```
C
C     SYSTEMS                                                    UNITS
C
C     -------                                                    -----
C        1 - SALINITY (SAL)                                        PPT
C
C     PHYTOPLANKTON
C        2 - WINTER DIATOMS (PHYT1)                             MG C/L
C        3 - SUMMER ASSEMBLAGE (PHYT2)                          MG C/L
C        4 - FALL ASSEMBLAGE (PHYT3)                            MG C/L
C
C     PHOSPHORUS
C        5 - REFRACTORY PARTICULATE ORGANIC (RPOP)              MG P/L
C        6 - LABILE PARTICULATE ORGANIC (LPOP)                  MG P/L
C        7 - REFRACTORY DISSOLVED ORGANIC (RDOP)                MG P/L
C        8 - LABILE DISSOLVED ORGANIC (LDOP)                    MG P/L
C        9 - TOTAL DISSOLVED INORGANIC (PO4T)                   MG P/L
C
C     NITROGEN
C       10 - REFRACTORY PARTICULATE ORGANIC (RPON)              MG N/L
C       11 - LABILE PARTICULATE ORGANIC (LPON)                  MG N/L
C       12 - REFRACTORY DISSOLVED ORGANIC (RDON)                MG N/L
C       13 - LABILE DISSOLVED ORGANIC (LDON)                    MG N/L
C       14 - TOTAL AMMONIA (NH4T)                               MG N/L
C       15 - NITRITE + NITRATE (NO23)                           MG N/L
C
C     SILICA
C       16 - BIOGENIC - UNAVAILABLE (BSI)                      MG SI/L
C       17 - TOTAL INORGANIC (SIT)                             MG SI/L
C
C     CARBON
C       18 - REFRACTORY PARTICULATE ORGANIC (RPOC)              MG C/L
C       19 - LABILE PARTICULATE ORGANIC (LPOC)                  MG C/L
C       20 - REFRACTORY DISSOLVED ORGANIC (RDOC)                MG C/L
C       21 - LABILE DISSOLVED ORGANIC (LDOC)                    MG C/L
C       22 - ALGAL EXUDATE - DISSOLVED ORGANIC (EXDOC)          MG C/L
C
C       23 - REACTIVE PARTICULATE ORGANIC - CSO/WWTP (REPOC)    MG C/L
C       24 - REACTIVE DISSOLVED ORGANIC - CSO/WWTP (REDOC)      MG C/L
C
C       25 - O2*  - AQUEOUS SOD (O2EQ)                         MG O2/L
C       26 - DISSOLVED OXYGEN (DO)                             MG O2/L
C
C**************************************************************************
C
C     CONSTANTS
C     ---------
C                  NAMES AND DESCRIPTIONS OF CONSTANTS
C
C*****         OPTIONS OR SWITCHES TO CONTROL COMPUTATIONS IN "EUTRO" TUNER    VALUE
C    NO   NAME      DESCRIPTION                                    UNITS
C    --   ----    ------------------------------------------------------
C     1   AGMOPT  ALGAL GROWTH MODEL OPTION
C                 = 0 USE STANDARD OR TRADITIONAL ALGAL GROWTH KINETICS
C                 = 1 USE JASSY-PLATT FORMULATION                          1
C                 = 2 USE LAWS-CHALUP FORMULATION
C     2   ACTALG  NUMBER OF ACTIVE ALGAL GROUPS TO SIMULATE
C                 = 1 JUST ONE GROUP WILL BE SIMULATED USING SYSTEM 2
C                 = 2 TWO GROUPS WILL BE SIMULATED USING SYSTEMS 2 AND 3     2
C                 = 3 THREE GROUPS WILL BE SIMULATED (SYSTEMS 2 THRU 4)
C     3   KAOPT   REAERATION FORMULATION OPTION
C                 = 0 USE SPATIALLY CONSTANT KL  (KA = KL/DEPTH)             1
C                 = 1 USE SPATIALLY VARIABLE KL
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C                = 2 USE WIND SHEAR FORMULATION
C    4   KEOPT   EXTINCTION COEFFICIENT OPTION
C                = 0 KE IS A CONSTANT (SPATIALLY AND TEMPORALLY
C                    INVARIANT
C                = 1 KE IS A SPATIALLY VARIABLE BUT CONSTANT IN TIME
C                    (USING 2-D PARAMETER ARRAY)
C                = 2 KE IS SPATIALLY INVARIANT BUT VARIES IN TIME
C                    (USING TIME-VARIABLE FUNCTION)
C                = 3 KE IS SPATIALLY VARIABLE AND CAN VARY IN TIME,
C                    (USING 2-D PARAMETER ARRAY AND ONE TIME-VARIABLE
C                     FUNCTION)
C                = 4 KE IS SPATIALLY AND TEMPORALLY VARIABLE                    4
C                    (REQUIRES SEPARATE INPUT FILE)
C    5   TGROPT  ALGAL GROWTH TEMPERATURE OPTION
C                = 0 USE ARRENHIUS TEMPERATURE CORRECTION FOR ALGAL GROWTH
C                = 1 USE TEMPERATURE OPTIMUM FORMULATION FOR ALGAL GROWTH        1
C
C   IF <AGMOPT> = 0 OR 1 THEN THE USER HAS CHOSEN TO USE THE STANDARD OR
C        TRADITIONAL EUTROPHICATION MODEL AND THE FOLLOWING CONSTANTS
C       (9 Thru 104) ARE SET ASIDE TO SPECIFY THE ALGAL COEFFICIENTS
C   Algal Group 1
C    9   TOPT1   OPTIMAL GROWTH TEMPERATURE FOR DIATOMS            DEG C      8.
C   10   K1BETA1 TEMPERATURE CORRECTION EFFECT ON GROWTH     (DEG C)**-2      0.004
C                RATE BELOW TOPT1
C   11   K1BETA2 TEMPERATURE CORRECTION EFFECT ON GROWTH     (DEG C)**-2      0.004
C                RATE ABOVE TOPT1
C   IF <AGMOPT> = 0 THEN
C   12   K1C     SATURATED PHYTOPLANKTON GROWTH RATE               /DAY
C                (AT TEMPERATURE = TOPT1)
C   OR IF <AGMOPT> = 1 THEN
C   12   PBMAX1  MAXIMUM PHOTOSYNTHETIC RATE            MG C/MG CHL-DAY     60.
C   13   K1T     TEMPERATURE COEFFICIENT
C   IF <AGMOPT> = 0 THEN
C   14   IS1     SATURATING ALGAL LIGHT INTENSITY               LY/DAY
C   OR IF <AGMOPT> = 1 THEN
C   14   ALPHA1  INITAL SLOPE OF PRODUCTION VS. IRRADIANCE
C                                       MG C/MG CHL-EINSTEINS M**-2      7.
C   15   KMN1    HALF SATURATION CONSTANT FOR NITROGEN           MG N/L      0.010
C   16   KMP1    HALF SATURATION CONSTANT FOR PHOSPHOROUS        MG P/L      0.001
C   17   KMS1    HALF SATURATION CONSTANT FOR SILICA            MG SI/L     0.010
C   18   K1RB    BASAL/RESTING RESPIRATION RATE -or-               /DAY
C                ENDOGENOUS RESPIRATION RATE AT 20 DEG C           /DAY      0.085
C   19   K1RT    TEMPERATURE COEFFICIENT                                     1.068
C   20   K1RG    GROWTH-RATE-DEPENDENT RESPIRATION COEFFICIENT               0.0
C   21   K1GRZC  DEATH RATE DUE TO GRAZING                         /DAY      0.120
C   22   K1GRZT  TEMPERATURE COEFFICIENT                                     1.10
C   23   CCHL1   CARBON TO CHLOROPHYLL RATIO              MG C/MG CHLA     40.0
C   24   CRBP11  CARBON TO PHOSPHORUS RATIO - NON-P LIMITED    MG C/MG P     50.0
C   25   CRBP12  CARBON TO PHOSPHORUS RATIO - P LIMITED        MG C/MG P     90.0
C   26   CRBP13  COEFFICIENT DETERMINING RANGE OF P LIMITATION    L/MG P    500.
C   27   CRBN11  CARBON TO NITROGEN RATIO - NON-N LIMITED      MG C/MG N      5.4
C   28   CRBN12  CARBON TO NITROGEN RATIO - N LIMITED          MG C/MG N     10.0
C   29   CRBN13  COEFFICIENT DETERMINING RANGE OF N LIMITATION    L/MG N     25.
C   30   CRBS11  CARBON TO SILICA RATIO - NON-SI LIMITED      MG C/MG SI      3.30
C   31   CRBS12  CARBON TO SILICA RATIO - SI LIMITED          MG C/MG SI      9.0
C   32   CRBS13  COEFFICIENT DETERMINING RANGE OF SI LIMITATION  L/MG SI     40.
C   33   XKC1    CHLOROPHYLL SELF-SHADING EXTINCTION          M2/MG CHLA      0.017
C                COEFFICIENT FOR ALGAL GROUP 1
C   34   VSBAS1  BASE ALGAL SETTLING RATE - GROUP 1               M/DAY      0.10
C   35   VSNTR1  NUTRIENT STRESSED ALGAL SETTLING RATE - GROUP 1   M/DAY      0.50
C   36   FLOCEX1 FRACTION OF PRIMARY PRODUCTIVITY GOING TO
C                LABILE ORGANIC CARBON VIA EXUDATION - GROUP 1               0.10
C
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C   Algal Group 2
C   41   TOPT2   OPTIMAL GROWTH TEMPERATURE FOR DIATOMS            DEG C     22.
C   42   K2BETA1 TEMPERATURE CORRECTION EFFECT ON GROWTH     (DEG C)**-2      0.004
C                RATE BELOW TOPT2
C   43   K2BETA2 TEMPERATURE CORRECTION EFFECT ON GROWTH     (DEG C)**-2      0.006
C                RATE ABOVE TOPT2
C   44   K2C     SATURATED PHYTOPLANKTON GROWTH RATE               /DAY
C                (AT TEMPERATURE = TOPT2)
C   OR IF <AGMOPT> = 1 THEN
C   44   PBMAX1  MAXIMUM PHOTOSYNTHETIC RATE            MG C/MG CHL-DAY    250.
C   45   K2T     TEMPERATURE COEFFICIENT
C   46   IS2     SATURATING ALGAL LIGHT INTENSITY                LY/DAY
C   OR IF <AGMOPT> = 1 THEN
C   26   ALPHA1  INITAL SLOPE OF PRODUCTION VS. IRRADIANCE                   11.
C   47   KMN2    HALF SATURATION CONSTANT FOR NITROGEN            MG N/L      0.010
C   48   KMP2    HALF SATURATION CONSTANT FOR PHOSPHOROUS         MG P/L      0.001
C   49   KMS2    HALF SATURATION CONSTANT FOR SILICA             MG SI/L     0.002
C   50   K2RB    BASAL/RESTING RESPIRATION RATE -or-               /DAY
C                ENDOGENOUS RESPIRATION RATE AT 20 DEG C           /DAY      0.150
C   51   K2RT    TEMPERATURE COEFFICIENT
C   52   K2RG    GROWTH-RATE-DEPENDENT RESPIRATION COEFFICIENT
C   53   K2GRZC  DEATH RATE DUE TO GRAZING                         /DAY      0.165
C   54   K2GRZT  TEMPERATURE COEFFICIENT                                      1.068
C   55   CCHL2   CARBON TO CHLOROPHYLL RATIO               MG C/MG CHLA     60.
C   56   CRBP21  CARBON TO PHOSPHORUS RATIO - NON-P LIMITED    MG C/MG P     40.
C   57   CRBP22  CARBON TO PHOSPHORUS RATIO - P LIMITED        MG C/MG P     90.
C   58   CRBP23  COEFFICIENT DETERMINING RANGE OF P LIMITATION    L/MG P    500.
C   59   CRBN21  CARBON TO NITROGEN RATIO - NON-N LIMITED      MG C/MG N      6.
C   60   CRBN22  CARBON TO NITROGEN RATIO - N LIMITED          MG C/MG N     12.
C   61   CRBN23  COEFFICIENT DETERMINING RANGE OF N LIMITATION    L/MG N     40.
C   62   CRBS21  CARBON TO SILICA RATIO - NON-SI LIMITED      MG C/MG SI      8.
C   63   CRBS22  CARBON TO SILICA RATIO - SI LIMITED          MG C/MG SI     20.
C   64   CRBS23  COEFFICIENT DETERMINING RANGE OF SI LIMITATION  L/MG SI     40.
C   65   XKC2    CHLOROPHYLL SELF-SHADING EXTINCTION          M2/MG CHLA      0.017
C                COEFFICIENT FOR ALGAL GROUP 2
C   66   VSBAS2  BASE ALGAL SETTLING RATE - GROUP 2               M/DAY      0.10
C   67   VSNTR2  NUTRIENT STRESSED ALGAL SETTLING RATE - GROUP 2   M/DAY      0.50
C   68   FLOCEX2 FRACTION OF PRIMARY PRODUCTIVITY GOING TO
C                LABILE ORGANIC CARBON VIA EXUDATION - GROUP 2               0.30
C
C
C   IF <AGMOPT> = 1  THEN THE USER HAS CHOSEN TO USE THE LAWS/CHALUP
C       VERSION OF EUTROPHICATION MODEL AND THE FOLLOWING CONSTANTS
C       (9 Thru 104) ARE SET ASIDE TO SPECIFY THE ALGAL COEFFICIENTS
C   Algal Group 1
C   IF <AGMOPT> = 1  THEN THE FOLLOWING CONSTANTS (6 Thru 45) ARE USED
C       BY THE EUTROPHICATION MODEL AND MUST BE SPECIFIED BY THE USER
C    9   TOPT1   OPTIMAL GROWTH TEMPERATURE FOR DIATOMS            DEG C
C   10   K1BETA1 TEMPERATURE CORRECTION EFFECT ON GROWTH     (DEG C)**-2
C                RATE BELOW TOPT1
C   11   K1BETA2 TEMPERATURE CORRECTION EFFECT ON GROWTH     (DEG C)**-2
C                RATE ABOVE TOPT1
C   12   GPRE1   GROSS PHOTOSYNTHETIC RATE PER UNIT CELL            /DAY
C                (ASSOCIATED WITH PHOTOSYNTHETIC DARK REACTIONS)
C   13   GPR01   GROSS PHOTOSYNTHETIC RATE PER UNIT CELL   M2/MOL QUANTA
C                PER UNIT LIGHT INTENSITY UNDER NUTRIENT-SATURATED
C                CONDITIONS AND ZERO IRRADIANCE
C   14   IS1     SATURATING ALGAL LIGHT INTENSITY                LY/DAY
C   15   KMN1    HALF SATURATION CONSTANT FOR NITROGEN            MG N/L
C   16   KMP1    HALF SATURATION CONSTANT FOR PHOSPHOROUS         MG P/L
C   17   KMS1    HALF SATURATION CONSTANT FOR SILICA             MG SI/L
C   18   K1RB    BASAL OR RESTING RESPIRATION RATE                 /DAY
C   19   K1RT    TEMPERATURE COEFFICIENT FOR BASAL/ENDOGENOUS
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C                RESPIRATION
C   20   K1RG    GROWTH-RATE-DEPENDENT RESPIRATION COEFFICIENT
C   21   K1GRZC  DEATH RATE DUE TO GRAZING                          /DAY
C   22   K1GRZT  TEMPERATURE COEFFICIENT
C   23   FSC1    FRACTION OF C ALLOCATED TO STRUCTURAL PURPOSES
C   24   WCCHL1  CARBON TO CHLOROPHYLL RATIO                MG C/MG CHLA
C   25   WCP1    CARBON TO PHOSPHORUS RATIO - NON-P LIMITED    MG C/MG P
C   26   WCN1    CARBON TO NITROGEN RATIO - NON-N LIMITED      MG C/MG N
C   27   WCS1    CARBON TO SILICA RATIO - NON-SI LIMITED      MG C/MG SI
C   28   QF1     QUOTIENT OF NUTRIENT-LIMITED NUTRIENT:C RATIOS
C                AT RELATIVE GROWTH RATES OF 0 AND 1
C   29   XKC1    CHLOROPHYLL SELF-SHADING EXTINCTION          M2/MG CHLA
C                COEFFICIENT FOR ALGAL GROUP 1
C   30   VSBAS1  BASE ALGAL SETTLING RATE - GROUP 1                M/DAY
C   31   VSNTR1  NUTRIENT STRESSED ALGAL SETTLING RATE - GROUP 1   M/DAY
C   32   K1T     ALGAL GROWTH TEMPERATURE CORRECTION COEFFICIENT
C   33   FLOCEX1 FRACTION OF PRIMARY PRODUCTIVITY GOING TO
C                LABILE ORGANIC CARBON VIA EXUDATION - GROUP 1
C
C   Algal Group 2
C   41   TOPT2   OPTIMAL GROWTH TEMPERATURE FOR SUMMER GROUP       DEG C
C   42   K2BETA1 TEMPERATURE CORRECTION EFFECT ON GROWTH     (DEG C)**-2
C                RATE BELOW TOPT2
C   43   K2BETA2 TEMPERATURE CORRECTION EFFECT ON GROWTH     (DEG C)**-2
C                RATE ABOVE TOPT2
C   44   GPRE2   GROSS PHOTOSYNTHETIC RATE PER UNIT CELL            /DAY
C                (ASSOCIATED WITH PHOTOSYNTHETIC DARK REACTIONS)
C   45   GPR02   GROSS PHOTOSYNTHETIC RATE PER UNIT CELL   M2/MOL QUANTA
C                PER UNIT LIGHT INTENSITY UNDER NUTRIENT-SATURATED
C                CONDITIONS AND ZERO IRRADIANCE
C   46   IS2     SATURATING ALGAL LIGHT INTENSITY                LY/DAY
C   47   KMN2    HALF SATURATION CONSTANT FOR NITROGEN            MG N/L
C   48   KMP2    HALF SATURATION CONSTANT FOR PHOSPHOROUS         MG P/L
C   49   KMS2    HALF SATURATION CONSTANT FOR SILICA             MG SI/L
C   50   K2RB    BASAL OR RESTING RESPIRATION RATE                  /DAY
C   51   K2RT    TEMPERATURE COEFFICIENT FOR BASAL/ENDOGENOUS
C                RESPIRATION
C   52   K2RG    GROWTH-RATE-DEPENDENT RESPIRATION COEFFICIENT
C   53   K2GRZC  DEATH RATE DUE TO GRAZING                          /DAY
C   54   K2GRZT  TEMPERATURE COEFFICIENT
C   55   FSC2    FRACTION OF C ALLOCATED TO STRUCTURAL PURPOSES
C   55   WCCHL2  CARBON TO CHLOROPHYLL RATIO                MG C/MG CHLA
C   57   WCP2    CARBON TO PHOSPHORUS RATIO - NON-P LIMITED    MG C/MG P
C   58   WCN2    CARBON TO NITROGEN RATIO - NON-N LIMITED      MG C/MG N
C   59   WCS2    CARBON TO SILICA RATIO - NON-SI LIMITED      MG C/MG SI
C   60   QF2     QUOTIENT OF NUTRIENT-LIMITED NUTRIENT:C RATIOS
C                AT RELATIVE GROWTH RATES OF 0 AND 1
C   61   XKC2    CHLOROPHYLL SELF-SHADING EXTINCTION          M2/MG CHLA
C                COEFFICIENT FOR ALGAL GROUP 2
C   62   VSBAS2  BASE ALGAL SETTLING RATE - GROUP 2                M/DAY
C   63   VSNTR2  NUTRIENT STRESSED ALGAL SETTLING RATE - GROUP 2   M/DAY
C   64   K2T     ALGAL GROWTH TEMPERATURE CORRECTION COEFFICIENT
C   65   FLOCEX2 FRACTION OF PRIMARY PRODUCTIVITY GOING TO
C                LABILE ORGANIC CARBON VIA EXUDATION - GROUP 2
C
C
C  105   KMPHYT  HALF SATURATION CONSTANT FOR PHYTOPLANKTON       MG C/L      0.0
C
C                   RECYCLE FRACTIONS
C  106   FRPOP   REFRACTORY PARTICULATE ORGANIC PHOSPHOROUS                   0.10
C  107   FLPOP   LABILE PARTICULATE ORGANIC PHOSPHOROUS                       0.25
C  108   FRDOP   REFRACTORY DISSOLVED ORGANIC PHOSPHOROUS                     0.10
C  109   FLDOP   LABILE DISSOLVED ORGANIC PHOSPHOROUS                         0.10
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C  110   FPO4    DISSOLVED INORGANIC PHOSPHOROUS                              0.45
C  111   FRPON   REFRACTORY PARTICULATE ORGANIC NITROGEN                      0.10
C  112   FLPON   LABILE PARTICULATE ORGANIC NITROGEN                          0.30
C  113   FRDON   REFRACTORY DISSOLVED ORGANIC NITROGEN                       0.125
C  114   FLDON   LABILE DISSOLVED ORGANIC NITROGEN                           0.125
C  115   FNH4    AMMONIA                                                      0.35
C  116   FRPOC   REFRACTORY PARTICULATE ORGANIC CARBON                       0.50
C  117   FLPOC   LABILE PARTICULATE ORGANIC CARBON                           0.40
C  118   FRDOC   REFRACTORY DISSOLVED ORGANIC CARBON                         0.10
C  119   FLDOC   LABILE DISSOLVED ORGANIC CARBON                             0.45
C
C            PHOSPHORUS HYDROLYSIS/MINERALIZATION RATES AT 20 DEG C
C  120   K57C    HYDROLYSIS RATE OF RPOP TO RDOP                  /DAY       0.010
C  121   K57T    TEMPERATURE COEFFICIENT                                     1.080
C  122   K68C    HYDROLYSIS RATE OF LPOP TO LDOP                  /DAY       0.085
C  123   K68T    TEMPERATURE COEFFICIENT                                     1.080
C  124   K79C    MINERALIZATION RATE OF RDOP TO PO4               /DAY       0.025
C  125   K79T    TEMPERATURE COEFFICIENT                                     1.080
C  126   K89C    MINERALIZATION RATE OF LDOP TO PO4               /DAY       0.100
C  127   K89T    TEMPERATURE COEFFICIENT                                     1.080
C
C             NITROGEN HYDROLYSIS/MINERALIZATION RATES AT 20 DEG C
C  128   K1012C  HYDROLYSIS RATE OF RPON TO RDON                  /DAY       0.008
C  129   K1012T  TEMPERATURE COEFFICIENT                                     1.080
C  130   K1113C  HYDROLYSIS RATE OF LPON TO LDON                  /DAY       0.050
C  131   K1113T  TEMPERATURE COEFFICIENT                                     1.080
C  132   K1214C  MINERALIZATION RATE of RDON TO NH4               /DAY       0.008
C  133   K1214T  TEMPERATURE COEFFICIENT                                     1.080
C  134   K1314C  MINERALIZATION RATE OF LDON TO NH4               /DAY       0.085
C  135   K1314T  TEMPERATURE COEFFICIENT                                     1.080
C                  NITRIFICATION/DENITIFICATION RATES
C  136   K1415C  NITRIFICATION RATE AT 20 DEG C                   /DAY       0.100
C  137   K1415T  TEMPERATURE COEFFICIENT                                     1.080
C  138   KNIT    HALF SATURATION CONSTANT FOR NITRIF-          MG O2/L      1.0
C                ICATION OXYGEN LIMITATION
C  139   K150C   DENITRIFICATION RATE AT 20 DEG C                 /DAY       0.50
C  140   K150T   TEMPERATURE COEFFICIENT                                     1.080
C  141   KNO3    MICHAELIS CONSTANT FOR DENITRIFICATION        MG O2/L      0.10
C                OXYGEN LIMITATION
C
C                   SILICA MINERALIZATION RATES AT 20 DEG C
C  142   K1617C  MINERALIZATION RATE OF BIOGENIC SI TO AVAIL SI   /DAY       0.10
C  143   K1617T  TEMPERATURE COEFFICIENT                                     1.080
C
C                   CARBON HYDROLYSIS/OXIDATION RATES AT 20 DEG C
C  144   K1820C  HYDROLYSIS RATE OF RPOC TO RDOC                  /DAY       0.010
C  145   K1820T  TEMPERATURE COEFFICIENT                                     1.080
C  146   K1921C  HYDROLYSIS RATE OF LPOC TO LDOC                  /DAY       0.20
C  147   K1921T  TEMPERATURE COEFFICIENT                                     1.080
C  148   K200C   OXIDATION RATE OF RDOC                           /DAY       0.015
C  149   K200T   TEMPERATURE COEFFICIENT                                     1.080
C  150   K210C   OXIDATION RATE OF LDOC                           /DAY       0.15
C  151   K210T   TEMPERATURE COEFFICIENT                                     1.080
C  152   KMLDOC  MICHAELIS CONSTANT FOR LDOC                     MG C/L       0.10
C  153   KDOC    HALF SATURATION CONSTANT FOR ORG CRBN OXIDATION MG O2/L      0.20
C  154   K220C   ALGAL EXUDATE DOC OXIDATION RATE                 /DAY       0.25
C  155   K220T   TEMPERATURE COEFFICIENT                                     1.080
C  156   UNUSED
C
C                REPOC/REDOC ARE ASSOCIATED WITH SANITARY/CSO SOLIDS
C  157   K2324C  HYDROLYSIS RATE OF REPOC TO REDOC                 /DAY       N.A.
C  158   K2324T  TEMPERATURE COEFFICIENT                                     N.A.
C  159   K240C   REACTIVE DOC OXIDATION RATE                       /DAY       0.30
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C  160   K240T   TEMPERATURE COEFFICIENT                                    1.080
C  161   CTOPCSO CARBON TO PHOSPHORUS RATIO OF CSO SOLIDS
C  162   CTONCSO CARBON TO NITROGEN RATIO OF CSO SOLIDS
C
C  163   K250C   OXIDATION RATE FOR AQUEOUS SOD                  /DAY      0.15
C  164   K250T   TEMPERATURE COEFFICIENT                                    1.080
C  165   KO2EQ   HALF SATURATION CONSTANT FOR O2*              MG O2/L      0.10
C
C  166   KLMIN   IF <KAOPT> = 0, THEN KLMIN = KL                 M/DAY
C                IF <KAOPT> > 0, THEN KLMIN = MINIMUM VALUE FOR KL          1.0
C  167   DIFUS   DIFFUSIVITY OF OXYGEN ACROSS THE AIR-WATER      M^2/DAY
C                INTERFACE
C  168   KAT     TEMPERATURE CORRECTION COEFFICIENT FOR ATMOSPHERIC          1.024
C                  REAERATION
C
C  169   VSBAST  TEMPERATURE CORRECTION                                     1.027
C  170   VSPOM   PARTICULATE ORGANIC MATTER SETTLING RATE          M/DAY      1.5
C  171   VSPMT   TEMPERATURE CORRECTION
C  172   VSSEDT  TEMPERATURE CORRECTION FOR DEPOSITION TO SEDIMENT           1.027
C  173   CVCSO   NON-ALGAL POM FLOCCULATION SHAPING PARAMETER
C  174   CREFCSO REFERENCE CONCENTRATION FOR POM FLOCCULATION     MG C/L
C                (CONCENTRATION AT WHICH SETTLING RATE IS ABOUT
C                 ONE HALF VMAXCSO)
C  175   VMINCSO MINIMUM SETTLING RATE FOR CSO SOLIDS              M/DAY
C  176   VMAXCSO MAXIMUM SETTLING RATE FOR CSO SOLIDS              M/DAY
C  177   KADPO4  PARTITION COEFFICIENT FOR SORBED PHOSPHORUS     L/MG SS
C  178   KADSI   PARTITION COEFFICIENT FOR SORBED SILICA         L/MG SS
C  179   VSPIM   SETTLING RATE FOR PHOSPHOURS/SILICA SORBED TO     M/DAY
C                SUSPENDED SOLIDS
C  180   KECONST BASE (CHL-A CORRECTED) EXTINCTION COEFFICIENT        /M
C                (USED WHEN KEOPT=0,2)
C  181   XKPOC   DETRITAL POC RELATED EXTINCTION COEFFICIENT     M2/MG C
C  182   XKDOC   DOC RELATED EXTINCTION COEFFICIENT              M2/MG C
C
C***********************************************************************
C
C     2-D PARAMETERS
C     --------------
C                       NAMES AND DESCRIPTIONS OF PARAMETERS
C
C       NO  NAME           DESCRIPTION                              UNITS
C
C        1 KL      TRANSFER COEFFICIENT FOR REAERATION              M/DAY
C        2 VSNET1  NET SETTLING RATE FROM WATER COLUMN              M/DAY
C                  TO THE BED FOR ALGAL GROUP NO. 1
C        3 VSNET2  NET SETTLING RATE FROM WATER COLUMN              M/DAY
C                  TO THE BED FOR ALGAL GROUP NO. 2
C        4 VSNET3  NET SETTLING RATE FROM WATER COLUMN              M/DAY
C                  TO THE BED FOR ALGAL GROUP NO. 3
C        5 VSNET4  NET SETTLING RATE FROM WATER COLUMN              M/DAY
C                  TO THE BED FOR NON-LIVING POM
C        6 KEBS    BASE (CHL-A CORRECTED) EXTINCTION COEFFICIENT      /M
C                  (USED WHEN KEOPT=1,3)
C
```