



Chapter 7

Infrastructure Sector

Infrastructure and Utilities

Infrastructure support and utilities such as roads, bridges, water supply, telecommunications, power and others play a vital role in the development of any province and with the progress happening in Cavite, these are considered one of the major contributors in paving its way for development.

Moreover, having an efficient and effective transport system, access roads and traffic circulation is a good indicator of a well-organized province and is an added factor for investment that will likely lead to development. The province of Cavite experienced a fast-paced development for the last decade. This is also evidently seen on the increased industrial and commercial activities that sometimes results to quilts of urban sprawl, traffic congestion and increased road accidents. However, these are being addressed through continuous upgrading of the transportation system specifically, improvement of major highways by upgrading them into four lanes and development of alternative transportation mediums.

Transport

Roads and Bridges

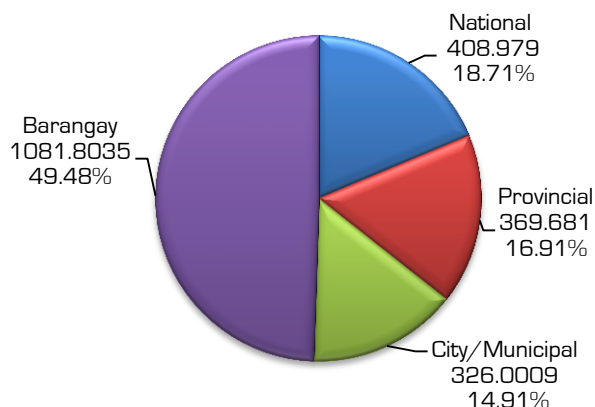
The transportation system in the Province of Cavite is predominantly land-based, of which the main transport mode is road-based. The roads are classified into national, provincial, city/municipal, and barangay roads. The national roads form part of the trunkline systems and are connected by provincial roads from one city/municipality to another, and the city/municipal roads interlink barangays.

The province has a total road kilometerage of 2,186.4644 wherein 18.71 percent or 408.9790 kilometers are national roads while 369.6810 kilometers or 16.91 percent are provincial roads. These roads are mostly paved with concrete and asphalt. Furthermore, city/municipal roads comprise 14.91% or 326.009 kilometers while barangay roads have a total length of 1,081.8035 kilometers or 49.48 percent of the total road length. Majority of these roads are concrete, some are paved with asphalt and others remain earthfill and gravel roads [Table 7.1 and Figure 7.1.]. The DPWH maintains the national roads while the Provincial Engineer's Office takes care of provincial roads. Maintenance and improvement of private roads are the responsibility of their respective owners, developers or homeowners associations.

Table 7.1. Total Length of Roads by Type of Pavement and by Road Classification, Province of Cavite: 2010

Road Classification	Type of Pavement				Total Length (km)
	Concrete (km)	Asphalt (km)	Gravel (km)	Earthfill (km)	
National	206.8242	202.1548			408.9790
Provincial	277.875	44.982	46.824		369.6810
City/Municipal	284.8338	27.7359	3.46	9.9712	326.0009
Barangay	660.4268	29.3199	102.6553	289.4015	1,081.8035
TOTAL	1,429.960	304.1926	152.9393	299.3727	2,186.464

Source: Special Projects Division, Provincial Planning and Development Office, Trece Martires City

Figure 7.1. Distribution of Road Length by Classification, Province of Cavite: 2010

The province of Cavite is accessible by various land-based vehicles from Manila and other nearby provinces and cities. It may be reached through public utility jeepneys and buses taking the six (6) major entrances and exits: the Aguinaldo Boulevard (Manila-Cavite Coastal Road), South Luzon Expressway (SLEX) in Carmona, the Aguinaldo Highway (Silang-Tagaytay-Alfonso Section), the Zapote-Las Piñas Road, the Sta. Rosa-Tagaytay Road, and the Alabang-Molino via Daang Hari Road. Moreover, economic growth and development in the province has been boosted by the seven-kilometer stretch of the Manila-Cavite Expressway (CaviteX) extension project which was formally opened to public motorists in May 2011.

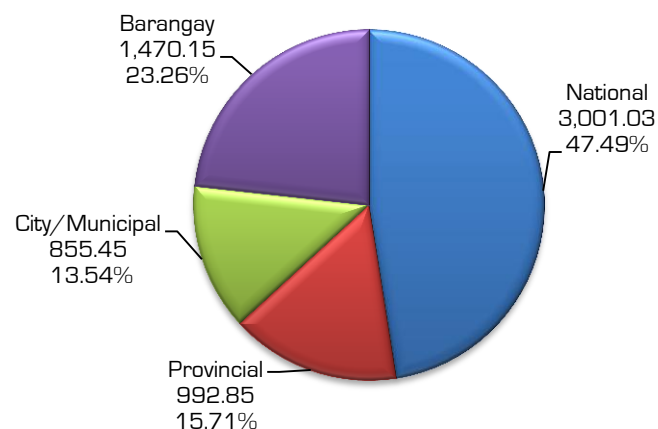
As shown in Table 7.2, there are 323 bridges which connect roads in different cities and municipalities of the province. A total of 102 bridges were classified as national, 69 bridges are provincial while city/municipal bridges totaled to 39 and barangay bridges was recorded at 113. These comprised a total length of 6,319.484 linear meters. Permanent bridges totaled to 205 with a length of 5,673.484 linear meters while temporary structures comprise 11.15 percent of the total bridges or 36 having a length of 646 linear meters. Figure 7.2 shows the distribution of length of bridges by classification.

Table 7.2. Number and Length of Existing Bridges, Province of Cavite: 2010

Classification	Number			Length in Linear Meter		
	Permanent	Temporary	Total	Permanent	Temporary	Total Length
National	100	2	102	2,920.13	80.9	3,001.03
Provincial	60	9	69	857.45	135.4	992.85
City/Municipal	36	3	39	724.45	131	855.45
Barangay	9	22	113	1,171.45	298.7	1,470.15
TOTAL	205	36	323	5,673.484	646	6,319.484

Source: Special Projects Division, Provincial Planning and Development Office, Trece Martires City

Figure 7.2. Distribution of Length of Bridges by Classification, Province of Cavite: 2010



Transport Facilities

The vehicles which regularly ply the roads provincewide include cars, utility vehicles, sports utility vehicle, trucks, buses, motorcycle/tricycle and trailers and these are evidently seen on the data gathered from the Land Transportation Office (LTO), Region IV-A in Lipa City, Batangas. A total of 240,049 units of motor vehicles are registered among the four (4) land transportation offices in the province by which 36.66 percent or 88,004 units are registered at Imus District Office; 22.93 percent or 55,043 units are at Kawit District Office while Tagaytay City Extension Office reflects a total of 44,155 units and Dasmariñas Extension Office has a total registration of 52,847 units or 22.02 percent share (Figure 7.3). Moreover, the highest number of motor vehicles registered was motorcycle/tricycle with 53.20 percent of the total of 127,702 units followed by utility vehicles with 27.54 percent or 66,109 units, while cars registered a total of 33,026 units. The least registration was trailer with only 137 units (Table 7.3).

LTO Cavite has also issued 108,894 new and renewal licenses by which 61,377 or 56.36 percent are professional licenses while 43.64 percent or 47,517 are non-professional licenses. Kawit Licensing Center has the most number of issuances with 40,834 and followed by Tagaytay City Extension Office with 30,809 issuances. Moreover, permits issued are categorized as student and conductor permits totaling to 51,823 by which 13,532 issuances are from Dasmariñas Extension Office, 13,578 permits are from Kawit Licensing Center while Imus District Office and Tagaytay City Extension Office has 15,015 and 9,698 issuances, respectively. Licenses and permits issued totaled to 160,717.

Table 7.3. Number of Registered Motor Vehicles by Type, Province of Cavite: 2011

Type of Vehicle	Number of Vehicle Registration				Total
	Imus District Office	Kawit District Office	Tagaytay City Extension Office	Dasmarinas Extension Office	
Cars	14,218	5,964	6,845	5,999	33,026
Utility Vehicle	27,958	11,531	16,194	10,426	66,109
Sports Utility Vehicle	2,791	2,196	1,364	1,094	7,445
Trucks	1,634	843	753	446	3,676
Buses	102	1,615	217	20	1,954
Motorcycle/Tricycle	41,202	32,867	18,778	34,855	127,702
Trailers	99	27	4	7	137
TOTAL	88,004	55,043	44,155	52,847	240,049

Source: Land Transportation Office, Region IV-A, Lipa City

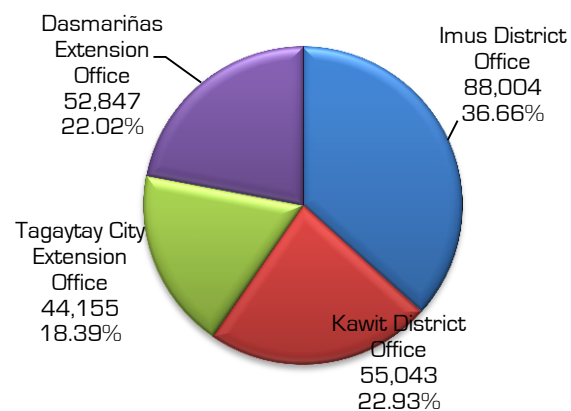
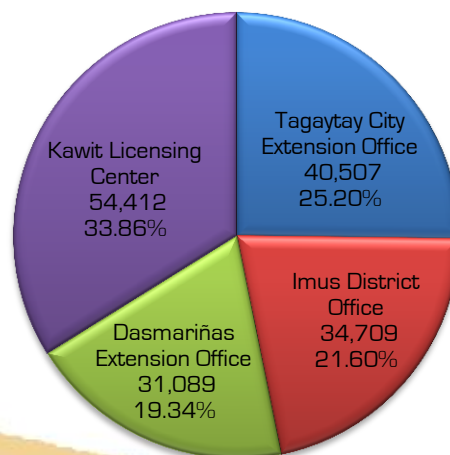
Figure 7.3. Distribution of Registered Motor Vehicles by Office, Province of Cavite: 2011

Table 7.4. Number of Licenses and Permits Issued by District and by Classification, Province of Cavite: 2011

Agency	Licenses							Permit						Total Licenses and Permits Issued
	Professional			Non-Professional			Total	Student Permit		Conductors Permit			Total	
	New	Renewal	Sub-Total	New	Renewal	Sub-Total		New	Sub-Total	New	Renewal	Sub-Total		
Tagaytay City Extension Office	4,123	13,485	17,608	7,078	6,123	13,201	30,809	9,428	9,428	158	112	270	9,698	40,507
Imus District Office		10,827	10,827		8,867	8,867	19,694	15,000	15,000		15	15	15,015	34,709
Dasmarina Extension Office		10,814	10,814	41	6,702	6,743	17,557	13,506	13,506			26	13,532	31,089
Kawit Licensing Center	4,267	17,861	22,128	10,635	8,071	18,706	40,834	13,450	13,450	73	55	128	13,578	54,412
TOTAL	8,390	52,987	61,377	17,754	29,763	47,517	108,894	51,384	51,384	231	182	439	51,823	160,717

Source: Land Transportation Office, Region IV-A, Lipa City

Figure 7.4. Distribution of Licenses and Permits Issued by Office, Province of Cavite: 2011

Communication

In any progressive province, communication facilities are vital to create a working environment that is conducive to effective, efficient and economical operation. Having an access to information is an advantage towards the success of any business endeavour thus; these services are useful to the populace to be updated with the current issues, global trends and developments.

The province of Cavite is also persistent in ensuring that business owners and industrial locators as well as the residents are given access to the communication system that best fits their needs. Telecommunication and postal services add to the sophistication of various establishments located in the province. Data gathered from National Telecommunications Commission, Region IV-A, Batangas City indicates that there are four (4) telephone companies that provide telephone services in the province. These are the Philippine Long Distance Telephone Company (PLDT) with 80,237 subscribers, Digital Telecommunications Philippines, Inc. (DIGTEL) having 17,836 subscribers while Innove (Globetel) has 48,746 subscribers and Bel Tel with 1,610 subscribers (Table 7.5).

Table 7.5. Telephone Service Providers, Province of Cavite: 2011

Name of Company	Number of Subscribers
Philippine Long Distance Telephone Company (PLDT)	80,237
Digital Telecommunications Philippines, Inc. (DIGTEL)	17,836
Innove (Globetel)	48,746
Bel Tel	1,610
TOTAL	148,429

Source: National Telecommunications Commission, Region IV, Batangas City

In terms of cellular mobile telephone system providers and number of cell sites, Smart Communications, Inc. topped in providing this services having 189 cellsites followed by Globe Telecom, Inc. with 178 cellsites and Digitel Mobile Philippines which powers Sun Cellular Network with 109 cellsites, thus a total of 476 cellular sites are already operating in the province (Tables 7.6).

Philippine Telegraph and Telephone Company (PT & T), Radio Communications of the Philippines, Inc. (RCPI), LBC Express, Inc. and DHL Forwarder also perform specific telecommunication and courier services throughout the province.

Broadband services are available through Philippine Long Distance Co., Smart, Globe Telecom and Digitel. The province is also abreast with modern information technology with the entry of internet service providers.

Due to the proximity of the province to Metro Manila, the province is generally under the coverage of such radio stations. In 2011, the province is home base to 20 cable TV service providers, one (1) AM radio station, and two (2) FM radio stations (Tables 7.7 and 7.8). All major newspapers, magazines and publications are available even in the farthest barangays of the province.

Table 7.6. Cellular Mobile Telephone System (CMTS) Providers and Number of Cell Sites, Province of Cavite: 2010

Name of Company	Number of Cellsites
Smart Communications, Inc.	189
Globe Telecom, Inc.	178
Digitel Mobile Phils., Inc.	109
TOTAL	476

Source: National Telecommunications Commission, Region IV-A, Batangas City

Table 7.7. Operating Radio Stations, Province of Cavite: 2011

Operating Agency	Location		Call-Sign
	Transmitter	Studio	
I. AM BROADCASTING			
Delta Broadcasting System	Manila-Cavite Road, San Rafael III, Noveleta, Cavite	118 Amorsolo St., Legaspi Village, Makati City	DWXI - AM
II. FM BROADCASTING			
De La Salle University	JFH Building, DLSU Campus, Dasmarinas, Cavite	JFH Building, DLSU Campus, Dasmarinas, Cavite	DWSU - FM
Calabarzon Broadcasting Network	3/F Cavite Broadcasting Center, P. Burgos Ave, Caridad, Cavite City	3/F Cavite Broadcasting Center, P. Burgos Ave, Caridad, Cavite City	91.9 Bomb - FM

Source: National Telecommunications Commission, Region IV-A, Batangas City

Table 7.8. Cable TV Service Providers, Province of Cavite: 2011

Name of Company	Office Address	Service Area
A & L Cable TV System	J.P. Rizal Street, Silang	Silang, Cavite
Amadeo Cable TV (Infoland Cable TV)	3rd Floor Ambagan Bldg., A Mabini Street, Amadeo	Amadeo, Cavite
Bacoor Cable TV (Cablelink)	Unit 3 De Castro Bldg., Aguinaldo Highway, Palico I, Imus	Bacoor, Cavite
Cavite Cable Corp. (SkyCable)	Km. 23 Tabon, Kawit	Kawit, Noveleta, Gen. Trias, Bacoor, Rosario, Tanza, Silang and Cavite City
Central CATV (SkyCable)	Km. 23 Tabon, Kawit	Bacoor, Cavite
Coast Cable TV, Inc. (SkyCable)	Km. 23 Tabon, Kawit	Rosario, Cavite
Dasca Cable Services	D. Mangubat St., Dasmariñas	City of Dasmariñas, Cavite
Dynna Cable Services	B25 L20 Ph1 Rome St., Golden City Subd., Imus	within Golden City Subd., Imus, Cavite
Gen. Trias Cable Network, Inc.	Sunshine Village, Manggahan, Gen. Trias	Gen. Trias, Cavite
HM CATV, Inc.	566 J.M. Loyola St., Mabuhay, Carmona	Carmona, Cavite
Imus Cable TV (Cablelink)	Unit 3 De Castro Bldg., Aguinaldo Highway, Palico I, Imus	Imus, Cavite
Mendez Cable TV, Inc.	48 J.P. Rizal St., Mendez	Mendez, Cavite
Met Cable Circuit Network Corp.	B2L16 Congressional Road, San Gabriel, Gen. M. Alvarez	Gen. M. Alvarez, Cavite
Naic Cable TV Corp.	A. Soriano Highway, Ibayo Silangan, Naic	Naic, Maragondon, TernateCavite
Northstar Cable TV, Inc.	2nd Floor MCM Bldg., Gov. Drive, Old Bulihan, Silang	Old Bulihan, Silang Cavite
Planet Cable, Inc.	B18 L10 Hummingbird St., Springville East Ph1, Molino, Bacoor	Bacoor and Gen. Trias, Cavite
Plus Cable Network, Inc.	24 Doña Rosario Adriatico cor. Fullon St., Ph 2C Bahayang Pag-asa Subd., Molino, Bacoor	within Bahayang Pag-asa Subd., Imus and Bacoor, Cavite
Suburban Cable Network, Inc.	Km. 23 Tabon, Kawit	Imus, Cavite
Tagaytay Cable TV	Unit 104 FGC Bldg., Aguinaldo Highway, Maharlika East, Tagaytay City	Tagaytay City
Trece Cable Corporation	0289 San Agustin, Trece Martires City	Trece Martires City

Source: National Telecommunications Commission, Region IV, Batangas City

Postal services are being provided by Philippine Postal Corporation. The province has 34 post offices which provide services such as mail and parcel delivery, money order, and domestic and international express mails with a total of 8,264,335 mails are posted and delivered, wherein 7,773,918 are domestic mails and 490,417 are international mails (Table 7.9).

**Table 7.9. Number of Post Offices, Volume of Mails Handled, Mails Posted and Delivered by City/Municipality
Province of Cavite: 2011**

City/Municipality	Number of Post Offices	Volume of Mails Handled	Domestic Mails			International Mails		
			Posted	Delivered	Total	Posted	Delivered	Total
1st District	5	1,043,977	110,461	833,283	943,744	16,466	83,767	100,233
Cavite City	1	134,693	22,954	89,749	112,703	6,465	15,525	21,990
Kawit	1	266,301	42,133	201,540	243,673	2,690	19,938	22,628
Noveleta	1	65,075	4,744	54,718	59,462	1,652	3,961	5,613
Rosario	2	577,908	40,630	487,276	527,906	5,659	44,343	50,002
2nd District	2	387,995	12,119	340,521	352,640	4,974	30,381	35,355
Bacoor	2	387,995	12,119	340,521	352,640	4,974	30,381	35,355
3rd District	3	924,647	175,936	695,810	871,746	31,802	21,099	52,901
Imus	3	924,647	175,936	695,810	871,746	31,802	21,099	52,901
4th District	5	1,472,844	172,347	1,234,558	1,406,905	32,895	33,044	65,939
City of Dasmarinas	5	1,472,844	172,347	1,234,558	1,406,905	32,895	33,044	65,939
5th District	5	1,453,870	145,328	1,249,335	1,394,663	26,967	32,240	59,207
Carmona	1	215,272	36,235	166,977	203,212	4,294	7,766	12,060
Gen. Mariano Alvarez	2	249,107	34,598	198,770	233,368	9,653	6,086	15,739
Silang	2	989,491	74,495	883,588	958,083	13,020	18,388	31,408
6th District	5	1,415,006	130,575	1,237,755	1,368,330	8,946	37,730	46,676
Amadeo	1	33,959	688	29,882	30,570	237	3,152	3,389
Gen. Trias	2	745,434	30,450	691,929	722,379	3,324	19,731	23,055
Tanza	1	393,696	25,281	352,395	377,676	3,358	12,662	16,020
Trece Martires City	1	241,917	74,156	163,549	237,705	2,027	2,185	4,212
7th District	9	1,565,996	246,942	1,188,948	1,435,890	33,339	96,767	130,106
Alfonso	1	89,167	11,423	69,270	80,693	2,637	5,837	8,474
Gen. E. Aguinaldo	1	23,117	807	20,900	21,707	34	1,376	1,410
Indang	1	203,917	2,831	189,772	192,603	1,053	10,261	11,314
Magallanes	1	75,084	1,659	70,308	71,967	1,538	1,579	3,117
Maragondon	1	112,444	10,021	66,433	76,454	1,991	33,999	35,990
Mendez	1	68,599	2,559	59,759	62,318	1,291	4,990	6,281
Naic	1	474,534	62,125	388,870	450,995	3,280	20,259	23,539
Tagaytay City	1	484,706	152,806	294,802	447,608	20,787	16,311	37,098
Ternate	1	34,428	2,711	28,834	31,545	728	2,155	2,883
TOTAL	34	8,264,335	993,708	6,780,210	7,773,918	155,389	335,028	490,417

Source: Philippine Postal Corporation, San Pablo City, Laguna

Power

The electric power of the entire province of Cavite is being supplied by the National Power Corporation (NPC) through the Manila Electric Company (MERALCO). All towns down to all barangays of Cavite have access to electric power supplied by MERALCO, thus giving the province's energization rate to 100 percent.

For the year 2011, the total number of MERALCO customers in the province totaled to 680,430 of which 633,429 metered connections or 93.09 percent are residential, 45,702 or 6.72 percent are commercial, 596 or 0.09 percent are industrial and 703 or 0.10 percent are for streetlights. The City of Dasmarinas has the most number of users with 131,236 connections (Table 7.10). Table 7.11 shows a total annual electricity consumption of 230,673,305 kWh; of which 83,745,488 kWh or 36.30 percent are residential, 54,317,065 kWh or 23.55 percent are commercial, 91,666,788 kWh or 39.74 percent are industrial, and 943,964 kWh or 0.41 percent are for streetlights purposes.

The province has 17 existing power substations, of which 14 substations are operated by the MERALCO and three (3) substations are operated by the National Grid Corporation of the Philippines (NGCP) (Table 7.12).

Table 7.10. Existing Number of Connections by Type of Users by City/Municipality, Province of Cavite: 2011

City/Municipality	Number of Connections by Type of Users				
	Residential	Commercial	Industrial	Streetlight	Total
1st District	59,136	5,993	17	31	65,177
Cavite City	18,101	1,979	4	2	20,086
Kawit	15,238	1,615	7	18	16,878
Noveleta	9,408	925		7	10,340
Rosario	16,389	1,474	6	4	17,873
2nd District	95,873	6,768	47	142	102,830
Bacoor	95,873	6,768	47	142	102,830
3rd District	85,364	5,692	44	85	91,185
Imus	85,364	5,692	44	85	91,185
4th District	122,805	8,185	131	115	131,236
City of Dasmarinas	122,805	8,185	131	115	131,236
5th District	78,161	5,834	259	95	84,349
Carmona	16,882	1,598	176	43	18,699
Gen. Mariano Alvarez	22,012	1,274	8	13	23,307
Silang	39,267	2,962	75	39	42,343
6th District	121,247	6,666	87	118	128,118
Amadeo	6,035	394		1	6,430
General Trias	56,175	2,457	49	54	58,735
Tanza	36,290	2,500	9	45	38,844
Trece Martires City	22,747	1,315	29	18	24,109
7th District	70,843	6,564	11	117	77,535
Alfonso	9,596	1,007	2	11	10,616
Gen. Aguinaldo	3,016	188	1		3,205
Indang	11,554	828	3	5	12,390
Magallanes	2,983	201		7	3,191
Maragondon	5,350	512			5,862
Mendez	5,580	424		3	6,007
Naic	17,120	1,331	4	29	18,484
Tagaytay City	12,647	1,911	1	60	14,619
Ternate	2,997	162		2	3,161
TOTAL	633,429	45,702	596	703	680,430

Source: MERALCO, Pasig City

Table 7.11. Annual Electricity Consumption by City/Municipality, Province of Cavite: 2011

City/Municipality	Electricity Consumption (kWh)				
	Residential	Commercial	Industrial	Streetlight	Total
1st District	8,496,039	5,868,209	15,147,543	95,598	29,607,389
Cavite City	2,744,022	2,180,607	1,650	64,898	4,991,177
Kawit	2,269,187	1,264,452	7,951	17,717	3,559,307
Noveleta	1,351,747	634,721		8,818	1,995,286
Rosario	2,131,083	1,788,429	15,137,942	4,165	19,061,619
2nd District	17,862,148	9,393,826	865,532	173,190	28,294,696
Bacoor	17,862,148	9,393,826	865,532	173,190	28,294,696
3rd District	13,115,350	6,037,710	6,727,140	104,631	25,984,831
Imus	13,115,350	6,037,710	6,727,140	104,631	25,984,831
4th District	14,913,136	10,973,962	13,830,865	187,460	39,905,423
City of Dasmarinas	14,913,136	10,973,962	13,830,865	187,460	39,905,423
5th District	9,045,000	7,755,753	28,277,391	128,478	45,206,622
Carmona	2,092,669	3,367,073	24,183,469	60,519	29,703,730
Gen. Mariano Alvarez	2,559,252	1,157,998	115,637	16,603	3,849,490
Silang	4,393,079	3,230,682	3,978,285	51,356	11,653,402
6th District	13,010,028	6,326,831	25,542,245	130,182	45,009,286
Amadeo	581,277	242,317		134	823,728
General Trias	6,009,403	3,038,013	21,594,045	72,624	30,714,085
Tanza	4,233,793	1,551,494	132,290	36,628	5,954,205
Trece Martires City	2,185,555	1,495,007	3,815,910	20,796	7,517,268
7th District	7,303,787	7,960,774	1,276,072	124,425	16,665,058
Alfonso	867,981	542,840	15,462	9,364	1,435,647
Gen. E. Aguinaldo	261,257	98,261	9,073		368,591
Indang	1,142,350	666,482	100,561	2,777	1,912,170
Magallanes	227,116	81,786		6,989	315,891
Maragondon	568,656	198,105			766,761
Mendez	539,274	241,941		619	781,834
Naic	1,870,252	1,097,245	1,143,658	18,764	4,129,919
Tagaytay City	1,503,269	4,806,881	7,318	82,911	6,400,379
Ternate	323,632	227,233		3,001	553,866
TOTAL	83,745,488	54,317,065	91,666,788	943,964	230,673,305

Source: MERALCO, Pasig City

Table 7.12. Existing Power Substations, Province of Cavite: 2011

Substation	Location
Abubot Substation	Aguinaldo Highway, Abubot, City of Dasmarinas
Amadeo Substation	Banaybanay, Amadeo
Bacoor Substation	Aguinaldo Highway, Habay, Bacoor
FCIE Substation	Langkaan, City of Dasmarinas
Gateway Substation	Gateway Business Park, Javalera, Gen. Trias
GMA Substation	Lakeview Industrial Corp., Kabilang Baybay, Gen. Mariano Alvarez
Imus Substation	Aguinaldo Highway, Anabu, Imus
NGCP-Dasmarinas Substation *	Aguinaldo Highway, San Agustin, City of Dasmarinas
NGCP-Rosario Substation *	Gen. Trias Drive, Rosario
NGCP-Ternate Substation *	Gen. Trias Drive, Ternate
Puerto Azul Substation	Puerto Azul, Ternate
Silang Substation	Aguinaldo Highway, San Vicente, Silang
Tagaytay Substation	Aguinaldo Highway, Buho, Silang
Tagaytay West Substation	Maharlika West, Tagaytay City
Tanza Substation	Amaya, Tanza
Trece Martires City I Substation	Trece Martires City-Indang Road, Trece Martires City
Trece Martires City II Substation	Tanauan (Quintana), Tanza

Source: MERALCO, Pasig City

*NGCP-owned substation

Water Supply

Generally, the entire province of Cavite has access to clean and safe water. The provision of water is being shared by the public and private service agencies. Maynilad Water Services, Incorporated serves the municipalities of Noveleta, Imus, Bacoor, Kawit, Rosario and Cavite City. Water Districts under Local Water Utilities Administration (LWUA) supply the municipalities of Mendez, Indang, Silang, Gen. Mariano Alvarez, Maragondon, Tanza, Carmona, Amadeo, Gen. Aguinaldo, and the cities of Dasmarinas, Tagaytay and Trece Martires. Likewise, there are private corporations operating as water service providers in the province like General Trias Water Corporation in Gen. Trias, Naic Water System Corporation in Naic and Western Cavite Water Supply and Service Corporation in Ternate. The municipal governments of Alfonso and Magallanes manage their respective water supply systems while others use deepwells as the traditional water source. In 2011, there are 253,300 customers served by 18 water services providers (Table 7.13).

Table 7.13. Water Supply Service Coverage, Province of Cavite: 2011

Water Utility/Service Provider	Number of Customers Served						
	Residential	Commercial	Semi-Business/Semi-Commercial	Industrial	Government	Others	Total
Amadeo Water District	4,606	52			31		4,689
Carmona Water District	9,508	225		7	39		9,779
Dasmarinas Water District	80,984	11,379		546	161		93,070
Gen. E. Aguinaldo Water District	2,078	70	112				2,260
Gen. Mariano Alvarez Water District	11,540	176	469		20		12,205
Indang Water District	4,893	147	254				5,294
Maragondon Water District	2,823	176			25		3,024
Mendez Water District	3,732	115					3,847
Silang Water District		791	387		98		1,276
Tagaytay City Water District	10,835	867			99	65	11,866
Tanza Water District	8,896	668			31		9,595
Trece Martires City Water District	16,543	719			81		17,343
Maynilad Water Services, Inc.	37,785	1,326	1,596	71			40,778
Magallanes Waterworks Office	2,331	42			35		2,408
Western Cavite Water Supply & Services Corp.	1,069	1					1,070
Alfonso Waterworks Office	1,097	39				8	1,144
Gen. Trias Water Corp.	28,402	727					29,129
Naic Water Supply Corp.	4,523						4,523
TOTAL	231,645	17,520	2,818	624	620	73	253,300

Source: Water Districts, Waterworks' Offices & Maynilad Water Services, Inc., Cavite

Irrigation

Cavite Friar Lands Irrigation System (CFLIS) with its office located in Naic, is one of the oldest national irrigation systems in the Philippines and is being managed by National Irrigation Administration (NIA), a government-owned and controlled corporation tasked with the development and operation of Irrigation Systems all over the country. NIA-CFLIS is responsible for the operation and maintenance of national irrigation system in the province of Cavite. It undertakes the collection of Irrigation Service Fees (ISF) from farmer beneficiaries of irrigated areas every cropping season for the service rendered in the delivery of water. Based on the data gathered from NIA, Spanish Royal land grants were implemented in the province during the Spanish period and portions of agricultural land were subdivided into four

estates namely: Naic Estate, Sta Cruz de Malabon Estate, San Francisco de Malabon Estate and Imus Estate, all of which are now popularly called as Cavite Friar Lands. As shown in Tables 7.14 and 15, a total of 8,489.59 hectares firm-up service area was served by the system covering the municipalities of Ternate, Maragondon, Naic, Tanza, Gen. Trias, Imus, Bacoor, and the City of Dasmarinas. Moreover, Communal Irrigation System has a total firm-up service area of 414.63 hectares serving the municipalities of Gen. Mariano Alvarez, Carmona, Ternate, Maragondon and Magallanes. Records also indicate that the major irrigation facilities in the system are consist of diversion dams, minor dams, reservoirs and conveyance canals including appurtenant structures (Table 16) and Table 7.17 shows the National Irrigation System's source of water.

Table 7.14. City/Municipality Served by the National Irrigation System, Province of Cavite

System	Municipality	Division	Firmed - Up Service Area (Has)
NAIC ESTATE			2,609.62
Mabacao Pump	Maragondon		34.59
Kay-Akle RIS	Maragondon, Ternate	SM MTI	351.17
Balayungan RIS	Naic, Maragondon	1	896.38
Balayungan RIS	Naic, Maragondon	2	650.10
Culong-Culong RIS	Naic, Maragondon	3C	474.91
Sahing RIS	Naic, Maragondon	3S	202.47
STA. CRUZ DE MALABON ESTATE			1,747.75
Tres Cruses RIS	Tanza	4	572.74
Matanda RIS	Tanza	5	490.91
Matanda RIS	Tanza	6	684.11
SAN FRANCISCO DE MALABON ESTATE			2,446.73
Bankud - Vargas RIS	Gen. Trias	7	543.59
Plucena-Bayan RIS	Gen. Trias	8	290.02
Butas-Lawang Bato RIS	Gen. Trias	9	529.47
Butas RIS	Gen. Trias	10a	269.16
Butas-Marcelo RIS	Gen. Trias	10b	334.63
Butas-Palanas RIS	Gen. Trias	11	479.86
IMUS ESTATE			1,685.48
San Augustine RIS	Imus	12	414.14
Pasong Kastila RIS	Imus	13K	511.14
Julian RIS	Imus	13J	207.90
Makuling RIS	City of Dasmarinas	14M	148.78
Luksuhin RIS	City of Dasmarinas	14L	109.23
Embarcadero RIS	City of Dasmarinas	15E	60.49
Baluctot RIS	City of Dasmarinas	15B	149.94
Molino RIS	Bacoor	16	83.85
TOTAL CFLIS			8,489.59

Source: National Irrigation Administration, Naic, Cavite

**Table 7.15. City/Municipality Served by National Irrigation and Communal Irrigation System
Province of Cavite: 2011**

City/Municipality	Firmed - Up Service Area (Has)	
	NIS	CIS
2nd District	83.85	
Bacoor	83.85	
3rd District	1,133.19	
Imus	1,133.19	
4th District	468.44	
City of Dasmarinas	468.44	
5th District		254.00
Carmona		188.00
Gen. Mariano Alvarez		66.00
6th District	4,194.49	
Gen. Trias	2,446.73	
Tanza	1,747.75	
7th District	2,609.62	160.63
Maragondon	571.53	100.00
Magallanes		12.00
Naic	1,998.24	
Ternate	39.85	48.63
TOTAL	8,489.59	414.63

Source: National Irrigation Administration, Naic, Cavite

Table 7.16. Number of Irrigation Facilities, Province of Cavite: 2011

Irrigation Facility	Number
Diversion Dams	18
Minor Dams	72
Reservoirs	2
Conveyance Canal	
NIA Road	

Source: National Irrigation Administration, Naic, Cavite

Table 7.17. National Irrigation System's (NIS) Sources of Water

National Irrigation System	Division	Source of Water
Kay-Akle RIS	SM MTI	Kay-Akle River
Balayungan RIS	1 & 2	Balayungan River
Culong-Culong RIS	3C	Balsahan River
Sahing RIS	3S	Sahing River
Tres Cruses RIS	4	Timalan, Balagbag River
Matanda RIS	5 & 6	Polonan, Quintana Creek
Bankud - Vargas RIS	7	Kay-alamang River
Plucena-Bayan RIS	8	Panaysayan River
Butas-Lawang Bato RIS	9	Rio Grande River
Butas-Marcelo RIS	10A & 10B	Alang-ilang River
Butas-Palanas RIS	11	Rio Grande River
San Augustine RIS	12	Alang-Ilang River
Pasong Kastila RIS	13K	Alang-Ilang River
Julian RIS	13J	Malagasang Creek
Makuling RIS	14M	Sociedad, Pasong Baka Creek
Lukshin RIS	14L	Malinta River
Embarcadero RIS	15E	Malaking Ilog River
Baluctot RIS	15B	Baluctot River
Molino RIS	16	Don Celia River

Source: National Irrigation Administration, Naic, Cavite