

Appendix V5-1R

Simulated Project-affected Lake Volumes at Assessment
Nodes under the Average Conditions



Appendix V5-1R. Simulated Project-affected Lake Volumes at Assessment Nodes under the Average Conditions

Table R-1. Simulated Project-affected Lake Volume at Wolverine Lake under Average Runoff Conditions (Mm ³)

Project Year	Calendar Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0	2018	1.881	1.881	1.881	1.881	1.886	1.926	1.909	1.867	1.866	1.881	1.881	1.881
1	2019	1.881	1.881	1.881	1.881	1.886	1.926	1.909	1.867	1.866	1.881	1.881	1.881
2	2020	1.881	1.881	1.881	1.881	1.886	1.927	1.909	1.867	1.866	1.881	1.882	1.882
3	2021	1.882	1.882	1.882	1.882	1.886	1.927	1.909	1.867	1.867	1.881	1.882	1.882
4	2022	1.882	1.882	1.882	1.882	1.887	1.927	1.909	1.867	1.867	1.881	1.882	1.882
5	2023	1.882	1.882	1.882	1.882	1.887	1.927	1.909	1.867	1.867	1.881	1.882	1.882
6	2024	1.882	1.882	1.882	1.882	1.887	1.927	1.909	1.867	1.867	1.881	1.882	1.882
7	2025	1.882	1.882	1.882	1.882	1.887	1.927	1.909	1.867	1.867	1.881	1.882	1.882
8	2026	1.882	1.882	1.882	1.882	1.887	1.927	1.909	1.867	1.867	1.882	1.882	1.882
9	2027	1.882	1.882	1.882	1.882	1.887	1.927	1.909	1.867	1.867	1.882	1.882	1.882
10	2028	1.882	1.882	1.882	1.882	1.888	1.927	1.909	1.867	1.867	1.882	1.882	1.882
11	2029	1.882	1.882	1.882	1.882	1.888	1.927	1.908	1.866	1.864	1.877	1.875	1.873
12	2030	1.870	1.867	1.864	1.860	1.862	1.924	1.907	1.860	1.855	1.865	1.860	1.855
13	2031	1.850	1.844	1.839	1.834	1.834	1.920	1.906	1.859	1.854	1.863	1.858	1.853
14	2032	1.847	1.842	1.836	1.831	1.831	1.919	1.906	1.859	1.854	1.863	1.858	1.853
15	2033	1.852	1.852	1.852	1.852	1.858	1.924	1.909	1.868	1.868	1.883	1.884	1.884
16	2034	1.884	1.884	1.884	1.884	1.890	1.928	1.909	1.868	1.868	1.883	1.884	1.884
17	2035	1.884	1.884	1.884	1.884	1.890	1.928	1.909	1.869	1.870	1.885	1.886	1.886
18	2036	1.886	1.886	1.886	1.886	1.892	1.928	1.909	1.869	1.870	1.885	1.886	1.886
19	2037	1.886	1.886	1.886	1.886	1.893	1.928	1.909	1.869	1.870	1.886	1.886	1.886
20	2038	1.886	1.886	1.886	1.886	1.893	1.928	1.909	1.869	1.870	1.886	1.887	1.887
21	2039	1.887	1.887	1.887	1.887	1.893	1.928	1.910	1.869	1.871	1.886	1.887	1.887
22	2040	1.887	1.887	1.887	1.887	1.894	1.928	1.910	1.869	1.871	1.886	1.887	1.887

Reference: Water and Load Balance Model (Appendix V3-2D).

Note: The Water and Load Balance Model (Appendix V3-2D) incorporates the effects of climate change (Appendix V3-2A) on streamflows.

Appendix V5-1R. Simulated Project-affected Lake Volumes at Assessment Nodes under the Average Conditions

Table R-2. Simulated Project-affected Lake Volume at Patch Lake under Average Runoff Conditions (Mm³)

Project Year	Calendar Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0	2018	21.39	21.39	21.39	21.39	21.43	22.59	22.23	21.59	21.39	21.38	21.39	21.39
1	2019	21.39	21.39	21.39	21.39	21.42	22.59	22.23	21.59	21.39	21.38	21.39	21.39
2	2020	21.39	21.39	21.39	21.39	21.42	22.59	22.23	21.59	21.39	21.38	21.39	21.39
3	2021	21.39	21.39	21.39	21.39	21.42	22.59	22.22	21.58	21.37	21.35	21.34	21.33
4	2022	21.31	21.29	21.28	21.26	21.28	22.48	22.15	21.53	21.32	21.30	21.28	21.25
5	2023	21.22	21.19	21.16	21.13	21.14	22.37	22.08	21.47	21.28	21.26	21.24	21.20
6	2024	21.17	21.14	21.11	21.08	21.08	22.33	22.06	21.46	21.27	21.25	21.23	21.19
7	2025	21.16	21.13	21.10	21.07	21.08	22.33	22.05	21.46	21.27	21.25	21.23	21.19
8	2026	21.16	21.13	21.10	21.07	21.08	22.34	22.06	21.46	21.27	21.25	21.23	21.19
9	2027	21.16	21.13	21.10	21.07	21.08	22.35	22.06	21.46	21.27	21.26	21.23	21.20
10	2028	21.16	21.13	21.10	21.07	21.08	22.36	22.06	21.46	21.27	21.26	21.23	21.20
11	2029	21.17	21.13	21.10	21.07	21.08	22.36	22.06	21.46	21.27	21.25	21.21	21.17
12	2030	21.13	21.09	21.05	21.01	21.02	22.29	22.01	21.42	21.24	21.22	21.18	21.14
13	2031	21.10	21.06	21.02	20.98	20.98	22.25	21.98	21.41	21.23	21.21	21.17	21.14
14	2032	21.12	21.11	21.10	21.09	21.13	22.40	22.08	21.50	21.32	21.32	21.32	21.31
15	2033	21.31	21.31	21.31	21.31	21.36	22.61	22.20	21.58	21.39	21.39	21.40	21.40
16	2034	21.40	21.40	21.40	21.40	21.45	22.70	22.25	21.61	21.41	21.41	21.41	21.41
17	2035	21.41	21.41	21.41	21.41	21.47	22.72	22.26	21.62	21.42	21.41	21.42	21.42
18	2036	21.42	21.42	21.42	21.42	21.47	22.73	22.26	21.62	21.42	21.42	21.42	21.42
19	2037	21.42	21.42	21.42	21.42	21.48	22.74	22.27	21.63	21.42	21.42	21.42	21.42
20	2038	21.42	21.42	21.42	21.42	21.48	22.75	22.27	21.63	21.42	21.42	21.43	21.43
21	2039	21.43	21.43	21.43	21.43	21.48	22.75	22.27	21.63	21.43	21.42	21.43	21.43
22	2040	21.43	21.43	21.43	21.43	21.48	22.76	22.28	21.63	21.43	21.43	21.43	21.43

Reference: Water and Load Balance Model (Appendix V3-2D).

Note: The Water and Load Balance Model (Appendix V3-2D) incorporates the effects of climate change (Appendix V3-2A) on streamflows.

Appendix V5-1R. Simulated Project-affected Lake Volumes at Assessment Nodes under the Average Conditions

Table R-3. Simulated Project-affected Lake Volume at Doris Lake under Average Runoff Conditions (Mm ³)

Project Year	Calendar Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0	2018	26.58	26.50	26.41	26.32	26.29	27.90	27.39	27.00	27.02	26.85	26.71	26.60
1	2019	26.50	26.40	26.30	26.19	26.16	27.85	27.38	27.00	27.02	26.86	26.71	26.62
2	2020	26.52	26.43	26.34	26.24	26.21	27.88	27.39	27.00	27.02	26.86	26.72	26.62
3	2021	26.54	26.48	26.42	26.36	26.37	27.95	27.40	27.01	27.04	26.87	26.75	26.68
4	2022	26.62	26.56	26.50	26.44	26.45	27.97	27.38	27.00	27.03	26.87	26.74	26.68
5	2023	26.61	26.55	26.49	26.42	26.43	27.95	27.35	26.99	27.02	26.87	26.74	26.67
6	2024	26.61	26.54	26.48	26.41	26.42	27.95	27.35	26.98	27.02	26.86	26.74	26.67
7	2025	26.61	26.54	26.48	26.41	26.42	27.95	27.35	26.98	27.02	26.86	26.74	26.67
8	2026	26.61	26.54	26.48	26.41	26.42	27.95	27.35	26.98	27.02	26.87	26.74	26.67
9	2027	26.61	26.54	26.48	26.41	26.42	27.96	27.35	26.98	27.02	26.87	26.74	26.67
10	2028	26.61	26.54	26.48	26.41	26.42	27.96	27.35	26.99	27.02	26.87	26.74	26.67
11	2029	26.52	26.29	26.05	25.81	25.65	27.67	27.34	26.98	27.02	26.81	26.55	26.30
12	2030	26.06	25.82	25.58	25.34	25.18	27.47	27.31	26.98	27.02	26.81	26.55	26.30
13	2031	26.06	25.82	25.58	25.34	25.18	27.47	27.30	26.97	27.02	26.81	26.55	26.30
14	2032	26.12	26.02	25.91	25.80	25.79	27.77	27.35	27.00	27.04	26.86	26.71	26.60
15	2033	26.53	26.49	26.46	26.43	26.49	28.02	27.40	27.03	27.06	26.89	26.77	26.73
16	2034	26.70	26.67	26.63	26.60	26.66	28.07	27.42	27.04	27.07	26.89	26.77	26.73
17	2035	26.71	26.71	26.72	26.72	26.81	28.11	27.44	27.06	27.09	26.91	26.78	26.77
18	2036	26.77	26.77	26.77	26.78	26.86	28.13	27.45	27.06	27.09	26.91	26.78	26.77
19	2037	26.77	26.77	26.77	26.78	26.86	28.13	27.45	27.06	27.09	26.91	26.78	26.77
20	2038	26.77	26.77	26.77	26.78	26.86	28.13	27.45	27.07	27.09	26.91	26.78	26.77
21	2039	26.77	26.77	26.77	26.78	26.86	28.14	27.45	27.07	27.09	26.91	26.78	26.77
22	2040	26.77	26.77	26.77	26.78	26.87	28.14	27.45	27.07	27.09	26.91	26.78	26.77

Reference: Water and Load Balance Model (Appendix V3-2D).

Note: The Water and Load Balance Model (Appendix V3-2D) incorporates the effects of climate change (Appendix V3-2A) on streamflows.

Appendix V5-1R. Simulated Project-affected Lake Volumes at Assessment Nodes under the Average Conditions

Table R-4. Simulated Project-affected Lake Volume at Windy Lake under Average Runoff Conditions (Mm³)

Project Year	Calendar Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0	2018	54.99	54.99	54.98	54.98	55.00	55.66	55.43	55.03	54.96	55.00	55.00	54.99
1	2019	54.99	54.99	54.98	54.98	55.00	55.66	55.43	55.03	54.96	55.00	55.00	54.99
2	2020	54.99	54.99	54.98	54.98	55.00	55.67	55.43	55.03	54.96	55.00	55.00	54.99
3	2021	54.99	54.99	54.98	54.98	55.00	55.67	55.43	55.03	54.96	55.00	55.00	54.99
4	2022	54.99	54.99	54.98	54.98	55.00	55.67	55.43	55.03	54.96	55.00	55.00	54.99
5	2023	54.99	54.99	54.98	54.98	55.00	55.68	55.43	55.03	54.96	55.00	55.00	55.00
6	2024	54.99	54.99	54.98	54.98	55.00	55.68	55.43	55.04	54.96	55.00	55.00	55.00
7	2025	54.99	54.99	54.98	54.98	55.00	55.69	55.43	55.04	54.96	55.00	55.00	55.00
8	2026	54.99	54.99	54.99	54.98	55.00	55.69	55.43	55.04	54.96	55.00	55.00	55.00
9	2027	54.99	54.99	54.99	54.98	55.00	55.69	55.43	55.04	54.96	55.00	55.00	55.00
10	2028	55.00	54.99	54.99	54.98	55.01	55.70	55.43	55.04	54.96	55.01	55.00	55.00
11	2029	55.00	54.99	54.99	54.98	55.01	55.70	55.43	55.04	54.97	55.01	55.01	55.00
12	2030	55.00	54.99	54.99	54.99	55.01	55.71	55.43	55.04	54.97	55.01	55.01	55.00
13	2031	55.00	55.00	54.99	54.99	55.01	55.71	55.44	55.04	54.97	55.01	55.01	55.00
14	2032	55.00	55.00	54.99	54.99	55.02	55.72	55.44	55.04	54.97	55.01	55.01	55.01
15	2033	55.00	55.00	55.00	54.99	55.02	55.72	55.44	55.05	54.97	55.01	55.01	55.01
16	2034	55.01	55.00	55.00	55.00	55.02	55.73	55.44	55.05	54.97	55.02	55.02	55.01
17	2035	55.01	55.01	55.01	55.01	55.04	55.75	55.45	55.06	54.99	55.03	55.04	55.04
18	2036	55.04	55.04	55.04	55.04	55.07	55.77	55.46	55.06	54.99	55.04	55.04	55.04
19	2037	55.04	55.04	55.04	55.04	55.07	55.77	55.46	55.07	54.99	55.04	55.04	55.04
20	2038	55.04	55.04	55.04	55.04	55.07	55.78	55.46	55.07	54.99	55.04	55.04	55.04
21	2039	55.04	55.04	55.04	55.04	55.08	55.78	55.47	55.07	55.00	55.04	55.04	55.04
22	2040	55.04	55.04	55.04	55.04	55.08	55.79	55.47	55.07	55.00	55.04	55.04	55.04

Reference: Water and Load Balance Model (Appendix V3-2D).

Note: The Water and Load Balance Model (Appendix V3-2D) incorporates the effects of climate change (Appendix V3-2A) on streamflows.

Appendix V5-1R. Simulated Project-affected Lake Volumes at Assessment Nodes under the Average Conditions

Table R-5. Simulated Project-affected Lake Volume at Stickleback Lake under Average Runoff Conditions (Mm ³)

Project Year	Calendar Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0	2018	2.242	2.242	2.242	2.242	2.246	2.300	2.281	2.233	2.228	2.241	2.242	2.242
1	2019	2.242	2.242	2.242	2.242	2.246	2.300	2.281	2.233	2.228	2.241	2.242	2.242
2	2020	2.242	2.242	2.242	2.242	2.246	2.300	2.281	2.233	2.228	2.241	2.241	2.241
3	2021	2.241	2.241	2.241	2.241	2.245	2.300	2.281	2.233	2.227	2.240	2.240	2.240
4	2022	2.240	2.240	2.240	2.240	2.245	2.300	2.281	2.232	2.227	2.240	2.240	2.240
5	2023	2.240	2.240	2.240	2.240	2.245	2.300	2.281	2.233	2.227	2.240	2.240	2.240
6	2024	2.240	2.240	2.240	2.240	2.245	2.300	2.281	2.233	2.227	2.240	2.241	2.241
7	2025	2.241	2.241	2.241	2.241	2.245	2.300	2.281	2.233	2.228	2.240	2.241	2.241
8	2026	2.241	2.241	2.241	2.241	2.246	2.300	2.281	2.233	2.228	2.241	2.241	2.241
9	2027	2.241	2.241	2.241	2.241	2.246	2.300	2.281	2.233	2.228	2.241	2.241	2.241
10	2028	2.241	2.241	2.241	2.241	2.246	2.301	2.281	2.233	2.228	2.241	2.242	2.242
11	2029	2.242	2.242	2.242	2.242	2.247	2.301	2.281	2.233	2.228	2.241	2.242	2.242
12	2030	2.242	2.242	2.242	2.242	2.247	2.301	2.281	2.233	2.229	2.242	2.242	2.242
13	2031	2.242	2.242	2.242	2.242	2.247	2.301	2.281	2.233	2.229	2.242	2.242	2.242
14	2032	2.242	2.242	2.242	2.242	2.248	2.301	2.281	2.234	2.229	2.242	2.243	2.243
15	2033	2.243	2.243	2.243	2.243	2.248	2.301	2.281	2.234	2.229	2.242	2.243	2.243
16	2034	2.243	2.243	2.243	2.243	2.249	2.301	2.282	2.234	2.229	2.243	2.243	2.243
17	2035	2.243	2.243	2.243	2.243	2.249	2.302	2.282	2.235	2.232	2.245	2.246	2.246
18	2036	2.246	2.246	2.246	2.246	2.252	2.302	2.282	2.235	2.232	2.246	2.246	2.246
19	2037	2.246	2.246	2.246	2.246	2.252	2.302	2.282	2.235	2.232	2.246	2.247	2.247
20	2038	2.247	2.247	2.247	2.247	2.253	2.302	2.282	2.236	2.232	2.246	2.247	2.247
21	2039	2.247	2.247	2.247	2.247	2.253	2.302	2.282	2.236	2.232	2.246	2.247	2.247
22	2040	2.247	2.247	2.247	2.247	2.254	2.302	2.282	2.236	2.233	2.247	2.247	2.247

Reference: Water and Load Balance Model (Appendix V3-2D).

Note: The Water and Load Balance Model (Appendix V3-2D) incorporates the effects of climate change (Appendix V3-2A) on streamflows.