

Catchment	Latitude (°S)	Longitude (°E)	Measured $^{10}\text{Be}/^9\text{Be} \pm 1\sigma^a$	Quartz dissolved (g)	$^9\text{Be}$ carrier mass added ( $10^{-4}$ g)	$^{10}\text{Be}$ concentration $\pm 1\sigma$ (at/g) <sup>b</sup>	Catchment-averaged spallogenic production rate (at/g/yr)	Catchment-averaged muogenic production rate (at/g/yr)	Catchment-averaged denudation rate $\pm 1\sigma$ (mm/yr)	Integration time (yr) <sup>c</sup>
Paringa	43.7088	169.4899	2.80E-14 $\pm$ 2.41E-15	111.050	1.372	2035 $\pm$ 281	7.771	0.053	2.62 $\pm$ 0.40	229
Mahitahi	43.6394	169.5854	1.99E-14 $\pm$ 2.50E-15	105.283	1.362	1426 $\pm$ 300	8.075	0.054	3.87 $\pm$ 0.85	155
Karangarua	43.5737	169.8020	2.97E-14 $\pm$ 2.14E-15	102.614	1.377	2361 $\pm$ 289	8.542	0.052	2.44 $\pm$ 0.33	246
Havelock Creek	43.5207	169.8624	3.93E-14 $\pm$ 2.56E-15	110.063	1.375	3002 $\pm$ 296	7.658	0.055	1.76 $\pm$ 0.20	341
Cook	43.4984	169.9661	1.86E-14 $\pm$ 1.78E-15	122.736	1.364	1132 $\pm$ 221	8.516	0.049	5.02 $\pm$ 1.03	112
Fox	43.4793	170.0128	5.62E-15 $\pm$ 1.12E-15	125.193	1.364	163 $\pm$ 191	5.481	0.031	22.39 $\pm$ 26.26	25
Waiho	43.3923	170.1794	3.16E-15 $\pm$ 8.50E-16	125.980	1.386	-12 $\pm$ 183*	6.299	0.036	17.19 $\pm$ 12.9	33
Whataroa	43.2932	170.4133	1.68E-14 $\pm$ 1.92E-15	106.697	1.383	1169 $\pm$ 263	9.024	0.053	5.20 $\pm$ 1.22	115
Poerua	43.1746	170.5048	2.42E-14 $\pm$ 2.78E-15	110.376	1.362	1712 $\pm$ 303	9.005	0.057	3.57 $\pm$ 0.67	168
Wanganui	43.1631	170.6276	1.63E-14 $\pm$ 1.55E-15	92.850	1.371	1279 $\pm$ 280	8.614	0.052	4.55 $\pm$ 1.04	132
Waitaha	43.0968	170.7281	1.07E-14 $\pm$ 1.38E-15	109.393	1.368	611 $\pm$ 229	7.958	0.054	8.99 $\pm$ 3.46	67
Hokitika	42.9158	170.9823	1.64E-14 $\pm$ 1.49E-15	113.835	1.372	1047 $\pm$ 226	9.034	0.057	5.87 $\pm$ 1.32	102
Kokatahi	42.8946	171.1344	1.81E-14 $\pm$ 3.47E-15	107.621	1.369	1254 $\pm$ 358	9.541	0.059	5.16 $\pm$ 1.51	116
Styx	42.8837	171.1542	2.65E-14 $\pm$ 2.05E-15	104.902	1.367	2017 $\pm$ 275	7.759	0.055	2.65 $\pm$ 0.40	226
Arahura	42.8269	171.2336	4.35E-14 $\pm$ 3.65E-15	100.772	1.371	3652 $\pm$ 394	8.701	0.057	1.62 $\pm$ 0.20	370
Taipō	42.7546	171.4024	3.06E-14 $\pm$ 2.99E-15	107.294	1.369	2319 $\pm$ 328	9.007	0.058	2.64 $\pm$ 0.41	227
Taramakau	42.7401	171.5118	7.45E-14 $\pm$ 8.02E-15	67.695	1.369	9611 $\pm$ 1143	8.866	0.058	0.63 $\pm$ 0.08	958
Robinson	42.5347	171.8109	6.30E-14 $\pm$ 3.84E-15	92.981	1.373	5887 $\pm$ 458	8.166	0.056	0.95 $\pm$ 0.09	632
Blue grey	42.4104	172.1186	6.41E-14 $\pm$ 4.49E-15	101.579	1.370	5473 $\pm$ 468	9.188	0.059	1.14 $\pm$ 0.12	528
Maruia	42.3436	172.2232	9.23E-14 $\pm$ 4.51E-15	105.447	1.359	7659 $\pm$ 460	9.371	0.059	0.83 $\pm$ 0.07	725

<sup>a</sup> Standards used (nominal  $^{10}\text{Be}/^9\text{Be}$  values): KN01-6-2 ( $5.35 \times 10^{-13}$ ), KN01-5-3 ( $6.320 \times 10^{-12}$ )

<sup>b</sup> Corrected for a long term average blank  $^{10}\text{Be}/^9\text{Be}$  value of  $4.52 \times 10^{-15} \pm 9.27 \times 10^{-16}$  ( $3.08 \times 10^4$   $^{10}\text{Be}$  atoms), based on 15 processed blanks on WSA sample batches.

<sup>c</sup> Integration time for which the estimated erosion rates ( $\epsilon$ ) are representative, calculated as  $T = z^*/\epsilon$ , with  $z^* = 60$  cm, approximately one CRN mean attenuation path length (Lal, 1991; von Blanckenburg, 2005)

\* Atom counts for this sample were below the blank counts. To estimate erosion rate, we used a maximum, blank-based  $^{10}\text{Be}$  concentration of 244 at/g.