Appendix 11-A

VERIFICATION INPUT FILE

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TITLE01             20060313FinalVER.INP
TITLE02             Contoocook River Jaffrey
TITLE03  YES        CONSERVATIVE MINERAL I      TDS     mg/L
TITLE04   NO        CONSERVATIVE MINERAL II
TITLE05   NO        CONSERVATIVE MINERAL III
TITLE06   NO        TEMPERATURE
TITLE07  YES        BIOCHEMICAL OXYGEN DEMAND (2-STAGES)
TITLE08  YES        PHYTOPLANKTON AS CHL-A in MG/L
TITLE09  YES        PHOSPHORUS CYCLE AS P IN MG/L
TITLE10                (ORGANIC-P; DISSOLVED-P)
TITLE11  YES        NITROGEN CYCLE AS N IN MG/L
TITLE12                (ORGANIC-N; AMMONIA-N; NITRITE-N, NITRATE-N)
TITLE13  YES        DISSOLVED OXYGEN IN MG/L
TITLE14   NO        INDICATOR BACTERIA
TITLE15   NO        ARBITRARY NON-CONSERVATIVE
TITLE16  YES        PERIPHYTON IN MG CHL-A/M2
ENDTITLE
LIST DATA INPUT
WRITE OPTIONAL SUMMARY
NO FLOW AUGMENTATION
STEADY STATE SIMULATION
DISCHARGE COEFFICIENTS
PRINT SOLAR/LCD DATA
PLOT DO AND BOD
FIXED DNSTRM CONC (YES=1)         0
5D-ULT SLOW BOD CONV K CO                    5D-ULT FAST BOD CONV K CO
INPUT METRIC (YES=1)              0          OUTPUT METRIC (YES=1)             0
NUMBER OF REACHES                17          NUMBER OF JUNCTIONS               0
NUM OF HEADWATERS                 1          NUMBER OF POINT LOADS             8
TIME STEP (HOURS)                            LNTH COMP ELEMENT (mi)          0.1
MAXIMUM SSTATE ITERATIONS       200          TIME INC. FOR RPT2 (HRS)
LATITUDE OF BASIN (DEG)        42.8          LONGITIUDE OF BASIN (DEG)        72
STANDARD MERIDIAN (DEG)          75          DAY OF YEAR START TIME          224
EVAP COEF:AE (ft/hr-inHg)   0.00068          EVAP COEF:BE (ft/hr-inHg-   0.00027
ELEV OF BASIN (ft)              843          DUST ATTENUATION COEF.         0.06
ENDATA1
O UPTAKE BY NH3 OXID               4.33  O UPTAKE BY NO2 OXID(MG O/MG N)    1.14
O PROD BY ALGAE (MG O/MG A)         1.6  O UPTAKE BY ALGAE (MG O/MG A)         2
N CONTENT OF ALGAE (MG N/MG A)     0.08  P CONTENT OF ALGAE (MG P/MG A)    0.011
ALG MAX SPEC GROWTH RATE(1/DAY)     2.8  ALGAE RESPIRATION RATE (1/DAY)     0.13
N HALF SATURATION CONST (MG/L)     0.03  P HALF SATURATION CONST (MG/L)    0.005
LIN ALG SHADE CO (1/H-UGCHA/L)  0.00268  NLIN SHADE (1/H-(UGCHA/L)**2/3)  0.0165
LIGHT FUNCTION OPTION (LFNOPT)        2  LIGHT SATURATION COEF (INT/MIN)     0.3
DAILY AVERAGING OPTION (LAVOPT)       2  LIGHT AVERAGING FACTOR (AFACT)     0.94
NUMBER OF DAYLIGHT HOURS (NDLH)      14  TOTAL DAILY SOLAR RADTN (INT)   630.239
ALGY GROWTH CALC OPTION (LGROPT)      2  ALGAL PREF FOR NH3-N (PREFN)        0.9
ALG/TEMP SOLR RAD FACTOR (TFACT)   0.44  C CONTENT OF ALGAE (MG C/MG A)      0.4
OXY PROD BY PERI (MG O/MG AP)       1.6  OXY UPTAKE BY PERI (MG O/MG AP)       2
NTRGN CNT OF PERI (MG N/MG AP)     0.08  P CONTENT OF PERI (MG P/MG AP)    0.011
CARB  CNT OF PERI (MG C/MG AP)      0.4  PERI PREF FOR NH3-N (PPREFN)        0.9
MAX SPEC GRTH RATE: PERI (1/DAY)      2  RESP RATE FOR PERI (1/DAY)       0.0267
N SAT COEF FOR PERI (MG/L)         0.03  P SAT COEF FOR PERI (MG/L)       0.005
PERI LIGHT  SAT COEF (INT/MIN)      0.3  PERI DENS SAT CO (MG-CHLA/AREA)     1.5
ENDATA1A
ENDATA1B
ENDATA1C
STREAM REACH       1                      FROM         68.2    TO          67.5
STREAM REACH       2                      FROM         67.5    TO          67.2
STREAM REACH       3                      FROM         67.2    TO          66.9
STREAM REACH       4                      FROM         66.9    TO          66.5
STREAM REACH       5                      FROM         66.5    TO          66.3
STREAM REACH       6                      FROM         66.3    TO          65.6
STREAM REACH       7                      FROM         65.6    TO          65.3
STREAM REACH       8                      FROM         65.3    TO          64.9
STREAM REACH       9                      FROM         64.9    TO          64.4
STREAM REACH      10                      FROM         64.4    TO          63.6
STREAM REACH      11                      FROM         63.6    TO          62.9
STREAM REACH      12                      FROM         62.9    TO          62.8
STREAM REACH      13                      FROM         62.8    TO          61.5
STREAM REACH      14                      FROM         61.5    TO          61.3
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STREAM REACH      15                        FROM         61.3    TO          60.6
STREAM REACH      16                        FROM         60.6    TO          59.5
STREAM REACH      17                        FROM         59.5    TO          58.7
ENDATA2
ENDATA3
FLAG FIELD RCH=    1         7           1 2 2 2 2 2 7
FLAG FIELD RCH=    2         3           2 2 2
FLAG FIELD RCH=    3         3           6 2 2
FLAG FIELD RCH=    4         4           2 2 2 2
FLAG FIELD RCH=    5         2           2 2
FLAG FIELD RCH=    6         7           2 2 2 2 2 2 2
FLAG FIELD RCH=    7         3           2 6 6
FLAG FIELD RCH=    8         4           2 2 2 2
FLAG FIELD RCH=    9         5           2 2 2 7 6
FLAG FIELD RCH=   10         8           2 2 2 2 2 2 2 2
FLAG FIELD RCH=   11         7           2 2 2 2 2 2 2
FLAG FIELD RCH=   12         1           2
FLAG FIELD RCH=   13        13           2 2 2 2 2 2 2 2 2 2 2 2 2
FLAG FIELD RCH=   14         2           6 2
FLAG FIELD RCH=   15         7           2 2 2 2 2 2 2
FLAG FIELD RCH=   16        11           2 2 2 2 7 2 2 2 2 2 2
FLAG FIELD RCH=   17         8           2 2 2 2 2 2 2 5
ENDATA4
HYDRAULCS RCH=     1    0                0.7       0.1       0.40.15695443  0.05
HYDRAULCS RCH=     2    0               0.67      0.08      0.340.29068628 0.065
HYDRAULCS RCH=     3    0               0.46      0.15       0.40.29068628  0.04
HYDRAULCS RCH=     4    0               0.48      0.15     0.3750.29068628  0.04
HYDRAULCS RCH=     5    0               0.48      0.15      0.280.39605994  0.04
HYDRAULCS RCH=     6    0                0.6       0.1      0.280.39605994  0.04
HYDRAULCS RCH=     7    0               0.55       0.1      0.320.30961755  0.04
HYDRAULCS RCH=     8    0               0.55       0.1      0.250.41739805  0.04
HYDRAULCS RCH=     9    0               0.45      0.15      0.150.41739805 0.065
HYDRAULCS RCH=    10    0               0.45      0.15      0.11      0.45 0.065
HYDRAULCS RCH=    11    0              0.065      0.15       0.9      0.45  0.02
HYDRAULCS RCH=    12    0                0.4      0.15      0.15      0.45  0.03
HYDRAULCS RCH=    13    0                0.2      0.15       0.2      0.45 0.025
HYDRAULCS RCH=    14    0               0.12      0.15      0.45      0.45  0.02
HYDRAULCS RCH=    15    0               0.05     0.688     0.4070.26863542 0.025
HYDRAULCS RCH=    16    0               0.12      0.15      0.36      0.45  0.02
HYDRAULCS RCH=    17    0                0.1     0.572     0.2330.32605732  0.04
ENDATA5
ENDATA5A
CBOD/DO REACT C    1             0.2      10                     0.1       8            0.11
CBOD/DO REACT C    2             0.2      10                    0.05       8            0.11
CBOD/DO REACT C    3             0.2      10                    0.05       8            0.11
CBOD/DO REACT C    4             0.2      10                    0.05       8            0.11
CBOD/DO REACT C    5             0.2      10                    0.05       8            0.11
CBOD/DO REACT C    6             0.2      10                    0.05       8            0.11
CBOD/DO REACT C    7             0.2      10                    0.03       8            0.11
CBOD/DO REACT C    8             0.2      10                    0.03       8            0.11
CBOD/DO REACT C    9             0.2      10                    0.03       8            0.11
CBOD/DO REACT C   10             0.2      10                    0.03       8            0.11
CBOD/DO REACT C   11             0.2      10                     0.2       8            0.11
CBOD/DO REACT C   12             0.2      10                    0.05       8            0.11
CBOD/DO REACT C   13             0.2      10                    0.05       8            0.11
CBOD/DO REACT C   14             0.2      10                    0.24       8           0.054
CBOD/DO REACT C   15             0.2      10                    0.05       8           0.054
CBOD/DO REACT C   16             0.2      10                    0.12       8           0.054
CBOD/DO REACT C   17             0.2      10                    0.03       8           0.054
ENDATA6
N AND P COEF   RCH=    1   0.05  0.001      5              2   0.01  0.001             0
N AND P COEF   RCH=    2   0.05  0.001      5              2   0.01  0.001             0
N AND P COEF   RCH=    3   0.05  0.001      5              2   0.01  0.001             2
N AND P COEF   RCH=    4   0.05  0.001      5              2   0.01  0.001             2
N AND P COEF   RCH=    5   0.05  0.001      5              2   0.01  0.001             2
N AND P COEF   RCH=    6   0.05  0.001      5              2   0.01  0.001             0
N AND P COEF   RCH=    7   0.05  0.001      5              2   0.01  0.001             0
N AND P COEF   RCH=    8   0.05  0.001      5              2   0.01  0.001             0
N AND P COEF   RCH=    9   0.05  0.001      5              2   0.01  0.001             2
N AND P COEF   RCH=   10   0.05  0.001      5              2   0.01  0.001             2
N AND P COEF   RCH=   11   0.05  0.001      1              2   0.01  0.001             2
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N AND P COEF   RCH=   12   0.05  0.001      5             2   0.01  0.001             0
N AND P COEF   RCH=   13   0.05  0.001      5             2   0.01  0.001             0
N AND P COEF   RCH=   14   0.05  0.001      1             2   0.01  0.001             0
N AND P COEF   RCH=   15   0.05  0.001      5             2   0.01  0.001             0
N AND P COEF   RCH=   16   0.05  0.001      1             2   0.01  0.001             0
N AND P COEF   RCH=   17   0.05  0.001      5             2   0.01  0.001             0
ENDATA6A
ALGAE/PERI/OTHER CO    1      10     0.5    0.05    0.06      10    0.05    0.25
ALGAE/PERI/OTHER CO    2      10     0.5    0.05    0.06      10    0.05    0.25
ALGAE/PERI/OTHER CO    3      10     0.5    0.05    0.06      10    0.05    0.25
ALGAE/PERI/OTHER CO    4      10     0.5    0.05    0.06      10    0.05    0.25
ALGAE/PERI/OTHER CO    5      10     0.5    0.05    0.06      10    0.05    0.25
ALGAE/PERI/OTHER CO    6      10     0.5    0.05    0.06      10    0.05    0.25
ALGAE/PERI/OTHER CO    7      10     0.5    0.05    0.06      10    0.05    0.25
ALGAE/PERI/OTHER CO    8      10     0.5    0.05    0.06      10    0.05    0.25
ALGAE/PERI/OTHER CO    9      10     0.5    0.05    0.06      10    0.05    0.25
ALGAE/PERI/OTHER CO   10      10     0.5    0.05    0.06      10    0.05    0.25
ALGAE/PERI/OTHER CO   11      10     0.5    0.05    0.06      10    0.05       0
ALGAE/PERI/OTHER CO   12      10     0.5    0.05    0.06      10    0.05    0.25
ALGAE/PERI/OTHER CO   13      10     0.5    0.05    0.06      10    0.05    0.25
ALGAE/PERI/OTHER CO   14      10     0.5    0.05    0.06      10    0.05       0
ALGAE/PERI/OTHER CO   15      10     0.5    0.05    0.06      10    0.05    0.25
ALGAE/PERI/OTHER CO   16      10     0.5    0.05    0.06      10    0.05       0
ALGAE/PERI/OTHER CO   17      10     0.5    0.05    0.06      10    0.05    0.25
ENDATA6B
INITIAL COND-1         1  72.64   6.26          1.04  90.78
INITIAL COND-1         2  70.79   7.42         1.944  98.96
INITIAL COND-1         3  70.57   7.42         2.715  98.96
INITIAL COND-1         4  70.34   7.24         2.715  127.6
INITIAL COND-1         5  69.98   7.26         0.648 125.85
INITIAL COND-1         6   69.8    7.7         1.944  140.4
INITIAL COND-1         7  69.44   7.57         1.591 130.62
INITIAL COND-1         8  67.37   7.45         1.692  97.89
INITIAL COND-1         9  66.83   8.05         0.682  92.66
INITIAL COND-1        10  67.91   8.63         1.421  92.09
INITIAL COND-1        11  68.27   8.25         1.581  80.76
INITIAL COND-1        12  68.27   8.25         4.713  80.76
INITIAL COND-1        13  67.82   7.58         4.713  83.47
INITIAL COND-1        14  70.61   7.12         1.379   71.6
INITIAL COND-1        15  70.97   8.01         0.833  74.36
INITIAL COND-1        16  70.88   7.13         0.821  81.86
INITIAL COND-1        17  72.05   7.07         0.431  74.78
ENDATA7
INITIAL COND-2         1    1.8   0.35   0.05          0.05   0.01  0.007      1
INITIAL COND-2         2   2.16   0.26   0.24          0.12   0.01  0.004      1
INITIAL COND-2         3   2.16   0.26   0.24          0.12   0.01  0.004      1
INITIAL COND-2         4   5.45   0.52   0.18          0.62   0.07  0.148      1
INITIAL COND-2         5   4.72   0.41   0.09          0.68   0.07  0.135      1
INITIAL COND-2         6   4.36   0.45   0.05           0.7   0.07  0.116      1
INITIAL COND-2         7   3.79   0.35   0.05          0.64   0.05  0.097      1
INITIAL COND-2         8   3.08   0.25   0.05          0.63   0.05  0.068      1
INITIAL COND-2         9   2.68   0.25   0.05          0.51   0.03  0.037      1
INITIAL COND-2        10   2.89   0.25   0.05          0.46   0.03  0.031      1
INITIAL COND-2        11   2.89   0.25   0.05          0.43   0.04  0.022      1
INITIAL COND-2        12   2.89   0.25   0.05          0.43   0.04  0.022      1
INITIAL COND-2        13   2.87   0.25   0.05          0.44   0.03  0.012      1
INITIAL COND-2        14   2.51   0.25   0.05          0.37   0.03  0.009      1
INITIAL COND-2        15   1.97   0.45   0.05          0.29   0.02  0.009      1
INITIAL COND-2        16   0.69   0.25   0.05          0.25   0.02  0.008      1
INITIAL COND-2        17   1.59    0.2   0.05          0.25   0.02  0.009      1
ENDATA7A
INCR FLOW-1  RCH=      1   0.19  72.64     6            2    80
INCR FLOW-1  RCH=      2  1.636  70.79     7            2    80
INCR FLOW-1  RCH=      3  0.165  70.57     6            2    80
INCR FLOW-1  RCH=      4  0.941  70.34     6            2    80
INCR FLOW-1  RCH=      5 -0.011  69.98     6            2    80
INCR FLOW-1  RCH=      6 -0.056   69.8     6            2    80
INCR FLOW-1  RCH=      7  1.214  69.44     6            2    80
INCR FLOW-1  RCH=      8  0.014  67.37     6            2    80
INCR FLOW-1  RCH=      9  0.197  66.83     6            2    80
INCR FLOW-1  RCH=     10  0.086  67.91     6            2    80
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INCR FLOW-1  RCH=     11  0.185  68.27     6           2    80
INCR FLOW-1  RCH=     12  0.002  68.27     6           2    80
INCR FLOW-1  RCH=     13  0.523  67.82     6           2    80
INCR FLOW-1  RCH=     14  0.458  70.61     6           2    80
INCR FLOW-1  RCH=     15  0.158  70.97     6           2    80
INCR FLOW-1  RCH=     16  0.902  70.88     6           2    80
INCR FLOW-1  RCH=     17  0.851  72.05     6           2    80
ENDATA8
INCR FLOW-2  RCH=      1           0.1   0.05      0   0.01  0.001  0.015
INCR FLOW-2  RCH=      2           0.1   0.05      0   0.01  0.001  0.015
INCR FLOW-2  RCH=      3           0.1   0.05      0   0.01  0.001  0.015
INCR FLOW-2  RCH=      4           0.1   0.05      0   0.01  0.001  0.015
INCR FLOW-2  RCH=      5           0.1   0.05      0   0.01  0.001  0.015
INCR FLOW-2  RCH=      6           0.1   0.05      0   0.01  0.001  0.015
INCR FLOW-2  RCH=      7           0.1   0.05      0   0.01  0.001  0.015
INCR FLOW-2  RCH=      8           0.1   0.05      0   0.01  0.001  0.015
INCR FLOW-2  RCH=      9           0.1   0.05      0   0.01  0.001  0.015
INCR FLOW-2  RCH=     10           0.1   0.05      0   0.01  0.001  0.015
INCR FLOW-2  RCH=     11            10   0.05      0   0.01  0.001  0.015
INCR FLOW-2  RCH=     12           0.1   0.05      0   0.01  0.001  0.015
INCR FLOW-2  RCH=     13           0.1   0.05      0   0.01  0.001  0.015
INCR FLOW-2  RCH=     14           0.1   0.05      0   0.01  0.001  0.015
INCR FLOW-2  RCH=     15           0.1   0.05      0   0.01  0.001  0.015
INCR FLOW-2  RCH=     16           0.1   0.05      0   0.01  0.001  0.015
INCR FLOW-2  RCH=     17           0.1   0.05      0   0.01  0.001  0.015
ENDATA8A
ENDATA9
HEADWTR-1 HDW=    1                     1.8  72.64    5.9      0  1.645  90.66
ENDATA10
HEADWTR-2 HDW=     1                     2.8   0.35   0.05      0   0.05   0.01  0.006
ENDATA10A
POINTLD-1 PTL=    1    Jaffrey             0
POINTLD-1 PTL=    2    Jaffrey     1    0.51  70.57   7.99        11.558 570.09
POINTLD-1 PTL=    3    Town Far         0.83  69.44   7.75         0.879  72.14
POINTLD-1 PTL=    4    Gridley          2.78  69.44   7.49         0.614  44.44
POINTLD-1 PTL=    5    Upland S        -0.02
POINTLD-1 PTL=    6    Meadow B         1.61  66.83    7.9         0.429  42.03
POINTLD-1 PTL=    7    Nubanusi        14.55  70.61   7.64           0.4   47.1
POINTLD-1 PTL=    8    Peterbor        -0.39
ENDATA11
POINTLD-2 PTL=     1
POINTLD-2 PTL=     2                   47.87   2.75   2.75          4.53    0.6    2.4
POINTLD-2 PTL=     3                    1.61   0.25   0.05          0.34   0.01  0.007
POINTLD-2 PTL=     4                    2.16   0.35   0.05          0.05  0.017  0.007
POINTLD-2 PTL=     5
POINTLD-2 PTL=     6                    1.61    0.2   0.05          0.05  0.007  0.007
POINTLD-2 PTL=     7                     0.9   0.25   0.05          0.06  0.006  0.008
POINTLD-2 PTL=     8
ENDATA11A
DAM DATA    DAM NO.    1     1     1   1.6   0.7   0.9    10
DAM DATA    DAM NO.    2    12     1   1.6   0.7   0.7    12
DAM DATA    DAM NO.    3    15     1   1.6   0.8   0.9     4
DAM DATA    DAM NO.    4    17     1   1.6   0.7   0.9     5
ENDATA12
ENDATA13
ENDATA13A
BEGIN  RCH    1
PLOT   RCH    1    2    3    4    5    6    7    8    9   10   11   12   13   14
PLOT   RCH   15   16   17
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