Supporting Information for

Using GRACE in a streamflow recession to determine drainable water storage in the Mississippi River Basin

H. E. Macedo[1,2], R. E. Beighley[2], C. H. David[3], and J. T. Reager[3]

[1]Geography Department, McGill University, Montreal, Quebec, Canada

[2]Civil and Environmental Engineering Department, Northeastern University, Boston, Massachusetts, USA

[3]NASA Jet Propulsion Laboratory, California Institute of Technology, Pasadena, California, USA

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Tables S1 and S2

Introduction

This document offers the supporting information for our manuscript. Table S1 includes the α and β parameters for all 12 stations, which can be seen at Figure 3. Table S2 lists the storage offsets used to convert GRACE TWSA into absolute drainable storage values, used to create Figure 4.

Table S1. Resulting storage-discharge coefficients for overall discharge and baseflow with associated R^2 values.

ID	α_o	β_o	R^2	α_b	β_b	R^2
1	2.7230	0.1048	0.78	1.4223	0.0876	0.85
2	2.4810	0.1108	0.80	1.3029	0.1022	0.88
3	2.7214	0.0759	0.75	1.5374	0.0761	0.92
4	1.8031	0.0875	0.59	1.1570	0.0781	0.88
5	1.8557	0.0999	0.66	1.2188	0.1066	0.91
6	1.9825	0.0992	0.74	1.2844	0.1055	0.91
7	0.2209	0.0511	0.46	0.1534	0.0319	0.72
8	0.2616	0.0466	0.40	0.1834	0.0162	0.46
9	0.2848	0.0441	0.45	0.2133	0.0184	0.71
10	0.2854	0.0508	0.51	0.2142	0.0248	0.91
11	0.4224	0.0691	0.54	0.2659	0.0358	0.90
12	1.1009	0.0830	0.80	0.8299	0.0914	0.92

Table S2. Storage offsets (S_o) for near zero flow conditions of 0.01% and 0.1% of the minimum non-winter monthly discharge (Q_{min}) observed during the period of study and maximum and minimum basin-average GRACE TWSA observed during the period of study.

ID	S_o (0.1%Q_{min})	S_o (0.01%Q_{min})	TWSA$_{max}$	TWSA$_{min}$
1	84	106	12.5	-18.0
2	79	100	14.0	-17.9
3	114	145	15.2	-20.5
4	93	119	10.7	-14.0
5	84	107	10.9	-13.8
6	84	108	12.6	-14.4
7	145	190	18.9	-7.9
8	158	207	20.8	-7.2
9	168	220	21.3	-7.6
10	146	191	20.1	-8.1
11	111	144	18.4	-7.7
12	96	123	14.6	-9.7