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	0.82
10.0	5	10	0.45	2.45	0.82
10.0	5	25	0.45	2.45	0.82
10.0	5	50	0.45	2.45	0.82
10.0	5	1000	0.45	2.45	0.82
10.0	10	5	0.61	3.06	1.39
10.0	10	10	0.63	3.08	1.39
10.0	10	25	0.63	3.08	1.39
10.0	10	50	0.63	3.09	1.39
10.0	10	1000	0.63	3.09	1.39
10.0	15	5	0.73	3.47	1.89
10.0	15	10	0.77	3.51	1.89
10.0	15	25	0.77	3.53	1.89
10.0	15	50	0.77	3.53	1.89
10.0	15	1000	0.77	3.53	1.89
10.0	20	5	0.80	3.77	2.36
10.0	20	10	0.88	3.85	2.36
10.0	20	25	0.89	3.88	2.36
10.0	20	50	0.89	3.88	2.36

U10 (m/s)	Fetch (km)	Depth (m)	Hs (m)	Ts (s)	Dur (h)
10.0	20	1000	0.89	3.89	2.36
10.0	25	5	0.86	4.00	2.80
10.0	25	10	0.97	4.13	2.80
10.0	25	25	0.99	4.17	2.80
10.0	25	50	1.00	4.18	2.80
10.0	25	1000	1.00	4.19	2.80
10.0	30	5	0.89	4.17	3.22
10.0	30	10	1.05	4.36	3.22
10.0	30	25	1.09	4.43	3.22
10.0	30	50	1.09	4.44	3.22
10.0	30	1000	1.09	4.45	3.22
10.0	35	5	0.92	4.31	3.63
10.0	35	10	1.12	4.56	3.63
10.0	35	25	1.17	4.65	3.63
10.0	35	50	1.18	4.67	3.63
10.0	35	1000	1.18	4.68	3.63
10.0	40	5	0.93	4.41	4.03
10.0	40	10	1.18	4.73	4.03
10.0	40	25	1.25	4.86	4.03
10.0	40	50	1.26	4.88	4.03
10.0	40	1000	1.26	4.89	4.03
10.0	45	5	0.94	4.49	4.41
10.0	45	10	1.23	4.88	4.41

U10 (m/s)	Fetch (km)	Depth (m)	Hs (m)	Ts (s)	Dur (h)
10.0	45	25	1.32	5.04	4.41
10.0	45	50	1.33	5.07	4.41
10.0	45	1000	1.34	5.09	4.41
10.0	50	5	0.95	4.56	4.79
10.0	50	10	1.28	5.01	4.79
10.0	50	25	1.39	5.20	4.79
10.0	50	50	1.40	5.24	4.79
10.0	50	1000	1.41	5.27	4.79
15.0	5	5	0.72	2.89	0.63
15.0	5	10	0.73	2.89	0.63
15.0	5	25	0.73	2.89	0.63
15.0	5	50	0.73	2.89	0.63
15.0	5	1000	0.73	2.89	0.63
15.0	10	5	0.97	3.61	1.07
15.0	10	10	1.03	3.64	1.07
15.0	10	25	1.04	3.64	1.07
15.0	10	50	1.04	3.64	1.07
15.0	10	1000	1.04	3.64	1.07
15.0	15	5	1.10	4.10	1.45
15.0	15	10	1.25	4.15	1.45
15.0	15	25	1.27	4.17	1.45
15.0	15	50	1.27	4.17	1.45
15.0	15	1000	1.27	4.17	1.45

U10 (m/s)	Fetch (km)	Depth (m)	Hs (m)	Ts (s)	Dur (h)
15.0	20	5	1.18	4.45	1.81
15.0	20	10	1.41	4.56	1.81
15.0	20	25	1.47	4.58	1.81
15.0	20	50	1.47	4.59	1.81
15.0	20	1000	1.47	4.59	1.81
15.0	25	5	1.22	4.72	2.15
15.0	25	10	1.55	4.89	2.15
15.0	25	25	1.64	4.93	2.15
15.0	25	50	1.64	4.94	2.15
15.0	25	1000	1.64	4.95	2.15
15.0	30	5	1.24	4.93	2.47
15.0	30	10	1.66	5.16	2.47
15.0	30	25	1.79	5.24	2.47
15.0	30	50	1.80	5.25	2.47
15.0	30	1000	1.80	5.26	2.47
15.0	35	5	1.25	5.09	2.78
15.0	35	10	1.75	5.40	2.78
15.0	35	25	1.93	5.51	2.78
15.0	35	50	1.94	5.53	2.78
15.0	35	1000	1.94	5.53	2.78
15.0	40	5	1.25	5.21	3.08
15.0	40	10	1.82	5.61	3.08
15.0	40	25	2.05	5.75	3.08

U10 (m/s)	Fetch (km)	Depth (m)	Hs (m)	Ts (s)	Dur (h)
15.0	40	50	2.07	5.77	3.08
15.0	40	1000	2.08	5.78	3.08
15.0	45	5	1.25	5.31	3.37
15.0	45	10	1.88	5.79	3.37
15.0	45	25	2.17	5.97	3.37
15.0	45	50	2.20	6.00	3.37
15.0	45	1000	2.20	6.02	3.37
15.0	50	5	1.25	5.38	3.65
15.0	50	10	1.92	5.95	3.65
15.0	50	25	2.28	6.18	3.65
15.0	50	50	2.32	6.21	3.65
15.0	50	1000	2.32	6.23	3.65
20.0	5	5	1.01	3.25	0.52
20.0	5	10	1.04	3.25	0.52
20.0	5	25	1.05	3.25	0.52
20.0	5	50	1.05	3.25	0.52
20.0	5	1000	1.05	3.25	0.52
20.0	10	5	1.30	4.06	0.89
20.0	10	10	1.45	4.09	0.89
20.0	10	25	1.48	4.10	0.89
20.0	10	50	1.48	4.10	0.89
20.0	10	1000	1.48	4.10	0.89
20.0	15	5	1.42	4.60	1.21

U10 (m/s)	Fetch (km)	Depth (m)	Hs (m)	Ts (s)	Dur (h)
20.0	15	10	1.74	4.67	1.21
20.0	15	25	1.81	4.69	1.21
20.0	15	50	1.81	4.69	1.21
20.0	15	1000	1.81	4.69	1.21
20.0	20	5	1.47	5.00	1.50
20.0	20	10	1.95	5.12	1.50
20.0	20	25	2.08	5.16	1.50
20.0	20	50	2.09	5.16	1.50
20.0	20	1000	2.09	5.17	1.50
20.0	25	5	1.49	5.29	1.78
20.0	25	10	2.11	5.50	1.78
20.0	25	25	2.32	5.55	1.78
20.0	25	50	2.34	5.56	1.78
20.0	25	1000	2.34	5.57	1.78
20.0	30	5	1.50	5.52	2.05
20.0	30	10	2.22	5.81	2.05
20.0	30	25	2.53	5.90	2.05
20.0	30	50	2.56	5.91	2.05
20.0	30	1000	2.56	5.91	2.05
20.0	35	5	1.50	5.69	2.30
20.0	35	10	2.31	6.08	2.30
20.0	35	25	2.73	6.20	2.30
20.0	35	50	2.76	6.22	2.30

U10 (m/s)	Fetch (km)	Depth (m)	Hs (m)	Ts (s)	Dur (h)
20.0	35	1000	2.77	6.23	2.30
20.0	40	5	1.50	5.82	2.55
20.0	40	10	2.37	6.31	2.55
20.0	40	25	2.90	6.48	2.55
20.0	40	50	2.95	6.50	2.55
20.0	40	1000	2.96	6.51	2.55
20.0	45	5	1.50	5.92	2.79
20.0	45	10	2.41	6.51	2.79
20.0	45	25	3.06	6.73	2.79
20.0	45	50	3.13	6.76	2.79
20.0	45	1000	3.14	6.77	2.79
20.0	50	5	1.50	6.00	3.02
20.0	50	10	2.44	6.69	3.02
20.0	50	25	3.21	6.96	3.02
20.0	50	50	3.29	7.00	3.02
20.0	50	1000	3.31	7.01	3.02
25.0	5	5	1.30	3.56	0.45
25.0	5	10	1.37	3.56	0.45
25.0	5	25	1.38	3.57	0.45
25.0	5	50	1.38	3.57	0.45
25.0	5	1000	1.38	3.57	0.45
25.0	10	5	1.60	4.45	0.77
25.0	10	10	1.89	4.48	0.77

U10 (m/s)	Fetch (km)	Depth (m)	Hs (m)	Ts (s)	Dur (h)
25.0	10	25	1.94	4.49	0.77
25.0	10	50	1.95	4.49	0.77
25.0	10	1000	1.95	4.49	0.77
25.0	15	5	1.69	5.04	1.05
25.0	15	10	2.23	5.12	1.05
25.0	15	25	2.37	5.14	1.05
25.0	15	50	2.38	5.14	1.05
25.0	15	1000	2.39	5.14	1.05
25.0	20	5	1.72	5.46	1.30
25.0	20	10	2.46	5.61	1.30
25.0	20	25	2.73	5.65	1.30
25.0	20	50	2.75	5.66	1.30
25.0	20	1000	2.76	5.66	1.30
25.0	25	5	1.72	5.78	1.54
25.0	25	10	2.61	6.02	1.54
25.0	25	25	3.04	6.09	1.54
25.0	25	50	3.07	6.10	1.54
25.0	25	1000	3.08	6.10	1.54
25.0	30	5	1.73	6.01	1.77
25.0	30	10	2.71	6.36	1.77
25.0	30	25	3.31	6.46	1.77
25.0	30	50	3.37	6.48	1.77
25.0	30	1000	3.37	6.48	1.77

U10 (m/s)	Fetch (km)	Depth (m)	Hs (m)	Ts (s)	Dur (h)
25.0	35	5	1.73	6.19	1.99
25.0	35	10	2.78	6.65	1.99
25.0	35	25	3.55	6.80	1.99
25.0	35	50	3.63	6.82	1.99
25.0	35	1000	3.64	6.82	1.99
25.0	40	5	1.73	6.33	2.21
25.0	40	10	2.82	6.90	2.21
25.0	40	25	3.77	7.10	2.21
25.0	40	50	3.88	7.12	2.21
25.0	40	1000	3.90	7.13	2.21
25.0	45	5	1.73	6.43	2.42
25.0	45	10	2.85	7.12	2.42
25.0	45	25	3.96	7.37	2.42
25.0	45	50	4.11	7.41	2.42
25.0	45	1000	4.13	7.42	2.42
25.0	50	5	1.73	6.51	2.62
25.0	50	10	2.87	7.31	2.62
25.0	50	25	4.14	7.62	2.62
25.0	50	50	4.32	7.67	2.62
25.0	50	1000	4.36	7.68	2.62
30.0	5	5	1.57	3.83	0.41
30.0	5	10	1.70	3.84	0.41
30.0	5	25	1.72	3.84	0.41

U10 (m/s)	Fetch (km)	Depth (m)	Hs (m)	Ts (s)	Dur (h)
30.0	5	50	1.72	3.84	0.41
30.0	5	1000	1.72	3.84	0.41
30.0	10	5	1.85	4.79	0.69
30.0	10	10	2.32	4.83	0.69
30.0	10	25	2.43	4.84	0.69
30.0	10	50	2.44	4.84	0.69
30.0	10	1000	2.44	4.84	0.69
30.0	15	5	1.92	5.42	0.93
30.0	15	10	2.70	5.51	0.93
30.0	15	25	2.96	5.54	0.93
30.0	15	50	2.98	5.54	0.93
30.0	15	1000	2.99	5.54	0.93
30.0	20	5	1.93	5.87	1.16
30.0	20	10	2.92	6.04	1.16
30.0	20	25	3.40	6.09	1.16
30.0	20	50	3.44	6.10	1.16
30.0	20	1000	3.45	6.10	1.16
30.0	25	5	1.93	6.20	1.37
30.0	25	10	3.06	6.48	1.37
30.0	25	25	3.78	6.56	1.37
30.0	25	50	3.84	6.57	1.37
30.0	25	1000	3.85	6.57	1.37
30.0	30	5	1.93	6.44	1.58

U10 (m/s)	Fetch (km)	Depth (m)	Hs (m)	Ts (s)	Dur (h)
30.0	30	10	3.14	6.84	1.58
30.0	30	25	4.10	6.96	1.58
30.0	30	50	4.21	6.98	1.58
30.0	30	1000	4.22	6.98	1.58
30.0	35	5	1.93	6.63	1.77
30.0	35	10	3.19	7.15	1.77
30.0	35	25	4.38	7.32	1.77
30.0	35	50	4.54	7.34	1.77
30.0	35	1000	4.56	7.35	1.77
30.0	40	5	1.93	6.76	1.96
30.0	40	10	3.21	7.42	1.96
30.0	40	25	4.63	7.65	1.96
30.0	40	50	4.84	7.68	1.96
30.0	40	1000	4.88	7.69	1.96
30.0	45	5	1.93	6.87	2.15
30.0	45	10	3.23	7.65	2.15
30.0	45	25	4.85	7.94	2.15
30.0	45	50	5.13	7.98	2.15
30.0	45	1000	5.17	7.99	2.15
30.0	50	5	1.93	6.94	2.33
30.0	50	10	3.24	7.86	2.33
30.0	50	25	5.05	8.21	2.33
30.0	50	50	5.39	8.26	2.33

U10 (m/s)	Fetch (km)	Depth (m)	Hs (m)	Ts (s)	Dur (h)
30.0	50	1000	5.45	8.28	2.33