

4. EXISTING FACILITIES AND SERVICE COVERAGE

4.1 Water Supply

4.1.3 Level III Systems

Table 4.1.1 Details on Existing Level III Systems
Sheet 1 of 4

Name of Municipality/City	Name of Operating Body	Level III Services								
		Number of Barangays Served			Number of Households Served			Number of Population Served		
		Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
Baungon	MIWS-LGU	1		1	172		172	1,032		1,032
Dangcagan	Poblacion Dangcagan	1		1	160		160	867		867
Don Carlos	Don Carlos WD	1	2	3	407	283	690	2,133	1,503	3,636
Impasugong	Capitan Bayong		1	1		95	95	532		532
	La Fortuna WWA	1	1	2	405	35	440	2,329	196	2,525
	Municipal Total	1	2	3	405	130	535	2,329	728	3,057
Kalilangan	Kalilangan WS	2	1	3	214	36	250	1,156	193	1,349
Kibawe	Kibawe WD	3	2	5	533	72	605	2,772	369	3,141
Lantapan	Lantapan WWS	2	3	5	180	121	301	1,015	667	1,682
Libona	Crossing WWA		1	1		350	350	2,100		2,100
	Laturan WWA		1	1		172	172	1,032		1,032
	Pongol WWA		1	1		97	97	582		582
	San Jose WWA		1	1		145	145	870		870
	Water Task Force Assn.	1		1	175		175	935		935
	Municipal Total	1	4	5	175	764	939	935	4,584	5,519
Malaybalay (Capital)	Aglayan WS		1	1		110	110	660		660
	Bangcod WS		1	1		20	20	120		120
	Malaybalay WD	13	1	14	4,635	327	4,962	25,261	1,792	27,053
	San Jose WS		1	1		50	50	300		300
	San Martin WS		1	1		200	200	1,200		1,200
	Municipal Total	13	5	18	4,635	707	5,342	25,261	4,072	29,333
Manolo Fortich	Del Monte Phil. Inc.		1	1		1,038	1,038	7,967		7,967
	Manolo Fortich WW	1	6	7	770	2,110	2,880	4,281	11,668	15,949
	Municipal Total	1	7	8	770	3,148	3,918	4,281	19,635	23,916
Maramag	Maramag WD	2	1	3	1,103	105	1,208	5,879	558	6,437
Pangantucan	Matipayon WS	1		1	200		200	1,200		1,200
Quezon	LGU-Quezon	2	3	5	1,440	353	1,793	7,639	1,889	9,528
Sumilao	Kisolon WS	3		3	396		396	3,881		3,881
Talakag	San Antonio WS	5		5	800		800	4,800		4,800
Valencia	Laligan RWSA		1	1		286	286	1,501		1,501
	Lurigan RWSA		1	1		570	570	3,021		3,021
	Guinoyoran RWSA	1		1	457		457	2,376		2,376
	Sinayawan		1	1		50	50	264		264
	Valencia WD	1	4	5	3,436	1,187	4,623	18,176	6,267	24,443
	Municipal Total	2	7	9	3,893	2,093	5,986	20,552	11,053	31,605
	Provincial Total	41	37	78	15,483	7,812	23,295	85,732	45,251	130,983

Table 4.1.1 Details on Existing Level III Systems

Sheet 2 of 4

Name of Municipality	Name of Operating Body	Level II Services						Number of Population Served		
		Number of Public Faucets		Number of Households Served		Total		Urban	Rural	Total
Baungon	MWS-LGU									
Dancagan	Poblacion Dancagan	7		7				102	612	612
Don Carlos	Don Carlos WD									
Impasugong	Capitan Bayong									
	La Fortuna WWA									
	Municipal Total									
Kalilangan	Kalilangan WS									
Kibawe	Kibawe WD	2		2				10	52	52
Lantapan	Lantapan WWS	7	19	26	35	49	84	197	270	467
Libona	Crossing WWA									
	Laturan WWA									
	Pongol WWA									
	San Jose WWA									
	Water Task Force Assn.									
	Municipal Total									
Malaybalay (Capital)	Aglayan WS		7	7			35	35	210	210
	Bangud WS									
	Malaybalay WD									
	San Jose WS		5	5			30	30	180	180
	San Martin WS									
	Municipal Total		12	12			65	65	390	390
Manolo Fortich	Del Monte Phil. Inc.									
	Manolo Fortich WW									
	Municipal Total									
Maramag	Maramag WD									
Pangantucan	Malipayon WS									
Quezon	LGU-Quezon									
Sumilao	Kisolon WS							288	1,604	1,604
Talakag	San Antonio WS									
Valencia	Laligan RWSA									
	Lurugan RWSA									
	Guinoyoran RWSA									
	Sinayawan									
	Valencia WD									
	Municipal Total									
Provincial Total		16	31	47	435	114	549	2,465	660	3,125

Table 4.1.1 Details on Existing Level III Systems
Sheet 3 of 4

Name of Municipality	Name of Operating Body	Water Sources			Consumptions			
		Type of Water Source ¹	Number	Production Capacity (cu.m/day)	Domestic	Institutional	Commercial	Industrial
Baungon	MWS-LGU	DW/SP	1/1		101			
	Poblacion Dancagan	SP	1	819	75	2		2
	Don Carlos WD	DW/Surf	1/1	1,920	337	22		85
	Capitan Bayong	SP	1	259				
	La Fortuna WWA	SP	1	480	324			83
	Municipal Total	SP	2	739	324			83
	Kallangan WS	SP	1	3,715	186			50
	Kibawe WD	DW	3	10,032	228	9		71
	Lantapan WWS	SP	1	1,382				2
	Crossing WWA	DW	1	109	118			
Libona	Laturan WWA	DW	1	83	67	3		
	Pongol WWA	DW	1	65	63	2		
	San Jose WWA	DW	1	93	90			
	Water Task Force Assn.	DW	1	130	108			
	Municipal Total	DW	5	480	446	5		
	Aglayan WS	DW	1	108				
	Bangcod WS	DW	1	72				
	Malaybalay WD	DW/Surf	2/5	6,538	3,020	420		712
	San Jose WS	DW	1	50				
	San Martin WS	SP	1	691				
Manolo Fortich	Municipal Total	DW/SP/Surf	5/1/5	7,459	3,020	420		712
	Del Monte Phil. Inc.	DW	15	19,076				
	Manolo Fortich WW	DW/SP	6/3	3,982	1,838			88
	Municipal Total	DW/SP	21/3	23,058	1,838			88
	Maramag WD	SP	1	4,078	742	68		264
	Malipavon WS	SP	1	151				
	LGU-Quezon	SP	6	14,438	5,379			
	Kisolon WS	SP	1	545	462			39
	San Antonio WS	SP	1	480				
	Laligan RWSA	SP	1	276	172			
Valencia	Lunigan RWSA	SP	3	654	278			
	Guinoyoran RWSA	SP	1	426	253			
	Sinayawan	DW	1	82				
	Valencia WD	DW/SP	4/3	3,897	2,920			906
	Municipal Total	DW/SP	5/8	5,335	3,623			906
	Provincial Total		75	74,632	16,760	526		2,299
								52

Note: 1. Type of Water Source: DW - Deep Well, DgW - Dug Well, Surf - Surface Water (River), SP - Spring, and IG - Infiltration Gallery

Table 4.1.1 Details on Existing Level III Systems

Sheet 4 of 4

Name of Municipality	Name of Operating Body	Domestic House Connections				Domestic Public Faucet				Institutional Consumers				Commercial Consumers				Industrial Consumers			
		Connection		Consumption (m ³ /day)		Connection		Consumption (m ³ /day)		Connection		Consumption (m ³ /day)		Connection		Consumption (m ³ /day)		Connection		Consumption (m ³ /day)	
		Metered	Unmetered	Metered	Unmetered	Metered	Unmetered	Metered	Unmetered	Metered	Unmetered	Metered	Unmetered	Metered	Unmetered	Metered	Unmetered	Metered	Unmetered	Metered	Unmetered
Baungon	MIWS-LGU	172		100.70																	
Dangcagan	Poblacion Dangcagan	160		75.00		17				51		2.30		21		1.56					
Don Carlos	Don Carlos WD	690		337.00						15		22.00		128		85.00					
Impasugong	Captian Bayong	95																			
	La Fortuna WWA	440		324.00										50		83.00		7		50.00	
	Municipal Total	535		324.00										50		83.00		7		50.00	
Kailangan	Kailangan WS	158	74	185.60						3				18		30.00					
Kibawe	Kibawe WD	605		227.83		2		0.17		6		9.00		95		70.60		2		1.50	
Lantapan	Lantapan WWS	301					26														
Libona	Crossing WWA	297	53	118.00																	
	Laturan WWA	172	75	67.10						3		2.80									
	Pongol WWA	97	46	62.96						1		1.70									
	San Jose WWA	145		89.63																	
	Water Task Force Assn.	155	20	108.00																	
	Municipal Total	866	194	445.69						4		4.50									
Malaybalay (Capital)	Aglayan WS	110				7															
	Bangcod WS		20																		
	Malaybalay WD	4,962		3,018.30		2		2.19		81		419.87		531		711.70					
	San Jose WS	50				5															
	San Martin WS		200																		
	Municipal Total	5,122	220	3,018.30		14		2.19		81		419.87		531		711.70					
Manolo Fortich	Del Monte Phil. Inc.		1,038																		
	Manolo Fortich W/W	2,880		1,838.00										50		88.00					
	Municipal Total	2,880	1,038	1,838.00										50		88.00					
Maramag	Maramag WD	1,208		742.00						35		68.00		356		264.00					
Panganucan	Malapayan WS	200																			
Quezon	LGU-Quezon	1,793	9,521	5,379.00																	
Sunlbo	Kisolon WS	259	22	462.00		19	29							29		39.43					
Talakag	San Antonio WS	700	100																		
Valencia	Laligan RWSA	284	2	172.00																	
	Lunagan RWSA	570		277.55																	
	Cumoyoran RWSA	457		253.00																	
	Snayawan	40	10																		
	Valencia WD	4,623		2,920.00										880		906.00					
	Municipal Total	5,974	12	3,622.55										880		906.00					
Provincial Total		21,213	11,181	16,433.67		42	55	2.36		146	11	525.67		2,039		2,216.29		2		1.50	

4.1.4 Level II Systems

Table 4.1.2 Details on Existing Level II Systems
Sheet 1 of 6

Name of Municipality	Name of Operating Body	Water Source		Existing Facilities			
		Type	Number	Discharge (m ³ /day)	Length of Transmission Line (meter)	Reservoir Number Volume (m ³)	Length of Distribution Line (meter) Number of Public Faucets
Baungon	Liboran WS	DW	1	218.0	1	9	20.0
	Lingating WS	SP	1	9.5	3,000	9	48.0
	Nicdao WS	SP	1			1	5.4
	Municipal Total	DW/SP	1/2	227.5	3,001	19	73.4
	Anluran WW	DW	1	81.8	600	1	8.0
	Cananga-an WW	SP	1	3,456.0	500	1	8.0
	Capinonan WW	SP	1	3,456.0	600	1	9.0
	Dalacutan WW	SP	1	2,592.0	300	1	8.0
	Freedom WW	SP	1	3,456.0	500	1	9.0
	Iba WS	DW	1	109.1	240	1	8.0
Cabanglasan	Imbatug WW	SP	1	3,456.0	1,500	1	9.0
	Jasaan WS	SP	1	109.1	1,500	1	8.0
	Lambagan WS	SP	1	288.0	400	1	8.0
	Mandaing WS	DW	1	109.1	400	1	9.0
	Mauswagon WW	SP	1	3,456.0	400	1	8.0
	Paradise WW	SP	1	288.0	350	1	8.0
	Poblacion WS	DW	1	109.1	30	1	9.4
	Municipal Total	DW/SP	4/9	20,966.2	7,320	13	109.4
	San Vicente WS	SP	1	2,592.0	20	1	500.0
	Macapari WS	SP	1		1,100	1	12.0
Dangcagan Damulog	New Compostela WS	SP	1		1,000	1	24.0
	Poblacion WS	DW	1		10	1	20.0
	Pocopoco WS	SP	1			1	12.0
	Municipal Total	DW/SP	1/3		2,110	4	68.0
	Kibatang WS	DW				1	11.4
	Manlamanay WS	DW				1	11.4
	New Nongnongan WS	DW	1			1	11.4
	Pualas WS	SP	1			1	7.6
Don Carlos							

Table 4.1.2. Details on Existing Level II Systems (cont'd.)

Sheet 1 of 6

Name of Municipality	Name of Operating Body	Water Source			Existing Facilities				
		Type	Number	Discharge (m ³ /day)	Length of Transmission Line (meter)	Reservoir	Length of Distribution Line (meter)	Number of Public Faucets	
Don Carlos	San Antonio East WS	SP				1	11.4	5	
	Municipal Total	DW/SP	1/1			5	53.2	58	
Impasugong	Bolunay WS	SP	1		500			5	
	Dumalaguang WS	SP	1	45.0	1,000			8	
	Hagpa WS	SP	1	45.0	1,000			4	
	Kalabugao WS	SP	2	135.0	3,200	2	8.0	22	
	Sayawan WS	SP	1	48.4	500			7	
Kadangilan	Municipal Total	SP	6	273.4	6,200	2	8.0	46	
	Malinao WS	SP	1	6,912.0	600	2	24.6	28	
	Poblacion WS	DW	1	114.0	10	1	10.0	45	
	Sibonga WS	DW	3	81.8	60	1	7.6	12	
	Municipal Total	DW/SP	4/1	7,107.8	670	4	42.2	85	
Kalilangan	Bangbang WSA	SP	1	115.2	4,950	2	25.0	12	
	Barorawon WSA	SP	1	173.0	780			2	
	Canituan WS Org.	SP	1	311.0	4,860			8	
	KIWASA	SP	1	346.0	1,140	3	10.0	15	
	Upper Kinura WSA	SP	1	302.0	1,440			7	
Kitaotao	Municipal Total	SP	5	1,247.2	13,170	5	35.0	44	
	KCES	DW	1	160.0	19	1	12.7	8	
	Plaza Site	DW	1	138.0	23	1	8.0	8	
	Teacher Village	DW	1	147.0	20	1	8.0	12	
	Municipal Total	DW	3	445.0	62	3	28.7	28	
Lantapan	Basak WS	SP	1	163.6	4,500	1	13.3	15	
	Bantuanon WS	SP	1	136.3	9,000	2	22.7	27	
	Bugcaon WS	SP	1	163.6	4,800	1	37.9	21	
	Capt. Juan WS	SP	1	109.0	500	1	11.4	10	
	Kaatuan WS	SP	1	136.3	5,000	1	11.4	18	

Table 4.1.2 Details on Existing Level II Systems (cont'd.)
Sheet 1 of 6

Name of Municipality	Name of Operating Body	Water Source			Existing Facilities				
		Type	Number	Discharge (m ³ /day)	Length of Transmission Line (meter)	Reservoir	Length of Distribution Line (meter)	Number of Public Faucets	
Lantapan	Kawayan WS	SP	1	163.6	2,800	1	13.3	6,000	10
	Kibangay WS	SP	2	218.3	3,500	2	13.6	1,300	35
	Kulasihan WS	SP	1	136.3	5,000	1	13.3	500	5
	Victory WS	SP	1	136.3	3,350	1	3.8	5,000	12
	Municipal Total	SP	10	1,363.3	38,450	11	140.5	26,150	153
Libona	Killog WS	SP	1	81.8	1,200	1	4.0	1,500	5
	Kinawe WS	SP	1	109.0	1,500	1	10.0	3,000	8
	Kiong-kog WS	DW	1	44.0	20	1	8.0	1,000	7
	Libona WSS	Surf	1		47,300	1	95.0		177
	Municipal Total	DW/SP/Surf	1/2/1	234.8	50,020	4	117.0	5,500	197
Malaybalay (Capital)	Busdi WS	SP	1	138.2	1,130	1	10.0	409	19
	Caburacanan WS	SP	1	90.7	1,500	1	10.0	510	12
	Can-ayan WS	SP	1	345.6	3,120	1	4.0	720	17
	Capitan Angel WS	SP	1	138.2	1,500	1	10.0		6
	Dalwangan WS	DW	1	218.1		1	5.0	500	21
	Imbayao WS	SP	1	86.4	7,000	1	10.0	2,400	18
	Indalasa WS	DW	1	163.2		1	10.0	300	8
	Kibalabag WS	SP	1	259.2	800	1	10.0	600	8
	Kulaman WS	SP	1	108.0	2,785	1	10.0	760	12
	Linabo WS	SP	1	86.4		1	3.0		4
	Magsaysay WS	SP	1	691.2	6,000	1	10.0	9,500	6
	Maligaya WS	SP	1	146.9	6,600	2	12.0	180	12
	Managok WS	SP	1	345.6	1,500			300	6
	Manalog WS	SP	1	691.2	638	1	10.6	562	6
	Mapayag WS	SP	1	86.4		1	10.0		10
	Mapulo WS	SP	1	86.4	2,150	1	3.0	400	10
	Miglamin WS	SP	1	86.4	1,500	1	26.5	1,000	14

Table 4.1.2 Details on Existing Level II Systems (cont'd.)

Sheet 1 of 6

Name of Municipality	Name of Operating Body	Water Source			Existing Facilities				
		Type	Number	Discharge (m ³ /day)	Length of Transmission Line (meter)	Reservoir		Length of Distribution Line (meter)	Number of Public Faucets
Malaybalay (Capital)	Pat-pat WS	SP	1	86.4		1	4.0		6
	Silae WS	SP	1	121.0	2,210	1	10.0	483	11
	Simaya WS	SP	1	103.7	2,400	1	13.0	4,000	13
	Sinanglanan WS	SP	1	163.6	5,000	1	12.0	6,000	8
	St. Peter WS	SP	1	346.0	1,000	1	10.0	100	8
	Zamboangita WS	SP	1	86.4	1,620	1	8.0	590	15
	Municipal Total	DW/SP	2/21	4,675.1	48,453	23	211.1	29,314	250
	Kalingking BWSA	SP	1	82.0	2,600	2	36.1	250	18
	Kiabo BWSA	SP	1	82.0	1,500	1	1.8	400	5
	Mindagat BWSA	SP	1	82.0	2,500	2	20.0	2,000	8
Malitbog	Omaging BWSA	SP	1	82.0	1,200	1	5.8	150	4
	Sampiano BWSA	SP	1	58.0	4,500	3	60.0	285	5
	San Luis BWSA	SP	1	58.0	1,300	2	60.0	480	8
	Silo-o BWSA	SP	1	58.0	600	1	5.8	250	3
	Sumalsag BWSA	SP	1	112.3	800	1	5.8	150	3
	Municipal Total	SP	8	614.3	15,000	13	195.3	3,965	54
	Alae-Mambatangan-Manitbugao WS	SP	1	173.0	10,000	2	10.0	2,000	27
	Dahilayan WS	SP	1	130.0	4,200	1	5.0	1,200	7
	Dahrig WS	SP	1	86.4	2,500	1	5.0	1,800	35
	Kalugmanan WS	SP	1	86.4	1,500	1	5.0	1,200	6
Manolo Fortich	Lindaban WS	SP	1	86.4	1,300	1	5.0	1,000	5
	Lingi-on WS	SP	1	173.0	2,000			2,000	10
	Maluko WS	SP	1	86.4	3,000	1	7.6	1,200	30
	Guilang-guilang WS	SP	1	86.4	1,200	1	7.6	400	5
	Santiago WS	SP	1	86.4	1,000	1	5.0	800	5
	Ticala WS	SP	1	86.4	2,000	1	7.6	800	5
	Municipal Total	SP	10	1,080.8	28,700	10	57.7	12,400	135

Table 4.1.2 Details on Existing Level II Systems (cont'd.)

Sheet 1 of 6

Name of Municipality	Name of Operating Body	Water Source			Existing Facilities					
		Type	Number	Discharge (m ³ /day)	Length of Transmission Line (meter)	Reservoir		Length of Distribution Line (meter)	Number of Public Faucets	
Maramag*	Anahawon	SP	1	44.0		Number	Volume (m ³)	11.4	1,572	10
	Bayabason	SP	1	129.0		1	15.2	1,092	20	
	Camp I	DW	1	109.1		1	30.3	3,000	36	
	Dagumbaan	SP	1	1,580.3		1	72.0	11,898	90	
	Daggawan	SP	3	864.0		1	7.6	420	8	
	Dologon	SP	1	86.4		1	37.9	8,700	20	
	Kiharong	SP	1	86.4		1	11.4	4,790	11	
	Kisanday	SP	1	230.7		1	37.9	2,580	41	
	Kolambugon	SP	1	345.6		1	15.2	1,920	20	
	Kuya	SP	4	172.8		1	37.9	4,460	41	
	La Roxas	SP	1	345.6		1	37.9	5,080	48	
	Panadtalan	SP	1	230.7		1	30.3	1,764	38	
	Panalsalan	SP	1	230.7		1	18.9	4,956	25	
	San Miguel	SP	1	518.4		1	37.9	7,644	47	
	San Roque	SP	4	172.8		1	22.7	5,820	30	
	Tubigun	SP	1	97.6		1	22.7	1,320	30	
Pangantucan	Municipal Total	DW/SP	1/23	5,244.1		16	447.2	67,016	515	
	Adtuyon WS	SP	1	216.0	4,000	1	12.0	800	4	
	Bacusanon WS	SP	1	216.0	1,500	1	7.0	1,500	10	
	Barandias WS	SP	1	259.2	2,500	2	8.0	800	8	
	Concepcion WS	SP	1	173.0	500	1	7.0	200	3	
	Gandingan WS	SP	1	216.0	1,500	1	8.0	1,500	4	
	Kimanait WS	SP	1	216.0	1,500	1	12.0	1,200	28	
	Lantay WS	SP	1	216.0	4,000	1	7.0	1,000	9	
	Mendis WS	SP	1	389.0	4,000	1	7.0	1,500	5	
	Nabaliwa WS	SP	1	605.0	4,000	2	9.0	1,500	6	
	New Eden WS	SP	1	216.0	4,000	1	4.0	800	8	
Pigtauranan WS	SP	1	691.0	3,000	1	8.0	600	6		

Table 4.1.2 Details on Existing Level II Systems (cont'd.)

Sheet 1 of 6

Name of Municipality	Name of Operating Body	Water Source			Existing Facilities				
		Type	Number	Discharge (m ³ /day)	Length of Transmission Line (meter)	Reservoir	Length of Distribution Line (meter)	Number of Public Faucets	
Pangantucan	Poblacion WS	SP	1	432.0	6,000	2	45.0	4,000	30
	Fortulin WS	SP	1	216.0	2,000			300	3
Quezon	Municipal Total	SP	13	4,061.2	38,500	15	134.0	15,700	124
	Cawayan WWS	SP	1	172.8	2,000			1,500	3
	Dumalama WWS	SP	1	345.6	2,500			1,500	5
	Linabo WWS	SP	1	345.6	1,000			500	3
	Magsaysay WS	SP	1	345.6	2,000			2,500	7
	Merangeran WWS	SP	1	345.6	5,000	1	50.0	4,500	12
	Palacapao WWS	SP	1	345.6	3,000			1,500	4
	Puntian WWS	SP	1	259.0		1	12.0	2,500	4
	San Roque WWS	SP	1	259.0	1,000			1,500	4
	Sta. Cruz WWS	SP	1	259.0	4,000	1	5.0	2,500	8
	Municipal Total	SP	9	2,677.8	20,500	3	67.0	18,500	50
San Fernando	Iglusad WS	SP	1		500			800	7
	Little Baguio WSS	SP	1		1,000			2,800	10
	Nacabuklad WS	SP	1		2,000			1,500	5
	Municipal Total	SP	3		3,500			5,100	22
Sumilao	Lico-an WS	SP	1	86.4	2,000	1	7.6	500	10
	Poblacion WS	SP	1	691.2	11,500	1	18.9	3,000	28
	Puntian WS	SP	1	14.4	1,800	1	7.6	800	8
	San Roque WS	SP	1	86.4	2,500	1	7.6	500	12
	Municipal Total	SP	4	878.4	17,800	4	41.7	4,800	58
Talakag	San Isidro WWS	SP	1	86.4	182	1	2,000.0	1,500	18
	Brgy. 5 WWS	DW	1	532.0	100	1	1,000.0	500	7
	Municipal Total	DW/SP	1/1	618.4	282	2	3,000.0	2,000	25

Table 4.1.2 Details on Existing Level II Systems (cont'd.)
Sheet 1 of 6

Name of Municipality	Name of Operating Body	Water Source			Existing Facilities				
		Type	Number	Discharge (m ³ /day)	Length of Transmission Line (meter)	Reservoir		Length of Distribution Line (meter)	Number of Public Faucets
						Number	Volume (m ³)		
Valencia	Banlag WS	SP	1		1,500	1	8.0	4,000	36
	Barubo WS	SP	1	545.0		4	8.0		7
	Concepcion WS	SP	1		2,000	2	4.0		4
	Kabayugan WS	SP	1	25.0	1,200	1	12.0		3
	Lilingayon WS	SP	1	1,290.0	3,000	1	12.0		40
	Lumbayao WS	SP	1	345.0	1,500	1	12.0		19
	Mt. Nebo WS	SP	1	302.0		2	4.0		21
	Pulahan WS	SP	1	22.0	2,000	1	3.0		12
	Tugaya WM	SP	1	545.0	6,000	1	12.0	5,000	31
		DW/SP	1/7	3,074.0	17,200	14	75.0	9,000	173
Municipal Total			159	57,272.2	309,458	170	5,396.4	231,004	2,223
Provincial Total									

Note: 1. Type of Water Source: *DW* - Deep Well, *DgW* - Dug Well, *Surf* - Surface Water (River), *SP* - Spring, and *IG* - Infiltration Gallery

* Length of transmission line was included in the Length of Distribution Line.

Table 4.1.2 Details on Existing Level II Systems
Sheet 2 of 6

Name of Municipality	Name of Operating Body	Number of Barangay Served			Number of Households Served			Number of Population Served		
		Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
Baungon	Liboran WS		1	1		120	120		720	720
	Lingating WS		1	1		108	108		648	648
	Nicdao WS	1		1	35		35	210		210
	Municipal Total	1	2	3	35	228	263	210	1,368	1,578
Cabanglasan	Anlugaan WW		1	1		42	42		252	252
	Cananga-an WW		1	1		72	72		432	432
	Capinonan WW		1	1		90	90		540	540
	Dalacutan WW		1	1		30	30		180	180
	Freedom WW		1	1		42	42		252	252
	Iba WS		1	1		30	30		180	180
	Imbatug WW		1	1		72	72		432	432
	Jasaan WS		1	1		70	70		420	420
	Lambagan WS		1	1		42	42		252	252
	Mandang WS		1	1		60	60		360	360
	Mauswagon WW		1	1		48	48		288	288
	Paradise WW		1	1		48	48		288	288
Dangcagan	Poblacion WS	1		1	65		65	390		390
	Municipal Total	1	12	13	65	646	711	390	3,876	4,266
	San Vicente WS		1	1		50	50		200	200
	Macapari WS		1	1		65	65		325	325
Daruilog	New Compostela WS		1	1		125	125		625	625
	Poblacion WS	1		1	35		35	175		175
	Pocopoco WS		1	1		73	73		365	365
	Municipal Total	1	3	4	35	263	298	175	1,315	1,490
Don Carlos	Kibatang WS		1	1		70	70		420	420
	Maniamonay WS		1	1		62	62		312	312
	New Nongnongan WS	1		1	72		72	432		432
	Pualas WS	1		1	90		90	540		540
	San Antonio East WS		1	1		30	30		180	180
	Municipal Total	2	3	5	162	162	324	972	912	1,884

Table 4.1.2 Details on Existing Level II Systems (cont'd.)

Sheet 2 of 6

Name of Municipality	Name of Operating Body	Number of Barangay Served			Number of Households Served			Number of Population Served		
		Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
Impasugong	Bohuy WS		1	1		30	30		168	168
	Dumalaguin WS		1	1		48	48		269	269
	Hagpa WS		1	1		25	25		140	140
	Kalabugao WS		1	1		132	132		792	792
	Sayawan WS		1	1		42	42		235	235
Kadangilan	Municipal Total		5	5		277	277		1,604	1,604
	Malinao WS		1	1		140	140		700	700
	Poblacion WS	1		1	270		270	1,620		1,620
	Sibonga WS		1	1		68	68		340	340
	Municipal Total	1	2	3	270	208	478	1,620	1,040	2,660
Kallilangan	Bangbang WSA		1	1		72	72		432	432
	Barorawon WSA		1	1		15	15		90	90
	Canituan WS Org.	1		1	48		48	288		288
	KIWASA		1	1		75	75		375	375
	Municipal Total	1	3	5	42	162	204	252	897	1,149
Kitaotao	Upper Kinura WSA									
	Municipal Total	2	3	5	90	162	252	540	897	1,437
	KCES				48		48	288		288
	Plaza Site				48		48	288		288
	Teacher Village				72		72	432		432
Lantapan	Municipal Total				168		168	1,008		1,008
	Basak WS		1	1		90	90		496	496
	Bantuanon WS		1	1		162	162		893	893
	Bugcaon WS		1	1		105	105		592	592
	Capt. Juan WS		1	1		60	60		331	331
Lantapan	Kaanan WS		1	1		120	120		661	661
	Kawayan WS		1	1		60	60		331	331
	Kibangay WS		1	1		210	210		1,157	1,157
	Kulasihan WS		1	1		35	35		197	197
	Victory WS		1	1		72	72		397	397
Lantapan	Municipal Total		9	9		914	914		5,055	5,055

Table 4.1.2 Details on Existing Level II Systems (cont'd.)

Sheet 2 of 6

Name of Municipality	Name of Operating Body	Number of Barangay Served			Number of Households Served			Number of Population Served		
		Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
Libona	Kiliog WS		1			30			180	
	Kinawe WS		1			48			288	
	Kiong-kog WS		1			42			252	
	Libona WSS		7	7		885	885		4,425	4,425
Malaybalay (Capital)	Municipal Total		10	7		1,005	885		5,145	4,425
	Busdi WS		1	1		100	100		500	500
	Caburacanan WS		1	1		72	72		360	360
	Can-ayan WS		1	1		102	102		510	510
	Capitan Angel WS		1	1		36	36		216	216
	Dalwangan WS		1	1		126	126		630	630
	Imbayao WS		1	1		90	90		540	540
	Indalasa WS		1	1		48	48		288	288
	Kibalabag WS		1	1		45	45		270	270
	Kuilaman WS		1	1		60	60		300	300
	Linabo WS		1	1		24	24		144	144
	Magsaysay WS		1	1		40	40		240	240
	Maligaya WS		1	1		60	60		360	360
	Managok WS		1	1		36	36		180	180
	Manalog WS		1	1		36	36		180	180
	Mapayag WS		1	1		60	60		360	360
	Mapulo WS		1	1		60	60		360	360
	Miglamin WS		1	1		80	80		400	400
	Pat-pat WS		1	1		36	36		180	180
	Silae WS		1	1		66	66		330	330
	Simaya WS		1	1		78	78		390	390
	Sinanglanan WS		1	1		48	48		240	240
	St. Peter WS		1	1		48	48		240	240
	Zamboangita WS		1	1		90	90		450	450
	Municipal Total		23	23		1,441	1,441		7,668	7,668

Table 4.1.2 Details on Existing Level II Systems (cont'd.)
Sheet 2 of 6

Name of Municipality	Name of Operating Body	Number of Barangay Served			Number of Households Served			Number of Population Served		
		Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
Malibog	Kalingking BWSA		1	1		60	60		300	300
	Kiabo BWSA		1	1		30	30		180	180
	Mindagat BWSA		1	1		48	48		288	288
	Omagling BWSA		1	1		28	28		150	150
	Sampiano BWSA		1	1		30	30		180	180
	San Luis BWSA		1	1		48	48		300	300
	Silo-o BWSA		1	1		20	20		120	120
	Sumalsag BWSA	1		1	21		21	112		112
	Municipal Total	1	7	8	21	264	285	112	1,518	1,630
	Alae-Mambatangan-Mantibugao WS		3	3		162	162		972	972
Manolo Fortich	Dahlayan WS		1	1		49	49		294	294
	Daling WS		1	1		210	210		1,260	1,260
	Kalugmanan WS		1	1		35	35		210	210
	Lindaban WS		1	1		30	30		180	180
	Lingi-on WS		1	1		60	60		360	360
	Mahuko WS		1	1		180	180		1,080	1,080
	Guilang-guilang WS		1	1		45	45		270	270
	Santiago WS		1	1		30	30		150	150
	Ticala WS		1	1		30	30		150	150
	Municipal Total		12	12		831	831		4,926	4,926
Maramag	Anahawon		1	1		58	58		308	308
	Bayabason		1	1		120	120		637	637
	Camp I	1		1	216		216	1,151		1,151
	Dagunbaan	1		1	580		580	3,091		3,091
	Dangawan		1	1		48	48		255	255
	Dologon	1		1	120		120	640		640
	Kiharong	1		1	67		67	357		357
	Kisanday	1		1	250		250	1,333		1,333
	Kolambugon	1		1	120		120	640		640
	Kuya	1		1	250		250	1,333		1,333

Table 4.1.2 Details on Existing Level II Systems (cont'd.)
Sheet 2 of 6

Name of Municipality	Name of Operating Body	Number of Barangay Served			Number of Households Served			Number of Population Served		
		Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
Maramag	La Roxas	1		1	290		290	1,546		1,546
	Panadtalan		1	1		230	230		1,221	1,221
	Panalsalan		1	1		150	150		797	797
	San Miguel	1		1	280		280	1,492		1,492
	San Roque		1	1		180	180		956	956
	Tubigun		1	1		180	180		956	956
	Municipal Total	9	7	16	2,173	966	3,139	11,583	5,130	16,713
	Adtuon WS									
	Bacusanon WS	1		1	64		64	384		384
	Barandias WS	1		1	67		67	386		386
Pangantucan	Concepcion WS		1	1		24	24		144	144
	Gandingan WS		1	1		30	30		180	180
	Kimanait WS	1		1	168		168	1,008		1,008
	Lantay WS		1	1		60	60		360	360
	Mendis WS		1	1		35	35		210	210
	Nabaliwa WS	1		1	38		38	228		228
	New Eden WS		1	1		50	50		285	285
	Pigtauranan WS		1	1		38	38		228	228
	Poblacion WS	1		1	185		185	1,110		1,110
	Fortulin WS		1	1		20	20		125	125
	Municipal Total	5	7	12	522	257	779	3,116	1,532	4,648
	Cawayan WWS		1	1		20	20		120	120
	Dumalama WWS		1	1		32	32		192	192
	Linabo WWS		1	1		21	21		130	130
	Magsaysay WS		1	1		42	42		252	252
	Merangeran WWS		1	1		74	74		445	445
Quezon	Palacpao WWS		1	1		30	30		185	185
	Puntian WWS		1	1		25	25		150	1,012

Table 4.1.2 Details on Existing Level II Systems (cont'd.)

Sheet 2 of 6

Name of Municipality	Name of Operating Body	Number of Barangay Served			Number of Households Served			Number of Population Served		
		Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
San Fernando	San Roque WWS		1	1		25	25		150	150
	Sta. Cruz WWS		1	1		50	50		285	285
	Municipal Total		9	9		319	319		1,909	2,771
	Iglusad WS		1	1		42	42		252	252
	Little Baguio WSS	1		1		60	60	360		360
Sumilao	Nacabuklad WS		1	1		30	30		180	180
	Municipal Total	1	2	3	60	72	132	360	432	792
	Lico-an WS		1	1		50	50		800	800
	Poblacion WS	1		1		168	168	1,008		1,008
	Puntian WS		1	1		48	48		336	336
Talakag	San Roque WS		1	1		72	72		432	432
	Municipal Total	1	3	4	168	170	338	1,008	1,568	2,576
	San Isidro WWS		1	1		75	75		450	450
	Brgy. 5 WWS	1		1	42		42	252		252
	Municipal Total	1	1	2	42	75	117	252	450	702
Valencia	Barlag WS		1	1		180	180		1,080	1,080
	Barbo WS		1	1		45	45		270	270
	Concepcion WS		1	1		90	90		540	540
	Kabayugan WS		1	1		30	30		106	106
	Lilingayon WS		1	1		240	240		1,440	1,440
	Lumbayao WS		1	1		120	120		678	678
	Mt. Nebo WS		1	1		130	130		780	780
	Pulahan WS		1	1		70	70		370	370
	Tugaya WM		1	1		186	186		1,116	1,116
	Municipal Total		9	9		1,091	1,091		6,380	6,380
Provincial Total		26	130	153	3,811	9,401	13,092	21,346	52,925	74,413

Table 4.1.2 Details on Existing Level II Systems

Sheet 3 of 6

Name of Municipality	Name of Operating Body	Service Conditions During Dry Season							Supply Water Pressure (% of total)	
		Supply (Hrs/day)	Dirty Water ¹	Taste or Smell ²	Power Failure	Pump Breakdown	Pipe Burst	Others		
Baungon	Liboran WS	4			2	1				
	Lingating WS	8								
	Nicdao WS	24								
	Anlugaan WW	4								
	Cananga-an WW	24								
Cabanglasan	Capinonan WW	24								
	Dalacutan WW	24								
	Freedom WW	24								
	Iba WS	4								
	Imbatug WW	24								
	Jasaan WS	24								
	Lambagan WS	4								
	Mandaing WS	4								
	Mauswagon WW	24								
	Paradise WW	4								
Dangcagan	Poblacion WS	6								
	San Vicente WS	24								
	Macapari WS	2			2	1				
	New Compostela WS	1			2		1			
	Poblacion WS	4			2					
Don Carlos	Pocopoco WS	24								
	Kibatang WS	1								
	Manlamonay WS	6								
	New Nongnongan WS	5								
	Pualas WS	6								

Table 4.1.2 Details on Existing Level II Systems (cont'd.)

Sheet 3 of 6

Name of Municipality	Name of Operating Body	Service Conditions During Dry Season							Supply Water Pressure (% of total)	
		Supply (Hrs/day)	Dirty Water ¹	Taste or Smell ²	Power Failure	Pump Breakdown	Pipe Burst	Others		
Don Carlos Impasugong	San Antonio East WS									
	Bolunay WS	12								
	Dumalaguig WS	24								
	Hagpa WS	24								
	Kalabugao WS	24								
	Sayawan WS	24								
Kadangilan	Malinao WS	24								
	Poblacion WS	6								
	Sibonga WS	1.5								
	Bangbang WSA	8					2			
Kaililangan	Barorawon WSA	24					2			
	Caninuan WS Org.	24					2			
	KIWASA	24					2			
	Upper Kinura WSA	24					1			
	KCES	4								
	Plaza Site	3								
Lantapan	Teacher Village	4								
	Basak WS	8								
	Bantuanon WS	8								
	Bugcaon WS	8								
	Capt. Juan WS	24								
	Kaatuan WS	8								
	Kawayan WS	8								
	Kibangay WS	8								

Table 4.1.2 Details on Existing Level II Systems (cont'd.)
Sheet 3 of 6

Name of Municipality	Name of Operating Body	Service Conditions During Dry Season							Supply Water	
		Supply (Hrs/day)	Dirty Water ¹	Taste or Smell ²	Power Failure	Pump Breakdown	Pipe Burst	Others	Adequate	Inadequate
Lantapan	Kulasihan WS	8								
	Victory WS	8								
	Killog WS	24								
Libona	Kinawe WS	4								
	Kiong-kog WS	3			3					
	Libona WSS	24								
Malaybalay (Capital)	Busdi WS	24					2			
	Caburacanan WS	24								
	Can-ayan WS	24					4			
	Capitan Angel WS	24								
	Dalwangan WS	24								
	Imbayao WS	24								
	Indalasa WS	24			5					
	Kibalabag WS	24								
	Kulaman WS	24					1			
	Linabo WS	24								
	Magsaysay WS	24								
	Maligaya WS	24								
	Managok WS	24								
	Manalog WS	24								
	Mapayag WS	24								
	Mapulo WS	24								
	Miglarin WS	24								
	Pat-pat WS	24								
	Silae WS	24					4			

Table 4.1.2 Details on Existing Level II Systems (cont'd.)

Sheet 3 of 6

Name of Municipality	Name of Operating Body	Service Conditions During Dry Season							
		Supply (Hrs/day)	Dirty Water ¹	Taste or Smell ²	Power Failure	Pump Breakdown	Pipe Burst	Others	Supply Water
Malaybalay (Capital)	Simaya WS	24							
	Sinanglanan WS	24							
	St. Peter WS	24							
	Zamboangita WS	24							
	Kalingking BWSA	12							
Malitbog	Kiabo BWSA	24							
	Mindagat BWSA	12							
	Omagling BWSA	24							
	Sampiano BWSA	4							
	San Luis BWSA	3							
	Silo-o BWSA	24							
	Sumalsag BWSA	12							
	Alae-Mambarang-Mantibugao WS	4							
Manolo Fortich	Dahilayan WS	24							
	Daling WS	24							
	Kalugmanan WS	24							
	Lindaban WS	24							
	Lingi-on WS	4							
	Maluko WS	24							
	Guilang-guilang WS	24							
	Santiago WS								
	Ticala WS	24							
	Anahawon	4							
Maramag	Bayabason	8							

Table 4.1.2 Details on Existing Level II Systems (cont'd.)
Sheet 3 of 6

Name of Municipality	Name of Operating Body	Service Conditions During Dry Season							Supply Water	
		Supply (Hrs/day)	Dirty Water ¹	Taste or Smell ²	Power Failure	Pump Breakdown	Pipe Burst	Others	Adequate	Inadequate
Maramag	Camp I	8								
	Dagumnaan	12								
	Dangawan	12								
	Dologon	4								
	Kiharong	8								
	Kisanday	8								
	Kolambugon	8								
	Kuya	8								
	La Roxas	12								
	Panadtalan	6								
	Panalsalan	6								
	San Miguel	8								
	San Roquel	12								
	Tubigun	8								
	Adtuyon WS	24								
	Bacusanon WS	24								
Pangantucan	Barandias WS	24								
	Concepcion WS	24								
	Gandingan WS									
	Kimanait WS	12								
	Lantay WS	24								
	Mendis WS	20								
	Nabaliwa WS	24								
	New Eden WS	24								
	Pigtauranan WS	24								

Table 4.1.2 Details on Existing Level II Systems (cont'd.)
Sheet 3 of 6

Name of Municipality	Name of Operating Body	Service Conditions During Dry Season								
		Supply (Hrs/day)	Dirty Water ¹	Taste or Smell ²	Power Failure	Pump Breakdown	Pipe Burst	Others	Adequate	Inadequate
Pangantucan	Poblacion WS	12								
	Fortulin WS	24								
Quezon	Cawayan WWS	24								
	Dumalana WWS	24								
	Linabo WWS	24								
	Magsaysay WS	24								
	Merangeran WWS	6								
	Palacapao WWS	24								
	Puntian WWS	24								
	San Roque WWS	24								
San Fernando	Sta. Cruz WWS	24								
	Iglusad WS	24								
	Little Baguio WSS	24								
	Nacabuklad WS	24								
	Lico-an WS	24								
	Poblacion WS	24								
Sumilao	Puntian WS	4								
	San Roque WS	24								
Talakag	San Isidro WWS	4								
	Brgy. 5 WWS	6								
Valencia	Banlag WS	24							2	
	Barubow WS	24							3	

Table 4.1.2 Details on Existing Level II Systems (cont'd.)
Sheet 3 of 6

Name of Municipality	Name of Operating Body	Service Conditions During Dry Season							
		Supply (Hrs/day)	Dirty Water ¹	Taste or Smell ²	Supply Interruption (number/month)				Supply Water
Valencia	Concepcion WS	4			Power Failure	Pump Breakdown	Pipe Burst	Others	Adequate
	Kabayugan WS	24							Inadequate
	Lilingayon WS								
	Lumbayao WS	24							
	Mt. Nebo WS	24							
	Pulahan WS								
	Tugaya WM	24					3		

Note: 1. Dirty Water: E - Everyday, OW - Once a week, OM - Once a month, O - Occasional.

2. Taste or Smell: G - Good taste, S - Salty, W - Wood taste, M - Metallic taste, O - Others.

Table 4.1.2 Details on Existing Level II Systems
Sheet 4 of 6

Name of Municipality	Name of Operating Body	Number of Staff					Repair Work			
		Technical Staff	Administrative Staff	Collector	Total Number of Staff	Local Trademan	MEO/CEO	DEO	Others	
Baungan	Liboran WS	2	1	1	4				✓	
	Lingating WS	2	3	1	6				✓	
	Nicdao WS	1		1	2				✓	
Cabanglasan	Anluran WW	1	1	1	3				✓	
	Cananga-an WW	1	1	1	3				✓	
	Capinonan WW	1	1	1	3				✓	
	Dalacutan WW	1	1	1	3				✓	
	Freedom WW	1	1	1	3				✓	
	Iba WS	1	1	1	3				✓	
	Imbatug WW	1	1	1	3				✓	
	Jasaan WS									
	Lambagan WS	1	1	1	3				✓	
	Mandaing WS	1	1	1	3				✓	
	Mauswagon WW	1	1	1	3				✓	
	Paradise WW								✓	
	Poblacion WS		1	1	2		✓			
	San Vicente WS									
	Macapari WS	1			1				✓	
	New Compostela WS						✓		✓	
Don Carlos	Poblacion WS								✓	
	Pocopoco WS								✓	
	Kibatang WS	1		2	3			✓	✓	
	Manlamonay WS							✓		
	New Nongnongan WS			2	2				✓	
	Pualas WS							✓		

Table 4.1.2 Details on Existing Level II Systems (cont'd.)

Sheet 4 of 6

Name of Municipality	Name of Operating Body	Number of Staff					Repair Work		
		Technical Staff	Administrative Staff	Collector	Total Number of Staff	Local Trademan	MEO/CEO	DEO	Others
Don Carlos	San Antonio East WS								
	Bohuy WS						✓		
	Dumalaguang WS								
	Hagpa WS						✓		
	Kalabugao WS						✓		
Kadilingan	Sayawan WS						✓		
	Malinao WS								✓
	Poblacion WS						✓		
	Sibonga WS	1		12	13				✓
	Bangbang WSA			3	3				✓
Kallilangan	Barorawon WSA			1	1				✓
	Caninuan WS Org.			1	1				✓
	KIWASA			1	1				✓
	Upper Kinura WSA			1	1				✓
	KCES						✓		
Kitaotao	Plaza Site			1	1		✓		
	Teacher Village	1		1	2		✓		
	Basak WS								
Lantapan	Bantuanon WS		Barangay Council						
	Bugcaon WS		Barangay Council						
	Capt. Juan WS		Barangay Council						
	Kaatuan WS		Barangay Council						
	Kawayan WS		Barangay Council						
	Kibangay WS		Barangay Council						

Table 4.1.2 Details on Existing Level II Systems (cont'd.)

Sheet 4 of 6

Name of Municipality	Name of Operating Body	Number of Staff					Repair Work		
		Technical Staff	Administrative Staff	Collector	Total Number of Staff	Local Trademan	MEO/CEO	DEO	Others
Lantapan	Kulasihan WS		Barangay Council						
	Victory WS		Barangay Council				✓		
Libona	Kiliog WS		Barangay Council				✓		
	Kinawe WS		Barangay Council				✓		✓
	Kiong-kog WS		Barangay Council				✓		✓
	Libona WSS	1			1		✓		✓
Malaybalay (Capital)	Busdi WS		Barangay Council						✓
	Caburacanan WS	2	1		3				✓
	Can-ayan WS	4	1		5				✓
	Capitan Angel WS		Barangay Council						
	Dalwangan WS		Barangay Council			✓			
	Imbayao WS		Barangay Council						✓
	Indalasa WS		Barangay Council						✓
	Kibalabag WS		Barangay Council						✓
	Kulaman WS		Barangay Council						✓
	Linabo WS		Barangay Council						✓
	Magsaysay WS		Barangay Council						✓
	Maligaya WS		Barangay Council						✓
	Managok WS		Barangay Council						✓
	Manalog WS		Barangay Council						✓
	Mapayag WS		Barangay Council						✓
	Mapulo WS		Barangay Council						✓
	Miglarmin WS		Barangay Council						✓
	Pat-pat WS		Barangay Council						✓
	Silae WS		Barangay Council						✓
	Simaya WS		Barangay Council						✓

Table 4.1.2 Details on Existing Level II Systems (cont'd.)
Sheet 4 of 6

Name of Municipality	Name of Operating Body	Number of Staff					Repair Work		
		Technical Staff	Administrative Staff	Collector	Total Number of Staff	Local Trademan	MEO/CEO	DEO	Others
Malaybalay (Capital)	Sinanglanan WS		Barangay Council						✓
	St. Peter WS		Barangay Council						✓
Malibog	Zamboangita WS		Barangay Council						✓
	Kalingking BWSA						✓		✓
	Kiabo BWSA						✓		✓
	Mindagat BWSA						✓		✓
	Omagling BWSA						✓		✓
	Sampiano BWSA						✓		✓
	San Luis BWSA						✓		✓
	Silo-o BWSA						✓		✓
	Suralsag BWSA						✓		✓
	Alae-Mambatangan-Mantibugao WS	3	2	1	6	✓			✓
Manolo Fortich	Dahilayan WS	3	2	1	6	✓			✓
	Daling WS	3	2	1	6	✓			✓
	Kalugmanan WS	3	2	1	6	✓			✓
	Lindaban WS	3	2	1	6	✓			✓
	Lingi-on WS	3	2	1	6	✓			✓
	Maluko WS	3	2	1	6	✓			✓
	Guilang-guilang WS	3	2	1	6	✓			✓
	Santiago WS	3	2	1	6	✓			✓
	Ticala WS	3	2	1	6	✓			✓
	Anahawon					✓			✓
Maramag	Bayabason					✓			✓
	Camp I					✓			✓
	Dagumbaan					✓			✓
	Danggawan					✓			✓

Table 4.1.2 Details on Existing Level II Systems (cont'd.)

Sheet 4 of 6

Name of Municipality	Name of Operating Body	Number of Staff					Repair Work		
		Technical Staff	Administrative Staff	Collector	Total Number of Staff	Local Trademan	MEO/CEO	DEO	Others
Maramag	Dologon					✓			✓
	Kiharong					✓			✓
	Kisanday					✓			✓
	Kolambugon					✓			✓
	Kuya					✓			✓
	La Roxas					✓			✓
	Panadtalan					✓			✓
	Panalsalan					✓			✓
	San Miguel					✓			✓
	San Roquel					✓			✓
	Tubigun					✓			✓
	Aduyon WS								✓
	Bacusanon WS								✓
Pangantucan	Barandias WS								✓
	Concepcion WS								✓
	Gandingan WS								✓
	Kimanait WS								✓
	Lantay WS								✓
	Mendis WS								✓
	Nabaliwa WS								✓
	New Eden WS								✓
	Pigtauranan WS								✓
	Poblacion WS						✓		✓
	Fortulin WS								✓
	Cawayan WWS								✓
	Dunalama WWS						✓		✓
Quezon									✓

Table 4.1.2 Details on Existing Level II Systems (cont'd.)
Sheet 4 of 6

Name of Municipality	Name of Operating Body	Number of Staff					Repair Work		
		Technical Staff	Administrative Staff	Collector	Total Number of Staff	Local Trademan	MEO/CEO	DEO	Others
Quezon	Linabo WWS						✓		✓
	Magsaysay WS						✓		✓
	Merangeran WWS						✓		✓
	Palacapao WWS						✓		✓
	Puntian WWS						✓		✓
	San Roque WWS						✓		✓
San Fernando	Sta. Cruz WWS						✓		✓
	Ighusad WS	2	6	1	9				✓
	Little Baguio WWS	4	6	1	11				✓
	Nacabuklad WS	2	5	1	8				✓
	Lico-an WS	2	1	1	4		✓		✓
	Poblacion WS						✓		✓
Surmilao	Puntian WS	2	1	1	4		✓		✓
	San Roque WS	2	1	1	4				
	San Isidro WWS						✓		
	Brgy. 5 WWS						✓		
Talakag	Banlag WS			2	2				✓
	Barubos WS								✓
Valencia	Concepcion WS								✓
	Kabayugan WS								✓
	Lilingayon WS								
	Lumbayao WS	1	1	1	3				✓
	Mt. Nebo WS								✓
	Pulahan WS								
	Tugaya WM	2	1	1	4				✓

Table 4.1.2 Details on Existing Level II Systems
Sheet 5 of 6

Name of Municipality	Name of Operating Body	Expenditures					Tariff			Average Collection Efficiency (%)				
		Annual	Wages	Fuel, Chem.	Transport	Repairs	Loan Repayment	Other	Consumer Payment (\$/Year)		Cost per Pail	Cost per Cu. (Pesos)	Cost/HH/Year	Other
Baugon	Liboran WS	14	12									120		95
	Lingating WS					2						120		90
	Nicdao WS	7	4.8	1.2		1						240		90
Cabanglasan	Anlugan WW		12					18				420		
	Cananga-an WW		12					3				240		
	Capinonan WW							3				360		
	Dalacutan WW		12					40						
	Freedom WW		12					4				240		
	Iba WS							18				300		90
	Imbatug WW		12					4				360		
	Jasaan WS													
	Lambagan WS		9.6					2						
	Mandaing WS		12					20				420		
Dangcagan Damulog	Mauswagon WW		12					4				240		
	Paradise WW							2				240		
	Poblacion WS											240		90
	San Vicente WS													
	Macapari WS	11.4	6											
	New Compostela WS	24	3.6											
	Poblacion WS	9	3.6											
	Pocopoco WS		3.6											
	Kibatang WS											360		50
	Manlamanay WS		6									300		80
Don Carlos	New Nongnongan WS		13.2									240		
	Pualas WS													
	San Antonio East WS									1				
	Botunay WS													
	Dumalaguig WS													
Impasugong	Hagpa WS													
	Kalabugao WS													
	Sayawan WS													
	Malinao WS	1										60		60
Kadanglian	Poblacion WS													
	Sibonga WS	12	4.8										250/PF	100
Kailangan	Bangbang WSA								11.52			120		
	Barorawon WSA								6.24			120		
	Canituan WS Org.								12.24			180		
	KIWASA								8.64			120		
	Upper Kinura WSA								9.12			120		

Table 4.1.2 Details on Existing Level II Systems (cont'd.)
Sheet 5 of 6

Name of Municipality	Name of Operating Body	Expenditures					Tariff				Average Collection Efficiency (%)			
		Annual	Wages	Fuel, Chem. Mat'l.	Transport	Repairs	Loan Repayment	Other	Consumer Payment (P/Year)	Cost per Pail		Cost per Cu. Meter	Cost/HH/Year	Other
Kitaotao	KCES													
	Plaza Site											134		
	Teacher Village													
Lantapan	Basak WS											60		
	Bantuanon WS											60		
	Bugcaon WS											60		
	Capt. Juan WS											60		
	Kaatuan WS											60		
	Kawayan WS											60		
	Kibangay WS											60		
	Kulashan WS											60		
	Victory WS											60		
	Kilitog WS													
Libona	Kinaue WS													
	Kiong-kog WS													
	Libona WSS	1,882.13												
Malaybalay (Capital)	Busdi WS													
	Caburacanan WS													
	Can-ayan WS											120		
	Capitan Angel WS													
	Dalwangan WS													
	Imbayao WS													
	Indalasa WS													
	Kibalabag WS													
	Kulaman WS													
	Linabo WS													
	Magsaysay WS													
	Maligaya WS													
	Managok WS													
	Manalog WS													
	Mapayag WS													
	Mapulo WS													
	Miglamin WS													
	Pat-pat WS													
	Silac WS													
	Simaya WS													
Sinanglanan WS														
St. Peter WS														
Zamboangita WS														

Table 4.1.2 Details on Existing Level II Systems (cont'd.)
Sheet 5 of 6

Name of Municipality	Name of Operating Body	Expenditures					Tariff				Average Collection Efficiency (%)					
		Annual	Wages	Fuel, Chem. Mat'l.	Transport	Repairs	Loan Repayment	Other	Consumer Payment (#/Year)	Cost per Pail		Cost per Cu. Meter	Cost/HH/ Year	Other		
															(P '000.00 / year)	
Malibog	Kalinging BWSA															
	Kiabo BWSA															
	Mindagat BWSA															
	Omaging BWSA															
	Sampiano BWSA															
	San Luis BWSA															
	Silo-o BWSA															
	Sumalsag BWSA															
	Alae-Mambatangan-Mantibugao WS															
	Dahilayan WS															
Manolo Fortich	Daling WS															
	Kalugmanan WS															
	Lindaban WS															
	Lingi-on WS															
	Maluko WS															
	Guilang-guilang WS															
	Santiago WS															
	Ticala WS															
	Anahawon															
	Bayabason															
Maramag	Camp I															
	Dagumbaan															
	Danggawan															
	Dologon															
	Kiharong															
	Kisanday															
	Kolambugon															
	Kuya															
	La Roxas															
	Panadalan															
Pangantucan	Panalsalan															
	San Miguel															
	San Roquel															
	Tubigon															
	Aduyon WS															
	Bacusanon WS															
	Barandias WS															
	Concepcion WS															
	Gandingan WS															

Table 4.1.2 Details on Existing Level II Systems (cont'd.)

Sheet 5 of 6

Name of Municipality	Name of Operating Body	Expenditures					Tariff				Average Collection Efficiency (%)			
		Annual	Wages	Fuel, Chem. Mat'l.	Transport	Repairs	Loan Repayment	Other	Consumer Payment (P/Year)	Cost per Cu. Meter				
										Cost per Pali		Cost/HH/Year	Other	
		(P '000.00 / year)												
		(Pesos)												
Pangantucan	Kimanait WS													
	Lantay WS													
	Mendis WS													
	Nabaliwa WS													
	New Eden WS													
	Pigtauranan WS												10	
	Poblacion WS													
Quezon	Fortulin WS													
	Caveyan WWS													
	Dumalana WWS													
	Linabo WWS													
	Magssaysay WS													
	Merangeran WWS													
	Palacapao WWS													
San Fernando	Puntian WWS													
	San Roque WWS													
	Sta. Cruz WWS													
	Iglusad WS												60	
	Little Baguio WSS										2		60	
	Nacabuklad WS													
	Lito-an WS													
Sumilao	Poblacion WS													
	Puntian WS													
	San Roque WS											70		
	San Isidro WWS													
	Brgy. 5 WWS													
	Banlag WS	10		10									10	60
	Berubo WS	2.4	2.4										10	18
Talakag	Concepcion WS		8	8									5	
	Kabayugan WS													
	Lilingayon WS													
	Lumbayao WS	5		5									10	10
	Mt. Nebo WS													
	Pulahan WS													
	Tugaya WM	5	2	3						5000			20	15
Valencia														17

Table 4.1.2 Details on Existing Level II Systems
Sheet 6 of 6

Name of Municipality	Name of Operating Body	Billings				Revenues					
		Annual Billing (Number)	Public Faucet Consumer	House Connection Consumers	Expected Subsidies	Others	Annual Income	Payment by Public Faucet Consumers	Payment by House Connection	Subsidies	Other
Baungon	Liboran WS	30	3.6								
	Lingating WS	500	60				20				
	Nicdao WS	30	7.2				7.56				
Cabanglasan	Anlugan WW						35				
	Cananga-an WW						40				
	Capinonan WW						50				
	Dalacutan WW						20				
	Freedom WW						30				
	Iba WS						30				
	Imbatug WW						50				
	Jasaan WS										
	Lambagan WS						35				
	Mandaing WS						40				
	Mauswagon WW						35				
	Paradise WW						35				
Dangcagan Damulog	Poblacion WS										
	San Vicente WS										
	Macapani WS		23.4								
	New Compostela WS	51									
	Poblacion WS		12.6								
Don Carlos	Pocopoco WS		26.28								
	Kibatang WS										
	Manlamonay WS										
	New Nongnongan WS										
	Pualas WS										
Impasugong	San Antonio East WS										
	Bolunay WS										
	Dumalaguang WS										
	Hagpa WS										
	Kalabugao WS										
	Savawan WS										

Table 4.1.2 Details on Existing Level II Systems (cont'd.)
Sheet 6 of 6

Name of Municipality	Name of Operating Body	Billings				Revenues					
		Annual Billing (Number)	Public Faucet Consumer	House Connection Consumers	Expected Subsidies	Others	Annual Income	Payment by Public Faucet Consumers	Payment by House Connection Consumer	Subsidies	Other
Kadangilan	Malinao WS										
	Poblacion WS						4.5				
	Sibonga WS						36				
	Bangbang WSA						11.52				
	Barorawon WSA						6.24				
Kaliangan	Canituan WS Org						12.24				
	KIWASA						8.64				
	Upper Kinura WSA						9.12				
	KCES										
Kitaotao	Plaza Site										
	Teacher Village										
Lantapan	Basak WS										
	Bantuanon WS										
	Bugcaon WS										
	Capt. Juan WS										
	Kaatuan WS										
	Kawayan WS										
	Kibangay WS										
	Kulasihan WS										
	Victory WS										

Table 4.1.2 Details on Existing Level II Systems (cont'd.)
Sheet 6 of 6

Name of Municipality	Name of Operating Body	Billings					Revenues				
		Annual Billing (Number)	Public Faucet Consumer	House Connection Consumers	Expected Subsidies	Others	Annual Income	Payment by Public Faucet Consumers	Payment by House Connection Consumer	Subsidies	Other
Libona	Kiliog WS										
	Kinawe WS										
	Kiong-kog WS										
	Libona WSS										5.25*
Malaybalay (Capital)	Busdi WS										
	Caburacan WS										
	Can-ayan WS						27.72				
	Capitan Angel WS										
	Dalwangan WS										
	Imbayao WS										
	Indalasa WS										
	Kibalabag WS										
	Kulaman WS										
	Linabo WS										
	Magsaysay WS										
	Maligaya WS										
	Managok WS										
	Manalog WS										
	Mapayag WS										
	Mapulo WS										

Table 4.1.2 Details on Existing Level II Systems (cont'd.)

Sheet 6 of 6

Name of Municipality	Name of Operating Body	Billings					Revenues				
		Annual Billing	Public Faucet Consumer	House Connection Consumers	Expected Subsidies	Others	Annual Income	Payment by Public Faucet Consumers	Payment by House Connection Consumer	Subsidies	Other
		(Number)									
Malaybalay (Capital)	Miglamin WS										
	Pat-pat WS										
	Silac WS										
	Sinaya WS										
	Sinanglanan WS										
	St. Peter WS										
Malitbog	Zamboangita WS										
	Kalingking BWSA										
	Kiabo BWSA										
	Mindagat BWSA										
	Omagling BWSA										
	Sampiano BWSA										
	San Luis BWSA										
	Silo-o BWSA										
	Sumalsag BWSA										
Manolo Fortich	Alae-Mambatangan-Manitbugao WS										
	Dahilayan WS										
	Daling WS										
	Kalugmanan WS										
	Lindaban WS										

Table 4.1.2 Details on Existing Level II Systems (cont'd.)
Sheet 6 of 6

Name of Municipality	Name of Operating Body	Billings				Revenues					
		Annual Billing	Public Faucet Consumer	House Connection Consumers	Expected Subsidies	Others	Annual Income	Payment by Public Faucet Consumers	Payment by House Connection Consumer	Subsidies	Other
		(Number)	(P '000.00 / year)								
Manolo Fortich	Ling-ion WS										
	Maluko WS										
	Guilang-guilang WS										
	Santiago WS										
	Ticala WS										
Maramag	Anahawon										
	Bayabason										
	Camp I										
	Dagumbaan										
	Danggawan										
	Dologon										
	Kiharong										
	Kisanday										
	Kolambugon										
	Kuya										
	La Roxas										
	Panadalan										
	Panalsalan										
	San Miguel										
	San Roquel										
Tubieun											

Table 4.1.2 Details on Existing Level II Systems (cont'd.)
Sheet 6 of 6

Name of Municipality	Name of Operating Body	Billings					Revenues				
		Annual Billing	Public Faucet Consumer	House Connection Consumers	Expected Subsidies	Others	Annual Income	Payment by Public Faucet Consumers	Payment by House Connection Consumer	Subsidies	Other
		(Number)									
Pangasinan	Adulyon WS										
	Bacusanon WS										
	Barandias WS										
	Concepcion WS										
	Gandingan WS										
	Kimanait WS										
	Lantay WS										
	Mendis WS										
	Nabaliwa WS										
	New Eden WS										
	Pigtauranan WS										
	Poblacion WS										
	Fortulin WS										
Quezon	Cawayan WWS										
	Dumalama WWS										
	Linabo WWS										
	Magsaysay WS										
	Merangeran WWS										
	Palacapo WWS										
	Puntian WWS										
	San Roque WWS										
	Sta. Cruz WWS										

Table 4.1.2 Details on Existing Level II Systems (cont'd.)
Sheet 6 of 6

Name of Municipality	Name of Operating Body	Billings				Revenues					
		Annual Billing (Number)	Public Faucet Consumer	House Connection Consumers	Expected Subsidies	Others	Annual Income	Payment by Public Faucet Consumers	Payment by House Connection Consumer	Subsidies	Other
San Fernando	Iglusad WS										
	Little Baguio WSS										
	Nacabuklad WS										
	Lico-an WS										
Sumilao	Poblacion WS										
	Puntian WS										
	San Roque WS										
	San Isidro WWS										
Talakag	Brgy. 5 WWS										
	Banlag WS						26.16				
Valencia	BarboWS						13.68				
	Concepcion WS						3.6				
	Kabayugan WS										
	Lilingayon WS										
	Lumbayao WS						42				
	Mt. Nebo WS										
	Pulahan WS										
	Tugaya WM						30				

Note: * - Application fee from consumer.

4.1.5 Level I Facilities

Safe and Unsafe Classification of Level I Facilities

According to the definition of DOH, the protected deep well, protected shallow well, covered/improved dug well and developed spring are classified as safe sources, while the unprotected shallow well, open dug well, undeveloped spring and rain water collector are classified as unsafe sources.

In the 1990 population census data, "Households by Main Source of Drinking Water and City/Municipality", it was shown that 86% of the households depended on several kinds of water sources such as shallow wells, dug wells, undeveloped springs, lake, river, rain water, etc. This figure was considered as the upper limit of doubtful sources in terms of underserved/unserved, if all shallow wells were regarded as doubtful.

On the other hand, the PHO has been conducting water quality analysis of samples collected at public and private Level I wells and classified into safe and unsafe sources/facilities. Table 4.3.1 presents the results of water quality analysis of existing shallow wells.

Table 4.1.3 Results of Water Quality Examination of Shallow Wells

Municipality	No. of Existing Shallow	Results of Water Quality Examination ^{2)/}				Total No. of Sample
		Safe Source		Unsafe Source		
		Number	Percentag	Number	Percentag	
Baungon	53	53	74%	19	26%	72
Cabanglasan	1	1	100%		0%	1
Damulog	0	5	14%	35	86%	37
Dangcagan	22	159	100%		0%	159
Don Carlos	1,930	152	8%	1,822	92%	1,974
Impasugong	4	-	N.A.	-	N.A.	-
Kadingilan	8		0%	15	100%	15
Kalilangan	4	12	100%		0%	12
Kibawe	4	6	100%		0%	6
Kitaotao	60		0%	60	100%	60
Lantapan	4	-	N.A.	-	N.A.	-
Libona	3	4	100%		0%	4
Malaybalay	54	104	76%	32	24%	136
Malitbog	0	-	N.A.	-	N.A.	-
Manolo Fortich	10	-	N.A.	-	N.A.	-
Maramag	61	63	100%		0%	63
Pangantucan	0	-	N.A.	-	N.A.	-
Quezon	37	18	28%	47	72%	65
San Fernando	42	6	11%	51	89%	57
Sumilao	2		0%	1	100%	1
Talakag	4		0%	12	100%	12
Valencia	229	152	55%	126	45%	278
Province	2,532	735	25%	2,217	75%	2,952

Source: 1) PPDO, 2) PHO, 1998

N.A.: Not Available

The results of the bacteriological examination indicated that about 75 % of the shallow wells are under the classification of unsafe source in the province. With regard to the high percentage of unsafe results, these are the following background conditions.

- Water sampling by the PHO is usually conducted upon the request of the local residents where problems on water quality and/or incidence of water related diseases have been experienced.
- There are some cases that the same Level I sources/facilities are examined repeatedly until their safety is confirmed.
- As revealed, as in the case of Damulog, dug wells may be included in the unsafe sources.
- The provincial average of unsafe sources is greatly affected by the examination results of Don Carlos, since 67 % of the samples was collected in the municipality.

Considering the above-mentioned conditions, the unsafe percentage derived from the PHO analysis on Level I shallow wells may be overestimated.

As reference information, the experiences for 1st batch provinces in Mindanao area during the preparation of PW4SP show that about 20-50% is considered as unsafe sources as summarized below.

Surigao del Norte	Agusan del Norte	Agusan del Sur	Davao Oriental	Davao del Sur
20%	50%	23%	40%	46%

Based on the above study, the maximum percentage used in the 1st batch study may be adopted as the unsafe percentage to the whole province in the classification of shallow wells. While, those sources other than the shallow wells are processed as classified in the questionnaire. Table 4.1.4 (a) presents the number of Level I facilities by safe and unsafe classification.

Public and Private Level I Facilities for Rural Water Supply

Table 4.1.4 (b) presents the number and the proportion of Level I facilities by public and private sources for rural water supply in the province. Public and private facilities share 13% and 87% of the total number of Level I facility, respectively. Developed springs occupy 46% of the total number of public facilities.

Table 4.1.4(a) Number of Level 1 Facilities by Safe and Unsafe Classification

Name of Municipality	Area	Safe Source										Unsafe Source						Grand Total				
		Public					Private					Public										
		Deep Well	Shallow Well	Covered/Improved Dug Well	Developed Spring	Sub-total	Deep Well	Shallow Well	Covered/Improved Dug Well	Sub-total	Total	Shallow Well	Open Dug Well	Undeveloped Spring	Rain Water Collection	Sub-total	Rain Water Collector		Sub-total	Total		
Bauang	Urban	3	4	4	11	18					18	4				4				4	23	145
	Rural	9	23		90	122					122	23				23				23	271	160
	Total	12	27	8	101	140					140	27				27				27	11	6
	Urban	4	1		6	11					11	1				1				1	10	16
Cabangisan	Urban	11	1		4	16					16	1				1				1	11	22
	Rural	15	1		5	21					21	1				1				1	14	24
	Total	26	2		9	37					37	2				2				2	25	46
	Urban	2	4	1	3	10					10	4				4				4	14	24
Dumaling	Rural	2	4	4	12	20					20	4				4				4	22	38
	Total	4	8	8	24	40					40	8				8				8	36	62
	Urban	4	3	2	9	18					18	3				3				3	21	39
	Total	8	7	5	21	35					35	7				7				7	28	61
Don Carlos	Urban	6	2	2	10	18					18	2				2				2	20	38
	Rural	14	4	3	16	37					37	4				4				4	41	79
	Total	20	6	5	26	55					55	6				6				6	61	117
	Urban	1	2	2	5	10					10	2				2				2	12	22
Impusugong	Rural	16	1	1	15	32					32	1				1				1	46	88
	Total	17	2	2	16	34					34	2				2				2	48	90
	Urban	8	1	1	10	19					19	1				1				1	20	38
	Total	16	2	2	16	34					34	2				2				2	40	76
Kadiyagan	Urban	1	2	2	5	10					10	2				2				2	25	31
	Rural	1	2	2	5	10					10	2				2				2	25	31
	Total	2	4	4	10	20					20	4				4				4	50	62
	Urban	9	1	1	11	22					22	1				1				1	36	54
Kallangan	Rural	3	1	1	5	10					10	1				1				1	36	54
	Total	6	2	2	10	20					20	2				2				2	72	108
	Urban	12	2	2	16	32					32	2				2				2	95	147
	Total	24	4	4	32	64					64	4				4				4	188	285
Kibawe	Urban	3	2	2	7	14					14	2				2				2	19	29
	Rural	3	2	2	7	14					14	2				2				2	19	29
	Total	6	4	4	14	28					28	4				4				4	38	58
	Urban	5	4	4	13	26					26	4				4				4	59	89
Kinabao	Rural	3	26		69	98					98	26				26				26	59	123
	Total	6	30		74	112					112	30				30				30	60	107
	Urban	3	1	1	5	10					10	1				1				1	36	54
	Total	6	2	2	10	20					20	2				2				2	95	147
Lantapan	Urban	3	1	1	5	10					10	1				1				1	10	20
	Rural	3	2	2	7	14					14	2				2				2	19	29
	Total	6	3	3	12	24					24	3				3				3	29	49
	Urban	3	1	1	5	10					10	1				1				1	10	20
Lubona	Rural	17	1	1	19	37					37	1				1				1	108	125
	Total	20	2	2	21	42					42	2				2				2	125	145
	Urban	26	16	16	60	122					122	16				16				16	494	520
	Total	52	32	32	122	244					244	32				32				32	494	520
Malubog	Urban	2	1	1	4	8					8	1				1				1	10	20
	Rural	9	1	1	11	22					22	1				1				1	20	30
	Total	11	2	2	15	30					30	2				2				2	30	50
	Urban	7	1	1	9	18					18	1				1				1	18	28
Manolo Peralta	Rural	10	1	1	12	24					24	1				1				1	108	128
	Total	20	2	2	22	44					44	2				2				2	128	148
	Urban	26	16	16	60	122					122	16				16				16	494	520
	Total	52	32	32	122	244					244	32				32				32	494	520
Marang	Urban	3	36	36	108	144					144	36				36				36	108	144
	Rural	17	1	1	19	37					37	1				1				1	108	128
	Total	20	4	2	24	48					48	37				37				37	126	172
	Urban	10	1	1	12	24					24	1				1				1	108	128
Pangasinan	Rural	10	1	1	12	24					24	1				1				1	108	128
	Total	20	2	2	22	44					44	2				2				2	126	172
	Urban	26	16	16	60	122					122	16				16				16	494	520
	Total	52	32	32	122	244					244	32				32				32	494	520
Quezon	Urban	1	14	1	16	31					31	1				1				1	108	128
	Rural	2	18	2	22	40					40	2				2				2	126	172
	Total	3	32	3	38	71					71	3				3				3	134	200
	Urban	8	7	7	22	44					44	7				7				7	108	128
San Fernando	Rural	5	11	3	19	39					39	3				3				3	108	128
	Total	13	18	6	37	75					75	6				6				6	216	256
	Urban	1	1	1	3	6					6	1				1				1	108	128
	Total	2	2	2	6	12					12	2				2				2	216	256
Sumilao	Urban	5	1	1	7	14					14	1				1				1	108	128
	Rural	6	1	1	8	16					16	1				1				1	108	128
	Total	11	2	2	15	30					30	2				2				2	216	256
	Urban	4	2	2	8	16					16	2				2				2	108	128
Talakog	Rural	4	2	2	8	16					16	2				2				2	108	128
	Total	8	4	4	16	32					32	4				4				4	216	256
	Urban	12	9	9	30	60					60	9				9				9	108	128
	Total	24	18	18	60	120					120	18				18				18	216	256
Valencia	Urban	35	84	84	119	203					203	84				84				84	257	361
	Rural	47	93	93	140	233					233	93				93				93	290	423
	Total	82	177	177	259	436					436	177				177				177	547	784
	Urban	86	38	38	124	206					206	38				38				38	257	361
Provincial Total	Rural	162	201	201	588	951					951	201				201				201	1,009	1,460
	Total	324	402	402	1,176	1,902					1,902	402				402				402	2,018	2,920
	Urban	248	239	239	681	1,256					1,256	239				239				239	1,009	1,460
	Total	496	641	641	1,937	3,158					3,158	471				471				471	2,018	2,920

Table 4.1.4 (b) Public and Private Level I Facilities for Rural Water Supply

Facility	Public Source		Private Source		Total
	Number	%	Number	%	
Deep Well	162	17.7	754	82.3	916
Shallow Well	402	19.9	1,614	80.1	2,016
Spring Development	598	100	0	0	598
Others	146	2.2	6,390	97.8	6,536
Total	1,308	13.0	8,758	87.0	10,066

4.1.6 Water Supply Service Coverage

Estimation of Service Coverage in Terms of Safe, Unsafe and Unserved Classification

Through review of the number of water supply systems/facilities and the number of households that were derived from the questionnaire, it was found out that a great number of unserved population would be accounted as a balance between the total population and the population with any levels of services (including unsafe facilities) by applying the service level standard for Level I and II. To come up with more realistic service coverage, the unserved population in 1997 was referred to using the profile in the 1990 population census data on "Households by Main Source of Drinking Water and City/Municipality" prepared by the NSO. The rest of the population, those who are not served by Level III and/or II systems, were considered to be covered by shared or own use of Level I facilities. The calculation procedure is as follows:

- Service percentage/population of Level III and Level II systems was estimated based on the questionnaire survey results.
- Percentage of unserved population (using undeveloped spring, lake water, river water, peddler, etc.) of respective municipality by urban and rural area, which were studied in the 1990 population census, was discounted to half of their percentage, since these figures were estimated based on a 10% sample. Also, the situation at that time seems to have been improved.
- Population covered by Level I facilities was calculated as the balance between the total population and the population served by Level III & II systems and the unserved population.
- Level I population coverage was estimated with the assumption that 50% of the private facilities were shared by neighbors.

The unserved population and the population covered by Level I facilities are presented in Table 4.1.5. Tables 4.1.6 (a) and (b) presents the overall population covered by Level I facilities and the number of households.

Table 4.1.5 Estimation of Unserved Population by Municipality

Name of Municipality	Area	Population and Household (1997)		Served Population			Unserved Population			Population Covered by Level I Facilities	
				Level III	Level II	Total	Unserved Percentage (1995)				
		Number	IHH Size				Total No. of IHHs	No. of Unserved	%	Unserved Population 1997	
Baungon	Urban	4,960	5.40	1,032	210	1,242	870	84	10	476	3,242
	Rural	18,906	5.31		1,368	1,368	3,377	145	4	809	16,729
	Total	23,866	5.33	1,032	1,578	2,610	4,247	228	5	1,281	19,971
Cabanglasan	Urban	4,013	5.64		390	390	682	82	12	480	3,143
	Rural	26,540	5.46		3,876	3,876	4,656	142	3	807	21,857
	Total	30,553	5.49		4,266	4,266	5,338	223	4	1,276	25,001
Damulog	Urban	3,870	5.00		175	175	744	64	9	333	3,362
	Rural	11,746	5.13		1,315	1,315	2,202	111	5	592	9,839
	Total	15,616	5.10		1,490	1,490	2,946	175	6	928	13,201
Dangcagan	Urban	4,548	5.42	867	612	1,479	801	27	3	153	2,916
	Rural	12,909	5.47		200	200	2,254	47	2	269	12,440
	Total	17,457	5.45	867	812	1,679	3,055	74	2	423	15,356
Don Carlos	Urban	23,145	5.24	2,133	972	3,105	4,232	102	2	555	19,485
	Rural	30,211	5.31	1,503	912	2,415	5,447	177	3	979	26,817
	Total	53,356	5.28	3,636	1,884	5,520	9,679	278	3	1,532	46,302
Impasugong	Urban	5,475	5.75	2,329		2,329	909	95	10	572	2,574
	Rural	21,110	5.60	728	1,604	2,332	3,599	165	5	968	17,810
	Total	26,585	5.63	3,057	1,604	4,661	4,508	260	6	1,533	20,384
Kadingilan	Urban	4,794	5.04		1,620	1,620	918	101	11	525	2,649
	Rural	22,227	5.24		1,040	1,040	4,096	175	4	947	20,240
	Total	27,021	5.20		2,660	2,660	5,014	275	5	1,482	22,889
Kalilangan	Urban	17,250	5.40	1,156	540	1,696	3,043	63	2	354	15,200
	Rural	11,049	5.35	193	897	1,090	1,969	109	6	609	9,350
	Total	28,299	5.38	1,349	1,437	2,786	5,012	171	3	966	24,550
Kibawe	Urban	4,347	5.20	2,772	52	2,824	812	75	9	399	1,124
	Rural	27,352	5.12	369		369	5,184	129	2	681	26,302
	Total	31,699	5.13	3,141	52	3,193	5,996	204	3	1,076	27,427
Kitaotao	Urban	9,891	4.85		1,008	1,008	1,952	118	6	595	8,288
	Rural	30,209	5.17				5,594	204	4	1,102	29,107
	Total	40,100	5.09		1,008	1,008	7,546	322	4	1,708	37,395
Lantapan	Urban	14,761	5.64	1,015	197	1,212	2,521	91	4	530	13,019
	Rural	23,619	5.51	667	5,325	5,992	4,128	157	4	898	16,729
	Total	38,380	5.56	1,682	5,522	7,204	6,649	248	4	1,429	29,748
Libona	Urban	2,317	5.34	935		935	421	60	14	327	1,055
	Rural	30,525	5.53	4,584	5,145	9,729	5,365	104	2	589	20,207
	Total	32,842	5.51	5,519	5,145	10,664	5,786	163	3	925	21,262
Malaybalay (Capital)	Urban	28,759	5.45	25,261		25,261	4,932	207	4	1,207	2,291
	Rural	91,419	5.48	4,072	8,058	12,130	15,597	360	2	2,107	77,182
	Total	120,178	5.47	29,333	8,058	37,391	20,529	567	3	3,316	79,473
Malitbog	Urban	2,704	5.12		112	112	509	66	13	348	2,244
	Rural	14,342	5.33		1,518	1,518	2,592	114	4	628	12,196
	Total	17,046	5.29		1,630	1,630	3,101	179	6	984	14,440
Manolo Fortich	Urban	5,512	5.21	4,281		4,281	1,019	98	10	530	701
	Rural	64,481	5.56	19,635	4,926	24,561	11,162	171	2	985	38,935
	Total	69,993	5.53	23,916	4,926	28,842	12,181	269	2	1,543	39,636
Maramag	Urban	52,948	5.33	5,879	11,583	17,462	9,451	139	1	779	34,707
	Rural	12,898	5.31	558	5,130	5,688	2,311	242	10	1,348	5,862
	Total	65,846	5.33	6,437	16,713	23,150	11,762	381	3	2,130	40,569
Pangantucan	Urban	23,078	5.48	1,200	2,181	3,381	4,096	157	4	885	18,812
	Rural	16,450	5.40		1,532	1,532	2,961	273	9	1,514	13,404
	Total	39,528	5.44	1,200	3,713	4,913	7,057	430	6	2,406	32,217
Quezon	Urban	14,458	5.30	7,639		7,639	2,674	164	6	887	5,932
	Rural	61,163	5.35	1,889	1,909	3,798	11,218	285	3	1,554	55,811
	Total	75,621	5.34	9,528	1,909	11,437	13,892	449	3	2,444	61,743
San Fernando	Urban	13,130	5.17		360	360	2,376	90	4	497	12,273
	Rural	23,524	5.36		432	432	4,104	157	4	897	22,195
	Total	36,654	5.29		792	792	6,480	247	4	1,394	34,468
Sumilao	Urban	10,880	5.57	3,881	3,224	7,105	1,840	37	2	216	3,559
	Rural	5,711	5.51		1,568	1,568	978	64	6	371	3,772
	Total	16,591	5.55	3,881	4,792	8,673	2,818	100	4	589	7,331
Talakag	Urban	5,663	5.27	4,800	252	5,052	1,030	178	17	611	
	Rural	35,438	5.39		450	450	6,303	309	5	1,735	33,253
	Total	41,101	5.37	4,800	702	5,502	7,333	486	7	2,724	33,253
Valencia	Urban	36,445	5.29	20,552		20,552	6,609	232	4	1,279	14,614
	Rural	97,553	5.28	11,053	5,984	17,037	17,750	403	2	2,215	78,301
	Total	133,998	5.28	31,605	5,984	37,589	24,359	635	3	3,493	92,915
Provincial Total	Urban	292,948	5.34	85,732	23,488	109,220	52,441	2,324	4	12,538	171,190
	Rural	689,382	5.38	45,251	53,189	98,440	122,847	4,036	3	22,602	568,340
	Total	982,330	5.36	130,983	76,677	207,660	175,288	6,360	4	35,140	739,520

Table 4.1.6 (a) Estimation of Population Covered by Safe and Unsafe Source by Municipality

Name of Municipality	Area	Pop. Covered by Level I Facilities	Number of Facilities						Coverage of Own Use					
			Public Facilities			Private Facilities			Number of Private Facilities			(1) Population Covered		
			Safe	Unsafe	Total	Safe	Unsafe	Total	Safe	Unsafe	Total	Safe	Unsafe	Total
Baungon	Urban	3,242	18	4	21									
	Rural	16,729	122	23	145									
	Total	19,971	140	27	166									
Cabanglasan	Urban	3,143	6	1	6									
	Rural	21,857	16	1	16									
	Total	25,001	21	1	22									
Danzilog	Urban	3,362	10	4	14									
	Rural	9,839	58		58									
	Total	13,201	68	4	72									
Dangcagan	Urban	2,916	2	1	3	9		9	5		5	24		24
	Rural	12,440	37	7	44	12	336	348	6	168	174	33	911	943
	Total	15,356	39	8	47	21	336	357	11	168	179	57	911	967
Don Carlos	Urban	19,485	9	2	10	216	211	426	108	105	213	565	552	1,116
	Rural	26,817	37	4	41	815	767	1,582	408	384	791	2,135	2,010	4,145
	Total	46,302	46	6	51	1,031	978	2,008	515	489	1,004	2,700	2,561	5,261
Impasugong	Urban	2,574	5	2	6	6		6	3		3	17		17
	Rural	17,810	32	1	32	14		14	7		7	40		40
	Total	20,384	36	2	38	20		20	10		10	58		58
Kaditigan	Urban	2,649	10	2	12	1	20	20	0	10	10	1	49	50
	Rural	20,240	34	11	44	20	27	47	10	14	24	50	68	118
	Total	22,889	44	13	56	21	47	67	10	23	34	52	117	169
Kailangan	Urban	15,200	18	1	19	129	59	188	65	30	94	148	159	308
	Rural	9,350	17	1	18		36	36		18	18	97	97	97
	Total	24,550	35	2	37	129	95	224	65	48	112	245	257	502
Kibawe	Urban	1,124												
	Rural	26,302	29	2	31	213	31	244	107	16	122	554	81	634
	Total	27,427	29	2	31	213	31	244	107	16	122	554	81	634
Kitaotao	Urban	8,288	14	6	20									
	Rural	29,107	98	30	128									
	Total	37,395	112	36	148									
Lantapan	Urban	13,019	6	1	7									
	Rural	16,729	9	1	10									
	Total	29,748	15	2	17									
Libona	Urban	1,055	3		3	3	20	23	2	10	12	8	53	61
	Rural	20,207	32	3	35	39	109	147	19	54	74	103	290	392
	Total	21,262	35	3	38	42	129	170	21	64	85	111	343	454
Malaybalay (Capital)	Urban	2,291												
	Rural	77,182	102	26	128	342	494	836	171	247	418	932	1,346	2,278
	Total	79,473	102	26	128	342	494	836	171	247	418	932	1,346	2,278
Malibog	Urban	2,244	7		7	7	1	8	4	1	4	18	3	20
	Rural	12,196	69		69	71	12	83	36	6	42	182	31	212
	Total	14,440	76		76	78	13	91	39	7	46	200	33	233
Manolo Fortich	Urban	701	3		3	3		3	2		2	8		8
	Rural	38,935	27	1	27	27	5	31	13	2	16	69	12	81
	Total	39,636	30	1	30	30	5	34	15	2	17	77	12	89
Maramag	Urban	34,707	13	3	15	8	301	308	4	150	154	20	801	821
	Rural	5,862	18		18	23	593	615	11	296	308	60	1,579	1,639
	Total	40,569	31	3	33	30	893	923	15	447	462	80	2,380	2,460
Pangantucan	Urban	18,812	23		23		9	9		5	5		25	25
	Rural	13,404	31		31	21	30	51	11	15	26	58	82	140
	Total	32,217	54		54	21	39	60	11	20	30	58	107	164
Quezon	Urban	5,932	5	4	8	595	1	596	298	1	298	1,577	3	1,579
	Rural	55,811	17	15	32	593	3	596	297	2	298	1,571	8	1,579
	Total	61,743	22	19	40	1,188	4	1,192	594	2	596	3,148	11	3,159
San Fernando	Urban	12,273	18	7	25	37	2	39	19	1	20	96	5	101
	Rural	22,195	50	11	61	72	3	75	36	2	38	186	8	194
	Total	34,468	68	18	86	109	5	114	55	3	57	282	13	295
Sumilao	Urban	3,559	3		3									
	Rural	3,772	11	1	12	1		1	1		1	3		3
	Total	7,331	14	1	15	1		1	1		1	3		3
Talakag	Urban		3	1	3	1		1	1		1			
	Rural	33,253	22	4	25	14		14	7		7	37		37
	Total	33,253	24	4	28	15		15	8		8	37		37
Valencia	Urban	14,614	41	9	50	176	5	181	88	3	91	466	13	479
	Rural	78,301	220	84	303	4,020	17	4,037	2,010	9	2,019	10,633	45	10,678
	Total	92,915	261	93	353	4,196	22	4,218	2,098	11	2,109	11,098	58	11,157
Provincial Total	Urban	171,190	214	45	258	1,190	628	1,817	595	314	909	3,147	1,662	4,810
	Rural	568,340	1,085	223	1,308	6,296	2,462	8,757	3,148	1,231	4,379	16,645	6,566	23,212
	Total	739,529	1,299	268	1,566	7,485	3,089	10,574	3,743	1,545	5,287	19,793	8,229	28,021

Table 4.1.6 (b) Estimation of Population Covered by Safe and Unsafe Source by Municipality

Name of Municipality	Area	Coverage of Shared Well						Level I Coverage (1) + (2)							
		(2) Population Covered by Private and Public			Number of Households			No. of HUs per Shared Facility	Safe		Unsafe		Total		
		Safe	Unsafe	Total	Safe	Unsafe	Total		Pop.	%	Pop.	%	Pop.	%	
Baungon	Urban	2,702	540	3,242	500	100	600	29	2,702	54	540	11	3,242	65	
	Rural	14,075	2,654	16,729	2,651	500	3,150	22	14,075	74	2,654	14	16,729	88	
	Total	16,777	3,194	19,971	3,151	600	3,751	23	16,777	70	3,194	13	19,971	84	
Cabanglasan	Urban	2,881	262	3,143	511	46	557	93	2,881	72	262	7	3,143	78	
	Rural	21,174	683	21,857	3,878	125	4,003	250	21,174	80	683	3	21,857	82	
	Total	24,056	945	25,001	4,389	172	4,561	207	24,056	79	945	3	25,001	82	
Damulog	Urban	2,401	961	3,362	480	192	672	48	2,401	62	961	25	3,362	87	
	Rural	9,839		9,839	1,918		1,918	33	9,839	84			9,839	84	
	Total	12,240	961	13,201	2,398	192	2,590	36	12,240	78	961	6	13,201	85	
Dangcagan	Urban	2,527	364	2,891	466	67	533	71	2,551	56	364	8	2,916	64	
	Rural	2,454	9,043	11,497	449	1,653	2,102	10	2,486	19	9,954	77	12,440	96	
	Total	4,981	9,407	14,388	915	1,720	2,635	12	5,038	29	10,318	59	15,356	88	
Don Carlos	Urban	10,157	8,211	18,369	1,938	1,567	3,505	16	10,722	46	8,763	38	19,485	84	
	Rural	14,327	8,345	22,672	2,698	1,572	4,270	5	16,462	54	10,355	34	26,817	89	
	Total	24,485	16,556	41,041	4,637	3,139	7,775	7	27,185	51	19,117	36	46,302	87	
Impasugong	Urban	2,145	412	2,557	373	72	445	49	2,162	39	412	8	2,574	47	
	Rural	17,582	188	17,770	3,140	34	3,173	81	17,622	83	188	1	17,810	84	
	Total	19,727	600	20,326	3,513	105	3,618	75	19,784	74	600	2	20,384	77	
Kadilingan	Urban	1,234	1,364	2,599	245	271	516	23	1,236	26	1,414	29	2,649	55	
	Rural	13,044	7,078	20,122	2,489	1,351	3,840	57	13,094	59	7,146	32	20,240	91	
	Total	14,278	8,443	22,720	2,734	1,622	4,356	49	14,330	53	8,560	32	22,889	85	
Katilingan	Urban	11,097	3,595	14,692	2,055	666	2,721	24	11,445	66	3,754	22	15,200	88	
	Rural	4,415	4,838	9,253	825	904	1,730	48	4,415	40	4,935	45	9,350	85	
	Total	15,512	8,433	23,945	2,880	1,570	4,450	30	15,861	56	8,689	31	24,550	87	
Kibawe	Urban		1,124	1,124		216	216				1,124	26	1,124	26	
	Rural	23,294	2,374	25,668	4,550	464	5,013	33	23,848	87	2,455	9	26,302	96	
	Total	23,294	3,498	26,792	4,550	680	5,229	34	23,848	75	3,579	11	27,427	87	
Kitaotao	Urban	5,801	2,486	8,288	1,196	513	1,709	85	5,801	59	2,486	25	8,288	84	
	Rural	22,285	6,822	29,107	4,311	1,320	5,630	44	22,285	74	6,822	23	29,107	96	
	Total	28,087	9,308	37,395	5,507	1,832	7,339	50	28,087	70	9,308	23	37,395	93	
Lantapan	Urban	11,159	1,860	13,019	1,979	330	2,308	330	11,159	76	1,860	13	13,019	88	
	Rural	15,056	1,673	16,729	2,732	304	3,036	304	15,056	64	1,673	7	16,729	71	
	Total	26,215	3,533	29,748	4,711	633	5,344	314	26,215	68	3,533	9	29,748	78	
Libona	Urban	327	666	993	61	125	186	13	335	14	719	31	1,055	46	
	Rural	9,545	10,270	19,815	1,726	1,857	3,583	33	9,648	32	10,559	35	20,207	66	
	Total	9,872	10,936	20,808	1,787	1,982	3,769	31	9,983	30	11,279	34	21,262	65	
Malaybalay (Capital)	Urban		2,291	2,291		420	420				2,291	8	2,291	8	
	Rural	38,591	36,313	74,904	7,042	6,626	13,669	25	39,523	43	37,659	41	77,182	84	
	Total	38,591	38,604	77,195	7,042	7,047	14,089	26	39,523	33	39,950	33	79,473	66	
Malibog	Urban	2,142	82	2,224	418	16	434	39	2,160	80	84	3	2,244	83	
	Rural	11,534	450	11,984	2,164	84	2,248	20	11,716	82	480	3	12,196	85	
	Total	13,676	531	14,207	2,582	100	2,683	22	13,875	81	565	3	14,440	85	
Manolo Fortich	Urban	693		693	133		133	30	701	13			701	13	
	Rural	36,415	2,439	38,854	6,550	439	6,988	164	36,484	57	2,450	4	38,935	60	
	Total	37,109	2,439	39,547	6,683	439	7,121	152	37,185	53	2,450	4	39,636	57	
Maramag	Urban	3,337	30,549	33,886	626	5,732	6,358	38	3,357	6	31,350	59	34,707	66	
	Rural	527	3,696	4,223	99	696	795	2	587	5	5,275	41	5,862	45	
	Total	3,864	34,246	38,110	725	6,428	7,153	14	3,944	6	36,625	56	40,569	62	
Pangantucan	Urban	15,734	3,054	18,788	2,871	557	3,428	125	15,734	68	3,078	13	18,812	82	
	Rural	9,845	3,419	13,264	1,823	633	2,456	43	9,903	60	3,501	21	13,404	81	
	Total	25,580	6,473	32,052	4,694	1,190	5,885	70	25,637	65	6,579	17	32,217	82	
Quezon	Urban	4,353		4,353	821		821	3	5,930	41		3	5,932	41	
	Rural	53,021	1,211	54,232	9,910	226	10,137	31	54,592	89	1,219	2	55,811	91	
	Total	57,373	1,211	58,585	10,732	226	10,958	17	60,522	80	1,222	2	61,743	82	
San Fernando	Urban	10,066	2,106	12,172	1,947	407	2,354	53	10,162	77	2,111	16	12,273	93	
	Rural	19,378	2,623	22,001	3,615	489	4,105	42	19,564	83	2,630	11	22,195	94	
	Total	29,445	4,728	34,173	5,562	897	6,459	45	29,726	81	4,741	13	34,468	94	
Sumilao	Urban	3,559		3,559	639		639	213	3,559	33			3,559	33	
	Rural	3,470	299	3,769	630	54	684	55	3,473	61	299	5	3,772	66	
	Total	7,030	299	7,329	1,269	54	1,323	85	7,032	42	299	2	7,331	44	
Talakag	Urban														
	Rural	29,616	3,600	33,217	5,495	668	6,163	193	29,653	84	3,600	10	33,253	94	
	Total	29,616	3,600	33,217	5,495	668	6,163	174	29,653	72	3,600	9	33,253	81	
Valencia	Urban	13,418	717	14,135	2,536	136	2,672	19	13,883	38	731	2	14,614	40	
	Rural	67,623		67,623	12,807		12,807	6	78,256	80			78,256	80	
	Total	81,041	717	81,758	15,344	136	15,479	6	92,139	69	776	1	92,915	69	
Provincial Total	Urban	105,735	60,644	166,380	19,798	11,432	31,230	27	108,883	37	62,307	21	171,190	58	
	Rural	437,112	108,017	545,128	81,502	19,999	101,501	18	453,757	66	114,583	17	568,340	82	
	Total	542,847	168,661	711,508	101,300	31,431	132,730	19	562,640	57	176,889	18	739,529	75	

The number of households per shared public/private facility is estimated at 27 households in the urban area and 18 in the rural area as the provincial averages. Compared with the service level standard of Level I public facility (15 households/facility), these figures are considered within the common range. However, those figures in the municipalities of Cabanglasan, Impasugong, Lantapan, Manolo Fortich, Pangantucan, Sumilao and Talakag are considered quite high. This reason seems to arise from a considerable number of non-reported/unidentified private wells.

Percentage of Population Covered by Level I Public Facility for Rural Water Supply

Grasping the current percentage of population covered by public facilities would be a useful information in considering as to what extent the additional population to be covered by public facilities in the future plan. This takes into account that the major facilities would be Level I especially for rural water supply in the future.

Population covered by public facilities is calculated as a balance between the total population served by Level I facilities and the population covered by private facilities. Thus it is estimated at 12,600 persons or 25% of the total population is covered by public Level I facilities as shown in Tables 4.1.6 (a) and 4.1.6 (b).