

Comparison of proposed NBC 2025 to NBC 2020 Seismic Design Data for example affected Localities in Canada - Site Designation X_{450} , 2%/50 year values

Table below includes NBC 2020 and proposed NBC 2025 values for those NBC localities which have notable changes at the X_{450} site condition and 2% in 50 years probability. All are reductions. A notable change is where the relative difference between NBC 2020 and NBC 2025 is larger than 5% AND where the absolute difference is greater than: 0.01g for PGA (X_{450}), Sa(0.2, X_{450}) or Sa(0.5, X_{450}); 0.005g for Sa(1.0, X_{450}) or Sa(2.0, X_{450}); 0.002g for Sa(5.0, X_{450}); 0.001g for Sa(10.0, X_{450}). Other site designations exhibit similar relative differences as for X_{450} . The NBC localities in this table are used to provide a representative view; the NBC 2025 values will be determined from a dense grid. Other NBC localities in western Canada may have small changes below these thresholds. There are no changes in eastern Canada.

Location	Prov/ Terr	2025	2020	2025	2020	2025	2020	2025	2020	2025	2020	2025	2020	2025	2020
		PGA(X_{450})	PGA(X_{450})	Sa(0.2, X_{450})	Sa(0.2, X_{450})	Sa(0.5, X_{450})	Sa(0.5, X_{450})	Sa(1.0, X_{450})	Sa(1.0, X_{450})	Sa(2.0, X_{450})	Sa(2.0, X_{450})	Sa(5.0, X_{450})	Sa(5.0, X_{450})	Sa(10.0, X_{450})	Sa(10.0, X_{450})
100 Mile House	BC													0.018	0.019
Ashcroft	BC													0.019	0.020
Beaton River	BC			0.17	0.19	0.10	0.11	0.048	0.057	0.025	0.031	0.015	0.018	0.011	0.014
Bella Bella	BC													0.031	0.033
Bella Coola	BC													0.027	0.029
Burns Lake	BC			0.11	0.12			0.066	0.072	0.056	0.062	0.032	0.035	0.018	0.022
Cache Creek	BC													0.019	0.020
Chetwynd	BC					0.13	0.15	0.066	0.075	0.033	0.040	0.019	0.022	0.013	0.015
Dawson Creek	BC							0.054	0.062			0.017	0.019	0.012	0.014
Dease Lake	BC	0.049	0.068	0.11	0.15	0.11	0.14	0.083	0.10	0.055	0.072	0.029	0.037	0.020	0.026
Dog Creek	BC													0.019	0.021
Fort Nelson	BC			0.18	0.19	0.11	0.12	0.060	0.069	0.029	0.037	0.013	0.017	0.0080	0.012
Fort St. John	BC			0.19	0.20	0.11	0.12	0.053	0.061	0.027	0.033	0.016	0.019	0.012	0.014
Kamloops	BC													0.017	0.019
Kitimat Plant	BC									0.10	0.11	0.046	0.049	0.026	0.030
Kitimat Townsite	BC									0.10	0.11	0.046	0.049	0.026	0.030
Lillooet	BC													0.020	0.022
Lytton	BC													0.020	0.022
Mackenzie	BC			0.19	0.20	0.12	0.14	0.062	0.072	0.037	0.044	0.022	0.025	0.014	0.016
Masset	BC													0.046	0.049
McBride	BC													0.015	0.017
McLeod Lake	BC			0.18	0.19	0.11	0.13	0.061	0.069	0.039	0.045	0.024	0.027	0.015	0.018
Merritt	BC													0.019	0.020
Ocean Falls	BC													0.029	0.031
Prince George	BC											0.026	0.028	0.016	0.019
Prince Rupert	BC											0.057	0.060	0.031	0.034
Quesnel	BC											0.028	0.030	0.017	0.019
Salmon Arm	BC													0.016	0.017
Smith River	BC							0.24	0.25	0.092	0.11	0.025	0.033	0.011	0.019
Smithers	BC			0.12	0.13	0.087	0.10	0.073	0.080	0.059	0.066	0.032	0.036	0.019	0.023
Stewart	BC	0.078	0.089	0.17	0.20	0.16	0.18	0.13	0.14	0.088	0.10	0.041	0.046	0.026	0.030
Taylor	BC			0.18	0.20	0.10	0.12	0.052	0.060	0.027	0.032	0.016	0.019	0.012	0.014
Terrace	BC			0.18	0.19			0.13	0.13	0.089	0.10	0.043	0.046	0.025	0.028
Whistler	BC													0.025	0.026
Williams Lake	BC													0.018	0.020
Barrhead	AB													0.0085	0.010
Beaverlodge	AB							0.056	0.061					0.012	0.014
Campsie	AB													0.0088	0.010
Edmonton	AB													0.0066	0.0077
Edson	AB													0.011	0.012
Fairview	AB							0.043	0.049					0.011	0.012
Fort Saskatchewan	AB													0.0064	0.0075
Grande Prairie	AB							0.052	0.057					0.012	0.013

Habay	AB										0.0040	0.0063	0.0015	0.0026	
Hinton	AB												0.013	0.015	
Jasper	AB												0.014	0.015	
Peace River	AB												0.0084	0.010	
Valleyview	AB												0.011	0.012	
Whitecourt	AB												0.0095	0.011	
Aklavik	NT							0.19	0.20	0.083	0.095	0.025	0.034	0.012	0.020
Echo Bay / Port Radium	NT							0.026	0.032	0.013	0.018	0.0039	0.0065	0.0015	0.0030
Fort Good Hope	NT	0.12	0.14	0.30	0.33	0.21	0.24	0.11	0.14	0.055	0.073	0.018	0.027	0.0082	0.017
Fort McPherson	NT							0.20	0.21	0.091	0.10	0.029	0.037	0.014	0.022
Fort Providence	NT											0.0046	0.0068	0.0018	0.0030
Fort Simpson	NT											0.011	0.014	0.0044	0.0072
Inuvik	NT							0.14	0.15	0.065	0.077	0.021	0.029	0.0095	0.018
Norman Wells	NT					0.51	0.54	0.25	0.27	0.10	0.12	0.026	0.034	0.010	0.017
Tungsten	NT							0.13	0.14	0.058	0.071	0.020	0.029	0.012	0.020
Wrigley	NT									0.093	0.10	0.024	0.028	0.0083	0.013
Aishihik	YT	0.22	0.25	0.53	0.59	0.40	0.48	0.24	0.29	0.12	0.17	0.049	0.067	0.030	0.041
Dawson	YT	0.21	0.25	0.51	0.60	0.32	0.44	0.18	0.26	0.090	0.15	0.035	0.059	0.021	0.036
Destruction Bay	YT													0.058	0.066
Faro	YT	0.14	0.15	0.33	0.36	0.20	0.25	0.11	0.15	0.057	0.090	0.023	0.040	0.015	0.028
Haines Junction	YT							0.49	0.52	0.23	0.26	0.081	0.093	0.039	0.048
Snag	YT	0.26	0.33	0.63	0.79	0.48	0.66	0.28	0.40	0.15	0.24	0.058	0.086	0.033	0.047
Teslin	YT	0.14	0.16	0.33	0.38	0.22	0.27	0.14	0.17	0.076	0.10	0.034	0.046	0.023	0.032
Watson Lake	YT	0.15	0.16	0.35	0.38	0.23	0.25	0.11	0.13	0.051	0.069	0.020	0.030	0.012	0.021
Whitehorse	YT	0.16	0.18	0.39	0.43	0.29	0.34	0.18	0.21	0.10	0.13	0.041	0.055	0.027	0.036

Proposed NBC 2025 vs NBC 2020 Seismic Design Data for Localities in Canada - Site Designation X₄₅₀, 5%/50 year values

Table below includes NBC 2020 and proposed NBC 2025 values for the X450 site condition which have notable changes at a probability of 5% in 50 years. All are reductions. A notable change is where the relative difference between NBC 2020 and NBC 2025 is larger than 5% AND where the absolute difference is greater than: 0.01g for PGA (X450), Sa(0.2, X450) or Sa(0.5, X450); 0.005g for Sa(1.0, X450) or Sa(2.0, X450); 0.002g for Sa(5.0, X450); 0.001g for Sa(10, X450). Values provided are only for the X450 condition but other site designations exhibit similar relative differences. Other values in western Canada may have small changes below these thresholds. There are no changes in eastern Canada.

Location	Prov/ Terr	2025	2020	2025	2020	2025	2020	2025	2020	2025	2020	2025	2020	2025	2020
		PGA(X450)	PGA(X450)	Sa(0.2,X450)	Sa(0.2,X450)	Sa(0.5,X450)	Sa(0.5,X450)	Sa(1.0,X450)	Sa(1.0,X450)	Sa(2.0,X450)	Sa(2.0,X450)	Sa(5.0,X450)	Sa(5.0,X450)	Sa(10.0,X450)	Sa(10.0,X450)
Beaton River	BC													0.0060	0.0071
Bella Bella	BC													0.019	0.020
Bella Coola	BC													0.015	0.017
Burns Lake	BC													0.0094	0.011
Dease Lake	BC			0.060	0.073	0.075	0.085	0.059	0.067	0.040	0.047	0.020	0.024	0.012	0.016
Fort Nelson	BC													0.0047	0.0060
Kitimat Plant	BC													0.017	0.018
Kitimat Townsite	BC													0.017	0.018
Mackenzie	BC													0.0072	0.0082
McLeod Lake	BC													0.0078	0.0089
Ocean Falls	BC													0.018	0.019
Prince Rupert	BC													0.020	0.022
Smith River	BC									0.053	0.059	0.015	0.019	0.0067	0.010
Smithers	BC											0.020	0.022	0.010	0.012
Stewart	BC							0.093	0.10			0.029	0.032	0.017	0.019
Terrace	BC													0.016	0.017
Aklavik	NT									0.051	0.057	0.015	0.020	0.0064	0.011
Fort Good Hope	NT			0.19	0.21	0.14	0.15	0.078	0.086	0.038	0.044	0.012	0.016	0.0051	0.0089
Fort McPherson	NT									0.059	0.066	0.018	0.023	0.0080	0.013
Inuvik	NT							0.085	0.091	0.042	0.047	0.013	0.017	0.0054	0.0094
Norman Wells	NT							0.15	0.16	0.059	0.066	0.015	0.020	0.0059	0.0091
Tungsten	NT									0.038	0.044	0.013	0.018	0.0066	0.011
Wrigley	NT											0.014	0.016	0.0047	0.0063
Aishihik	YT	0.16	0.17	0.37	0.40	0.29	0.32	0.17	0.20	0.090	0.11	0.034	0.045	0.020	0.026
Dawson	YT	0.13	0.15	0.32	0.36	0.21	0.26	0.12	0.15	0.062	0.089	0.023	0.037	0.013	0.021
Destruction Bay	YT											0.10	0.11	0.037	0.042
Faro	YT			0.18	0.20	0.12	0.15	0.073	0.089	0.039	0.054	0.015	0.025	0.0085	0.016
Haines Junction	YT							0.33	0.35	0.15	0.17	0.053	0.062	0.026	0.031
Snag	YT	0.19	0.22	0.44	0.52	0.34	0.42	0.20	0.25	0.11	0.15	0.040	0.056	0.022	0.030
Teslin	YT			0.19	0.21	0.15	0.16	0.094	0.11	0.054	0.065	0.024	0.030	0.015	0.020
Watson Lake	YT							0.071	0.079	0.033	0.040	0.013	0.018	0.0067	0.012
Whitehorse	YT			0.25	0.27	0.20	0.22	0.13	0.14	0.071	0.085	0.029	0.037	0.017	0.023

Proposed NBC 2025 vs NBC 2020 Seismic Design Data for Localities in Canada - Site Designation X₄₅₀, 10%/50 year values

Table below includes NBC 2020 and proposed NBC 2025 values for the X450 site condition which have notable changes at a probability of 10% in 50 years. All are reductions. A notable change is where the relative difference between NBC 2020 and NBC 2025 is larger than 5% AND where the absolute difference is greater than: 0.01g for PGA (X450), Sa(0.2, X450) or Sa(0.5, X450); 0.005g for Sa(1.0, X450) or Sa(2.0, X450); 0.002g for Sa(5.0, X450); 0.001g for Sa(10, X450). Values provided are only for the X450 condition but other site designations exhibit similar relative differences. Other values in western Canada may have small changes below these thresholds. There are no changes in eastern Canada.

Location	Prov/ Terr	2025	2020	2025	2020	2025	2020	2025	2020	2025	2020	2025	2020	2025	2020
		PGA(X450)	PGA(X450)	Sa(0.2,X450)	Sa(0.2,X450)	Sa(0.5,X450)	Sa(0.5,X450)	Sa(1.0,X450)	Sa(1.0,X450)	Sa(2.0,X450)	Sa(2.0,X450)	Sa(5.0,X450)	Sa(5.0,X450)	Sa(10.0,X450)	Sa(10.0,X450)
Dease Lake	BC											0.014	0.017	0.0081	0.011
Masset	BC													0.022	0.023
Prince Rupert	BC													0.014	0.015
Smith River	BC											0.010	0.012	0.0040	0.0056
Stewart	BC													0.012	0.013
Aklavik	NT											0.010	0.013	0.0039	0.0064
Fort Good Hope	NT											0.0082	0.011	0.0033	0.0052
Fort McPherson	NT											0.012	0.016	0.0049	0.0079
Inuvik	NT											0.0085	0.011	0.0033	0.0054
Norman Wells	NT											0.010	0.012	0.0037	0.0052
Tungsten	NT											0.0087	0.012	0.0041	0.0067
Aishihik	YT			0.27	0.29	0.22	0.24	0.13	0.14	0.069	0.082	0.025	0.032	0.014	0.018
Dawson	YT	0.090	0.10	0.21	0.24	0.15	0.17	0.086	0.10	0.046	0.060	0.016	0.025	0.0083	0.014
Destruction Bay	YT									0.24	0.26	0.065	0.072	0.025	0.029
Faro	YT			0.11	0.12	0.086	0.10	0.053	0.061	0.029	0.037	0.010	0.017	0.0053	0.010
Haines Junction	YT							0.23	0.24	0.11	0.12	0.037	0.044	0.018	0.022
Snag	YT	0.14	0.16	0.32	0.37	0.25	0.29	0.15	0.18	0.079	0.10	0.029	0.039	0.015	0.020
Teslin	YT			0.12	0.13			0.070	0.076	0.041	0.047	0.017	0.021	0.010	0.013
Watson Lake	YT											0.0084	0.012	0.0039	0.0069
Whitehorse	YT			0.18	0.19	0.15	0.16	0.10	0.11	0.054	0.062	0.021	0.027	0.012	0.016