JAPAN INTERNATIONAL COOPERATION AGENCY

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

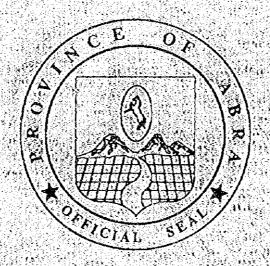
STUDY ON THE PROVINCIAL WATER SUPPLY, SEWERAGE AND SANITATION SECTOR PLAN IN THE REPUBLIC OF THE PHILIPPINES

VOLUME III - 5

SUPPORTING AND DATA REPORT

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

ABRA



FEBRUARY 1996

NIPPON JOGESUIDO SEKKEI CO., LTD.

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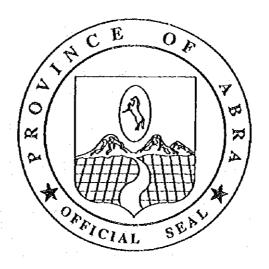
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VOLUME III - 5 SUPPORTING AND DATA REPORT

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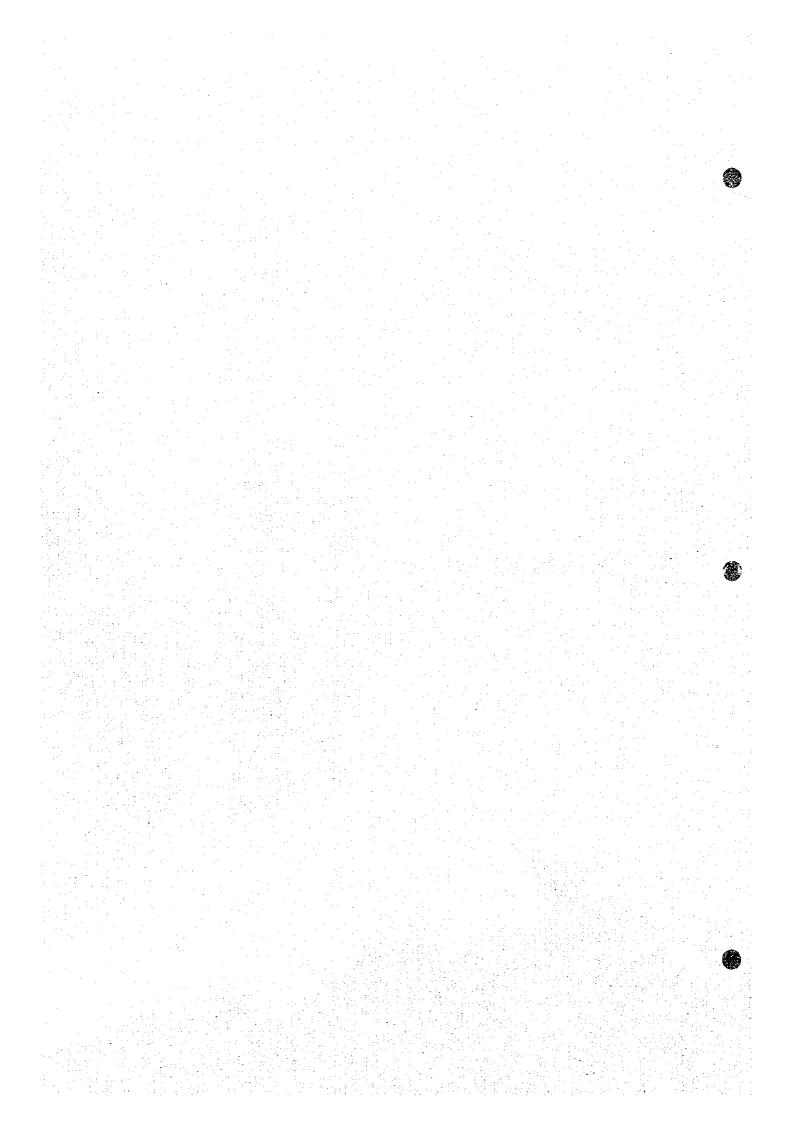
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SUPPORTING REPORT

A. BACKGROUND INFORMATION AND EXISTING CONDITIONS



- 1. INTRODUCTION
- 1.3 The Provincial Plan for the Province of Abra
- 1.3.1 Preparation of the Plan

MINUTES OF DISCUSSIONS

ON

THE INCEPTION REPORT

FOR

STUDY ON PROVINCIAL WATER SUPPLY, SEWERAGE AND SANITATION SECTOR PLAN

IN

THE REPUBLIC OF THE PHILIPPINES

AGREED UPON BETWEEN THE DEPARTMENT OF THE INTERIOR AND LOCAL GOVERNMENT

AND

STUDY TEAM OF

JAPAN INTERNATIONAL COOPERATION AGENCY

MANILA, SEPTEMBER 5, 1994

HON. YOLANDA MA. L. DE LEON

- Assistant Secretary

Dept. of the Interior and Local Government

MR. MASATOSHI MOMOSE

Team Leader, Study Team
Japan Int'l 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 August 31, 1994 to conduct "the Study on Provincial Water Supply, Sewerage and Sanitation Sector Plan" (hereinafter referred to as "the Study") in accordance with the Implementing Arrangement for the Study between the JICA and the Department of the Interior and Local Government (hereinafter referred to as "DILG") on November 19, 1993.

A series of discussions was made on the Inception Report for the Study between the Study Team and officials of DILG. In the course of discussions, both parties have agreed to the main items described in the Inception Report. The list of attendants in the series of discussions is presented in Appendix A.

1. Objectives and Scope of Work for the Study

- (1) Formulation of long-term provincial development plan for water supply, sewerage and sanitation sector to the year 2010 through technical assistance to the provincial staff; and
- (2) Preparation of medium-term (five year) sector investment plan based on the long-term development plan.

The Study will be conducted in two stages for the two batches.

2. Study Area

The study area covers the following nine (9) provinces and are grouped as follows:

BATCH No. 1	BATCH No. 2
(1) Zambales	(1) Abra
(2) Rizal	(2) Ilocos Norte
(3) Mindoro Oriental	(3) Ilocos Sur
(4) Mindoro Occidental	(4) Nueva Vizcaya
• .	(5) Batanes

For Rizal province, four (4) municipalities covered by the MWSS will be excluded in the future plan. The conduct of the Study for Batch No. 2 shall be finally determined after ascertaining the peace and order conditions in the subject provinces by the end of the Batch No. 1 Study.



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3. General Approach and Methodology to the Study

- (1) Planning framework for future sector development
 - a. Base years shall be determined after discussion with NEDA to conform with national plans and programs.
 - b. The PW4SP shall be prepared within the context of existing plans and projects. However some modifications may be made where appropriate to reflect the updated information.
 - c. Conformity and consistency of the Study with the national plans and programs such as the NEDA Board Resolutions Nos. 4 and 5 Series 1994; the Water Sector Reforms Study and the National Urban Sewerage and Sanitation Strategy Plan for the Philippines.

(2) Establishment of data base

To maintain consistency and compatibility with the existing data base of previously developed PW4SPs, the Study will adopt the same in principle and will be modified if needed.

(3) Water source development

Water Availability Maps will be developed through update of the NWRB's Rapid Assessment Report and other studies.

(4) Community development and training

Training needs assessment will be undertaken to guide the Study in identifying manpower development strategies and programs. Existing local training resources and activities will be evaluated. A community development study will be undertaken entailing model studies for each of the three service levels in every province.

(5) Technology Transfer

Capacity building and technology transfer are important elements of the Study. To the extent possible, counterpart staff at the local and national levels shall participate actively in data collection and analysis, formulation of strategic recommendations, and the preparation of the PW4SP.



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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 ЛСА 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 such as PCC (FW4SP) and the like.

The JICA 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.

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LIST OF ATTENDANTS IN THE SERIES OF DISCUSSIONS

ATTENDANTS

DESIGNATION

A	DIL	C
А.	DUL	, Cr

1. HON. YOLANDA MA. L. DE LEON Assistant Secretary,

Plans and Programs

2. MR. ORVILLE M. ROQUE Project Manager I, PMO

3. MR. ROGELIO B. OCAMPO Chief, Planning Div., PMO

4. MS. ELLEN I. PASCUA Chief, Admin. Div., PMO

5. MS. FE CRISILLA M. BANLUTA PW4SP Overall Coordinator, PMO

B. OTHER AGENCIES

1. MR. ANTONIO DE VERA Administrator, LWUA

2. MR. ROGELIO A. FLORES Director, PMO-RWS, DPWH

3. DR. MARIO VILLAVERDE Director, EHS, DOH

С. ЛСА

1. MR. MASAO TATEBA Supervisor, Second Dev't. Study

Div., Social Dev't. Study Dept.

2. MR. EIJI IWASAKI Asst. Resident Representative, Phil. Office

D. JICA STUDY TEAM

1. MR. MASATOSHI MOMOSE Team Leader

2. MR. MASUOMI HIROYAMA Water Supply Engr.

3. MR. KENSUKE ICHIKAWA
4. MS. YOLANDA M. MINGOA
5 Sanitary Engr.

5. MR. WILFRIDO C. BARREIRO Institutional/CD/T Specialist

6. MR. ALLEN M. LOWE System Engr.

7. KENJI KASAMATU Coordinator

Top

MINUTES OF DISCUSSIONS

ON

THE PROGRESS REPORT I

FOR

STUDY ON PROVINCIAL WATER SUPPLY, SEWERAGE AND SANITATION SECTOR PLAN

IN

THE REPUBLIC OF THE PHILIPPINES

AGREED UPON BETWEEN

THE DEPARTMENT OF THE INTERIOR AND LOCAL GOVERNMENT

AND

STUDY TEAM OF

JAPAN INTERNATIONAL COOPERATION AGENCY

MANILA, DECEMBER 20, 1994

HON, YÓLANDA MA. L. DE LEON

Assistant Secretary

Dept. of the Interior and Local Government

MR. MASATOSHI MOMOSE Team Leader, Study Team

Japan Int'l. Cooperation Agency

The Stage I field work for "the Study on Provincial Water Supply, Sewerage and Sanitation Sector Plan" (hereinafter referred to as "the Study") started on August 31, 1994 and completed on December 28, 1994.

A series of discussions was held, through the course of the Study, between JICA Study Team and officials concerned including DILG, NEDA, DPWH, LWUA, other central agencies and provinces. General approach and methodologies, as presented in the Inception Report, have been employed for the planning work.

Progress Report I, which covers all outputs during the work period, was prepared entailing part of PW4SP for respective provinces. The contents of the report were basically agreed upon on December 20, 1994 between JICA Study Team and officials concerned in the Philippine side. The list of attendees to the meeting is presented in Appendix A. The following were confirmed and/or agreed upon by both parties.

Study Area Coverage

For Rizal province, four (4) municipalities covered by the MWSS were Initially agreed to be excluded from the sector plan. However, inclusion of the Talim Island, part of Binangonan (rural area) which is one of the four municipalities, has been reconsidered upon request by the Governor.

2. Planning Conditions

(1) Table of Contents for PW4SP: referring to previous PW4SPs, some modifications were made.

(2) Planning Conditions:

- a. Conformity and consistency of the Study shall be ensured especially with "Medium-Term Philippine Development Plan 1993-1998."
- b. Planning base year is 1994, while target years are 2000 and 2010 for medium-term and long-term purposes, respectively. The start year of 5-year medium-term development is set to be 1996.



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- c. Population projection: NSO projection was basically adopted. However, some modifications on urban and rural population by municipality were made with reference to re-classification of barangays reviewed by respective PSPTs.
- d. Data management: outputs in tables and graphics are prepared in EXCEL spreadsheets for final analysis and presentation.
- e. Sector arrangements and institutional capacity: previous arrangements adopted and experiences learned by the central government agencies are discussed in detail for reference/basis of LGUs in coming up with sector plan.

(3) Future Arrangements by DILG

- a. Further arrangements with PSPTs will be done by DILG to catch up with the schedule to complete PW4SP within one month during February, 1995 after holding workshop at respective provinces.
- b. Arrangements with Batch No. 2 provinces will be initiated based on the experience in Batch No. 1 study, ascertaining the peace and order in the provinces.
- c. To ensure timely completion/finalization of the Plans, DILG shall work closely with the LGUs and other agencies in getting the comments and recommendations on the Draft Plans.
- d. Adoption of the Plans by the Provincial Council (Sangguniang Panlalawigan) shall also be facilitated by DILG.

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LIST OF ATTENDANTS

Attendants

Designation

A. DILG

1. MR. ORVILLE M. ROQUE 2. MR ROGELIO B. OCAMPO

3. MS. ELLEN I. PASCUA

4. MR. MARIO VERGEL DE DIOS

5. MS. FE CRISILLA M. BANLUTA

6. MS. JOSEPHINE RAMOS

7. MS. LINA GRIEGO

8. MS. MA. CONTESSA NAVARRO

9. MS. VIVIAN BIALA

Project Manager, PMO

Chief, Planning Div., PMO

Chief, Admin. Div., PMO

Chief, Operations Div., PMO

PW4SP Overall Coordinator, PMO

DILG Coordinator, Oriental Mindoro

DILG Coordinator, Occidental Mindoro

DILG Coordinator, Rizal

DILG Coordinator, Zambales

B. OTHER AGENCIES

1. MR. ROGELIO FLORES

2. MR. YIRGILIO GACUSANA

3. MR. VICTOR SABANDEJA

4. MR. ANIANO FORNELOS JR.

Director, PMO-RWS, DPWH

Chief, Planning Division, PMO, DPWH

Chief, Environmental Health Division, DOH

Sanitary Engineer II, DOH

C. JICA

I. MR. EIJIE IWASAKI

Asst. Resident Representative, Philippine Office

D. JICA Study Team

1. MR. MASATOSHI MOMOSE

2. MR. MASUOMI HIROYAMA

3. MS. YOLANDA M. MINGOA

4. MR. WILFRIDO C. BARREIRO

5. MR. ALLEN LOWE

Team Leader

Water Supply Engineer

Sanitary Engineer

Institutional/CD/F Specialist

System Engineer



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MINUTES OF DISCUSSIONS

ON

THE PROGRESS REPORT II

FOR

STUDY ON PROVINCIAL WATER SUPPLY, SEWERAGE AND SANITATION SECTOR PLAN

IN

THE REPUBLIC OF THE PHILIPPINES

AGREED UPON BETWEEN

THE DEPARTMENT OF THE INTERIOR AND LOCAL GOVERNMENT

AND

STUDY TEAM OF

JAPAN INTERNATIONAL COOPERATION AGENCY

MANILA, MARCH 8, 1995

HON. YOLANDA MA. L. DE LEON

Assistant Secretary

Dept. of the Interior and Local Government

MR. MASATOSHI MOMOSE Team Leader, Study Team

Japan Int'l. Cooperation Agency

The Stage II field work for "the Study on Provincial Water Supply, Sewerage and Sanitation Sector Plan" (hereinafter referred to as "the Study") resumed on January 14, 1995 and completed on March 14, 1995.

Conditions and assumptions for development of Medium-Term and Long-Term sector plans were discussed and finalized between respective PSPTs and IICA Study Team through the conduct of Workshop No. 3.

Progress Report II, as a draft of PW4SP, was prepared. In this connection, contents of the report were basically agreed upon on March 8, 1995 between JICA Study Team and officials concerned in the Philippine side. The list of attendees to the meeting is presented in Appendix A.

The following are future arrangements required by both parties:

- (1) DILG will follow-up Batch No. 2 provinces for implementation of the PW4SPs, ascertaining the peace and order situation in the provinces.
- (2) The starting date of the third field work by IICA Study Team for Batch No. 2 will be informed to DILG through JICA Philippine Office.



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LIST OF ATTENDEES

Attendees

Designation

A. DILG

1. MR. ORVILLE M. ROQUE Project Manager, PMO 2. MS. ELLEN I. PASCUA Assistant Project Manager, PMO 3. MR. ROGELIO B. OCAMPO Chief, Planning Div., PMO 4. MS. FE CRISILLA M. BANLUTA PW4SP Overall Coordinator, PMO DILG Coordinator, Oriental Mindoro 5. MS. JOSEPHINE RAMOS 6. MS, LINA GRIEGO DILG Coordinator, Occidental Mindoro DILG Coordinator, Rizal 7. MS. MA. CONTESSA NAVARRO

B. OTHER AGENCIES

8. MS. VIVIAN BIALA

1. MR. VIRGILIO GACUSANA

Chief, Planning Division, PMO, DPWH

DILG Coordinator, Zambales

C. JICA

MR. EIJI IWASAKI

MR. NOBUAKI MIYATA

Asst. Resident Representative, Philippine Office Second Development Study Div., Social Development Study Dept.

D. JICA Study Team

1. MR. MASATOSHI MOMOSE MR. MASUOMI HIROYAMA

3. MS. YOLANDA M. MINGOA

4. MR. WILFREDO C. BARREIRO

5. MR. MANABU FUJIKAWA

6. MR. ALLEN LOWE

Team Leader Water Supply Engineer Sanitary Engineer Institutional/CD/T Specialist

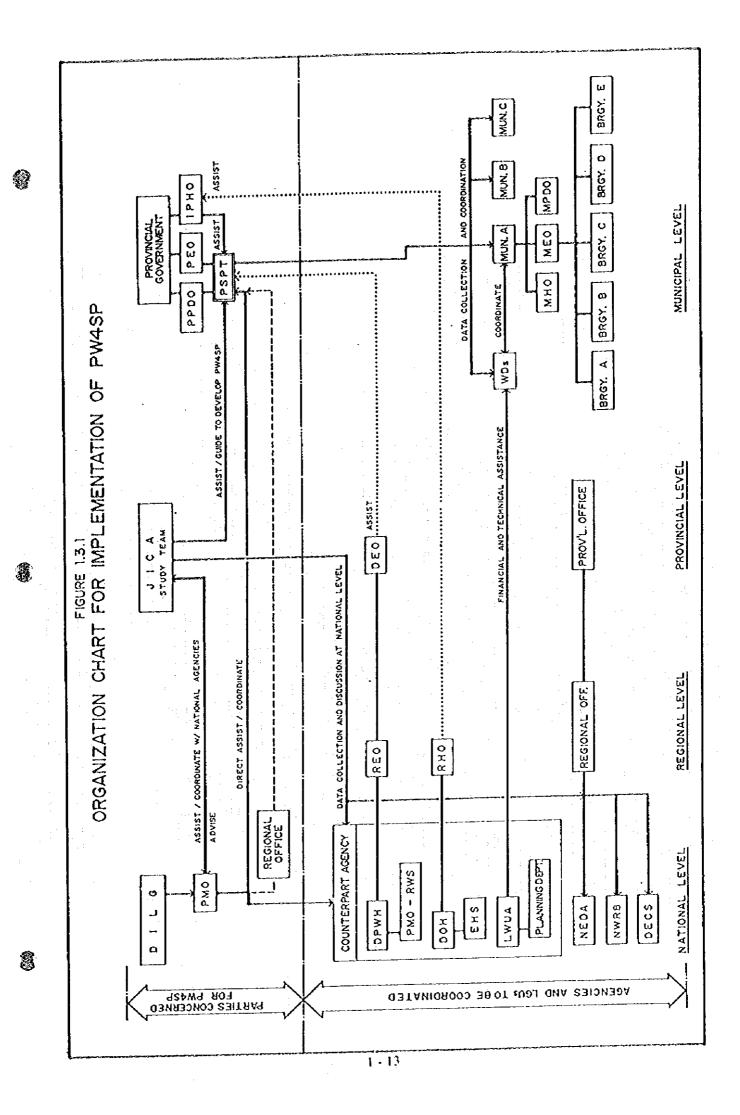
Financial Specialist

System Engineer









MINUTES OF DISCUSSIONS

ON

THE DRAFT FINAL REPORT

FOR

STUDY ON PROVINCIAL WATER SUPPLY, SEWERAGE AND SANITATION SECTOR PLAN

IN

THE REPUBLIC OF THE PHILIPPINES

AGREED UPON BETWEEN

THE DEPARTMENT OF THE INTERIOR AND LOCAL GOVERNMENT

AND

STUDY TEAM OF

JAPAN INTERNATIONAL COOPERATION AGENCY

MANILA, DECEMBER 7, 1995

HON. YOLANDA MA. L. DE LEON

Assistant Secretary

Dept. of the Interior and Local Government

MR. MASATOSHI MOMOSE

Team Leader, Study Team

Japan Int'l. Cooperation Agency

The Stage III field work for Batch II for "the Study on Provincial Water Supply, Sewerage and Sanitation Sector Plan" (hereinafter referred to as "the Study") started on May 22, 1995 and will be completed on December 15, 1995.

Major conditions and assumptions for the development of Medium-Term and Long Term sector plans for the remaining five (5) provinces under Batch II were discussed and finalized between respective PSPTs and JICA Study Team through the conduct of Workshop No. 3.

The Draft Final Reports for the nine (9) provinces, which cover all outputs during the study period, were prepared for respective provinces. The contents of the report were basically agreed upon on December 7, 1995 between JICA Study Team and officials concerned in the Philippine side. The list of attendees to the meeting is presented in Appendix A. The following were confirmed and/or agreed upon by both parties.

- 1. Correction of typographical errors of the Drast Final Report will be undertaken by the Study Team prior to printing of the Final Report.
- 2. Adoption of the Plans (Batch II) by the Provincial Council (Sangguniang Panlalawigan) shall be facilitated by DILG in the same manner as Batch I.
- 3. Inclusion of the Message of the Governor in the Main Report of respective PW4SPs.

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LIST OF ATTENDEES

Attendees

Designation

A. DILG

1. HON, YOLANDA MA, L, DE LEON	Assistant Secretary
2. MR. ORVILLE M. ROQUE	Program Manager, PMO
3. MS. ELLEN I, PASCUA	Asst. Program Manager, PMO ·
4. MR. ROGER OCAMPO	Chief, Planning Div., PMO
5. MR, MARIO VERGEL DE DIOS	Chief, Operations Div., PMO
6. MS, FE CRISILLA M, BANLUTA	PW4SP Overall & Ilocos Norte Coordinator
7. MS. JOSEPHINE RAMOS	DILG Coordinator, Abra & Or. Mindoro
8. MS. LINA GRIEGO	DILG Coordinator, Batanes & Occ. Mindore
9. MS. MA. CONTESSA NAVARRO	DILG Coordinator, Nueva Vizcaya & Rizal
IO MS VIWAN RIALA	DILG Coordinator Hocos Sur & Zambales

B. OTHER AGENCIES

1. MR. ROGELIO A. FLORES	Director, PMO-RWS, DPWH
2. MR. VIRGILIO GACUSANA	Chief, Planning Division, PMO, DPWH
3. MR. VICTOR SABANDEJA	Chief, Environmental Health Division, DOH
4. MR. ANIANO FORNELOS JR.	Sanitary Engineer II, DOH
5. MR. JOSE RENE RONCESVALLES	Program Manager, LWUA

C. JICA

2nd Development Study Div., Social Development Study Dept. 1. MR. SHIGEYUKI MATSUMOTO

D. JICA Study Team

1. MR. MASATOSHI MOMOSE	Team Leader
2. MR. MASUOMI HIROYAMA	Water Supply Engineer
3. MS. YOLANDA M. MINGOA	Sanitary Engineer
4. MR. WILFRIDO C. BARREIRO	Institutional/CD/T Specialist
5. MR. ALLEN LOWE	System Engineer





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 into 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 to 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 spreadsheet, the latter method was selected. Among the available spreadsheet-type software, EXCEL was used. EXCEL supports 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 advantages and disadvantages of the spreadsheet method with reference to database method.

Advantage

- 1. Minimum programming skills
- 2. Friendly environment to users
- 3. Graphic presentation of data at user's option
- 4. Execution of data linkage at formula level entry
- 5. Guided formula creation using function wizard

Disadvantage

- 1. Repeated entry of same formula
- 2. Sorting or indexing is done manually
- 3. All data are loaded in memory, which require huge amount of memory
- 4. Limited to static data linkages

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 assumptions are entered into key parameter tables. These data are then processed and finally consolidated into target forms. These final forms 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
I.	cvei	Water Supply Number of household to be served by Level I Facility	HH/Facility	
	<u>₽</u>	Water Consumption Rate for Level III System	Liter/capita/day	·····
	Service Level	Sanitation Std. number of student to be served by a unit of sanitary toilet Standard number of toilets for a public utility	Student/Toilet Toilet/Public Facility	
2.		Water Supply		
		UrbanWater Supply Rural Water Supply	% of Population % of Population	
		Sanitation Household Toilet	% of Household	
	ŀ	Household Toilet Urban Household Toilet Flush Pour Flush VIP Latrine Rural Household Toilet Flush Pour Flush	% of Household	
		Pour Flush	% of Household	
		VIP Latine	% of Household	
		Rural Household Toilet	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
	1	Flush	% of Household	
	i c	Pour Flush	% of Household	
	Provincial Sector Target	VIP Latrine	% of Household	
	Ľ	School Toilet	% of Public Student	
	å	Public Toilet	% of Public Utility	
	뒿	Solid Waste	% of Population	
	Š	Water Supply		
	- 3	UrbanWater Supply	% of Population	
	Ř.	Rural Water Supply	% of Population	
	į	Sanitation		
	<u>C</u>	Household Toilet	% of Household	
		3 Urban Household Toilet		
:		Flush	% of Household	2.1
. :		Urban Household Toilet Flush Pour Flush VIP Latrice Rural Household Toilet Flush	% of Household	11
		VIP Latrine	% of Household	
	1	Rural Household Toilet	% of Household	
	į.		% of Household	1000
1	j	Pour Flush	% of Household	į į
		VIP Latrine School Toilet	% of Public Student	
	1	Public Toilet	% of Public Utility	
		Urban Sewerage	% of Urban Population	
3.	Percer	tage of Level I Wells for Rehabilitation	%	
		tage of Sector Management Cost to Construction Cost		
*-	[`````	Feasibility and Detail Design	% of Construction Cost	
		Construction Supervision	% of Construction Cost	<u> </u>
5.	Contin	gencies		
		Physical Contingency	% of Construction Cost	
		Price Contingency	Percent per annum	
6.	Comm	unity Development and Training Cost		
	1	Level HI	% of Construction Cost	
	L	Level I and II	% of Construction Cost	1
7.	%	Level III System (Operating Cost)	Pesos/HIL/year	} .
	Recurrent Cost	Level III System (Spare Parts/Equipment)	% of Construction Cost	J ·
	Ĕ	Level II System (Spare Parts/Equipment)	Pesos/HH/year	1
	5	Level 1 System (Spare Parts/Equipment)	Pesos/HiVyear	
·: .	ا جُرِّ ا	Public School Toilet Maintenance Cost	Pesos/Toilet/year	
	1	Public Utility Toilet Maintenance Cost	Pesos/Toilet/year	
8.	Alloca	tion factors/Percentages of IRA	96	
		From Provincial	% %	
	1:	From Municipality and Brgy.	%	
9.	Fundi	ng Levels/Percenatges for Different Financing Scenarios	% Funding Available	
		1st Scenario	% Funding Available	1
		2nd Scenario	% Funding Available	
	1	3rd Scenario	% Funding Available	
	E	4th Scenario	% Funding Available	







Table 2.6.2 Composition of Well Sources and Specific Capacity

	1 1		1 }		tandard Spe	citication
Municipality	Area	Source	Proportion	Depth	SWL (m)	Specific Capacity (lit/sec/m)
			(%)	(m)	(111)	(noscom)
	Rural	Shallow Well				
	ļl	Deep Well				
	Urban	Shallow Well				
	_	Deep Well				
	Rural	Shallow Well	-			
		Deep Well	-			<u> </u>
	Urban	Shallow Well			. <u> </u>	<u> </u>
		Deep Well				
	Rurat	Shallow Well				
	<u> </u>	Deep Well	-			<u> </u>
	Urban	Shallow Well				
		Deep Well				
•	Roral	Shallow Well				ļ
		Deep Well				
	Urban	Shallow Well	ļ	<u> </u>		<u> </u>
	_	Deep Well				
	Rural	Shallow Well				
	· []	Deep Weli				ļ
	Urban	Shallow Well				<u> </u>
<u> </u>		Deep Well				
	Rural	Shallow Well				<u> </u>
		Deep Well	<u> </u>			<u> </u>
	Urban	Shallow Well	_L			
3		Deep Well				<u> </u>
	Rural	Shallow Well				
	`I I	Deep Well		L		
	Urban	Shallow Well				
		Drep Well			<u> </u>	
	Rural	Shallow Well	V .			<u> </u>
		Deep Well				
	Urban	Shallow Well				
	- 1	Deep Well				
	Roral	Shallow Well		I		
	. [Deep Well		I		<u> </u>
	Urban	Shaffow Well				
•	.	Deep Well				
	Rural	Shallow Well	1			
•		Deep Well	1	1		
	Urban	Shallow Well	T	1		
	1	Deep Well		<u> </u>		
	Rural	Shallow Well	- 			
	1,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Deep Well		 	<u> </u>	1
	Urban	Shallow Well		 	 	:
	CIUAR	Drep Well	-1	t	1	<u> </u>
	Rural	Shallow Well				
	Kuisi	Deep Well		 	 	T
	Urban			 	 	†
	Croan	Shallow Well		 	 	
		Deep Well	_1		<u> </u>	.1



Table 2.6.3 Annual Distribution of Investment Cost Required by Sub-sector for Medium-Term Development Plan

Unit: Percent 1996 1997 1998 1999 2000 Total Sub-Sector Component Level III System Feasibility Study and Detail Design Construction & Supervision Community Development & Training Level I Facility Detail Design Rural Water Supply Construction & Supervision Community Development & Training Level II System Detail Design Construction & Supervision Community Development & Training Urban Household Toilet Rural Household Toilet Sanitation Public School Toilet Public Toilet Disinfection of Level I Wells Detail Design Construction & Supervision Community Development & Training

Table 2.6.4 Level I Safe and Unsafe Percentage

· :		
Municipality	Safe Source (%)	Unsafe Source (%)
		:
	· · · · · · · · · · · · · · · · · · ·	
Provincial Average	\ <u></u>	



Table 2.6.5 Unit Construction Cost of Different Facilities

	Unit	Service (Service Coverage	Unit	Unit Cost
Description	Construction	Served	Served	Pesos/	Pesos/
	Cost (Pesos)	Population	Household	Person .	Household
Water Supply					
Level III - New System					A STATE OF THE STA
For 5000 Population					
For 10000 Population					
For 15000 Population					
Level III - Expansion	The state of the s				
For 5000 Population					
For 10000 Population			A Charles and an include the control of the charles		
For 15000 Population					
Level II					
Level					
Deep Well - 30 meter depth					
Deep Well - 50 meter depth				,	
Deep Well - 70 meter depth					
Shallow Well					
Spring Development					:
Rehabilitation Cost for Level I Deep Well		-			1
Disinfection of Level I Wells		,		:	
Sanitation	きされた。日本では、				
Flush					
Pour Flush	;				
VIP Latrine					
School Toilet				-	
Public Toilet					
Urban Sewerage			·		

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

		Unit: rercent	-
Underserved and Unserved Population in Base Year	Underserved and Unserved Population in Phase	Population Unserved by Level III Systems in Base Year	
%>	%>	%>	
>%>	>%>	<%<	
>%>	>%>	>%>	
>%>	>%>	>%>	
1 75	>%	>%	===

Score

Table 2.6.7 Scoring Factor for Municipal Comprehensive Investment Ranking

Unit: Percent

Score	Urban Water Supply	Rural Water Supply Urban Sanitation	Urban Sanitation	Rural Sanitation
1.0	N.A.	%>	. %>	%>
0.8	N.A.	>%>	>%>	>%>
9.0	N.A.	>%>	>%>	>%>
0.4	A.X.	×%×	>%>	×%×
0.2	N.A.	>%	>%	>%
Weight Allocation				
Score				

Weight Allocation

0.6

3. PROVINCIAL PROFILE

3.3 Socio-economic Conditions

3.3.1 Economic Activities and Household Income

Table 3.3.1 Distribution of Household by Income Class

			Abra		C	AR
Income Class	Total Far	nilies(2)	Annual l	nconie	Total Number	Average Annual
	Number	Share	Total (P 1,000)	Average (Pesos)	of Families	Income (Pesos)
Under 15,000	13,813	37.06	145,325	10,521	28,847	9.890
15,000 - 19,999	3,784	10.15	64,881	17,144	15,689	17,013
20,000 - 29,999	6,055	16.24	145,306	23,998	30,513	25,741
30,000 - 39,999	4,825	12,94	163,683	33,925	25,466	34,834
40,000 - 59,999	4,447	11.93	206,096	46,349	57,895	49,145
60,000 - 99,999	3,122	8,38	228,604	73,219	38,473	75.9 39
100,000 - 249,999	1,230	3.30	185,826	151,078	27,172	141,03
250,000 and over	0	0.00	0	O	3,663	439,02:
Total/Average	37,276	100.00	1,139,721	30,576	227,718	58,98
Median		-		21,239		43,800

Source: 1991 Family Income and Expenditures Survey, NSO

Note:

⁽¹⁾ Based on NEDA and other agencies, poverty threshold in CAR in 1991 was estimated at P39,400. Proportion of families below poverty level was 76% in the same year.

⁽²⁾ 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 to the head by blood, marriage or adoption. A single person living alone is considered as a separate family.

Table 3.3.2 Gainful Workers by Occupation Group and Major Industry Group

	Gainful		MAJOR	INDUSTRY	GROUP	
Major Occupation Group	Workers 15 Years Old and Over	Agriculture, Fishery and Forestry	Mining and Quarrying	Manu- facturing	Electricity, Gas and Water	Construction
Total	65,146	34,902	337	1,821	210	89 0
Official of Gov't. & Special Interest Org., Corp. Executives, Managers, Managing Prod. & Supervisors	1,201	8	•	33	11	23
Professional	2,795	13	-	31		37
Technicians and Associated Professional	608	18	-	13	-	-
Clerks	1,935	19		1	89	-
Service & Shop Market Sales Workers	1,774	9	5	18	13	
Farmers, Forestry Workers & Fishermen	31,842	34,534	•	40	_	-
Craft and Related Workers	2,704	-	17	1,409	86	664
Plant & Machine Operators and Assemblers	1,237	59	-	114		14
Elementary Occupations	5,558	59	115	38		137
Other Occupations	2,676	183	-	124	11	15
Occupation Not Stated	9,816			-		-

	:	MA,	IOR INDUST	RY GROUP		
Major Occupation Group	Wholesale and Retail Trade	Transportation and Communication	Financing, Insurance, Real Estate and Business Services	Community , Social and Personal Services	Activities Not Adequately Defined	Not Stated
Total	2,820	1,533	397	10,116	2,504	9,816
Official of Gov't. & Special Interest Org., Corp. Executives, Managers, Managing Prod. & Supervisors	370	58	5	645	48	
Professional	10	10	20	2,396	278	
Technicians and Associated Professional	10	20	58	436	53	-
Clerks	756	107	97	719	147	
Service & Shop Market Sales Workers	609	123	173	695	129	-
Farmers, Forestry Workers & Fishermen	57		-	47	164	-
Craft and Related Workers	87	- 21	10	242	168	
Plant & Machine Operators and Assemblers	27	755	· · · · · · · · · · · · · · · · · · ·	191	77	
Elementary Occupations	714	434	10	3,761	287	
Other Occupations	180	5	24	981	1,153	
Occupation Not Stated	-		-		-	9,816

Source: NSO Census 1990

3.3.3 Education



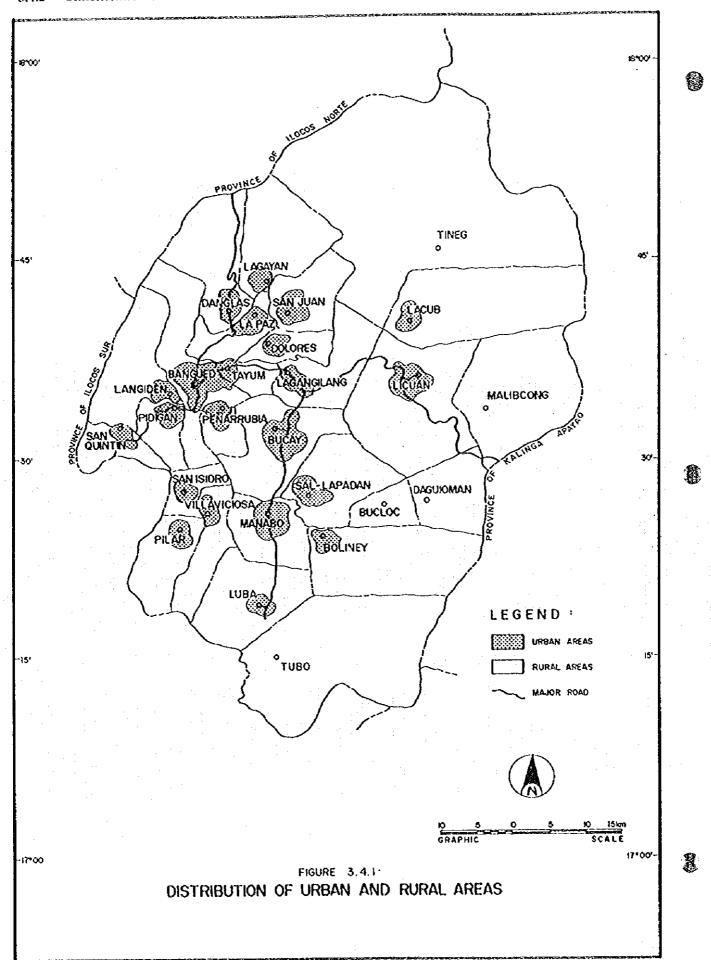
Table 3.3.3 Household Population by Highest Educational Attainment

Highest Educational	Household Population				Age Grou	p		
Attainment	7 Years Old and Over	Below 20	20-24	25-29	30-34	35-39	40-44	45 & Over
Total	150,916	55,572	16,003	14,079	12,431	10,062	7,881	34,888
No Grade	8,440	1,965	218	237	264	254	256	5,240
Pre-School	1,491	1,380	10	10	14	4	6	6
Elementary	76,314	33,600	3,652	3.986	4,711	4,752	4,149	21,46
1st - 4th Grade	38,797	22,077	1,056	1,076	1,303	1,354	1,233	10,69
5th - 7th Grade	37,517	11,523	2,596	2,910	3,408	3,398	2,916	10,76
High School	39,954	11.510	6,333	5.025	3,973	2,713	1,833	4,56
Undergraduate	20,609	11,098	2,286	1,714	1,406	1,025	812	2,26
Graduate	19,345	4,412	4,047	3,311	2,567	1.688	1,021	2,29
Post Secondary	4,713	518	1,210	1,005	809	427	214	5 30
Undergraduate	1,034	189	252	191	149	99	42	[1]
Graduate	3,679	329	958	814	660	328	172	410
College Undergraduate	10,782	2,331	2,912	1,880	1,325	826	537	917
Academic Degree Holder	8,367	38	1,565	1,833	1,257	1.041	833	1.800
Not Stated	855	230	103	103	78	45	- 53	24.

Source: NSO Census 1990

3.4 Population

3.4.2 Classification of Urban and Rural Areas



3.5 Health Status

3.5.3 Health Facilities and Practitioners



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

	At	ora	Philip	pines
Health Facilities	Number	Ratio	Number	Ratio
Hospitals	5	1:39,856	1,733	1:35,017
RHUs	27	1:7,381	2,295	1:26,442
BHSs	94	1:2,120	10,151	1:5,978
Practitioners				
Doctors	25	1:7,971	7,431	1:8,166
Nurses	29	1:6,872	10,270	1:5,909
Midwives	96	1:2,076	11,604	1:5,230
Dentists	4	1:49,820	1,550	1:39,152



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 ^(D) (max, risé 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
Dissolved Oxygen (8)	%satn	70	70	70	60	40
(Minimum)	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) Nitrate as Nitrogen	mg/L mg/L	nil I	i 10	l NR	2 10	5
Phosphate as Phosporous	nig/L	nil	0.1	0.2	0.4	
Phenolic Substances as	mg/L	nil	0.002	0.005	0.02	
Phenols Total Coliforms	MPN/100mL	50	1,000	1,000	5,000	• • • • • • • • • • • • • • • • • • •
or Fecal Coliforms	MPN/100mL	20	100	200	·-	
Chloride as Cl	ing/l	250	250	:	350	
Copper	mg/L	1	1 .		0.05	

Notes:

Class AA - Public Water Supply Class I. Intended for waters having watersheds which 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 contect 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 agnatic 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

NEDA				nect t			II Servi				
Geo-	N.F (7-7 - a.)/4	Name of Sytem	Number	of Bar	angays	N	umber	of		umber o	
graphic	Municipality	(Operating Body)		Served			holds S			lation S	
Code			Urban	Rural	Total	Urban		Total	Urban	Rural	Total
010101	Bangued (Capital)	Bangued W.D	8	14	22	1,945	798	2,743	10,309	4,309	
010102	Boliney	Baoyan W.S		1	1		63	63		315	315
	•	Boliney W.S	1			135		135	675		675
1		Danac W.S		2	2		189	189		945	945
		Daoangan W.S		1	1		98	98		490	490
		Dumagas W.S		ī	1		40	40	<u> </u>	200	200
ļ		Kilong-Olao W.S		ı	. 1		53	53	.,	315	315
Ì	Munic	cipal Total	ì	6	7	135	443	578	675	2,265	2,940
010103	Bucay	Bangcagan B.W.S.A		1	1		58	58		290	29(
010106	Danglas	Abaquid W.A.		i	1		43	43		215	215
010107	Dolores	Cabaroan W.S.		1	1		25	25		125	125
		Dolores W.D	1			250		250	1,250		1,250
	Muni	cipal Total	1	1	2	250	. 25	275	1,250	125	1,375
010109	Lagangilang	Lagangilang W.D	2	2	. 4	205	87	292	1,025	435	1,460
010113	Licuan	Bongto W.S		1	1		31	. 31		155	155
•		Bulbulala W.S		l			56	56		280	280
		Canayan W.S		1	1		37	37	Ĺ	185	185
.		Dominglay W.S		1	J		29	29		145	145
		Mapisla W.S	1			- 43		43	215		215
	:	Poblacion W.S				36		36	180		180
·		Turnalip W.S		1	1		40	40)	200	200
	Muni	cipal Total		2 5		7 79	193	272	395	965	1,360
010114	Luba	Bangel W.S	1			163		163	815		81:
		Luzong W.S		1			121	121		605	60:
	Mun	icipal Total		1		163	121	284	815	605	1.420
010117	Penarruoia	Bangued W.D		2		3 85	60	145	467	812	1,279
		Poblacion W.S.		i	Ţ	36		36	198		193
		Sagsagacat W.S.		1 3		4 30	140	170	164	784	94
	Mun	icipal Total	- 1			6 151	200	351	829	1,596	2.42
010118	Pilar	Dalit W.S		1		1	90	90)	450	450
"""		Dintan W.S		i i		1	45	i 45	5	225	22
	·	Pang-ot W.S		1		1	58	58	3	290	29
		Poblacion W.S		1		200		200	1,000) :	1,00
	Mun	icipal Total		1 :	3	4 200	193	393	3 1,000	965	1,96
010124	Tayum	Deet W.S	1	1 7		1	10	10	1	520	52
1		Tayum Water Service 6		1	T	300		300	0 1,50)	1,50
	Mun	icipal Total		1		2 300	10	40	1 1,50	520	2,02
010126	Tubo	Poblacion W.S		1		1	5	5	<u> </u>	255	25
1		Supo W.S		1		1	7	7.	4	370	37
	1	Tub-tuba		1		1	44) 41	0	200	20
		Wayangan W.S	1	1		1	7	3 7	8	390	39
	Mon	icipal Total	†	0	1	4 (24.	3 24.	3	1,215	1,21
<u></u>	Provincial		4	8 4		8 3,421	2,50	5.93	6 17.79	8 13,505	31,30

Note: * 3 systems covering one urban barangay.

Search Municipality Coperating Body Pauces Households Served Population Code Others Rural Total Urban Rural Total Others Danac w S 0 0 0 0 0 0 0 0 0					l II Ser						l	NEDA
Order Frame		umber				r					Municipality	
Dillo Bangued (Capital) Bangued W.D. Dillo D											Municipality	-
Boliney W S				0			0			Bangued W.D	Bangued (Capital)	010101
Danie W.S 2 2 20 20 20 20 20 20	80	80		16	16					Baoyan W.S	Boliney	010102
Daoangan W S			35	7		7	1		1	Boliney W S		
Dumagas W.S	100	001		20	20		2	2		Danac W.S		
Rilong-Olao W.S	50	50		10	10		1	ı		Daoangan W.S		
Municipal Total	60	60		12	12		1	ı		Dumagas W.S		
Oli Oli	50	50		10	10		1	1		Kilong-Olao W.S		
Oli Oli	140	340	35	75	68	7	7	6	1	icipal Total	Muni	
Delores Cabaroan W.S. 0	8.5	185		37	37		I	. 1		Bangcagan B.W.S.A	Bucaÿ	010103
Delores Cabaroan W.S. Delores W.D De	1		tt				0			Abaguid W.A.	Danglas	010106
Municipal Total 0 0 0 0 0 0 0 0 0				0			. 0			1	Dolores	010107
Ol0109	1			0			0			Dolores W.D		
Dilitary Bonglo W.S	0	0	0	0	. 0	0	0	0	0	icipal Total	Muni	
Bulbulala W.S				. 0			0			Lagangilang W.D	Lagangilag	010109
Canayan W.S	10	110		22	22		· i	1		Bonglo W.S	Licuan	010113
Dominglay W.S	65	65		13	13		1	1		Bulbulala W.S		
Dominglay W.S	20	120		2.4	24			1		Canayan W.S		* .
Mapisla W.S	15	115		23	23		I	í		Dominglay W.S	1.1	
Poblacion W.S			120	24		24			1			
Municipal Total 2 5 7 38 98 136 190 4			 	14		14	. I		1	Poblacion W.S		ř.
Number State	80	80		16	16			1		Tumslip W.S	* * * * * * * * * * * * * * * * * * *	
Digital Luba Bangel W.S Digital Digi	90	490	190	136	98	38	: 7	: 5	2	cipal Total	Muni	•
Municipal Total 0				0			0		17			010134
Municipal Total 0	40	140		28	28	11	·	1		Luzong W.S	1.5	4
Poblacion W.S. 0 0 0 0 0 0 0 0 0		140	. 0	· · · · · · · · · · · · · · · · · · ·		0	1	1	0	*	Muni	
Poblacion W.S. 0 0 0 0 0 0 0 0 0			h				0	1.5		1		010117
Sagsagacat W.S. 0 0 0 0 0 0 0 0 0	1.	٠.		0			0					af
Municipal Total 0 0 0 0 0 0 0 0 0	1						. 0			·		
Dalit W.S	0	0			0			0	0		Moni	
Dintan W.S	80	180		36		· · · · · ·	1			1	†	010118
Pang-ot W.S		115	ft				1	1			*	
Poblacion W.S		225						: 1			.*	
Municipal Total 1 3 4 8 104 112 40 5	1					8						• 1
Tayum Deet W.S	20	520	·		104		4	: 3		·	Muni	
Tayuri Water Service C 1 1 10 10 50		175	1				1	,		f	1	10124
Municipal Total 1 1 2 10 35 45 50 1 10126 Tubo Poblacion W.S 1 1 19 19 19 19 10 10						10	1			1		
10126 Tubo Poblacion W.S 1 1 1 19 19 Supo W.S 1 1 40 40 2 Tub-tuba 0 0	175	175	1		35		2			4	Muni	• •
Supo W.S 1 1 40 40 70 Tub-tuba 0 0	95									1		10126
Tub-tuba 0 0		200					1		-			
<u> </u>							0	<u>-</u>		1		
[[[[[[[[[[[[[[[[[[[
	195	295			έο	 -			^	•	March	

Table 4.1.1 Details on Existing Level III Systems

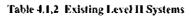
		T		Sheet 3 Water So	arces		Const	ımption	
NEDA Geo-	Mustalealite	Name of Sytem			Production	Domestic	Institutional		Industrial
graphic	Municipality	(Operating Body)	Type	Number	(cu. m/day)			nv'day)	L
Code		0	SP		17,971.2	1,748	30	107	(
010101	Bangued (Capital)	Banguod W.D Boliney W.S				0	0	. 0	
010102	Boliney		SP		69.12	0	0	0	
		Baoyan W.S Danac W.S	SP		228.90		0	0	
			SP		86.40	. 0			
		Daoangan W.S	SP	<u> </u>	324.40	0	. 0	0	
		Domagas W.S	SP	<u>-</u>	172.80		0	0	
	 	Kilong-Olao W S	SP	<u> </u>	172.80		0	0	
	<u>M</u>	unicipal Total		6	1,054.42		0		
010103	Висау	Bangcagan B.W.S.A	SP	1	216		0		
910106	Onnglas	Abaquid W.A.	SP	1	778	·	. 0		
010107	Dofores .	Cabaroan W.S.	SP	<u> </u>	2.88	0	0		1
		Dolores W.D	SP	_1	129.6		0		} .
	M	unicipal Total		2	132.48	0	0		1
010109	Lagingilag	Lagangilang W.D	DW			152	0	(·
010113	Licuan	Poblacion W.S	SP	<u> </u>	86.4	0	0	()
		Bengto W.S	SP	11	86.4	0	0	(<u> </u>
•		Bulbulala W.S	\$P	1	86.4	0	0	<u> </u>	<u> </u>
		Canayan W.S	SP	<u> '</u>	129.60	0	0		
; -		Dominglay W.S	SP		172.80	<u> </u>	0)
		Mapisla W.S	SP	1	172.80	9 0	0		·
		Furnalip W.S	SP	<u> </u>	86.40	0	. 0)
	39	unicipal Total			820.80		<u> 0</u>		
010114	Luba	Bangel W.S	SP		216.0) <u>c</u>	0)
		Luzong W.S.	SP	!	172.8	3	0		D
<i>!.</i>	λ.	lenicipal Total		7	388.	8 C	c		ol
010117	Penarrubia	Bangued W. D	SP	N.A	N.A				D
:		Poblacion W.S.	SP		N.A		0		0
		Sagsagacat W.S.	SP		172.	8			0
	3	Inalcipal Total			172.	8 () (·	0
010118	Pilar	Dalit W.S	SP		172.	8 . (0
		Dintan W.S	\$P	1:	17.2	8 () ()	0
		Pang-ot W.S	SP		172	8 () (0
		Poblacion W.S	SP		172.	8()	0
	3	tunicipal Total			535.6	8) ()	0
010174	Tayum	Deet W.S	DW		2 28) ()	0
010124	2.470.00	Tayum Water Service Corp			1	8)	0
		funicipal Total			3 30		2 (0
010126		Poblacion W.S	SP	1	6	1			0
,,,,,			SP		·				0
	*	Supo W.S	SP		1 86.	-		1	0
		Fub-tuba	SP		1 7				0
	}	Wayangan W.S	21		4 223.				0
<u> </u>		Junicipal Total ovincial Total		30	+	-} -			

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

Table 4.1.1 Details on Existing Level III Systems

Control Cont																		
Name of System Common of System <th>NEDA</th> <th></th> <th></th> <th>,</th> <th></th> <th></th> <th></th> <th>Action Physics</th> <th>E) mary change</th> <th>-</th> <th>Consumer</th> <th>, ,</th> <th></th> <th>Commerc</th> <th>-</th> <th></th> <th>Industri</th> <th></th>	NEDA			,				Action Physics	E) mary change	-	Consumer	, ,		Commerc	-		Industri	
Particular Par	કુ	Municipality	Name of System	Second Second	the House Co	Consumption	Š		Consumption	Conn		Consumption	Cont	ection	Consumption	S	nection	
December (Contain Statement V. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2.	3		(choor Summand(o)	Metered	1	(cu.m/day)	Metered	Ş	(cu.m/day)	Metered	Unmetered	(cu.m/day)	Metered	Unmetered	(cu.m/day)	Metered	Unmetered	(cu.m/dav)
Designey W.S. State M.S. Sta	01010	(Hangued (Capital)	¥-	2,743		-				18		96	2		101			
District Vol. 2 District V		Rolinev	1		63	ľ		3										
District WAS 1999 2 2 2 2 2 2 2 2 2			Bolmey W.S.		SC1													
December December			Danac W.S.		681			7 .		-								
Controlled Wildle Wilson Controlled Wilson			Dagarean W.S.		86			2										
Consistency			27.5		3			7										
Discrete Micropial Total Colores Marcolar M.A. Colores M.A.			Comages w		۶			5										
Date Managolar N.W.A. Date Da			Kalong-Olao W.S	ľ		12			7	Ċ	Ċ	ĵō	Ō	0	0			
December December		Σ	unicipal Total	٥	9/8	Ý.			Š	٥	7							
Degrey	010103	Bucay	Bangcagan B.W.S.A		28			2			-f-							
Display Changes W N. Changes W		Danglas	Abaquid W.A.		43								T					
Exercise WD Exercise WD 250 S. N.A. 0 0 N.A. 0 0 0 0 0 0 0 0 0		Dolores	Caburoan W.S.		25													
Manigla Total Manigla Tota			Dolores W.D	057														ľ
Legistrate Legistrate Votes Vo			unicional Total	ž		Y Z			A.		ō	ō	٦	٥	0			
Principle Wishing Principle Wishing Wishing Principle Wishing Principle Wishing Principle Wishing Principle Wishing Principle Wishing Principle Wishing Wishing Principle Wishing Principl	001010	Section 1	I acabana W D	33		152												
Equipment V.S. Equi			Booslo W V					\$		•								
Compare NA State Compare	} } }	į	Rullfulgia W.		\$			7		,								_
Commission W S			No.	l	37			5										
Majorial W.J. Adjoined W.J	 .		S. W. Marketon		29			×										
Following Foll	· · · :		The state of the s		47													
Transition W 3	·		Manista W.S		35			٦										
Municipal PVS Municipal PV			Poblacion W.3															
Municipal Total O 121			Tumalip W.S	ľ								c	C					
Figure F		Σ	unicipal Total	1							,	,	Ì					
Presentable Registed W.S. Multicipal Total 0 121 N.A. 0 </td <th></th> <td>Luba</td> <th>Bangel W.S</th> <td></td> <td>163</td> <td></td> <td></td> <td>Ĭ</td> <td></td>		Luba	Bangel W.S		163			Ĭ										
Musicipal Total O 29/4 N.A. O 3 N.A. O 9			Luzong W.S		121						1		ľ					
Preserving Rangeof W. D. 1455 554		×	unicipal Total	_		Z.			Ý.		٥							
Problecon W.S. 25k	010117		Bangued W. D.	145														
Nagesgrat W.S. Sage agging at W.S. Sage			Poblacion W.S.		5.6													
Fig. Manicipal Total 145 354 N.A. 0 0 0 0 0 0 0 0 0			Sagsagacat W.S.															
Play Oblit W.S. 90 90 1 2 6 1 8 8 8 8 8 8 8 8 9		Σ	unicipal Total	\$145							0	0	٥					
Page-of W.S. Page-of W.S. Pa	010118		Dahr W.S		90			2										
Public of W.S. Publ			Ontan W.S		45			ŝ										
Tayum Municipal Total 0 393 N.A. 0 14 N.A. 0			Pang-or W.S		58			ç										
Tayum Municipal Total 0 393 N.A. 0 14 N.A. 0			Poblacion W.S		200													
Tayum Tayum Water Service Corp. 300 0 <t< td=""><th></th><td>></td><th>unicipal Total</th><td>)</td><td></td><td></td><td></td><td></td><td></td><td></td><td>Ō</td><td></td><td><u>-</u></td><td></td><td></td><td></td><td></td><td></td></t<>		>	unicipal Total)							Ō		<u>-</u>					
Deer W.S. 14 90 N.A. 2 7 N.A. 0 0 0 0 0 0 0	010124		Tayum Water Service Corp.	300			7		5.1									
Municipal Total 314 40 N.A. 2 7 N.A. 0 0 0 0 0 0 0			Deet W.S	7				7		:								
Tubo Poblacion W.S 74 %		Σ	lunicipal Total	314								0						
Supp W.S. 74 8 6 7 7 7 7 7 7 8 7 9 0	010126	Tubo	Poblacion W.S		51			:										
40 78 13 12 12 12 13 14 1986 N.A. 2 112 N.A. 3 0 30 76 0 107 0			Supo W.S		74			*										
0 343 N.A. 0 13 N.A. 0 107; 0			Tub-tuba		40													
0, 343, N.A. 0 13, N.A. 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			Wayangan W.S		78													
3,744 1,986 N.A. 2 112 N.A. 3 0 30 76 0 107 0		Σ	lunicipal Total								0							
		Provent	noi Total	174				ľ		3	0	30						_

4.1.4 Level II Systems



Sheet I

ſ	I The state of the		r `	Speci 1	<u> </u>	Ex	isting Fac	ilities	
NEDA		1	 		L∉ngth of	r 	isting Lac	Length of	
Geo- graphic	Municipality	Name of System (Operating System)	Water	Source	Transmission	Rese	rvoir	Distribution	Number of Public
Code		(Operating System)	ļ	r	Line			Câne -	Faucets
<u> </u>			Type	Number	(meter)	Number	Q (cu.m)	(meter)	
010101	Bangued (Capital)	Angad W.S	SP	1	950	1	12	400	15
	ļ	Lingtan W.S	SP		N.A		. 8		12
ĺ		Macarcamay W.S	SP	1	N.A.	1	8		15
		Maoay W.S	SP		750	1	8	400	12
		Palao W.S	SP		N.A.		12		35
		Sao-Atan W.S	SP		800		8	400	7
L	Mu	nicipal Total		6	N.A.	6	56	1,200	96
010103	Bucay	Abang BWSA	SP	ı	N.A.	į	. 8		20
		Bangbangcag BWSA	SP	1	N.A.	<u></u>	12		12
1		Banglolao DWSI	SP	t	N.A.	1	8		10
ł		Bocay WS	SP	- 1	N.A.	1	12		.30
		Bugbog BWSA	SP	ŧ	N.A		- 8		
		Calso BWSA	SP	ł.	N.A.	1	8		12
		Dugong BWSA	SP	ı	N.A.	ı	12		30
		Labon BWSA	SP	ı	N.A.	1	12		12
		Layugan BWSA	SP	1	N.A.		8		4
	:	Madalipay BWSA	SP	1	Ņ.A.	i	8		. 6
		Pakiling BWSA	SP	1	N.A.	1	8		10
ļ		Palaquio BWSA	SP	1	N.A.	. 1	12		- 20
		Quimloong WSA	SP	1	N.A.	1	8		12
		Salnec BWSA	SP	1	· N.A.	1	8		. 8
		Siblong BWSA	SP	!	800	,	8	1,290	
· ·		Tablog WSA	SP	1	1,000	ı	8	400	. 3
	Mo	nicipal Total		16	N.A.	16	148	1,690	199
010104	Bucloc	Ducligan WS	SP	1	N.A.	i	8		3
		Labaan WS	SP	ī	N.A.	1	9	,	4
	1. 1	Lamao WS	SP	1	N.A.		8		8
	*	Lingey WS	SP	1	500	1	8		21
	Mu	nicipal Total		4	N.A.	4	33	0	36
010105	Daguioman	Ableg WS	SP	1	6,000	1	8	. 200	
		Cabaruyan WS	SP	1	4,900	ı	12	N.A	. 4
		Pikek WS	SP	1	4,900	1	8	N.A	4
100		Tui WS	SP	1	4,000	l	12	N.A.	12
	Mu	nicipal Total		4	18,000	4	. 40	N.A.	23
010106	Danglas	Cabaryan WS	SP	1	375	1	8	N.A	12
'		Caupasan WSA	DgW		24	1	22.5	200	10
•		Danglas WSA	SP		3,000		12	300	11
	·	Domeguiay WSA	SP	ļ — — i	N.A.	1	8	N.A.	
	Mu	nicipal Total		4	N.A.	4	. 51	ŅΑ	37
010107	Dolores	Bayaan WS	SP		1,500		8	400	7
		Kimmalaba WS	SP		1,500		8	1,000	
		Namit-ingan WS	SP		3,000	il	- 8	900	- (
		Taping WS	SP		2,500		8	500	4
	λtıı	nicipal Total		4	8,500	4	32	2,800	21
010108	Lacub	Bacag WS	SP		1,500		8	1,750	4
010100	LAK VU	Balacang WS	SP		1,200		8	1.500	
		Buneg WS	SP		2,500		8	3,000	4
		Pacoc WS	SP		2,000	<u> </u>	<u>8</u>	2,600	3
			SP SP	 	2,500			3,200	
		Poblacion WS		 		 	8		
		[Sap-al WS	SP	 	3,000		48	3,500	29
10124		nicipal Total		6	- 12,700 N.A.	6		15,550 N: A	
10110	Engayan	Colombat	SP	 :	N.A	 :	18.75	N.A.	7
		Collago WS	SP	 	N.A	<u>'</u>	18.75	N.A.	1.3
L	Mu	nicipal Total		2	N.A.	2]	37.50]	N.A.	



Table 4.1.2 Existing Level II Systems (Cont.)

N.E.O.A		T	T	Sheet I		Ex	isting Fac		
NEDA Geo- graphic	Municipality	Name of System (Operating System)	Water	Source	Length of Transmission Line	Rese	rsole	Length of Distribution Line	Number of Public
Code			Type	Number	(meter)	Number	Q (cu.m)	(meter)	Faucets
010111	Langiden	Base WS	SP	1	540	1	27	775	<u> </u>
		Poblacion WS	SP	ì	4,000	. 1	8	3,000	
		Quillat WS	SP	ı	500	1	12	1,000	
i	Ma	nicipal Total		3	5,040	3	47	4,775	1-
010113	Licoan	Lénneng WS	SP	1	2,500	1	18	500	
		Mogao WS	SP	5	N.A.	5	90	N.A	
		Nalbuan-Subagan WS	SP	2	5,000	1	8	900	1
· · · · · · · · · · · · · · · · · · ·	Mu	nicipal Total			7,500	. 7	116	1,400	2.
010114	Luba	Ampaliek WS	SP	1	2,300	1	8	500	
		Barit WS	SP	1	2,300	1	8	400	
	,	Gayaman WS	SP	1	2,000		8	t	}
	,	Lul-luno WS	SP	1			8	 	
		Nagtuquipa WS	SP	1	2,000	t	8	†- 	
	 	Pega WS	SP		600	ŧ	5	400	· · · · · · · · · · · · · · · · · · ·
	 	ınicipal Total		6		 		t	4
010115	Malibeong	Adugao WS	SP	<u> </u>			3	f	
		Bayabas WS	SP	<u> </u>		1	8	 	
		Buanao WS	SP	<u></u> !		1	8		14
		Cubcuba WS	SP			1	8		
		Outao WS	SP		 	1	8		<u> </u>
1.1		Duldulao WS	SP SP	1		<u>'</u>	8		1
		Gacab WS	SP	1	N.A.	} <u>'</u>			1
		Malibeong WS Manapaap WS	SP		N.A.	 			-
		Matalibeng WS	SP		N.A.	 	8	 	
		Mataragan WS	SP		N.A		8	ł	
		Pacqued WS	SP SP	 	N.A	 	8	+	
		Taripan WS	SP	1	N.A.	i		{	
		Umnap WS	SP	†	N.A.	ii	8	 	
	M	unicipal Total		14	 	14			9
010116	Manabo	Ayyeng WS	SP	: 1	300	1	27	1,500	1
		Banet WS	SP	1	500		8	300	1
	. : :	Catacdegan WS	SP		870		18	500	1
		Liagan WS	SP		2,000		18	. 300	1
	1	Luzong WS	SP	1	999) 1	27	1,300	1
	1	Madago WS	SP	1	1,500	1		300	1
		San Juan WS	SP		3,000	1			
		Sa. Jose WS	SP		860) 1	27	750	
	}	Sto. Tomas WS	SP	<u> </u>	860	1			
		Villa Coochita W.S.A	SP		300		27	- }	
	M	unicipat Total		K	11,180	10			
010117	Penarrubia	Lusuac WS	SP		N.A		40		1
010118	Pidigan	Immali W\$	ŞP.		N A		1		
]	Maloblobo & Tambo WS		ļ	· · · · · · · · · · · · · · · · · · ·	·			1
	,	Pangtod WS	SP		· · · · · · · · · · · · · · · · · · ·		+	 	
		Suyo WS	SP				1 3		
A.0	 	unicipal Total		•	N.A		5 40	1	
010119	Pilar	Nagcawasan WS	SP		2,00				
		Namara WS	SP		2,00				
		Ocop WS	SP	ļ				500	
		Palicao WS	SP	 	1,50			5 40	
	ļ	San Juan WS unicipal Total	SP		1 2,50 5 10,50] : 5 2:	5 400 5 2,300	





Table 4.1.2 Existing Level II Systems (Cont.)

Sheet 1 **Existing Facilities** NEDA Length of Length of Water Source Number of Name of System Geo-Distribution Transmission Reservoir Municipality Public graphic (Operating System) Line Line Faucets Code Type¹ Number (meter) Number Q (cu.m) (meter) 4,94 N.A Sal-lapadan Bazar WS SP 010120 10 SP 2,560 N.A Bilabila WS N.A 24 Gangal WS SP 3,500 N.A 9,750 32 Maguyepyep WS SP 15 5,680 N.A 24 Naguilian WS SP N.A 15 6,512 20 SP Sacaang WS N.A Saliapadan WS SP 186 12 20 N.A 6,012 Subusub WSA SP 15 24 N.A 4,250 SP Ud-udiao WS 119 43,390 21 211 N.A Municipal Total 1,000 20 2,500 32 SP 010121 San Isidro Sa Isidro WS 5,300 3,000 SP Poblacion WS 010122 San Juan N.A 1,000 Carsuan WS SP 010123 San Quintin 1,000 N.A. SP Labaan WS 1,500 SP 4,000 Palang WS 32 2,000 22 5,000 SP Pantoc WS 3,000 27 2,000 Ю Poblacion WS SP SP 500 N.A Talaytay WS 35 N.A Tangadan WS SP 450 N.A Villa Mercedes WS SP NÁ 122 N.A N.A 12 16 Municipal Total 10 3,000 3,000 SP 010124 Tayum Basbasa WS 2,000 20 5,000 SP Budac WS 20 3,000 SP 5,000 Gaddani WS N.A 22 1,370 Velasco WS SP 27 N.A 72 14,370 Municipal Total 500 12 27 400 Agsimao WS 010125 Tineg SP 200 400 SP Alada WS 400 100 SP Apao WS 10 1,200 27 500 SP Caganayan WS 300 400 SP Cogon WS 100 300 SP Lance WS 400 200 Lapat-Balantay WS SP 1,900 45 69 3,500 S 2 Municipal Total 700 15 SP 1,600 010126 Amtuagan WS Tubo N.A N.A Alangtin WS SP N.A N.A SP Apatan WS N.A N.A 18 SP Baclingayan WS N.A N.A SP Baca WS N.A 18.75 N.A SP Kili-Tubo WS N.A N.A Tabatab WS SP N.A N.A SP Tiempo WS 91.75 N A N.A Municipal Total NΑ 2.000 010127 Villaviciosa SP Boltising WS 15 24 N.A 1,000 5P Calso WS 12 400 20 3,000 SP Laplapog WS 20 N.A 3,000 SP Lomaba WS 20 N.A 2,000 Poblacion WS SP 12 1,000 N.A SP Talamac WS 30 N.A 500 SP Tuquib WS 237 N.A 15,700 Municipal Total 187 1,883.25 1.535 N.A 157 Provincial Total

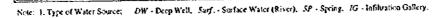


Table 4.1.2 Existing Level II Systems

NEDA Geo-		Name of System	Numbe	er of Bar Served	angays	Numbe	r of Hou Served	seholds	Numbe	r of Pop Served	ulation
graphic	Municipality	(Operating Body)	Urban	Rural	Total	Urban	Kural	Total	Urban	Rural	Total
Code	Bangued (Capital)	L LAnged W.S	I	10012	1		74	74		400	400
010101	oangueo (Capitan	Lington W.S					60	60		324	324
		Macareamay W.S	-}		<u>-</u>		75	75		405	405
		}	 	<u>.</u>			60	60		324	324
		Maoay W.S Palao W.S	 			 -	175	175		945	945
		Sao-Atan W.S	 	<u> </u>		 -	27	27		146	146
	Mari	Isao-Atan W.S	10	6	6	0	471	471	0	2,544	2.544
010103		Abang BWSA	 `	i		<u>`</u>	100	100		560	560
010103	Bucay	Bangbangcag BWSA	·	-	<u>.</u>		60	60		336	336
		Banglolao DWSI	┪				50	50		280	280
		Bucay WS	2	3	7	50	50	100	270	280	550
		Bugbog BWSA	· 		1	1	25	25		140	140
		Calao BWSA	 	<u> </u>	1	1	60	60		336	330
		Dugong BWSA	 		<u>-</u>	150		150	810		810
		Labon BWSA	 	1	1	1	60	60		3,36	336
		Layugan BWSA	 	1	1		20	20		112	112
		Madalipay BWSA	 	1	1		30		1	168	168
		Pakiling BWSA			·i		50		 	280	280
1		Palaguio BWSA			i	t	100			560	560
1		Quimloong WSA	 	 	-	1	60		+	336	336
		Salnec BWSA				†	40			224	224
		Siblong BWSA	1	1 1	li		25			140	140
		Tabiog WSA	1	1			15	ŧ		- 84	84
	Min	nicipal Total	1 3	19	22	200	745	 		4,172	5,252
010104	Buclee	Ducligan WS		 			15			84	84
0.010.	DOCICE .	Laboan WS		-			20	20	1	112	112
		Lamao WS		 			40	1	1	224	224
	:	Lingey WS		1	1	1	105	105	1	588	588
	Mu	picipal Total	1	4	4	0	180	180	0	1,008	1,008
010105	Daguioman	Ableg WS		1		1	15	15		80	80
}	: -	Cabaruyan WS	1	—	1	1	20	20		106	106
1		Pikek WS		1	1	,	20	20	,	106	106
		Tui WS	1	i		1 7 77	60	. 60		318	318
	Mu	nicipal Total	0	4	4	0	315	115	0	610	610
010106	Danglas	Cabaruan WS		1			60	60)	306	306
	"	Caupasan WSA	i			50		50	260		260
		Danglas WSA		1			55	55		281	281
ļ ·		Demeguiay WSA	T			20		20	104		104
	Mu	nicipal Total	1	2	1	70	115	185	364	587	951
010107	Dolores	Bayaan WS		ī		1	35	3.		193	- 193
	**	Kimmalaba WS					25			1.18	138
		Namit-ingan WS					30	30		165	
1		Taping WS		1		<u> </u>	15	12	1	83	
1	Mo	nicipal Total	() 4		1 (105			579	
010108	Lacub	Bacag WS				1	20			112	
	:	Balaoang WS	\bot			1	10			56	
1		Buneg WS		1		<u> </u>	20	20	1	112	
		Pacoc WS		1	L	·	15		+	84	
	1	Poblacion WS		·	<u> </u>	1 60		60			324
	L	Sap-al WS		1	4	1	20		·	117	
	Mu	nicipal Total		1 3	1	6 60	8:	+		· }	
010110	Lagayan	Cafambat			1	1	35			186	
1	L	Collago WS		1	·	<u> </u>	6:			345	
1	Mu	inicipal Total		0	2	2 (100	10	0] (531	531





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

<u></u>			· S	icet 2							
NEDA Geo- graphic	Monicipality	Name of System (Operating Body)	Numb	er of Ba Served	~ •	Numbe	r of Hot Served	seholds	Numb	er of Pop Served	sulation
Code	<u> </u>	(Operating flod))	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
010111	Langiden	Baac WS	T	1	i		20	20		98	98
	İ	Poblacion WS]		1	25	`	25	120		120
l		Quillat WS	I		I		25	25		123	12:
		nicipal Total		2	. 3	25	45	70	120	221	341
010113	Licuan	Lenneng WS	1	1	1		20	20		118	118
		Mogao WS		<u> </u>	1		40	40		236	230
		Nalbuan-Subagan WS		2			60	60		354	354
010114		nicipal Total	c		4	0	120	120	0	708	708
010114	Luba	Ampaliok WS	Ļ	1			35	35	<u> </u>	189	189
		Barit WS	ļ	<u> </u>	<u> </u>		30	30		162	162
		Gayaman WS	 -	<u> </u>	1		60	60		324	324
		Lul-leno WS	ļ	<u>-</u>	1		30	30	·	162	162
		Nagtuquipa WS	 	<u>'</u>			30	30		162	162
	35	Pega WS	1	ļ,	1	20		20	116		116
010115	Malibeong	nicipal Total	 	5	6	20	185	205	116	999	1,115
010113	N I SHOCONG	Adugao WS Bayabos WS	╂	 :			13	13		77	77
	1	Buanao WS	 	 			29	29		171	171
		Cubcuba WS	 	 			50 15	50		295	295
		Dulao WS			<u>_</u>		30	15 30	12	89	89
		Duidulao WS					50	50		177	177
		Gacab WS	 	l	-		60	60		295 354	295 354
į		Malibeong WS		<u>'</u>	1		60	60		354	354
:		Manaphap WS	 	-			15	15		89	89
	1 4	Matalibeng WS		<u>-</u>	1		20	20		118	118
		Mataragan WS		1	<u>-</u>		30	- 30		177	177
		Pacqued WS	·	i	<u>-</u> -		40	40		236	236
	1	Taripan WS		i	i		40	40		236	236
	1.0	Umnap WS		i	<u>-</u>		30	30		177	177
	Muc	nicipal Total	1	14	14	0	482	482	0	2,845	2,845
010116	Manabo	Ayyeng WS	ì		1	65		65	338		338
		Banat WS		1	1		50	50		255	255
		Catacdegan WS		2	2		80	80		408	408
		Liagan WS	,		3	75		75	390		390
		Luzong WS	ŀ	:	3	90		90	468		468
		Madago WS		1	1		50	50		255	255
		San Juan WS		2	2		100	100		510	510
		Sn. Jose WS		2	2		- 80	80		408	408
		Sto. Tomas WS		t	1		35	35		179	179
		Villa Conchita W.S.A		J	- 1		40	40		204	2()4
	Muz	lcipal Total	3	10	13	230	435	663	1,196	2,219	3,415
010117	Penarrubia	Lusuac WS	!		6	40	140	180	220	784	1,004
010118	Pidigan	Immuli WS		- 1	1		20	20		110	110
		Maloblobo & Tambo WS	2	2	4	175	75	250	980	_413	1,393
		Pangtod WS		- 1			18	18		99	99
		Suyo WS		1	!		20	20		110	. 110
		icipal Total	2			175	133	308	980	732	1,712
010119	Pilar	Nageawasan WS		!			30	30		159	159
		Narnara WS		!	!		30	30		159	159
		Ocop WS			1		30	30		159	159
ĺ		Palicao WS				2.5		2,5	138		1.8
		San Juan WS		1	!		30	.30		159	159
	Mun	icipal Total	Į į	4	5	2.5	120	145	138	636	774

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

NEDA Gengraphic Code	-					·					
Graphic Code Code	adan B	Name of System	Numbe	er of Bar	angays	Numbe	r of Hou	seholds	Numbe	r of Pop	elation
Ol0120 Sal-lapad Ol0121 San Iside Ol0122 San Juan Ol0123 San Quin Ol0124 Tayum Ol0125 Tineg	-	(Operating Body)	į	Served			Served			Served	
010121 San Iside 010122 San Juan 010123 San Quin 010124 Fayum	-	(Oprissing Body)	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
010121 San Iside 010122 San Juan 010123 San Quin 010124 Fayum	-	Bazar WS	 	ī	1		100	901		550	55(
010122 San Juan 010123 San Quin 010124 Tayum 010125 Tineg	I P	Bilabila WS	·	· · · · · ·	1		50	50		275	27:
010122 San Juan 010123 San Quin 010124 Tayum 010125 Tineg	i -	Gangal WS	1			60		60	330		33
010122 San Juan 010123 San Quin 010124 Tayum	_	Maguyepyep WS	<u>-</u>				- 60	60		330	3.30
010122 San Juan 010123 San Quin 010124 Tayum 010125 Tineg	h	Naguilian WS	1	<u>;</u>			75	75		413	41
010122 San Juan 010123 San Quin 010124 Tayum	<u></u>	Socaang WS	 				75	75		413	41
010122 San Juan 010123 San Quin 010124 Tayum 010125 Tineg	}~		· 				40	40		220	22
010122 San Juan 010123 San Quin 010124 Tayum 010125 Tineg	}	Sallapadan WS	1	- '		60	40	60	330		33
010122 San Juan 010123 San Quin 010124 Tayum 010125 Tineg	-	Subusub WSA		ļ;			75	75		413	41
010122 San Juan 010123 San Quin 010124 Tayum 010125 Tineg		Ud-udiao WS	·		9	120	475	595	660	2,614	3,27
010122 San Juan 010123 San Quin 010124 Tayum 010125 Tineg		cipal Fotal	2	7		120			240	330	57
010123 San Quin 010124 Fayum 010125 Fineg		Sn Isidro WS	 	2		40	60	100		330	
010124 Fayum 010125 Fineg		Poblacion WS	2			45		45	216		21
010125 Fineg		Carsuan WS	ļ		<u> </u>	ļi	15	15		7.5	7
010125 Fineg	1-	Labaan WS			· · · · · ·	 	10	10	l	50	5
010125 Fineg	-	Palang WS	J	1			25	25		125	12
010125 Fineg	. 1	Pantoc WS	 	1	3	L	103	103		515	51
010125 Fineg	Į.	Poblacion WS	<u> </u>	 		50		50	260		26
010125 Fineg	<u>[</u>]	Talaytay WS		1	- 1		10	10	ļ	50	
010125 Fineg	լ	Tangadan WS	.L	1	l		155	155		775	. 71
010125 Fineg		Villa Mercedes WS		1	i		15	15		75	7
010125 Fineg	Munic	cipal Total		7	8	50	333	383	260	1,665	1,92
	i : [1	Basbasa WS		3	1		50	50		285	28
	- [i	Budac WS		· j	J		100	100	<u> </u>	570	57
		Gaddani WS	1	3	l		100	100		570	57
	, i	Velasco WS	7	2	2		110	011		627	62
	Monl	cipal Total	0	5	.5	0	360	360	. 0	2,052	2.05
010126 Tubo		Agsimao WS	1	1	1		60	60		324	3.7
010126 Tubo	7	Alada WS		i	1		20	20		108	10
010126 Tubo	į,	Apao WS		i i	ı		20	20		108	10
010126 Tubo	10	Caganayan WS		. 1	1		50	50	1	270	27
010126 Tubo		Cogon WS	1		ı		25	25		135	13
010126 Tubo		Lanec WS		1			2.5	25		135	13
010126 Tubo	·	Lapat-Balantay WS	1	1	1		25	25	1	135	1.3
010126 Tubo		icipal Total) 7	7	0	225	225	0	1,215	1,21
		Alangtin WS		1	1	· · · · ·	50	50	,	275	27
	F	Amtuagan WS	+	 	 	T	55	55		303	3(
		Apatan WS	1		<u> </u>		16			88	
:		Baclingayan WS	1	1	i	1	34	34		187	18
	1	Bana WS		1	i		18	L		99	
) i	- F	Kili-tubo WS		1	 		28		 	154	1.5
	-	Tabatab WS		 	1		35			193	
		Tiempo WS	 	1		+	40			220	
		icipal Total	 	,	·	+	 				
010127 17.16	Africa:	Bollitising WS	· · · · · ·	}	`		20		1	106	11
010127 Villavie		Calao WS	 	 	<u> </u>		75		·	398	
	iciosa		-}	1	1		100	†		530	
	iciosa	Laplapog WS			·	·	100		+	530	 -
	iciosa	Lumaba WS				100		 	+	+	5
	iciosa	Poblacion WS	 	 :		100	+	100			
	iciosa				11	'L	60		+	318	
ļ	iciosa	Talamae WS		+		Т				200	
<u> </u>	iciosa					1 8 100	132			700	



Table 4.1.2 Existing Level II Systems

					Sheet 3						
NEDA						Service	Service Conditions During Dry Season	rring Dry Se	ason		
ĝ	100	Name of System	Sumalu	Dirto	Taste or	Supply	Supply Interruption (number/month)	(number/mo	nth)	Supply Water Pre	Supply Water Pressure (% of Total)
graphic Code	Municipality	(Operating Body)	(Krs/day)	Water	Smell	Power Failure	Pump Breakdown	Pipe Burst	Others	Adequate	Inadequate
010101	Bangued (Capital)	Angad W.S	24							%06	10%
		Lington W.S								75%	25%
		Macarcamay W.S								75%	25%
		Maoav W.S								75%	25%
		Palao W.S								9509	40%
		Sao-Atan W.S								75%	25%
	Z	Municipal Total									200
01010	Bucay	Abang BWSA	22								
	•	Bangbangcag BWSA									
		Banglolao DWSI									
		Bucay WS									
		Bugbog BWSA									
		Calao BWSA									
		Dugong BWSA									
		Labon BWSA									
		Layugan BWSA									
		Madalipay BWSA									
		Pakiling BWSA									
		Palaquio BWSA									
		Quimicong WSA									
		Salnec BWSA									
		Siblong BWSA	24								
		Tabiog WSA									
: -	4	Municipal Total		100					经营销品		
010104	Buctoc	Ducigan WS		-	U				2		
	· ·	Labaan WS			ט				2		
		Lamao WS		0	O.			1			
		Lingey WS	8		υ					75%	25%
		Municipal Total									
01010	Daguioman	Tui WS	24	0						75%	25%
	•	Piker WS	24		IJ					3506	10%
		Cabaruyan WS	24		U					3506	10%
		Ableg WS	77								3501
	-	Municipal Total		The second second			Towns towns		in the constitution		

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

NETA Name of System Supply Dirty Task or Supply Dirty					Sheet 5							
Manual depails Name of System Supply Dirty Take or Supply Interruption (authober/month) Supply Interruption (authober/month) Supply Water Pressure (% of Total	NEDA						Service (Conditions D	uring Dry Se	ason		
Dunglass Cobertading Body) Water, Smell Flower Spann Prop Burn Others Adequate Inadequate Dunglas Clobarium WS 2 W C 7556 256 <td>8</td> <td></td> <td>Name of System</td> <td>S</td> <td>Ą.c</td> <td>Tastoor</td> <td>Supply</td> <td>Interruption</td> <td>(number/mo</td> <td>ntb)</td> <td>Supply Water Pre</td> <td>ssure (% of Total)</td>	8		Name of System	S	Ą.c	Tastoor	Supply	Interruption	(number/mo	ntb)	Supply Water Pre	ssure (% of Total)
Dungliss Cabranta WS 6 24 6 75% 25 Participa Standar WSA 24 6 27 75% 25%	graphic Code	Municipality	(Operating Body)	(Hrs/day)	Water '	Smell ²	Power Failure	Pump Breakdown	Pipe Burst		Adequate	Inadequate
Delice	YUL WILL	Parameter	Cohamian WN	9							75%	25%
Doloves	3	CHINA THE PARTY OF	Signature Web	24							75%	25%
Delices Deli			Dengle WSA	24		Ö					75%	25%
Doloves		1.	Domestiav WSA	9	7.M	×			2		15%	25%
Dolorey Municipal total Dolorey Municipal Total Dolorey Equation WS S S S S S S S S S			the state of the s	property and the second			W 1877	10 To				
Kimmalaba WS S S S S S S S S S			Aunicipal Total	24		Company of the Compan						
Namicingan WS 24			Kimmalaba WS	15								
Taping WS			Namit-ingan WS									
Lacuto Bacag WS			Taping WS	24								
Jacub		2	funicipal Total	1	· · · · · · · · · · · · · · · · · · ·	Section 1				100		
Baingang WS C C C C			Bacag WS		0	Ŋ			1			
Bance WS Proce ding			Balagang WS		0	ڻ د			I			
Pacce WS			Bunez WS		٥	ڻ			1			
Poblacion WS			Pacoc WS	22	0	ט						
Sap-ai WS Calambat Calambat			Poblacion WS	16	0	Ö						
Lagayan Calambat Calambat Calambat Calambat Collago WS			Sap-al WS			Ö						
Lagryam Calambat Collapo WS Collapo WS </td <td></td> <td></td> <td>Aunicipal Total</td> <td></td> <td>1000</td> <td>**</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>			Aunicipal Total		1000	**						
Collago WS Col	10110		Calambat									
Langiden Luba Baac WS Poblacion WS Poblacio			Collago WS								ı	
Langiden Poblacion WS G G G G IOS% Poblacion WS 3 G G IOS% IOS% <t< td=""><td></td><td></td><td>Aunicipal Total</td><td></td><td>A 15 A 15</td><td></td><td></td><td>14.7×3×1.1%</td><td></td><td></td><td></td><td></td></t<>			Aunicipal Total		A 15			14.7×3×1.1%				
Poblacion WS G 100%	010111		Baac WS		0	၁					100%	950
Municipal Total 24 G I.cmeng WS 24 G I 95% Licuan Mogao WS 24 G I 95% Malbuan-Subagan WS 24 G I 95% Luba Ampaliok WS C C I Luba Bant WS C G I Lul-luno WS 24 G G I Lul-luno WS C G I I		į.	Poblacion WS			ט					%001	950
Municipal Total 24 G I 95% Licuan Mogao WS 24 G I 95% Walbuan-Subagan WS 24 G I I 95% Municipal Total C G I			Quillat WS	3								
Licuan Lenneng WS 24 G I 95% Mogao WS 24 G I 95% Walbuan-Subagan WS 24 G I I Aunicipal Total G G I I Luba Ampaliok WS C G I Bart WS 24 G G I Lul-luno WS C G G I			Municipal Total	ALC: NO SECURE) West		· 经公司	A 86 6	を表示なる			
Mogao WS 24 G I 95% Walbuan-Subagan WS 24 G I Ampalox MS I	010113		Lenneng WS	24		9						
Walbuar-Subagan WS 24 1 Municipal Total C C Luba Ampaliok WS 24 C Bant WS 24 C Cayannan WS 24 C Lul-luno WS C C			Mogao WS	24		ט			1		95%	5%
Municipal Total C C Luba Ampaliok WS 24 G Bant WS 24 G Cayaman WS 24 G Lul-luno WS G G			Walbuan-Subagan WS	24								
Luba Ampaliok WS 24 Barit WS 24 Gayaman WS 24 Lul-luno WS 24			Municipal Total									
Barit WS 24 Cayaman WS 24 Lu1-luno WS Cayaman WS	010114		Ampaliok WS			ט						
WS 24			Bant WS	24		C				_		
			Gavaman WS	24		S.						
			Lui-luno WS			U						

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

					Sheet 3						
NEDA						Service (Service Conditions During Dry Season	uring Dry See	rson		
ģ	70 70 70 70 70 70 70 70 70 70 70 70 70 7	Name of System	Smark	Dirty	Taxte or	Supply	Supply Interruption (number/month)	(number/mo	atb)	Supply Water Pre	Supply Water Pressure (% of Total)
graphic Code	Municipanty	(Operating Body)	(Hrv/day)	Water	Smell	Power Failure	Pump Breakdown	Pipe Burst	Others	Adequate	Inadequate
010114	Гива	Nagruquipa WS			2						
		Pega WS	22		9						
	2	Total		Sugar, Sugar,							
010115	Malibcong										
	•	Bayadas WS									
		Buanao WS									
		Cubcuba WS									
		Dulao WS									
		Duldulao WS									
		Gacab WS									
		Malibcong WS									
		Manapnap WS									
		Matalibeng WS									
		Mataragan WS									
		Pacqued WS									
		Tanpan WS									
		tal	Balance St. (C.)	A Carlo Come	10 m	A STATE OF THE STATE OF			Contraction of		
010116	Manabo	Ayyeng WS	24		_						
	•	Banat WS	77								
		Catacdegan WS									
		Liagan WS								%86	2%
		Luzong WS	12								
		Madago WS									
		San Juan WS									
911010	Manabo	Sn. Jose WS	24								
		Sto. Tomas WS	24								
		Villa Conchita WS Association									
	(Municipal Total		a Co		Section Section	KING SECTION OF			A CONTRACTOR OF THE PARTY OF TH	
010117	Penarrubia	Lusuae WS		2M				7			
811010	Pidigan	Immuli WS						0			
		Maloblobo & Tambo WS									
		Pangtod WS						Q			(

Table 4.1.2 Existing Level II Systems

					Spect 2						
VEDA						Service	Service Conditions During Dry Season	iring Dry Se	uox		
8		Name of System	Cumply	Dirty	Taste or	Supply	Supply Interruption (number/month)	number/mo	jt)	Supply Water Pre	Supply Water Pressure (% of Total)
graphic Code	Municipality	(Operating Body)	(Hrs/day)	Water	Smell²	Power Failure	Pump Breakdown	Pipe Burst	Others	Adequate	Inadequate
010118	Pidigan	Suyo WS									And the state of the board of the state of t
		Municipal Total	The state of the state of the								
010119	Pilar	Nagcawasan WS			ڻ ن						
		Namara WS			Ö						
		Ocos WS									
		Palicao WS			S	4					
		San Juan WS									
		Municipal Total		Contract of	A STATE OF STATE OF	Water State		を持なる			
010120	Sai-lanadan	Bazar WS	124			-					
	,	Bilabila WS	22								
		Ganyal WS	24								
		Maguvenyeb WS	24								
	•	Nacutian WS	24								
		Sacaang WS	24								
		Sallapadan WS	24								
		Subusub WSA	24								
		Ud-udiao WS	42								
		Municipal Total	STATE STATE OF	Same Andrews	The Control of the	*	Section of the section of	囊	The second second		
010121	San Isidro	Sn Isidro WS	24				4				
010122	San Juan	Poblacion WS	24		}						
010123	San Ouintin	Carsuan WS							~~		
		Labaan WS									
		Palang WS									
		Pantoc WS									
		Poblacion WS									
		Talaytay WS			-	,					
-		Tangadan WS									
		Villa Mercedes WS									
		Municipal Total	美国的	新班性系统	等 25 数 多 美	医海绵 香料	等。2011年1月1日	· 操送 · 基础		A STATE OF THE STA	
010124	Tayum	Basbasa WS									
		Budac WS									
		Gaddani WS		0				_			
		Velasco WS	24					_		And the second s	en leader a black of place of the party of t
		Municipal Total									

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

						Service	Service Conditions During Dry Season	uring Dry Sea	ason		
NEDA		Name of System				sydding:	Supply Interruption (number/month)	(number/mo	nth)	Supply Water Pre	Supply Water Pressure (% of Total)
graphic	Municipality	(Operating Body)	Supply (Firs/day)	Water ¹	Smell*	Power Failure	Pump Breakdown	Pipe Burst	Others	Adequate	Inadequate
Coce		T. W.	100		U					30%	%0L
010125	Tineg	Agsimao wa	7					4		80%	20%
		Alada WS	:	ม	ž					20%	200
		Apao WS						7 (10%	00
		Caganayan WS	24	0	ڻ د			1		2003	000
		Cocon WS		0		5				3,0%	2000
		I and WS	24	0						20%	OC.
		There Deleared WC						S		90%	10%
		Manicipal Total				1. C.					
			A CONTRACTOR OF THE PARTY OF TH								
010126	Tubo	Amtuagan WS	‡7								
		Alangtin WS	24								
		Apatan WS									
		Baclingayan WS	24								
		Bana WS									
		Vil mbo We	24								
		SH CONTROL									
		Tabatab WS									
		Tiempo WS	24		_				The second second	A mention of the second statement of the second sec	
		Municipal Total	120								125C
010127	Villaviciosa	Bollilising WS	24	МО	0					97.07	
		Calao WS	24	МО	×					04.01	3. C7
		Laplabog WS	12		0	1					
	:	Lumaha WS		0	X			es -	6	30%	9,0/
		Poblacion WS	90	МО	X					75%	
		Talamac WS	77								
	 -	Tuquib WS		wo	X				11	o/.C/	0, 67
		Municipal Total									
	Provin	Provincial Total									

Note: 1. Dirty Water: £ - Everyday, OW - Once a week, OM - Once a month, O - Occassional. 2. Taste/Smell: G - Good taste, S - Salty, W - Wood taste, M - Metallic taste, O - Others.

Table 4.1.2 Existing Level II Systems

- 3	J.,	1 a

NEDA					Number of	Staff			
Geo-	Municipality	Name of System	Technical	Adminis-		Total	Rep	air Work	
graphic	, Maintipenty	(Operating Body)	Professional	trative Staff	Collector	Number	Local	MEO/C	
Code	<u></u>	<u> </u>	Frocessions	CHINE SIZI		of Staff	Trademan	EQ	DEC
010101	Bangued (Capital)	Angad W.S					X		
		Lington W.S					x		
	İ	Macarcamay W.S					х		
		Maoay W.S					Х		
		Palao W.S					х		
		Soo-Atan W.S					X		
	Miss	nicipal Total	N.A.	N.A.	N.A.	N.A			a #
010103	Висау	Abang BWSA		1	1), i	Maria Par	Post of the
010105	1000	Bangbangcag BWSA	ti		1		x		
		Banglolao DWSI			1	<u> </u>	x		
		Bucay WS	 			5			
	j	· · · · · · · · · · · · · · · · · · ·	 			11			
		Bugbog BWSA	 		•		<u> </u>		
		Calao BWSA	 		4	3			
	1	Dugong BWSA	 			10		 	
	1	Labon BWSA	.		1	10			
	1	Layugan BWSA			0		· · · · · · · · · · · · · · · · · · ·	ļ	
	ŀ	Madalipay BWSA					<u> </u>		
		Pakiling BWSA			0	4	X		
		Palaquio BWSA			0	*	X	ļ	
		Quimloong WSA	<u> </u>		1	4	Х	ļ	
		Salnec BWSA				5	<u> </u>		
		Siblong BWSA			1	5	Х		
	L	Tableg WSA	<u> </u>		5 × 1	5	X		
	Muc	nicipal Total	N.A.	N.A	N.A	N.A	(42) (43)		
010104	Bucloc	Ducligan WS					X		
		Labaan WS				•	×		
		Lameo WS	T			•	X		
: .		Lingey WS				. •	х		
	Mu	nicipal Total	N.A.	N.A	N.A.	N.A.			
010105	Daguioman	Ableg WS				•	Į.		
		Cabaruyan WS					х.		
		Piker WS	1			•	X.		
		Tui WS				•	X		:
	Mag	nicipal Total	N.A.	N.A.	N.A	N.A			
010106	Danglas	Cabaruan WS	1				KARANGA TERMINA K		
0.0100	Denga,	Caupasan WSA	 	5		6		-	
	•	Danglas WSA	<u> </u>		<u>-</u>	~	i x		
		Domeguiay WSA	 				1 1		
:		nicipal Total	N.A.	N.A.	N.A.	N A	STATE OF THE PARTY OF		
010107	Dolores	Bayaan WS	1	17.7		N.A.		2 222	
010103	Editores		 				X		
		Kimmalaba WS	 				X :		
	•	Namit-ingan WS	 				X		
	ļ 	Taping WS	 			100	A STATE	4	
010100		nicipal Total	N.A	N.A.	N.A.	N.A.			
801010	Lacub :	Bacag WS		<u></u>		<u>.</u>	X		<u> </u>
]	Balagang WS			<u> </u>	<u> </u>		 	<u> </u>
		Buneg WS	<u> </u>				X		
	1	Pacoc WS					X	ļ	
		Poblacion WS					X	L	ļ
	<u> </u>	Sal-al WS					X		**************************************
		nicipal Total	N.A	N.A.	N.A	N.A			
010110	Lagayan	Calambat					X	 _	L
		Cellago WS					λ		
	Mu	nicipal Total	N.A	N.A.	N.A	N.A			*







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

NEOA		1		et 4	Number of	Staff			
Geo-	N4	Name of System	1	4.41-1-		Total	Rep	ir Work	
graphic	Municipality	(Operating Body)	Technical Professional	Adminis- trative Staff	Collector	Number	Local	MEO/C	
Code			T V CSSIONAL			of Staff	Trademan	ΕO	DEO
010111	Langiden	Baac WS					<u> </u>		
		Poblacion WS					X		
		Quillat WS						X	a.Printe
	Mu	nicipal Total	N.A	N.A.	N.A.	N.A.			
010113	Licuan	ZW gasans.)					x	ļi	
	1	Mogao WS					X		
		Walbuan-Subagan WS					X	***********	ksenerata Kanarata
	Mu	nicipal Total	N.A.	N.A.	N.A.	N.A.			
010114	Luba	Ampaliok WS					· X-		
		Barit WS					X		
		Gayaman WS					X		
		Lul-luno WS					X		
		Nagtuquipa WS					3.	ļ	L
		Pega WS					X		
	Me	inicipal Total	N.A.	N.A	N.A	N.A			
10115	Maliboong	Adugao WS					X	<u> </u>	
	1	Bayahas WS					χ		
	į	Buanao WS					X.		
		Cubcuba WS					x		L
		Dulao WS					x		L
		Duldulao WS					х		L
		Gacab WS	-				х		
		Malibeong WS				•	х		
. *		Magappap WS					X.		
	ŀ	Matalibeng WS			٠.		X		
		Mataragan WS					X		
1		Pacqued WS			I		1		
	1	Taripan WS			1		х	Γ	L
		Umnap WS					X		
	Ni	unicipal Total	N.A	N.A.	N.A.	N.A			
010116	Manabo	Ayyeng WS	2	2		4	X	1	
		Banat WS	1			() x		
•		Catacdegan WS	7.7				X X		
		Liagan WS	<u> </u>		1.	. () x		
	. [Luzong WS	2	2	1		5 X		
		Madago WS) x		I
		San Juan WS					3 x		
		Sa. Jose WS		l		1	Х. Х		
		Sto. Tomas WS	1				O x	1	
		Villa Conchita WS Asso.	 					1	1
	M	unicipal Total	N.A.	N.A	N.A.	N.A			
010117	Penarrubia	Lusuac WS	 				3 x		
010118		Immuli WS	··· · · · · · · · · · · · · · · · · ·				X		
010116	1,0,642	Maloblobo & Tambo WS		· · · · · · · · · · · · · · · · · · ·	3			X	
		Pangtod WS	1				R.		l
	1	Suyo WS	 				ĸ	1	1
			N.A.	N.A	. N.A	N.A			
A10112		unicipal Total Nagcawasan WS	†	l	1	1	λ		- 15 HW
010119	Lifat	Nagrawasan WS	 	l	 	 	x		1
			 	 	 		- x	1	1
	1	Ocop WS	 	 	1		 	1	1
	1	Orline WS	 	<u> </u>	1		,	1	

San Juan WS Municipal Total

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

NEDA					Number of	Staff			
Geo-	Biling a later of the	Name of System	Toolseland	Adminis-		Total	Rep	air Work	
graphic	Municipality	(Operating Body)	Technical Professional	trative Staff	Collector	Number	Local	MEO/C	
Code			Processional	(Takire Stati		of Staff	Trademan	EQ	DEO
010120	Sal-lapadan	Bazar WS					X	İ	
	·	Bilabila WS					X	[
		Gangal WS				***************************************	χ		
		Maguyepyep WS	·				X		
		Naguilian WS					x	1	
		Sacanng WS				·	X.		
		Sallapadan WS	 				х		
		Subusub WSA					X	!	
		Ud-udiao WS	 	· · · · · · · · · · · · · · · · · · ·			x		l
	N		N.A.	N.A.	N.A	N.A.			3.1
013131		nicipal Total	- N.A.	н.л.		14.71	X	A SOLE	i ironia
010121	San Isidro	Sn Isidro WS					1	 	
010122	San Juan	Poblacion WS					<u> </u>		
010123	San Quintin	Carsuan WS	 		 		X	ł	
]	Labaan WS	<u> </u>	ļ	 		X	 	
		Palang WS	.		· · · · · · · · · · · · · · · · · · ·		x	 -	
	l	Pantoc WS	. - -	<u> </u>	 		X		ļ
•		Poblacion WS	1			 -	X	 	
		Talaytay WS	ļ				X	 	 -
		Tangadan WS			<u> </u>		X		- -
:	:	Villa Mercedes WS	<u> </u>				X Parameter Andrews		eastern.
	Me	inicipal Total	N.A.	N.A.	N.A.	N.A		63.5	
010124	Fayum	Basbasa WS					<u> </u>	<u> </u>	Ļ
		Bodac WS					, x	<u> </u>	
	•	Gaddani WS					х	I	<u></u>
•		Velasco WS			<u> </u>	<u> </u>	X		
	Mi	inicipal Total	N.A.	N.A	N.A.	N.A	Section 1	195	沙婆
010125	Tineg	Agsimao WS					х		L
		Alada WS				-	λ	1	<u></u>
	1	Apao WS					3.	1	L
:	ļ	Caganayan WS					X	1	
		Cogon WS					R	1	
		Lance WS	1				x		
	1	Lapat-Balantay WS	 				x	 	
	N	unicipal Total	N.A.	N.A	N.A.	N.A	A Jackson		R.
010126		Alangtin WS	1		<u> </u>	1	X		1
0.0120		Amtuagan WS	1	<u> </u>	1		,	T	1
		Apotan WS		†	 	 	X	T	ţ.
		Baclingayan WS	· 	 	 -	 	, x	1	1
		Bana WS			1	 	1 ×		1-
	1	Kili-tubo WS		 	 		X	1	1
				 	+	 		 	1
٠.		Tabatab WS		1				1	
		Tiempo WS	1	N	87.0	hr a			
		onicipal Total	N.A	N.A	N.A	17.2		20 E E E E	362.05.5
010127	Villaviciosa	Bollitising WS		 		 			
1: 1	[Calao WS	- 	 	 	 	<u> </u>		
		Laplapog WS		<u> </u>	1	') X	┨	1
	· [Lumaba WS		ļ	-{	 	2 X		
1		Poblacion WS		ļ			x		-
1	I .	Talamac WS		 		ļ	x		—
		Tuquib WS			<u> </u>	ļ	2		
L	M	unicipal Total	N.A	N./	N.A.	N./			
	Provinc	ial Total	N.A	N.A	N.A	N./			

Note: * - Barangay Officials

Table 4.1.2 Existing Level II Systems

				Expenditures	ures					Ta	Tariff		
Annu	ual Wages	ļ	Chem.	Transport	Repairs	Loan Repayment	Other	Consumer	Cost per Pail	Cost per Cubic	Cost Per Household	Other	Average Collection Efficiency
			(Thou	(Thousand of Pesos/year)	(vear)			(Year)		(Pe	(Pesos)		(%)
		_											
	L	_							_				
				1									
		-										[
		-		:									
NA.		N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	NA	N.A.	N.A.
-1											2.00		
0		_											
2											1.00		100%
100		-		•							2.00	10,00	70%
0					:						2.00		
2		_											
0											2.00		
5							, ,		-		2,00		206
<u></u>					-				-				
·		-									2.00		95%
0			-										
S									-				
0											2.00		206
01											2.00		05%
-		_											
0		-			•	-	7		-		1.00		2001
N.A.		N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	V.A	N.A.
										-			
N.A.		N.A.	N.A.	N.A.	ν.	N.A.	A.N.	N.A.	N.A.	NA	VV	N.A.	N.
	Ì	_											
Ϋ́		N.A.	N.A.	N.A.	N.A.	N.A.	Y.Z	N.A.	N.A.	N.A.	N.A.	N.A.	NA

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





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

1.			Expenditures	ures					1,2	Taniff		
Annual Wages Chem,	ļ	Ι.	Transport	Repairs	Loan	Other	Consumer	Cost per		Cost Per	Other	Average Collection
Mat	Zaz	. 8	(Thousand of Peroclycer)	(Appen)			Veer		Meter	- Control Cont		Efficiency
	_									,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		(2)
	Ц											
N.A. N.A.		N.A.	N.A.	N.A.	Ä.S.	N.	N.A.	Z.A.	A'N	N.A.	N.	N.A.
						Ī						
								T				-
	_											
	-											
			:		-							
NA. NA.		N.A.	N.A.	A.N.	V.X	A Z	NA.	ž	Z	V Z	A.N.	AN AN
			<u> </u>									
			-									
-												
								-			-	
N.A. N.A.		N.A.	N.A.	Z.A.	Z.	Ϋ́ Z	N.	Ϋ́	Ϋ́N	V.N.	Z Z	YZ.
	. !			2						2.00		

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

_						Executives						Tai	Tariff		
NEDA Geo- graphic	Municipality	Name of System (Operating Body)	Annual	Wages	Fuel, Chem,	Transport	Repairs	Loan Repayment	Other	Consumer Payment	Cost per Pail	Cost per Cubic	Cost Per Kousehold	Other	Average Collection Efficiency
Soci					Thou	(Thousand of Pesovyear)	/year)			(Year)		(Per	(Pesos)		(%)
811010	Didigan	Immili WS													
	nagen.	Maloblobo & Tambo WS											5.00		70%
		Pangtod WS													
		Suyo WS													
•	Mun	Municipal Total	Z.	Ϋ́N	Ϋ́Z	N.A.	N.A.	N.A.	N.A.	N.A.	Y Z	N.A.	N.A.	N.A.	NA
611010	Pilar	Naggawasan WS													
		Namara WS										:			
		Ocop WS			-										
		Palicao WS				44 4 4									
		San Juan WS			1										
	Mon	Monicipal Total	N.A.	Y'N	. V Z	N.A.	NA	N.A.	N.A.	N.A.	NA	N.A.	NA	N.A.	Ϋ́Х
021010	Sal-lapadan	Bazar WS				,							-		
	•	Bilabila WS				•									
		Gangal WS			4			;							
		Maguyepyep WS													
		Naguilian WS					:	:							
		Sacaang WS													ļ
		Sallapadan WS													
		Subusub WSA													
		Ud-udiao WS								-					
•	Mun	Municipal Total	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	Y.	N.A.	N.A.	N.A.	N.A.	Ϋ́Z	N.A.
010121	San Isidro	Sn Isidro WS		:											
010122	San Juan	Poblacion WS			•										
010123	San Quintin	Carsunn WS			-									-	
		Labaan WS		-											
-		Palang WS													
		Pantoc WS				- 1									
		Poblacion WS													
		Talaytay WS			_										
		Tangadan WS													
		Villa Mercedes WS													
	Mun	Municipal Total	N.A.	N.A.	N.A.	Z.	Y.Z	Ϋ́Z	Y.Y	Ϋ́	ζ.	ζ,	Y.X.	< Z	Z.

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

NETA Name of Signer																
Numicipality Name of System Name o							Expenditure						T L	בְּנֵ		
Tayoun Backers WS Musticidative WS	NEDA See graphic	Musicipality	Name of System (Operating Body)	Annual	Wages	Chen.	Transport	Repairs	Loan Repayment	Other	Consumer Payment	Cost per Pail	Cost per Cubic Meter	Cost Per Household	Other	Collection Efficiency
They Subban WS	Š					E	sand of Pero	(vear)			(Year)		(Pe	, vox		<u>\$</u>
Principle Vision Wiley	010124	Takim	Bashasa WS													
Victorian WS			Budac WS													
Velacoc WS			Gaddani WS													
Timego Agriculture No.			Velasco WS													
Timego				2	V X	× 7.	ž	N.	AZ				N.A.			Y'X
Albook WS Albook WS Cogenify NS Cogenify NS Cogenify NS genify NS Cogenify NS Cogenify NS Cogenify NS Cogenify NS Cogenify NS Cogenify NS Cogeni	010125		Avsimao WS	Š.	7											
Apos WS		0	Alada WS													
Coppanyou WS			Apao WS													
Cogon WS			Caganavan WS													
Lance Way Lance Way NA NA NA NA NA NA NA N			Cogon WS					:								
Lapac-Balanasy WS		_	Lanec WS													
Tubo			Lapat-Balantay WS													
Tubo Alangsin WS		Mun	nicipal Total	N.A.	N.A.		N.A.	NA	N.A.				N.			Ž
Amnuagan WS Apatan WS Bacilugayan WS Bacilugayan WS Bacilugayan WS Bacilugayan WS Bacilugayan WS Tabadab WS Tempo WS Tabadab WS Tabadab WS Tabadap WS	010126		Alangtin WS													
Applian WS Bacilingsyan WS Bacilingsyan WS Bacilingsyan WS Tempo WS			Amtuagan WS										-			
Baclingayan WS Bana WS Bana WS Bana WS Trange WS Trang			Apatan WS													
Bana WS Kili-rubo WS Trabatab WS Tra			Baclingayan WS								_					
Kili-tubo WS			Bana WS								_					
Tempo WS			Kili-tubo WS									_				
Tiempo WS Municipal Total N.A.			Tabatab WS			1									_	
Mullaviciosa Boltisismy WS NA.			Tiempo WS													
Villaviciosa Boltisising WS Catao WS 0.50 Laplapog WS Laplapog WS 0.50 Lumaba WS Poblacion WS 0.50 Talamac WS Talamac WS 0.50 Tuculib WS NA NA Municipal Total NA NA Municipal Total NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA		Mei	nicipal Total	NA									İ			Y.
Calab WS	010127	Villaviciosa	Bollilising WS				·									
100 m 100			Calao WS													
Action WS action WS action WS by WS Total NA, NA, NA, NA, NA, NA, NA, NA, NA, NA,			Laplapog WS											0.50		
noc WS noc WS noc WS NA		:	Lumaba WS													
105 WS 105 WS 106 WS 107 WA 108 WS			Poblacion WS													
Total N.A. N.A. N.A. N.A. N.A. N.A. N.A. N.A			Talamac WS													
Total N.A. N.A. N.A. N.A. N.A. N.A. N.A. N.A			Tuquib WS				1									
AN AN AN AN AN AN AN AN AN AN		Mu	nicipal Total													
		December	"Total													N.A.

Table 4.1.2 Existing Level II Systems

					Billings					Kevenues		:
NEDA Geo- graphic Code	Municipality	Name of System (Operating Body)	Annual Billing	Public Faucet Consumers	House Connection Consumers	Expected Subsidies	Others	Annual	Payment by Public Faucet Consumers	Payment by House Connection Consumer	Subsidies	Others
			(Number)				Thou	(Thousand of Pesos/vear)	s/vear)			
010101	Bangued (Capital)	Angad W.S										
		Lington W.S										
		Macarcamay W.S										
		Maoay W.S										
		Palao W.S										
		Sao-Atan W.S										
	F.,	Municipal Total	A.N.	Y Z	N.A.	A'N	VV	N.A.	N.A.	VV	VV	VV
010103	Bucay	Abang BWSA					-					
	•	Bangbangcag BWSA					1					
	-	Banglolao DWSI										
		Bucay WS										
		Bugbog BWSA		:				-				
		Calao BWSA	_									
		Dugong BWSA										
		Labon BWSA										
		Layugan BWSA										
	·	Madalipay BWSA	-									
		Pakiling BWSA										
		Palaquio BWSA										
		Quimloong WSA										
		Saince BWSA										
		Siblong BWSA										
		Tablog WSA										
		Municipal Total	N.A.	NA	YZ	ΥN	N.A.	NA	N.A.	N.A.	N.A.	VV
010104	Suctor	Ducligan WS										
		Labaan WS										
		Lamao WS										
		Municipal Total	N.A.	A.N.	N.A.	NA.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
010105	Daguroman	Ableg WS										
	•	Cabaruyan WS										
		Piker WS	·									
		Tur WS										
		Maring Samuel Wash	7	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \				1	× 1.4			

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

1

				S	Sheet 6							
					Billings					Revenues		
NEDA Geo- graphic	Municipality	Name of System (Operating Body)	Annual Billing	Public Faucet Consumers	House Connection Consumers	Expected Subsidies	Others	Annual Income	Payment by Public Faucet Consumers	Payment by House Connection Consumer	Subsidies	Others
<u></u>			(Number)				Thou	(Thousand of Pesos/year)	«/year)			
901010	Danglas	Cabaruan WS										
		Caupasan WSA										
		Danglas WSA										
		Domeguiay WSA	-									
		Municipal Total	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	ΝĄ	Υ _N	A.A.
01010	Dolores	Buyaan WS										
		Kimmalaba WS						_				
		Namiteingan WS										
<u></u>		Taping WS										
-		Municipal Total	N.A.	YN	N.A.	N.A.	Y.Y.	Z.A.	N.A.	N.A.	X.X	N.A.
010108	Lacub	Bacag WS										
		Balagang WS										
		Buneg WS										
	,	Pacoc WS										
		Poblacion WS	:									
-	:	Sal-al WS										
		Municipal Total	N.A.	N.A.	NA.	N.A.	N.A.	Ϋ́Υ	X.	A N	Y Z	Ϋ́Z
01010	Lagayan	Calambat										
		Collago WS										
		Municipal Total	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	NA	A.V.	NA	Ϋ́N
01011	Langiden	Baac WS										
		Poblacion WS										
		Quillat WS	5									
		Municipal Total	NA	N.A.	N.A.	N.A.	Ϋ́Z	Ϋ́N	N.A.	Y.Z	¥ Z	N.A.
010113	Licuan	Lenneng WS	4 4									
	-	Mogao WS		1								
		Walbuan-Subagan WS										
		Municipal Total	AN	NA	Y'N	N.A.	N.A.	Ϋ́Z	NA	Y.Z	Ϋ́Υ	N.A.
010114	Luba	Ampaliok WS			1.00							
		Bant WS										
- -		Gayaman WS										
		Lui-luno WS										
		Nagudulpa WS										

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

Committee Comm						Sheet 6							
Municipality Name of System Name o						Billings					Revenues		
Links	NEDA Geo- graphic	Municipality	Name of Syxtem (Operating Rody)	Annual Billing		House Connection Consumers	Expected	Others	Annual	Payment by Public Faucet Consumers	Payment by House Connection Consumer	Subsidies	Others
Page WS	မီ ပိ			N. September 1				Ę	sand of Peso	Vvear)			
Links				(Namoer)									
Matingsory Administration Vision NAA	010114	Luba	Pega WS		;]		1	1	4.3	× Z		Y Z
Maleborg Eaglest WS Eagle			Municipal Total	Y.Z	Ϋ́Z	VV.	¥.		1				
Bayeles WS	\$11010	Malibeong	Adugao WS										Ī
Elabation WS		0	Bayabas WS	Ŀ									
Cupcates WS			Buanao WS										
Databow WS Controlled WS			Cubcuba WS										
Diadialow WS			Outro WS										
Managong WS Managong WS Managong WS Managong WS Managong WS Managong WS Managong WS Managong WS Managong WS Managong WS Managong WS Managong WS Managong Teal WS WA WA WA WA WA WA WA			Duldulao WS										
Manaboung WS Manaboung WS Manapung WS MS MS MS MS MS MS MS			Gacab WS										
Manapour, National Program National Program National		-	361120000										
Managerian WS Managerian WS Managerian WS Managerian WS Managerian WS Managerian WS Managerian WS Traysan WS Traysan WS Traysan WS Managerian WS MANAGERian WS MANAGERIAN WS MANAGERian WS MANAGERIAN WS MANAGERIAN WS MANAGERIAN WS MANAG			Manocong ws										
Manabo M			Manaphap ws										
Managen WS			Matalibeng WS										
Pacqued WS Pacqued WS Pacqued WS Umballow W NA		-	Mataragan WS										
Tunpan WS			Pacqued WS										
Umasp WS			Tanpan WS										
Municipal Total NA.	٠		Umnap WS										
Manabo Ayyeeg WS Ayeeg WS Lazoue WS Lazoue WS Luzzoue WS San Juan WS San Juan WS San Juan WS San Juan WS San Juan WS San Juan WS San Juan WS San Juan WS San Juan WS San Juan WS San Juan WS Sun Joec WS San Juan WS Sun Joec WS NA. NA. NA. NA. NA. NA. NA. NA. NA. NA.			Municipal Total	N.A.			N.A.	N.A.	N.A.	N.A.			Š.
Banat WS Casedegan WS Casedegan WS Casedegan WS Casedegan WS Casedegan WS Casedegan WS Casedegan WS Casedegan WS Casedegan WS Casedegan WS Casedegan WS Casedegan WS Casedegan WS Casedegan WS Casedegan WS Casedegan WS Casedegan WS Casedegan WS Casedegan WA Casedegan WA Casedegan WA Casedegan WA Casedegan WA Casedegan WA Casedegan WA Casedegan Casedegan WA Casedegan W	911010	Manabo	Aweng WS										
Catacdegan WS			Banat WS										
Luzoge WS Avadago WS Avadago WS San Juan WS San			Caracdegan WS										
Luzong WS Madago WS Madago WS San Juan WS San Ju			Liagan WS										
Madago WS San Juan WS Sa			Luzong WS										
San Juan WS			Madago WS										
Sin. Jose WS Stor Tomas WS Stor Tomas WS Villa Conchica WS Asso. N.A. N.A. N.A. N.A. N.A. N.A. N.A. N			San Juan WS										
Stor Tomas WS Villa Conchita WS Asso. N.A.			Sn. Jose WS										
Villa Conchita WS Asso. N.A. N.			Sto. Tomas WS										
Penarrubia Lusuac WS N.A. N.A			Villa Conchita WS Asso.										
Penarrubia Lusuac WS Pidigan Maloblobo & Tambo WS Immuli WS Immuli WS Paggod WS NA Suvo WS NA Municipal Total NA NA NA NA NA			Municipal Total	A.N.	N								
Pidigan Maloblobo & Tambo WS Immuli WS Immuli WS Pangrod WS Suvo WS NA NA NA NA NA NA NA NA	010117	Penarrubia	Lusuac WS									-	
Immult WS Pangood WS N.A. N.A. N.A. N.A. N.A. N.A. N.A. N.	X1.010	Г	Majoblobo & Tambo WS								-		
N.A. N.A. N.A. N.A. N.A. N.A. N.A. N.A.	·		Immuli WS										
N.A. N.A. N.A. N.A. N.A. N.A. N.A. N.A.			Pangtod WS										
NA NA NA NA NA NA NA			Suvo WS										
			Municipal Total	A.N.									



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

					Sheet 6					Pavannos		
					Dillings					Meyerimes.		Ī
NEDA Geo- graphic Code	Municipality	Name of System (Operating Body)	Annual Billing	Public Faucet Consumers	House Connection Consumers	Expected	Others	Annual	Payment by Public Faucet Consumers	Payment by House Connection Consumer	Subsidies	Others
			(Number)				Thot	(Thousand of Pesos/year)	os/year)			
611010	Pilar	Nagcawasan WS										
		Namara WS										
		Ocop WS										
		Palicao WS										
		San Juan WS									-	
		Municipal Total	Ϋ́Z	N.A.	Ϋ́χ	Y Z	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
021010	Sal-lapadan	Bazar WS										
		Bilabila WS										
		Gangal WS										
		Maguvepyep WS										
		Naguilian WS										
		Socaang WS										
		Sallapadan WS										
		Subusub WSA										
	-	Ud-udino WS										
		Municipal Total	A.N.	A.N.	N.A.	N.A.	N.A.	N.A.	N.A.	Y.A.	Y.A.	X
121010	San Isidro	Sn Isidro WS			3							
010122	San Juan	Poblacion WS										
010123	San Quintin	Carsuon WS										
		Labaan WS										
		Palang WS	-								-	
		Pantoc WS										
		Poblacion WS										
		Talaytay WS										
	χ.	Tangadan WS		:	_							
		Villa Mercedes WS										
		Municipal Total	N.A.	N.A.	N.A.	VV	N.A.	N.A.	N.A.	N.A.	KZ.	N.A.
921010	Tayum	Basbasa WS		1								
		Budac WS			4.							
		Gaddani WS										
	-	Velasco WS							,			
		Municipal Total	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	Y'Z	N.A.	VV

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

Fayment by Payment by Payment by Payment by Payment by Payment by Pholic Faucet Connection Connection Connection Connection (Thousand of Pecov/vear) Consumers					`	Current O	200000000000000000000000000000000000000	Company					
Municipality Name of System (Operating Body) Public Fauced Connection Flower Connection Expected Connection Connection Connection Public Fauced Connection Public Fauced Connection <th></th> <th></th> <th></th> <th></th> <th></th> <th>Billings</th> <th></th> <th></th> <th></th> <th></th> <th>Revenues</th> <th></th> <th></th>						Billings					Revenues		
Tring	NEDA Geo- graphic	Municipality	Name of System (Operating Body)	Annual Billing		House Connection Consumers	Experted	Others	Annual	Payment by Public Faucet Consumers	Payment by House Connection Consumer	Subsidies	Others
Tineg Agentae WS	Š								Ond of Dace	(month)].]	
Tineg Agemone WS				(Number)			*	TOUT)	Isano or reso	NVCMF.)			
Appen WS	Ħ	Tinez	Agsimao WS										
Copen WS			Alada WS										
Cagenaryon WS			Apao WS										
Tubo Alangua WS			Caganavan WS										
Lapice WS Lapice WS Lapice WS Lapice WS NA, NA, NA, NA, NA, NA, NA, NA, NA, NA,			Cogon WS										
Laptac Balantay WS			Lanec WS										
Tubo Alangin WS NA NA NA NA NA NA NA N			Lapat-Balantay WS										
Tubo			Municipal Total	Ϋ́Х		Y.A.	N.A.	N.A.	N.A.	NA			YZ Z
Amtuagan WS	i		Alangun WS										
Apption WS Backingayan WS Backingayan WS Backingayan WS Backingayan WS Bana WS Kili-tubo WS Tabanab WS Tabanab WS Tabanab WS Tabanab WS Tabanab WS Tabanab WS Tabanab WS Talanab WS			Amtuagan WS										
Baclingayan WS Bana WS Bana WS Tabatab WS Tampo WS Trango WS Tampo WS Tampo WS Tampo WS Tampo WS Tampo WS Tampo WS Tampo WS Tampo WS Tampo WS Tampo WS Tampo WS Tampo WS Tampo WS Talamac			Apatan WS	. !									
Eana WS Eana WS Extil-ubo WS Extil-ubo WS Tabatab WS Tabat			Baclingayan WS										
Kill-ubo WS			Bana WS										
Tabolab WS			Kih-tubo WS										
Tiempo WS Municipal Total N.A.			Tabatab WS										
Villaviciosa Bollilisiug WS N.A. N.A		-	Tiempo WS										
Villaviciosa Bollilising WS Calao WS Laplapog WS Laplapog WS Laplapog WS Laplapog WS Laplapog WS Talamac			Municipal Total	N.A.			N.A.	N.A.	N.A.	Ϋ́			X
Calao WS	010127		Bollilising WS										
NA. NA. NA. NA. NA. NA. NA. NA. NA. NA.			Calao WS										
NA. NA. NA. NA. NA. NA. NA. NA. NA. NA.			Laplapog WS										
NA. NA. NA. NA. NA. NA. NA. NA. NA. NA.			Lumaba WS										
NA. NA. NA. NA. NA. NA. NA. NA. NA. NA.			Poblacion WS										
NA NA NA NA NA NA NA NA NA NA NA NA NA N			Talamac WS										
NA NA NA NA NA NA NA NA NA NA NA NA NA N			Tuguib WS							1			
YZ YZ YZ YZ YZ YZ YZ			Municipal Total	Y Z									Ϋ́
		Province	cial (fotal	Z	Z Z								Ź.