

Supplementary Materials:

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Table S1. Physical and chemical parameters of water samples collected in northern of the Tianshan Mountains, China. (Note: 1 water type: SFW or SW, surface water samples including river water, lake water, reservoirs water, pond water, stream water, snow, ice, rainfall, etc.; PGW or PW, phreatic groundwater samples with groundwater level depth < 50 m; CGW or CW, confined groundwater samples with groundwater level depth > 50 m or > 100 m. 2 Watershed: EQS, Erlqis watershed; YL, Yili watershed; JG: Junggar watershed; YL-TKS, Tekes Basin in Yili watershed; YL-GNS, Gongnais Basin in Yili; YL-KS, Kashi Basin in Yili; YL-YL, Yili Basin in Yili; JG-THB, Tuha Basin in JG; JG-MNSTB, middle part of the north slope of Tianshan Mountains in JG; JG-ABB, Aibi Lake Basin in JG; JG-EMB, Ermin Basin in JG; WLGB, Wulungu Basin in JG. The specific location and distribution of each sampling site are shown in Fig. 3.)

Sampl e-ID	Water shed	Water type	Temp (°C)	pH	TDS (mg/L)	K ⁺ (mg/L)	Na ⁺ (mg/L)	Mg ²⁺ (mg/L)	Ca ²⁺ (mg/L)	HCO ₃ ⁻ (mg/L)	SO ₄ ²⁻ (mg/L)	Cl ⁻ (mg/L)
EQ01	EQS	SFW	/	7.00	41.6	0.8532	2.409	1.546	6.218	18.58	4.593	6.009
EQ02	EQS	SFW	/	7.61	153.0	1.291	6.464	2.943	32.74	24.62	83.40	3.164
EQ03	EQS	SFW	/	7.58	199.0	1.500	13.04	5.026	37.30	50.12	92.14	7.912
EQ04	EQS	SFW	/	7.73	158.0	2.019	14.40	4.729	19.69	68.95	37.37	8.497
EQ05	EQS	SFW	/	7.03	43.90	1.209	4.051	1.507	6.141	17.46	8.805	5.400
EQ06	EQS	SFW	/	7.34	38.70	0.8540	2.838	1.330	5.449	12.89	9.484	4.187
EQ07	EQS	SFW	/	7.83	183.0	3.093	9.663	6.301	26.20	90.51	41.41	3.371
EQ08	EQS	SFW	/	7.61	87.00	1.833	3.517	3.525	12.34	60.19	3.163	2.243
EQ09	EQS	SFW	/	7.90	126.0	2.148	3.494	6.660	17.24	86.50	6.127	2.817
EQ10	EQS	SFW	/	7.23	24.60	1.395	2.487	0.5481	2.673	10.24	2.601	4.124
EQ11	EQS	SFW	/	8.17	35.10	0.7279	1.060	0.8349	5.652	23.96	1.724	0.2700
EQ12	EQS	SFW	/	8.33	32.90	0.5322	0.9416	0.8495	5.793	23.22	1.887	0.5080
EQ13	EQS	PGW	/	7.75	2060	1.002	524.18	61.45	111.0	83.00	441.6	774.0
EQ14	EQS	PGW	/	7.83	1450	0.9165	351.7	40.10	100.2	91.18	416.1	498.5
EQ15	EQS	PGW	/	7.79	1460	0.9073	334.5	39.68	100.8	83.30	382.3	458.0
EQ16	EQS	PGW	/	7.18	280.0	0.6753	59.96	1.378	16.10	149.0	23.96	15.05
EQ17	EQS	PGW	/	7.04	1570	3.121	378.1	50.63	121.8	97.22	339.8	600.3
EQ18	EQS	PGW	/	7.42	1080	1.090	255.7	12.97	61.38	85.62	352.8	258.1
EQ19	EQS	PGW	/	8.05	2520	1.642	631.8	24.24	287.9	17.19	761.2	906.6
EQ20	EQS	PGW	/	8.00	1720	2.429	427.2	37.75	85.74	156.7	586.1	356.9
EQ21	EQS	PGW	/	7.27	1130	4.160	297.1	21.53	86.01	136.7	216.0	405.1
EQ22	EQS	PGW	/	7.10	440.0	1.329	11.22	13.44	85.75	236.5	44.14	29.62

EQ23	EQS	PG W	/	7.70	645.1	1.565	18.92	15.41	134.6	292.5	83.72	66.32
EQ24	EQS	PG W	/	7.30	580.3	2.325	71.25	17.19	72.54	173.5	179.9	56.33
EQ25	EQS	PG W	/	7.30	1468	2.077	192.0	21.40	209.0	210.4	684.0	85.70
EQ26	EQS	PG W	/	7.50	352.1	0.6045	7.028	8.419	72.00	196.0	69.50	5.878
EQ27	EQS	PG W	/	7.60	314.5	1.137	9.612	4.105	63.68	198.4	22.29	5.215
EQ28	EQS	PG W	/	7.20	756.8	2.969	60.61	28.71	122.7	273.3	259.2	28.25
EQ29	EQS	PG W	/	7.70	944.0	2.790	56.94	30.58	152.6	298.9	361.3	31.61
EQ30	EQS	PG W	/	7.10	271.2	1.641	26.22	8.632	33.21	168.6	23.00	9.700
EQ31	EQS	PG W	/	7.40	1113	2.221	107.19	30.94	162.3	312.8	269.0	178.3
EQ32	EQS	PG W	/	6.70	363.2	2.612	42.49	14.08	50.02	134.1	97.43	38.95
EQ33	EQS	PG W	/	7.20	2634	5.393	528.5	74.35	257.6	376.3	944.0	511.4
EQ34	EQS	CG W	/	7.20	2035	4.122	290.3	63.55	266.7	504.6	796.1	208.5
EQ35	EQS	CG W	/	8.00	563.1	2.6079	71.69	13.04	66.11	171.6	159.4	57.36
JG001	JG- THB	SFW	/	6.59	329.6	7.613	50.32	11.05	21.23	180.4	47.57	21.07
JG002	JG- THB	SFW	/	6.66	47.49	1.679	5.708	0.9856	4.939	26.40	2.026	6.161
JG003	JG- MNST	SFW	/	7.78	105.6	0.4016	4.217	6.204	14.08	58.98	13.34	3.354
JG004	JG- MNST	SFW	/	7.91	90.00	2.025	3.432	2.710	17.02	32.27	29.38	6.922
JG005	JG- MNST	SFW	/	7.94	112.0	2.657	5.191	2.910	20.95	47.96	30.59	7.333
JG006	JG- MNST	SFW	/	8.02	110.0	2.243	5.825	2.733	17.44	45.17	30.89	3.270
JG007	JG- MNST	SFW	/	7.26	200.0	3.262	10.65	5.632	31.58	114.0	19.95	14.73
JG008	JG- MNST	SFW	/	8.02	200.0	1.982	9.324	3.696	38.60	105.0	38.88	7.175
JG009	JG- MNST	SFW	/	8.37	280.0	1.899	15.64	11.81	42.83	120.4	54.14	19.98

JG- B	JG010	MNST SFW	/	7.51	180.0	2.218	20.87	1.379	29.56	63.78	50.20	18.53
JG- B	JG011	MNST SFW	/	8.22	260.0	2.037	11.97	8.862	43.84	122.6	45.96	13.57
JG- B	JG012	MNST SFW	/	7.35	270.0	2.216	15.63	8.264	43.15	126.3	49.72	16.31
JG- B	JG013	MNST SFW	/	8.00	270.0	1.623	4.173	11.16	50.12	116.7	73.77	5.168
JG- B	JG014	MNST SFW	/	8.24	240.8	1.317	11.13	8.696	39.72	109.9	53.77	7.750
JG- B	JG015	MNST SFW	/	8.05	232.9	1.105	9.340	6.490	43.71	121.0	37.68	9.737
JG- B	JG016	MNST SFW	/	8.30	433.0	2.6400	27.74	16.64	66.97	171.0	116.9	16.13
JG- B	JG017	MNST SFW	/	8.1	354.0	1.704	29.17	11.38	45.81	126.5	101.4	20.38
JG- B	JG018	MNST SFW	/	8.21	267.7	1.859	15.71	9.086	45.93	98.49	63.15	26.09
JG- B	JG019	MNST SFW	/	8.19	231.7	1.182	2.757	9.581	48.44	109.4	67.17	3.530
JG- B	JG020	MNST SFW	/	8.2	230.6	0.5151	0.9565	9.473	41.66	102.8	58.03	5.765
JG- B	JG021	MNST SFW	/	8.15	233.4	0.6230	1.157	10.28	45.29	109.7	62.37	6.196
JG- B	JG022	MNST SFW	/	8.30	366.4	2.1945	23.06	16.66	57.514	154.0	113.6	16.82
JG- B	JG023	MNST SFW	/	8.30	556.4	7.034	18.09	28.38	93.39	239.9	167.7	28.92
JG- B	JG024	MNST SFW	/	8.30	362.3	1.9749	20.47	15.63	52.87	134.8	107.1	14.72
JG- B	JG025	MNST SFW	/	8.00	287.0	1.712	17.99	11.93	47.60	132.1	53.41	35.08
JG- B	JG026	MNST SFW	/	8.00	322.8	0.7527	8.751	11.99	51.76	176.9	46.85	10.39

JG027	JG-MNST	SFW	/	8.50	366.0	9.076	23.34	12.15	64.10	132.9	87.16	47.77
JG028	JG-MNST	SFW	/	8.00	269.0	1.402	2.604	9.620	59.97	124.1	77.27	3.489
JG029	JG-MNST	SFW	/	9.00	325.0	2.363	31.39	10.88	52.58	73.95	95.79	53.01
JG030	JG-MNST	SFW	/	8.00	349.5	2.325	24.43	16.92	47.93	122.1	124.1	5.624
JG031	JG-ABB	SFW	/	7.40	192.4	5.418	3.546	24.96	7.270	111.6	27.36	6.577
JG032	JG-ABB	SFW	/	8.76	1850	27.54	268.8	193.4	16.73	262.3	913.5	252.5
JG033	JG-ABB	SFW	/	8.74	1840	22.68	237.1	191.7	27.50	260.7	876.9	240.4
JG034	JG-ABB	SFW	/	8.73	1840	24.19	263.7	215.3	20.31	258.5	873.9	243.7
JG035	JG-ABB	SFW	/	7.96	253.0	0.9231	3.363	17.38	43.09	103.9	84.81	3.524
JG036	JG-ABB	SFW	/	7.77	253.0	1.766	16.89	8.927	43.18	96.95	70.21	15.89
JG037	JG-EMB	SFW	/	9.81	6200	56.64	1691	136.0	22.50	1515	2106	514.5
JG038	JG-EMB	SFW	/	7.60	201.0	0.9711	15.57	6.572	27.65	70.42	61.55	9.425
JG039	JG-EMB	SFW	/	7.30	331.0	3.951	34.23	22.27	18.38	208.3	12.549	26.19
JG040	JG-WLGB	SFW	/	7.87	321.0	3.133	32.68	11.34	51.42	60.76	141.7	28.74
JG041	JG-WLGB	SFW	/	7.66	1260	24.29	275.8	27.37	59.30	296.3	389.1	204.1
JG042	JG-WLGB	SFW	/	8.02	2190	49.92	525.5	71.31	30.23	494.4	534.5	381.3
JG043	JG-WLGB	SFW	/	8.09	2940	67.61	662.6	85.26	43.27	774.5	749.6	473.6
JG044	JG-WLGB	SFW	/	8.48	2040	53.19	497.3	68.73	34.38	211.1	633.0	467.8
JG045	JG-THB	PG W	/	7.16	1253	7.374	239.5	43.13	126.9	35.25	253.0	485.5
JG046	JG-THB	PG W	/	7.42	1471	3.236	282.3	37.51	114.5	396.3	467.4	202.3
JG047	JG-MNST	PG W	/	7.76	284.2	0.7963	5.894	35.63	20.16	141.46	68.97	8.977
JG048	JG-THB	PG W	/	/	11820	43.23	3259	132.9	546.8	279.0	4973	2902
JG049	JG-THB	PG W	/	/	69610	343.0	22084	561.0	3529	182.0	11343	32498

JG050	JG-THB	PG W	/	/	34030	852.8	10858	524.1	689.9	463.7	1261	19498
JG051	JG-THB	PG W	/	/	34690	91.81	11463	125.1	826.5	110.2	11307	12156
JG052	JG-MNST B	PG W	25.0	8.67	9095	5.132	3710	44.02	6.718	6.236	145.2	5613
JG053	JG-MNST B	PG W	23.9	8.93	9445	5.749	3804	48.61	6.344	6.854	146.2	5895
JG054	JG-MNST B	PG W	36.0	9.16	351.5	1.786	117.1	0.1366	3.094	10.52	136.5	74.12
JG055	JG-MNST B	PG W	49.5	9.70	335.2	0.8739	114.7	0.0480	3.985	0.2116	135.4	84.43
JG056	JG-MNST B	PG W	42.5	9.30	716.7	3.611	193.0	3.895	31.05	0.2511	347.1	128.6
JG057	JG-MNST B	PG W	22.4	8.10	11768	10.33	4456	105.6	13.47	6.881	40.77	7212
JG058	JG-MNST B	PG W	30.8	8.42	13070	14.88	5032	94.94	22.34	8.714	45.25	8431
JG059	JG-MNST B	PG W	24.9	8.07	14179	14.82	5580	145.5	68.14	1.823	56.18	8677
JG060	JG-MNST B	PG W	22.2	7.86	14985	9.749	5337	148.7	62.52	1.770	58.50	9031
JG061	JG-ABB	PG W	/	7.51	160.3	0.5949	6.901	5.503	30.15	42.88	34.51	31.82
JG062	JG-ABB	PG W	43.3	9.36	380.7	2.580	126.2	0.1445	11.18	1.692	191.0	66.6
JG063	JG-ABB	PG W	41.9	9.48	385.7	2.350	115.6	0.1261	9.789	0.1997	180.8	62.80
JG064	JG-EMB	PG W	16.5	8.31	3747	10.65	1351	44.69	26.64	3.907	163.0	2084
JG065	JG-EMB	PG W	20.5	8.86	3773	11.59	1387	46.03	27.53	6.87	171.6	2172
JG066	JG-MNST B	PG W	11.5	8.00	264.9	0.7116	45.09	3.654	24.61	170.9	13.31	9.261
JG067	JG-MNST B	PG W	12.2	6.15	817.9	3.962	69.17	20.05	140.2	99.73	349.2	99.49
JG068	JG-MNST B	PG W	12	8.95	276.5	0.3125	75.88	2.057	7.278	155.0	36.04	13.80

JG069	JG-MNST B	PG W	13.3	8.84	293.8	0.3326	78.77	0.7246	7.591	158.3	44.24	15.72
JG070	JG-MNST B	PG W	11.3	8.50	1217	1.891	298.6	26.92	40.14	483.8	292.9	133.3
JG071	JG-MNST B	PG W	/	/	455.7	2.383	23.67	17.78	66.60	238.8	74.25	15.29
JG072	JG-MNST B	PG W	/	7.93	210.0	0.8369	34.45	2.601	21.45	122.7	13.80	13.58
JG073	JG-MNST B	PG W	/	8.12	340.0	1.305	53.70	12.17	26.75	100.1	136.9	9.185
JG074	JG-MNST B	PG W	/	8.27	820.0	2.088	22.10	88.28	85.63	190.4	439.8	25.83
JG075	JG-MNST B	PG W	/	8.03	330.0	0.8029	80.26	6.239	18.52	118.5	51.84	68.88
JG076	JG-MNST B	PG W	/	8.13	1360	1.075	261.1	42.30	106.5	116.5	467.7	297.8
JG077	JG-MNST B	PG W	/	7.51	270.0	1.509	59.87	2.344	13.53	138.0	5.431	36.08
JG078	JG-MNST B	PG W	/	7.7	2330	2.799	316.8	87.01	286.9	232.8	926.5	496.0
JG079	JG-MNST B	PG W	/	8.53	910.0	0.8615	243.1	2.678	13.25	608.7	41.31	42.69
JG080	JG-MNST B	PG W	/	7.85	2520	1.263	821.6	34.01	58.24	358.8	421.2	896.1
JG081	JG-THB	PG W	/	/	1442 30	312.6	49638	1960	1332	135.9	10821	72969
JG082	JG-THB	PG W	/	/	7610	33.89	2126	82.13	298.5	269.4	1884	2723
JG083	JG-THB	PG W	/	/	6860	26.97	1955	100.7	392.5	146.0	2914	1645
JG084	JG-THB	PG W	/	/	1427 0	54.54	4142	161.1	666.7	65.33	5878	3860
JG085	JG-THB	PG W	/	/	8760	38.24	2533	64.22	403.5	139.6	3372	2509
JG086	JG-THB	PG W	/	/	6696 0	284.2	22801	637.8	776.8	151.7	15028	29305
JG087	JG-THB	PG W	/	/	2876 0	79.39	8983	120.7	624.7	88.82	7800	10044

JG088	JG- EMB	PG W	/	7.74	231.0	0.7680	13.27	11.26	29.70	117.1	41.97	11.53
JG089	JG- EMB	PG W	/	7.7	178.3	1.229	10.39	6.321	28.29	96.66	29.26	10.80
JG090	JG- EMB	PG W	/	7.6	239.7	1.431	15.03	7.338	39.71	123.8	48.75	13.11
JG091	JG- THB	CG W	/	7.74	1081	3.126	179.5	27.85	97.35	233.9	434.9	75.68
JG092	JG- THB	CG W	/	7.82	1002	3.350	175.9	29.67	86.56	255.3	371.7	115.6
JG093	JG- THB	CG W	/	7.54	1081	2.385	194.2	26.70	107.2	274.7	423.7	101.3
JG094	JG- THB	CG W	/	7.49	1068	2.707	181.6	26.28	108.5	277.4	428.2	88.97
JG095	JG- THB	CG W	/	7.80	1209	3.660	213.6	43.86	87.55	243.5	478.9	128.0
JG096	JG- THB	CG W	/	7.53	1892	3.306	370.2	31.80	141.4	341.1	776.6	148.1
JG097	JG- THB	CG W	/	7.37	3295	10.20	555.5	99.10	298.6	364.5	1522	335.9
JG098	JG- THB	CG W	/	7.74	1000	1.328	250.3	12.18	43.53	170.8	408.0	91.79
JG099	JG- THB	CG W	/	7.72	1104	2.463	251.6	18.56	72.68	175.9	519.2	113.0
JG100	JG- THB	CG W	/	7.53	6488	4.243	1790	87.68	293.2	179.0	2028	1791
JG101	JG- THB	CG W	/	7.92	1783	4.969	392.5	36.48	144.3	122.7	680.2	394.4
JG102	JG- THB	CG W	/	8.15	2245	5.149	531.9	42.41	182.2	103.2	902.3	574.0
JG103	JG- THB	CG W	/	7.81	2120	5.609	489.7	50.35	196.6	104.9	873.6	504.4
JG104	JG- THB	CG W	/	7.81	1669	4.762	342.5	54.34	167.6	124.8	609.4	429.4
JG105	JG- THB	CG W	/	7.78	2093	5.943	444.1	54.06	178.3	108.7	839.4	538.6
JG106	JG- THB	CG W	/	7.55	3177	12.85	696.0	64.41	253.3	215.9	1124	687.9
JG107	JG- THB	CG W	/	7.86	1688	5.037	397.9	25.44	111.0	141.6	590.5	334.5
JG108	JG- THB	CG W	/	7.84	1066	3.295	179.5	28.60	132.8	189.4	475.3	110.2
JG109	JG- THB	CG W	/	7.67	1145	2.615	243.9	2.843	123.0	136.3	499.1	127.6
JG110	JG- THB	CG W	/	8.12	1774	3.281	417.2	41.64	121.6	134.1	715.6	394.1
JG111	JG- THB	CG W	/	8.15	2024	5.630	554.5	31.20	104.9	117.1	732.9	520.0
JG112	JG- THB	CG W	/	8.20	1136	2.677	172.0	28.63	110.3	206.8	479.4	99.15

JG113	JG-THB	CG W	/	/	9260	47.89	2418	88.75	628.4	66.48	2966	2962
JG114	JG-THB	CG W	/	/	10550	33.97	3403	58.17	278.5	1689	2245	3048
JG115	JG-THB	CG W	/	/	19080	39.93	5666	101.1	548.8	96.82	6325	5597
JG116	JG-MNST B	CG W	/	7.90	400.0	2.196	23.08	10.79	76.59	152.5	113.6	40.95
JG117	JG-MNST B	CG W	/	8.00	839.7	2.478	75.94	19.94	146.1	204.1	302.1	116.0
JG118	JG-MNST B	CG W	/	7.80	280.0	1.290	13.21	6.161	49.36	140.1	48.22	12.70
JG119	JG-MNST B	CG W	/	7.70	416.4	1.648	28.20	11.95	72.25	168.3	112.4	35.12
JG120	JG-MNST B	CG W	/	8.00	350.0	2.237	45.36	8.132	38.87	171.7	67.60	22.19
JG121	JG-MNST B	CG W	/	7.90	342.0	2.338	47.74	5.130	31.37	169.4	55.70	13.88
JG122	JG-MNST B	CG W	/	7.90	470.0	1.625	74.65	8.192	46.67	172.9	98.30	44.63
JG123	JG-MNST B	CG W	/	7.80	582.9	1.903	87.46	15.93	59.12	245.4	136.5	51.36
JG124	JG-MNST B	CG W	/	7.70	700.0	1.896	87.13	14.62	86.93	200.0	233.0	60.33
JG125	JG-MNST B	CG W	/	7.60	764.0	2.184	105.4	13.89	110.8	192.5	279.7	75.28
JG126	JG-MNST B	CG W	/	7.80	288.2	1.231	10.40	10.57	52.27	103.4	79.05	25.74
JG127	JG-MNST B	CG W	/	8.00	246.4	0.6604	7.679	7.704	45.36	95.82	53.89	25.07
JG128	JG-MNST B	CG W	/	7.60	619.2	2.533	81.91	22.03	58.42	210.9	165.2	65.03
JG129	JG-MNST B	CG W	/	7.70	607.4	2.547	82.36	22.79	63.73	185.7	156.8	69.54
JG130	JG-MNST B	CG W	/	8.00	401.1	2.066	40.26	8.821	57.88	205.5	59.53	19.55

JG131	JG-MNST B	CG W	/	8.10	339.3	2.392	38.92	6.482	52.39	114.7	90.84	36.02
JG132	JG-MNST B	CG W	/	8.50	404.0	2.293	39.25	15.13	51.14	111.5	124.2	40.49
JG133	JG-MNST B	CG W	/	8.10	230.0	1.460	15.13	5.407	41.04	112.8	50.76	13.26
JG134	JG-MNST B	CG W	/	8.60	160.0	1.272	20.33	3.818	20.56	70.59	42.53	8.859
JG135	JG-MNST B	CG W	/	8.00	190.0	1.541	13.87	4.352	34.06	103.2	27.44	12.63
JG136	JG-MNST B	CG W	/	8.30	368.0	1.719	27.47	22.98	40.09	199.9	71.94	21.06
JG137	JG-MNST B	CG W	/	8.00	350.0	1.931	33.06	9.785	60.52	118.3	98.46	45.21
JG138	JG-MNST B	CG W	13.6	7.95	300.6	2.068	33.43	7.942	43.16	144.7	62.52	20.80
JG139	JG-MNST B	CG W	10.3	7.81	522.2	2.779	37.81	16.90	87.66	148.7	141.4	61.14
JG140	JG-MNST B	CG W	16.7	7.85	272.1	2.955	17.58	6.956	50.43	151.9	41.19	13.89
JG141	JG-MNST B	CG W	15.6	7.65	460.9	2.286	17.44	13.43	85.07	183.6	99.62	44.21
JG142	JG-MNST B	CG W	11.5	7.65	282.6	1.378	34.67	5.091	32.76	182.7	21.49	11.90
JG143	JG-MNST B	CG W	/	/	191.3	2.433	21.88	4.371	21.73	103.3	16.88	13.54
JG144	JG-MNST B	CG W	/	7.70	388.1	1.984	31.69	15.16	44.93	187.4	68.52	22.71
JG145	JG-MNST B	CG W	/	8.10	190.0 0	0.8440	9.707	6.268	34.45	100.5	32.07	9.846
JG146	JG-MNST B	CG W	/	8.10	213.9	1.631	27.91	4.851	25.26	78.71	48.83	17.22
JG147	JG-MNST B	CG W	/	7.90	310.0	1.945	20.43	10.50	48.48	135.5	71.48	20.39

JG148	JG-MNST B	CG W	/	7.60	155.6	1.252	20.01	3.091	16.69	81.98	17.60	7.220
JG149	JG-MNST B	CG W	/	8.00	280.0	1.795	30.72	9.074	41.17	115.6	71.64	22.23
JG150	JG-MNST B	CG W	/	8.00	181.8	1.567	26.82	2.672	21.42	85.96	31.67	11.16
JG151	JG-MNST B	CG W	/	7.80	900.0	2.241	108.1	35.73	110.5	200.1	307.7	134.9
JG152	JG-MNST B	CG W	/	8.80	219.2	2.853	58.24	0.3965	3.245	87.94	44.13	20.44
JG153	JG-MNST B	CG W	/	8.20	576.2	1.598	175.9	11.52	16.56	10.67	82.04	252.4
JG154	JG-MNST B	CG W	/	8.20	339.3	2.431	39.55	18.47	28.85	140.6	75.11	32.09
JG155	JG-MNST B	CG W	/	8.30	394.4	3.279	52.38	12.16	36.78	159.0	81.89	40.61
JG156	JG-MNST B	CG W	/	8.10	782.9	1.633	75.03	40.42	75.33	339.2	155.2	57.81
JG157	JG-MNST B	CG W	/	7.40	539.1	2.480	49.73	11.89	88.22	268.6	99.54	30.33
JG158	JG-ABB	CG W	/	7.59	396.0	1.953	32.59	20.34	45.82	118.8	120.1	37.98
JG159	JG-ABB	CG W	/	7.77	289.0	1.565	17.04	18.14	34.76	103.9	81.18	28.56
JG160	JG-ABB	CG W	/	7.40	289.4	1.436	4.573	15.55	44.09	153.8	50.45	8.437
JG161	JG-ABB	CG W	/	8.00	280.3	0.5477	6.315	5.613	59.69	157.2	48.41	11.52
JG162	JG-ABB	CG W	/	7.80	309.1	1.539	26.20	6.105	53.70	87.37	84.06	34.97
JG163	JG-ABB	CG W	/	8.00	559.5	2.686	73.84	2.242	80.28	100.2	203.1	69.73
JG164	JG-ABB	CG W	/	8.00	213.7	1.138	9.597	13.72	30.47	133.6	24.75	9.132
JG165	JG-ABB	CG W	/	7.90	547.2	1.710	27.32	32.75	73.95	282.4	109.8	29.11
JG166	JG-ABB	CG W	/	8.00	214.8	1.592	16.731	3.947	34.88	104.4	31.64	12.43
JG167	JG-ABB	CG W	/	8.00	208.1	1.820	19.12	5.899	32.41	98.58	30.53	22.70

JG168	JG- ABB	CG W	/	8.40	582.5	2.335	154.4	8.711	16.47	127.3	221.1	69.25
JG169	JG- ABB	CG W	/	8.50	249.0	2.399	65.95	2.137	6.733	110.5	53.39	17.76
JG170	JG- ABB	CG W	/	8.60	143.1	2.153	35.04	1.264	4.170	81.36	19.76	5.679
JG171	JG- ABB	CG W	/	8.40	367.2	2.627	94.67	6.792	18.07	99.02	85.61	73.24
JG172	JG- ABB	CG W	/	8.00	1450	4.018	361.3	30.87	79.75	156.1	577.0	312.9
JG173	JG- ABB	CG W	/	8.60	187.2	0.7488	49.50	2.649	4.058	90.51	31.39	16.88
JG174	JG- ABB	CG W	/	8.00	1051	2.499	231.0	36.26	65.46	181.9	394.7	163.9
JG175	JG- ABB	CG W	/	8.40	1341	5.024	332.1	26.74	45.85	175.0	500.9	188.2
JG176	JG- ABB	CG W	/	8.50	187.1	2.448	47.72	1.554	7.042	90.90	31.18	15.58
JG177	JG- EMB	CG W	/	7.70	^{1607.} 7	3.721	262.0	102.8	71.65	568.7	529.7	134.9
JG178	JG- EMB	CG W	/	8.00	325.2	0.9357	14.95	7.090	68.72	92.91	86.28	40.26
JG179	JG- EMB	CG W	/	8.10	127.5	0.1163	0.0914	3.448	27.86	68.86	10.33	11.89
JG180	JG- EMB	CG W	/	7.90	465.4	2.590	51.93	21.10	55.86	224.8	115.2	16.89
JG181	JG- EMB	CG W	/	7.60	652.0	2.784	76.53	21.20	81.07	238.1	200.7	23.84
JG182	JG- EMB	CG W	/	7.90	331.7	2.186	36.85	11.16	31.50	162.58	52.58	20.42
JG183	JG- EMB	CG W	/	7.80	367.8	2.193	42.74	11.42	39.46	178.6	63.02	22.34
JG184	JG- EMB	CG W	/	8.00	750.6	2.612	126.1	26.60	55.84	227.3	247.8	40.69
JG185	JG- EMB	CG W	/	7.80	527.5	2.674	69.60	20.85	63.69	180.3	179.2	37.16
JG186	JG- EMB	CG W	/	8.10	454.2	2.299	46.62	10.56	59.69	166.8	128.9	27.19
YL001	YL- GNS	SFW	/	8.58	113.7	1.290	4.341	2.514	24.28	47.14	35.95	2.916
YL002	YL- GNS	SFW	12.0	7.65	196.3	0.3266	7.077	7.948	34.95	95.92	53.92	4.830
YL003	YL- GNS	SFW	10.2	7.81	183.7	0.325	6.716	1.625	39.11	90.44	36.64	1.483
YL004	YL- GNS	SFW	15.6	7.98	1020	4.610	141.3	44.77	90.35	266.3	323.9	126.5
YL005	YL- GNS	SFW	/	7.27	266.1	1.797	18.33	11.17	36.34	123.2	58.53	15.92
YL006	YL- GNS	SFW	^{16.1} 0	8.08	300.9	1.614	19.17	9.784	44.48	144.4	59.27	16.77

YL007	YL-GNS	SFW	15.9 0	8.33	292.4	1.316	12.55	9.818	48.68	167.6	48.42	8.929
YL008	YL-GNS	SFW	/	7.27	984.2	2.704	161.8	42.41	80.98	144.5	346.6	179.6
YL009	YL-GNS	SFW	/	7.35	95.00	0.7170	2.165	2.358	18.48	40.07	24.31	4.248
YL010	YL-GNS	SFW	/	7.85	147.0	0.9254	3.276	6.448	27.15	80.85	28.88	5.010
YL011	YL-TKS	SFW	/	8.12	101.8	2.053	2.408	2.608	20.97	54.94	22.97	0.7087
YL012	YL-TKS	SFW	/	7.84	112.7	1.278	2.206	3.157	21.25	57.43	26.69	0.8179
YL013	YL-TKS	SFW	/	7.57	99.31	0.8626	1.822	3.245	20.82	55.90	21.06	0.5694
YL014	YL-TKS	SFW	/	8.19	108.2	1.302	2.120	3.415	21.56	54.76	23.76	1.070
YL015	YL-TKS	SFW	/	7.76	131.0	1.058	3.089	4.724	22.02	58.60	33.14	2.863
YL016	YL-TKS	SFW	/	7.87	122.2	1.685	3.453	3.700	23.22	60.80	25.17	2.135
YL017	YL-TKS	SFW	/	7.87	141.0	1.882	4.657	7.013	26.81	47.75	55.10	4.838
YL018	YL-TKS	SFW	/	7.77	106.0	1.575	3.093	2.971	21.58	57.86	20.31	1.868
YL019	YL-TKS	SFW	/	7.75	130.5	1.562	3.993	4.618	24.23	63.39	33.46	3.569
YL020	YL-TKS	SFW	/	8.49	130.6	1.364	4.434	4.605	23.97	61.26	33.645	4.294
YL021	YL-TKS	SFW	/	7.17	198.7	1.735	7.444	7.078	34.43	89.30	48.51	7.685
YL022	YL-TKS	SFW	/	7.78	91.00	0.5630	1.667	2.293	17.30	49.21	14.30	2.266
YL023	YL-TKS	SFW	/	7.83	590.0	4.258	63.77	27.19	62.84	92.61	242.8	72.76
YL024	YL-TKS	SFW	/	7.75	84.00	0.8585	3.313	2.728	15.67	43.80	15.54	4.353
YL025	YL-TKS	SFW	/	7.91	127.0	1.458	2.933	5.511	22.80	53.86	40.39	3.300
YL026	YL-TKS	SFW	/	7.92	124.0	1.242	3.227	4.966	21.090	62.20	22.49	7.213
YL027	YL-KS	SFW	/	7.63	106.6	1.394	2.289	3.184	22.27	49.37	31.38	0.7159
YL028	YL-KS	SFW	/	7.50	151.9	1.356	6.155	4.130	27.69	72.62	35.47	6.968
YL029	YL-KS	SFW	/	7.80	58.71	0.6479	1.805	0.9719	10.98	28.18	12.62	0.9240
YL030	YL-KS	SFW	/	8.04	156.0	1.102	2.136	5.363	29.64	95.80	21.05	2.436
YL031	YL-KS	SFW	/	7.87	88.00	1.071	1.608	2.754	16.48	42.94	20.12	1.547
YL032	YL-KS	SFW	/	8.02	680.0	4.154	126.7	30.28	53.86	110.3	286.9	90.82
YL033	YL-KS	SFW	/	8.03	113.0	1.163	4.081	3.867	19.62	49.76	26.27	3.971
YL034	YL-KS	SFW	/	7.68	134.4	1.511	6.443	3.885	23.82	61.01	28.53	5.463
YL035	YL-KS	SFW	/	7.16	158.3	1.624	7.632	4.645	28.18	84.72	32.86	6.510
YL036	YL-YL	SFW	/	8.08	202.0	1.648	7.151	6.465	34.07	106.7	37.08	6.222
YL037	YL-YL	SFW	/	8.13	141.0	1.395	4.490	3.601	30.10	76.82	25.09	5.595

YL038	YL-YL SFW	/	7.83	197.0	0.4665	1.916	12.32	33.92	110.2	39.79	1.948
YL039	YL-YL SFW	/	7.72	480.0	1.164	9.316	23.30	93.95	126.2	215.4	5.044
YL040	YL-YL SFW	/	7.26	306.5	1.824	31.85	11.88	37.27	83.93	96.81	38.69
YL041	YL-YL SFW	/	7.25	321.4	3.103	37.10	15.52	44.45	28.94	158.6	45.10
YL042	YL-YL SFW	/	8.41	307.2	2.473	25.47	11.66	40.31	89.77	96.65	30.01
YL043	YL-YL SFW	/	8.32	303.6	2.780	25.34	12.27	42.00	97.62	98.69	27.12
YL044	YL-YL SFW	/	7.29	254.0	2.315	16.68	11.13	41.25	93.03	81.30	20.81
YL045	YL-YL SFW	/	7.85	192.0	1.607	9.774	7.388	31.57	65.49	56.32	11.10
YL046	YL-YL SFW	/	7.94	126.0	1.316	5.727	4.577	23.87	56.69	31.84	6.338
YL047	YL-YL SFW	17.4	8.13	362.4	1.962	32.53	15.08	49.67	176.3	74.64	29.88
YL048	YL-YL SFW	16.3	7.92	371.9	1.999	22.73	19.47	52.30	177.9	79.93	18.42
YL049	YL-YL SFW	14.8	7.46	453.4	4.490	43.77	13.37	57.24	192.3	83.21	36.34
YL050	YL-YL SFW	18.6	7.69	445.5	1.704	26.26	26.76	56.23	226.8	91.84	22.62
YL051	YL-YL SFW	20.9	7.32	528.6	3.650	49.37	25.65	60.93	189.8	134.4	39.95
YL052	YL- PG GNS W	15.0	7.06	370.8	0.8293	12.65	10.05	66.45	196.7	48.70	24.52
YL053	YL- PG GNS W	12.0	7.60	349.4	0.5680	9.996	11.02	68.27	236.7	32.85	6.502
YL054	YL- PG GNS W	14.0	7.30	493.4	1.717	23.93	20.82	81.77	264.0	76.50	28.23
YL055	YL- PG GNS W	16.0	7.25	425.9	0.8475	8.475	14.41	78.07	267.7	29.39	7.244
YL056	YL- PG GNS W	12.0	7.69	584.9	1.142	33.10	27.78	76.29	337.6	61.28	36.17
YL057	YL- PG GNS W	15.2	7.30	763.6	1.304	22.31	34.12	120.8	388.3	117.0	51.55
YL058	YL- PG GNS W	18.9	7.82	388.7	0.8814	9.916	16.09	70.62	191.3	91.88	5.299
YL059	YL- PG GNS W	14.0	7.59	426.1	0.8269	10.44	18.60	70.39	313.7	14.97	3.911
YL060	YL- PG GNS W	14.0	7.55	669.5	1.385	30.90	57.00	59.77	463.8	64.39	19.79
YL061	YL- PG GNS W	15.5	7.89	768.3	1.453	91.02	40.37	74.83	167.7	305.9	50.41
YL062	YL- PG GNS W	14.4	7.82	506.4	2.191	59.58	26.92	46.01	221.8	119.1	41.69
YL063	YL- PG GNS W	13.4	7.84	581.2	1.291	100.6	20.87	51.74	197.9	151.5	85.83
YL064	YL- PG GNS W	13.0	8.04	772.0	0.8304	184.8	16.19	39.96	169.3	235.6	151.2
YL065	YL- PG GNS W	12.8	7.77	^{1425.} ₄	4.371	311.8	31.13	68.33	580.3	483.6	9.510
YL066	YL- PG GNS W	16.1	7.62	501.2	2.258	15.35	16.48	99.57	285.8	94.23	9.479
YL067	YL- PG GNS W	18.0	7.86	320.7	1.940	11.07	9.469	64.00	188.2	44.97	11.27
YL068	YL- PG GNS W	15.0	7.59	923.7	23.16	26.89	66.07	104.9	462.8	189.6	51.54
YL069	YL- PG GNS W	13.2	7.49	1440	25.07	109.9	95.37	183.4	377.6	574.6	117.0

YL070	YL-GNS	PG W	12.6	7.56	911.1	10.78	50.32	53.99	112.3	497.9	185.2	37.51
YL071	YL-GNS	PG W	16.6	7.57	1350	58.22	177.8	32.99	108.9	518.0	265.5	126.0
YL072	YL-GNS	PG W	18.3	7.75	717.2	2.888	61.74	41.13	67.81	260.6	214.9	39.66
YL073	YL-GNS	PG W	13.8	7.68	960.4	3.392	173.4	27.48	81.52	405.3	267.6	45.53
YL074	YL-GNS	PG W	16.0	7.55	824.1	4.109	114.3	30.76	75.96	319.1	241.1	60.77
YL075	YL-GNS	PG W	15.5	7.44	454.0	2.331	14.51	12.93	84.97	300.7	45.06	15.02
YL076	YL-YL	PG W	13.4	7.16	1337	5.225	128.6	42.31	193.0	385.6	392.3	124.1
YL077	YL-YL	PG W	11.4	7.17	255.7	1.867	7.799	5.382	52.83	142.5	40.21	15.74
YL078	YL-YL	PG W	15.6	7.66	720.3	1.951	18.43	50.08	95.62	524.1	52.18	13.92
YL079	YL-YL	PG W	13.8	7.58	1532	5.070	264.1	79.54	105.8	365.0	636.0	143.8
YL080	YL-YL	PG W	12.1	7.41	843.0	4.478	34.58	45.51	121.0	381.7	193.8	25.02
YL081	YL-YL	PG W	27.0	7.39	830.4	8.558	47.21	37.41	107.9	350.8	197.2	49.48
YL082	YL-YL	PG W	16.7	7.53	802.9	5.898	40.78	44.44	106.0	366.5	185.4	54.70
YL083	YL-YL	PG W	14.8	7.35	1217	3.344	95.25	52.42	203.2	460.6	309.3	133.8
YL084	YL-YL	PG W	22.3	7.18	384.8	1.521	15.11	11.86	63.36	218.7	44.58	14.97
YL085	YL-YL	PG W	15.9	7.42	1042	6.999	77.57	52.00	124.7	495.7	226.5	60.77
YL086	YL-YL	PG W	16.5	7.46	770.1	3.788	37.16	32.35	114.9	343.6	164.2	37.10
YL087	YL-YL	PG W	15.3	7.45	1207	36.85	95.60	52.68	156.4	542.8	266.1	87.82
YL088	YL-YL	PG W	15.2	7.55	1225	8.307	110.6	73.35	150.7	451.5	397.2	92.61
YL089	YL-YL	PG W	24.0	7.36	882.5	3.904	43.77	30.00	140.0	445.5	142.1	34.00
YL090	YL-YL	PG W	13.7	7.76	620.7	1.505	31.41	36.53	76.47	299.8	121.9	36.23
YL091	YL-YL	PG W	13.7	7.33	1432	2.927	156.5	68.63	161.8	386.5	437.0	147.7
YL092	YL-YL	PG W	13.1	7.50	1646	13.011	205.8	98.04	99.07	431.3	537.5	180.9
YL093	YL-YL	PG W	15.50	7.68	875.4	2.985	94.46	25.91	119.6	351.3	215.6	78.87
YL094	YL-YL	PG W	/	7.80	373.2	1.757	28.08	21.97	42.98	209.3	56.25	16.35

YL095	YL-YL	PG W	/	7.60	650.0	2.204	60.59	51.85	35.13	194.9	236.7	36.21
YL096	YL-YL	PG W	/	7.80	844.2	1.848	84.92	42.78	97.38	297.4	267.9	73.81
YL097	YL-YL	PG W	/	7.60	512.5	0.6371	7.407	51.69	54.10	323.3	48.07	23.65
YL098	YL-YL	PG W	/	7.80	462.9	2.028	33.00	9.195	69.77	219.0	84.44	22.47
YL099	YL-YL	PG W	/	6.80	119.7	0.755	1.133	4.160	22.49	73.45	17.08	1.508
YL100	YL-YL	PG W	21.1	7.90	206.2	1.114	11.85	5.369	34.14	109.9	35.91	9.333
YL101	YL-YL	PG W	19.8	8.00	494.6	2.123	38.33	19.00	76.10	224.1	124.5	29.05
YL102	YL-YL	PG W	25.2	7.80	644.2	2.540	25.70	29.66	101.8	338.4	144.3	14.79
YL103	YL-YL	PG W	15.5	8.10	346.7	1.496	12.18	15.60	51.39	200.3	43.39	7.283
YL104	YL-YL	PG W	15.0	7.90	700.5	3.354	57.82	19.71	110.0	326.9	157.6	32.58
YL105	YL-YL	PG W	14.5	7.70	538.5	2.474	20.31	25.05	82.67	304.1	94.53	15.52
YL106	YL-YL	PG W	15.9	7.80	629.5	3.063	28.65	38.43	71.23	335.1	97.75	25.22
YL107	YL-YL	PG W	14.0	7.70	771.1	2.345	60.75	41.46	94.00	380.5	185.9	34.29
YL108	YL-YL	PG W	18.5	7.47	476.1	2.629	44.58	28.07	42.16	271.2	52.42	20.10
YL109	YL-YL	PG W	14.0	7.80	512.3	2.273	26.14	36.17	57.97	261.9	106.1	30.18
YL110	YL-YL	PG W	14.0	7.72	382.6	1.160	39.89	14.15	51.14	230.9	47.06	15.80
YL111	YL-YL	CG W	/	8.00	347.6	1.817	19.10	17.39	59.05	128.1	67.99	52.45
YL112	YL-YL	CG W	/	8.10	169.5	1.008	8.518	4.373	26.71	99.03	15.77	5.699
YL113	YL-YL	CG W	/	7.40	945.7	2.660	73.13	56.24	127.3	350.8	264.9	94.52
YL114	YL-YL	CG W	/	7.30	950.5	1.943	93.79	40.87	112.3	401.1	241.1	75.51
YL115	YL-YL	CG W	/	7.40	471.2	1.283	4.077	36.66	57.69	242.2	98.75	11.06
YL116	YL-YL	CG W	/	7.80	493.2	2.399	65.96	9.618	66.08	236.3	95.61	39.05
YL117	YL-YL	CG W	/	7.80	284.5	0.9864	8.337	12.23	47.06	166.1	39.55	7.425
YL118	YL-YL	CG W	/	7.90	346.7	0.8308	7.022	9.594	65.26	181.3	61.50	11.94
YL119	YL-YL	CG W	/	7.70	281.1	1.068	9.027	11.67	46.73	179.4	25.67	5.685

YL120	YL-YL	CG W	/	7.60	641.1	2.116	33.81	34.02	105.2	296.6	162.09	31.85
YL121	YL-YL	CG W	/	7.50	326.2	0.6549	0.9823	23.70	52.78	220.6	26.56	16.59
YL122	YL-YL	CG W	/	7.70	489.5	1.009	8.528	31.22	71.49	262.3	72.64	17.90
YL123	YL-YL	CG W	/	7.80	414.2	1.370	23.45	16.99	56.01	206.8	71.34	21.98
YL124	YL-YL	CG W	/	7.50	199.6	0.8326	8.418	3.385	36.56	104.6	27.71	9.026
YL125	YL-YL	CG W	/	7.90	323.6	1.628	17.11	13.83	47.57	201.0	37.26	15.57
YL126	YL-YL	CG W	/	8.00	454.1	2.232	43.51	12.20	67.00	214.2	102.4	28.50
YL127	YL-YL	CG W	/	8.00	230.8	0.6187	7.115	8.171	40.43	148.4	14.04	9.421
YL128	YL-YL	CG W	/	7.90	222.9	1.120	9.467	4.077	42.26	133.9	16.55	9.577
YL129	YL-YL	CG W	/	7.80	338.3	1.544	26.43	7.898	59.10	131.0	104.0	23.14
YL130	YL-YL	CG W	/	8.10	168.8	1.366	11.54	3.575	32.10	93.79	25.84	8.523
YL131	YL-YL	CG W	14.8	8.10	246.5	0.6069	6.271	2.428	56.74	107.8	74.25	3.867
YL132	YL-YL	CG W	25.1	8.20	291.3	1.140	8.209	22.12	41.16	138.3	82.89	3.777
YL133	YL-YL	CG W	25.5	7.90	452.5	1.972	9.639	26.62	74.59	242.5	84.76	11.70
YL134	YL-YL	CG W	13.5	8.00	334.5	1.112	6.229	10.79	66.85	197.1	59.86	8.189
YL135	YL-YL	CG W	14.0	7.60	1507	17.75	105.0	69.51	189.7	421.6	582.0	71.64
YL136	YL-YL	CG W	16.0	7.90	475.5	2.247	29.42	23.43	64.30	216.4	108.2	22.22
YL137	YL-YL	CG W	15.6	7.80	523.4	2.012	28.06	26.79	74.66	301.0	80.28	11.08
YL138	YL-YL	CG W	16.0	8.00	293.9	1.344	9.304	20.06	33.18	171.8	41.58	7.688
YL139	YL-YL	CG W	23.4	8.00	466.4	1.961	35.49	27.64	40.88	275.1	59.01	10.86
YL140	YL-YL	CG W	16.3	7.70	1869	4.912	243.7	115.5	144.7	298.0	782.4	227.2
YL141	YL-YL	CG W	17.9	7.22	339.2	1.047	15.18	10.16	58.75	179.8	42.97	14.43

Table S2. Statistical summary of the physical and chemical parameters determined in each of the subdivided river basins (I to VIII) in north of the Tianshan Mountains, China. (Note: 1 water type: SFW or SW, surface water samples including river water, lake water, reservoirs water, pond water, stream water, snow, ice, rainfall, etc.; PGW or PW, phreatic groundwater samples with groundwater level depth < 50 m; CGW or CW, confined groundwater samples with groundwater level depth > 50 m or > 100 m. 2 Watershed: EQS, Erlqis watershed; YL, Yili watershed; JG: Junggar watershed; YL-TKS, Tekes Basin in Yili watershed; YL-GNS, Gongnais Basin in Yili; YL-KS, Kashi Basin in Yili; YL-

YL, Yili Basin in Yili; JG-THB, Tuha Basin in JG; JG-MNSTB, middle part of the north slope of Tianshan Mountains in JG; JG-ABB, Aibi Lake Basin in JG; JG-EMB, Ermin Basin in JG; WLGB, Wulungu Basin in JG. The specific location and distribution of each sampling site are shown in Fig. 3.)

River basin		pH	TDS (mg/L)	K ⁺ (meq/L)	Na ⁺ (meq/L)	Mg ²⁺ (meq/L)	Ca ²⁺ (meq/L)	HCO ₃ ⁻ (meq/L)	SO ₄ ²⁻ (meq/L)	Cl ⁻ (meq/L)
EQS-SFW (n=12)	Average	7.61	93.60	0.0372	0.2333	0.2455	0.7378	0.6655	0.5078	0.1140
	Median	7.61	65.50	0.0344	0.1525	0.1847	0.4631	0.3981	0.1554	0.1057
	Min	7.00	24.60	0.0136	0.0410	0.0451	0.1334	0.1678	0.0359	0.0076
	Max	8.33	199.0	0.0791	0.6266	0.5480	1.861	1.483	1.9183	0.2397
EQS-PGW (n=21)	Average	7.43	1103	0.0519	9.098	2.183	5.672	2.943	6.501	7.146
	Median	7.40	1080	0.0420	4.662	1.772	5.001	2.764	5.600	2.417
	Min	6.70	271.2	0.0155	0.3057	0.1134	0.8036	0.2817	0.4642	0.1471
	Max	8.05	2634	0.1379	27.48	6.118	14.37	6.166	19.65	25.57
EQS-CGW (n=2)	Average	7.60	1299	0.0861	7.873	3.151	8.303	5.541	9.947	3.749
	Median	7.60	1299	0.0861	7.873	3.151	8.303	5.541	9.947	3.749
	Min	7.20	563.1	0.0667	3.118	1.073	3.299	2.812	3.319	1.618
	Max	8.00	2035	0.1054	12.63	5.230	13.31	8.270	16.58	5.880
JG-THB-SFW (n=2)	Average	6.63	188.5	0.1188	1.219	0.4951	0.6529	1.695	0.5163	0.3841
	Median	6.63	188.5	0.1188	1.219	0.4951	0.6529	1.695	0.5163	0.3841
	Min	6.59	47.50	0.0429	0.2483	0.0811	0.2465	0.4326	0.0422	0.1738
	Max	6.66	329.6	0.1947	2.189	0.9091	1.059	2.957	0.9905	0.5944
JG-THB-PGW (n=5)	Average	7.52	26936	3.476	381.7	23.53	32.52	2.869	100.7	336.4
	Median	7.60	10290	1.042	126.0	9.107	23.71	2.258	65.44	79.33
	Min	7.16	178.3	0.0196	0.4519	0.5202	1.412	0.5777	0.6092	0.3046
	Max	7.74	144230	21.81	2159	161.2	176.1	7.600	312.9	2058
JG-THB-CGW (n=22)	Average	7.78	3201	0.2255	35.69	3.661	9.218	3.982	22.86	21.79
	Median	7.79	1774	0.1085	17.07	3.002	6.625	2.882	14.16	9.474
	Min	7.37	999.7	0.0340	7.483	0.2339	2.172	1.090	7.739	2.135
	Max	8.20	19080	1.225	246.5	8.318	31.36	27.68	131.7	157.9
JG-MNSTB-SFW (n=28)	Average	8.08	268.1	0.0569	0.5826	0.8263	2.236	1.869	1.391	0.4309
	Median	8.08	268.4	0.0506	0.5026	0.7900	2.273	1.943	1.168	0.3379
	Min	7.26	90.00	0.0103	0.0416	0.1135	0.7024	0.5288	0.2778	0.0922
	Max	9.00	556.4	0.2321	1.365	2.336	4.661	3.932	3.491	1.4954
JG-MNSTB-PGW (n=24)	Average	8.29	3598	0.0949	55.87	3.224	2.360	2.279	3.839	55.61
	Median	8.20	820.0	0.0484	8.396	1.650	1.228	1.943	2.819	2.806
	Min	6.15	210.0	0.0080	0.9614	0.0040	0.1544	0.0035	0.1131	0.2591
	Max	9.70	14985	0.3805	242.7	12.24	14.32	9.976	19.29	254.7
JG-MNSTB-CGW (n=41)	Average	7.95	401.2	0.0505	1.955	0.9629	2.624	2.480	2.002	1.142
	Median	7.95	350.0	0.0502	1.481	0.8347	2.374	2.464	1.531	0.7167
	Min	7.40	155.6	0.0169	0.3340	0.0326	0.1619	0.1748	0.3515	0.2037
	Max	8.80	900.0	0.0839	7.652	3.326	7.290	5.559	6.407	7.120
JG-ABB-SFW (n=6)	Average	8.23	1038	0.3518	5.753	8.938	1.315	2.988	9.878	3.585
	Median	8.35	1047	0.3593	5.525	8.916	1.193	3.033	9.980	3.615
	Min	7.40	192.4	0.0236	0.1463	0.7346	0.3628	1.589	0.5697	0.0994
	Max	8.76	1850	0.7044	11.69	17.72	2.155	4.298	19.02	7.122
JG-ABB-PGW(n=3)	Average	8.78	308.9	0.0471	3.606	0.1584	0.8503	0.2446	2.820	1.516
	Median	9.36	380.7	0.0601	5.030	0.0119	0.5581	0.0277	3.763	1.771
	Min	7.51	160.3	0.0152	0.3002	0.0104	0.4885	0.0033	0.719	0.8975
	Max	9.48	385.7	0.0660	5.489	0.4528	1.504	0.7028	3.977	1.880

JG-ABB-CGW (n=19)	Average	8.10	466.5	0.0542	3.674	1.045	1.937	2.116	2.957	1.674
	Median	8.00	289.4	0.0500	1.524	0.5589	1.741	1.811	1.690	0.8055
	Min	7.40	143.1	0.0140	0.1989	0.1040	0.2025	1.333	0.4113	0.1602
	Max	8.60	1450	0.1285	15.72	2.984	4.006	4.629	12.01	8.825
JG-EMB-SWF (n=3)	Average	8.24	2244	0.5248	25.24	4.523	1.140	9.797	15.13	5.172
	Median	7.60	331.0	0.1010	1.489	1.833	1.123	3.414	1.281	0.7386
	Min	7.30	201.0	0.0248	0.6772	0.5408	0.9174	1.154	0.2613	0.2659
	Max	9.81	6200	1.449	73.55	11.19	1.380	24.82	43.85	14.51
JG-EMB-PGW (n=5)	Average	8.04	1634	0.1313	24.16	1.903	1.516	1.142	1.893	24.21
	Median	7.74	239.7	0.0366	0.6540	0.9269	1.412	1.584	1.015	0.3699
	Min	7.60	178.3	0.0196	0.4519	0.5202	1.330	0.0640	0.6092	0.3046
	Max	8.86	3773	0.2965	60.35	3.788	1.982	2.029	3.572	61.26
JG-EMB-CGW (n=10)	Average	7.89	560.9	0.0566	3.164	1.944	2.771	3.456	3.356	1.060
	Median	7.90	459.8	0.0625	2.143	1.328	2.883	2.941	2.541	0.7196
	Min	7.60	127.5	0.0030	0.0040	0.2837	1.390	1.129	0.2150	0.3353
	Max	8.10	1608	0.0952	11.40	8.457	4.046	9.320	11.03	3.804
JG-WLGB-SFW (n=5)	Average	8.02	1750	1.014	17.35	4.345	2.182	6.022	10.19	8.776
	Median	8.02	2040	1.277	21.63	5.656	2.159	4.857	11.13	10.75
	Min	7.66	321.0	0.0801	1.422	0.9335	1.508	0.9958	2.949	0.8106
	Max	8.48	2940	1.729	28.82	7.016	2.959	12.69	15.61	13.36
YL-TKS-SFW (n=16)	Average	7.85	149.9	0.0395	0.3089	0.4619	1.249	0.9871	0.8840	0.2121
	Median	7.84	123.1	0.0361	0.1374	0.3417	1.088	0.9447	0.5398	0.0869
	Min	7.17	84.00	0.0144	0.0725	0.1887	0.7819	0.7178	0.2977	0.0161
	Max	8.49	590.0	0.1089	2.774	2.237	3.136	1.518	5.055	2.052
YL-GNS-SFW (n=10)	Average	7.82	359.9	0.0400	1.638	1.143	2.220	1.967	2.116	1.033
	Median	7.83	231.2	0.0333	0.4269	0.7296	1.882	1.796	1.065	0.1966
	Min	7.27	95.00	0.0083	0.0942	0.1337	0.9220	0.6567	0.5062	0.0418
	Max	8.58	1020	0.1179	7.037	3.684	4.509	4.364	7.217	5.066
YL-GNS-PGW (n=24)	Average	7.61	705.3	0.1639	3.017	2.510	4.068	5.199	3.431	1.217
	Median	7.60	627.2	0.0468	1.392	2.238	3.763	4.807	2.458	1.039
	Min	7.06	320.7	0.0145	0.3686	0.7792	1.994	2.749	0.3117	0.1103
	Max	8.04	1440	1.489	13.56	7.848	9.154	9.511	11.96	4.266
YL-KS-SFW (n=9)	Average	7.75	183.0	0.0398	0.7677	0.5402	1.289	1.083	1.146	0.3741
	Median	7.80	134.4	0.0347	0.1775	0.3196	1.189	0.9999	0.5940	0.1120
	Min	7.16	58.70	0.0166	0.0700	0.0800	0.5479	0.4619	0.2628	0.0202
	Max	8.04	680.0	0.1062	5.511	2.492	2.688	1.807	5.973	2.562
YL-YL-SFW (n=16)	Average	7.79	312.0	0.0542	0.9501	1.134	2.274	1.945	1.824	0.6085
	Median	7.84	306.8	0.0484	1.045	1.012	2.077	1.674	1.713	0.6124
	Min	7.25	126.0	0.0119	0.0834	0.2963	1.191	0.4744	0.5224	0.0550
	Max	8.41	528.6	0.1148	2.148	2.202	4.688	3.717	4.485	1.272
YL-YL-PGW (n=35)	Average	7.58	751.1	0.1111	2.593	3.039	4.686	5.265	3.783	1.402
	Median	7.60	700.5	0.0650	1.735	3.006	4.772	5.493	3.004	0.9191
	Min	6.80	119.7	0.0163	0.0493	0.3423	1.122	1.204	0.3541	0.0425
	Max	8.10	1646	0.9426	11.49	8.068	10.14	8.896	13.24	5.103
YL-YL-CGW (n=31)	Average	7.79	480.6	0.0533	1.369	1.892	3.323	3.461	2.397	0.8080
	Median	7.80	346.7	0.0349	0.5022	1.398	2.932	3.294	1.485	0.3368
	Min	7.22	168.8	0.0155	0.0427	0.1998	1.333	1.537	0.2923	0.1065
	Max	8.20	1869	0.4539	10.60	9.503	9.467	6.909	16.29	6.408