geosciences

MDPI

Estimating Groundwater Abstractions at the Aquifer Scale Using GRACE Observations

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Supplementary Materials

Table S1. Data set of in situ observations.

Month	Year	Monthly Precipitation (mm)	Mean Monthly Temperature (°C)	Monthly Groundwater Abstractions ($m^3 \times 10^6$)
1	2005	60	6.5	0
2	2005	107	5.6	0
3	2005	22	8.8	0
4	2005	9	13.8	0
5	2005	18.5	19.7	0
6	2005	4	22.1	1.4
7	2005	56	26.6	1.9
8	2005	153.4	26	1.2
9	2005	8.8	22.3	0
10	2005	78.4	15.9	0
11	2005	93.4	10.1	0
12	2005	127.8	7.7	0
1	2006	24	3.5	0
2	2006	74	5.4	0
3	2006	107	9.1	0
4	2006	22	15	0
5	2006	26	18.9	0
6	2006	18	23.4	1.9
7	2006	46	26.4	2.4
8	2006	6	27.6	1.9
9	2006	146.5	21.9	0
10	2006	56	17	0
11	2006	129	10.1	0
12	2006	54	7	0
1	2007	9	8.5	0
2	2007	37	7.7	0
3	2007	90	10.6	0
4	2007	5	14.3	0
5	2007	121	20.4	0
6	2007	24	26.2	1.7
7	2007	0	29	3.4
8	2007	17	27.9	1.7

9	2007	29	21.5	0
10	2007	113	17.2	0
11	2007	241	10.4	0
12	2007	32.5	6	0
1	2008	31.5	5.3	0
2	2008	0	6.7	0
3	2008	3	12.1	0
4	2008	61.5	14.6	0
5	2008	11	18.9	0
6	2008	10	24.8	2.1
7	2008	6.5	26.7	3
8	2008	13	28.6	1.8
9	2008	4	21.6	0
10	2008	12	17.3	0
11	2008	8	12.6	0
12	2008	38.5	7.4	0
1	2009	142.5	6.8	0
2	2009	23	7	0
3	2009	82	9	0
4	2009	9	14.3	0
5	2009	34	20.3	0
6	2009	38	23.4	2.1
7	2009	0	25.3	2.6
8	2009	0	27.2	1.6
9	2009	18	21.9	0
10	2009	38.5	17.2	0
11	2009	38	11.8	0
12	2009	117	2.2	0
1	2010	11	7.2	0
2	2010	155	7.7	0
3	2010	61	8.9	0
4	2010	19.5	13.5	0
5	2010	7.5	17.9	0
6	2010	12	22.4	2.2
7	2010	2	25.5	2.9
8	2010	1	27.4	1.8
9	2010	15	21.7	0
10	2010	170	14.3	0
11	2010	42	14.6	0
12	2010	75	9.2	0
1	2011	35.5	5.4	0
2	2011	16	5.2	0
3	2011	12	8.2	0
4	2011	17	11.6	0
5	2011	28	18.1	0
6	2011	26	22.3	2.8
7	2011	11	25.5	3.2
8	2011	19	24.7	2.1
9	2011	3	22.6	0

10	2011	57	15.9	0
11	2011	0	10.0	0
12	2011	72	9.2	0
1	2012	59	3.4	0
2	2012	112	3.5	0
3	2012	15	8.3	0
4	2012	32	14.2	0
5	2012	68	19.0	0
6	2012	0	24.4	2.4
7	2012	0	27.7	2.7
8	2012	4	26.1	1.9
9	2012	5	22.1	0
10	2012	44.2	18.6	0
11	2012	21	13.5	0
12	2012	133	6.6	0
1	2013	120.6	6.6	0
2	2013	74.2	8.3	0
3	2013	57.8	10.0	0
4	2013	21.6	14.2	0
5	2013	11.8	19.5	0
6	2013	117.2	21.9	2.1
7	2013	45.8	24.4	2.3
8	2013	0	25.6	1.2
9	2013	34.8	19.7	0
10	2013	71.2	13.2	0
11	2013	183.4	11.4	0
12	2013	8.2	3.7	0
1	2014	101.2	6.7	0
2	2014	21.6	7.6	0
3	2014	106.6	9.3	0
4	2014	180.6	13.1	0
5	2014	52.8	17.2	0
6	2014	103.6	21.2	1.2
7	2014	65.2	23.8	1.7
8	2014	58.4	23.9	1.1
9	2014	97.2	19.4	0
10	2014	67.8	13.9	0
11	2014	45.8	9.5	0
12	2014	238.8	6.8	0