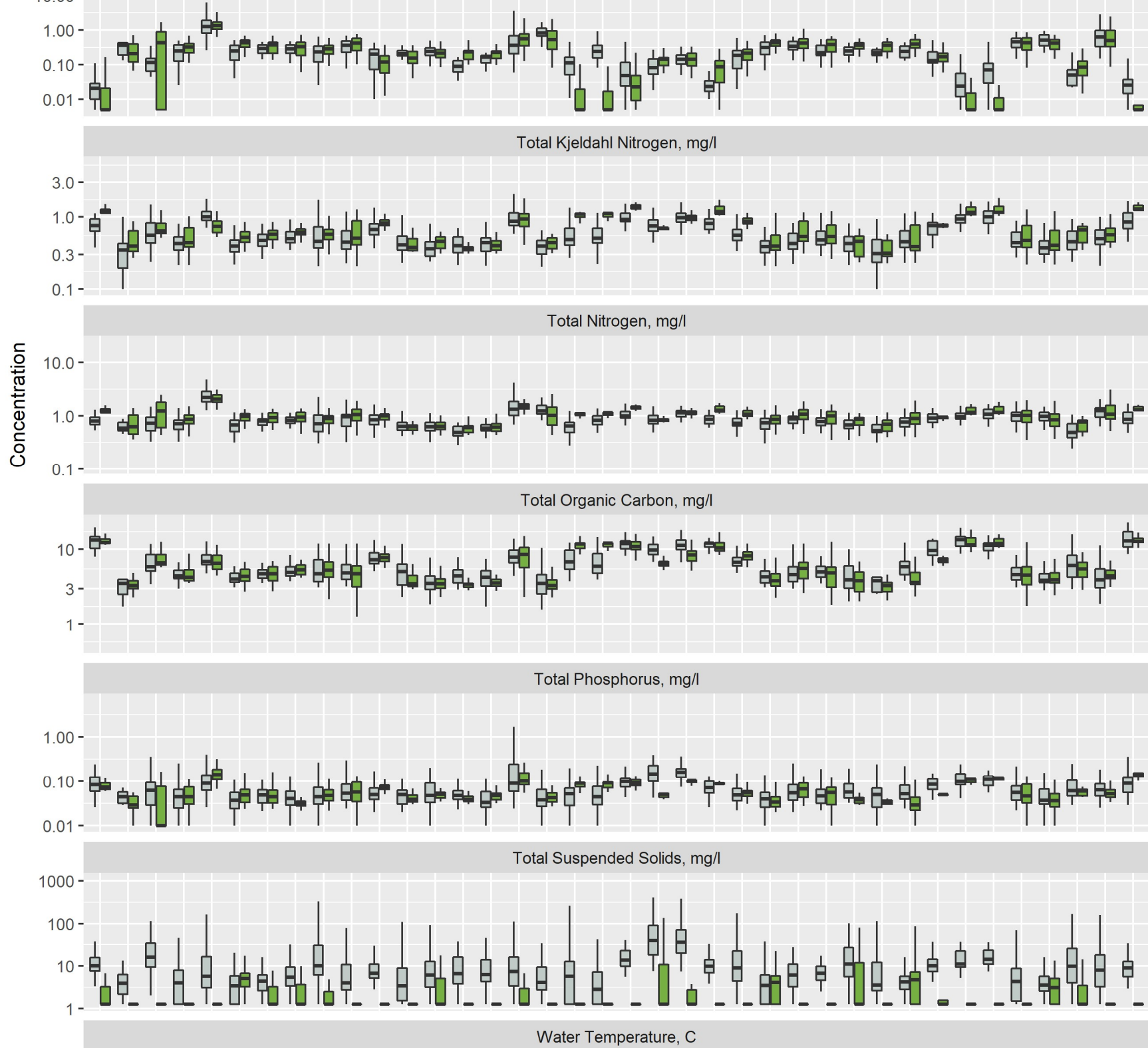
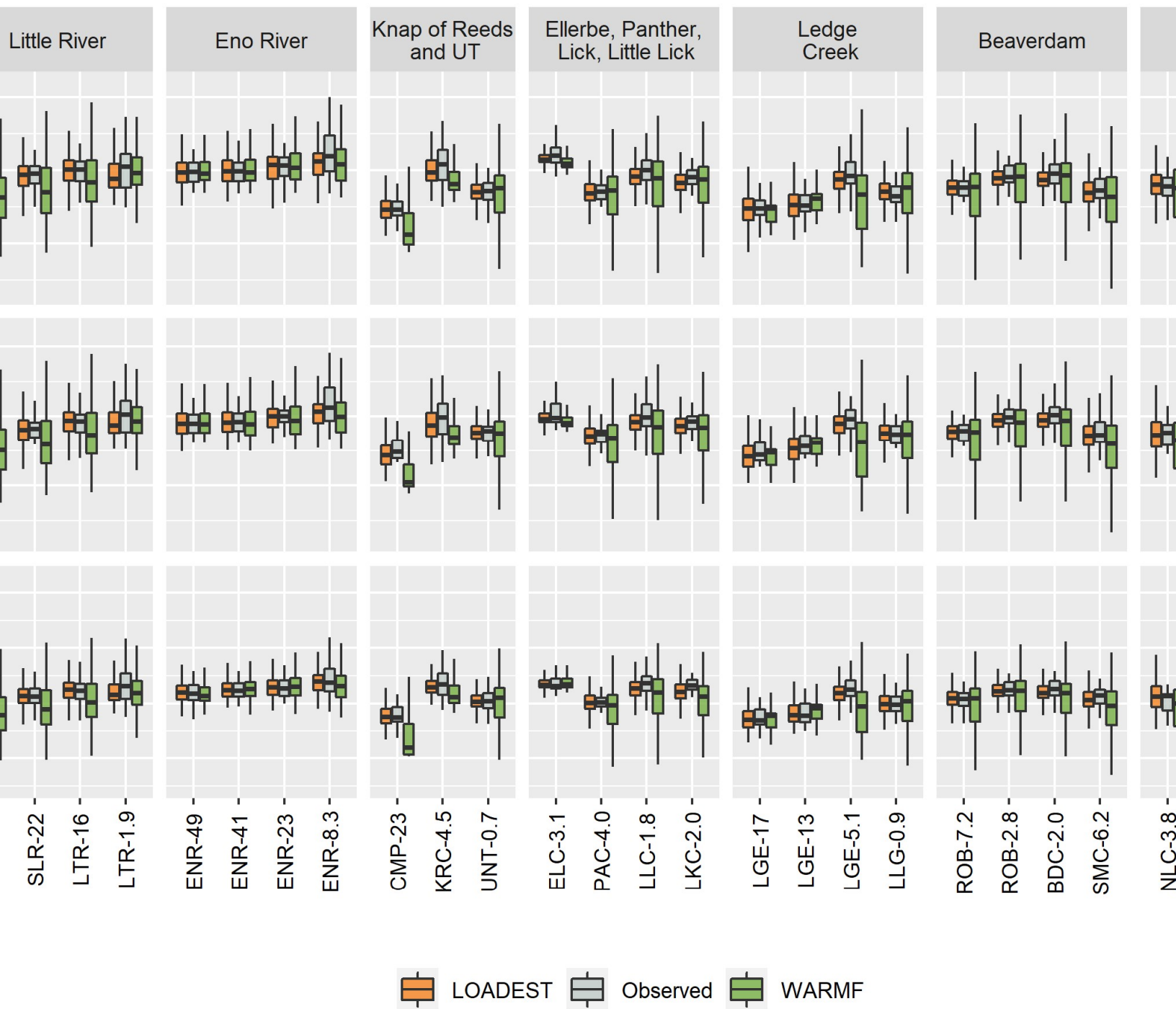


Figure 1. Water Quality Monitoring Stations and USGS Gage Locations.





Daily Loading Comparisons (2015-2018; log-scale). Please note that total phosphorus results and total suspended solids results are p

# Water Temperature, C

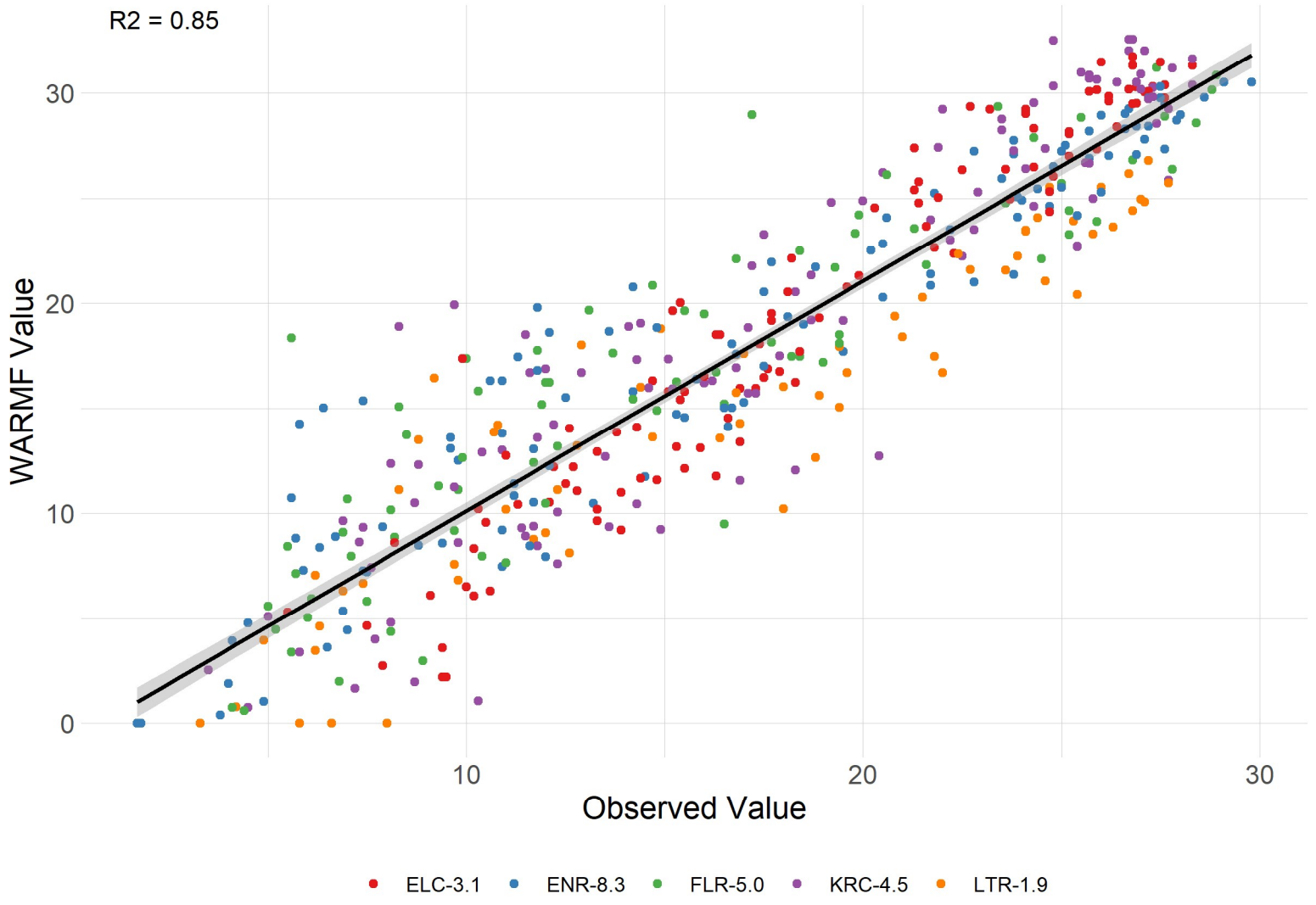


Figure 4. Observed water temperatures vs draft model temperatures.



# Total Suspended Solids, mg/l

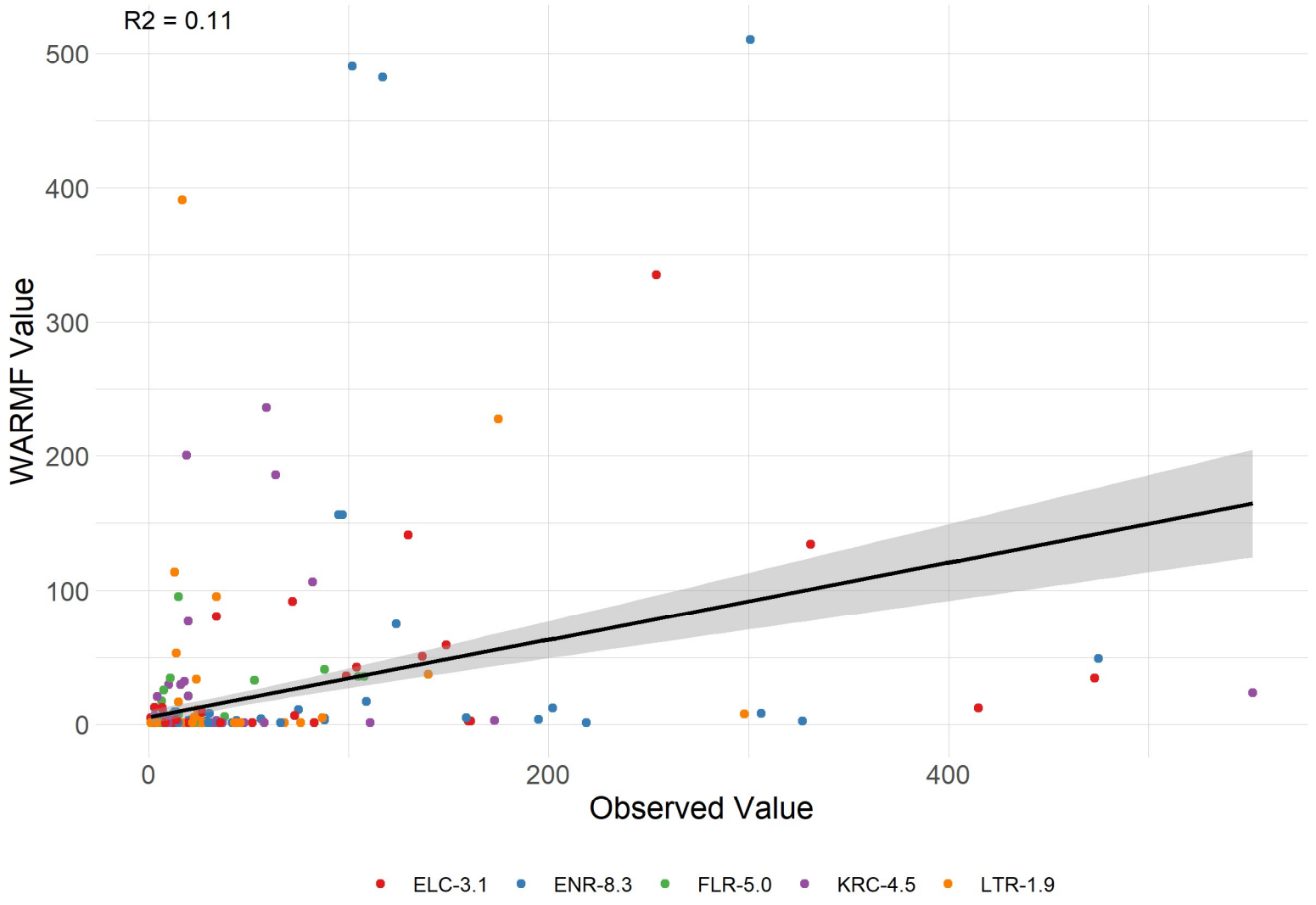


Figure 5. Observed total suspended solids concentrations vs preliminary draft model concentrations.

# Ammonia Nitrogen, mg/l

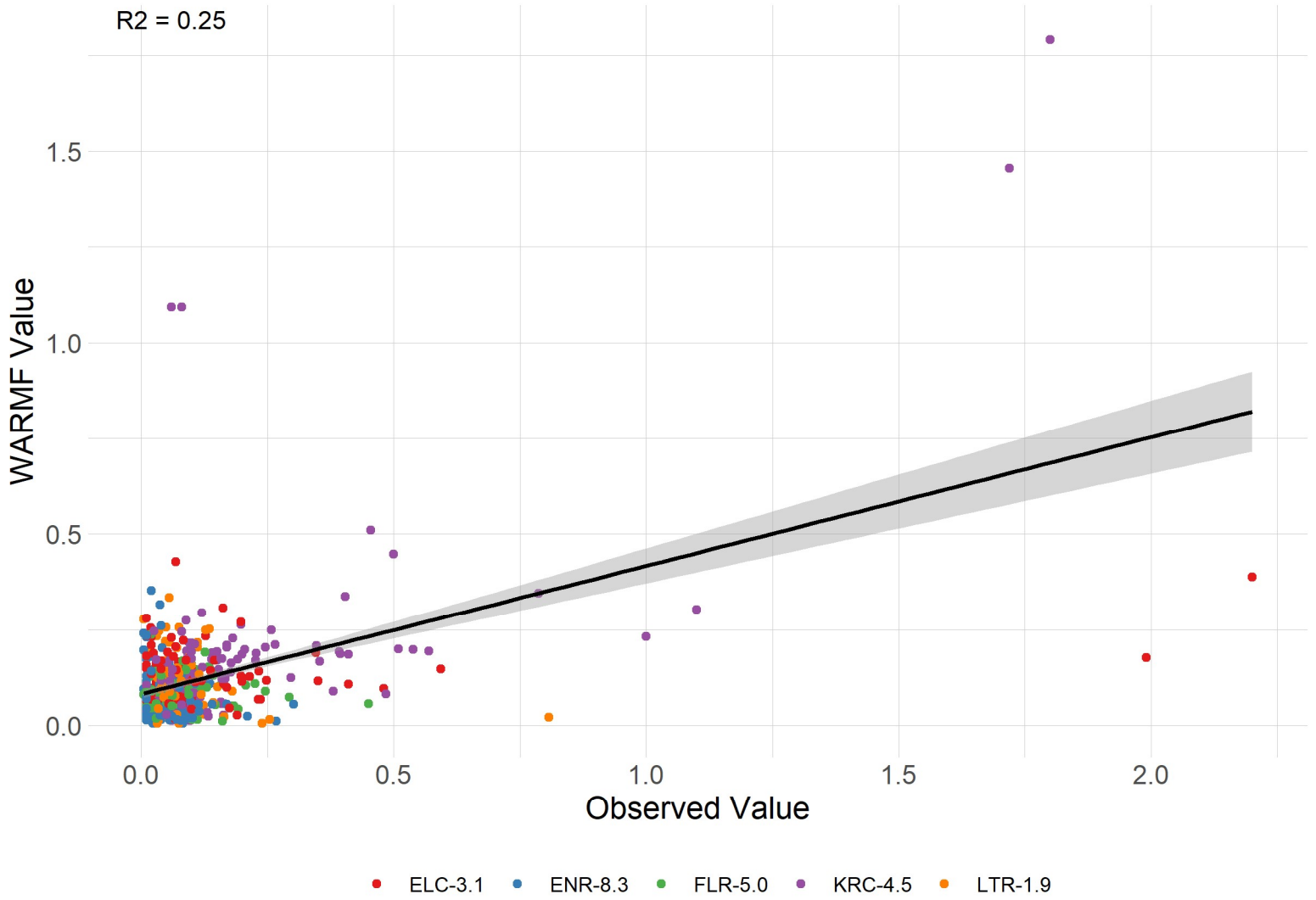


Figure 6. Observed ammonia concentrations vs draft model concentrations.

# Nitrate-Nitrite, mg/l

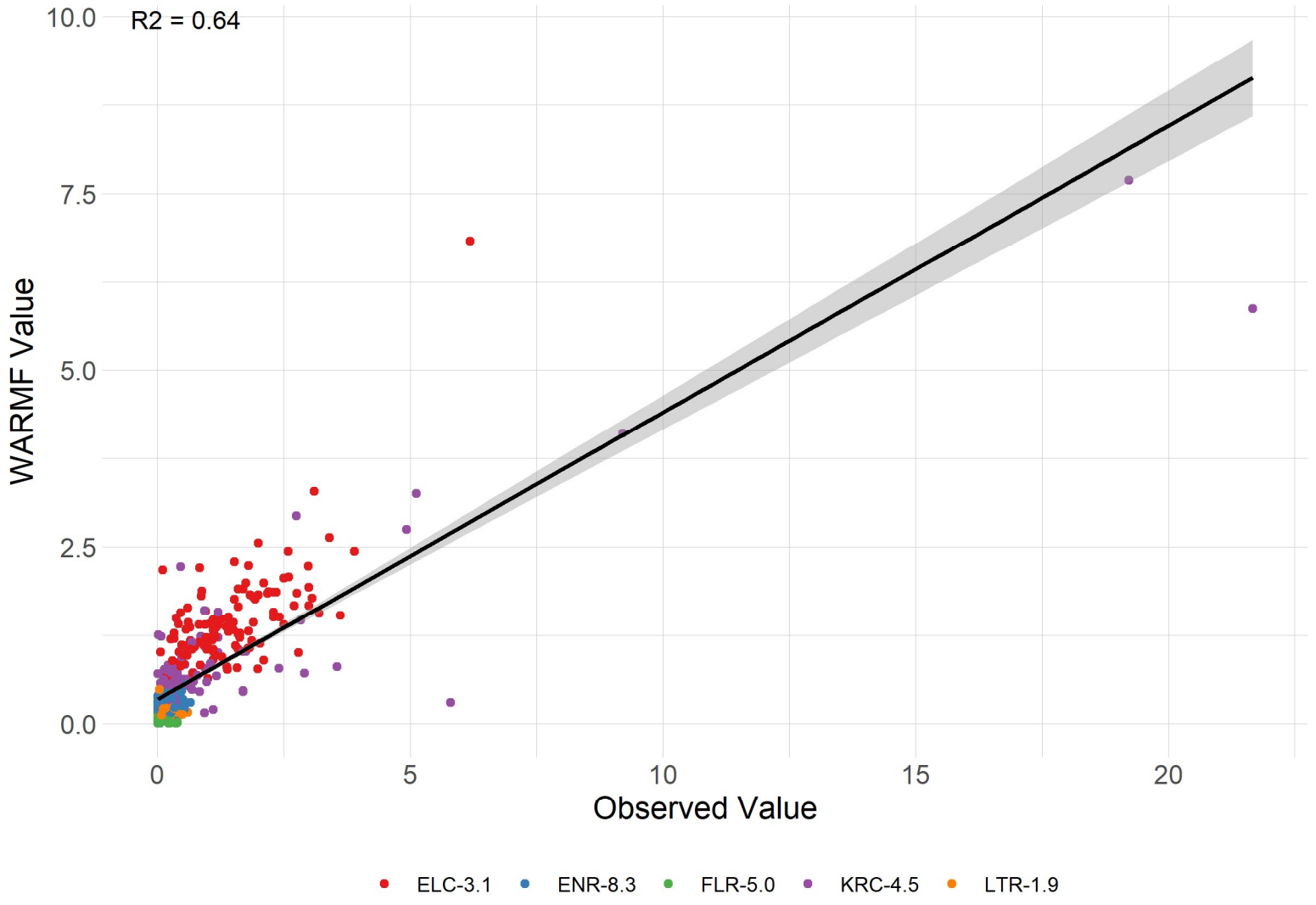


Figure 7. Observed nitrate/nitrite concentrations vs draft model concentrations.

# Total Kjeldahl Nitrogen, mg/l

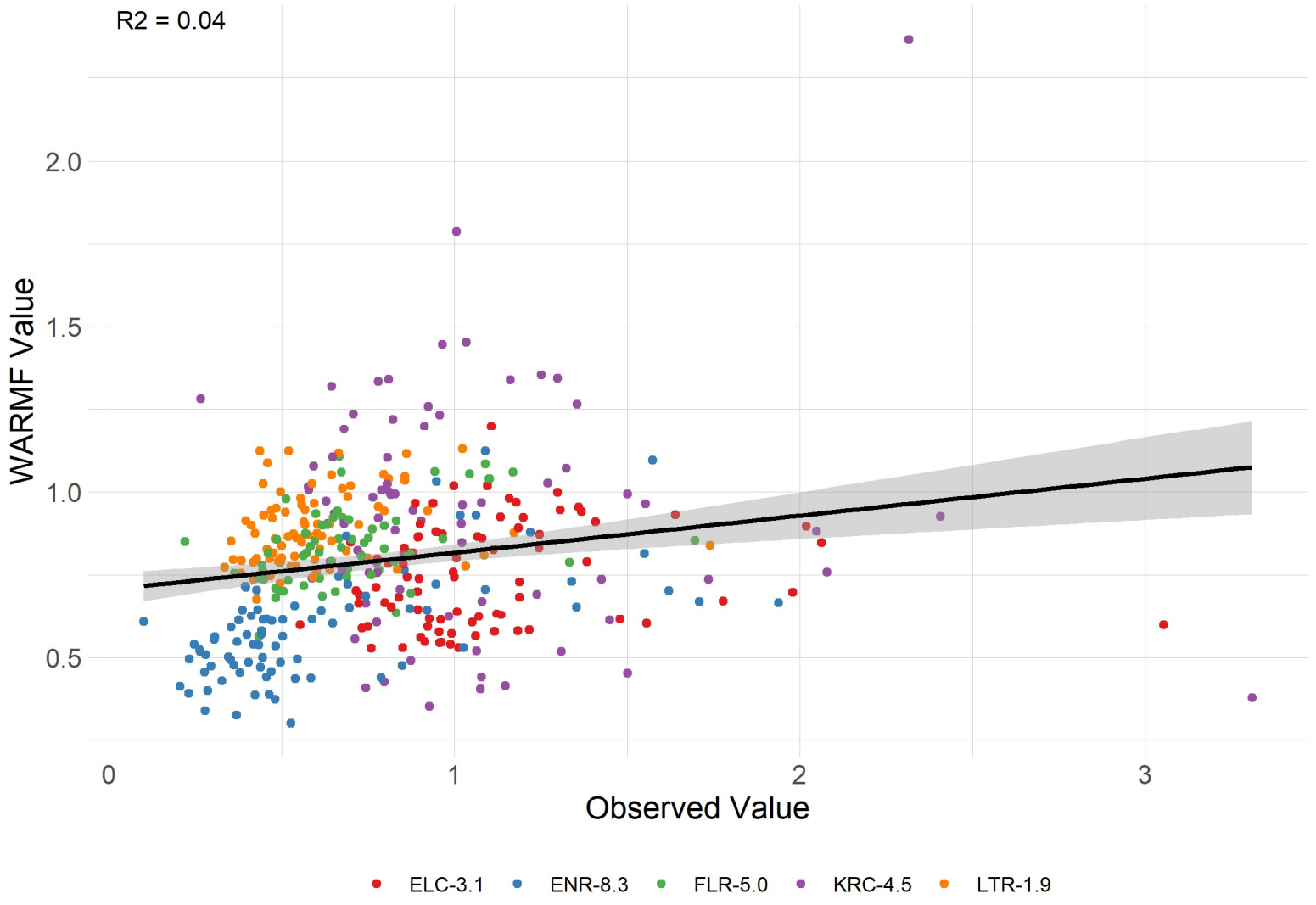


Figure 8. Observed total kjeldahl nitrogen concentrations vs draft model concentrations.



# Total Nitrogen, mg/l

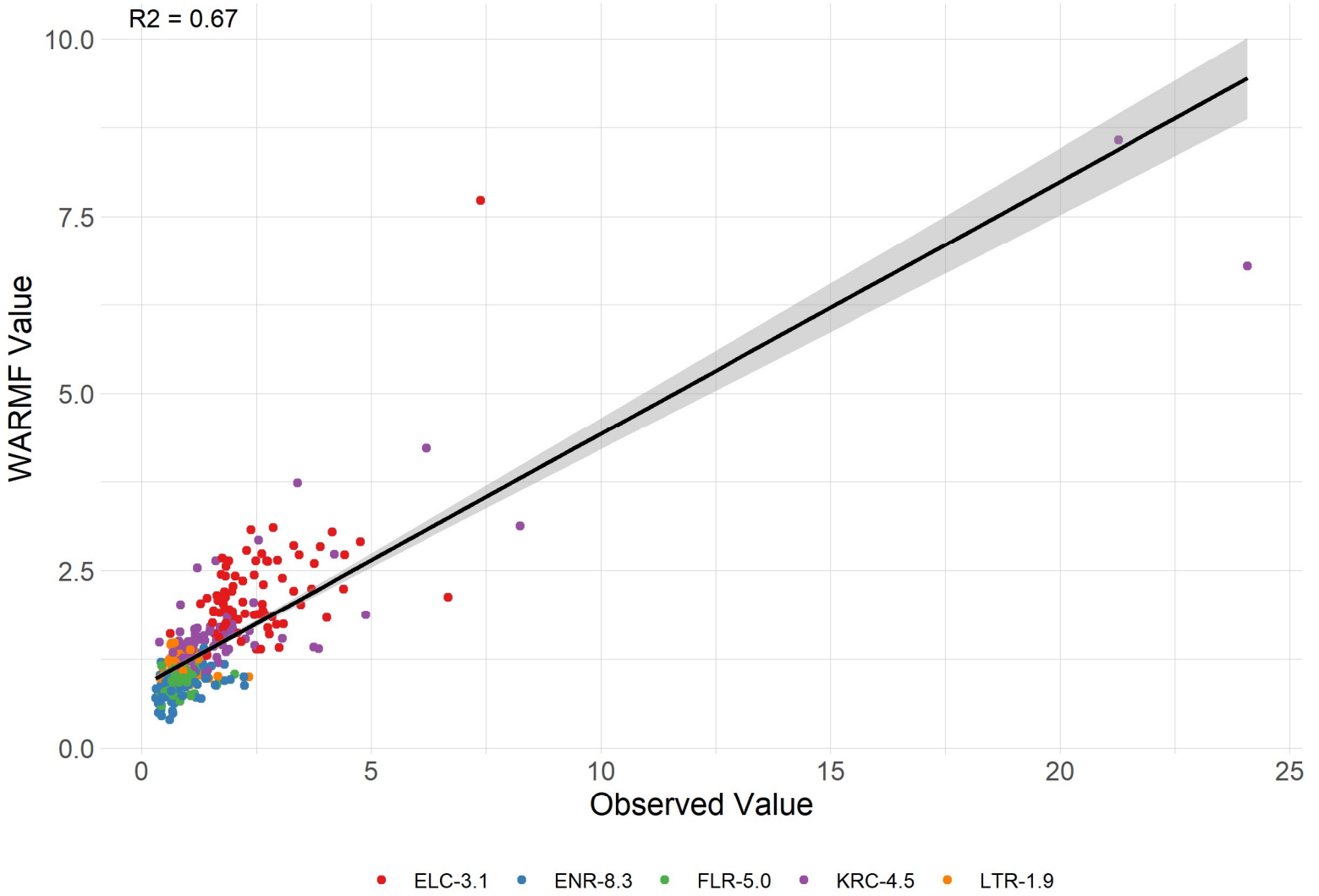


Figure 9. Observed total nitrogen concentrations vs draft model concentrations.



# Total Organic Carbon, mg/l

R2 = 0.37

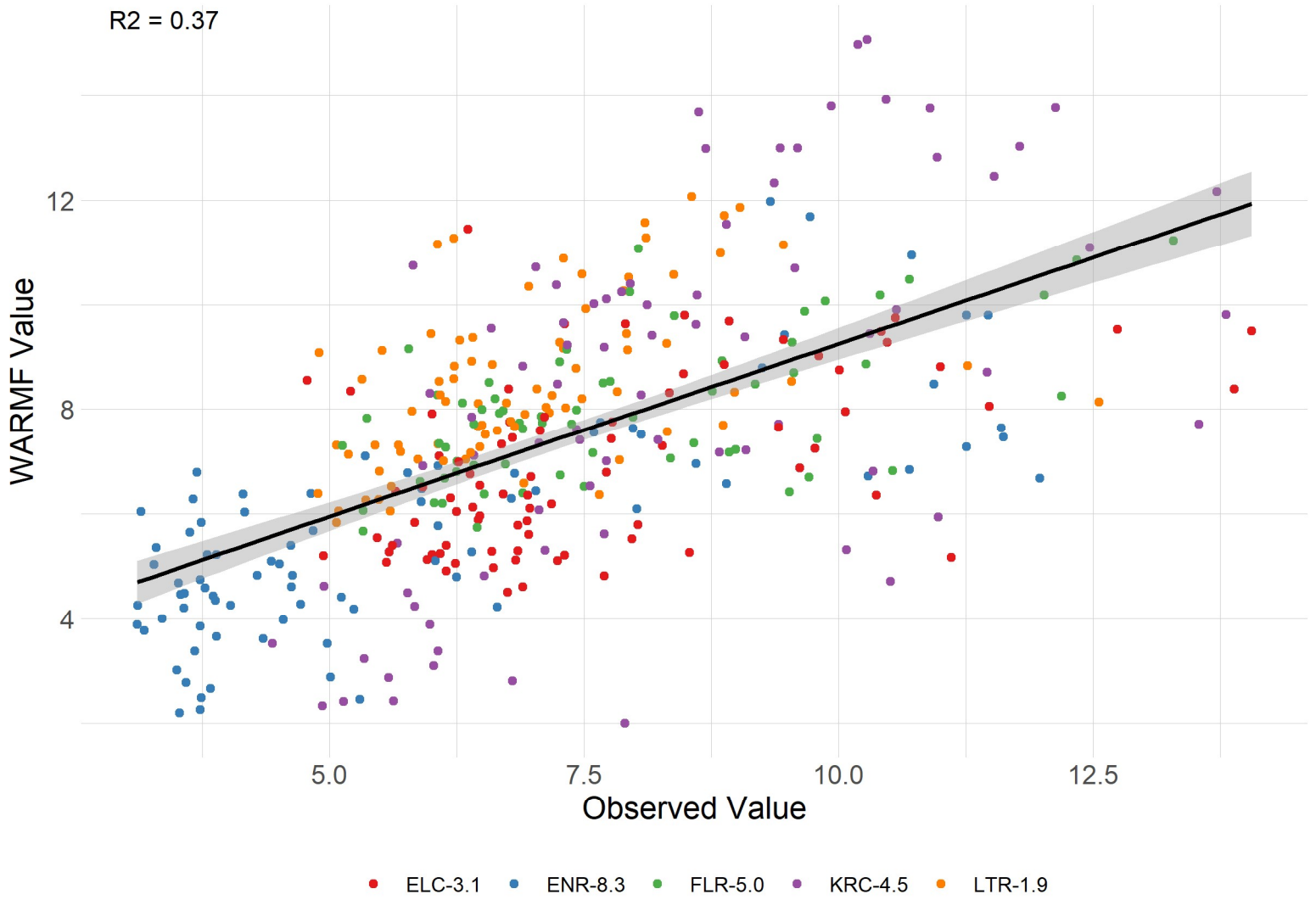


Figure 11. Observed total organic carbon concentrations vs draft model concentrations.

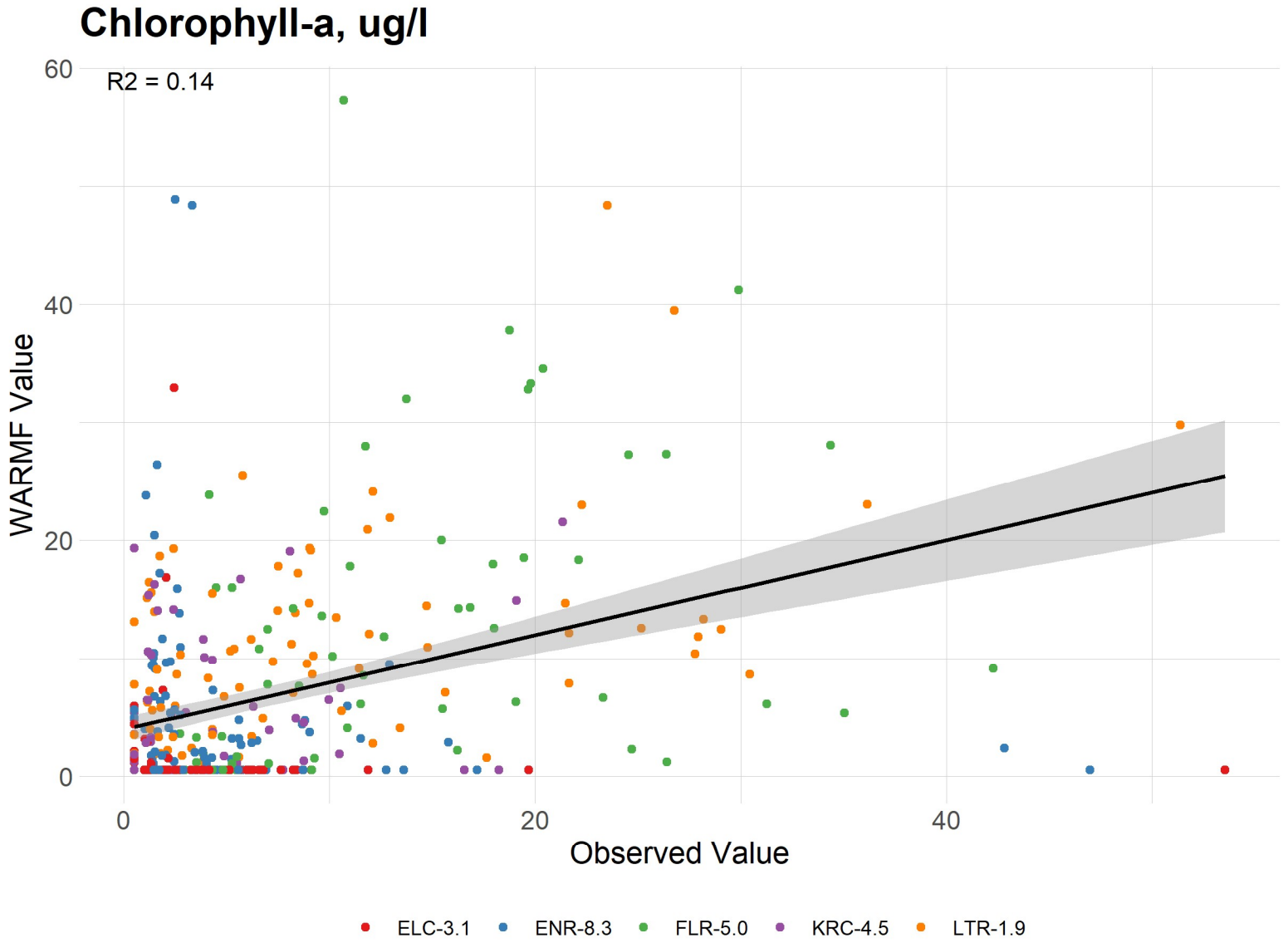


Figure 12. Observed chlorophyll-a concentrations vs draft model concentrations.

calibration (2015-2016), Validation (2017-2018), and Full (2015-2018) Model Periods. Please note that total phosphorus results and

	Number of Samples	Mean (Observed)	Mean (WARMF)	Median (Observed)	Median (WARMF)	Absolute Error (AE)	R <sup>2</sup>	RMSE-observations standard deviation ratio (RSR)	Nash Sutcliffe Efficiency (NSE)	Re
	123	0.12	0.12	0.06	0.11	0.11	0.09	0.95	0.09	

Period	Number of Samples	Mean (Observed)	Mean (WARMF)	Median (Observed)	Median (WARMF)	Absolute Error (AE)	R <sup>2</sup>	RMSE-observations standard deviation ratio (RSR)	Nash Sutcliffe Efficiency (NSE)	Re
Period	67	0.15	0.12	0.06	0.10	0.13	0.17	0.93	0.14	
Period	56	0.09	0.12	0.07	0.13	0.10	0.03	1.33	-0.76	
	81	3.56	1.43	1.95	0.50	3.79	0.00	1.26	-0.59	
Period	44	2.58	1.07	1.76	0.50	2.49	0.01	1.70	-1.89	
Period	37	4.74	1.86	2.14	0.50	5.32	0.01	1.23	-0.52	
	126	1.46	1.45	1.27	1.35	0.54	0.46	0.73	0.46	
Period	67	1.69	1.53	1.60	1.36	0.52	0.56	0.68	0.53	
Period	59	1.19	1.35	1.00	1.34	0.56	0.25	0.89	0.22	
	81	1.09	0.75	1.00	0.73	0.35	0.02	1.39	-0.92	
Period	44	1.07	0.71	0.98	0.68	0.37	0.00	1.37	-0.89	
Period	37	1.12	0.79	1.01	0.85	0.33	0.05	1.39	-0.94	
	81	1,799	1,552	376	217	938	0.76	0.51	0.74	
Period	44	707	756	373	188	459	0.65	0.77	0.41	
Period	37	3,099	2,498	376	316	1,508	0.79	0.51	0.74	
	4	169,681	177,649	179,579	177,075	20,384	0.68	0.84	0.29	
Period	2	185,027	177,075	185,027	177,075	16,880	1.00	1.17	-0.37	
Period	2	154,336	178,224	154,336	178,224	23,888	1.00	0.76	0.41	
	81	2.50	2.17	2.21	2.03	0.65	0.36	0.86	0.26	
Period	44	2.75	2.21	2.51	1.99	0.75	0.45	0.84	0.29	
Period	37	2.21	2.13	1.99	2.11	0.53	0.07	1.06	-0.11	
	81	9,319	6,063	826	636	4,856	0.84	0.55	0.70	
Period	44	3,332	2,658	778	533	1,735	0.79	0.49	0.76	
Period	37	16,439	10,112	1,003	1,125	8,567	0.84	0.57	0.67	
	4	648,250	633,352	656,521	629,941	48,416	0.87	0.39	0.85	
Period	2	656,521	629,941	656,521	629,941	82,267	1.00	4.23	-16.89	
Period	2	639,978	636,763	639,978	636,763	14,565	1.00	0.05	1.00	
	81	7.64	6.94	6.95	6.54	1.42	0.26	0.98	0.04	
Period	44	7.43	6.53	6.85	6.25	1.38	0.29	0.98	0.05	
Period	37	7.89	7.43	7.31	7.44	1.48	0.22	0.99	0.03	
	124	235	99	8	11	165	0.65	0.82	0.33	
Period	66	51	46	8	10	30	0.86	0.46	0.78	
Period	58	445	159	10	14	317	0.66	0.84	0.30	
	4	13,301	16,490	12,779	15,705	3,485	0.73	0.92	0.15	
Period	2	12,779	15,705	12,779	15,705	3,518	1.00	6.44	-40.53	
Period	2	13,822	17,275	13,822	17,275	3,452	1.00	0.47	0.78	
	124	0.13	0.16	0.09	0.14	0.08	0.14	0.96	0.08	
Period	66	0.10	0.14	0.08	0.13	0.06	0.10	1.26	-0.60	

Period	Number of Samples	Mean (Observed)	Mean (WARMF)	Median (Observed)	Median (WARMF)	Absolute Error (AE)	R <sup>2</sup>	RMSE-observations standard deviation ratio (RSR)	Nash Sutcliffe Efficiency (NSE)	Re
Period	58	0.16	0.17	0.10	0.16	0.10	0.15	0.92	0.15	
	95	34.26	12.35	5.70	1.25	25.65	0.27	0.89	0.21	
Period	51	17.74	7.04	4.10	1.25	12.25	0.77	0.66	0.56	
Period	44	53.40	18.52	8.25	1.25	41.19	0.18	0.96	0.08	
	108	18.62	19.43	17.80	19.24	2.66	0.93	0.52	0.73	
Period	64	18.64	19.46	17.80	19.41	2.79	0.94	0.52	0.73	
Period	44	18.58	19.37	17.50	18.51	2.47	0.90	0.52	0.73	
	125	0.05	0.08	0.04	0.05	0.06	0.03	1.92	-2.70	
Period	70	0.05	0.07	0.04	0.05	0.05	0.01	2.63	-5.90	
Period	55	0.05	0.08	0.04	0.05	0.08	0.05	1.66	-1.75	
	83	5.09	5.60	2.60	2.82	7.11	0.03	1.67	-1.78	
Period	47	4.20	5.75	2.20	2.08	6.48	0.02	1.72	-1.95	
Period	36	6.25	5.40	4.16	2.85	7.94	0.03	1.62	-1.63	
	128	0.23	0.29	0.24	0.28	0.13	0.14	1.09	-0.18	
Period	70	0.22	0.28	0.23	0.30	0.12	0.14	1.17	-0.36	
Period	58	0.25	0.30	0.26	0.28	0.14	0.15	1.02	-0.04	
	83	0.61	0.59	0.46	0.57	0.22	0.36	0.81	0.34	
Period	47	0.53	0.55	0.44	0.54	0.19	0.38	0.79	0.37	
Period	36	0.71	0.64	0.49	0.61	0.25	0.30	0.85	0.27	
	83	5,002	2,664	364	536	2,751	0.89	0.61	0.63	
Period	47	1,938	1,527	327	297	930	0.89	0.44	0.81	
Period	36	9,001	4,148	467	838	5,129	0.90	0.64	0.60	
	4	210,475	248,816	222,344	250,809	38,341	0.89	0.86	0.26	
Period	2	222,344	250,809	222,344	250,809	28,465	1.00	3.61	-12.07	
Period	2	198,606	246,822	198,606	246,822	48,216	1.00	0.61	0.62	
	83	0.85	0.87	0.71	0.89	0.30	0.19	0.90	0.20	
Period	47	0.76	0.84	0.69	0.88	0.25	0.20	0.91	0.17	
Period	36	0.97	0.92	0.85	0.93	0.36	0.14	0.92	0.15	
	83	34,382	22,032	2,376	3,207	15,784	0.93	0.45	0.80	
Period	47	14,803	11,697	1,747	1,566	7,217	0.87	0.45	0.80	
Period	36	59,944	35,523	3,215	4,330	26,968	0.94	0.46	0.79	
	4	1,437,524	1,596,163	1,411,713	1,635,210	173,520	0.90	0.51	0.74	
Period	2	1,411,713	1,635,210	1,411,713	1,635,210	223,497	1.00	2.47	-5.10	
Period	2	1,463,334	1,557,117	1,463,334	1,557,117	123,543	1.00	0.21	0.96	
	83	5.83	5.65	4.72	5.28	1.33	0.57	0.66	0.57	
Period	47	5.29	5.25	4.03	4.83	1.25	0.59	0.64	0.59	
Period	36	6.52	6.18	5.91	6.26	1.42	0.53	0.71	0.50	



Period	Number of Samples	Mean (Observed)	Mean (WARMF)	Median (Observed)	Median (WARMF)	Absolute Error (AE)	R <sup>2</sup>	RMSE-observations standard deviation ratio (RSR)	Nash Sutcliffe Efficiency (NSE)	Re
	126	706	112	14	13	607	0.80	0.92	0.16	
Period	69	192	68	13	13	142	0.78	0.82	0.32	
Period	57	1,329	164	20	9	1,170	0.82	0.93	0.13	
	4	20,475	12,474	21,781	13,768	8,001	0.80	1.35	-0.82	
Period	2	21,781	13,768	21,781	13,768	8,013	1.00	8.27	-67.45	
Period	2	19,169	11,179	19,169	11,179	7,989	1.00	0.81	0.35	
	126	0.08	0.05	0.04	0.05	0.05	0.03	1.02	-0.04	
Period	69	0.06	0.06	0.04	0.05	0.04	0.02	1.04	-0.09	
Period	57	0.10	0.05	0.05	0.05	0.07	0.19	1.03	-0.07	
	97	41.81	21.91	10.00	1.25	42.25	0.13	1.21	-0.46	
Period	54	28.21	8.62	9.25	1.25	24.06	0.14	0.96	0.08	
Period	43	58.89	38.60	15.00	1.25	65.09	0.15	1.40	-0.97	
	112	16.76	17.96	16.70	18.34	2.33	0.90	0.37	0.86	
Period	67	16.74	18.05	16.70	18.61	2.17	0.92	0.35	0.88	
Period	45	16.80	17.83	17.00	17.70	2.56	0.86	0.41	0.84	
	47	0.06	0.09	0.04	0.06	0.08	0.00	1.46	-1.14	
Period	24	0.06	0.08	0.04	0.04	0.07	0.02	1.21	-0.47	
Period	23	0.06	0.11	0.04	0.07	0.09	0.00	1.94	-2.77	
	48	0.36	0.42	0.36	0.42	0.18	0.07	1.27	-0.62	
Period	24	0.40	0.41	0.39	0.39	0.16	0.06	1.26	-0.60	
Period	24	0.32	0.42	0.34	0.45	0.20	0.09	1.32	-0.74	
	48	0.56	0.62	0.44	0.51	0.23	0.24	0.97	0.05	
Period	24	0.55	0.55	0.44	0.45	0.21	0.19	0.97	0.07	
Period	24	0.58	0.70	0.46	0.62	0.25	0.31	0.96	0.07	
	48	565	573	152	89	298	0.74	0.58	0.67	
Period	24	312	354	186	87	174	0.72	1.05	-0.10	
Period	24	818	792	148	124	423	0.75	0.55	0.70	
	4	239,077	197,745	238,061	184,397	41,333	0.94	0.60	0.64	
Period	2	294,738	244,396	294,738	244,396	50,343	1.00	1.16	-0.35	
Period	2	183,416	151,093	183,416	151,093	32,323	1.00	0.78	0.38	
	48	0.93	1.04	0.96	1.05	0.30	0.27	1.01	-0.01	
Period	24	0.96	0.95	0.98	0.96	0.26	0.27	0.97	0.06	
Period	24	0.90	1.13	0.94	1.15	0.34	0.35	1.02	-0.04	
	28	2,911	3,052	844	377	2,146	0.50	0.73	0.47	
Period	20	2,335	3,150	1,270	576	2,051	0.45	1.24	-0.53	
Period	8	4,352	2,808	363	168	2,384	0.94	0.48	0.77	
	4	1,604,455	1,417,148	1,519,526	1,283,563	187,307	0.95	0.43	0.81	

Period	Number of Samples	Mean (Observed)	Mean (WARMF)	Median (Observed)	Median (WARMF)	Absolute Error (AE)	R <sup>2</sup>	RMSE-observations standard deviation ratio (RSR)	Nash Sutcliffe Efficiency (NSE)	Reliability
Period	2	1,985,098	1,755,998	1,985,098	1,755,998	229,099	1.00	0.77	0.40	
Period	2	1,223,812	1,078,297	1,223,812	1,078,297	145,515	1.00	1.60	-1.55	
	28	5.60	5.32	4.86	4.76	2.09	0.38	1.19	-0.41	
Period	20	5.75	5.18	4.96	4.76	2.04	0.39	1.27	-0.61	
Period	8	5.21	5.67	4.09	4.93	2.22	0.40	1.01	-0.01	
	46	52	46	9	6	35	0.61	0.64	0.60	
Period	23	22	27	11	4	21	0.36	1.25	-0.56	
Period	23	83	65	9	12	50	0.64	0.61	0.63	
	4	15,057	13,703	14,604	12,122	1,777	0.95	0.50	0.75	
Period	2	17,950	17,255	17,950	17,255	1,541	1.00	0.57	0.68	
Period	2	12,165	10,151	12,165	10,151	2,014	1.00	1.26	-0.58	
	46	0.08	0.06	0.05	0.06	0.04	0.07	1.00	0.00	
Period	23	0.07	0.05	0.05	0.04	0.04	0.01	1.06	-0.12	
Period	23	0.09	0.07	0.06	0.07	0.04	0.12	0.94	0.11	
	46	10.19	1.98	4.00	1.25	8.20	0.23	1.06	-0.13	
Period	24	9.01	1.48	4.45	1.25	7.54	0.09	1.09	-0.19	
Period	22	11.46	2.54	3.65	1.25	8.93	0.34	1.02	-0.05	
	46	16.80	16.84	17.20	18.49	2.43	0.93	0.36	0.87	
Period	24	16.65	16.20	17.20	18.49	2.35	0.94	0.34	0.89	
Period	22	16.95	17.53	17.35	18.09	2.52	0.91	0.37	0.86	
	92	0.08	0.09	0.07	0.09	0.06	0.00	1.19	-0.42	
Period	53	0.08	0.10	0.06	0.09	0.06	0.00	1.29	-0.67	
Period	39	0.09	0.08	0.07	0.06	0.07	0.00	1.12	-0.26	
	65	12.64	11.82	10.14	7.64	8.30	0.16	1.29	-0.66	
Period	38	10.66	10.43	6.82	3.83	6.28	0.29	1.15	-0.32	
Period	27	15.42	13.78	12.65	11.82	11.14	0.02	1.58	-1.50	
	95	0.19	0.13	0.20	0.12	0.11	0.07	1.15	-0.33	
Period	53	0.19	0.13	0.21	0.13	0.10	0.17	1.04	-0.08	
Period	42	0.18	0.12	0.19	0.12	0.12	0.01	1.27	-0.62	
	65	0.70	0.84	0.67	0.82	0.21	0.16	1.07	-0.15	
Period	38	0.71	0.82	0.64	0.81	0.22	0.12	1.03	-0.05	
Period	27	0.69	0.86	0.67	0.86	0.20	0.29	1.14	-0.31	
	65	4,573	3,568	720	653	3,203	0.45	0.75	0.44	
Period	38	2,552	2,755	683	627	2,142	0.42	0.76	0.42	
Period	27	7,416	4,713	1,260	1,301	4,696	0.44	0.77	0.41	
	4	241,787	291,849	252,934	286,914	50,061	0.97	0.59	0.65	
Period	2	252,934	286,914	252,934	286,914	33,980	1.00	1.65	-1.72	

Period	Number of Samples	Mean (Observed)	Mean (WARMF)	Median (Observed)	Median (WARMF)	Absolute Error (AE)	R <sup>2</sup>	RMSE-observations standard deviation ratio (RSR)	Nash Sutcliffe Efficiency (NSE)	Reliability
Period	2	230,640	296,783	230,640	296,783	66,143	1.00	0.45	0.80	
	65	0.88	0.97	0.84	0.99	0.21	0.14	1.00	0.00	
Period	38	0.90	0.96	0.85	0.98	0.20	0.16	0.94	0.12	
Period	27	0.86	0.99	0.82	1.00	0.22	0.14	1.10	-0.20	
	65	40,166	28,315	5,204	5,361	24,931	0.55	0.69	0.52	
Period	38	24,795	21,662	4,987	4,747	19,354	0.51	0.70	0.50	
Period	27	61,800	37,678	7,994	9,565	32,781	0.57	0.70	0.51	
	4	2,210,352	2,418,287	2,065,661	2,294,993	207,936	1.00	0.23	0.95	
Period	2	2,065,661	2,294,993	2,065,661	2,294,993	229,332	1.00	3.20	-9.27	
Period	2	2,355,042	2,541,582	2,355,042	2,541,582	186,540	1.00	0.13	0.98	
	65	7.84	7.97	7.33	7.83	1.22	0.34	0.82	0.33	
Period	38	7.96	7.80	7.33	7.71	1.24	0.33	0.82	0.33	
Period	27	7.66	8.22	7.33	8.27	1.17	0.44	0.81	0.35	
	94	375	166	33	36	304	0.46	0.85	0.27	
Period	52	235	142	32	38	223	0.30	0.87	0.24	
Period	42	549	196	44	35	405	0.61	0.85	0.28	
	4	18,086	20,329	15,265	20,198	3,105	0.84	0.43	0.82	
Period	2	15,265	20,198	15,265	20,198	4,933	1.00	2.91	-7.48	
Period	2	20,908	20,459	20,908	20,459	1,277	1.00	0.09	0.99	
	94	0.06	0.07	0.05	0.07	0.04	0.01	1.13	-0.28	
Period	52	0.06	0.08	0.05	0.08	0.04	0.18	1.20	-0.45	
Period	42	0.07	0.07	0.06	0.06	0.03	0.02	1.04	-0.08	
	74	13.62	5.73	6.70	1.25	11.49	0.25	0.96	0.08	
Period	43	11.46	4.27	6.40	1.25	8.78	0.49	0.84	0.29	
Period	31	16.63	7.75	8.20	1.25	15.25	0.17	1.02	-0.04	
	80	15.05	16.39	14.45	16.96	2.87	0.82	0.51	0.74	
Period	49	14.89	16.26	14.20	17.47	2.93	0.83	0.53	0.72	
Period	31	15.30	16.60	14.70	16.24	2.78	0.81	0.47	0.78	
	118	0.19	0.18	0.10	0.14	0.11	0.48	0.75	0.44	
Period	64	0.18	0.15	0.10	0.15	0.11	0.23	0.89	0.21	
Period	54	0.21	0.23	0.10	0.13	0.11	0.60	0.67	0.55	
	78	3.65	4.07	1.77	0.79	3.89	0.09	1.32	-0.76	
Period	43	2.82	2.93	1.66	0.50	3.57	0.00	1.56	-1.42	
Period	35	4.67	5.48	2.27	1.86	4.28	0.16	1.22	-0.50	
	121	1.07	0.78	0.36	0.56	0.69	0.79	0.71	0.49	
Period	64	1.74	1.07	0.55	0.71	1.13	0.79	0.73	0.47	
Period	57	0.31	0.45	0.30	0.43	0.19	0.12	1.56	-1.44	

Period	Number of Samples	Mean (Observed)	Mean (WARMF)	Median (Observed)	Median (WARMF)	Absolute Error (AE)	R <sup>2</sup>	RMSE-observations standard deviation ratio (RSR)	Nash Sutcliffe Efficiency (NSE)	Reliability
	78	1.02	0.93	0.86	0.93	0.41	0.00	1.25	-0.57	
Period	43	1.05	0.85	0.84	0.90	0.41	0.07	1.26	-0.60	
Period	35	0.99	1.03	0.90	1.01	0.42	0.06	1.21	-0.47	
	78	754	982	166	50	625	0.47	1.14	-0.29	
Period	43	611	716	158	47	659	0.33	1.25	-0.56	
Period	35	928	1,309	198	81	583	0.78	0.87	0.24	
	4	88,231	81,128	92,151	76,045	25,511	0.42	0.82	0.33	
Period	2	108,658	76,045	108,658	76,045	32,613	1.00	1.24	-0.53	
Period	2	67,804	86,212	67,804	86,212	18,408	1.00	0.65	0.58	
	78	2.22	1.77	1.32	1.49	0.97	0.83	0.73	0.46	
Period	43	2.99	2.02	1.61	1.54	1.42	0.86	0.75	0.44	
Period	35	1.28	1.46	1.14	1.44	0.43	0.12	1.09	-0.19	
	78	5,430	8,061	882	183	4,410	0.60	1.32	-0.75	
Period	43	3,247	5,548	835	172	3,912	0.45	1.80	-2.22	
Period	35	8,113	11,148	1,187	349	5,021	0.81	0.88	0.23	
	4	528,010	559,515	531,365	503,837	73,629	0.94	0.55	0.70	
Period	2	531,365	503,837	531,365	503,837	27,528	1.00	0.88	0.22	
Period	2	524,655	615,192	524,655	615,192	119,730	1.00	0.44	0.81	
	78	8.30	8.40	7.89	8.60	2.31	0.37	1.24	-0.54	
Period	43	8.22	7.74	7.72	7.71	2.14	0.34	1.32	-0.74	
Period	35	8.39	9.21	8.23	9.63	2.51	0.42	1.16	-0.35	
	119	57	39	10	3	41	0.37	0.86	0.27	
Period	63	43	34	14	5	43	0.27	1.11	-0.24	
Period	56	72	45	7	2	39	0.60	0.67	0.56	
	4	6,233	5,729	6,827	6,032	824	0.90	0.51	0.74	
Period	2	7,216	6,698	7,216	6,698	1,114	1.00	1.30	-0.70	
Period	2	5,251	4,759	5,251	4,759	534	1.00	0.28	0.92	
	119	0.44	0.17	0.09	0.10	0.33	0.62	0.90	0.19	
Period	63	0.70	0.25	0.10	0.13	0.54	0.61	0.93	0.14	
Period	56	0.14	0.09	0.09	0.09	0.08	0.22	0.97	0.06	
	91	21.62	12.19	7.30	1.25	23.45	0.02	1.11	-0.23	
Period	49	11.87	6.35	7.30	1.25	10.27	0.34	1.11	-0.22	
Period	42	33.00	19.01	7.55	1.25	38.81	0.01	1.12	-0.25	
	107	17.82	19.20	17.50	19.06	3.42	0.84	0.57	0.67	
Period	63	17.69	19.27	17.50	18.90	3.38	0.88	0.54	0.71	
Period	44	18.01	19.10	18.35	19.12	3.47	0.79	0.61	0.62	
	77	0.08	0.11	0.06	0.10	0.09	0.03	1.43	-1.04	

Period	Number of Samples	Mean (Observed)	Mean (WARMF)	Median (Observed)	Median (WARMF)	Absolute Error (AE)	R <sup>2</sup>	RMSE-observations standard deviation ratio (RSR)	Nash Sutcliffe Efficiency (NSE)	Re
Period	46	0.08	0.12	0.07	0.13	0.08	0.02	2.26	-4.09	
Period	31	0.10	0.10	0.06	0.08	0.10	0.04	1.27	-0.62	
	80	9.86	11.34	7.01	10.25	7.36	0.22	0.97	0.07	
Period	46	6.45	10.23	5.03	9.34	6.18	0.07	1.34	-0.80	
Period	34	14.46	12.84	11.26	11.72	8.97	0.26	0.94	0.12	
	80	0.19	0.21	0.19	0.21	0.10	0.02	1.19	-0.42	
Period	46	0.20	0.22	0.20	0.22	0.10	0.03	1.20	-0.45	
Period	34	0.17	0.20	0.16	0.21	0.11	0.00	1.18	-0.38	
	80	0.61	0.89	0.56	0.87	0.33	0.04	1.67	-1.78	
Period	46	0.57	0.84	0.55	0.82	0.30	0.05	1.98	-2.91	
Period	34	0.66	0.96	0.58	0.95	0.37	0.00	1.53	-1.35	
	80	2,064	2,087	137	266	1,191	0.80	0.47	0.78	
Period	46	503	690	137	277	443	0.50	0.71	0.50	
Period	34	4,175	3,976	183	202	2,203	0.80	0.47	0.78	
	4	71,415	123,729	59,763	112,836	52,314	0.89	1.60	-1.55	
Period	2	56,614	111,620	56,614	111,620	55,006	1.00	3.09	-8.57	
Period	2	86,215	135,838	86,215	135,838	49,623	1.00	1.06	-0.12	
	80	0.79	1.10	0.72	1.07	0.39	0.02	1.53	-1.36	
Period	46	0.76	1.07	0.72	1.05	0.34	0.03	1.81	-2.28	
Period	34	0.83	1.16	0.73	1.10	0.45	0.00	1.39	-0.93	
	80	17,713	17,010	1,206	1,976	8,188	0.88	0.39	0.85	
Period	46	4,542	5,241	1,161	1,976	3,608	0.52	0.71	0.50	
Period	34	35,533	32,933	1,494	1,874	14,385	0.88	0.38	0.86	
	4	624,591	936,284	487,261	839,381	311,693	0.87	0.99	0.01	
Period	2	455,222	798,869	455,222	798,869	343,647	1.00	3.35	-10.21	
Period	2	793,960	1,073,699	793,960	1,073,699	279,739	1.00	0.60	0.64	
	80	6.96	8.50	6.70	8.23	1.86	0.22	1.54	-1.36	
Period	46	6.73	7.88	6.49	7.69	1.41	0.29	1.33	-0.76	
Period	34	7.28	9.34	7.22	9.15	2.47	0.13	1.72	-1.95	
	79	285	84	9	15	230	0.77	0.88	0.22	
Period	46	51	34	8	15	49	0.11	0.94	0.11	
Period	33	611	154	23	23	481	0.78	0.89	0.21	
	4	5,178	5,805	3,856	5,575	1,427	0.61	0.58	0.66	
Period	2	3,521	5,575	3,521	5,575	2,054	1.00	2.65	-6.02	
Period	2	6,835	6,035	6,835	6,035	800	1.00	0.19	0.96	
	79	0.07	0.05	0.05	0.05	0.04	0.11	0.97	0.07	
Period	46	0.05	0.05	0.04	0.05	0.03	0.00	1.01	-0.02	

Period	Number of Samples	Mean (Observed)	Mean (WARMF)	Median (Observed)	Median (WARMF)	Absolute Error (AE)	R <sup>2</sup>	RMSE-observations standard deviation ratio (RSR)	Nash Sutcliffe Efficiency (NSE)	Re
Period	33	0.09	0.06	0.05	0.06	0.05	0.16	0.98	0.04	
	80	21.71	13.71	8.80	1.25	24.01	0.05	1.42	-1.03	
Period	46	14.88	5.71	8.05	1.25	15.26	0.05	1.20	-0.43	
Period	34	30.94	24.53	14.00	1.25	35.85	0.04	1.49	-1.21	
	65	16.79	15.29	17.00	16.03	2.59	0.86	0.44	0.81	
Period	44	16.25	15.01	16.80	15.87	2.42	0.86	0.41	0.83	
Period	21	17.91	15.88	21.50	17.60	2.93	0.86	0.48	0.77	
	89	0.03	0.04	0.01	0.02	0.03	0.00	1.46	-1.13	
Period	47	0.03	0.03	0.02	0.02	0.03	0.00	1.41	-0.99	
Period	42	0.03	0.04	0.01	0.03	0.04	0.01	1.47	-1.16	
	90	0.31	0.43	0.31	0.44	0.18	0.03	1.54	-1.37	
Period	47	0.35	0.38	0.33	0.36	0.15	0.00	1.66	-1.76	
Period	43	0.28	0.49	0.29	0.50	0.21	0.23	1.49	-1.23	
	46	0.46	0.49	0.38	0.39	0.21	0.17	0.96	0.09	
Period	24	0.51	0.41	0.41	0.39	0.20	0.66	0.73	0.47	
Period	22	0.41	0.57	0.38	0.41	0.22	0.04	2.57	-5.62	
	46	832	541	101	25	419	0.98	0.44	0.81	
Period	24	1,386	802	111	26	644	1.00	0.44	0.81	
Period	22	227	256	77	25	174	0.80	0.86	0.27	
	4	114,878	140,771	119,015	149,036	25,892	0.72	0.99	0.01	
Period	2	138,349	155,492	138,349	155,492	17,143	1.00	1.93	-2.71	
Period	2	91,408	126,050	91,408	126,050	34,642	1.00	1.78	-2.16	
	46	0.77	0.90	0.74	0.86	0.32	0.09	1.14	-0.31	
Period	24	0.86	0.78	0.79	0.73	0.26	0.51	0.73	0.47	
Period	22	0.66	1.02	0.63	0.95	0.39	0.03	2.21	-3.90	
	28	1,518	1,070	584	110	910	0.59	0.71	0.49	
Period	20	1,501	760	693	149	990	0.29	0.89	0.21	
Period	8	1,562	1,846	291	51	711	1.00	0.40	0.84	
	4	906,247	982,282	924,499	1,039,891	154,746	0.41	0.72	0.48	
Period	2	1,159,044	1,080,334	1,159,044	1,080,334	78,710	1.00	7.85	-60.60	
Period	2	653,449	884,230	653,449	884,230	230,782	1.00	4.24	-16.98	
	28	4.87	4.38	4.29	3.84	1.65	0.15	1.29	-0.66	
Period	20	5.11	3.97	4.58	4.03	1.45	0.36	1.02	-0.03	
Period	8	4.27	5.40	3.49	3.68	2.16	0.20	1.73	-2.00	
	87	98	19	5	1	81	0.97	0.87	0.24	
Period	45	171	27	5	1	147	1.00	0.87	0.24	
Period	42	19	11	5	1	9	0.85	0.47	0.78	



	Number of Samples	Mean (Observed)	Mean (WARMF)	Median (Observed)	Median (WARMF)	Absolute Error (AE)	R <sup>2</sup>	RMSE-observations standard deviation ratio (RSR)	Nash Sutcliffe Efficiency (NSE)	Re
	4	10,380	7,536	10,838	7,934	2,843	0.61	1.30	-0.70	
period	2	12,144	8,364	12,144	8,364	3,780	1.00	5.26	-26.69	
period	2	8,615	6,708	8,615	6,708	1,907	1.00	0.93	0.14	
	87	0.05	0.04	0.04	0.03	0.03	0.19	0.94	0.12	
period	45	0.06	0.03	0.04	0.03	0.03	0.33	0.93	0.13	
period	42	0.05	0.04	0.04	0.04	0.02	0.19	0.95	0.09	
	59	20.64	7.06	3.45	4.03	16.43	0.97	0.82	0.32	
period	31	33.00	8.46	3.50	2.66	26.56	0.99	0.82	0.32	
period	28	6.96	5.51	3.20	4.96	5.21	0.13	0.95	0.10	
	92	15.95	17.24	15.80	17.84	2.67	0.87	0.43	0.82	
period	47	16.22	17.47	16.40	17.94	2.39	0.90	0.36	0.87	
period	45	15.67	17.00	14.40	15.23	2.97	0.84	0.49	0.76	