

# Summary

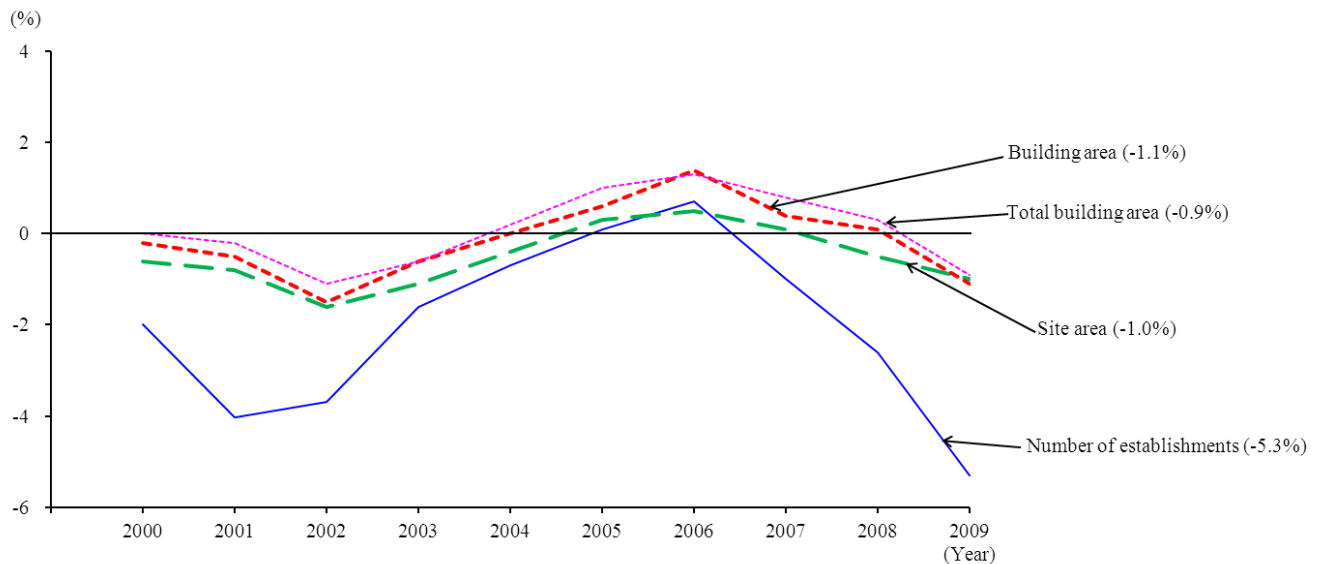
## I. Land for industrial use

The number of manufacturing establishments with 30 or more employees in 2009 was 44,006, down by 5.3% compared to the previous year, showing a decrease for the third consecutive year.

The site area of establishments was 1,410.45 million m<sup>2</sup> (down by 1.0% compared to the previous year), showing a decrease for the second consecutive year. The building area was 386.80 million m<sup>2</sup> (down by 1.1% id.), showing a decrease for the first time in six years, and the total building area also showed a decrease of 0.9% id. to 524.40 million m<sup>2</sup>, down for the first time in six years. Also the value of product shipments per 1,000 m<sup>2</sup> of total building area was 445.96 million yen, down by 20.6% id. (Table 1, Figure 1)

In additional, the site area per establishment was 32,051 m<sup>2</sup> (up by 4.6% id.) on average across all the manufacturing industries. (Table 1)

**Figure 1: Changes in Major Items of Land for Industrial Use**  
(Establishments with 30 or more employees)



Note: The figures in parentheses represent year-on-year comparison in 2009.

**Table 1: Changes in Major Items of Land for Industrial Use**  
(Establishments with 30 or more employees)

Year	Number of establishments		Site area		Site area per establishment		Building area		Total building area		Shipment value per 1,000 m <sup>2</sup> of total building area	
		Y/Y (%)	(1,000 m <sup>2</sup> )	Y/Y (%)	(m <sup>2</sup> )	Y/Y (%)	(1,000 m <sup>2</sup> )	Y/Y (%)	(1,000 m <sup>2</sup> )	Y/Y (%)	(10,000 yen)	Y/Y (%)
2000	51,434	-2.0	1,453,612	-0.6	28,262	1.4	385,355	-0.2	514,995	0.0	50,098	3.8
2001	49,364	-4.0	1,442,586	-0.8	29,223	3.4	383,510	-0.5	513,982	-0.2	48,010	-4.2
2002	47,046	-3.7	1,418,233	-1.6	30,146	3.2	377,166	-1.5	505,230	-1.1	46,164	-2.7
2003	46,283	-1.6	1,403,172	-1.1	30,317	0.6	374,852	-0.6	502,214	-0.6	47,367	2.6
2004	45,970	-0.7	1,397,011	-0.4	30,390	0.2	374,978	0.0	503,110	0.2	49,387	4.3
2005	46,029	0.1	1,400,963	0.3	30,437	0.2	377,311	0.6	508,147	1.0	51,098	3.5
2006	46,366	0.7	1,407,682	0.5	30,360	-0.3	382,765	1.4	514,687	1.3	54,244	6.2
2007	47,682	-1.0	1,430,605	0.1	30,003	-1.2	390,400	0.4	527,125	0.8	56,583	—
2008	46,455	-2.6	1,424,146	-0.5	30,656	2.2	390,905	0.1	528,943	0.3	56,188	-0.7
2009	44,006	-5.3	1,410,445	-1.0	32,051	4.6	386,799	-1.1	524,402	-0.9	44,596	-20.6

- Notes: 1. Because of the revision of the Japan Standard Industrial Classification in the 2002 Survey, the year-on-year comparisons have been computed by reclassifying the 2001 classification.
2. The year-on-year comparisons in 2004 have been computed while taking into account the establishments excluded due to the "Niigata-Chuetsu Earthquake."
3. As a survey on establishments was conducted as part of the 2007 Survey, year-on-year comparisons have been computed by taking time series into account and excluding the establishments surveyed.
4. As survey items were changed in the 2007 Survey, the value of product shipments per 1,000 m<sup>2</sup> of total building area in 2007 is not related to that in the previous year.

## 1. Situation by industry

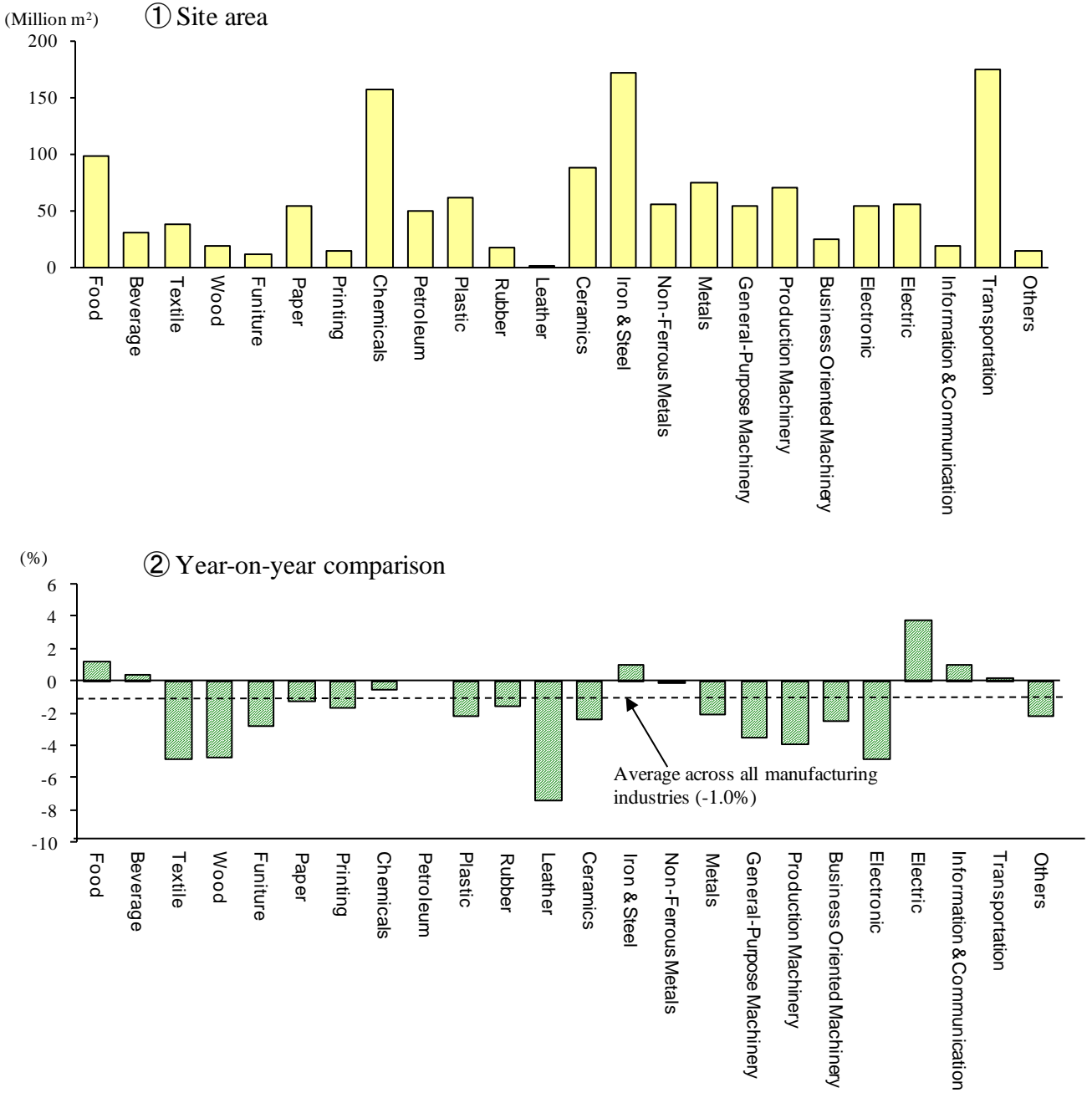
### (1) Site area

The site area of establishments was 1,410.45 million m<sup>2</sup> (down by 1.0% compared to the previous year), showing a decrease for the second consecutive year.

By industry, those with a large site area were "Manufacture of transportation equipment" (174.34 million m<sup>2</sup>, composition ratio of 12.4%), "Manufacture of iron and steel" (171.64 million m<sup>2</sup>, 12.2% id.), "Manufacture of chemical and allied products" (156.23 million m<sup>2</sup>, 11.1% id.), "Manufacture of food" (98.36 million m<sup>2</sup>, 7.0% id.), "Manufacture of ceramic, stone and products" (88.29 million m<sup>2</sup>, 6.3% id.), "Manufacture of fabricated metal products" (75.11 million m<sup>2</sup>, 5.3% id.), and "Manufacture of production machinery" (70.91 million m<sup>2</sup>, 5.0% id.).

On a year-on-year basis, decreases were observed in 17 industries, including "Manufacture of leather tanning, leather products and fur skins" (down by 7.5% compared to the previous year), "Manufacture of textile mill products" and "Manufacture of electronic parts, devices and electronic circuits" (both down by 4.9% id.), "Manufacture of lumber and wood products" (down by 4.8% id.), and "Manufacture of production machinery" (down by 3.9% id.). In the meantime, increases were observed in 6 industries, including "Manufacture of electrical machinery, equipment and supplies" (up by 3.8% id.), "Manufacture of food" (up by 1.2% id.), and "Manufacture of iron and steel" and "Manufacture of information and communication electronics equipment" (both up by 1.0% id.). One industry, "Manufacture of petroleum and coal products," remained flat. (Figure 2)

**Figure 2: Site Area by Industry**  
 (Establishments with 30 or more employees)

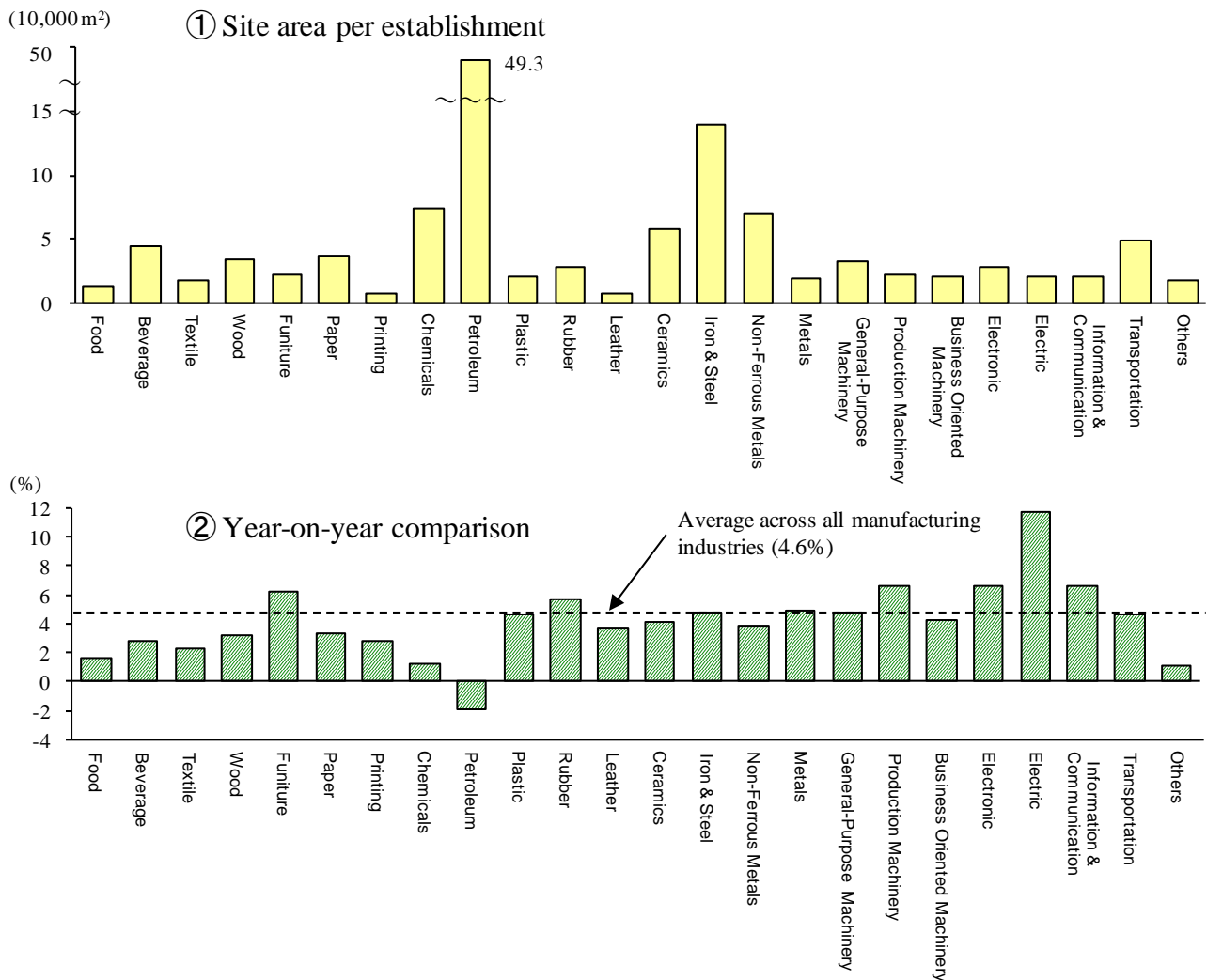


The site area per establishment was 32,051 m<sup>2</sup>, up by 4.6% from the previous year.

By industry, "Manufacture of petroleum and coal products" (492,743 m<sup>2</sup>) was the largest by far, followed by "Manufacture of iron and steel" (139,887 m<sup>2</sup>), "Manufacture of chemical and allied products" (73,903 m<sup>2</sup>) and "Manufacture of non-ferrous metals and products" (69,661 m<sup>2</sup>), placing equipment-related industries in top-ranking positions. There were no changes in orders from the previous year or in trends so far.

On a year-on-year basis, increases were observed in 23 industries, including "Manufacture of electrical machinery equipment and supplies" (up by 11.7% compared to the previous year), "Manufacture of electronic parts, devices and electronic circuits" (up by 6.6% id.), "Manufacture of production machinery" and "Manufacture of information and communication electronics equipment" (both up by 6.5% id.), and "Manufacture of furniture and fixtures" (up by 6.1% id.), while there was a decrease in one industry, "Manufacture of petroleum and coal products" (down by 2.0% id.). (Figure 3)

**Figure 3: Site Area per Establishment by Industry**  
(Establishments with 30 or more employees)



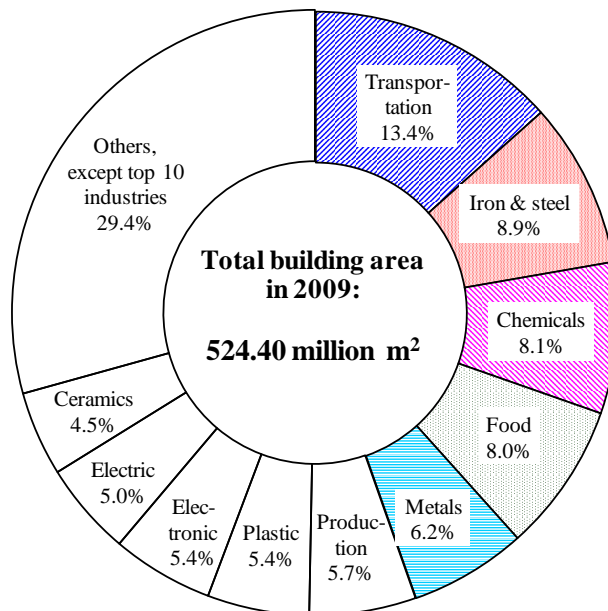
**(2) Total building area**

The total building area was 524.40 million m<sup>2</sup>, down by 0.9% compared to the previous year, showing a decrease for the first time in six years.

By industry, those with a large area were "Manufacture of transportation equipment" (70.27 million m<sup>2</sup>, composition ratio of 13.4%), "Manufacture of iron and steel" (46.46 million m<sup>2</sup>, 8.9% id.), "Manufacture of chemical and allied products" (42.53 million m<sup>2</sup>, 8.1% id.), "Manufacture of food" (41.91 million m<sup>2</sup>, 8.0% id.), "Manufacture of fabricated metal products" (32.77 million m<sup>2</sup>, 6.2% id.), and "Manufacture of production machinery" (29.83 million m<sup>2</sup>, 5.7% id.).

On a year-on-year basis, there were decreases in 16 industries, including "Manufacture of leather tanning, leather products and fur skins" (down by 8.8% compared to the previous year), "Manufacture of textile mill products" (down by 6.5% id.), "Manufacture of lumber and wood products" (down by 6.4% id.), and "Manufacture of production machinery" (down by 4.2% id.). In the meantime, increases were observed in 8 industries, including "Manufacture of petroleum and coal products" (up by 4.1% id.), "Manufacture of electrical machinery, equipment and supplies" (up by 2.8% id.), and "Manufacture of beverages, tobacco and feed" (up by 1.6% id.). (Figure 4)

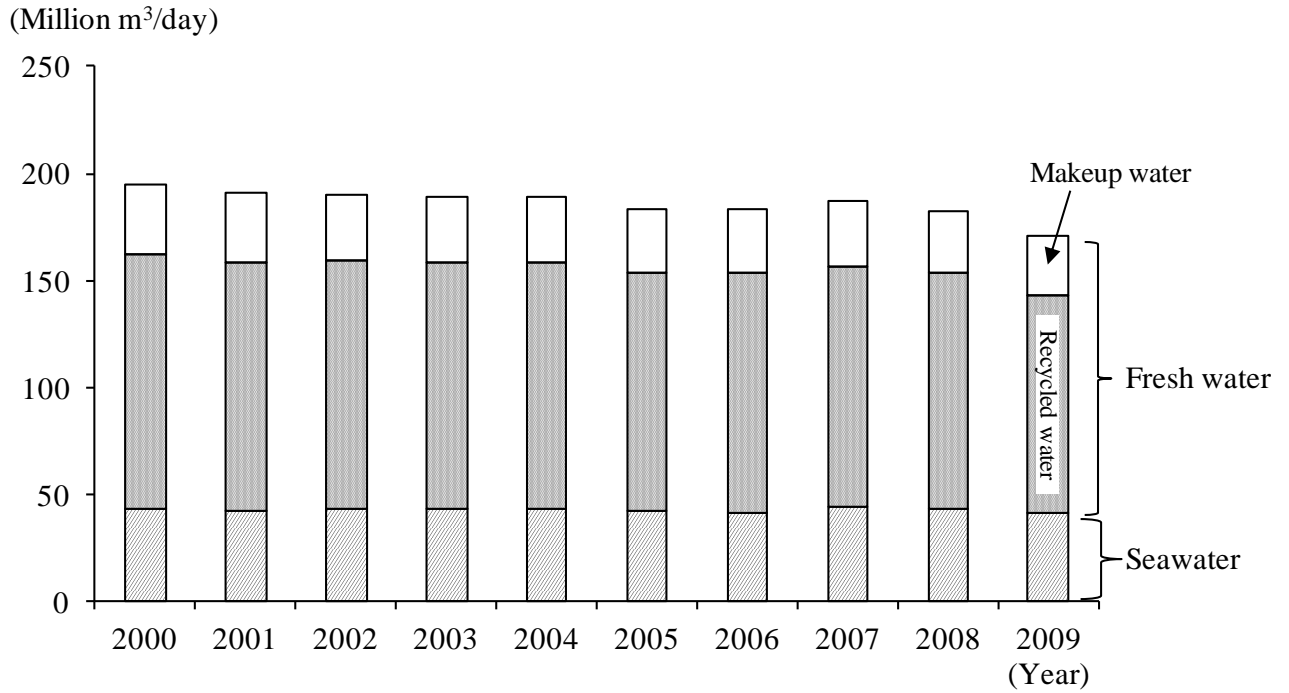
**Figure 4: Breakdown of the Total Building Area by Industry**  
(Establishments with 30 or more employees)



**II. Industrial water**

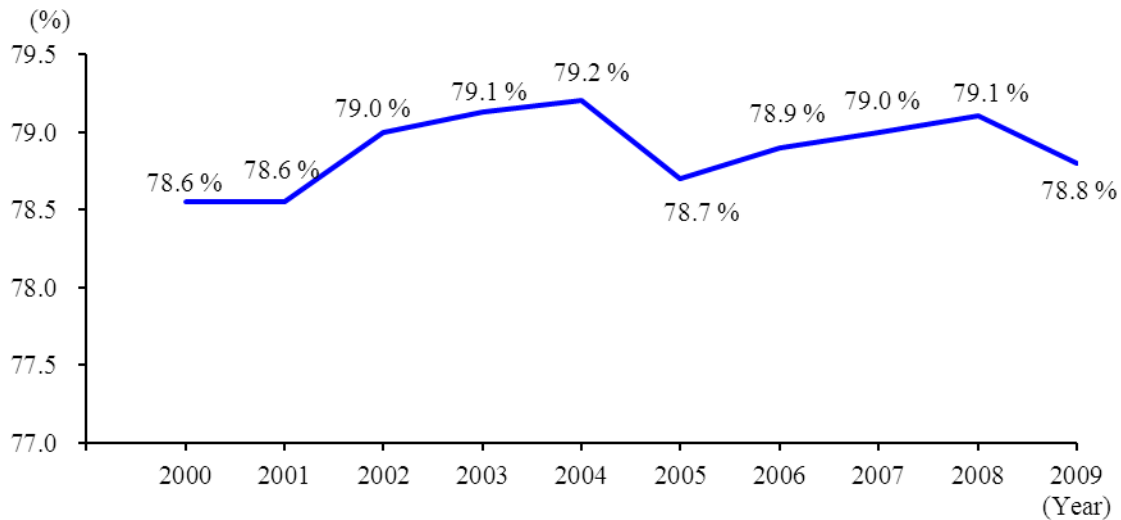
The industrial water requirement per day at manufacturing establishments with 30 or more employees in 2009 (hereinafter referred to as the "water requirement") was 170.86 million m<sup>3</sup> (down by 6.5% compared to the previous year), of which fresh water was 129.75 million m<sup>3</sup> (down by 7.0% id., composition ratio of 75.9%) and seawater was 41.11 million m<sup>3</sup> (down by 4.9%, 24.1% id.). (Table 2, Figure 5)

**Figure 5: Changes in Industrial Water Requirement per Day**  
(Establishments with 30 or more employees)



In addition the recycle rate of fresh water (the ratio of recycled water to the total volume of fresh water) was 78.8% in the total manufacturing industries, down by 0.3 % points compared to the previous year, showing a decrease for the first time in four years. (Table 2, Figure 6)

**Figure 6: Changes in Recycle Rate of Fresh Water**  
(Establishments with 30 or more employees)



**Table 2: Changes in Industrial Water Requirement and Fresh Water Requirement  
by Source and by Use**  
(Establishments with 30 or more employees)

Year	Number of establishments		Water requirement									
			Total		Total fresh water			Recycle rate of fresh water		Total seawater		
	Y/Y (%)	Y/Y (%)	Y/Y (%)	Y/Y (%)	Percentage (%)	Recycle rate (%)	Difference from the previous year (Point)	Y/Y (%)	Percentage (%)	Y/Y (%)	Percentage (%)	
												(1000 m <sup>3</sup> /day)
2000	51,434	-2.0	194,952	1.4	151,965	1.1	77.9	78.6	0.5	42,988	9.6	22.1
2001	49,364	-4.0	190,547	-2.3	147,978	-2.6	77.7	78.6	0.0	42,569	-1.0	22.3
2002	47,046	-3.7	189,774	-0.3	147,021	-0.5	77.5	79.0	0.4	42,753	0.0	22.5
2003	46,283	-1.6	188,888	-0.5	145,742	-0.9	77.2	79.1	0.1	43,146	0.9	22.8
2004	45,970	-0.7	188,968	0.0	145,937	0.1	77.2	79.2	0.1	43,031	-0.3	22.8
2005	46,029	0.1	183,710	-2.8	141,437	-3.1	77.0	78.7	-0.5	42,273	-1.8	23.0
2006	46,366	0.7	183,463	-0.1	142,614	0.8	77.7	78.9	0.2	40,849	-3.4	22.3
2007	47,682	-1.0	186,936	1.7	143,227	0.1	76.6	79.0	0.1	43,709	7.0	23.4
2008	46,455	-2.6	182,767	-2.2	139,542	-2.6	76.3	79.1	0.1	43,225	-1.1	23.7
2009	44,006	-5.3	170,863	-6.5	129,752	-7.0	75.9	78.8	-0.3	41,111	-4.9	24.1

## 1. Situation by industry

### (1) Total water requirement

Observing water requirement used by industry, the top two industries, "Manufacture of chemical and allied products" (59.91 million m<sup>3</sup>, composition ratio of 35.1%) and "Manufacture of iron and steel" (49.76 million m<sup>3</sup>, 29.1% id.), account for more than 60%, followed by "Manufacture of petroleum and coal products" (15.55 million m<sup>3</sup>, 9.1% id.), "Manufacture of pulp, paper and paper products" (12.63 million m<sup>3</sup>, 7.4% id.), and "Manufacture of transportation equipment" (6.85 million m<sup>3</sup>, 4.0% id.). These 5 industries account for more than 80% of the total water requirement.

Industries which use a lot of fresh water were "Manufacture of chemical and allied products" (44.91 million m<sup>3</sup>, composition ratio in fresh water of 34.6%), "Manufacture of iron and steel" (34.43 million m<sup>3</sup>, 26.5% id.), "Manufacture of pulp, paper and paper products" (12.60 million m<sup>3</sup>, 9.7% id.), "Manufacture of petroleum and coal products" (8.30 million m<sup>3</sup>, 6.4% id.), and "Manufacture of transportation equipment" (6.83 million m<sup>3</sup>, 5.3% id.). The 3 industries using the most seawater were "Manufacture of iron and steel" (15.33 million m<sup>3</sup>, composition ratio in seawater of 37.3%), "Manufacture of chemical and allied products" (15.00 million m<sup>3</sup>, 36.5% id.), and "Manufacture of petroleum and coal products" (7.25 million m<sup>3</sup>, 17.6% id.). These top three industries used more than 90% of the total. (Figure 7)

**Figure 7: Breakdown of Water Requirement by Industry**  
(Establishments with 30 or more employees)

