APPENDIX B

Input File of the Calibrated Water Quality (Chloride) Model:

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Final Chloride Calibration with DYNHYD5 (Version 2): 9/1/01 to 03/31/02 (577 days)
87 segments:18 boundaries: prepared by Namsoo Suk, DRBC (June 3, 2003)
NSEG NSYS ICFL MFLG JMAS NSLN INTY  ADFC   DD HHMM          *** A: MODEL OPTIONS
   87   01    0    0    1    0    0 0.37   00 0000    1
   76   59   49   34    2   51
    1
0.01041666     577.0
    1
0.01041666     577.0
    0    0    0    0    0             System By-Passes (0=model, 1=Bypass)
    1                                      Water column only   *** B: DISP COEFS
    6     1.000     1.000             Dispersion Coefficients
    6   XA        EL                 water layer longitudinal interfaces
   83659.    24041.   85   86
  191316.    16803.   85   84
   57259.    21563.   84   86
  118827.    14941.   84   83
   64432.    10880.   83   82
   56464.     6900.   82   81
    2
     0.00       0.0      0.00     800.0
    3   XA        EL                 water layer longitudinal interfaces
   37195.     5000.   81   87
   35000.     4000.   87   17
   33597.     3000.   17   80
    2
   140.00       0.0    140.00     800.0
    4   XA        EL
   23834.     2714.   80    2
   29220.     2285.    2   77
   27886.     2285.   77   11
   24297.     2285.   11   78
    2
   250.00       0.0    250.00     800.0
   23   XA        EL                          water layer longitudinal interfaces
    1934.     2093.    1    3
    1937.     1889.    3    4
    2054.     1528.    4    5
    2054.     1528.    5    6
    2077.     2380.    6    7
    2077.     2380.    7    8
    2057.     2926.    8    9
    2082.     3111.    9   10
   23449.     2285.   78   12
   15809.     4570.   12   13
   11017.     3120.   10   13
    2169.     5890.   12   14
     737.     2742.   14   15
    2688.     2742.   15   16
    7124.     4164.   13   18
    3199.     2742.   14   19
    7214.     4164.   13   20
    7411.     3250.   18   21
    6534.     2945.   19   20
   10306.     3352.   21   22
    7368.     4265.   20   22
   16834.     4164.   22   23
   15957.     3656.   23   24
    2
   110.00       0.0    110.00     800.0
   10   XA        EL                          water layer longitudinal interfaces
   13582.     3656.   24   25
    1475.     2844.   25   26
     987.     2844.   26   27
     377.     2844.   27   28
     119.     2844.   28   29
     856.     2844.   26   30
   13177.     3656.   25   31
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 13882.     3656.   31   32
 13159.     3656.   32   33
 12857.     4062.   33   34
 2
  50.00       0.0     50.00     800.0
47   XA        EL                        water layer longitudinal interfaces
  9289.     3656.   34   36
  5674.     3250.   34   35
  9574.     3656.   36   38
   406      2438    35   79
  1754.     2234.   35   37
  3800.     2234.   37   38
  3378.     1930.   38   39
  9410.     3656.   38   42
   288.     2742.   39   40
  1115.     1930.   39   41
  2334.     3656.   41   43
  9551.     3656.   42   43
  9166.     4570.   43   44
  1453.     3250.   44   45
  1313.     3250.   45   46
   934.     3250.   46   47
  7881.     3656.   44   48
  7764.     3656.   48   49
   234.     2742.   49   50
  7640.     3656.   49   51
  7787.     3148.   51   52
  1704.     1930.   52   53
    61.     2742.   53   54
  5902.     3656.   52   55
  2894.     2437.   53   55
  5500.     2949.   55   56
   254.     2745.   56   57
  5665.     2949.   56   58
  6401.     2949.   58   59
  5242.     2949.   59   60
   759.     2745.   60   61
  3867.     2745.   60   62
  3785.     2745.   62   63
  3733.     2898.   63   64
   332.     1930.   64   65
  3994.     2898.   64   66
  3347.     3356.   66   68
  1464.     2389.   66   67
  1474.     2389.   67   68
  2919.     2949.   68   69
  2629.     3305.   69   70
  2655.     3660.   70   71
  2134.     2745.   71   72
   231.     1830.   72   73
  1645.     2288.   72   74
  1330.     2438.   74   75
   623.     2438.   75   76
 2
  30.00       0.0     30.00     800.0
 0    0    0                        System bypasses for dispersive exchanges
 1    0     800.0    +    *    +    *    +    *    +       *** C: VOLUMES ***
  1000.     1.000             Volume(cu m)    a         b         c         d
      1         0         1     5308.      0.00      0.00      0.00      0.00
      2         0         1    66097.      0.00      0.00      0.00      0.00
      3         0         1     4170.      0.00      0.00      0.00      0.00
      4         0         1     3570.      0.00      0.00      0.00      0.00
      5         0         1     3190.      0.00      0.00      0.00      0.00
      6         0         1     4080.      0.00      0.00      0.00      0.00
      7         0         1     4970.      0.00      0.00      0.00      0.00
      8         0         1     5540.      0.00      0.00      0.00      0.00
      9         0         1     6310.      0.00      0.00      0.00      0.00
     10         0         1     6510.      0.00      0.00      0.00      0.00
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11	0	1	58300.	0.00	0.00	0.00	0.00
12	0	1	74500.	0.00	0.00	0.00	0.00
13	0	1	63800.	0.00	0.00	0.00	0.00
14	0	1	11100.	0.00	0.00	0.00	0.00
15	0	1	6360.	0.00	0.00	0.00	0.00
16	0	1	11200.	0.00	0.00	0.00	0.00
17	0	1	126445.	0.00	0.00	0.00	0.00
18	0	1	24800.	0.00	0.00	0.00	0.00
19	0	1	11100.	0.00	0.00	0.00	0.00
20	0	1	39600.	0.00	0.00	0.00	0.00
21	0	1	20700.	0.00	0.00	0.00	0.00
22	0	1	59700.	0.00	0.00	0.00	0.00
23	0	1	60800.	0.00	0.00	0.00	0.00
24	0	1	49800.	0.00	0.00	0.00	0.00
25	0	1	50100.	0.00	0.00	0.00	0.00
26	0	1	3830.	0.00	0.00	0.00	0.00
27	0	1	1810.	0.00	0.00	0.00	0.00
28	0	1	992.	0.00	0.00	0.00	0.00
29	0	1	783.	0.00	0.00	0.00	0.00
30	0	1	883.	0.00	0.00	0.00	0.00
31	0	1	48400.	0.00	0.00	0.00	0.00
32	0	1	47000.	0.00	0.00	0.00	0.00
33	0	1	40800.	0.00	0.00	0.00	0.00
34	0	1	35700.	0.00	0.00	0.00	0.00
35	0	1	6520.	0.00	0.00	0.00	0.00
36	0	1	28600.	0.00	0.00	0.00	0.00
37	0	1	1840.	0.00	0.00	0.00	0.00
38	0	1	25900.	0.00	0.00	0.00	0.00
39	0	1	4030.	0.00	0.00	0.00	0.00
40	0	1	1680.	0.00	0.00	0.00	0.00
41	0	1	3980.	0.00	0.00	0.00	0.00
42	0	1	20500.	0.00	0.00	0.00	0.00
43	0	1	39900.	0.00	0.00	0.00	0.00
44	0	1	41200.	0.00	0.00	0.00	0.00
45	0	1	5520.	0.00	0.00	0.00	0.00
46	0	1	6230.	0.00	0.00	0.00	0.00
47	0	1	2370.	0.00	0.00	0.00	0.00
48	0	1	24800.	0.00	0.00	0.00	0.00
49	0	1	31300.	0.00	0.00	0.00	0.00
50	0	1	541.	0.00	0.00	0.00	0.00
51	0	1	24700.	0.00	0.00	0.00	0.00
52	0	1	16300.	0.00	0.00	0.00	0.00
53	0	1	2310.	0.00	0.00	0.00	0.00
54	0	1	502.	0.00	0.00	0.00	0.00
55	0	1	18700.	0.00	0.00	0.00	0.00
56	0	1	17400.	0.00	0.00	0.00	0.00
57	0	1	356.	0.00	0.00	0.00	0.00
58	0	1	18200.	0.00	0.00	0.00	0.00
59	0	1	19000.	0.00	0.00	0.00	0.00
60	0	1	16200.	0.00	0.00	0.00	0.00
61	0	1	2050.	0.00	0.00	0.00	0.00
62	0	1	10000.	0.00	0.00	0.00	0.00
63	0	1	11400.	0.00	0.00	0.00	0.00
64	0	1	9460.	0.00	0.00	0.00	0.00
65	0	1	705.	0.00	0.00	0.00	0.00
66	0	1	10900.	0.00	0.00	0.00	0.00
67	0	1	1160.	0.00	0.00	0.00	0.00
68	0	1	10400.	0.00	0.00	0.00	0.00
69	0	1	8010.	0.00	0.00	0.00	0.00
70	0	1	9950.	0.00	0.00	0.00	0.00
71	0	1	10200.	0.00	0.00	0.00	0.00
72	0	1	5520.	0.00	0.00	0.00	0.00
73	0	1	110.	0.00	0.00	0.00	0.00
74	0	1	3210.	0.00	0.00	0.00	0.00
75	0	1	2810.	0.00	0.00	0.00	0.00
76	0	1	659.	0.00	0.00	0.00	0.00
77	0	1	59500.	0.00	0.00	0.00	0.00
78	0	1	54500.	0.00	0.00	0.00	0.00

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       79         0         1     1390.      0.00      0.00      0.00      0.00
       80         0         1    72418.      0.00      0.00      0.00      0.00
       81         0         1   252928.      0.00      0.00      0.00      0.00
       82         0         1   436156.      0.00      0.00      0.00      0.00
       83         0         1  1212157.      0.00      0.00      0.00      0.00
       84         0         1  2370000.      0.00      0.00      0.00      0.00
       85         0         1  4130000.      0.00      0.00      0.00      0.00
       86         0         1   916000.      0.00      0.00      0.00      0.00
       87         0         1   169244.      0.00      0.00      0.00      0.00
    3    1temp.HYD    +    *    +    *    +    *    +    *    +  *** D: FLOWS **
    0    0    0               Bypass options for flow transport in each system
        18              **** System 1  Dummy Conservative Chem  *** E: BCs ***
       1.0       1.0                        Scale and conversion factor
    1    2                                   Downstream BC-C&D
   550.000       0.0   550.000     800.0
   85    2                                   Downstream BC-Mouth
   15000.0       0.0   15000.0     800.0
   16    2                                   Salem R.
   21.0000       0.0   21.0000     800.0
   29    2                                   Christina R.
   22.0000       0.0   22.0000     800.0
   30    2                                   Brandywine R.
   21.0000       0.0   21.0000     800.0
   40    2                                   Darby Cr.
   18.0000       0.0   18.0000     800.0
   47    2                                   Schuylkill R.
   34.0000       0.0   34.0000     800.0
   50    2                                   Newton Cr.
   18.0000       0.0   18.0000     800.0
   54    2                                   Cooper R.
   22.0000       0.0   22.0000     800.0
   57    2                                   Pennsauken Cr.
   24.0000       0.0   24.0000     800.0
   60    2                                   Torresdale Intake
    0.0000       0.0    0.0000     800.0
   61    2                                   Rancocas Cr.
   7.00000       0.0   7.00000     800.0
   65    2                                   Neshaminy Cr.
   18.0000       0.0   18.0000     800.0
   66    2                                   Bristol + Burlington Intake
    0.0000       0.0    0.0000     800.0
   69    2                                   Lower Bucks Intake
    0.0000       0.0    0.0000     800.0
   73    2                                   Crosswicks Cr.
   15.0000       0.0   15.0000     800.0
   76    2                                   Upstream at Trenton
   21.0000       0.0   21.0000     800.0
   79    2                                   Raccoon Cr.
   18.0000       0.0   18.0000     800.0
        0                     **** System 1  - Consrv. Chem.   *** F: LOADS ***
      0                                            (*** NO NPS LOADS ***)
        0   (No parameter)                                  ***   G:PARAMETERS ***
Model constants, general and for each system (see pg 218-232) ** H: CONSTANTS **
Cnsrv. CHM         0    (No reactions/ conservative for system 1)
Cnsrv. CHM         0    (zero constants for the Dummy Conservative Chemical)
         0    +    *    Time Functions *    +    *      *** I: TIME FUNCTIONS **
Initial Condition  Chloride conc, mg/l      3  0.0    1.0E12 ** J: INIT CONC ***
   1:     550.0      1.00   2:    5500.0      1.00   3:     550.0      1.00
   4:     550.0      1.00   5:     550.0      1.00   6:     550.0      1.00
   7:     550.0      1.00   8:     550.0      1.00   9:     550.0      1.00
  10:     550.0      1.00  11:    5500.0      1.00  12:    5000.0      1.00
  13:    3500.0      1.00  14:    3500.0      1.00  15:      21.0      1.00
  16:      21.0      1.00  17:    5000.0      1.00  18:    3000.0      1.00
  19:    2000.0      1.00  20:    2000.0      1.00  21:    1900.0      1.00
  22:    1900.0      1.00  23:    1600.0      1.00  24:    1600.0      1.00
  25:    1200.0      1.00  26:     100.0      1.00  27:      22.0      1.00
  28:      22.0      1.00  29:      22.0      1.00  30:      22.0      1.00
  31:     500.0      1.00  32:     500.0      1.00  33:     400.0      1.00
```

34:	400.0	1.00	35:	300.0	1.00	36:	200.0	1.00
37:	200.0	1.00	38:	200.0	1.00	39:	150.0	1.00
40:	20.0	1.00	41:	150.0	1.00	42:	150.0	1.00
43:	100.0	1.00	44:	50.0	1.00	45:	34.0	1.00
46:	34.0	1.00	47:	34.0	1.00	48:	50.0	1.00
49:	50.0	1.00	50:	18.0	1.00	51:	50.0	1.00
52:	21.0	1.00	53:	21.0	1.00	54:	21.0	1.00
55:	21.0	1.00	56:	21.0	1.00	57:	21.0	1.00
58:	21.0	1.00	59:	21.0	1.00	60:	21.0	1.00
61:	21.0	1.00	62:	21.0	1.00	63:	21.0	1.00
64:	21.0	1.00	65:	21.0	1.00	66:	21.0	1.00
67:	21.0	1.00	68:	21.0	1.00	69:	21.0	1.00
70:	21.0	1.00	71:	21.0	1.00	72:	21.0	1.00
73:	21.0	1.00	74:	21.0	1.00	75:	21.0	1.00
76:	21.0	1.00	77:	5500.0	1.00	78:	5000.0	1.00
79:	21.0	1.00	80:	5500.0	1.00	81:	5500.0	1.00
82:	7000.0	1.00	83:	11000.	1.00	84:	13000.	1.00
85:	15000.	1.00	86:	14000.	1.00	87:	5500.0	1.00