  0.00
AVG 20 DEG C RATE    0.41  0.04 0.06  0.00  0.01 0.00  0.00 0.98           0.05 0.01  0.10 0.00  0.00 0.00           0.00  0.00  0.00
*  g/m²/d         **  mg/L/day
********************************************** WATER QUALITY CONSTITUENT VALUES **********************************************
ELEM  ENDING  TEMP SALN    CM-I   CM-II   DO  BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN   NH3 NO3+2  TOTN  PHOS CHL A  MACRO    COLI    NCM
NO.   DIST DEG C  PPT    mg/L    mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  µg/L   g/m³  #/100mL
  1  21.840 28.07 0.00    0.00    0.00 5.06  0.36  0.00  0.36  0.00  0.04  0.08  0.12  0.24  0.05  1.00  0.00     0.  0.00
  2  21.570 28.33 0.00    0.00    0.00 5.11  0.31  0.00  0.31  0.00  0.08  0.07  0.13  0.28  0.05  1.00  0.00     0.  0.00
  3  21.300 28.60 0.00    0.00    0.00 5.13  0.26  0.00  0.26  0.00  0.11  0.06  0.14  0.31  0.05  1.00  0.00     0.  0.00
FINAL REPORT          Headwater                    Middle/Middle West Rivers DO Modeling - 090207
REACH NO.  2   MR-B before split of MR/MRWest              COEF-1 Run
************************************************************ REACH INPUTS ************************************************************
ELEM  TYPE      FLOW    TEMP    SALN    CM-I   CM-II    DO  BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN   NH3 NO3+2  PHOS CHL A    COLI    NCM
NO.               deg C    ppt    mg/L    mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  µg/L  #/100mL
  4  UPR RCH  1.80700  28.60    0.00    0.00   0.00 5.13  0.26  0.00  0.26  0.00  0.11  0.06  0.14  0.05  1.00    0.00   0.00
EACH  INCR    0.62175  30.00    0.00    0.00   0.00 5.00  0.05  0.00            0.30  0.00  0.20  0.00    0.00   0.00
************************************************ HYDRAULIC PARAMETER VALUES ************************************************
ELEM  BEGIN ENDING    FLOW  PCT  ADVCTV  TRAVEL  DEPTH  WIDTH   VOLUME   SURFACE X-SECT   TIDAL  TIDAL  DISPRSN   MEAN
 NO.  DIST  DIST        EFF   VELO    TIME                     AREA   AREA    PRISM   VELO          VELO
      km    km      m³/s        m/s   days     m     m      m³      m²     m²      m³    m/s    m²/s    m/s
  4  21.30  21.05  2.42875  0.0  0.01092   0.26   4.92  45.20  55596.00  11300.00 222.38 32343.60  0.003    1.000  0.011
  5  21.05  20.80  3.05050  0.0  0.01372   0.21   4.92  45.20  55596.00  11300.00 222.38 39123.60  0.004    1.000  0.014
  6  20.80  20.55  3.67225  0.0  0.01651   0.18   4.92  45.20  55596.00  11300.00 222.38 45903.60  0.005    1.000  0.017
  7  20.55  20.30  4.29400  0.0  0.01931   0.15   4.92  45.20  55596.00  11300.00 222.38 52683.60  0.005    1.000  0.019
 TOT                                  0.80            222384.00  45200.00
 AVG                          0.0145         4.92  45.20                 222.38
 CUM                                  1.34
********************************************** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********************************************
ELEM  ENDING SAT   REAER BOD#1 BOD#1 ABOD#1  BOD#2 BOD#2 ABOD#2  BKGD  FULL  CORR  ORGN ORGN   NH3  NH3 DENIT  PO4  ALG  MAC  COLI   NCM   NCM
NO.   DIST D.O.   RATE DECAY SETT DECAY DECAY SETT DECAY  SOD  SOD  SOD DECAY SETT DECAY SRCE  RATE SRCE PROD PROD DECAY DECAY  SETT
         mg/L   1/da  1/da 1/da  1/da  1/da 1/da  1/da   *    *    *   1/da 1/da  1/da   *   1/da   *   **   **  1/da  1/da  1/da
  4  21.050 7.68   0.17  0.06 0.03  0.00  0.01 0.00  0.00 2.31 2.33 2.33  0.06 0.00  0.19 0.00  0.00 0.00 0.08 0.00  0.00  0.00  0.00
  5  20.800 7.61   0.17  0.06 0.03  0.00  0.01 0.00  0.00 2.38 2.40 2.40  0.06 0.00  0.20 0.00  0.00 0.00 0.08 0.00  0.00  0.00  0.00
  6  20.550 7.55   0.17  0.06 0.03  0.00  0.01 0.00  0.00 2.46 2.47 2.47  0.06 0.00  0.21 0.00  0.00 0.00 0.08 0.00  0.00  0.00  0.00
```

```
  7  20.300  7.48   0.17  0.07  0.03  0.00  0.01  0.00  0.00  2.53  2.55  2.55   0.06  0.00   0.21  0.00  0.00  0.00  0.08  0.00   0.00  0.00   0.00
AVG 20 DEG C RATE    0.14  0.04  0.02  0.00  0.01  0.00  0.00  1.30             0.05  0.00   0.10  0.00  0.00  0.00             0.00  0.00   0.00
*  g/m²/d          **   mg/L/day
************************************************** WATER QUALITY CONSTITUENT VALUES **************************************************
ELEM  ENDING  TEMP  SALN    CM-I   CM-II   DO  BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN   NH3  NO3+2   TOTN  PHOS  CHL A  MACRO    COLI    NCM
NO.    DIST  DEG C  PPT    mg/L    mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  µg/L   g/m³  #/100mL
  4  21.050  29.10  0.00    0.00    0.00  5.10  0.20  0.00  0.20  0.00  0.16  0.04  0.16  0.36  0.05  1.00  0.00      0.   0.00
  5  20.800  29.60  0.00    0.00    0.00  5.08  0.17  0.00  0.17  0.00  0.18  0.04  0.17  0.38  0.05  1.00  0.00      0.   0.00
  6  20.550  30.10  0.00    0.00    0.00  5.07  0.15  0.00  0.15  0.00  0.20  0.03  0.17  0.40  0.05  1.00  0.00      0.   0.00
  7  20.300  30.60  0.00    0.00    0.00  5.07  0.14  0.00  0.14  0.00  0.21  0.03  0.18  0.42  0.05  1.00  0.00      0.   0.00
FINAL REPORT            Headwater                        Middle/Middle West Rivers DO Modeling - 090207
REACH NO.  3    MR-C/MRWest-D                                COEF-1 Run
************************************************************** REACH INPUTS **************************************************************
ELEM  TYPE       FLOW    TEMP    SALN    CM-I   CM-II    DO  BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN   NH3  NO3+2   PHOS  CHL A    COLI    NCM
NO.                deg C    ppt    mg/L    mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L   µg/L  #/100mL
  8  UPR RCH   4.29400  30.60    0.00    0.00    0.00  5.07  0.14  0.00  0.14  0.00  0.21  0.03  0.18  0.05  1.00    0.00   0.00
EACH  INCR     0.89100  30.00    0.00    0.00    0.00  5.00  0.05  0.00             0.30  0.00  0.20  0.00    0.00   0.00
************************************************** HYDRAULIC PARAMETER VALUES **************************************************
ELEM   BEGIN  ENDING     FLOW   PCT   ADVCTV    TRAVEL   DEPTH   WIDTH    VOLUME    SURFACE  X-SECT    TIDAL   TIDAL   DISPRSN    MEAN
NO.    DIST    DIST          EFF    VELO     TIME                          AREA    AREA     PRISM    VELO            VELO
       km      km       m³/s          m/s    days      m      m       m³       m²      m²       m³     m/s     m²/s     m/s
  8   20.30   20.00   5.18500   0.0  0.03319    0.10   2.48   63.00  46872.00   18900.00  156.24  64023.60   0.009    1.000   0.033
  9   20.00   19.70   6.07600   0.0  0.03889    0.09   2.48   63.00  46872.00   18900.00  156.24  75363.60   0.011    1.000   0.039
 10   19.70   19.40   6.96700   0.0  0.04459    0.08   2.48   63.00  46872.00   18900.00  156.24  86703.60   0.012    1.000   0.045
 11   19.40   19.10   7.85800   0.0  0.05029    0.07   2.48   63.00  46872.00   18900.00  156.24  98043.60   0.014    1.000   0.050
 12   19.10   18.80   8.74900   0.0  0.05600    0.06   2.48   63.00  46872.00   18900.00  156.24 109383.60   0.016    1.000   0.056
TOT                                        0.40              234360.00   94500.00
AVG                                   0.0431           2.48   63.00                156.24
CUM                                        1.75
************************************************ BIOLOGICAL AND PHYSICAL COEFFICIENTS ************************************************
ELEM  ENDING  SAT    REAER  BOD#1 BOD#1 ABOD#1  BOD#2 BOD#2 ABOD#2  BKGD  FULL  CORR   ORGN ORGN    NH3   NH3 DENIT   PO4   ALG   MAC   COLI    NCM    NCM
NO.    DIST  D.O.   RATE  DECAY  SETT  DECAY  DECAY  SETT  DECAY   SOD   SOD   SOD  DECAY  SETT  DECAY  SRCE   RATE  SRCE  PROD  PROD  DECAY  DECAY   SETT
           mg/L    1/da   1/da  1/da  1/da   1/da   1/da  1/da   1/da    *     *     *    1/da  1/da   1/da    *    1/da    *    **    **    1/da   1/da   1/da
  8  20.000  7.49   0.34  0.06  0.05   0.00   0.01  0.00   0.00  0.64  0.66  0.66   0.06  0.01   0.21  0.00   0.00  0.00  0.08  0.00   0.00   0.00   0.00
  9  19.700  7.49   0.34  0.06  0.05   0.00   0.01  0.00   0.00  0.64  0.65  0.65   0.06  0.01   0.21  0.00   0.00  0.00  0.08  0.00   0.00   0.00   0.00
 10  19.400  7.50   0.34  0.06  0.05   0.00   0.01  0.00   0.00  0.64  0.65  0.65   0.06  0.01   0.21  0.00   0.00  0.00  0.08  0.00   0.00   0.00   0.00
 11  19.100  7.50   0.34  0.06  0.05   0.00   0.01  0.00   0.00  0.64  0.65  0.65   0.06  0.01   0.21  0.00   0.00  0.00  0.08  0.00   0.00   0.00   0.00
 12  18.800  7.51   0.34  0.06  0.05   0.00   0.01  0.00   0.00  0.64  0.65  0.65   0.06  0.01   0.21  0.00   0.00  0.00  0.08  0.00   0.00   0.00   0.00
AVG 20 DEG C RATE    0.28  0.04  0.04   0.00   0.01  0.00   0.00  0.33             0.05  0.00   0.10  0.00   0.00  0.00             0.00   0.00   0.00
*  g/m²/d          **   mg/L/day
************************************************** WATER QUALITY CONSTITUENT VALUES **************************************************
ELEM  ENDING  TEMP  SALN    CM-I   CM-II   DO  BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN   NH3  NO3+2   TOTN  PHOS  CHL A  MACRO    COLI    NCM
NO.    DIST  DEG C  PPT    mg/L    mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  µg/L   g/m³  #/100mL
  8  20.000  30.56  0.00    0.00    0.00  5.12  0.12  0.00  0.12  0.00  0.22  0.03  0.18  0.43  0.05  1.00  0.00      0.   0.00
  9  19.700  30.52  0.00    0.00    0.00  5.15  0.11  0.00  0.11  0.00  0.23  0.02  0.18  0.44  0.05  1.00  0.00      0.   0.00
 10  19.400  30.48  0.00    0.00    0.00  5.18  0.10  0.00  0.10  0.00  0.24  0.02  0.19  0.45  0.05  1.00  0.00      0.   0.00
 11  19.100  30.44  0.00    0.00    0.00  5.20  0.09  0.00  0.09  0.00  0.25  0.02  0.19  0.45  0.05  1.00  0.00      0.   0.00
 12  18.800  30.40  0.00    0.00    0.00  5.22  0.09  0.00  0.09  0.00  0.25  0.02  0.19  0.46  0.05  1.00  0.00      0.   0.00
FINAL REPORT            Headwater                        Middle/Middle West Rivers DO Modeling - 090207
REACH NO.  4    MR-E/MRWest-G                                COEF-1 Run
```

********** REACH INPUTS **********

| ELEM NO. | TYPE | FLOW deg C | TEMP ppt | SALN mg/L | CM-I mg/L | CM-II mg/L | DO mg/L | BOD#1 mg/L | BOD#2 mg/L | EBOD#1 mg/L | EBOD#2 mg/L | ORGN mg/L | NH3 mg/L | NO3+2 mg/L | PHOS µg/L | CHL A | COLI #/100mL | NCM |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 13 | UPR RCH | 8.74900 | 30.40 | 0.00 | 0.00 | 0.00 | 5.22 | 0.09 | 0.00 | 0.09 | 0.00 | 0.25 | 0.02 | 0.19 | 0.05 | 1.00 | 0.00 | 0.00 |
| EACH | INCR | 0.25700 | 30.00 | 0.00 | 0.00 | 0.00 | 5.00 | 0.42 | 0.00 | | 0.30 | 0.00 | 0.20 | 0.00 | 0.00 | 0.00 | | |

********** HYDRAULIC PARAMETER VALUES **********

| ELEM NO. | BEGIN DIST km | ENDING DIST km | FLOW m³/s | PCT EFF | ADVCTV VELO m/s | TRAVEL TIME days | DEPTH m | WIDTH m | VOLUME m³ | SURFACE AREA m² | X-SECT AREA m² | TIDAL PRISM m³ | TIDAL VELO m/s | DISPRSN m²/s | MEAN VELO m/s |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 13 | 18.80 | 18.50 | 9.00600 | 0.0 | 0.02149 | 0.16 | 4.05 | 103.50 | 125752.51 | 31050.00 | 419.18 | 128013.60 | 0.007 | 1.000 | 0.021 |
| 14 | 18.50 | 18.20 | 9.26300 | 0.0 | 0.02210 | 0.16 | 4.05 | 103.50 | 125752.51 | 31050.00 | 419.18 | 146643.61 | 0.008 | 1.000 | 0.022 |
| 15 | 18.20 | 17.90 | 9.52000 | 0.0 | 0.02271 | 0.15 | 4.05 | 103.50 | 125752.51 | 31050.00 | 419.18 | 165273.61 | 0.009 | 1.000 | 0.023 |
| 16 | 17.90 | 17.60 | 9.77700 | 0.0 | 0.02332 | 0.15 | 4.05 | 103.50 | 125752.51 | 31050.00 | 419.18 | 183903.61 | 0.010 | 1.000 | 0.023 |
| 17 | 17.60 | 17.30 | 10.03400 | 0.0 | 0.02394 | 0.15 | 4.05 | 103.50 | 125752.51 | 31050.00 | 419.18 | 202533.61 | 0.011 | 1.000 | 0.024 |
| 18 | 17.30 | 17.00 | 10.29100 | 0.0 | 0.02455 | 0.14 | 4.05 | 103.50 | 125752.51 | 31050.00 | 419.18 | 221163.61 | 0.012 | 1.000 | 0.025 |
| 19 | 17.00 | 16.70 | 10.54800 | 0.0 | 0.02516 | 0.14 | 4.05 | 103.50 | 125752.51 | 31050.00 | 419.18 | 239793.61 | 0.013 | 1.000 | 0.025 |
| 20 | 16.70 | 16.40 | 10.80500 | 0.0 | 0.02578 | 0.13 | 4.05 | 103.50 | 125752.51 | 31050.00 | 419.18 | 258423.61 | 0.014 | 1.000 | 0.026 |
| 21 | 16.40 | 16.10 | 11.06200 | 0.0 | 0.02639 | 0.13 | 4.05 | 103.50 | 125752.51 | 31050.00 | 419.18 | 277053.62 | 0.015 | 1.000 | 0.026 |
| 22 | 16.10 | 15.80 | 11.31900 | 0.0 | 0.02700 | 0.13 | 4.05 | 103.50 | 125752.51 | 31050.00 | 419.18 | 295683.62 | 0.016 | 1.000 | 0.027 |
| 23 | 15.80 | 15.50 | 11.57600 | 0.0 | 0.02762 | 0.13 | 4.05 | 103.50 | 125752.51 | 31050.00 | 419.18 | 314313.62 | 0.017 | 1.000 | 0.028 |
| 24 | 15.50 | 15.20 | 11.83300 | 0.0 | 0.02823 | 0.12 | 4.05 | 103.50 | 125752.51 | 31050.00 | 419.18 | 332943.62 | 0.018 | 1.000 | 0.028 |
| TOT | | | | | 1.69 | | | | 1509030.12 | 372600.00 | | | | | |
| AVG | | | | 0.0247 | | | 4.05 | 103.50 | | | 419.17 | | | | |
| CUM | | | | | 3.44 | | | | | | | | | | |

********** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********

| ELEM NO. | ENDING DIST | SAT D.O. mg/L | REAER RATE 1/da | DECAY 1/da | SETT 1/da | BOD#1 DECAY 1/da | BOD#1 SETT 1/da | BOD#2 DECAY 1/da | BOD#2 SETT 1/da | ABOD#2 DECAY * | BKGD SOD * | FULL SOD * | CORR SOD 1/da | ORGN DECAY 1/da | ORGN SETT 1/da | NH3 DECAY 1/da | NH3 SRCE * | DENIT RATE 1/da | PO4 SRCE * | ALG PROD ** | MAC PROD ** | COLI DECAY 1/da | NCM DECAY 1/da | NCM SETT 1/da |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 13 | 18.500 | 7.51 | 0.21 | 0.06 | 0.03 | 0.00 | 0.01 | 0.00 | 0.00 | 1.89 | 1.90 | 1.90 | 0.06 | 0.00 | 0.21 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 14 | 18.200 | 7.50 | 0.21 | 0.06 | 0.03 | 0.00 | 0.01 | 0.00 | 0.00 | 1.89 | 1.90 | 1.90 | 0.06 | 0.00 | 0.21 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 15 | 17.900 | 7.50 | 0.21 | 0.06 | 0.03 | 0.00 | 0.01 | 0.00 | 0.00 | 1.89 | 1.90 | 1.90 | 0.06 | 0.00 | 0.21 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 16 | 17.600 | 7.50 | 0.21 | 0.06 | 0.03 | 0.00 | 0.01 | 0.00 | 0.00 | 1.89 | 1.91 | 1.91 | 0.06 | 0.00 | 0.21 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 17 | 17.300 | 7.50 | 0.21 | 0.06 | 0.03 | 0.00 | 0.01 | 0.00 | 0.00 | 1.89 | 1.91 | 1.91 | 0.06 | 0.00 | 0.21 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 18 | 17.000 | 7.50 | 0.21 | 0.06 | 0.03 | 0.00 | 0.01 | 0.00 | 0.00 | 1.89 | 1.91 | 1.91 | 0.06 | 0.00 | 0.21 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 19 | 16.700 | 7.50 | 0.21 | 0.06 | 0.03 | 0.00 | 0.01 | 0.00 | 0.00 | 1.89 | 1.91 | 1.91 | 0.06 | 0.00 | 0.21 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 20 | 16.400 | 7.50 | 0.21 | 0.06 | 0.03 | 0.00 | 0.01 | 0.00 | 0.00 | 1.89 | 1.91 | 1.91 | 0.06 | 0.00 | 0.21 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 21 | 16.100 | 7.50 | 0.21 | 0.06 | 0.03 | 0.00 | 0.01 | 0.00 | 0.00 | 1.90 | 1.91 | 1.91 | 0.06 | 0.00 | 0.21 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 22 | 15.800 | 7.50 | 0.21 | 0.06 | 0.03 | 0.00 | 0.01 | 0.00 | 0.00 | 1.90 | 1.92 | 1.92 | 0.06 | 0.00 | 0.21 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 23 | 15.500 | 7.49 | 0.21 | 0.06 | 0.03 | 0.00 | 0.01 | 0.00 | 0.00 | 1.90 | 1.92 | 1.92 | 0.06 | 0.00 | 0.21 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 24 | 15.200 | 7.49 | 0.21 | 0.06 | 0.03 | 0.00 | 0.01 | 0.00 | 0.00 | 1.90 | 1.92 | 1.92 | 0.06 | 0.00 | 0.21 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | |
| AVG 20 DEG C RATE | | | 0.17 | 0.04 | 0.02 | 0.00 | 0.01 | 0.00 | 0.00 | 0.98 | | | 0.05 | 0.00 | 0.10 | 0.00 | 0.00 | 0.00 | | | | 0.00 | 0.00 | 0.00 |

* g/m²/d ** mg/L/day

********** WATER QUALITY CONSTITUENT VALUES **********

| ELEM NO. | ENDING DIST | TEMP DEG C | SALN PPT | CM-I mg/L | CM-II mg/L | DO mg/L | BOD#1 mg/L | BOD#2 mg/L | EBOD#1 mg/L | EBOD#2 mg/L | ORGN mg/L | NH3 mg/L | NO3+2 mg/L | TOTN mg/L | PHOS µg/L | CHL A g/m³ | MACRO | COLI #/100mL | NCM |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 13 | 18.500 | 30.41 | 0.00 | 0.00 | 0.00 | 5.22 | 0.10 | 0.00 | 0.10 | 0.00 | 0.25 | 0.02 | 0.19 | 0.46 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 14 | 18.200 | 30.42 | 0.00 | 0.00 | 0.00 | 5.23 | 0.11 | 0.00 | 0.11 | 0.00 | 0.25 | 0.02 | 0.19 | 0.46 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 15 | 17.900 | 30.42 | 0.00 | 0.00 | 0.00 | 5.24 | 0.11 | 0.00 | 0.11 | 0.00 | 0.25 | 0.02 | 0.19 | 0.46 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 16 | 17.600 | 30.43 | 0.00 | 0.00 | 0.00 | 5.24 | 0.12 | 0.00 | 0.12 | 0.00 | 0.25 | 0.02 | 0.19 | 0.46 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 17 | 17.300 | 30.44 | 0.00 | 0.00 | 0.00 | 5.25 | 0.12 | 0.00 | 0.12 | 0.00 | 0.24 | 0.02 | 0.19 | 0.46 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |

| | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 17.000 | 30.45 | 0.00 | 0.00 | 0.00 | 5.25 | 0.13 | 0.00 | 0.13 | 0.00 | 0.24 | 0.02 | 0.19 | 0.46 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 19 | 16.700 | 30.46 | 0.00 | 0.00 | 0.00 | 5.25 | 0.14 | 0.00 | 0.14 | 0.00 | 0.24 | 0.03 | 0.19 | 0.46 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 20 | 16.400 | 30.47 | 0.00 | 0.00 | 0.00 | 5.26 | 0.14 | 0.00 | 0.14 | 0.00 | 0.24 | 0.03 | 0.19 | 0.46 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 21 | 16.100 | 30.48 | 0.00 | 0.00 | 0.00 | 5.26 | 0.15 | 0.00 | 0.15 | 0.00 | 0.24 | 0.03 | 0.19 | 0.46 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 22 | 15.800 | 30.48 | 0.00 | 0.00 | 0.00 | 5.26 | 0.15 | 0.00 | 0.15 | 0.00 | 0.24 | 0.03 | 0.19 | 0.46 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 23 | 15.500 | 30.49 | 0.00 | 0.00 | 0.00 | 5.26 | 0.15 | 0.00 | 0.15 | 0.00 | 0.24 | 0.03 | 0.19 | 0.46 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 24 | 15.200 | 30.50 | 0.00 | 0.00 | 0.00 | 5.27 | 0.16 | 0.00 | 0.16 | 0.00 | 0.24 | 0.03 | 0.19 | 0.46 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |

FINAL REPORT Headwater Middle/Middle West Rivers DO Modeling - 090207
REACH NO. 5 MR-H COEF-1 Run

********** REACH INPUTS **********

| ELEM NO. | TYPE | FLOW deg C | TEMP ppt | SALN mg/L | CM-I mg/L | CM-II mg/L | DO mg/L | BOD#1 mg/L | BOD#2 mg/L | EBOD#1 mg/L | EBOD#2 mg/L | ORGN mg/L | NH3 mg/L | NO3+2 mg/L | PHOS mg/L | CHL A µg/L | COLI #/100mL | NCM |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 25 | UPR RCH | 11.83300 | 30.50 | 0.00 | 0.00 | 0.00 | 5.27 | 0.16 | 0.00 | 0.16 | 0.00 | 0.24 | 0.03 | 0.19 | 0.05 | 1.00 | 0.00 | 0.00 |
| EACH | INCR | 0.18750 | 30.00 | 0.00 | 0.00 | 0.00 | 5.00 | 0.42 | 0.00 | | 0.30 | 0.00 | 0.20 | 0.00 | 0.00 | 0.00 | | |

********** HYDRAULIC PARAMETER VALUES **********

| ELEM NO. | BEGIN DIST km | ENDING DIST km | FLOW EFF m³/s | PCT m/s | ADVCTV VELO m/s | TRAVEL TIME days | DEPTH m | WIDTH m | VOLUME m³ | SURFACE AREA m² | X-SECT AREA m² | TIDAL PRISM m³ | TIDAL VELO m/s | DISPRSN m²/s | MEAN VELO m/s |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 25 | 15.20 | 14.90 | 12.02050 | 0.0 | 0.01886 | 0.18 | 5.47 | 116.50 | 191176.50 | 34950.00 | 637.26 | 353913.62 | 0.012 | 1.000 | 0.019 |
| 26 | 14.90 | 14.60 | 12.20800 | 0.0 | 0.01916 | 0.18 | 5.47 | 116.50 | 191176.50 | 34950.00 | 637.26 | 374883.62 | 0.013 | 1.000 | 0.019 |
| 27 | 14.60 | 14.30 | 12.39550 | 0.0 | 0.01945 | 0.18 | 5.47 | 116.50 | 191176.50 | 34950.00 | 637.26 | 395853.62 | 0.014 | 1.000 | 0.020 |
| 28 | 14.30 | 14.00 | 12.58300 | 0.0 | 0.01975 | 0.18 | 5.47 | 116.50 | 191176.50 | 34950.00 | 637.26 | 416823.62 | 0.015 | 1.000 | 0.020 |
| 29 | 14.00 | 13.70 | 12.77050 | 0.0 | 0.02004 | 0.17 | 5.47 | 116.50 | 191176.50 | 34950.00 | 637.26 | 437793.62 | 0.015 | 1.000 | 0.021 |
| 30 | 13.70 | 13.40 | 12.95800 | 0.0 | 0.02033 | 0.17 | 5.47 | 116.50 | 191176.50 | 34950.00 | 637.26 | 458763.62 | 0.016 | 1.000 | 0.022 |
| 31 | 13.40 | 13.10 | 13.14550 | 0.0 | 0.02063 | 0.17 | 5.47 | 116.50 | 191176.50 | 34950.00 | 637.26 | 479733.62 | 0.017 | 1.000 | 0.022 |
| 32 | 13.10 | 12.80 | 13.33300 | 0.0 | 0.02092 | 0.17 | 5.47 | 116.50 | 191176.50 | 34950.00 | 637.26 | 500703.62 | 0.017 | 1.000 | 0.023 |
| TOT | | | | | | 1.40 | | | 1529412.00 | 279600.00 | | | | | |
| AVG | | | | 0.0199 | | | 5.47 | 116.50 | | | 637.25 | | | | |
| CUM | | | | | | 4.83 | | | | | | | | | |

********** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********

| ELEM NO. | ENDING DIST | SAT D.O. mg/L | REAER RATE 1/da | BOD#1 DECAY 1/da | BOD#1 SETT 1/da | ABOD#1 DECAY 1/da | BOD#2 DECAY 1/da | BOD#2 SETT 1/da | ABOD#2 DECAY * | BKGD * | FULL * | SOD 1/da | SOD 1/da | SOD 1/da | CORR DECAY 1/da | ORGN SETT * | ORGN DECAY ** | ORGN SRCE ** | NH3 RATE 1/da | NH3 SRCE 1/da | NH3 PROD 1/da | DENIT PROD 1/da | PO4 DECAY 1/da | ALG SETT 1/da | MAC | COLI | NCM | NCM |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 25 | 14.900 | 7.49 | 0.16 | 0.06 | 0.02 | 0.00 | 0.01 | 0.00 | 0.00 | 1.91 | 1.93 | 1.93 | 0.06 | 0.00 | 0.21 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | |
| 26 | 14.600 | 7.48 | 0.16 | 0.07 | 0.02 | 0.00 | 0.01 | 0.00 | 0.00 | 1.91 | 1.93 | 1.93 | 0.06 | 0.00 | 0.22 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | |
| 27 | 14.300 | 7.47 | 0.16 | 0.07 | 0.02 | 0.00 | 0.01 | 0.00 | 0.00 | 1.92 | 1.94 | 1.94 | 0.06 | 0.00 | 0.22 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | |
| 28 | 14.000 | 7.46 | 0.16 | 0.07 | 0.02 | 0.00 | 0.01 | 0.00 | 0.00 | 1.93 | 1.95 | 1.95 | 0.06 | 0.00 | 0.22 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | |
| 29 | 13.700 | 7.45 | 0.16 | 0.07 | 0.02 | 0.00 | 0.01 | 0.00 | 0.00 | 1.94 | 1.96 | 1.96 | 0.06 | 0.00 | 0.22 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | |
| 30 | 13.400 | 7.45 | 0.16 | 0.07 | 0.02 | 0.00 | 0.01 | 0.00 | 0.00 | 1.94 | 1.97 | 1.97 | 0.06 | 0.00 | 0.22 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | |
| 31 | 13.100 | 7.44 | 0.16 | 0.07 | 0.02 | 0.00 | 0.01 | 0.00 | 0.00 | 1.95 | 1.97 | 1.97 | 0.06 | 0.00 | 0.22 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | |
| 32 | 12.800 | 7.43 | 0.16 | 0.07 | 0.02 | 0.00 | 0.01 | 0.00 | 0.00 | 1.96 | 1.98 | 1.98 | 0.06 | 0.00 | 0.22 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | |
| AVG 20 DEG C RATE | | | 0.13 | 0.04 | 0.02 | 0.00 | 0.01 | 0.00 | 0.00 | 0.98 | | | 0.05 | 0.00 | 0.10 | 0.00 | 0.00 | 0.00 | | | | 0.00 | 0.00 | 0.00 | | | | |

* g/m²/d ** mg/L/day

********** WATER QUALITY CONSTITUENT VALUES **********

| ELEM NO. | ENDING DIST | TEMP DEG C | SALN PPT | CM-I mg/L | CM-II mg/L | DO mg/L | BOD#1 mg/L | BOD#2 mg/L | EBOD#1 mg/L | EBOD#2 mg/L | ORGN mg/L | NH3 mg/L | NO3+2 mg/L | TOTN mg/L | PHOS µg/L | CHL A g/m³ | MACRO | COLI #/100mL | NCM |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 25 | 14.900 | 30.56 | 0.00 | 0.00 | 0.00 | 5.28 | 0.16 | 0.00 | 0.16 | 0.00 | 0.24 | 0.03 | 0.19 | 0.46 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 26 | 14.600 | 30.62 | 0.00 | 0.00 | 0.00 | 5.28 | 0.16 | 0.00 | 0.16 | 0.00 | 0.24 | 0.03 | 0.19 | 0.46 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 27 | 14.300 | 30.69 | 0.00 | 0.00 | 0.00 | 5.29 | 0.16 | 0.00 | 0.16 | 0.00 | 0.23 | 0.03 | 0.19 | 0.46 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |
| 28 | 14.000 | 30.75 | 0.00 | 0.00 | 0.00 | 5.29 | 0.16 | 0.00 | 0.16 | 0.00 | 0.23 | 0.03 | 0.20 | 0.46 | 0.05 | 1.00 | 0.00 | 0. | 0.00 |

```
 29  13.700 30.81 0.00   0.00   0.00  5.30  0.16  0.00  0.16  0.00  0.23  0.03  0.20  0.46  0.05  1.00   0.00     0.  0.00
 30  13.400 30.88 0.00   0.00   0.00  5.30  0.17  0.00  0.17  0.00  0.23  0.03  0.20  0.46  0.05  1.00   0.00     0.  0.00
 31  13.100 30.94 0.00   0.00   0.00  5.30  0.17  0.00  0.17  0.00  0.23  0.04  0.20  0.46  0.05  1.00   0.00     0.  0.00
 32  12.800 31.00 0.00   0.00   0.00  5.31  0.17  0.00  0.17  0.00  0.23  0.04  0.20  0.46  0.05  1.00   0.00     0.  0.00
FINAL REPORT          Headwater                    Middle/Middle West Rivers DO Modeling - 090207
REACH NO.  6   MRWest-J                            COEF-1 Run
************************************************************ REACH INPUTS ************************************************************
ELEM  TYPE      FLOW    TEMP    SALN    CM-I   CM-II    DO  BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN    NH3  NO3+2   PHOS  CHL A    COLI    NCM
NO.             deg C    ppt    mg/L    mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   µg/L  #/100mL
 33  UPR RCH  13.33300  31.00    0.00    0.00    0.00  5.31   0.17   0.00   0.17   0.00   0.23   0.04   0.20   0.05   1.00    0.00   0.00
EACH  INCR     0.37500  30.00    0.00    0.00    0.00  5.00   1.06   0.00            0.30   0.00   0.20   0.00    0.00   0.00
************************************************** HYDRAULIC PARAMETER VALUES **************************************************
ELEM  BEGIN  ENDING     FLOW  PCT  ADVCTV   TRAVEL   DEPTH   WIDTH   VOLUME   SURFACE  X-SECT    TIDAL   TIDAL   DISPRSN    MEAN
 NO.   DIST   DIST       EFF   VELO    TIME                     AREA    AREA    PRISM    VELO            VELO
       km     km       m³/s      m/s    days     m      m      m³      m²      m²      m³     m/s     m²/s    m/s
 33   12.80  12.60  13.70800   0.0  0.02151   0.11   5.47  116.50 127451.00  23300.00  637.26 514683.62   0.018    1.000   0.023
 34   12.60  12.40  14.08300   0.0  0.02210   0.10   5.47  116.50 127451.00  23300.00  637.26 528663.62   0.018    1.000   0.024
 35   12.40  12.20  14.45800   0.0  0.02269   0.10   5.47  116.50 127451.00  23300.00  637.26 542643.62   0.019    1.000   0.025
 36   12.20  12.00  14.83300   0.0  0.02328   0.10   5.47  116.50 127451.00  23300.00  637.26 556623.62   0.019    1.000   0.025
 TOT                                  0.41            509804.00   93200.00
 AVG                            0.0224          5.47  116.50                637.26
 CUM                                 5.25
********************************************** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********************************************
ELEM  ENDING  SAT   REAER  BOD#1 BOD#1 ABOD#1  BOD#2 BOD#2 ABOD#2  BKGD  FULL  CORR   ORGN ORGN   NH3   NH3 DENIT   PO4   ALG   MAC   COLI   NCM   NCM
NO.    DIST  D.O.   RATE  DECAY  SETT  DECAY  DECAY  SETT  DECAY   SOD   SOD   SOD DECAY  SETT  DECAY  SRCE   RATE  SRCE  PROD  PROD  DECAY  DECAY   SETT
          mg/L   1/da   1/da   1/da   1/da   1/da   1/da   1/da    *     *     *   1/da   1/da   1/da     *    1/da     *    **    **   1/da   1/da   1/da
 33   12.600  7.43   0.16   0.07  0.02   0.00   0.01  0.00   0.00  1.30  1.32  1.32   0.06  0.00   0.22  0.00   0.00  0.00  0.08  0.00   0.00   0.00   0.00
 34   12.400  7.43   0.16   0.07  0.02   0.00   0.01  0.00   0.00  1.30  1.33  1.33   0.06  0.00   0.22  0.00   0.00  0.00  0.08  0.00   0.00   0.00   0.00
 35   12.200  7.43   0.16   0.07  0.02   0.00   0.01  0.00   0.00  1.30  1.33  1.33   0.06  0.00   0.22  0.00   0.00  0.00  0.08  0.00   0.00   0.00   0.00
 36   12.000  7.43   0.16   0.07  0.02   0.00   0.01  0.00   0.00  1.30  1.33  1.33   0.06  0.00   0.22  0.00   0.00  0.00  0.08  0.00   0.00   0.00   0.00
AVG 20 DEG C RATE    0.13   0.04  0.02   0.00   0.01  0.00   0.00  0.65            0.05  0.00   0.10  0.00   0.00  0.00            0.00   0.00   0.00
*   g/m²/d          **   mg/L/day
************************************************** WATER QUALITY CONSTITUENT VALUES **************************************************
ELEM  ENDING   TEMP  SALN    CM-I   CM-II    DO  BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN    NH3  NO3+2   TOTN   PHOS  CHL A  MACRO    COLI    NCM
NO.    DIST  DEG C   PPT    mg/L    mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   µg/L   g/m³  #/100mL
 33   12.600  31.00  0.00    0.00    0.00  5.32  0.19  0.00  0.19  0.00  0.23  0.04  0.20  0.46  0.05  1.00   0.00     0.  0.00
 34   12.400  31.00  0.00    0.00    0.00  5.32  0.22  0.00  0.22  0.00  0.23  0.04  0.20  0.46  0.05  1.00   0.00     0.  0.00
 35   12.200  31.00  0.00    0.00    0.00  5.33  0.23  0.00  0.23  0.00  0.23  0.04  0.20  0.46  0.05  1.00   0.00     0.  0.00
 36   12.000  31.00  0.00    0.00    0.00  5.34  0.25  0.00  0.25  0.00  0.23  0.03  0.20  0.46  0.05  1.00   0.00     0.  0.00
FINAL REPORT          Headwater                    Middle/Middle West Rivers DO Modeling - 090207
REACH NO.  7                                       COEF-1 Run
************************************************************ REACH INPUTS ************************************************************
ELEM  TYPE      FLOW    TEMP    SALN    CM-I   CM-II    DO  BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN    NH3  NO3+2   PHOS  CHL A    COLI    NCM
NO.             deg C    ppt    mg/L    mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   mg/L   µg/L  #/100mL
 37  UPR RCH  14.83300  31.00    0.00    0.00    0.00  5.34   0.25   0.00   0.25   0.00   0.23   0.03   0.20   0.05   1.00    0.00   0.00
EACH  INCR     0.37500  30.00    0.00    0.00    0.00  5.00   1.06   0.00            0.30   0.00   0.20   0.00    0.00   0.00
************************************************** HYDRAULIC PARAMETER VALUES **************************************************
ELEM  BEGIN  ENDING     FLOW  PCT  ADVCTV   TRAVEL   DEPTH   WIDTH   VOLUME   SURFACE  X-SECT    TIDAL   TIDAL   DISPRSN    MEAN
 NO.   DIST   DIST       EFF   VELO    TIME                     AREA    AREA    PRISM    VELO            VELO
       km     km       m³/s      m/s    days     m      m      m³      m²      m²      m³     m/s     m²/s    m/s
```

```
 37  12.00  11.65  15.20800  0.0  0.02386    0.17   5.47  116.50 223039.25  40775.00  637.26 581088.62  0.020    1.000  0.026
 38  11.65  11.30  15.58300  0.0  0.02445    0.17   5.47  116.50 223039.25  40775.00  637.26 605553.62  0.021    1.000  0.027
 39  11.30  10.95  15.95800  0.0  0.02504    0.16   5.47  116.50 223039.25  40775.00  637.26 630018.62  0.022    1.000  0.028
 40  10.95  10.60  16.33300  0.0  0.02563    0.16   5.47  116.50 223039.25  40775.00  637.26 654483.62  0.023    1.000  0.029
 TOT                                  0.66            892157.00  163100.00
 AVG                          0.0247          5.47  116.50                637.26
 CUM                                  5.90
********************************************** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********************************************
ELEM  ENDING  SAT   REAER  BOD#1 BOD#1 ABOD#1  BOD#2 BOD#2 ABOD#2  BKGD  FULL  CORR   ORGN  ORGN   NH3   NH3  DENIT   PO4   ALG   MAC   COLI   NCM   NCM
NO.   DIST  D.O.   RATE  DECAY  SETT  DECAY  DECAY  SETT  DECAY   SOD   SOD   SOD  DECAY  SETT  DECAY  SRCE   RATE  SRCE  PROD  PROD  DECAY  DECAY   SETT
          mg/L   1/da   1/da  1/da   1/da   1/da  1/da   1/da    *     *     *   1/da  1/da   1/da     *   1/da     *    **    **   1/da   1/da   1/da
 37  11.650  7.45   0.16   0.07  0.02   0.00   0.01  0.00   0.00  1.29  1.32  1.32   0.06  0.00   0.22  0.00   0.00  0.00  0.08  0.00   0.00   0.00   0.00
 38  11.300  7.46   0.16   0.07  0.02   0.00   0.01  0.00   0.00  1.28  1.32  1.32   0.06  0.00   0.22  0.00   0.00  0.00  0.08  0.00   0.00   0.00   0.00
 39  10.950  7.48   0.16   0.07  0.02   0.00   0.01  0.00   0.00  1.27  1.31  1.31   0.06  0.00   0.22  0.00   0.00  0.00  0.08  0.00   0.00   0.00   0.00
 40  10.600  7.49   0.16   0.06  0.02   0.00   0.01  0.00   0.00  1.26  1.30  1.30   0.06  0.00   0.21  0.00   0.00  0.00  0.08  0.00   0.00   0.00   0.00
AVG 20 DEG C RATE    0.13   0.04  0.02   0.00   0.01  0.00   0.00  0.65            0.05  0.00   0.10  0.00   0.00  0.00            0.00   0.00   0.00
*   g/m²/d          **   mg/L/day
********************************************** WATER QUALITY CONSTITUENT VALUES **********************************************
ELEM  ENDING   TEMP  SALN    CM-I   CM-II   DO  BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN   NH3  NO3+2   TOTN   PHOS  CHL A   MACRO    COLI    NCM
NO.   DIST  DEG C   PPT    mg/L    mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L   µg/L    g/m³  #/100mL
 37  11.650  30.88  0.00    0.00    0.00  5.36  0.27  0.00  0.27  0.00  0.23  0.04  0.20  0.46  0.05  1.00   0.00      0.   0.00
 38  11.300  30.75  0.00    0.00    0.00  5.37  0.28  0.00  0.28  0.00  0.23  0.04  0.20  0.46  0.05  1.00   0.00      0.   0.00
 39  10.950  30.62  0.00    0.00    0.00  5.39  0.30  0.00  0.30  0.00  0.23  0.04  0.20  0.46  0.05  1.00   0.00      0.   0.00
 40  10.600  30.50  0.00    0.00    0.00  5.41  0.31  0.00  0.31  0.00  0.23  0.04  0.20  0.46  0.05  1.00   0.00      0.   0.00
FINAL REPORT          Headwater                    Middle/Middle West Rivers DO Modeling - 090207
REACH NO.  8   MREast-(L)/MRWest-(M)/MR-(N)                COEF-1 Run
************************************************************ REACH INPUTS ************************************************************
ELEM  TYPE      FLOW    TEMP    SALN    CM-I   CM-II    DO  BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN   NH3  NO3+2   PHOS  CHL A    COLI    NCM
NO.                  deg C     ppt    mg/L    mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L   µg/L  #/100mL
 41  UPR RCH  16.33300  30.50    0.00    0.00    0.00  5.41  0.31  0.00  0.31  0.00  0.23  0.04  0.20  0.05  1.00    0.00    0.00
EACH  INCR     0.15000  30.00    0.00    0.00    0.00  5.00  1.06  0.00            0.30  0.00  0.20  0.00   0.00    0.00
********************************************** HYDRAULIC PARAMETER VALUES **********************************************
ELEM  BEGIN  ENDING     FLOW  PCT  ADVCTV   TRAVEL   DEPTH   WIDTH   VOLUME   SURFACE  X-SECT    TIDAL   TIDAL   DISPRSN    MEAN
 NO.  DIST   DIST          EFF    VELO     TIME                          AREA    AREA    PRISM    VELO            VELO
       km     km        m³/s      m/s    days      m       m       m³       m²      m²       m³     m/s     m²/s     m/s
 41  10.60  10.36  16.48300  0.0  0.01103    0.25    6.65  224.75 358701.00  53940.00 1494.59 686847.62  0.010    1.000  0.013
 42  10.36  10.12  16.63300  0.0  0.01113    0.25    6.65  224.75 358701.00  53940.00 1494.59 719211.62  0.011    1.000  0.013
 43  10.12   9.88  16.78300  0.0  0.01123    0.25    6.65  224.75 358701.00  53940.00 1494.59 751575.62  0.011    1.000  0.014
 44   9.88   9.64  16.93300  0.0  0.01133    0.25    6.65  224.75 358701.00  53940.00 1494.59 783939.62  0.012    1.000  0.014
 45   9.64   9.40  17.08300  0.0  0.01143    0.24    6.65  224.75 358701.00  53940.00 1494.59 816303.62  0.012    1.000  0.014
 46   9.40   9.16  17.23300  0.0  0.01153    0.24    6.65  224.75 358701.00  53940.00 1494.59 848667.62  0.013    1.000  0.015
 47   9.16   8.92  17.38300  0.0  0.01163    0.24    6.65  224.75 358701.00  53940.00 1494.59 881031.62  0.013    1.000  0.015
 48   8.92   8.68  17.53300  0.0  0.01173    0.24    6.65  224.75 358701.00  53940.00 1494.59 913395.62  0.014    1.000  0.016
 49   8.68   8.44  17.68299  0.0  0.01183    0.23    6.65  224.75 358701.00  53940.00 1494.59 945759.62  0.014    1.000  0.016
 50   8.44   8.20  17.83299  0.0  0.01193    0.23    6.65  224.75 358701.00  53940.00 1494.59 978123.62  0.015    1.000  0.017
 TOT                                  2.42            3587010.00  539400.00
 AVG                          0.0115          6.65  224.75                1494.59
 CUM                                  8.32
********************************************** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********************************************
ELEM  ENDING  SAT   REAER  BOD#1 BOD#1 ABOD#1  BOD#2 BOD#2 ABOD#2  BKGD  FULL  CORR   ORGN  ORGN   NH3   NH3  DENIT   PO4   ALG   MAC   COLI   NCM   NCM
```

```
NO.   DIST D.O.   RATE DECAY SETT DECAY DECAY SETT DECAY  SOD  SOD  SOD DECAY SETT DECAY SRCE  RATE SRCE PROD PROD DECAY DECAY  SETT
          mg/L   1/da  1/da 1/da  1/da  1/da  1/da  1/da  *    *    *   1/da 1/da  1/da  *   1/da  *   **   **   1/da  1/da  1/da
 41  10.360 7.49   0.13  0.06 0.02  0.00  0.01 0.00  0.00 1.26 1.30 1.30  0.06 0.00  0.21 0.00  0.00 0.00 0.08 0.00  0.00  0.00  0.00
 42  10.120 7.49   0.13  0.06 0.02  0.00  0.01 0.00  0.00 1.26 1.30 1.30  0.06 0.00  0.21 0.00  0.00 0.00 0.08 0.00  0.00  0.00  0.00
 43   9.880 7.49   0.13  0.06 0.02  0.00  0.01 0.00  0.00 1.26 1.30 1.30  0.06 0.00  0.21 0.00  0.00 0.00 0.08 0.00  0.00  0.00  0.00
 44   9.640 7.49   0.13  0.06 0.02  0.00  0.01 0.00  0.00 1.26 1.30 1.30  0.06 0.00  0.22 0.00  0.00 0.00 0.08 0.00  0.00  0.00  0.00
 45   9.400 7.49   0.13  0.06 0.02  0.00  0.01 0.00  0.00 1.26 1.30 1.30  0.06 0.00  0.22 0.00  0.00 0.00 0.08 0.00  0.00  0.00  0.00
 46   9.160 7.49   0.13  0.06 0.02  0.00  0.01 0.00  0.00 1.26 1.30 1.30  0.06 0.00  0.22 0.00  0.00 0.00 0.08 0.00  0.00  0.00  0.00
 47   8.920 7.49   0.13  0.06 0.02  0.00  0.01 0.00  0.00 1.26 1.30 1.30  0.06 0.00  0.22 0.00  0.00 0.00 0.08 0.00  0.00  0.00  0.00
 48   8.680 7.49   0.13  0.06 0.02  0.00  0.01 0.00  0.00 1.26 1.30 1.30  0.06 0.00  0.22 0.00  0.00 0.00 0.08 0.00  0.00  0.00  0.00
 49   8.440 7.49   0.13  0.06 0.02  0.00  0.01 0.00  0.00 1.26 1.30 1.30  0.06 0.00  0.22 0.00  0.00 0.00 0.08 0.00  0.00  0.00  0.00
 50   8.200 7.49   0.13  0.06 0.02  0.00  0.01 0.00  0.00 1.26 1.30 1.30  0.06 0.00  0.22 0.00  0.00 0.00 0.08 0.00  0.00  0.00  0.00
AVG 20 DEG C RATE    0.11  0.04 0.02  0.00  0.01 0.00  0.00 0.65            0.05 0.00  0.10 0.00  0.00 0.00            0.00  0.00  0.00
*  g/m²/d          **   mg/L/day
************************************************** WATER QUALITY CONSTITUENT VALUES **************************************************
ELEM  ENDING  TEMP SALN    CM-I   CM-II   DO  BOD#1 BOD#2 EBOD#1 EBOD#2  ORGN   NH3  NO3+2  TOTN  PHOS  CHL A  MACRO    COLI    NCM
NO.   DIST DEG C  PPT    mg/L    mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  µg/L   g/m³  #/100mL
 41  10.360 30.50 0.00    0.00    0.00  5.44  0.31  0.00  0.31  0.00  0.22  0.04  0.20  0.46  0.05  1.00  0.00     0.   0.00
 42  10.120 30.50 0.00    0.00    0.00  5.46  0.31  0.00  0.31  0.00  0.22  0.04  0.20  0.46  0.05  1.00  0.00     0.   0.00
 43   9.880 30.50 0.00    0.00    0.00  5.49  0.31  0.00  0.31  0.00  0.22  0.04  0.21  0.46  0.05  1.00  0.00     0.   0.00
 44   9.640 30.50 0.00    0.00    0.00  5.51  0.31  0.00  0.31  0.00  0.21  0.04  0.21  0.46  0.05  1.00  0.00     0.   0.00
 45   9.400 30.50 0.00    0.00    0.00  5.54  0.31  0.00  0.31  0.00  0.21  0.04  0.21  0.46  0.05  1.00  0.00     0.   0.00
 46   9.160 30.50 0.00    0.00    0.00  5.56  0.31  0.00  0.31  0.00  0.21  0.04  0.21  0.46  0.05  1.00  0.00     0.   0.00
 47   8.920 30.50 0.00    0.00    0.00  5.58  0.31  0.00  0.31  0.00  0.21  0.04  0.21  0.46  0.05  1.00  0.00     0.   0.00
 48   8.680 30.50 0.00    0.00    0.00  5.60  0.31  0.00  0.31  0.00  0.20  0.04  0.21  0.46  0.05  1.00  0.00     0.   0.00
 49   8.440 30.50 0.00    0.00    0.00  5.62  0.31  0.00  0.31  0.00  0.20  0.04  0.21  0.46  0.05  1.00  0.00     0.   0.00
 50   8.200 30.50 0.00    0.00    0.00  5.64  0.31  0.00  0.31  0.00  0.20  0.04  0.21  0.46  0.05  1.00  0.00     0.   0.00
FINAL REPORT            Headwater                    Middle/Middle West Rivers DO Modeling - 090207
REACH NO.  9                                   COEF-1 Run
************************************************************ REACH INPUTS ************************************************************
ELEM  TYPE      FLOW    TEMP    SALN    CM-I   CM-II    DO  BOD#1 BOD#2 EBOD#1 EBOD#2  ORGN   NH3  NO3+2  PHOS  CHL A    COLI    NCM
NO.               deg C    ppt    mg/L    mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  µg/L  #/100mL
  51  UPR RCH  17.83299  30.50    0.00    0.00    0.00    0.00  5.64  0.31  0.00  0.31  0.00  0.20  0.04  0.21  0.05  1.00    0.00    0.00
EACH  INCR     0.25000  30.00    0.00    0.00    0.00    0.00  5.00  1.06  0.00            0.30  0.00  0.20  0.00    0.00    0.00
************************************************** HYDRAULIC PARAMETER VALUES **************************************************
ELEM  BEGIN ENDING     FLOW  PCT  ADVCTV   TRAVEL  DEPTH  WIDTH   VOLUME   SURFACE X-SECT    TIDAL  TIDAL  DISPRSN   MEAN
 NO.  DIST  DIST          EFF   VELO    TIME                          AREA   AREA    PRISM   VELO           VELO
       km    km      m³/s          m/s   days     m      m      m³       m²     m²      m³    m/s    m²/s    m/s
  51   8.20   7.90  18.08299  0.0  0.01210    0.29   6.65  224.75 448376.25  67425.00 1494.591018578.62  0.015    1.000  0.017
  52   7.90   7.60  18.33299  0.0  0.01227    0.28   6.65  224.75 448376.25  67425.00 1494.591059033.62  0.016    1.000  0.018
  53   7.60   7.30  18.58299  0.0  0.01243    0.28   6.65  224.75 448376.25  67425.00 1494.591099488.62  0.016    1.000  0.018
  54   7.30   7.00  18.83299  0.0  0.01260    0.28   6.65  224.75 448376.25  67425.00 1494.591139943.62  0.017    1.000  0.019
  55   7.00   6.70  19.08299  0.0  0.01277    0.27   6.65  224.75 448376.25  67425.00 1494.591180398.62  0.018    1.000  0.019
  56   6.70   6.40  19.33299  0.0  0.01294    0.27   6.65  224.75 448376.25  67425.00 1494.591220853.62  0.018    1.000  0.020
 TOT                                   1.67            2690257.50  404550.00
 AVG                            0.0125          6.65  224.75                1494.59
 CUM                                   9.99
************************************************ BIOLOGICAL AND PHYSICAL COEFFICIENTS ************************************************
ELEM  ENDING SAT   REAER BOD#1 BOD#1 ABOD#1  BOD#2 BOD#2 ABOD#2  BKGD  FULL  CORR  ORGN ORGN   NH3  NH3 DENIT  PO4  ALG  MAC  COLI   NCM   NCM
NO.   DIST D.O.   RATE DECAY SETT DECAY DECAY SETT DECAY  SOD  SOD  SOD DECAY SETT DECAY SRCE  RATE SRCE PROD PROD DECAY DECAY  SETT
```

```
          mg/L   1/da  1/da  1/da  1/da  1/da  1/da  1/da   *    *    *   1/da  1/da  1/da   *   1/da   *   **   **   1/da  1/da  1/da
 51   7.900  7.49   0.13  0.06  0.02  0.00  0.01  0.00  0.00  1.26  1.30  1.30  0.06  0.00  0.22  0.00  0.00  0.00  0.08  0.00  0.00  0.00  0.00
 52   7.600  7.49   0.13  0.06  0.02  0.00  0.01  0.00  0.00  1.26  1.30  1.30  0.06  0.00  0.22  0.00  0.00  0.00  0.08  0.00  0.00  0.00  0.00
 53   7.300  7.49   0.13  0.06  0.02  0.00  0.01  0.00  0.00  1.26  1.30  1.30  0.06  0.00  0.22  0.00  0.00  0.00  0.08  0.00  0.00  0.00  0.00
 54   7.000  7.49   0.13  0.06  0.02  0.00  0.01  0.00  0.00  1.26  1.30  1.30  0.06  0.00  0.22  0.00  0.00  0.00  0.08  0.00  0.00  0.00  0.00
 55   6.700  7.49   0.13  0.06  0.02  0.00  0.01  0.00  0.00  1.26  1.30  1.30  0.06  0.00  0.22  0.00  0.00  0.00  0.08  0.00  0.00  0.00  0.00
 56   6.400  7.49   0.13  0.06  0.02  0.00  0.01  0.00  0.00  1.26  1.30  1.30  0.06  0.00  0.22  0.00  0.00  0.00  0.08  0.00  0.00  0.00  0.00
AVG 20 DEG C RATE    0.11  0.04  0.02  0.00  0.01  0.00  0.00  0.65            0.05  0.00  0.10  0.00  0.00  0.00            0.00  0.00  0.00
*  g/m²/d          **   mg/L/day
************************************************** WATER QUALITY CONSTITUENT VALUES **************************************************
ELEM  ENDING  TEMP  SALN    CM-I   CM-II   DO  BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN   NH3  NO3+2  TOTN  PHOS  CHL A  MACRO    COLI    NCM
NO.    DIST  DEG C  PPT    mg/L    mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L   µg/L   g/m³  #/100mL
 51   7.900  30.50  0.00    0.00    0.00  5.66  0.31  0.00  0.31  0.00  0.20  0.04  0.21  0.46  0.05  1.00  0.00     0.   0.00
 52   7.600  30.50  0.00    0.00    0.00  5.68  0.32  0.00  0.32  0.00  0.20  0.04  0.22  0.46  0.05  1.00  0.00     0.   0.00
 53   7.300  30.50  0.00    0.00    0.00  5.69  0.32  0.00  0.32  0.00  0.19  0.04  0.22  0.46  0.05  1.00  0.00     0.   0.00
 54   7.000  30.50  0.00    0.00    0.00  5.71  0.32  0.00  0.32  0.00  0.19  0.04  0.22  0.45  0.05  1.00  0.00     0.   0.00
 55   6.700  30.50  0.00    0.00    0.00  5.72  0.32  0.00  0.32  0.00  0.19  0.04  0.22  0.45  0.05  1.00  0.00     0.   0.00
 56   6.400  30.50  0.00    0.00    0.00  5.74  0.33  0.00  0.33  0.00  0.19  0.04  0.22  0.45  0.05  1.00  0.00     0.   0.00
FINAL REPORT            Headwater                        Middle/Middle West Rivers DO Modeling - 090207
REACH NO. 10    MRWest-O                                 COEF-1 Run
************************************************************** REACH INPUTS **************************************************************
ELEM  TYPE      FLOW    TEMP    SALN    CM-I   CM-II    DO  BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN   NH3  NO3+2  PHOS  CHL A    COLI    NCM
NO.                  deg C    ppt    mg/L    mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L   µg/L  #/100mL
 57  UPR RCH  19.33299  30.50    0.00    0.00    0.00  5.74  0.33  0.00  0.33  0.00  0.19  0.04  0.22  0.05  1.00    0.00    0.00
EACH  INCR     0.30000  30.00    0.00    0.00    0.00  5.00  1.06  0.00             0.30  0.00  0.20  0.00    0.00    0.00
************************************************** HYDRAULIC PARAMETER VALUES **************************************************
ELEM  BEGIN  ENDING     FLOW  PCT  ADVCTV   TRAVEL  DEPTH  WIDTH   VOLUME   SURFACE  X-SECT    TIDAL  TIDAL  DISPRSN   MEAN
 NO.  DIST   DIST          EFF   VELO    TIME                          AREA   AREA    PRISM   VELO           VELO
       km     km       m³/s          m/s    days     m      m       m³       m²     m²       m³    m/s     m²/s    m/s
 57   6.40   6.02   19.63299  0.0  0.01743    0.25   4.33  260.20 428133.09  98876.01 1126.671280179.25  0.025    1.000  0.028
 58   6.02   5.64   19.93299  0.0  0.01769    0.25   4.33  260.20 428133.09  98876.01 1126.671339504.88  0.026    1.000  0.029
 59   5.64   5.26   20.23299  0.0  0.01796    0.24   4.33  260.20 428133.09  98876.01 1126.671398830.50  0.028    1.000  0.030
 60   5.26   4.88   20.53299  0.0  0.01822    0.24   4.33  260.20 428133.09  98876.01 1126.671458156.12  0.029    1.000  0.031
 61   4.88   4.50   20.83299  0.0  0.01849    0.24   4.33  260.20 428133.09  98876.01 1126.671517481.75  0.030    1.000  0.032
 TOT                                   1.23            2140665.50  494380.03
 AVG                          0.0180          4.33  260.20                 1126.67
 CUM                                  11.21
************************************************** BIOLOGICAL AND PHYSICAL COEFFICIENTS **************************************************
ELEM  ENDING  SAT    REAER  BOD#1 BOD#1 ABOD#1  BOD#2 BOD#2 ABOD#2  BKGD  FULL  CORR   ORGN ORGN    NH3   NH3 DENIT   PO4   ALG   MAC   COLI    NCM    NCM
NO.    DIST  D.O.   RATE  DECAY SETT DECAY DECAY SETT DECAY  SOD   SOD   SOD DECAY SETT DECAY SRCE  RATE SRCE PROD PROD DECAY DECAY  SETT
          mg/L   1/da  1/da  1/da  1/da  1/da  1/da  1/da   *    *    *   1/da  1/da  1/da   *   1/da   *   **   **   1/da  1/da  1/da
 57   6.020  7.49   0.20  0.06  0.03  0.00  0.01  0.00  0.00  1.26  1.30  1.30  0.06  0.00  0.22  0.00  0.00  0.00  0.08  0.00  0.00  0.00  0.00
 58   5.640  7.49   0.20  0.06  0.03  0.00  0.01  0.00  0.00  1.26  1.30  1.30  0.06  0.00  0.22  0.00  0.00  0.00  0.08  0.00  0.00  0.00  0.00
 59   5.260  7.49   0.20  0.06  0.03  0.00  0.01  0.00  0.00  1.26  1.30  1.30  0.06  0.00  0.22  0.00  0.00  0.00  0.08  0.00  0.00  0.00  0.00
 60   4.880  7.49   0.20  0.06  0.03  0.00  0.01  0.00  0.00  1.26  1.30  1.30  0.06  0.00  0.22  0.00  0.00  0.00  0.08  0.00  0.00  0.00  0.00
 61   4.500  7.49   0.20  0.06  0.03  0.00  0.01  0.00  0.00  1.26  1.30  1.30  0.06  0.00  0.22  0.00  0.00  0.00  0.08  0.00  0.00  0.00  0.00
AVG 20 DEG C RATE    0.16  0.04  0.02  0.00  0.01  0.00  0.00  0.65            0.05  0.00  0.10  0.00  0.00  0.00            0.00  0.00  0.00
*  g/m²/d          **   mg/L/day
************************************************** WATER QUALITY CONSTITUENT VALUES **************************************************
ELEM  ENDING  TEMP  SALN    CM-I   CM-II   DO  BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN   NH3  NO3+2  TOTN  PHOS  CHL A  MACRO    COLI    NCM
```

```
 NO.    DIST  DEG C   PPT    mg/L    mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L   µg/L   g/m³  #/100mL
 57   6.020  30.50  0.00    0.00    0.00  5.75  0.33  0.00  0.33  0.00  0.19  0.04  0.22  0.45  0.05  1.00   0.00     0.   0.00
 58   5.640  30.50  0.00    0.00    0.00  5.76  0.33  0.00  0.33  0.00  0.19  0.04  0.22  0.45  0.05  1.00   0.00     0.   0.00
 59   5.260  30.50  0.00    0.00    0.00  5.78  0.34  0.00  0.34  0.00  0.18  0.04  0.22  0.45  0.05  1.00   0.00     0.   0.00
 60   4.880  30.50  0.00    0.00    0.00  5.79  0.34  0.00  0.34  0.00  0.18  0.04  0.23  0.45  0.05  1.00   0.00     0.   0.00
 61   4.500  30.50  0.00    0.00    0.00  5.80  0.34  0.00  0.34  0.00  0.18  0.04  0.23  0.45  0.05  1.00   0.00     0.   0.00
FINAL REPORT            Headwater                    Middle/Middle West Rivers DO Modeling - 090207
REACH NO. 11                                      COEF-1 Run
************************************************************ REACH INPUTS ************************************************************
 ELEM  TYPE      FLOW    TEMP    SALN    CM-I   CM-II    DO  BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN    NH3  NO3+2   PHOS  CHL A    COLI    NCM
 NO.                deg C    ppt    mg/L    mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L   µg/L  #/100mL
  62  UPR RCH  20.83299  30.50    0.00    0.00    0.00  5.80  0.34  0.00  0.34  0.00  0.18  0.04  0.23  0.05  1.00    0.00   0.00
 EACH  INCR     0.75000  30.00    0.00    0.00    0.00  5.00  0.63  0.00              0.30  0.00  0.20  0.00    0.00   0.00
***************************************************** HYDRAULIC PARAMETER VALUES *****************************************************
 ELEM  BEGIN  ENDING     FLOW  PCT  ADVCTV   TRAVEL  DEPTH  WIDTH   VOLUME   SURFACE  X-SECT    TIDAL  TIDAL  DISPRSN   MEAN
 NO.   DIST   DIST          EFF   VELO     TIME                          AREA   AREA    PRISM   VELO           VELO
       km     km       m³/s          m/s    days     m      m       m³       m²      m²       m³    m/s    m²/s    m/s
  62   4.50   4.35  21.58299  0.0  0.01598    0.11   5.70  236.94 202583.70   35541.00 1350.561538806.38  0.025    1.000  0.027
  63   4.35   4.20  22.33299  0.0  0.01654    0.10   5.70  236.94 202583.70   35541.00 1350.561560131.00  0.026    1.000  0.028
 TOT                                    0.21              405167.41   71082.00
 AVG                            0.0163          5.70  236.94                1350.56
 CUM                                    11.43
************************************************ BIOLOGICAL AND PHYSICAL COEFFICIENTS ************************************************
 ELEM  ENDING  SAT   REAER  BOD#1 BOD#1 ABOD#1  BOD#2 BOD#2 ABOD#2  BKGD  FULL  CORR   ORGN ORGN   NH3   NH3 DENIT   PO4   ALG   MAC   COLI   NCM   NCM
 NO.   DIST  D.O.   RATE  DECAY  SETT  DECAY  DECAY  SETT  DECAY   SOD   SOD   SOD DECAY  SETT  DECAY  SRCE   RATE  SRCE  PROD  PROD  DECAY  DECAY   SETT
          mg/L   1/da   1/da  1/da   1/da   1/da  1/da   1/da   *     *     *    1/da  1/da   1/da    *    1/da    *    **    **    1/da   1/da   1/da
 62   4.350  7.49   0.15   0.06  0.02   0.00   0.01  0.00   0.00  0.06  0.10  0.10   0.06  0.00   0.22  0.00   0.00  0.00  0.08  0.00   0.00   0.00   0.00
 63   4.200  7.49   0.15   0.06  0.02   0.00   0.01  0.00   0.00  0.06  0.10  0.10   0.06  0.00   0.22  0.00   0.00  0.00  0.08  0.00   0.00   0.00   0.00
AVG 20 DEG C RATE    0.12   0.04  0.02   0.00   0.01  0.00   0.00  0.03              0.05  0.00   0.10  0.00   0.00  0.00              0.00   0.00   0.00
*   g/m²/d          **   mg/L/day
***************************************************** WATER QUALITY CONSTITUENT VALUES *****************************************************
 ELEM  ENDING   TEMP  SALN    CM-I   CM-II    DO  BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN    NH3  NO3+2   TOTN   PHOS  CHL A   MACRO    COLI    NCM
 NO.    DIST  DEG C   PPT    mg/L    mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L   µg/L   g/m³  #/100mL
 62   4.350  30.50  0.00    0.00    0.00  5.80  0.35  0.00  0.35  0.00  0.19  0.04  0.23  0.45  0.05  1.00   0.00     0.   0.00
 63   4.200  30.50  0.00    0.00    0.00  5.81  0.35  0.00  0.35  0.00  0.19  0.04  0.23  0.46  0.05  1.00   0.00     0.   0.00
FINAL REPORT            Headwater                    Middle/Middle West Rivers DO Modeling - 090207
REACH NO. 12                                      COEF-1 Run
************************************************************ REACH INPUTS ************************************************************
 ELEM  TYPE      FLOW    TEMP    SALN    CM-I   CM-II    DO  BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN    NH3  NO3+2   PHOS  CHL A    COLI    NCM
 NO.                deg C    ppt    mg/L    mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L   µg/L  #/100mL
  64  UPR RCH  22.33299  30.50    0.00    0.00    0.00  5.81  0.35  0.00  0.35  0.00  0.19  0.04  0.23  0.05  1.00    0.00   0.00
 EACH  INCR     0.75000  30.00    0.00    0.00    0.00  5.00  0.63  0.00              0.30  0.00  0.20  0.00    0.00   0.00
***************************************************** HYDRAULIC PARAMETER VALUES *****************************************************
 ELEM  BEGIN  ENDING     FLOW  PCT  ADVCTV   TRAVEL  DEPTH  WIDTH   VOLUME   SURFACE  X-SECT    TIDAL  TIDAL  DISPRSN   MEAN
 NO.   DIST   DIST          EFF   VELO     TIME                          AREA   AREA    PRISM   VELO           VELO
       km     km       m³/s          m/s    days     m      m       m³       m²      m²       m³    m/s    m²/s    m/s
  64   4.20   3.85  23.08299  0.0  0.01709    0.24   5.70  236.94 472695.28   82929.00 1350.561609888.38  0.026    1.000  0.029
  65   3.85   3.50  23.83299  0.0  0.01765    0.23   5.70  236.94 472695.28   82929.00 1350.561659645.75  0.027    1.000  0.030
 TOT                                    0.47              945390.56  165858.00
 AVG                            0.0174          5.70  236.94                1350.56
```

```
 CUM                                    11.89
********************************************** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********************************************
ELEM  ENDING  SAT   REAER  BOD#1 BOD#1 ABOD#1  BOD#2 BOD#2 ABOD#2  BKGD  FULL  CORR   ORGN ORGN   NH3  NH3 DENIT  PO4  ALG  MAC  COLI   NCM   NCM
NO.   DIST  D.O.   RATE  DECAY SETT DECAY  DECAY  SETT  DECAY  SOD  SOD  SOD DECAY SETT DECAY SRCE  RATE SRCE PROD PROD DECAY DECAY  SETT
          mg/L   1/da  1/da  1/da  1/da  1/da  1/da  1/da   *    *    *   1/da 1/da  1/da   *   1/da   *   **   **   1/da  1/da  1/da
 64   3.850  7.48   0.15  0.07  0.02  0.00  0.01  0.00  0.00  0.06  0.10  0.10  0.06  0.00  0.22  0.00  0.00  0.00  0.08  0.00  0.00  0.00  0.00
 65   3.500  7.47   0.15  0.07  0.02  0.00  0.01  0.00  0.00  0.06  0.10  0.10  0.06  0.00  0.22  0.00  0.00  0.00  0.08  0.00  0.00  0.00  0.00
AVG 20 DEG C RATE    0.12  0.04  0.02  0.00  0.01  0.00  0.00  0.03            0.05  0.00  0.10  0.00  0.00  0.00            0.00  0.00  0.00
*  g/m²/d          **   mg/L/day
********************************************** WATER QUALITY CONSTITUENT VALUES **********************************************
ELEM  ENDING  TEMP  SALN    CM-I   CM-II   DO  BOD#1  BOD#2 EBOD#1 EBOD#2  ORGN   NH3  NO3+2  TOTN  PHOS  CHL A  MACRO    COLI    NCM
NO.   DIST  DEG C  PPT    mg/L    mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L   µg/L   g/m³  #/100mL
 64   3.850  30.60  0.00    0.00    0.00  5.85  0.36  0.00  0.36  0.00  0.19  0.04  0.23  0.46  0.05  1.00   0.00      0.   0.00
 65   3.500  30.70  0.00    0.00    0.00  5.89  0.36  0.00  0.36  0.00  0.19  0.04  0.23  0.46  0.05  1.00   0.00      0.   0.00
FINAL REPORT            Headwater                        Middle/Middle West Rivers DO Modeling - 090207
REACH NO. 13   MRWest-P                                  COEF-1 Run
********************************************** REACH INPUTS **********************************************
ELEM  TYPE      FLOW    TEMP    SALN    CM-I   CM-II    DO  BOD#1  BOD#2 EBOD#1 EBOD#2  ORGN   NH3  NO3+2  PHOS  CHL A    COLI    NCM
NO.               deg C    ppt    mg/L    mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L   µg/L  #/100mL
 66  UPR RCH  23.83299  30.70    0.00    0.00    0.00  5.89  0.36  0.00  0.36  0.00  0.19  0.04  0.23  0.05  1.00    0.00    0.00
EACH  INCR     0.25000  30.00    0.00    0.00    0.00  5.00  0.63  0.00             0.30  0.00  0.20  0.00    0.00    0.00
********************************************** HYDRAULIC PARAMETER VALUES **********************************************
ELEM  BEGIN  ENDING     FLOW  PCT  ADVCTV   TRAVEL  DEPTH  WIDTH   VOLUME   SURFACE  X-SECT    TIDAL  TIDAL  DISPRSN   MEAN
NO.  DIST   DIST          EFF   VELO    TIME                        AREA   AREA    PRISM   VELO           VELO
      km     km      m³/s          m/s    days     m      m      m³       m²     m²      m³     m/s    m²/s    m/s
 66   3.50   3.20  24.08299  0.0  0.01783   0.19   5.70  236.94 405167.41  71082.00 1350.561702295.00  0.028    1.000  0.030
 67   3.20   2.90  24.33299  0.0  0.01802   0.19   5.70  236.94 405167.41  71082.00 1350.561744944.25  0.029    1.000  0.031
 68   2.90   2.60  24.58299  0.0  0.01820   0.19   5.70  236.94 405167.41  71082.00 1350.561787593.50  0.029    1.000  0.032
 69   2.60   2.30  24.83299  0.0  0.01839   0.19   5.70  236.94 405167.41  71082.00 1350.561830242.75  0.030    1.000  0.032
 70   2.30   2.00  25.08299  0.0  0.01857   0.19   5.70  236.94 405167.41  71082.00 1350.561872892.00  0.031    1.000  0.033
 71   2.00   1.70  25.33299  0.0  0.01876   0.19   5.70  236.94 405167.41  71082.00 1350.561915541.25  0.032    1.000  0.034
 TOT                                    1.14            2431004.50  426492.00
 AVG                            0.0183          5.70  236.94                1350.56
 CUM                                    13.03
********************************************** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********************************************
ELEM  ENDING  SAT   REAER  BOD#1 BOD#1 ABOD#1  BOD#2 BOD#2 ABOD#2  BKGD  FULL  CORR   ORGN ORGN   NH3  NH3 DENIT  PO4  ALG  MAC  COLI   NCM   NCM
NO.   DIST  D.O.   RATE  DECAY SETT DECAY  DECAY  SETT  DECAY  SOD  SOD  SOD DECAY SETT DECAY SRCE  RATE SRCE PROD PROD DECAY DECAY  SETT
          mg/L   1/da  1/da  1/da  1/da  1/da  1/da  1/da   *    *    *   1/da 1/da  1/da   *   1/da   *   **   **   1/da  1/da  1/da
 66   3.200  7.47   0.15  0.07  0.02  0.00  0.01  0.00  0.00  0.06  0.10  0.10  0.06  0.00  0.22  0.00  0.00  0.00  0.08  0.00  0.00  0.00  0.00
 67   2.900  7.47   0.15  0.07  0.02  0.00  0.01  0.00  0.00  0.06  0.10  0.10  0.06  0.00  0.22  0.00  0.00  0.00  0.08  0.00  0.00  0.00  0.00
 68   2.600  7.47   0.15  0.07  0.02  0.00  0.01  0.00  0.00  0.06  0.10  0.10  0.06  0.00  0.22  0.00  0.00  0.00  0.08  0.00  0.00  0.00  0.00
 69   2.300  7.47   0.15  0.07  0.02  0.00  0.01  0.00  0.00  0.06  0.10  0.10  0.06  0.00  0.22  0.00  0.00  0.00  0.08  0.00  0.00  0.00  0.00
 70   2.000  7.47   0.15  0.07  0.02  0.00  0.01  0.00  0.00  0.06  0.10  0.10  0.06  0.00  0.22  0.00  0.00  0.00  0.08  0.00  0.00  0.00  0.00
 71   1.700  7.47   0.15  0.07  0.02  0.00  0.01  0.00  0.00  0.06  0.10  0.10  0.06  0.00  0.22  0.00  0.00  0.00  0.08  0.00  0.00  0.00  0.00
AVG 20 DEG C RATE    0.12  0.04  0.02  0.00  0.01  0.00  0.00  0.03            0.05  0.00  0.10  0.00  0.00  0.00            0.00  0.00  0.00
*  g/m²/d          **   mg/L/day
********************************************** WATER QUALITY CONSTITUENT VALUES **********************************************
ELEM  ENDING  TEMP  SALN    CM-I   CM-II   DO  BOD#1  BOD#2 EBOD#1 EBOD#2  ORGN   NH3  NO3+2  TOTN  PHOS  CHL A  MACRO    COLI    NCM
NO.   DIST  DEG C  PPT    mg/L    mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L   µg/L   g/m³  #/100mL
 66   3.200  30.70  0.00    0.00    0.00  5.93  0.35  0.00  0.35  0.00  0.19  0.04  0.23  0.46  0.05  1.00   0.00      0.   0.00
```

```
 67   2.900  30.70  0.00    0.00    0.00  5.97  0.35  0.00  0.35  0.00  0.19  0.04  0.23  0.46  0.05  1.00   0.00     0.   0.00
 68   2.600  30.70  0.00    0.00    0.00  6.01  0.35  0.00  0.35  0.00  0.19  0.04  0.23  0.45  0.05  1.00   0.00     0.   0.00
 69   2.300  30.70  0.00    0.00    0.00  6.05  0.34  0.00  0.34  0.00  0.18  0.04  0.23  0.45  0.05  1.00   0.00     0.   0.00
 70   2.000  30.70  0.00    0.00    0.00  6.08  0.34  0.00  0.34  0.00  0.18  0.04  0.23  0.45  0.05  1.00   0.00     0.   0.00
 71   1.700  30.70  0.00    0.00    0.00  6.11  0.34  0.00  0.34  0.00  0.18  0.04  0.23  0.45  0.05  1.00   0.00     0.   0.00
FINAL REPORT            Headwater                    Middle/Middle West Rivers DO Modeling - 090207
REACH NO. 14                                         COEF-1 Run
************************************************************ REACH INPUTS ************************************************************
ELEM  TYPE      FLOW    TEMP    SALN    CM-I   CM-II    DO  BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN    NH3  NO3+2   PHOS  CHL A    COLI    NCM
NO.                deg C    ppt    mg/L    mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  µg/L  #/100mL
 72  UPR RCH  25.33299  30.70    0.00    0.00    0.00  6.11  0.34  0.00  0.34  0.00  0.18  0.04  0.23  0.05  1.00    0.00   0.00
EACH  INCR     0.75000  30.00    0.00    0.00    0.00  5.00  0.63  0.00             0.30  0.00  0.20  0.00    0.00   0.00
************************************************** HYDRAULIC PARAMETER VALUES **************************************************
ELEM  BEGIN ENDING     FLOW  PCT  ADVCTV   TRAVEL  DEPTH  WIDTH   VOLUME   SURFACE X-SECT    TIDAL  TIDAL  DISPRSN   MEAN
 NO.   DIST   DIST          EFF    VELO     TIME                          AREA   AREA    PRISM   VELO           VELO
       km     km       m³/s          m/s    days     m      m       m³       m²     m²       m³    m/s    m²/s    m/s
 72   1.70   1.60  26.08299  0.0  0.04160    0.03   5.70  110.00  62700.00  11000.00  627.001922141.25  0.068    1.000  0.073
 73   1.60   1.50  26.83299  0.0  0.04280    0.03   5.70  110.00  62700.00  11000.00  627.001928741.25  0.068    1.000  0.074
 TOT                                  0.05              125400.00   22000.00
 AVG                          0.0422          5.70  110.00                  627.00
 CUM                                 13.09
********************************************** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********************************************
ELEM  ENDING  SAT    REAER  BOD#1 BOD#1 ABOD#1  BOD#2 BOD#2 ABOD#2  BKGD  FULL  CORR   ORGN ORGN    NH3   NH3 DENIT   PO4   ALG   MAC   COLI    NCM    NCM
NO.    DIST  D.O.   RATE  DECAY  SETT  DECAY  DECAY  SETT  DECAY   SOD   SOD   SOD  DECAY  SETT  DECAY  SRCE   RATE  SRCE  PROD  PROD  DECAY  DECAY   SETT
          mg/L   1/da   1/da  1/da   1/da   1/da  1/da  1/da   1/da    *     *     *    1/da  1/da   1/da     *    1/da     *    **    **    1/da   1/da   1/da
 72   1.600  7.48   0.15  0.07  0.02   0.00   0.01  0.00   0.00  0.06  0.10  0.10   0.06  0.00   0.22  0.00   0.00  0.00  0.08  0.00   0.00   0.00   0.00
 73   1.500  7.49   0.15  0.06  0.02   0.00   0.01  0.00   0.00  0.06  0.10  0.10   0.06  0.00   0.22  0.00   0.00  0.00  0.08  0.00   0.00   0.00   0.00
AVG 20 DEG C RATE    0.12   0.04  0.02   0.00   0.01  0.00   0.00  0.03             0.05  0.00   0.10  0.00   0.00  0.00             0.00   0.00   0.00
*   g/m²/d          **   mg/L/day
************************************************** WATER QUALITY CONSTITUENT VALUES **************************************************
ELEM  ENDING  TEMP  SALN    CM-I   CM-II    DO  BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN    NH3  NO3+2   TOTN   PHOS  CHL A  MACRO    COLI    NCM
NO.    DIST  DEG C  PPT    mg/L    mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  µg/L   g/m³  #/100mL
 72   1.600  30.60  0.00    0.00    0.00  6.08  0.35  0.00  0.35  0.00  0.19  0.04  0.23  0.46  0.05  1.00   0.00     0.   0.00
 73   1.500  30.50  0.00    0.00    0.00  6.07  0.35  0.00  0.35  0.00  0.19  0.04  0.23  0.46  0.05  1.00   0.00     0.   0.00
FINAL REPORT            Headwater                    Middle/Middle West Rivers DO Modeling - 090207
REACH NO. 15    MRWest-Q                             COEF-1 Run
************************************************************ REACH INPUTS ************************************************************
ELEM  TYPE      FLOW    TEMP    SALN    CM-I   CM-II    DO  BOD#1  BOD#2 EBOD#1 EBOD#2   ORGN    NH3  NO3+2   PHOS  CHL A    COLI    NCM
NO.                deg C    ppt    mg/L    mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  µg/L  #/100mL
 74  UPR RCH  26.83299  30.50    0.00    0.00    0.00  6.07  0.35  0.00  0.35  0.00  0.19  0.04  0.23  0.05  1.00    0.00   0.00
EACH  INCR     0.30000  30.00    0.00    0.00    0.00  5.00  0.85  0.00             0.30  0.00  0.20  0.00    0.00   0.00
************************************************** HYDRAULIC PARAMETER VALUES **************************************************
ELEM  BEGIN ENDING     FLOW  PCT  ADVCTV   TRAVEL  DEPTH  WIDTH   VOLUME   SURFACE X-SECT    TIDAL  TIDAL  DISPRSN   MEAN
 NO.   DIST   DIST          EFF    VELO     TIME                          AREA   AREA    PRISM   VELO           VELO
       km     km       m³/s          m/s    days     m      m       m³       m²     m²       m³    m/s    m²/s    m/s
 74   1.50   1.23  27.13299  0.0  0.04327    0.07   5.70  110.00 169290.00  29700.00  627.001946561.25  0.069    1.000  0.075
 75   1.23   0.96  27.43299  0.0  0.04375    0.07   5.70  110.00 169290.00  29700.00  627.001964381.25  0.070    1.000  0.075
 76   0.96   0.69  27.73299  0.0  0.04423    0.07   5.70  110.00 169290.00  29700.00  627.001982201.25  0.070    1.000  0.076
 77   0.69   0.42  28.03299  0.0  0.04471    0.07   5.70  110.00 169290.00  29700.00  627.002000021.25  0.071    1.000  0.077
 78   0.42   0.15  28.33299  0.0  0.04519    0.07   5.70  110.00 169290.00  29700.00  627.002017841.25  0.072    1.000  0.077
```

```
 TOT                                0.35            846450.00  148500.00
 AVG                          0.0442          5.70  110.00                627.00
 CUM                                13.44
********************************************** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********************************************
ELEM  ENDING  SAT   REAER  BOD#1 BOD#1 ABOD#1  BOD#2 BOD#2 ABOD#2  BKGD  FULL  CORR  ORGN ORGN   NH3  NH3 DENIT  PO4  ALG  MAC  COLI  NCM   NCM
NO.   DIST  D.O.   RATE  DECAY  SETT  DECAY  DECAY  SETT  DECAY  SOD  SOD  SOD  DECAY  SETT  DECAY  SRCE  RATE  SRCE  PROD  PROD  DECAY  DECAY  SETT
          mg/L   1/da  1/da  1/da  1/da  1/da  1/da  1/da   *   *   *   1/da  1/da  1/da   *   1/da   *   **   **   1/da  1/da  1/da
 74   1.230  7.49   0.15  0.06  0.02  0.00  0.01  0.00  0.00  0.06  0.10  0.10  0.06  0.00  0.22  0.00  0.00  0.00  0.08  0.00  0.00  0.00  0.00
 75   0.960  7.49   0.15  0.06  0.02  0.00  0.01  0.00  0.00  0.06  0.10  0.10  0.06  0.00  0.22  0.00  0.00  0.00  0.08  0.00  0.00  0.00  0.00
 76   0.690  7.49   0.15  0.06  0.02  0.00  0.01  0.00  0.00  0.06  0.10  0.10  0.06  0.00  0.22  0.00  0.00  0.00  0.08  0.00  0.00  0.00  0.00
 77   0.420  7.49   0.15  0.06  0.02  0.00  0.01  0.00  0.00  0.06  0.11  0.11  0.06  0.00  0.22  0.00  0.00  0.00  0.08  0.00  0.00  0.00  0.00
 78   0.150  7.49   0.15  0.06  0.02  0.00  0.01  0.00  0.00  0.06  0.12  0.12  0.06  0.00  0.22  0.00  0.00  0.00  0.08  0.00  0.00  0.00  0.00
AVG 20 DEG C RATE    0.12  0.04  0.02  0.00  0.01  0.00  0.00  0.03            0.05  0.00  0.10  0.00  0.00  0.00            0.00  0.00  0.00
*  g/m²/d          **   mg/L/day
********************************************** WATER QUALITY CONSTITUENT VALUES **********************************************
ELEM  ENDING  TEMP  SALN    CM-I   CM-II   DO  BOD#1  BOD#2 EBOD#1 EBOD#2  ORGN   NH3  NO3+2  TOTN  PHOS  CHL A  MACRO    COLI    NCM
NO.   DIST  DEG C  PPT    mg/L    mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  µg/L   g/m³  #/100mL
 74   1.230  30.50  0.00    0.00    0.00  6.07  0.36  0.00  0.36  0.00  0.19  0.04  0.23  0.46  0.05  1.00  0.00      0.   0.00
 75   0.960  30.50  0.00    0.00    0.00  6.08  0.36  0.00  0.36  0.00  0.19  0.04  0.23  0.46  0.05  1.00  0.00      0.   0.00
 76   0.690  30.50  0.00    0.00    0.00  6.08  0.36  0.00  0.36  0.00  0.19  0.04  0.23  0.46  0.05  1.00  0.00      0.   0.00
 77   0.420  30.50  0.00    0.00    0.00  6.09  0.37  0.00  0.37  0.00  0.19  0.04  0.23  0.46  0.05  1.00  0.00      0.   0.00
 78   0.150  30.50  0.00    0.00    0.00  6.07  0.45  0.00  0.45  0.00  0.19  0.04  0.22  0.45  0.05  1.00  0.00      0.   0.00
FINAL REPORT            Headwater                        Middle/Middle West Rivers DO Modeling - 090207
REACH NO. 16                                        COEF-1 Run
********************************************************** REACH INPUTS **********************************************************
ELEM  TYPE      FLOW    TEMP    SALN    CM-I   CM-II    DO  BOD#1  BOD#2 EBOD#1 EBOD#2  ORGN   NH3  NO3+2  PHOS  CHL A    COLI    NCM
NO.                deg C    ppt    mg/L    mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  µg/L  #/100mL
 79  UPR RCH  28.33299  30.50    0.00    0.00    0.00  6.07  0.45  0.00  0.45  0.00  0.19  0.04  0.22  0.05  1.00    0.00    0.00
EACH  INCR     1.50000  30.00    0.00    0.00    0.00  5.00  0.85  0.00              0.30  0.00  0.20  0.00    0.00    0.00
****************************************************** HYDRAULIC PARAMETER VALUES ******************************************************
ELEM  BEGIN  ENDING     FLOW  PCT  ADVCTV   TRAVEL  DEPTH  WIDTH   VOLUME   SURFACE  X-SECT    TIDAL  TIDAL  DISPRSN   MEAN
NO.   DIST   DIST          EFF   VELO     TIME                     AREA   AREA    PRISM   VELO          VELO
      km     km      m³/s          m/s    days     m      m      m³       m²      m²      m³     m/s    m²/s    m/s
 79   0.15   0.00  29.83299  0.0  0.04758    0.04   5.70  110.00  94050.00  16500.00  627.002027741.25  0.072    1.000  0.078
 TOT                                0.04            94050.00  16500.00
 AVG                          0.0476          5.70  110.00                627.00
 CUM                                13.48
********************************************** BIOLOGICAL AND PHYSICAL COEFFICIENTS **********************************************
ELEM  ENDING  SAT   REAER  BOD#1 BOD#1 ABOD#1  BOD#2 BOD#2 ABOD#2  BKGD  FULL  CORR  ORGN ORGN   NH3  NH3 DENIT  PO4  ALG  MAC  COLI  NCM   NCM
NO.   DIST  D.O.   RATE  DECAY  SETT  DECAY  DECAY  SETT  DECAY  SOD  SOD  SOD  DECAY  SETT  DECAY  SRCE  RATE  SRCE  PROD  PROD  DECAY  DECAY  SETT
          mg/L   1/da  1/da  1/da  1/da  1/da  1/da  1/da   *   *   *   1/da  1/da  1/da   *   1/da   *   **   **   1/da  1/da  1/da
 79   0.000  8.08   0.14  0.05  0.02  0.00  0.01  0.00  0.00  0.04  0.18  0.18  0.06  0.00  0.15  0.00  0.00  0.00  0.00  0.00  0.00  0.00  0.00
AVG 20 DEG C RATE    0.12  0.04  0.02  0.00  0.01  0.00  0.00  0.03            0.05  0.00  0.10  0.00  0.00  0.00            0.00  0.00  0.00
*  g/m²/d          **   mg/L/day
********************************************** WATER QUALITY CONSTITUENT VALUES **********************************************
ELEM  ENDING  TEMP  SALN    CM-I   CM-II   DO  BOD#1  BOD#2 EBOD#1 EBOD#2  ORGN   NH3  NO3+2  TOTN  PHOS  CHL A  MACRO    COLI    NCM
NO.   DIST  DEG C  PPT    mg/L    mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  mg/L  µg/L   g/m³  #/100mL
 79   0.000  26.25  0.00    0.00    0.00  5.82  1.18  0.00  1.18  0.00  0.15  0.03  0.18  0.36  0.00  0.00  0.00      0.   0.00
STREAM SUMMARY                                      Middle/Middle West Rivers DO Modeling - 090207
      Headwater                                 COEF-1 Run
```

TRAVEL TIME = 13.48 DAYS
MAXIMUM EFFLUENT = 0.00 PERCENT
FLOW = 1.34233 TO 29.83299 m³/s
DISPERSION = 1.0000 TO 1.0000 m²/s
VELOCITY = 0.01092 TO 0.05600 m/s
DEPTH = 1.71 TO 6.65 m
WIDTH = 45.20 TO 260.20 m
BOD DECAY = 0.05 TO 0.07 per day
NH3 DECAY = 0.15 TO 0.22 per day
SOD = 0.10 TO 2.55 g/m²/d
NH3 SOURCE = 0.00 TO 0.00 g/m²/d
REAERATION = 0.13 TO 0.48 per day
BOD SETTLING = 0.02 TO 0.07 per day
ORG-N DECAY = 0.06 TO 0.06 per day
ORG-N SETTLING = 0.00 TO 0.01 per day
TEMPERATURE = 26.25 TO 31.00 deg C
DISSOLVED OXYGEN = 5.06 TO 6.11 mg/L
Middle/Middle West Rivers DO Modeling - 090207
COEF-1 Run
REACH SUMMARY REPORT FOR Headwater

| RCH NO. | REACH NAME | BEGIN DIST km | ENDING DIST km | REACH LENGTH km | TRAVEL TIME days | FLOW AT EOR m3/s | AVERAGE VELO m/s | AVG DEPTH m | AVG WIDTH m | FLOW AT EOR cfs | AVERAGE VELO fps | AVG DEPTH ft | AVG WIDTH ft |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Headwaters-MR-A | 22.11 | 21.30 | 0.81 | 0.54 | 1.80700 | 0.01725 | 1.710 | 52.60 | 63.805 | 0.057 | 5.611 | 172.58 |
| 2 | MR-B before split of MR/MRWest | 21.30 | 20.30 | 1.00 | 0.80 | 4.29400 | 0.01445 | 4.920 | 45.20 | 151.621 | 0.047 | 16.143 | 148.30 |
| 3 | MR-C/MRWest-D | 20.30 | 18.80 | 1.50 | 0.40 | 8.74900 | 0.04310 | 2.480 | 63.00 | 308.927 | 0.141 | 8.137 | 206.70 |
| 4 | MR-E/MRWest-G | 18.80 | 15.20 | 3.60 | 1.69 | 11.83300 | 0.02468 | 4.050 | 103.50 | 417.823 | 0.081 | 13.288 | 339.58 |
| 5 | MR-H | 15.20 | 12.80 | 2.40 | 1.40 | 13.33300 | 0.01987 | 5.470 | 116.50 | 470.788 | 0.065 | 17.947 | 382.24 |
| 6 | MRWest-J | 12.80 | 12.00 | 0.80 | 0.41 | 14.83300 | 0.02237 | 5.470 | 116.50 | 523.753 | 0.073 | 17.947 | 382.24 |
| 7 | | 12.00 | 10.60 | 1.40 | 0.66 | 16.33300 | 0.02473 | 5.470 | 116.50 | 576.718 | 0.081 | 17.947 | 382.24 |
| 8 | MREast-(L)/MRWest-(M)/MR-(N) | 10.60 | 8.20 | 2.40 | 2.42 | 17.83299 | 0.01147 | 6.650 | 224.75 | 629.683 | 0.038 | 21.819 | 737.40 |
| 9 | | 8.20 | 6.40 | 1.80 | 1.67 | 19.33299 | 0.01251 | 6.650 | 224.75 | 682.648 | 0.041 | 21.819 | 737.40 |
| 10 | MRWest-O | 6.40 | 4.50 | 1.90 | 1.23 | 20.83299 | 0.01795 | 4.330 | 260.20 | 735.613 | 0.059 | 14.207 | 853.72 |
| 11 | | 4.50 | 4.20 | 0.30 | 0.21 | 22.33299 | 0.01625 | 5.700 | 236.94 | 788.578 | 0.053 | 18.702 | 777.40 |
| 12 | | 4.20 | 3.50 | 0.70 | 0.47 | 23.83299 | 0.01736 | 5.700 | 236.94 | 841.543 | 0.057 | 18.702 | 777.40 |
| 13 | MRWest-P | 3.50 | 1.70 | 1.80 | 1.14 | 25.33299 | 0.01829 | 5.700 | 236.94 | 894.508 | 0.060 | 18.702 | 777.40 |
| 14 | | 1.70 | 1.50 | 0.20 | 0.05 | 26.83299 | 0.04219 | 5.700 | 110.00 | 947.473 | 0.138 | 18.702 | 360.91 |
| 15 | MRWest-Q | 1.50 | 0.15 | 1.35 | 0.35 | 28.33299 | 0.04422 | 5.700 | 110.00 | 1000.438 | 0.145 | 18.702 | 360.91 |
| 16 | | 0.15 | 0.00 | 0.15 | 0.04 | 29.83299 | 0.04758 | 5.700 | 110.00 | 1053.403 | 0.156 | 18.702 | 360.91 |

DISSOLVED OXYGEN LOADING FOR REACH 1: Headwater

| IOR | UPMN ADV | UPTR ADV | LOWR ADV | UPMN DISP | UPTR DISP | LOWR DISP | INCR IN | INCR OUT | NONP IN | WSLD IN | WITH OUT | REAE IN | BOD1 DECA | NH3-N DECA | ORG-N DECA | NCM DECA | SOD BKGD | SOD BOD1 | SOD ALG | SOD NCM | ALG PHOT | ALG RESP | MAC PHOT | TOT OUT | TOT IN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 480. | 0. | -587. | -4. | 0. | 1. | 100. | 0. | 0. | 0. | 0. | 32. | -1. | 0. | 0. | 0. | -23. | -1. | 0. | 0. | 2. | 0. | 0. | -614.9 | 614.9 | 0.00 |
| 2 | 587. | 0. | -695. | -1. | 0. | 1. | 100. | 0. | 0. | 0. | 0. | 31. | 0. | 0. | 0. | 0. | -24. | -1. | 0. | 0. | 2. | 0. | 0. | -720.9 | 720.9 | 0.00 |
| 3 | 695. | 0. | -801. | -1. | 0. | -1. | 100. | 0. | 0. | 0. | 0. | 31. | 0. | 0. | 0. | 0. | -24. | 0. | 0. | 0. | 2. | 0. | 0. | -827.7 | 827.7 | 0.00 |
| 4 | 801. | 0. | -1071. | 1. | 0. | -1. | 269. | 0. | 0. | 0. | 0. | 24. | -1. | 0. | 0. | 0. | -26. | 0. | 0. | 0. | 4. | 0. | 0. | -1099.3 | 1099.3 | 0.00 |
| 5 | 1071. | 0. | -1340. | 1. | 0. | -1. | 269. | 0. | 0. | 0. | 0. | 24. | -1. | 0. | 0. | 0. | -27. | 0. | 0. | 0. | 4. | 0. | 0. | -1369.0 | 1369.0 | 0.00 |
| 6 | 1340. | 0. | -1609. | 1. | 0. | 0. | 269. | 0. | 0. | 0. | 0. | 24. | -1. | 0. | 0. | 0. | -28. | 0. | 0. | 0. | 4. | 0. | 0. | -1637.9 | 1637.9 | 0.00 |
| 7 | 1609. | 0. | -1879. | 0. | 0. | 3. | 269. | 0. | 0. | 0. | 0. | 23. | 0. | 0. | 0. | 0. | -29. | 0. | 0. | 0. | 5. | 0. | 0. | -1908.7 | 1908.7 | 0.00 |
| 8 | 1879. | 0. | -2292. | -3. | 0. | 2. | 385. | 0. | 0. | 0. | 0. | 38. | 0. | 0. | 0. | 0. | -12. | 0. | 0. | 0. | 4. | 0. | 0. | -2307.8 | 2307.8 | 0.00 |

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | 2292. | 0. | -2705. | -2. | 0. | 1. | 385. | 0. | 0. | 0. | 0. | 38. | 0. | 0. | 0. | 0. | -12. | 0. | 0. | 0. | 4. | 0. | 0. | -2719.5 | 2719.5 | 0.00 |
| 10 | 2705. | 0. | -3118. | -1. | 0. | 1. | 385. | 0. | 0. | 0. | 0. | 37. | 0. | 0. | 0. | 0. | -12. | 0. | 0. | 0. | 4. | 0. | 0. | -3132.0 | 3132.0 | 0.00 |
| 11 | 3118. | 0. | -3531. | -1. | 0. | 1. | 385. | 0. | 0. | 0. | 0. | 37. | 0. | 0. | 0. | 0. | -12. | 0. | 0. | 0. | 4. | 0. | 0. | -3544.5 | 3544.5 | 0.00 |
| 12 | 3531. | 0. | -3944. | -1. | 0. | 1. | 385. | 0. | 0. | 0. | 0. | 37. | 0. | 0. | 0. | 0. | -12. | 0. | 0. | 0. | 4. | 0. | 0. | -3957.0 | 3957.0 | 0.00 |
| 13 | 3944. | 0. | -4065. | -1. | 0. | 1. | 111. | 0. | 0. | 0. | 0. | 60. | -1. | 0. | 0. | 0. | -59. | 0. | 0. | 0. | 10. | 0. | 0. | -4125.7 | 4125.7 | 0.00 |
| 14 | 4065. | 0. | -4186. | -1. | 0. | 1. | 111. | 0. | 0. | 0. | 0. | 60. | -1. | 0. | 0. | 0. | -59. | 0. | 0. | 0. | 10. | 0. | 0. | -4247.0 | 4247.0 | 0.00 |
| 15 | 4186. | 0. | -4307. | -1. | 0. | 1. | 111. | 0. | 0. | 0. | 0. | 60. | -1. | 0. | 0. | 0. | -59. | 0. | 0. | 0. | 10. | 0. | 0. | -4367.8 | 4367.8 | 0.00 |
| 16 | 4307. | 0. | -4428. | -1. | 0. | 1. | 111. | 0. | 0. | 0. | 0. | 60. | -1. | 0. | 0. | 0. | -59. | 0. | 0. | 0. | 10. | 0. | 0. | -4488.4 | 4488.4 | 0.00 |
| 17 | 4428. | 0. | -4548. | -1. | 0. | 0. | 111. | 0. | 0. | 0. | 0. | 59. | -1. | 0. | 0. | 0. | -59. | 0. | 0. | 0. | 10. | 0. | 0. | -4608.7 | 4608.7 | 0.00 |
| 18 | 4548. | 0. | -4668. | 0. | 0. | 0. | 111. | 0. | 0. | 0. | 0. | 59. | -1. | 0. | 0. | 0. | -59. | -1. | 0. | 0. | 10. | 0. | 0. | -4728.9 | 4728.9 | 0.00 |
| 19 | 4668. | 0. | -4788. | 0. | 0. | 0. | 111. | 0. | 0. | 0. | 0. | 59. | -1. | 0. | 0. | 0. | -59. | -1. | 0. | 0. | 10. | 0. | 0. | -4848.8 | 4848.8 | 0.00 |
| 20 | 4788. | 0. | -4908. | 0. | 0. | 0. | 111. | 0. | 0. | 0. | 0. | 59. | -1. | 0. | 0. | 0. | -59. | -1. | 0. | 0. | 10. | 0. | 0. | -4968.5 | 4968.5 | 0.00 |
| 21 | 4908. | 0. | -5027. | 0. | 0. | 0. | 111. | 0. | 0. | 0. | 0. | 59. | -1. | 0. | 0. | 0. | -59. | -1. | 0. | 0. | 10. | 0. | 0. | -5088.1 | 5088.1 | 0.00 |
| 22 | 5027. | 0. | -5146. | 0. | 0. | 0. | 111. | 0. | 0. | 0. | 0. | 59. | -1. | 0. | 0. | 0. | -59. | -1. | 0. | 0. | 10. | 0. | 0. | -5207.5 | 5207.5 | 0.00 |
| 23 | 5146. | 0. | -5266. | 0. | 0. | 0. | 111. | 0. | 0. | 0. | 0. | 59. | -1. | 0. | 0. | 0. | -59. | -1. | 0. | 0. | 10. | 0. | 0. | -5326.8 | 5326.8 | 0.00 |
| 24 | 5266. | 0. | -5386. | 0. | 0. | 1. | 111. | 0. | 0. | 0. | 0. | 59. | -1. | 0. | 0. | 0. | -59. | -1. | 0. | 0. | 10. | 0. | 0. | -5446.8 | 5446.8 | 0.00 |
| 25 | 5386. | 0. | -5479. | -1. | 0. | 1. | 81. | 0. | 0. | 0. | 0. | 66. | -2. | 0. | 0. | 0. | -67. | -1. | 0. | 0. | 16. | 0. | 0. | -5549.0 | 5549.0 | 0.00 |
| 26 | 5479. | 0. | -5571. | -1. | 0. | 1. | 81. | 0. | 0. | 0. | 0. | 65. | -2. | 0. | 0. | 0. | -67. | -1. | 0. | 0. | 16. | 0. | 0. | -5641.5 | 5641.5 | 0.00 |
| 27 | 5571. | 0. | -5662. | -1. | 0. | 1. | 81. | 0. | 0. | 0. | 0. | 65. | -2. | 0. | 0. | 0. | -67. | -1. | 0. | 0. | 16. | 0. | 0. | -5733.3 | 5733.3 | 0.00 |
| 28 | 5662. | 0. | -5753. | -1. | 0. | 1. | 81. | 0. | 0. | 0. | 0. | 65. | -2. | 0. | 0. | 0. | -67. | -1. | 0. | 0. | 16. | 0. | 0. | -5824.5 | 5824.5 | 0.00 |
| 29 | 5753. | 0. | -5844. | -1. | 0. | 1. | 81. | 0. | 0. | 0. | 0. | 64. | -2. | 0. | 0. | 0. | -68. | -1. | 0. | 0. | 16. | 0. | 0. | -5915.2 | 5915.2 | 0.00 |
| 30 | 5844. | 0. | -5934. | -1. | 0. | 1. | 81. | 0. | 0. | 0. | 0. | 64. | -2. | 0. | 0. | 0. | -68. | -1. | 0. | 0. | 16. | 0. | 0. | -6005.3 | 6005.3 | 0.00 |
| 31 | 5934. | 0. | -6024. | -1. | 0. | 1. | 81. | 0. | 0. | 0. | 0. | 64. | -2. | 0. | 0. | 0. | -68. | -1. | 0. | 0. | 16. | 0. | 0. | -6095.2 | 6095.2 | 0.00 |
| 32 | 6024. | 0. | -6114. | -1. | 0. | 2. | 81. | 0. | 0. | 0. | 0. | 64. | -2. | 0. | 0. | 0. | -68. | -1. | 0. | 0. | 16. | 0. | 0. | -6185.9 | 6185.9 | 0.00 |
| 33 | 6114. | 0. | -6296. | -2. | 0. | 2. | 162. | 0. | 0. | 0. | 0. | 42. | -2. | 0. | 0. | 0. | -30. | -1. | 0. | 0. | 11. | 0. | 0. | -6330.6 | 6330.6 | 0.00 |
| 34 | 6296. | 0. | -6478. | -2. | 0. | 2. | 162. | 0. | 0. | 0. | 0. | 42. | -2. | 0. | 0. | 0. | -30. | -1. | 0. | 0. | 11. | 0. | 0. | -6512.8 | 6512.8 | 0.00 |
| 35 | 6478. | 0. | -6659. | -2. | 0. | 2. | 162. | 0. | 0. | 0. | 0. | 42. | -2. | 0. | 0. | 0. | -30. | -1. | 0. | 0. | 11. | 0. | 0. | -6694.4 | 6694.4 | 0.00 |
| 36 | 6659. | 0. | -6842. | -2. | 0. | 3. | 162. | 0. | 0. | 0. | 0. | 42. | -2. | 0. | 0. | 0. | -30. | -1. | 0. | 0. | 11. | 0. | 0. | -6877.0 | 6877.0 | 0.00 |
| 37 | 6842. | 0. | -7036. | -3. | 0. | 3. | 162. | 0. | 0. | 0. | 0. | 73. | -4. | 0. | 0. | 0. | -53. | -1. | 0. | 0. | 18. | 0. | 0. | -7097.6 | 7097.6 | 0.00 |
| 38 | 7036. | 0. | -7232. | -3. | 0. | 2. | 162. | 0. | 0. | 0. | 0. | 73. | -4. | 0. | 0. | 0. | -52. | -1. | 0. | 0. | 18. | 0. | 0. | -7291.8 | 7291.8 | 0.00 |
| 39 | 7232. | 0. | -7427. | -2. | 0. | 3. | 162. | 0. | 0. | 0. | 0. | 73. | -4. | 0. | 0. | 0. | -52. | -2. | 0. | 0. | 18. | 0. | 0. | -7487.2 | 7487.2 | 0.00 |
| 40 | 7427. | 0. | -7628. | -3. | 0. | 9. | 162. | 0. | 0. | 0. | 0. | 72. | -4. | 0. | 0. | 0. | -51. | -2. | 0. | 0. | 18. | 0. | 0. | -7688.8 | 7688.8 | 0.00 |
| 41 | 7628. | 0. | -7744. | -9. | 0. | 14. | 65. | 0. | 0. | 0. | 0. | 94. | -7. | 0. | 0. | 0. | -68. | -2. | 0. | 0. | 29. | 0. | 0. | -7830.9 | 7830.9 | 0.00 |
| 42 | 7744. | 0. | -7853. | -14. | 0. | 14. | 65. | 0. | 0. | 0. | 0. | 93. | -7. | 0. | 0. | 0. | -68. | -2. | 0. | 0. | 29. | 0. | 0. | -7944.9 | 7944.9 | 0.00 |
| 43 | 7853. | 0. | -7961. | -14. | 0. | 13. | 65. | 0. | 0. | 0. | 0. | 92. | -7. | 0. | 0. | 0. | -68. | -2. | 0. | 0. | 29. | 0. | 0. | -8051.9 | 8051.9 | 0.00 |
| 44 | 7961. | 0. | -8068. | -13. | 0. | 12. | 65. | 0. | 0. | 0. | 0. | 91. | -7. | 0. | 0. | 0. | -68. | -2. | 0. | 0. | 29. | 0. | 0. | -8158.0 | 8158.0 | 0.00 |
| 45 | 8068. | 0. | -8173. | -12. | 0. | 12. | 65. | 0. | 0. | 0. | 0. | 90. | -7. | 0. | 0. | 0. | -68. | -2. | 0. | 0. | 29. | 0. | 0. | -8263.0 | 8263.0 | 0.00 |
| 46 | 8173. | 0. | -8278. | -12. | 0. | 11. | 65. | 0. | 0. | 0. | 0. | 89. | -7. | 0. | 0. | 0. | -68. | -2. | 0. | 0. | 29. | 0. | 0. | -8367.1 | 8367.1 | 0.00 |
| 47 | 8278. | 0. | -8382. | -11. | 0. | 11. | 65. | 0. | 0. | 0. | 0. | 88. | -7. | 0. | 0. | 0. | -68. | -2. | 0. | 0. | 29. | 0. | 0. | -8470.3 | 8470.3 | 0.00 |
| 48 | 8382. | 0. | -8484. | -11. | 0. | 10. | 65. | 0. | 0. | 0. | 0. | 87. | -7. | 0. | 0. | 0. | -68. | -2. | 0. | 0. | 29. | 0. | 0. | -8572.5 | 8572.5 | 0.00 |
| 49 | 8484. | 0. | -8586. | -10. | 0. | 10. | 65. | 0. | 0. | 0. | 0. | 86. | -7. | 0. | 0. | 0. | -68. | -2. | 0. | 0. | 29. | 0. | 0. | -8673.9 | 8673.9 | 0.00 |
| 50 | 8586. | 0. | -8687. | -10. | 0. | 9. | 65. | 0. | 0. | 0. | 0. | 85. | -7. | 0. | 0. | 0. | -68. | -2. | 0. | 0. | 29. | 0. | 0. | -8774.3 | 8774.3 | 0.00 |
| 51 | 8687. | 0. | -8839. | -9. | 0. | 8. | 108. | 0. | 0. | 0. | 0. | 105. | -9. | 0. | 0. | 0. | -85. | -3. | 0. | 0. | 36. | 0. | 0. | -8944.5 | 8944.5 | 0.00 |
| 52 | 8839. | 0. | -8990. | -8. | 0. | 7. | 108. | 0. | 0. | 0. | 0. | 104. | -9. | 0. | 0. | 0. | -85. | -3. | 0. | 0. | 36. | 0. | 0. | -9094.5 | 9094.5 | 0.00 |
| 53 | 8990. | 0. | -9140. | -7. | 0. | 7. | 108. | 0. | 0. | 0. | 0. | 103. | -9. | 0. | 0. | 0. | -85. | -3. | 0. | 0. | 36. | 0. | 0. | -9244.1 | 9244.1 | 0.00 |
| 54 | 9140. | 0. | -9289. | -7. | 0. | 6. | 108. | 0. | 0. | 0. | 0. | 102. | -9. | 0. | 0. | 0. | -85. | -3. | 0. | 0. | 36. | 0. | 0. | -9392.8 | 9392.8 | 0.00 |
| 55 | 9289. | 0. | -9437. | -6. | 0. | 6. | 108. | 0. | 0. | 0. | 0. | 101. | -9. | 0. | 0. | 0. | -85. | -3. | 0. | 0. | 36. | 0. | 0. | -9540.4 | 9540.4 | 0.00 |
| 56 | 9437. | 0. | -9583. | -6. | 0. | 4. | 108. | 0. | 0. | 0. | 0. | 101. | -9. | 0. | 0. | 0. | -85. | -3. | 0. | 0. | 36. | 0. | 0. | -9686.2 | 9686.2 | 0.00 |
| 57 | 9583. | 0. | -9755. | -4. | 0. | 3. | 130. | 0. | 0. | 0. | 0. | 146. | -9. | 0. | 0. | 0. | -125. | -4. | 0. | 0. | 35. | 0. | 0. | -9897.1 | 9897.1 | 0.00 |
| 58 | 9755. | 0. | -9926. | -3. | 0. | 3. | 130. | 0. | 0. | 0. | 0. | 145. | -9. | 0. | 0. | 0. | -125. | -4. | 0. | 0. | 35. | 0. | 0. | -10067.5 | 10067.5 | 0.00 |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 59 | 9926. | 0. | -10096. | -3. | 0. | 3. | 130. | 0. | 0. | 0. | 0. | 144. | -9. | 0. | 0. | 0. | -125. | -4. | 0. | 0. | 35. | 0. | 0. | -10237.6 | 10237.6 | 0.00 | | | | | |

DISSOLVED OXYGEN LOADING FOR REACH 1: Headwater

| IOR | UPMN ADV | UPTR ADV | LOWR ADV | UPMN DISP | UPTR DISP | LOWR DISP | INCR IN | INCR OUT | NONP IN | WSLD IN | WSLD OUT | WITH IN | REAE DECA | BOD1 DECA | NH3-N DECA | ORG-N DECA | NCM BKGD | SOD BOD1 | SOD ALG | SOD NCM | SOD PHOT | SOD RESP | ALG PHOT | ALG OUT | MAC IN | TOT | TOT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 60 | 10096. | 0. | -10266. | -3. | 0. | 3. | 130. | 0. | 0. | 0. | 0. | 143. | -9. | 0. | 0. | 0. | -125. | -4. | 0. | 0. | 35. | 0. | 0. | -10406.7 | 10406.7 | 0.00 | |
| 61 | 10266. | 0. | -10434. | -3. | 0. | 3. | 130. | 0. | 0. | 0. | 0. | 142. | -9. | 0. | 0. | 0. | -125. | -4. | 0. | 0. | 35. | 0. | 0. | -10575.0 | 10575.0 | 0.00 | |
| 62 | 10434. | 0. | -10822. | -3. | 0. | 7. | 324. | 0. | 0. | 0. | 0. | 51. | -5. | 0. | 0. | 0. | -2. | -2. | 0. | 0. | 16. | 0. | 0. | -10832.5 | 10832.5 | 0.00 | |
| 63 | 10822. | 0. | -11215. | -7. | 0. | 18. | 324. | 0. | 0. | 0. | 0. | 51. | -5. | 0. | 0. | 0. | -2. | -2. | 0. | 0. | 16. | 0. | 0. | -11230.8 | 11230.8 | 0.00 | |
| 64 | 11215. | 0. | -11668. | -18. | 0. | 13. | 324. | 0. | 0. | 0. | 0. | 115. | -11. | 0. | 0. | 0. | -5. | -4. | 0. | 0. | 38. | 0. | 0. | -11705.5 | 11705.5 | 0.00 | |
| 65 | 11668. | 0. | -12126. | -13. | 0. | 16. | 324. | 0. | 0. | 0. | 0. | 112. | -11. | 0. | 0. | 0. | -5. | -4. | 0. | 0. | 39. | 0. | 0. | -12158.0 | 12158.0 | 0.00 | |
| 66 | 12126. | 0. | -12343. | -16. | 0. | 16. | 108. | 0. | 0. | 0. | 0. | 93. | -9. | 0. | 0. | 0. | -4. | -3. | 0. | 0. | 33. | 0. | 0. | -12375.7 | 12375.7 | 0.00 | |
| 67 | 12343. | 0. | -12558. | -16. | 0. | 15. | 108. | 0. | 0. | 0. | 0. | 91. | -9. | 0. | 0. | 0. | -4. | -3. | 0. | 0. | 33. | 0. | 0. | -12590.2 | 12590.2 | 0.00 | |
| 68 | 12558. | 0. | -12770. | -15. | 0. | 14. | 108. | 0. | 0. | 0. | 0. | 88. | -9. | 0. | 0. | 0. | -4. | -3. | 0. | 0. | 33. | 0. | 0. | -12801.4 | 12801.4 | 0.00 | |
| 69 | 12770. | 0. | -12979. | -14. | 0. | 13. | 108. | 0. | 0. | 0. | 0. | 86. | -9. | 0. | 0. | 0. | -4. | -3. | 0. | 0. | 33. | 0. | 0. | -13010.0 | 13010.0 | 0.00 | |
| 70 | 12979. | 0. | -13184. | -13. | 0. | 10. | 108. | 0. | 0. | 0. | 0. | 84. | -9. | 0. | 0. | 0. | -4. | -3. | 0. | 0. | 33. | 0. | 0. | -13213.7 | 13213.7 | 0.00 | |
| 71 | 13184. | 0. | -13369. | -10. | 0. | -12. | 108. | 0. | 0. | 0. | 0. | 82. | -9. | 0. | 0. | 0. | -4. | -3. | 0. | 0. | 33. | 0. | 0. | -13407.5 | 13407.5 | 0.00 | |
| 72 | 13369. | 0. | -13711. | 12. | 0. | -10. | 324. | 0. | 0. | 0. | 0. | 13. | -1. | 0. | 0. | 0. | -1. | 0. | 0. | 0. | 5. | 0. | 0. | -13723.7 | 13723.7 | 0.00 | |
| 73 | 13711. | 0. | -14063. | 10. | 0. | 2. | 324. | 0. | 0. | 0. | 0. | 13. | -1. | 0. | 0. | 0. | -1. | 0. | 0. | 0. | 5. | 0. | 0. | -14065.4 | 14065.4 | 0.00 | |
| 74 | 14063. | 0. | -14234. | -2. | 0. | 1. | 130. | 0. | 0. | 0. | 0. | 36. | -4. | 0. | 0. | 0. | -2. | -1. | 0. | 0. | 14. | 0. | 0. | -14243.2 | 14243.2 | 0.00 | |
| 75 | 14234. | 0. | -14406. | -1. | 0. | 1. | 130. | 0. | 0. | 0. | 0. | 36. | -4. | 0. | 0. | 0. | -2. | -1. | 0. | 0. | 14. | 0. | 0. | -14414.6 | 14414.6 | 0.00 | |
| 76 | 14406. | 0. | -14578. | -1. | 0. | 1. | 130. | 0. | 0. | 0. | 0. | 36. | -4. | 0. | 0. | 0. | -2. | -1. | 0. | 0. | 14. | 0. | 0. | -14586.0 | 14586.0 | 0.00 | |
| 77 | 14578. | 0. | -14745. | -1. | 0. | -4. | 130. | 0. | 0. | 0. | 0. | 35. | -4. | 0. | 0. | 0. | -2. | -1. | 0. | 0. | 14. | 0. | 0. | -14756.5 | 14756.5 | 0.00 | |
| 78 | 14745. | 0. | -14855. | 4. | 0. | -65. | 130. | 0. | 0. | 0. | 0. | 36. | -5. | 0. | 0. | 0. | -2. | -2. | 0. | 0. | 14. | 0. | 0. | -14927.7 | 14927.7 | 0.00 | |
| 79 | 14855. | 0. | -14997. | 65. | 0. | -591. | 648. | 0. | 0. | 0. | 0. | 29. | -6. | 0. | 0. | 0. | -1. | -2. | 0. | 0. | 0. | 0. | 0. | -15596.8 | 15596.8 | 0.00 | |

Middle/Middle West Rivers DO Modeling - 090207

COEF-1 Run

INPUT/OUTPUT LOADING SUMMARY

| | FLOW $m^3/s$ | DO kg/d | BOD#1 kg/d | BOD#2 kg/d | ORG-N kg/d | NH3-N kg/d | NO3-N kg/d | PHOS kg/d | CHL A | NCM |
|---|---|---|---|---|---|---|---|---|---|---|
| HEADWATER FLOW | 1.110 | 479.5 | 40.3 | 0.0 | 0.0 | 9.6 | 9.6 | 0.0 | 0.0 | 0.0 |
| INCREMENTAL INFLOW | 28.723 | 12408.3 | 1433.1 | 0.0 | 744.5 | 0.0 | 496.3 | 0.0 | 0.0 | 0.0 |
| INCREMENTAL OUTFLOW | 0.000 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| WASTELOADS | 0.000 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| WITHDRAWLS | 0.000 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| FLOW THRU LOWER BNDRY | -29.833 | -14996.9 | -3040.8 | 0.0 | -393.9 | -73.7 | -457.3 | 0.0 | 0.0 | 0.0 |
| DISPERSION THRU LOWER BNDRY | | -591.0 | 2037.1 | 0.0 | -110.4 | -20.6 | -128.2 | 0.0 | 0.0 | 0.0 |
| DISPERSION THRU HDWTR BNDRY | | -3.6 | 3.3 | 0.0 | -2.3 | 0.9 | -0.9 | 0.0 | 0.0 | 0.0 |
| NON-POINT INPUT | | 0.0 | 0.0 | 0.0 | 0.0 | | | | | 0.0 |
| NATURAL REAERATION | | 5378.8 | | | | | | | | |
| DAM REAERATION | | 0.0 | | | | | | | | |
| BACKGROUND SOD | | -3675.5 | | | | | | | | |
| BOD#1 DECAY | | -348.7 | -348.7 | | | | | | | |
| BOD#1 SETTLING | | -124.3 | -124.3 | | | | | | | |
| ANAEROBIC BOD#1 DECAY | | | 0.0 | | | | | | | |
| BOD#2 DECAY | | 0.0 | | 0.0 | | | | | | |
| BOD#2 SETTLING | | 0.0 | | 0.0 | | | | | | |
| ANAEROBIC BOD#2 DECAY | | | | 0.0 | | | | | | |
| ORG-N DECAY | | 0.0 | | | -229.1 | 229.1 | | | | |
| ORG-N SETTLING | | | | | -8.9 | 8.9 | | | | |
| NH3 DECAY | | 0.0 | | | | -154.4 | 154.4 | | | |
| BACKGROUND NH3 SOURCE | | | | | | 0.0 | | | | |
| OTHER DENITRIFICATION | | | | | | | 0.0 | | | |
| PHOSPHORUS SOURCE | | | | | | | | 0.0 | | |
| ALGAE PHOTOSYNTHESIS | | 1473.4 | | | | 0.0 | -73.7 | 0.0 | 0.0 | |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| ALGAE RESPIRATION | | 0.0 | | | | 0.0 | | 0.0 | 0.0 | |
| ALGAE SETTLING | | 0.0 | | | | | | | 0.0 | |
| MACRO PHOTOSYNTHESIS | | 0.0 | | | | 0.0 | 0.0 | 0.0 | | |
| NCM DECAY | | 0.0 | | | | | | | | 0.0 |
| NCM SETTLING | | 0.0 | | | | | | | | 0.0 |
| TOTAL INPUTS | 29.833 | 19740.0 | 3513.9 | 0.0 | 744.5 | 248.4 | 660.3 | 0.0 | 0.0 | 0.0 |
| TOTAL OUTPUTS | -29.833 | -19740.0 | -3513.9 | 0.0 | -744.5 | -248.7 | -660.0 | 0.0 | 0.0 | 0.0 |
| NET CONVERGENCE ERROR | 0.000 | 0.0 | 0.0 | 0.0 | 0.0 | -0.3 | 0.3 | 0.0 | 0.0 | 0.0 |

.....EXECUTION COMPLETED

# APPENDIX H:
# PLOTS OF PREDICTED WATER QUALITY FOR BASELINE

Figure H-1. DO Baseline results for subsegment 090105 ..... 1
Figure H-2. DO Baseline results for subsegment 090204 ..... 1
Figure H-3. DO Baseline results for subsegment 090207 ..... 2

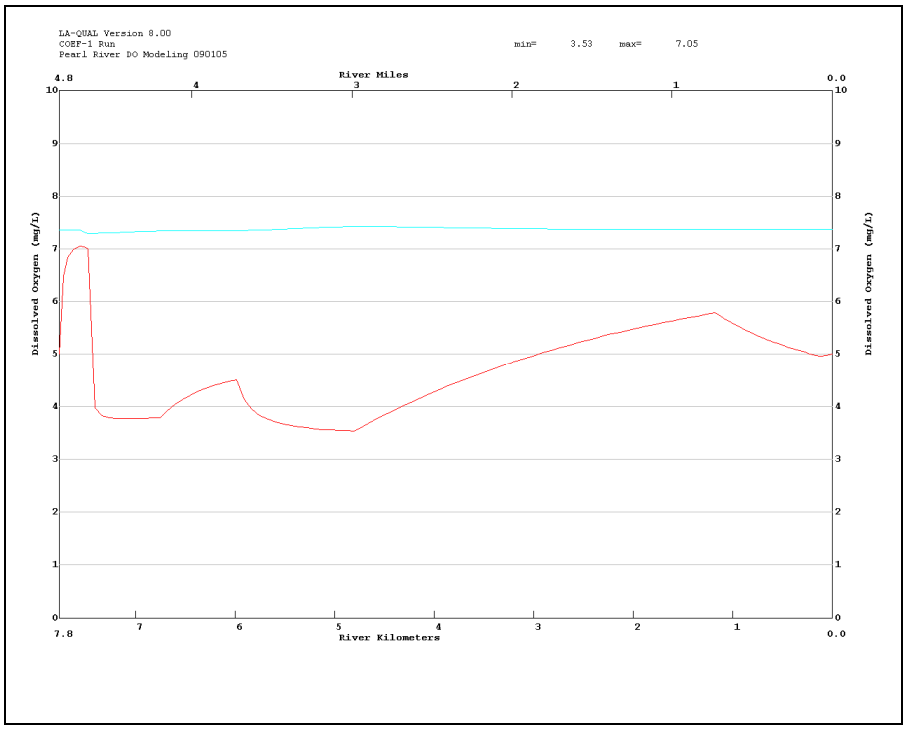


**Figure H-1. DO Baseline results for subsegment 090105**

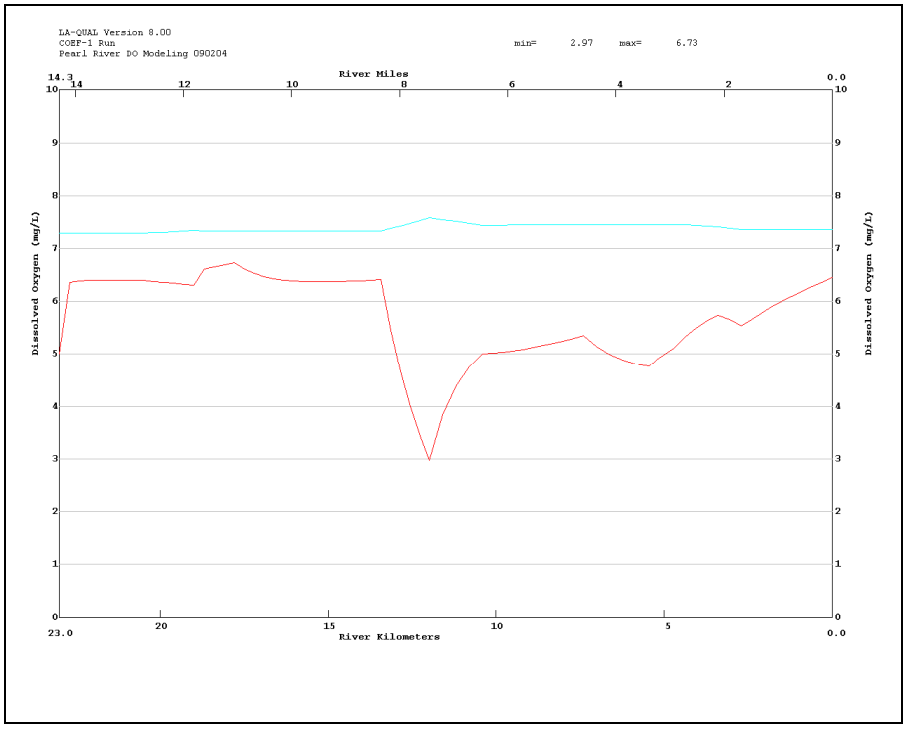


**Figure H-2. DO Baseline results for subsegment 090204**

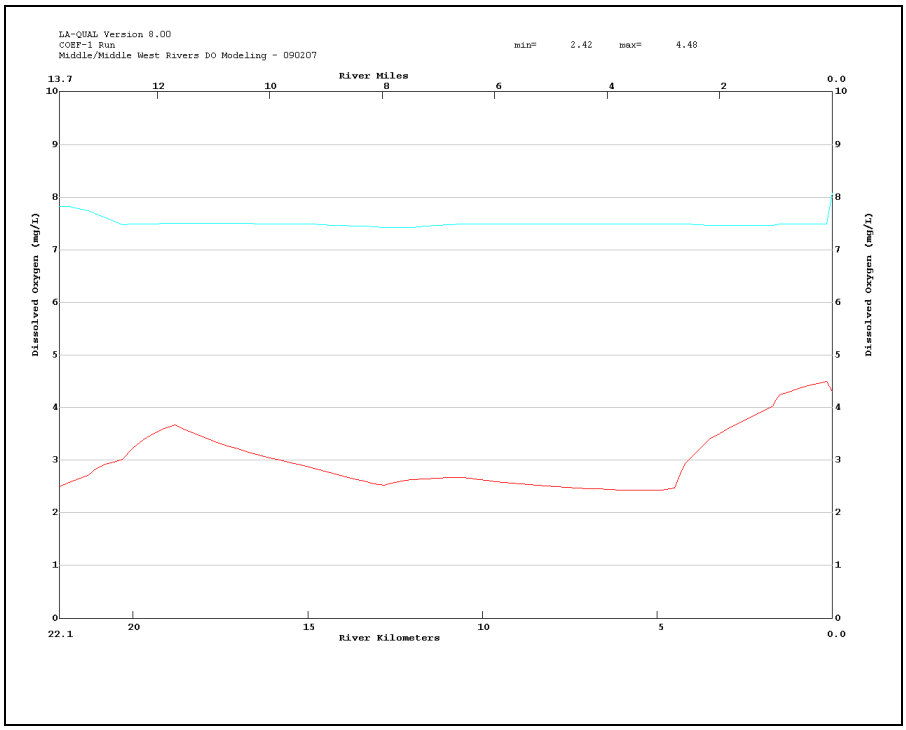


**Figure H-3. DO Baseline results for subsegment 090207**

# APPENDIX I:
# PLOTS OF PREDICTED WATER QUALITY FOR TMDL

Figure I-1. DO TMDL results for subsegment 090105 ..... 1
Figure I-2. DO TMDL results for subsegment 090204 ..... 1
Figure I-3. DO TMDL results for subsegment 090207 ..... 2

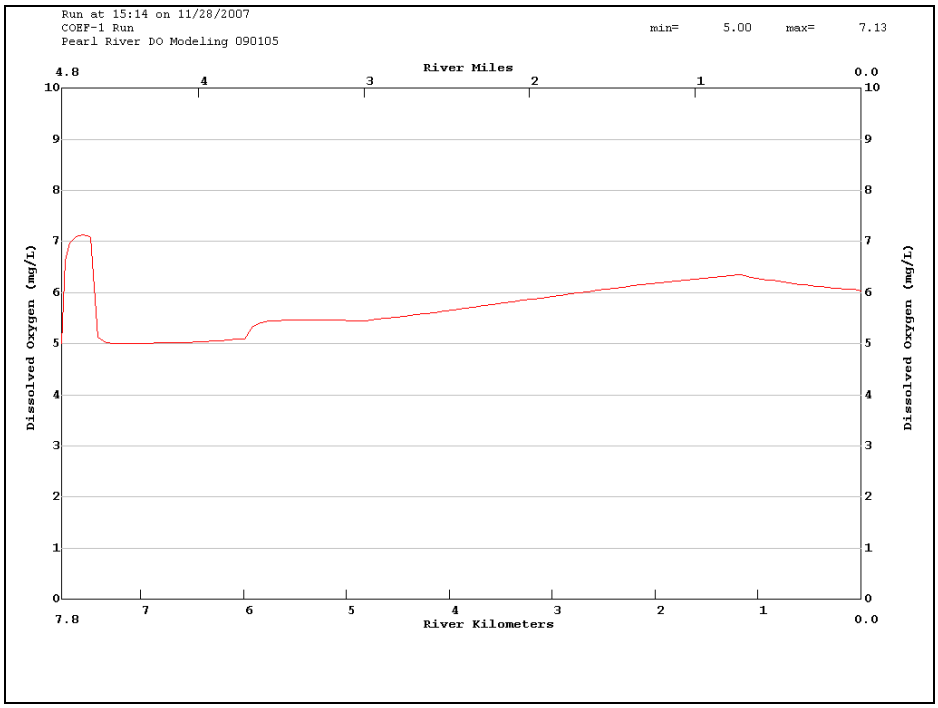


**Figure I-1. DO TMDL results for subsegment 090105**

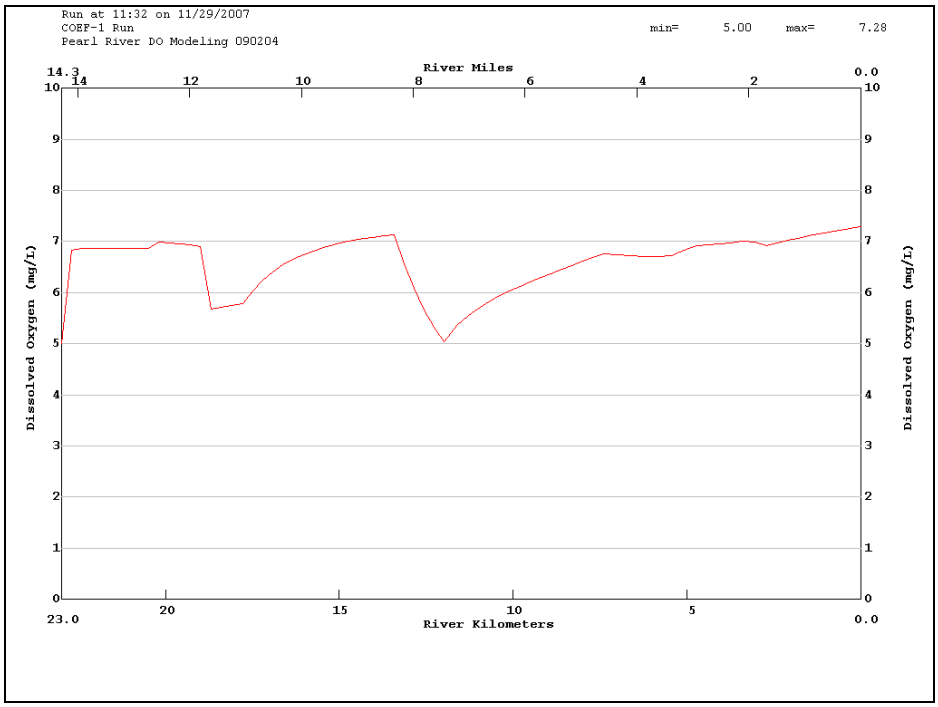


**Figure I-2. DO TMDL results for subsegment 090204**

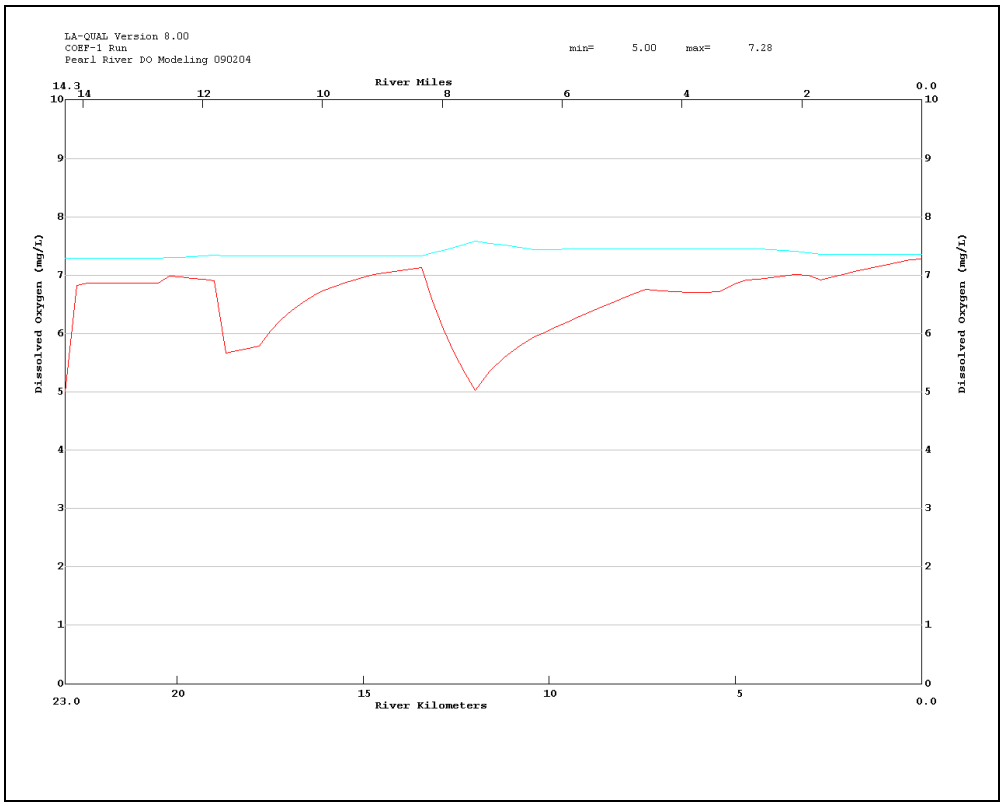


**Figure I-3. DO TMDL results for subsegment 090207**

# APPENDIX J:
# TMDL CALCULATIONS

Table J-1. Loadings for oxygen demanding substances in subsegment 090105 ..... 2
Table J-2. Oxygen demand in subsegment 090105 ..... 2
Table J-3. Loadings for oxygen demanding substances in subsegment 090204 ..... 3
Table J-4. Oxygen demand in subsegment 090204 ..... 3
Table J-5. Loadings for oxygen demanding substances in subsegment 090207 ..... 4
Table J-6. Oxygen demand in subsegment 090207 ..... 4

### Table J-1. Loadings for oxygen demanding substances in subsegment 090105

| Subsegment | Loadings (kg/d) | | | |
|---|---|---|---|---|
| 090105 | SOD | $CBOD_5$ | Ammonia | Nitrate |
| WLA | 0.00 | 5.60 | 0.18 | 0.00 |
| MOS for WLA | 0.00 | 0.70 | 0.02 | 0.00 |
| FG for WLA | 0.00 | 0.70 | 0.02 | 0.00 |
| LA | 392.42 | 619.59 | 25.22 | 126.63 |
| MOS for LA | 49.05 | 77.45 | 3.15 | 15.83 |
| FG for LA | 49.05 | 77.45 | 3.15 | 15.83 |
| TMDL | 490.53 | 790.59 | 32.52 | 158.29 |

Notes:
Loadings take from Input/output loading summery from each model output file in Appendix F.
SOD is from “Background SOD’ in the DO column.
Others parameters from “Headwater flow” and “incremental flow” in their respective columns.

### Table J-2. Oxygen demand in subsegment 090105

| | Oxygen demand (kg/d) | | | | |
|---|---|---|---|---|---|
| 090105 | SOD | $CBOD_u$ | Ammonia | Nitrate | Total |
| WLA | 0.00 | 12.88 | 0.79 | 0.00 | 13.67 |
| MOS for WLA | 0.00 | 1.61 | 0.10 | 0.00 | 1.71 |
| FG for WLA | 0.00 | 1.61 | 0.10 | 0.00 | 1.71 |
| LA | 392.42 | 1,425.07 | 109.21 | 548.32 | 2,475.02 |
| MOS for LA | 49.05 | 178.13 | 13.65 | 68.54 | 309.38 |
| FG for LA | 49.05 | 178.13 | 13.65 | 68.54 | 309.38 |
| TMDL | 490.53 | 1,797.44 | 137.50 | 685.40 | 3,110.87 |

Notes:
$CBOD_5$ was multiplied by 2.3 to determine the ultimate oxygen demand.
Nutrient loadings were multiplied by 4.33 to determine their oxygen demand.

### Table J-3. Loadings for oxygen demanding substances in subsegment 090204

| Subsegment | Loadings (kg/d) | | | |
|---|---|---|---|---|
| 090105 | SOD | $CBOD_5$ | Ammonia | Nitrate |
| WLA | 0.00 | 6.79 | 2.26 | 0.00 |
| MOS for WLA | 0.00 | 0.85 | 0.28 | 0.00 |
| FG for WLA | 0.00 | 0.85 | 0.28 | 0.00 |
| LA | 2,171.11 | 537.93 | 200.53 | 31.04 |
| MOS for LA | 271.39 | 67.24 | 25.07 | 3.88 |
| FG for LA | 271.39 | 67.24 | 25.07 | 3.88 |
| TMDL | 2,713.89 | 1,566.08 | 262.92 | 38.80 |

Notes:
Loadings take from Input/output loading summery from each model output file in Appendix F.
SOD is from “Background SOD’ in the DO column.
Others parameters from “Headwater flow” and “incremental flow” in their respective columns.

### Table J-4. Oxygen demand in subsegment 090204

| | Oxygen demand (kg/d) | | | | |
|---|---|---|---|---|---|
| 090105 | SOD | $CBOD_u$ | Ammonia | Nitrate | Total |
| WLA | 0.00 | 15.63 | 9.81 | 0.00 | 25.44 |
| MOS for WLA | 0.00 | 1.95 | 1.23 | 0.00 | 3.18 |
| FG for WLA | 0.00 | 1.95 | 1.23 | 0.00 | 3.18 |
| LA | 2,171.11 | 1,237.23 | 868.31 | 134.41 | 4,411.06 |
| MOS for LA | 271.39 | 154.65 | 108.54 | 16.80 | 551.38 |
| FG for LA | 271.39 | 154.65 | 108.54 | 16.80 | 551.38 |
| TMDL | 2,713.89 | 1,566.08 | 1,097.64 | 168.01 | 5,545.62 |

Notes:
$CBOD_5$ was multiplied by 2.3 to determine the ultimate oxygen demand.
Nutrient loadings were multiplied by 4.33 to determine their oxygen demand.

### Table J-5. Loadings for oxygen demanding substances in subsegment 090207

| Subsegment | Loadings (kg/d) | | | |
|---|---|---|---|---|
| 090105 | SOD | $CBOD_5$ | Ammonia | Nitrate |
| WLA | 0.00 | 0.00 | 0.00 | 0.00 |
| MOS for WLA | 0.00 | 0.00 | 0.00 | 0.00 |
| FG for WLA | 0.00 | 0.00 | 0.00 | 0.00 |
| LA | 6,482.47 | 2,694.47 | 16.93 | 892.26 |
| MOS for LA | 810.31 | 336.81 | 2.12 | 111.53 |
| FG for LA | 810.31 | 336.81 | 2.12 | 111.53 |
| TMDL | 8,103.09 | 3,368.09 | 21.16 | 1,115.32 |

Notes:
Loadings take from Input/output loading summery from each model output file in Appendix F.
SOD is from “Background SOD’ in the DO column.
Others parameters from “Headwater flow” and “incremental flow” in their respective columns.

### Table J-6. Oxygen demand in subsegment 090207

| | Oxygen demand (kg/d) | | | | |
|---|---|---|---|---|---|
| 090105 | SOD | $CBOD_u$ | Ammonia | Nitrate | Total |
| WLA | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| MOS for WLA | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| FG for WLA | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| LA | 6,482.47 | 6,197.28 | 73.31 | 3,863.46 | 16,616.53 |
| MOS for LA | 810.31 | 774.66 | 9.16 | 482.93 | 2,077.07 |
| FG for LA | 810.31 | 774.66 | 9.16 | 482.93 | 2,077.07 |
| TMDL | 8,103.09 | 7,746.60 | 91.64 | 4,829.33 | 20,770.67 |

Notes:
$CBOD_5$ was multiplied by 2.3 to determine the ultimate oxygen demand.
Nutrient loadings were multiplied by 4.33 to determine their oxygen demand.

# APPENDIX K:
# SENSITIVITY ANALYSIS PLOTS


Figure K-1. BOD sensitivity results (BOD settling rate) for subsegment 090105. ..... 1
Figure K-2. BOD sensitivity results (BOD aerobic decay rate) for subsegment 090105.. 1
Figure K-3. BOD sensitivity results (dispersion) for subsegment 090105. ..... 2
Figure K-4. BOD sensitivity results (reaeration) for subsegment 090105. ..... 2
Figure K-5. BOD sensitivity results (background SOD) for subsegment 090105. ..... 3
Figure K-6. BOD sensitivity results (stream velocity) for subsegment 090105. ..... 3
Figure K-7. DO sensitivity results (BOD settling rate) for subsegment 090105. ..... 4
Figure K-8. DO sensitivity results (BOD aerobic decay rate) for subsegment 090105. ... 4
Figure K-9. DO sensitivity results (dispersion) for subsegment 090105. ..... 5
Figure K-10. DO sensitivity results (reaeration) for subsegment 090105. ..... 5
Figure K-11. DO sensitivity results (background SOD) for subsegment 090105. ..... 6
Figure K-12. DO sensitivity results (stream velocity) for subsegment 090105. ..... 6
Figure K-13. BOD sensitivity results (BOD aerobic decay rate) for subsegment 090204.7
Figure K-14. BOD sensitivity results (BOD settling rate) for subsegment 090204. ..... 7
Figure K-15. BOD sensitivity results (dispersion) for subsegment 090204. ..... 8
Figure K-16. BOD sensitivity results (reareation) for subsegment 090204. ..... 8
Figure K-17. BOD sensitivity results (background SOD) for subsegment 090204. ..... 9
Figure K-18. BOD sensitivity results (stream velocity) for subsegment 090204. ..... 9
Figure K-19. DO sensitivity results (BOD decay rate) for subsegment 090204. ..... 10
Figure K-20. DO sensitivity results (BOD settling rate) for subsegment 090204. ..... 10
Figure K-21. DO sensitivity results (dispersion) for subsegment 090204. ..... 11
Figure K-22. DO sensitivity results (reaeration) for subsegment 090204. ..... 11
Figure K-23. DO sensitivity results (background SOD) for subsegment 090204. ..... 12
Figure K-24. DO sensitivity results (stream velocity) for subsegment 090204. ..... 12
Figure K-25. BOD sensitivity results (BOD aerobic decay rate) for subsegment 090207. ..... 13
Figure K-26. BOD sensitivity results (BOD settling rate) for subsegment 090207. ..... 13
Figure K-27. BOD sensitivity results (dispersion) for subsegment 090207. ..... 14
Figure K-28. BOD sensitivity results (reaeration) for subsegment 090207. ..... 14
Figure K-29. BOD sensitivity results (background SOD) for subsegment 090207. ..... 15
Figure K-30. BOD sensitivity results (stream velocity) for subsegment 090207. ..... 15
Figure K-31. DO sensitivity results (BOD aerobic decay rate) for subsegment 090207. 16
Figure K-32. DO sensitivity results (BOD settling rate) for subsegment 090207. ..... 16
Figure K-33. DO sensitivity results (dispersion) for subsegment 090207. ..... 17
Figure K-34. DO sensitivity results (reaeration) for subsegment 090207. ..... 17
Figure K-35. DO sensitivity results (background SOD) for subsegment 090207. ..... 18
Figure K-36. DO sensitivity results (stream velocity) for subsegment 090207. ..... 18

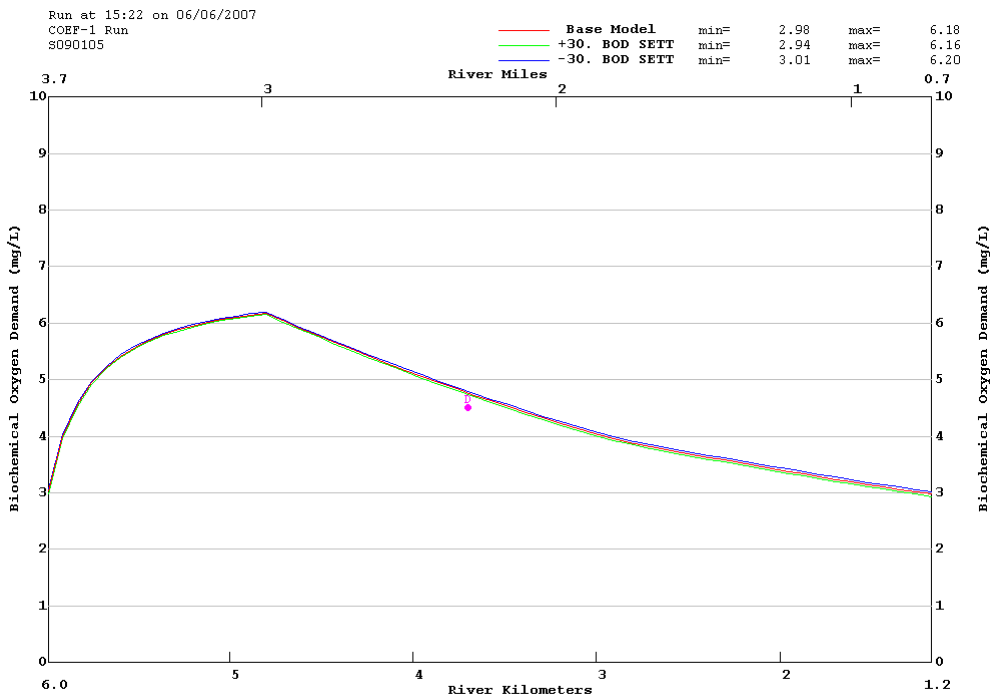


**Figure K-1. BOD sensitivity results (BOD settling rate) for subsegment 090105.**

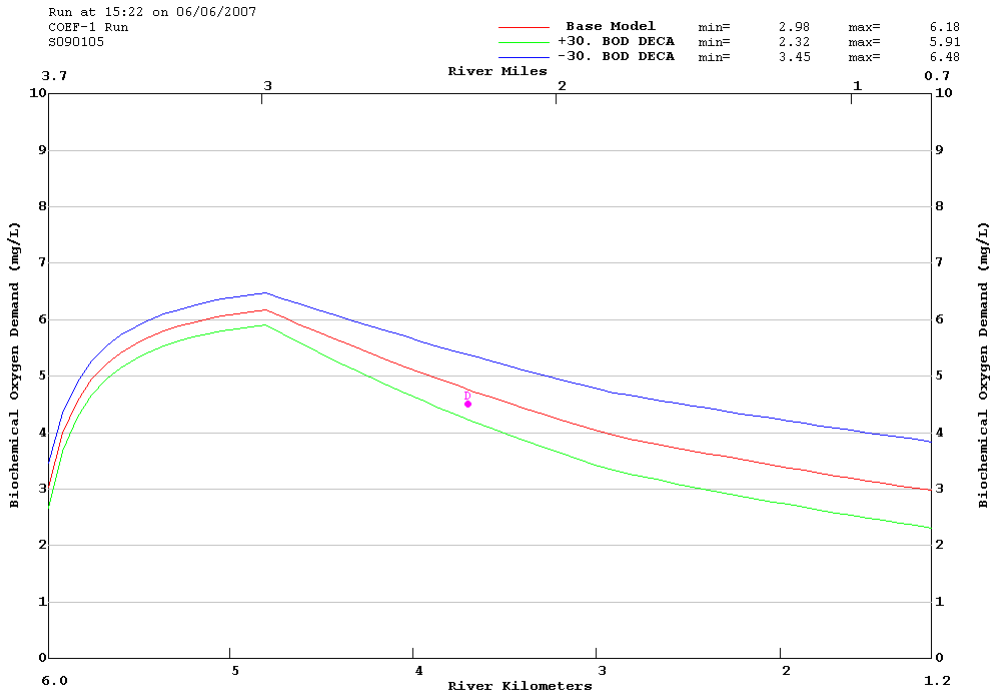


**Figure K-2. BOD sensitivity results (BOD aerobic decay rate) for subsegment 090105.**

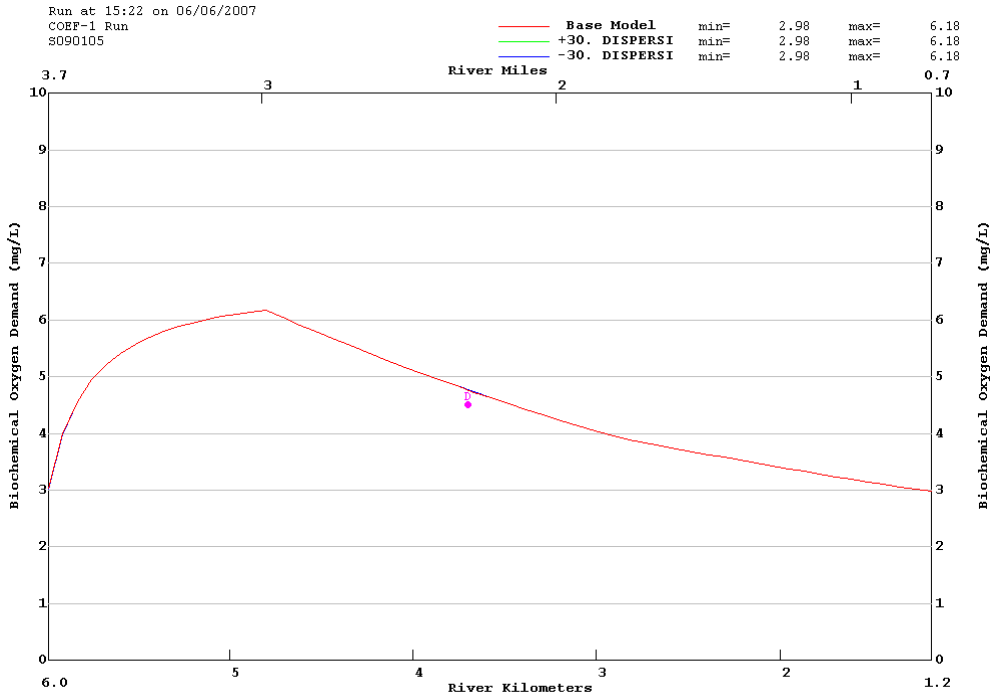


**Figure K-3. BOD sensitivity results (dispersion) for subsegment 090105.**

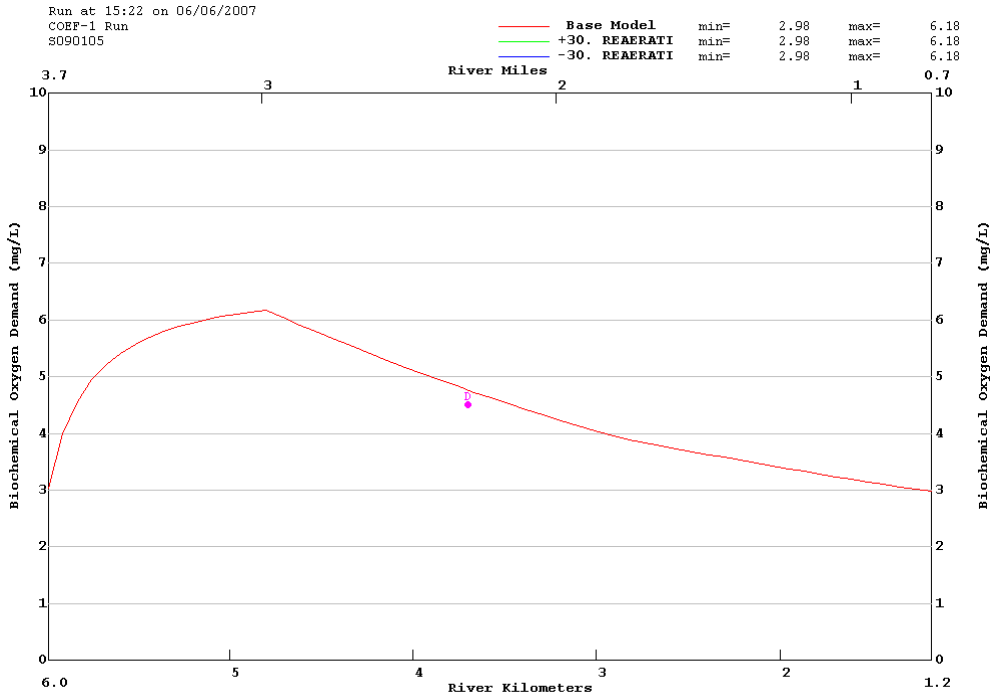


**Figure K-4. BOD sensitivity results (reaeration) for subsegment 090105.**

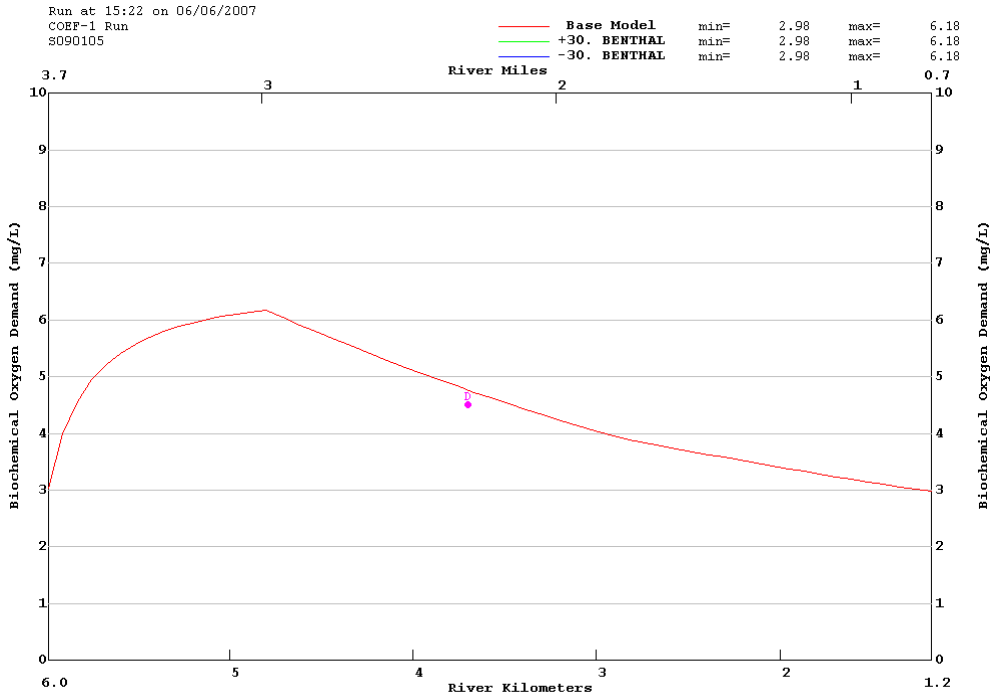


**Figure K-5. BOD sensitivity results (background SOD) for subsegment 090105.**

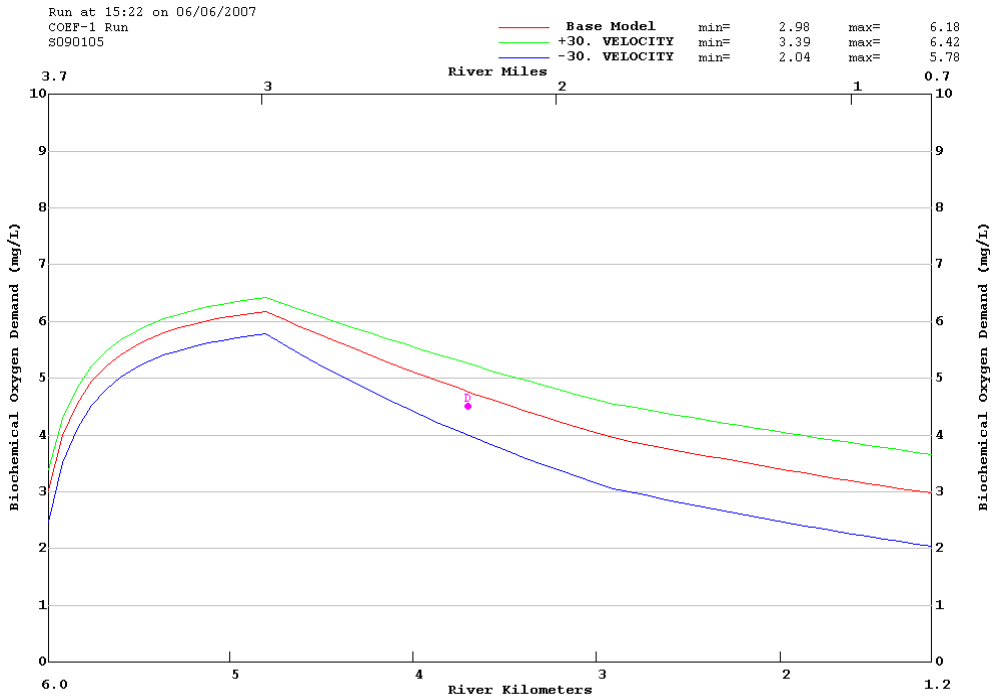


**Figure K-6. BOD sensitivity results (stream velocity) for subsegment 090105.**

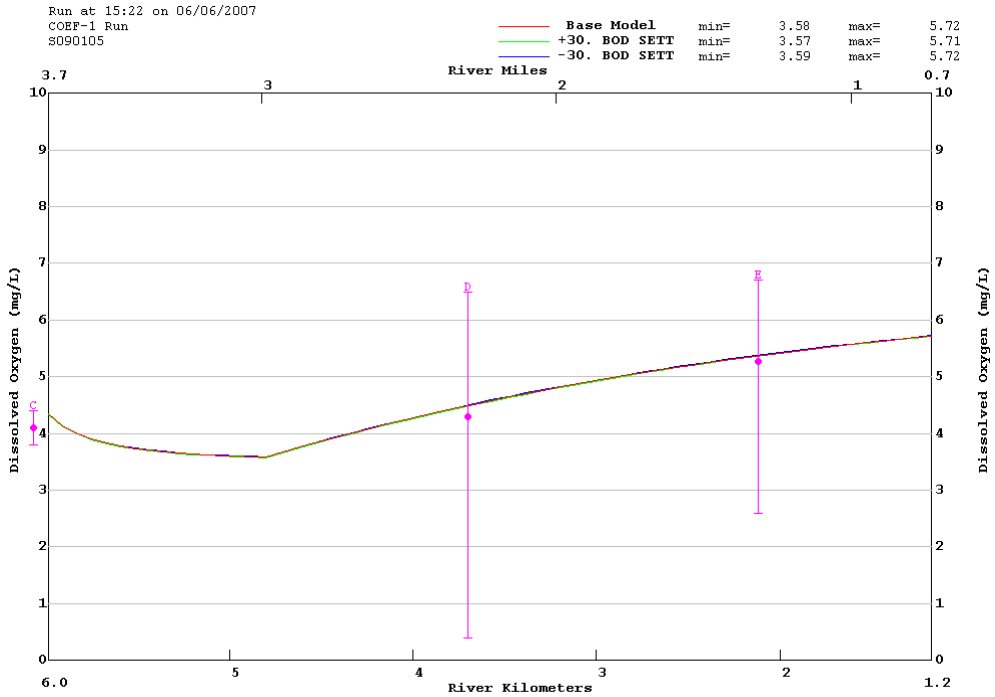


**Figure K-7. DO sensitivity results (BOD settling rate) for subsegment 090105.**

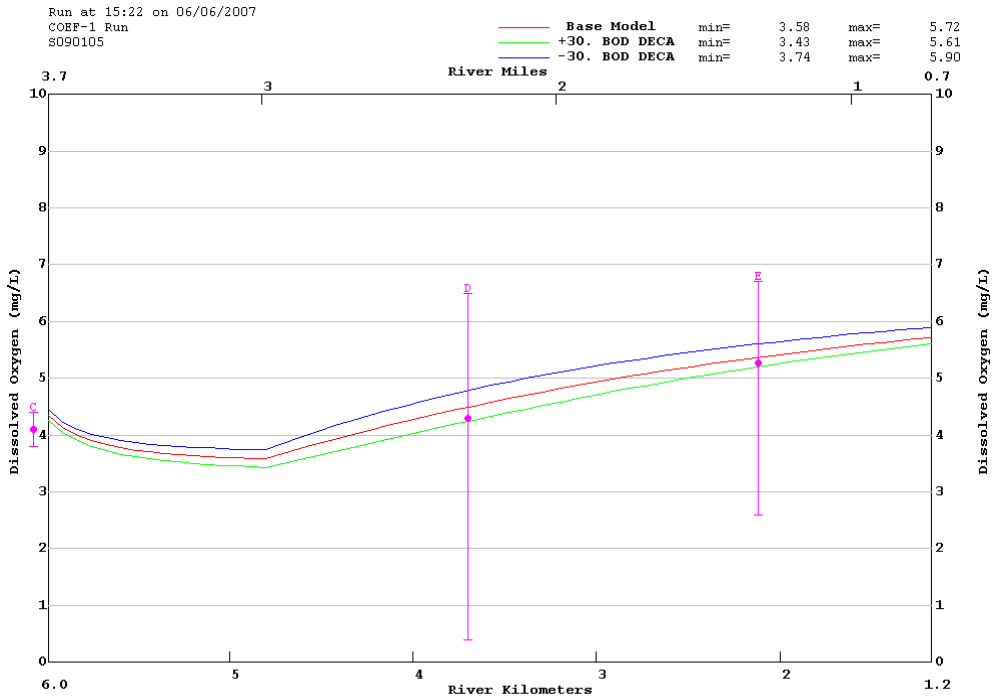


**Figure K-8. DO sensitivity results (BOD aerobic decay rate) for subsegment 090105.**

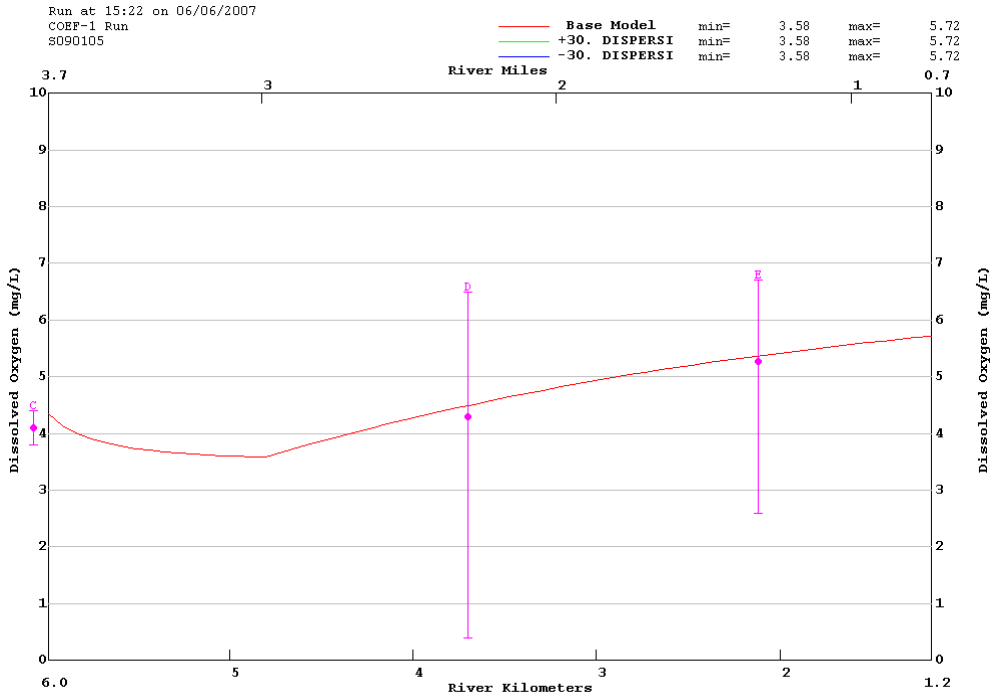


**Figure K-9. DO sensitivity results (dispersion) for subsegment 090105.**

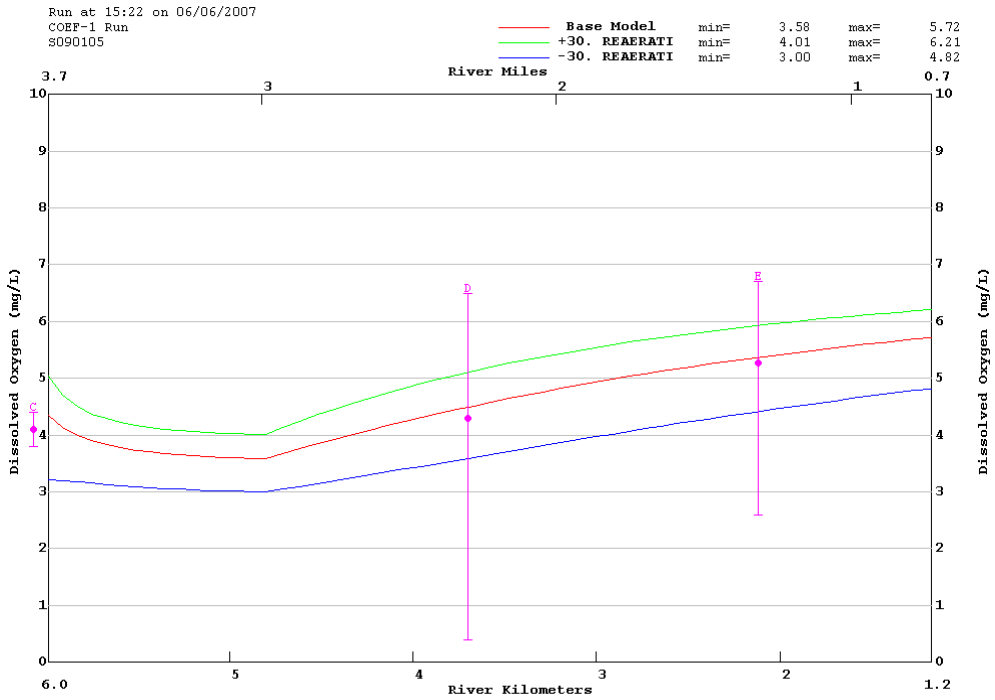


**Figure K-10. DO sensitivity results (reaeration) for subsegment 090105.**

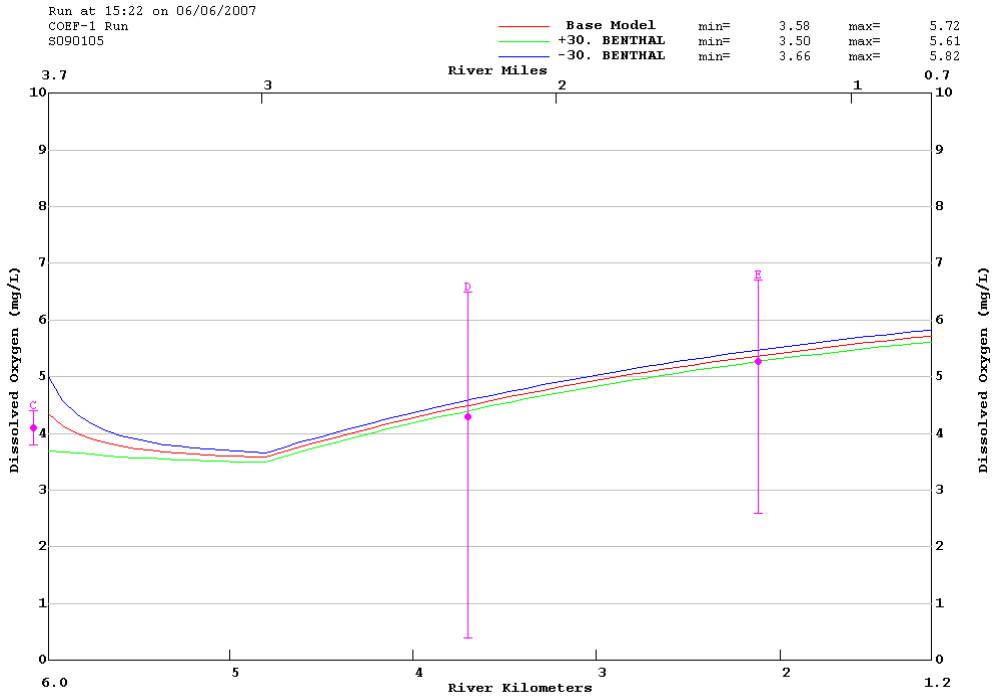


**Figure K-11. DO sensitivity results (background SOD) for subsegment 090105.**

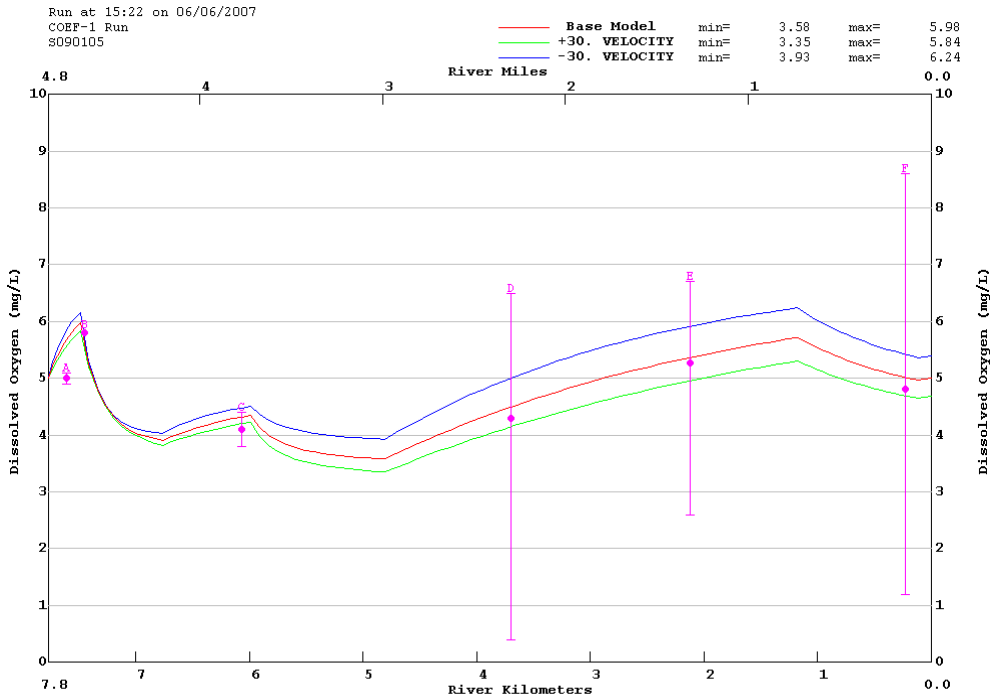


**Figure K-12. DO sensitivity results (stream velocity) for subsegment 090105.**

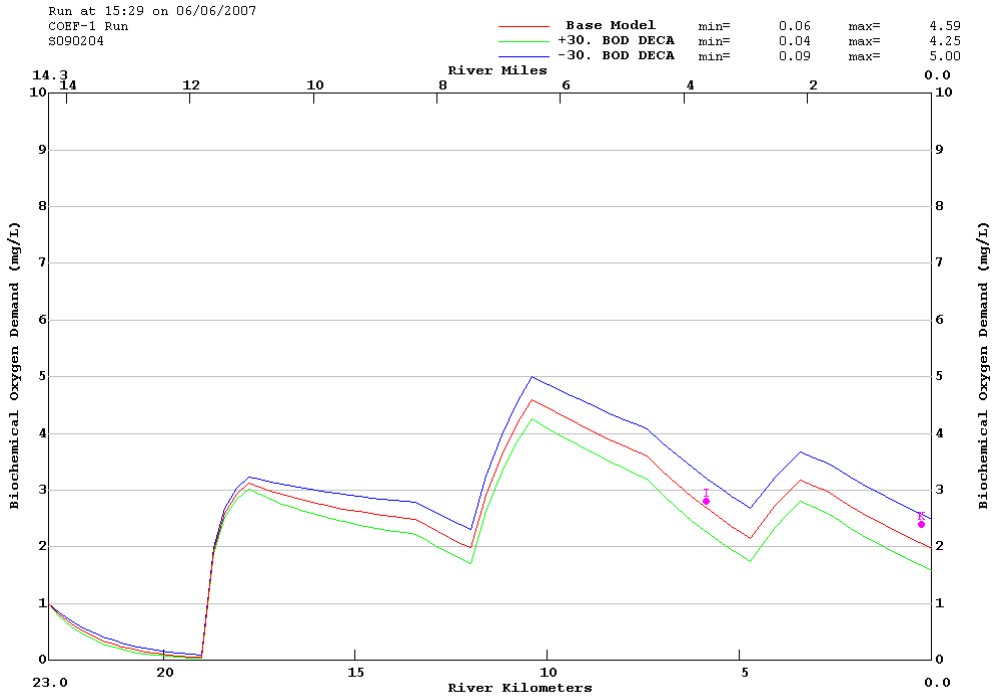


**Figure K-13. BOD sensitivity results (BOD aerobic decay rate) for subsegment 090204.**

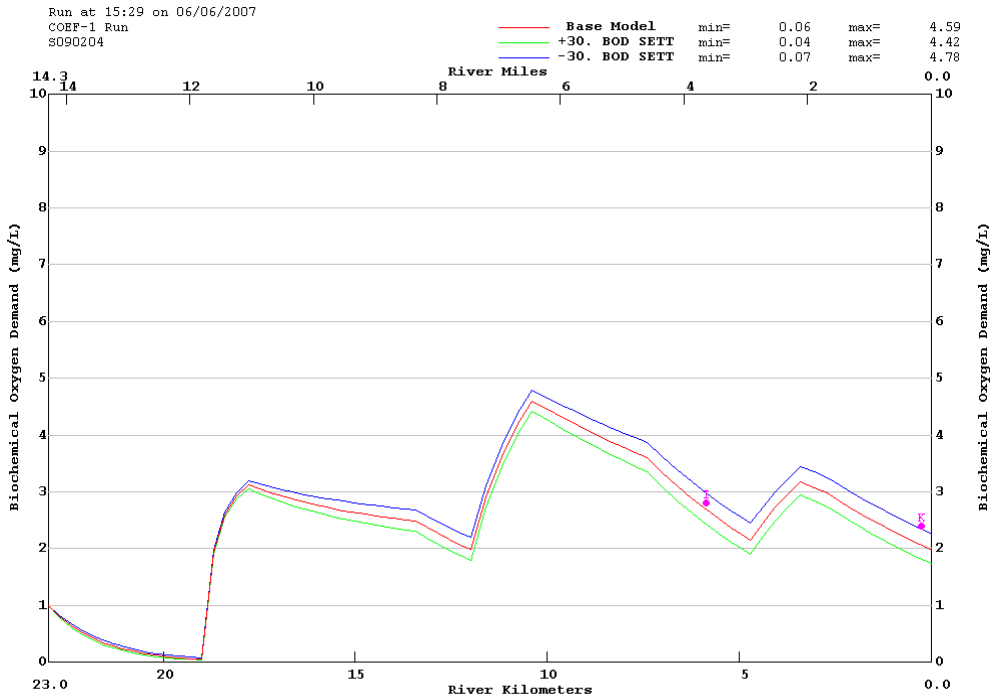


**Figure K-14. BOD sensitivity results (BOD settling rate) for subsegment 090204.**

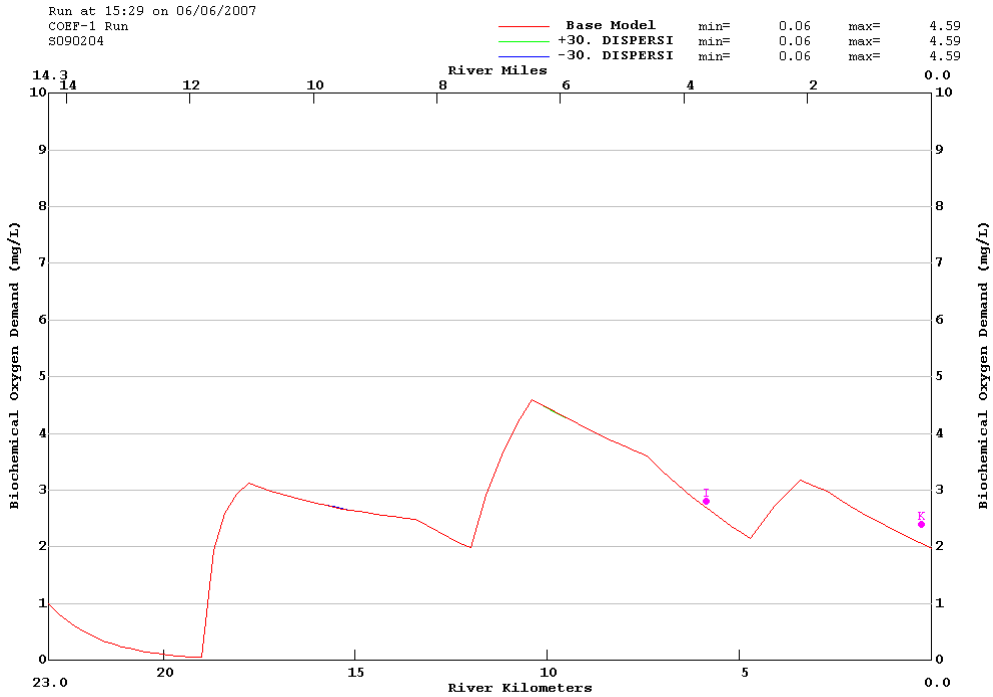


**Figure K-15. BOD sensitivity results (dispersion) for subsegment 090204.**

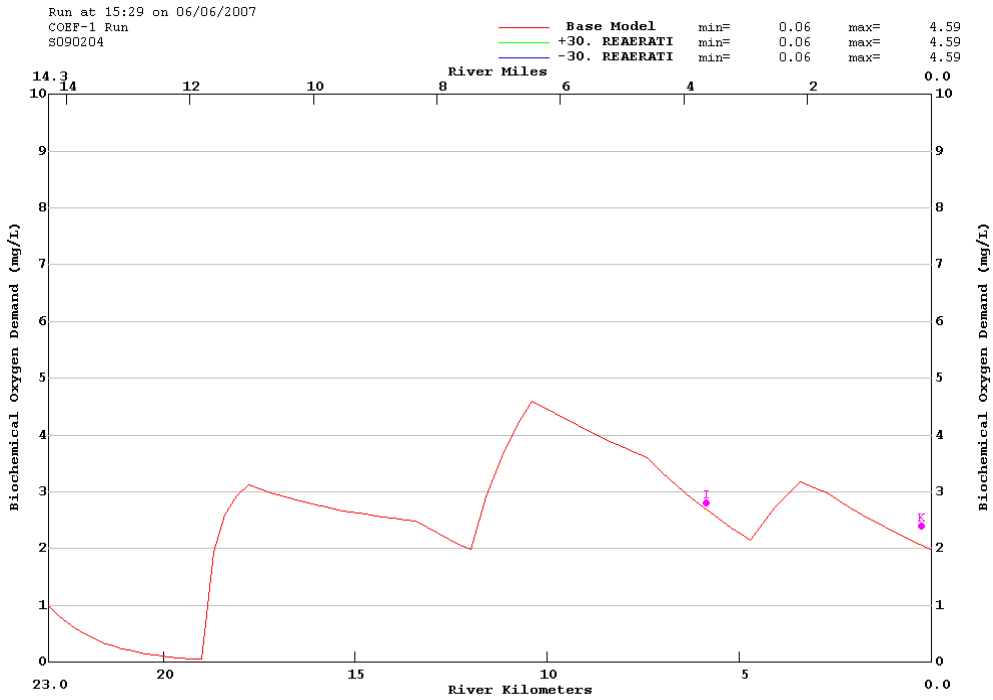


**Figure K-16. BOD sensitivity results (reareation) for subsegment 090204.**

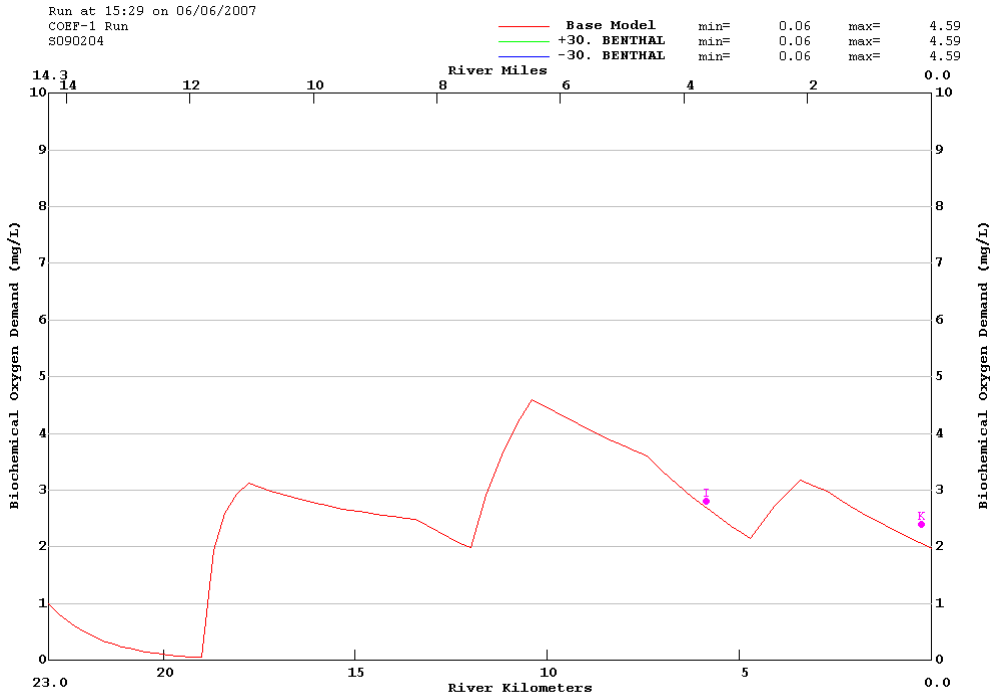


**Figure K-17. BOD sensitivity results (background SOD) for subsegment 090204.**

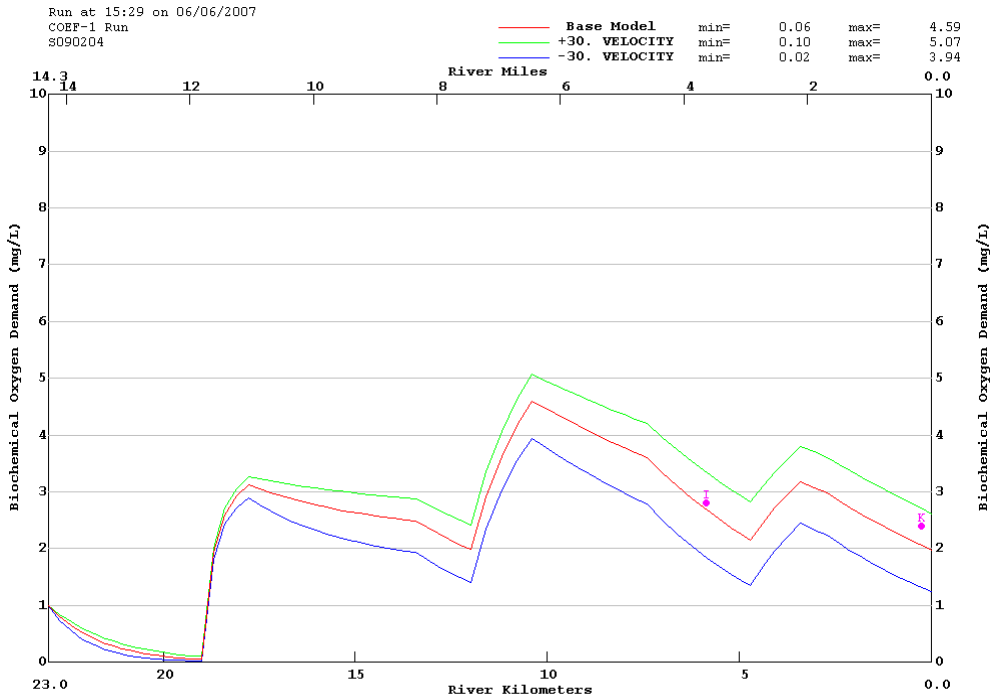


**Figure K-18. BOD sensitivity results (stream velocity) for subsegment 090204.**

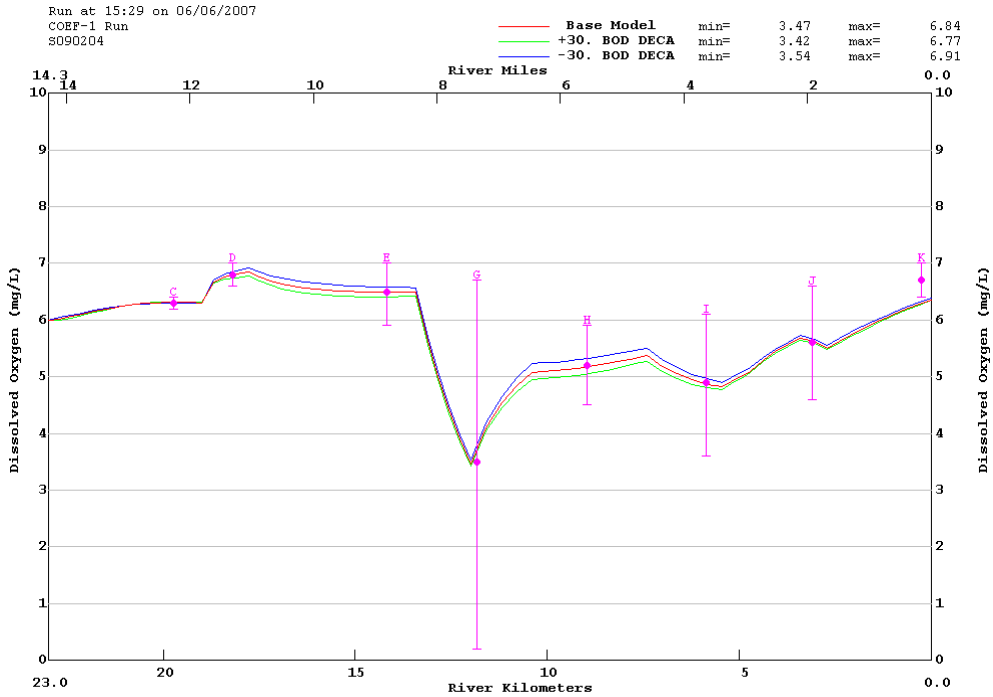


**Figure K-19. DO sensitivity results (BOD decay rate) for subsegment 090204.**

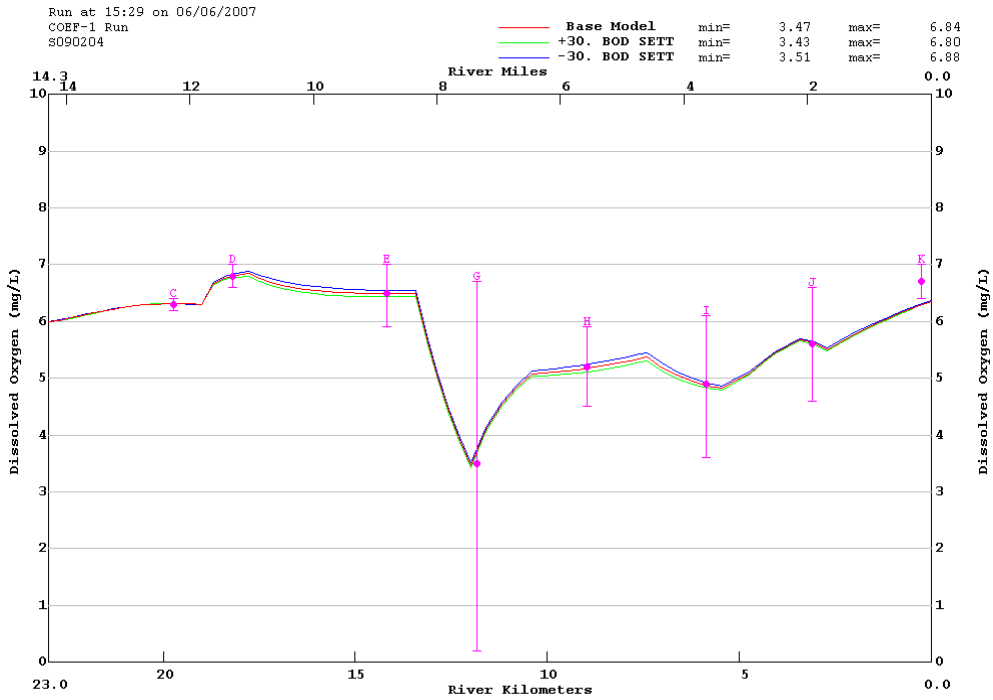


**Figure K-20. DO sensitivity results (BOD settling rate) for subsegment 090204.**

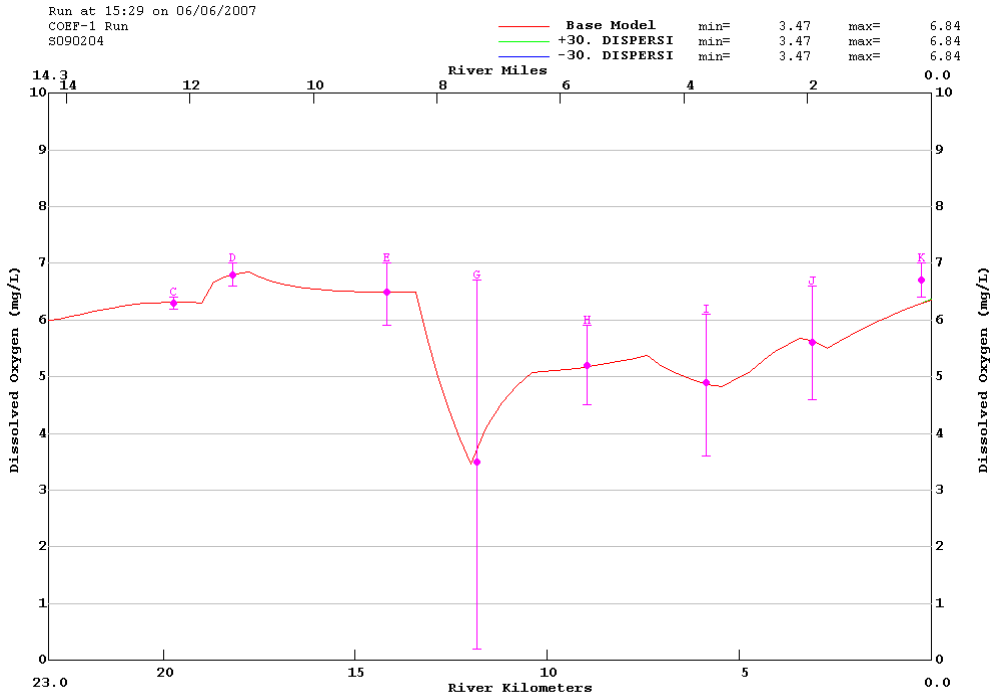


**Figure K-21. DO sensitivity results (dispersion) for subsegment 090204.**

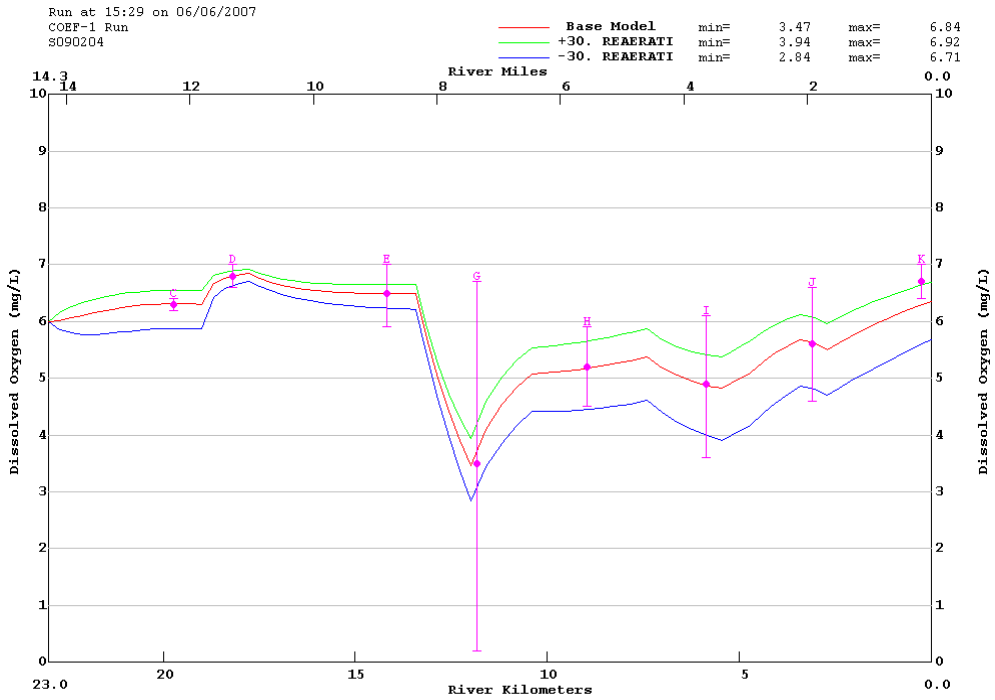


**Figure K-22. DO sensitivity results (reaeration) for subsegment 090204.**

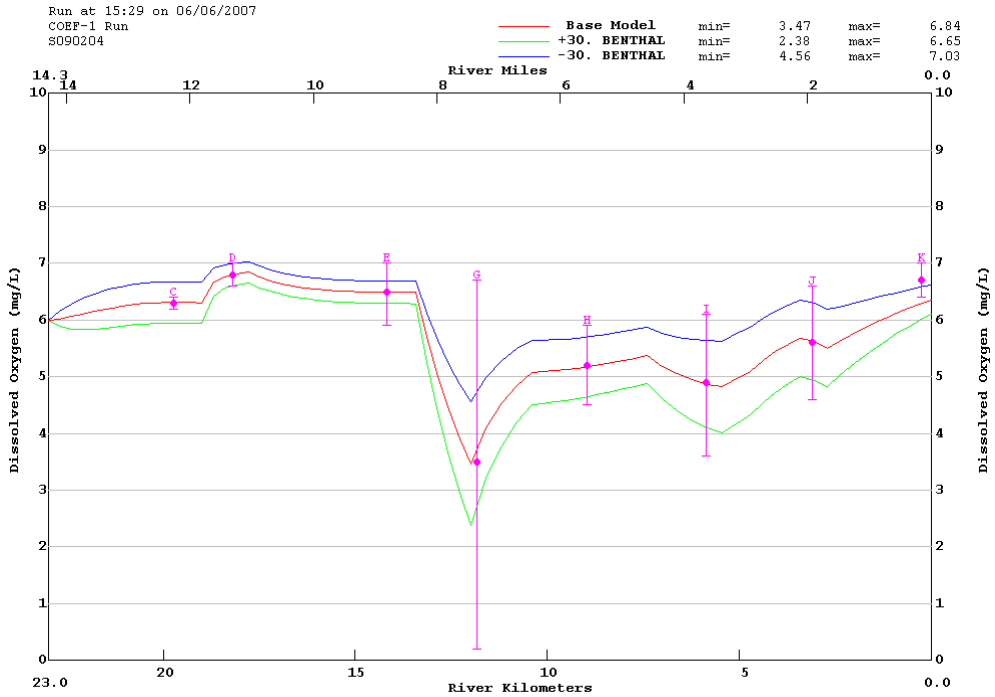


**Figure K-23. DO sensitivity results (background SOD) for subsegment 090204.**

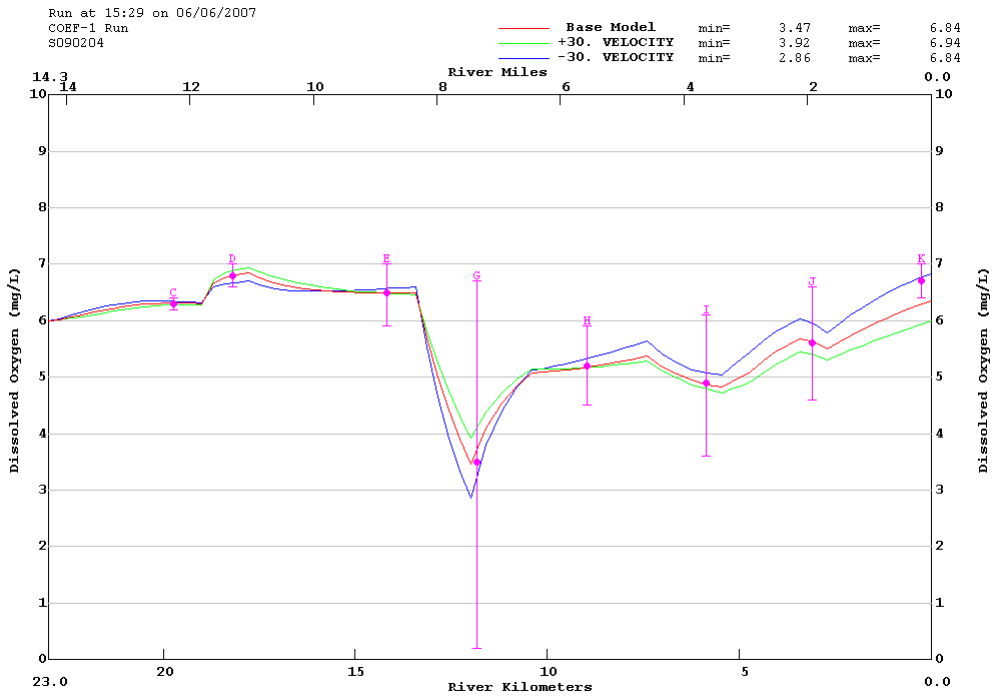


**Figure K-24. DO sensitivity results (stream velocity) for subsegment 090204.**

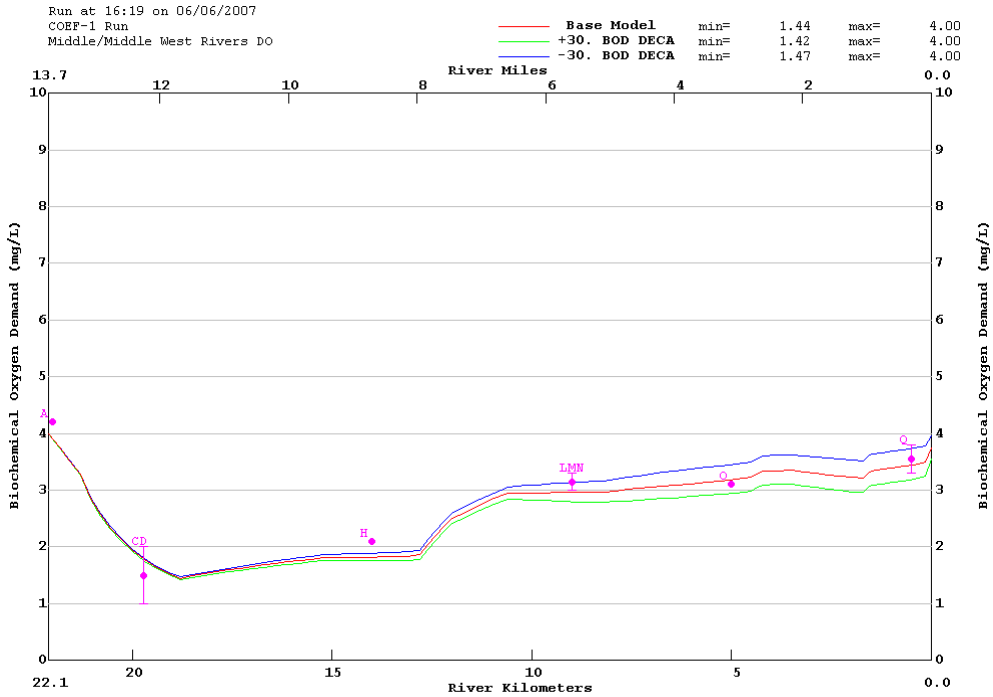


**Figure K-25. BOD sensitivity results (BOD aerobic decay rate) for subsegment 090207.**

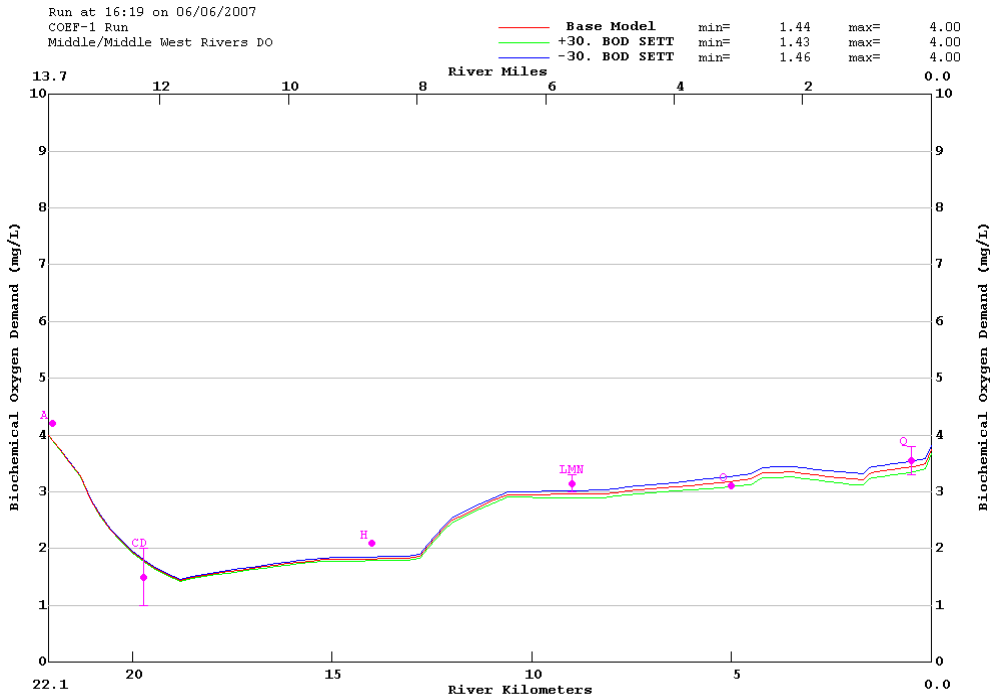


**Figure K-26. BOD sensitivity results (BOD settling rate) for subsegment 090207.**

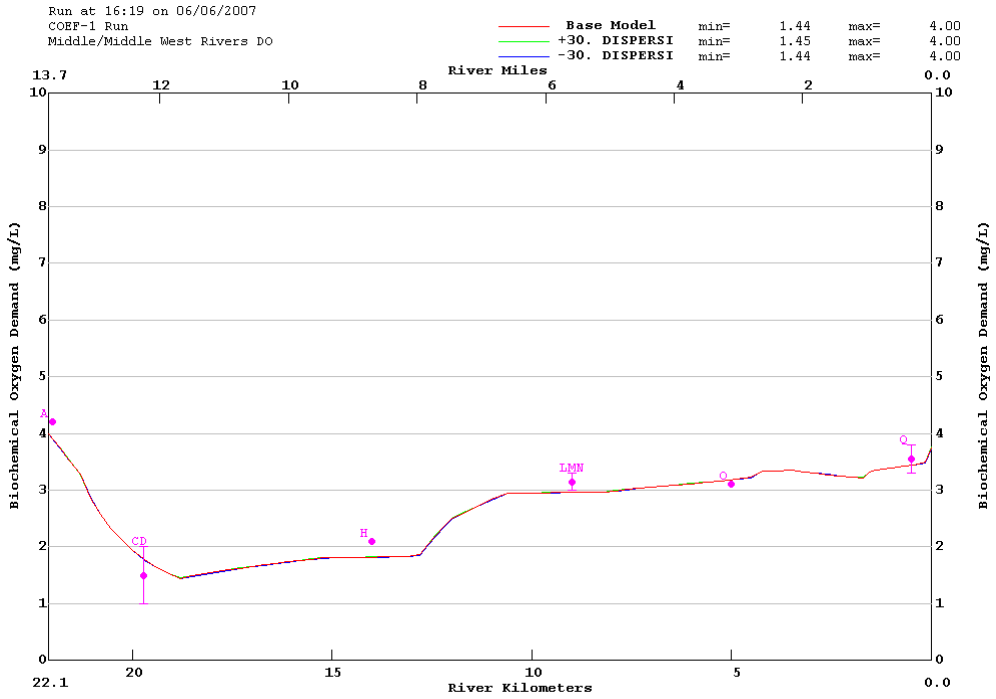


**Figure K-27. BOD sensitivity results (dispersion) for subsegment 090207.**

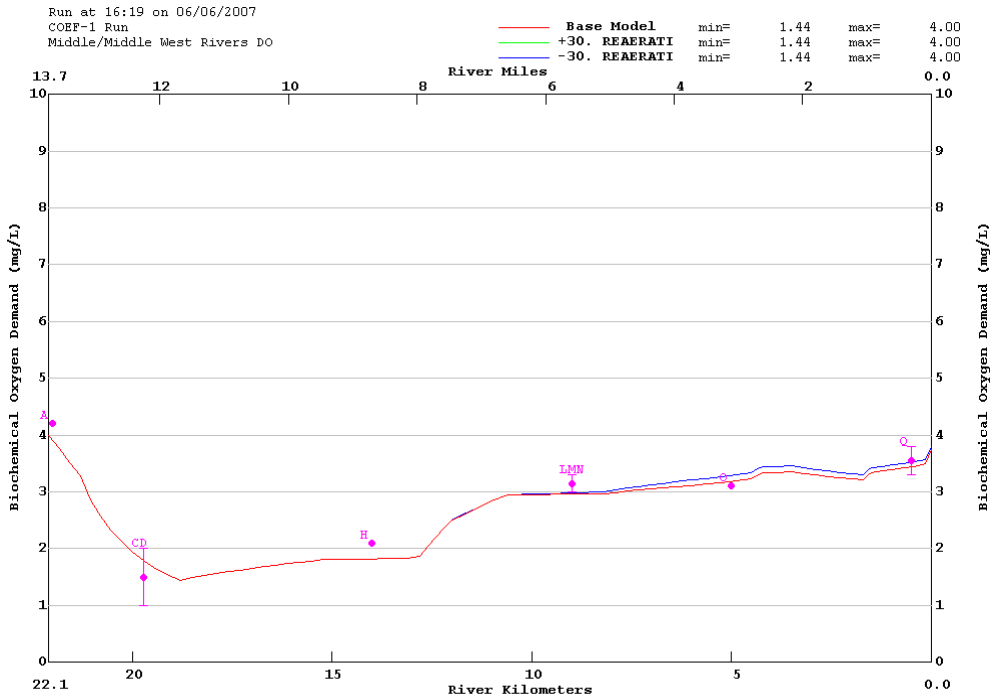


**Figure K-28. BOD sensitivity results (reaeration) for subsegment 090207.**

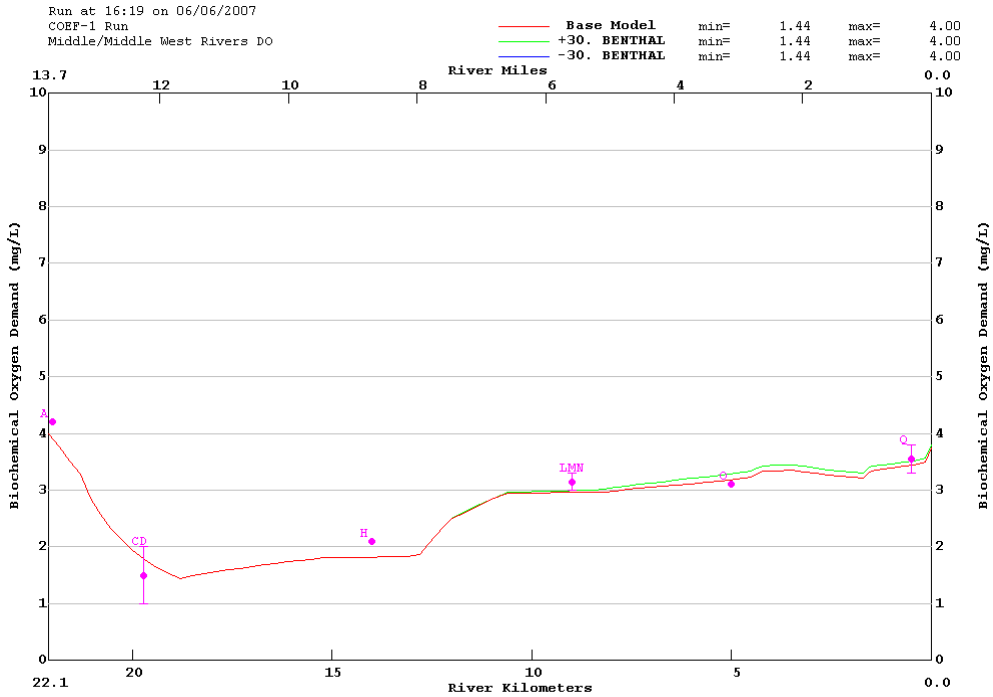


**Figure K-29. BOD sensitivity results (background SOD) for subsegment 090207.**

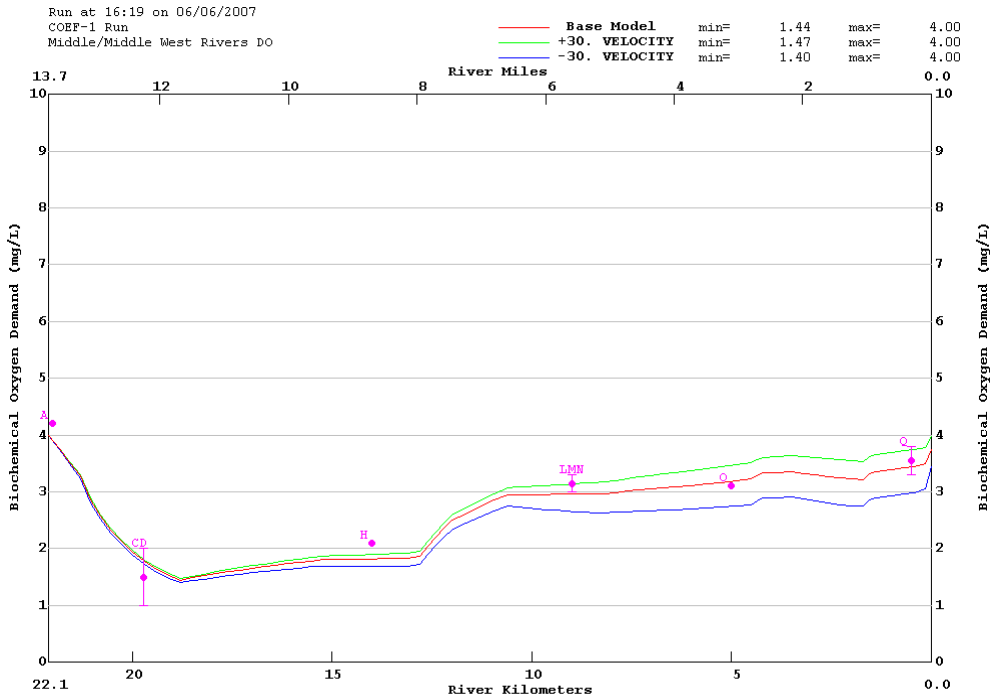


**Figure K-30. BOD sensitivity results (stream velocity) for subsegment 090207.**

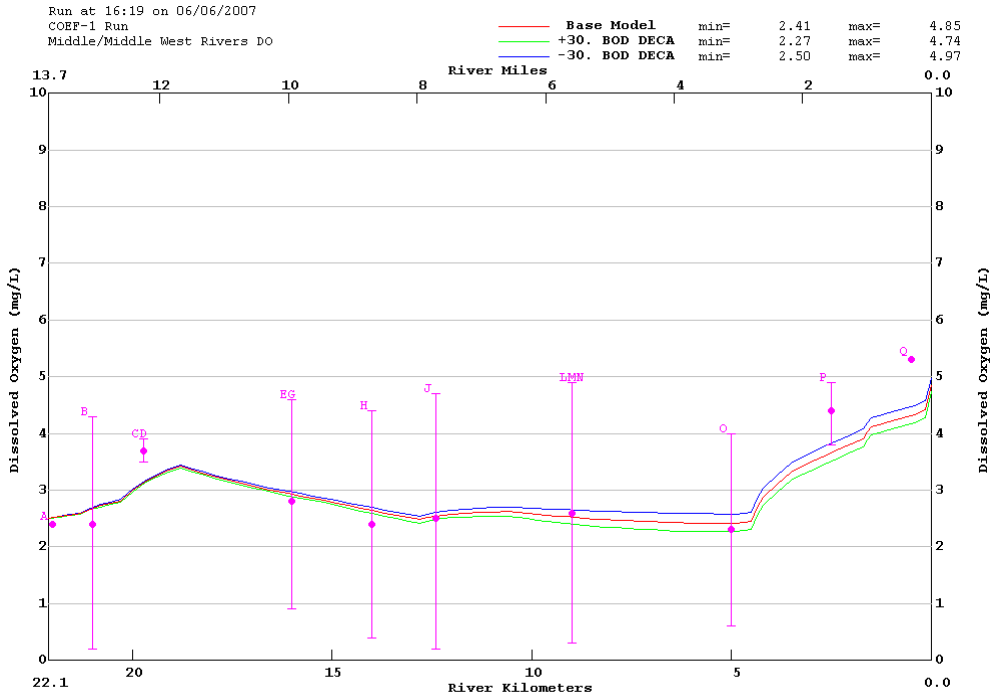


**Figure K-31. DO sensitivity results (BOD aerobic decay rate) for subsegment 090207.**

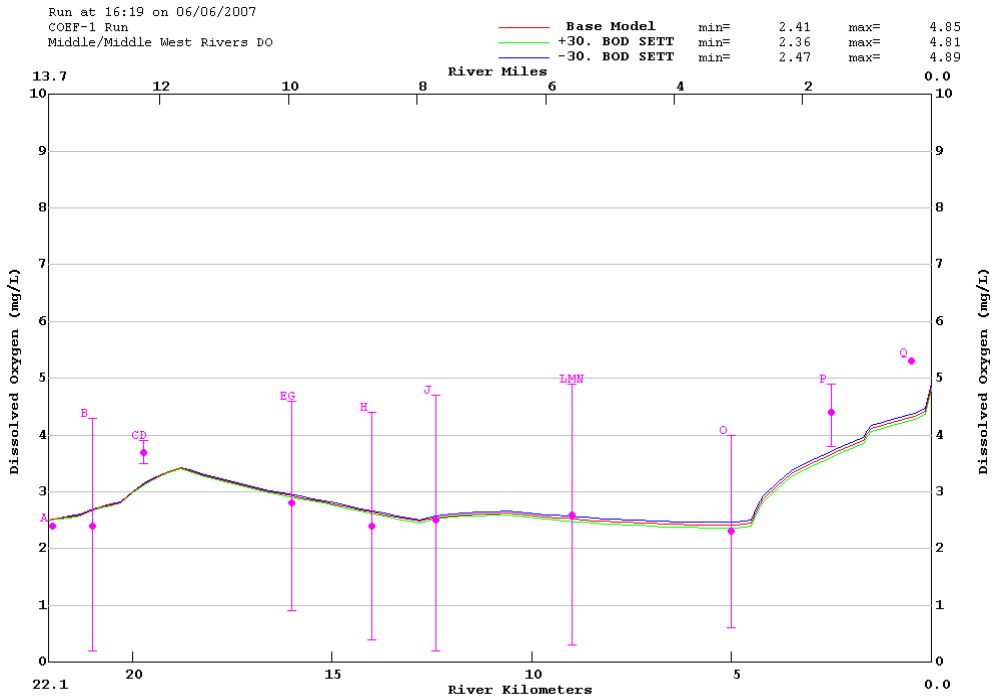


**Figure K-32. DO sensitivity results (BOD settling rate) for subsegment 090207.**

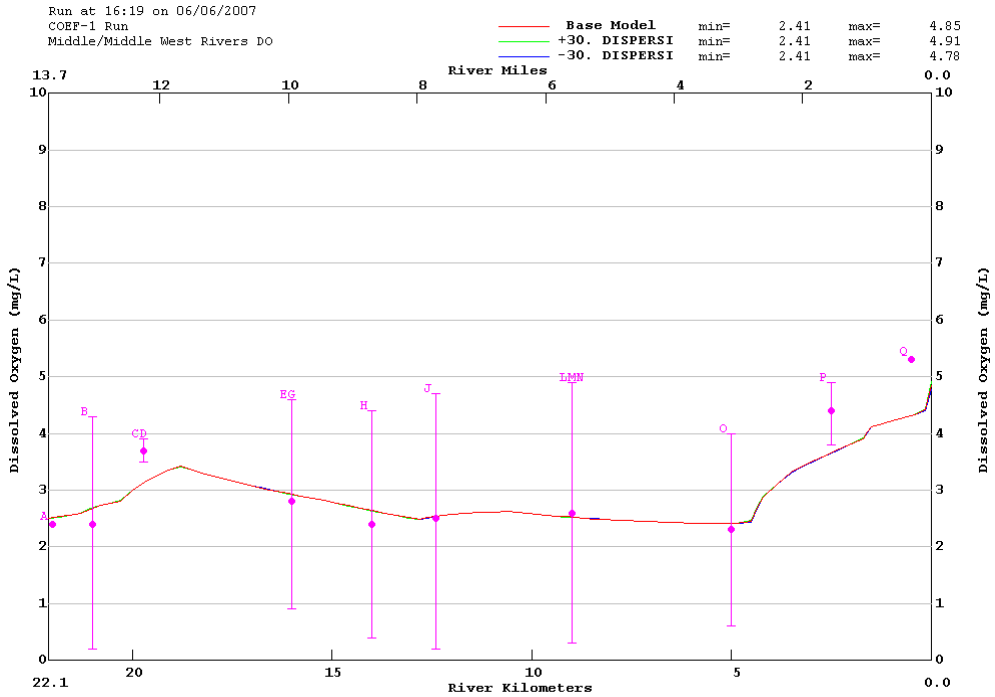


**Figure K-33. DO sensitivity results (dispersion) for subsegment 090207.**

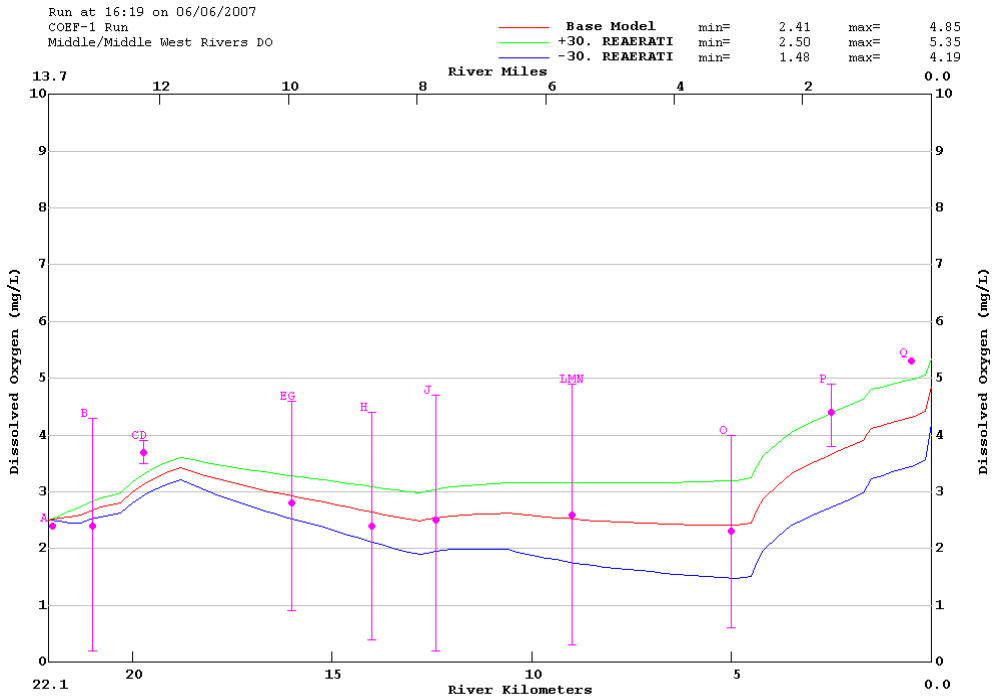


**Figure K-34. DO sensitivity results (reaeration) for subsegment 090207.**

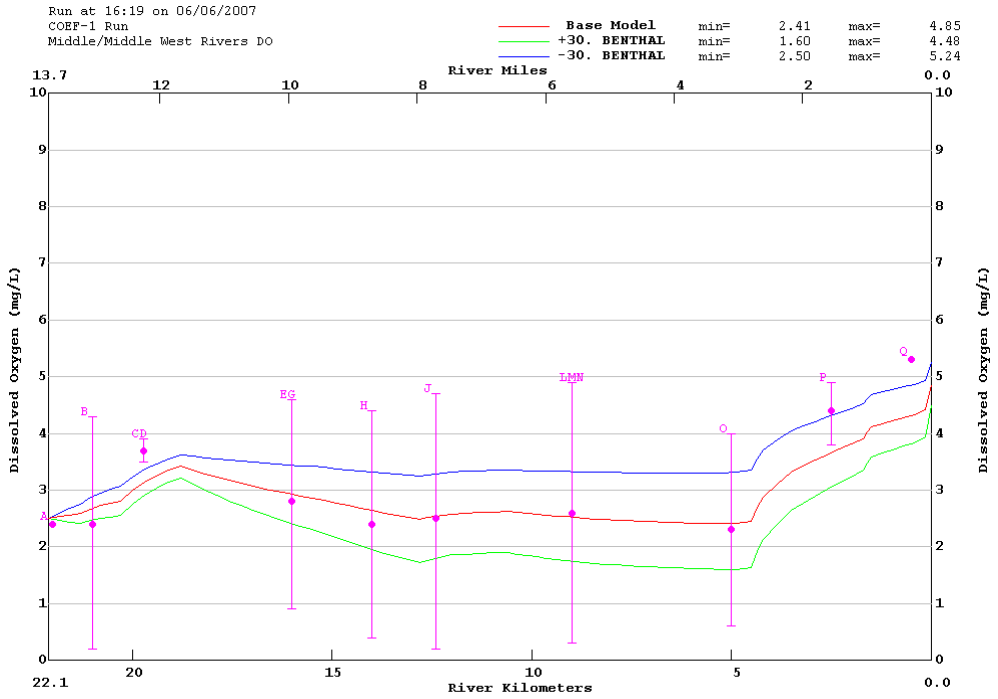


**Figure K-35. DO sensitivity results (background SOD) for subsegment 090207.**

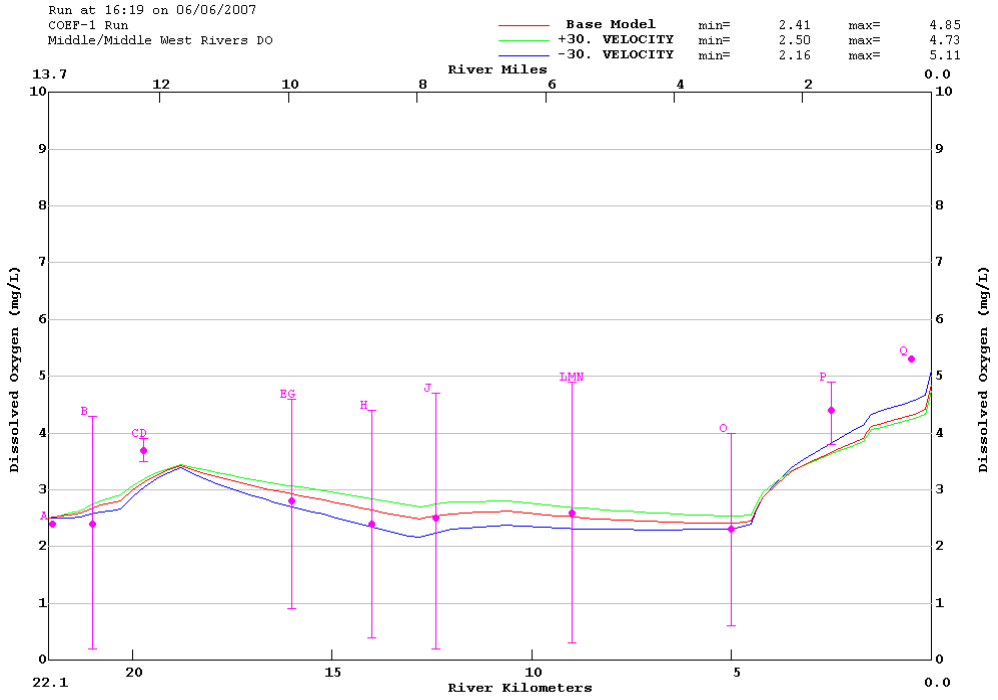


**Figure K-36. DO sensitivity results (stream velocity) for subsegment 090207.**

# APPENDIX L:
# AMMONIA TOXICITY CALCULATIONS

Table L-1. Ammonia toxicity results for subsegment 090105 ..... 1
Table L-2. Ammonia toxicity results for subsegment 090204 ..... 3
Table L-3. Ammonia toxicity results for subsegment 090207 ..... 5

**Table L-1. Ammonia toxicity results for subsegment 090105**

| Model Element | Average observed pH | Model Temperature (℃) | Predicted NH3-N (mg N/L) | Calculated CCC (mg N/L) | Above CCC? |
|---|---|---|---|---|---|
| 1 | 6.90 | 31.60 | 0.04 | 2.03 | No |
| 2 | 6.90 | 31.60 | 0.01 | 2.03 | No |
| 3 | 6.90 | 31.60 | 0.00 | 2.03 | No |
| 4 | 6.90 | 31.60 | 0.00 | 2.03 | No |
| 5 | 6.90 | 31.85 | 0.00 | 2.00 | No |
| 6 | 6.90 | 32.10 | 0.00 | 1.97 | No |
| 7 | 6.90 | 32.06 | 0.05 | 1.97 | No |
| 8 | 6.90 | 32.02 | 0.06 | 1.98 | No |
| 9 | 6.90 | 31.98 | 0.06 | 1.98 | No |
| 10 | 6.90 | 31.94 | 0.06 | 1.99 | No |
| 11 | 6.90 | 31.90 | 0.06 | 1.99 | No |
| 12 | 6.90 | 31.86 | 0.06 | 2.00 | No |
| 13 | 6.90 | 31.82 | 0.06 | 2.01 | No |
| 14 | 6.90 | 31.78 | 0.06 | 2.01 | No |
| 15 | 6.90 | 31.74 | 0.06 | 2.02 | No |
| 16 | 6.90 | 31.70 | 0.06 | 2.02 | No |
| 17 | 6.70 | 31.70 | 0.06 | 2.13 | No |
| 18 | 6.70 | 31.70 | 0.05 | 2.13 | No |
| 19 | 6.70 | 31.70 | 0.05 | 2.13 | No |
| 20 | 6.70 | 31.70 | 0.04 | 2.13 | No |
| 21 | 6.70 | 31.70 | 0.04 | 2.13 | No |
| 22 | 6.70 | 31.70 | 0.04 | 2.13 | No |
| 23 | 6.70 | 31.70 | 0.03 | 2.13 | No |
| 24 | 6.70 | 31.70 | 0.03 | 2.13 | No |
| 25 | 6.70 | 31.70 | 0.03 | 2.13 | No |
| 26 | 6.70 | 31.70 | 0.03 | 2.13 | No |
| 27 | 6.70 | 31.65 | 0.05 | 2.13 | No |
| 28 | 6.70 | 31.61 | 0.05 | 2.14 | No |
| 29 | 6.70 | 31.56 | 0.06 | 2.15 | No |
| 30 | 6.70 | 31.51 | 0.06 | 2.15 | No |
| 31 | 6.70 | 31.47 | 0.06 | 2.16 | No |
| 32 | 6.70 | 31.42 | 0.06 | 2.17 | No |
| 33 | 6.70 | 31.37 | 0.07 | 2.17 | No |
| 34 | 6.70 | 31.33 | 0.07 | 2.18 | No |
| 35 | 6.70 | 31.28 | 0.07 | 2.19 | No |
| 36 | 6.70 | 31.23 | 0.07 | 2.19 | No |
| 37 | 6.70 | 31.19 | 0.07 | 2.20 | No |
| 38 | 6.70 | 31.14 | 0.07 | 2.21 | No |
| 39 | 6.70 | 31.09 | 0.07 | 2.21 | No |
| 40 | 6.70 | 31.05 | 0.07 | 2.22 | No |
| 41 | 6.70 | 31.00 | 0.07 | 2.23 | No |
| 42 | 6.90 | 31.02 | 0.07 | 2.11 | No |
| 43 | 6.90 | 31.04 | 0.06 | 2.11 | No |
| 44 | 6.90 | 31.06 | 0.06 | 2.11 | No |

**Table L-1. (continued)**

| Model Element | Average observed pH | Model Temperature (℃) | Predicted NH3-N (mg N/L) | Calculated CCC (mg N/L) | Above CCC? |
|---|---|---|---|---|---|
| 45 | 6.90 | 31.08 | 0.06 | 2.10 | No |
| 46 | 6.90 | 31.10 | 0.05 | 2.10 | No |
| 47 | 6.90 | 31.12 | 0.05 | 2.10 | No |
| 48 | 6.90 | 31.14 | 0.05 | 2.10 | No |
| 49 | 6.90 | 31.16 | 0.05 | 2.09 | No |
| 50 | 6.90 | 31.18 | 0.05 | 2.09 | No |
| 51 | 6.90 | 31.20 | 0.04 | 2.09 | No |
| 52 | 6.90 | 31.22 | 0.04 | 2.08 | No |
| 53 | 6.90 | 31.24 | 0.04 | 2.08 | No |
| 54 | 6.90 | 31.26 | 0.04 | 2.08 | No |
| 55 | 6.90 | 31.28 | 0.04 | 2.08 | No |
| 56 | 6.90 | 31.30 | 0.03 | 2.07 | No |
| 57 | 6.90 | 31.32 | 0.03 | 2.07 | No |
| 58 | 6.90 | 31.34 | 0.03 | 2.07 | No |
| 59 | 6.90 | 31.36 | 0.03 | 2.07 | No |
| 60 | 6.90 | 31.38 | 0.03 | 2.06 | No |
| 61 | 6.90 | 31.40 | 0.03 | 2.06 | No |
| 62 | 7.10 | 31.40 | 0.03 | 1.91 | No |
| 63 | 7.10 | 31.41 | 0.02 | 1.91 | No |
| 64 | 7.10 | 31.41 | 0.02 | 1.91 | No |
| 65 | 7.10 | 31.42 | 0.02 | 1.91 | No |
| 66 | 7.10 | 31.42 | 0.02 | 1.91 | No |
| 67 | 7.10 | 31.43 | 0.02 | 1.90 | No |
| 68 | 7.10 | 31.43 | 0.02 | 1.90 | No |
| 69 | 7.10 | 31.44 | 0.02 | 1.90 | No |
| 70 | 7.10 | 31.44 | 0.02 | 1.90 | No |
| 71 | 7.10 | 31.45 | 0.02 | 1.90 | No |
| 72 | 7.10 | 31.45 | 0.02 | 1.90 | No |
| 73 | 7.10 | 31.46 | 0.02 | 1.90 | No |
| 74 | 7.10 | 31.47 | 0.02 | 1.90 | No |
| 75 | 7.10 | 31.47 | 0.02 | 1.90 | No |
| 76 | 7.10 | 31.48 | 0.02 | 1.90 | No |
| 77 | 7.10 | 31.48 | 0.02 | 1.90 | No |
| 78 | 7.10 | 31.49 | 0.02 | 1.90 | No |
| 79 | 7.10 | 31.49 | 0.02 | 1.90 | No |
| 80 | 7.10 | 31.50 | 0.01 | 1.90 | No |
| 81 | 7.10 | 31.50 | 0.01 | 1.90 | No |
| 82 | 8.00 | 31.50 | 0.02 | 0.81 | No |
| 83 | 8.00 | 31.50 | 0.02 | 0.81 | No |
| 84 | 8.00 | 31.50 | 0.02 | 0.81 | No |
| 85 | 8.00 | 31.50 | 0.02 | 0.81 | No |
| 86 | 8.00 | 31.50 | 0.02 | 0.81 | No |
| 87 | 8.00 | 31.50 | 0.02 | 0.81 | No |
| 88 | 8.00 | 31.50 | 0.02 | 0.81 | No |
| 89 | 8.00 | 31.50 | 0.02 | 0.81 | No |

**Table L-1. (continued)**

| Model Element | Average observed pH | Model Temperature (℃) | Predicted NH3-N (mg N/L) | Calculated CCC (mg N/L) | Above CCC? |
|---|---|---|---|---|---|
| 90 | 8.00 | 31.50 | 0.03 | 0.81 | No |
| 91 | 8.00 | 31.50 | 0.03 | 0.81 | No |
| 92 | 8.00 | 31.50 | 0.03 | 0.81 | No |
| 93 | 8.00 | 31.50 | 0.03 | 0.81 | No |
| 94 | 8.00 | 31.50 | 0.03 | 0.81 | No |
| 95 | 8.00 | 31.50 | 0.03 | 0.81 | No |
| 96 | 8.00 | 31.50 | 0.03 | 0.81 | No |
| 97 | 8.00 | 31.50 | 0.03 | 0.81 | No |
| 98 | 8.00 | 31.50 | 0.03 | 0.81 | No |
| 99 | 8.00 | 31.50 | 0.03 | 0.81 | No |
| 100 | 8.00 | 31.50 | 0.03 | 0.81 | No |
| 101 | 8.00 | 31.50 | 0.03 | 0.81 | No |
| 102 | 8.00 | 31.50 | 0.03 | 0.81 | No |
| 103 | 8.00 | 31.50 | 0.04 | 0.81 | No |

**Table L-2. Ammonia toxicity results for subsegment 090204**

| Model Element | Average observed pH | Model Temperature (℃) | Predicted NH3-N (mg N/L) | Calculated CCC (mg N/L) | Above CCC? |
|---|---|---|---|---|---|
| 1 | 6.75 | 32.10 | 0.01 | 2.05 | No |
| 2 | 6.75 | 32.10 | 0.00 | 2.05 | No |
| 3 | 6.75 | 32.10 | 0.00 | 2.05 | No |
| 4 | 6.75 | 32.10 | 0.00 | 2.05 | No |
| 5 | 6.75 | 32.10 | 0.00 | 2.05 | No |
| 6 | 6.75 | 32.10 | 0.00 | 2.05 | No |
| 7 | 6.75 | 32.10 | 0.00 | 2.05 | No |
| 8 | 6.75 | 32.10 | 0.00 | 2.05 | No |
| 9 | 6.75 | 32.10 | 0.00 | 2.05 | No |
| 10 | 6.75 | 32.10 | 0.00 | 2.05 | No |
| 11 | 6.75 | 32.02 | 0.00 | 2.06 | No |
| 12 | 6.75 | 31.94 | 0.00 | 2.07 | No |
| 13 | 6.75 | 31.86 | 0.00 | 2.08 | No |
| 14 | 6.75 | 31.78 | 0.00 | 2.09 | No |
| 15 | 6.75 | 31.70 | 0.00 | 2.10 | No |
| 16 | 6.70 | 31.73 | 0.33 | 2.12 | No |
| 17 | 6.70 | 31.75 | 0.34 | 2.12 | No |
| 18 | 6.70 | 31.77 | 0.34 | 2.12 | No |
| 19 | 6.70 | 31.80 | 0.34 | 2.11 | No |
| 20 | 6.45 | 31.80 | 0.31 | 2.20 | No |
| 21 | 6.45 | 31.80 | 0.28 | 2.20 | No |
| 22 | 6.45 | 31.80 | 0.26 | 2.20 | No |
| 23 | 6.45 | 31.80 | 0.24 | 2.20 | No |
| 24 | 6.45 | 31.80 | 0.22 | 2.20 | No |
| 25 | 6.45 | 31.80 | 0.20 | 2.20 | No |
| 26 | 6.45 | 31.80 | 0.19 | 2.20 | No |

**Table L-2. (continued)**

| Model Element | Average observed pH | Model Temperature (℃) | Predicted NH3-N (mg N/L) | Calculated CCC (mg N/L) | Above CCC? |
|---|---|---|---|---|---|
| 27 | 6.45 | 31.80 | 0.18 | 2.20 | No |
| 28 | 6.45 | 31.80 | 0.17 | 2.20 | No |
| 29 | 6.45 | 31.80 | 0.16 | 2.20 | No |
| 30 | 6.45 | 31.80 | 0.15 | 2.20 | No |
| 31 | 6.45 | 31.80 | 0.14 | 2.20 | No |
| 32 | 6.45 | 31.80 | 0.14 | 2.20 | No |
| 33 | 6.45 | 31.80 | 0.13 | 2.20 | No |
| 34 | 6.45 | 31.80 | 0.13 | 2.20 | No |
| 35 | 6.45 | 31.40 | 0.12 | 2.26 | No |
| 36 | 6.45 | 31.00 | 0.11 | 2.32 | No |
| 37 | 6.45 | 30.60 | 0.10 | 2.38 | No |
| 38 | 6.45 | 30.20 | 0.09 | 2.44 | No |
| 39 | 6.45 | 29.80 | 0.09 | 2.51 | No |
| 40 | 6.00 | 30.07 | 0.16 | 2.55 | No |
| 41 | 6.00 | 30.35 | 0.21 | 2.50 | No |
| 42 | 6.00 | 30.62 | 0.24 | 2.46 | No |
| 43 | 6.00 | 30.90 | 0.27 | 2.42 | No |
| 44 | 6.35 | 30.89 | 0.26 | 2.36 | No |
| 45 | 6.35 | 30.88 | 0.25 | 2.36 | No |
| 46 | 6.35 | 30.87 | 0.24 | 2.36 | No |
| 47 | 6.35 | 30.86 | 0.23 | 2.37 | No |
| 48 | 6.35 | 30.85 | 0.22 | 2.37 | No |
| 49 | 6.35 | 30.84 | 0.21 | 2.37 | No |
| 50 | 6.35 | 30.83 | 0.21 | 2.37 | No |
| 51 | 6.35 | 30.82 | 0.20 | 2.37 | No |
| 52 | 6.35 | 30.81 | 0.19 | 2.37 | No |
| 53 | 6.35 | 30.80 | 0.19 | 2.37 | No |
| 54 | 6.25 | 30.80 | 0.16 | 2.40 | No |
| 55 | 6.25 | 30.80 | 0.15 | 2.40 | No |
| 56 | 6.25 | 30.80 | 0.13 | 2.40 | No |
| 57 | 6.25 | 30.80 | 0.11 | 2.40 | No |
| 58 | 6.25 | 30.80 | 0.10 | 2.40 | No |
| 59 | 6.25 | 30.80 | 0.09 | 2.40 | No |
| 60 | 6.25 | 30.80 | 0.09 | 2.40 | No |
| 61 | 6.25 | 30.80 | 0.08 | 2.40 | No |
| 62 | 6.25 | 30.88 | 0.09 | 2.38 | No |
| 63 | 6.25 | 30.95 | 0.09 | 2.37 | No |
| 64 | 6.25 | 31.02 | 0.10 | 2.36 | No |
| 65 | 6.25 | 31.10 | 0.10 | 2.35 | No |
| 66 | 6.45 | 31.35 | 0.10 | 2.27 | No |
| 67 | 6.45 | 31.60 | 0.10 | 2.23 | No |
| 68 | 6.75 | 31.60 | 0.09 | 2.12 | No |
| 69 | 6.75 | 31.60 | 0.08 | 2.12 | No |
| 70 | 6.75 | 31.60 | 0.08 | 2.12 | No |

**Table L-2. (continued)**

| Model Element | Average observed pH | Model Temperature (℃) | Predicted NH3-N (mg N/L) | Calculated CCC (mg N/L) | Above CCC? |
|---|---|---|---|---|---|
| 71 | 6.75 | 31.60 | 0.07 | 2.12 | No |
| 72 | 6.75 | 31.60 | 0.06 | 2.12 | No |
| 73 | 6.75 | 31.60 | 0.06 | 2.12 | No |
| 74 | 6.75 | 31.60 | 0.06 | 2.12 | No |
| 75 | 6.75 | 31.60 | 0.05 | 2.12 | No |
| 76 | 6.75 | 31.60 | 0.05 | 2.12 | No |

**Table L-3. Ammonia toxicity results for subsegment 090207**

| Model Element | Average observed pH | Model Temperature (℃) | Predicted NH3-N (mg N/L) | Calculated CCC (mg N/L) | Above CCC? |
|---|---|---|---|---|---|
| 1 | 6.40 | 28.07 | 0.08 | 2.82 | No |
| 2 | 6.40 | 28.33 | 0.07 | 2.77 | No |
| 3 | 6.40 | 28.60 | 0.06 | 2.72 | No |
| 4 | 6.23 | 29.10 | 0.04 | 2.68 | No |
| 5 | 6.23 | 29.60 | 0.04 | 2.59 | No |
| 6 | 6.23 | 30.10 | 0.03 | 2.51 | No |
| 7 | 6.23 | 30.60 | 0.03 | 2.43 | No |
| 8 | 6.43 | 30.56 | 0.03 | 2.39 | No |
| 9 | 6.43 | 30.52 | 0.02 | 2.40 | No |
| 10 | 6.43 | 30.48 | 0.02 | 2.40 | No |
| 11 | 6.43 | 30.44 | 0.02 | 2.41 | No |
| 12 | 6.43 | 30.40 | 0.02 | 2.42 | No |
| 13 | 6.22 | 30.41 | 0.02 | 2.46 | No |
| 14 | 6.22 | 30.42 | 0.02 | 2.46 | No |
| 15 | 6.22 | 30.42 | 0.02 | 2.46 | No |
| 16 | 6.22 | 30.43 | 0.02 | 2.46 | No |
| 17 | 6.22 | 30.44 | 0.02 | 2.46 | No |
| 18 | 6.22 | 30.45 | 0.02 | 2.46 | No |
| 19 | 6.22 | 30.46 | 0.03 | 2.45 | No |
| 20 | 6.22 | 30.47 | 0.03 | 2.45 | No |
| 21 | 6.22 | 30.48 | 0.03 | 2.45 | No |
| 22 | 6.22 | 30.48 | 0.03 | 2.45 | No |
| 23 | 6.22 | 30.49 | 0.03 | 2.45 | No |
| 24 | 6.22 | 30.50 | 0.03 | 2.45 | No |
| 25 | 6.50 | 30.56 | 0.03 | 2.37 | No |
| 26 | 6.50 | 30.62 | 0.03 | 2.36 | No |
| 27 | 6.50 | 30.69 | 0.03 | 2.35 | No |
| 28 | 6.50 | 30.75 | 0.03 | 2.34 | No |
| 29 | 6.50 | 30.81 | 0.03 | 2.33 | No |
| 30 | 6.50 | 30.88 | 0.03 | 2.32 | No |
| 31 | 6.50 | 30.94 | 0.04 | 2.31 | No |
| 32 | 6.50 | 31.00 | 0.04 | 2.30 | No |
| 33 | 6.50 | 31.00 | 0.04 | 2.30 | No |
| 34 | 6.50 | 31.00 | 0.04 | 2.30 | No |
| 35 | 6.50 | 31.00 | 0.04 | 2.30 | No |

**Table L-3. (continued)**

| Model Element | Average observed pH | Model Temperature (℃) | Predicted NH3-N (mg N/L) | Calculated CCC (mg N/L) | Above CCC? |
|---|---|---|---|---|---|
| 36 | 6.50 | 31.00 | 0.03 | 2.30 | No |
| 37 | 6.50 | 30.88 | 0.04 | 2.32 | No |
| 38 | 6.50 | 30.75 | 0.04 | 2.34 | No |
| 39 | 6.50 | 30.62 | 0.04 | 2.36 | No |
| 40 | 6.50 | 30.50 | 0.04 | 2.38 | No |
| 41 | 6.65 | 30.50 | 0.04 | 2.32 | No |
| 42 | 6.65 | 30.50 | 0.04 | 2.32 | No |
| 43 | 6.65 | 30.50 | 0.04 | 2.32 | No |
| 44 | 6.65 | 30.50 | 0.04 | 2.32 | No |
| 45 | 6.65 | 30.50 | 0.04 | 2.32 | No |
| 46 | 6.65 | 30.50 | 0.04 | 2.32 | No |
| 47 | 6.65 | 30.50 | 0.04 | 2.32 | No |
| 48 | 6.65 | 30.50 | 0.04 | 2.32 | No |
| 49 | 6.65 | 30.50 | 0.04 | 2.32 | No |
| 50 | 6.65 | 30.50 | 0.04 | 2.32 | No |
| 51 | 6.65 | 30.50 | 0.04 | 2.32 | No |
| 52 | 6.65 | 30.50 | 0.04 | 2.32 | No |
| 53 | 6.65 | 30.50 | 0.04 | 2.32 | No |
| 54 | 6.65 | 30.50 | 0.04 | 2.32 | No |
| 55 | 6.65 | 30.50 | 0.04 | 2.32 | No |
| 56 | 6.65 | 30.50 | 0.04 | 2.32 | No |
| 57 | 6.65 | 30.50 | 0.04 | 2.32 | No |
| 58 | 6.65 | 30.50 | 0.04 | 2.32 | No |
| 59 | 6.65 | 30.50 | 0.04 | 2.32 | No |
| 60 | 6.65 | 30.50 | 0.04 | 2.32 | No |
| 61 | 6.65 | 30.50 | 0.04 | 2.32 | No |
| 62 | 6.65 | 30.50 | 0.04 | 2.32 | No |
| 63 | 6.65 | 30.50 | 0.04 | 2.32 | No |
| 64 | 6.65 | 30.60 | 0.04 | 2.31 | No |
| 65 | 6.65 | 30.70 | 0.04 | 2.29 | No |
| 66 | 7.00 | 30.70 | 0.04 | 2.08 | No |
| 67 | 7.00 | 30.70 | 0.04 | 2.08 | No |
| 68 | 7.00 | 30.70 | 0.04 | 2.08 | No |
| 69 | 7.00 | 30.70 | 0.04 | 2.08 | No |
| 70 | 7.00 | 30.70 | 0.04 | 2.08 | No |
| 71 | 7.00 | 30.70 | 0.04 | 2.08 | No |
| 72 | 7.00 | 30.60 | 0.04 | 2.10 | No |
| 73 | 7.00 | 30.50 | 0.04 | 2.11 | No |
| 74 | 7.35 | 30.50 | 0.04 | 1.75 | No |
| 75 | 7.35 | 30.50 | 0.04 | 1.75 | No |
| 76 | 7.35 | 30.50 | 0.04 | 1.75 | No |
| 77 | 7.35 | 30.50 | 0.04 | 1.75 | No |
| 78 | 7.35 | 30.50 | 0.04 | 1.75 | No |
| 79 | 7.35 | 26.25 | 0.03 | 2.30 | No |

# APPENDIX M:
# RESPNSES TO PUBLIC COMMENTS

LDEQ Comments 3/3/2008 ..... 1
General Comments..... 2
Specific Comments ..... 2
LDEQ Summary of Persistent Problems with TMDLs Developed by EPA Region 6 for Louisiana Waters ..... 4
For Parameters Other Than Dissolved Oxygen and Nutrients..... 4
For Dissolved Oxygen and Nutrients..... 6

## LDEQ Comments 3/3/2008

March 3, 2008

Diane Smith, Environmental Protection Specialist
Mail Code: 6WQNP
Water Quality Protection Division
U.S. Environmental Protection Agency
Region 6
1445 Ross Avenue
Dallas, Texas 75202-2733

RE:Comments on Federal Register: February 1, 2008 (Volume 73, Number 22)
[FRL-8523-6] Clean Water Act Section 303(d): Availability of 16 Total Maximum Daily Loads (TMDLs) in Louisiana

Dear Ms. Smith:

The Louisiana Department of Environmental Quality appreciates the opportunity to review the above referenced Notice and hereby submits the enclosed comments on the TMDLs prepared by EPA Region 6 for waters listed in the Pearl River and the Terrebonne Basins in Louisiana.

If you have any questions, please contact me at 225-219-3554.

Sincerely,

David M. Hughes
Environmental Scientist
Water Quality Assessment Division

Enclosure(s)
c: (w/enclosure)
Linda Levy, LDEQ
Barbara Romanowsky, LDEQ

## General Comments

1. If any unresolved LDEQ comments to these TMDLs become the basis for an EPA Region 6 objection of an LDEQ drafted permit or permittee objection/appeal of an LDEQ drafted permit, LDEQ shall relinquish permitting authority to EPA Region 6.

**EPA Response: In accordance with Section 1.C of the NPDES MOA (Revision 1, April 28, 2004) between LDEQ and EPA, EPA has the responsibility of providing technical and other assistance on a continuing basis, including interpretation and implementation of Federal regulations, policies, and guidelines on permitting and enforcement matters. The MOA further states that LDEQ has primary responsibilities for implementing the LPDES program in Louisiana, including applicable sections of the Federal Clean Water Act, applicable state legal authority, the applicable requirements of 40 CFR Parts 122-125 and any other applicable federal regulations, establishing LPDES program priorities with consideration of EPA Region 6 and national NPDES goals and objectives.**

**In developing the TMDLs, EPA strives to use the most accurate available information for the point sources. Also, during the public comment period if any entity including LDEQ, permittee or public has provided any significant data or information that is relevant to the calculations of the TMDLs, EPA has reviewed those data or information and revised the TMDLs as appropriate.**

## Specific Comments[1]

<u>TMDLs for DO in Selected Subsegments in the Pearl River Basin, Louisiana (090501, 090204, 090207)</u>

1. Table 6.3 Summary of WLAs for the Pearl River Basin
   a. LA0106143, Double D Meat Company, the ammonia WLA is stated as 4.0 lb/day whereas the permit limit is 4.0 mg/l average concentration. This change should be made in the table and reflected in the TMDL calculations. Table 2-3 correctly reflects the correct effluent limitations for Double D Meat Company.

      **EPA Response: This typographical error will be corrected and changes will be made throughout the document as needed.**

   b. LA0055638, MacKenzie Co, LLC. Outfalls 001 and 003 are low contamination potential stormwater runoff. It is not appropriate to assign a concentrations in accordance with footnotes [a] and [b] from the sanitary

[1] The March 3, 2008 letter and TMDL responses from LDEQ address three TMDL reports, including this document. Specific comments to other TMDL reports have been omitted from this document and are addressed in their respective documents.

general permit when these outfalls are not for sanitary wastewater. These outfalls should be removed from the TMDL or the appropriate loadings should be assigned based on the type of water being discharged.

**EPA Response: These outfalls will be removed and changes will be made throughout the document as needed.**

c. LAG480357, St. Tammany Parish Government – Bush Maintenance Barn. Outfall 002 is for the discharge of exterior vehicle and equipment washwater. It is not appropriate to assign a concentrations in accordance with footnotes [a] and [b] from the sanitary general permit when these outfalls are not for sanitary wastewater. These outfalls should be removed from the TMDL or the appropriate loadings should be assigned based on the type of water being discharged.

**EPA Response: These outfalls will be removed and changes will be made throughout the document as needed.**

2. Tables ES-4 and 2-3 should be updated to reflect the above changes.

**EPA Response: These tables will be updated along with any text, appendix, or additional tables.**

## LDEQ Summary of Persistent Problems with TMDLs Developed by EPA Region 6 for Louisiana Waters

### For Parameters Other Than Dissolved Oxygen and Nutrients

**EPA Response: These comments do not apply to this TMDL report.**

1. Inadequate or erroneous science
    a. Application of in-stream criteria at "end-of-pipe" without allowing for mixing with upstream flow (resulting in unnecessarily stringent wasteload allocations).
    b. The use of inappropriate sites for flow data when more appropriate sites are available and/or faulty calculations of flow from available data (resulting in inaccurate TMDL calculations).
    c. The use of monthly water yield for flow data instead of measured flows is inappropriate and can result in inaccurate TMDL calculations.
    d. Water quality data supposedly copied from our web site often does not agree with the web site data (resulting in errors in the statistical analysis and causing inaccurate TMDL calculations).
    e. The EPA uses average flow for TMDLs of chlorides, sulfates, and TDS rather than harmonic mean flow as called for by our regulations (resulting in inaccurate TMDL calculations).
    f. The EPA has treated non-conservative parameters such as temperature and TSS as conservatives (resulting in unnecessarily stringent wasteload allocations and nonpoint percentage reductions).
    g. In a TMDL for temperature, the EPA calculated the heat content of a lake from $0^{o}C$ rather than $0^{o}K$ and failed to address evaporation from the lake.
2. A significant portion of the flow/watershed was not taken into consideration while calculating the TMDL (resulting in inaccurate TMDL calculations).
3. Combined point source wasteload allocations for an entire basin/segment/ subsegment that do not accommodate all existing dischargers and do not include a margin of safety/growth for existing facilities or addition of new facilities (possibly resulting in unnecessarily stringent wasteload allocations which could cause major restrictions to the number and size of future permit renewals and new permits).

    *LDEQ TMDLs give facilities within the watershed, that are not a part of the model, allocations based on state policy. Thus all of the facilities that we are aware of within a subsegment are accounted for in the TMDL. LDEQ wasteload allocations contain a margin of growth to allow for facility expansions and new facilities. In those cases where the wasteload is increased or the discharge point is relocated, the Louisiana Technical Procedures provide that an increase in the total wasteload of 10 percent or more or a change in discharge location of 15 percent or more (of the wasteload) will trigger a recalculation of the TMDL and allocations.*

4. The EPA used weak correlations between TSS and turbidity to develop linear regression equations. From turbidity's numeric criteria, these equations were used to determine numeric criteria for TSS (resulting in EPA assigning numeric criteria for TSS to Louisiana streams, which conflicts with LDEQ's regulatory intentions). LDEQ takes exception to EPA's continued use of a TMDL "endpoint" in the absence of promulgated water quality criteria. TMDL's seriously impact both point and nonpoint sources and as such should not be capriciously developed for substances for which no numerical water quality criteria exists. While the methodology used for developing the endpoint is the methodology LDEQ uses for establishing water quality criteria, use of this number as the basis for a TMDL without promulgation is unacceptable.
5. By definition, load-duration curves describe the contribution of each constituent as a function of overland flow. Most of the data trend shows an inverse relationship between flows and constituent concentrations (i.e., constituent concentrations decrease with increasing flow). This trend indicates that impairments are contributed by a constant background source. Because of these factors, the proposed BMPs, which seek to reduce constituent concentrations by mitigating overland inflows, could fail to yield even the slightest reduction in the targeted impairments.
6. Many of the load-duration curves are based on the relationship between flow and drainage area. This relationship is not valid for most of the targeted waterbodies. Most of these waterbodies are tidally influenced or they are controlled by man-made control structures.
7. The landuse data used in many of these reports appears to be 10-15 years old. Much of the landuse has changed within that time due to new agricultural practices/and crop-type changes, subsidence, and urban expansion.
8. The EPA has, in several cases, added small point source dischargers to a LDEQ TMDL and subtracted that loading from the non-point "load allocation". We do not agree with this practice. The LDEQ TMDLs are specific to the 303(d) listed stream and are not calculated to apply to the entire watershed.

   *To the extent that these small/distant dischargers impact the 303(d) stream, they were already accounted for in the LDEQ TMDL as part of the distributed non-point loading, and the EPA is therefore accounting for them twice. The LDEQ has recently started listing the known small/distant dischargers separately and giving them state policy limitations. EPA needs to do that as well in their TMDLs developed for Louisiana.*
9. Discharges were estimated for the facilities with no justification as to how the estimates were calculated (which could result in inaccurately calculated WLA loads).
10. <u>TMDL Load Calculations</u> - Louisiana regulations state: "For chlorides, sulfates and total dissolved solids, criteria are to be met below the point of discharge after complete mixing. Because criteria are developed over a long-term period, harmonic mean flow will be applied for mixing." (33:IX.1115.C.8) The flow which should have been used to calculate both the current and TMDL loadings should have been the harmonic mean flow.
11. LDEQ strongly objects to establishing a TMDL for a constituent which does not have a numerical water quality criteria especially when a valid constituent which does have a criteria is available for use in protecting the water from the same type of pollution. The

sources of input data for this TMDL are not adequately documented. An adequate margin of safety was not used in the establishment of the TMDL. Numerous point source and nonpoint sources were not identified and received no allocations in the TMDL. LDEQ expects the same high standard of data documentation, presentation and justification from EPA which is required in the TMDLs prepared by LDEQ. EPA has not met this standard.

12. The EPA has developed TMDLs for parameters that are not on the court ordered list or that should, by their own stated justification, have been delisted (resulting in unnecessary load restrictions as well as increased workload for EPA and LDEQ staff).

13. Cocodrie Lake is not on the court ordered list for these parameters. EPA claims that it is mentioned in a consent order, but the LDEQ has no documentation of that order.

### For Dissolved Oxygen and Nutrients

1. Inadequate or erroneous science
    a. The use of inappropriate sites for flow data when more appropriate sites are available and/or faulty calculations of flow from available data (resulting in inaccurate TMDL calculations).

    **EPA Response: EPA reviews flow data locations and feels it chooses the most appropriate flow location site for the TMDLs being developed.**

    b. Incorrect calculations/determinations of critical flows.

    **EPA Response: for non-tidal areas, because 7Q10 values for the waterbodies are not available, the headwater and tributary flows used in calibrating the model were set to 0.1 cfs. It was assumed that during critical times, there might not be headwater flow for 7 days, making the 7Q10 equal to 0 cfs, so 0.1 cfs would be used. For tidal areas, the critical flows were set to one-third the average tidal flow.**

    c. Inappropriate use of LDEQ's defaults for calibration and projection modeling.

    **EPA Response: The primary LDEQ default values used in the DO models were the temperature correction coefficients (theta) from the LTP and the default critical low flows from the LTP. Other model inputs were typically estimated from field data or other sources; they were not LDEQ defaults.**

    d. Omission of hydrologic data which was used as the basis for the TMDL is unacceptable.

    **EPA Response: Hydrologic data for these TMDLs are included in appendices.**

    e. Omission of field notes, measurements, and lab reports which were used as the basis for the TMDL is unacceptable.

**EPA Response: EPA will include field notes in a separate appendix on a CD-ROM that will be available on request. Each report includes a section summarizing the field data that are relevant to the subsegments addressed by that report.**

f. The amount of data actually collected is inadequate to support the TMDL model and conclusions.

**EPA Response: While additional data is useful, it is not always feasible to be collected. EPA believes the data collected for these TMDLs is adequate for TMDL modeling.**

g. The calibration is not calibrated acceptably or adequately.

**EPA Response: EPA believes the models used in these TMDLs have been acceptably and adequately calibrated.**

h. Inappropriate interpretation and use of Chlorophyll a data.

**EPA Response: Chlorophyll a data have been included in the initial conditions in models where algae were believed to have a significant impact on DO, which is the normal use for chlorophyll a in steady state DO models where the full nutrient-algal cycle is not being simulated.**

i. Inadequate data to appropriately analyze the tributaries.

**EPA Response: Sufficient resources were not available to collect detailed field data on all tributaries, however, their contributions were included in the TMDLs through model calibrations.**

j. Omission of key tributaries.

**EPA Response: EPA feels key tributaries have been included in these TMDLs.**

2. Incomplete and/or inaccurate discharger inventory
   a. Some known facilities are missing.

**EPA Response: Initial point source information is obtained from LDEQ using their internal databases. EDMS is then reviewed for pertinent information. Point sources not receiving WLAs were deemed not significant.**

b. Apparently the DMRs were not reviewed.

**EPA Response: WLAs are based on permit flows and limits. DMRs were reviewed for calibration purposes.**

c. Discharges were estimated for the facilities with no justification as to how the estimates were calculated (which could result in inaccurately calculated WLA loads).

**EPA Response: EPA did not estimate discharges for these TMDLs with no justification. Information was obtained from permits, DMRs, and other information in EDMS.**

d. Loads were estimated for the facilities with no justification as to how the estimates were calculated.

**EPA Response: The TMDL section of these reports describes how facility loads were estimated.**

e. Overly conservative handling of dischargers:

The EPA has, in several cases, added small point source dischargers to a LDEQ TMDL and subtracted that loading from the non-point "load allocation". We do not agree with this practice. The LDEQ TMDLs are specific to the 303(d) listed stream and are not calculated to apply to the entire watershed.

To the extent that these small/distant dischargers impact the 303(d) stream, they were already accounted for in the LDEQ TMDL as part of the distributed non-point loading, and the EPA is therefore accounting for them twice. The LDEQ has recently started listing the known small/distant dischargers separately and giving them state policy limitations. EPA needs to do that as well in their TMDLs developed for Louisiana.

**EPA Response: EPA included small/distant dischargers to these TMDLs. Their WLAs are not taken from NPS load allocations.**

3. Water quality data supposedly copied/downloaded from our web site often does not agree with the web site data (resulting in errors in the statistical analysis and causing inaccurate TMDL calculations).

**EPA Response: This comment is not applicable for these TMDLs. During the course of the development of these TMDLs, ambient water quality data were not available online. All ambient water quality data were obtained directly from LDEQ staff or field studies.**

4. The presence of a year-round criterion for DO does not relieve EPA of the responsibility to perform winter season projection modeling.

**EPA Response: TMDLs are developed to be protective during all conditions. It is EPA's feeling that if a TMDL is protective of critical conditions, usually during the summer months, the TMDL will be protective during other times. Observed dissolved oxygen data has been reviewed and supports this conclusion.**

5. Inconsistencies between the Tabular information presented in the report and the same information presented in the Appendices. Inadequacies in the information presented (missing overlay files for example).

**EPA Response: These reports have gone through a thorough QA/QC process to correct any known inconsistencies. This comment appears to refer to TMDL reports from previous years.**

6. Inappropriate determinations/use of the MOS.

**EPA Response: For these TMDLs, EPA has used methods consistent with the LTP.**

7. The Consultants confuse information from one TMDL with information from another. Remnant tables and sentences from some previous TMDL appear in the report. Before delivering reports to Region 6, EPA's paid consultants should be responsible for carefully proofing final submittals and checking for errors made when cutting and pasting language among multiple TMDL reports.

**EPA Response: These reports have gone through a thorough QA/QC process to correct any known errors. This comment appears to refer to TMDL reports from previous years.**

8. The poor quality of all EPA TMDLs is a direct result of inadequate funding. The Consultants do not gather enough field data, measurements or samples to support the development of technically sound and complete TMDLs.

**EPA Response: EPA acknowledges this comment. EPA feels that it meets all requirements for TMDL development. EPA chooses its methods on the basis of data available and the technical requirements of the TMDL. All methods used by EPA have been verified as technically sound methods in TMDL development.**

9. The EPA has developed TMDLs for parameters that are not on the court ordered list or that should, by their own stated justification, have been delisted (resulting in unnecessary load restrictions assigned to sources as well as increased workload for EPA and LDEQ staff).

**EPA Response: All parameters and subsegments in these TMDLs are currently on the final 2004 303(d) list of impaired waterbodies.**