ภาคผนวก ฉ

ฉ.1 ผลการคำนวณจากสมการเคลื่อนย้ายตะกอน 5 สมการ

1. Meyer-Peter and Muller Formula (1948)

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TIME STEP #      24  *    BTIME STEP MAR.- 682 DAYS
 COMPUTING FROM TIME=   7683.0000 DAYS TO TIME=   8365.0000 DAYS IN    22 COMPUTATION STEPS
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 KHLONG SADAO DAM.
        ACCUMULATED TIME (yrs)....     22.918
        FLOW DURATION (days)......     31.000
 ---------------------------------------------------------------------------
 Stream Segment # 1     |   DISCHARGE   | SEDIMENT LOAD | TEMPERATURE
 Section No.     21.000 |     (cfs)     |  (tons/day)   |   (deg F)
 ---------------------------------------------------------------------------
                 INFLOW |         46.40 |          3.95 |       77.00
 TABLE SA-1. TRAP EFFICIENCY ON STREAM SEGMENT #  1
             KHLONG SADAO DAM.
             ACCUMULATED AC-FT ENTERING AND LEAVING THIS STREAM SEGMENT
 ***************************************************************************************************************************
 TIME   NTRY  *         CLAY           *          SILT           *          SAND           *
 DAYS   POINT*INFLOW  OUTFLOW TRAP EFF *INFLOW  OUTFLOW TRAP EFF *INFLOW  OUTFLOW TRAP EFF *
8365  21.000 *10.42                    *42.75                    *27.86                    *
TOTAL= 1.000 *10.42    1.15        .89 *42.75      .02      1.00 *27.86      .00      1.00 *
***************************************************************************************************************************
 TABLE SB-1:  SEDIMENT LOAD PASSING THE  BOUNDARIES OF STREAM SEGMENT #  1
 ---------------------------------------------------------------------------
   SEDIMENT INFLOW at the Upstream Boundary:
      GRAIN SIZE      LOAD (tons/day) |    GRAIN SIZE      LOAD (tons/day)
-------------------------------------------------------------------------
     CLAY.............           .22  |  MEDIUM SAND.......           .42
     VERY FINE SILT....           .24  |  COARSE SAND.......           .13
     FINE SILT.........           .62  |  VERY COARSE SAND..           .04
     MEDIUM SILT.......           .44  |  VERY FINE GRAVEL..           .09
     COARSE SILT.......           .64  |  FINE GRAVEL.......           .02
     VERY FINE SAND....           .62  |  MEDIUM GRAVEL.....           .00
     FINE SAND.........           .48  |  COARSE GRAVEL.....           .00
                         -------------                       -------------
                                                  TOTAL =          3.95
   SEDIMENT OUTFLOW from the Downstream Boundary
      GRAIN SIZE      LOAD (tons/day) |    GRAIN SIZE      LOAD (tons/day)
   ---------------------------------------------------------------------------
     CLAY.............           .00  |  MEDIUM SAND.......           .00
     VERY FINE SILT....           .00  |  COARSE SAND.......           .00
     FINE SILT.........           .00  |  VERY COARSE SAND..           .00
     MEDIUM SILT.......           .00  |  VERY FINE GRAVEL..           .00
     COARSE SILT.......           .00  |  FINE GRAVEL.......           .00
     VERY FINE SAND....           .00  |  MEDIUM GRAVEL.....           .00
     FINE SAND.........           .00  |  COARSE GRAVEL.....           .00
                         -------------                       -------------
                                                  TOTAL =           .00
 TABLE SB-2:  STATUS OF THE BED PROFILE AT TIME =  8365.000 DAYS
 ---------------------------------------------------------------------------
   SECTION   BED CHANGE   WS ELEV   THALWEG        Q      TRANSPORT RATE (tons/day)
   NUMBER       (ft)        (ft)      (ft)       (cfs)       CLAY        SILT        SAND
      21.000       1.18    223.09    188.81         46.          0.          0.          0.
      20.000       0.92    223.09    164.39         46.          0.          0.          0.
      19.000       1.25    223.09    180.56         46.          0.          0.          0.
      18.000       1.30    223.09    164.08         46.          0.          0.          0.
      17.000       1.25    223.09    157.50         46.          0.          0.          0.
      16.000       1.95    223.09    164.06         46.          0.          0.          0.
      15.000       2.18    223.09    156.84         46.          0.          0.          0.
      14.000       1.49    223.09    154.21         46.          0.          0.          0.
      13.000       1.15    223.09    152.57         46.          0.          0.          0.
      12.000       0.92    223.09    157.49         46.          0.          0.          0.
      11.000       0.80    223.09    155.19         46.          0.          0.          0.
      10.000       0.69    223.09    164.05         46.          0.          0.          0.
       9.000       0.57    223.09    152.57         46.          0.          0.          0.
       8.000       0.35    223.09    153.88         46.          0.          0.          0.
       7.000       0.30    223.09    157.48         46.          0.          0.          0.
       6.000      -0.01    223.09    145.34         46.          0.          0.          0.
       5.000       0.20    223.09    150.59         46.          0.          0.          0.
       4.000       0.24    223.09    147.64         46.          0.          0.          0.
       3.000       0.25    223.09    147.64         46.          0.          0.          0.
       2.000       0.30    223.09    147.64         46.          0.          0.          0.
       1.000       0.29    223.09    143.04         46.          0.          0.          0.
---------------------------------------------------------------------------------------- $$END
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2. Yang’s Stream Power (1973)

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UPSTREAM BOUNDARY CONDITIONS
 ---------------------------------------------------------------------------
 Stream Segment # 1     |   DISCHARGE   | SEDIMENT LOAD | TEMPERATURE
 Section No.     21.000 |     (cfs)     |  (tons/day)   |   (deg F)
 ---------------------------------------------------------------------------
                 INFLOW |         46.40 |          3.95 |       77.00
 TABLE SA-1. TRAP EFFICIENCY ON STREAM SEGMENT #  1
             KHLONG SADAO DAM.
             ACCUMULATED AC-FT ENTERING AND LEAVING THIS STREAM SEGMENT
 ***************************************************************************************************************************
 TIME   NTRY  *         CLAY           *          SILT           *          SAND           *
 DAYS   POINT*INFLOW  OUTFLOW TRAP EFF *INFLOW  OUTFLOW TRAP EFF *INFLOW  OUTFLOW TRAP EFF *
```

```
8365  21.000 *10.42                   *42.75                   *27.86                   *
TOTAL= 1.000 *10.42    1.15        .89 *42.75      .02      1.00 *27.86      .00      1.00 *
*****************************************************************************************
 TABLE SB-1:  SEDIMENT LOAD PASSING THE  BOUNDARIES OF STREAM SEGMENT #  1
 ------------------------------------------------------------------------------
   SEDIMENT INFLOW at the Upstream Boundary:
       GRAIN SIZE      LOAD (tons/day) |    GRAIN SIZE      LOAD (tons/day)
   ---------------------------------------------------------------------------
     CLAY.............           .22  |  MEDIUM SAND.......           .42
     VERY FINE SILT....           .24  |  COARSE SAND.......           .13
     FINE SILT.........           .62  |  VERY COARSE SAND..           .04
     MEDIUM SILT.......           .44  |  VERY FINE GRAVEL..           .09
     COARSE SILT.......           .64  |  FINE GRAVEL.......           .02
     VERY FINE SAND....           .62  |  MEDIUM GRAVEL.....           .00
     FINE SAND.........           .48  |  COARSE GRAVEL.....           .00
                         -------------                       -------------
                                                    TOTAL =          3.95
   SEDIMENT OUTFLOW from the Downstream Boundary
       GRAIN SIZE      LOAD (tons/day) |    GRAIN SIZE      LOAD (tons/day)
   ---------------------------------------------------------------------------
     CLAY.............           .00  |  MEDIUM SAND.......           .00
     VERY FINE SILT....           .00  |  COARSE SAND.......           .00
     FINE SILT.........           .00  |  VERY COARSE SAND..           .00
     MEDIUM SILT.......           .00  |  VERY FINE GRAVEL..           .00
     COARSE SILT.......           .00  |  FINE GRAVEL.......           .00
     VERY FINE SAND....           .00  |  MEDIUM GRAVEL.....           .00
     FINE SAND.........           .00  |  COARSE GRAVEL.....           .00
                         -------------                       -------------
                                                    TOTAL =           .00
 TABLE SB-2:  STATUS OF THE BED PROFILE AT TIME =  8365.000 DAYS
 ------------------------------------------------------------------------------------
   SECTION   BED CHANGE   WS ELEV   THALWEG         Q      TRANSPORT RATE (tons/day)
   NUMBER       (ft)        (ft)      (ft)       (cfs)       CLAY       SILT       SAND
      21.000       1.15     223.09    188.81        46.          0.         0.         0.
      20.000        .92     223.09    164.39        46.          0.         0.         0.
      19.000       1.26     223.09    180.56        46.          0.         0.         0.
      18.000       1.44     223.09    164.08        46.          0.         0.         0.
      17.000       1.72     223.09    157.50        46.          0.         0.         0.
      16.000       1.95     223.09    164.06        46.          0.         0.         0.
      15.000       1.98     223.09    156.84        46.          0.         0.         0.
      14.000       2.05     223.09    154.21        46.          0.         0.         0.
      13.000       1.15     223.09    152.57        46.          0.         0.         0.
      12.000        .92     223.09    157.49        46.          0.         0.         0.
      11.000        .80     223.09    155.19        46.          0.         0.         0.
      10.000        .69     223.09    164.05        46.          0.         0.         0.
       9.000        .57     223.09    152.57        46.          0.         0.         0.
       8.000        .35     223.09    153.88        46.          0.         0.         0.
       7.000        .29     223.09    157.48        46.          0.         0.         0.
       6.000        .20     223.09    145.34        46.          0.         0.         0.
       5.000        .23     223.09    150.59        46.          0.         0.         0.
       4.000        .27     223.09    147.64        46.          0.         0.         0.
       3.000        .28     223.09    147.64        46.          0.         0.         0.
       2.000        .29     223.09    147.64        46.          0.         0.         0.
       1.000        .31     223.09    143.04        46.          0.         0.         0.

 ------------------------------------------------------------------------------------
 $$END
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3. Ackers-White Formula (1973)

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UPSTREAM BOUNDARY CONDITIONS
 ---------------------------------------------------------------------------
˝
 Stream Segment # 1     |   DISCHARGE   | SEDIMENT LOAD | TEMPERATURE
 Section No.     21.000 |     (cfs)     |  (tons/day)   |   (deg F)
 ---------------------------------------------------------------------------
                 INFLOW |         46.40 |          3.95 |       77.00


 TABLE SA-1. TRAP EFFICIENCY ON STREAM SEGMENT #  1
             KHLONG SADAO DAM.
             ACCUMULATED AC-FT ENTERING AND LEAVING THIS STREAM SEGMENT
 *****************************************************************************************************************************
 TIME   NTRY *         CLAY          *          SILT          *          SAND          *
 DAYS   POINT*INFLOW  OUTFLOW TRAP EFF *INFLOW  OUTFLOW TRAP EFF *INFLOW  OUTFLOW TRAP EFF *
8365  21.000 *10.42                   *42.75                   *27.86                   *
TOTAL= 1.000 *10.42    1.15        .89 *42.75      .02      1.00 *27.86      .00      1.00 *
*****************************************************************************************************************************
 TABLE SB-1:  SEDIMENT LOAD PASSING THE  BOUNDARIES OF STREAM SEGMENT #  1
 ------------------------------------------------------------------------------
   SEDIMENT INFLOW at the Upstream Boundary:
       GRAIN SIZE      LOAD (tons/day) |    GRAIN SIZE      LOAD (tons/day)
   ---------------------------------------------------------------------------
     CLAY.............           .22  |  MEDIUM SAND.......           .42
     VERY FINE SILT....           .24  |  COARSE SAND.......           .13
     FINE SILT.........           .62  |  VERY COARSE SAND..           .04
     MEDIUM SILT.......           .44  |  VERY FINE GRAVEL..           .09
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    COARSE SILT.......           .64  |  FINE GRAVEL.......           .02
    VERY FINE SAND....           .62  |  MEDIUM GRAVEL.....           .00
    FINE SAND.........           .48  |  COARSE GRAVEL.....           .00
                         -------------                      -------------
                                                    TOTAL =          3.95
  SEDIMENT OUTFLOW from the Downstream Boundary
      GRAIN SIZE      LOAD (tons/day) |    GRAIN SIZE      LOAD (tons/day)
  ------------------------------------------------------------------------
    CLAY..............           .00  |  MEDIUM SAND.......           .00
    VERY FINE SILT....           .00  |  COARSE SAND.......           .00
    FINE SILT.........           .00  |  VERY COARSE SAND..           .00
    MEDIUM SILT.......           .00  |  VERY FINE GRAVEL..           .00
    COARSE SILT.......           .00  |  FINE GRAVEL.......           .00
    VERY FINE SAND....           .00  |  MEDIUM GRAVEL.....           .00
    FINE SAND.........           .00  |  COARSE GRAVEL.....           .00
                         -------------                      -------------
                                                    TOTAL =           .00

 TABLE SB-2:  STATUS OF THE BED PROFILE AT TIME =  8365.000 DAYS
 ---------------------------------------------------------------------------------
   SECTION   BED CHANGE   WS ELEV   THALWEG         Q      TRANSPORT RATE (tons/day)
   NUMBER       (ft)        (ft)      (ft)        (cfs)       CLAY        SILT        SAND
      21.000       2.05    223.09    188.81         46.          0.          0.          0.
      20.000       0.92    223.09    164.39         46.          0.          0.          0.
      19.000       1.02    223.09    180.56         46.          0.          0.          0.
      18.000       1.40    223.09    164.08         46.          0.          0.          0.
      17.000       1.66    223.09    157.50         46.          0.          0.          0.
      16.000       1.93    223.09    164.06         46.          0.          0.          0.
      15.000       2.10    223.09    156.84         46.          0.          0.          0.
      14.000       1.49    223.09    154.21         46.          0.          0.          0.
      13.000       1.15    223.09    152.57         46.          0.          0.          0.
      12.000       0.92    223.09    157.49         46.          0.          0.          0.
      11.000       0.80    223.09    155.19         46.          0.          0.          0.
      10.000       0.69    223.09    164.05         46.          0.          0.          0.
       9.000       0.57    223.09    152.57         46.          0.          0.          0.
       8.000       0.35    223.09    153.88         46.          0.          0.          0.
       7.000       0.30    223.09    157.48         46.          0.          0.          0.
       6.000      -0.01    223.09    145.34         46.          0.          0.          0.
       5.000       0.22    223.09    150.59         46.          0.          0.          0.
       4.000       0.24    223.09    147.64         46.          0.          0.          0.
       3.000       0.30    223.09    147.64         46.          0.          0.          0.
       2.000       0.22    223.09    147.64         46.          0.          0.          0.
       1.000       0.25    223.09    143.04         46.          0.          0.          0.

 ---------------------------------------------------------------------------------------------
 $$END
```

4. Colby Relation (1964)

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UPSTREAM BOUNDARY CONDITIONS
 ------------------------------------------------------------------------
 Stream Segment # 1     |   DISCHARGE   | SEDIMENT LOAD | TEMPERATURE
 Section No.     21.000 |     (cfs)     |  (tons/day)   |   (deg F)
 ------------------------------------------------------------------------
                INFLOW |         46.40 |          3.95 |       77.00

TABLE SA-1. TRAP EFFICIENCY ON STREAM SEGMENT #  1
             KHLONG SADAO DAM.
             ACCUMULATED AC-FT ENTERING AND LEAVING THIS STREAM SEGMENT
 ***************************************************************************************************************************
 TIME   NTRY  *         CLAY           *          SILT           *          SAND           *
 DAYS   POINT*INFLOW  OUTFLOW TRAP EFF *INFLOW  OUTFLOW TRAP EFF *INFLOW  OUTFLOW TRAP EFF *
8365  21.000 *10.42                    *42.75                     *27.86                     *
TOTAL= 1.000 *10.42    1.15        .89 *42.75      .02      1.00 *27.86      .00      1.00 *
***************************************************************************************************************************

 TABLE SB-1:  SEDIMENT LOAD PASSING THE  BOUNDARIES OF STREAM SEGMENT #  1
 ---------------------------------------------------------------------------
   SEDIMENT INFLOW at the Upstream Boundary:
       GRAIN SIZE      LOAD (tons/day) |    GRAIN SIZE      LOAD (tons/day)
   ------------------------------------------------------------------------
     CLAY..............           .22  |  MEDIUM SAND.......           .42
     VERY FINE SILT....           .24  |  COARSE SAND.......           .13
     FINE SILT.........           .62  |  VERY COARSE SAND..           .04
     MEDIUM SILT.......           .44  |  VERY FINE GRAVEL..           .09
     COARSE SILT.......           .64  |  FINE GRAVEL.......           .02
     VERY FINE SAND....           .62  |  MEDIUM GRAVEL.....           .00
     FINE SAND.........           .48  |  COARSE GRAVEL.....           .00
                          -------------                      -------------
                                                     TOTAL =          3.95
   SEDIMENT OUTFLOW from the Downstream Boundary
       GRAIN SIZE      LOAD (tons/day) |    GRAIN SIZE      LOAD (tons/day)
   ------------------------------------------------------------------------
     CLAY..............           .00  |  MEDIUM SAND.......           .00
     VERY FINE SILT....           .00  |  COARSE SAND.......           .00
     FINE SILT.........           .00  |  VERY COARSE SAND..           .00
     MEDIUM SILT.......           .00  |  VERY FINE GRAVEL..           .00
     COARSE SILT.......           .00  |  FINE GRAVEL.......           .00
     VERY FINE SAND....           .00  |  MEDIUM GRAVEL.....           .00
     FINE SAND.........           .00  |  COARSE GRAVEL.....           .00
                          -------------                      -------------
                                                     TOTAL =           .00
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TABLE SB-2: STATUS OF THE BED PROFILE AT TIME = 8365.000 DAYS

SECTION NUMBER	BED CHANGE (ft)	WS ELEV (ft)	THALWEG (ft)	Q (cfs)	TRANSPORT RATE (tons/day) CLAY	SILT	SAND
21.000	0.11	223.09	188.81	46.	0.	0.	0.
20.000	1.01	223.09	164.39	46.	0.	0.	0.
19.000	1.12	223.09	180.56	46.	0.	0.	0.
18.000	0.82	223.09	164.08	46.	0.	0.	0.
17.000	0.21	223.09	157.50	46.	0.	0.	0.
16.000	0.89	223.09	164.06	46.	0.	0.	0.
15.000	1.12	223.09	156.84	46.	0.	0.	0.
14.000	0.50	223.09	154.21	46.	0.	0.	0.
13.000	0.62	223.09	152.57	46.	0.	0.	0.
12.000	0.00	223.09	157.49	46.	0.	0.	0.
11.000	0.01	223.09	155.19	46.	0.	0.	0.
10.000	0.59	223.09	164.05	46.	0.	0.	0.
9.000	-0.05	223.09	152.57	46.	0.	0.	0.
8.000	-0.10	223.09	153.88	46.	0.	0.	0.
7.000	0.11	223.09	157.48	46.	0.	0.	0.
6.000	-0.25	223.09	145.34	46.	0.	0.	0.
5.000	0.21	223.09	150.59	46.	0.	0.	0.
4.000	0.15	223.09	147.64	46.	0.	0.	0.
3.000	0.22	223.09	147.64	46.	0.	0.	0.
2.000	0.31	223.09	147.64	46.	0.	0.	0.
1.000	0.31	223.09	143.04	46.	0.	0.	0.

$$END

5. Toffaleti's Formula (1969)

UPSTREAM BOUNDARY CONDITIONS

Stream Segment # 1 Section No. 21.000		DISCHARGE (cfs)	SEDIMENT LOAD (tons/day)	TEMPERATURE (deg F)
	INFLOW	46.40	3.95	77.00

TABLE SA-1. TRAP EFFICIENCY ON STREAM SEGMENT # 1
KHLONG SADAO DAM.
ACCUMULATED AC-FT ENTERING AND LEAVING THIS STREAM SEGMENT

TIME DAYS	NTRY POINT	CLAY INFLOW	CLAY OUTFLOW	CLAY TRAP EFF	SILT INFLOW	SILT OUTFLOW	SILT TRAP EFF	SAND INFLOW	SAND OUTFLOW	SAND TRAP EFF
8365	21.000	*10.42			*42.75			*27.86		
TOTAL=	1.000	*10.42	1.15	.89	*42.75	.02	1.00	*27.86	.00	1.00

TABLE SB-1: SEDIMENT LOAD PASSING THE BOUNDARIES OF STREAM SEGMENT # 1

SEDIMENT INFLOW at the Upstream Boundary:

GRAIN SIZE	LOAD (tons/day)	GRAIN SIZE	LOAD (tons/day)
CLAY.....	.22	MEDIUM SAND.....	.42
VERY FINE SILT....	.24	COARSE SAND.....	.13
FINE SILT.....	.62	VERY COARSE SAND..	.04
MEDIUM SILT.....	.44	VERY FINE GRAVEL..	.09
COARSE SILT.....	.64	FINE GRAVEL.....	.02
VERY FINE SAND....	.62	MEDIUM GRAVEL.....	.00
FINE SAND.....	.48	COARSE GRAVEL.....	.00
		TOTAL =	3.95

SEDIMENT OUTFLOW from the Downstream Boundary

GRAIN SIZE	LOAD (tons/day)	GRAIN SIZE	LOAD (tons/day)
CLAY.....	.00	MEDIUM SAND.....	.00
VERY FINE SILT....	.00	COARSE SAND.....	.00
FINE SILT.....	.00	VERY COARSE SAND..	.00
MEDIUM SILT.....	.00	VERY FINE GRAVEL..	.00
COARSE SILT.....	.00	FINE GRAVEL.....	.00
VERY FINE SAND....	.00	MEDIUM GRAVEL.....	.00
FINE SAND.....	.00	COARSE GRAVEL.....	.00
		TOTAL =	.00

TABLE SB-2: STATUS OF THE BED PROFILE AT TIME = 8365.000 DAYS

SECTION NUMBER	BED CHANGE (ft)	WS ELEV (ft)	THALWEG (ft)	Q (cfs)	TRANSPORT RATE (tons/day) CLAY	SILT	SAND
21.000	1.12	223.09	188.81	46.	0.	0.	0.
20.000	0.92	223.09	164.39	46.	0.	0.	0.
19.000	1.25	223.09	180.56	46.	0.	0.	0.
18.000	1.35	223.09	164.08	46.	0.	0.	0.
17.000	1.25	223.09	157.50	46.	0.	0.	0.
16.000	1.95	223.09	164.06	46.	0.	0.	0.
15.000	2.18	223.09	156.84	46.	0.	0.	0.
14.000	1.49	223.09	154.21	46.	0.	0.	0.
13.000	1.15	223.09	152.57	46.	0.	0.	0.
12.000	0.92	223.09	157.49	46.	0.	0.	0.

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11.000      0.80    223.09    155.19        46.         0.         0.         0.
10.000      0.69    223.09    164.05        46.         0.         0.         0.
 9.000      0.57    223.09    152.57        46.         0.         0.         0.
 8.000      0.35    223.09    153.88        46.         0.         0.         0.
 7.000      0.29    223.09    157.48        46.         0.         0.         0.
 6.000     -0.02    223.09    145.34        46.         0.         0.         0.
 5.000      0.21    223.09    150.59        46.         0.         0.         0.
 4.000      0.25    223.09    147.64        46.         0.         0.         0.
 3.000      0.25    223.09    147.64        46.         0.         0.         0.
 2.000      0.30    223.09    147.64        46.         0.         0.         0.
 1.000      0.29    223.09    143.04        46.         0.         0.         0.
-------------------------------------------------------------------------------------------$$END
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ฉ.2 ผลวิเคราะห์ความสัมพันธ์ 5 สมการกับการสำรวจภาคสนาม

สำรวจ ปี 2001	Meyer.	Toffaliti	Yang	Acker.	Colby
0.39	0.29	0.29	0.31	0.25	0.31
0.29	0.3	0.3	0.29	0.22	0.31
0.28	0.25	0.25	0.28	0.3	0.22
0.25	0.24	0.25	0.27	0.24	0.15
0.21	0.2	0.21	0.23	0.22	0.21
0.25	-0.01	0.02	0.2	0.01	-0.25
0.26	0.3	0.29	0.29	0.3	-0.11
0.35	0.35	0.35	0.35	0.35	-0.1
0.55	0.57	0.57	0.57	0.57	-0.05
0.7	0.69	0.69	0.69	0.69	0.59
0.87	0.8	0.8	0.8	0.8	-0.01
0.38	0.92	0.92	0.92	0.92	0
1.66	1.15	1.15	1.15	1.15	0.62
2.5	1.49	1.49	2.05	2	0.5
0.67	2.18	2.18	1.98	2.16	1.12
2.2	1.95	1.95	1.95	1.95	0.89
1.76	1.25	1.25	1.72	1.66	0.21
2.08	1.3	1.35	1.44	1.4	0.82
1.51	1.25	1.25	1.26	1.02	1.12
1.28	0.92	0.92	0.92	0.92	1.01
1.18	1.5	1.12	1.15	2.05	6.11
RANK CORELATION	0.9950	0.9950	0.9980	0.9970	0.9790

สหสัมพันธ์แบบจัดอันดับ (Rank Correlation)

$$r = \sum_{i=1}^{n} \frac{(x_i - \bar{x})(y_i - \bar{y})}{\sqrt{\sum_{i=1}^{n}(x_i - \bar{x})^2 \sum_{i=1}^{n}(y_i - \bar{y})^2}}$$ หรือ $$r_s = 1 - \left(\frac{6\sum_{i=1}^{n} d_i^2}{n(n^2 - 1)} \right)$$

<u>หมายเหตุ</u> ค่า r_s อยู่ระหว่าง –1 ถึง 1

ถ้าค่า r_s เข้าใกล้ 1 แสดงว่า x, y มีความสัมพันธ์สูงในทิศทางเดียวกัน

ฉ.3 ผลการประเมินปริมาณตะกอนหลังการดำเนินงานปีที่ 10, 25, 50, 100 และ102

1. OUTPUT FILE: KSD2551.OUT (การดำเนินการเขื่อนคลองสะเดาไปแล้ว 10 ปี)

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- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 KHLONG SADAO DAM.
        ACCUMULATED TIME (yrs)....     29.918
        FLOW DURATION (days)......     31.000
 ---------------------------------------------------------------------
 Stream Segment # 1     |   DISCHARGE   | SEDIMENT LOAD | TEMPERATURE
 Section No.     21.000 |     (cfs)     |  (tons/day)   |   (deg F)
 ---------------------------------------------------------------------
                INFLOW |         46.40 |          3.95 |       77.00
 TABLE SA-1. TRAP EFFICIENCY ON STREAM SEGMENT #  1
             KHLONG SADAO DAM.
             ACCUMULATED AC-FT ENTERING AND LEAVING THIS STREAM
 ***************************************************************************
 TIME       ENTRY    *             CLAY              *             SILT              *             SAND
*
 DAYS        POINT  *  INFLOW   OUTFLOW  TRAP EFF * INFLOW   OUTFLOW  TRAP EFF    * INFLOW   OUTFLOW  TRAP
EFF *
10920.00    21.000  *     13.59                    *     55.77                      *     36.35
*
TOTAL=      1.000 *     13.59      1.50       .89 *     55.77       .02      1.00 *     36.35       .00
1.00 *
 TABLE SB-1:  SEDIMENT LOAD PASSING THE  BOUNDARIES OF STREAM SEGMENT #  1
 ---------------------------------------------------------------------
   SEDIMENT INFLOW at the Upstream Boundary:
       GRAIN SIZE      LOAD (tons/day) |    GRAIN SIZE      LOAD (tons/day)
 ---------------------------------------------------------------------
    CLAY.............           .22  |  MEDIUM SAND.......           .42
    VERY FINE SILT....           .24  |  COARSE SAND.......           .13
    FINE SILT.........           .62  |  VERY COARSE SAND..           .04
    MEDIUM SILT.......           .44  |  VERY FINE GRAVEL..           .09
    COARSE SILT.......           .64  |  FINE GRAVEL.......           .02
    VERY FINE SAND....           .62  |  MEDIUM GRAVEL.....           .00
    FINE SAND.........           .48  |  COARSE GRAVEL.....           .00
                        -------------                      -------------
                                                 TOTAL =          3.95
   SEDIMENT OUTFLOW from the Downstream Boundary
       GRAIN SIZE      LOAD (tons/day) |    GRAIN SIZE      LOAD (tons/day)
 ---------------------------------------------------------------------
    CLAY.............           .00  |  MEDIUM SAND.......           .00
    VERY FINE SILT....           .00  |  COARSE SAND.......           .00
    FINE SILT.........           .00  |  VERY COARSE SAND..           .00
    MEDIUM SILT.......           .00  |  VERY FINE GRAVEL..           .00
    COARSE SILT.......           .00  |  FINE GRAVEL.......           .00
    VERY FINE SAND....           .00  |  MEDIUM GRAVEL.....           .00
    FINE SAND.........           .00  |  COARSE GRAVEL.....           .00
                        -------------                      -------------
                                                 TOTAL =          .00
 TABLE SB-2:  STATUS OF THE BED PROFILE AT TIME = 10920.000 DAYS
 ---------------------------------------------------------------------
   SECTION   BED CHANGE   WS ELEV   THALWEG        Q      TRANSPORT RATE (tons/day)
   NUMBER       (ft)        (ft)      (ft)       (cfs)       CLAY       SILT       SAND
     21.000       1.03     223.09    191.16        46.          0.         0.         0.
     20.000       1.18     223.09    164.49        46.          0.         0.         0.
     19.000       1.62     223.09    180.60        46.          0.         0.         0.
     18.000       1.84     223.09    164.09        46.          0.         0.         0.
     17.000       2.21     223.09    157.51        46.          0.         0.         0.
     16.000       2.51     223.09    164.06        46.          0.         0.         0.
     15.000       2.80     223.09    156.84        46.          0.         0.         0.
     14.000       1.92     223.09    154.22        46.          0.         0.         0.
     13.000       1.47     223.09    152.58        46.          0.         0.         0.
     12.000       1.18     223.09    157.50        46.          0.         0.         0.
     11.000       1.03     223.09    155.19        46.          0.         0.         0.
     10.000        .88     223.09    164.05        46.          0.         0.         0.
      9.000        .74     223.09    152.57        46.          0.         0.         0.
      8.000        .44     223.09    153.88        46.          0.         0.         0.
      7.000        .37     223.09    157.49        46.          0.         0.         0.
      6.000        .22     223.09    145.34        46.          0.         0.         0.
      5.000        .30     223.09    150.59        46.          0.         0.         0.
      4.000        .37     223.09    147.64        46.          0.         0.         0.
      3.000        .37     223.09    147.64        46.          0.         0.         0.
      2.000        .30     223.09    147.64        46.          0.         0.         0.
```

```
      1.000        .30    223.09    143.04         46.          0.          0.          0.

 ------------------------------------------------------------------------------------$$END
```

2. OUTPUT FILE: KSD2566.OUT (การดำเนินการเขื่อนคลองสะเดาไปแล้ว 25 ปี)

```
================================================================================================
 TIME STEP #      24
 *    BTIME STEP MAR.- 1364 DAYS
 COMPUTING FROM TIME=  15031.0000 DAYS TO TIME=  16355.0000 DAYS IN    42 COMPUTATION STEPS
 KHLONG SADAO DAM.
        ACCUMULATED TIME (yrs)....     44.748
        FLOW DURATION (days)......     31.000
 ------------------------------------------------------------------------
 Stream Segment # 1      |   DISCHARGE   | SEDIMENT LOAD | TEMPERATURE
 Section No.     21.000 |     (cfs)     |  (tons/day)   |   (deg F)
 ------------------------------------------------------------------------
                  INFLOW |         46.40 |          3.95 |       77.00

 TABLE SA-1. TRAP EFFICIENCY ON STREAM SEGMENT #  1 KHLONG SADAO DAM.
             ACCUMULATED AC-FT ENTERING AND LEAVING THIS STREAM SEGMENT
 ********************************************************************************     TIME
ENTRY *             CLAY              *             SILT              *             SAND              *
     DAYS       POINT *    INFLOW   OUTFLOW  TRAP EFF *    INFLOW   OUTFLOW  TRAP EFF *    INFLOW
OUTFLOW  TRAP EFF *
 16333.00      21.000 *     20.37                     *     83.59                     *     54.48
*
    TOTAL=      1.000 *     20.37      2.26       .89 *     83.59       .02      1.00 *     54.48
.00      1.00 *
 ********************************************************************************
 TABLE SB-1:  SEDIMENT LOAD PASSING THE  BOUNDARIES OF STREAM SEGMENT #  1
 ------------------------------------------------------------------------------
   SEDIMENT INFLOW at the Upstream Boundary:
       GRAIN SIZE      LOAD (tons/day) |    GRAIN SIZE      LOAD (tons/day)
   ---------------------------------------------------------------------------
     CLAY.............           .22  |  MEDIUM SAND.......           .42
     VERY FINE SILT....           .24  |  COARSE SAND.......           .13
     FINE SILT.........           .62  |  VERY COARSE SAND..           .04
     MEDIUM SILT.......           .44  |  VERY FINE GRAVEL..           .09
     COARSE SILT.......           .64  |  FINE GRAVEL.......           .02
     VERY FINE SAND....           .62  |  MEDIUM GRAVEL.....           .00
     FINE SAND.........           .48  |  COARSE GRAVEL.....           .00
                         -------------                       -------------
                                                   TOTAL =          3.95
   SEDIMENT OUTFLOW from the Downstream Boundary
       GRAIN SIZE      LOAD (tons/day) |    GRAIN SIZE      LOAD (tons/day)
   ---------------------------------------------------------------------------
     CLAY.............           .00  |  MEDIUM SAND.......           .00
     VERY FINE SILT....           .00  |  COARSE SAND.......           .00
     FINE SILT.........           .00  |  VERY COARSE SAND..           .00
     MEDIUM SILT.......           .00  |  VERY FINE GRAVEL..           .00
     COARSE SILT.......           .00  |  FINE GRAVEL.......           .00
     VERY FINE SAND....           .00  |  MEDIUM GRAVEL.....           .00
     FINE SAND.........           .00  |  COARSE GRAVEL.....           .00
                         -------------                       -------------
                                                   TOTAL =           .00

 TABLE SB-2:  STATUS OF THE BED PROFILE AT TIME = 16333.000 DAYS
 ------------------------------------------------------------------------------
   SECTION   BED CHANGE   WS ELEV   THALWEG         Q      TRANSPORT RATE (tons/day)
   NUMBER       (ft)        (ft)      (ft)       (cfs)       CLAY       SILT       SAND
      21.000       1.54    223.09    196.38         46.          0.          1.          0.
      20.000       1.76    223.09    164.75         46.          0.          0.          0.
      19.000       2.42    223.09    180.68         46.          0.          0.          0.
      18.000       2.75    223.09    164.12         46.          0.          0.          0.
      17.000       3.29    223.09    157.52         46.          0.          0.          0.
      16.000       3.73    223.09    164.07         46.          0.          0.          0.
      15.000       4.17    223.09    156.85         46.          0.          0.          0.
      14.000       2.86    223.09    154.22         46.          0.          0.          0.
      13.000       2.20    223.09    152.58         46.          0.          0.          0.
      12.000       1.76    223.09    157.50         46.          0.          0.          0.
      11.000       1.54    223.09    155.20         46.          0.          0.          0.
      10.000       1.32    223.09    164.06         46.          0.          0.          0.
       9.000       1.10    223.09    152.57         46.          0.          0.          0.
       8.000        .66    223.09    153.88         46.          0.          0.          0.
       7.000        .55    223.09    157.49         46.          0.          0.          0.
       6.000        .33    223.09    145.35         46.          0.          0.          0.
       5.000        .44    223.09    150.59         46.          0.          0.          0.
       4.000        .55    223.09    147.64         46.          0.          0.          0.
       3.000        .55    223.09    147.64         46.          0.          0.          0.
       2.000        .44    223.09    147.64         46.          0.          0.          0.
       1.000        .44    223.09    143.04         46.          0.          0.          0.
 ------------------------------------------------------------------------------------$$END
```

3. OUTPUT FILE: KSD2591.OUT (การดำเนินการเขื่อนคลองสะเดาไปแล้ว 50 ปี)

```
TIME STEP #      24
 *    BTIME STEP MAR.- 2139 DAYS
 COMPUTING FROM TIME=  23656.0000 DAYS TO TIME=  25795.0000 DAYS IN    69 COMPUTATION STEPS
 KHLONG SADAO DAM.
        ACCUMULATED TIME (yrs)....     70.671
        FLOW DURATION (days)......     31.000
 ------------------------------------------------------------------------
 Stream Segment # 1      |   DISCHARGE   | SEDIMENT LOAD | TEMPERATURE
 Section No.     21.000 |     (cfs)     |  (tons/day)   |   (deg F)
```

```
 ---------------------------------------------------------------------
                INFLOW |         46.40 |          3.95 |       77.00

 TABLE SA-1. TRAP EFFICIENCY ON STREAM SEGMENT #  1 KHLONG SADAO DAM.
             ACCUMULATED AC-FT ENTERING AND LEAVING THIS STREAM SEGMENT
 ************************************************************************************
     TIME       ENTRY *             CLAY              *             SILT              *
SAND                 *
     DAYS       POINT *    INFLOW   OUTFLOW  TRAP EFF *    INFLOW   OUTFLOW  TRAP EFF *    INFLOW
OUTFLOW  TRAP EFF *
 25795.00      21.000 *     32.15                     *    131.94                     *     85.99
*
    TOTAL=      1.000 *     32.15      3.62       .89 *    131.94       .02      1.00 *     85.99
.00      1.00 *
 ************************************************************************************
 TABLE SB-1:  SEDIMENT LOAD PASSING THE  BOUNDARIES OF STREAM SEGMENT #  1
 ------------------------------------------------------------------------------
   SEDIMENT INFLOW at the Upstream Boundary:
       GRAIN SIZE      LOAD (tons/day) |    GRAIN SIZE      LOAD (tons/day)
   ---------------------------------------------------------------------------
     CLAY.............           .22  |  MEDIUM SAND.......           .42
     VERY FINE SILT....           .24  |  COARSE SAND.......           .13
     FINE SILT.........           .62  |  VERY COARSE SAND..           .04
     MEDIUM SILT.......           .44  |  VERY FINE GRAVEL..           .09
     COARSE SILT.......           .64  |  FINE GRAVEL.......           .02
     VERY FINE SAND....           .62  |  MEDIUM GRAVEL.....           .00
     FINE SAND.........           .48  |  COARSE GRAVEL.....           .00
                         -------------                      -------------
                                                  TOTAL =          3.95
   SEDIMENT OUTFLOW from the Downstream Boundary
       GRAIN SIZE      LOAD (tons/day) |    GRAIN SIZE      LOAD (tons/day)
   ---------------------------------------------------------------------------
     CLAY.............           .00  |  MEDIUM SAND.......           .00
     VERY FINE SILT....           .00  |  COARSE SAND.......           .00
     FINE SILT.........           .00  |  VERY COARSE SAND..           .00
     MEDIUM SILT.......           .00  |  VERY FINE GRAVEL..           .00
     COARSE SILT.......           .00  |  FINE GRAVEL.......           .00
     VERY FINE SAND....           .00  |  MEDIUM GRAVEL.....           .00
     FINE SAND.........           .00  |  COARSE GRAVEL.....           .00
                         -------------                      -------------
                                                  TOTAL =           .00
 TABLE SB-2:  STATUS OF THE BED PROFILE AT TIME = 25795.000 DAYS
 ------------------------------------------------------------------------------
   SECTION   BED CHANGE   WS ELEV   THALWEG        Q      TRANSPORT RATE (tons/day)
   NUMBER       (ft)        (ft)      (ft)       (cfs)       CLAY       SILT       SAND
      21.000       2.78    223.09    209.20        46.          0.         1.         0.
      20.000       3.17    223.09    165.31        46.          0.         0.         0.
      19.000       4.37    223.09    180.92        46.          0.         0.         0.
      18.000       4.96    223.09    164.18        46.          0.         0.         0.
      17.000       5.95    223.09    157.54        46.          0.         0.         0.
      16.000       6.74    223.09    164.09        46.          0.         0.         0.
      15.000       7.54    223.09    156.86        46.          0.         0.         0.
      14.000       5.16    223.09    154.24        46.          0.         0.         0.
      13.000       3.97    223.09    152.59        46.          0.         0.         0.
      12.000       3.17    223.09    157.51        46.          0.         0.         0.
      11.000       2.78    223.09    155.21        46.          0.         0.         0.
      10.000       2.38    223.09    164.07        46.          0.         0.         0.
       9.000       1.98    223.09    152.58        46.          0.         0.         0.
       8.000       1.19    223.09    153.89        46.          0.         0.         0.
       7.000        .99    223.09    157.49        46.          0.         0.         0.
       6.000        .60    223.09    145.35        46.          0.         0.         0.
       5.000        .79    223.09    150.60        46.          0.         0.         0.
       4.000        .99    223.09    147.65        46.          0.         0.         0.
       3.000        .99    223.09    147.65        46.          0.         0.         0.
       2.000        .79    223.09    147.65        46.          0.         0.         0.
       1.000        .79    223.09    143.05        46.          0.         0.         0.
------------------------------------------------------------------------------- $$END
```

4. OUTPUT FILE: KSD2641.OUT (การดำเนินการเขื่อนคลองสะเดาไปแล้ว 100 ปี)

```
TIME STEP #      24
 *    BTIME STEP MAR.- 3689 DAYS
 COMPUTING FROM TIME=  40356.0000 DAYS TO TIME=  44045.0000 DAYS IN   119 COMPUTATION STEPS
 KHLONG SADAO DAM.
        ACCUMULATED TIME (yrs)....    120.671
        FLOW DURATION (days)......     31.000
 ---------------------------------------------------------------------
 Stream Segment # 1     |   DISCHARGE   | SEDIMENT LOAD | TEMPERATURE
 Section No.     21.000 |     (cfs)     |  (tons/day)   |   (deg F)
 ---------------------------------------------------------------------
                INFLOW |         46.40 |          3.95 |       77.00
 TABLE SA-1. TRAP EFFICIENCY ON STREAM SEGMENT #  1 KHLONG SADAO DAM.
             ACCUMULATED AC-FT ENTERING AND LEAVING THIS STREAM SEGMENT
 ************************************************************************************
     TIME       ENTRY *             CLAY              *             SILT              *
SAND                 *
     DAYS       POINT *    INFLOW   OUTFLOW  TRAP EFF *    INFLOW   OUTFLOW  TRAP EFF *    INFLOW
OUTFLOW  TRAP EFF *
 44045.00      21.000 *     54.82                     *    224.96                     *    146.62
*
    TOTAL=      1.000 *     54.82      6.35       .88 *    224.96       .03      1.00 *    146.62
.00      1.00 *
 ************************************************************************************
 TABLE SB-1:  SEDIMENT LOAD PASSING THE  BOUNDARIES OF STREAM SEGMENT #  1
 ------------------------------------------------------------------------------
```

```
  SEDIMENT INFLOW at the Upstream Boundary:
      GRAIN SIZE      LOAD (tons/day) |    GRAIN SIZE      LOAD (tons/day)
  ------------------------------------------------------------------------
    CLAY..............           .22  |  MEDIUM SAND.......           .42
    VERY FINE SILT....           .24  |  COARSE SAND.......           .13
    FINE SILT.........           .62  |  VERY COARSE SAND..           .04
    MEDIUM SILT.......           .44  |  VERY FINE GRAVEL..           .09
    COARSE SILT.......           .64  |  FINE GRAVEL.......           .02
    VERY FINE SAND....           .62  |  MEDIUM GRAVEL.....           .00
    FINE SAND.........           .48  |  COARSE GRAVEL.....           .00
                        -------------                       -------------
                                                 TOTAL =          3.95
  SEDIMENT OUTFLOW from the Downstream Boundary
      GRAIN SIZE      LOAD (tons/day) |    GRAIN SIZE      LOAD (tons/day)
  ------------------------------------------------------------------------
    CLAY..............           .00  |  MEDIUM SAND.......           .00
    VERY FINE SILT....           .00  |  COARSE SAND.......           .00
    FINE SILT.........           .00  |  VERY COARSE SAND..           .00
    MEDIUM SILT.......           .00  |  VERY FINE GRAVEL..           .00
    COARSE SILT.......           .00  |  FINE GRAVEL.......           .00
    VERY FINE SAND....           .00  |  MEDIUM GRAVEL.....           .00
    FINE SAND.........           .00  |  COARSE GRAVEL.....           .00
                        -------------                       -------------
                                                 TOTAL =          .00
 TABLE SB-2:  STATUS OF THE BED PROFILE AT TIME = 44045.000 DAYS
 ---------------------------------------------------------------------------------------
   SECTION   BED CHANGE   WS ELEV   THALWEG        Q      TRANSPORT RATE (tons/day)
   NUMBER       (ft)        (ft)      (ft)       (cfs)      CLAY       SILT       SAND
      21.000       4.32    223.05    222.94         46.         0.         0.         0.
      20.000       4.94    223.09    166.36         46.         0.         0.         0.
      19.000       6.80    223.09    183.01         46.         0.         0.         0.
      18.000       7.73    223.09    164.34         46.         0.         0.         0.
      17.000       9.27    223.09    157.60         46.         0.         0.         0.
      16.000      10.50    223.09    164.13         46.         0.         0.         0.
      15.000      11.74    223.09    156.89         46.         0.         0.         0.
      14.000       8.04    223.09    154.26         46.         0.         0.         0.
      13.000       6.18    223.09    152.62         46.         0.         0.         0.
      12.000       4.94    223.09    157.53         46.         0.         0.         0.
      11.000       4.32    223.09    155.23         46.         0.         0.         0.
      10.000       3.70    223.09    164.08         46.         0.         0.         0.
       9.000       3.09    223.09    152.59         46.         0.         0.         0.
       8.000       1.86    223.09    153.90         46.         0.         0.         0.
       7.000       1.55    223.09    157.50         46.         0.         0.         0.
       6.000        .93    223.09    145.36         46.         0.         0.         0.
       5.000       1.24    223.09    150.60         46.         0.         0.         0.
       4.000       1.55    223.09    147.65         46.         0.         0.         0.
       3.000       1.55    223.09    147.65         46.         0.         0.         0.
       2.000       1.24    223.09    147.65         46.         0.         0.         0.
       1.000       1.24    223.09    143.05         46.         0.         0.         0.
 --------------------------------------------------------------------------------------- $$END
```

5. OUTPUT FILE: KSD2643.OUT (การดำเนินการเขื่อนคลองสะเดาไปแล้ว 102 ปี 5 เดือน)

ปริมาณตะกอนเต็มระดับกักเก็บ สิงหาคม ค.ศ. 2643

```
TIME STEP #      24
 * BTIME STEP MAR.- 3729 DAYS
 COMPUTING FROM TIME=  40843.0000 DAYS TO TIME=  44572.0000 DAYS IN 120 COMPUTATION STEPS
 KHLONG SADAO DAM.
        ACCUMULATED TIME (yrs)....    122.090
        FLOW DURATION (days)......     31.000
 ------------------------------------------------------------------------
 Stream Segment # 1     |   DISCHARGE   | SEDIMENT LOAD | TEMPERATURE
 Section No.     21.000 |     (cfs)     |  (tons/day)   |   (deg F)
 ------------------------------------------------------------------------
                 INFLOW |          46.40 |          3.95 |       77.00
TABLE SA-1. TRAP EFFICIENCY ON STREAM SEGMENT #  1 KHLONG SADAO DAM.
             ACCUMULATED AC-FT ENTERING AND LEAVING THIS STREAM SEGMENT
 ********************************************************************************      TIME
ENTRY *           CLAY              *              SILT              *              SAND              *
    DAYS       POINT *    INFLOW   OUTFLOW  TRAP EFF *    INFLOW   OUTFLOW  TRAP EFF *    INFLOW   OUTFLOW  TRAP
EFF *
 44563.00      21.000 *     55.36                    *    227.16                    *    148.05
*
    TOTAL=      1.000 *     55.36      6.40       .88 *    227.16       .03      1.00 *    148.05       .00
1.00 *
 ********************************************************************************* TABLE SB-1:
SEDIMENT LOAD PASSING THE  BOUNDARIES OF STREAM SEGMENT #  1
    SEDIMENT INFLOW at the Upstream Boundary:
      GRAIN SIZE      LOAD (tons/day) |    GRAIN SIZE      LOAD (tons/day)
  ------------------------------------------------------------------------
    CLAY..............           .22  |  MEDIUM SAND.......           .42
    VERY FINE SILT....           .24  |  COARSE SAND.......           .13
    FINE SILT.........           .62  |  VERY COARSE SAND..           .04
    MEDIUM SILT.......           .44  |  VERY FINE GRAVEL..           .09
    COARSE SILT.......           .64  |  FINE GRAVEL.......           .02
    VERY FINE SAND....           .62  |  MEDIUM GRAVEL.....           .00
    FINE SAND.........           .48  |  COARSE GRAVEL.....           .00
                        -------------                       -------------
                                                 TOTAL =          3.95
  SEDIMENT OUTFLOW from the Downstream Boundary
      GRAIN SIZE      LOAD (tons/day) |    GRAIN SIZE      LOAD (tons/day)
  ------------------------------------------------------------------------
    CLAY..............           .00  |  MEDIUM SAND.......           .00
    VERY FINE SILT....           .00  |  COARSE SAND.......           .00
```

FINE SILT.....	.00	VERY COARSE SAND..	.00
MEDIUM SILT.....	.00	VERY FINE GRAVEL..	.00
COARSE SILT.....	.00	FINE GRAVEL.....	.00
VERY FINE SAND....	.00	MEDIUM GRAVEL.....	.00
FINE SAND.....	.00	COARSE GRAVEL.....	.00
		TOTAL =	.00

TABLE SB-2: STATUS OF THE BED PROFILE AT TIME = 44563.000 DAYS

SECTION NUMBER	BED CHANGE (ft)	WS ELEV (ft)	THALWEG (ft)	Q (cfs)	TRANSPORT RATE (tons/day) CLAY	SILT	SAND
21.000	4.34	223.19	222.98	46.	0.	2.	2.
20.000	4.96	223.09	166.25	46.	0.	2.	15.
19.000	6.82	223.09	183.21	46.	0.	0.	0.
18.000	7.75	223.09	164.35	46.	0.	0.	0.
17.000	9.29	223.09	157.60	46.	0.	0.	0.
16.000	10.54	223.09	164.13	46.	0.	0.	0.
15.000	11.78	223.09	156.89	46.	0.	0.	0.
14.000	8.06	223.09	154.26	46.	0.	0.	0.
13.000	6.20	223.09	152.62	46.	0.	0.	0.
12.000	4.96	223.09	157.53	46.	0.	0.	0.
11.000	4.34	223.09	155.23	46.	0.	0.	0.
10.000	3.72	223.09	164.08	46.	0.	0.	0.
9.000	3.09	223.09	152.59	46.	0.	0.	0.
8.000	1.86	223.09	153.91	46.	0.	0.	0.
7.000	1.55	223.09	157.50	46.	0.	0.	0.
6.000	.93	223.09	145.36	46.	0.	0.	0.
5.000	1.24	223.09	150.60	46.	0.	0.	0.
4.000	1.55	223.09	147.65	46.	0.	0.	0.
3.000	1.55	223.09	147.65	46.	0.	0.	0.
2.000	1.24	223.09	147.65	46.	0.	0.	0.
1.000	1.24	223.09	143.05	46.	0.	0.	0.

$$END