SMB (Sverdrup-Munk-Bretschneider) Wave Prediction Model

This table presents significant wave height (Hs), significant wave period (Ts), and minimum storm duration for various combinations of wind speed, fetch, and water depth, calculated using the SMB model.

U10 (m/s)	Fetch (km)	Depth (m)	Hs (m)	Ts (s)	Dur (h)
10.0	5	5	0.44	2.44	1.09
10.0	5	10	0.45	2.45	1.09
10.0	5	25	0.45	2.45	1.09
10.0	5	50	0.45	2.45	1.09
10.0	5	1000	0.45	2.45	1.09
10.0	10	5	0.61	3.06	1.73
10.0	10	10	0.63	3.08	1.73
10.0	10	25	0.63	3.08	1.73
10.0	10	50	0.63	3.09	1.73
10.0	10	1000	0.63	3.09	1.73
10.0	15	5	0.73	3.47	2.27
10.0	15	10	0.77	3.51	2.27
10.0	15	25	0.77	3.53	2.27
10.0	15	50	0.77	3.53	2.27
10.0	15	1000	0.77	3.53	2.27
10.0	20	5	0.80	3.77	2.75
10.0	20	10	0.88	3.85	2.75
10.0	20	25	0.89	3.88	2.75
10.0	20	50	0.89	3.88	2.75

U10 (m/s)	Fetch (km)	Depth (m)	Hs (m)	Ts (s)	Dur (h)
10.0	20	1000	0.89	3.89	2.75
10.0	25	5	0.86	4.00	3.19
10.0	25	10	0.97	4.13	3.19
10.0	25	25	0.99	4.17	3.19
10.0	25	50	1.00	4.18	3.19
10.0	25	1000	1.00	4.19	3.19
10.0	30	5	0.89	4.17	3.60
10.0	30	10	1.05	4.36	3.60
10.0	30	25	1.09	4.43	3.60
10.0	30	50	1.09	4.44	3.60
10.0	30	1000	1.09	4.45	3.60
10.0	35	5	0.92	4.31	3.99
10.0	35	10	1.12	4.56	3.99
10.0	35	25	1.17	4.65	3.99
10.0	35	50	1.18	4.67	3.99
10.0	35	1000	1.18	4.68	3.99
10.0	40	5	0.93	4.41	4.36
10.0	40	10	1.18	4.73	4.36
10.0	40	25	1.25	4.86	4.36
10.0	40	50	1.26	4.88	4.36
10.0	40	1000	1.26	4.89	4.36
10.0	45	5	0.94	4.49	4.72
10.0	45	10	1.23	4.88	4.72

U10 (m/s)	Fetch (km)	Depth (m)	Hs (m)	Ts (s)	Dur (h)
10.0	45	25	1.32	5.04	4.72
10.0	45	50	1.33	5.07	4.72
10.0	45	1000	1.34	5.09	4.72
10.0	50	5	0.95	4.56	5.06
10.0	50	10	1.28	5.01	5.06
10.0	50	25	1.39	5.20	5.06
10.0	50	50	1.40	5.24	5.06
10.0	50	1000	1.41	5.27	5.06
15.0	5	5	0.72	2.89	0.92
15.0	5	10	0.73	2.89	0.92
15.0	5	25	0.73	2.89	0.92
15.0	5	50	0.73	2.89	0.92
15.0	5	1000	0.73	2.89	0.92
15.0	10	5	0.97	3.61	1.47
15.0	10	10	1.03	3.64	1.47
15.0	10	25	1.04	3.64	1.47
15.0	10	50	1.04	3.64	1.47
15.0	10	1000	1.04	3.64	1.47
15.0	15	5	1.10	4.10	1.92
15.0	15	10	1.25	4.15	1.92
15.0	15	25	1.27	4.17	1.92
15.0	15	50	1.27	4.17	1.92
15.0	15	1000	1.27	4.17	1.92

U10 (m/s)	Fetch (km)	Depth (m)	Hs (m)	Ts (s)	Dur (h)
15.0	20	5	1.18	4.45	2.33
15.0	20	10	1.41	4.56	2.33
15.0	20	25	1.47	4.58	2.33
15.0	20	50	1.47	4.59	2.33
15.0	20	1000	1.47	4.59	2.33
15.0	25	5	1.22	4.72	2.70
15.0	25	10	1.55	4.89	2.70
15.0	25	25	1.64	4.93	2.70
15.0	25	50	1.64	4.94	2.70
15.0	25	1000	1.64	4.95	2.70
15.0	30	5	1.24	4.93	3.05
15.0	30	10	1.66	5.16	3.05
15.0	30	25	1.79	5.24	3.05
15.0	30	50	1.80	5.25	3.05
15.0	30	1000	1.80	5.26	3.05
15.0	35	5	1.25	5.09	3.38
15.0	35	10	1.75	5.40	3.38
15.0	35	25	1.93	5.51	3.38
15.0	35	50	1.94	5.53	3.38
15.0	35	1000	1.94	5.53	3.38
15.0	40	5	1.25	5.21	3.69
15.0	40	10	1.82	5.61	3.69
15.0	40	25	2.05	5.75	3.69

U10 (m/s)	Fetch (km)	Depth (m)	Hs (m)	Ts (s)	Dur (h)
15.0	40	50	2.07	5.77	3.69
15.0	40	1000	2.08	5.78	3.69
15.0	45	5	1.25	5.31	4.00
15.0	45	10	1.88	5.79	4.00
15.0	45	25	2.17	5.97	4.00
15.0	45	50	2.20	6.00	4.00
15.0	45	1000	2.20	6.02	4.00
15.0	50	5	1.25	5.38	4.29
15.0	50	10	1.92	5.95	4.29
15.0	50	25	2.28	6.18	4.29
15.0	50	50	2.32	6.21	4.29
15.0	50	1000	2.32	6.23	4.29
20.0	5	5	1.01	3.25	0.82
20.0	5	10	1.04	3.25	0.82
20.0	5	25	1.05	3.25	0.82
20.0	5	50	1.05	3.25	0.82
20.0	5	1000	1.05	3.25	0.82
20.0	10	5	1.30	4.06	1.30
20.0	10	10	1.45	4.09	1.30
20.0	10	25	1.48	4.10	1.30
20.0	10	50	1.48	4.10	1.30
20.0	10	1000	1.48	4.10	1.30
20.0	15	5	1.42	4.60	1.71

U10 (m/s)	Fetch (km)	Depth (m)	Hs (m)	Ts (s)	Dur (h)
20.0	15	10	1.74	4.67	1.71
20.0	15	25	1.81	4.69	1.71
20.0	15	50	1.81	4.69	1.71
20.0	15	1000	1.81	4.69	1.71
20.0	20	5	1.47	5.00	2.07
20.0	20	10	1.95	5.12	2.07
20.0	20	25	2.08	5.16	2.07
20.0	20	50	2.09	5.16	2.07
20.0	20	1000	2.09	5.17	2.07
20.0	25	5	1.49	5.29	2.40
20.0	25	10	2.11	5.50	2.40
20.0	25	25	2.32	5.55	2.40
20.0	25	50	2.34	5.56	2.40
20.0	25	1000	2.34	5.57	2.40
20.0	30	5	1.50	5.52	2.71
20.0	30	10	2.22	5.81	2.71
20.0	30	25	2.53	5.90	2.71
20.0	30	50	2.56	5.91	2.71
20.0	30	1000	2.56	5.91	2.71
20.0	35	5	1.50	5.69	3.00
20.0	35	10	2.31	6.08	3.00
20.0	35	25	2.73	6.20	3.00
20.0	35	50	2.76	6.22	3.00

U10 (m/s)	Fetch (km)	Depth (m)	Hs (m)	Ts (s)	Dur (h)
20.0	35	1000	2.77	6.23	3.00
20.0	40	5	1.50	5.82	3.28
20.0	40	10	2.37	6.31	3.28
20.0	40	25	2.90	6.48	3.28
20.0	40	50	2.95	6.50	3.28
20.0	40	1000	2.96	6.51	3.28
20.0	45	5	1.50	5.92	3.55
20.0	45	10	2.41	6.51	3.55
20.0	45	25	3.06	6.73	3.55
20.0	45	50	3.13	6.76	3.55
20.0	45	1000	3.14	6.77	3.55
20.0	50	5	1.50	6.00	3.81
20.0	50	10	2.44	6.69	3.81
20.0	50	25	3.21	6.96	3.81
20.0	50	50	3.29	7.00	3.81
20.0	50	1000	3.31	7.01	3.81
25.0	5	5	1.30	3.56	0.75
25.0	5	10	1.37	3.56	0.75
25.0	5	25	1.38	3.57	0.75
25.0	5	50	1.38	3.57	0.75
25.0	5	1000	1.38	3.57	0.75
25.0	10	5	1.60	4.45	1.19
25.0	10	10	1.89	4.48	1.19

U10 (m/s)	Fetch (km)	Depth (m)	Hs (m)	Ts (s)	Dur (h)
25.0	10	25	1.94	4.49	1.19
25.0	10	50	1.95	4.49	1.19
25.0	10	1000	1.95	4.49	1.19
25.0	15	5	1.69	5.04	1.56
25.0	15	10	2.23	5.12	1.56
25.0	15	25	2.37	5.14	1.56
25.0	15	50	2.38	5.14	1.56
25.0	15	1000	2.39	5.14	1.56
25.0	20	5	1.72	5.46	1.89
25.0	20	10	2.46	5.61	1.89
25.0	20	25	2.73	5.65	1.89
25.0	20	50	2.75	5.66	1.89
25.0	20	1000	2.76	5.66	1.89
25.0	25	5	1.72	5.78	2.19
25.0	25	10	2.61	6.02	2.19
25.0	25	25	3.04	6.09	2.19
25.0	25	50	3.07	6.10	2.19
25.0	25	1000	3.08	6.10	2.19
25.0	30	5	1.73	6.01	2.47
25.0	30	10	2.71	6.36	2.47
25.0	30	25	3.31	6.46	2.47
25.0	30	50	3.37	6.48	2.47
25.0	30	1000	3.37	6.48	2.47

U10 (m/s)	Fetch (km)	Depth (m)	Hs (m)	Ts (s)	Dur (h)
25.0	35	5	1.73	6.19	2.74
25.0	35	10	2.78	6.65	2.74
25.0	35	25	3.55	6.80	2.74
25.0	35	50	3.63	6.82	2.74
25.0	35	1000	3.64	6.82	2.74
25.0	40	5	1.73	6.33	3.00
25.0	40	10	2.82	6.90	3.00
25.0	40	25	3.77	7.10	3.00
25.0	40	50	3.88	7.12	3.00
25.0	40	1000	3.90	7.13	3.00
25.0	45	5	1.73	6.43	3.24
25.0	45	10	2.85	7.12	3.24
25.0	45	25	3.96	7.37	3.24
25.0	45	50	4.11	7.41	3.24
25.0	45	1000	4.13	7.42	3.24
25.0	50	5	1.73	6.51	3.48
25.0	50	10	2.87	7.31	3.48
25.0	50	25	4.14	7.62	3.48
25.0	50	50	4.32	7.67	3.48
25.0	50	1000	4.36	7.68	3.48
30.0	5	5	1.57	3.83	0.70
30.0	5	10	1.70	3.84	0.70
30.0	5	25	1.72	3.84	0.70

U10 (m/s)	Fetch (km)	Depth (m)	Hs (m)	Ts (s)	Dur (h)
30.0	5	50	1.72	3.84	0.70
30.0	5	1000	1.72	3.84	0.70
30.0	10	5	1.85	4.79	1.10
30.0	10	10	2.32	4.83	1.10
30.0	10	25	2.43	4.84	1.10
30.0	10	50	2.44	4.84	1.10
30.0	10	1000	2.44	4.84	1.10
30.0	15	5	1.92	5.42	1.45
30.0	15	10	2.70	5.51	1.45
30.0	15	25	2.96	5.54	1.45
30.0	15	50	2.98	5.54	1.45
30.0	15	1000	2.99	5.54	1.45
30.0	20	5	1.93	5.87	1.75
30.0	20	10	2.92	6.04	1.75
30.0	20	25	3.40	6.09	1.75
30.0	20	50	3.44	6.10	1.75
30.0	20	1000	3.45	6.10	1.75
30.0	25	5	1.93	6.20	2.03
30.0	25	10	3.06	6.48	2.03
30.0	25	25	3.78	6.56	2.03
30.0	25	50	3.84	6.57	2.03
30.0	25	1000	3.85	6.57	2.03
30.0	30	5	1.93	6.44	2.30

U10 (m/s)	Fetch (km)	Depth (m)	Hs (m)	Ts (s)	Dur (h)
30.0	30	10	3.14	6.84	2.30
30.0	30	25	4.10	6.96	2.30
30.0	30	50	4.21	6.98	2.30
30.0	30	1000	4.22	6.98	2.30
30.0	35	5	1.93	6.63	2.54
30.0	35	10	3.19	7.15	2.54
30.0	35	25	4.38	7.32	2.54
30.0	35	50	4.54	7.34	2.54
30.0	35	1000	4.56	7.35	2.54
30.0	40	5	1.93	6.76	2.78
30.0	40	10	3.21	7.42	2.78
30.0	40	25	4.63	7.65	2.78
30.0	40	50	4.84	7.68	2.78
30.0	40	1000	4.88	7.69	2.78
30.0	45	5	1.93	6.87	3.01
30.0	45	10	3.23	7.65	3.01
30.0	45	25	4.85	7.94	3.01
30.0	45	50	5.13	7.98	3.01
30.0	45	1000	5.17	7.99	3.01
30.0	50	5	1.93	6.94	3.23
30.0	50	10	3.24	7.86	3.23
30.0	50	25	5.05	8.21	3.23
30.0	50	50	5.39	8.26	3.23

U10 (m/s)	Fetch (km)	Depth (m)	Hs (m)	Ts (s)	Dur (h)
30.0	50	1000	5.45	8.28	3.23