

# Energy & Science



## Section 7

### ENERGY & SCIENCE

The increase in Maui County's population has been reflected in the utilities. Consumption and use of electricity, gas, utilities, and water have all increased dramatically over the last decade. Statistics on electricity, gas, water production and consumption are covered. Hawaiian Commercial and Sugar generated about 10.0% of the electric power used on the island of Maui in 2008. Ongoing scientific endeavors include observation of astronomical and man-made space objects from the summit of Mt. Haleakalā.

## 7.1.1

## TELESCOPES AT THE SUMMITS OF MAUNA KE‘A AND HALEAKALĀ: 2003

Facility (mirror diameter in meters)	Capital cost <sup>1</sup> (\$mil)	Annual operating cost (\$mil)	County based staff	Operational
<b>Mauna Ke‘a observatories:</b>				
UH 0.6-m (Optical)	0.3	- <sup>2</sup>	- <sup>2</sup>	1968
UH 2.2-m (Optical/Infrared)	5	1.3	8	1970
Canada-France-Hawai‘i 3.6-m (Optical/Infrared)	30	6.2	50	1979
NASA IRTF 3.0-m (Infrared)	10	3.2	16	1979
United Kingdom 3.8-m (Infrared)	5	3.0	31	1979
James Clerk Maxwell 15-m Submillimeter	32	5.0	39	1986
Caltech 10.4-m Submillimeter	10	2.6	11	1986
W.M. Keck Observatory (Keck I & II)				
10-m x 2 (Optical/Infrared)	170	11.0	115	1992/96
VLBA Antenna 25-m (Radio)	7	0.25	2	1992
Submillimeter Array 8x6-m	80	6.0	36	2003
Subaru (Japan National Large Telescope)				
8-m (Optical/Infrared)	170	15.0	70	1999
Fredrick C. Gillett Gemini 8m (Optical/Infrared)	92	8.0	70	1999
Mauna Ke‘a Observatories Support Services	(X)	2.4 <sup>3</sup>	28	(X)
<b>Total</b>	<b>611</b>	<b>61.6</b>	<b>476</b>	
<b>Haleakalā observatories:</b>				
Mees Solar Observatory	0.5	0.1	2	1968
Lunar Ranging Facility	3.3	0.7	7	1976/84
Haleakalā Observatories Projects	(NA)	0.5	4	1979
Maui Space Surveillance Site (MSSS) <sup>4</sup>	200.0	16.0	120	1979
Advanced Electro-Optical System				
3.7-m Telescope (AEOS)	50.0	15.0	55	1997
Magnum 2-m Telescope <sup>5</sup>	5.0	0.25	1	2000
Faulkes 2-m Telescope <sup>6</sup>	5.0	(NA)	(NA)	2003
Haleakalā Support Facilities	(X)	0.13	6	(NA)
<b>Total</b>	<b>263.8</b>	<b>32.68</b>	<b>195</b>	

NA Not available.

X Not applicable.

<sup>1</sup> Historical cost, not adjusted for inflation.<sup>2</sup> Combined budget and staffing with UH 2.2-m telescope.<sup>3</sup> Not included in the total since derived from facility operating costs.<sup>4</sup> Formerly Air Force Maui Optical Station (AMOS).<sup>5</sup> MAGNUM = Multicolor Active Galactic Nuclei Monitoring.<sup>6</sup> Under construction.

SOURCE: University of Hawai‘i at Mānoa, Institute for Astronomy, records.

7.1.2

**ELECTRIC UTILITIES,  
MAUI COUNTY**

	2003	2004	2005	2006	2007
<b>CUSTOMERS, DEC. 31</b>					
<i>Total</i>					
Maui Island	56,880	57,430	59,248	60,218	61,485
Moloka'i	3,017	3,018	3,085	3,099	3,141
Lāna'i	1,526	1,548	1,568	1,620	1,697
<b>Maui County</b>	<b>61,423</b>	<b>61,996</b>	<b>63,901</b>	<b>64,937</b>	<b>66,323</b>
<i>Residential'</i>					
Maui Island	48,327	48,753	50,281	50,922	52,066
Moloka'i	2,464	2,472	2,504	2,531	na
Lāna'i	1,319	1,334	1,350	1,381	1,431
<b>Maui County</b>	<b>52,110</b>	<b>52,559</b>	<b>54,135</b>	<b>54,834</b>	<b>na</b>
<i>Other</i>					
Maui Island	8,553	8,677	8,967	9,296	9,419
Moloka'i	553	546	581	568	562
Lāna'i	207	214	218	239	266
<b>Maui County</b>	<b>9,313</b>	<b>9,437</b>	<b>9,766</b>	<b>10,103</b>	<b>10,247</b>
<b>GENERATING AND FIRM PURCHASED CAPABILITY, DEC. 31 (MW)</b>					
Maui Island	245.2	245.2	232.8	248.0	260.3
Moloka'i	11.8	11.8	11.8	11.8	11.8
Lāna'i	10.3	10.3	10.3	10.3	9.3
<b>Maui County</b>	<b>267.3</b>	<b>267.3</b>	<b>254.9</b>	<b>270.1</b>	<b>281.4</b>
<b>PEAK DEMAND (MW)<sup>2</sup></b>					
Maui Island	197.7	206.5	202.1	206.4	204.4
Moloka'i	6.5	6.7	6.3	6.2	6.3
Lāna'i	5.0	4.8	5.1	5.5	5.4
<b>POWER SOLD (1,000 kWh)</b>					
<i>Total</i>					
Maui Island	1,142,689	1,184,554	1,188,253	1,202,503	1,213,611
Moloka'i	35,894	35,344	35,918	35,273	35,756
Lāna'i	28,136	27,802	27,942	28,691	30,736
<b>Maui County</b>	<b>1,206,719</b>	<b>1,247,700</b>	<b>1,252,113</b>	<b>1,266,467</b>	<b>1,280,103</b>
<i>Residential</i>					
Maui Island	398,949	419,276	421,130	424,628	428,414
Moloka'i	13,048	13,413	13,012	12,717	12,697
Lāna'i	7,515	7,688	7,865	8,088	8,465
<b>Maui County</b>	<b>419,512</b>	<b>440,377</b>	<b>442,007</b>	<b>445,433</b>	<b>449,576</b>
<i>Other</i>					
Maui Island	743,741	765,268	767,123	777,875	785,197
Moloka'i	22,846	21,931	22,906	22,556	23,059
Lāna'i	20,621	20,114	20,077	20,603	22,271
<b>Maui County</b>	<b>787,208</b>	<b>807,313</b>	<b>810,106</b>	<b>821,034</b>	<b>830,527</b>

## 7.1.2

CONTINUED

	2003	2004	2005	2006	2007
<b>AVERAGE ANNUAL USE (kWh)<sup>3</sup></b>					
<i>Residential</i>					
Maui Island	8,255	8,600	8,376	8,339	8,228
Moloka'i	5,296	5,426	5,196	5,024	4,923
Lāna'i	5,697	5,763	5,826	5,857	5,915
<b>Maui County</b>	<b>8,050</b>	<b>n/a</b>	<b>n/a</b>		<b>na</b>
<i>Other</i>					
Maui Island	86,957	88,195	85,550	83,678	83,363
Moloka'i	41,312	40,166	39,425	39,711	41,030
Lāna'i	99,619	93,990	92,096	86,205	83,726
<b>Maui County</b>	<b>84,528</b>	<b>n/a</b>	<b>n/a</b>		<b>na</b>
<b>AVERAGE RATE (dollars per kWh)</b>					
<i>Residential</i>					
Maui Island	0.18289	0.20817	0.24687	0.27784	0.28056
Moloka'i	0.22953	0.25741	0.30111	0.33955	0.34197
Lāna'i	0.23460	0.25149	0.30019	0.32505	0.32782
<b>Maui County</b>	<b>0.18527</b>	<b>n/a</b>	<b>n/a</b>		<b>na</b>
<i>Other</i>					
Maui Island	0.16954	0.19296	0.23321	0.26349	0.26337
Moloka'i	0.22509	0.25543	0.29621	0.33543	0.33497
Lāna'i	0.23516	0.23959	0.29003	0.31364	0.32809
<b>Maui County</b>	<b>0.17287</b>	<b>n/a</b>	<b>n/a</b>		<b>na</b>
<b>Revenues (\$1,000)</b>					
<i>Total</i>					
Maui Island	199,057	234,943	282,868	322,941	326,991
Moloka'i	8,137	9,054	10,703	11,884	12,066
Lāna'i	6,612	6,752	8,184	9,091	10,081
<b>Maui County</b>	<b>213,806</b>	<b>250,749</b>	<b>301,755</b>	<b>343,916</b>	<b>349,138</b>
<i>Residential</i>					
Maui Island	72,964	87,281	103,964	117,980	120,197
Moloka'i	2,995	3,453	3,918	4,318	4,342
Lāna'i	1,763	1,933	2,361	2,629	2,775
<b>Maui County</b>	<b>77,721</b>	<b>92,667</b>	<b>110,243</b>	<b>124,927</b>	<b>127,314</b>
<i>Other</i>					
Maui Island	126,093	147,662	178,904	204,961	206,794
Moloka'i	5,142	5,602	6,785	7,566	7,724
Lāna'i	4,849	4,819	5,823	6,462	7,307
<b>Maui County</b>	<b>136,085</b>	<b>158,083</b>	<b>191,512</b>	<b>218,989</b>	<b>221,825Ex se</b>

<sup>1</sup> Residential refers to single-metered residential customers which may include condominiums for visitor use but excludes master-metered apartment and condominium buildings used by residents, which are classified as commercial customers.

<sup>2</sup> Peak demand is the maximum amount of energy required from the electrical system. The islands' electrical systems are not interconnected, so no peaks are reported for Maui County as a whole.

<sup>3</sup> Based on number of customers at end of year. n/a Not Available.

MW: Megawatts kWh: Kilo-watt-hour.

SOURCE: Hawai'i State Department of Commerce and Consumer Affairs, Division of Consumer Advocacy, records; capacity and peak demand: Hawaiian Electric Industries, Inc., Securities and Exchange Commission 10-K filings, 2003-2007.

### 7.1.3

## GAS UTILITIES, MAUI COUNTY

*Excludes bottled gas*

	2002	2003	2004	2005	2006	2007
<b>Island of Maui</b>						
<b>Customers (December 31)</b>						
Residential <sup>1</sup>	325	321	317	321	319	341
Other	75	76	74	76	77	77
Total	400	397	391	397	396	418
<b>Gas Sold (1,000 therms)</b>						
Residential	68	69	69	74	76	83
Other	771	766	782	755	726	724
Total	839	836	850	829	802	807
<b>Average Annual Use (therms)</b>						
Residential	210	216	217	231	238	243
Other	10,281	10,081	10,561	9,934	9,429	9,403
<b>Average Rate (\$ per therm)<sup>2</sup></b>						
Residential	2.71343	2.82044	2.91367	3.14865	3.34211	3.49398
Other	1.36960	1.51092	1.59858	1.87550	2.05510	2.25138
<b>Revenues (\$1,000)</b>						
Residential	185	196	201	233	254	290
Other	1,056	1,158	1,249	1,416	1,492	1,630
Total	1,241	1,353	1,450	1,649	1,746	1,920
<b>Island of Moloka'i<sup>3</sup></b>						
<b>Customers (December 31)</b>						
Total/Residential	80	72	73	78	81	80
<b>Gas Sold (1,000 therms)</b>						
Total/Residential	14	15	14	14	14	13
<b>Average Annual Use (therms)</b>						
Total/Residential	117	202	185	179	173	163
<b>Average Rate (\$ per therm)</b>						
Total/Residential	2.84208	3.00433	3.15372	3.35714	3.71429	4.00000
<b>Revenues (\$1,000)</b>						
Total/Residential	40	44	43	47	52	52

<sup>1</sup> Residential refers to single-metered residential customers which may include condominiums for visitor use but excludes master-metered apartment and condominium buildings used by residents which are classified as commercial customers.

<sup>2</sup> Based on number of customers at end of year.

<sup>3</sup> All Molokai customers are residential.

SOURCE: Hawai'i State Department of Commerce and Consumer Affairs, Division of Consumer Advocacy, records.

## 7.1.4

## HAWAI'I STATE ENERGY REPORT, ENERGY CONSUMPTION ESTIMATES BY SOURCE

*In billion BTU*

	2001	2002	2003	2004	2005
Asphalt and road oil	2,271.0	709.9	731.5	799.5	1,286.3
Aviation gasoline	243.8	88.6	77.4	197.1r	224.4
Distillate fuel	35,180.4	47,099.5	46,782.6	50,293.6r	42,564.6
Kerosene-type jet fuel	50,437.3	59,450.4	73,620.8	75,465.8	92,831.2
Naphtha-type jet fuel	0.0	0.0	0.0	0.0	0.0
Kerosene	0.9	0.7	0.9	0.8	0.8
Liquified petroleum gasses	2,102.2	2,782.4	1,786.3	1,672.9	1,563.1
Lubricants	545.8	539.3	498.6	505.1	502.5
Motor gasoline	50,587.3	54,261.1	55,176.6	56,013.6r	57,283.4
Residual fuel	83,517.5	80,086.4	75,938.7	82,423.1	83,048.4
Other petroleum products <sup>1</sup>	14,948.1	14,167.6	15,438.6	15,183.8	15,847.8
<b>Subtotal petroleum products</b>	<b>239,834.4</b>	<b>259,185.8</b>	<b>270,052.1</b>	<b>282,555.3r</b>	<b>295,152.4</b>
Geothermal energy	4,349.9	1,537.2	3,756.1	4,492.5	4,668.4
Solar thermal and photovoltaic energy	1,343.1	1,369.8	1,417.5	1,467.9	1,539.4
Wind energy	21.9	16.4	16.1	75.1	66.3
<b>Subtotal geothermal, solar thermal, photovoltaic and wind energy</b>	<b>5,715.0</b>	<b>2,923.4</b>	<b>5,189.8</b>	<b>6,035.5</b>	<b>6,274.2</b>
Coal	17,773.8	16,618.0	19,255.5	19,253.7	17,956.0
Hydroelectric power	1,041.1	967.1	926.9	941.1	961.8
Natural gas	2,919.4	2,898.1	2,860.8	2,907.2r	2,897.9
Wood and waste	11,690.2	9,531.4	11,706.4	11,760.9	10,109.3
<b>Total energy consumption</b>	<b>278,974.1</b>	<b>292,123.8</b>	<b>309,991.5</b>	<b>323,452.7r</b>	<b>333,351.5</b>

Note: Totals may not equal sum of components due to independent rounding.

<sup>1</sup> Other petroleum products are aviation gasoline blending components, motor gasoline blending components, petroleum coke, still gas, unfinished oils, and petroleum waxes.

r Revised from previous Data Book.

SOURCE: U.S. Department of Energy, Energy Information Administration, Combined State Energy Data System 2005.

## 7.1.5

**WATER SERVICES AND CONSUMPTION, MAUI COUNTY***Years ending June 30*

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
	<b>NUMBER OF SERVICES</b>										
State Total	230,952	233,043	235,799	238,665	242,092	245,397	247,862	254,036	258,790	261,096	265,243
Maui County	28,306	28,720	29,333	29,750	30,414	31,021	31,680	32,344	33,123	33,675	34,682
Maui	26,795	27,205	27,809	28,217	28,872	29,451	30,102	30,751	31,510	32,045	33,032
Moloka'i	1,511	1,515	1,524	1,533	1,542	1,570	1,578	1,593	1,613	1,630	1,650
	<b>CONSUMPTION (million gallons)</b>										
State Total	71,810	73,301	76,631	76,401	78,748	77,868	80,735	78,245	77,171	80,106	80,959
Maui County	11,485	11,729	12,547	12,719	12,883	12,312	12,695	12,436	12,961	13,186	13,258
Maui	11,110	11,399	12,199	12,388	12,546	11,997	12,357	12,105	12,644	12,883	12,961
Moloka'i	330	369	348	331	337	315	338	331	317	303	297

Source: County of Maui, Department of Water Supply, *Annual Report FY 2007*.

7.1.6

**DAILY AVERAGES FOR WATER PRODUCTION BY AREA, MAUI COUNTY**

*in thousands of gallons*

Area	07/07	08/07	09/07	10/07	11/07	12/07	01/08	02/08	03/08	04/18	05/18	06/08	Prev. 12 months
<b>Central Maui</b>													
Groundwater-Īao	19,922	18,804	16,856	15,290	13,715	11,829	13,142	13,215	15,306	15,608	16,320	17,402	15,628
'Īao Tunnel	1,688	1,351	1,199	1,263	1,256	1,343	1,268	1,226	1,269	1,168	1,164	1,107	1,276
Groundwater-Waihe'e	4,468	5,662	6,591	6,413	6,188	5,466	5,877	5,783	5,563	4,960	5,074	4,996	5,585
Kepaniwai	813	755	740	740	728	732	742	742	735	737	741	741	746
Surface Water	1,444	1,388	1,370	1,730	1,680	728	1,121	1,073	1,515	1,498	2,033	1,601	1,433
<b>Upcountry Maui</b>													
Surface Water	7,878	7,173	6,827	7,258	6,124	4,479	4,847	4,547	6,357	6,425	7,114	7,097	6,351
Groundwater	622	748	476	350	539	999	993	1,084	1,271	1,221	1,411	2,683	1,031
<b>West Maui</b>													
Surface Water	3,465	3,424	3,341	3,491	3,327	2,795	3,270	2,935	3,187	3,253	3,101	3,158	3,230
Groundwater	3,302	3,287	3,090	2,715	2,392	2,577	2,441	2,449	2,689	2,741	2,893	3,342	2,828
<b>East Maui</b>													
Groundwater	334	300	290	299	283	303	303	300	355	352	376	372	322
<b>Moloka'i</b>													
Groundwater	1,497	1,412	1,370	1,324	1,107	959	1,067	1,083	1,301	1,332	1,444	1,466	1,281
<b>TOTAL WATER PRODUCTION</b>	<b>45,435</b>	<b>44,305</b>	<b>42,149</b>	<b>40,873</b>	<b>37,339</b>	<b>32,211</b>	<b>35,070</b>	<b>34,435</b>	<b>39,548</b>	<b>39,294</b>	<b>41,673</b>	<b>43,964</b>	<b>39,709</b>

Source: County of Maui, Department of Water Supply, Water Quality Report.

## 7.1.7

### WATER SYSTEM DEVELOPMENT FEE SCHEDULE

*Effective July 29, 2002*

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<b>Meter Size</b>	<b>Total Fee</b>
5/8 inch	\$6,030
3/4 inch	8,442
1 inch	15,678
1 1/2 inch	34,974
2 inch	61,506
3 inch	138,690
4 inch	247,230
6 inch	555,966
8 inch	987,714
10 inch	1,543,680
12 inch	2,222,658

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Note: Fees do not include installation charges.

SOURCE: County of Maui, Department of Water Supply, *Annual Report FY 2007*.

7.1.8

**WATER SERVICES BY METER SIZE,  
MAUI COUNTY**

District	5/8"	3/4"	1"	1-1/2"	2"	3"	4"	6"	8"	Total
<b>Regular Rates</b>										
Wailuku	16,655	1,227	513	396	384	66	24	5	1	19,271
Makawao	8,559	312	169	72	28	17	3	1	0	9,161
Lahaina	2,719	202	127	122	122	24	6	2	0	3,324
Hāna	491	8	8	4	4	0	0	0	0	515
Moloka'i	1,532	43	31	15	18	3	0	1	0	1,643
Subtotal	29,956	1,792	848	609	556	110	33	9	1	33,914
<b>Agricultural Service Meters</b>										
Wailuku	23	5	9	2	2	2	1	0	0	44
Makawao	397	70	99	97	33	1	3	0	0	700
Lahaina	5	4	1	0	0	0	1	0	0	11
Hāna	6	0	2	0	0	0	0	0	0	8
Moloka'i	3	0	2	0	0	0	0	0	0	5
Subtotal	434	79	113	99	35	3	5	0	0	768
<b>Total</b>	<b>30,390</b>	<b>1,871</b>	<b>961</b>	<b>708</b>	<b>591</b>	<b>113</b>	<b>38</b>	<b>9</b>	<b>1</b>	<b>34,682</b>

SOURCE: County of Maui, Department of WaterSupply, *Annual Report FY 2007*.

## 7.1.9

**OUTSIDE WATER DELIVERIES TO DEPARTMENT OF  
WATER SUPPLY, MAUI COUNTY**

Purchased From	1,000 Gallons	Amount	Cost Per 1,000 Gallons
East Maui Irrigation	2,782,059	\$167,758	\$0.060
Wailuku Agribusiness	682,319	360,479	0.528
Maui Land & Pine	716,578	45,259	0.063
Hawaiian Home Lands	14,890	47,295	3.176
R.W. Meyers	86	34	0.395
HC&S	0		
<b>Total</b>	<b>4,195,932</b>	<b>\$620,825</b>	<b>\$0.148</b>
<b>District</b>			
Wailuku	682,319	\$360,480	\$0.528
Kula	1,400,238	84,434	0.060
Makawao	1,367,204	82,442	0.060
Lahaina	716,578	45,259	0.063
Hāna	14,617	881	0.060
Moloka'i	14,976	47,329	3.160
<b>Total</b>	<b>4,195,932</b>	<b>\$620,825</b>	<b>\$0.148</b>
<b>Other Water</b>			
Wailuku - Wlku. Agribusiness	394,122		
Wailuku - Hl. Land & Farming	1,834,162		
<b>Total</b>	<b>2,228,284</b>		

SOURCE: County of Maui, Department of WaterSupply, *Annual Report FY 2007*.

## 7.1.10

**WATER SALES TO GENERAL AND AGRICULTURAL  
CONSUMERS BY DISTRICT & SYSTEMS,  
MAUI COUNTY, FISCAL YEAR**

System	Services	Change from FY 2006	Consumption (1,000 gallons )	Change from FY 2006 (1,000 gallons)
<b>Wailuku District</b>				
Wailuku	5,927	238	1,343,947	39,962
Waihe'e	190	0	33,825	4,374
Waikapū	510	176	63,792	9,484
Wailuku Heights	490	3	90,001	3,564
Kahului	5,031	279	1,852,311	42,735
Pu'unēnē	11	0	34,992	(2,257)
Kihei	5,823	98	4,149,576	(171,550)
Mā'alaea	45	0	77,900	(7,555)
Mākena	205	10	244,010	19,476
Pā'ia-Kū'au	903	(1)	161,968	7,281
Spreckelsville	174	4	81,895	3,462
<b>Subtotal</b>	<b>19,309</b>	<b>807</b>	<b>8,134,217</b>	<b>(51,024)</b>
<b>Makawao District</b>				
Kokomo-Kaupakalua	1,254	19	179,109	2,664
Kuiaha	296	0	62,704	5,365
Ha'ikū-Pa'uwela	836	0	149,392	9,291
Makawao	2,026	11	369,692	21,925
Pukalani	2,074	2	390,582	26,242
Hāilī'imaile	201	1	31,784	(6,810)
Upper Kula	1,960	4	552,991	62,358
Lower Kula	1,098	6	813,945	4,887
'Ulupalakua	81	(1)	57,333	(3,373)
Kula Agr. Park	39	0	213,454	(7,447)
<b>Subtotal</b>	<b>9,865</b>	<b>42</b>	<b>2,820,986</b>	<b>115,101</b>
<b>Lahaina District</b>				
Lahaina	2,016	36	846,086	(2,956)
Honokōwai	471	30	562,877	(12,704)
'Alaeloa	840	72	528,010	25,758
Honokōhau	9	(4)	866	(232)
<b>Subtotal</b>	<b>3,336</b>	<b>134</b>	<b>1,937,839</b>	<b>9,866</b>
<b>Moloka'i District</b>				
Kawela-Kaunakakai	1,162	16	216,996	(9,901)
'Ualapu'e	375	9	69,971	5,489
Kala'e	113	3	9,789	(1,325)
Hālawa	0	(8)	0	(159)
<b>Subtotal</b>	<b>1,650</b>	<b>20</b>	<b>296,756</b>	<b>(5,896)</b>
<b>Hāna District</b>				
Hāna	382	0	54,758	3,922
Nāhiku	39	2	3,740	(443)
Ke'anae	84	2	7,904	442
Kaupō	17	0	1,364	(536)
<b>Subtotal</b>	<b>522</b>	<b>4</b>	<b>67,766</b>	<b>3,385</b>

SOURCE: County of Maui, Department of Water Supply, *Annual Report FY 2007*.

7.1.11

**WATER CONSUMPTION BY DISTRICT,  
MAUI COUNTY, FISCAL YEAR**

*1,000 gallons*

Months	Total	Wailuku	Makawao	Kula	Lahaina	Moloka'i	Hāna
<b>General</b>							
July-August	2,190,573	1,419,722	200,736	132,163	372,175	56,041	9,736
September-October	2,259,526	1,499,787	222,749	125,858	348,848	57,973	4,311
November-December	1,848,906	1,276,624	148,026	81,142	291,591	40,468	11,055
January-February	1,841,320	1,221,880	158,418	92,391	311,906	45,337	11,388
March-April	1,821,128	1,225,125	154,616	92,210	298,661	40,377	10,139
May-June	2,027,601	1,353,331	189,258	116,863	300,238	49,535	18,376
<b>Total</b>	<b>11,989,054</b>	<b>7,996,469</b>	<b>1,073,803</b>	<b>640,627</b>	<b>1,923,419</b>	<b>289,731</b>	<b>65,005</b>
<b>Agricultural</b>							
July-August	263,376	28,133	22,160	209,086	2,178	1,489	330
September-October	261,155	23,577	26,576	206,025	3,194	1,551	232
November-December	165,387	21,456	19,237	121,628	1,949	719	398
January-February	183,346	20,083	12,406	146,719	2,477	999	662
March-April	168,387	20,922	13,716	129,630	2,660	1,065	394
May-June	226,859	23,577	16,879	182,494	1,962	1,202	745
<b>Total</b>	<b>1,268,510</b>	<b>137,748</b>	<b>110,974</b>	<b>995,582</b>	<b>14,420</b>	<b>7,025</b>	<b>2,761</b>
<b>Grand Total</b>	<b>13,257,564</b>	<b>8,134,217</b>	<b>1,184,777</b>	<b>1,636,209</b>	<b>1,937,839</b>	<b>296,756</b>	<b>67,766</b>

SOURCE: County of Maui, Department of Water Supply, *Annual Report FY 2007*.