

8.3 Projection of Frame Values

8.3.1 Review of Past Population Development and Population Projection

Since the NSO has not yet prepared/issued future population of the provinces, the provincial population for the years 1998 (planning base year), 2004 (medium-term target year) and 2010 (long-term target year) were projected. Available information for the study at present is as follows:

- NSO population census results from 1903 to 1995 (conducted 10 times)
- 1995 Census-based National and Regional Population Projection prepared by the NSO
- 1995 Census-based Regional and Provincial Population Projection prepared by the NEDA Regional Office-VIII
- Provincial Physical Framework Plan/Comprehensive Provincial Land Use Plan (1993-2002) prepared by the Provincial Office (hereafter referred to as "the Land Use Plan")

(1) Comparison of regional population projected by NSO and NEDA

The NSO conducted the national population projections for the period 1995-2040 and the regional projections for the period 1995-2020. The assumptions take into account future trends in the demographic processes of fertility, mortality and migration required by the cohort-component method for projecting population.

In the regional population projection of Region VIII (Eastern Visayas), the subject region composed of the 3rd batch provinces of this study is classified as medium-sized region (projected population of at least 5 million but less than 10 million by year 2020).

On the other hand, the NEDA Regional Office-VIII projected the regional population together with the provincial population for year 2006 based on the 1995 census result.

Table 8.3.1 shows the comparison between the two agencies' projection on the regional population for the years 2000, 2005 and 2010. In the past development, the annual growth rate between 1990 and 1995 drastically increased compared with that of the previous census period. The NSO considered the latest development for its projection. Thus, the growth rates with 5-year interval for the years 1995, 2005 and 2010 are assumed at 2.21%, 2.00% and 1.82%, respectively.

The NEDA Regional Office also projected the population for year 2006 based on the 1995 census result. In this study, the annual growth rate between the two years was calculated at 1.00% using the compounded formula for the purpose of comparison with

the NSO projection. Thus, the population in a 5-year interval from year 1995 was estimated as shown below applying 1.00% as annual growth rate. Comparing with the projected population by NSO, the NEDA projection is rather conservative in consideration of the past trend between 1948 and 1995 as shown in Table 8.3.1 and Figure 8.3.1.

<u>Year</u>	<u>Population</u>	<u>Source/Growth Rate</u>
1995	3,366,917	Census result
2000	3,538,664	Estimated/ 1.00% (1995 - 2006)
2005	3,719,171	Estimated/ 1.00% (1995 - 2006)
2006	3,756,193	NEDA projection/ 1.00% (1995 - 2006)

Table 8.3.1 Comparison of Regional Population Projection by the NSO and NEDA

<u>Year</u>		<u>1980</u>	<u>1990</u>	<u>1995</u>	<u>2000</u>	<u>2005</u>	<u>2010</u>
Census	Population	2,799,534	3,054,490	3,366,917			
	Growth Rate		0.88%	1.97%			
NSO Projection	Population			3,356,854	3,743,895	4,132,242	4,523,762
	Growth Rate				2.21%	2.00%	1.82%
NEDA Projection	Population			3,366,917	3,538,664	3,719,171	
	Growth Rate				1.00%	1.00%	

Notes: The 1995 population as of July 1995 was used as a basis for NSO population projection.
The NEDA projections in 2000 and 2005 are estimated in this study.

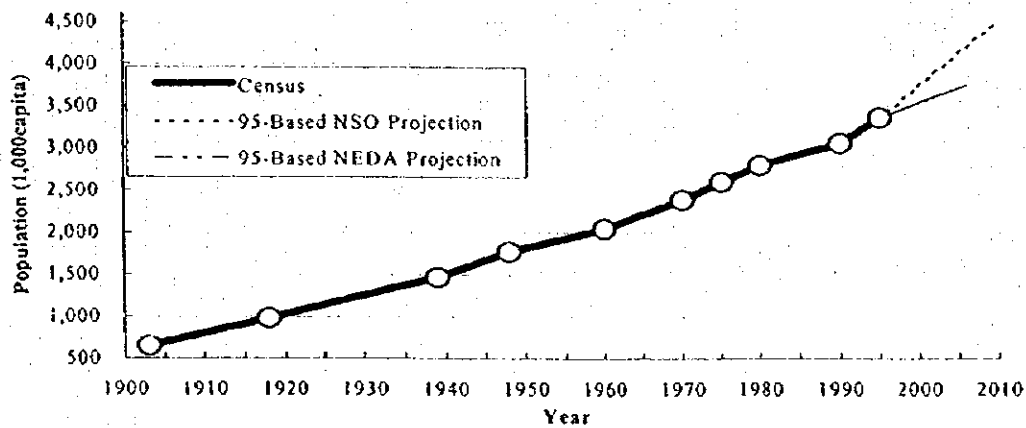


Figure 8.3.1 Past (census) and Projected Population (prepared by NSO and NEDA) of Region-VIII

(2) The Land Use Plan: Province of Northern Samar (Planning period 1993-2002)

The provincial population for the year 2002 was projected with 1990 as base year. The provincial growth rate of 0.13 % experienced between 1980 and 1990 was basically

adopted for the projection. While, the experienced and projected growth rates of Region VIII are 0.88 % between 1980 and 1990 and 0.95 % between 1990 and 2002.

The population projection on the provincial total and component municipalities was made with 1990 as base year. The population for the year 2002 was projected using a uniform growth rate between 1990 and 2002 referring to the experience from 1980 to 1990 (census years). Minor arrangements on the municipal growth rates were made to meet the provincial average growth rate of about 0.14%.

Table 8.3.2 shows the past population developments in census years (1980-1995) and the projections for the years 1995 and 2002 with 1990 as the base year applying the assumed growth rates for the period 1990 to 2002 in the said comprehensive Provincial Land Use Plan (hereafter referred to as "Land Use Plan").

Table 8.3.2 Census Population and Projected Population in Land Use Plan

Municipality	Census Population				Land Use Plan			
	1980	1990	Growth Rate (1980-1990)	1995	Growth Rate (1990-1995)	1995	2002	Growth Rate (1980-2002)
Allen	15,166	15,404	0.16%	17,972	3.13%	15,524	15,694	0.16%
Biri	7,437	7,467	0.04%	8,866	3.49%	7,482	7,503	0.04%
Bobon	12,702	13,687	0.75%	15,800	2.91%	14,131	14,776	0.64%
Capul	10,237	9,510	-0.73%	9,964	0.94%	8,854	8,012	-1.42%
Catarman	48,132	50,965	0.57%	61,705	3.90%	52,488	54,698	0.59%
Catubig	21,212	22,057	0.39%	25,190	2.69%	22,414	22,923	0.32%
Gamay	17,247	15,764	-0.90%	19,457	4.30%	16,050	16,458	0.36%
Laoang	46,545	42,048	-1.01%	47,438	2.44%	39,878	37,027	-1.05%
Lapinig	7,481	8,232	0.96%	9,813	3.58%	8,559	9,040	0.78%
Las Navas	21,216	22,017	0.37%	25,031	2.60%	22,350	22,825	0.30%
Lavezares	20,007	19,058	-0.48%	20,492	1.46%	18,517	17,785	-0.57%
Lope De Vega	10,889	9,254	-1.61%	11,947	5.24%	8,440	7,419	-1.82%
Mapanas	5,549	7,553	3.13%	9,377	4.42%	8,932	11,297	3.41%
Mondragon	20,423	21,399	0.47%	25,504	3.57%	21,724	22,188	0.30%
Palapag	23,115	20,114	-1.38%	24,947	4.40%	18,295	16,022	-1.88%
Pambujan	17,208	18,389	0.67%	22,152	3.79%	18,731	19,220	0.37%
Rosario	5,872	6,699	1.33%	8,626	5.19%	7,081	7,653	1.12%
San Antonio	7,008	7,164	0.22%	7,984	2.19%	7,243	7,356	0.22%
San Isidro	15,994	18,353	1.39%	22,991	4.61%	18,849	19,565	0.53%
San Jose	10,388	10,773	0.36%	12,556	3.11%	10,892	11,060	0.22%
San Roque	13,106	13,856	0.56%	18,094	5.48%	14,169	14,620	0.45%
San Vicente	4,786	5,777	1.90%	5,970	0.66%	6,276	7,047	1.67%
Silvino Lobos	7,245	9,071	2.27%	11,028	3.98%	10,080	11,685	2.13%
Victoria	9,551	9,043	-0.55%	11,291	4.54%	8,715	8,275	-0.74%
Province	378516	383,654	0.13%	454,195	3.43%	385,675	390,148	0.14%

Note: The municipality of Lope de Vega was created after 1980 Census on Population and Housing. Its 1980 population was based on the population of the barangays that were part of Catarman but later become part of Lope de Vega.

Comparing the census and the projected population in 1995, the provincial population based on the census is about 18% higher than the projected. Regarding the municipal

census population in 1995, all municipalities except for San Vicente were higher with a range of 5 - 42% comparing with the projected ones.

In addition to this, the province is presently updating its Land Use Plan using the NEDA projection based on the 1995 census population. Thus, the future projection shall be made using the 1995 census results as the base year.

(3) Population Projection of the Province

The following conditions are considered in the population projection.

Regional Population

For the regional population in the study, the projection conducted by the NEDA Regional Office may be adopted assuming that a rather conservative population growth will be realized comparing with that of the NSO projection.

- 1) The regional population projected by the NEDA for the year 2006 is referred to for the short and medium-term periods. The annual growth rate of 1.00% between 1995 and 2006 will be adopted for the projection in 1998 and 2004 using the compounded formula with 1995 as the base year.
- 2) For the long-term projection, it is assumed that the annual growth rates will decrease gradually as adopted in the NSO projection. The annual growth rates adopted in the NSO projection decline from 2.00% (2000 - 2005) to 1.82% (2005 - 2010), which indicate that the relative reduction rate is 0.09%. In this study, the same reduction rate may be used to the NEDA projected growth rate of 1.00% (2000 - 2005). Thus, the population in year 2010 is estimated at 3,891,501 applying the growth rate of 0.91% from year 2005. The growth rates adopted in the study correspond to half the figures employed by NSO.

<u>Year</u>	<u>Population</u>	<u>Growth Rate</u>
1995	3,366,917	Census result
1998	3,468,938	1.00% (1995 - 1998)
2004	3,682,348	1.00% (1995 - 2004)
2005	3,719,171	1.00% (1995 - 2005)
2010	3,891,501	0.91% (2005 - 2010)

Provincial Population

In the NEDA projection, the regional population to be increased from 1995 to 2006 was distributed to each province in proportion to the share of the provincial population increase to the regional population experienced between 1990 and 1995. In this study, it is assumed that the tendency of the population growth by province will not drastically change. Thus, the same manner as adopted by the NEDA projection was employed both for the short/medium-term and long-term periods in the population distribution from the regional population to those for concerned provinces. The distribution of the regional population to be increased to the provincial population was made between the respective base/target years. Table 8.3.3 shows the projected population in years 1998, 2004 and 2010 together with the NEDA projection.

Table 8.3.3 Projected Population of the Provinces

Province	NEDA Projection				Projected Population		
	Population		Population Increase		1998	2004	2010
	1995	2006	Number	Share			
Biliran	132,209	149,921	17,712	4.55%	136,851	146,561	156,977
Eastern Samar	362,324	403,509	41,185	10.58%	373,118	395,697	417,825
Leyte	1,511,251	1,689,501	178,250	45.79%	1,557,966	1,655,686	1,751,458
Northern Samar	454,195	542,288	88,093	22.63%	477,282	525,577	572,908
Samar	589,373	658,859	69,486	17.85%	607,584	645,678	683,012
Southern Leyte	317,565	312,115	-5,450	-1.40%	316,137	313,149	310,221
Region	3,366,917	3,756,193	389,276	100.00%	3,468,938	3,682,348	3,891,501

Municipal Population

- 1) The total population of the province in 1998, 2004 and 2010 was fixed.
- 2) For the population projection by municipality, the same method employed in NEDA projection for the distribution of regional population to provincial population was applied. The provincial population to be increased in respective planning years was distributed to each municipality in proportion to the share of the population increase of each municipality to the provincial total experienced between 1990 and 1995. Table 8.3.4 presents the census results (1990 and 1995) and the projected population of the municipalities.

Table 8.3.4 Census Results and Projected Population of Municipalities

Municipality	Census Result				Projected Population					
	1990	1995	Pop. Growth	Percentage Inc' Mun Pop/ Inc' Pro. Pop	1998		2004		2010	
					Population	GR	Population	GR	Population	GR
Allen	15,40	17,972	2,568	3.6%	18,812	1.53	20,570	1.50	22,293	1.35%
Biri	7,467	8,866	1,399	2.0%	9,324	1.69	10,282	1.64	11,221	1.47%
Bobon	13,68	15,800	2,113	3.0%	16,492	1.44	17,939	1.41	19,357	1.28%
Capul	9,510	9,964	454	0.6%	10,113	0.50	10,424	0.51	10,729	0.48%
Catarman	50,96	61,705	10,740	15.2%	65,220	1.86	72,574	1.80	79,780	1.59%
Catubig	22,05	25,190	3,133	4.4%	26,215	1.34	28,360	1.32	30,462	1.20%
Gamay	15,76	19,457	3,693	5.2%	20,666	2.03	23,194	1.94	25,672	1.71%
Laoang	42,04	47,438	5,390	7.6%	49,202	1.22	52,893	1.21	56,510	1.11%
Lapinig	8,232	9,813	1,581	2.2%	10,330	1.73	11,412	1.67	12,473	1.49%
Las Navas	22,01	25,031	3,014	4.3%	26,017	1.30	28,080	1.28	30,102	1.17%
Lavezares	19,05	20,492	1,434	2.0%	20,961	0.76	21,943	0.77	22,905	0.72%
Lope De Vega	9,254	11,947	2,693	3.8%	12,828	2.40	14,672	2.26	16,479	1.95%
Mapanas	7,553	9,377	1,824	2.6%	9,974	2.08	11,223	1.99	12,447	1.74%
Mondragon	21,39	25,504	4,105	5.8%	26,848	1.73	29,658	1.67	32,412	1.49%
Palapag	20,11	24,947	4,833	6.9%	26,529	2.07	29,838	1.98	33,081	1.73%
Pambujan	18,38	22,152	3,763	5.3%	23,384	1.82	25,960	1.76	28,485	1.56%
Rosario	6,699	8,626	1,927	2.7%	9,257	2.38	10,576	2.24	11,869	1.94%
San Antonio	7,164	7,984	820	1.2%	8,252	1.11	8,813	1.10	9,363	1.01%
San Isidro	18,35	22,991	4,638	6.6%	24,509	2.15	27,684	2.05	30,796	1.79%
San Jose	10,77	12,556	1,783	2.5%	13,140	1.53	14,361	1.49	15,557	1.34%
San Roque	13,85	18,094	4,238	6.0%	19,481	2.49	22,382	2.34	25,226	2.01%
San Vicente	5,777	5,970	193	0.3%	6,033	0.35	6,165	0.36	6,294	0.35%
Silvino Lobos	9,071	11,028	1,957	2.8%	11,668	1.90	13,008	1.83	14,321	1.62%
Victoria	9,043	11,291	2,248	3.2%	12,027	2.13	13,566	2.03	15,074	1.77%
Province	383,6	454,19	70,541	100.0%	477,282	1.67	525,577	1.62	572,908	1.45%

Note: GR = Growth rates

Growth rates in 1998, 2004 and 2010 were calculated using compounded formula.

Population by Urban and Rural Area

1) Past population development

Table 8.3.5 shows the urban and rural population with growth rates in census years (1980-1995) by municipality. With regard to the ratio of the urban population of the province to the total population, the provincial averages in 1980 and 1990 were 23.4% and 35.4%, while it decreased to 28.1% in 1995. The provincial growth rate of 4.36% between 1980 and 1990 decreased to -1.20% in 1995. While, the rural population by municipality was increased from -1.55% (1980 - 1990) to 5.65% (1990 - 1995) as a provincial average.

2) Projection of urban and rural population for the years 1998, 2004 and 2010

The urban population by municipality for the target years was first projected and the rural population was calculated to meet the aforementioned total population by fixing the urban population.

In the projection of municipal urban population, the following are assumed by short/medium-term and long-term period.

- Short/Medium-term target: 1998 and 2004

Growth rates between 1990 and 1995 in terms of the profile of urban population to total population by municipality were basically adopted. However, for those municipalities having drastic changes of growth rates between the two census periods (1990 – 1995 and 1980 – 1990), the average growth rates between 1980 and 1995 were employed. These municipalities are Allen, Catubig, Mondragon, Pambujan, San Isidro, San Jose and San Roque.

In addition, some modifications were made as follows:

- Lapinig municipality; The provincial average growth rate of 2.47% (1980 - 1995) was used, since the growth rate of the municipality between 1990 and 1995 indicated a very high rate of about 13%.
 - Municipalities of Biri, Laoang, Lavezares, Rosario, San Vicente and Victoria; Population in 1995 was fixed for short/medium-term to avoid a negative growth.
- Long-term target: 2010

For the long-term projection, the adopted share of urban/rural population in 2004 may be applied to the municipal population for the year 2010, assuming that the share of urban/rural population in the medium-term period will not drastically change.

Under the above assumptions, the provincial average share of the urban population for the year 2010 was arrived at 28.4%, higher than the figures in 1995 (24.7%) and 1990 (20.5%). Table 8.3.6 presents the projected urban and rural population. The growth rates and shares on rural population were calculated using the estimated rural population.

Table 8.3.5 Past Population Development by Urban and Rural Area

Municipality	1980			1990				1995				
	Total	Urban/ Rural	Share (%)	Total	Urban/ Rural	G.R. (%)	Share (%)	Total	Urban/ Rural	G.R. (%)	Share (%)	
Urban Area	Allen	15,166	4,547	30.0%	15,404	5,392	1.72%	35.0%	17,972	7,640	7.2%	42.5%
	Biri	7,437		0.0%	7,467	3,273		43.8%	8,866	2,596	-4.5%	29.3%
	Bobon	12,702	3,443	27.1%	13,687	3,838	1.09%	28.0%	15,800	4,551	3.5%	28.8%
	Capul	10,237		0.0%	9,510	4,032		42.4%	9,964	4,189	0.8%	42.0%
	Cataman	48,132	17,714	36.8%	50,965	29,235	5.14%	57.4%	61,705	30,335	0.7%	49.2%
	Catubig	21,212	4,205	19.8%	22,057	6,183	3.93%	28.0%	25,190	4,572	-5.9%	18.2%
	Gamay	17,247	8,298	48.1%	15,764	2,598		16.5%	19,457	2,694	0.7%	13.8%
	Laoang	46,545	11,372	24.4%	42,048	13,210	1.51%	31.4%	47,438	11,104	-3.4%	23.4%
	Lapinig	7,481		0.0%	8,232	1,884		22.9%	9,813	3,440	12.8%	35.1%
	Las Navas	21,216	2,226	10.5%	22,017	4,098	6.29%	18.6%	25,031	5,337	5.4%	21.3%
	Lavezares	20,007	4,412	22.1%	19,058	4,971	-1.20%	26.1%	20,492	3,433	-7.1%	16.8%
	Lope De Vega	10,889		0.0%	9,254	1,937		20.9%	11,947	2,280	3.3%	19.1%
	Mapanas	5,549	3,808	68.6%	7,553	1,538	-8.67%	20.4%	9,377	1,902	4.3%	20.3%
	Mondragon	20,423	3,062	15.0%	21,399	7,284	9.05%	34.0%	25,504	4,982	-7.3%	19.5%
	Palapag	23,115	6,371	27.6%	20,114	5,438	-1.57%	27.0%	24,947	5,928	1.7%	23.8%
	Pambujan	17,208	6,045	35.1%	18,389	6,929	1.37%	37.7%	22,152	9,172	5.8%	41.4%
	Rosario	5,872		0.0%	6,699	2,580		38.5%	8,626	2,412	-1.3%	28.0%
	San Antonio	7,008		0.0%	7,164	2,685		37.5%	7,984	839	-20.8%	10.5%
	San Isidro	15,994	2,125	13.3%	18,353	7,953	14.11%	43.3%	22,991	2,701	-19.4%	11.7%
	San Jose	10,388	2,807	27.0%	10,773	4,421	4.65%	41.0%	12,556	3,039	-7.2%	24.2%
	San Roque	13,106	6,247	47.7%	13,856	8,693	3.36%	62.7%	18,094	7,978	-1.7%	44.1%
San Vicente	4,786	1,860	38.9%	5,777	2,148	1.45%	37.2%	5,970	1,610	-5.6%	27.0%	
Silvino Lobos	7,245		0.0%	9,071	1,795		19.8%	11,028	2,271	4.8%	20.6%	
Victoria	9,551		0.0%	9,043	3,516		38.9%	11,291	2,700	-5.1%	23.9%	
Province	378,516	88,542	23.4%	383,654	135,631	4.36%	35.4%	454,195	127,705	-1.2%	28.1%	
Rural Area	Allen	15,166	10,619	70.0%	15,404	10,012	-0.59%	65.0%	17,972	10,332	0.63%	57.5%
	Biri	7,437	7,437	100.0%	7,467	4,194	-5.57%	56.2%	8,866	6,270	8.37%	70.7%
	Bobon	12,702	9,259	72.9%	13,687	9,849	0.62%	72.0%	15,800	11,249	-2.69%	71.2%
	Capul	10,237	10,237	100.0%	9,510	5,478	-6.06%	57.6%	9,964	5,775	1.06%	58.0%
	Cataman	48,132	30,418	63.2%	50,965	21,730	-3.31%	42.6%	61,705	31,370	7.62%	50.8%
	Catubig	21,212	17,007	80.2%	22,057	15,874	-0.69%	72.0%	25,190	20,618	5.37%	81.8%
	Gamay	17,247	8,949	51.9%	15,764	13,166	3.94%	83.5%	19,457	16,763	4.95%	86.2%
	Laoang	46,545	35,173	75.6%	42,048	28,838	-1.97%	68.6%	47,438	36,334	4.73%	76.6%
	Lapinig	7,481	7,481	100.0%	8,232	6,348	-1.63%	77.1%	9,813	6,373	0.08%	64.9%
	Las Navas	21,216	18,990	89.5%	22,017	17,919	-0.58%	81.4%	25,031	19,694	1.91%	78.7%
	Lavezares	20,007	15,595	77.9%	19,058	14,087	-1.01%	73.9%	20,492	17,059	3.90%	83.2%
	Lope De Vega	10,889	10,889	100.0%	9,254	7,317	-3.90%	79.1%	11,947	9,667	5.73%	80.9%
	Mapanas	5,549	1,741	31.4%	7,553	6,015	13.20%	79.6%	9,377	7,475	4.44%	79.7%
	Mondragon	20,423	17,361	85.0%	21,399	14,115	-2.05%	66.0%	25,504	20,522	7.77%	80.5%
	Palapag	23,115	16,744	72.4%	20,114	14,706	-1.29%	73.1%	24,947	19,019	5.28%	76.2%
	Pambujan	17,208	11,163	64.9%	18,389	11,460	0.26%	62.3%	22,152	12,980	2.52%	58.6%
	Rosario	5,872	5,872	100.0%	6,699	4,119	-3.48%	61.5%	8,626	6,214	8.57%	72.0%
	San Antonio	7,008	7,008	100.0%	7,164	4,479	-4.38%	62.5%	7,984	7,145	9.79%	89.5%
	San Isidro	15,994	13,869	86.7%	18,353	10,400	-2.84%	56.7%	22,991	20,290	14.30%	88.3%
	San Jose	10,388	7,581	73.0%	10,773	6,352	-1.75%	59.0%	12,556	9,517	8.42%	75.8%
	San Roque	13,106	6,859	52.3%	13,856	5,163	-2.80%	37.3%	18,094	10,116	14.40%	55.9%
San Vicente	4,786	2,926	61.1%	5,777	3,629	2.18%	62.8%	5,970	4,360	3.74%	73.0%	
Silvino Lobos	7,245	7,245	100.0%	9,071	7,276	0.04%	80.2%	11,028	8,757	3.77%	79.4%	
Victoria	9,551	9,551	100.0%	9,043	5,527	-5.32%	61.1%	11,291	8,591	9.22%	76.1%	
Province	378,516	289,974	76.6%	383,654	248,053	-1.55%	64.7%	454,195	326,490	5.65%	71.9%	

Table 8.3.6 Population Projection by Urban and Rural Area: 1998, 2004 and 2010

Municipality	1998				2004				2010			
	Total	Urban/ Rural	G.R. (%)	Share (%)	Total	Urban/ Rural	G.R. (%)	Share (%)	Total	Urban/ Rural	G.R. (%)	Share (%)
Urban Area												
Allen	18,812	8,476	3.52%	45.1%	20,570	10,431	3.52%	50.7%	22,293	11,305	1.35%	50.7%
Biri	9,324	2,596	0.00%	27.8%	10,282	2,596	0.00%	25.2%	11,221	2,833	1.47%	25.2%
Bobon	16,492	5,041	3.47%	30.6%	17,939	6,185	3.47%	34.5%	19,357	6,674	1.28%	34.5%
Capul	10,113	4,286	0.77%	42.4%	10,424	4,487	0.77%	43.0%	10,729	4,618	0.48%	43.0%
Catarman	65,220	31,015	0.74%	47.6%	72,574	32,421	0.74%	44.7%	79,780	35,640	1.59%	44.7%
Catubig	26,215	4,649	0.56%	17.7%	28,360	4,807	0.56%	16.9%	30,462	5,163	1.20%	16.9%
Gamay	20,666	2,753	0.72%	13.3%	23,194	2,876	0.73%	12.4%	25,672	3,183	1.70%	12.4%
Laoang	49,202	11,104	0.00%	22.6%	52,893	11,104	0.00%	21.0%	56,510	11,863	1.11%	21.0%
Lapinig	10,330	3,701	2.47%	35.8%	11,412	4,285	2.47%	37.5%	12,473	4,683	1.49%	37.5%
Las Navas	26,017	6,254	3.43%	24.0%	28,080	8,587	5.43%	30.6%	30,102	9,205	1.17%	30.6%
Lavezares	20,961	3,433	0.00%	16.4%	21,943	3,433	0.00%	15.6%	22,905	3,584	0.72%	15.6%
Lope De Vega	12,828	2,514	3.31%	19.6%	14,672	3,057	3.31%	20.8%	16,479	3,433	1.95%	20.8%
Mapanas	9,974	2,161	4.35%	21.7%	11,223	2,788	4.34%	24.8%	12,447	3,092	1.74%	24.8%
Mondragon	26,848	5,491	3.30%	20.5%	29,658	6,671	3.30%	22.5%	32,412	7,290	1.49%	22.5%
Palapag	26,529	6,243	1.74%	23.5%	29,838	6,924	1.74%	23.2%	33,081	7,677	1.74%	23.2%
Pambujan	23,384	9,970	2.82%	42.6%	25,960	11,779	2.82%	45.4%	28,485	12,925	1.56%	45.4%
Rosario	9,257	2,412	0.00%	26.1%	10,576	2,412	0.00%	22.8%	11,869	2,707	1.94%	22.8%
San Antonio	8,252	839	0.00%	10.2%	8,813	839	0.00%	9.5%	9,363	891	1.01%	9.5%
San Isidro	24,509	2,834	1.62%	11.6%	27,684	3,119	1.61%	11.3%	30,796	3,470	1.79%	11.3%
San Jose	13,140	3,088	0.53%	23.5%	14,361	3,188	0.53%	22.2%	15,557	3,454	1.34%	22.2%
San Roque	19,481	8,378	1.64%	43.0%	22,382	9,239	1.64%	41.3%	25,226	10,413	2.01%	41.3%
San Vicente	6,033	1,610	0.00%	26.7%	6,165	1,610	0.00%	26.1%	6,294	1,644	0.35%	26.1%
Silvino Lobos	11,668	2,615	4.81%	22.4%	13,008	3,468	4.82%	26.7%	14,321	3,818	1.62%	26.7%
Victoria	12,027	2,700	0.00%	22.4%	13,566	2,700	0.00%	19.9%	15,074	3,000	1.77%	19.9%
Province	477,282	134,163	1.66	28.1%	525,577	149,006	1.76%	28.4%	572,908	162,565	1.46%	28.4%
Rural Area												
Allen	18,812	10,336	0.01%	54.9%	20,570	10,139	-0.32%	49.3%	22,293	10,988	1.35%	49.3%
Biri	9,324	6,728	2.38%	72.2%	10,282	7,686	2.24%	74.8%	11,221	8,388	1.47%	74.8%
Bobon	16,492	11,451	0.60%	69.4%	17,939	11,754	0.44%	65.5%	19,357	12,683	1.28%	65.5%
Capul	10,113	5,827	0.30%	57.6%	10,424	5,937	0.31%	57.0%	10,729	6,111	0.48%	57.0%
Catarman	65,220	34,205	2.93%	52.4%	72,574	40,153	2.71%	55.3%	79,780	41,140	1.59%	55.3%
Catubig	26,215	21,566	1.51%	82.3%	28,360	23,553	1.49%	83.1%	30,462	25,299	1.20%	83.1%
Gamay	20,666	17,913	2.24%	86.7%	23,194	20,318	2.12%	87.6%	25,672	22,489	1.71%	87.6%
Laoang	49,202	38,098	1.59%	77.4%	52,893	41,789	1.55%	79.0%	56,510	44,647	1.11%	79.0%
Lapinig	10,330	6,629	1.32%	64.2%	11,412	7,127	1.21%	62.5%	12,473	7,790	1.49%	62.5%
Las Navas	26,017	19,763	0.12%	76.0%	28,080	19,493	-0.23%	69.4%	30,102	20,897	1.17%	69.4%
Lavezares	20,961	17,528	0.91%	83.6%	21,943	18,510	0.91%	84.4%	22,905	19,321	0.72%	84.4%
Lope De Vega	12,828	10,314	2.18%	80.4%	14,672	11,615	2.00%	79.2%	16,479	13,046	1.96%	79.2%
Mapanas	9,974	7,813	1.49%	78.3%	11,223	8,435	1.28%	75.2%	12,447	9,355	1.74%	75.2%
Mondragon	26,848	21,357	1.34%	79.5%	29,658	22,987	1.23%	77.5%	32,412	25,122	1.49%	77.5%
Palapag	26,529	20,286	2.17%	76.5%	29,838	22,914	2.05%	76.8%	33,081	25,404	1.73%	76.8%
Pambujan	23,384	13,414	1.10%	57.4%	25,960	14,181	0.93%	54.6%	28,485	15,560	1.56%	54.6%
Rosario	9,257	6,845	3.28%	73.9%	10,576	8,164	2.98%	77.2%	11,869	9,162	1.94%	77.2%
San Antonio	8,252	7,413	1.23%	89.8%	8,813	7,974	1.22%	90.5%	9,363	8,472	1.01%	90.5%
San Isidro	24,509	21,675	2.23%	88.4%	27,684	24,565	2.11%	88.7%	30,796	27,326	1.79%	88.7%
San Jose	13,140	10,052	1.84%	76.5%	14,361	11,173	1.78%	77.8%	15,557	12,103	1.34%	77.8%
San Roque	19,481	11,103	3.15%	57.0%	22,382	13,143	2.85%	58.7%	25,226	14,813	2.01%	58.7%
San Vicente	6,033	4,423	0.48%	73.3%	6,165	4,555	0.49%	73.9%	6,294	4,650	0.34%	73.9%
Silvino Lobos	11,668	9,053	1.11%	77.6%	13,008	9,540	0.88%	73.3%	14,321	10,503	1.62%	73.3%
Victoria	12,027	9,327	2.78%	77.6%	13,566	10,866	2.58%	80.1%	15,074	12,074	1.77%	80.1%
Province	477,282	343,119	1.67	71.9%	525,577	376,571	1.56%	71.6%	572,908	410,343	1.44%	71.6%

Note: G.R. - Growth Rate

Table 8.3.7 Projected Number of Households by Urban and Rural Area by Municipality by Target Year

Name of Municipality	Number of Households														
	Household Size			1995			1998			2004			2010		
	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
Allen	5.03	4.85	4.93	1,518	2,129	3,647	1,685	2,131	3,816	2,074	2,091	4,165	2,826	2,747	5,573
Bin	5.77	5.83	5.81	450	1,076	1,526	450	1,154	1,604	450	1,318	1,768	708	2,097	2,805
Bobon	5.23	5.11	5.14	870	2,202	3,072	964	2,241	3,205	1,183	2,300	3,483	1,669	3,171	4,840
Capul	5.12	5.19	5.16	818	1,112	1,930	837	1,123	1,960	876	1,144	2,020	1,155	1,528	2,683
Catarmán (Capital)	5.82	5.26	5.52	5,212	5,965	11,177	5,329	6,503	11,832	5,571	7,634	13,205	8,910	11,035	19,945
Canbig	5.26	5.13	5.15	369	4,022	4,891	884	4,204	5,088	914	4,591	5,505	1,291	6,325	7,616
Gamay	5.16	5.12	5.13	522	3,271	3,793	534	3,499	4,033	557	3,968	4,525	796	5,622	6,418
Laoang	5.47	5.20	5.26	2,029	6,991	9,020	2,030	7,327	9,357	2,030	8,036	10,066	2,966	11,162	14,128
Lapinig	6.01	5.75	5.84	572	1,109	1,681	616	1,153	1,769	713	1,239	1,952	1,171	1,948	3,119
Las Navas	5.33	4.89	4.98	1,001	4,030	5,031	1,173	4,042	5,215	1,611	3,986	5,597	2,301	5,224	7,525
Lavezares	5.25	4.95	5.00	654	3,446	4,100	654	3,541	4,195	654	3,739	4,393	896	4,830	5,726
Lope De Vega	5.77	6.08	6.02	395	1,590	1,985	436	1,696	2,132	530	1,910	2,440	858	3,262	4,120
Maapanas	5.40	5.64	5.59	352	1,326	1,678	400	1,385	1,785	516	1,496	2,012	773	2,339	3,112
Mondragon	5.37	5.20	5.24	927	3,943	4,870	1,023	4,107	5,130	1,242	4,421	5,663	1,823	6,281	8,104
Palapag	4.85	5.12	5.05	1,222	3,717	4,939	1,287	3,962	5,249	1,428	4,475	5,903	1,919	6,351	8,270
Pambujan	5.82	5.62	5.70	1,577	2,311	3,888	1,713	2,387	4,100	2,024	2,523	4,547	3,231	3,890	7,121
Rosario	6.64	5.86	5.90	363	1,098	1,461	363	1,209	1,572	363	1,442	1,805	677	2,291	2,968
San Antonio	4.99	4.87	4.88	168	1,467	1,635	168	1,522	1,690	168	1,637	1,805	223	2,118	2,341
San Isidro	5.33	5.49	5.47	507	3,695	4,202	532	3,948	4,480	585	4,474	5,059	868	6,832	7,700
San Jose	5.33	5.17	5.21	570	1,841	2,411	579	1,944	2,523	598	2,161	2,759	364	3,026	3,890
San Roque	6.26	5.90	6.06	1,274	1,714	2,988	1,338	1,882	3,220	1,476	2,228	3,704	2,603	3,703	6,306
San Vicente	4.72	4.63	4.66	341	941	1,282	341	955	1,296	341	984	1,325	411	1,163	1,574
Silvino Lobos	6.47	5.91	6.02	351	1,481	1,832	404	1,532	1,936	536	1,614	2,150	955	2,626	3,581
Victoria	4.86	4.85	4.86	555	1,770	2,325	556	1,923	2,479	556	2,240	2,796	750	3,019	3,769
Provincial Total	5.52	5.25	5.32	23,117	62,247	85,364	24,296	65,370	89,666	26,996	71,651	98,647	40,644	102,590	143,234

8.3.2 School Enrollment Projection

Table 8.3.8 Projected School Enrollment by Municipality by Target Year

Name of Municipality	1998			2004			2010		
	Total Enrollment		School Age Population	Total Enrollment		School Age Population	Total Enrollment		School Age Population
	Number	Participation Rate	Number	Participation Rate	Number	Participation Rate	Number	Participation Rate	
Allen	4,458	94	3,928	83	5,163	90	5,595	90	
Biri	2,766	81	2,252	81	3,050	85	3,329	90	
Bobon	4,530	95	4,228	93	4,927	90	5,316	95	
Capul	2,865	100	2,870	100	2,953	95	3,039	95	
Cataman (Capital)	17,762	85	13,884	78	19,765	90	21,728	90	
Catubig	7,284	78	5,693	78	7,880	85	8,464	90	
Gamay	5,799	107	6,230	107	6,508	100	7,203	95	
Lacang	13,683	75	9,837	72	14,709	80	15,715	90	
Lapinig	3,145	91	2,874	91	3,474	95	3,797	95	
Las Navas	7,277	76	5,502	76	7,854	80	8,420	85	
Lavezares	6,036	94	5,404	90	6,319	90	6,596	90	
Lope De Vega	3,490	64	2,227	64	3,992	70	4,484	75	
Mapanas	2,926	87	2,568	87	3,292	90	3,651	95	
Mondragon	6,959	67	4,633	67	7,687	75	8,401	80	
Palapaig	7,569	91	6,873	91	8,513	95	9,438	95	
Pambujan	6,643	94	6,243	94	7,375	95	8,092	95	
Rosario	2,697	89	2,391	89	3,081	95	3,458	95	
San Antonio	1,974	111	2,200	111	2,108	100	2,240	95	
San Isidro	6,433	88	5,655	88	7,266	90	8,083	95	
San Jose	3,683	90	3,132	85	4,025	90	4,360	90	
San Roque	5,571	66	3,652	66	6,401	70	7,214	75	
San Vicente	1,497	97	1,450	97	1,530	100	1,562	95	
Silvino Lobos	3,252	51	1,647	51	3,625	55	3,991	60	
Victoria	3,158	106	3,337	106	3,540	100	3,934	95	
Provincial Total	131,701	85	108,565	82	145,037	88	158,110	91	

8.3.3 Projection on the Number of Public Utilities

Table 8.3.9 Projected Number of Public Utilities by Municipality by Target Year

Name of Municipality	Type	1998	2004		2010	
		No. of Public Utilities	Proposed Construction	Total	Proposed Construction	Total
Allen	Public Market	1		1		1
	Bus/Jeepney Terminal		1	1		1
	Parks/Playground					
	Total	1	1	2		2
Diri	Public Market	1		1		1
	Bus/Jeepney Terminal					
	Parks/Playground					
	Total	1		1		1
Bobon	Public Market	1		1		1
	Bus/Jeepney Terminal					
	Parks/Playground					
	Total	1		1		1
Caput	Public Market	1		1		1
	Bus/Jeepney Terminal					
	Parks/Playground					
	Total	1		1		1
Cataman (Capital)	Public Market	1		1		1
	Bus/Jeepney Terminal		1	1		1
	Parks/Playground					
	Total	1	1	2		2
Catubig	Public Market	1		1		1
	Bus/Jeepney Terminal		1	1		1
	Parks/Playground					
	Total	1	1	2		2
Gamay	Public Market	1		1		1
	Bus/Jeepney Terminal				1	1
	Parks/Playground					
	Total	1		1	1	2
Laoang	Public Market	1		1		1
	Bus/Jeepney Terminal				1	1
	Parks/Playground					
	Total	1		1	1	2
Lapinig	Public Market	1		1		1
	Bus/Jeepney Terminal				1	1
	Parks/Playground					
	Total	1		1	1	2
Las Navas	Public Market	1		1		1
	Bus/Jeepney Terminal					
	Parks/Playground				1	1
	Total	1		1	1	2
Lavezares	Public Market	1		1		1
	Bus/Jeepney Terminal					
	Parks/Playground					
	Total	1		1		1
Lope De Vega	Public Market	1		1		1
	Bus/Jeepney Terminal					
	Parks/Playground					
	Total	1		1		1

Table 8.3.9 Projected Number of Public Utilities by Municipality by Target Year

Name of Municipality	Type	1998	2004		2010	
		No. of Public Utilities	Proposed Construction	Total	Proposed Construction	Total
Mapanas	Public Market	1		1		1
	Bus/Jeepney Terminal					
	Parks/Playground				1	1
	Total	1		1	1	2
Mondragon	Public Market	1		1		1
	Bus/Jeepney Terminal					
	Parks/Playground				1	1
	Total	1		1	1	2
Patapag	Public Market	1		1		1
	Bus/Jeepney Terminal				1	1
	Parks/Playground					
	Total	1		1	1	2
Pambujan	Public Market	1		1		1
	Bus/Jeepney Terminal					
	Parks/Playground					
	Total	1		1		1
Rosario	Public Market				1	1
	Bus/Jeepney Terminal					
	Parks/Playground				1	1
	Total				2	2
San Antonio	Public Market	1		1		1
	Bus/Jeepney Terminal					
	Parks/Playground					
	Total	1		1		1
San Isidro	Public Market	1		1		1
	Bus/Jeepney Terminal	1		1		1
	Parks/Playground	1		1	1	2
	Total	3		3	1	4
San Jose	Public Market	1		1		1
	Bus/Jeepney Terminal					
	Parks/Playground					
	Total	1		1		1
San Roque	Public Market	1		1		1
	Bus/Jeepney Terminal					
	Parks/Playground					
	Total	1		1		1
San Vicente	Public Market				1	1
	Bus/Jeepney Terminal					
	Parks/Playground				1	1
	Total				2	2
Silvino Lobos	Public Market					
	Bus/Jeepney Terminal					
	Parks/Playground					
	Total					
Victoria	Public Market	1		1		1
	Bus/Jeepney Terminal					
	Parks/Playground					
	Total	1		1		1
Provincial Total	Public Market	21		21	2	23
	Bus/Jeepney Terminal	1	3	4	4	8
	Parks/Playground	1		1	6	7
	Total	23	3	26	12	38

8.4 Types of Facilities and Implementation Criteria

8.4.1 Water Supply

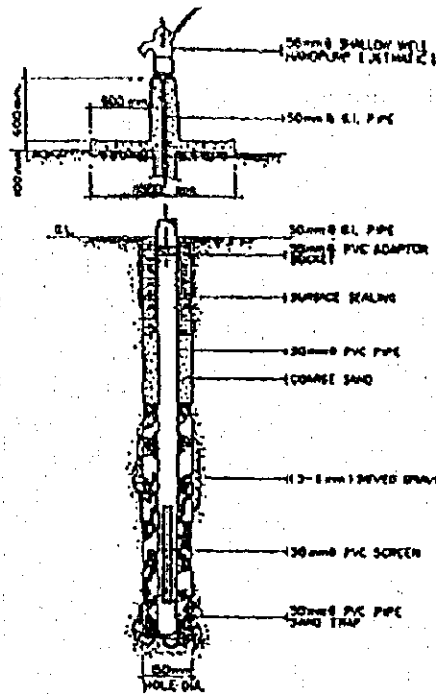
(1) Urban water supply

With regard to development/expansion of urban water supply by municipality, existing conditions, future requirements and planned/on-going projects were reviewed in preparation of this PW4SP. Potential water source for future development was also evaluated in Chapter 7, taking into account the possibility to utilize untapped spring sources. Location of urban area of respective municipalities/city was referred to Figure 3.4.1 in Chapter 3. Table 8.4.1 presents basic figures on existing service coverage, water sources and future requirements.

Table 8.4.1 Existing Condition and Future Requirements of Urban Water Supply by Municipality

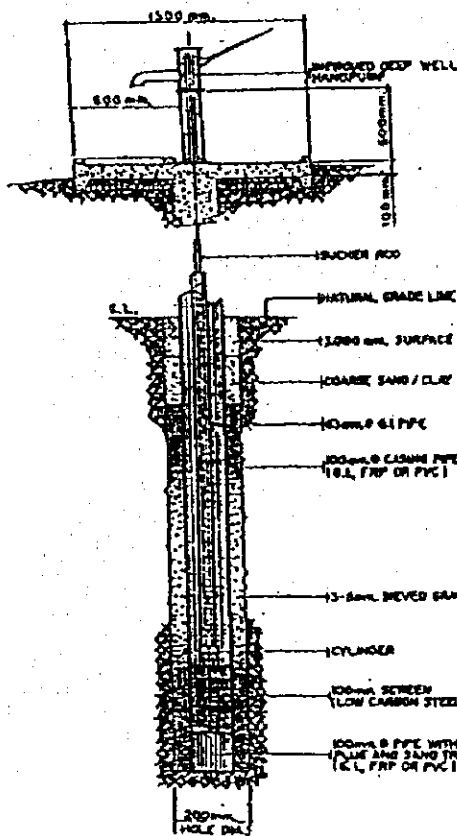
Name of Municipality	Existing Condition (1998)				Existing Condition (1998)				Phase I (2004)				Phase II (2010)					
	Urban Population (1998)	No. of Level-III and Operating L-III and Back	Pop. Served by Level-III	Total Pop. Served (%)	L-III Water Source Type	Production (m3/d)	Urban Population (2004)	Additional Pop. Served by L-III	Total Pop. Served by L-III	% Pop. Served by L-III	Additional Pop. Served by L-III	Total Pop. Served	% Pop. Served	Urban Population (2010)	Additional Pop. Served	Total Pop. Served	% Pop. Served	
																		Pop. Served by Level-III
Allen	8,476	5,012	5,012	59%		10,431	1,068	1,068	10%	None	6,100	5%	11,501	6,622	10,740	95%	1,500	
Bin	2,996	1,598	1,598	62%		2,596	271	271	10%	None	1,869	7%	2,531	2,421	2,691	95%	400	
Hobson	5,641	3,481	3,481	71%		6,185	645	645	10%	None	4,226	6%	6,074	3,695	4,340	95%	800	
Canil	4,366	3,443	3,443	80%		4,487	None	None	None	None	3,441	7%	4,618	4,387	4,387	95%	600	
Californian	3,013 (2 WD, 1 Priv)	2,607	2,607	71%	DW/Surf	32,421	2,567	2,567	8%	None	22,558	10%	5,540	31,291	33,653	95%	4,100	
Caribou	4,648	2,306	2,306	50%		4,607	561	561	10%	None	2,807	3%	5,163	4,404	4,908	95%	900	
Gamay	2,753	1,428	1,428	52%		2,836	300	300	10%	None	1,726	6%	3,183	11,270	11,270	95%	1,500	
Leona	1,104	8,137	8,137	78%		11,108	447	447	10%	None	2,733	6%	4,683	4,302	4,449	95%	600	
Lepetit	3,701	3,326	3,326	90%		4,285	956	956	10%	None	4,038	2%	9,106	8,245	8,745	95%	1,000	
Las Navas	6,334	2,231	2,231	35%		3,433	319	319	10%	None	1,286	4%	3,453	3,261	3,305	95%	500	
Lora De Vera	2,114	967	967	46%		3,057	291	291	10%	None	1,459	5%	3,052	2,947	2,937	95%	400	
Maguey	2,161	1,208	1,208	56%		2,288	686	686	10%	None	4,165	6%	7,240	6,250	6,926	95%	1,000	
Munguian	5,591	3,470	3,470	63%		6,671	772	772	10%	None	4,086	5%	7,677	6,571	7,293	95%	900	
Pajapat	6,251	2,346	2,346	38%		11,376	1,228	1,228	10%	None	2,228	6%	12,923	11,090	12,279	95%	1,300	
Panbuhán	9,978	5,999	5,999	60%		2,412	88	88	10%	None	2,369	9%	2,707	2,372	2,372	95%	400	
Piedra	2,472	2,399	2,399	97%		839	None	None	None	None	624	3%	891	759	846	95%	100	
San Antonio	839	536	536	64%		1,119	908	908	29%	None	2,135	68%	3,420	2,319	3,197	95%	400	
San Isidro	2,634 (1 WD)	1,227	1,227	47%	Surf	1,170	332	332	10%	None	2,290	21%	3,444	2,840	3,281	95%	500	
San José	3,083	1,918	1,918	62%		3,148	964	964	10%	None	6,556	71%	10,413	9,929	9,992	95%	1,200	
San Roque	8,378	5,592	5,592	67%		1,610	188	188	10%	None	1,141	7%	1,644	1,504	1,504	95%	500	
San Vicente	1,610	973	973	61%		3,466	362	362	10%	None	1,531	4%	3,814	3,765	3,667	95%	400	
Silvano Lobos	2,615	1,170	1,170	45%		2,700 (10 Mun)	None	None	None	None	2,096	27%	3,000	2,950	2,950	95%	400	
Victoria	134,163	3,475	3%	3%		149,006	9,317	12,792	9%	None	96,854	65%	162,566	141,945	154,417	95%	19,400	
Provincial Total																		

(Note) WD: Water District, Priv: Private, Municipality, Atr: Association, Priv: Private
 Unit consumption: 100 l/pd
 Additional population served in 2010 includes the served population that will be absorbed by Level III system.

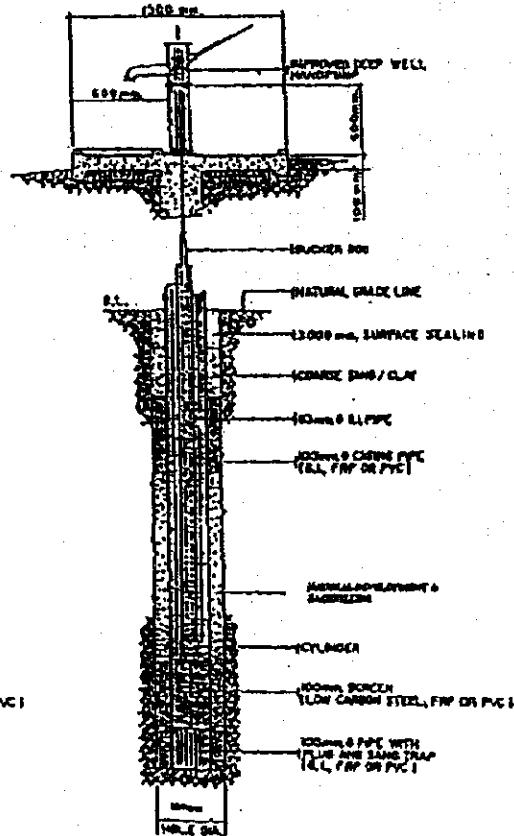


OPEN HOLE DRILLING & GRAVEL PACK METHOD

SHALLOW WELLS



OPEN HOLE DRILLING & GRAVEL PACK METHOD

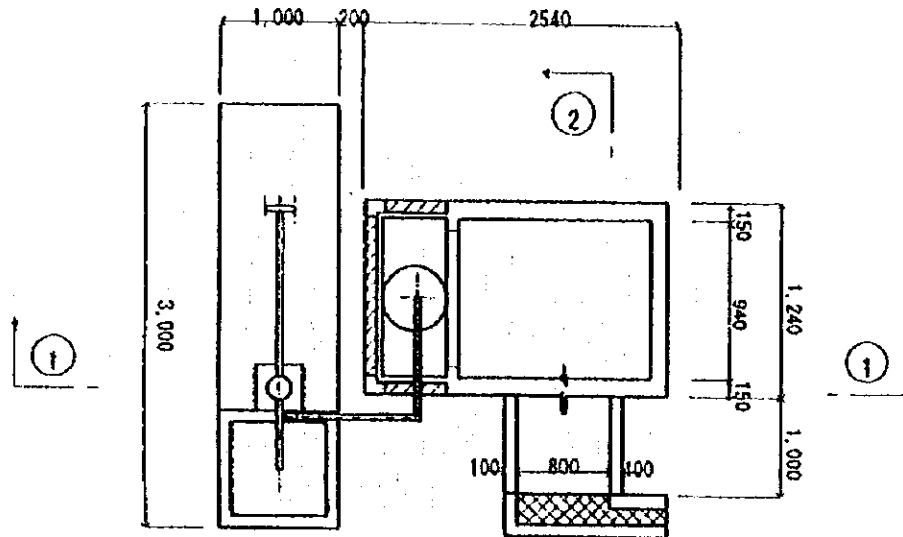


OPEN HOLE DRILLING & NATURAL GRAVEL PACK METHOD

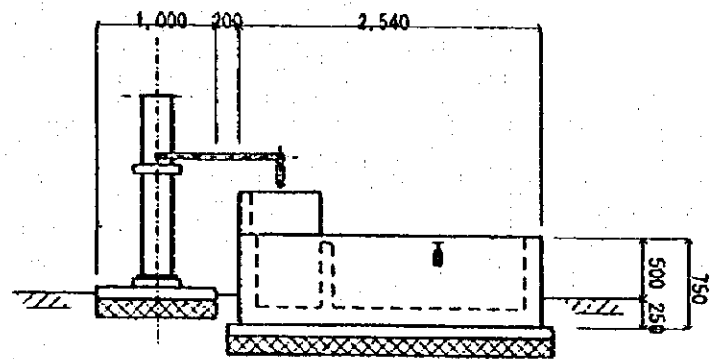
DEEP WELLS

FIGURE 8.4.1

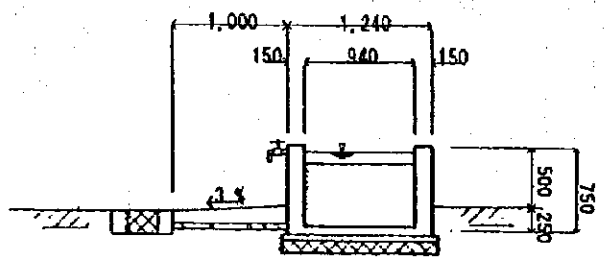
TYPICAL STRUCTURE OF LEVEL I WELL FACILITY



PLAN $S = 1/30$



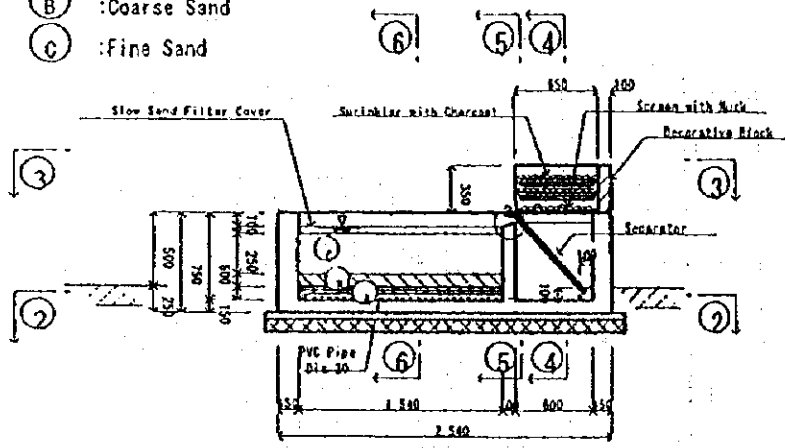
Section ① — ① $S = 1/30$



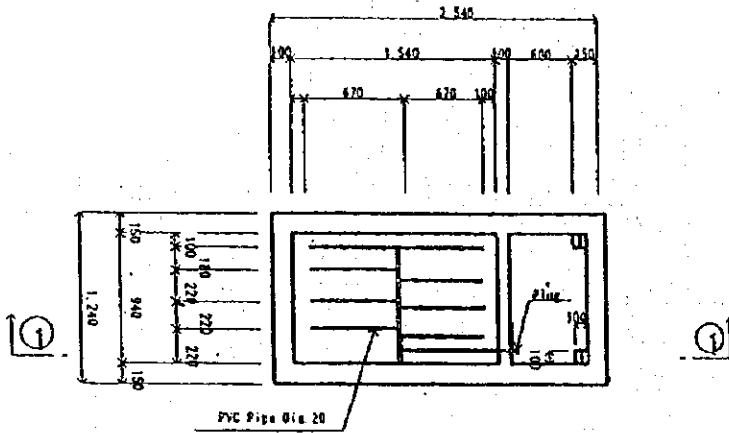
Section ② — ② $S = 1/30$

Figure 8.4.2(a) Iron Removal Facility

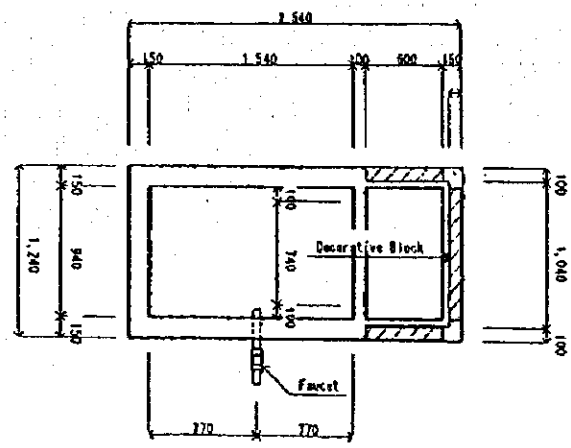
- (A) :Pebble
- (B) :Coarse Sand
- (C) :Fine Sand



Section ① - ① $S = 1/20$



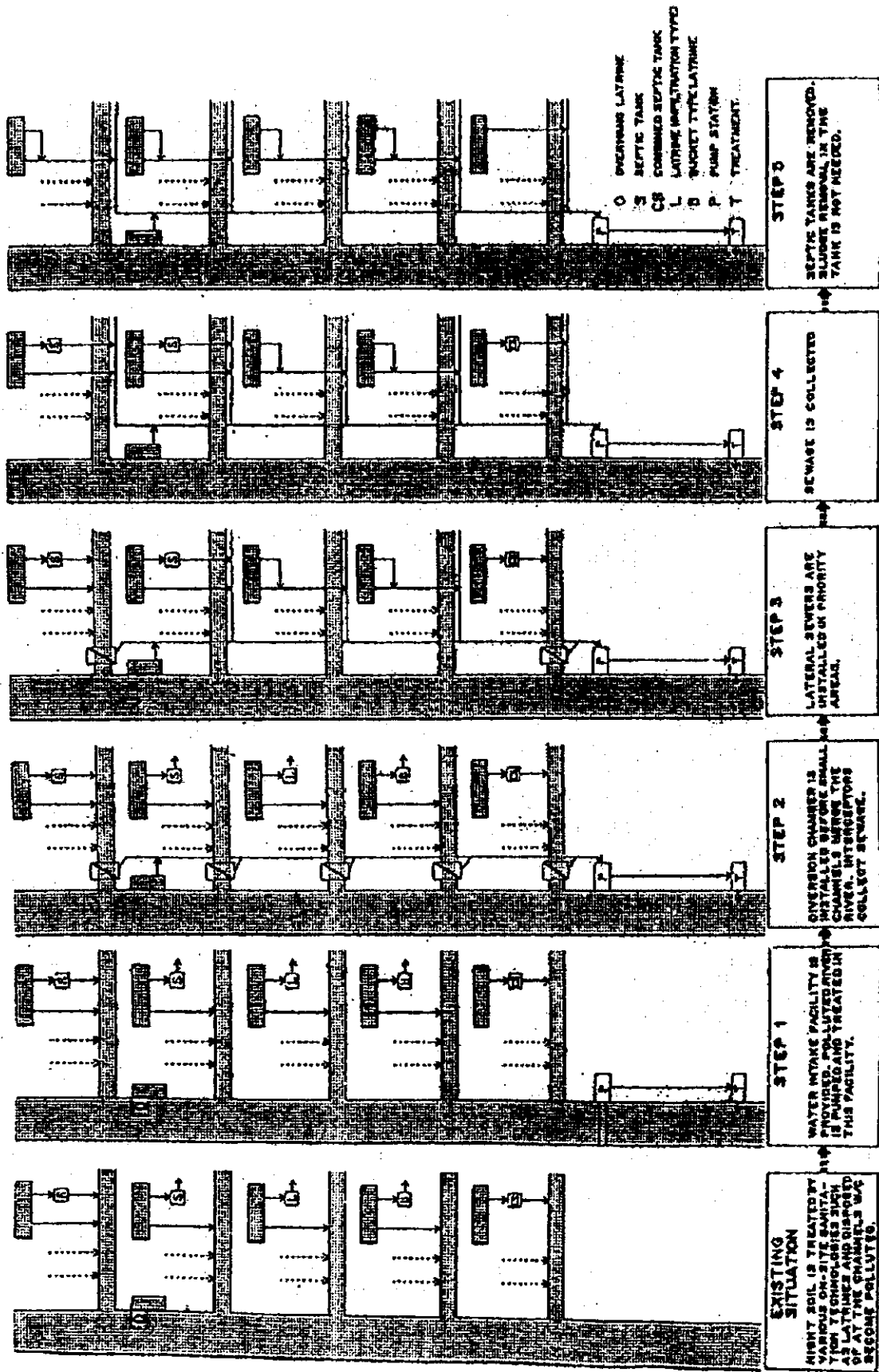
Section ② - ② $S = 1/20$



Section ③ - ③ $S = 1/20$

Figure 8.4.2(b) Iron Removal Facility

Figure 8.4.3 STAGED IMPROVEMENT IN SEWAGE COLLECTION METHOD



8.5 Service Coverage by Target Year

8.5.1 Water Supply

(1) Population to be served by Level II system in Phase I

There was no information available on untapped spring sources during the course of PW4SP preparation. Thus, no Level II system in rural water supply was considered in the medium-term development plan.

Table 8.5.1 Population to be Served by Level II System in Phase I

Name of Municipality	Number of Untapped Spring	Number of Barangay to be Served	Number of Households to be Served	Population to be Served
Allen	N.A.			
Biri	N.A.			
Bobon	N.A.			
Capul	N.A.			
Catarman (Capital)	N.A.			
Catubig	N.A.			
Gamay	N.A.			
Laoang	N.A.			
Lapinig	N.A.			
Las Navas	N.A.			
Lavezares	N.A.			
Lope De Vega	N.A.			
Mapanas	N.A.			
Mondragon	N.A.			
Palapag	N.A.			
Pambujan	N.A.			
Rosario	N.A.			
San Antonio	N.A.			
San Isidro	N.A.			
San Jose	N.A.			
San Roque	N.A.			
San Vicente	N.A.			
Silvino Lobos	N.A.			
Victoria	N.A.			
Provincial Total				

N.A.: No data available

(2) Population to be served by target year

Phase I

For urban area, the additional service coverage was assumed as the population to be served by Level III service. For rural area, the additional population to be served by Level I facilities was calculated.

Phase II

For urban area, the population served by Level I and II facilities in base year was considered to be absorbed by Level III service aside from the additional service coverage to be estimated by the sector target. For rural area, all existing facilities in Phase I were assumed to be utilized through the future.

The population to be served by target year is exhibited in Table 8.5.2 and Table 8.5.3.

Table 8.5.2. Population to be Served in Phase I (Water Supply)

Name of Municipality	Area	Population Served in the Base Year					Phase I Coverage (2004)									
		Population Served in the Base Year			Total Population	Service Coverage			Additional Population to be Served							
		Level III	Level II	Level I		Total	Level III	Level II	Level I	Total	Level III	Level II	Level I	Total		
Allen	Urban			5,012	5,012	10,431	1,088		5,012	6,100	1,088					1,088
	Rural			5,538	5,538	10,139	1,088		6,083	6,083						907
	Total			10,550	10,550	20,570	2,176		11,095	12,183	1,088					907
Biri	Urban			1,598	1,598	2,596	271		1,598	1,869	271					271
	Rural			3,974	3,974	7,686			4,612	4,612						688
	Total			5,572	5,572	10,282	271		6,210	6,481	271					688
Bobon	Urban			3,581	3,581	6,185	645		3,581	4,226	645					645
	Rural			6,903	6,903	11,754	645		7,052	7,052						1,052
	Total			10,484	10,484	17,939	1,290		10,633	11,278	1,290					1,052
Capul	Urban		563	2,880	3,443	4,487		563	2,880	3,443						
	Rural		416	3,562	3,978	5,937		416	3,562	3,978						
	Total		979	6,442	7,421	10,424		979	6,442	7,421						
Catarman (Capital)	Urban	2,567	192	19,799	22,558	32,421	2,567	192	19,799	22,558						
	Rural	532		19,196	19,728	40,153	532		23,560	24,092						
	Total	3,099	192	38,995	42,286	72,574	3,099	192	43,359	46,650						
Catubig	Urban			2,306	2,306	4,807	501		2,306	2,807	501					501
	Rural			8,590	9,182	23,553			13,540	14,132						2,108
	Total			10,896	11,488	28,360	501		15,846	16,939	501					2,108
Gamay	Urban			1,426	1,426	2,876	300		1,426	1,726	300					300
	Rural			9,744	9,744	20,318			12,191	12,191						1,818
	Total			11,170	11,170	23,194	300		13,617	13,917	300					1,818
Laosang	Urban			8,137	8,137	11,104			8,137	8,137						
	Rural			27,694	27,694	41,789			27,694	27,694						
	Total			35,831	35,831	52,893			35,831	35,831						
Lapinig	Urban			2,326	2,326	4,285	447		2,326	2,773	447					447
	Rural		172	3,891	4,063	7,127		172	4,104	4,276						638
	Total		172	6,217	6,389	11,412	447	172	6,430	7,049	447					638
Las Navas	Urban			2,770	2,770	4,837	896		2,770	4,039	896					896
	Rural		647	6,425	7,072	19,493		647	11,049	11,696						1,744
	Total		1,020	9,195	10,215	28,080	896	1,020	13,819	15,735	896					1,744
Lavezares	Urban			2,231	2,231	3,433			2,231	2,231						
	Rural		750	11,530	12,280	18,510		750	11,530	12,280						
	Total		750	13,761	14,511	21,943		750	13,761	14,511						
Lope De Vega	Urban		346	621	967	3,057	319	346	621	1,286	319					319
	Rural		851	1,627	2,478	11,615		851	6,118	6,969						1,039
	Total		1,197	2,248	3,445	14,672	319	1,197	6,739	8,255	319					1,039
Mapanas	Urban			1,208	1,208	2,788	291		1,208	1,499	291					291
	Rural			3,929	3,929	8,435			5,061	5,061						755
	Total			5,137	5,137	11,223	291		6,269	6,560	291					755

Table 8.5.2. Population to be Served in Phase I (Water Supply)

Name of Municipality	Area	Population Served in the Base Year				Phase I Coverage (2004)										
		Population Served in the Base Year			Total Population	Service Coverage			Additional Population to be Served							
		Level III	Level II	Level I		Total	Level III	Level II	Level I	Total	Level III	Level II	Level I	Total		
Mondragon	Urban			3,470	6,671	696		3,470	4,166	696						696
	Rural			16,105	22,987			16,105	16,105							
	Total			19,575	29,658	696		19,575	20,271	696						696
Palapag	Urban			3,344	6,924	722		3,344	4,066	722						
	Rural			10,187	22,914			13,748	13,748							
	Total			13,531	29,838	722		17,092	17,814	722						2,051
Pambujan	Urban			5,999	11,779	1,228		5,999	7,227	1,228						
	Rural		483	7,818	8,301		483	8,026	8,509							
	Total		483	13,817	14,300	1,228	483	14,025	15,736	1,228						1,269
Rosario	Urban			2,399	2,412			2,399	2,399							
	Rural			4,985	8,164			4,985	4,985							
	Total			7,384	10,576			7,384	7,384							
San Antonio	Urban			536	839	87		536	623	87						87
	Rural		49	5,308	7,974		49	5,308	5,357							
	Total		49	5,844	8,813	87	49	5,844	5,980	87						87
San Isidro	Urban	908	82	1,145	3,119	908		82	1,145	2,135						
	Rural	164	3,102	13,384	24,565	164		3,102	13,384	16,650						
	Total	1,072	3,184	14,529	18,785	1,072		3,184	14,529	18,785						
San Jose	Urban			1,918	3,188	332		1,918	2,250	332						
	Rural		181	5,757	5,938		181	6,523	6,704							
	Total		181	7,675	9,126	332	181	8,441	8,954	332						1,000
San Roque	Urban			5,501	9,239	964		5,501	6,556	964						
	Rural		182	7,158	13,143		182	7,704	7,886							
	Total		273	12,659	22,382	964	273	13,205	14,442	964						1,176
San Vicente	Urban			973	1,610	168		973	1,141	168						
	Rural			3,680	4,555			3,680	3,680							
	Total			4,653	6,165	168		4,653	4,821	168						168
Silvino Lobos	Urban		668	502	3,468	362		668	502	1,532						
	Rural		120	2,701	9,540		120	5,604	5,724							
	Total		788	3,203	13,008	362	788	6,106	7,256	362						854
Victoria	Urban			2,066	2,700			2,066	2,066							
	Rural		874	5,478	10,866		874	5,646	6,520							
	Total		1,603	6,815	13,566		1,603	6,983	8,586							972
Provincial Total	Urban	3,475	3,044	81,019	149,006	12,792		3,044	81,019	96,854						9,316
	Rural	696	8,419	195,164	204,279	696		8,419	226,869	225,943						21,664
	Total	4,171	11,463	276,183	291,817	13,488		11,463	307,888	322,797						30,980

Table 8.5.3 Population to be Served in Phase II (Water Supply)

Name of Municipality	Area	Population Served in 2004				Phase II Coverage (2010)												
		Population Served in 2004			Total Population	Service Coverage			Additional Population to be Served									
		Level III	Level II	Level I		Total	Level III	Level II	Level I	Total	Level III	Level II	Level I	Total				
Allen	Urban	1,088		5,012	6,100	11,305	10,740						10,740	9,652				9,652
	Rural			6,083	6,083	10,988				10,219			10,219					4,136
	Total	1,088		11,095	12,183	22,293	10,740			20,959			20,959	9,652				13,788
Biri	Urban	271		1,598	1,869	2,833	2,691						2,691	2,420				2,420
	Rural			4,612	4,612	8,388				7,801			7,801					3,189
	Total	271		6,210	6,481	11,221	2,691			15,660			15,660	2,420				5,609
Bobon	Urban	645		3,381	4,226	6,674	6,340						6,340	5,695				5,695
	Rural			7,052	7,052	12,683				11,795			11,795	5,695				4,743
	Total	645		10,633	11,278	19,357	6,340			28,455			28,455	11,390				10,438
Capul	Urban		563	2,880	3,443	4,618	4,387						4,387	4,387				4,387
	Rural		416	3,562	3,978	6,111				416			416	5,267				1,705
	Total		979	6,442	7,421	10,729	4,387			10,729			10,729	9,654				6,092
Catanman (Capital)	Urban	2,567	192	19,799	22,558	35,640	33,858						33,858	31,291				31,291
	Rural	532		23,560	24,092	44,140	532						41,050					16,958
	Total	3,099	192	43,359	46,650	79,780	34,390						74,908	31,291				48,249
Cattbig	Urban	501		2,306	2,807	5,163	4,905						4,905	4,404				4,404
	Rural		592	13,540	14,132	25,299				592			22,936					9,396
	Total	501	592	15,846	16,939	30,462	4,905			28,433			28,433	4,404				13,800
Gamay	Urban	300		1,426	1,726	3,183	3,024						3,024	2,724				2,724
	Rural			12,191	12,191	22,489							20,915					8,724
	Total	300		13,617	13,917	25,672	3,024			23,939			23,939	2,724				11,448
Laotang	Urban			8,137	8,137	11,863	11,270						11,270	11,270				11,270
	Rural			27,694	27,694	44,647							41,522					13,828
	Total			35,831	35,831	56,510	11,270			52,792			52,792	11,270				25,098
Lapinig	Urban	447		2,326	2,773	4,683	4,449						4,449	4,002				4,002
	Rural		172	4,104	4,276	7,790				172			7,073					2,969
	Total	447	172	6,430	7,049	12,473	4,449			11,694			11,694	4,002				6,971
Las Navas	Urban	896	373	2,770	4,039	9,205	8,745						8,745	7,349				7,349
	Rural		647	11,049	11,696	20,897				647			18,787					7,738
	Total	896	1,020	13,819	15,735	30,102	8,745			29,531			28,179	7,349				15,587
Lavezares	Urban			2,231	2,231	3,584	3,405						3,405	3,405				3,405
	Rural		750	11,530	12,280	19,321				750			17,219					5,689
	Total		750	13,761	14,511	22,905	3,405			21,374			21,374	3,405				9,094
Lope De Vega	Urban	319	346	621	1,286	3,433	3,261						3,261	2,942				2,942
	Rural		851	6,118	6,969	13,046				851			11,282					5,164
	Total	319	1,197	6,739	8,255	16,479	3,261			12,541			12,541	2,942				8,106
Mapupas	Urban	291		1,208	1,499	3,092	2,937						2,937	2,646				2,646
	Rural			5,061	5,061	9,355				8,700			8,700					3,639
	Total	291		6,269	6,560	12,447	2,937			13,639			13,639	2,646				6,285

Table 8.5.3 Population to be Served in Phase II (Water Supply) (Cont'd.)

Name of Municipality	Population Served in 2004				Phase II Coverage (2010)												
	Area			Total Population	Service Coverage			Additional Population to be Served									
	Level III	Level II	Level I		Level III	Level II	Level I	Total	Level III	Level II	Level I	Total					
Mondragon	Urban	696	3,470	4,166	7,290	6,926						6,926	6,230			6,230	
	Rural		16,105	16,105	25,122			23,363				23,363				7,258	7,258
	Total	696	19,575	20,271	32,412	6,926		23,363				30,289		6,230		7,258	13,488
Palapag	Urban	722	3,344	4,066	7,677	7,293						7,293				6,571	6,571
	Rural		13,748	13,748	25,404			23,626				23,626				9,878	9,878
	Total	722	17,092	17,814	33,081	7,293		23,626				30,919		6,571		9,878	16,449
Pambujan	Urban	1,228	5,999	7,227	12,925	12,279						12,279				11,051	11,051
	Rural		8,026	8,509	15,560			483				13,988				5,962	5,962
	Total	1,228	14,025	15,736	28,485	12,279		483				26,750		11,051		5,962	17,013
Rosario	Urban		2,399	2,399	2,707	2,572						2,572				3,536	3,536
	Rural		4,985	4,985	9,162			8,521				8,521				3,536	3,536
	Total		7,384	7,384	11,869	2,572		8,521				11,093		2,572		3,536	6,108
San Antonio	Urban	87	536	623	891	846						846				759	759
	Rural		5,308	5,357	8,472			49				7,830				2,522	2,522
	Total	87	5,844	5,980	9,363	846		49				7,830		759		2,522	3,281
San Isidro	Urban	908	82	1,145	3,470	3,297						3,297				2,389	2,389
	Rural	164	3,102	13,384	16,650	164						22,147				8,763	8,763
	Total	1,072	3,184	14,529	31,785	3,461						24,147		2,389		8,763	11,152
San Jose	Urban	332	1,918	2,250	3,454	3,281						3,281				2,949	2,949
	Rural		6,523	6,704	12,103			181				11,075				4,552	4,552
	Total	332	8,441	8,954	15,557	3,281		181				14,537		2,949		4,552	7,501
San Roque	Urban	964	5,501	6,556	10,413	9,892						9,892				8,928	8,928
	Rural		7,704	7,886	14,813			182				13,594				5,890	5,890
	Total	964	13,205	14,442	25,226	9,892		182				23,668		8,928		5,890	14,818
San Vicente	Urban	168	973	1,141	1,644	1,562						1,562				1,394	1,394
	Rural		3,680	3,680	4,650							4,325				645	645
	Total	168	4,653	4,821	6,294	1,562						5,887		1,394		645	2,039
Silvino Lobos	Urban	362	668	502	3,818	3,627						3,627				4,044	4,044
	Rural		5,604	5,724	10,503			120				9,648				4,044	4,044
	Total	362	788	6,106	14,321	3,627		120				13,395		3,265		4,044	7,309
Victoria	Urban		729	1,337	2,066	2,850						2,850				2,850	2,850
	Rural		5,646	6,520	12,074			874				10,355				4,709	4,709
	Total		6,375	7,857	14,148			874				10,355		2,850		4,709	7,559
Provincial Total	Urban	12,792	3,044	8,101	96,855	154,437						154,437				141,645	141,645
	Rural	996	8,419	226,369	235,984	410,343						372,506				145,637	145,637
	Total	13,488	11,463	307,883	332,839	572,908						536,958		141,645		145,637	287,282

8.5.2 Sanitation

Table 8.5.4 Additional Number of Households to be Served in Phase I (Household Toilets)

Name of Municipality	Area	No. of Household Served in the Based Year			Phase I Coverage (2004)									
		Flush	Pour Flush	VIP/Dry	Total	Total No. of HHs	Household Coverage			Additional No. of HHs to be Served				
							Flush	Pour Flush	VIP/Dry	Total	Flush	Pour Flush	VIP/Dry	Total
Allen	Urban	10	986		996	2,074	141	1,269		1,410	131	283		414
	Rural		1,264		1,264	2,091		1,359		1,359		95		95
	Total	10	2,250		1,264	4,165	141	2,628		2,769	131	378		509
Biri	Urban	4	127		131	450	31	275		306	27	148		175
	Rural		320		320	1,318		857		857		537		537
	Total	4	447		320	1,768	31	1,132		1,163	27	685		712
Bobon	Urban	5	419		424	1,183	80	724		804	75	305		380
	Rural		1,315		1,315	2,300		1,495		1,495		180		180
	Total	5	1,734		1,315	3,483	80	2,219		2,299	75	485		560
Capul	Urban	2	416		418	876	2	594		596		178		178
	Rural		548		548	1,144		744		744		196		196
	Total	2	964		548	2,020	2	1,338		1,340		374		374
Cataman (Capital)	Urban	35	3,351		3,386	5,571	379	3,409		3,788	344	58		402
	Rural		4,049		4,049	7,634		4,962		4,962		913		913
	Total	35	7,400		4,049	13,205	379	8,371		8,750	344	971		1,315
Cautbig	Urban	10	786		796	914	10	786		796				
	Rural		3,573		3,573	4,591		3,573		3,573				
	Total	10	4,359		3,573	5,505	10	4,359		4,369				
Gamay	Urban	5	248		253	557	38	341		379	33	93		126
	Rural		1,533		1,533	3,968		2,579		2,579		1,046		1,046
	Total	5	1,781		1,533	4,525	38	2,920		2,958	33	1,139		1,172
Laolang	Urban	17	1,574		1,591	2,030	17	1,574		1,591				
	Rural		5,353		5,353	8,036		5,353		5,353				
	Total	17	6,927		5,353	10,066	17	6,927		6,944				
Lapinig	Urban		262		262	713	49	436		485	49	174		223
	Rural		430		430	1,239		805		805		375		375
	Total		692		430	1,952	49	1,241		1,290	49	549		598
Las Navas	Urban	3	655		658	1,611	110	985		1,095	107	330		437
	Rural		2,588		2,588	3,986		2,591		2,591		3		3
	Total	3	3,243		2,588	5,597	110	3,576		3,686	107	333		440

Table 8.5.4 Additional Number of Households to be Served in Phase I (Household Toilets)

(cont'd.)

Name of Municipality	Area	No. of Household Served in the Based Year					Phase I Coverage (2004)									
		Flush	Pour Flush	VIP/Dry	Total	Total No. of HHs	Household Coverage		Additional No. of HHs to be Served							
							Flush	Pour Flush	Flush	Pour Flush	VIP/Dry	Flush	VIP/Dry	Total		
Lavezares	Urban	10	517		527	654	10	517		527						
	Rural		2,702		2,702	3,739		2,702		2,702						
	Total	10	3,219		2,702	4,393	10	3,219		3,229						
Lope De Vega	Urban	3	206		209	530	36	324		360	33	118				151
	Rural		816		816	1,910		1,242		1,242		426				426
	Total	3	1,022		816	2,440	36	1,566		1,602	33	544				577
Mapanas	Urban		183		183	516	35	316		351	35	133				168
	Rural		675		675	1,496		972		972		297				297
	Total		858		675	2,012	35	1,288		1,323	35	430				465
Mondragon	Urban	8	478		486	1,242	85	760		845	77	282				359
	Rural		2,010		2,010	4,421		2,874		2,874		864				864
	Total	8	2,488		2,010	5,663	85	3,634		3,719	77	1,146				1,223
Palapag	Urban	5	925		930	1,428	97	874		971	92					92
	Rural		2,765		2,765	4,475		2,909		2,909		144				144
	Total	5	3,690		2,765	5,903	97	3,783		3,880	92	144				236
Pambujan	Urban	9	753		762	2,024	138	1,238		1,376	129	485				614
	Rural		955		955	2,523		1,640		1,640		685				685
	Total	9	1,708		955	4,547	138	2,878		3,016	129	1,170				1,299
Rosario	Urban		221		221	363		247		247		26				26
	Rural		655		655	1,442		937		937		282				282
	Total		876		655	1,805		1,184		1,184		308				308

Table 8.5.4 Additional Number of Households to be Served in Phase I (Household Toilets)

(cont'd.)

Name of Municipality	Area	No. of Household Served in the Based Year				Phase I Coverage (2004)											
		Flush	Pour Flush	VIP/Dry	Total	Total No. of HHs	Household Coverage			Additional No. of HHs to be Served							
							Flush	Pour Flush	VIP/Dry	Flush	Pour Flush	VIP/Dry	Total				
San Antonio	Urban		107		107	168	11	103		114	11						
	Rural		914		914	1,637		1,064		1,064		150					
	Total		1,021		1,021	1,805	11	1,167		1,178	11	150					
San Isidro	Urban	5	258		263	585	40	358		398	35	100					
	Rural		1,859		1,859	4,474		2,908		2,908		1,049					
	Total	5	2,117		1,859	5,059	40	3,266		3,306	35	1,149					
San Jose	Urban	8	359		367	598	41	366		407	33	7					
	Rural		1,148		1,148	2,161		1,405		1,405		257					
	Total	8	1,507		1,148	2,759	41	1,771		1,812	33	264					
San Roque	Urban	10	961		971	1,476	100	904		1,004	90						
	Rural		1,456		1,456	2,228		1,456		1,456							
	Total	10	2,417		1,456	3,704	100	2,360		2,460	90						
San Vicente	Urban		136		136	341	23	209		232	23	73					
	Rural		367		367	984		640		640		273					
	Total		503		367	1,325	23	849		872	23	346					
Silvino Lobos	Urban		372		372	536		372		372							
	Rural		252		252	1,614		1,049		1,049		797					
	Total		624		252	2,150		1,421		1,421		797					
Victoria	Urban	7	221		228	556	7	371		378		150					
	Rural		649		649	2,240		1,456		1,456		807					
	Total	7	870		649	2,796	7	1,827		1,834		957					
Provincial Total	Urban	156	14,521		14,677	26,996	1,480	17,352		18,832	1,324	2,943					
	Rural		38,196		38,196	71,651		47,572		47,572		9,376					
	Total	156	52,717		52,873	98,647	1,480	64,924		66,404	1,324	12,319					

Table 8.5.5 Additional Number of Households to be Served in Phase II (Household Toilets)

Name of Municipality	Area	No. households Served in 2004						Phase II Coverage (2010)						
		No. households Served in 2004			Household Coverage			Additional No. of HHs to be Served						
		Flush	Pour Flush	VIP/Dry	Total	Total No. of HHs	Flush	Pour Flush	VIP/Dry	Total	Flush	Pour Flush	VIP/Dry	Total
Allen	Urban	141	1,269		1,410	2,826	1,314	1,314		2,628	1,173		45	1,218
	Rural		1,359		1,359	2,747	2,472		2,472		1,113			1,113
	Total	141	2,628		2,769	5,573	3,786	1,314		5,100	1,173		1,158	2,331
Biri	Urban	31	275		306	708	329	329		658	298		54	352
	Rural		857		857	2,097	1,887		1,887		1,030			1,030
	Total	31	1,132		1,163	2,805	329	2,216		2,545	298		1,084	1,382
Bobon	Urban	80	724		804	1,669	776	776		1,552	696		52	748
	Rural		1,495		1,495	3,171	2,854		2,854		1,359			1,359
	Total	80	2,219		2,299	4,840	776	3,630		4,406	696		1,411	2,107
Capul	Urban	2	594		596	1,155	537	537		1,074	535			535
	Rural		744		744	1,528	1,375		1,375		631			631
	Total	2	1,338		1,340	2,683	537	1,912		2,449	535		631	1,166
Catarman (Capital)	Urban	379	3,409		3,788	8,910	4,143	4,143		8,286	3,764		734	4,498
	Rural		4,962		4,962	11,035	9,400		9,400		532		4,438	4,970
	Total	379	8,371		8,750	19,945	4,675	13,543		18,218	4,296		5,172	9,468
Cambig	Urban	10	786		796	1,291	601	600		1,201	591			591
	Rural		3,573		3,573	6,325	5,693		5,693		2,120			2,120
	Total	10	4,359		4,369	7,616	601	6,293		6,894	591		2,120	2,711
Gamay	Urban	38	341		379	796	370	370		740	332		29	361
	Rural		2,579		2,579	5,622	5,060		5,060		2,481			2,481
	Total	38	2,920		2,958	6,418	370	5,430		5,800	332		2,510	2,842
Laoang	Urban	17	1,574		1,591	2,966	1,379	1,379		2,758	1,362			1,362
	Rural		5,353		5,353	11,162	10,046		10,046		4,693			4,693
	Total	17	6,927		6,944	14,128	1,379	11,425		12,804	1,362		4,693	6,055
Lapinig	Urban	49	436		485	1,171	545	544		1,089	496		108	604
	Rural		805		805	1,948	1,753		1,753		948			948
	Total	49	1,241		1,290	3,119	545	2,297		2,842	496		1,056	1,552
Las Navas	Urban	110	985		1,095	2,301	1,070	1,070		2,140	960		85	1,045
	Rural		2,591		2,591	5,224	4,702		4,702		2,111			2,111
	Total	110	3,576		3,686	7,525	1,070	5,772		6,842	960		2,196	3,156

Table 8.5.5 Additional Number of Households to be Served in Phase II (Household Toilets)

(cont'd.)

Name of Municipality	Area	No. households Served in 2004					Phase II Coverage (2010)									
		Total No. of HHs		Household Coverage			Household Coverage			Additional No. of HHs to be Served						
		Flush	Pour Flush	VIP/Dry	Total	Flush	Pour Flush	VIP/Dry	Total	Flush	Pour Flush	VIP/Dry	Total			
Lavezares	Urban	10	517		527	896	417	416		833	407		407			407
	Rural		2,702		2,702	4,830	4,347	4,347		4,347	1,645		1,645			1,645
	Total	10	3,219		3,229	5,726	4,763	4,763		5,180	407		407			2,052
Lope De Vega	Urban	36	324		360	858	399	399		798	363		363			438
	Rural		1,242		1,242	3,262	2,936	2,936		2,936	1,694		1,694			1,694
	Total	36	1,566		1,602	4,120	3,999	3,335		3,734	363		1,769			2,132
Mapanas	Urban	35	316		351	773	360	359		719	325		43			368
	Rural		972		972	2,339	2,105	2,105		2,105	1,133		1,133			1,133
	Total	35	1,288		1,323	3,112	360	2,464		2,824	325		1,176			1,501
Mondragon	Urban	85	760		845	1,823	848	847		1,695	763		87			850
	Rural		2,874		2,874	6,281	5,653	5,653		5,653	2,779		2,779			2,779
	Total	85	3,634		3,719	8,104	848	6,500		7,348	763		2,866			3,629
Palapag	Urban	97	874		971	1,919	893	892		1,785	796		18			814
	Rural		2,909		2,909	6,351	5,716	5,716		5,716	2,807		2,807			2,807
	Total	97	3,783		3,880	8,270	893	6,608		7,501	796		2,825			3,621
Pambujan	Urban	138	1,238		1,376	3,231	1,503	1,502		3,005	1,365		264			1,629
	Rural		1,640		1,640	3,890	3,501	3,501		3,501	1,861		1,861			1,861
	Total	138	2,878		3,016	7,121	1,503	5,003		6,506	1,365		2,125			3,490
Rosario	Urban		247		247	677	315	315		630	315		68			383
	Rural		937		937	2,291	2,062	2,062		2,062	1,125		1,125			1,125
	Total		1,184		1,184	2,968	315	2,377		2,692	315		1,193			1,508

Table 8.5.5 Additional Number of Households to be Served in Phase II (Household Toilets)

(cont'd.)

Name of Municipality	Area	No. households Served in 2004					Phase II Coverage (2010)									
		Flush		VIP/Dry		Total	Household Coverage			Additional No. of HHs to be Served			Total			
		Flush	Pour Flush	VIP/Dry	Total	Total No. of HHs	Flush	Pour Flush	VIP/Dry	Total	Flush	Pour Flush	VIP/Dry	Total		
San Antonio	Urban	11	103		114	223	104	103		207	93			93		
	Rural		1,064		1,064	2,118		1,906		1,906			842	842		
	Total	11	1,167		1,178	2,341	104	2,009		2,113	93		842	935		
San Isidro	Urban	40	358		398	868	404	403		807	364		45	409		
	Rural		2,908		2,908	6,832	164	5,985		6,149	164		3,077	3,241		
	Total	40	3,266		3,306	7,700	568	6,388		6,956	528		3,122	3,650		
San Jose	Urban	41	366		407	864	402	402		804	361		36	397		
	Rural		1,405		1,405	3,026		2,723		2,723			1,318	1,318		
	Total	41	1,771		1,812	3,890	402	3,125		3,527	361		1,354	1,715		
San Roque	Urban	100	904		1,004	2,603	1,211	1,210		2,421	1,111		306	1,417		
	Rural		1,456		1,456	3,703		3,333		3,333			1,877	1,877		
	Total	100	2,360		2,460	6,306	1,211	4,543		5,754	1,111		2,183	3,294		
San Vicente	Urban	23	209		232	411	191	191		382	168			168		
	Rural		640		640	1,163		1,047		1,047			407	407		
	Total	23	849		872	1,574	191	1,238		1,429	168		407	575		
Silvino Lobos	Urban		372		372	955	444	444		888	444		72	516		
	Rural		1,049		1,049	2,626		2,363		2,363			1,314	1,314		
	Total		1,421		1,421	3,581	444	2,807		3,251	444		1,386	1,830		
Victoria	Urban	7	371		378	750	349	349		698	342			342		
	Rural		1,456		1,456	3,019		2,717		2,717			1,261	1,261		
	Total	7	1,827		1,834	3,769	349	3,066		3,415	342		1,261	1,603		
Provincial Total	Urban	1,480	17,352		18,832	40,644	18,904	18,894		37,798	17,424		2,121	19,545		
	Rural		47,572		47,572	102,590	696	91,636		92,332	696		44,064	44,760		
	Total	1,480	64,924		66,404	143,234	19,600	110,530		130,130	18,120		46,185	64,305		

Table 8.5.6 Additional Number of Public School Students to be Served in Phases I and II (School Toilets)

Name of Municipality	Std. No. of Public School Student that can be Served in the Base Year (1998)	Projected No. of Public School Student in 2004	Phase I Coverage (2004)		Projected Number of Public School Students in 2010	Phase II Coverage (2010)	
			Public School Students Coverage	Additional No. of Public School Student to be Served		Public School Students Coverage	Additional No. of Public School Students to be Served
Allen	560	4,647	1,572	1,012	5,036	4,532	2,960
Biri	680	2,593	1,245	565	2,996	2,696	1,451
Bobon	1,840	4,434	2,806	966	4,519	4,067	1,261
Capul	1,240	2,805	1,851	611	2,887	2,598	747
Catarman (Capital)	2,160	17,789	6,035	3,875	19,555	17,600	11,565
Catubig	2,640	6,698	4,099	1,459	7,618	6,856	2,757
Gamay	3,120	6,508	4,538	1,418	6,843	6,159	1,621
Laoang	3,600	11,032	6,003	2,403	13,358	12,022	6,019
Lapinig	400	3,300	1,119	719	3,607	3,246	2,127
Las Navas	1,440	6,283	2,809	1,369	7,157	6,441	3,632
Lavezares	1,400	5,687	2,639	1,239	5,936	5,342	2,703
Lope De Vega	1,080	2,794	1,689	609	3,363	3,027	1,338
Mapanas	520	2,963	1,165	645	3,468	3,121	1,956
Mondragon	1,200	5,765	2,456	1,256	6,721	6,049	3,593
Palapug	960	8,087	2,721	1,761	8,966	8,069	5,348
Pambujan	2,160	7,006	3,686	1,526	7,687	6,918	3,232
Rosario	2,391	2,927	2,391		3,285	2,957	566
San Antonio	800	2,108	1,259	459	2,128	1,915	656
San Isidro	2,800	6,539	4,224	1,424	7,679	6,911	2,687
San Jose	1,840	3,623	1,840		3,924	3,532	1,692
San Roque	1,480	4,481	2,456	976	5,411	4,870	2,414
San Vicente	1,360	1,530	1,360		1,484	1,336	
Silvino Lobos	680	1,994	1,114	434	2,395	2,156	1,042
Victoria	720	3,540	1,491	771	3,737	3,363	1,872
Provincial Total	37,071	125,133	62,568	25,497	139,760	125,783	63,239

Table 8.5.7 Additional Number of Public Utilities with Sanitary Toilets in Phase I and II

Name of Municipality	Type	Coverage in Base Year (1998)		Phase I Coverage (2004)			Phase I Coverage (2010)		
		No. of PU with Toilets Facilities	No. of PU with Sanitary Toilets	No. of PU with Toilets Facilities	Add'l. No. of Public Utilities with Sanitary Toilets	No. of PU with Sanitary Toilets	No. of PU with Toilets Facilities	Add'l. No. of Public Utilities with Sanitary Toilets	No. of PU with Sanitary Toilets
Allen	Public Market								
	Bus/Jeepney Terminal								
	Parks/Playground								
	Total								
Biri	Public Market								
	Bus/Jeepney Terminal								
	Parks/Playground								
	Total								
Bobon	Public Market								
	Bus/Jeepney Terminal								
	Parks/Playground								
	Total								
Capul	Public Market								
	Bus/Jeepney Terminal								
	Parks/Playground								
	Total								
Catarman (Capital)	Public Market								
	Bus/Jeepney Terminal								
	Parks/Playground								
	Total								
Catubig	Public Market								
	Bus/Jeepney Terminal								
	Parks/Playground								
	Total								
Gamay	Public Market								
	Bus/Jeepney Terminal								
	Parks/Playground								
	Total								
Laoang	Public Market								
	Bus/Jeepney Terminal								
	Parks/Playground								
	Total								
Laping	Public Market								
	Bus/Jeepney Terminal								
	Parks/Playground								
	Total								

Table 8.5.7 Additional Number of Public Utilities with Sanitary Toilets in Phase I and II (Cont'd.)

Name of Municipality	Type	Coverage in Base Year (1998)			Phase I Coverage (2004)			Phase I Coverage (2010)		
		No. of PU with Toilets Facilities	No. of PU with Sanitary Toilets	No. of PU with Toilets Facilities	Add'l. No. of Public Utilities with Sanitary Toilets	No. of PU with Sanitary Toilets	No. of PU with Toilets Facilities	Add'l. No. of Public Utilities with Sanitary Toilets	No. of PU with Sanitary Toilets	
Las Navas	Public Market	1		1						
	Bus/Jeepney Terminal									
	Parks/Playground									
	Total	1		1						
Lavezates	Public Market	1	1	1						
	Bus/Jeepney Terminal	1	1	1						
	Parks/Playground	2	2	2						
	Total	4	4	4						
Lope De Vega	Public Market	1	1	1						
	Bus/Jeepney Terminal									
	Parks/Playground	1	1	1						
	Total	2	2	2						
Mapanas	Public Market									
	Bus/Jeepney Terminal									
	Parks/Playground									
	Total									
Mondragon	Public Market									
	Bus/Jeepney Terminal									
	Parks/Playground									
	Total									
Palapag	Public Market									
	Bus/Jeepney Terminal	1	1	1						
	Parks/Playground	1	1	1						
	Total	2	2	2						
Pambujan	Public Market	1	1	1						
	Bus/Jeepney Terminal	2	2	2						
	Parks/Playground	3	3	3						
	Total	6	6	6						
Rosario	Public Market									
	Bus/Jeepney Terminal									
	Parks/Playground									
	Total									
San Antonio	Public Market									
	Bus/Jeepney Terminal									
	Parks/Playground									
	Total									

Table 8.S.7 Additional Number of Public Utilities with Sanitary Toilets in Phase I and II (Cont'd.)

Name of Municipality	Type	Coverage in Base Year (1998)			Phase I Coverage (2004)			Phase I Coverage (2010)		
		No. of PU with Toilets Facilities	No. of PU with Sanitary Toilets	No. of PU with Toilets Facilities	Add'l. No. of Public Utilities with Sanitary Toilets	No. of PU with Sanitary Toilets	No. of PU with Toilets Facilities	Add'l. No. of Public Utilities with Sanitary Toilets	No. of PU with Sanitary Toilets	
San Isidro	Public Market									
	Bus/Jeepney Terminal									
	Parks/Playground									
	Total									
San Jose	Public Market									
	Bus/Jeepney Terminal									
	Parks/Playground									
	Total									
San Roque	Public Market									
	Bus/Jeepney Terminal									
	Parks/Playground									
	Total									
San Vicente	Public Market									
	Bus/Jeepney Terminal									
	Parks/Playground									
	Total									
Silvino Lobos	Public Market									
	Bus/Jeepney Terminal									
	Parks/Playground									
	Total									
Victoria	Public Market									
	Bus/Jeepney Terminal									
	Parks/Playground									
	Total									
Provincial Total	Public Market	10	7	10	3	10	12	2	12	
	Bus/Jeepney Terminal			3	3	3	7	4	7	
	Parks/Playground	11	11	11		11	17	6	17	
	Total	21	18	24	6	24	36	12	36	

8.6 Facilities, Equipment and Rehabilitation Required to Meet the Target Services

8.6.1 Water Supply

(1) Required water supply facilities

Urban water supply:

Urban water supply facilities required by target year shown in Table 8.6.1 were estimated as the required number of house connections based on the additional service coverage.

As reference, the following requirements were also estimated:

- daily average water demand at 100 lpcd consumption rate, and
- number of deep wells to meet the daily maximum water demand based on the groundwater productivity.

(daily maximum water demand = 1.3 x daily average water demand)

Information pertaining to the expansion plan of Level III systems was arranged to be indicated in Table 8.6.1 and details presented in Table 8.6.2, however, required data were not available during this PW4SP preparation.

Rural water supply:

Rural water supply facilities required by target year shown in Table 8.6.3(a) were estimated as the number of Level II systems with number of communal faucets and the number of Level I wells broken-down to deep and shallow wells. In the province of Northern Samar, however, there was no available information on untapped springs during the course of PW4SP preparation.

(2) Required well drilling and rehabilitation equipment

Presently, neither the provincial government nor the DEO-DPWH has available drilling rig at present.

To achieve the physical targets of deep wells in medium-term plan, the number of required equipment is estimated as described below.

Applicable type of well drilling equipment is determined considering the geological formation of the province, the easiness to technically operate. Both types of percussion and rotary are suitable for the soft and hard formations, and the percussion type can be easily operated and maintained without special training to drillers compared with the latter, it is very useful to bores in the boulders or cobbles formations. Thus, the drilling equipment of percussion type is recommendable to be selected in the PW4SP preparation.

Table 8.6.1 Urban Water Supply Facilities Required by Target Year

Name of Municipality	Reference on Expansion of Existing Level III System						Phase I (2004) Requirements			Phase II (2010) Requirements				
	Name of Operating Body	Area	Coverage in 1998		Type of Water Source	Plan for Water Expansion	Additional Population to be Served	Number of House Connections	Daily Average Water Demand (m ³ /day)	Number of Spring Dev'./ Deep Well	Additional Population to be Served	Number of House Connections	Daily Average Water Demand (m ³ /day)	Number of Spring Dev'./ Deep Well
			No. of Barangay Served	Served Population										
Allen	Not Applicable	Urban	N.A.	N.A.	N.A.	N.A.	1,088	216	109	1	9,652	2,413	965	2
		Rural	N.A.	N.A.	N.A.	N.A.								
		Total												
Bin	Not Applicable	Urban	N.A.	N.A.	N.A.	N.A.	271	47	27	1	2,420	605	242	1
		Rural	N.A.	N.A.	N.A.	N.A.								
		Total												
Bobon	Not Applicable	Urban	N.A.	N.A.	N.A.	N.A.	645	123	65	1	5,695	1,424	570	1
		Rural	N.A.	N.A.	N.A.	N.A.								
		Total												
Capul	Not Applicable	Urban	N.A.	N.A.	N.A.	N.A.					4,387	1,097	439	1
		Rural	N.A.	N.A.	N.A.	N.A.								
		Total												
Catarman (Capital)	Catarman WD	Urban	15	2,128	DW	No					31,291	7,823	3,129	5
		Rural	3	532										
		Total	18	2,660										
Costa Real Const.	Costa Real Const.	Urban	1	439	SW	No								
		Rural												
		Total	1	439										
Municipal Total	Municipal Total	Urban	16	2,567										
		Rural	3	532										
		Total	19	3,099										
Caubig	Not Applicable	Urban	N.A.	N.A.	N.A.	N.A.	301	95	50	1	4,404	1,101	440	1
		Rural	N.A.	N.A.	N.A.	N.A.								
		Total												
Gamay	Not Applicable	Urban	N.A.	N.A.	N.A.	N.A.	300	58	30	1	2,724	681	272	1
		Rural	N.A.	N.A.	N.A.	N.A.								
		Total												
Lasing	Not Applicable	Urban	N.A.	N.A.	N.A.	N.A.					11,270	2,818	1,127	2
		Rural	N.A.	N.A.	N.A.	N.A.								
		Total												
Lapinig	Not Applicable	Urban	N.A.	N.A.	N.A.	N.A.	447	74	45	1	4,002	1,001	400	1
		Rural	N.A.	N.A.	N.A.	N.A.								
		Total												
Las Navas	Not Applicable	Urban	N.A.	N.A.	N.A.	N.A.	896	168	90	1	7,849	1,962	785	2
		Rural	N.A.	N.A.	N.A.	N.A.								
		Total												
Lavezares	Not Applicable	Urban	N.A.	N.A.	N.A.	N.A.					3,405	851	341	1
		Rural	N.A.	N.A.	N.A.	N.A.								
		Total												
Lope De Vega	Not Applicable	Urban	N.A.	N.A.	N.A.	N.A.	319	55	32	1	2,942	736	294	1
		Rural	N.A.	N.A.	N.A.	N.A.								
		Total												

Table 8.6.1 Urban Water Supply Facilities Required by Target Year

Name of Municipality	Reference on Expansion of Existing Level III System				Phase I (2004) Requirements				Phase II (2010) Requirements					
	Name of Operating Body	Area	Coverage in 1998		Type of Water Source	Plan for Expansion	Additional Population to be Served	Number of House Connections	Water Demand (m ³ /day)	Number of Spring Dev'./ Deep Well	Additional Population to be Served	Number of House Connections	Water Demand (m ³ /day)	Number of Spring Dev'./ Deep Well
			No. of Barangay Served	Served Population										
Mapanas	Not Applicable	Urban	N.A.	N.A.	N.A.	N.A.	291	54	29	1	2,646	662	265	1
		Rural	N.A.	N.A.	N.A.	N.A.								
		Total												
Mondragon	Not Applicable	Urban	N.A.	N.A.	N.A.	N.A.	696	130	70	1	6,230	1,558	622	1
		Rural	N.A.	N.A.	N.A.	N.A.								
		Total												
Palapag	Not Applicable	Urban	N.A.	N.A.	N.A.	N.A.	722	149	72	1	6,571	1,643	657	1
		Rural	N.A.	N.A.	N.A.	N.A.								
		Total												
Pambujan	Not Applicable	Urban	N.A.	N.A.	N.A.	N.A.	1,228	211	122	1	11,051	2,763	1,105	2
		Rural	N.A.	N.A.	N.A.	N.A.								
		Total												
Rosario	Not Applicable	Urban	N.A.	N.A.	N.A.	N.A.					2,572	643	257	1
		Rural	N.A.	N.A.	N.A.	N.A.								
		Total												
San Antonio	Not Applicable	Urban	N.A.	N.A.	N.A.	N.A.	87	17	9	1	759	190	76	1
		Rural	N.A.	N.A.	N.A.	N.A.								
		Total												
San Isidro	San Isidro WD	Urban	2	908	SP	No					2,389	597	239	1
		Rural	1	164										
		Total	3	1,072										
San Jose	Not Applicable	Urban	N.A.	N.A.	N.A.	N.A.	332	62	33	1	2,949	737	295	1
		Rural	N.A.	N.A.	N.A.	N.A.								
		Total												
San Roque	Not Applicable	Urban	N.A.	N.A.	N.A.	N.A.	964	154	96	1	8,928	2,232	893	2
		Rural	N.A.	N.A.	N.A.	N.A.								
		Total												
San Vicente	Not Applicable	Urban	N.A.	N.A.	N.A.	N.A.	168	36	17	1	1,394	349	139	1
		Rural	N.A.	N.A.	N.A.	N.A.								
		Total												
Silvino Lobos	Not Applicable	Urban	N.A.	N.A.	N.A.	N.A.	362	56	36	1	3,265	816	327	1
		Rural	N.A.	N.A.	N.A.	N.A.								
		Total												
Victoria	Not Applicable	Urban	N.A.	N.A.	N.A.	N.A.					2,850	713	285	1
		Rural	N.A.	N.A.	N.A.	N.A.								
		Total												
Provincial Total		Urban	18	3,475			9,317	1,705	933	17	141,645	35,415	14,165	33
		Rural	4	656										
		Total	22	4,171										

Table 8.6.2 Plan for Expansion of Existing Level III Systems

Name of Municipality	Name of Operating Body	Additional Areas Barangay to be Covered	Additional Population to be Served	Additional Water Sources	
				Type	Capacity (m ³ /day)
Cataman (Capital)	Cataman WD				
	Costa Real Const.				
	Municipal Total				
San Isidro	San Isidro WD				
Provincial Total					

Table 8.6.3(a) Rural Water Supply Facilities Required by Target Year

Name of Municipality	Level II				Phase I (2004) Requirements										Phase II (2010) Requirements				
	Number of System	No. of Communal Faucets	Number of Deep Wells			No. of Shallow Wells	Total	Number of Deep Wells			Sub-total	No. of Shallow Wells	Total	Number of Deep Wells			Sub-total	No. of Shallow Wells	Total
			Level I					Level I											
			40 m	80 m	120 m			40 m	80 m	120 m				40 m	80 m	120 m			
Allen						12						12							69
Biri						8						8							54
Bobon				14															80
Capul																			29
Cataman (Capital)				46		46						46							283
Catubig				27		27						27							157
Gamay				22		22						22							146
Laoung																			231
Lapinig				7		7						7							50
Las Navas				24		24						24							129
Lavezares																			95
Lope De Vega																			87
Mapanas				9		9						9							61
Mondragon																			121
Palapag				27		27						27							165
Pambujan				15		15						15							100
Rosario																			48
San Antonio																			59
San Isidro																			43
San Jose				11		11						11							147
San Roque				13		13						13							76
San Vicente																			146
Silvino Lobos																			11
Victoria				6		6						6							68
Provincial Total				170		170						170							709
				72		72						72							2,486
				242		242						242							1,777
				1,336		1,336						1,336							441

Table 8.6.3(b) Rural Water Supply Facilities Required by Target Year

Name of Municipality	Phase I (2004) Requirements											Phase II (2010) Requirements										
	Percentage Allocated to Public Facility (50%)											Percentage Allocated to Public Facility (50%)										
	Percentage Allocated for Public Wells (75%) and Percentage Allocated for Public Spring Development (25%)											Percentage Allocated for Public Wells (75%) and Percentage Allocated for Public Spring Development (25%)										
	Number of Deep Wells			No. of Shallow Wells		Total		No. of Spring Dev.		Grand Total		Number of Deep Wells			No. of Shallow Wells		Total		No. of Spring Dev.		Grand Total	
40 m	80 m	120 m	Sub-total	No. of Shallow Wells	Total	No. of Spring Dev.	Grand Total	40 m	80 m	120 m	Sub-total	No. of Shallow Wells	Sub-total	Total	No. of Spring Dev.	Grand Total						
Allen				4	4	2	6						26	26	9	35						
Biri				3	3	1	4						20	20	7	27						
Bobon	5			5	5	2	7		30				30	30	10	40						
Capul																						
Calamban (Capital)	17			17	17	6	23		106				106	106	36	142						
Catubig	10			10	10	4	14			59			59	59	20	79						
Gamay	9			9	9	3	12		50				50	50	18	73						
Laang																						
Laping	3			3	3	1	4		19				19	19	6	25						
Las Navas										49			49	49	16	65						
Lavezares									18				18	18	12	48						
Lope De Vega																						
Mapanas	4			4	4	2	6		21				21	21	8	31						
Monedragon									46				46	46	15	61						
Palapag	10			10	10	4	14		62				62	62	21	83						
Pambujan	6			6	6	2	8		37				37	37	13	50						
Rosario									18				18	18	8	30						
San Antonio																						
San Isidro									6				6	6	19	24						
San Jose	4			4	4	2	7		23				23	23	10	38						
San Roque	5			5	5	2	7		55				55	55	18	73						
San Vicente																						
Silvino Lobos	4			4	4	1	5			25			25	25	9	34						
Victoria	2			2	2	2	7		12				12	12	10	40						
Provincial Total	65	27		92	11	103			503	166	669	265	934	317	1,251							

Medium size percussion drilling rig (truck-mounted type for deep well):

Average performance

- 1 well/30 days (5 m/day of drilling rate with finishing work)

Annual accomplishment

- 9 wells/year (365 days/year ÷ 30 days/well x 0.75)

Required number

- 2 sets for the total 92 deep wells

Well rehabilitation equipment:

Average performance

- 1 well/7 days (well redevelopment and finishing work)

Annual accomplishment

- 39 wells/year (365 days/year ÷ 7 days/well x 0.75)

Required number

- 1 set for 10% of 92 Level I deep wells

Support vehicle:

Type - pick-up truck with winch, double cab

Required number

- 1 unit for well rehabilitation

Considering no existing drilling rigs available, it is necessary for the province to procure/mobilize 2 units of medium size percussion rig for the implementation of rural water supply in Phase I period. However, following equipment shall be considered for the physical targets in the medium-term development plan:

- 1 set of well rehabilitation equipment for 10% of deep wells (at least 1 set shall be held by the provincial government); and
- 1 unit of support vehicle for well rehabilitation.

In addition to the above, one unit each of service truck equipped with crane are required for the percussion rigs for hauling drilling tools and water.

8.6.2 Sanitation

Table 8.6.4 Urban Household Toilets Required by Target Year

Name of Municipality	Phase I (2004) Requirements						Phase II (2010) Requirements						
	Additional HHs to be Served			No. of HHs to be Served			Additional HHs to be Served			No. of HHs to be Served			
	Flush	Pour Flush	VIP/ Dry	Total	Flush	Pour Flush	VIP/ Dry	Total	Flush	Pour Flush	VIP/ Dry	Total	
Allen	131	283	414	131	283	414	414	1,173	45	1,218	1,173	45	1,218
Biri	27	148	175	27	148	175	175	298	54	352	298	54	352
Bobon	75	305	380	75	305	380	380	696	52	748	696	52	748
Capul		178	178		178	178	178	535		535	535		535
Canarman (Capital)	344	58	402	344	58	402	402	3,764	734	4,498	3,764	734	4,498
Catubig								591		591	591		591
Gamay	33	93	126	33	93	126	126	332	29	361	332	29	361
Laoling								1,362		1,362	1,362		1,362
Lapinig	49	174	223	49	174	223	223	496	108	604	496	108	604
Las Navas	107	330	437	107	330	437	437	960	85	1,045	960	85	1,045
Lavezares								407		407	407		407
Lope De Vega	33	118	151	33	118	151	151	363	75	438	363	75	438
Mapanas	35	133	168	35	133	168	168	325	43	368	325	43	368
Mondragon	77	282	359	77	282	359	359	763	87	850	763	87	850
Polapag	92	92	184	92	92	184	92	796	18	814	796	18	814
Pambujan	129	485	614	129	485	614	614	1,365	264	1,629	1,365	264	1,629
Rosario		26	26		26	26	26	315	68	383	315	68	383
San Antonio	11	11	22	11	11	22	22	93		93	93		93
San Isidro	35	100	135	35	100	135	135	364	45	409	364	45	409
San Jose	33	7	40	33	7	40	40	361	36	397	361	36	397
San Roque	90	90	180	90	90	180	90	1,111	306	1,417	1,111	306	1,417
San Vicente	23	73	96	23	73	96	96	168		168	168		168
Silvino Lobos								444	72	516	444	72	516
Victoria		150	150		150	150	150	342		342	342		342
Provincial Total	1,324	2,943	4,267	1,324	2,943	4,267	4,267	17,424	2,121	19,545	17,424	2,121	19,545

Table 8.6.5 Rural Household Toilets Required by Target Year

Name of Municipality	Phase I (2004) Requirements						Phase II (2010) Requirements					
	Additional HHs to be Served			No. of HHs to be Served			Additional HHs to be Served			No. of HHs to be Served		
	Flush	Pour Flush	VIP/ Dry	Total	Flush	Pour Flush	VIP/ Dry	Total	Flush	Pour Flush	VIP/ Dry	Total
Allen	95			95	95			95	1,113			1,113
Bin	537			537	537			537	1,030			1,030
Bobon	180			180	180			180	1,359			1,359
Capul	196			196	196			196	631			631
Cataman (Capital)	913			913	913			913	532	4,438		4,970
Catubig									2,120			2,120
Gamay	1,046			1,046	1,046			1,046	2,481			2,481
Laoang									4,693			4,693
Lapinig	375			375	375			375	948			948
Las Navas	3			3	3			3	2,111			2,111
Lavezares									1,645			1,645
Lope De Vega	426			426	426			426	1,694			1,694
Mapanas	297			297	297			297	1,133			1,133
Mondragon	864			864	864			864	2,779			2,779
Palapag	144			144	144			144	2,807			2,807
Pambujan	685			685	685			685	1,861			1,861
Rosario	282			282	282			282	1,125			1,125
San Antonio	150			150	150			150	842			842
San Isidro	1,049			1,049	1,049			1,049	3,077	164		3,241
San Jose	257			257	257			257	1,318			1,318
San Roque									1,877			1,877
San Vicente	273			273	273			273	407			407
Silvino Lobos	797			797	797			797	1,314			1,314
Victoria	807			807	807			807	1,261			1,261
Provincial Total	9,376			9,376	9,376			9,376	696	44,064		44,760

Table 8.6.6 Public School Toilets Required by Target Year

Name of Municipality	Phase I (2004) Requirements			Phase II (2010) Requirements		
	Additional Public School Students to be Served	No. of Toilet Unit	No. of Toilet Facilities	Additional Public School Students to be Served	No. of Toilet Unit	No. of Toilet Facilities
Allen	1,012	26	6	2,960	74	15
Biri	565	15	3	1,451	37	8
Bobon	966	25	5	1,261	32	7
Capul	611	16	4	747	19	4
Catarman (Capital)	3,875	97	20	11,565	290	58
Carubig	1,459	37	8	2,757	69	14
Gamay	1,418	36	8	1,621	41	9
Laoang	2,403	61	13	6,019	151	31
Lapinig	719	18	4	2,127	54	11
Las Navas	1,369	35	7	3,632	91	19
Lavezares	1,239	31	7	2,703	68	14
Lope De Vega	609	16	4	1,338	34	7
Mapanas	645	17	4	1,956	49	10
Mondragon	1,256	32	7	3,593	90	18
Palapag	1,761	45	9	5,348	134	27
Pambujan	1,526	39	8	3,232	81	17
Rosario				566	15	3
San Antonio	459	12	3	656	17	4
San Isidro	1,424	36	8	2,687	68	14
San Jose				1,692	43	9
San Roque	976	25	5	2,414	61	13
San Vicente						
Silvino Lobos	434	11	3	1,042	27	6
Victoria	771	20	4	1,872	47	10
Provincial Total	25,497	650	140	63,239	1,592	328

Table 8.6.7 Public Toilets Required by Target Year

Name of Municipality	Phase I (2004) Requirements				Phase II (2010) Requirements			
	Number of Public Toilets				Number of Public Toilets			
	Public Market	Bus/Jeepney Terminal	Parks/Playground	Total	Public Market	Bus/Jeepney Terminal	Parks/Playground	Total
Allen		1		1				
Bin								
Bobon								
Capul								
Catarman (Capital)		1		1				
Catubig		1		1				
Gamay						1		1
Laolang						1		1
Lapinig	2			2		1		1
Las Navas	1			1			1	1
Lavezares								
Lope De Vega								
Mapanas							1	1
Mondragon							1	1
Palapag						1		1
Pambujan								
Rosario					1		1	2
San Antonio								
San Isidro							1	1
San Jose								
San Roque								
San Vicente					1		1	2
Silvino Lobos								
Victoria								
Provincial Total	3	3		6	2	4	6	12