Table S-6. Estimated mean annual groundwater recharge as a percentage of water input for baseline conditions in the Southeast Mauna Loa aquifer sector of the Island of Hawai‘i, compiled by land-cover type and precipitation amount (refer to USGS SIR 2011–5078).

[<, less than; –, not applicable; water input is defined as the sum of mean annual rainfall, fog, and irrigation; baseline conditions are defined as 2008 land cover and mean annual rainfall for the period 1916–83; the Southeast Mauna Loa aquifer sector consists of the Ōla‘a, Kapāpala, Nā‘ālehu, and Ka Lae aquifer systems and is defined by the Hawai‘i Commission on Water Resource Management (see http://www.state.hi.us/dlnr/cwrm/mapsillustrations/gwhu_hawaii.pdf); reported mean recharge is an area-weighted average; no distinction is made between fog and non-fog conditions for shrubland, coffee, and eucalyptus forest plantations]

Land-cover description	Mean annual rainfall plus fog equal to 40 inches or less			Mean annual rainfall plus fog greater than 40 inches and less than 80 inches			Mean annual rainfall plus fog equal to 80 inches or greater		
	Number of water-budget subareas	Area (square miles)	Mean recharge as a percentage of water input[1]	Number of water-budget subareas	Area (square miles)	Mean recharge as a percentage of water input[1]	Number of water-budget subareas	Area (square miles)	Mean recharge as a percentage of water input[1]
Open native forest (outside fog zone)	478	2.74	18.2	2,991	7.73	18.5	1,501	5.85	32.0
Closed native forest (outside fog zone)	28	0.02	6.1	1,136	1.97	16.2	702	2.26	41.9
Alien and mixed forest (outside fog zone)	256	0.67	1.3	4,833	11.69	7.2	888	3.15	33.9
Open native forest (inside fog zone)	0	–	–	4,353	33.95	31.2	7,534	78.37	49.5
Closed native forest (inside fog zone)	0	–	–	2,483	24.96	29.3	5,971	66.40	47.1
Alien and mixed forest (inside fog zone)	0	–	–	987	3.85	21.2	1,160	10.27	54.3
Shrubland	754	8.22	37.6	9,302	127.27	62.2	2,634	11.01	68.0
Agriculture: Macadamia	0	–	–	1,418	6.63	23.0	0	–	–
Coffee	0	–	–	0	–	–	0	–	–
Diversified	0	–	–	4,516	11.52	34.4	3,153	8.06	58.5
Forest (eucalyptus)	0	–	–	0	–	–	0	–	–
Fallow/Grassland	0	–	–	0	–	–	0	–	–
Golf course	0	–	–	68	0.18	35.3	27	0.04	53.1
Low-intensity developed	0	–	–	1,697	1.41	27.9	163	0.21	55.4
High-intensity developed	0	–	–	778	0.49	51.6	127	0.05	81.0
Grassland	973	23.76	5.8	8,321	36.05	29.5	3,453	12.32	56.4
Sparsely vegetated	1,496	139.35	59.1	2,350	48.82	63.5	124	0.31	71.7
Wetland vegetation	0	–	–	19	0.36	30.5	3	<0.005	63.6
Water body[2]	0	–	–	11	0.02	–	11	0.01	–

[1]Recharge as a percentage of water input was calculated for each subarea using the formula: [(recharge - direct recharge)/(rainfall + fog + irrigation)] x 100. Values for each subarea in a particular land-cover category were then multiplied by the area and summed, and that sum was then divided by the total area of that category to obtain a mean. Direct recharge is described in USGS SIR 2011–5078.

[2]Recharge was not calculated using the water-budget model (see USGS SIR 2011–5078, p. 28).