Supplementary Materials

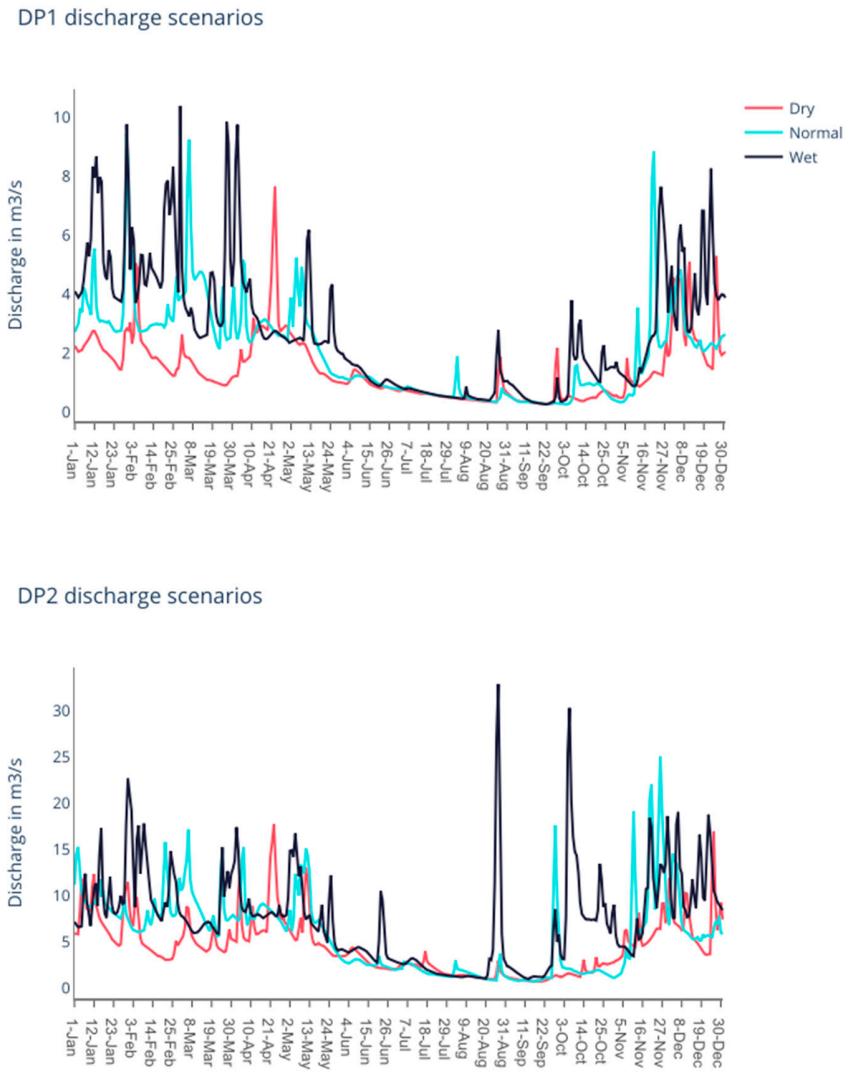


Figure S1. Hydrological time series used as representative discharge scenarios for the considered diversion points (DP1 and DP2).

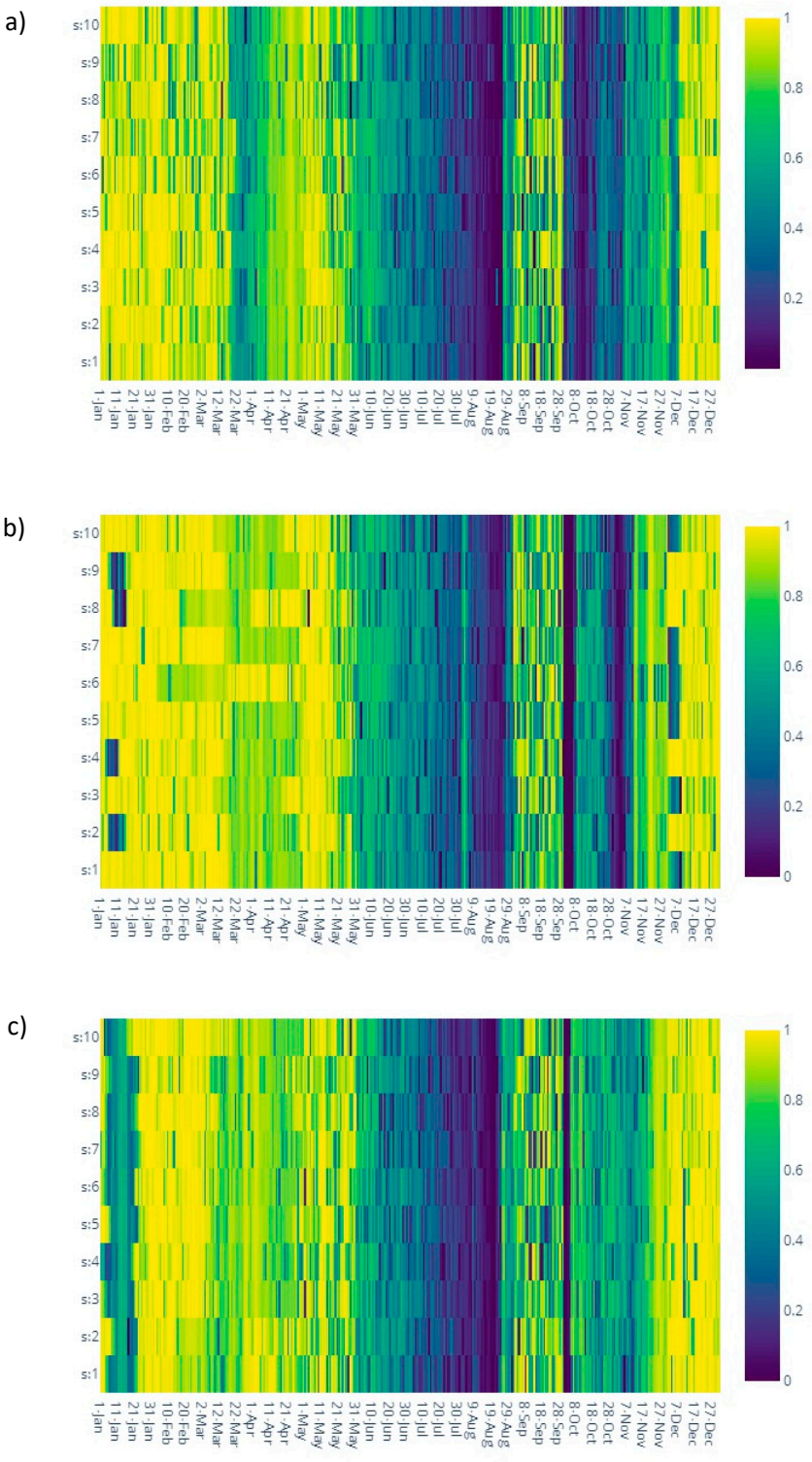


Figure S2. Combination of the average daily diversion percentages with respect to the natural discharge normalized to 0-1 range for each single run of the model ('s1-s10') under the same scenario. Yellow (1) tiles correspond with the highest diversion percentage, whereas blue (0) tiles correspond with the lowest optimal diversion. **Results for DP1** under dry (a), normal (b) and wet (c) scenarios.

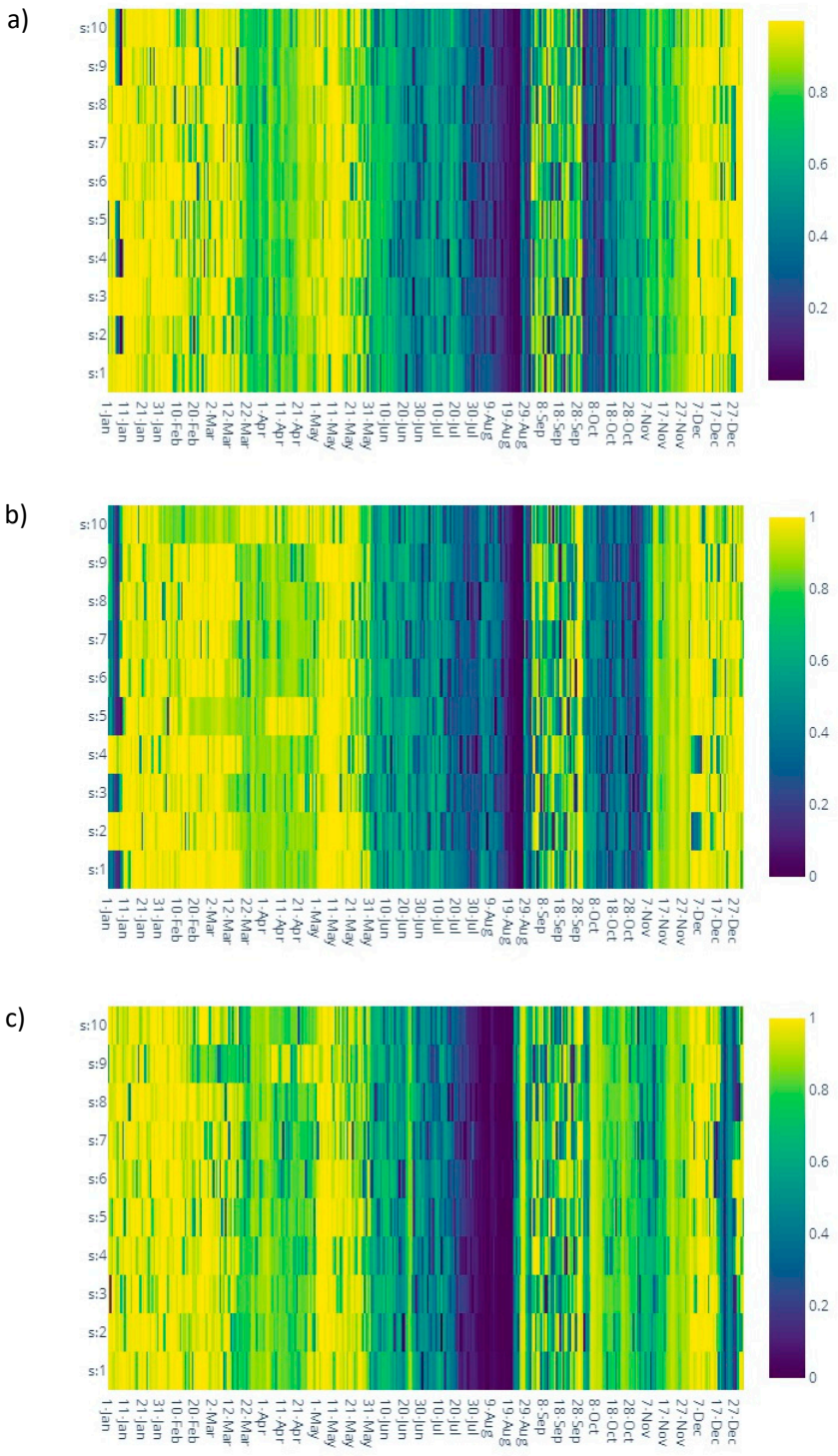
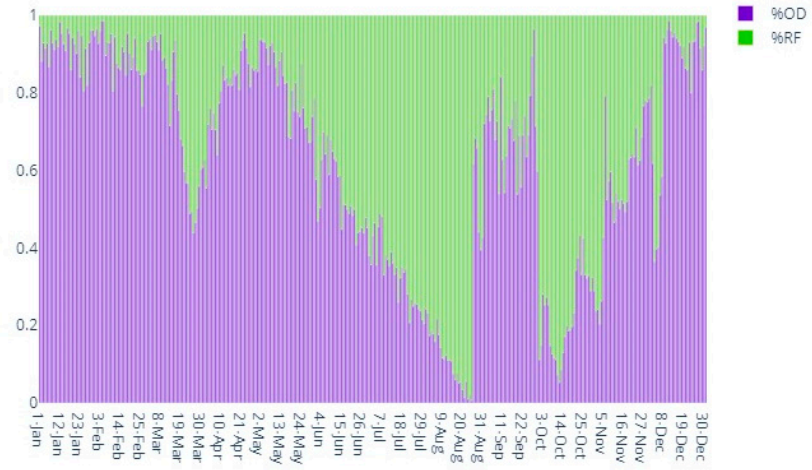


Figure S3. Combination of the average daily diversion percentages with respect to the natural discharge normalized to 0-1 range for each single run of the model ('s1-s10') under the same scenario. Yellow (1) tiles correspond with the highest diversion percentage, whereas blue (0) tiles correspond with the lowest optimal diversion. **Results for DP2** under dry (a), normal (b) and wet (c) scenarios.

a)



b)

c)

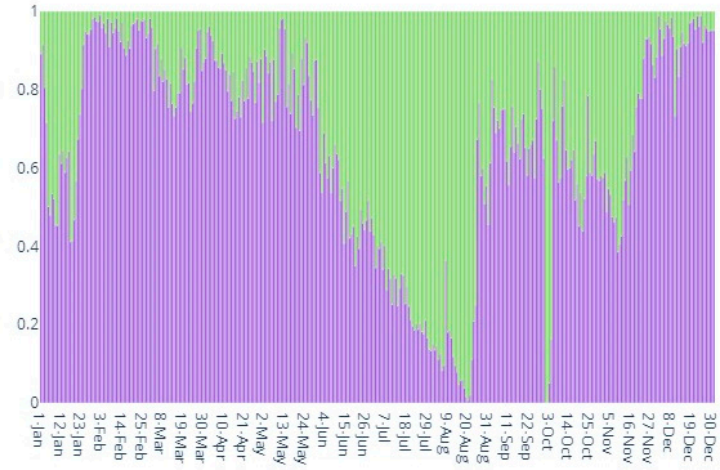


Figure S4. Barchart showing the normalized fraction (expressed in %) of discharge that has been optimized for abstraction (purple 'OD' bars) with respect to the natural flow (green 'RF' bars) at the daily scale. The diverted discharge is calculated as a daily average for all the 10 runs of the model for each scenario. **Results for DP1** under dry (a), normal (b) and wet (c) scenarios.

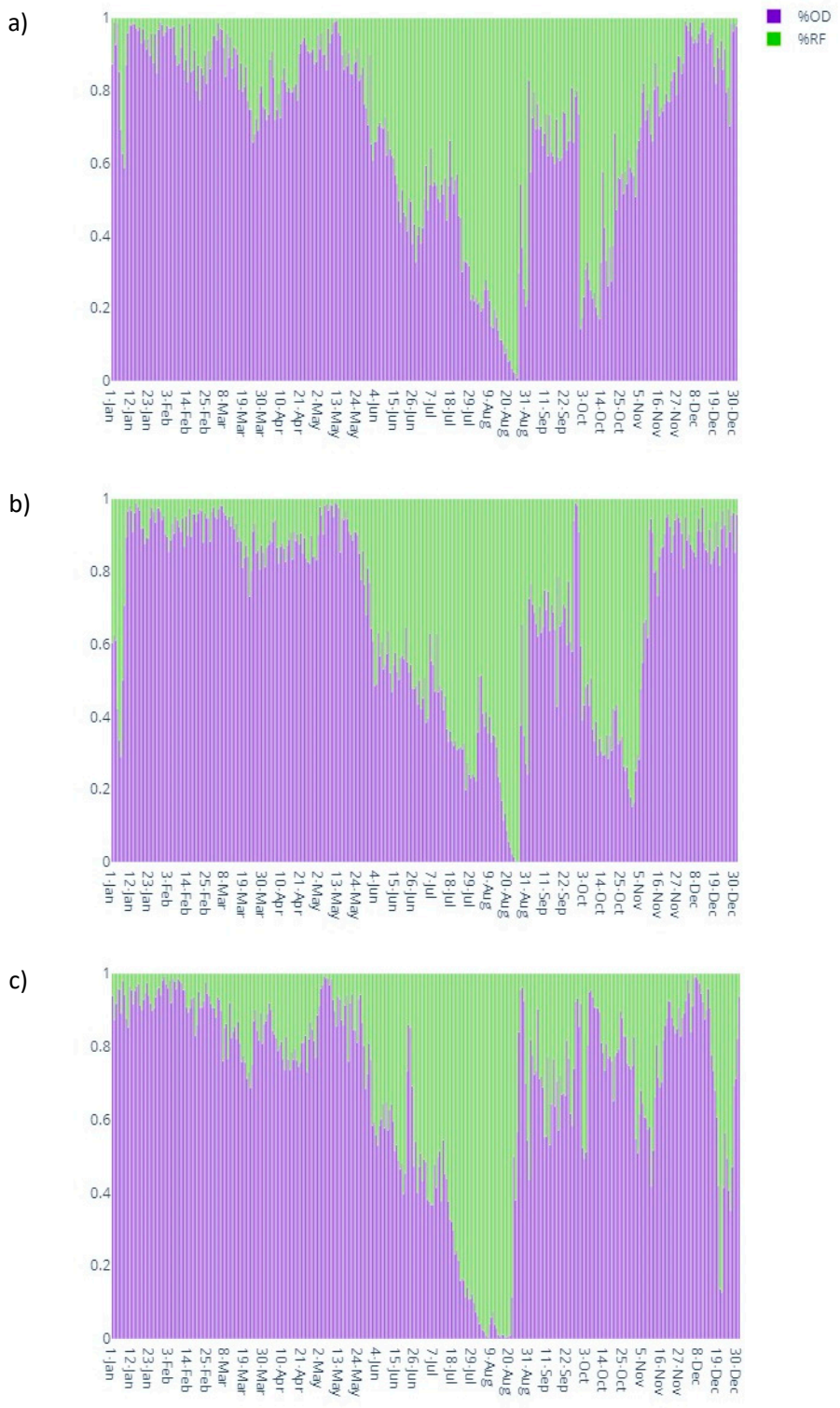


Figure S5. Barchart showing the normalized fraction (expressed in %) of discharge that has been optimized for abstraction (purple 'OD' bars) with respect to the natural flow (green 'RF' bars) at the daily scale. The diverted discharge is calculated as a daily average for all the 10 runs of the model for each scenario. **Results for DP2** under dry (a), normal (b) and wet (c) scenarios.

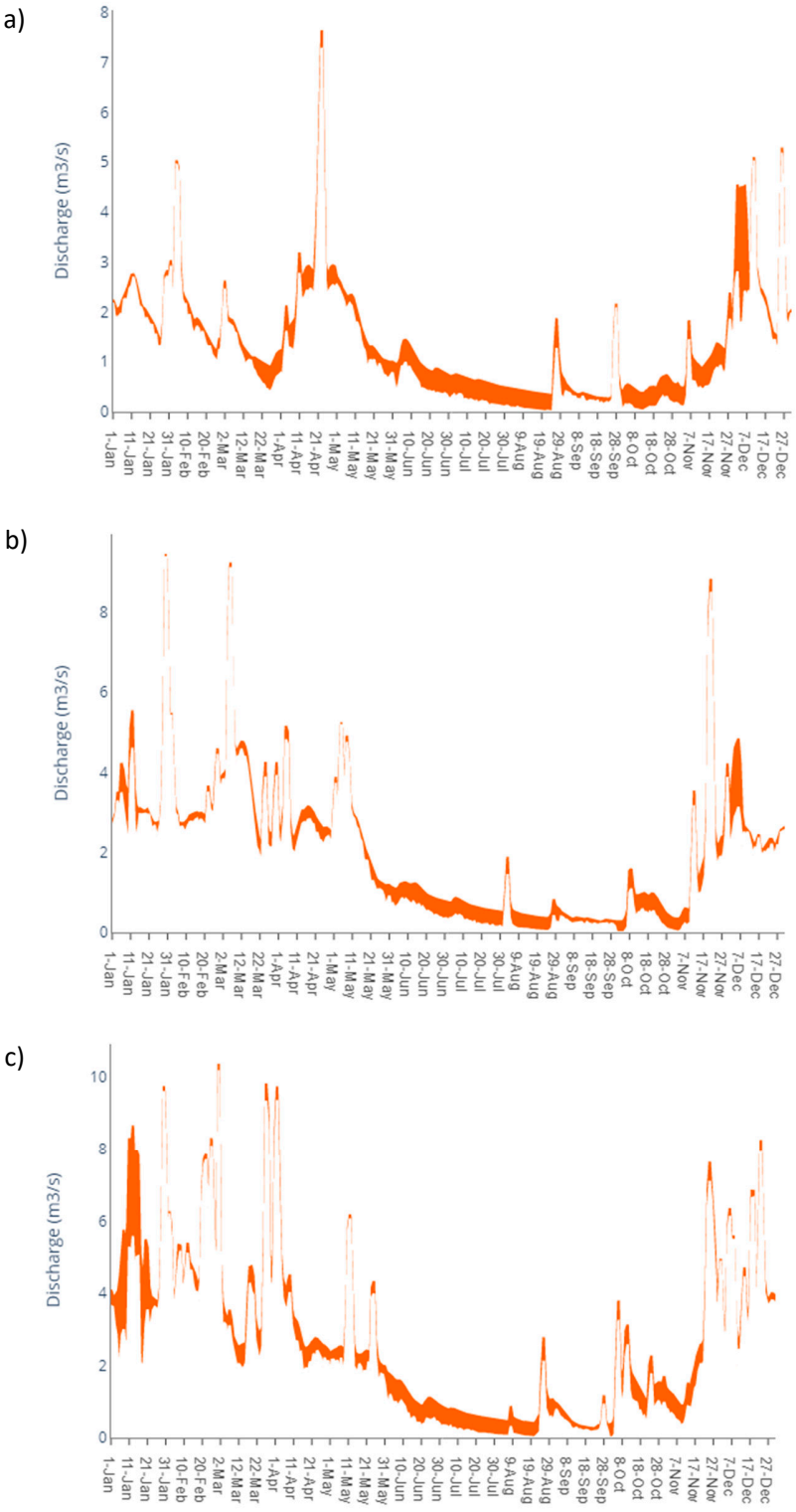


Figure S6. Flow series showing the magnitude of gap between the daily optimized diverted discharges in m^3/s with respect to the natural discharge. Greater thickness indicates the highest trade-off between the natural discharge and water for municipal use. **Results for DP1** under dry (a), normal (b) and wet (c) scenarios.

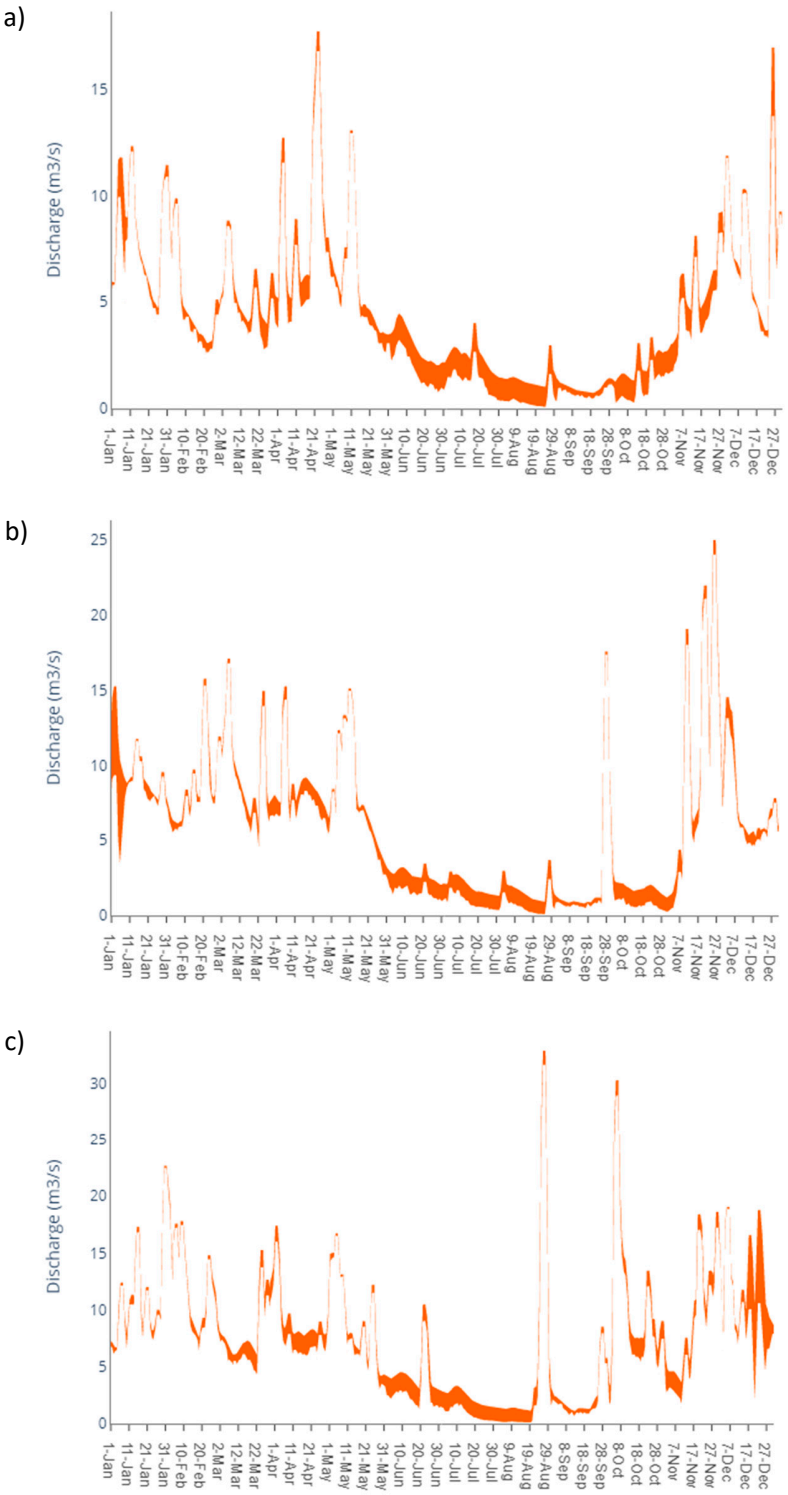


Figure S7. Flow series showing the magnitude of gap between the daily optimized diverted discharges in m^3/s with respect to the natural discharge. Greater thickness indicates the highest trade-off between the natural discharge and water for municipal use. **Results for DP2** under dry (a), normal (b) and wet (c) scenarios.

Table S1 Average objective function score (municipal water demand), for each simulation run (1-10). The score indicate the achievement of the objective (minus sign) and the ratio of the resulting supply after optimization to the required supply (i.e. the proportion of existing water for human consumption with respect to demanded water; AVG, MIN and MAX values refer to the average, minimum and maximum value for each set, respectively. **Results for the DP1** under dry, normal and wet scenarios.

DP1			
RUN:	**Dry**	**Normal**	**Wet**
1	-134.14	-209.57	-266.20
2	-134.34	-204.36	-271.45
3	-136.62	-208.30	-268.61
4	-137.05	-209.96	-263.14
5	-134.76	-209.25	-273.09
6	-133.21	-210.18	-264.93
7	-132.31	-212.78	-268.04
8	-127.97	-208.82	-272.77
9	-129.91	-206.23	-264.72
10	-133.64	-208.50	-275.35
AVG	-133.40	-208.79	-268.83
MIN	-127.97	-204.36	-263.14
MAX	-137	-213	-275

Table S2 Average objective function score (municipal water demand), for each simulation run (1-10). The score indicate the achievement of the objective (minus sign) and the ratio of the resulting supply after optimization to the required supply (i.e. the proportion of existing water for human consumption with respect to demanded water; AVG, MIN and MAX values refer to the average, minimum and maximum value for each set, respectively. **Results for the DP2** under dry, normal and wet scenarios.

DP2			
RUN:	**Dry**	**Normal**	**Wet**
1	-172.09	-234.62	-299.99
2	-170.52	-234.34	-296.80
3	-175.62	-228.17	-298.36
4	-171.66	-232.57	-298.00
5	-173.92	-231.20	-295.49
6	-173.71	-231.62	-293.23
7	-174.54	-227.52	-288.43
8	-172.89	-231.38	-295.89
9	-173.13	-231.16	-291.14
10	-171.13	-227.95	-295.75
AVG	-172.92	-231.05	-295.31
MIN	-170.52	-227.52	-288.43
MAX	-176	-235	-300

Dry Scenario – DP1

RUN:	R1	R2	R3	R4	R5	R6
1	0.01	0.79	0.24	0.01	0	0.10
2	0.01	0.79	0.20	0.01	0	0.07
3	0.02	0.75	0.20	0.01	0	0.11
4	0.01	0.80	0.20	0.01	0	0.08
5	0.01	0.79	0.17	0.01	0	0.10
6	0.01	0.79	0.23	0.01	0	0.07
7	0.01	0.80	0.31	0.01	0	0.11
8	0.01	0.80	0.25	0.01	0	0.13
9	0.01	0.83	0.21	0.01	0	0.10
10	0.01	0.75	0.19	0.01	0	0.07
TEST	0	0.67	0	0	0	0
AVG	0.01	0.79	0.22	0.01	0	0.09
MIN	0.01	0.75	0.17	0.01	0	0.07
MAX	0.02	0.83	0.31	0.01	0	0.13

Normal Scenario – DP1

RUN:	R1	R2	R3	R4	R5	R6
1	0.01	0.73	0.17	0.01	0	0.08
2	0.02	0.63	0.15	0.01	0	0.07
3	0.02	0.73	0.24	0.00	0	0.12
4	0.02	0.68	0.14	0.01	0	0.06
5	0.03	0.75	0.21	0.01	0	0.10
6	0.02	0.72	0.19	0.01	0	0.08
7	0.02	0.73	0.12	0.01	0	0.08
8	0.01	0.67	0.18	0.01	0	0.06
9	0.02	0.66	0.19	0.01	0	0.08
10	0.02	0.69	0.15	0.00	0	0.05
TEST	0	0.10	0	0	0	0
AVG	0.02	0.70	0.17	0.01	0	0.08
MIN	0.01	0.63	0.12	0	0	0.05
MAX	0.03	0.75	0.24	0.01	0	0.12

Wet Scenario – DP1

RUN:	R1	R2	R3	R4	R5	R6
1	0.01	0.28	0.18	0.01	0	0.02
2	0.01	0.39	0.19	0.01	0	0.08
3	0.01	0.26	0.15	0.01	0	0.01
4	0.01	0.26	0.12	0.00	0	0.04
5	0.01	0.32	0.17	0.01	0	0.04
6	0.01	0.35	0.14	0.00	0	0.03
7	0.01	0.16	0.17	0.01	0	0.09
8	0.02	0.25	0.22	0.01	0	0
9	0.01	0.30	0.15	0.00	0	0.06
10	0.01	0.42	0.16	0.01	0	0.04
TEST	0	0	0	0	0	0
AVG	0.01	0.30	0.17	0.01	0	0.04
MIN	0.01	0.16	0.12	0	0	0
MAX	0.02	0.42	0.22	0.01	0	0.09

Tables S3-S4-S5 Average objective function scores (R1-R6), for each simulation run (1-10). TEST values refer to the test runs on the undisturbed hydrograph; AVG, MIN and MAX values refer to the average, minimum and maximum value for each set, respectively. **Results for the DP1** under dry, normal and wet scenarios.

Dry Scenario – DP2

RUN:	R1	R2	R3	R4	R5	R6
1	0.03	0.91	0.26	0.01	0	0.13
2	0.02	0.84	0.22	0.01	0	0.08
3	0.03	0.92	0.26	0.01	0	0.10
4	0.02	0.82	0.22	0.01	0	0.08
5	0.02	0.90	0.26	0.01	0	0.08
6	0.02	0.90	0.26	0.01	0	0.11
7	0.02	0.91	0.27	0.01	0	0.10
8	0.02	0.91	0.22	0.01	0	0.09
9	0.04	0.87	0.25	0.01	0	0.09
10	0.01	0.87	0.27	0.01	0	0.10
TEST	0	0.76	0	0	0	0
AVG	0.02	0.88	0.25	0.01	0	0.10
MIN	0.01	0.82	0.22	0.01	0	0.08
MAX	0.04	0.92	0.27	0.01	0	0.13

Normal Scenario – DP2

RUN:	R1	R2	R3	R4	R5	R6
1	0.01	0.63	0.15	0	0	0.06
2	0.01	0.77	0.20	0.01	0	0.03
3	0.01	0.71	0.24	0.01	0	0.06
4	0.01	0.79	0.20	0.01	0	0.08
5	0.01	0.65	0.16	0	0	0.06
6	0.01	0.75	0.16	0	0	0.05
7	0.02	0.71	0.16	0	0	0.10
8	0.02	0.75	0.24	0.01	0	0.07
9	0.02	0.73	0.18	0	0	0.10
10	0.01	0.72	0.16	0	0	0.06
TEST	0	0	0	0	0	0
AVG	0.01	0.72	0.19	0	0	0.07
MIN	0.01	0.63	0.15	0	0	0.03
MAX	0.02	0.79	0.24	0.01	0	0.10

Wet Scenario – DP2

RUN:	R1	R2	R3	R4	R5	R6
1	0.02	0.56	0.19	0.01	0	0.06
2	0.02	0.56	0.18	0.02	0	0.10
3	0.02	0.56	0.22	0.01	0	0.09
4	0.02	0.61	0.16	0.01	0	0.07
5	0.01	0.53	0.16	0.02	0	0.03
6	0.01	0.55	0.16	0.02	0	0.08
7	0.02	0.49	0.16	0.02	0	0.05
8	0.01	0.47	0.16	0.01	0	0
9	0.02	0.55	0.18	0.02	0	0.08
10	0.01	0.57	0.14	0.01	0	0.04
TEST	0	0.10	0	0.01	0	0
AVG	0.02	0.54	0.17	0.02	0	0.06
MIN	0.01	0.47	0.14	0.01	0	0.01
MAX	0.02	0.61	0.22	0.02	0	0.10

Tables S6-S7-S8 Average objective function scores (R1-R6), for each simulation run (1-10). TEST values refer to the test runs on the undisturbed hydrograph; AVG, MIN and MAX values refer to the average, minimum and maximum value for each set, respectively. **Results for the DP2** under dry, normal and wet scenarios.

Table S9. Comparison of average natural discharge values under different scenarios and the optimized discharge thresholds. **Results for DP1** for sub-normal (dry), normal and above-normal (wet) hydrological conditions.

		1-Jan		2-Jan		3-Jan		4-Jan		5-Jan		6-Jan		7-Jan		8-Jan	
		Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized
S	D	2.2457	2.1846	2.1433	1.8893	2.0454	1.9004	2.0744	1.8983	2.1038	1.9532	2.2377	1.9403	2.3526	2.2639	2.4065	2.2354
	N	2.7257	2.5988	2.8858	2.7747	3.0020	2.9284	3.5120	3.2989	3.3890	2.8362	4.2324	3.4977	4.0577	3.1257	3.6905	2.7677
	W	4.0957	3.6503	3.9504	3.6157	3.8874	3.1336	3.9807	2.8495	4.0785	2.0469	4.4813	2.1496	5.3042	2.8360	5.7497	2.9976

		9-Jan		10-Jan		11-Jan		12-Jan		13-Jan		14-Jan		15-Jan		16-Jan	
		Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized
S	D	2.5010	2.2804	2.6441	2.4805	2.7434	2.5225	2.7498	2.7045	2.6533	2.5293	2.4970	2.3146	2.3187	2.1072	2.1662	2.0953
	N	3.5470	2.3170	3.3036	2.0606	5.1130	4.1108	5.5450	4.6118	3.6366	2.8122	3.1876	2.2244	3.0762	2.5357	3.0982	2.9497
	W	5.2748	2.3948	5.8818	2.6661	8.3126	5.2834	7.9577	4.8709	8.6646	5.5866	7.4207	4.3734	7.9668	4.9955	7.8124	5.0218

		17-Jan		18-Jan		19-Jan		20-Jan		21-Jan		22-Jan		23-Jan		24-Jan	
		Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized
S	D	2.0903	1.9933	2.0629	1.7733	2.0046	1.8911	1.9389	1.7969	1.9009	1.7150	1.8231	1.7513	1.7440	1.4668	1.6489	1.5638
	N	3.0693	2.9415	3.0364	2.9618	3.0362	2.9638	3.0741	2.9348	2.9680	2.9399	2.8365	2.6765	2.7691	2.5664	2.7226	2.6797
	W	5.1039	2.1016	4.6233	1.9139	4.4915	2.1019	5.4905	3.1103	5.2642	3.5485	4.1717	3.0730	3.9054	3.1361	3.8537	3.5267

		25-Jan		26-Jan		27-Jan		28-Jan		29-Jan		30-Jan		31-Jan		1-Feb	
		Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized
S	D	1.5372	1.2378	1.4531	1.3302	1.4448	1.1845	1.8039	1.6777	2.7335	2.6275	2.8264	2.7202	2.7729	2.6280	3.0338	2.9273
	N	2.7416	2.4143	2.7412	2.5030	2.7675	2.6941	3.3228	3.1733	5.5054	5.2479	9.4489	9.4023	7.9027	7.8307	4.8705	4.7677
	W	3.8096	3.6158	3.7796	3.5623	3.7455	3.5272	4.1740	3.9836	6.1210	6.0033	9.7584	9.6226	8.0067	7.8115	4.8312	4.7028

		2-Feb		3-Feb		4-Feb		5-Feb		6-Feb		7-Feb		8-Feb		9-Feb	
		Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized
S	D	2.3299	2.1615	2.6257	2.5223	5.0380	4.9700	4.8862	4.8125	3.0920	2.7716	2.4365	2.2676	2.3206	2.1576	2.2627	2.1551
	N	5.4828	5.4410	4.2542	4.1289	3.1529	2.9823	3.0167	2.9214	2.7432	2.5975	2.7265	2.6328	2.7367	2.6377	2.7323	2.5280
	W	6.2687	6.2099	5.8129	5.5684	3.7022	3.5933	3.8839	3.6679	4.3662	4.2866	5.3304	4.8475	5.3152	5.1691	4.3391	4.1022

		10-Feb		11-Feb		12-Feb		13-Feb		14-Feb		15-Feb		16-Feb		17-Feb	
		Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized
S	D	2.1789	1.7532	2.0706	1.9560	1.9471	1.7069	1.8450	1.5966	1.8323	1.5746	1.8646	1.7148	1.8310	1.6593	1.7567	1.4857
	N	2.7748	2.5469	2.8257	2.6675	2.9202	2.7541	2.9483	2.7631	2.9515	2.7310	2.9849	2.8129	2.9948	2.8393	2.9688	2.6983
	W	4.2963	4.1121	4.7142	4.6346	5.3922	5.1212	4.8747	4.4965	4.7773	4.6454	4.6769	4.2442	4.5356	4.0281	4.3590	4.0365

		18-Feb		19-Feb		20-Feb		21-Feb		22-Feb		23-Feb		24-Feb		25-Feb	
		Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized
S	D	1.6960	1.6174	1.6287	1.4703	1.5475	1.3316	1.4691	1.3115	1.3885	1.3075	1.3384	1.1483	1.2800	1.0989	1.2299	1.0425
	N	2.9843	2.8294	2.9649	2.7627	2.8767	2.6662	2.9847	2.7455	3.6617	3.5198	3.2472	3.0815	3.1388	2.9632	3.0695	2.9018
	W	4.2002	3.8052	4.4525	4.2936	6.8628	6.6463	7.7321	7.5169	7.8569	7.7044	6.6866	6.3663	7.1229	6.9606	8.3145	8.1050

		26-Feb		27-Feb		28-Feb		1-Mar		2-Mar		3-Mar		4-Mar		5-Mar	
		Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized
S	D	1.2391	0.9494	1.4572	1.2359	1.4838	1.2683	1.9269	1.7973	2.6294	2.4707	1.9782	1.8033	1.8700	1.7712	1.8552	1.7623
	N	3.8954	3.6264	4.5971	4.4568	3.7831	3.6288	3.8788	3.6245	3.9498	3.8355	3.9845	3.7092	4.0828	3.9404	7.7321	7.6262
	W	6.3479	6.2182	5.0231	4.6862	4.0565	3.8330	10.3852	10.2033	4.8606	4.6667	3.7878	3.0214	3.5188	3.1853	3.3865	3.1068

		6-Mar		7-Mar		8-Mar		9-Mar		10-Mar		11-Mar		12-Mar		13-Mar	
		Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized
S	D	1.8351	1.7110	1.7558	1.5989	1.6461	1.5693	1.5275	1.3506	1.4302	1.2748	1.3468	1.1641	1.2867	1.0584	1.2403	0.8879
	N	9.2405	9.1255	6.2896	6.1797	4.7358	4.5815	4.4838	4.2799	4.5837	4.3900	4.7050	4.4228	4.7584	4.5868	4.7488	4.4044
	W	3.2463	2.7128	3.5411	3.1117	3.2693	2.6859	2.8010	2.3862	2.6518	2.1956	2.5687	1.9402	2.5129	2.0524	2.5511	1.9505

		14-Mar		15-Mar		16-Mar		17-Mar		18-Mar		19-Mar		20-Mar		21-Mar	
		Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized
S	D	1.2050	1.0028	1.1464	1.0387	1.0929	1.0237	1.0898	0.8689	1.0895	0.8221	1.0589	0.7215	1.0249	0.6807	1.0125	0.6043
	N	4.6397	4.3841	4.4370	4.1468	4.1289	3.8230	3.7565	3.4192	3.3687	2.9568	3.0065	2.6092	2.6932	2.1402	2.4458	2.0502
	W	2.5805	1.8907	2.5928	1.9580	2.6182	2.0729	3.8398	3.0413	4.7201	4.2871	4.7389	4.0422	4.4773	3.9502	3.3369	2.7170

		22-Mar		23-Mar		24-Mar		25-Mar		26-Mar		27-Mar		28-Mar		29-Mar	
		Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized
S	D	0.9889	0.5625	0.9629	0.5455	0.9328	0.4566	0.9074	0.4478	0.9028	0.3963	0.9168	0.4269	1.0007	0.5031	1.1135	0.6229
	N	2.2428	1.8233	2.1380	1.7384	3.5815	3.2576	4.2546	3.8926	2.6734	2.2019	2.4522	2.1181	2.4809	2.1075	2.5173	2.1171
	W	3.0397	2.4878	2.9286	2.1800	2.9292	2.2443	3.0729	2.5244	5.4967	4.9826	9.8397	9.3603	9.1007	8.6996	5.2282	4.4390

		30-Mar		31-Mar		1-Apr		2-Apr		3-Apr		4-Apr		5-Apr		6-Apr	
		Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized
S	D	1.1724	0.7060	1.2093	0.7360	1.2300	0.7719	1.2265	0.6805	1.5702	1.1286	2.1318	1.6219	1.7166	1.2112	1.7124	1.2804
	N	3.5561	3.2268	4.2470	3.9301	2.7751	2.3947	2.4750	2.0608	2.7116	2.3252	3.1760	2.8659	5.1577	4.8219	5.0128	4.7083
	W	4.2594	3.7081	5.1398	4.5225	8.5446	8.0997	9.7488	9.3749	7.2017	6.7654	5.1247	4.7419	4.4137	3.8631	4.2165	3.6865

		7-Apr		8-Apr		9-Apr		10-Apr		11-Apr		12-Apr		13-Apr		14-Apr	
		Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized
S	D	1.7675	1.2464	1.8410	1.1770	1.8819	1.4562	2.3848	1.9202	3.1947	2.7851	2.7022	2.2514	2.7034	2.2691	2.8221	2.3133
	N	2.9113	2.5314	2.4818	2.0884	2.3678	2.0116	2.4019	1.9345	2.5613	2.1556	2.7267	2.3511	2.9369	2.5568	3.0412	2.7156
	W	4.0520	3.4755	4.3254	3.6957	4.5149	4.0304	3.6057	3.1328	3.3386	2.8413	3.2727	2.6069	3.1950	2.6803	3.0212	2.3340

		15-Apr		16-Apr		17-Apr		18-Apr		19-Apr		20-Apr		21-Apr		22-Apr	
		Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized
S	D	2.9033	2.4362	2.9209	2.3940	2.8773	2.4752	2.8296	2.3929	2.7812	2.3686	3.5949	2.9067	4.5688	4.1575	6.2074	5.8086
	N	3.0388	2.7510	3.0782	2.7277	3.1415	2.8127	3.1201	2.8216	3.0551	2.7266	2.9884	2.6976	2.8780	2.4175	2.7835	2.4980
	W	2.8019	2.3687	2.6040	1.8927	2.4935	1.8581	2.4752	1.9350	2.5067	1.8302	2.5557	2.1054	2.6438	2.0407	2.7200	2.3296

		23-Apr		24-Apr		25-Apr		26-Apr		27-Apr		28-Apr		29-Apr		30-Apr	
		Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized
S	D	7.6451	7.2982	5.2255	4.7843	2.9874	2.6167	2.7398	2.2348	2.8129	2.4347	2.9078	2.4960	2.9310	2.5315	2.9092	2.4895
	N	2.7315	2.3173	2.6706	2.2964	2.5915	2.1842	2.6099	2.2523	2.6156	2.3667	2.5904	2.3989	2.4957	2.2571	2.4324	2.3611
	W	2.7520	2.1397	2.7340	2.4188	2.6634	2.3160	2.6161	2.2163	2.5629	1.9677	2.5442	2.2191	2.5026	2.0484	2.4360	2.1422

		1-May		2-May		3-May		4-May		5-May		6-May		7-May		8-May	
		Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized
S	D	2.7138	2.5419	2.6506	2.4860	2.5827	2.4072	2.4783	2.3087	2.3978	2.1972	2.3197	2.0250	2.2808	2.1030	2.3334	2.1707
	N	3.1635	3.0252	3.8837	3.7369	2.9030	2.5071	3.8709	3.7300	5.2409	5.2082	4.0821	3.8715	3.5883	3.4438	4.9160	4.7618
	W	2.3502	1.6832	2.3861	2.1561	2.4353	2.1567	2.4448	2.0616	2.4626	2.1454	2.5133	1.8130	2.5227	2.2136	2.4839	1.9123

		9-May		10-May		11-May		12-May		13-May		14-May		15-May		16-May	
		Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized
S	D	2.3418	2.1223	2.2832	1.9792	2.1570	1.7666	2.0187	1.7829	1.8594	1.6843	1.6982	1.4351	1.5648	1.2891	1.4832	1.2267
	N	4.3161	4.2624	3.2593	3.0810	3.0110	2.8955	2.9164	2.8392	2.8508	2.6455	2.7193	2.5838	2.5489	2.3472	2.3570	2.2603
	W	2.4126	1.9026	3.3885	3.2422	5.8453	5.7284	6.1771	6.0711	4.3380	4.1463	2.6098	1.9748	2.3287	1.8978	2.2972	1.6976

		17-May		18-May		19-May		20-May		21-May		22-May		23-May		24-May	
		Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized
S	D	1.3927	0.9566	1.3191	0.9003	1.3008	1.0495	1.3070	0.9848	1.2713	1.0507	1.2141	0.9113	1.1538	0.8534	1.1014	0.9636
	N	2.1797	1.8496	2.0690	1.7609	1.9567	1.8036	1.8237	1.4978	1.6786	1.1971	1.5440	1.3041	1.4298	1.1362	1.3394	1.0341
	W	2.2908	2.0487	2.2990	1.9631	2.3189	1.6315	2.3742	1.8706	2.4060	1.6735	2.3892	2.1036	2.3382	1.9003	4.1688	3.8970

		25-May		26-May		27-May		28-May		29-May		30-May		31-May		1-Jun	
		Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized
S	D	1.0714	0.8158	1.0457	0.7413	1.0246	0.7308	1.0129	0.6806	1.0026	0.6757	1.0004	0.7398	1.0023	0.7887	0.9749	0.5622
	N	1.2874	1.0722	1.2610	1.0725	1.2297	1.0359	1.1894	0.9172	1.1714	0.6546	1.1813	0.7844	1.1796	0.9189	1.1385	0.6819
	W	4.3294	3.9871	2.7078	2.2649	2.2203	1.7182	2.0798	1.5297	2.0143	1.7625	1.9819	1.7383	1.9774	1.4916	1.8276	1.0757

		2-Jun		3-Jun		4-Jun		5-Jun		6-Jun		7-Jun		8-Jun		9-Jun	
		Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized
S	D	0.9555	0.4482	0.9787	0.4930	1.0612	0.6661	1.2984	0.9080	1.4285	0.9180	1.4399	0.9956	1.4047	0.8284	1.3422	0.9115
	N	1.1120	0.7188	1.0930	0.5800	1.0865	0.6625	1.1291	0.6970	1.2104	0.7921	1.2379	0.8612	1.2420	0.7744	1.2432	0.8362
	W	1.7801	0.9581	1.7450	1.2042	1.6959	1.0400	1.6270	0.9348	1.5875	1.0028	1.5811	0.8496	1.5838	0.9508	1.5461	1.0199

		10-Jun		11-Jun		12-Jun		13-Jun		14-Jun		15-Jun		16-Jun		17-Jun	
		Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized
S	D	1.2704	0.8245	1.2014	0.7575	1.1300	0.7056	1.0632	0.6213	1.0049	0.5896	0.9563	0.4287	0.9165	0.4699	0.8843	0.4523
	N	1.2147	0.7853	1.1928	0.7448	1.1969	0.6993	1.1990	0.7652	1.2218	0.6866	1.1947	0.6385	1.1432	0.7190	1.0875	0.5902
	W	1.4841	0.9443	1.3992	0.8695	1.3086	0.6762	1.2228	0.6698	1.1477	0.4675	1.0828	0.5294	1.0275	0.5824	0.9810	0.4136

		18-Jun		19-Jun		20-Jun		21-Jun		22-Jun		23-Jun		24-Jun		25-Jun	
		Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized
S	D	0.8579	0.4289	0.8360	0.4094	0.8178	0.4157	0.8024	0.3883	0.8103	0.4050	0.8608	0.3507	0.8635	0.3801	0.8425	0.3723
	N	1.0365	0.6455	0.9922	0.5591	0.9549	0.5065	0.9243	0.5373	0.8984	0.4958	0.8767	0.4766	0.8582	0.3899	0.8421	0.4368
	W	0.9428	0.4066	0.9114	0.4112	0.8853	0.3103	0.8874	0.3778	0.9739	0.3843	1.0614	0.5242	1.1024	0.5067	1.0993	0.4862

		26-Jun		27-Jun		28-Jun		29-Jun		30-Jun		1-Jul		2-Jul		3-Jul	
		Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized
S	D	0.8174	0.3703	0.7939	0.3482	0.7728	0.3700	0.7553	0.3416	0.7397	0.2812	0.7158	0.2555	0.7193	0.3106	0.7443	0.3461
	N	0.8277	0.4214	0.8147	0.3807	0.8021	0.3735	0.7903	0.3296	0.7796	0.3513	0.7621	0.3492	0.7516	0.3064	0.7415	0.3598
	W	1.0706	0.4999	1.0298	0.5324	0.9846	0.4319	0.9393	0.4440	0.8972	0.3854	0.8656	0.2991	0.8443	0.3392	0.8185	0.3230

		4-Jul		5-Jul		6-Jul		7-Jul		8-Jul		9-Jul		10-Jul		11-Jul	
		Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized
S	D	0.7477	0.2660	0.7377	0.3356	0.7239	0.3544	0.7050	0.3391	0.6864	0.2267	0.6692	0.2556	0.6544	0.2428	0.6414	0.2268
	N	0.7506	0.3579	0.8323	0.3984	0.8597	0.4385	0.8468	0.3958	0.8195	0.4312	0.7887	0.4082	0.7589	0.3187	0.7318	0.2960
	W	0.7924	0.3265	0.7772	0.2655	0.8027	0.3226	0.8062	0.2325	0.7901	0.2712	0.7672	0.2442	0.7525	0.1893	0.7312	0.2401

		12-Jul		13-Jul		14-Jul		15-Jul		16-Jul		17-Jul		18-Jul		19-Jul	
		Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized
S	D	0.6339	0.2468	0.6275	0.2267	0.6178	0.2049	0.6237	0.2181	0.6357	0.1653	0.6269	0.2025	0.6142	0.2154	0.5990	0.2021
	N	0.7082	0.3159	0.6880	0.2837	0.6702	0.2785	0.6546	0.2392	0.6411	0.2710	0.6282	0.1745	0.6167	0.2258	0.6059	0.2056
	W	0.7076	0.2255	0.6861	0.1705	0.6676	0.1960	0.6513	0.2149	0.6371	0.2076	0.6246	0.1585	0.6131	0.1822	0.6068	0.1500

		20-Jul		21-Jul		22-Jul		23-Jul		24-Jul		25-Jul		26-Jul		27-Jul	
		Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized
S	D	0.5852	0.2022	0.5722	0.1609	0.5598	0.1164	0.5487	0.1471	0.5387	0.1347	0.5293	0.1361	0.5204	0.1325	0.5121	0.1245
	N	0.5956	0.1855	0.5857	0.1968	0.5762	0.2102	0.5669	0.2053	0.5577	0.1422	0.5488	0.1520	0.5396	0.1844	0.5310	0.1392
	W	0.5974	0.1274	0.5863	0.1153	0.5757	0.1071	0.5660	0.1148	0.5564	0.1047	0.5473	0.1109	0.5384	0.0980	0.5299	0.0936

		28-Jul		29-Jul		30-Jul		31-Jul		1-Aug		2-Aug		3-Aug		4-Aug	
		Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized
S	D	0.5039	0.1198	0.4962	0.1071	0.4884	0.1001	0.4841	0.1177	0.4821	0.1118	0.4746	0.0827	0.4669	0.0876	0.4596	0.0821
	N	0.5229	0.1359	0.5143	0.1404	0.5057	0.1569	0.4974	0.0949	0.5005	0.1526	1.0747	0.6872	1.8866	1.4559	0.8109	0.3952
	W	0.5213	0.1101	0.5127	0.0856	0.5046	0.0691	0.4963	0.0663	0.4927	0.0743	0.4849	0.0657	0.4768	0.0696	0.4686	0.0523

		5-Aug		6-Aug		7-Aug		8-Aug		9-Aug		10-Aug		11-Aug		12-Aug	
		Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized
S	D	0.4525	0.0719	0.4451	0.0968	0.4379	0.0773	0.4309	0.0617	0.4240	0.0492	0.4169	0.0476	0.4102	0.0504	0.4030	0.0443
	N	0.5935	0.2016	0.5310	0.1595	0.5087	0.1230	0.4895	0.1053	0.4730	0.0958	0.4587	0.1002	0.4466	0.1017	0.4358	0.0875
	W	0.4608	0.0577	0.4533	0.0377	0.4673	0.0447	0.8703	0.3164	0.5633	0.1019	0.5215	0.0966	0.5029	0.0837	0.4826	0.0570

		13-Aug		14-Aug		15-Aug		16-Aug		17-Aug		18-Aug		19-Aug		20-Aug	
		Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized
S	D	0.3963	0.0442	0.3898	0.0422	0.3829	0.0291	0.3767	0.0227	0.3699	0.0288	0.3637	0.0189	0.3573	0.0192	0.3510	0.0122
	N	0.4261	0.0886	0.4171	0.0744	0.4089	0.0637	0.4012	0.0623	0.3941	0.0617	0.3869	0.0458	0.3800	0.0439	0.3733	0.0445
	W	0.4612	0.0443	0.4426	0.0350	0.4281	0.0201	0.4351	0.0254	0.4308	0.0256	0.4177	0.0162	0.4041	0.0064	0.3921	0.0026

		21-Aug		22-Aug		23-Aug		24-Aug		25-Aug		26-Aug		27-Aug		28-Aug	
		Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized
S	D	0.3446	0.0048	0.3386	0.0188	0.3327	0.0033	0.3267	0.0074	0.3305	0.0021	1.3283	0.8197	1.8750	1.2829	1.1745	0.7728
	N	0.3671	0.0394	0.3604	0.0338	0.3544	0.0311	0.3483	0.0283	0.3520	0.0283	0.4023	0.0633	0.4830	0.1044	0.8281	0.4270
	W	0.3962	0.0079	0.4686	0.0522	0.5601	0.1168	0.6569	0.1639	1.9264	1.2972	2.7861	2.1351	1.4190	0.8232	1.1578	0.6941

		29-Aug		30-Aug		31-Aug		1-Sep		2-Sep		3-Sep		4-Sep		5-Sep	
		Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized
S	D	0.8035	0.3542	0.7064	0.2792	0.6513	0.2786	0.5623	0.4056	0.5126	0.3813	0.4684	0.3703	0.4298	0.3128	0.3984	0.3016
	N	0.6611	0.2444	0.6193	0.2600	0.5837	0.1835	0.5123	0.3934	0.4761	0.3759	0.4415	0.3206	0.4099	0.3188	0.3834	0.2744
	W	1.0368	0.5278	1.0433	0.5791	1.0577	0.4819	0.9793	0.6001	0.9582	0.7917	0.9084	0.6857	0.8430	0.5813	0.7713	0.5568

		6-Sep		7-Sep		8-Sep		9-Sep		10-Sep		11-Sep		12-Sep		13-Sep	
		Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized
S	D	0.3726	0.3018	0.3519	0.2390	0.3501	0.2547	0.3730	0.2013	0.3755	0.3162	0.3636	0.2285	0.3482	0.1891	0.3330	0.2122
	N	0.3611	0.2517	0.3425	0.2143	0.3423	0.2308	0.3656	0.2375	0.3687	0.2602	0.3572	0.2524	0.3413	0.2577	0.3258	0.2151
	W	0.6992	0.4906	0.6311	0.4725	0.5685	0.4267	0.5134	0.3854	0.4655	0.2878	0.4255	0.2370	0.3923	0.2569	0.3649	0.2763

		14-Sep		15-Sep		16-Sep		17-Sep		18-Sep		19-Sep		20-Sep		21-Sep	
		Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized
S	D	0.3192	0.2283	0.3077	0.2183	0.2979	0.2184	0.2897	0.1963	0.2829	0.2205	0.2773	0.1495	0.2722	0.1878	0.2677	0.1491
	N	0.3337	0.1839	0.3461	0.2577	0.3335	0.2167	0.3166	0.2093	0.3017	0.1890	0.2902	0.2200	0.2805	0.1943	0.2724	0.1854
	W	0.3433	0.2199	0.3256	0.2298	0.3114	0.2064	0.2997	0.1869	0.2907	0.2107	0.2826	0.2088	0.2755	0.1796	0.2695	0.1567

		22-Sep		23-Sep		24-Sep		25-Sep		26-Sep		27-Sep		28-Sep		29-Sep	
		Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized
S	D	0.2635	0.1821	0.2597	0.1924	0.2635	0.1674	0.2789	0.1930	0.3035	0.2408	1.6063	1.4372	2.1695	2.0922	0.7746	0.5536
	N	0.2661	0.2090	0.2650	0.2089	0.2964	0.2217	0.3101	0.2193	0.3067	0.2252	0.2969	0.1482	0.2842	0.2170	0.2721	0.2093
	W	0.2651	0.1724	0.2669	0.1764	0.3000	0.2015	0.3436	0.1974	0.3428	0.2487	0.5081	0.4433	1.1800	0.9454	0.4961	0.3734

		30-Sep		1-Oct		2-Oct		3-Oct		4-Oct		5-Oct		6-Oct		7-Oct	
		Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized
S	D	0.4846	0.2897	0.3971	0.0445	0.4377	0.0652	0.5165	0.1450	0.5448	0.1376	0.5348	0.1460	0.5068	0.1283	0.4716	0.0698
	N	0.2646	0.1610	0.2720	0.0001	0.2721	0.0004	0.2644	0.0007	0.2686	0.0015	0.3026	0.0003	0.3971	0.0623	0.5806	0.1377
	W	0.3535	0.2208	0.3579	0.0002	0.3793	0.0000	0.4228	0.0215	0.5874	0.0956	2.3234	1.6761	3.7977	3.2612	1.9531	1.3115

		8-Oct		9-Oct		10-Oct		11-Oct		12-Oct		13-Oct		14-Oct		15-Oct	
		Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized
S	D	0.4348	0.0551	0.4047	0.0471	0.3942	0.0443	0.3792	0.0276	0.3721	0.0199	0.3764	0.0325	0.4229	0.0549	0.4411	0.0757
	N	1.5434	0.9987	1.5831	1.0944	1.1376	0.6743	0.9186	0.4433	0.9115	0.4254	0.9280	0.5038	0.9455	0.5089	0.9761	0.5915
	W	1.7685	0.9971	1.8446	1.0608	2.9661	2.2481	3.1294	2.5836	2.0610	1.3319	1.7944	1.0706	1.6950	1.0175	1.6039	0.9959

		16-Oct		17-Oct		18-Oct		19-Oct		20-Oct		21-Oct		22-Oct		23-Oct	
		Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized
S	D	0.4889	0.0976	0.5042	0.0941	0.5006	0.0945	0.4849	0.0958	0.4996	0.1159	0.5962	0.2042	0.6710	0.2515	0.7016	0.3042
	N	0.9814	0.4913	0.9495	0.5063	0.9099	0.4447	0.9190	0.5148	0.9693	0.4809	0.9617	0.5407	0.9171	0.4181	0.8436	0.3889
	W	1.5068	0.9746	1.4180	0.7353	1.3333	0.7462	1.2319	0.5569	1.1252	0.6041	1.0396	0.4563	1.0217	0.5324	2.0316	1.1784

		24-Oct		25-Oct		26-Oct		27-Oct		28-Oct		29-Oct		30-Oct		31-Oct	
		Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized
S	D	0.7195	0.2384	0.7298	0.3105	0.6920	0.2294	0.6332	0.2035	0.5827	0.1917	0.5594	0.1618	0.5392	0.7140	0.5666	0.7305
	N	0.7588	0.3015	0.6751	0.2141	0.5983	0.1945	0.5308	0.1342	0.4727	0.0957	0.4275	0.0792	0.3961	0.0643	0.3669	0.0365
	W	2.2700	1.7810	1.4340	0.8435	1.4447	0.8404	1.4794	0.9398	1.5303	1.0255	1.5189	0.8688	1.5096	0.8577	1.7039	0.9911

		1-Nov		2-Nov		3-Nov		4-Nov		5-Nov		6-Nov		7-Nov		8-Nov	
		Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized
S	D	0.5010	0.6200	0.4858	0.6035	0.4802	0.5781	0.5042	0.6371	0.7672	1.0949	1.8355	3.2900	1.1795	1.7985	1.0716	1.6856
	N	0.3504	0.0226	0.3319	0.0128	0.3377	0.0144	0.3487	0.0251	0.4045	0.0592	0.5173	0.1549	0.5954	0.2154	0.5867	0.1563
	W	1.4049	0.8082	1.3212	0.7780	1.2751	0.6222	1.2341	0.6754	1.1775	0.6271	1.1001	0.5229	1.0175	0.4697	0.9549	0.4530

		9-Nov		10-Nov		11-Nov		12-Nov		13-Nov		14-Nov		15-Nov		16-Nov	
		Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized
S	D	1.0117	1.6153	0.9776	1.4834	0.9455	1.3862	0.9004	1.3880	0.8631	1.3123	0.9089	1.3645	0.9624	1.4673	0.9827	1.4896
	N	0.5598	0.2125	0.6131	0.2277	2.5040	2.0612	3.5435	3.1766	1.7641	1.3511	1.2925	0.8192	1.4162	0.9785	1.5739	0.9973
	W	0.8923	0.3443	0.8829	0.3579	0.8986	0.3833	1.0812	0.5613	1.5186	0.8635	1.3422	0.8434	1.5399	0.7805	1.7742	1.0544

		17-Nov		18-Nov		19-Nov		20-Nov		21-Nov		22-Nov		23-Nov		24-Nov	
		Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized
S	D	1.0544	1.5747	1.1080	1.6839	1.1777	1.9183	1.2991	2.1219	1.3658	2.2453	1.3505	2.2080	1.3161	2.2512	1.2843	2.0735
	N	1.7424	1.1776	1.9090	1.4432	3.1199	2.7685	7.9024	7.5619	8.8303	8.5053	5.0315	4.6232	2.6426	2.1757	2.2236	1.7224
	W	1.9993	1.3698	2.2624	1.4535	2.4597	1.8570	2.5680	2.0320	2.5981	2.0194	2.7191	2.1158	4.3265	3.8109	6.9175	6.4368

		25-Nov		26-Nov		27-Nov		28-Nov		29-Nov		30-Nov		1-Dec		2-Dec	
		Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized
S	D	1.2465	2.0273	1.2487	2.1048	1.8713	3.3058	2.3864	4.2503	1.8804	3.3413	2.0066	3.5843	3.1376	5.7084	4.5510	7.3650
	N	2.1925	1.7451	2.2642	1.8979	2.3868	1.8331	2.3918	1.9936	3.0699	2.4276	4.2200	3.8812	3.3481	2.3358	3.5534	2.1921
	W	7.6423	7.1100	6.9757	6.5327	6.0843	5.5846	5.0748	4.3856	3.3812	2.8116	4.2726	3.7749	4.9556	4.9014	3.5778	3.4179

		3-Dec		4-Dec		5-Dec		6-Dec		7-Dec		8-Dec		9-Dec		10-Dec	
		Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized
S	D	4.4096	6.0189	4.4953	6.2822	4.4979	6.3071	4.5202	6.9455	3.8592	6.1173	2.5728	5.0002	2.2521	4.3433	4.4108	8.6605
	N	4.2340	2.5455	4.5928	2.8806	4.7306	2.9894	4.8364	3.1349	4.2284	2.7836	2.9655	2.1691	2.6561	2.5180	2.6057	2.3816
	W	2.9753	2.6393	2.7657	2.5760	5.8692	5.7241	6.3517	6.1400	5.4423	5.2090	5.5900	5.5053	3.4395	3.2209	2.7279	1.9984

		11-Dec		12-Dec		13-Dec		14-Dec		15-Dec		16-Dec		17-Dec		18-Dec	
		Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized
S	D	5.1012	10.1340	2.9426	5.7675	2.7115	5.2729	2.4732	4.8381	2.4429	4.7426	2.3722	4.5852	2.2684	4.3611	2.0961	3.9632
	N	2.5689	2.5145	2.4932	2.3309	2.3550	2.1929	2.2351	1.9389	2.1910	2.1141	2.3155	2.0749	2.4488	2.3727	2.1038	1.9965
	W	2.7078	2.4504	2.8734	2.3941	3.8099	3.4698	4.7146	4.4621	3.5100	3.2225	3.2944	3.0038	3.9007	3.5878	6.8284	6.6278

		19-Dec		20-Dec		21-Dec		22-Dec		23-Dec		24-Dec		25-Dec		26-Dec	
		Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized
S	D	1.9058	3.6603	1.7288	3.2229	1.5924	2.9595	1.5626	3.0176	1.5185	2.7345	1.4438	2.7891	3.8113	7.3707	5.2902	10.4833
	N	2.0589	1.9343	2.1124	2.0093	2.1683	1.9860	2.2501	2.0714	2.3328	2.0686	2.3309	2.2156	2.2330	1.9799	2.1550	1.9894
	W	6.8255	6.6454	4.0592	3.9888	3.6380	3.4711	6.1654	6.0966	8.2585	7.9432	6.0289	5.9600	4.3602	4.0142	3.9467	3.8059

		27-Dec		28-Dec		29-Dec		30-Dec		31-Dec	
		Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized
S	D	3.1512	6.2538	2.0577	3.9408	1.9317	3.5916	1.9722	3.7903	2.0461	4.0311
	N	2.2859	2.1686	2.4646	2.1413	2.5584	2.4971	2.5864	2.5366	2.6374	2.5547
	W	3.7929	3.6296	3.9079	3.7087	3.9912	3.7950	3.9782	3.7834	3.8760	3.6872

Table S10. Comparison of average natural discharge values under different scenarios and the optimized discharge thresholds. **Results for DP2** for sub-normal (dry), normal and above-normal (wet) hydrological conditions.

		1-Jan		2-Jan		3-Jan		4-Jan		5-Jan		6-Jan		7-Jan		8-Jan	
		Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized
S	D	5.9146	5.1633	5.8658	5.8016	5.8241	5.3982	8.0919	7.9802	11.6450	9.9287	11.7683	8.1527	10.0950	6.3245	8.4880	4.9904
	N	11.1707	6.7491	14.4555	9.0357	15.2655	9.3264	11.9407	5.0480	10.3348	3.4738	9.7044	2.8087	9.3389	4.6792	8.9967	6.3579
	W	7.1581	6.7271	6.8927	6.0190	6.5863	6.0478	6.6051	6.3284	6.6644	6.3814	10.1940	9.0921	12.3759	12.1318	9.3709	8.8301

		9-Jan		10-Jan		11-Jan		12-Jan		13-Jan		14-Jan		15-Jan		16-Jan	
		Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized
S	D	8.9824	7.8267	8.2789	7.9379	11.0679	10.8602	12.3161	12.0747	9.0844	8.9502	8.1350	8.0069	7.6004	7.3940	7.1883	6.9447
	N	8.7574	7.8383	8.7861	8.4910	8.9725	8.8030	9.1509	8.8580	9.1956	8.3604	10.6037	10.2016	11.7701	11.6364	9.8958	9.6746
	W	7.5974	6.6675	6.7264	5.7368	8.7881	8.4770	10.8640	10.3762	11.3025	10.3580	8.8636	8.4528	14.3422	13.8453	17.2921	16.8148

		17-Jan		18-Jan		19-Jan		20-Jan		21-Jan		22-Jan		23-Jan		24-Jan	
		Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized
S	D	6.9008	6.7387	6.6818	6.2228	6.3965	6.2099	6.0787	5.7220	5.7248	5.2345	5.3054	5.0008	5.0197	4.5028	4.9104	4.7042
	N	10.5951	10.2670	9.1007	8.3591	8.9189	8.2136	8.8316	7.7451	8.5485	7.6466	8.2429	7.3491	8.1096	7.6890	8.0001	7.8154
	W	10.1931	9.3158	8.0715	7.2717	7.5939	7.0546	10.4792	9.9329	11.9981	11.6958	8.9785	8.4436	8.1560	7.4967	8.0277	7.2152

		25-Jan		26-Jan		27-Jan		28-Jan		29-Jan		30-Jan		31-Jan		1-Feb	
		Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized
S	D	4.6973	4.1178	4.5876	4.3929	4.7392	4.0213	7.3309	7.1011	10.1129	9.9979	10.8676	10.6711	11.4307	10.8745	8.4899	8.1633
	N	7.8016	7.5366	7.6508	7.1563	7.5163	7.3217	8.1773	7.9765	9.5691	9.2567	7.9927	7.5399	7.4508	7.1080	6.8833	6.2222
	W	8.1609	7.3929	8.7973	8.2303	9.9886	9.5668	9.1053	8.7601	9.2133	8.6721	17.5653	17.2366	22.6549	22.4590	20.9461	20.3483

		2-Feb		3-Feb		4-Feb		5-Feb		6-Feb		7-Feb		8-Feb		9-Feb	
		Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized
S	D	6.8656	6.7282	6.8099	6.6133	9.2807	9.0205	9.8594	9.6123	7.6835	7.5104	5.4631	4.9135	4.8250	4.1981	4.6088	4.0372
	N	6.5604	5.8804	6.2866	5.3730	6.1985	5.5013	6.0779	5.6686	6.0441	5.4715	6.1002	5.8084	6.2115	5.8520	6.2336	5.7592
	W	19.2496	18.4912	13.5318	13.2899	8.7213	8.0281	16.1002	15.8882	17.5735	17.2156	12.3853	11.8613	14.9532	14.7334	17.7952	17.4511

		10-Feb		11-Feb		12-Feb		13-Feb		14-Feb		15-Feb		16-Feb		17-Feb	
		Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized
S	D	4.5035	4.1415	4.3850	4.2995	4.2053	3.6044	4.0300	3.5686	3.9246	3.2353	3.7809	3.7293	3.5910	3.0604	3.4488	2.9547
	N	7.1114	6.4764	8.3860	7.9498	7.1648	6.2263	6.8076	6.4940	7.8186	7.0299	9.7197	9.4681	8.1948	7.3534	7.8098	7.4871
	W	15.4372	15.0466	12.9516	12.3782	11.3973	10.8741	9.5173	8.6465	9.0457	8.0864	8.6752	7.8724	8.2531	7.6846	7.8213	7.3213

		18-Feb		19-Feb		20-Feb		21-Feb		22-Feb		23-Feb		24-Feb		25-Feb	
		Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized
S	D	3.4480	3.1434	3.3754	2.7030	3.2275	2.8098	3.0539	2.3635	3.0106	2.5984	3.0654	2.5849	3.0950	2.7817	3.1562	2.5871
	N	7.8037	7.4799	7.8720	7.3843	11.9543	11.4844	15.7759	15.3238	12.8725	12.4596	9.8458	8.6732	8.1697	7.8545	7.8028	7.3936
	W	7.4962	6.2218	7.2444	6.2278	8.3657	7.9573	9.2730	8.4120	8.7926	7.9836	10.3963	9.6157	14.7863	14.4472	13.0764	12.3687

		26-Feb		27-Feb		28-Feb		1-Mar		2-Mar		3-Mar		4-Mar		5-Mar	
		Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized
S	D	3.7836	3.4432	5.1123	4.3975	4.5989	4.1939	4.9216	4.6839	5.3576	5.1038	5.6116	5.2736	6.5544	6.4718	8.8148	8.5601
	N	7.8012	7.3909	7.9878	7.0528	10.4509	10.0862	11.9198	11.6490	10.5412	10.0278	10.9771	10.3815	12.5552	12.2145	13.8471	13.5940
	W	12.2777	11.5278	11.5055	10.5656	9.1705	8.3098	8.1396	7.3829	7.8039	6.8696	7.6944	7.1989	7.5093	6.9778	7.1982	6.4696

		6-Mar		7-Mar		8-Mar		9-Mar		10-Mar		11-Mar		12-Mar		13-Mar	
		Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized
S	D	8.5864	8.3199	6.4772	5.9525	5.5845	4.6865	5.1615	4.9457	4.8999	4.3689	4.6734	4.4299	4.5104	3.8878	4.3855	4.0373
	N	17.1226	16.8061	11.8383	11.4084	10.4361	9.9781	9.8414	9.2835	9.4635	9.0134	9.0982	8.4216	8.6483	8.2479	8.2029	7.5302
	W	6.8094	5.1821	6.4120	5.4655	6.1372	5.2980	5.9552	4.5650	5.9586	5.4829	6.0216	4.9650	6.1866	5.2086	6.4799	5.5402

		14-Mar		15-Mar		16-Mar		17-Mar		18-Mar		19-Mar		20-Mar		21-Mar	
		Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized
S	D	4.2565	3.9005	4.0762	3.6728	3.9447	3.1724	4.0796	3.5735	4.2603	3.3998	5.2744	4.2768	6.5547	5.6764	5.6139	4.3377
	N	7.7115	7.1958	7.2754	6.4271	6.8455	6.1373	6.4829	5.7376	6.1834	5.0151	6.8297	5.7280	7.8390	6.8405	6.6535	5.6038
	W	6.8306	5.6089	6.9802	6.0654	7.0563	5.7148	7.1815	5.4488	7.0834	5.4957	6.8087	5.1562	6.4699	4.6151	6.1759	4.5104

		22-Mar		23-Mar		24-Mar		25-Mar		26-Mar		27-Mar		28-Mar		29-Mar	
		Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized
S	D	4.5790	3.4303	4.2768	3.1932	4.1283	2.7169	4.0052	2.7265	3.8982	2.8197	3.9584	2.7329	5.3337	4.2362	6.3549	5.1690
	N	5.5910	4.0920	5.6560	4.5400	12.0547	10.9851	14.9598	13.9552	8.5633	7.2949	7.3997	6.3561	7.3082	5.8948	7.5194	6.5644
	W	5.9103	4.0643	5.8599	4.3993	12.2058	10.6308	15.2464	13.7401	9.8862	8.3515	11.0741	9.0614	12.6458	11.2812	10.7939	8.7317

		30-Mar		31-Mar		1-Apr		2-Apr		3-Apr		4-Apr		5-Apr		6-Apr	
		Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized
S	D	5.3252	4.0268	5.1824	3.8890	5.1483	3.7045	5.0046	3.6775	10.1444	8.9890	12.7100	11.5487	6.8188	5.7047	5.4791	3.9489
	N	7.7324	6.5971	7.8958	6.4195	7.6946	6.6637	7.4983	6.5540	7.3111	6.4937	7.6244	6.7226	13.9029	13.0314	15.2637	14.3860
	W	12.3276	10.6292	12.9332	11.2585	13.7515	12.2431	17.3913	15.9856	14.9555	13.4831	10.3469	8.7366	8.6734	7.2409	8.3200	6.8539

		7-Apr		8-Apr		9-Apr		10-Apr		11-Apr		12-Apr		13-Apr		14-Apr	
		Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized
S	D	5.2005	3.8899	5.1213	4.0583	5.0586	3.6675	6.9466	5.7742	8.8957	7.6801	6.6243	5.4591	5.8371	4.6557	5.8437	4.7285
	N	8.4938	7.3629	6.7886	5.5873	7.1917	6.2523	8.7546	7.6861	7.5038	6.4876	7.4705	6.1821	7.9810	6.9659	8.5179	7.5668
	W	8.2358	6.5014	8.7917	7.0663	9.6592	7.8611	8.1310	6.2366	7.7902	5.7418	7.7870	6.4488	7.9391	6.0767	7.9975	5.8931

		15-Apr		16-Apr		17-Apr		18-Apr		19-Apr		20-Apr		21-Apr		22-Apr	
		Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized
S	D	6.0217	4.7900	6.1592	4.9091	6.2263	5.0510	6.1975	5.0741	6.0347	4.6672	10.8383	9.7861	14.1574	13.1609	15.7554	14.7685
	N	8.8553	8.0381	9.0656	7.5580	9.1081	8.2979	8.9783	7.9460	8.7938	7.9447	8.5956	7.5281	8.3941	7.6058	8.2986	7.0604
	W	7.8833	6.1861	7.6890	5.8771	7.5705	6.0096	7.7101	5.8845	7.8908	5.8875	8.0227	6.0726	8.1542	6.6081	8.1841	6.6429

		23-Apr		24-Apr		25-Apr		26-Apr		27-Apr		28-Apr		29-Apr		30-Apr	
		Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized
S	D	17.7058	16.7750	13.3488	12.3881	9.8111	8.9239	8.7121	7.8760	7.3318	6.6529	8.0333	7.3522	7.1511	6.2447	6.8859	6.0621
	N	8.1611	7.2953	7.9052	6.6133	7.6453	6.3234	7.4739	6.1458	7.1905	6.4652	6.7995	5.7268	6.4177	5.4023	6.1184	5.0940
	W	8.0410	6.6781	7.7836	5.6901	7.8137	6.4130	8.9584	7.7681	7.9468	6.7389	7.7298	6.3123	7.7552	5.9696	7.8824	6.9869

		1-May		2-May		3-May		4-May		5-May		6-May		7-May		8-May	
		Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized
S	D	6.4244	6.1201	6.2095	5.6812	5.8676	5.6303	5.4689	4.9159	5.1952	4.6827	5.2268	4.4804	6.2950	6.1197	7.5646	7.0481
	N	7.0488	6.3545	8.4384	8.2554	6.1000	5.8327	7.3336	6.6260	12.3509	12.1350	11.1608	11.0245	10.0151	9.7028	13.3469	13.1240
	W	9.7913	8.9231	14.8507	14.2464	14.9078	14.4416	14.2000	14.0951	16.7144	16.5044	13.9847	13.7960	12.1086	11.7335	13.1152	12.9151

		9-May		10-May		11-May		12-May		13-May		14-May		15-May		16-May	
		Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized
S	D	5.9789	5.7231	9.6424	9.5245	13.0555	12.9337	11.7906	11.7157	9.4617	9.0890	5.9519	5.6684	5.0001	4.4944	4.6890	4.0250
	N	13.0348	12.8200	12.4283	11.8218	15.1126	14.9642	14.3281	14.1324	12.4094	12.1097	8.2627	7.0518	7.3048	6.9205	7.0646	6.6622
	W	10.6102	9.8567	8.1731	7.3364	7.4299	6.3583	7.7709	7.2887	7.9114	7.3612	6.9713	6.0879	6.7397	5.7884	6.5895	6.0202

		17-May		18-May		19-May		20-May		21-May		22-May		23-May		24-May	
		Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized
S	D	4.6842	4.2811	4.8680	4.2299	4.6836	4.2398	4.6400	3.9325	4.5322	3.8337	4.3725	3.8258	4.1514	3.6580	3.9079	3.5854
	N	7.1129	6.8922	7.3316	6.9291	7.0418	6.4214	6.7568	6.1000	6.4211	5.6896	6.0409	5.4981	5.6393	5.1248	5.2253	4.7084
	W	6.3784	5.9962	6.0998	4.6354	7.4694	6.8675	9.0098	8.5039	6.1314	5.1889	5.3087	4.4848	4.9284	3.9976	9.5318	8.8629

		25-May		26-May		27-May		28-May		29-May		30-May		31-May		1-Jun	
		Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized
S	D	3.6902	3.0581	3.5172	2.9724	3.4828	3.0123	3.5260	2.6913	3.4655	2.6083	3.4180	2.4118	3.4156	3.0697	3.4484	2.2524
	N	4.8861	4.1581	4.5452	3.5361	4.2268	3.6242	3.8928	2.9735	3.5793	2.4379	3.3399	2.7041	3.1135	2.3958	2.9372	1.8920
	W	12.1865	11.4899	7.3804	6.3897	4.9409	3.9684	4.2585	2.9157	4.0551	2.9437	4.1308	3.3421	4.2041	3.2120	4.1204	2.4090

		2-Jun		3-Jun		4-Jun		5-Jun		6-Jun		7-Jun		8-Jun		9-Jun	
		Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized
S	D	3.4800	2.1155	3.5952	2.3733	3.7703	2.4896	4.1821	2.9407	4.3758	3.1174	4.2881	2.9983	4.0889	2.8487	3.8261	2.7831
	N	2.8075	1.7075	2.7409	1.3328	2.6757	1.3124	2.7528	1.7400	2.9401	1.6693	3.0405	1.8480	3.1155	1.6577	3.1359	1.7055
	W	4.0044	2.3777	3.8554	2.1549	3.8292	2.0298	3.9477	2.3039	4.0790	2.4548	4.1741	2.6887	4.3431	2.5066	4.4125	2.8613

		10-Jun		11-Jun		12-Jun		13-Jun		14-Jun		15-Jun		16-Jun		17-Jun	
		Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized
S	D	3.6138	2.2481	3.5080	2.4204	3.3179	2.1222	3.0836	1.9186	2.9190	1.7955	2.7490	1.5626	2.5728	1.3991	2.4411	1.2127
	N	3.0616	1.7574	2.9328	1.8695	2.7835	1.4517	2.6332	1.2372	2.5159	1.3677	2.5247	1.4584	2.5095	1.3153	2.4507	1.2332
	W	4.4035	2.5182	4.3377	2.7233	4.2673	2.7453	4.0965	2.4414	3.9731	2.0430	3.7865	2.0126	3.5711	1.7456	3.3354	1.5510

		18-Jun		19-Jun		20-Jun		21-Jun		22-Jun		23-Jun		24-Jun		25-Jun	
		Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized
S	D	2.3449	1.0250	2.2678	1.1944	2.2293	1.0381	2.1730	0.9874	2.1482	0.8879	2.1831	1.1021	2.1393	1.0597	2.0576	0.7790
	N	2.4474	1.3794	2.4024	1.3678	2.5742	1.4411	3.4546	2.2365	2.6913	1.4838	2.4252	1.2683	2.3790	1.2935	2.3356	1.1165
	W	3.0952	1.4886	2.8781	1.1440	2.7659	1.2533	5.0593	3.7061	10.4695	9.0091	9.4238	8.0353	5.6661	3.9214	3.6694	1.7337

		26-Jun		27-Jun		28-Jun		29-Jun		30-Jun		1-Jul		2-Jul		3-Jul	
		Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized
S	D	1.9761	0.8550	1.9600	0.6438	1.9864	0.8002	2.0888	0.8909	2.1206	0.8064	2.0721	0.8746	2.2631	1.1344	2.4663	1.4647
	N	2.2649	1.0827	2.1702	1.0538	2.0726	0.9011	1.9929	0.9982	1.9641	0.8283	2.0326	0.9179	2.0276	1.0315	2.0064	0.7721
	W	3.2107	1.7351	3.1207	1.2491	3.0628	1.4453	2.9542	1.5014	2.8148	1.2192	2.7863	1.3714	2.7201	1.3191	2.6770	1.0216

		4-Jul		5-Jul		6-Jul		7-Jul		8-Jul		9-Jul		10-Jul		11-Jul	
		Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized
S	D	2.5841	1.2173	2.7360	1.4799	2.8308	1.8191	2.7985	1.5064	2.6842	1.4747	2.5308	1.3647	2.4426	1.2294	2.5570	1.2607
	N	2.1015	0.8322	2.9099	1.8326	2.6012	1.4424	2.6292	1.4291	2.6762	1.2592	2.6354	1.6551	2.5394	1.1901	2.4362	1.1849
	W	2.5836	0.9722	2.5489	0.9360	2.6547	0.9730	2.8442	1.3590	3.0911	1.2808	3.1771	1.5818	3.2197	1.6556	3.1577	1.1913

		12-Jul		13-Jul		14-Jul		15-Jul		16-Jul		17-Jul		18-Jul		19-Jul	
		Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized
S	D	2.5411	1.3788	2.4149	1.2422	2.2672	1.2680	2.2882	1.0140	2.8442	1.5298	4.0138	2.6622	2.9008	1.6371	2.6293	1.3576
	N	2.2927	1.0867	2.1370	0.8955	1.9899	0.9112	1.8585	0.6819	1.7445	0.5795	1.6468	0.5953	1.5645	0.5223	1.5016	0.4833
	W	3.0057	1.6364	2.8135	1.2734	2.6140	1.1469	2.4226	0.9136	2.2471	0.7356	2.0911	0.6730	1.9683	0.5854	1.8758	0.4367

		20-Jul		21-Jul		22-Jul		23-Jul		24-Jul		25-Jul		26-Jul		27-Jul	
		Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized
S	D	2.5121	1.3944	2.3649	1.3486	2.1981	1.0016	2.0356	0.9168	1.8908	0.5690	1.7669	0.5885	1.6646	0.5476	1.5802	0.5150
	N	1.5252	0.5108	1.5284	0.4726	1.4940	0.4691	1.4457	0.4599	1.3997	0.4366	1.3553	0.4428	1.3141	0.2612	1.3155	0.3619
	W	1.7803	0.4321	1.6930	0.3643	1.6342	0.2609	1.5806	0.2623	1.5266	0.2456	1.4767	0.1707	1.4324	0.2028	1.3946	0.1518

		28-Jul		29-Jul		30-Jul		31-Jul		1-Aug		2-Aug		3-Aug		4-Aug	
		Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized
S	D	1.5117	0.4798	1.4558	0.3264	1.4097	0.3376	1.3713	0.3028	1.3788	0.3191	1.3491	0.2881	1.3229	0.2891	1.3297	0.2558
	N	1.3033	0.3150	1.2767	0.2953	1.2596	0.3063	1.2304	0.2909	1.2145	0.2713	1.7020	0.6097	2.9712	1.5183	2.0623	1.0605
	W	1.3989	0.1550	1.3835	0.1691	1.3486	0.1341	1.3130	0.0979	1.3095	0.0828	1.2787	0.0531	1.2620	0.0546	1.2408	0.0309

		5-Aug		6-Aug		7-Aug		8-Aug		9-Aug		10-Aug		11-Aug		12-Aug	
		Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized
S	D	1.3883	0.2808	1.4116	0.3568	1.4286	0.3996	1.3965	0.3509	1.3471	0.2989	1.2993	0.1974	1.2576	0.1855	1.2207	0.2405
	N	1.9490	0.7974	1.9227	0.7196	1.9091	0.7914	1.8306	0.6511	1.7270	0.6933	1.7017	0.5625	1.6379	0.5742	1.5459	0.5352
	W	1.2147	0.0247	1.1897	0.0115	1.1899	0.0050	1.2581	0.0507	1.2962	0.0774	1.3164	0.0982	1.2902	0.0517	1.2393	0.0364

		13-Aug		14-Aug		15-Aug		16-Aug		17-Aug		18-Aug		19-Aug		20-Aug	
		Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized
S	D	1.1895	0.2084	1.1617	0.1634	1.1368	0.1294	1.1143	0.1265	1.0931	0.1122	1.0732	0.0823	1.0544	0.0946	1.0358	0.0558
	N	1.4532	0.4604	1.3506	0.3193	1.2541	0.2767	1.1709	0.1992	1.1025	0.1271	1.0467	0.1412	1.0013	0.0879	0.9639	0.0551
	W	1.1871	0.0138	1.1409	0.0076	1.1039	0.0136	1.1142	0.0128	1.1051	0.0057	1.0746	0.0050	1.0411	0.0091	1.0104	0.0100

		21-Aug		22-Aug		23-Aug		24-Aug		25-Aug		26-Aug		27-Aug		28-Aug	
		Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized
S	D	1.0180	0.0598	1.0005	0.0354	0.9832	0.0250	0.9664	0.0202	0.9545	0.0087	1.6778	0.4990	2.9627	1.6082	1.8227	0.6715
	N	0.9330	0.0387	0.9071	0.0205	0.8845	0.0130	0.8644	0.0024	0.8465	0.0007	0.8298	0.0030	2.2559	0.8518	3.6919	2.4160
	W	1.4241	0.1638	3.1455	1.5704	3.0259	1.1505	4.0745	2.3095	11.3647	9.5451	26.9707	25.7634	32.8884	31.6406	17.6805	16.3611

		29-Aug		30-Aug		31-Aug		1-Sep		2-Sep		3-Sep		4-Sep		5-Sep	
		Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized
S	D	1.52945	0.3901043	1.3858	0.2865	1.2830	0.2865	1.1551	0.9576	1.1356	0.6538	1.0958	0.7947	1.0393	0.8279	0.9842	0.6840
	N	1.849235	0.64480258	1.4079	0.3838	1.2491	0.3025	1.1095	0.8053	1.0397	0.7965	0.9731	0.6915	0.9127	0.6279	0.8607	0.5660
	W	5.864919	4.10378229	3.1877	1.7329	2.6695	1.1631	2.3503	1.9257	2.3040	1.7896	2.1960	1.5901	2.0497	1.5053	1.8879	1.7056

		6-Sep		7-Sep		8-Sep		9-Sep		10-Sep		11-Sep		12-Sep		13-Sep	
		Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized
S	D	0.9368	0.7161	0.8966	0.6224	0.8640	0.6068	0.8364	0.5433	0.8131	0.5549	0.7934	0.5842	0.7758	0.4810	0.7602	0.5578
	N	0.8162	0.5078	0.7794	0.5489	0.7838	0.4956	0.8525	0.5521	0.8696	0.6514	0.8485	0.5897	0.8134	0.6067	0.7741	0.4934
	W	1.7254	1.2292	1.5706	1.1299	1.4280	0.9838	1.3011	0.7195	1.1902	0.6605	1.0952	0.8452	1.0151	0.5393	0.9808	0.6307

		14-Sep		15-Sep		16-Sep		17-Sep		18-Sep		19-Sep		20-Sep		21-Sep	
		Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized
S	D	0.7455	0.4709	0.7320	0.4538	0.7188	0.4303	0.7065	0.5100	0.6940	0.4278	0.6826	0.4147	0.6917	0.4256	0.7398	0.5500
	N	0.7378	0.5235	0.7063	0.4864	0.7115	0.4555	0.7792	0.3338	0.8229	0.6472	0.7974	0.5185	0.8106	0.5371	0.9826	0.6980
	W	1.1248	0.8614	1.2496	0.7964	1.2572	0.8864	1.2330	0.7046	1.1916	0.8596	1.1586	0.7754	1.1578	0.7787	1.1730	0.7818

		22-Sep		23-Sep		24-Sep		25-Sep		26-Sep		27-Sep		28-Sep		29-Sep	
		Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized
S	D	0.7554	0.5581	0.8421	0.5358	0.9404	0.6220	1.0365	0.6874	1.1944	0.9658	1.3052	0.8581	1.3674	1.0723	1.3562	1.0849
	N	1.1017	0.7723	1.1102	0.6635	1.1255	0.8698	1.1015	0.6695	1.0936	0.6342	10.7247	10.0813	17.5891	17.3877	9.8326	9.6637
	W	1.3118	1.0718	1.5769	1.2108	1.9805	1.2219	2.2870	1.3359	2.4354	1.8032	6.4889	5.9912	8.5096	7.9388	4.9894	4.2672

		30-Sep		1-Oct		2-Oct		3-Oct		4-Oct		5-Oct		6-Oct		7-Oct	
		Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized
S	D	1.2969	0.9542	1.1773	0.1700	1.2374	0.2163	1.3863	0.3214	1.5022	0.4635	1.5845	0.5207	1.5918	0.4458	1.5099	0.3789
	N	6.2029	5.6377	2.9015	1.7289	2.2535	0.8818	2.1350	0.9233	2.1156	1.0217	2.1014	1.0320	2.1161	0.9128	2.0443	1.0367
	W	5.7725	5.3002	3.6169	1.8947	3.1421	1.5520	3.1242	1.6004	7.6494	6.1489	25.4186	24.1455	30.2901	28.9340	20.2852	18.9737

		8-Oct		9-Oct		10-Oct		11-Oct		12-Oct		13-Oct		14-Oct		15-Oct	
		Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized
S	D	1.4399	0.3282	1.3532	0.3299	1.2881	0.2631	1.2656	0.2316	1.2076	0.2071	1.8389	0.6029	3.0687	1.7698	1.9005	0.8051
	N	1.9072	0.6985	1.8051	0.6016	1.7745	0.6880	1.6892	0.4974	1.5765	0.5370	1.5210	0.4659	1.5920	0.4686	1.6083	0.4765
	W	16.3206	14.8188	14.7483	13.3618	14.3347	12.9802	12.4702	11.1529	9.1980	7.4608	7.9880	6.2630	7.6522	5.6240	7.4519	6.0296

		16-Oct		17-Oct		18-Oct		19-Oct		20-Oct		21-Oct		22-Oct		23-Oct	
		Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized
S	D	1.7236	0.5720	1.7253	0.4519	1.7144	0.6342	1.6830	0.4644	2.0260	0.7577	3.3395	2.2814	2.3925	1.1296	2.3433	1.3143
	N	1.6492	0.5773	1.6809	0.4799	1.6781	0.5851	1.7291	0.5318	1.8553	0.7855	1.9362	0.8112	1.9646	0.8525	1.9078	0.6215
	W	7.4072	5.6920	7.4482	5.7782	7.3653	5.5991	7.4474	4.8515	7.4316	5.7609	7.3134	5.7374	8.4531	6.7027	13.4410	12.0682

		24-Oct		25-Oct		26-Oct		27-Oct		28-Oct		29-Oct		30-Oct		31-Oct	
		Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized
S	D	2.5711	1.4334	2.6796	1.5318	2.6292	1.3578	2.5363	1.4659	2.6110	1.4194	2.6551	1.6187	2.6638	1.5686	2.7915	1.6076
	N	1.7890	0.6003	1.6431	0.5686	1.5113	0.3991	1.3855	0.3480	1.3430	0.3518	1.2682	0.2575	1.1648	0.2096	1.0947	0.1674
	W	11.8480	10.4146	8.7991	7.2913	9.1711	7.6015	6.9885	5.2715	6.2949	4.7133	5.9132	4.3694	8.0965	6.0660	9.0093	7.4512

		1-Nov		2-Nov		3-Nov		4-Nov		5-Nov		6-Nov		7-Nov		8-Nov	
		Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized
S	D	2.9771	1.6847	3.0125	1.5303	3.1773	2.0319	3.2931	2.1834	3.5885	2.5129	6.1260	4.8771	6.3180	5.1842	5.0973	3.6703
	N	1.1943	0.1961	1.3106	0.3286	1.3727	0.4079	1.5797	0.4469	2.1670	1.0331	2.7304	1.5004	4.3701	2.8853	3.2863	2.1982
	W	5.7257	3.1375	4.7647	2.4272	4.4774	2.7557	4.4685	3.0406	4.5189	2.9150	4.4916	2.7266	4.2842	2.5924	3.9757	2.2810

		9-Nov		10-Nov		11-Nov		12-Nov		13-Nov		14-Nov		15-Nov		16-Nov	
		Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized
S	D	4.8060	3.5922	4.6694	3.5772	4.5538	3.1026	4.4774	2.9603	6.4936	5.2165	8.1117	7.1117	5.2935	4.3082	4.5837	3.3500
	N	3.1422	1.9422	11.5229	10.5560	19.0863	18.0476	11.7063	10.6288	6.8339	5.4557	5.9757	4.8146	6.1514	4.5122	6.5231	5.4916
	W	3.6798	2.1422	3.5327	1.4782	3.4449	1.7786	5.5205	3.6550	7.5281	6.0633	5.2497	3.7623	5.3719	3.7031	5.9470	4.1866

		17-Nov		18-Nov		19-Nov		20-Nov		21-Nov		22-Nov		23-Nov		24-Nov	
		Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized
S	D	4.6373	3.4983	4.7711	3.5476	4.9577	3.7909	5.1780	4.1034	5.4225	4.1860	5.7324	4.4107	6.1215	5.0690	6.4319	5.4832
	N	6.8663	5.9431	7.1498	6.2140	9.7985	8.8578	20.4104	19.3965	21.9968	21.1020	13.1975	12.2078	8.4870	7.2448	10.9112	9.8408
	W	8.4686	6.9315	10.7413	9.2208	10.8529	9.5326	18.3932	17.0213	17.4201	16.0844	11.8470	10.4315	10.3684	8.8995	8.6730	7.2564

		25-Nov		26-Nov		27-Nov		28-Nov		29-Nov		30-Nov		1-Dec		2-Dec	
		Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized
S	D	6.4513	5.5015	6.4030	5.0514	9.1374	8.1889	9.1685	8.2012	7.0362	5.9620	8.5219	7.4617	11.8651	11.7668	10.0751	9.8741
	N	18.4944	17.4275	25.0210	24.0459	19.0425	18.0886	14.4285	13.5063	11.0000	9.9628	7.6894	6.2212	6.7946	6.4621	11.4421	10.1463
	W	10.7975	9.1686	13.4020	12.1649	13.2082	10.9470	12.4569	10.9623	13.4205	11.9724	18.5991	17.2300	15.0131	14.7765	9.6899	9.1857

		3-Dec		4-Dec		5-Dec		6-Dec		7-Dec		8-Dec		9-Dec		10-Dec	
		Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized
S	D	7.7090	7.4423	7.0569	6.9833	6.9404	6.5957	6.8107	6.3461	6.5956	6.2245	6.2690	5.8504	6.3136	6.0495	10.2753	10.0300
	N	14.5470	13.1418	13.7723	12.0581	13.5443	11.6773	11.8334	10.1177	9.6646	8.1311	7.0834	6.4586	6.2957	5.9625	6.0645	5.5210
	W	7.6470	6.4255	7.4820	6.8172	17.6987	17.5244	19.0386	18.8656	12.9715	12.7633	12.4191	12.0923	8.7724	8.2943	8.5334	7.8725

		11-Dec		12-Dec		13-Dec		14-Dec		15-Dec		16-Dec		17-Dec		18-Dec	
		Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized
S	D	10.2047	10.0881	8.1297	8.0495	7.0774	6.8503	5.5408	5.1575	5.2680	4.9749	5.0800	4.8578	4.8355	4.6512	4.5273	3.9280
	N	5.9890	5.8548	5.8178	5.1219	5.5535	4.7771	5.3236	4.5468	5.2430	4.8032	5.4179	4.4548	5.4994	4.6098	5.1485	4.4179
	W	7.6606	6.7058	7.7289	6.9705	9.2437	8.8601	11.7662	10.6656	9.9129	7.7021	8.6415	6.3430	12.1635	8.2762	16.5726	10.0614

		19-Dec		20-Dec		21-Dec		22-Dec		23-Dec		24-Dec		25-Dec		26-Dec	
		Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized
S	D	4.2104	3.4531	3.9201	3.6043	3.6634	3.2629	3.6055	3.3825	3.6101	3.0997	3.6785	3.3651	12.3746	9.8510	16.9485	13.7240
	N	5.1689	4.8500	5.8035	5.0492	5.5200	4.5101	5.6675	5.2047	5.7225	5.5381	5.6032	5.2028	5.3972	4.6826	6.4477	6.2730
	W	14.2411	5.9772	9.7876	1.3401	9.4439	1.2008	14.1592	5.8676	18.7559	10.5803	16.7408	8.2675	12.8848	5.2465	10.5072	3.6997

		27-Dec		28-Dec		29-Dec		30-Dec		31-Dec	
		Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized	Natural	Optimized
S	D	9.0385	6.3488	6.2471	6.1580	7.4868	7.2181	9.2409	9.1191	7.4150	7.2491
	N	7.0936	6.4533	6.9162	6.6080	7.8049	7.5119	6.0031	5.1185	5.8356	5.5903
	W	9.9852	4.7055	9.3109	6.4607	9.0359	6.4435	8.7571	7.2000	8.4092	7.8879