Appendix B - LakeVOC Model Input Parameter Files

Simulation 1 – VOC Conservation of Mass Input Parameter File

```
 1 Monthly Averaged Mixed Layer Temperatures in deg-C
   10.00   10.00   10.00   10.00   10.00   10.00   10.00   10.00   10.00   10.00   10.00   10.00
 1 Monthly Averaged Mixed Layer Depths in meters
   50.00   50.00   50.00   50.00   50.00   50.00   50.00   50.00   50.00   50.00   50.00   50.00
 1 Monthly Averaged Lake Depths in meters
   50.00   50.00   50.00   50.00   50.00   50.00   50.00   50.00   50.00   50.00   50.00   50.00
 1 Monthly averaged Lake Inflow in m^3/day
      0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0
 1 Monthly averaged Lake Outflow in m^3/day
      0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0
 1 Monthly Averaged Air Temperatures in deg-C
   10.00   10.00   10.00   10.00   10.00   10.00   10.00   10.00   10.00   10.00   10.00   10.00
 1 Monthly Averaged Wind Speeds in meters per second
    0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000
 1 Monthly averaged barometric pressure in atmospheres
    1.0000  1.0000  1.0000  1.0000  1.0000  1.0000  1.0000  1.0000  1.0000  1.0000  1.0000  1.0000
 1 Monthly Averaged VOC Inputs in kg/month
    0.000 100.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000
 1 Monthly Averaged Atmospheric VOC Concentrations in ppbv
    0.0000E+00   0.0000E+00   0.0000E+00   0.0000E+00   0.0000E+00   0.0000E+00   0.0000E+00   0.0000E+00
0.0000E+00   0.0000E+00   0.0000E+00   0.0000E+00
 Surface area of lake versus depth profile data
 Number of points in profile
   2
 Depth (m)   :   Lake Area (sq. meters)
     50.00          2000.00
      0.00          2000.00
 1 Monthly averaged Lake Inflow height in m
      10.0    10.0    10.0    10.0    10.0    10.0    10.0    10.0    10.0    10.0    10.0    10.0
 1 Monthly averaged Lake Outflow Height in m
      10.0    10.0    10.0    10.0    10.0    10.0    10.0    10.0    10.0    10.0    10.0    10.0
 Initial VOC epilimnion concentration in micrograms/Liter
   1.000
 VOC molecular weight in g/mole
   88.150
 Total model runtime in years
      5.000
 Time between ASCII data file data points in days
     1.0000
 Tolerance for Runge-Kutta DEQ integrator
    0.1000E-04
 Diffusivity parameterization (1 for Wilke-Chang, 2 for Wanninkhof)
    1
 Molar volume in ml/mol at boiling point for Wilke Chang
     129.39999
 Solubility parameterization (1 for exp(-(A-B/T)), 2 for Wanninkhof)
    1
 A and B coefficients to give solubility in mol/m^3-atm
      0.184000E+02       0.766600E+04
 Title for run and two lines of comments, comments not used
Simulation~1
Default~Model~Data~Set-Comment~#1
Default~Model~Data~Set-Comment~#2
 1 Biochemical degradation rates for epilimnion 1/days
      0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0
 1 Biochemical degradation rates for hypolimnion 1/days
      0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0
 Relative Humidity (%)
 100.000
```

Simulation 2 – Dilution of VOC with No Interlayer Exchange Input Parameter File

```
 1 Monthly Averaged Mixed Layer Temperatures in deg-C
  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00
 1 Monthly Averaged Mixed Layer Depths in meters
  50.00  50.00  50.00  50.00  50.00  50.00  50.00  50.00  50.00  50.00  50.00  50.00
 1 Monthly Averaged Lake Depths in meters
  50.00  50.00  50.00  50.00  50.00  50.00  50.00  50.00  50.00  50.00  50.00  50.00
 1 Monthly averaged Lake Inflow in m^3/day
    0.0    0.0    0.0    0.0  100.0  100.0    0.0    0.0    0.0    0.0    0.0    0.0
 1 Monthly averaged Lake Outflow in m^3/day
    0.0    0.0    0.0    0.0  100.0  100.0    0.0    0.0    0.0    0.0    0.0    0.0
 1 Monthly Averaged Air Temperatures in deg-C
  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00
 1 Monthly Averaged Wind Speeds in meters per second
   0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000
 1 Monthly averaged barometric pressure in atmospheres
   1.0000  1.0000  1.0000  1.0000  1.0000  1.0000  1.0000  1.0000  1.0000  1.0000  1.0000  1.0000
 1 Monthly Averaged VOC Inputs in kg/month
   0.000 100.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000
 1 Monthly Averaged Atmospheric VOC Concentrations in ppbv
   0.0000E+00  0.0000E+00  0.0000E+00  0.0000E+00  0.0000E+00  0.0000E+00  0.0000E+00  0.0000E+00
0.0000E+00  0.0000E+00  0.0000E+00  0.0000E+00
 Surface area of lake versus depth profile data
 Number of points in profile
  2
 Depth (m)   :   Lake Area (sq. meters)
    50.00          2000.00
     0.00          2000.00
 1 Monthly averaged Lake Inflow height in m
    10.0    10.0    10.0    10.0    10.0    10.0    10.0    10.0    10.0    10.0    10.0    10.0
 1 Monthly averaged Lake Outflow Height in m
    10.0    10.0    10.0    10.0    10.0    10.0    10.0    10.0    10.0    10.0    10.0    10.0
 Initial VOC epilimnion concentration in micrograms/Liter
  1.000
 VOC molecular weight in g/mole
  88.150
 Total model runtime in years
     5.000
 Time between ASCII data file data points in days
    1.0000
 Tolerance for Runge-Kutta DEQ integrator
  0.1000E-04
 Diffusivity parameterization (1 for Wilke-Chang, 2 for Wanninkhof)
  1
 Molar volume in ml/mol at boiling point for Wilke Chang
    129.40000
 Solubility parameterization (1 for exp(-(A-B/T)), 2 for Wanninkhof)
  1
 A and B coefficients to give solubility in mol/m^3-atm
     0.184000E+02      0.766600E+04
 Title for run and two lines of comments, comments not used
Simulation~2
Default~Model~Data~Set-Comment~#1
Default~Model~Data~Set-Comment~#2
 1 Biochemical degradation rates for epilimnion 1/days
    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
 1 Biochemical degradation rates for hypolimnion 1/days
    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
 Relative Humidity (%)
 100.000
```

Simulation 3 – Dilution of VOC with Stratification, No Interlayer Exchange Input Parameter File

```
 1 Monthly Averaged Mixed Layer Temperatures in deg-C
   10.00   10.00   10.00   10.00   10.00   10.00   10.00   10.00   10.00   10.00   10.00   10.00
 1 Monthly Averaged Mixed Layer Depths in meters
   25.00   25.00   25.00   25.00   25.00   25.00   25.00   25.00   25.00   25.00   25.00   25.00
 1 Monthly Averaged Lake Depths in meters
   50.00   50.00   50.00   50.00   50.00   50.00   50.00   50.00   50.00   50.00   50.00   50.00
 1 Monthly averaged Lake Inflow in m^3/day
      0.0     0.0     0.0     0.0   100.0   100.0     0.0     0.0     0.0     0.0     0.0     0.0
 1 Monthly averaged Lake Outflow in m^3/day
      0.0     0.0     0.0     0.0   100.0   100.0     0.0     0.0     0.0     0.0     0.0     0.0
 1 Monthly Averaged Air Temperatures in deg-C
   10.00   10.00   10.00   10.00   10.00   10.00   10.00   10.00   10.00   10.00   10.00   10.00
 1 Monthly Averaged Wind Speeds in meters per second
    0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000
 1 Monthly averaged barometric pressure in atmospheres
    1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000   1.0000
 1 Monthly Averaged VOC Inputs in kg/month
    0.000 100.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000
 1 Monthly Averaged Atmospheric VOC Concentrations in ppbv
    0.0000E+00   0.0000E+00   0.0000E+00   0.0000E+00   0.0000E+00   0.0000E+00   0.0000E+00   0.0000E+00
0.0000E+00   0.0000E+00   0.0000E+00   0.0000E+00
 Surface area of lake versus depth profile data
 Number of points in profile
   2
 Depth (m)   :   Lake Area (sq. meters)
     50.00          2000.00
      0.00          2000.00
 1 Monthly averaged Lake Inflow height in m
      10.0     10.0     10.0     10.0     10.0     10.0     10.0     10.0     10.0     10.0     10.0     10.0
 1 Monthly averaged Lake Outflow Height in m
      10.0     10.0     10.0     10.0     10.0     10.0     10.0     10.0     10.0     10.0     10.0     10.0
 Initial VOC epilimnion concentration in micrograms/Liter
   1.000
 VOC molecular weight in g/mole
   88.150
 Total model runtime in years
      5.000
 Time between ASCII data file data points in days
      1.0000
 Tolerance for Runge-Kutta DEQ integrator
    0.1000E-04
 Diffusivity parameterization (1 for Wilke-Chang, 2 for Wanninkhof)
    1
 Molar volume in ml/mol at boiling point for Wilke Chang
      129.40000
 Solubility parameterization (1 for exp(-(A-B/T)), 2 for Wanninkhof)
    1
 A and B coefficients to give solubility in mol/m^3-atm
       0.184000E+02       0.766600E+04
 Title for run and two lines of comments, comments not used
Simulation~3
Default~Model~Data~Set-Comment~#1
Default~Model~Data~Set-Comment~#2
 1 Biochemical degradation rates for epilimnion 1/days
      0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0
 1 Biochemical degradation rates for hypolimnion 1/days
      0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0      0.0
 Relative Humidity (%)
 100.000
```

Simulation 4 – VOC Dilution with Stratification and Interlayer Exchange, Inflow to Hypolimnion and Outflow from Epilimnion Input Parameter File

```
 1 Monthly Averaged Mixed Layer Temperatures in deg-C
  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00
 1 Monthly Averaged Mixed Layer Depths in meters
  25.00  25.00  25.00  25.00  25.00  25.00  25.00  25.00  25.00  25.00  25.00  25.00
 1 Monthly Averaged Lake Depths in meters
  50.00  50.00  50.00  50.00  50.00  50.00  50.00  50.00  50.00  50.00  50.00  50.00
 1 Monthly averaged Lake Inflow in m^3/day
     0.0    0.0    0.0    0.0  100.0  100.0    0.0    0.0    0.0    0.0    0.0    0.0
 1 Monthly averaged Lake Outflow in m^3/day
     0.0    0.0    0.0    0.0  100.0  100.0    0.0    0.0    0.0    0.0    0.0    0.0
 1 Monthly Averaged Air Temperatures in deg-C
  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00
 1 Monthly Averaged Wind Speeds in meters per second
   0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000
 1 Monthly averaged barometric pressure in atmospheres
   1.0000  1.0000  1.0000  1.0000  1.0000  1.0000  1.0000  1.0000  1.0000  1.0000  1.0000  1.0000
 1 Monthly Averaged VOC Inputs in kg/month
   0.000 100.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000
 1 Monthly Averaged Atmospheric VOC Concentrations in ppbv
   0.0000E+00  0.0000E+00  0.0000E+00  0.0000E+00  0.0000E+00  0.0000E+00  0.0000E+00  0.0000E+00
0.0000E+00  0.0000E+00  0.0000E+00  0.0000E+00
 Surface area of lake versus depth profile data
 Number of points in profile
  2
 Depth (m)   :  Lake Area (sq. meters)
    50.00          2000.00
     0.00          2000.00
 1 Monthly averaged Lake Inflow height in m
    10.0    10.0    10.0    10.0    10.0    10.0    10.0    10.0    10.0    10.0    10.0    10.0
 1 Monthly averaged Lake Outflow Height in m
    48.0    48.0    48.0    48.0    48.0    48.0    48.0    48.0    48.0    48.0    48.0    48.0
 Initial VOC epilimnion concentration in micrograms/Liter
  1.000
 VOC molecular weight in g/mole
  88.150
 Total model runtime in years
     5.000
 Time between ASCII data file data points in days
    1.0000
 Tolerance for Runge-Kutta DEQ integrator
  0.1000E-04
 Diffusivity parameterization (1 for Wilke-Chang, 2 for Wanninkhof)
  1
 Molar volume in ml/mol at boiling point for Wilke Chang
    129.40000
 Solubility parameterization (1 for exp(-(A-B/T)), 2 for Wanninkhof)
  1
 A and B coefficients to give solubility in mol/m^3-atm
     0.184000E+02      0.766600E+04
 Title for run and two lines of comments, comments not used
Simulation~4
Default~Model~Data~Set-Comment~#1
Default~Model~Data~Set-Comment~#2
 1 Biochemical degradation rates for epilimnion 1/days
     0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
 1 Biochemical degradation rates for hypolimnion 1/days
     0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
 Relative Humidity (%)
 100.000
```

Simulation 5 – VOC Dilution with Stratification and Interlayer Exchange, Inflow to Epilimnion and Outflow from Hypolimnion Input Parameter File

```
 1 Monthly Averaged Mixed Layer Temperatures in deg-C
  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00
 1 Monthly Averaged Mixed Layer Depths in meters
  25.00  25.00  25.00  25.00  25.00  25.00  25.00  25.00  25.00  25.00  25.00  25.00
 1 Monthly Averaged Lake Depths in meters
  50.00  50.00  50.00  50.00  50.00  50.00  50.00  50.00  50.00  50.00  50.00  50.00
 1 Monthly averaged Lake Inflow in m^3/day
    0.0    0.0    0.0    0.0  100.0  100.0    0.0    0.0    0.0    0.0    0.0    0.0
 1 Monthly averaged Lake Outflow in m^3/day
    0.0    0.0    0.0    0.0  100.0  100.0    0.0    0.0    0.0    0.0    0.0    0.0
 1 Monthly Averaged Air Temperatures in deg-C
  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00
 1 Monthly Averaged Wind Speeds in meters per second
   0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000
 1 Monthly averaged barometric pressure in atmospheres
   1.0000  1.0000  1.0000  1.0000  1.0000  1.0000  1.0000  1.0000  1.0000  1.0000  1.0000  1.0000
 1 Monthly Averaged VOC Inputs in kg/month
   0.000 100.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000
 1 Monthly Averaged Atmospheric VOC Concentrations in ppbv
   0.1000E+04  0.1000E+04  0.1000E+04  0.1000E+04  0.1000E+04  0.1000E+04  0.1000E+04  0.1000E+04
0.1000E+04  0.1000E+04  0.1000E+04  0.1000E+04
 Surface area of lake versus depth profile data
 Number of points in profile
  2
 Depth (m)   :  Lake Area (sq. meters)
    50.00          2000.00
     0.00          2000.00
 1 Monthly averaged Lake Inflow height in m
    48.0    48.0    48.0    48.0    48.0    48.0    48.0    48.0    48.0    48.0    48.0    48.0
 1 Monthly averaged Lake Outflow Height in m
    10.0    10.0    10.0    10.0    10.0    10.0    10.0    10.0    10.0    10.0    10.0    10.0
 Initial VOC epilimnion concentration in micrograms/Liter
  1.000
 VOC molecular weight in g/mole
  88.150
 Total model runtime in years
     5.000
 Time between ASCII data file data points in days
    1.0000
 Tolerance for Runge-Kutta DEQ integrator
  0.1000E-04
 Diffusivity parameterization (1 for Wilke-Chang, 2 for Wanninkhof)
  1
 Molar volume in ml/mol at boiling point for Wilke Chang
    129.40000
 Solubility parameterization (1 for exp(-(A-B/T)), 2 for Wanninkhof)
  1
 A and B coefficients to give solubility in mol/m^3-atm
     0.184000E+02      0.766600E+04
 Title for run and two lines of comments, comments not used
Simulation~5
Default~Model~Data~Set-Comment~#1
Default~Model~Data~Set-Comment~#2
 1 Biochemical degradation rates for epilimnion 1/days
     0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
 1 Biochemical degradation rates for hypolimnion 1/days
     0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
 Relative Humidity (%)
 100.000
```

Simulation 6 – VOC Dilution in Hypolimnion with Interlayer Exchange, Varying Lake Depth, Inflow to Hypolimnion and Outflow from Hypolimnion Input Parameter File

```
 1 Monthly Averaged Mixed Layer Temperatures in deg-C
  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00
 1 Monthly Averaged Mixed Layer Depths in meters
  25.00  25.00  25.00  25.00  25.00  25.00  25.00  25.00  25.00  25.00  25.00  25.00
 1 Monthly Averaged Lake Depths in meters
  50.00  50.00  50.00  50.00  50.00  50.00  50.00  50.00  50.00  50.00  50.00  50.00
 1 Monthly averaged Lake Inflow in m^3/day
     0.0    0.0    0.0    0.0  100.0  100.0    0.0    0.0    0.0    0.0    0.0    0.0
 1 Monthly averaged Lake Outflow in m^3/day
     0.0    0.0  328.8    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
 1 Monthly Averaged Air Temperatures in deg-C
  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00
 1 Monthly Averaged Wind Speeds in meters per second
   0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000
 1 Monthly averaged barometric pressure in atmospheres
   1.0000  1.0000  1.0000  1.0000  1.0000  1.0000  1.0000  1.0000  1.0000  1.0000  1.0000  1.0000
 1 Monthly Averaged VOC Inputs in kg/month
   0.000 100.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000
 1 Monthly Averaged Atmospheric VOC Concentrations in ppbv
   0.0000E+00  0.0000E+00  0.0000E+00  0.0000E+00  0.0000E+00  0.0000E+00  0.0000E+00  0.0000E+00
0.0000E+00  0.0000E+00  0.0000E+00  0.0000E+00
 Surface area of lake versus depth profile data
 Number of points in profile
  2
 Depth (m)   :  Lake Area (sq. meters)
    50.00          2000.00
     0.00          2000.00
 1 Monthly averaged Lake Inflow height in m
    10.0    10.0    10.0    10.0    10.0    10.0    10.0    10.0    10.0    10.0    10.0    10.0
 1 Monthly averaged Lake Outflow Height in m
    10.0    10.0    10.0    10.0    10.0    10.0    10.0    10.0    10.0    10.0    10.0    10.0
 Initial VOC epilimnion concentration in micrograms/Liter
  1.000
 VOC molecular weight in g/mole
  88.150
 Total model runtime in years
     5.000
 Time between ASCII data file data points in days
    1.0000
 Tolerance for Runge-Kutta DEQ integrator
  0.1000E-04
 Diffusivity parameterization (1 for Wilke-Chang, 2 for Wanninkhof)
  1
 Molar volume in ml/mol at boiling point for Wilke Chang
    129.40000
 Solubility parameterization (1 for exp(-(A-B/T)), 2 for Wanninkhof)
  1
 A and B coefficients to give solubility in mol/m^3-atm
     0.184000E+02      0.766600E+04
 Title for run and two lines of comments, comments not used
Simulation~6
Default~Model~Data~Set-Comment~#1
Default~Model~Data~Set-Comment~#2
 1 Biochemical degradation rates for epilimnion 1/days
     0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
 1 Biochemical degradation rates for hypolimnion 1/days
     0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
 Relative Humidity (%)
 100.000
```

Simulation 7 – Lake Equilibrium with Stratification and Interlayer Exchange, Inflow to Epilimnion and Outflow to Hypolimnion Input Parameter File

```
 1 Monthly Averaged Mixed Layer Temperatures in deg-C
  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00
 1 Monthly Averaged Mixed Layer Depths in meters
  25.00  25.00  25.00  25.00  25.00  25.00  25.00  25.00  25.00  25.00  25.00  25.00
 1 Monthly Averaged Lake Depths in meters
  50.00  50.00  50.00  50.00  50.00  50.00  50.00  50.00  50.00  50.00  50.00  50.00
 1 Monthly averaged Lake Inflow in m^3/day
     0.0    0.0    0.0    0.0 2000.0 2000.0 2000.0 2000.0 2000.0 2000.0 2000.0    0.0
 1 Monthly averaged Lake Outflow in m^3/day
     0.0    0.0    0.0    0.0 2000.0 2000.0 2000.0 2000.0 2000.0 2000.0 2000.0    0.0
 1 Monthly Averaged Air Temperatures in deg-C
  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00
 1 Monthly Averaged Wind Speeds in meters per second
   0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000
 1 Monthly averaged barometric pressure in atmospheres
   1.0000  1.0000  1.0000  1.0000  1.0000  1.0000  1.0000  1.0000  1.0000  1.0000  1.0000  1.0000
 1 Monthly Averaged VOC Inputs in kg/month
   0.000 100.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000
 1 Monthly Averaged Atmospheric VOC Concentrations in ppbv
   0.0000E+00  0.0000E+00  0.0000E+00  0.0000E+00  0.1000E+04  0.1000E+04  0.1000E+04  0.1000E+04
0.1000E+04  0.1000E+04  0.1000E+04  0.0000E+00
 Surface area of lake versus depth profile data
 Number of points in profile
  2
 Depth (m)   :  Lake Area (sq. meters)
    50.00          2000.00
     0.00          2000.00
 1 Monthly averaged Lake Inflow height in m
    48.0    48.0    48.0    48.0    48.0    48.0    48.0    48.0    48.0    48.0    48.0    48.0
 1 Monthly averaged Lake Outflow Height in m
    10.0    10.0    10.0    10.0    10.0    10.0    10.0    10.0    10.0    10.0    10.0    10.0
 Initial VOC epilimnion concentration in micrograms/Liter
  0.500
 VOC molecular weight in g/mole
  88.150
 Total model runtime in years
     5.000
 Time between ASCII data file data points in days
    1.0000
 Tolerance for Runge-Kutta DEQ integrator
  0.1000E-04
 Diffusivity parameterization (1 for Wilke-Chang, 2 for Wanninkhof)
  1
 Molar volume in ml/mol at boiling point for Wilke Chang
    129.40000
 Solubility parameterization (1 for exp(-(A-B/T)), 2 for Wanninkhof)
  1
 A and B coefficients to give solubility in mol/m^3-atm
     0.184000E+02      0.766600E+04
 Title for run and two lines of comments, comments not used
Simulation~7
Default~Model~Data~Set-Comment~#1
Default~Model~Data~Set-Comment~#2
 1 Biochemical degradation rates for epilimnion 1/days
     0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
 1 Biochemical degradation rates for hypolimnion 1/days
     0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
 Relative Humidity (%)
 100.000
```

Simulation 8 – Gas Exchange, Unstratified Lake Input Parameter File

```
 1 Monthly Averaged Mixed Layer Temperatures in deg-C
  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00
 1 Monthly Averaged Mixed Layer Depths in meters
  50.00  50.00  50.00  50.00  50.00  50.00  50.00  50.00  50.00  50.00  50.00  50.00
 1 Monthly Averaged Lake Depths in meters
  50.00  50.00  50.00  50.00  50.00  50.00  50.00  50.00  50.00  50.00  50.00  50.00
 1 Monthly averaged Lake Inflow in m^3/day
    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
 1 Monthly averaged Lake Outflow in m^3/day
    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
 1 Monthly Averaged Air Temperatures in deg-C
  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00
 1 Monthly Averaged Wind Speeds in meters per second
   0.000  0.000  0.000  5.000  5.000  5.000  5.000  0.000  0.000  0.000  0.000  0.000
 1 Monthly averaged barometric pressure in atmospheres
   1.0000  1.0000  1.0000  1.0000  1.0000  1.0000  1.0000  1.0000  1.0000  1.0000  1.0000  1.0000
 1 Monthly Averaged VOC Inputs in kg/month
   0.000 100.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000
 1 Monthly Averaged Atmospheric VOC Concentrations in ppbv
   0.0000E+00  0.0000E+00  0.0000E+00  0.0000E+00  0.0000E+00  0.0000E+00  0.0000E+00  0.0000E+00
0.0000E+00  0.0000E+00  0.0000E+00  0.0000E+00
 Surface area of lake versus depth profile data
 Number of points in profile
  2
 Depth (m)   :   Lake Area (sq. meters)
    50.00          2000.00
     0.00          2000.00
 1 Monthly averaged Lake Inflow height in m
    10.0    10.0    10.0    10.0    10.0    10.0    10.0    10.0    10.0    10.0    10.0    10.0
 1 Monthly averaged Lake Outflow Height in m
    10.0    10.0    10.0    10.0    10.0    10.0    10.0    10.0    10.0    10.0    10.0    10.0
 Initial VOC epilimnion concentration in micrograms/Liter
  0.500
 VOC molecular weight in g/mole
  88.150
 Total model runtime in years
     5.000
 Time between ASCII data file data points in days
    1.0000
 Tolerance for Runge-Kutta DEQ integrator
  0.1000E-04
 Diffusivity parameterization (1 for Wilke-Chang, 2 for Wanninkhof)
  1
 Molar volume in ml/mol at boiling point for Wilke Chang
    129.40000
 Solubility parameterization (1 for exp(-(A-B/T)), 2 for Wanninkhof)
  1
 A and B coefficients to give solubility in mol/m^3-atm
     0.184000E+02      0.766600E+04
 Title for run and two lines of comments, comments not used
Simulation~8
Default~Model~Data~Set-Comment~#1
Default~Model~Data~Set-Comment~#2
 1 Biochemical degradation rates for epilimnion 1/days
    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
 1 Biochemical degradation rates for hypolimnion 1/days
    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
 Relative Humidity (%)
 100.000
```

Simulation 9 – Gas Exchange, Unstratified Lake, Equilibration Test Input Parameter File

```
 1 Monthly Averaged Mixed Layer Temperatures in deg-C
   10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00
 1 Monthly Averaged Mixed Layer Depths in meters
   50.00  50.00  50.00  50.00  50.00  50.00  50.00  50.00  50.00  50.00  50.00  50.00
 1 Monthly Averaged Lake Depths in meters
   50.00  50.00  50.00  50.00  50.00  50.00  50.00  50.00  50.00  50.00  50.00  50.00
 1 Monthly averaged Lake Inflow in m^3/day
      0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
 1 Monthly averaged Lake Outflow in m^3/day
      0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
 1 Monthly Averaged Air Temperatures in deg-C
   10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00
 1 Monthly Averaged Wind Speeds in meters per second
    0.000  0.000  0.000 10.000 10.000 10.000 10.000 10.000 10.000 10.000 10.000 10.000
 1 Monthly averaged barometric pressure in atmospheres
    1.0000  1.0000  1.0000  1.0000  1.0000  1.0000  1.0000  1.0000  1.0000  1.0000  1.0000  1.0000
 1 Monthly Averaged VOC Inputs in kg/month
    0.000 100.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000
 1 Monthly Averaged Atmospheric VOC Concentrations in ppbv
    0.0000E+00  0.0000E+00  0.0000E+00  0.1000E+04  0.1000E+04  0.1000E+04  0.1000E+04  0.1000E+04
0.1000E+04  0.1000E+04  0.1000E+04  0.1000E+04
 Surface area of lake versus depth profile data
 Number of points in profile
   2
 Depth (m)   :   Lake Area (sq. meters)
    50.00          2000.00
     0.00          2000.00
 1 Monthly averaged Lake Inflow height in m
      10.0    10.0    10.0    10.0    10.0    10.0    10.0    10.0    10.0    10.0    10.0    10.0
 1 Monthly averaged Lake Outflow Height in m
      10.0    10.0    10.0    10.0    10.0    10.0    10.0    10.0    10.0    10.0    10.0    10.0
 Initial VOC epilimnion concentration in micrograms/Liter
   0.500
 VOC molecular weight in g/mole
   88.150
 Total model runtime in years
      5.000
 Time between ASCII data file data points in days
     1.0000
 Tolerance for Runge-Kutta DEQ integrator
    0.1000E-04
 Diffusivity parameterization (1 for Wilke-Chang, 2 for Wanninkhof)
    1
 Molar volume in ml/mol at boiling point for Wilke Chang
     129.40000
 Solubility parameterization (1 for exp(-(A-B/T)), 2 for Wanninkhof)
    1
 A and B coefficients to give solubility in mol/m^3-atm
      0.184000E+02       0.766600E+04
 Title for run and two lines of comments, comments not used
Simulation~9
Default~Model~Data~Set-Comment~#1
Default~Model~Data~Set-Comment~#2
 1 Biochemical degradation rates for epilimnion 1/days
      0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
 1 Biochemical degradation rates for hypolimnion 1/days
      0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
 Relative Humidity (%)
 100.000
```

Simulation 10 – Lake-Stratification and Lake-Volume Input Parameter File

```
 3 Daily Averaged Mixed Layer Temperatures Data Filename
D:\dabender\lakevoc\daily\$$$wat-temp.txt
 3 Daily Averaged Mixed Layer Depth Data Filename
D:\dabender\lakevoc\daily\$$$epi-dep1.txt
 3 Daily Averaged Wind Lake Depth Data Filename
D:\dabender\lakevoc\daily\$$$lk-dep.txt
 3 Daily Averaged Lake Inflow data filename
D:\dabender\lakevoc\daily\$$$inflow.txt
 3 Daily Averaged Lake Outflow data filename
D:\dabender\lakevoc\daily\$$$outflow.txt
 3 Daily Averaged Air Temperatures Data Filename
D:\dabender\lakevoc\daily\$$$atm-tavg.txt
 3 Daily Averaged Wind Speeds Data Filename
D:\dabender\lakevoc\daily\$$$atm-wind.txt
 3 Daily Averaged Barometric Pressure Data Filename
D:\dabender\lakevoc\daily\$$$atm-pres.txt
 1 Monthly Averaged VOC Inputs in kg/month
   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000
 1 Monthly Averaged Atmospheric VOC Concentrations in ppbv
   0.2100E+09   0.2100E+09   0.2100E+09   0.2100E+09   0.2100E+09   0.2100E+09   0.2100E+09   0.2100E+09
0.2100E+09   0.2200E+09   0.2200E+09   0.2200E+09
 Surface area of lake versus depth profile data
 Number of points in profile
  7
 Depth (m)   :   Lake Area (sq. meters)
    28.80        9400885.00
    28.00        9202588.00
    26.00        8846464.00
    19.70        7426011.00
    13.60        5572544.00
     7.50        3524826.00
     0.00        1691593.00
 1 Monthly averaged Lake Inflow height in m
     4.4     4.4     4.4     4.4     4.4     4.4     4.4     4.4     4.4     4.4     4.4     4.4
 1 Monthly averaged Lake Outflow Height in m
    12.1    12.1    12.1    12.1    12.1    12.1    12.1    12.1    12.1    12.1    12.1    12.1
 Initial VOC epilimnion concentration in micrograms/Liter
8999.000
 VOC molecular weight in g/mole
  32.000
 Total model runtime in years
     3.500
 Time between ASCII data file data points in days
    1.0000
 Tolerance for Runge-Kutta DEQ integrator
   0.1000E-07
 Diffusivity parameterization (1 for Wilke-Chang, 2 for Wanninkhof)
   2
 Coefficients for polynomial parameterization of Schmidt number (Wanninkhof (1992))
     0.180100E+04     0.120100E+03     0.378200E+01     0.476100E-01
 Solubility parameterization (1 for exp(-(A-B/T)), 2 for Wanninkhof)
   2
 Coefficients for polynomial parameterization of Ostwald solubility (Wanninkhof (1992))
    -0.583877E+02     0.858079E+02     0.238439E+02     0.000000E+00     0.000000E+00     0.000000E+00     0.000
 Title for run and two lines of comments, comments not used
Lake~Perris~MTBE~Data;~Atmospheric~Equilibrium~O2
Oxygen~Equilibruim
Default~Model~Data~Set-Comment~#2
 1 Biochemical degradation rates for epilimnion 1/days
     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0
 1 Biochemical degradation rates for hypolimnion 1/days
     0.0     0.0     0.0    0.00    0.02    0.02    0.03    0.03    0.03    0.00     0.0     0.0
 Relative Humidity (%)
 50.000
```

Simulation 11 – VOC Concentration Simulation with Daily Inputs Parameter File for Lake Perris

```
3 Daily Averaged Mixed-Layer Temperatures Data Filename
D:\dabender\lakevoc\daily\$$$wat-temp.txt
 3 Daily Averaged Mixed-Layer Depth Data Filename
D:\dabender\lakevoc\daily\$$$epi-dep1.txt
 3 Daily Averaged Lake Depth Data Filename
D:\dabender\lakevoc\daily\$$$lk-dep.txt
 3 Daily Averaged Lake Inflow data filename
D:\dabender\lakevoc\daily\$$$inflow.txt
 3 Daily Averaged Lake Outflow data filename
D:\dabender\lakevoc\daily\$$$outflow.txt
 3 Daily Averaged Air Temperatures Data Filename
D:\dabender\lakevoc\daily\$$$atm-tavg.txt
 3 Daily Averaged Wind Speeds Data Filename
D:\dabender\lakevoc\daily\$$$atm-wind.txt
 3 Daily Averaged Barometric Pressure Data Filename
D:\dabender\lakevoc\daily\$$$atm-pres.txt
 3 Daily Averaged VOC Input Data Filename
D:\dabender\lakevoc\daily\$$$boatcal.txt
 3 Daily Averaged Atm. VOC Concentration Data Filename
D:\dabender\lakevoc\daily\$$$air-conc.txt
 Surface area of lake versus depth profile data
 Number of points in profile
  7
 Depth (m)   :   Lake Area (m^2)
    28.80         9400885.00
     28.00        9202588.00
     26.00        8846464.00
     19.70        7426011.00
     13.60        5572544.00
      7.50        3524826.00
      0.00        1691593.00
 1 Monthly Averaged Lake Inflow height in meters
      4.4     4.4     4.4     4.4     4.4     4.4     4.4     4.4     4.4     4.4     4.4     4.4
 1 Monthly Averaged Lake Outflow Height in meters
     12.1    12.1    12.1    12.1    12.1    12.1    12.1    12.1    12.1    12.1    12.1    12.1
 Initial VOC Epilimnion Concentration in micrograms/Liter
  4.800
 VOC Molecular Weight in g/mol
  88.150
 Total Model Runtime in years
      5.000
 Time between ASCII Data File Data Points in days
     1.0000
 Tolerance for Runge-Kutta DEQ integrator
    0.1000E-07
 Diffusivity characterization (1 for Wilke-Chang, 2 for Wanninkhof)
   1
 Molar Volume in ml/mol at Boiling Point for Wilke-Chang
     129.40000
 Solubility characterization (1 for exp(-(A-B/T)), 2 for Wanninkhof)
   1
 A and B Coefficients to Give Solubility in atm-m^3/mol
      0.184000E+02       0.766600E+04
 Title for Run and Two Lines of Comments, comments not used
Lake~Perris~MTBE~Data;~All~MTBE~Inputs
Boat;~Atmosphere
Default~Model~Data~Set-Comment~#2
 1 Biochemical Degradation Rates for Epilimnion 1/days
      0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0
 1 Biochemical Degradation rates for Hypolimnion 1/days
      0.0     0.0     0.0     0.005   0.00    0.00    0.01    0.00    0.005   0.00    0.0     0.005
 Relative Humidity (%)
  50.000
```

Table B1. Daily input data for Lake Perris, California

[°C, degrees Celsius; m^3/s, cubic meters per second; m/s, meters per second; atm, atmospheres; ppbv, parts per billion by volume; kg/d, kilograms per day]

Day	Water temperature (°C)	Epilimnion depth (meters)	Lake depth (meters)	Riverine inflow (m^3/s)	Outflow (m^3/s)	Average air temperature (°C)	Average wind speed (m/s)	Atmospheric pressure (atm)	MTBE air concentration (ppbv)	MTBE inputs (kg/d)
1	12.7	26.15	26.15	0	1.927	1.7	2.32	0.958	3.5	3.5
2	12.6	26.13	26.13	0	1.613	2.1	2.33	.959	3.66	.5
3	12.6	26.1	26.1	0	1.942	2.5	2.33	.959	3.8	1
4	12.5	26.08	26.08	.1	2.284	2.9	2.34	.959	3.93	3
5	12.4	26.06	26.06	0	2.042	3.3	2.34	.959	4.06	3
6	12.4	26.05	26.05	.828	1.756	3.6	2.34	.959	4.17	0
7	12.3	26.02	26.02	0	2.527	4	2.35	.96	4.28	0
8	12.3	26.01	26.01	.314	1.57	4.3	2.35	.96	4.38	1
9	12.3	26	26	0	.257	4.7	2.36	.96	4.47	3
10	12.2	26	26	0	.128	5	2.36	.96	4.56	3.5
11	12.2	26	26	.471	.157	5.3	2.37	.96	4.64	9.5
12	12.2	26.01	26.01	.471	.157	5.6	2.37	.96	4.71	2
13	12.1	26.01	26.01	.143	.143	5.9	2.38	.96	4.77	1
14	12.1	26	26	0	.143	6.1	2.38	.96	4.83	0
15	12.1	26.01	26.01	.757	.143	6.4	2.39	.961	4.88	.5
16	12.1	26.01	26.01	.143	.143	6.7	2.4	.961	4.93	1.5
17	12	26.01	26.01	.443	.128	6.9	2.4	.961	4.97	4
18	12	26.01	26.01	0	.157	7.1	2.41	.961	5	11.5
19	12	25.99	25.99	0	.143	7.4	2.41	.961	5.03	13
20	12	25.99	25.99	0	.157	7.6	2.42	.961	5.05	2
21	12	26	26	1.713	.157	7.8	2.43	.961	5.07	1
22	12	26.02	26.02	1.413	.171	8	2.43	.961	5.08	.5
23	12	26.01	26.01	0	.157	8.2	2.44	.961	5.09	.5
24	12	.58	26	0	.157	8.3	2.45	.961	5.1	3.5
25	12	.77	26.02	1.713	.157	8.5	2.45	.961	5.1	2.5
26	12	.96	26.02	.785	.157	8.7	2.46	.961	5.1	5
27	12	1.15	26.02	0	.157	8.8	2.47	.961	5.09	1
28	12	1.34	26.02	.785	.157	9	2.47	.961	5.08	1.5
29	12	1.14	26.02	.157	.157	9.1	2.48	.961	5.07	2
30	12.1	.96	26.02	.157	.157	9.2	2.49	.961	5.05	2
31	12.1	.81	26.05	2.955	.157	9.4	2.49	.961	5.03	8.5
32	12.1	.68	26.05	.443	.128	9.5	2.5	.961	5.01	17
33	12.1	.57	26.06	1.399	.157	9.6	2.51	.961	4.98	11

Table B1. Daily input data for Lake Perris, California–Continued

[°C, degrees Celsius; m^3/s, cubic meters per second; m/s, meters per second; atm, atmospheres; ppbv, parts per billion by volume; kg/d, kilograms per day]

Day	Water temperature (°C)	Epilimnion depth (meters)	Lake depth (meters)	Riverine inflow (m^3/s)	Outflow (m^3/s)	Average air temperature (°C)	Average wind speed (m/s)	Atmospheric pressure (atm)	MTBE air concentration (ppbv)	MTBE inputs (kg/d)
34	12.2	0.5	26.06	0.143	0.143	9.7	2.52	0.961	4.96	1.5
35	12.2	.4	26.07	1.071	.143	9.8	2.52	.961	4.93	2
36	12.2	.4	26.13	5.753	.143	9.9	2.53	.961	4.89	2.5
37	12.2	.3	26.2	7.638	.143	10	2.54	.961	4.86	2.5
38	12.3	.3	26.25	5.14	.143	10.1	2.55	.961	4.82	4
39	12.3	.3	26.31	6.096	.143	10.2	2.55	.961	4.78	8.5
40	12.4	.3	26.36	5.796	.157	10.3	2.56	.961	4.74	14.5
41	12.4	.35	26.4	3.598	.143	10.4	2.57	.961	4.7	3.5
42	12.4	.4	26.4	.771	.143	10.5	2.58	.961	4.66	2
43	12.5	.4	26.46	5.811	.157	10.5	2.59	.961	4.61	2.5
44	12.5	.5	26.51	5.782	.128	10.6	2.59	.961	4.56	1
45	12.6	.55	26.57	5.811	.143	10.7	2.6	.961	4.52	4.5
46	12.7	.63	26.61	4.883	.157	10.7	2.61	.961	4.47	12
47	12.7	.71	26.67	6.125	.128	10.8	2.62	.961	4.42	17.5
48	12.8	.8	26.66	0	.171	10.8	2.63	.961	4.37	8.5
49	12.8	.9	26.73	7.738	.143	10.9	2.63	.961	4.31	2
50	12.9	1	26.81	8.352	.128	10.9	2.64	.961	4.26	2
51	12.9	1.1	26.91	11.25	.157	11	2.65	.961	4.21	3
52	13	1.21	27.01	10.35	.171	11	2.66	.961	4.16	9.5
53	13.1	1.33	27.06	4.954	.171	11.1	2.67	.961	4.1	22
54	13.1	1.44	27.07	1.128	.171	11.1	2.68	.961	4.05	25.5
55	13.2	1.56	27.1	3.997	.171	11.2	2.68	.961	3.99	2
56	13.3	1.68	27.16	6.553	.171	11.2	2.69	.961	3.94	1.5
57	13.4	1.8	27.28	12.321	.171	11.2	2.7	.961	3.88	2
58	13.4	1.93	27.29	1.456	.171	11.3	2.71	.961	3.83	1.5
59	13.5	2.05	27.33	4.34	.171	11.3	2.72	.961	3.77	2.5
60	13.6	2.18	27.33	.171	.171	11.3	2.72	.961	3.72	18
61	13.7	2.3	26.45	3.983	.143	11.4	2.73	.961	3.66	16.5
62	13.8	2.43	27.44	7.238	.171	11.4	2.74	.96	3.61	3.5
63	13.8	2.55	27.51	8.509	.143	11.4	2.75	.96	3.55	4
64	13.9	2.67	27.59	8.552	.171	11.5	2.76	.96	3.5	4.5
65	14	2.79	27.68	9.522	.157	11.5	2.77	.96	3.44	8
66	14.1	2.91	27.76	7.923	.157	11.5	2.77	.96	3.39	12

Table B1. Daily input data for Lake Perris, California–Continued

[°C, degrees Celsius; m^3/s, cubic meters per second; m/s, meters per second; atm, atmospheres; ppbv, parts per billion by volume; kg/d, kilograms per day]

Day	Water temperature (°C)	Epilimnion depth (meters)	Lake depth (meters)	Riverine inflow (m^3/s)	Outflow (m^3/s)	Average air temperature (°C)	Average wind speed (m/s)	Atmos-pheric pressure (atm)	MTBE air concentra-tion (ppbv)	MTBE inputs (kg/d)
67	14.2	3.03	27.85	14.491	0.157	11.5	2.78	0.96	3.34	25.5
68	14.3	3.14	27.84	0	.128	11.6	2.79	.96	3.28	34.5
69	14.4	3.25	27.84	.171	.171	11.6	2.8	.96	3.23	13
70	14.5	3.36	27.84	0	.143	11.6	2.81	.96	3.18	64
71	14.6	3.47	27.84	0	.171	11.7	2.81	.96	3.13	57
72	14.6	3.57	27.84	.186	.186	11.7	2.82	.96	3.08	51
73	14.7	3.67	27.85	1.47	.171	11.7	2.83	.96	3.02	34
74	14.8	3.77	27.86	1.442	.143	11.7	2.84	.96	2.97	60
75	14.9	3.86	27.87	.828	.171	11.8	2.84	.96	2.93	41
76	15	3.95	27.88	1.128	.157	11.8	2.85	.96	2.88	10
77	15.1	4.04	27.88	.5	.171	11.8	2.86	.96	2.83	23
78	15.2	4.12	27.87	0	.143	11.9	2.87	.96	2.78	26
79	15.3	4.2	27.87	0	.171	11.9	2.87	.96	2.74	31
80	15.5	4.28	27.89	2.113	.171	11.9	2.88	.96	2.69	38
81	15.6	4.35	27.87	0	.157	12	2.89	.959	2.65	68
82	15.7	4.42	27.86	0	.157	12	2.9	.959	2.6	63
83	15.8	4.48	27.86	.143	.143	12	2.9	.959	2.56	12
84	15.9	4.54	27.86	.171	.171	12.1	2.91	.959	2.52	27
85	16	4.6	27.85	0	.171	12.1	2.92	.959	2.48	31
86	16.1	4.65	27.86	.799	.143	12.1	2.92	.959	2.44	50
87	16.2	4.7	27.86	.814	.171	12.2	2.93	.959	2.4	50
88	16.3	4.74	27.85	0	.157	12.2	2.94	.959	2.36	140
89	16.4	4.78	27.85	.157	.157	12.3	2.94	.959	2.32	96
90	16.5	4.82	27.82	0	.157	12.3	2.95	.959	2.28	30.6
91	16.6	4.85	27.83	.471	.157	12.3	2.96	.959	2.25	30.6
92	16.8	4.88	27.84	2.141	.186	12.4	2.96	.959	2.21	16.2
93	16.9	4.91	27.83	0	.186	12.4	2.97	.959	2.18	16.2
94	17	4.93	27.83	.186	.186	12.5	2.98	.959	2.15	39.6
95	17.1	4.95	27.83	.171	.171	12.5	2.98	.959	2.11	23.4
96	17.2	4.97	27.84	.814	.171	12.6	2.99	.959	2.08	99
97	17.3	4.98	27.84	.171	.171	12.6	2.99	.959	2.05	30.6
98	17.4	5	27.84	.485	.157	12.7	3	.959	2.02	27
99	17.6	5	27.86	1.485	.186	12.7	3.01	.959	1.99	25.2

Table B1. Daily input data for Lake Perris, California–Continued

[°C, degrees Celsius; m^3/s, cubic meters per second; m/s, meters per second; atm, atmospheres; ppbv, parts per billion by volume; kg/d, kilograms per day]

Day	Water temperature (°C)	Epilimnion depth (meters)	Lake depth (meters)	Riverine inflow (m^3/s)	Outflow (m^3/s)	Average air temperature (°C)	Average wind speed (m/s)	Atmospheric pressure (atm)	MTBE air concentration (ppbv)	MTBE inputs (kg/d)
100	17.7	5.01	27.86	0.171	0.171	12.8	3.01	0.959	1.97	37.8
101	17.8	5.01	27.85	0	.157	12.8	3.02	.959	1.94	41.4
102	17.9	5.01	27.86	.814	.157	12.9	3.02	.958	1.91	95.4
103	18	5.01	27.84	0	.171	13	3.03	.958	1.89	57.6
104	18.1	5	27.83	0	.171	13	3.03	.958	1.86	19.8
105	18.3	5	27.83	.186	.186	13.1	3.04	.958	1.84	21.6
106	18.4	4.99	27.83	.186	.186	13.2	3.04	.958	1.82	34.2
107	18.5	4.98	27.83	0	.171	13.2	3.05	.958	1.79	28.8
108	18.6	4.97	27.82	0	.171	13.3	3.05	.958	1.77	64.8
109	18.7	4.95	27.82	.171	.171	13.4	3.06	.958	1.75	91.5
110	18.9	4.94	27.82	.157	.157	13.4	3.06	.958	1.73	127.5
111	19	4.92	27.82	0	.186	13.5	3.06	.958	1.71	33
112	19.1	4.9	27.83	.814	.171	13.6	3.07	.958	1.7	28.5
113	19.2	4.88	27.83	.5	.171	13.7	3.07	.958	1.68	33
114	19.3	4.86	27.83	.171	.171	13.7	3.08	.958	1.66	22.5
115	19.4	4.84	27.83	.171	.171	13.8	3.08	.958	1.65	81
116	19.6	4.82	27.83	.171	.171	13.9	3.08	.958	1.63	84
117	19.7	4.8	27.83	0	.171	14	3.09	.958	1.62	124.5
118	19.8	4.78	27.82	0	.171	14.1	3.09	.958	1.6	27
119	19.9	4.76	27.82	.5	.171	14.2	3.09	.958	1.59	22.5
120	20	4.73	27.81	0	.171	14.2	3.1	.958	1.58	25.5
121	20.2	4.71	27.81	.157	.157	14.3	3.1	.958	1.57	28.5
122	20.3	4.69	27.81	.328	0	14.4	3.1	.958	1.56	54
123	20.4	4.67	27.81	0	0	14.5	3.1	.958	1.55	108.9
124	20.5	4.65	27.82	.314	0	14.6	3.11	.958	1.54	119.9
125	20.6	4.63	27.82	0	0	14.7	3.11	.958	1.53	29.7
126	20.7	4.61	27.81	0	0	14.8	3.11	.958	1.52	24.2
127	20.8	4.59	27.82	.971	0	14.9	3.11	.958	1.51	35.2
128	21	4.57	27.8	0	0	15	3.11	.958	1.5	33
129	21.1	4.56	27.8	0	0	15.1	3.12	.958	1.49	47.3
130	21.2	4.54	27.78	0	0	15.2	3.12	.958	1.49	74.8
131	21.3	4.53	27.7	0	0	15.3	3.12	.958	1.48	55
132	21.4	4.52	27.65	0	0	15.4	3.12	.958	1.47	36.3

Table B1. Daily input data for Lake Perris, California–Continued

[°C, degrees Celsius; m^3/s, cubic meters per second; m/s, meters per second; atm, atmospheres; ppbv, parts per billion by volume; kg/d, kilograms per day]

Day	Water temperature (°C)	Epilimnion depth (meters)	Lake depth (meters)	Riverine inflow (m^3/s)	Outflow (m^3/s)	Average air temperature (°C)	Average wind speed (m/s)	Atmospheric pressure (atm)	MTBE air concentration (ppbv)	MTBE inputs (kg/d)
133	21.5	4.51	27.59	0	0	15.5	3.12	0.958	1.47	29.7
134	21.6	4.5	27.56	0	0	15.6	3.12	.958	1.46	33
135	21.7	4.49	27.54	0	0	15.7	3.12	.958	1.46	35.2
136	21.9	4.48	27.55	.957	0	15.8	3.12	.958	1.45	72.6
137	22	4.48	27.55	0	0	16	3.12	.958	1.45	85.8
138	22.1	4.48	27.55	0	0	16.1	3.12	.958	1.45	92.4
139	22.2	4.48	27.55	.642	0	16.2	3.12	.958	1.44	27.5
140	22.3	4.48	27.55	0	0	16.3	3.12	.957	1.44	30
141	22.4	4.48	27.55	0	0	16.4	3.12	.957	1.44	32.5
142	22.5	4.49	27.55	.314	0	16.5	3.12	.957	1.44	35
143	22.6	4.5	27.55	0	0	16.6	3.12	.957	1.43	83.75
144	22.7	4.51	27.54	0	0	16.8	3.12	.957	1.43	90
145	22.8	4.52	27.53	0	0	16.9	3.12	.957	1.43	98.75
146	22.9	4.54	27.53	0	0	17	3.12	.957	1.43	87.5
147	23	4.56	27.53	.328	0	17.1	3.12	.957	1.43	40
148	23.1	4.58	27.53	0	0	17.2	3.12	.957	1.42	38.75
149	23.2	4.6	27.53	.642	0	17.4	3.12	.957	1.42	45
150	23.3	4.63	27.53	0	0	17.5	3.12	.957	1.42	83.75
151	23.4	4.65	27.53	0	0	17.6	3.11	.957	1.42	121.25
152	23.5	4.69	27.53	0	0	17.7	3.11	.957	1.42	81.25
153	23.6	4.72	27.54	1.428	.128	17.9	3.11	.957	1.42	51.25
154	23.7	4.75	27.54	.157	.157	18	3.11	.957	1.42	40
155	23.8	4.79	27.55	1.114	.157	18.1	3.11	.957	1.42	35
156	23.9	4.83	27.55	0	.157	18.2	3.1	.957	1.42	36.25
157	23.9	4.88	27.48	4.469	10.907	18.4	3.1	.957	1.42	55
158	24	4.92	27.45	0	.128	18.5	3.1	.957	1.42	62.5
159	24.1	4.97	27.44	0	.157	18.6	3.1	.957	1.42	101.25
160	24.2	5.02	27.44	.143	.143	18.7	3.09	.957	1.42	55
161	24.3	5.07	27.44	.157	.157	18.9	3.09	.957	1.42	36.25
162	24.4	5.13	27.44	0	.157	19	3.09	.957	1.42	42.5
163	24.5	5.18	27.43	0	.143	19.1	3.09	.957	1.42	37.5
164	24.5	5.24	27.43	0	.157	19.2	3.08	.957	1.42	42.5
165	24.6	5.3	27.42	0	.157	19.4	3.08	.957	1.42	88.75

Table B1. Daily input data for Lake Perris, California–Continued

[°C, degrees Celsius; m^3/s, cubic meters per second; m/s, meters per second; atm, atmospheres; ppbv, parts per billion by volume; kg/d, kilograms per day]

Day	Water temperature (°C)	Epilimnion depth (meters)	Lake depth (meters)	Riverine inflow (m^3/s)	Outflow (m^3/s)	Average air temperature (°C)	Average wind speed (m/s)	Atmospheric pressure (atm)	MTBE air concentration (ppbv)	MTBE inputs (kg/d)
166	24.7	5.37	27.42	0.143	0.143	19.5	3.08	0.957	1.42	91.25
167	24.8	5.43	27.42	.128	.128	19.6	3.07	.957	1.41	84
168	24.9	5.5	27.42	0	.143	19.7	3.07	.957	1.41	58.5
169	24.9	5.57	27.42	.485	.157	19.9	3.06	.957	1.41	61.5
170	25	5.64	27.42	.443	.128	20	3.06	.957	1.41	58.5
171	25.1	5.71	27.42	0	.143	20.1	3.06	.957	1.41	85.5
172	25.1	5.79	27.42	0	.214	20.3	3.05	.957	1.41	114
173	25.2	5.86	27.41	0	.214	20.4	3.05	.957	1.41	130.5
174	25.3	5.94	27.41	0	.214	20.5	3.04	.957	1.41	90
175	25.3	6.02	27.4	0	.214	20.6	3.04	.957	1.41	55.5
176	25.4	6.09	27.39	0	.214	20.7	3.03	.957	1.41	46.5
177	25.5	6.17	27.39	0	.214	20.9	3.03	.957	1.41	42
178	25.5	6.26	27.38	0	.214	21	3.02	.957	1.41	70.5
179	25.6	6.34	27.38	0	.214	21.1	3.02	.957	1.41	94.5
180	25.6	6.42	27.39	1.499	.214	21.2	3.01	.957	1.41	121.5
181	25.7	6.5	27.4	.543	.214	21.4	3.01	.957	1.41	102
182	25.8	6.59	27.45	5.668	.214	21.5	3	.957	1.4	64.5
183	25.8	6.67	27.46	1.171	.2	21.6	3	.957	1.4	67.5
184	25.9	6.75	27.45	.2	1.171	21.7	2.99	.957	1.4	85.5
185	25.9	6.84	27.44	0	.171	21.8	2.99	.957	1.4	111
186	26	6.92	27.45	1.156	.186	21.9	2.98	.957	1.4	109.5
187	26	7	27.46	1.142	.186	22	2.98	.957	1.4	118.5
188	26	7.08	27.46	.2	.2	22.2	2.97	.957	1.4	87
189	26.1	7.17	27.46	0	.186	22.3	2.97	.957	1.4	54
190	26.1	7.25	27.46	.171	.171	22.4	2.96	.957	1.39	48
191	26.2	7.33	27.46	.186	.186	22.5	2.95	.957	1.39	57
192	26.2	7.41	27.45	0	.171	22.6	2.95	.957	1.39	88.5
193	26.2	7.49	27.46	.485	.157	22.7	2.94	.957	1.39	117
194	26.3	7.56	27.46	.485	.171	22.8	2.94	.957	1.39	111
195	26.3	7.64	27.46	.171	.171	22.9	2.93	.957	1.39	97.5
196	26.3	7.71	27.46	.5	.171	23	2.92	.957	1.38	54
197	26.4	7.78	27.47	.828	.186	23.1	2.92	.957	1.38	48
198	26.4	7.85	27.47	.171	.171	23.2	2.91	.957	1.38	55.5

Table B1. Daily input data for Lake Perris, California–Continued

[°C, degrees Celsius; m^3/s, cubic meters per second; m/s, meters per second; atm, atmospheres; ppbv, parts per billion by volume; kg/d, kilograms per day]

Day	Water temperature (°C)	Epilimnion depth (meters)	Lake depth (meters)	Riverine inflow (m^3/s)	Outflow (m^3/s)	Average air temperature (°C)	Average wind speed (m/s)	Atmos-pheric pressure (atm)	MTBE air concentra-tion (ppbv)	MTBE inputs (kg/d)
199	26.4	7.92	27.46	0	0.171	23.3	2.9	0.957	1.38	75
200	26.4	7.99	27.47	1.114	.157	23.4	2.9	.957	1.38	96
201	26.5	8.05	27.47	.157	.157	23.5	2.89	.957	1.38	133.5
202	26.5	8.11	27.47	.186	.186	23.6	2.88	.957	1.38	85.5
203	26.5	8.17	27.48	.514	.186	23.7	2.88	.957	1.38	37.5
204	26.5	8.23	27.48	.171	.171	23.8	2.87	.957	1.38	49.5
205	26.5	8.28	27.33	0	.171	23.8	2.86	.957	1.37	51
206	26.5	8.33	27.33	0	.186	23.9	2.86	.957	1.37	72
207	26.6	8.38	27.33	.171	.171	24	2.85	.957	1.37	123
208	26.6	8.42	27.33	.5	.171	24.1	2.84	.957	1.37	127.5
209	26.6	8.47	27.33	0	.157	24.2	2.84	.957	1.37	87
210	26.6	8.5	27.32	0	.171	24.2	2.83	.957	1.37	49.5
211	26.6	8.54	27.32	0	.186	24.3	2.82	.957	1.37	63
212	26.6	8.57	27.32	.171	.171	24.4	2.82	.957	1.37	54.25
213	26.6	8.59	27.28	0	.171	24.5	2.81	.957	1.37	82.25
214	26.6	8.62	27.26	0	.171	24.5	2.8	.957	1.38	133
215	26.6	8.64	27.28	2.084	.157	24.6	2.8	.957	1.38	159.25
216	26.6	8.65	27.27	0	.143	24.6	2.79	.957	1.38	99.75
217	26.6	8.66	27.26	0	.143	24.7	2.78	.957	1.38	66.5
218	26.5	8.67	27.25	0	.143	24.8	2.78	.957	1.38	66.5
219	26.5	8.68	27.25	.143	.143	24.8	2.77	.957	1.38	59.5
220	26.5	8.67	27.24	0	.143	24.9	2.76	.957	1.39	91
221	26.5	8.67	27.24	.157	.157	24.9	2.76	.957	1.39	141.75
222	26.5	8.66	27.25	1.099	.143	25	2.75	.957	1.39	155.75
223	26.5	8.65	27.23	.799	2.713	25	2.74	.957	1.4	92.75
224	26.4	8.63	27.19	.799	5.282	25	2.74	.957	1.4	71.75
225	26.4	8.61	27.18	0	.143	25.1	2.73	.957	1.41	54.25
226	26.4	8.59	27.14	0	.143	25.1	2.72	.957	1.41	66.5
227	26.4	8.56	27.05	0	8.566	25.2	2.72	.957	1.42	66.5
228	26.3	8.53	26.96	1.028	10.565	25.2	2.71	.957	1.43	120.75
229	26.3	8.49	26.89	3.798	11.421	25.2	2.7	.957	1.43	133
230	26.3	8.45	26.92	9.38	6.21	25.2	2.7	.957	1.44	96.25
231	26.2	8.41	26.99	12.92	5.611	25.3	2.69	.957	1.45	56

Table B1. Daily input data for Lake Perris, California–Continued

[°C, degrees Celsius; m^3/s, cubic meters per second; m/s, meters per second; atm, atmospheres; ppbv, parts per billion by volume; kg/d, kilograms per day]

Day	Water temperature (°C)	Epilimnion depth (meters)	Lake depth (meters)	Riverine inflow (m^3/s)	Outflow (m^3/s)	Average air temperature (°C)	Average wind speed (m/s)	Atmospheric pressure (atm)	MTBE air concentration (ppbv)	MTBE inputs (kg/d)
232	26.2	8.36	27.01	6.938	4.397	25.3	2.68	0.957	1.46	54.25
233	26.2	8.31	27.01	0	.143	25.3	2.68	.957	1.47	57.75
234	26.1	8.25	27.01	.143	.143	25.3	2.67	.957	1.48	85.75
235	26.1	8.2	27.01	.143	.143	25.3	2.67	.957	1.49	136.5
236	26	8.14	27.01	.457	.143	25.3	2.66	.957	1.5	136.5
237	26	8.08	27.04	4.654	1.785	25.3	2.65	.957	1.51	96.25
238	25.9	8.01	27.06	2.07	.157	25.3	2.65	.957	1.52	57.75
239	25.9	7.94	27.07	1.099	.143	25.3	2.64	.957	1.54	54.25
240	25.8	7.87	27	0	4.711	25.3	2.64	.956	1.55	61.25
241	25.8	7.8	26.95	2.027	6.796	25.3	2.63	.956	1.57	20
242	25.7	7.73	26.96	3.184	2.555	25.3	2.62	.956	1.58	31.5
243	25.7	7.66	26.95	0	.143	25.3	2.62	.956	1.6	32
244	25.6	7.59	26.97	1.413	.143	25.3	2.61	.957	1.62	36.5
245	25.5	7.51	26.99	2.384	.157	25.3	2.61	.957	1.63	20.5
246	25.5	7.44	27	1.742	.157	25.3	2.6	.957	1.65	11
247	25.4	7.36	27.01	1.142	.186	25.2	2.6	.957	1.67	10
248	25.3	7.29	27.04	2.698	.157	25.2	2.59	.957	1.69	13.5
249	25.3	7.22	27.05	1.756	.157	25.2	2.59	.957	1.71	26
250	25.2	7.15	27.06	1.456	.186	25.1	2.58	.957	1.74	30.5
251	25.1	7.08	27.07	.785	.143	25.1	2.58	.957	1.76	21
252	25.1	7.02	27.1	3.341	.157	25.1	2.57	.957	1.79	7.5
253	25	6.96	26.98	0	.157	25	2.57	.957	1.81	8.5
254	24.9	6.9	26.99	.5	.171	25	2.56	.957	1.84	11.5
255	24.8	6.85	26.98	0	.157	24.9	2.56	.957	1.86	11
256	24.8	6.81	26.98	0	.2	24.9	2.55	.957	1.89	35.5
257	24.7	6.76	26.99	.814	.171	24.8	2.55	.957	1.92	37
258	24.6	6.73	27.01	3.055	.2	24.8	2.55	.957	1.95	18
259	24.5	6.71	27.05	3.683	.171	24.7	2.54	.957	1.98	4.5
260	24.4	6.69	27.06	1.756	.171	24.6	2.54	.957	2.01	4
261	24.3	6.68	27.09	2.755	.2	24.6	2.53	.957	2.05	7
262	24.2	6.68	27.11	2.099	.186	24.5	2.53	.957	2.08	12
263	24.1	6.69	27.14	3.355	.171	24.4	2.53	.957	2.12	19.5
264	24.1	6.72	27.18	4.683	.2	24.4	2.52	.957	2.15	30.5

Table B1. Daily input data for Lake Perris, California–Continued

[°C, degrees Celsius; m^3/s, cubic meters per second; m/s, meters per second; atm, atmospheres; ppbv, parts per billion by volume; kg/d, kilograms per day]

Day	Water temperature (°C)	Epilimnion depth (meters)	Lake depth (meters)	Riverine inflow (m^3/s)	Outflow (m^3/s)	Average air temperature (°C)	Average wind speed (m/s)	Atmospheric pressure (atm)	MTBE air concentration (ppbv)	MTBE inputs (kg/d)
265	24	6.75	27.3	12.977	0.186	24.3	2.52	0.957	2.19	19.5
266	23.9	6.8	27.43	13.648	.171	24.2	2.52	.957	2.23	7.5
267	23.8	6.87	27.5	7.595	.2	24.1	2.51	.957	2.27	5.5
268	23.7	6.95	27.42	0	.186	24.1	2.51	.957	2.31	3.5
269	23.6	7.05	27.51	9.508	.171	23.9	2.51	.957	2.35	5
270	23.5	7.16	27.63	12.735	.171	23.8	2.5	.957	2.39	21
271	23.4	7.3	27.76	13.777	.186	23.8	2.5	.957	2.44	38
272	23.3	7.45	27.89	14.448	.171	23.7	2.5	.957	2.48	19
273	23.1	7.63	28	13.862	.186	23.6	2.5	.957	2.53	7
274	23	7.83	28	13.577	.186	23.5	2.49	.957	2.57	3
275	22.9	8.05	28	7.681	.171	23.3	2.49	.957	2.62	3.5
276	22.8	8.3	28	.828	.171	23.2	2.49	.957	2.67	8.5
277	22.7	8.58	28	1.799	.157	23.1	2.49	.957	2.72	18.5
278	22.6	8.89	28	1.156	.171	23	2.49	.957	2.77	30
279	22.5	9.22	28	1.756	.186	22.9	2.48	.957	2.82	18.5
280	22.4	9.59	28	2.541	.186	22.8	2.48	.957	2.87	4.5
281	22.3	9.99	28	2.798	.186	22.7	2.48	.957	2.93	4.5
282	22.1	10.43	28	.186	.186	22.5	2.48	.957	2.98	4.5
283	22	10.9	28	0	.186	22.4	2.48	.957	3.04	6
284	21.9	11.41	28	.171	.171	22.3	2.48	.957	3.09	13.5
285	21.8	11.97	28	0	.171	22.1	2.48	.957	3.15	22
286	21.7	12.56	28	.186	.186	22	2.48	.957	3.21	17.5
287	21.5	13.2	28	0	.186	21.9	2.48	.957	3.27	5.5
288	21.4	13.89	28	0	.186	21.7	2.47	.957	3.33	3
289	21.3	14.62	28	0	.171	21.6	2.47	.957	3.39	3
290	21.2	15.41	28	.171	.171	21.5	2.47	.957	3.45	7.5
291	21	16.25	28	0	.171	21.3	2.47	.958	3.51	15.5
292	20.9	16.92	28	.171	.171	21.2	2.47	.958	3.57	19
293	20.8	17.6	28	0	.186	21	2.47	.958	3.63	8.5
294	20.6	18.27	28	0	.171	20.9	2.47	.958	3.7	2.5
295	20.5	18.95	28	0	.186	20.7	2.47	.958	3.76	1.5
296	20.4	19.62	28	0	.171	20.6	2.47	.958	3.82	3
297	20.3	20.3	28	0	.186	20.4	2.48	.958	3.89	3

Table B1. Daily input data for Lake Perris, California–Continued

[°C, degrees Celsius; m^3/s, cubic meters per second; m/s, meters per second; atm, atmospheres; ppbv, parts per billion by volume; kg/d, kilograms per day]

Day	Water temperature (°C)	Epilimnion depth (meters)	Lake depth (meters)	Riverine inflow (m^3/s)	Outflow (m^3/s)	Average air temperature (°C)	Average wind speed (m/s)	Atmospheric pressure (atm)	MTBE air concentration (ppbv)	MTBE inputs (kg/d)
298	20.1	20.97	27.99	0	0.186	20.3	2.48	0.958	3.95	7.5
299	20	21.65	27.96	0	.171	20.1	2.48	.958	4.02	11.5
300	19.9	22.32	27.92	0	.2	19.9	2.48	.958	4.08	3
301	19.7	23	27.89	0	.186	19.8	2.48	.958	4.15	2
302	19.6	24	27.86	0	.186	19.6	2.48	.958	4.21	1.5
303	19.5	25	27.84	0	.186	19.4	2.48	.958	4.28	.5
304	19.3	26.25	27.85	.814	.171	19.3	2.48	.958	4.34	3.5
305	19.2	27.86	27.86	1.47	.171	19.1	2.48	.958	4.41	8.5
306	19.1	27.87	27.87	1.456	.157	18.9	2.48	.958	4.47	15
307	18.9	27.87	27.87	.157	.157	18.8	2.49	.958	4.54	4.5
308	18.8	27.87	27.87	0	.157	18.6	2.49	.958	4.6	1.5
309	18.6	27.87	27.87	.814	.171	18.4	2.49	.959	4.66	2.5
310	18.5	27.87	27.87	.157	.157	18.3	2.49	.959	4.73	14
311	18.4	27.87	27.87	0	.171	18.1	2.49	.959	4.79	5
312	18.2	27.87	27.87	.143	.143	17.9	2.49	.959	4.85	8
313	18.1	27.87	27.87	.157	.157	17.7	2.49	.959	4.91	14.5
314	18	27.87	27.87	0	.157	17.6	2.5	.959	4.97	12
315	17.8	27.87	27.87	.157	.157	17.4	2.5	.959	5.03	7.5
316	17.7	27.87	27.87	.157	.157	17.2	2.5	.959	5.09	2.5
317	17.6	27.87	27.87	.157	.157	17.1	2.5	.959	5.14	2.5
318	17.4	27.87	27.87	.171	.171	16.9	2.5	.959	5.2	2.5
319	17.3	27.86	27.86	0	.128	16.7	2.5	.959	5.25	6
320	17.1	27.85	27.85	0	.157	16.5	2.51	.959	5.31	7.5
321	17	27.85	27.85	.157	.157	16.4	2.51	.959	5.36	4
322	16.9	27.85	27.85	.157	.157	16.2	2.51	.959	5.4	1.5
323	16.7	27.85	27.85	.5	.171	16	2.51	.959	5.45	1.5
324	16.6	27.89	27.89	3.74	.171	15.8	2.51	.96	5.5	1.5
325	16.5	27.93	27.93	4.726	.171	15.7	2.52	.96	5.54	2
326	16.3	28	28	12.221	.157	15.5	2.52	.96	5.58	4.5
327	16.2	28	28	.842	.186	15.3	2.52	.96	5.62	7
328	16.1	28	28	.171	.171	15.1	2.52	.96	5.65	4
329	15.9	28	28	.171	.171	15	2.52	.96	5.68	3
330	15.8	28	28	0	.186	14.8	2.52	.96	5.71	3
331	15.7	28	28	0	0.171	14.6	2.52	0.96	5.74	2

Table B1. Daily input data for Lake Perris, California–Continued

[°C, degrees Celsius; m^3/s, cubic meters per second; m/s, meters per second; atm, atmospheres; ppbv, parts per billion by volume; kg/d, kilograms per day]

Day	Water temperature (°C)	Epilimnion depth (meters)	Lake depth (meters)	Riverine inflow (m^3/s)	Outflow (m^3/s)	Average air temperature (°C)	Average wind speed (m/s)	Atmospheric pressure (atm)	MTBE air concentration (ppbv)	MTBE inputs (kg/d)
332	15.6	28	28	.171	.171	14.5	2.53	.96	5.76	9.5
333	15.4	28	28	0	.186	14.3	2.53	.96	5.78	11
334	15.3	28	28	0	.186	14.1	2.53	.96	5.79	6.5
335	15.2	28	28	0	.186	14	2.53	.96	5.8	3
336	15.1	28	28	0	.157	13.8	2.53	.96	5.81	2
337	14.9	28	28	.171	.171	13.7	2.53	.96	5.81	1
338	14.8	28	28	0	.157	13.5	2.53	.96	5.81	1
339	14.7	28	28	.157	.157	13.3	2.53	.96	5.81	1.5
340	14.6	28	28	.143	.143	13.2	2.53	.961	5.79	1
341	14.4	28	28	0	.157	13	2.53	.961	5.78	3
342	14.3	28	28	.157	.157	12.9	2.53	.961	5.76	4
343	14.2	28	28	.171	.171	12.7	2.53	.961	5.73	1
344	14.1	28	28	1.485	.171	12.6	2.53	.961	5.7	0
345	14	28	28	.157	.157	12.5	2.53	.961	5.66	.5
346	13.9	28	28	.157	.157	12.3	2.53	.961	5.61	1
347	13.8	28	28	.157	.157	12.2	2.52	.961	5.56	3
348	13.7	28	28	0	.143	12.1	2.52	.961	5.5	3
349	13.6	28	28	0	.157	11.9	2.52	.961	5.44	1.5
350	13.5	27.99	27.99	0	.157	11.8	2.52	.961	5.36	1
351	13.4	27.98	27.98	0	.157	11.7	2.52	.961	5.28	.5
352	13.3	27.98	27.98	.171	.171	11.6	2.51	.961	5.19	1
353	13.2	27.98	27.98	.157	.157	11.5	2.51	.961	5.1	.5
354	13.1	27.98	27.98	0	.157	11.4	2.51	.961	4.99	3
355	13	27.97	27.97	0	.128	11.3	2.5	.961	4.88	2
356	12.9	27.97	27.97	0	.171	11.2	2.5	.961	4.76	1
357	12.8	27.97	27.97	.157	.157	11.1	2.49	.961	4.63	.5
358	12.7	27.97	27.97	.143	.143	11	2.49	.961	4.49	1
359	12.6	27.97	27.97	.143	.143	10.9	2.48	.961	4.33	.5
360	12.6	27.97	27.97	0	.157	10.8	2.47	.961	4.17	3
361	12.5	27.96	27.96	0	.157	10.7	2.47	.961	4	3.5
362	12.4	27.95	27.95	0	.171	10.7	2.46	.961	3.82	5
363	12.3	27.96	27.96	.5	.171	10.6	2.45	.961	3.63	3.5
364	12.3	27.95	27.95	0	.171	10.5	2.44	.961	3.42	1.5
365	12.2	27.94	27.94	.828	.171	10.5	2.43	.958	3.2	2

Simulation 11 – VOC Concentration Simulation with Weekly Inputs Parameter File for Lake Perris

```
2 Weekly Averaged Mixed-Layer Temperatures Data Filename
D:\dabender\lakevoc\weekly\$$$wat-temp.txt
 2 Weekly Averaged Mixed-Layer Depth Data Filename
D:\dabender\lakevoc\weekly\$$$epi1.txt
 2 Weekly Averaged Lake Depth Data Filename
D:\dabender\lakevoc\weekly\$$$depth1.txt
 2 Weekly Averaged Lake Inflow data filename
D:\dabender\lakevoc\weekly\$$$inflow.txt
 2 Weekly Averaged Lake Outflow data filename
D:\dabender\lakevoc\weekly\$$$outflow.txt
 2 Weekly Averaged Air Temperatures Data Filename
D:\dabender\lakevoc\weekly\$$$atm-tavg.txt
 2 Weekly Averaged Wind Speeds Data Filename
D:\dabender\lakevoc\weekly\$$$atm-wind.txt
 2 Weekly Averaged Barometric Pressure Data Filename
D:\dabender\lakevoc\weekly\$$$atm-pres.txt
 2 Weekly Averaged VOC Input Data Filename
D:\dabender\lakevoc\weekly\$$$boatin2.txt
 2 Weekly Averaged Atm. VOC Concentration Data Filename
D:\dabender\lakevoc\weekly\$$$air-conc.txt
 Surface area of lake versus depth profile data
 Number of points in profile
  7
 Depth (m)   :   Lake Area (m^2)
    28.80         9400885.00
    28.00         9202588.00
    26.00         8846464.00
    19.70         7426011.00
    13.60         5572544.00
     7.50         3524826.00
     0.00         1691593.00
 1 Monthly Averaged Lake Inflow height in meters
      4.4     4.4     4.4     4.4     4.4     4.4     4.4     4.4     4.4     4.4     4.4     4.4
 1 Monthly Averaged Lake Outflow Height in meters
     12.1    12.1    12.1    12.1    12.1    12.1    12.1    12.1    12.1    12.1    12.1    12.1
 Initial VOC Epilimnion Concentration in micrograms/liter
  4.800
 VOC Molecular Weight in g/mol
  88.150
 Total Model Runtime in years
      5.000
 Time between ASCII Data File Data Points in days
     1.0000
 Tolerance for Runge-Kutta DEQ integrator
    0.1000E-07
 Diffusivity characterization (1 for Wilke-Chang, 2 for Wanninkhof)
   1
 Molar Volume in ml/mol at Boiling Point for Wilke-Chang
     129.40000
 Solubility characterization (1 for exp(-(A-B/T)), 2 for Wanninkhof)
   1
 A and B Coefficients to Give Solubility in atm-m^3/mol
      0.184000E+02       0.766600E+04
 Title for Run and Two Lines of Comments, comments not used
Lake~Perris~MTBE~Data;~All~MTBE~Inputs-Weekly
Boat;~Atmosphere
Default~Model~Data~Set-Comment~#2
 1 Biochemical Degradation Rrates for Epilimnion 1/days
      0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0
 1 Biochemical Degradation Rates for Hypolimnion 1/days
      0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0
 Relative Humidity (%)
 50.000
```

Table B2. Weekly input data for Lake Perris, California

[°C, degrees Celsius; m^3/s, cubic meters per second; m/s, meters per second; atm, atmospheres; ppbv, parts per billion by volume; kg/wk, kilograms per week]

Week	Water temperature (°C)	Epilimnion depth (meters)	Lake depth (meters)	Riverine inflow (m^3/s)	Outflow (m^3/s)	Average air temperature (°C)	Average wind speed (m/s)	Atmospheric pressure (atm)	MTBE air concentration (ppbv)	MTBE inputs (kg/wk)
1	12	26.12	26.12	0.133	2.013	4	2.35	0.96	4.28	11
2	11.6	26.02	26.02	.2	.365	6.1	2.38	.961	4.83	20
3	11.8	26.01	26.01	.436	.147	7.8	2.43	.961	5.07	33.5
4	12	18.77	26	.671	.159	9	2.47	.961	5.08	14.5
5	12.3	1.01	26	.903	.149	9.8	2.52	.961	4.93	44
6	12.5	.4	26.3	4.97	.145	10.5	2.58	.961	4.66	37.5
7	12.8	.45	26.6	5.164	.147	10.9	2.63	.961	4.31	48
8	13	1.01	27	6.655	.163	11.2	2.69	.96	3.94	65.5
9	13.3	1.81	27.2	5.431	.163	11.4	2.75	.96	3.55	48
10	15.1	2.67	27.8	5.808	.155	11.6	2.81	.96	3.18	161.5
11	16.9	3.46	27.9	.793	.167	11.8	2.86	.959	2.83	276
12	16.7	4.11	27.9	.347	.159	12.1	2.91	.959	2.52	265
13	16.6	4.59	27.8	.32	.159	12.3	2.96	.959	2.25	428.2
14	16.4	4.87	27.8	.567	.175	12.7	3	.958	2.02	252
15	16.2	5	27.8	.379	.171	13.1	3.04	.958	1.84	298.8
16	17.7	4.99	27.8	.19	.173	13.6	3.07	.958	1.7	408.3
17	19.3	4.88	27.8	.216	.171	14.2	3.09	.958	1.59	394.5
18	20.8	4.73	27.8	.114	.047	14.8	3.11	.958	1.52	390.7
19	22.3	4.59	27.7	.139	0	15.5	3.12	.958	1.47	311.3
20	25.4	4.5	27.5	.228	0	16.3	3.12	.957	1.44	376.5
21	24.7	4.49	27.5	.092	0	17.1	3.12	.957	1.43	467.5
22	24	4.58	27.5	.318	.041	18	3.11	.957	1.42	461.25
23	24.55	4.8	27.5	.84	1.687	18.9	3.09	.957	1.42	381.25
24	25.1	5.13	27.4	.039	.147	19.7	3.07	.957	1.41	445
25	24.1	5.57	27.4	.133	.184	20.6	3.04	.957	1.41	595.5
26	24.5	6.1	27.4	1.101	.214	21.5	3	.957	1.4	541.5
27	25	6.67	27.5	.553	.328	22.3	2.97	.957	1.4	633
28	25.6	7.25	27.5	.286	.171	23	2.92	.957	1.38	573
29	26.1	7.78	27.5	.424	.173	23.7	2.88	.957	1.38	531
30	27.2	8.22	27.3	.12	.171	24.2	2.83	.957	1.37	559.5
31	26.4	8.53	27.3	.322	.163	24.7	2.78	.957	1.38	658
32	25.9	8.66	27.2	.428	1.246	25	2.74	.957	1.4	679
33	25.3	8.6	27	3.875	6.094	25.3	2.69	.957	1.45	593.25

Table B2. Weekly input data for Lake Perris, California–Continued

[°C, degrees Celsius; m^3/s, cubic meters per second; m/s, meters per second; atm, atmospheres; ppbv, parts per billion by volume; kg/wk, kilograms per week]

Week	Water temperature (°C)	Epilimnion depth (meters)	Lake depth (meters)	Riverine inflow (m^3/s)	Outflow (m^3/s)	Average air temperature (°C)	Average wind speed (m/s)	Atmos-pheric pressure (atm)	MTBE air concentra-tion (ppbv)	MTBE inputs (kg/wk)
34	25.9	8.35	27	2.058	0.987	25.3	2.65	0.957	1.52	624.75
35	26.5	7.94	27	1.444	2.093	25.3	2.61	.957	1.63	256
36	26	7.44	27	1.846	.163	25.1	2.57	.957	1.79	119.5
37	25.6	6.97	27	1.15	.175	24.7	2.54	.957	1.98	126
38	25.1	6.71	27.2	5.896	.184	24.2	2.52	.957	2.23	100
39	24.1	6.9	27.7	10.275	.182	23.6	2.5	.957	2.53	99
40	23.1	7.88	28	4.191	.175	22.8	2.48	.957	2.87	86.5
41	21.1	10.06	28	.477	.182	21.9	2.48	.958	3.27	73.5
42	19.75	13.99	28	.049	.175	20.9	2.47	.958	3.7	59
43	18.4	18.95	28	0	.184	19.8	2.48	.958	4.15	31.5
44	18.2	24.3	27.9	.557	.169	18.6	2.49	.959	4.6	35
45	18.1	27.87	27.87	.204	.159	17.4	2.5	.959	5.03	63.5
46	17.5	27.87	27.87	.114	.155	16.2	2.51	.96	5.4	26.5
47	17	27.89	27.89	3.196	.171	15	2.52	.96	5.68	23.5
48	16	28	28	.024	.177	13.8	2.53	.961	5.81	37
49	15.5	28	28	.114	.159	12.7	2.53	.961	5.73	12.5
50	14.1	28	28	.279	.157	11.8	2.52	.961	5.36	10
51	13	27.99	27.99	.069	.157	11.1	2.49	.961	4.63	8.5
52	12	27.97	27.97	.112	.159	10.5	2.44	.958	3.42	18

Simulation 11 – VOC Concentration Simulation with Monthly Inputs Parameter File for Lake Perris

```
1 Monthly Averaged Mixed-Layer Temperatures in deg-C
  14.60  14.30  13.90  15.50  21.30  24.40  25.30  25.70  25.90  21.10  19.20  16.80
1 Monthly Averaged Mixed-Layer Depths in meters
  19.60   0.90   3.70   4.90   4.60   5.50   7.70   8.40   7.00  15.40  27.90  28.00
1 Monthly Averaged Lake Depths in meters
  26.00  27.00  28.00  28.00  28.00  27.00  27.00  27.00  27.00  28.00  28.00  28.00
1 Monthly Averaged Lake Inflow in m^3/day
     0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
1 Monthly Averaged Lake Outflow in m^3/day
     0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
1 Monthly Averaged Air Temperatures in deg-C
   9.40  11.30  12.30  14.30  17.80  20.80  25.00  25.00  23.60  19.30  14.10  10.40
1 Monthly Averaged Wind Speeds in meters per second
   2.070  2.190  2.090  2.190  2.120  2.040  1.990  1.940  1.860  1.890  2.040  2.040
1 Monthly Averaged Barometric Pressure in atmospheres
   0.9883  0.9883  0.9883  0.9883  0.9883  0.9883  0.9883  0.9883  0.9883  0.9883  0.9883  0.9883
1 Monthly Averaged VOC Inputs in kg/month
  91.500 206.500 1154.700 1407.600 1862.000 2054.500 2496.000 2591.000  468.000  261.500  169.500   53.000
1 Monthly Averaged Atmospheric VOC Concentrations in ppbv
   0.4800E+01   0.4100E+01   0.2700E+01   0.1800E+01   0.1500E+01   0.1400E+01   0.1400E+01   0.1400E+01
0.1900E+01   0.3300E+01   0.5200E+01   0.5000E+01
 Surface area of lake versus depth profile data
 Number of points in profile
   7
 Depth (m)   :   Lake Area (m^2)
    28.80        9400885.00
    28.00        9202588.00
    26.00        8846464.00
    19.70        7426011.00
    13.60        5572544.00
     7.50        3524826.00
     0.00        1691593.00
1 Monthly Averaged Lake Inflow height in meters
     4.4    4.4    4.4    4.4    4.4    4.4    4.4    4.4    4.4    4.4    4.4    4.4
1 Monthly Averaged Lake Outflow Height in meters
    12.1   12.1   12.1   12.1   12.1   12.1   12.1   12.1   12.1   12.1   12.1   12.1
 Initial VOC Epilimnion Concentration in micrograms/Liter
   4.800
 VOC Molecular Weight in g/mol
   88.150
 Total Model Runtime in years
     5.000
 Time between ASCII Data File Data Points in days
     1.0000
 Tolerance for Runge-Kutta DEQ integrator
    0.1000E-07
 Diffusivity characterization (1 for Wilke-Chang, 2 for Wanninkhof)
   1
 Molar Volume in ml/mol at Boiling Point for Wilke-Chang
     129.39999
 Solubility characterization (1 for exp(-(A-B/T)), 2 for Wanninkhof)
   1
 A and B Coefficients to Give Solubility in atm-m^3/mol
     0.184000E+02       0.766600E+04
 Title for Run and Two lines of Comments, comments not used
Lake~Perris~MTBE~Data;~All~Inputs;~~Monthly~Data
Default~Model~Data~Set-Comment~#1
Default~Model~Data~Set-Comment~#2
 1 Biochemical Degradation Rates for Epilimnion 1/days
     0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
 1 Biochemical Degradation Rates for Hypolimnion 1/days
     0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0
 Relative Humidity (%)
  50.000
```