

Precipitation Stable Isotope Data for East Maui, Hawaii

Supplement to Scholl et al., 2002, Journal of Hydrology, The influence of microclimates and fog on stable isotope signatures used in interpretation of regional hydrology: East Maui, Hawaii

Site ID	Location	Latitude	Longitude	Altitude (feet)	Altitude (m)	Funnel Diameter (cm)	Sample ID	Date	Date	delta D (per mil)	delta O-18 (per mil)	Volume (mL)	Rainfall (inches)	Rainfall (cm)
								Placed	Collected					
P1	Waikamoi 800'	20.872	156.186	750	229	4.8	MHP1-1	9/10/95	2/22/96	-10	-3.1	2270	127.4	50.2
							MHP1-2	2/22/96	9/5/96	-7	-2.8	2150	120.7	47.5
							MHP1-3	9/5/96	2/27/97	-9	-3.3	1870	105.0	41.3
							MHP1-4	2/27/97	9/10/97	-7	-2.8	2745	154.1	60.7
P2	Waikamoi 1200'	20.865	156.193	1180	360	2.7	MHP2A-1	9/10/95	2/22/96	-9	-3.1	1445	252.6	99.4
							MHP2A-2	2/22/96	9/5/96	-9	-3.0	1550	270.9	106.7
							MHP2A-3	9/5/96	2/27/97	-10	-3.3	1195	208.9	82.2
							MHP2B-4	2/27/97	9/10/97	-9	-2.9	3295	575.9	226.7
P3	Waikamoi 3200'	20.831	156.225	3140	957	2.7	MHP3-1	9/9/95	2/23/96	-12	-3.8	1220	213.2	84.0
							MHP3-2	2/23/96	9/6/96	-14	-3.9	2000	349.6	137.6
							MHP3-3	9/6/96	2/28/97	-17	-4.2	1520	265.7	104.6
							MHP3-4	2/28/97	9/9/97	-14	-3.5	3320	580.3	228.5
P4	Waikamoi 4400'	20.812	156.233	4250	1295	2.7	MHP4B-1	9/9/95	2/23/96	-16	-4.2	1195	208.9	82.2
							MHP4A-2	2/23/96	9/6/96	-17	-4.1	1650	288.4	113.5
							MHP4B-2	2/23/96	9/6/96	-16	-4.2	1300	227.2	89.5
							MHP4A-3	9/6/96	2/28/97	-20	-4.8	1420	248.2	97.7
							MHP4B-3	9/6/96	2/28/97	-22	-4.9	1020	178.3	70.2
							MHP4A-4	2/28/97	9/9/97	-16	-3.8	3195	558.4	219.9
P5	Waikamoi 6450'	20.777	156.244	6440	1963	4.8	MHP5-1	9/11/95	2/25/96	-28	-5.3	920	51.6	20.3
							MHP5-2	2/25/96	9/4/96	-40	-6.7	1250	70.2	27.6
							MHP5-3	9/4/96	3/1/97	-35	-6.6	2470	138.7	54.6
							MHP5-4	3/1/97	9/8/97	-26	-4.9	3420	192.0	75.6
P6	Haleakala Ranger Station	20.763	156.251	6950	2118	7.3	MHP6-1	9/11/95	2/24/96	-37	-6.1	1370	32.7	12.9
							MHP6-2	2/25/96	9/4/96	-52	-7.9	2200	52.5	20.7
							MHP6-3	9/8/96	2/26/97	-41	-7.2	5045	120.5	47.4
							MHP6-4	2/26/97	9/6/97	-33	-5.6	4995	119.3	47.0
P7	Haleakala Hwy. 8500'	20.742	156.248	8500	2591	7.3	MHP7A-1	9/11/95	2/24/96	-44	-7.2	1320	31.5	12.4
							MHP7A-2	2/25/96	9/4/96	-70	-10.4	1975	47.2	18.6
							MHP7A-3	9/8/96	2/26/97	-49	-8.1	4320	103.1	40.6
							MHP7A-4	2/26/97	9/6/97	-47	-7.5	3170	75.7	29.8
P8	Haleakala Hwy. 9800'	20.714	156.259	9790	2984	10.2	MHP8-1	9/11/95	2/24/96	-45	-7.7	4320	53.3	21.0
							MHP8-2	2/25/96	9/4/96	-79	-11.7	4725	58.3	22.9
							MHP8-3	9/8/96	2/26/97	-54	-8.5	12770	157.5	62.0
							MHP8-4	2/26/97	9/6/97	-60	-9.0	4305	53.1	20.9
P9	Haleakala Hwy. 6000'	20.761	156.268	6000	1829	7.3	MHP9-1	9/12/95	2/24/96	-40	-6.6	920	22.0	8.6
							MHP9-2	2/25/96	9/8/96	-57	-8.5	1500	35.8	14.1
							MHP9-3	9/8/96	3/1/97	-42	-7.1	3970	94.8	37.3
							MHP9-4	3/1/97	9/8/97	-34	-5.6	1880	44.9	17.7
P10	Haleakala Hwy. 5000'	20.76	156.287	5040	1536	7.3	MHP10-1	9/9/95	2/24/96	-37	-6.4	895	21.4	8.4
							MHP10-2	2/25/96	9/8/96	-37	-6.5	1775	42.4	16.7
							MHP10-3	9/8/96	3/1/97	-41	-6.7	3720	88.8	35.0
							MHP10-4	3/1/97	9/8/97	-28	-5.0	1995	47.6	18.8

Site ID	Location	Latitude	Longitude	Altitude	Altitude	Funnel	Sample ID	Date	Date	delta D	delta O-18	Volume	Rainfall	Rainfall					
				(feet)	(m)	Diameter		Placed	Collected						(per mil)	(per mil)	(mL)	(inches)	(cm)
P11	Haleakala Hwy. 4200'	20.772	156.295	4150	1265	7.3	MHP11A-1	9/9/95	2/23/96	-41	-6.7	770	18.4	7.2					
							MHP11A-2	2/27/96	9/8/96	-28	-5.3	2150	51.3	20.2					
							MHP11A-3	9/8/96	3/1/97	-35	-6.3	4070	97.2	38.3					
							MHP11A-4	3/1/97	9/8/97	-22	-4.4	1970	47.0	18.5					
P12	Kula Experimental Farm	20.761	156.323	3160	963	7.3	MHP12-1	9/12/95	2/27/96	-36	-6.3	920	22.0	8.6					
							MHP12-2	2/27/96	9/4/96	-31	-5.5	1325	31.6	12.5					
							MHP12-3	9/4/96	2/28/97	-32	-5.7	3220	76.9	30.3					
							MHP12-4	2/28/97	9/9/97	-27	-4.8	1520	36.3	14.3					
P13	Naalae Rd. 1770'	20.771	156.358	1780	543	10.2	MHP13A-1	9/11/95	2/24/96	-36	-5.9	1445	17.8	7.0					
							MHP13A-2	2/24/96	9/7/96	-37	-6.0	1450	17.9	7.0					
							MHP13A-3	9/7/96	2/26/97	-27	-4.8	4920	60.7	23.9					
							MHP13B-4	2/26/97	9/8/97	-26	-4.9	1995	24.6	9.7					
P14	Naalae Rd. 1000'	20.778	156.39	1000	305	10.2	MHP14-1	9/11/95	2/24/96	-22	-4.3	1470	18.1	7.1					
							MHP14-2	2/24/96	9/7/96	-39	-6.0	1125	13.9	5.5					
							MHP14-3	9/7/96	2/26/97	-22	-4.6	4820	59.5	23.4					
							MHP14-4	2/26/97	9/8/97	-27	-4.6	1395	17.2	6.8					
P15	Naalae Rd. 445'	20.776	156.422	445	136	10.2	MHP15A-1	9/11/95	2/24/96	-17	-3.9	1570	19.4	7.6					
							MHP15B-2	2/24/96	9/7/96	-50	-7.2	1000	12.3	4.9					
							MHP15B-3	9/7/96	2/26/97	-24	-4.6	4595	56.7	22.3					
							MHP15A-4	2/26/97	9/8/97	-28	-4.5	1520	18.7	7.4					
P16	NOAA Whale Sanctuary	20.77	156.462	5	2	10.2	MHP16-1	9/12/95	2/27/96	-16	-3.5	1295	16.0	6.3					
							MHP16-2	2/27/96	9/7/96	-47	-6.7	850	10.5	4.1					
							MHP16-3	9/7/96	2/26/97	-22	-4.2	4820	59.5	23.4					
							MHP16-4	2/26/97	9/8/97	-28	-4.7	1720	21.2	8.4					
P17	Hanawi Stream upper gage	20.81	156.117	1350	412	2.7	MHP17-1	9/13/95	2/26/96	-7	-2.9	1670	291.9	114.9					
							MHP17-2	2/26/96	9/9/96	-12	-3.4	2250	393.3	154.8					
							MHP17-3	9/9/96	3/1/97	-7	-2.9	1270	222.0	87.4					
							MHP17-4	3/1/97	9/11/97	-8	-2.8	3070	536.6	211.3					
P18	Hanawi Stream lower gage (removed after 1 year)	20.821	156.107	550	168	4.8	MHP18-1	9/13/95	2/26/96	-7	-2.8	3720	208.8	82.2					
							MHP18-2	2/26/96	9/9/96	-11	-2.8	4275	240.0	94.5					
							control initial, 6000'	20.761	156.268	6000	1829		9/12/95		--	-3.50	1920		
							control final, 6000'							2/24/96		--	-3.53		
	control initial, 445'	20.776	156.422	445	136			9/7/96		-13	-3.62	1500							
	control final, 445'								2/26/97	-13	-3.55								

Notes: These are six-month cumulative samples of precipitation. At half of the sites, duplicate collectors (A and B) were set out to assure a sample was collected. Generally, only one of the duplicate samples was analyzed each time period. Oxygen isotope ratios are determined using the carbon dioxide-water equilibration technique of Epstein and Mayeda (1953). Precision is +/- 0.2 per mil. Hydrogen isotope ratios are determined using the gaseous hydrogen equilibration procedure published by Coplen, Wildman, and Chen (1991). Precision is +/- 2 per mil. Stable isotope analyses were done at the Reston Stable Isotope Laboratory of the U.S. Geological Survey.