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Section 20

FORESTRY, FISHERIES, AND MINING

This section presents data on forests and forest reserves, commercial fishing and fish populations, and mining and mineral products.

Important sources of data on these subjects are the *United States Census of Mineral Industries* and *Mineral Industry Surveys*, U.S. Census Bureau, *2007 Economic Census, Geographic Area Series*, Mining, and reports and records of the Hawaii State Department of Land and Natural Resources, Division of Aquatic Resources and Division of Forestry and Wildlife. *Historical Statistics of Hawaii*, Section 14, summarizes the data for earlier periods. Comparable national statistics are reported in the *Statistical Abstract of the United States: 2010*, Sections 18.

**Table 20.01-- FOREST AND NATURAL AREA ACREAGE, BY ISLAND:
JUNE 30, 2009**

Island	Conservation district forest land		Natural areas 3/	
	Forest reserve land 1/	Private forest land 2/	Number of areas	Acres
State total	676,000	328,742	19	109,164
Hawaii	476,000	106,745	8	82,535
Maui	4/ 83,000	53,180	4	17,123
Kahoolawe	-	-	-	-
Lanai	-	6,150	-	-
Molokai	(4/)	-	2	2,950
Oahu	31,000	88,817	3	1,770
Kauai	86,000	73,850	2	4,786
Niihau	-	-	-	-

1/ State-owned and privately-owned lands under surrender agreement in forest reserve system.

2/ Private forest land within conservation district. The majority of these lands were previously in the forest reserve system.

3/ Includes Waimanu Research Reserve (3,600 acres) and Alakai Wilderness Preserve (9,939 acres).

4/ Includes both Maui and Molokai.

Source: Hawaii State Department of Land and Natural Resources, Division of Forestry and Wildlife, records.

**Table 20.02-- WOODLAND ON FARMS, 1997, 2002, AND 2007, AND BY
COUNTY, 2007**

[Acres]

Use	1997	2002	2007				
			State total	Hawaii	Honolulu	Kauai	Maui
Total	108,704	117,685	79,041	46,137	5,646	5,660	21,598
Pastured	31,844	41,467	22,570	12,791	(D)	103	(D)
Not pastured	76,860	76,218	56,471	33,346	(D)	5,557	(D)

D Withheld to avoid disclosing data for individual farms.

Source: U.S. Department of Agriculture, 2002 Census of Agriculture, Hawaii, (June 2004), p. 195.
2007 Census of Agriculture, Hawaii, (February 2009), p. 240.

**Table 20.03-- FOREST AND BRUSHLAND FIRES, BY CAUSE OF FIRE:
2006 TO 2008**

Cause of Fire	Number of Fires			Acres burned		
	2006	2007	2008	2006	2007	2008
State total	205	147	32	14,584.8	29,591.5	2,385.2
Lightning	7	1	-	3,596.3	0.1	0.0
Campfire	4	5	3	783.1	40.1	3.2
Smoking	-	1	-	-	2,291.0	0.0
Debris burning	12	11	1	37.9	53.9	5.0
Arson	27	21	2	3,104.3	6,728.5	51.5
Equipment	15	9	8	679.9	255.6	1,125.5
Railroads	-	-	-	-	-	-
Children	-	-	-	-	-	-
Miscellaneous	140	99	18	6,383.3	20,222.3	1,200.0

Source: Hawaii State Department of Land and Natural Resources, Division of Forestry and Wildlife, Fire Management Program, *Annual Wildfire Summary Report* <<http://www.state.hi.us/dlnr/dofaw/fmp/firedata.htm>> accessed June 4, 2010.

Table 20.04-- COMMERCIAL FISHING: 2003 TO 2009

[Fiscal year ending June 30. Represents the total sea catches of all licensed commercial fishers.

Excludes pond catches, The Aquaculture and Development Program, Department of Agriculture, surveys pond harvest market information]

Year	Number of commercial fishermen	Commercial fish catch		
		Pounds landed	Pounds sold	Value to primary producers (dollars)
2003	3,434	24,054,939	(1/)	(1/)
2004	2,971	22,230,489	(1/)	(1/)
2005	3,248	24,876,316	(1/)	(1/)
2006	3,137	24,636,892	(1/)	(1/)
2007	3,220	26,563,127	(1/)	(1/)
2008	3,196	33,310,542	(1/)	(1/)
2009	3,557	26,527,158	(1/)	(1/)

1/ Due to revisions to the commercial fishing report forms in October 2002, licensed commercial fishers no longer report ex-vessel landing values. The latter information is collected from a fish dealer reporting system. The Division of Aquatic Resources is developing an application to integrate the fishing and fish dealer reporting systems to summarize landings with ex-vessel landing value information. Therefore, only total landings reported by commercial fishers are available at this time.

Source: Hawaii State Department of Land and Natural Resources, Division of Aquatic Resources, *Commercial Fish Landings for Fiscal Year* (annual) and records.

Table 20.05-- COMMERCIAL FISH CATCH, BY SPECIES: 2007 TO 2009

[Fiscal year ending June 30, pounds landed, excludes pond catches. Due to revisions to the commercial fishing report forms in 2002, data may not be comparable to previous years]

Species	2007	2008	2009
Total catch	26,563,127	33,310,542	26,527,158
Tunas	14,613,016	19,985,859	14,490,191
Aku (skipjack)	1,207,357	636,190	1,029,206
Tombo	620,324	1,014,455	452,609
Bigeye (ahi)	10,064,751	14,199,122	10,301,173
Yellowfin (ahi)	2,701,159	4,120,986	2,686,042
Billfishes	5,649,300	5,989,668	5,889,153
Blue marlin	913,889	787,524	1,122,715
Shortnose spearfish	239,763	577,794	244,129
Striped marlin	1,147,064	820,105	681,391
Swordfish	3,318,223	3,771,529	3,818,151
Miscellaneous pelagic species	4,088,145	5,240,266	4,269,125
Mahimahi	1,162,164	1,791,321	933,087
Monchong	548,693	659,001	646,282
Ono	816,292	992,558	709,195
Opah	1,134,802	1,283,863	1,513,867
Walu	399,729	481,862	444,514
Deep bottom fishes	474,387	439,182	489,974
Ehu	25,038	23,089	27,206
Hapuupuu	29,680	24,060	23,345
Opakapaka	116,966	112,136	146,083
Uku	151,778	157,147	124,517
Ulaula (onaga)	121,272	82,476	85,356
Akule/opelu	1,034,554	792,269	622,401
Akule	678,621	489,538	316,505
Opelu	355,933	302,731	305,877
Jacks	50,526	53,012	43,443
Inshore fishes	305,484	324,841	303,484
Sharks	266,860	374,942	293,649
Mako	191,951	273,945	222,946
Lobsters	8,838	9,059	18,385
Crabs	31,492	47,893	43,142
Shrimps	1/	1/	1/
Seaweeds	5,072	10,021	7,677
Unclassified / miscellaneous	35,453	43,530	56,534

1/ Due to low level of fishermen reporting and to preserve confidentiality, data for these species are pooled under miscellaneous.

Source: Hawaii State Department of Land and Natural Resources, Division of Aquatic Resources, *Commercial Fish Landings, State of Hawaii—Fiscal Years 2007-2009* and records.

Table 20.06-- COMMERCIAL SEA LANDINGS, BY ISLAND: 2007 TO 2009

[Fiscal year ending June 30, pounds landed]

Island	2007	2008	2009
State total	26,563,127	33,310,542	26,527,158
Hawaii	3,311,346	3,073,342	2,222,011
Maui	520,093	658,024	679,289
Lanai	18,782	14,441	19,135
Molokai	17,390	22,652	43,434
Oahu	22,039,272	28,829,479	22,917,691
Kauai and Niihau	656,244	712,604	645,598

Source: Hawaii State Department of Land and Natural Resources, Division of Aquatic Resources, records.

**Table 20.07-- COMMERCIAL SEA LANDINGS, BY FISHING METHOD:
2007 TO 2009**

[Fiscal year ending June 30, pounds landed]

Fishing method	2007	2008	2009
All methods	26,563,127	33,310,542	26,527,158
Aku pole and line	968,191	346,461	647,054
Longline	19,239,785	26,928,332	20,289,851
Handline	1,949,821	1,812,335	1,708,076
Trolling	2,751,699	2,926,225	2,858,791
Net	930,172	751,172	507,581
Trap	55,026	74,864	58,602
All other methods	668,433	471,153	457,203

Source: Hawaii State Department of Land and Natural Resources, Division of Aquatic Resources,
Commercial Fish Landings, State of Hawaii--Fiscal Years 2007-2009 and records.

Table 20.08-- MINERAL INDUSTRIES (NAICS 21): 1982 TO 2007

[Includes establishments with payroll. Statistics based on the North American Industry Classification System (NAICS) which replaced the Standard Industrial Classification (SIC) system used in Economic Censuses prior to the 1997 Economic Census]

Subject	1982	1987	1992	1997	2002	2007
Number of establishments	12	9	7	7	8	8
With 20 employees or more	4	4	4	2	1	4
All employees:						
Number (1,000) 1/	.2	.2	.2	.1	.1	.2
Annual payroll (million dollars)	3.8	7.4	9.4	5.6	7.3	9.6
Production, development, and exploration workers:						
Number (1,000) 1/	.1	.2	.2	.1	.1	.1
Annual hours (millions)	.2	.4	.4	.2	.2	.3
Annual wages (million dollars)	2.6	5.7	8.1	4.7	5.1	7.9
Value added (million dollars)	9.7	23.5	27.3	22.0	20.7	49.0
Total cost of supplies (million dollars)	5.9	10.4	11.3	(D)	6.6	12.9
Total value of shipments and receipts for services (million dollars)	12.8	31.1	33.7	33.3	25.6	55.4
Capital expenditures (million dollars)	2.7	2.8	4.8	(D)	1.7	6.4

D Withheld to avoid disclosing data for individual companies.

1/ For pay period including March 12.

Source: U.S. Census Bureau, *1987 Census of Mineral Industries, Geographic Area Series, Pacific States*, MIC87-A-9 (October 1990), Hawaii table 1; *1992 Census of Mineral Industries, Geographic Area Series, Pacific States*, MIC92-A-9 (May 1996), Hawaii table 1; *1997 Economic Census, Mining, Geographic Area Series, Hawaii*, EC97N21A-HI (May 2000), table 1; *2002 Economic Census, Mining, Geographic Area Series, Hawaii*, EC02-21A-HI (April 2005), table 1; 2007 Economic Census, Sector 21: EC0721A2: Mining: Geographic Area Series: Detailed Statistics for the State or Offshore Areas: 2007 <http://factfinder.census.gov/servlet/IBQTable?_bm=y&-geo_id=04000US15&-fds_name=EC0700A1&-ds_name=EC0721A2&-_lang=en> accessed May 26, 2010.

Table 20.09-- NONFUEL MINERAL PRODUCTION: 2004 TO 2006

[Production as measured by mine shipments, sales, or marketable production (including consumption by producers), Data are rounded to no more than three significant digits; may not add to totals shown]

Minerals	2004	2005	2006
QUANTITY (1,000 METRIC TONS)			
Gemstones	(NA)	(NA)	(NA)
Sand and gravel (construction)	1,260	1,390	1,230
Stone (crushed)	5,470	1/ 8,230	8,380
VALUE (\$1,000)			
Total	73,700	1/ 125,000	145,000
Gemstones	262	217	107
Sand and gravel (construction)	12,100	17,500	15,900
Stone (crushed)	61,300	1/ 107,000	129,000

NA Not available.

1/ Revised from previous *Data Book*.

Source: U.S. Geological Survey, Minerals Information, "*The Mineral Industry of Hawaii*," *Hawaii 2006*,
<<http://minerals.er.usgs.gov/minerals/pubs/state/hi.html>> accessed June 4, 2010.