

Supplementary Materials: Regional flood frequency analysis for a poorly gauged basin using the simulated flood data and L-moment method

Table S1. Simulation conditions and observed peak flow for each storm event.

Simulation period	λ	ARC	UH method	Peak flow (m ³ /s)	
				CJD	YC
07/20/1987 ~ 07/25/1987	0.2	III	Clark	11761.0	8553.0
07/11/1988 ~ 07/16/1988	0.2	III	Clark	7334.0	4250.2
07/18/1988 ~ 07/28/1988	0.2	III	Clark	11207.0	5963.7
07/24/1989 ~ 07/31/1989	0.2	III	Clark	8881.0	7148.9
09/09/1990 ~ 09/13/1990	0.2	III	SCS	22164.0	13317.8
07/16/1991 ~ 07/23/1991	0.05	III	Clark	4290.0	3658.9
09/27/1991 ~ 10/01/1991	0.05	III	Clark	2207.0	2413.7
08/24/1992 ~ 09/02/1992	0.05	III	Clark	2445.0	2650.4
09/24/1992 ~ 09/28/1992	0.05	II	SCS	1962.0	1974.8
07/12/1993 ~ 07/15/1993	0.2	III	Clark	7928.0	6559.2
08/07/1993 ~ 08/12/1993	0.2	III	Clark	6285.0	5085.1
06/29/1994 ~ 07/04/1994	0.2	II	Clark	4703.0	4102.5
08/23/1995 ~ 08/29/1995	0.2	III	Clark	11080.0	8392.2
07/26/1996 ~ 07/30/1996	0.05	III	Clark	1900.0	1460.5
06/30/1997 ~ 07/03/1997	0.2	III	Clark	5059.0	4718.0
08/03/1997 ~ 08/06/1997	0.05	II	Clark	3500.0	2152.4
08/07/1998 ~ 08/11/1998	0.2	III	Clark	8015.7	5964.0
08/01/1999 ~ 08/05/1999	0.05	III	Clark	10572.0	8519.5
09/18/1999 ~ 09/26/1999	0.2	III	SCS	6832.9	7056.0
07/22/2000 ~ 07/26/2000	0.2	II	SCS	3444.2	2561.3
09/07/2000 ~ 09/20/2000	0.05	III	Clark	5635.1	3955.7
06/28/2001 ~ 07/05/2001	0.2	II	Clark	2048.0	1224.0
07/23/2001 ~ 07/27/2001	0.05	III	Clark	1974.0	1316.9
08/05/2002 ~ 08/09/2002	0.2	III	Clark	20437.0	14423.7
08/30/2002 ~ 09/03/2002	0.05	III	SCS	11443.8	10279.0
08/27/2003 ~ 08/30/2003	0.2	III	Clark	4214.3	3227.0
09/11/2003 ~ 09/14/2003	0.05	III	SCS	9972.0	9004.0
06/18/2004 ~ 06/22/2004	0.2	II	Clark	10569.1	7442.0
07/11/2004 ~ 07/19/2004	0.2	II	Clark	5694.2	4060.0
08/17/2004 ~ 08/21/2004	0.05	III	Clark	5215.7	4541.0
06/30/2005 ~ 07/03/2005	0.05	III	Clark	5806.7	4455.0
07/10/2005 ~ 07/18/2005	0.2	III	SCS	3939.8	2402.0
09/16/2005 ~ 09/25/2005	0.2	III	Clark	4316.9	1657.0
07/09/2006 ~ 07/19/2006	0.2	III	Clark	22650.0	12204.8
08/03/2007 ~ 08/14/2007	0.2	III	Clark	4250.5	3248.8
08/26/2007 ~ 09/11/2007	0.2	II	Clark	3091.9	1597.0
09/14/2007 ~ 09/19/2007	0.05	III	Clark	4899.1	3843.9
07/23/2008 ~ 07/28/2008	0.05	III	Clark	9060.3	6225.9
07/09/2009 ~ 07/16/2009	0.05	II	Clark	9327.4	7583.1
08/11/2009 ~ 08/14/2009	0.05	III	Clark	3761.6	3306.8
09/10/2010 ~ 09/15/2010	0.2	III	Clark	6536.2	6019.0
09/19/2010 ~ 09/25/2010	0.05	II	SCS	6829.7	5839.9

Table S2. Simulation results for each storm event.

Simulation period	CE		CP	
	CJD	YC	CJD	YC
07/20/1987 ~ 07/25/1987	0.91	0.94	0.24	0.37
07/11/1988 ~ 07/16/1988	-	0.91	-	0.14
07/18/1988 ~ 07/28/1988	-	0.87	-	-0.16
07/24/1989 ~ 07/31/1989	0.92	0.92	0.03	-0.54
09/09/1990 ~ 09/13/1990	-	-	-	-
07/16/1991 ~ 07/23/1991	0.93	0.87	0.59	-0.15
09/27/1991 ~ 10/01/1991	-	-	-	-
08/24/1992 ~ 09/02/1992	-	-	-	-
09/24/1992 ~ 09/28/1992	-	-	-	-
07/12/1993 ~ 07/15/1993	0.9	0.91	0.43	0.5
08/07/1993 ~ 08/12/1993	-	-	-	-
06/29/1994 ~ 07/04/1994	-	-	-	-
08/23/1995 ~ 08/29/1995	0.86	0.84	-0.35	-0.62
07/26/1996 ~ 07/30/1996	-	-	-	-
06/30/1997 ~ 07/03/1997	0.91	-	0.34	-
08/03/1997 ~ 08/06/1997	-	-	-	-
08/07/1998 ~ 08/11/1998	-	-	-	-
08/01/1999 ~ 08/05/1999	0.89	0.95	-0.08	0.61
09/18/1999 ~ 09/26/1999	-	-	-	-
07/22/2000 ~ 07/26/2000	-	-	-	-
09/07/2000 ~ 09/20/2000	-	-	-	-
06/28/2001 ~ 07/05/2001	-	0.93	-	0.62
07/23/2001 ~ 07/27/2001	-	-	-	-
08/05/2002 ~ 08/09/2002	0.98	0.91	0.74	0.07
08/30/2002 ~ 09/03/2002	0.92	-	-5.41	-
08/27/2003 ~ 08/30/2003	-	0.92	-	0.51
09/11/2003 ~ 09/14/2003	-	-	-	-
06/18/2004 ~ 06/22/2004	0.91	0.91	0.06	-0.11
07/11/2004 ~ 07/19/2004	0.62	0.63	-3.29	-2.56
08/17/2004 ~ 08/21/2004	0.95	0.86	0.47	-0.42
06/30/2005 ~ 07/03/2005	-	0.93	-	0.7
07/10/2005 ~ 07/18/2005	-	-	-	-
09/16/2005 ~ 09/25/2005	-	-	-	-
07/09/2006 ~ 07/19/2006	0.96	0.90	0.62	0.21
08/03/2007 ~ 08/14/2007	-	0.71	-	-0.91
08/26/2007 ~ 09/11/2007	-	-	-	-
09/14/2007 ~ 09/19/2007	0.75	-	-0.37	-
07/23/2008 ~ 07/28/2008	0.85	-	-0.14	-
07/09/2009 ~ 07/16/2009	0.86	0.84	0.31	0.24
08/11/2009 ~ 08/14/2009	0.73	0.62	0.17	-0.72
09/10/2010 ~ 09/15/2010	0.9	0.93	0.16	0.52
09/19/2010 ~ 09/25/2010	-	-	-	-

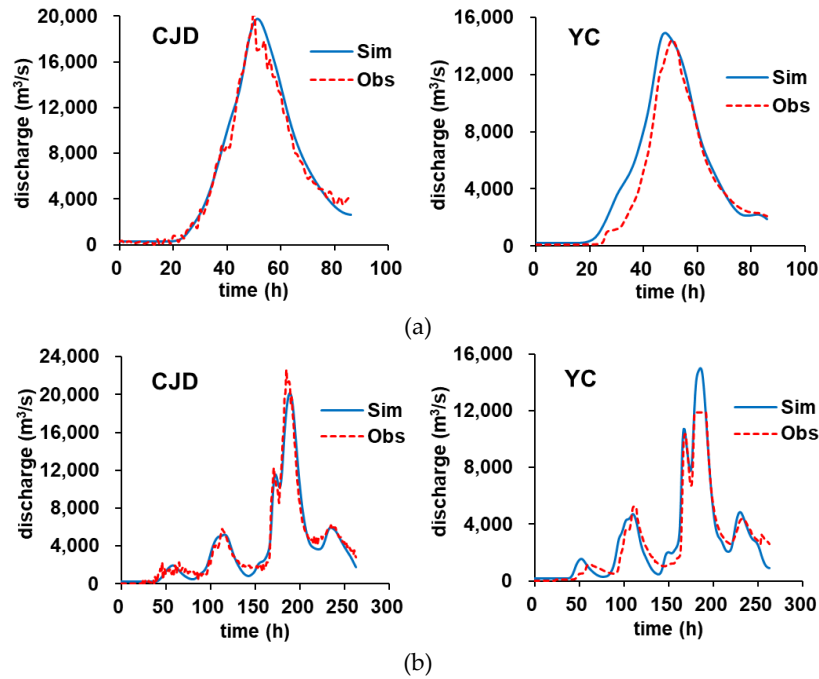


Figure S1. Observed and simulated hourly hydrographs for large flood events (a) the simulation period 5 August 2002 to 9 August 2002, (b) the simulation period 9 July 2006 to 19 July 2006.

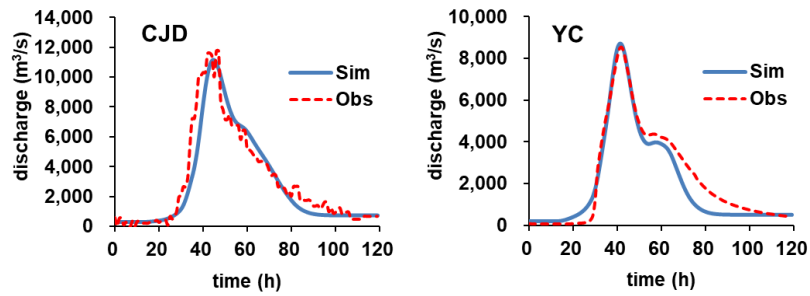


Figure S2. Observed and simulated hourly hydrographs for medium flood event (the simulation period 20 July 1987 to 25 July 1987).

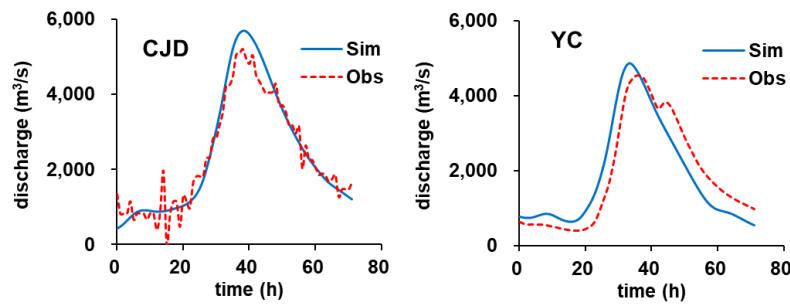


Figure S3. Observed and simulated hourly hydrographs for small flood event (the simulation period 17 August 2004 to 21 August 2004).