SUPPLEMENTAL TABLE 1. BEDROCK ELEMENT ABUNDANCES*

Site	[Na] Avg	[Na] (Min-Max) (%)	[Mg] Avg	[Mg] (Min-Max) (%)	[Ca] Avg	[Ca] (Min-Max) (%)	[K] Avg	[K] (Min-Max) (%)	*N*†
Fall River	1.8	(1.6-2.0)	0.5	(0.2-1.3)	1.9	(1.6-2.7)	0.7	(0.6-1.0)	12
Grizzly Dome	1.6	(1.4-2.0)	2.0	(1.8-2.4)	4.0	(3.4-5.7)	0.7	(0.2-1.0)	6
Antelope Lake	1.5	(1.4-1.5)	1.7	(1.3-2.1)	3.9	(3.2-4.6)	1.0	(0.9-1.3)	10
Adams Peak	1.5	(1.5-1.6)	1.0	(0.8-1.2)	2.8	(2.5-3.3)	1.3	(1.1-1.5)	14
Fort Sage	1.4	(1.3-1.5)	1.0	(0.9-1.2)	2.9	(2.7-3.1)	1.2	(1.1-1.5)	7
Sunday Peak	1.6	(1.6-1.8)	0.2	(0.2-0.3)	1.3	(1.2-1.4)	1.5	(1.2-2.0)	9
Nichols Peak	1.4	(1.3-1.5)	1.1	(1.0-1.2)	3.0	(2.7-3.4)	1.2	(1.0-1.4)	5

Site	[Al] Avg	[Al] (Min-Max) (%)	[Si] Avg	[Si] (Min-Max) (%)	[Zr] Avg	[Zr] (Min-Max) (ppm)	[Sr] Avg	[Sr] (Min-Max) (ppm)	*N*†
Fall River	4.3	(4.0-4.5)	33.6	(31.7-34.8)	78	(55-112)	442	(367-521)	12
Grizzly Dome	4.4	(4.2-5.2)	29.2	(25.9-30.5)	174	(147-204)	487	(434-613)	6
Antelope Lake	4.4	(4.2-4.6)	28.6	(27.7-30.3)	179	(106-251)	432	(389-468)	10
Adams Peak	4.3	(4.2-4.5)	31.1	(30.1-31.9)	97	(90-105)	502	(440-567)	14
Fort Sage	4.3	(4.2-4.3)	31.1	(30.8-31.4)	102	(88-110)	399	(375-419)	7
Sunday Peak	3.8	(3.7-4.1)	33.7	(33.5-34.3)	233	(200-275)	134	(120-146)	9
Nichols Peak	4.3	(4.1-4.3)	30.6	(30.1-31.3)	137	(120-156)	584	(531-615)	5

*Average, minimum, and maximum concentrations from XRF analysis. Major elements reported in weight percent and normalized for loss on ignition.

†Number of samples. Samples were collected from widely distributed outcrops at each site.

SUPPLEMENTAL TABLE 2. COSMOGENIC NUCLIDE DATA FOR STUDY CATCHMENTS

Sample	$^{10}Be/^{9}Be$* (10^{-15})	$^{26}Al/^{27}Al$* (10^{-15})	[^{10}Be]† (10^{5} atoms/g)	[^{26}Al]† (10^{6} atoms/g)	[^{26}Al]/[^{10}Be]§
Fall River:					
FR-2	47.7±7.4	302±29	0.517±0.084	0.234±0.025	4.52±0.88
FR-4	35.9±8.4	162±13	0.198±0.047	0.115±0.011	5.83±1.50
FR-5	33±7	663±60	0.395±0.085	0.258±0.027	6.53±1.56
FR-6	279±12	1009±34	2.562±0.169	0.980±0.059	3.83±0.34
FR-7	341±13	1705±100	3.412±0.215	1.092±0.084	3.20±0.32
FR-8	556±15	2835±89	5.523±0.314	2.898±0.171	5.25±0.43
FR-9	473±19	2059±69	4.758±0.305	2.215±0.133	4.66±0.41
FR-10	202.7±9.1	1253±42	2.751±0.185	1.645±0.099	5.74±0.58
Grizzly Dome:					
GD-1	108±12	422±24	0.651±0.079	0.362±0.027	5.57±0.80
GD-2	150.2±9.3	677±28	0.963±0.077	0.600±0.039	6.23±0.64
GD-3	130.1±8.6	604±23	0.905±0.075	0.624±0.039	6.90±0.72
GD-4	339±12	1381±61	1.719±0.105	1.077±0.072	6.27±0.57
GD-5	274±10	1395±51	1.807±0.112	1.120±0.069	6.20±0.54
GD-6	241±14	1462±57	1.515±0.116	0.973±0.062	6.42±0.64
GD-9	215±11	2456±160	1.717±0.123	1.293±0.106	7.53±0.82
GD-10	126±12	375±17	0.740±0.079	0.352±0.024	4.76±0.60
GD-12	69.7±7.8	206±14	0.553±0.068	0.357±0.030	6.46±0.96
GD-13	104.4±8.5	379±14	0.741±0.071	0.431±0.027	5.81±0.66
GD-14	79.6±9.6	803±41	0.610±0.080	0.417±0.030	6.83±1.02
Antelope Lake:					
AL-2	225±11	596±22	3.467±0.242	2.211±0.137	6.38±0.60
AL-3	355±12	1516±41	3.284±0.198	1.542±0.088	4.70±0.39
AL-4	402±17	2213±55	5.328±0.349	2.847±0.159	5.34±0.46
AL-5	374±20	1563±39	4.189±0.307	2.444±0.137	5.84±0.54
AL-6	424±18	3296±84	4.975±0.323	3.163±0.178	6.36±0.55
AL-7	709±20	3891±97	8.224±0.472	4.494±0.251	5.46±0.44
AL-8	256±9.9	1082±27	4.170±0.264	2.266±0.127	5.43±0.46
AL-9	275±13	1341±35	3.122±0.215	1.843±0.104	5.90±0.53
AL-10	278±13	1323±35	4.008±0.274	2.359±0.133	5.89±0.52
AL-11	444±12	1816±45	6.221±0.354	3.285±0.183	5.28±0.42
Adams Peak:					
AP-1	508±16	3003±150	4.351±0.137	2.617±0.290	6.01±0.69
AP-2	344±11	1751±75	3.961±0.127	2.334±0.250	5.89±0.66
AP-3	205±13	1484±72	3.030±0.192	1.990±0.220	6.57±0.84
AP-4	297±14	1870±55	4.090±0.193	2.642±0.280	6.46±0.75
AP-5	168.6±8.1	1229±46	2.538±0.122	1.584±0.170	6.24±0.73
AP-6	141±13	N.D.**	3.118±0.287	N.D.**	N.D.**
AP-7	144±8	1011±38	2.351±0.129	1.569±0.170	6.67±0.81
AP-9	177.1±8.6	1147±40	2.560±0.124	1.661±0.180	6.49±0.77
AP-11	540±26	2342±61	5.915±0.411	2.993±0.169	5.06±0.45
AP-13	233.9±9.5	1460±42	3.239±0.209	1.813±0.105	5.60±0.48
AP-14	156.9±9.1	944±40	2.826±0.216	1.484±0.097	5.25±0.53
Sunday Peak:					
SP-1	284±16	1060±28	3.189±0.242	2.167±0.123	6.80±0.64
SP-3	522±11	1809±47	5.063±0.275	2.673±0.151	5.28±0.41
SP-4	211±11	1050±41	1.675±0.121	1.224±0.078	7.31±0.70
SP-7	157.8±9.6	1407±74	2.770±0.218	1.385±0.100	5.00±0.54

SUPPLEMENTAL TABLE 2. (continued)

Sample	$^{10}Be/^{9}Be$* (10^{-15})	$^{26}Al/^{27}Al$* (10^{-15})	[^{10}Be]† (10^{5} atoms/g)	[^{26}Al]† (10^{6} atoms/g)	[^{26}Al]/[^{10}Be]§
Sunday Peak (continued):					
SP-8	921±33	3734±92	6.063±0.373	3.417±0.190	5.64±0.47
SP-9	498±14	2680±66	3.956±0.227	2.440±0.136	6.17±0.49
SP-19	937±24	8346±270	15.870±0.892	9.758±0.581	6.15±0.50
Nichols Peak:					
NP-1	80.9±8.6	745±38	1.647±0.194	0.977±0.070	5.93±0.82
NP-4	242±15	1476±64	3.040±0.242	2.141±0.142	7.04±0.73
NP-6	205±14	1129±41	2.290±0.192	1.405±0.087	6.13±0.64
NP-7	109±12	469±38	2.067±0.250	0.937±0.089	4.53±0.7
NP-10	46±11	N.D.**	1.343±0.331	N.D.**	N.D.**
NP-14	48.5±7.2	396±51	1.393±0.218	0.781±0.108	5.61±1.17
NP-15	N.D.**	783±32	N.D.**	0.983±0.064	N.D.**
NP-17	78.4±6.8	889±50	2.054±0.206	1.151±0.087	5.60±0.70
NP-18	116.3±7.2	1269±77	2.612±0.208	1.557±0.122	5.96±0.67

*We physically and chemically isolated quartz from our stream sediment samples using the techniques of Kohl and Nishiizumi (1992) and Granger (1996), and then spiked the isolates with ~1.25 μg ^{9}Be per gram of quartz. We then dissolved the quartz and extracted its Be and Al using ion exchange chomatography. BeO and Al_2O_3 targets were prepared for Accelerator Mass Spectrometry, which yields measurements of $^{10}Be/^{9}Be$ and $^{26}Al/^{27}Al$ (Davis et al., 1990).

†^{10}Be concentrations are calculated using the $^{10}Be/^{9}Be$ and concentrations of Be in the quartz, which we know precisely from measurements of quartz masses and Be spike masses. ^{26}Al concentrations are calculated using $^{26}Al/^{27}Al$ and concentrations of aluminum in quartz, which we measured from sample aliquots using Atomic Absorption Spectrophotometry and Inductively Coupled Plasma - Atomic Emission Spectrometry.

§Uncertainties in [^{26}Al]/[^{10}Be] are propagated from analytical uncertainties in the Al and Be analyses.

**N.D. = not determined.

SUPPLEMENTAL TABLE 3. STUDY CATCHMENT MORPHOLOGY AND EROSION RATES

Sample	Location			Area	Average gradient*	$[Zr]_{soil}$† / $[Zr]_{rock}$	Soil depth§	Dissolution factor#	Shielding factor**	Erosion rate††
	Altitude (km)	Lat (° N)	Long (° W)	(ha)	(m/m)		(cm)			(mm/k.y.)
Fall River (Map = Brush Creek; Average $[Zr]_{soil}/[Zr]_{rock}$ = 1.36±0.05; Average soil depth = 41±3)										
FR-2	0.93	39.6604	121.3607	0.7	0.48±0.03	1.59±0.07	25±4	1.13±0.07	0.87±0.01	156.7±25.2
FR-4	0.53	39.6350	121.2783	7.4	0.70±0.02	N.D.	38±1	1.12±0.07	0.77±0.01	219.6±27.8
FR-5	0.60	39.6361	121.2714	2.6	0.62±0.02	1.33±0.04	52±5	1.13±0.04	0.80±0.01	111.2±13.7
FR-6	0.87	39.6385	121.3322	17.8	0.42±0.03	1.36±0.05	N.D.	1.12±0.05	0.89±0.01	34.1±6.4
FR-7	0.89	39.6391	121.3311	92.9	0.17±0.01	N.D.	41±3	1.13±0.07	0.98±0.00	31.0±8.0
FR-8	1.06	39.6586	121.3230	2.2	0.18±0.01	1.33±0.06	10±5	1.03±0.06	0.98±0.00	14.4±1.6
FR-9	1.04	39.6552	121.3269	0.4	0.16±0.01	N.D.	10±5	1.04±0.07	0.98±0.00	18.2±2.6
FR-10	0.98	39.6465	121.3434	0.4	0.18±0.01	1.00±0.00	0	1.00±0.00	0.98±0.00	24.7±2.1
Grizzly Dome (Map = Storrie & Soapstone Hill; Assumed $[Zr]_{soil}/[Zr]_{rock}$ = 1.36±0.05; Assumed soil depth = 40±5)##										
GD-1	1.41	39.8815	121.3468	1.1	0.67±0.05	N.D.	N.D.	1.12±0.05	0.78±0.03	130.9±18.9
GD-2	1.40	39.8811	121.3473	1.1	0.59±0.05	N.D.	N.D.	1.12±0.05	0.82±0.03	86.4±11.3
GD-3	1.39	39.8804	121.3479	1.5	0.61±0.05	N.D.	N.D.	1.12±0.05	0.81±0.03	85.7±11.8
GD-4	1.52	39.8861	121.3308	5.2	0.16±0.05	N.D.	N.D.	1.12±0.05	0.98±0.01	63.3±7.9
GD-5	1.50	39.8863	121.3305	1.1	0.13±0.05	N.D.	N.D.	1.12±0.05	0.99±0.01	60.2±7.4
GD-6	1.52	39.8882	121.3269	8.2	0.17±0.05	N.D.	N.D.	1.12±0.05	0.98±0.01	70.9±9.0
GD-9	1.51	39.8865	121.3163	1.9	0.13±0.05	N.D.	N.D.	1.12±0.05	0.99±0.01	57.3±8.4
GD-10	1.00	39.8694	121.3691	78.0	0.63±0.05	N.D.	N.D.	1.12±0.05	0.80±0.03	93.5±15.3
GD-12	0.99	39.8885	121.3607	102.2	0.55±0.05	N.D.	N.D.	1.12±0.05	0.83±0.03	111.7±15.6
GD-13	0.99	39.8861	121.3616	83.6	0.55±0.05	N.D.	N.D.	1.12±0.05	0.83±0.03	88.2±11.7
GD-14	1.08	39.8631	121.3526	99.2	0.54±0.05	N.D.	N.D.	1.12±0.05	0.84±0.03	105.2±15.0
Antelope Lake (Map = Kettle Rock; Average $[Zr]_{soil}/[Zr]_{rock}$ = 1.22±0.04; Average soil depth = 49±8)										
AL-2	1.79	40.1721	120.6464	3.0	0.35±0.06	N.D.	N.D.	1.08±0.04	0.92±0.02	34.6±4.3
AL-3	1.74	40.1801	120.6368	8.2	0.42±0.01	N.D.	45±16	1.08±0.04	0.89±0.00	38.4±5.9
AL-4	1.74	40.1775	120.6382	1.9	0.43±0.02	1.26±0.06	N.D.	1.10±0.06	0.89±0.01	23.0±3.2
AL-5	1.69	40.1785	120.6288	4.5	0.34±0.10	1.36±0.24	N.D.	1.14±0.24	0.93±0.04	29.3±7.8
AL-6	1.75	40.1835	120.6384	2.6	0.26±0.02	N.D.	N.D.	1.08±0.04	0.96±0.01	24.3±2.9
AL-7	1.80	40.1623	120.6532	3.3	0.27±0.06	N.D.	N.D.	1.08±0.04	0.95±0.02	16.1±2.1
AL-8	1.76	40.1494	120.6472	111.5	0.50±0.20	N.D.	N.D.	1.08±0.04	0.86±0.10	28.2±5.1
AL-9	1.80	40.1546	120.6450	1.1	0.60±0.13	1.33±0.11	N.D.	1.13±0.11	0.82±0.07	36.7±6.7
AL-10	1.80	40.1548	120.6376	11.1	0.40±0.06	1.21±0.02	53±7	1.09±0.02	0.90±0.03	30.6±3.7
AL-11	1.73	40.1628	120.6338	52.0	0.26±0.05	N.D.	N.D.	1.08±0.04	0.96±0.02	20.7±2.7
Adams Peak (Map = Constantia; Average $[Zr]_{soil}/[Zr]_{rock}$ = 1.20±0.03; Average soil depth = 34±5)										
AP-1	2.05	39.9032	120.1286	2.2	0.22±0.05	N.D.	N.D.	1.06±0.03	0.97±0.01	34.1±4.1
AP-2	2.15	39.9023	120.1351	1.1	0.45±0.02	N.D.	N.D.	1.06±0.03	0.88±0.01	36.7±4.4
AP-3	2.14	39.8987	120.1351	3.3	0.46±0.03	1.24±0.03	27±9	1.06±0.03	0.88±0.01	45.6±5.8
AP-4	2.19	39.8917	120.1409	1.9	0.67±0.05	1.09±0.05	N.D.	1.03±0.05	0.78±0.03	30.6±4.1
AP-5	2.05	39.8904	120.1339	7.4	0.34±0.04	1.15±0.06	N.D.	1.04±0.06	0.93±0.02	54.6±7.4
AP-6	2.12	39.8874	120.1339	13.4	0.49±0.06	N.D.	N.D.	1.06±0.03	0.86±0.03	44.3±5.6
AP-7	1.92	39.8828	120.1278	1.1	0.38±0.03	N.D.	N.D.	1.06±0.03	0.91±0.01	52.5±6.6
AP-9	1.94	39.8828	120.1298	0.4	0.34±0.01	N.D.	N.D.	1.06±0.03	0.93±0.00	50.2±6.2
AP-11	2.25	39.8917	120.1443	0.4	0.10±0.01	1.22±0.05	N.D.	1.06±0.05	0.99±0.00	32.0±4.6
AP-13	1.89	39.8802	120.1275	0.4	0.21±0.03	1.20±0.03	N.D.	1.06±0.03	0.97±0.01	43.0±5.3
AP-14	1.89	39.8787	120.1278	0.7	0.26±0.01	N.D.	37±7	1.06±0.03	0.96±0.00	49.8±6.6
Sunday Peak (Map = Tobias Peak; Average $[Zr]_{soil}/[Zr]_{rock}$ = 1.11±0.05; Average soil depth = 61±12)										
SP-1	2.27	35.7938	118.5899	9.3	0.55±0.05	1.12±0.06	61±12	1.05±0.06	0.84±0.03	40.2±5.6
SP-3	2.33	35.7981	118.5833	5.6	0.45±0.05	1.03±0.08	N.D.	1.01±0.08	0.88±0.02	30.0±4.6
SP-4	2.27	35.8150	118.5754	1.1	0.29±0.05	N.D.	N.D.	1.05±0.05	0.94±0.02	82.8±11.8
SP-7	2.42	35.7789	118.5839	1.1	0.80±0.05	N.D.	N.D.	1.05±0.05	0.73±0.03	50.7±7.9
SP-8	2.42	35.7830	118.5915	2.2	0.21±0.05	1.15±0.06	N.D.	1.07±0.06	0.97±0.01	30.0±4.0
SP-9	2.25	35.7826	118.6024	3.0	0.31±0.05	N.D.	N.D.	1.05±0.05	0.94±0.02	37.6±4.7
SP-19	2.28	35.7878	118.5801	9.3	0.41±0.05	N.D.	N.D.	1.05±0.05	0.90±0.02	9.2±1.2

SUPPLEMENTAL TABLE 3. (continued)

Sample	Location Altitude (km)	Lat (° N)	Long (° W)	Area (ha)	Average gradient* (m/m)	$[Zr]_{soil}$† / $[Zr]_{rock}$	Soil depth§ (cm)	Dissolution factor#	Shielding factor**	Erosion rate†† (mm/k.y.)
Nichols Peak (Map = Cane Canyon; Average $[Zr]_{soil}/[Zr]_{rock}$ = 1.25±0.08; Average soil depth = 30±1 cm)										
NP-1	1.12	35.5922	118.2255	1.1	0.44±0.02	N.D.	33±6	1.07±0.08	0.88±0.01	41.6±4.8
NP-4	1.33	35.5853	118.2181	1.5	0.65±0.05	N.D.	N.D.	1.06±0.08	0.79±0.03	21.0±2.6
NP-6	1.28	35.5870	118.2181	2.6	0.65±0.05	N.D.	N.D.	1.06±0.08	0.79±0.03	28.9±3.3
NP-7	1.26	35.6003	118.2120	2.2	0.46±0.05	N.D.	N.D.	1.06±0.08	0.88±0.02	43.5±7.1
NP-10	1.43	35.5820	118.1808	3.3	0.68±0.05	N.D.	N.D.	1.06±0.08	0.78±0.03	53.8±14.4
NP-14	1.37	35.5783	118.1977	0.7	0.23±0.02	N.D.	28±3	1.06±0.08	0.96±0.01	64.9±9.5
NP-15	1.36	35.5781	118.1981	1.1	0.29±0.05	N.D.	N.D.	1.06±0.08	0.94±0.02	52.5±6.2
NP-17	1.15	35.5232	118.2090	5.9	0.16±0.05	N.D.	N.D.	1.06±0.08	0.98±0.01	38.1±5.7
NP-18	1.18	35.5221	118.2014	0.7	0.24±0.02	1.25±0.08	29±2	1.06±0.08	0.96±0.01	29.1±4.2

*Average hillslope gradient measured by field surveys and from U.S. Geological Survey 7.5′ quadrangles. Map names are listed in parenthesis next to site names. Refer to Figure 1 for catchment locations.

†[Zr] measured by XRF. Samples of regolith and bedrock were taken from widely distributed locations within a subset of the study catchments. For catchments where no Zr concentrations are available, we used site-wide averages (weighted by inverse variance and listed next to site names) from regolith and outcrop samples.

§Soil (we use "soil" and "regolith" interchangeably here) depth measured from widely distributed pits on hillslopes within study catchments. For catchments where no soil depths are available, we used site-wide average values (listed next to site names).

#Dissolution correction factors are estimated from Zr enrichment in the soil and soil depths, and apply to production rates (see equation 3, published manuscript). Within each site, the dissolution correction is relatively uniform across the catchments and is small (<1.14). Thus any errors introduced by using average soil depths and [Zr] should be small, and would not substantially affect the analysis presented in this study.

**Shielding correction factors apply to production rates, and account for horizon shielding by hillslopes and depth shielding imposed by soil and rock during exhumation (Dunne et al., 1999).

††Reported erosion rates are inverse-variance-weighted averages±standard errors (Bevington, 1969) of erosion rates calculated from equation 3 for each nuclide. Reported erosion rate uncertainties were propagated using random and analytical uncertainties, and ignoring systematic uncertainties in production rates. Uncertainties on absolute erosion rates are therefore somewhat higher. Soil density is assumed to be 1.6±0.4 g/cm^3. Rock density is 2.7 g/cm^3. Solving equation 3 for erosion rate requires estimates of P_n and P_m. Cosmogenic nuclide production rates in quartz at the earth's surface depend on altitude and latitude (Lal, 1958; Lal and Peters, 1967; Lal, 1991). Spallogenic production rates can be scaled from sea-level, high latitude (SLHL) reference values to sample altitude and geographic latitude using Table 2 of Lal (1991). The cosmic ray muon flux to Earth's surface is not strongly sensitive to latitude (Allkofer and Jokisch, 1973). We therefore neglect latitude scaling of muogenic production rates in this analysis. Altitude scaling of muogenic production is best approximated by assuming exponential attenuation in the atmosphere, with a mean free path of 247 g/cm^2 (Rossi, 1948). Nuclide accumulation on sloped surfaces is affected by topographic shielding, which effectively reduces production both at depth and at the surface. These effects can be accounted for using shielding correction factors that depend on hillslope angle (Dunne et al., 1999). SLHL muogenic production rates are estimated here to be (in atoms/g/yr) P_m = 0.11±0.01 for ^{10}Be and P_m = 0.81±0.11 for ^{26}Al, based on sea level stopping rates reported by Barton and Slade (1965), chemical compound factors and nuclear capture probabilities summarized by Heisinger et al. (1997), and branching ratio estimates for production of ^{26}Al (Strack et al., 1994) and ^{10}Be (Heisinger et al., 1997). For a detailed summary of muogenic production systematics, see Stone et al. (1998a). Based on these SLHL muogenic production rates (which agree with estimates reported elsewhere; see Brown et al., 1995a and Stone et al., 1998b), the overall contribution of muons to ^{26}Al and ^{10}Be production at the surface is only ~3%, much lower than earlier estimates of ~20% (Lal, 1991). In light of this revelation, we needed to revise estimates of SLHL spallogenic production rates that have been calibrated in previous work. SLHL spallogenic production rates used here are (in atoms/g/yr) P_n = 4.72±0.38 for ^{10}Be and P_n = 28.45±2.71 for ^{26}Al. The SLHL P_n for ^{10}Be used in this study is an average of rescaled estimates from four calibration studies: 1) the Nishiizumi et al. (1989) work on glacial retreat in the Sierra Nevada, 2) the Clark et al. (1995) work on Laurentide ice retreat in New Jersey, USA, 3) the Stone et al. (1998b) work on glacial retreat in Scotland, and 4) the Kubik et al. (1998) work on the Köfels landslide in Austria. SLHL P_n for ^{26}Al is calculated as the product of SLHL P_n for ^{10}Be and the spallogenic production rate ratio of ^{26}Al/^{10}Be, which we take to be 6.03±0.31 from data reported in the Sierra Nevada calibration study. Note that to rescale the Sierra Nevada production rates, we used ^{10}Be and ^{26}Al concentrations reported by Nishiizumi et al. (1989), revised glacial retreat ages reported by Clark et al. (1995), and, as suggested by Nishiizumi et al. (1996), geographic latitude of the calibration samples.

Supplemental Table 3 notes (continued):

§§N.D. = not determined.

##For the Grizzly Dome catchments, we have no soil depth or [Zr] data. We assume that [Zr] enrichment factor at Grizzly Dome is 1.36±0.05, equal to the site-wide average at Fall River, which, having a similar climate, should also have a similar chemical weathering intensities (and thus [Zr] enrichments). We further assume that soil depth at Grizzly Dome is 40±5 cm, which is close to the median value for our study sites and should therefore be a reasonable estimate. Erosion rates estimates for Grizzly Dome are insensitive to plausible errors introduced by these assumptions, because soil depth and [Zr] are only necessary in accounting for the effect of weathering dissolution on cosmogenic erosion rates. Neglecting the dissolution effect entirely would result in less than 14% error in erosion rates at our other six sites, implying that any erosion rate errors introduced by assuming incorrect soil depths and [Zr] for Grizzly Dome should be small, and would not affect our analysis

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