JAPAN INTERNATIONAL COOPERATION AGENCY

DEPARTMENT OF THE INTERIOR AND LOCAL GOVERNMENT
THE REPUBLIC OF THE PHILIPPINES

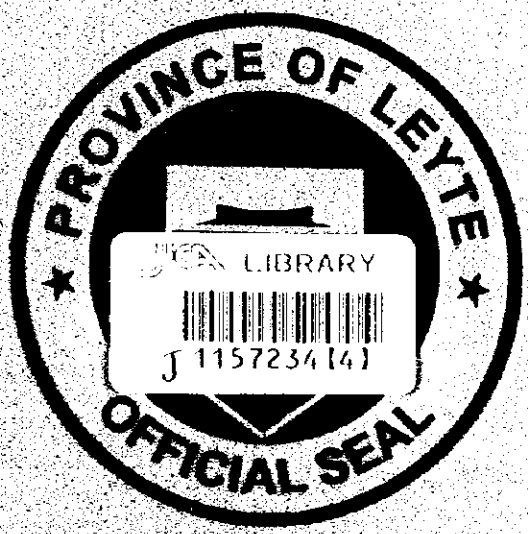
THE STUDY ON THE PROVINCIAL WATER SUPPLY, SEWERAGE AND SANITATION SECTOR PLAN IN THE REPUBLIC OF THE PHILIPPINES

VOLUME II – [3]

SUPPORTING REPORT

PROVINCIAL WATER SUPPLY, SEWERAGE AND SANITATION SECTOR PLAN FOR THE PROVINCE OF

LEYTE



DECEMBER 1999

NIPPON JOGESUIDO SEKKEI CO., LTD.

JAPAN INTERNATIONAL COOPERATION AGENCY

DEPARTMENT OF THE INTERIOR AND LOCAL GOVERNMENT
THE REPUBLIC OF THE PHILIPPINES

THE STUDY ON THE PROVINCIAL WATER SUPPLY, SEWERAGE AND SANITATION SECTOR PLAN IN THE REPUBLIC OF THE PHILIPPINES

VOLUME II

SUPPORTING REPORT

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PROVINCIAL WATER SUPPLY, SEWERAGE AND SANITATION SECTOR PLAN

VOLUME II SUPPORTING REPORT

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FOR

THE STUDY ON PROVINCIAL WATER SUPPLY, SEWERAGE AND SANITATION SECTOR PLANS

FOR

VISAYAS AND MINDANAO

IN

THE REPUBLIC OF THE PHILIPPINES

AGREED UPON BETWEEN

THE DEPARTMENT OF THE INTERIOR AND

LOCAL GOVERNMENT

AND

THE STUDY TEAM OF

JAPAN INTERNATIONAL COOPERATION AGENCY

MANILA, JANUARY 26, 1998

MR. NORMANDO J. TOLEDO
Director
Office of the Project Development Services
Dept. of the Interior and Local Government

MR. MASATOSHI MOMOSE
Team Leader, Study Team
Japan International Cooperation Agency

Japan International Cooperation Agency (hereinafter referred to as "JICA"), the official agency responsible for the implementation of the technical cooperation programs of the Government of Japan, dispatched the Study Team to the Republic of the Philippines on January 13, 1998 to conduct "The Study on Provincial Water Supply, Sewerage and Sanitation Sector Plans for Visayas and Mindanao" (hereinafter referred to as "the Study") in accordance with the Implementing Arrangement for the Study executed between the JICA and the Department of the Interior and Local Government (hereinafter referred to as "DILG") on August 27, 1997.

A series of discussions were made on the Inception Report for the Study between the Study Team and the officials of DILG and other agencies concerned. In the course of the discussions, both parties have agreed with the general approach and methodology, and implementation arrangements detailed in the Inception Report. Also agreed upon were the changes made as to which provinces are to be covered in 1st batch and 2nd batch (refer to 1. Study Area). The list of attendees in the series of discussions is presented in Appendix A.

1. Study Area

The subject twenty-one (21) provinces were grouped into four batches in the "Implementing Arrangement on the Study". However, a delay in the organization of the Provincial Sector Planning Team (PSPT) in the 1st batch provinces of Misamis Oriental and Surigao del Sur prompted their transfer to the 2nd batch. Instead, Davao del Sur and Davao Oriental from the 2nd batch whose PSPTs were already formed were moved up in their place. In this connection, the DILG completed to exchange MOA with the provinces on the participation and full support by the provinces.

The present study area covers the following 21 provinces grouped into four batches.

1st BATCH	2nd BATCH	3rd BATCH	4th BATCH
1. Agusan del Norte	1. Davao	1. Biliran	1. Aklan
2. Agusan del Sur	2. Misamis Oriental	2. Eastern Samar	2. Antique
3. Davao del Sur	3. Sarangani	3. Leyte	3. Capiz
4. Davao Oriental	4. South Cotabato	4. Northern Samar	4. Iloilo
5. Surigao del Norte	5. Surigao del Sur	5. Southern Leyte	5. Negros Occidental
		6. Western Samar	

With regard to Davao province, the separation into two provinces is currently under legislative process. Upon the formalization of an additional province, the total number of the provinces in the study area would be 22. The DILG has requested that the forthcoming province be included in the study area. The JICA Study Team will relay the request to JICA headquarters for consideration. The DILG is expected to complete the execution of the MOAs of the 2nd batch provinces by early July to catch up with the planned schedule. The required arrangements in terms of subject provinces and study period will be discussed between the DILG and JICA.

2. General Approach and Methodology to the Study

The PW4SPs will be prepared with the full participation of the respective PSPTs together with DILG coordinators and the Study team in accordance with the approach and methodology outlined in the Inception Report. The following topics were confirmed during the discussions:

(1) Planning framework for future sector development

a) Planning base year is 1997 for 1st and 2nd batches and 1998 for 3rd and 4th batches. Medium-term and long-term target years are 2005 (implementation program: year 2001 to year 2005) and 2010, respectively.

b) Plan will be prepared in compliance with "Implementing Rules and Regulations of NEDA Board Resolution No. 4".

(2) Standard provision of school toilets

Discussions and confirmation on the provision of school toilets will be arranged with DECS.

(3) Options on the sludge removal from septic tank and its disposal will be shown in the plan.

(4) Model province for 1st batch is Agusan del Sur.

3. Sector Information Collection

The DILG and the JICA Study Team will continuously collect information on the projects/programs assisted by various financial sources. The information will be reflected in the plans.

4. Implementation Set-Up for the Study

In accordance with the Implementing Arrangements between the DILG and the JICA, the DILG shall:

(1) Secure the safety of the JICA Study Team;

(2) Assign DILG counterpart staff members who will coordinate and assist PSPTs at the provincial level;

(3) Set-up PSPTs by respective provincial governments in the study area and secure budget to carry out the Study;

(4) Through PSPT in each study area province; facilitate and coordinate in data gathering with municipal government and other agencies concerned, and participate in workshops and preparation of PW4SP;

(5) Facilitate coordination with concerned agencies like DPWH, DOH, NEDA, LWUA and with appropriate bodies.

The JICA Study Team shall:

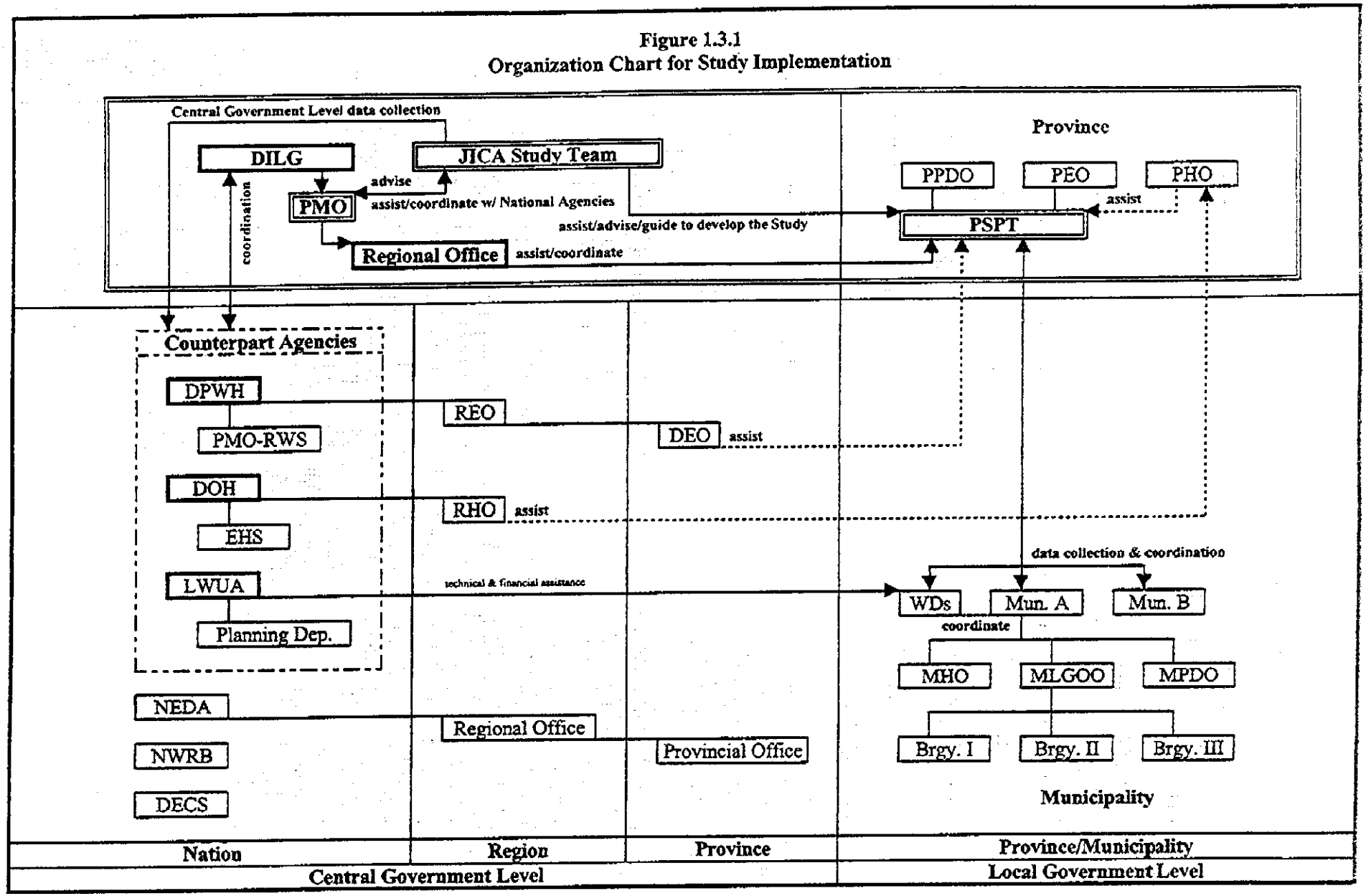
(1) Pursue technology transfer to the Philippine counterpart personnel in the course of the Study and;

(2) Assist PSPTs in the preparation of the PW4SP.

LIST OF ATTENDEES IN THE SERIES OF DISCUSSIONS

ATTENDEES	DESIGNATION
A. DILG	
1. Mr. Normando J. Toledo	Director, Office of Project Development Services
2. Mr. Orville M. Roque	Program Manager, WSS-PMO
3. Ms. Ellen I. Pascua	Asst. Program Manager, WSS-PMO
4. Mr. Rogelio B. Ocampo	Chief, Planning Division, WSS-PMO
5. Ms. Fe Crisilla M. Banluta	PW4SP Project Officer, WSS-PMO
B. Other Agencies	
1. Mr. Sam Siao	Officer, PMO-RWS, DPWH
2. Dr. Mario Villaverde	Director, EHS, DOH
C. JICA Advisory Committee	
1. Ms. Keiko Yamamoto	Chairman, Advisory Committee
2. Mr. Keiichi Kanaya	Member, Advisory Committee
D. JICA Headquarters	
1. Mr. Shigeyuki Matsumoto	Second Development Study Division, Social Development Study Dept.
E. JICA Study Team	
1. Mr. Masatoshi Momose	Team Leader/Water Supply Planning
2. Mr. Nobuki Abe	Water Supply/Sanitation Engineer
3. Ms. Consuelo B. Estepa	Community Dev't/WID Specialist
4. Ms. Elizabeth L. Verzola	Socio-Economic/Financial Specialist
5. Mr. Kenji Takayanagi	Water Source Development Specialist
6. Mr. Emmanuel L. Patingo	Data Management Specialist

Figure 1.3.1
Organization Chart for Study Implementation



MINUTES OF DISCUSSIONS

ON

THE PROGRESS REPORT

FOR

THE STUDY ON PROVINCIAL WATER SUPPLY, SEWERAGE AND SANITATION SECTOR PLANS

FOR

VISAYAS AND MINDANAO

IN

THE REPUBLIC OF THE PHILIPPINES

AGREED UPON BETWEEN

THE DEPARTMENT OF THE INTERIOR AND

LOCAL GOVERNMENT

AND

THE STUDY TEAM OF

JAPAN INTERNATIONAL COOPERATION AGENCY

MANILA, MARCH 18, 1998

MR. NORMANDO J. TOLEDO
Director
Office of the Project Development Service
Dept. of the Interior and Local Government

MR. MASATOSHI MOMOSE
Team Leader, Study Team
Japan International Cooperation Agency

The Stage I fieldwork for "the Study on Provincial Water Supply, Sewerage and Sanitation Sector Plan" started on January 13, 1998 and completed on March 23, 1998.

A series of discussions were held throughout the course of the Study, between JICA Study Team and officials concerned including DILG, NEDA, DOH, DPWH and other central government agencies and provinces. The general approach and methodologies, as presented in the Inception Report, have been employed for the fieldwork.

A Progress Report, which covers all outputs during the work period, was prepared entailing part of PW4SP for the respective provinces. The contents of the report were basically agreed upon on March 18,1998 between JICA Study Team and officials of the DILG. The list of attendees to the meeting is presented in Appendix A. The following issues/problems on the arrangements required for the implementation of the Study were discussed, and the Study Team will relay the modified arrangements required to JICA headquarters.

(1) Modified Arrangements Required for 1st batch Study

1) Due to the presidential election scheduled on May 11, 1998, the second workshop may be held from May 18 to May 22, 1998 after the election, and tentatively starting the 2nd field work on May 13, 1998.

2) The venue for the final workshop was requested by concerned PPDCs to be held in Mindanao rather than in Manila as originally planned. This is because of the financial constraint on the travel expenses required for 7 members of respective PSPTs under the current GOP instruction to LGUs to reduce its planned annual expenditures of up to 25%.

(2) Provinces to be Covered by the 2nd Batch

The total number of provinces for the 2nd batch (5 provinces) will be kept as previously agreed between the two parties. However, Surigao del Sur will be omitted from the Study, since timely establishment of the PSPT by the province seems to be difficult. Instead of the said province, either the newly created Compostela Valley or Bukidnon(Region X) would be included.

The DILG will inform the Study Team of the possibility in the setting up of PSPT by the administration of Compostela Valley by the middle of June 1998. If not, DILG will make an advanced arrangement with Bukidnon.

(3) Electric Resistivity Prospecting and Test Boring

Comparatively reliable data to evaluate the development potential of water source were collected for 1st batch provinces during the fieldwork. It is assumed that the conduct of the field test for groundwater analysis, given a limited period, cannot be able to contribute significantly to the level of accuracy in the preparation of M/P and F/S. The situation will remain the same for 2nd batch provinces. Accordingly, it is not recommended to conduct field test for this study.

The required areas and the scope of work/surveys, such as field tests, will be recommended in the PW4SP and will be considered during detailed design and construction stages.

(4) Time Constraint in Data Collection/Validation/Follow-up

It was found, both by the Study Team and the DILG through the fieldwork, the following problems on data collection/validation/follow-up:

1) The summary reports on the sector status prepared by NEDA Regional Office through UNICEF fund were field confirmed as the materials to provide approximate sector situations in the fact of no existence of sector related information at present.
2) Data collection by PSPTs had sometimes to be done at the barangay level, due to limited data available in the municipal level. Thus, additional time was required for PSPTs to access to remote rural barangays.
3) Comprehensive planning work by the province in Mindanao area is still initial stage. It is necessary for the activities to ensure much more time through intensive technology transfer to DILG coordinators and PSPTs.

Based on the lessons learned, the Study Team and the DILG recognized the need of the review on the allotted period for the activities. The Study Team will relay this matter to JICA headquarters.

(5) Cities to be Covered in the Preparation of PW4SP

Of the three classes of cities in the Local Government Code, only component cities, which are under the jurisdiction of the provincial government will be considered. The subject cities are as follows:

Province	Component City
Surigao del Norte	Surigao City
Davao	Tagum City and Island Garden City
Leyte	Tacloban City
Western Samar	Calbayog City
Capiz	Roxas City
Iloilo	Passi City
Negros Occidental	Bago City, Cadiz City, La Carlota City, San Carlos City and Silay City

Appendix A

LIST OF ATTENDEES IN THE SERIES OF DISCUSSION

ATTENDEES	DESIGNATION
A. DILG	
1. Mr. Orville M. Roque	Program Manager, WSS-PMO
2. Ms. Ellen I. Pascua	Asst. Program Manager, WSS-PMO
3. Mr. Rogelio B. Ocampo	Chief, Planning Division, WSS-PMO
4. Ms. Fe Crisilla M. Banluta	PW4SP Project Officer, WSS-PMO
5. Ms. Charito Araza	Area Coordinator, WSS-PMO
6. Ms. Maria Contessa Navarro	Area Coordinator, WSS-PMO
7. Ms. Josephine Ramos	Area Coordinator, WSS-PMO
8. Ms. Susan Mangoda	Area Coordinator, WSS-PMO
9. Ms. Crisanta Rapirap	Area Coordinator, WSS-PMO
B. JICA Study Team	
1. Mr. Masatoshi Momose	Team Leader/Water Supply Planning
2. Mr. Nobuki Abe	Water Supply/Sanitation Engineer
3. Mr. Kenji Takayanagi	Water Source Development Specialist
4. Ms. Consuelo B. Estepa	Community Dev't./WID Specialist
5. Ms. Elizabeth L. Verzola	Socio-economic/Financial Specialist

MINUTES OF DISCUSSIONS

ON

THE DRAFT FINAL REPORT

FOR

THE STUDY ON PROVINCIAL WATER SUPPLY, SEWERAGE AND SANITATION SECTOR PLANS

FOR

VISAYAS AND MINDANAO

IN

THE REPUBLIC OF THE PHILIPPINES

AGREED UPON BETWEEN

THE DEPARTMENT OF THE INTERIOR AND LOCAL GOVERNMENT

AND

THE STUDY TEAM OF

JAPAN INTERNATIONAL COOPERATION AGENCY

MANILA, AUGUST 27, 1998

MR. BENITO R. CATINDIG
Assistant Secretary for Support Services and Regional Offices
Dept. of the Interior and Local Government

MR. MASATOSHI MOMOSE
Team Leader, Study Team
Japan International Cooperation Agency

The Stage II fieldwork for "the Study on Provincial Water Supply, Sewerage and Sanitation Sector Plan" (hereinafter referred to as "the Study") resumed on May 20, 1998 and will be completed on March 30, 1999. Upon completion of the 1st batch study, the study for the 2nd batch will start on August 30 with an "Orientation Workshop". It is further scheduled that the 2nd batch study will be finalized by February 1999 and 3rd batch work will be commenced before the completion of this fieldwork.

Major conditions and assumptions for the development of Medium-Term and Long-Term sector plans for the subject provinces under the 1st batch were discussed and finalized between respective PSPTs and the JICA Study Team (hereinafter referred to as "the Team") through Workshop No. 2 (held between May 26 and 28, 1998) and during planning work thereafter. In this connection, the target year for the Medium-Term development plan was revised from 2005 to 2003 in order to realize the plan earlier.

The Draft Final Reports for the five (5) provinces of the 1st batch were prepared and the final workshop was conducted between August 24 and 26, 1998 to present and discuss the contents of the reports. The contents of the reports were basically agreed upon on August 27, 1998 by the Team and officials concerned on the Philippine side. The list of attendees to the meeting is presented in Appendix A. The following were confirmed and agreed upon by both parties.

1. Correction of typographical errors of the Draft Final Report will be undertaken by the Team prior to printing of the Final Report. The Final Report will be submitted by October 1998.
2. Adoption of the Plans by the Provincial Council (Sangguniang Panlalawigan) shall be facilitated by the DILG.
3. Inclusion of the Message of the Governor in the Main Report of respective PW4SPs.

With regard to the 2nd batch study, both parties have agreed on the general approach and methodology, and implementation arrangements adopted for the 1st batch study. Among them, the following are the basic conditions to be applied for the planning.

(1) Study Area

The DILG completed the exchange of MOA with the 2nd batch provinces on the participation and full support by the concerned provinces. The subject provinces are Misamis Oriental, Bukidnon, Davao del Norte, South Cotabato and Sarangani. The province of Bukidnon was selected for model province study.

(2) Planning Framework for Future Sector Development

a) Planning base year is 1997 and Medium-Term and Long-Term target years are 2003 (implementation program: year 1999 to year 2003) and 2010, respectively.
b) Plans will be prepared in compliance with the "Implementing Rules and Regulations of NEDA Board Resolution No. 4".

(3) Implementation Set-Up/Arrangements for the Study

The study will be conducted in accordance with the Implementing Arrangements between the DILG and the JICA, as done with the 1st batch study.

Both parties will make timely and effective arrangements through the study period to achieve the purpose of the Study within the set time-table based on the lessons learned from the 1st batch study. In this regard, the following are put into practice.

a) Data collection by the PSPTs will be commenced in advance (overlapped activity with the preceding batch study) to ensure longer period for this activity as compared with the original time allotted.
b) Planning period by the PSPTs will be extended by adjusting the timing for the conduct of 2nd worshop for data encoding and discussions to set-up planning fundamentals.
c) Practical arrangements will be made to increase the opportunities for further collaboration in the planning work among PSPTs, DILG coordinators and the Team.

For the arrangement of the 3rd batch study, the DILG will confirm the subject provinces including the model province through the MOA by December 1998.

Appendix A

LIST OF ATTENDEES IN THE SERIES OF DISCUSSIONS

	ATTENDEES	DESIGNATION
A.	*DILG*	
	1. Mr. Normando J. Toledo	Director, Office of Project Development Services
	2. Ms. Ellen I. Pascua	Acting Program Manager, WSS-PMO
	3. Mr. Rogelio B. Ocampo	Chief, Planning Division, WSS-PMO
	4. Ms. Fe Crisilla M. Banluta	PW4SP Project Officer, WSS-PMO
B.	*Other Agencies*	
	1. Ms. Cristina Santiago	PIS, NEDA
C.	*JICA Advisory Committee*	
	1. Ms. Keiko Yamamoto	Chairman, Advisory Committee
	2. Mr. Keiichi Kanaya	Member, Advisory Committee
D.	*JICA Headquarters*	
	1. Ms. Akiko Hayashi	Second Development Study Division, Social Development Study Depart.
E.	*JICA Study Team*	
	1. Mr. Masatoshi Momose	Team Leader/Water Supply Planning
	2. Mr. Nobuki Abe	Water Supply/Sanitation Engineer
	3. Mr. Kenji Hiramatsu	Institutional Specialist
	4. Ms. Consuelo B. Estepa	Community Dev't./Gender Specialist
	5. Ms. Elizabeth L. Versola	Socio-Economic/Financial Specialist
	6. Mr. Emmanuel L. Patingo	Data Management Specialist

MINUTES OF DISCUSSIONS

ON

THE DRAFT FINAL REPORT (2nd BATCH)

FOR

THE STUDY ON PROVINCIAL WATER SUPPLY, SEWERAGE AND SANITATION SECTOR PLANS

FOR

VISAYAS AND MINDANAO

IN

THE REPUBLIC OF THE PHILIPPINES

AGREED UPON BETWEEN

THE DEPARTMENT OF THE INTERIOR AND LOCAL GOVERNMENT

AND

THE STUDY TEAM OF

JAPAN INTERNATIONAL COOPERATION AGENCY

QUEZON CITY, FEBRUARY 22, 1999

MR. BENITO R. CATINDIG
Assistant Secretary
Dept. of the Interior and Local Government

MR. MASATOSHI MOMOSE
Team Leader, Study Team
Japan International Cooperation Agency

The Stage II fieldwork for "the Study on Provincial Water Supply, Sewerage and Sanitation Sector Plan" (hereinafter referred to as "the Study") resumed on May 20, 1998 and will be completed on March 30, 1999.

The study for the 2nd batch started on August 30,1998 and will be completed with the final workshop scheduled between February 24 and 26, 1999. During the finalization stage of the 2nd batch study, the study for the 3rd batch was started with an "Orientation Workshop" on February 8 to 10, 1999. It is further scheduled that the 3rd batch study will be finalized by the end of this year.

With regard to the 2nd batch study, major conditions and assumptions for the development of Medium-Term and Long-Term sector plans for the subject provinces were discussed and finalized between the respective PSPTs and the JICA Study Team (hereinafter referred to as "the Team") during Workshop No. 2 between November 4 to 6, 1998 and also at the time of the planning work thereafter. For the entire duration of the planning work, the Team stayed intermittently in Davao City, Cagayan de Oro City and Malaybalay City for better collaboration with the PSPTs.

The Draft Final Reports for the five (5) provinces of the 2nd batch were prepared and discussed on the contents of the reports between the respective PSPTs and the Team during February 15 and 19, 1999. The contents of the reports were basically agreed upon on February 22, 1999 by the Team and the officials concerned in the Philippine side in consideration of the discussion results with PSPTs.

The list of attendees to the meeting on February 22, 1999 is presented in Appendix A. The followings were confirmed and agreed upon by both parties.

1. Further modification/correction on the Draft Final Report will be undertaken by the Team prior to printing of the Final Report based on the discussions with PSPTs. The Final Report will be sent by May, 1999.

2. Adoption of the Plans by the Provincial Council (Sanggunian Panlalawigan) will be pursued and facilitated by the DILG.

3. Inclusion of the Message of the Governor in the Main Report of respective PW4SPs.

Concerning the 3rd batch study, both parties have agreed on the general approach and methodology, and implementation arrangements adopted for the previous batch studies. Among others, the followings are the basic conditions to be applied for the planning.

(1) Study Area

The DILG completed the exchange of MOAs with the 3rd batch provinces regarding the participation and full support by the concerned provinces. The subject provinces are Northern Samar, Eastern Samar, Samar, Biliran, Leyte and Southern Leyte. The province of Leyte was selected for model province study.

(2) Planning Framework for Future Sector Development

a) Planning base year is 1998 and Medium-Term and Long-Term target years are 2004 (implementation program: year 2000 to year 2004) and 2010, respectively.
b) Plans will be prepared in compliance with the "Implementing Rules and Regulations of NEDA Board Resolution No. 4", Series of 1994.

(3) Implementation Set-Up/Arrangements for the Study

The study will be conducted in accordance with the Implementing Arrangements between the DILG and the JICA, as done with the 1st and 2nd batch studies.

Both parties will make timely and effective arrangements throughout the study period to achieve the purpose of the Study within the set time-table based on the lessons learned from previous batch studies. In this regard, the following will be put into practice.

a) Data collection by the PSPTs will start in advance (overlapped activity with the preceding batch study) to ensure longer period for this activity as compared with the original time allotted.
b) Planning period by the PSPTs will be extended by adjusting the timing for the conduct of the 2nd workshop for data encoding and discussions to set-up planning fundamentals.
c) Practical arrangements will be made to increase the opportunities for further collaboration in the planning work among PSPTs, DILG coordinators and the Team.

For the arrangement of the 4th batch study, the DILG will confirm the subject provinces including the model province through a MOA by May, 1999.

Appendix A

LIST OF ATTENDEES IN THE SERIES OF DISCUSSIONS

		ATTENDEES	DESIGNATION
A.		*DILG*	
	1.	Mr. Benito R. Catindig	Assistant Secretary
	2	Ms. Ellen I. Pascua	Program Manager, WSS-PMO
	3	Mr. Rogelio B. Ocampo	Chief, Planning Division, WSS-PMO
	4	Ms. Fe Crisilla M. Banluta	PW4SP Project Officer, WSS-PMO
B.		*Other Agencies*	
	1.	Ms. Christina Santiago	PIS, NEDA
C.		*JICA Advisory Committee*	
	1.	Ms. Keiko Yamamoto	Chairman, Advisory Committee
	2.	Mr. Keiichi Kanaya	Member, Advisory Committee
D.		*JICA Study Team*	
	1.	Mr. Masatoshi Momose	Team Leader/Water Supply Planning
	2.	Mr. Nobuki Abe	Water Supply/Sanitation Engineer
	3.	Mr. Kenji Hiramatsu	Institutional Specialist
	4.	Mr. Nobukatu Sakiyama	Water Source Specialist
	5.	Ms. Consuelo B. Estepa	Community Dev't./Gender Specialist
	6	Ms. Elizabeth L. Versola	Socio-Economic/financial Specialist
	7	Mr. Emmanuel Patingo	Data Management Specialist

2. PLANNING APPROACH FOR FUTURE SECTOR DEVELOPMENT

2.6 Planning Principles and Data Management

2.6.2 Data Management

(1) Computer-based System

The data management system was established to support the Provincial Sector Planning Team (PSPT) in the preparation of the Provincial Water Supply, Sewerage and Sanitation Sector Plan (PW4SP). An essential task of data management is to organize various kind of data an effective and efficient information base.

A computer-based system was applied as a viable solution to process large amount of data and to minimize the human-error in calculation. For this particular project, a dynamic system is designed to allow the planner to adjust planning factors and update the information when further data becomes available.

It is viable and economical t choose the microcomputer with software suitable for the average skills of the common user. In this connection, of the two types of software package available, database and spreedsheet, the latter method was selected. Among the available spreadsheet-type software, EXCEL was used. Excel support file conversion (opening and saving), multiple file opening, graphic presentation of data, What-You-See-Is-What-You-Get (WYSIWYG) formatting, scaleable font and view, etc. The following are the advantage and disadvantages of the spreedsheet method with reference to database method.

Advantage	Disadvantage
1. Minimum programming skills	1. Repeated entry of same formula
2. Friendly environment to users	2. Sorting or indexing is done manually
3. Graphics presentation of data at user's option.	3. All data are loaded in memory, which require huge amount of memory.
4. Execution of data linkages at formula level entry	4. Limited to static data linkages
5. Guided formula creation using function wizard	

Data management task starts from the collection of data using the questionnaire forms. The existence and accuracy of data are major concern at this stage to prepare main information bases. Using the microcomputer provided with EXCEL spreadsheet, data in the questionnaire forms are transferred into the forms constructed in EXCEL. Applicable policy, criteria and assumption are entered into key parameter tables. These data are then processed and finally consolidated into target forms. These final provide a map of provincial profile, service coverage, future requirements, cost estimates for future sector development, and funding requirements.

Table 2.6.1 Key Parameter

No.	Description of Key Parameter			Unit	Values
1.	Service Level	*Water Supply*			
		Number of household to be served by Level I Facility		HH/Source	
		Number of household to be served by Level II System		HH/Public Faucet	
		Water Consumption Rate for Level III System		Liter/capita/day	
		Sanitation			
		Std. number of student to be served by a unit of Sanitary toilet		Student/Toilet	
		Standard number of toilets for a public utility		Toilet/Public Facility	
2.	Provincial Sector Target	Medium Term Plan	*Water Supply*		
			UrbanWater Supply	% of Population	
			Rural Water Supply	% of Population	
			Sanitation		
			Household Toilet		
			Urban Household Toilet	% of Household	
			Flush	% of Household	
			Pour Flush	% of Household	
			VIP Latrine	% of Household	
			Rural Household Toilet	% of Household	
			Flush	% of Household	
			Pour Flush	% of Household	
			VIP Latrine	% of Household	
			School Toilet	% of Public Student	
			Public Toilet	% of Public Utility	
			Solid Waste	% of Population	
		Long Term Plan	*Water Supply*		
			UrbanWater Supply	% of Population	
			Rural Water Supply	% of Population	
			Sanitation		
			Household Toilet		
			Urban Household Toilet	% of Household	
			Flush	% of Household	
			Pour Flush	% of Household	
			VIP Latrine	% of Household	
			Rural Household Toilet	% of Household	
			Flush	% of Household	
			Pour Flush	% of Household	
			VIP Latrine	% of Household	
			School Toilet	% of Public Student	
			Public Toilet	% of Public Utility	
			Urban Sewerage	% of Urban Population	
3.	**Percentage of Level I Deep Wells to be Rehabilitated**			%	
4.	**Percentage of Sector Management Cost to Construction Cost**				
	Feasibility and Detail Design			% of Construction Cost	
	Construction Supervision			% of Construction Cost	
5.	**Community Development and Training Cost**				
	Level III			% of Construction Cost	
	Level I, II and Public Toilet			% of Construction Cost	
6.	Recurrent Cost	Level III System (Operating Cost)		Pesos/HH/year	
		Level III System (Spare Parts/Equipment)		% of Construction Cost	
		Level II System (Spare Parts/Equipment)		Pesos/HH/year	
		Level I System (Spare Parts/Equipment)		Pesos/HH/year	
		Public School Toilet Maintenance Cost		Pesos/Toilet/year	
		Public Utility Toilet Maintenance Cost		Pesos/Toilet/year	
7.	**Allocation factors/Percentages of IRA**				
	From Provincial			%	
	From Municipality and Brgy.			%	
8.	**Funding Levels/Percenatges for Different Financing Scenarios**				
	1st Scenario			% Funding Available	
	2nd Scenario			% Funding Available	
	3rd Scenario			% Funding Available	
	4th Scenario			% Funding Available	
	5th Scenario			% Funding Available	

Table 2.6.2 Composition of Well Sources and Specific Capacity

Name of Municipality	Type	Type Water Source	Proportion (%)	Standard Specification		
				Depth (m)	SWL (m)	Specific Capacity (liter/sec/m)
	Urban	Shallow Well				
		Deep Well				
		Spring				
	Rural	Shallow Well				
		Deep Well				
		Spring				
	Urban	Shallow Well				
		Deep Well				
		Spring				
	Rural	Shallow Well				
		Deep Well				
		Spring				
	Urban	Shallow Well				
		Deep Well				
		Spring				
	Rural	Shallow Well				
		Deep Well				
		Spring				
	Urban	Shallow Well				
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	Rural	Shallow Well				
		Deep Well				
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	Urban	Shallow Well				
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	Rural	Shallow Well				
		Deep Well				
		Spring				
	Urban	Shallow Well				
		Deep Well				
		Spring				
	Rural	Shallow Well				
		Deep Well				
		Spring				
	Urban	Shallow Well				
		Deep Well				
		Spring				
	Rural	Shallow Well				
		Deep Well				
		Spring				
	Urban	Shallow Well				
		Deep Well				
		Spring				
	Rural	Shallow Well				
		Deep Well				
		Spring				

Table 2.6.3 Annual Investment

Sub-Sector	Component	1999	2000	2001	2002	2003	Total
Urban Water Supply	**Level III System**						
	Feasibility Study and Detail Design						
	Construction & Supervision						
	Community Development & Training						
Rural Water Supply	**Level I Facility**						
	Detail Design						
	Construction & Supervision						
	Community Development & Training						
	Level II System						
	Detail Design						
	Construction & Supervision						
	Community Development & Training						
Sanitation	Urban Household Toilet						
	Rural Household Toilet						
	Public School Toilet						
	Public Toilet						
	Disinfection of Level I Wells						
	Detail Design						
	Construction & Supervision						
	Community Development & Training						

Table 2.6.4 Level I Safe & Unsafe Percentage

Name of Municipality	Safe (%)	Unsafe (%)
Provincial Total		

Table 2.6.5 Unit Construction Cost of Different Facilities

Description	Unit Construction Cost (Pesos)	Service Coverage		Unit Cost	
		Served Population	Served Household	Pesos/ Person	Pesos/ Household
Water Supply					
Level III - New System					
For 5000 Population					
For 10000 Population					
For 15000 Population					
Level III - Expansion					
For 5000 Population					
For 10000 Population					
For 15000 Population					
Level II					
Level I					
Deep Well - 40 meter depth					
Deep Well - 80 meter depth					
Deep Well - 120 meter depth					
Shallow Well - 18 meter depth					
Spring Development					
Rehabilitation Cost for Level I Deep Well					
Disinfection of Level I Wells					
Sanitation					
Flush					
Pour Flush					
VIP / Dry					
School Toilet					
Public Toilet					
Urban Sewerage					

Table 2.6.6 Scoring Factor for Municipal Investment Ranking for Urban Water Supply

Score	Underserved and Unserved Population in Base Year	Underserved and Unserved Population in Phase I	Population Unserved by Level III Systems in Base Year
1.0	< %	< %	< %
0.8	< % < 40	< % <	< % <
0.6	< % < 30	< % <	< % <
0.4	< % < 20	< % <	< % <
0.2	% < 10	% <	% <
Weight Allocation Score (%)			

Table 2.6.7 Scoring Factor for Municipal Comprehensive Investment Ranking

Score	Urban Water Supply	Rural Water Supply	Urban Sanitation	Rural Sanitation
1.0	N.A.	< %	< %	< %
0.8	N.A.	< % <	< % <	< % <
0.6	N.A.	< % <	< % <	< % <
0.4	N.A.	< % <	< % <	< % <
0.2	N.A.	% <	% <	% <
Weight Allocation Score (%)				

3. PROVINCIAL PROFILE

3.3 Socio-economic Conditions

3.3.1 Economic Activities and Family Income

Table 3.3.1 Distribution of Families by Income Class

Income Class	Leyte				Region VIII	
	Total Number of Families		Annual Income		Total Number of Families	Annual Income Average (Pesos)
	Number	Share	Total (P '000.00)	Average (Pesos)		
Under 15,000	40,401	13	557,634	13,803	87,207	13,748
15,000 - 19,999	31,656	10	729,524	23,045	85,948	22,862
20,000 - 29,999	85,236	27	2,593,262	30,425	180,372	30,065
30,000 - 39,999	63,040	20	2,695,388	42,757	137,133	42,930
40,000 - 59,999	58,123	18	3,539,274	60,892	120,101	62,345
60,000 - 99,999	27,619	9	3,069,988	111,157	58,068	112,836
100,000 - 249,999	14,665	5	2,825,521	192,970	23,431	232,048
250,000 and over	856	0	404,114	472,207	1,418	473,960

Source: 1994 Family Income and Expenditures Survey by NSO

Notes:

(1) Derived from Region VIII FIES

(2) Based on NEDA and other agencies, poverty threshold in Region VIII was estimated at P-37,053 (P 6,444 annual per capita poverty threshold).

(3) For purposes of the survey, a family is defined as a group of persons usually living together and composed of the head and other persons related by blood, marriage and adoption. A single person living alone is considered as a separate family. A household is composed of 1 or more families in the same housing unit and has a common arrangement of food preparation and consumption.

Table 3.3.2 Employment by Major Industry Group and Class of Worker, 1994

Major Industry Group	Household Population 15 years and Over Who Worked	Class of Worker							
		Worked for Private Household (Domestic Services)	Worked for Private Business/ Enterprise/ Farm	Worked for Government/ Government Corporation	Self-employed Without Any Paid Employee	Employer In Own Farm or Business	Work With Pay in Own Family Operated Farm or Business	Work Without Pay in Own Family Operated Farm or Business	Not Reported
Agriculture, Hunting and Forestry	254,527	560	65,159	382	107,893	19,930	3,945	55,945	713
Fishing	25,158	25	4,038	10	16,592	707	98	3,620	68
Mining and Quarrying	334	6	213	8	67	8	1	28	3
Manufacturing	16,203	159	9,304	245	4,867	501	101	971	55
Electricity, Gas and Water	1,692	12	1,364	142	151	12	0	4	4
Construction	21,342	331	18,780	278	1,714	109	6	62	62
Trade	49,640	134	9,025	55	30,433	2,090	442	7,362	99
Services	132,777	32,730	38,386	42,222	15,668	1,487	279	1,700	305
Not Stated	896	20	402	32	101	15	4	68	251
Provincial Total	502,569	33,977	146,671	43,374	177,492	24,859	4,876	69,760	1,560

Source: 1995 NSO Socioeconomic and Demographic Characteristics

3.3.3 Education

Table 3.3.3 Household Population by Highest Educational Attainment

Highest Educational Attainment	Household Population 5 years Old and Over	Age Group				
		Below 20	20 - 24	25 - 29	30 - 34	35 and Over
No Grade Completed	115,315	79,740	2,214	2,099	2,099	29,163
Pre-school	42,245	40,434	173	177	156	1,305
Elementary						
1st - 4th Grade	377,656	206,351	18,316	17,939	17,561	117,489
5th - 7th Grade	308,568	99,051	27,277	28,141	27,154	126,945
High School						
Undergraduate	180,881	88,704	21,507	16,894	12,951	40,825
Graduate	96,033	18,419	18,515	15,913	12,465	30,721
Post Secondary						
Undergraduate	2,220	426	631	430	257	476
Graduate	10,836	716	2,962	2,483	1,725	2,950
College Undergraduate	65,772	15,207	15,759	8,991	7,511	18,304
Academic Degree Holder	70,230	456	9,769	12,536	11,820	35,649
Post-Baccalaureate	3,463	13	152	310	401	2,587
Not Stated	13,048	8,404	744	555	527	2,818
Total	1,286,267	557,921	118,019	106,468	94,627	409,232

Source: 1995 NSO Socioeconomic and Demographic Characteristics

3.4 Population

3.4.1 Classification of Urban and Rural Area

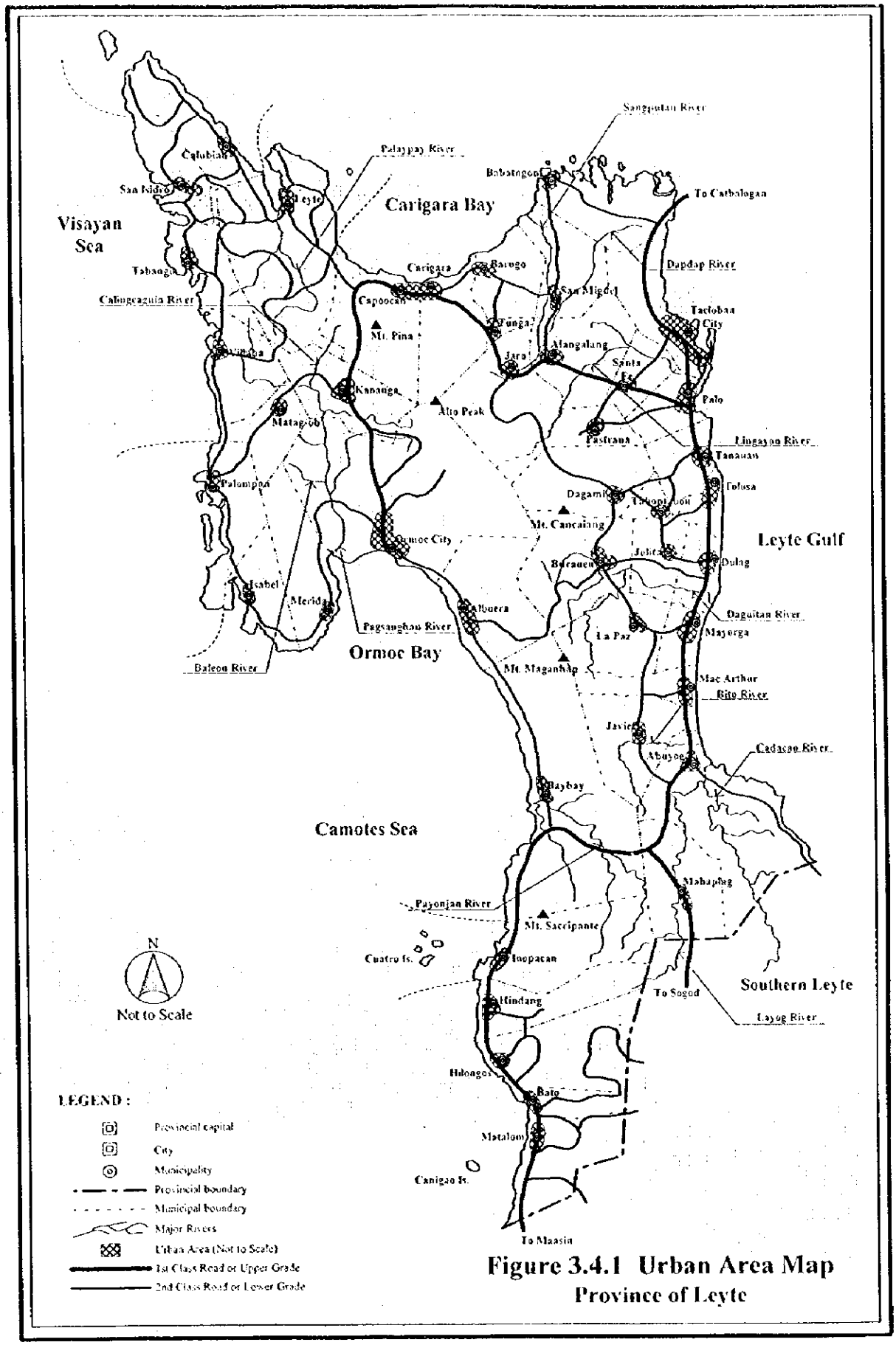

Figure 3.4.1 Urban Area Map
Province of Leyte

3.5 Health Status

Table 3.5.1 Number and Ratio of Population to Health Facilities and/or Medical Practitioners

Health Facilities and Practitioners	Leyte		Philippines	
	Number	Ratio	Number	Ratio
Health Facilities				
Hospital	17	1/83,003	1,700	1/40,206
Rural Health Units	48	1/29,397	2,335	1/29,272
Barangay Health Station	214	1/6,594	11,646	1/5,869
Practitioners				
Doctors	95	1/14,853	6,913	1/9,887
Nurses	150	1/9,407	8,849	1/7,724
Midwives	281	1/5,022	10,831	1/6,311
Dentists	38	1/37,133	1,895	1/36,068

Source: PSPT and 1997 Philippine Statistical Yearbook.

3.6 Environmental Conditions
3.6.2 Water Pollution

Table 3.6.1 DENR Water Quality Criteria/Water Usage and Classification for Fresh Water

Parameter	Unit	Class AA	Class A	Class B	Class C	Class D
Color	PCU	15	50	(C)	(C)	(C)
Temperature (max. rise in deg. Celsius)	°C rise	--	3	3	3	3
pH (range)		6.5-8.5	6.5-8.5	6.5-8.5	6.5-8.5	6.0-9.0
Dissolve Oxygen (Minimum)	%satn	70	70	70	60	40
	mg/L	5.0	5.0	5.0	5.0	3.0
5-Day 20°C BOD	mg/L	1	5	5	7(10)	10(15)
Total Suspended Solids	mg/L	25	50			
Total Dissolved Solids	mg/L	500	1,000	--	--	1,000
Surfactants (MBAS)	mg/L	nil	0.2(0.5)	0.3(0.5)	0.5	--
Oil/Grease (Petroleum Ether Extract)	mg/L	nil	1	1	2	5
Nitrate as Nitrogen	mg/L	1	10	NR	10	--
Phosphate as Phosporous	mg/L	nil	0.1	0.2	0.4	--
Phenolic Substances as Phenols	mg/L	nil	0.002	0.005	0.02	--
Total Coliforms	MPN/100mL	50	1,000	1,000	5,000	--
or Fecal Coliforms	MPN/100mL	20	100	200	--	--
Chloride as Cl	mg/l	250	250	--	350	--
Copper	mg/L	1	1	--	0.05	--

Notes:

Class AA - Public Water Supply Class I. Intended for waters having watersheds that are uninhabited and otherwise protected and which require only approved disinfection in order to meet the national standards for drinking water.

Class A - Public Water Supply Class II. Sources of water supply that will require complete treatment (coagulation, sedimentation, filtration and disinfection) in order to meet drinking water standards.

Class B - Recreational Water Class I. For primary contact recreation such as bathing, swimming skin diving, etc. (particularly for tourism purposes).

Class C - Fishery Water for the propagation and growth of fish and other aquatic resources; recreational (for boating, etc.); industrial water supply class I for manufacturing processes after treatment.

Class D - For agriculture, irrigation, livestock watering, etc.; for industrial water supply class II (cooling, etc.); other inland waters by their quality, belong to this specification.

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
Abuyog	Abuyog WD	9		9	905		905	4,597		4,597
Babatngon	LGU - Babatngon	4		4	455		455	5,659		5,659
Barugo	Metro Carigara WD (c)	8	5	13	516	322	838	2,771	1,752	4,523
Bato	Metro Hilongos WD (c)	1		1	147		147	716		716
Baybay	Baybay WD	23	15	38	3,022	1,932	4,954	15,019	9,428	24,447
Burauen	LGU - Burauen WWS	9	2	11	2,041	202	2,243	11,777	1,165	12,942
Calubian	Calubian WD	1	11	12	60	656	716	297	3,182	3,479
Capoocan	Metro Carigara WD (d)	2	5	7	129	322	451	614	1,610	2,224
Carigara	Metro Carigara WD (a)	5	14	19	322	902	1,224	1,571	4,501	6,072
Dagami	Leyte Metro WD (d)	1	8	9	25	645	670	126	3,150	3,276
Dulag	LGU - Dulag	1		1	51		51	253		253
Hilongos	Metro Hilongos WD (a)	1	2	3	281	957	1,238	1,472	4,795	6,267
Hindang	Metro Hilongos WD (b)	1		1	440		440	2,213		2,213
Isabel	Isabel WD	3	5	8	539	896	1,435	2,646	4,104	6,750
Jaro	Jaro WD	4		4	687		687	3,428		3,428
Javier (Bugho)	LGU - Javier	2	3	5	160	120	280	826	613	1,439
Kananga	LGU - Kananga WS	1	1	2	1,244	297	1,541	7,140	1,913	9,053
Leyte	LGU - Leyte	1	1	2	137	4	141	786	21	807
Matag-ob	LGU - Matag-ob WS	3	4	7	77	292	369	386	1,435	1,821
Matalom	Matalom WS	3	3	6	604	718	1,322	3,020	3,537	6,557
Merida	LGU - Merida	1	1	2	132	10	142	528	36	564
	Merida WD	1	1	2	468	32	500	1,863	145	2,008
	Municipal Total	2	2	4	600	42	642	2,391	181	2,572
Palo	Leyte Metro WD (b)	11		11	3,429		3,429	17,659		17,659
Palompon	Palompon WD	10	3	13	638	191	829	3,050	884	3,934
Pastrana	Leyte Metro WD (e)	1	3	4	16	394	410	86	2,150	2,236
Tabontabon	Leyte Metro WD (f)	1		1	38		38	188		188
Tacloban City (Capital)	Leyte Metro WD (a)	72		72	17,044		17,044	160,163		160,163
Tanauan	Leyte Metro WD (c)	1	5	6	28	748	776	143	3,575	3,718
Tolosa	Leyte Metro WD (g)	2	4	6	121	66	187	1,635	3,383	5,018
Tunga	Metro Carigara WD (b)	4	3	7	258	193	451	1,638	1,154	2,792
Villaba	Hinabuyan		1	1		100	100		600	600
	Pob. Del Norte	1		1	175		175	929		929
	Pob. Del Sur	1		1	150		150	671		671
	Municipal Total	2	1	3	325	100	425	1,600	600	2,200
Provincial Total		189	100	289	34,339	9,999	44,338	253,870	53,133	307,003

Table 4.1.1 Details on Existing Level III Systems
Sheet 2 of 4

Name of Municipality/City	Name of Operating Body	Level II Services								
		Number of Public Faucets			Number of Households Served			Number of Population Served		
		Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
Abuyog	Abuyog WD									
Babatngon	LGU - Babatngon	2		2	10		10	53		53
Barugo	Metro Carigara WD (c)									
Bato	Metro Hilongos WD (c)									
Baybay	Baybay WD									
Burauen	LGU - Burauen WWS									
Calubian	Calubian WD									
Capoocan	Metro Carigara WD (d)									
Carigara	Metro Carigara WD (a)									
Dagami	Leyte Metro WD (d)									
Dulag	LGU - Dulag									
Hilongos	Metro Hilongos WD (a)									
Hindang	Metro Hilongos WD (b)									
Isabel	Isabel WD									
Jaro	Jaro WD									
Javier (Bugho)	LGU - Javier									
Kananga	LGU - Kananga WS									
Leyte	LGU - Leyte									
Matag-ob	LGU - Matag-ob WS									
Matalom	Matalom WS									
Merida	LGU - Merida									
	Merida WD									
	Municipal Total									
Palo	Leyte Metro WD (b)									
Palompon	Palompon WD									
Pastrana	Leyte Metro WD (e)									
Tabontabon	Leyte Metro WD (f)									
Tacloban City (Capital)	Leyte Metro WD (a)									
Tanauan	Leyte Metro WD (c)									
Tolosa	Leyte Metro WD (g)		4	4		20	20		98	98
Tunga	Metro Carigara WD (b)									
Villaba	Hinabuyan									
	Pob. Del Norte	5		5	20		20	100		100
	Pob. Del Sur	2		2	10		10	50		50
	Municipal Total	7		7	30		30	150		150
Provincial Total		9	4	13	40	20	60	203	98	301

Table 4.1.1 Details on Existing Level III Systems

Sheet 3 of 4

Name of Municipality/City	Name of Operating Body	Water Sources			Consumptions			
		Type of Water Source[1]	Number	Production Capacity (cu.m/day)	Domestic	Institutional	Commercial	Industrial
					(cu.m/day)			
Abuyog	Abuyog WD	DW	2	847	712		39	
Babatngon	LGU - Babatngon	SP	1	1,920				
Barugo	Metro Carigara WD (c)							
Bato	Metro Hilongos WD (c)	DW	1	864				
Baybay	Baybay WD	SP	2	8,539	2,859	113	264	
Burauen	LGU - Burauen WWS	SP	2	1,553				
Calubian	Calubian WD							
Capoocan	Metro Carigara WD (d)							
Carigara	Metro Carigara WD (a)	Surf	1	10,000	1,448	65	80	
Dagami	Leyte Metro WD (d)							
Dulag	LGU - Dulag	DW	1	1,296			12	
Hilongos	Metro Hilongos WD (a)	DW	3	1,584				
Hindang	Metro Hilongos WD (b)							
Isabel	Isabel WD	DW	1	432	1,000			
Jaro	Jaro WD	DW	1	864	12	2	2	
Javier (Bugho)	LGU - Javier	SP	2	2,419				
Kananga	LGU - Kananga WS				535		23	
Leyte	LGU - Leyte	SP	1	33				
Matag-ob	LGU - Matag-ob WS							
Matalom	Matalom WS	SP	1	1,633	1,380		254	
Merida	LGU - Merida		1	27				
	Merida WD		1	311	17			
	Municipal Total		2	338	17			
Palo	Leyte Metro WD (b)							
Palompon	Palompon WD	DW/SP	2	864	9	1		
Pastrana	Leyte Metro WD (e)							
Tabontabon	Leyte Metro WD (f)							
Tacloban City (Capital)	Leyte Metro WD (a)	Surf	2	25,556	13,272	1,323	2,589	1,347
Tanauan	Leyte Metro WD (c)							
Tolosa	Leyte Metro WD (g)							
Tunga	Metro Carigara WD (b)							
Villaba	Hinabuyan	SP	1	60	15			
	Pob. Del Norte	SP	1	69	16			
	Pob. Del Sur	SP	1	69	15			
	Municipal Total		3	198	46			
Provincial Total			28	58,920	21,289	1,504	3,264	1,347

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/City	Name of Operating Body	Consumers														
		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	
Abuyog	Abuyog WD	935		711.74							75		39.38			
Babatngon	LGU - Babatngon		4,550			2			8			71				
Barugo	Metro Cangara WD (c)															
Bato	Metro Hilongos WD (c)															
Baybay	Baybay WD	4,699		2,859.00				23		113.00	275		264.00			
Burauen	LGU - Burauen WWS	2,243														
Calubian	Calubian WD															
Capoocan	Metro Cangara WD (d)															
Cangara	Metro Cangara WD (a)	2,863		1,431.50	31		16.12	10		64.80	107		80.25			
Dagami	Leyte Metro WD (d)										23		12.16			
Dulag	LGU - Dulag															
Hilongos	Metro Hilongos WD (a)															
Hindang	Metro Hilongos WD (b)															
Isabel	Isabel WD	1,392		1,000.00												
Jaro	Jaro WD	685		12.00				6		2.00	25		2.00			
Javier (Bugho)	LGU - Javier		5			20			5			10				
Kananga	LGU - Kananga WS	709	6	529	1		6	4			5		23			
Leyte	LGU - Leyte		132					5				1			1	
Matag-ob	LGU - Matag-ob WS															
Matalom	Matalom WS			1,380.00							14		254.00			
Merida	LGU - Merida		1,030													
	Merida WD	490		17.00												
	Municipal Total	490	1,030	17.00												
Palo	Leyte Metro WD (b)															
Palompon	Palompon WD	847	2	1.00	7		8.00	103		1.00						
Pastrana	Leyte Metro WD (e)															
Tabontabon	Leyte Metro WD (f)															
Tacloban City (Capital)	Leyte Metro WD (a)	18,768		12,996.00	160		276.00	252		1,323.00	1,918		2,589.00	38		1,347.00
Tanauan	Leyte Metro WD (c)															
Tolosa	Leyte Metro WD (g)															
Tunga	Metro Cangara WD (b)															
Villaba	Hinabuyan	100	301	15.00												
	Pob. Del Norte	175	10	16.00		5										
	Pob. Del Sur	50	150	15.00		2										
	Municipal Total	325	461	46.00		7										
Provincial Total		33,956	6,186	20,983	199	29	306.12	403	13	1,503.80	2,442	18	3,263.79	38	1	1,347.00

Table 4.1.2 Details on Existing Level II Systems

Sheet 1 of 6

Name of Municipality/City	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)		
Abuyog	Alanggilan WS	SP				2			4
	Bagacay WS	SP				2			6
	Balinsasayao WS	SP				2			13
	Bayabas WS	SP				3			8
	Buaya WS	SP				2			10
	Bulak WS	SP				1			8
	Burubud-an WS	SP				1			2
	Dingle WS	SP				1			6
	Kikilo WS	SP				3			10
	Lawaan WS	SP				1			6
	Libertad WS	SP				3			6
	Magaguicay WS	SP				2			14
	Matagnao WS	SP				1			3
	New Taligue WS	SP				1			6
	Old Taligue WS	SP				1			8
	Parasanon WS	SP				2			6
	Pilar WS	SP				1			4
	Pinamanagan WS	SP				1			10
	San Francisco WS	SP				1			8
	San Roque WS	SP				1			8
	Tadoc WS	SP				1			2
	Tinocolan WS	SP				1			4
	Tuy-a WS	SP				2			10
	Municipal Total	SP				36			162
Albuera	Doña Maria	SP	1	74.9	3,000	3	23.3	2,000	12
	Lawis, Balugo BWSA	DW	1	5.5	100	1	4.5	550	4

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

Sheet 1 of 6

Name of Municipality/City	Name of Operating Body	Water Source			Existing Facilities				
					Length of Transmission Line (meter)	Reservoir		Length of Distribution Line (meter)	Number of Public Faucets
		Type	Number	Discharge (m^3/day)		Number	Volume (m^3)		
Albuera	Mahayag	SP	1	43.2	2,000	2	10.0	2,000	3
	Mahayhay BWSA	SP	1	20.0	40	6	20.0	500	5
	Poblacion WS	DW	1		60	1	37.9	3,475	18
	Sherwood	SP	1	35.0	2,000	3	28.5	2,000	10
	Sitio Soob, Poblacion	SP	1	12.5	1,000	1	5.6	230	9
	Municipal Total	DW/SP	2/5	191.1	8,200	17	129.8	10,755	61
Babatngon	Bagong Silang WS	SP	1	32.7	500	1	2.3	100	3
	Magcasuang WS	SP	1	27.3	400	1	2.3	100	3
	Malibago WS	DW	1	20.0	10	1	5.0	900	10
	Naga-asan WS	DW	1	64.0	100	1	8.0	150	4
	Pagsulhugon WS	SP	1	136.3	2,000	2	7.2	700	8
	Rizal II WS	SP	1	163.5	2,000	1	6.0	1,500	14
	San Isidro WS	DW	1	21.0	38	1	7.0	300	11
	San Ricardo WS	SP	1	81.8	2,000	2	8.3	310	6
	Taguite WS	SP	1	81.8	1,500	2	4.6	500	5
	Victory WS	SP	1	109.0	800	2	17.4	600	8
	Villa Magsaysay WS	SP	1	54.5	300	1	2.3	200	3
	Municipal Total	DW/SP	3/8	791.9	9,648	15	70.4	5,360	75
Barugo	Balud	SP	1	2.0	1,500	1	1.0		3
	Bukid	SP	1	10.0	300	2	20.0		4
	Duka	SP	1	5.0	120	2	2.0	50	3
	San Roque	SP	1	5.0	20	2	2.0		2
	Municipal Total	SP	4	22.0	1,940	7	25.0	50	12

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

Sheet 1 of 6

Name of Municipality/City	Name of Operating Body	Water Source			Existing Facilities				
						Reservoir			
		Type	Number	Discharge (m^3/day)	Length of Transmission Line (meter)	Number	Volume (m^3)	Length of Distribution Line (meter)	Number of Public Faucets
Bato	Dolho BWSA	DW	1	11.0		1	3.9	180	3
	Himamaa BWSA	SP	1	20.0		2	16.0	1,750	6
	Iniguihan BWSA	DW	1	11.0		1	10.3	860	9
	Mabini	SP	1	10.0	600	1	3.3	100	2
	Plaridel BWSA	SP	1	32.0	2,000	2	16.0		3
	Rivilla WS	SP	1	11.0	1,500	1	8.0		2
	Municipal Total	DW/SP	2/4	95.0	4,100	8	57.5	2,890	25
Baybay	Ambacan WS	SP	1	43.2	800	1	15.0	500	3
	Balao WS	SP	1	28.5	2,000	1	10.0	500	3
	Banahao WS	SP	1	43.2	2,200	2	24.0	1,000	6
	Bidlinan WS	SP	1	19.9	1,800	1	11.3	700	4
	Bitanhuan WS	SP	1	86.4	1,000	3	29.1	3,000	100
	Bubon WS	SP	1	21.6	10	3	36.8	20	3
	Buenavista WS	SP	1	28.5	1,600	2	15.0	1,000	8
	Bunga WS	SP	1	86.4	1,500	2	24.8	1,200	10
	Butigan WS	SP	1	14.7	10	1	12.5	1,000	5
	Caridad WS	SP	1	129.6	2,300	3	30.0	5,100	22
	Ciabo & Makinhas WS	SP	1	259.2	1,500	2	29.8	2,000	24
	Guadalupe WS	SP	1	14.7	500	1	7.2	800	4
	Gubang WS	SP	1	86.4	500	2	27.2	2,000	9
	Higuloan WS	SP	1	21.6	1,000	2	12.0	800	3
	Hilapnitan WS	SP	1	43.2	2,000	1	21.2	500	5
	Igang WS	SP	1	86.4	2,000	1	9.0	1,200	4
	Kabalasan WS	SP	1	14.7	1,200	1	9.0	1,000	5

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

Sheet 1 of 6

Name of Municipality/City	Name of Operating Body	Water Source			Existing Facilities				
						Reservoir			
		Type	Number	Discharge (m^3/day)	Length of Transmission Line (meter)	Number	Volume (m^3)	Length of Distribution Line (meter)	Number of Public Faucets
Baybay	Kabatuan WS	SP	1	4.9	2,500	1	12.5	500	3
	Kabungaan WS	SP	1	65.3	1,000	1	12.3	606	16
	Kagumay WS	SP	1	14.7	1,500	1	10.8	800	3
	Kambonggan & Makinhas	SP	1	86.4	3,000			2,000	10
	Kantagnos WS	SP	1	14.7	1,500	1	10.8	700	3
	Maganhan WS	SP	1	14.7	2,500	1	9.0	1,000	4
	Mahayahay WS	SP	1	43.2	1,500	1	15.0	1,000	6
	Mailhi WS	SP	1	14.7	1,000	2	14.7	1,000	6
	Maitum WS	SP	1	129.6	1,000	1	17.6	300	12
	Mapgap WS	SP	1	43.2	1,500	2	22.0	1,000	8
	Marcos WS	SP	1	326.6	554	1	18.0	300	10
	Maslug WS	SP	1	64.8	2,000	1	21.2	1,500	10
	Matam-is WS	SP	1	14.7	3,400	1	7.0	800	4
	Maybog WS	SP	1	86.4	2,200	2	15.0	2,000	26
	Maypatag WS	SP	1	43.2	3,500	2	17.0	1,000	8
	Monte Verde WS	SP	1	14.7	1,500	1	7.2	1,000	4
	Pangasugan WS	SP	1	86.4	800	1	21.2	3,000	516
	Pansagan WS	SP	1	108.9	4,000	2	50.1	60	5
	Patag WS	SP	1	43.2	1,000	1	10.8	500	2
	Plaridel WS	SP	1	172.8	3,600	2	35.2	4,000	300
	Pomponan WS	SP	1	43.2	1,300	3	16.2	2,500	20
	Punta WS	SP	1	21.6	1,500	1	9.0	1,000	5
	Sabang WS	SP	1	86.4	400	2	22.0	500	16
	San Agustin WS	SP	1	43.2	1,800	1	14.8	800	4

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

Sheet 1 of 6

Name of Municipality/City	Name of Operating Body	Water Source			Existing Facilities				
						Reservoir			
		Type	Number	Discharge (m^3/day)	Length of Transmission Line (meter)	Number	Volume (m^3)	Length of Distribution Line (meter)	Number of Public Faucets
Baybay	San Juan WS	SP	1	14.7	1,500	1	9.0	800	4
	Villa Solidaridad WS	SP	1	21.6	1,500	2	12.0	1,000	5
	Zacarito WS	SP	1	17.3	1,100	2	23.6	1,700	4
	Municipal Total	SP	44	2,669.1	70,574	66	757.9	53,686	1,232
Burauen	Burauen WS	SP	2	1,553.4	6,102	3	14.1	7,002	172
Calubian	Caroyocan WS	DW	1	9.4	460	2	3.1	430	5
	Casiogan WS	SP	1	8.0	400	1	2.3	200	4
	Herrera WS	SP	1	12.0	600	1	7.8	800	4
	Jubay WS	SP	1	24.6	800	1	8.2	395	8
	Kawayanan WS	SP	1	12.0	200	1	3.4		2
	Limite WS	SP	1	18.1	1,200	1	6.0	300	4
	Paula WS	DW	1	6.0		1	3.2	350	3
	Ul-og WS	SP	1	16.2	600	1	5.4	400	15
	Municipal Total	DW/SP	2/8	1,659.7	10,362	12	53.5	9,877	217
Carigara	Bislig	SP	1		400				4
	Libo & San Isidro WS	DW	1		1	2	4.5	400	6
	Municipal Total	DW/SP	1/1		401	2	4.5	400	10
Dagami	Calipayan & Rizal BWSA	SP	1		2,800	2	12.0	1,800	5
	Guinarona WS	SP	1		5,000	2			5
	Municipal Total	SP	2		7,800	4	12.0	1,800	10
Hilongos	Cantandog I BWSA	DW	1	216.0	300	2	216.0	350	9
	Himo-aw BWSA	DW	1	200.0	200	2	400.0	1	5
	Matapay BWSA	DW	1	400.0	40	1		40	9
	Naval BWSA	DW	1	400.0	170	3	81.0	100	84
	Municipal Total	DW	4	1,216.0	710	8	697.0	491	107

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

Sheet 1 of 6

Name of Municipality/City	Name of Operating Body	Water Source			Existing Facilities				
						Reservoir			
		Type	Number	Discharge (m^3/day)	Length of Transmission Line (meter)	Number	Volume (m^3)	Length of Distribution Line (meter)	Number of Public Faucets
Hindang	Anolon BWSA	SP	1	50.0	300	1	16.0	15	3
	Bontoc WS	SP	1	100.0	400	4	20.0	200	18
	Capudlosan BWSA	SP	1	50.0	350			10	2
	Himacugo BWSA	SP	1	65.0	500	1	9.0	10	2
	San Vicente BWSA	SP	1	60.0	30			450	10
	Tagbibi BWSA	SP	1	80.0	20			185	8
	Municipal Total	SP	6	405.0	1,600	6	45.0	870	43
Inopacan	Cabulisan WS	SP							10
	Caminto WS	SP							8
	Can-angay	SP							5
	Caulisihan	SP							4
	De los Santos	SP							3
	Guadalupe	SP							10
	Hinabay	SP							5
	Jubasan	SP							10
	Maljo	SP							10
	Marao WS	SP							15
	Tahud WS	SP							10
	Municipal Total	SP							90
Jaro	Biaz-Zabala	SP	1	33.0	205	1	8.0		4
	Burabod WS	SP	1	31.0	800	2	3.4	250	5
	Daro WS	SP	1	230.0	1,500	2	8.8	900	12
	Hibunawon WS	SP	1	38.5	220	2	8.0	120	5
	Macanip WS	SP	1	25.0	120	1	6.0	200	2

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

Sheet 1 of 6

Name of Municipality/City	Name of Operating Body	Water Source			Existing Facilities				
					Length of Transmission Line (meter)	Reservoir		Length of Distribution Line (meter)	Number of Public Faucets
		Type	Number	Discharge (m^3/day)		Number	Volume (m^3)		
Jaro	Piraon WS	SP	1	20.0	40	1	20.0	220	4
	Rubas WS	SP	1	40.0	900	2	6.0	700	5
	San Agustin WS	SP	1	39.0	800			150	5
	Sari-sari WS	SP	1	35.0	450			200	3
	Tinambacan WS	SP	1	120.0	2,000	2	8.5	800	6
	Uguiao WS	SP	1	120.0	1,500				4
	Villa Consuelo WS	SP	1	80.0	300	1	8.0	150	3
	Municipal Total	SP	12	811.5	8,835	14	76.7	3,690	58
Javier (Bugho)	A. Bonifacio BWSA	SP			20			200	5
	Binulho BWSA	SP			4,200	2	185.0	1,400	30
	Caraye	SP			1,500	1	6.1	800	10
	Comatin BWSA	SP			1,400	1	6.1	1,100	11
	Guindapunan BWSA	SP			650	1	6.1	200	4
	Malitbogay	SP			1,500	1	6.1	600	7
	Manarug	SP			2,600	1	9.5	900	10
	Manlilisid BWSA	SP	1	432.0	2,500	1	4.1	950	15
	Odiong BWSA	SP	1		1,000	1	10.9	800	12
	Pinocawan BWSA	SP			50			300	4
	San Sotero BWSA	SP	1		900	1	22.7	600	14
	Talisayan	DW	1	600.0	200	1	9.5	500	5
	Ulhay BWSA	SP			1,800	1	10.9	1,000	9
	Zone 1	DW			25			200	5
	Municipal Total	DW/SP	1/3	1,032.0	18,345	12	277.0	9,550	141
Kananga	Aguiting	SP	1	30.0	2,500			1,500	4
	Hiluctogan	SP	1	30.0	2,000			2,000	8

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

Sheet 1 of 6

Name of Municipality/City	Name of Operating Body	Water Source			Existing Facilities				
						Reservoir			
		Type	Number	Discharge (m^3/day)	Length of Transmission Line (meter)	Number	Volume (m^3)	Length of Distribution Line (meter)	Number of Public Faucets
Kananga	Libertad	SP	1	30.0	1,500	1	4.5	500	3
	Lonoy	SP	1	30.0	2,000	1	4.5	500	4
	Masarayao	SP	1	30.0	2,500			800	5
	Rizal	SP	1	45.0	2,500			1,300	16
	San Isidro	SP	1	30.0	2,000				4
	Municipal Total	SP	7	225.0	15,000	2	9.0	6,600	44
La Paz	Mun. WS	SP	1	5.0					303
Leyte	Bachao RWSA	SP	1	86.4	1,000	1	8.0	250	6
	Baco WWS	SP	1	69.1	600	1	8.0		4
	Basud WWS	SP	1	103.7	1,200	1	16.6	100	6
	Culasi WWS	SP	1	86.4	1,200	2	6.8	350	8
	Kawayan WWS	SP	1	86.4	1,000	3	17.5		8
	Libas WWS	SP	1	69.1	700	1	3.4	75	3
	Maanda WWS	SP	1	86.4	1,300	1	1.5	100	4
	Palarao RWA	SP	1	129.6	2,100	1	8.0	200	18
	Palid I	SP	1	86.4	1,500	1	6.0	150	6
	Parasan WWS	SP	1	69.1	600	1	1.0		3
	Salog WWS	SP	1	43.2	600	1	2.3		2
	Tapol BWSA	SP	1	86.4	1,000	1	8.0		2
	Tigbawan WWS	SP	1	43.2	1,000	1	1.0	200	3
	Tinocdogan WWS	SP	1	69.1	1,200	1	16.0	100	4
	Toctoc WWS	SP	1	86.4	1,000	2	16.0	200	6
	Municipal Total	SP	16	1,206.0	16,000	19	120.1	1,725	386

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

Sheet 1 of 6

Name of Municipality/City	Name of Operating Body	Water Source			Existing Facilities				
					Length of Transmission Line (meter)	Reservoir		Length of Distribution Line (meter)	Number of Public Faucets
		Type	Number	Discharge (m^3/day)		Number	Volume (m^3)		
MacArthur	Casuntingan & Tinawan	SP	1					1,500	5
	Danao	SP	1		200			150	2
	San Antonio & Sta. Isabel	SP	1						5
	Municipal Total	SP	3		200			1,650	12
Mahaplag	Himamara WS	SP	1		1,500	1	15.0	280	11
	San Isidro WS	DW	1			2	8.0		6
	Municipal Total	DW/SP	1/1		1,500	3	23.0	280	17
Matag-ob	Balagtas WS	SP	1	28.5	1,800	2	12.0	250	8
	Bonoy WS	SP	1	136.3	800	2	10.9	150	15
	Bulak WS	SP	1	109.0	200			100	2
	Cambadbad WS	SP	1	49.1	400	1	3.4	130	3
	Candelaria	SP	1	136.3	800	1	3.4	350	8
	Cansoso WS	SP	1	122.7	650	2	8.0	500	4
	Imelda WS	SP	1	28.5	2,050	2	14.0	400	5
	Malazarte WS	SP	1	95.0	980	2	6.8		5
	Mansalip WS	SP	1	87.2	1,200	1	5.8	300	3
	Masaba WS	SP	1	87.2	900	1	3.4		4
	Naulayan WS	SP	1	119.9	1,500	1	3.4	150	4
	San Dionesio WS	SP	1	87.2	600	1	8.0	150	4
	San Marcelino WS	SP	1	136.3	450	1	5.8	300	5
	San Vicente WS	SP	1	163.6	650	2	12.0	300	20
	Sta. Rosa WS	SP	1	65.4	700	2	11.4	250	14
	Sto. Rosario WS	SP	1	28.5	1,950	6	25.3	400	10
	Municipal Total	SP	16	1,480.8	15,630	27	133.6	3,730	114

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

Sheet 1 of 6

Name of Municipality/City	Name of Operating Body	Water Source			Existing Facilities				
						Reservoir			
		Type	Number	Discharge (m^3/day)	Length of Transmission Line (meter)	Number	Volume (m^3)	Length of Distribution Line (meter)	Number of Public Faucets
Mataloin	Cahagnaan BWSA	SP	1	20.3	120	3	25.5	2,000	15
	Cangganay BWSA	SP	1		5	1	3.8	100	4
	Monte Alegre	SP	1	60.5	250	1	3.5	120	10
	Sta. Fe WS	SP	1	78.5	15	1	3.8	300	3
	Sto. Niño BWSA	SP	1	78.5	50	1	3.8	200	5
	Municipal Total	SP	5	237.8	440	7	40.4	2,720	37
Mayorga	Mayorga BWSA	DW			20			10	9
Palompon	Buenavista WS	SP	1		200	1	3.4	150	6
	Caduhaan WS	SP	1		120	3	10.1	200	15
	Cruz WS	SP	1		50	1	3.0	280	12
	Municipal Total	SP	3		370	5	16.5	630	33
San Isidro	Capiñahan WS	DW	1	100.0	100	2	60.0	250	11
Santa Fe	San Juan WS	SP	1	100.0	8	1	18.0	150	6
Tabango	Mun. Government	DW							22
Tacloban City (Capital)	Tacloban City								55
Tanauan	Ada BWSA	DW	1	8.0	400			20	8
	Canbalisara BWSA	SP	1		1,100				54
	Mahulod BWSA	DW							14
	Sta. Elena	DW			65				3
	Municipal Total	DW/SP	1/1	8.0	1,565			20	79
Villaba	Abijao	SP	1	186.6	900			300	4
	Bangcal BWSA	SP	1	207.4	800	1	27.0	300	4
	Cabungaan, Silad & Suba E	SP	1	186.6	4,500	3	90.0	1,800	6
	Cagnocot BWSA	SP	1	248.8	1,800	1	45.0	900	7

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

Sheet 1 of 6

Name of Municipality/City	Name of Operating Body	Water Source			Existing Facilities				
						Reservoir			
		Type	Number	Discharge (m^3/day)	Length of Transmission Line (meter)	Number	Volume (m^3)	Length of Distribution Line (meter)	Number of Public Faucets
Villaba	Camporog WS	SP	1	207.4	800	1	15.0	300	2
	Canquiason BWSA	SP	1	81.0	900	1	20.0	300	2
	Casili-on BWSA	SP	1	155.5	1,200			500	5
	Fatima BWSA	SP	1	259.2	900			300	5
	Hibulangan BWSA	SP	1	155.5	900			300	3
	Jordan BWSA	SP	1	248.8	1,300			800	6
	Sulpa BWSA	SP	1	97.2	1,300	1	6.0	100	2
	Tabunok BWSA	SP	1	155.5	500				2
	Municipal Total	SP	12	2,189.6	15,800	8	203.0	5,900	48
Provincial Total			180	14,440.5	209,148	281	2,829.9	123,084	3,061

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

Number of public faucet for the Municipality of Burauen was taken from UNICEF Report.

Table 4.1.2 Details on Existing Level II Systems

Sheet 2 of 6

Name of Municipality/City	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
Abuyog	Alanggilan WS		1	1		20	20		99	99
	Bagacay WS		1	1		30	30		149	149
	Balinsasayao WS		1	1		65	65		323	323
	Bayabas WS		1	1		40	40		199	199
	Buaya WS		1	1		50	50		249	249
	Bulak WS		1	1		40	40		199	199
	Burubud-an WS		1	1		10	10		50	50
	Dingle WS		1	1		30	30		149	149
	Kikilo WS		1	1		50	50		249	249
	Lawaan WS		1	1		30	30		149	149
	Libertad WS		1	1		30	30		149	149
	Magaguicay WS		1	1		70	70		348	348
	Matagnao WS		1	1		15	15		75	75
	New Taligue WS		1	1		30	30		149	149
	Old Taligue WS		1	1		40	40		199	199
	Parasanon WS		1	1		30	30		149	149
	Pilar WS		1	1		20	20		99	99
	Pinamanagan WS		1	1		50	50		249	249
	San Francisco WS		1	1		40	40		199	199
	San Roque WS		1	1		40	40		199	199
	Tadoc WS		1	1		10	10		50	50
	Tinocolan WS		1	1		20	20		99	99
	Tuy-a WS		1	1		50	50		249	249
	Municipal Total		23	23		810	810		4,028	4,028
Albuera	Doña Maria		1	1		60	60		293	293
	Lawis, Balugo BWSA		1	1		20	20		98	98

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

Sheet 2 of 6

Name of Municipality/City	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
Albuera	Mahayag		1	1		15	15		73	73
	Mahayhay BWSA		1	1		25	25		122	122
	Poblacion WS	1		1	90		90	445		445
	Sherwood		1	1		50	50		244	244
	Sitio Soob, Pob.				45		45	222		222
	Municipal Total	1	5	6	135	170	305	667	830	1,497
Babatngon	Bagong Silang WS		1	1		15	15		77	77
	Magcasuang WS	1		1	15		15	79		79
	Malibago WS		1	1		50	50		257	257
	Naga-asan WS		1	1		20	20		103	103
	Pagsulhugon WS		1	1		40	40		206	206
	Rizal II WS		1	1		70	70		360	360
	San Isidro WS		1	1		55	55		283	283
	San Ricardo WS		1	1		30	30		154	154
	Taguite WS		1	1		25	25		129	129
	Victory WS		1	1		40	40		206	206
	Villa Magsaysay WS		1	1		15	15		77	77
	Municipal Total	1	10	11	15	360	375	79	1,852	1,931
Barugo	Balud		1	1		15	15		82	82
	Bukid		1	1		20	20		109	109
	Duka		1	1		15	15		82	82
	San Roque		1	1		10	10		54	54
	Municipal Total		4	4		60	60		327	327
Bato	Dolho BWSA		1	1		15	15		77	77
	Himamaa BWSA		1	1		30	30		153	153
	Iniguihan BWSA	2		2	45		45	219		219

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

Sheet 2 of 6

Name of Municipality/City	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
Bato	Mabini		1	1		10	10		51	51
	Plaridel BWSA		1	1		15	15		77	77
	Rivilla WS		1	1		10	10		51	51
	Municipal Total	2	5	7	45	80	125	219	409	628
Baybay	Ambacan WS		1	1		15	15		73	73
	Balao WS		1	1		15	15		73	73
	Banahao WS		1	1		30	30		146	146
	Bidlinan WS		1	1		20	20		98	98
	Bitanhuan WS		1	1		500	500		2,440	2,440
	Bubon WS		1	1		15	15		73	73
	Buenavista WS		1	1		40	40		195	195
	Bunga WS		1	1		50	50		244	244
	Butigan WS		1	1		25	25		122	122
	Caridad WS		1	1		110	110		537	537
	Ciabo & Makinhas WS		1	1		120	120		586	586
	Guadalupe WS	1		1	20		20	99		99
	Gubang WS		1	1		45	45		220	220
	Higuloan WS		1	1		15	15		73	73
	Hilapnitan WS		1	1		25	25		122	122
	Igang WS		1	1		20	20		98	98
	Kabalasan WS		1	1		25	25		122	122
	Kabatuan WS		1	1		15	15		73	73
	Kabungaan WS		1	1		80	80		390	390
	Kagumay WS		1	1		15	15		73	73
	Kambonggan & Makinhas WS		1	1		50	50		244	244
	Kantagnos WS		1	1		15	15		73	73

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

Sheet 2 of 6

Name of Municipality/City	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
Baybay	Maganhan WS		1	1		20	20		98	98
	Mahayahay WS		1	1		30	30		146	146
	Mailhi WS		1	1		30	30		146	146
	Maitum WS		1	1		60	60		293	293
	Mapgap WS		1	1		40	40		195	195
	Marcos WS		1	1		50	50		244	244
	Maslug WS		1	1		50	50		244	244
	Matam-is WS		1	1		20	20		98	98
	Maybog WS		1	1		130	130		634	634
	Maypatag WS		1	1		40	40		195	195
	Monte Verde WS		1	1		20	20		98	98
	Pangasugan WS		1	1		2,580	2,580		12,590	12,590
	Pansagan WS		1	1		25	25		122	122
	Patag WS		1	1		10	10		49	49
	Plaridel WS		1	1		1,500	1,500		7,320	7,320
	Pomponan WS	1		1	100		100	497		497
	Punta WS		1	1		25	25		122	122
	Sabang WS		1	1		80	80		390	390
	San Agustin WS		1	1		20	20		98	98
	San Juan WS		1	1		20	20		98	98
	Villa Solidaridad WS		1	1		25	25		122	122
	Zacarito WS		1	1		20	20		98	98
	Municipal Total	2	42	44	120	6,040	6,160	596	29,475	30,071
Burauen	Burauen WS	3	11	14	79	93	172	395	465	860
Calubian	Caroyocan WS		1	1		25	25		121	121
	Casiogan WS		1	1		20	20		97	97

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

Sheet 2 of 6

Name of Municipality/City	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
Calubian	Herrera WS		1	1		20	20		97	97
	Jubay WS		1	1		40	40		194	194
	Kawayanan WS		1	1		10	10		49	49
	Limite WS		1	1		20	20		97	97
	Paula WS		1	1		15	15		73	73
	Ul-og WS		1	1		75	75		364	364
	Municipal Total		8	8		225	225		1,092	1,092
Carigara	Bislig		1	1		20	20		100	100
	Libo & San Isidro WS		2	2		30	30		150	150
	Municipal Total		3	3		50	50		250	250
Dagami	Calipayan & Rizal BWSA		2	2		25	25		125	125
	Guinarona WS		3	3		25	25		125	125
	Municipal Total		5	5		50	50		250	250
Hilongos	Cantandog I BWSA		1	1		45	45		225	225
	Himo-aw BWSA	1		1	25		25	131		131
	Matapay BWSA		1	1		45	45		225	225
	Naval BWSA		1	1		420	420		2,104	2,104
	Municipal Total	1	3	4	25	510	535	131	2,554	2,685
Hindang	Anolon BWSA		1	1		15	15		70	70
	Bontoc WS		2	2		90	90		419	419
	Capudlosan BWSA		1	1		10	10		47	47
	Himacugo BWSA		1	1		10	10		47	47
	San Vicente BWSA		1	1		50	50		233	233
	Tagbibi BWSA		1	1		45	45		209	209
	Municipal Total		7	7		220	220		1,025	1,025

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

Sheet 2 of 6

Name of Municipality/City	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
Inopacan	Cabulisan WS		1	1		50	50		251	251
	Caminto WS		1	1		40	40		201	201
	Can-angay		1	1		25	25		126	126
	Caulisihan		1	1		20	20		100	100
	De los Santos		1	1		15	15		75	75
	Guadalupe		1	1		50	50		251	251
	Hinabay		1	1		25	25		126	126
	Jubasan		1	1		50	50		251	251
	Maljo		1	1		50	50		251	251
	Marao WS		1	1		75	75		377	377
	Tahud WS		1	1		50	50		251	251
	Municipal Total		11	11		450	450		2,260	2,260
Jaro	Biaz-Zabala		1	1		20	20		98	98
	Burabod WS		1	1		25	25		123	123
	Daro WS		1	1		60	60		295	295
	Hibunawon WS		1	1		25	25		123	123
	Macanip WS		1	1		10	10		49	49
	Piraon WS	4		4	20		20	100		100
	Rubas WS		1	1		25	25		123	123
	San Agustin WS		1	1		25	25		123	123
	Sari-sari WS		1	1		15	15		74	74
	Tinambacan WS		1	1		30	30		147	147
	Uguiao WS		1	1		20	20		98	98
	Villa Consuelo WS		1	1		15	15		74	74
	Municipal Total	4	11	15	20	270	290	100	1,327	1,427

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

Sheet 2 of 6

Name of Municipality/City	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
Javier (Bugho)	A. Bonifacio BWSA		1	1		25	25		128	128
	Binulho BWSA	3	1	4	100	50	150	516	256	772
	Caraye		1	1		50	50		256	256
	Comatin BWSA		1	1		55	55		281	281
	Guindapunan BWSA		1	1		20	20		102	102
	Malitbogay		1	1		35	35		179	179
	Manarug		1	1		50	50		256	256
	Manlilisid BWSA		1	1		75	75		383	383
	Odiong BWSA		1	1		60	60		307	307
	Pinocawan BWSA		1	1		20	20		102	102
	San Sotero BWSA		1	1		70	70		358	358
	Talisayan		1	1		25	25		128	128
	Ulhay BWSA		1	1		45	45		230	230
	Zone 1	1		1	25		25	129		129
	Municipal Total	4	13	17	125	580	705	645	2,966	3,611
Kananga	Aguiting		1	1		20	20		102	102
	Hiluctogan		1	1		40	40		204	204
	Libertad		1	1		15	15		77	77
	Lonoy		1	1		20	20		102	102
	Masarayao		1	1		25	25		128	128
	Rizal		1	1		80	80		408	408
	San Isidro		1	1		20	20		102	102
	Municipal Total		7	7		220	220		1,123	1,123
La Paz	Mun. WS	4	2	6	297	30	327	1,524	149	1,673
Leyte	Bachao RWSA		1	1		30	30		158	158
	Baco WWS		1	1		20	20		105	105

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

Sheet 2 of 6

Name of Municipality/City	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
Leyte	Basud WWS		1	1		30	30		158	158
	Culasi WWS		1	1		40	40		211	211
	Kawayan WWS		1	1		40	40		211	211
	Libas WWS		1	1		15	15		79	79
	Maanda WWS		1	1		20	20		105	105
	Palarao RWA		1	1		90	90		474	474
	Palid I		1	1		30	30		158	158
	Parasan WWS		1	1		15	15		79	79
	Salog WWS		1	1		10	10		53	53
	Tapol BWSA		1	1		10	10		53	53
	Tigbawan WWS		1	1		15	15		79	79
	Tinocdogan WWS		1	1		20	20		105	105
	Toctoc WWS		1	1		30	30		158	158
	Municipal Total		15	15		415	415		2,186	2,186
MacArthur	Casuntingan & Tinawan		2	2		25	25		133	133
	Danao		1	1		10	10		53	53
	San Antonio & Sta. Isabel		2	2		25	25		133	133
	Municipal Total		5	5		60	60		319	319
Mahaplag	Himamara WS		1	1		11	11		57	57
	San Isidro WS		1	1		6	6		31	31
	Municipal Total		2	2		17	17		88	88
Matag-ob	Balagtas WS		1	1		40	40		197	197
	Bonoy WS	1		1	75		75	375		375
	Bulak WS		1	1		10	10		49	49
	Cambadbad WS		1	1		15	15		74	74
	Candelaria		1	1		40	40		197	197

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

Sheet 2 of 6

Name of Municipality/City	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
Matag-ob	Cansoso WS		1	1		20	20		98	98
	Imelda WS		1	1		25	25		123	123
	Malazarte WS		1	1		25	25		123	123
	Mansalip WS	1		1	15		15	75		75
	Masaba WS		1	1		20	20		98	98
	Naulayan WS		1	1		20	20		98	98
	San Dionesio WS		1	1		20	20		98	98
	San Marcelino WS		1	1		25	25		123	123
	San Vicente WS		1	1		100	100		492	492
	Sta. Rosa WS		1	1		70	70		344	344
	Sto. Rosario WS		1	1		50	50		246	246
	Municipal Total	2	14	16	90	480	570	450	2,360	2,810
Matalom	Cahagnaan BWSA	1		1	75		75	357		357
	Cangganay BWSA		1	1		20	20		101	101
	Monte Alegre		1	1		50	50		252	252
	Sta. Fe WS		1	1		15	15		75	75
	Sto. Niño BWSA	1		1	25		25	119		119
	Municipal Total	2	3	5	100	85	185	476	428	904
Mayorga	Mayorga BWSA	1	2	3	15	30	45	72	146	218
Palompon	Buenavista WS		1	1		6	6		28	28
	Caduhaan WS		1	1		15	15		69	69
	Cruz WS		2	2		12	12		56	56
	Municipal Total		4	4		33	33		153	153
San Isidro	Capiñahan WS	2	1	3	40	15	55	178	71	249
Santa Fe	San Juan WS		1	1		30	30		154	154
Tabango	Mun. Government		3	3		275	275		1,375	1,375

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

Sheet 2 of 6

Name of Municipality/City	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
Tacloban City (Capital	Tacloban City		1	1		275	275		1,375	1,375
Tanauan	Ada BWSA		1	1		40	40		191	191
	Canbalisara BWSA		1	1		270	270		1,291	1,291
	Mahulod BWSA		1	1		70	70		335	335
	Sta. Elena		1	1		15	15		72	72
	Municipal Total		4	4		395	395		1,889	1,889
Villaba	Abijao		1	1		395	395		1,916	1,916
	Bangcal BWSA		1	1		20	20		97	97
	Cabungaan, Silad & Suba BWS		3	3		20	20		97	97
	Cagnocot BWSA		1	1		30	30		146	146
	Camporog WS		1	1		35	35		170	170
	Canquiason BWSA		1	1		10	10		49	49
	Casili-on BWSA		1	1		10	10		49	49
	Fatima BWSA	1		1	25		25	125		125
	Hibulangan BWSA		1	1		25	25		121	121
	Jordan BWSA		1	1		15	15		73	73
	Sulpa BWSA		1	1		30	30		146	146
	Tabunok BWSA		1	1		10	10		49	49
	Municipal Total	1	13	14	25	600	625	125	2,913	3,038
Provincial Total		30	238	268	1,131	12,928	14,059	5,657	63,839	69,496

Table 4.1.2 Details on Existing Level II Systems

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Name of Municipality/City	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 Press. (% of total)	
					Power Failure	Pump Breakdown	Pipe Burst	Others	Adequate	Inadequate
Abuyog	Alanggilan WS									
	Bagacay WS									
	Balinsasayao WS									
	Bayabas WS									
	Buaya WS									
	Bulak WS									
	Burubud-an WS									
	Dingle WS									
	Kikilo WS									
	Lawaan WS									
	Libertad WS									
	Magaguicay WS									
	Matagnao WS									
	New Taligue WS									
	Old Taligue WS									
	Parasanon WS									
	Pilar WS									
	Pinamanagan WS									
	San Francisco WS									
	San Roque WS									
	Tadoc WS									
	Tinocolan WS									
	Tuy-a WS									
Albuera	Doña Maria	10								
	Lawis, Balugo BWSA	4								
	Mahayag	24								
	Mahayhay BWSA	24								