

## APPENDIX 4: CRUSTAL FAULT PARAMETERS, AS USED IN THE TSUNAMI SOURCE MODEL

**Table A 4.1** Crustal faults properties. Fault Name and NZSHM\_Number are as used in the National Seismic Hazard Model (Stirling et al., 2012). NZSHM\_Number can be used to identify fault locations using the figures in Stirling et al. (2012). MWMN, MW, MWMX are minimum, preferred, and maximum moment magnitudes. RECINTMN, RECINT, RECINTMX are minimum, preferred and maximum recurrence intervals (in years).

FaultName	NZSHM_Number	MWMN	MW	MWMX	RECINTMN	RECINT	RECINTMX
Wairaka02	2	6.6	6.6	6.7	936	906	990
KerepehiO	3	7.2	7.2	7.3	18954	19860	22903
NgatoroS03	4	6.1	6.5	6.6	241	434	474
NgatoroS05	6	6.3	6.5	6.5	376	522	571
Ohena04	7	5.9	6.5	6.5	202	499	546
Ohena02	8	6.7	6.8	6.9	530	653	714
Ohena03	9	6.2	6.5	6.6	307	518	567
Wairaka05	13	6.4	6.8	6.9	626	1173	1283
AldermanE06	17	6.3	6.5	6.6	2177	2859	3014
Astrolabe07	24	6	6.7	6.8	234	693	730
Ohena01	27	6	6.6	6.6	1243	3467	3791
OtaraEast03	28	6.5	6.7	6.8	708	1026	1121
Astrolabe05	31	6.2	6.7	6.8	292	687	724
TaurTrE03	32	6	6.5	6.6	251	562	614
TaurTrE02	37	6.2	6.7	6.7	246	530	580
TuhuaN03	38	6.2	6.4	6.5	1277	1745	1840
TaurTrE01	40	6.2	6.5	6.6	238	388	424
OtaraEast04	41	6.4	6.4	6.5	853	825	902
AldermanW01	43	6.1	6.5	6.5	5960	10967	11563
Tuakana11	48	6.1	6.4	6.5	536	860	941
AldermanE02	49	6.1	6.4	6.5	1905	2996	3159
Tuakana10	54	6.1	6.6	6.6	514	1034	1131
TuhuaN01	55	6.3	6.6	6.7	1282	2162	2279
Wairaka01	56	6.6	6.6	6.7	3769	3647	3987
Tuakana05	58	6	6.7	6.7	381	1302	1423
OtaraEast02	61	6.4	6.4	6.5	317	307	336
Astrolabe02	62	6.1	6.7	6.7	795	1786	1884
OtaraWest02	68	5.9	6.6	6.6	188	517	565
AldermanE07	69	6.1	6.5	6.6	1890	4122	5704
Matatara04	72	6.1	6.8	6.8	892	2766	3025
Astrolabe01	73	6.1	6.6	6.6	941	2027	2138
MaungatiW02	74	6	6.5	6.5	646	1346	1471
Tuakana04	76	6.1	6.5	6.6	720	1547	1692
TuhuaS02	77	6.1	6.4	6.5	2072	3473	3662
Tuakana03	78	6.2	6.5	6.5	924	1310	1433
MaungatiW01	80	6.6	6.6	6.7	518	714	978
Tuakana02	81	6.3	6.6	6.7	754	1209	1321
WhitelsN01	82	6.5	6.5	6.6	9182	8884	9714
KerepehiN	83	6.7	6.8	6.8	8521	8928	10296

<b>FaultName</b>	<b>NZSHM_Number</b>	<b>MWMN</b>	<b>MW</b>	<b>MWMX</b>	<b>RECINTMN</b>	<b>RECINT</b>	<b>RECINTMX</b>
Volkner04	86	6.1	6.7	6.7	124	351	384
Matatara03	87	6.1	6.5	6.6	520	992	1084
TeArawa03	88	6.4	6.4	6.5	222	268	367
Volkner03	96	6.1	6.5	6.6	230	459	502
Tauranga05	98	6.1	6.6	6.7	491	1123	1227
Tumokemoke02	99	6.4	6.5	6.5	773	842	921
Maketu02	106	5.9	6.5	6.6	592	1756	2286
Okurei02	107	6	6.7	6.7	1895	5466	5586
Tumokemoke01	108	6.2	6.5	6.6	527	886	969
Maketu03	110	6.1	6.4	6.5	2805	4335	4430
Okurei01	112	6.5	6.6	6.7	2361	2868	2932
Volkner01	113	6.6	6.6	6.6	865	837	915
Tauranga03	114	6.3	6.6	6.6	718	1000	1006
Maketu01	120	6.4	6.4	6.5	1284	1285	1318
Pokare02	126	6.1	6.5	6.6	473	1207	1881
Nukuhou01	127	6.1	6.5	6.5	649	1104	1056
RaukumaraF22	129	7	7.2	7.3	24445	27161	59754
Tarawera05	130	6	6.5	6.6	785	1865	1911
Ohae01	135	6.9	7	7.1	19760	26347	43472
Opotiki03	136	6.6	7	7.1	2582	7773	25650
Tarawera03	137	6.2	6.5	6.6	1434	2351	2410
Moutoki02	139	6.3	6.6	6.6	1681	2571	3163
Tokata01	140	6	6.4	6.5	418	1014	1974
RaukumaraF23	142	6.5	6.6	6.7	120000	125000	130000
Pokare01	145	6	6.6	6.6	445	1273	1984
Whitels01	146	6.6	6.7	6.8	602	879	1262
Tarawera01	147	6.3	6.5	6.6	975	1314	1346
Moutoki01	149	6.2	6.6	6.6	1413	2589	3184
Wkm-1	150	6.6	6.6	6.7	423	454	766
Ohae02	151	6.8	6.9	7	16892	22522	37162
RaukumaraF15	155	6.9	7	7.2	9500	10000	10500
RaukumaraF21	156	6.5	6.6	6.7	28205	41786	13789354
WhakataneN	158	7.4	7.5	7.6	1516	2374	4420
Opotiki02	161	5.9	6.5	6.6	810	3372	11127
Urewera3	162	7.2	7.3	7.4	4925	7661	14045
Matata	163	6.6	6.7	6.8	497	812	829
RaukumaraF13	164	6.7	6.8	7	3134	3482	19152
Waikaremoana	165	7.4	7.5	7.6	6716	10446	19152
WaimanaN	166	7.4	7.5	7.6	6805	10586	19407
RaukumaraF19	167	6.6	6.7	6.8	31339	46429	15321505
RaukumaraF18	168	6.6	6.7	6.8	10000	67500	125000
RaukumaraF17	170	6.3	6.4	6.5	10000	67500	125000
Houtunui	175	7.1	7.2	7.4	1671	2786	6129
RuatoriaS2	180	6.7	7	7.2	1003	1857	6129
RuatoriaS1	182	7	7.3	7.5	1805	3343	11031
ArielBank	202	7.3	7.4	7.6	449	723	1087

<b>FaultName</b>	<b>NZSHM_Number</b>	<b>MWMN</b>	<b>MW</b>	<b>MWMX</b>	<b>RECINTMN</b>	<b>RECINT</b>	<b>RECINTMX</b>
GableEnd	206	7.1	7.2	7.4	386	763	1502
ArielNorth	207	6.7	6.8	7	766	1641	4304
TuriN	208	6.7	6.8	6.8	3698	3154	10518
WhakataneS	213	7.2	7.3	7.4	1092	1709	3182
TuriC	224	6.8	6.8	6.9	4189	3573	11913
PovertyBay	225	6.4	6.5	6.7	150	358	1408
ArielEast	227	6.4	6.6	6.8	334	716	1878
TuaheniR	228	6.2	6.5	6.7	710	1184	2605
TuriS	230	6.7	6.8	6.8	3698	3154	10518
Lachlan3	231	7.3	7.5	7.7	665	1068	2114
ParituW	238	6.2	6.5	6.7	710	1184	2605
HawkeBay4	241	6.5	6.6	6.8	2037	3018	9959
Napier1931	242	7.4	7.6	7.7	1692	2821	6205
HawkeBay7	245	6.4	6.5	6.7	3761	8357	9193
ParituR	247	6.6	6.9	7.1	815	1358	2988
HawkeBay5&11	248	6.5	6.7	6.9	2350	3482	5746
Mahia2	249	6.5	6.7	6.9	1985	3308	7278
HawkeBay6&12	250	6.4	6.6	6.7	3761	8357	9193
RitchieR	257	6.9	7.1	7.3	1429	2646	8733
HawkeBay1	258	6.6	6.7	6.9	1332	2368	6512
HawkeBay2	260	7	7.1	7.3	1639	2960	8682
CEgmontN	262	6.7	6.8	6.9	1577	1682	1869
KidnappersR	263	7.3	7.4	7.6	1755	2600	4290
RitchieW1	266	7.3	7.5	7.7	3761	6268	13789
Lachlan1&2	269	7	7.2	7.4	752	1170	2145
RitchieW2	277	6.8	7	7.2	903	1671	5516
CEgmontC	278	6.7	6.8	6.8	1479	1577	1753
WaverOkaia1	281	6.9	7	7.1	29755	40988	73293
MotuokuraN	282	7	7.1	7.3	1630	2716	5975
MoumahOkaia4	284	6.9	6.9	7	8565	7866	26724
RidgeROkaia2	285	6.9	7	7.1	59509	81977	146586
Waitot1011	288	7	7.1	7.1	8088	9285	23718
Waimarama3&4	289	6.6	6.8	6.9	752	1254	2758
PaoanuiRN	291	7.1	7.3	7.5	2800	4666	10265
NukWaitot1to6	292	7	7.1	7.1	15251	26011	162788
MotuokuraE	293	7.3	7.5	7.7	1609	2681	5899
Waimarama1&2	294	6.3	6.5	6.6	460	766	1685
KairakauN	295	6.8	6.9	7.1	1003	1671	3677
CegmontS	296	6.5	6.6	6.6	7244	9267	15450
Kairakau2	297	6.7	6.8	7	878	1463	3218
Waitot8to9	298	7	7	7.1	2466	3798	9072
Okaia5	300	6.6	6.6	6.7	18593	29825	85484
KairakauS	303	7	7.1	7.3	533	789	1302
MotuokuraR	312	7	7.1	7.3	1222	1811	2988
Rangioffsh	315	7.1	7.2	7.3	2758	3830	8427
Madden	316	7.5	7.6	7.8	1540	2396	4392
Mascarin	317	7.3	7.4	7.5	1110	1439	3166

<b>FaultName</b>	<b>NZSHM_Number</b>	<b>MWMN</b>	<b>MW</b>	<b>MWMX</b>	<b>RECINTMN</b>	<b>RECINT</b>	<b>RECINTMX</b>
OmakereR	318	7	7.2	7.4	2215	3691	8120
PoranagR	320	7.1	7.2	7.4	2424	4039	8886
Onepoto	322	7.3	7.4	7.5	3604	4805	8810
OmakereS	323	6.8	7	7.1	2865	4457	8171
PaoanuiRS	325	7	7.2	7.4	2173	3621	7967
Fisherman	331	7.4	7.5	7.6	4126	5502	10087
Mataikona	335	7.2	7.3	7.5	614	853	1251
Manaota	336	7.5	7.6	7.7	14259	21125	34856
PoranagW1	338	7	7.2	7.4	1922	3204	7048
PoranagW2	339	6.8	7	7.1	852	1579	5209
Okupe	344	7.3	7.4	7.5	3886	5397	11874
WairarapNich	345	7.9	8.2	8.3	785	1199	1851
Riversdale	351	7.1	7.2	7.4	527	731	1073
UrutiE	354	6.9	7.1	7.3	1755	2925	6435
UrutiN	356	6.7	6.9	7.1	1003	1671	3677
KekNeed	360	7.3	7.4	7.6	1463	2438	5363
UrutiR2	363	6.5	6.7	6.9	439	731	1609
DryHuang	366	7.1	7.3	7.4	2946	4676	9001
Wharekauhau	367	7.2	7.3	7.5	913	1421	2605
Otaraia	368	7	7.1	7.2	10969	16250	26813
UrutiBasin	369	7.1	7.2	7.3	558	853	1502
WhareamaBank	370	7.3	7.5	7.7	1655	3064	10112
OpouaweUruti	371	7.7	7.8	8	3560	6593	21757
PalliserKai	372	7.5	7.6	7.8	716	1114	2043
JorKekCha	373	7.4	7.6	7.8	1410	2089	3447
JorKekNeed	374	7.4	7.6	7.8	313	389	455
Honeycomb	375	7	7.1	7.3	1504	2507	5516
Pahaua	377	7.7	7.9	8	3660	6779	22369
AwatNEVerCl	379	7.6	7.7	7.8	2528	4213	9270
AwatNEVer	380	7.6	7.7	7.8	2486	4604	9116
WharaToCampB	385	7	7.2	7.4	655	1091	1964
HopeTeRapa1n2	389	7.3	7.4	7.6	802	1254	2006
KekerenguBF	390	7.4	7.6	7.8	3265	6122	14692
UpperSlope	391	7	7.2	7.4	1553	2911	6987
MS05	399	6.7	6.8	7	5571	13393	208930
MS04	400	7.1	7.3	7.5	6351	13232	47636
MS01	402	6.8	7	7.2	3789	9471	28414427
Hundalee	405	7.1	7.3	7.4	1444	3076	10150
MS02	406	6.3	6.5	6.6	527	1163	5934
NorthCant13	408	6.7	6.9	7.1	2953	7382	2214654
NorthCant10	412	6.6	6.8	7	403	756	1814
NMFZM	413	7.1	7.3	7.5	13642	27283	81850
MS09	415	6.4	6.5	6.7	1683	3756	25239
NMFZK1	416	7.2	7.4	7.6	10188	20731	66857
NMFZ1819	418	6.9	7.1	7.3	14597	34212	328437
NMFZK2	423	6.8	7	7.2	4776	9718	31339
NorthCant8	426	6.9	7.1	7.3	5376	10753	32259

<b>FaultName</b>	<b>NZSHM_Number</b>	<b>MWMN</b>	<b>MW</b>	<b>MWMX</b>	<b>RECINTMN</b>	<b>RECINT</b>	<b>RECINTMX</b>
NMFZF1	427	6.8	7	7.2	4776	9286	25072
NMFZB0	429	7	7.2	7.4	25796	32245	55277
NMFZ4647	430	7	7.2	7.4	7540	17672	169651
NMFZE1	431	7	7.2	7.4	4569	10982	171322
NMFZE2	433	6.9	7.1	7.3	3900	9375	146251
NMFZF2	434	6.9	7.1	7.2	5412	10524	28414
NorthCant11	438	6.4	6.5	6.7	1560	3250	11700
NMFZB1	439	6.6	6.8	7	11477	14347	24594
NMFZB2	443	7.1	7.3	7.5	27913	34891	59814
NorthCant2	444	6.5	6.7	6.9	5321	9501	19953
NorthCant4	445	6.2	6.4	6.6	4364	8183	19639
NorthCant1	448	6.6	6.8	7	6407	12814	38443
Pegasus1nw	449	6.8	7	7.2	6110	9165	13748
MilfordB1	469	7.4	7.6	7.8	765	1416	4673
Swedge6to10	474	7.1	7.3	7.6	529	882	1941
MilB5GeoR2	475	7.8	7.9	8	15461	25768	56690
CaswellH8	476	7	7.1	7.2	2051	3582	9193
CaswellH10	480	6.8	6.9	7	1302	2350	6895
CaswellH9	481	6.6	6.8	6.9	998	1802	5286
GeorgeR1	482	7.9	8.1	8.4	3836	7104	23442
FiordMar1&2	489	7.1	7.2	7.3	56411	62679	68947
CaswellH67	490	7.1	7.2	7.4	2300	4152	12181
Cwedge123	491	7	7.2	7.4	3029	5049	11108
Swedge5	492	7.5	7.7	7.9	1017	1695	3728
Cw4Swedge411	497	7.3	7.5	7.8	752	1254	2758
Caswell5	498	7.1	7.2	7.3	3064	6129	33707
Swedge2	499	7.2	7.4	7.7	577	1068	3524
Caswell4	503	7.1	7.3	7.4	2849	4975	12768
Swedge3	508	7	7.1	7.4	390	650	1430
Swedge1	510	7	7.2	7.4	2159	4318	23748
SFiordMg13	511	7	7.1	7.2	878	1463	3218
Caswell3	513	6.7	6.9	7	1425	2487	6384
Caswell1	517	7.4	7.5	7.6	4331	7561	19407
Caswell211	521	6.8	7	7.1	1652	2885	7405
Chalky4to8	522	6.8	6.9	7	1170	1950	4290
SFiordMg1to9	523	6.6	6.6	6.7	1033	1762	8157
FiveFingers	526	6.9	7	7.1	4137	7661	25280
Chalky1to3	530	6.7	6.8	7	3009	5571	18386
Akatore	531	7.3	7.4	7.6	1852	3482	7114
HumpR	532	7.5	7.6	7.7	37942	63236	139119
Hauroko	533	7.5	7.6	7.7	1943	3238	7124
Solander	534	7.1	7.2	7.3	19096	31827	70019
Settlement	535	6.7	6.8	7	2403	4004	8810
CBalleney	536	7.3	7.4	7.5	699	932	1281

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