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

8.6.1 Water Supply

(1) Required water supply facilities

Urban water supply:

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

As reference, the following requirements were also estimated:

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

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

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

Rural water supply:

Rural water supply facilities required by target year shown in Table 8.6.3(a) were estimated as the number of Level II systems with the number of communal faucets and the number of Level I wells broken-down to deep and shallow wells. Forty-five (45) untapped springs suitable for Level II system were confirmed during this PW4SP preparation.

(2) Required well drilling and rehabilitation equipment

Presently, one unit each of percussion and rotary type drilling rig is operational at DPWH-DEO in the province.

Taking into account the maximum utilization of existing equipment, the additional number of required equipment is estimated as described below.

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

Table 8.6.1 Urban Water Supply Facilities Required by Target Year

Name of Municipality	Reference on Expansion of Existing Level III System						Phase I (2003) Requirements				Phase II (2010) Requirements			
	Name of Operating Body	Area	Coverage in 1997		Type of Water Source	Plan for Expansion	Additional Population to be Served	Number of House Connections	Daily Average Water Demand (m^3/day)	Number of Spring Dev't./ Deep Well	Additional Population to be Served	Number of House Connections	Daily Average Water Demand (m^3/day)	Number of Spring Dev't./ Deep Well
			No. of Barangay Served	Served Population										
Alabel (Capital)	Alabel WD	Urban	1	1,488	DW	No	480	95	48	1	22,306	5,577	2,231	3
		Rural												
		Total	1	1,488										
	San Miguel Coop.	Urban			DW	No								
		Rural	1	350										
		Total	1	350										
	Sto. Niño Coop.	Urban	1	1,150	DW	No								
		Rural												
		Total	1	1,150										
	Municipal Total	Urban	2	2,638										
		Rural	2	350										
		Total	4	2,988										
Glan	Glan WD	Urban	1	4,100	DW	No	1,583	289	158	1	23,522	5,881	2,352	4
		Rural	1	336										
		Total	2	4,436										
Kiamba	Not Applicable	Urban	N.A.	N.A.	N.A.	N.A.	833	173	83	1	13,360	3,340	1,336	2
		Rural	N.A.	N.A.										
		Total												
Maasim	Maasim WD	Urban	2	870	SP	No	672	132	67	1	8,649	2,162	865	2
		Rural												
		Total	2	870										
Maitum	Not Applicable	Urban	N.A.	N.A.	N.A.	N.A.					11,140	2,785	1,114	2
		Rural	N.A.	N.A.										
		Total												
Malapatan	Malapatan WS	Urban	1	900	DW	No	1,776	334	178	1	25,363	6,341	2,536	4
		Rural												
		Total	1	900										
	Lun Padidu WS	Urban	1	690	DW	No								
		Rural												
		Total	1	690										
	Municipal Total	Urban	2	1,590										
		Rural												
		Total	2	1,590										
Malungon	Not Applicable	Urban	N.A.	N.A.	N.A.	N.A.	10,850	2,013	1,085	2	30,737	7,684	3,074	4
		Rural	N.A.	N.A.										
		Total												
Provincial Total		Urban	7	9,198			16,194	3,036	1,619	7	135,077	33,770	13,508	21
		Rural	2	686										
		Total	9	9,884										

Table 8.6.2 Plan for Expansion of Existing Level III Systems

Name of Municipality	Name of Operating Body	Additional Areas Barangay to be Covered	Additional Population to be Served	Additional Water Sources	
				Type	Capacity (m^3/day)
Alabel (Capital)	Alabel WD				
	San Miguel Coop.				
	Sto. Niño Coop.				
	Municipal Total				
Glan	Glan WD				
Maasim	Maasim WD				
Malapatan	Malapatan WS				
	Lun Padidu WS				
	Municipal Total				

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

Name of Municipality	Phase I (2003) Requirements								Phase II (2010) Requirements					
	Level II		Level I						Level I					
	Number of System	No. of Communal Faucets	Number of Deep Wells				No. of Shallow Wells	Total	Number of Deep Wells				No. of Shallow Wells	Total
			40 m	80 m	120 m	Sub-total			40 m	80 m	120 m	Sub-total		
Alabel (Capital)	3								256			256	63	319
Glan	9	180							276			276	117	393
Kiamba	4								45			45	178	223
Maasim	7								92			92	39	131
Maitum	14									28		28	111	139
Malapatan	3	60							158			158	39	197
Malungon	5	100		404		404	100	504		760		760	190	950
Provincial Total	45	340		404		404	100	504	827	788		1,615	737	2,352

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

Name of Municipality	Phase I (2003) Requirements								Phase II (2010) Requirements							
	Percenatge Allocated to Public Facility (20%)								Percenatge Allocated to Public Facility (20%)							
	Percentage Allocated for Public Wells (95%) and Percentage Allocated for Public Spring Development (5%)								Percentage Allocated for Public Wells (95%) and Percentage Allocated for Public Spring Development (5%)							
	Number of Deep Wells				No. of Shallow Wells	Total	No. of Spring Dev.	Grand Total	Number of Deep Wells				No. of Shallow Wells	Total	No. of Spring Dev.	Grand Total
	40 m	80 m	120 m	Sub-total					40 m	80 m	120 m	Sub-total				
Alabel (Capital)									49			49	12	61	3	64
Glan									53			53	22	75	4	79
Kiamba									9			9	34	43	2	45
Maasim									18			18	7	25	1	26
Maitum										6		6	21	27	1	28
Malapatan									30			30	7	37	2	39
Malungon		77		77	19	96	5	101		144		144	36	180	10	190
Provincial Total		77		77	19	96	5	101	159	150		309	139	448	23	471

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

Average performance

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

Annual accomplishment

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

Required number

- 3 sets for the total 106 deep wells

Well rehabilitation equipment:

Average performance

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

Annual accomplishment

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

Required number

- 1 set for 10% of 106 Level I deep wells

Support vehicle:

Type - pick-up truck with winch, double cab

Required number

- 1 unit for well rehabilitation

Considering the utilization of existing drilling rigs, the following equipment shall be mobilized/procured either by the private sector or by the LGUs to accomplish the physical targets:

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

In addition to the above, service truck equipped with crane are required for a medium size rotary and percussion rig for hauling drilling tools and water.

Table 8.6.4 Urban Household Toilets Required by Target Year

Name of Municipality	Phase I (2003) Requirements								Phase II (2010) Requirements							
	Additional HHs to be Served				No. of HHs to be Served				Additional HHs to be Served				No. of HHs to be Served			
	Flush	Pour Flush	VIP/ Dry	Total	Flush	Pour Flush	VIP/ Dry	Total	Flush	Pour Flush	VIP/ Dry	Total	Flush	Pour Flush	VIP/ Dry	Total
Alabel (Capital)			255	255			255	255	3,112	564		3,676	3,112	564		3,676
Glan	569	261	296	1,126	569	261	296	1,126	2,982	1,208		4,190	2,982	1,208		4,190
Kiamba	434	248	226	908	434	248	226	908	1,285			1,285	1,285			1,285
Maasim	298		154	452	298		154	452	939	14		953	939	14		953
Maitum		402	171	573		402	171	573	1,364			1,364	1,364			1,364
Malapatan	867	248	434	1,549	867	248	434	1,549	2,649	45		2,694	2,649	45		2,694
Malungon	998	1,070	491	2,559	998	1,070	491	2,559	4,091	1,099		5,190	4,091	1,099		5,190
Provincial Total	3,166	2,229	2,027	7,422	3,166	2,229	2,027	7,422	16,422	2,930		19,352	16,422	2,930		19,352

Table 8.6.5 Rural Household Toilets Required by Target Year

Name of Municipality	Phase I (2003) Requirements								Phase II (2010) Requirements							
	Additional HHs to be Served				No. of HHs to be Served				Additional HHs to be Served				No. of HHs to be Served			
	Flush	Pour Flush	VIP/ Dry	Total	Flush	Pour Flush	VIP/ Dry	Total	Flush	Pour Flush	VIP/ Dry	Total	Flush	Pour Flush	VIP/ Dry	Total
Alabel (Capital)			1,247	1,247			1,247	1,247	350	3,056		3,406	350	3,056		3,406
Glan		2,455	1,536	3,991		2,455	1,536	3,991	329	4,990		5,319	329	4,990		5,319
Kiamba			786	786			786	786		3,235		3,235		3,235		3,235
Maasim		488	591	1,079		488	591	1,079		2,320		2,320		2,320		2,320
Maitum		115	655	770		115	655	770		2,469		2,469		2,469		2,469
Malapatan		1,203	630	1,833		1,203	630	1,833		2,564		2,564		2,564		2,564
Malungon		4,812	2,122	6,934		4,812	2,122	6,934		12,705		12,705		12,705		12,705
Provincial Total		9,073	7,567	16,640		9,073	7,567	16,640	679	31,339		32,018	679	31,339		32,018

Table 8.6.6 Public School Toilets Required by Target Year

Name of Municipality	Phase I (2003) Requirements			Phase II (2010) Requirements		
	Additional Public School Students to be Served	No. of Toilet Unit	No. of Toilet Facilities	Additional Public School Students to be Served	No. of Toilet Unit	No. of Toilet Facilities
Alabel (Capital)	4,953	124	25	9,501	238	48
Glan	4,942	124	25	10,186	255	51
Kiamba				4,910	123	25
Maasim	2,879	72	15	3,228	81	17
Maitum				3,043	77	16
Malapatan	4,223	106	22	5,138	129	26
Malungon	9,194	230	46	16,295	408	82
Provincial Total	26,191	656	133	52,301	1,311	265

Table 8.6.7 Public Toilets Required by Target Year

Name of Municipality	Phase I (2003) Requirements				Phase II (2010) Requirements			
	Number of Public Toilets				Number of Public Toilets			
	Public Market	Bus/Jeepney Terminal	Park/ Playground	Total	Public Market	Bus/Jeepney Terminal	Park/ Playground	Total
Alabel (Capital)	2	1	1	4	3	2	2	7
Glan	5	1	1	7	5	3	2	10
Kiamba	1	2	5	8	1	2	6	9
Maasim	2	1	2	5	3	1	2	6
Maitum	2	1	2	5	2	1	2	5
Malapatan	2	1	1	4	2	2	1	5
Malungon	5	2	3	10	5	3	3	11
Provincial Total	19	9	15	43	21	14	18	53

SECTOR IMPLEMENTATION ARRANGEMENTS

C

9. SECTOR MANAGEMENT FOR MEDIUM-TERM DEVELOPMENT

9.2 Sector Management

Accessing ODA Funds for Level III Systems

When considering sources of financing for new Level III systems or for existing Level III systems that are expanding, LGUs may tap their IRA or they may borrow funds from commercial or ODA institutions. In the case of LGUs that have formed a Water District to operate their system, a ready source of loan funds is the LWUA.

This section discusses how an LGU can access funds from an ODA agency in order to develop its Level III water system. It is presumed that the proposed Level III project has gone through the Project Development process stipulated by the NEDA in Rule 7, Articles 24 – 26 of its IRR of Board Resolution No. 4 (Series of 1994), Clause (G). Specifically, the proposed Level III project must be consistent with the Provincial/City/Municipal Water Supply, Sewerage and Sanitation Sector Plan that has been prepared and annually updated by their respective Planning and Development Office(s). On the basis of these local council approved sector plans, water supply investments will have been identified and developed into a local investment program that includes an appropriate financing plan.

It is worthwhile to reiterate the following NEDA prescriptions regarding project identification:

- "proposed investments shall .be developed according to a demand-driven approach that would allow beneficiaries to select from among cost-effective technical options and from financing options. The LGUs may avail of technical assistance from the DILG in the preparation of these project packages (Rule 5)."
- "LGU systems shall be constructed on the basis of choosing among technical options that are affordable through the financial resources made available by users, communities and LGUs. The process of determining demand for a particular service delivery shall be concluded through a negotiated agreement between the LGU, water utility and the users, on how the costs will be shared at the town, barangay, and household levels."
- "for any Level III service, at least two technical options shall be explored: those of an inter-LGU service delivery organization involving amalgamation of service areas and of single LGU management systems."

(1) Project Initiation Stage

Based on their respective approved water sector plans, the province/municipality proposes a specific Level III water system following the NEDA guidelines on project identification. The provinces and component municipalities may submit their respective project proposals for ODA funding to the DILG. The DILG examines such requests and ensures that they are in conformity with the NEDA's Medium Term Public Investment Program (MTPIP), a master list of projects from which ODA agencies can select specific projects that they can fund. From the MTPIP, the ODA loan agency prepares its own short list of potential province and municipality beneficiaries/ grantees of its loan program. The ODA loan agency then proceeds to conduct its own feasibility study concerning its loan program and discusses this extensively with both the NEDA and the DILG (since the DILG will be the implementing agency for the ODA loan).

While the DILG is designated as the implementing agency for the ODA loan program, a domestic lending institution (e.g. the Development Bank of the Philippines or DBP) can be contracted to administer the loan package and on-lend ODA funds to specific LGUs. [Note that the LWUA has served and continues to serve as a conduit for loans to Water Districts.] Under such a working arrangement, the DILG, the ODA agency, and the domestic lending institution affix their signatures on the ODA program loan documents.

The DILG now pre-screens LGUs who have expressed intent to borrow funds from the ODA loan facility. Together with consultants from the ODA agency, the DILG conducts briefings on the loan conditions to make sure that the province/municipality fully understands the financial and institutional commitments they have to make once they contract the loan. The respective local councils (e.g. Sanggunians) deliberate whether they are able to and will partake of the loan. Should the Sanggunian decide that they can meet the loan commitments, they submit an official letter of interest (LOI) to the DILG. The DILG, with assistance provided by the ODA agency, evaluates the various LOIs from different LGUs and selects which specific projects will be eligible to borrow from the ODA loan facility.

(2) Project Implementation Stage

At this point, the province/municipality with the Level III system project can now sign the loan documents with the designated local on-lending institution. For the construction of the Level III water system, the LGU itself (or the LGU company formed to undertake the project) is expected to bid out the job to contractors from the private sector. The bidding process should be a transparent one with a public announcement of the bidding,

publication of pre-qualified construction companies, and a well-documented decision by the bids and awards committee. During the construction of the Level III water system, the LGU unit tasked to monitor the construction activity should carry out periodic inspections. Final inspection is done upon completion of the construction contract. Throughout the period of the bidding process and actual construction, the DILG can be tapped by the LGU for assistance on various technical and institutional-building matters.

The private sector contractor submits its periodic billings to the LGU. After the necessary inspections are done, the LGU in turn forwards this bill to the domestic lending institution for payment. Given that all documents are in order, the domestic lending institution requests for fund remittance from the ODA agency. Once the funds are remitted, the domestic lending institution settles the bills with the private contractor.

As far as repayment of the loan is concerned, the LGU is responsible for paying the loan since it was the signatory of the loan. Through the operations of the completed Level III water system, the LGU is able to collect the corresponding tariffs from the different consumer households. From these revenues, the LGU re-pays the loan capital and interest to the domestic lending institution, which in turn remits these proceeds to the ODA loan agency. This process is repeated throughout the term of the loan.

9.4 Project Management Arrangements

9.4.1 Project Approach/Strategy

Integration of Waterworks

The province may also initiate the establishment of an Integrated Waterworks (IWW) facility that will merge the management operations of adjoining municipalities, which have existing or proposed Level III water systems. This may not necessarily involve the integration of the physical facilities because of the distance and sparse location of municipalities, but rather only the management aspect of it. Article 8 of the IRR of NEDA Board Resolution No. 4 (Series of 1994), Clause (G) states that: "An LGU may also consider amalgamating or consolidating its system with that of its neighboring LGUs in order to benefit from economies of scale that could expand water supply services to consumers at the lowest possible cost."

The advantages of an IWW facility are as follows:

- Comprehensive water sector planning at the provincial level is facilitated. Investments in developing larger water sources and reservoirs can be considered at the planning stage (in the case of municipalities that are in close proximity with each other).
- The overhead cost involved in maintaining and operating a large waterworks system can be reduced since redundancies in equipment and manpower resources will be eliminated. Municipalities will no longer have to purchase and maintain their own waterworks construction equipment. As a result, there will be greater utilization of such equipment. Engineering and management staff that are currently needed to run the municipal waterworks system can be transferred to other functions.
- The province will be able to hire and retain professional engineering and management staff who will assume greater responsibilities and duties. This will eventually translate to a higher level of service to the communities served by the IWW facility.
- Access to loan funds (from both ODA and commercial sources) for the construction of the waterworks system will be easier since the lending institution will deal with a single entity. Lending institutions prefer such a set-up since the loan evaluation and the corresponding loan monitoring is simpler.
- The IWW facility will be more attractive to more reputable private sector corporations, both local and foreign. The province will be able to generate more interest from private sector players who may want to develop waterworks systems on a BOT/BO/BOO basis or jointly with the LGU. The LGU may also tap these same

private sector players to operate and maintain the existing distribution network under any form of contract – service, management, lease, or concession.

The organizational structure of the IWW should contain, at the least, 5 sections – Administration, Finance, Engineering, Operations & Maintenance, and a Meter Reading and Tariff Collection unit. The Administration and Finance departments will handle matters related to human resources development, financial planning and control, and other related concerns. The Engineering section is expected to concentrate on water system planning and design. The Operations & Maintenance unit will ensure that the water system is operating efficiently (e.g. minimal system losses) and that water quality is always satisfactory by conducting strict monitoring activities. Any construction activity, including the installation of water meters, will be contracted out to the private sector so there will be no need for a large pool of both equipment and manpower. Water samples can be tested in existing private or government laboratories if the IWW will not maintain its own laboratory. The Meter Reading and Tariff Collection unit will be in charge of the all-important task of determining individual household consumption and collecting the corresponding tariff due. The actual conduct of these two activities can be contracted out to the private sector through a service contract.

The financial and operating condition of the IWW facility should be reported periodically to the provincial and municipal governments. In addition, the rates that the IWW will charge consumers will be set under the supervision of a regulatory authority and any proposed changes should first be presented and discussed in a public hearing.

The success of the IWW facility depends on the full support of the local governments of both the province and the component municipalities. Such support shall be in the form of strengthening the management and engineering capabilities of the IWW staff. Any loan needed by the IWW should be endorsed, and if possible guaranteed, by the LGUs concerned. Initial capital requirements can even be sourced from these LGUs.

9.4.2 Project Implementation Arrangements

Project Implementation Arrangement and Procedure

Together with the Figures (Figure 9.4.1 and 9.4.2), the following are the project implementation arrangement and procedure for Level I and sanitation from national level to barangay levels, which are designed to encourage active participation of implementers and beneficiaries in undertaking the project.

(1) National Government Level

Project Planning/Launching Workshop as start-up activity will be conducted to introduce and orient the implementers on the Project, define their roles, responsibilities and relationships among them and formulate provincial action plans. The Consultant, upon completion of the training needs assessment and development of appropriate training programs shall conduct capacity enhancement for the WSS-PMO Staff, NGOs, DPWH and DOH representatives. This activity aims to strengthen their competence in technical, managerial, training and community organizing and gender responsiveness. The trained members are responsible to facilitate the organization/reactivation of the PWSU and information dissemination for the provincial officials to secure their support and commitment to the Project. With the assistance from the Consultant, they will enhance the capacity of the PWSU, the MSLT and COs/NGOs in planning, implementing, monitoring and evaluating the project.

(2) Local Government Level

The PWSU shall assist the MSLT in each municipality and conduct information dissemination for the municipal officials to orient them on the project and obtain their support and commitment. With the PWSU assistance, the trained MSLT members shall select priority barangays, in coordination with the municipal development council. The Team will be responsible for facilitating barangay activities such as consultation meetings with barangay officials and community members, barangay survey and spot mapping, formation of BWSA/RWSA, pre-construction conference, and supervision of construction. Skills training will be conducted for the operating body in maintaining and managing the project. They shall also provide continuing assistance and monitor the activities of the beneficiaries and status of the project.

(3) Barangay Level

The barangay officials/development councils shall provide support to the PWSU and MSLT members in conducting activities and mobilizing resources in the barangay. Men and women volunteer shall conduct barangay survey and spot mapping to confirm their demand for the level of service, HH latrines and willingness to operate and maintain the facilities and counterpart. The community members decide on the operating body, tap existing community-based organization or organize a BWSA/RWSA. They have also to agree on the monthly water fees and provide labor and local materials during the construction of facilities. The BOD/Officers, Bookkeeper and Caretaker of the operating body shall attend skills training to develop their competence in performing their jobs. The beneficiaries shall provide information and request assistance from the PWSU/MSLT members, if necessary.

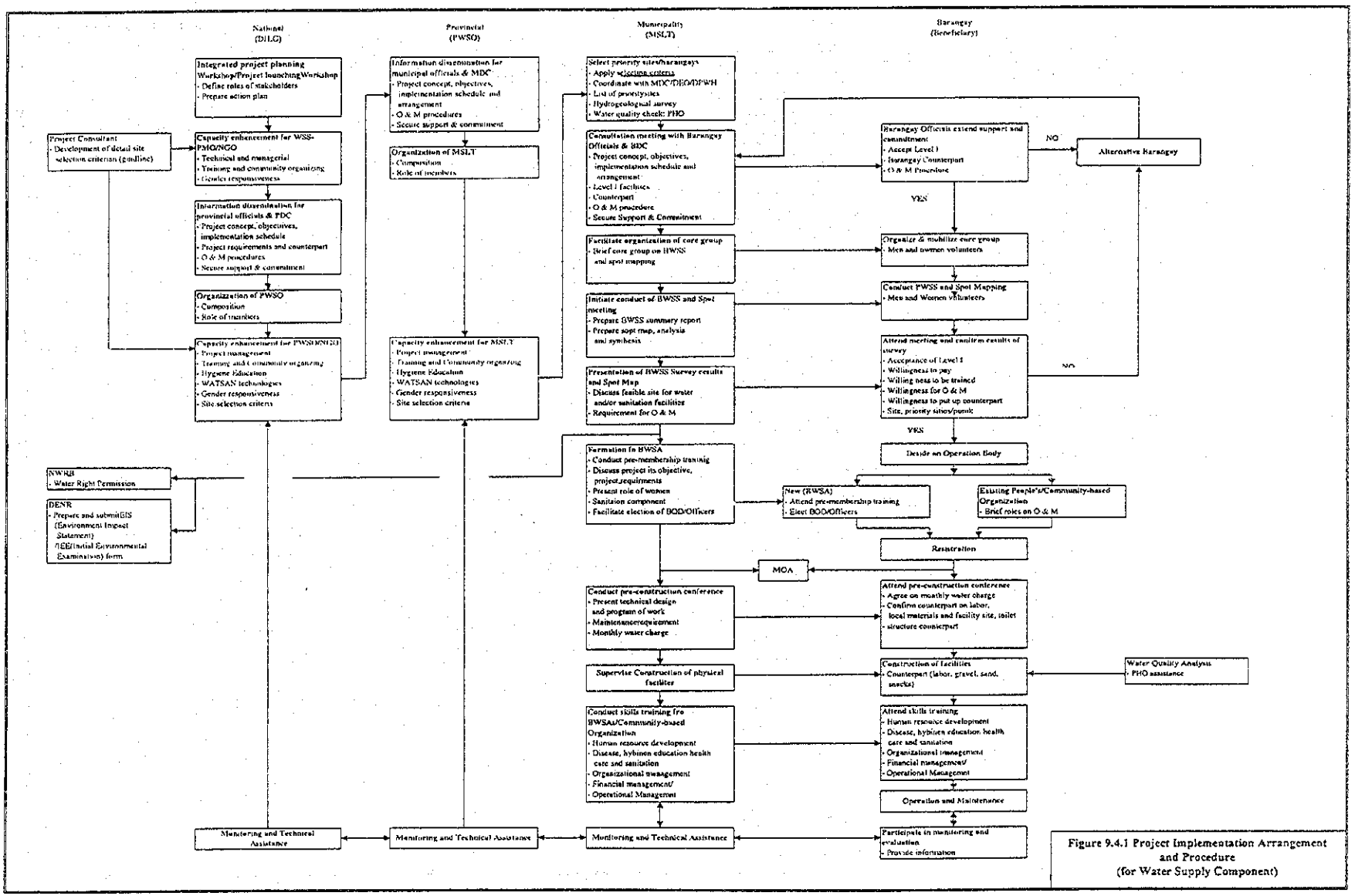
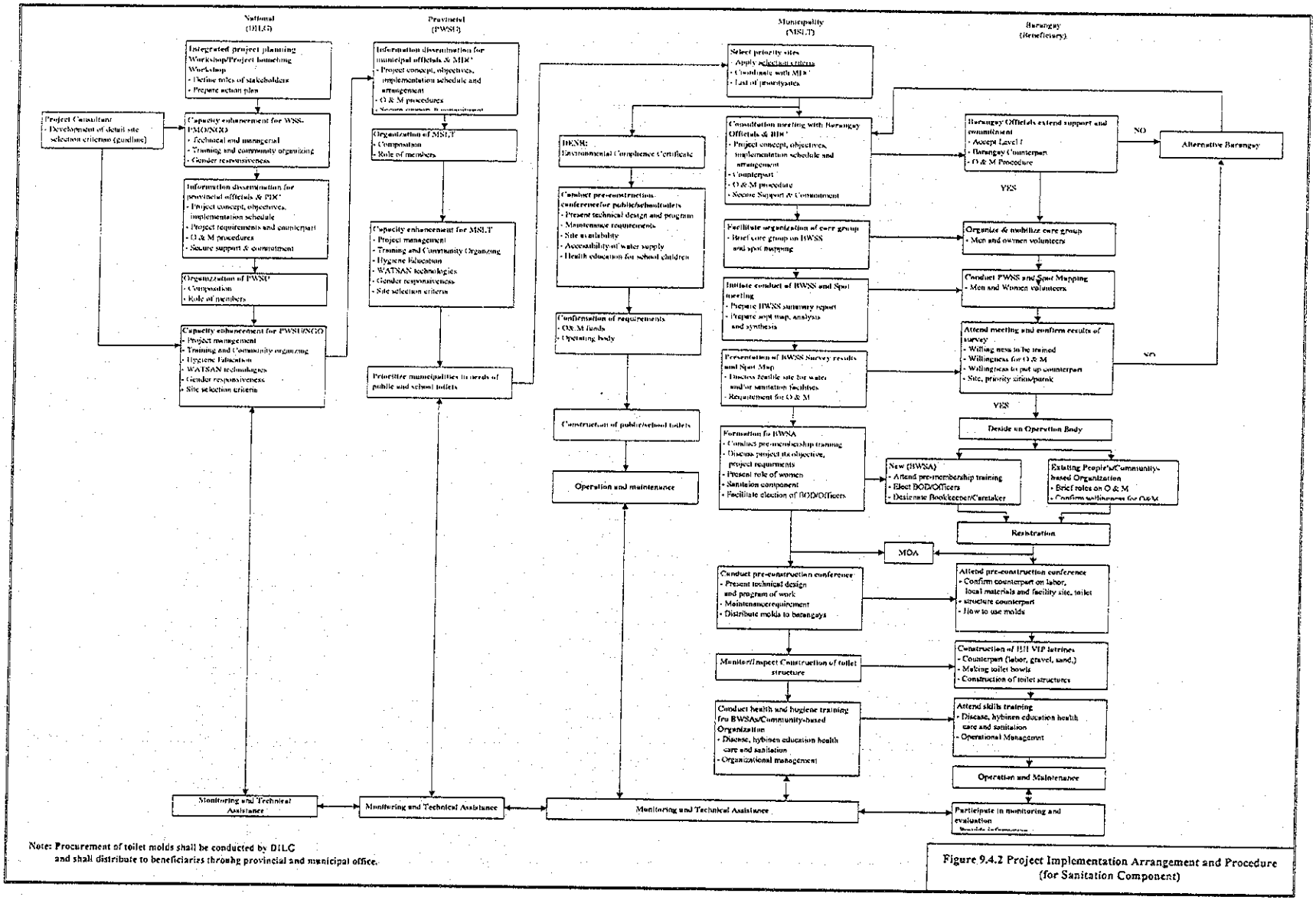


Figure 9.4.1 Project Implementation Arrangement and Procedure (for Water Supply Component)



Note: Procurement of toilet molds shall be conducted by DILG and shall distribute to beneficiaries throughg provincial and municipal office.

Figure 9.4.2 Project Implementation Arrangement and Procedure (for Sanitation Component)

Proposed Site Selection Criteria

Barangay: _____ Municipality: _____ Province: _____

(1). Required Items

Item No.	Description	Score
1.	No alternative water source except ground water	OK or Not
2.	Acceptance of Level I facility	OK or Not

(2) Technical & Socio Economical Requirements 60%

Item No.	Description	Score
1.	Water source availability (quality and quantity)	20%
2.	Incidence of water-borne disease	25%
3.	Accessibility of well drilling machine to water source	15%

(3) Community Interest and Involvement 40%

Item No.	Description	Score
1.	Willingness to assume responsibility for operating and maintenance of the facility/ies	10%
2.	Willingness to be trained on O&M	5%
3.	Willingness to pay for water fees	15%
4.	Willingness to put up counterpart	10%

(4) Total Score

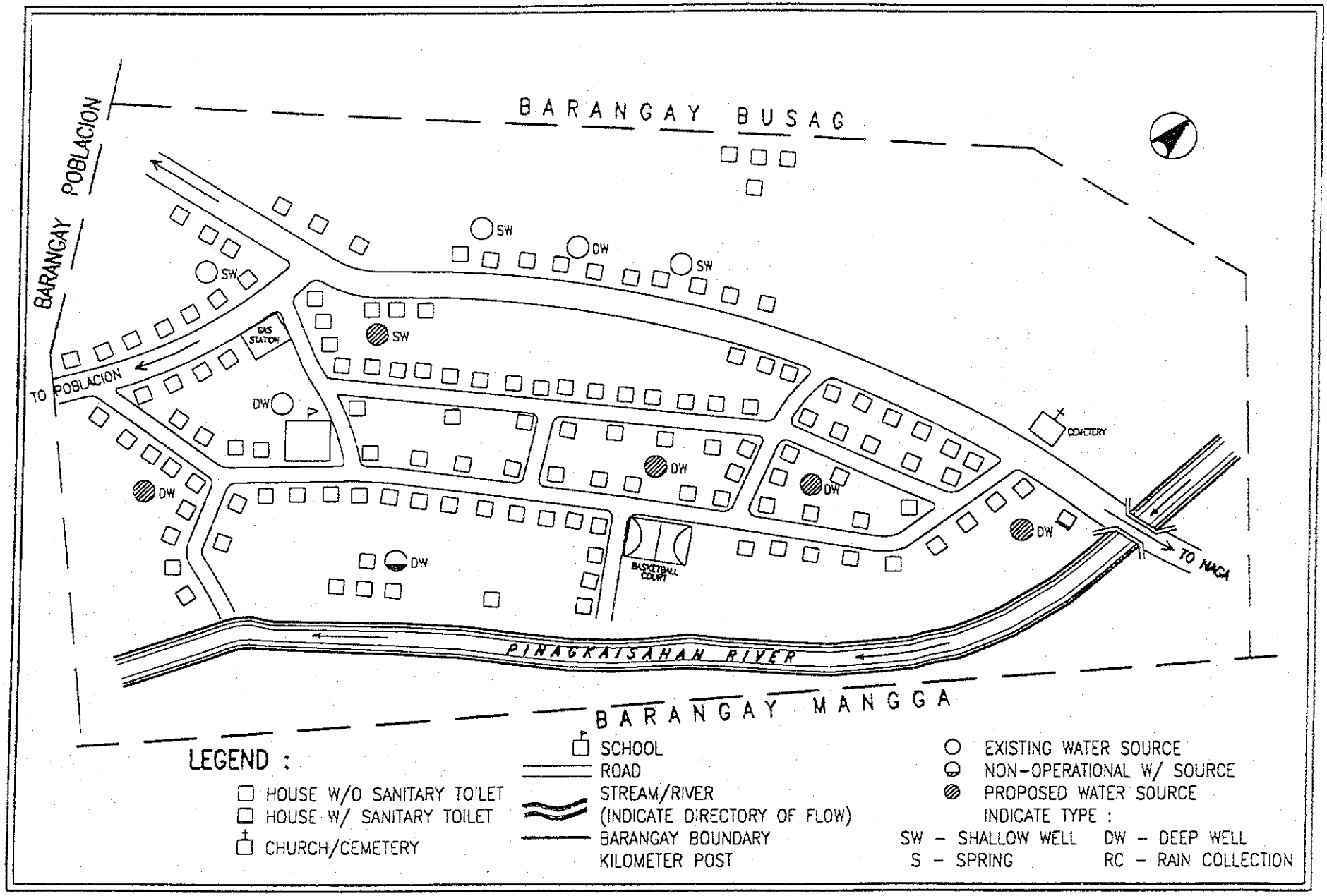
Item No.	Description	Score
(1)	Required items	OK or Not
(2)	Physical requirements	
(3)	Community interest and involvement	
	Total Score	

Proposed Capacity Enhancement Program

Activity/Participants	Course Content
1. Project Planning/Launching Workshop DILG (WSS-PMO) DPWH, DOH,NWRB NEDA,DOF, OECF	1. Project Concept, Objective, Project requirements, Implementation schedule and arrangement 2. Role and responsibility of national government agencies, LGUs (province and municipalities and project beneficiaries) 3. Action Plan by province
2. Capacity Enhancement for WSS-PMO, NGOs DOH and DPWH	1. Project Concept (objectives, components, requirements, implementation arrangement, O&M systems and procedures, etc.) 2. Sector Development and existing Policies 3. Project Planning, Management and Control 4. Team Building Exercises 5. Presentation and Facilitating Skills 6. Methods of Instruction 7. Community Organization/Community Development 8. Barangay Surveys and Spot Mapping 9. Formation of BWSA 10. Health and Hygiene Education 11. Technical Training - Designing and Construction - Water Source Investigation 12. Skills Training for Operating Body - Organizational Management - Financial Management - Operational Management 13. Gender Responsiveness 14. Monitoring and Evaluation
3. Capacity Enhancement for LGUs (PWSU, MSLT, CO/NGOs)	1. Project Concept (objectives, components, requirements, implementation arrangement, O&M systems and procedures, etc) 2. Sector Development and Existing Policies 3. Project Planning, Management and Control 4. Team Building and Experiences 5. Methods of Institution 6. Presentation and Facilitating Skills 7. Community Organization/Community Development 8. Barangay Surveys and Spot Mapping 9. Formation of BWSA 10. Health and Hygiene Education 11. Technical Training - Designing and Construction of WATSAN facilities - Water source investigation 12. Skills training for Operating Body - Organizational Management - Financial Management - Operational Management 13. Gender Responsiveness 14. Monitoring and Evaluation

4. Capacity Enhancement for Operating body (BOD/Officers, Bookkeeper, Caretakers)	1. Project concept (objectives, components, requirements, implementation arrangement, O&M systems and procedures, etc.) 2. Human Resources Development (Team Building, Leadership and Value Formation) 3. Disease, Hygiene, Education, Health Care and Sanitation (Excreta, Liquid and Solid Waste Disposal) 4. Organizational Management (BWSA Management Skills) 5. Operational Management (Operation, repair and maintenance skills) 6. Financial Management (Simplified Bookkeeping Procedures) 7. Greater Participation of Women 8. Monitoring and Evaluation

SPOT MAP


BARANGAY BUSAG
BARANGAY POBLACION
TO POBLACION
GAS STATION
SW
DW
CEMETERY
BASKETBALL COURT
TO NAGA
PINAGKAISAHAN RIVER
BARANGAY MANGGA
LEGEND :
HOUSE W/O SANITARY TOILET
HOUSE W/ SANITARY TOILET
CHURCH/CEMETERY
SCHOOL
ROAD
STREAM/RIVER
(INDICATE DIRECTORY OF FLOW)
BARANGAY BOUNDARY
KILOMETER POST
EXISTING WATER SOURCE
NON-OPERATIONAL W/ SOURCE
PROPOSED WATER SOURCE
INDICATE TYPE :
SW - SHALLOW WELL
DW - DEEP WELL
S - SPRING
RC - RAIN COLLECTION

Instructions for Completing Barangay Map

This sample barangay map is a rough sketch of an entire barangay showing the households, with and without sanitation facilities. The map also shows location, type and condition of existing water facilities and plot location of proposed water sources.

1) The map will be used for BWSA planning.
2) The map can be used as a planning tool to determine best locations for future water sources.
3) The map can also be used to support funding requests for other water and/or sanitation facilities.
4) The map may also be entered into a national data base.

To make a map of your barangay, use the legend at the bottom of the sample to indicate information and landmarks. Follow these procedures when completing the map:

1) Indicate location of highways and roads, including name and number of road if any.
2) Draw approximate boundaries of your barangay and indicate names of adjacent barangays.
3) Indicate direction of north line.
4) Locate public buildings, cemeteries, schools, or other prominent landmarks.
5) Locate natural land features (like rivers, rice field, hills, etc.) and animal pens.
6) Show households by drawing a clear square.
7) Show all sanitation facilities in households by darkening bottom of square.
8) Show water sources location and condition by drawing a clear circle for existing water sources, a half dark circle if source is not in operation and a darkened circle for proposed facility. (Proposed facilities should be at least thirty (30) meters away from the nearest latrine and animal pen).
9) Show water source type like deepwell, shallow well, spring, etc. Following legend on the map.
10) Next to exiting facilities, write the distance in meters to the nearest latrine or animal pen. Proposed facilities should be at least 30 meters away from the nearest latrine and animal pen.
11) Show kilometer posts along the road by drawing a darkened small square.

BWSA Formation

A BWSA (Barangay Waterworks and Sanitation Association) is an organization of water supply and sanitation beneficiaries in a barangay whose objective is to own, operate and maintain the water systems. RA 6716 requires its formation to ensure the provision of adequate, potable and accessible water supply to its members through proper operation and maintenance of the water facilities. The organizational structure of BWSA is quite simple and depends on the number of facilities, need, culture and situation in a particular barangay.

The decision to tap existing community-based organization, merge/consolidate with the existing water association or to form a new association is lodged with the community members. Should the decision is to form a new association as operating body of the facilities, it shall be known as BWSA.

The formation activities of the BWSA are divided into three phases: pre-formation/social preparations, formation and post formation (refer to Proposed Community Management Program attached here for the detailed activities in each phase). During the formation phase, pre-membership training and election of BDO and Officers are held. In this phase, individual member interest and community commitment are manifested through application for membership in the association and signing of Manifesto Resolution (refer to the sample formats attached hereafter).

Proposed Community Management Program

Barangay Activities	Responsible	Duration (Day)	Cost
A. Pre-Formation/Social Preparation Phase			
1. **Consultation with barangay officials/development councils (First Meeting)** The activity aims to obtain the support, commitment and active participation in planning, implementation and managing the project. They are primarily responsible for the identification and prioritization of community needs. The decision on the acceptance of Level I water facility and barangay counterpart shall emanate from them.	CO/NGO; PWSU/MSLT; Barangay Officials Development Council	0.5	
2. **Barangay Water Supply and Sanitation Survey/Spot Map** A core group composed of men and women volunteers will conduct BWSS and spot mapping. The BWSS results provide information on the prospective users willingness to undertake the responsibility for the O&M as well as provision of counterpart. Spot map will identify the most feasible site for Level I facilities, HH latrines, school and public toilets.	CO/NGO; PWSU/MSLT; Men and Women Volunteers	5	P600
3. **Presentation of survey results and spot map (Second Meeting)** The survey results and spot map will be presented to the barangay officials, core group and prospective water users of the facilities. The decisions of the community members will be confirmed in terms of acceptance of Level I water facilities, site of the water facility/ies, willingness to contribute for water fee, operate and maintain the facilities, to be trained and to put up counterpart such as labor, site, and local materials. The results of the survey and spot map are discussed relative to the most feasible site of the water facilities in the barangay as well as the most feasible site of sanitation facilities and houses in need of latrine. The community members will decide among themselves which sitios/puroks will be given priority in the provision of water and sanitation facilities. The community members will also decide on the operating body, whether to tap existing community-based organization, form a new one (BWSA) or merge/consolidate with existing water association.	CO/NGO; PWSU/MSLT; Prospective Users	0.5	P500

B. Formation Phase			
4. Pre-membership Training and election of BOD and Officers (Third Meeting) A core group will be mobilized to conduct house to house campaign to ensure membership attendance in the Pre-membership Training. The training is conducted for prospective water users of the facilities. The project concept is discussed including its objectives, importance and role of BWSA and members. Other modules such as women's role, sanitation, technical aspects, success factors, etc. are discussed during the pre-membership training. The board of Directors is elected by the general membership and the Board elects among themselves the officers of the BWSA. Bookkeeper and Caretaker are designated by the President. With the initiative of the newly elected officers, the organizational documents are accomplished.	CO/NGO; PWSU/MSLT; Prospective Water Users	1	P1,000
5. Meeting of the Board of Directors (Fourth Meeting) The first meeting of the BOD is conducted to discuss in details the duties and responsibilities of the Board /Officers, how to conduct a meeting, formulate administrative and operational policies (collection of water fees, dates and place of regular meetings, etc.) and prepare an action plan. The registration procedures and requirements are also discussed.	CO/NGO; PWSU/MSLT; BOD/Officers	1	P1,000
6. Registration The operating body (existing community organization or BWSA is registered to give it legal personality to enter into a contractual obligation)	BOD/Officers CO/NGO; PWSU/MSLT;		
7. Pre-construction Conference (Fifth Meeting) The technical design and program of work for the construction of water and sanitation facilities are presented to the officers and members of the operating body. Based on the technical design, the financial computation to determine the operation and maintenance requirements of the facilities is discussed. The proposed estimates on monthly water fees are presented and the beneficiaries must agree among themselves the monthly water charge to be collected. The commitment of the beneficiaries to actively participate in the construction and counterpart shall be confirmed.	CO/NGO; PWSU/MSLT; BOD/Officers members	5	P500

8. Construction of Water and Sanitation Facilities The operating body shall ensure that the materials delivered are all accounted for and in accordance with the approved specifications in the technical design. Labor, local materials such as gravel and sand, and snacks are provided as counterpart. The prospective users actively participate during construction and test run of water facilities. Upon completion, the facility is turned-over to the operating body. The President, in behalf of the association, shall receive the water systems from the LGUs. Simple turn-over ceremony is held witnessed by barangay officials/leaders. BOD/officers and members the association and P/MSLT members.	CO/NGO; PWSU/MSLT; BOD/Officers members	10	
9. Skills Training (Sixth Meeting) Skills training aims to build the capacity of project beneficiaries in planning, proper operation, repair and maintenance of water and sanitation facilities. This will also create and awareness among the project beneficiaries on the importance of proper hygiene and the need to main a health environment BOD/officers will be trained on organizational management, bookkeeper on financial management/bookkeeping and caretaker on operational management (operation, maintenance and repair of wells hand-pumps, etc).	CO/NGO; PWSU/MSLT; BOD/Officers Bookkeeper/Caretaker	5	P4,400
10. Health and Hygiene Education Health and hygiene education services shall be continuously provided to the community members focusing on the interdependence of safe water supply and sanitary toilet facilities to achieve overall health and environmental benefits.	MSLT/RHW/BHW	Continuous	P1,800
C. Post Formation Phase			
11. Monitoring, Evaluation and Technical Assistance Periodic monitoring and evaluation will be conducted in partnership between MSLT and beneficiaries. M&E will Start from project implementation. Technical assistance will be provided, if necessary.	PWSU/MSLT; BOD/Officers	Continuous	
TOTAL		23.5	

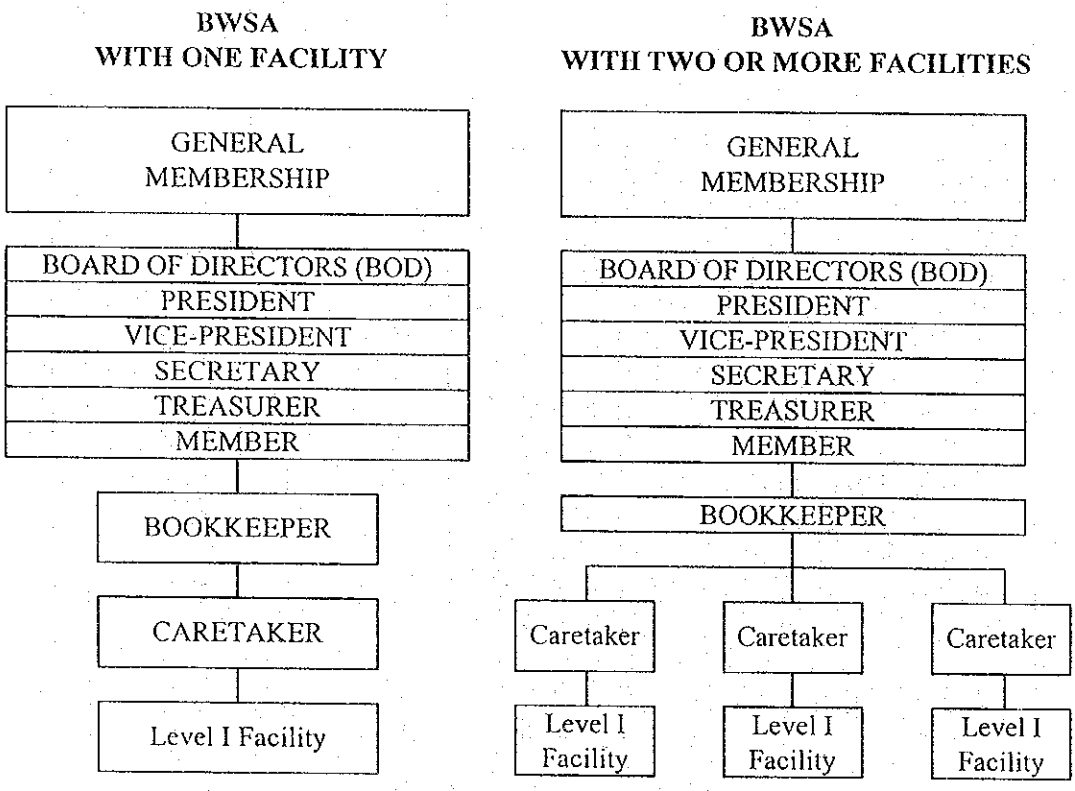


Figure 9.4.3 Organization Structure of BWSA

Sample Manifest

MANIFESTO RESOLUTION

We, household heads (men or women) of Barangay _____, Municipality of _____, Province of _____, seek the assistance of the Provincial Government in putting up a Level I water system in our area.

Conscious of the attendant responsibilities in operating and maintaining the facilities, we constitute ourselves into an association in accordance with R.A. 6716 and hereby declare:

1. That the name of the association shall be _____ Barangay Waterworks and Sanitation Association;

2. That the association is formed primarily to own, operate and maintain the water facilities and provide members with adequate supply of water for domestic use;

3. That the association shall maintain office of Barangay _____;

4. That the following shall maintain office at Barangay _____;

   President _____
   Vice-President _____
   Secretary _____
   Treasurer _____
   Board Member _____

5. That membership shall be open to household heads (men or women) who shall use the water facilities; and

6. That this Resolution may be amended or repealed by majority vote of all members of the association.

To ensure the construction, smooth operation and proper maintenance of the water supply system, we bind ourselves to the following:

1. That we will provide a suitable site for the project;

2. That we will collect monthly contributions for water fees to raise funds for the repair, maintenance and cost recovery of the system;

3. That we will attend meetings and seminars conducted by PWSU/MSLT for the association;

4. That we will provide counterpart needed for the water facilities;

5. That we will exercise the following rights:

   a. Right to vote
   b. Right to hold elective office
   c. Right to be informed of the association's affairs
   d. Right to use the association's facilities

6. That we will hold an annual meeting every _____, to discuss the association's business and to elect officers for one year.

NOW, THEREFORE, we hereunto set our hands this _____ day of _____, 19___.

	PRINTED NAME	SIGNATURE	CTN
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			

_____
(Name of BWSA)

_____
(Barangay, Municpality)

_____
(Province)

The Board of Directors

_____Barangay Waterworks
and Sanitation Association
_____

Date _____

Gentlemen:

I hereby apply for membership in _____ Barangay Waterworks and Sanitation Association of avail of its services of providing potable water for domestic use. I pledge to faithfully obey and comply with the rules and regulations which may be promulgated by the Board of Directors.

I hereby further pledge to:

1. Attend all meetings which will be called by the BWSA Board of Directors/Officers;
2. Attend training/seminars which will be conducted by PWSU/MSLT for BWSA members;
3. Pay monthly water fee contributions for operation, repair, maintenance and cost recovery of the facilities as may be prescribed by the Board;
4. Observe proper utilization of water and preventive maintenance of facilities as required by the Association;
5. Assist in the installation of the water facility by providing labor, local materials and snacks, and
6. Help attain the objectives of the Association.

For information about myself and my household, please refer to my information sheet at the back page.

_____

Signature of Applicant
Over Name in Print

Right Thumbmark

BWSA Member Information Sheet

Name of Prospective Member: _____

Age: _____ Civil Status: _____ Sex: _____

Place of Birth: _____ Date of Birth: _____

Household Members (include household help):

Name	Age	Relation to Member

Present Water Source used by Household (Please Check):

Handpump _____ Artesian Well

Dug Well _____ Spring

Others _____

Present Expenses for Water per Month _____

Distance of Water Source to the House _____ meters

I hereby certify that the information above are true and correct to the best of my knowledge.

_____ _____

Signature Date

Duties and Responsibilities of BOD/Officers and Members

The management of the BWSA rests on the Board of Directors/Officers who are elected by the general membership. The Board elects from among themselves the Officers of the association: President, Vice-President, Treasurer and Secretary. The President designates the Bookkeeper and Caretaker of the BWSA. The duties and responsibilities of the Board/Officers, Bookkeeper and Caretakers are shown below.

(1) Duties and responsibilities of the Board of Directors

- Oversee the activities of the BWSA
- Formulate policies and procedures to carry out the affairs of the BWSA
- Elect the BWSA officers
- Attend all meetings of the Board and the General Assembly
- Attend trainings for BOD/Officers conducted by PWSU/MSLT

(2) Duties and responsibilities of the President

- Conduct/Preside over all meetings of the General Assembly and BOD
- Execute policies relative to the management of the Association and the maintenance of the water facility
- Act as arbitrator in settling conflicts among members regarding BWSA operations
- Represent the Association in any activity involving BWSA operations
- Investigate the current condition of the Association and recommend measures for its improvement or solutions to its problems
- Perform such other duties as may be assigned by the Board of Directors

(3) Duties and responsibilities of the Vice-President

In the event of death, incapacity or refusal of the President to perform higher duties and responsibilities, the Vice-President shall assume the Presidency. He shall perform the duties of the President and such other duties as may be assigned by the BOD

(4) Duties and responsibilities of the Secretary

- Attend all meetings and record the minutes
- Call meetings in the absence of the President and the Vice-President and preside until a temporary presiding officer is chosen
- Prepare and send notice to all Association meetings
- Keep all papers/documents pertinent to the Association
- Perform such other duties as may be assigned by the Board of Directors

(5) Duties and responsibilities of the Treasurer

- Attend all meetings of the Board and the General Assembly
- Take proper custody of all funds and properties of the Association
- Ensure the proper issuance of official receipts for money received by the Association
- Ensure that all expenses are authorized by the BOD and covered by official receipts
- Deposit all funds of the Association in a bank designated by the Board; and
- Produce periodic reports and account reconciliation as prescribed
- Perform such other duties as may be assigned by the Board of Directors

(6) Duties and responsibilities of Bookkeeper

- Keep the financial records of the Association;
- Collect water fee contributions from and issue receipts to user members;
- Remit collected water contributions to the BWSA treasurer;
- Submit a quarterly financial status report to the BOD or as often as required;
- Attend BOD meetings and BWSA training/activities conducted by the PWSU/MSLT
- Perform such other duties as may be assigned by the Board of Directors

(7) Duties and responsibilities of Caretaker

- Remind the members of the proper use of the facility
- Ensure that the water facility is in good operating condition
- Keep the record of the operation and maintenance of the water facility
- Report to the Board of Directors (BOD) any damaged or repair needs of the facility
- Perform minor repairs of the water facility
- Assist in the collection of water be contributions
- Attend meetings of the Board as may be required
- Attend skills training on operation and maintenance conducted by the PWSU/MSLT
- Perform such other duties as may be assigned by the Board of Directors

(8) Duties and responsibilities of Members

- Pay monthly water fee contribution;
- Attend meetings and training activities designed for members;
- Observe rules and regulations and policies approved by the BOD/Officers;
- Remind other water users to use the facility properly;
- Keep the premises of the water facility clean, sanitary and free from excess water which may cause contamination of the water source; and
- Adopt proper health and sanitation practices.

Procedures for BWSA Financial Operations

Bookkeeping records an organization's financial transactions involving the receipt and expenditure of money in an organization. The organization may be a small business or large corporation. It may be government or a non-government organization. Regardless of the size of the organization, it provides a standard method for recording and reporting financial transactions of all kinds. The information obtained from accurate and timely bookkeeping provides timely information on the financial health of the operation.

The information contained herein will enable the BWSA bookkeepers to record financial transactions and prepare financial reports. The manual presents the overall picture, through the General Accounting Plan procedures. A step-by-step guide follows the General Accounting Plan through all the transactions, entries and reports. Each transactions, entry and report has a corresponding form. Each form is presented with explanations on its function and how it relates to the other forms. Instructions are provided line-by-line for a clear understanding.

(1) BWSA Business Operation

The BWSA business operation is simple. Funds are generated through water fees. Although there may be other sources of income, user fees will be the main source of income. Money is spent to maintain the barangay water system and other properties owned by the association. Other funds spent include expenses for administration, parts and supplies.

With only a few sources of income and expenses, financial transaction entries can be made quickly as they occur. If transactions pile up, even a simple operation can become very complicated. It is recommended that all transactions be recorded daily. If this is done regularly, periodic reports can be prepared quickly and accurately.

(2) Maintenance and Custody of Documents and Records

Safekeeping the books of accounts, related records, accounting forms and reports is a major responsibility of the bookkeeper. Accounting forms used as the basis for recording should be arranged and filed separately in sequence. All records and documents should be locked up and access should be limited to authorized BWSA officers and personnel.

The BWSA officers should agree on the reports to be prepared, who received the reports and how frequently. It is recommended that certain records be maintained and certain

reports be complied. It is up to the BWSA officers to determine how often these reports are to be made and if additional reports are necessary. Some larger BWSAs may need monthly reports. Smaller BWSAs may only require quarterly reports.

(3) General Accounting Plan (GAP)

The flow of accounting and reporting is shown in the General Accounting Plan, Figure 1. The GAP will guide users through this section as each procedure is explained. The GAP contains four columns of boxes. Columns are headed:

- Transactions - consisting of cash and non-cash transactions
- Document - for recording different types of financial transactions
- Books - to maintain a record of financial transactions
- Reports - to summarize all financial transactions for given period.

(4) Transaction Defined

The BWSA financial transactions are classified as:

- Cash Transactions
  - Cash-In (cash receipts)
  - Cash Out (cash disbursements)
- Non-Cash Transactions

Money, incoming and outgoing, is classified as cash transactions. The GAP shows two kinds of cash transactions, cash-in (cash receipts) and cash-out (disbursement). There are also non-cash transactions, which document money owed to the BWSA or money that the BWSA owes.

1) Documents for Cash Transactions

The Official Receipt (OR), (See Figure 2) and the Voucher (See Figure 3) are the source documents for cash transactions. ORs and vouchers are called source document because they initiate the bookkeeping process.

Each time a person gives money or its equivalent to the BWSA, an OR is issued to the person. Each time the BWSA pays money to a person, a voucher is completed to show that it is an authorized expenditure. The voucher also records to whom the money was given and for what purpose.

Both the OR and voucher are numbered and all numbered documents should be accounted-for. This means that if an OR or a voucher has been incorrectly filled out,

it must be kept for the record.

a) The OR records all money received BWSA and must specify:
   - The date funds are actually received
   - The name and address of the person paying the money
   - The amount received, both in words and in figures
   - An explanation or purpose of the payment
   - Confirmation of receipt as shown by the authorized collector's signature, usually the bookkeeper
   - The billing form number, if money is for payment of water fees

b) The voucher records all money paid out by the BWSA. Each numbered voucher must specify:
   - The date money is actually paid
   - The name and address of the person receiving the money
   - The total amount of money paid, is words and in figures
   - Details of payment, including invoice number
   - Signature of person authorized to approve payment
   - Confirmation of receipt as shown by the authorized collector's signature, usually the bookkeeper, of the person paying money
   - Signature of person receiving the money and date received

2) Document for Non-Cash Transactions

The sources for recording non-cash transactions are the billing form and the invoices. The billing form documents money that is owed to the BWSA. Invoices or statements of account are documents made by others showing money owed by the BWSA. These are transactions, which do not involve cash collection or payments, and therefore, are not to be recorded in the Cash Record Book.

a) The Billing Form (See Figure 4) is used to notify water consumers of the fees owed to the BWSA covering a certain billing period. Billing forms may be made monthly or quarterly as the Association decides. Billing forms must specify:
   - List of services rendered
   - The name and address of the person being billed
   - Period covered by this bill, beginning and ending dates
   - The total amount of money owed
   - Date of billing

- Date the bill should be paid
- Official signature, usually the bookkeeper

Unaccounted Water Fees are examples of non-cash transactions which should be recorded in the Receivable Book.

b) The Invoice or Statement of Account (See Figure 5) is a document prepared by the seller and presented to the BWSA showing money owed to the seller by the BWSA. Invoices usually contain:

- An invoice number
- The person or company sending the invoice
- The name of the BWSA that owes the money
- Particulars of goods or service provided
- The breakdown of money owed and total amount due
- A payment due date
- Name or signature of the person requesting payment

Unpaid invoices on repair and maintenance and other unpaid expenses, such as honoraria are recorded in the Payable Book.

(5) Book of Accounts

The book of account are basic records used to record all financial transactions. Three books of accounts are maintained as described below.

1) Cash Record Book

The Cash Record Book is used to record all cash incoming and out-going transactions. The OR is recorded in the Credit column (Money Received). The voucher is recorded in the Debit Column (Money Disbursed). All entries are recorded by date, including all cancelled forms, properly notes. After each credit or debit entry, the amount is added or subtracted from the Daily Balance. At the end of the month, the entries form the bases for preparing the Statement of Operation and the Cash Position Statement.

2) Receivable Book

Unaccounted account from the members and outside parties are recorded in the Receivable Book (See Figure 7). This book shows the transaction date, the billing number, the household head, the amount and explanation or remarks about the nature/condition of the account.

3) Payable Book

Unpaid accounts on the expenses incurred by the BWSA such as salaries or wages, repair and maintenance and other expenses are recorded in the Payable Book (See Figure 8). This book shows the transaction date, the payee, the nature/explanation of the unpaid account and the amount.

(6) Financial Reports

The BWSA reports are usually prepared monthly or quarterly. The financial reports are prepared to inform the BWSA financial members of the Association's financial status. In preparing the BWSA financial reports, the bookkeeper reviews all source documents supporting the transaction to countercheck the amount appearing in the books. The recorded transactions should be summarized and arranged chronologically to produce a report easily understood by BWSA officers and members.

1) Statement of Operations

The statement of Operations (See Figure 9) is prepared monthly to record the income and expenses incurred by the Association in its operation during the period. The statement shows the revenues earned, the operating expenses incurred and the income or loss as a result of operation.

2) Cash Position Statement

The sources of information when preparing the Cash Position Statement (See Figure 10) are the cash record books and the statement of operations. The report is prepared to determine if the Association can cover its operating expenses. This statement shows the beginning cash balance, the cash receipts for the period, the cash disbursement, and the cash balance ending for the period.

3) Financial Summary Report (Annual Report)

The financial Summary Report (See Figure 11) is prepared to summarize the periodic reports prepared during the year and the supporting schedules.

(7) Bookkeeping Procedures

A step-by-step review of all BWSA transactions can be accomplished by following the accounting entries and reports.

GENERAL ACCOUNTING PLAN (GAP)
FOR BWSA TRANSACTIONS

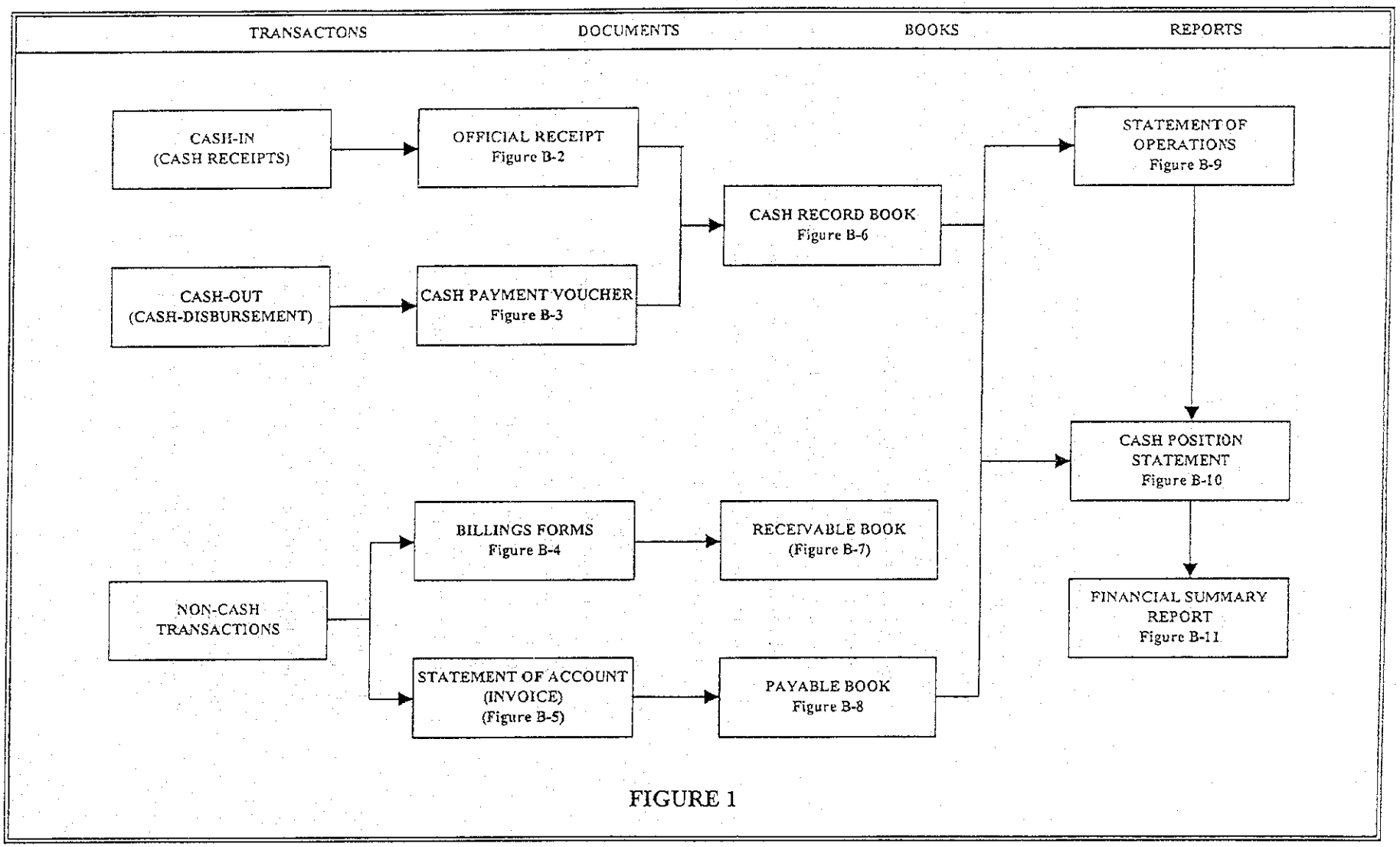


FIGURE 1

OFFICIAL RECEIPT
BWSA _____

OR. NO. _____
Date: _____

Received from _____

the sum of _____ (₱ _____)

in payment of _____

Billing Form # _____ (For payment of water fees only).

_____
Treasurer/Collector
(Bookkeeper)

Note: Print Name Below Signature

(IN TRIPLICATE)

Complete Official Receipt in Triplicate

Official Receipt must be issued for all payments received by the Bookkeeper.

FIGURE 2

CASH PAYMENT VOUCHER _____

CPV No. _____
Date: _____

Paid to : _____

Address : _____

In the sum of : _____ (₱ _____)

PARTICULARS	AMOUNT

Approved By:

_____

Received from _____

The amount of _____

As payment for the above described.

Received By

Date Received _____

Note: Print Name Below Signature

VOUCHER
(IN TRIPLICATE)

Each time a disbursement is made, a cash payment voucher must be prepared to support such disbursement.

FIGURE 3

Name of BWSA

Barangay, Municipality

Province

BILLING FOM

for

WATER CONSUMPTION

Name of Member _____

Address: _____

No. _____

PERIOD COVERED					AMOUNT
FROM		TO			
MONTH	DAY	MONTH	DAY	YEAR	

Date of Billing: _____ Please pay On or Before: _____

Please pay your bill at the Office on or before the date shown above.

_____

BWSA Treasurer

Note: Print Name Below Signature

Billing must be prepared and sent to all BWSA members for their monthly dues as a member of their monthly obligation to the Association.

FIGURE 4

Date: _____

Invoice # _____

INVOICE

_____

Sold to: _____

ITEM	NO.	UNIT PRICE	PRICE
TOTAL			₱

Received By: _____
(Print Name below Signature)

FIGURE 5

BWSA _____

CASH RECORD BOOK
COLLECTION/DISBURSEMENT

Month: _____ Year: _____

DATE	PARTICULARS	CREDIT (Money Received)	DEBIT (Money Disbursed)	DAILY BALANCE

This book records all cash transactions (collection/disbursements) made by the BWSA, and calculates a daily balance.

FIGURE 6

Name of BWSA

Barangay, Municipality

Province

RECEIVABLE BOOK

DATE	BILLING FORM NO.	HOUSEHOLD HEAD (Family Name)	AMOUNT DUE	REMARKS

This form records all accounts due to the Association

FIGURE 7

BWSA _____

_____

Barangay, Municipality

_____

Province

PAYABLE BOOK

DATE	INVOICE NO. AND DATE	CREDITOR	EXPLANATION	AMOUNT DUE	VOUCHER NO. DATE PAI

This form records all incoming invoices that have not been paid by the Association.

FIGURE 8

_____
Name of BWSA

_____
Barangay, Municipality

_____
Province

STATEMENT OF OPERATIONS
For the Month _____, _____

Revenues:

Water Fees	_____	₱	_____
Others (Specify)	_____		_____
Total Revenues	_____	₱	_____

Operating Expenses:

Salaries	_____	₱	_____
Supplies	_____		_____
Repair and Maintenance	_____		_____
Others (Specify)	_____		_____
Total Operating Expenses	_____	₱	_____
Net Income/Loss		₱	_____

Prepared By:

_____

Date Prepared:

_____

Certified true and correct:

_____
BWSA Treasurer

Date Certified:

_____

Note: Print Name below signature

At the end of each month, the bookkeeper prepares the Statement of Operations for the previous month.

FIGURE 9

_____
Name of BWSA

_____
Barangay, Municipality

_____
Province

CASH POSITION STATEMENT
For the Month _____, _____

Revenues:			
	Water Fees	₱	
	Contribution		
	Others (Specify)		
	Total Revenues	₱	
Less: Operating Expenses:			
	Salaries	₱	
	Supplies		
	Repair and Maintenance		
	Others (Specify)		
	Total Operating Expenses	₱	
Cash Balance, During the Period		₱	
Add: Cash Balance, Beginning		₱	
Cash Balance, Ending		₱	

Prepared By:

Date Prepared:

_____
BWSA Bookkeeper

Note: Print Name below signature

Cash Position Statement summarizes the Association's transactions for the month ended. The Bookkeeper fills up this form every end of the month.

FIGURE 10

_____
Name of BWSA

_____
Barangay, Municipality

_____
Province

FINANCIAL SUMMARY REPORT
Year End _____

I. Financial Results

1. Total Revenues	_____	₱	_____
2. Total Expenditures	_____	₱	_____
3. Total Cash on Hand	_____	₱	_____
4. Total Cash in Bank	_____	₱	_____
5. Total Accounts Receivable	_____	₱	_____
6. Total Accounts Payable	_____	₱	_____

II. Findings/Recommendations:

_____
_____
_____
_____
_____
_____

Prepared By:

_____
BWSA Bookkeeper

Date Prepared:

_____

Note: Print Name below signature

Financial summary report is made after a year of operation. It provides information to show whether the association profited or not.

FIGURE 11

Table 9.4.1 Format for Level I Project Data

Form _____

PROPOSED LEVEL I PROJECT DATA

Notice : This form shall be accomplished upon instruction on PST/PWSD

LOCATION

1.1 Barangay/Sitio

1.3 Province

1.2 Municipality

1.4 Region

POP. DATA

2.1 Total Community/Barangay Population

2.3 Proposed Population to be Served

2.2 Total Number of Households

2.4 Proposed Number of Households to be Served

INFORMATION ON THE WELL SITE

3.1 Ownership :

☐ Public ☐ Private

3.2 Description :

3.3 Location:

3.4 Donor (If Private Lot):

(Use separate sheets if necessary)

4.1 Type of Point Source:

☐ Deep Well

☐ Shallow Well

☐ Spring

☐ Others (dug well pond)

4.2 Ownership :

☐ Public

☐ Private

4.3 For wells :

Casing diameter_____ in. or_____m.

Casing depth _____ ft. or_____m.

Water level Well _____ ft. or_____m.

Well capacity/yield _____ gpm. or_____m.

4.4 For Springs : Capacity/yield _____ gpm. or_____lps.

Approx. elevation above or below

Service Area _____ ft. or _____ m

Location

☐ Inside of service area

☐ Outside of service area

Approximate distance from center

of service area _____km.

Prepared by :

_____ _____

Municipal Liason Staff Date

Table 9.4.2 Format for Level II Feasibility Study

Form

FEASIBILITY STUDY (Level II) Notice : This form shall be accomplished upon instruction of the PST/PWSO.	Barangay	Municipality
	Province	Region

PROJECT SUMMARY

POPULATION DATA

1. Present Population	2. Design Population	3. Number of Households
		6. Number of Faucets

TECHNICAL DATA

4. Type of Source ☐ Spring ☐ Well ☐ Surface Water	5. Type of System ☐ Gravity ☐ Pumped	
	7. Pump Horsepower _____ HP	8. Pumping Time _____ Hours per Day
9. Total Average Daily Demand _____ Liters	10. Storage Tank Capacity _____ Liters	11. Pump Discharge Capacity _____ LPS

FINANCIAL DATA

12. Total System Cost ₱ _____	13. Maximum Loan Amount ₱ _____	14. Interest Rate _____
15. Local Equity ₱ _____	16. Funding Cost per Household ₱ _____	17. Repayment Period (months) _____

18. Type of Local Equity
☐ Cash ☐ Labor ☐ Materials ☐ Others, _____

19. Total Monthly Expense ₱ _____	20. Monthly Fee Per Household ₱ _____

ANNEXES

☐ 1 Survey Form	☐ 5 Design of Pipe Lines	☐ 9A Fittings Schedule	☐ 12 Financial Analysis
☐ 2 Map of the Project Area	☐ 6 Design of Reservoir	(G.I. Pipes)	☐ 13 Availability of Local
☐ 3 Design Criteria and	and Pump	☐ 9B Fittings Schedule	Equity
Basic Design Data	☐ 7 Detailed Design Plan	☐ 10 Bill of Materials	
☐ 4 Schematic Diagram of	☐ 8 Pipes Schedule	☐ 11 Cost Summary	
the System			

Prepared by :	Endorsed by :
_____ _____ Municipal Liason Staff Date	_____ _____ PST/PWSO Coordinator Date

Annex 1

SURVEY FORM
_____ Rural Water Supply Project

A. LOCATION

Barangay : _____ Province : _____
Municipality : _____ Region Number : _____

B. GENERAL INFORMATION

1. Population _____
2. Number of households _____
3. Distance from poblacion _____ kilometers
4. Availability of electricity Yes ☐ No ☐
5. Distance form electric line _____ kilometers
6. Power cost per kilowatt hour ₱ _____
7. Availability of public transportation _____
8. Main livelihood of residents
   - ☐ Land transport
   - ☐ Water transport
   - ☐ Farming
   - ☐ Industry ☐ Others
   - ☐ Fishing

C. TECHNICAL INFORMATION

1. Are there reliable sources of potable water?
   ☐ Yes ☐ No

a) For Wells
   Well capacity : _____ lps
   Casing diameter : _____
   Casing depth : _____
   Water level from top of well : _____
   Location : ☐ Within service area
   ☐ Outside _____M. from service area

b) For Springs
   Average dry season flow : _____ ☐ GPM ☐ LPS
   Relative elevation of spring
   a. _____ ☐ ft. ☐ m. above service area
   b. _____ ☐ ft. ☐ m. below service area
   Location : ☐ Within service area
   ☐ Outside _____ m. from service area

2. Are there water supply system materials and equipment (pumps, pipes, fittings) which can be donated for this project from other source?

☐ Yes ☐ No

For pumps : Type : _____ Power : _____ HP

For pipes : ☐ Galvanized Iron ☐ PVC
☐ Others, specify _____

3. Is there an existing water tank that can be used? ☐ Yes ☐ No

Type : ☐ Steel ☐ Reinforced Concrete

Capacity : _____ ☐ Gallons ☐ Cubic Meters

Location: (Please indicate in the map of the project area)

Relative elevation with respect to service area ____ ☐ ft. ____ ☐ m.

4. Are there other sites where water tanks may be erected? ☐ Yes ☐ No

Location : (please indicate in the map of the project area)

Relative elevation with respect to service area ____ ☐ ft. ____ ☐ m.

5. Does the barrio have skilled personnel? ☐ Yes ☐ No

If yes, how many? Estimated Number

Plumbers : _____
Masons : _____
Carpenters : _____
Others : _____

If no, are there competent contractors near the area?

Plumbing contractor : ☐ Yes ☐ No
Tank fabricator : ☐ Yes ☐ No

Are there suppliers of materials (pumps, pipes, fittings) in the municipality?

☐ Yes ☐ No

D. FINANCIAL INFORMATION

1. What can the barangay provide as local equity?

Cash : ₱ _____

Labor : _____ man-days

Materials : Sand : _____ cu. m.

Gravel : _____ cu. m.

Cement : _____ bags

Others, specify : _____

2. Have the people been informed of the current financing policies for Level II systems, particularly the monthly fees required to repay loan & provide for O & M?

☐ Yes ☐ No

3. How much are the people willing to pay per household per month as a water fee?

Below ₱ 6.00 ☐ ₱ 10.00 - 15.00 ☐ Others ☐

₱ 6.00 - 10.00 ☐ 15.00 - 20.00 ☐ Specify : _____

4. Average income per household ₱ _____ per month

E. INSTITUTIONAL INFORMATION

1. Is there an existing association who is ready, willing and able to manage the system

☐ Yes ☐ No

If yes, please specify. _____

2. Are people willing to join a water association to operate and manage a water supply system? ☐ Yes ☐ No

3. How many households are willing to be members? _____ households.

4. Name at least three (3) leaders of the community who can act as officers of the association, if required.

Name	Address
_____	_____
_____	_____
_____	_____
_____	_____

F. MAP OF THE AREA

Please attach map of the area proposed to be served. Indicate location of houses, buildings and other structures to be served including roads, the water source(s) and possible locations of storage tanks. The map should preferably be drawn to scale.

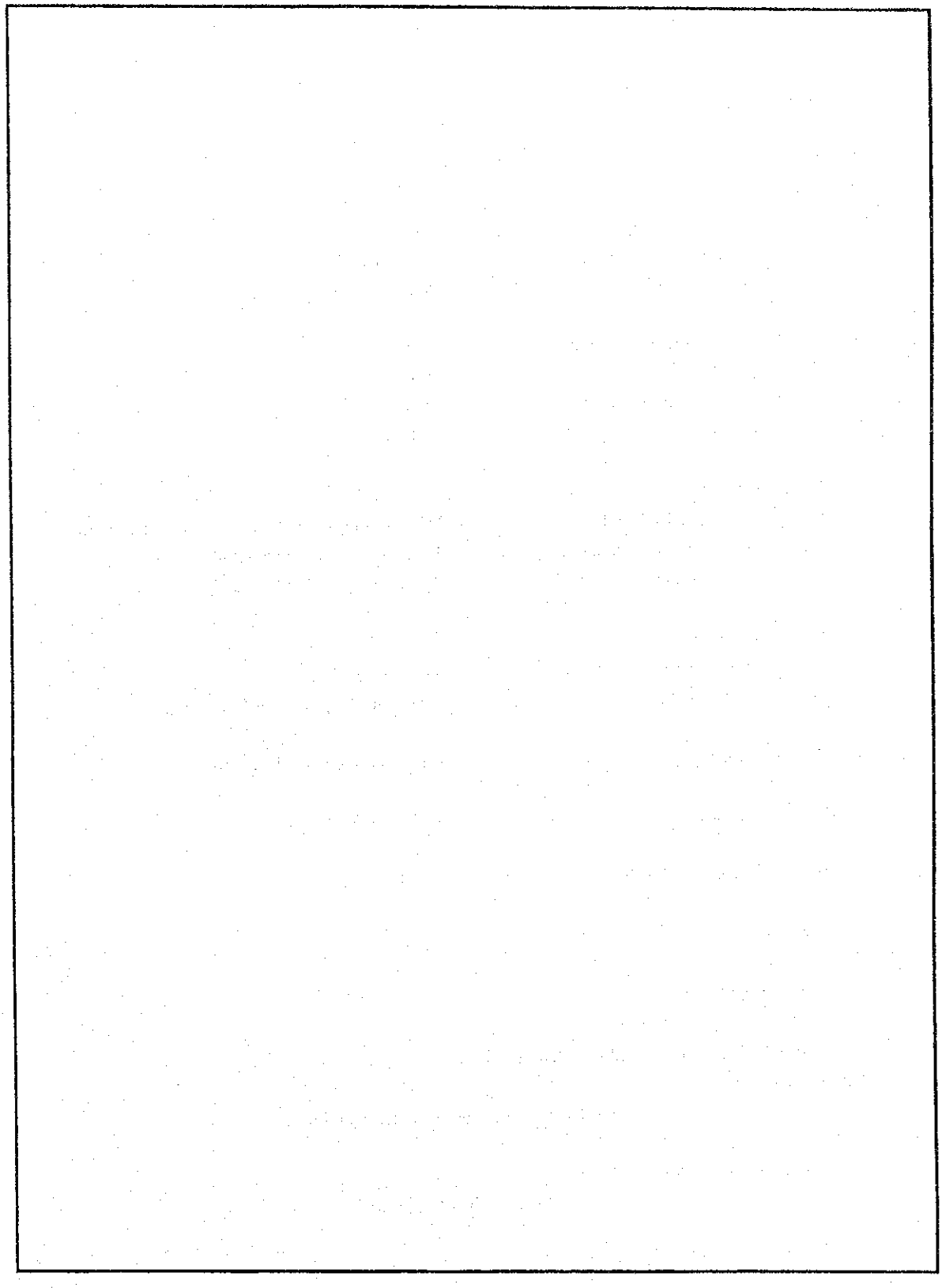
Important : If map cannot be drawn to scale, indicate distance measurements between important points along roads, or possible routes of distribution pipes with households properly indicated. For rolling terrain, indicate elevation differences between measurement points.

G. REMARKS :

Annex 2

MAP OF THE PROJECT AREA

_____ Rural Water Supply Project



Annex 3

DESIGN CRITERIA AND BASIC DESIGN DATA

_____ Rural Water Supply Project

I. Design Criteria

1. Design Period : 5 years
2. Population
   - Annual Growth : 3%
   - Average Household Size : 6 persons/HH
   - Design Population : Present Population x 1.16
3. Per Capita Water Consumption
   - Level II : 60 lpcd
   - Level II with garden : 75 lpcd
   - Level III : 100 lpcd
4. Water Demand
   - Average Day Demand : Design Population X Per Capita Consumption
   - Maximum Day Demand : 1.3 X Average Day Demand
   - Maximum Hour Demand : 2.5 X Average Day Demand
5. Pump Operation
   - Pumping Hours : 8 -15 hours
   - Pumping Rate : Maximum Day Demand/PumpingHrs. = _____
6. Storage Capacity : 1/4 of Average Day Demand
7. System Pressure : 5 - 10 psi at faucet
8. Households Served Per Faucet : 4 - 6 HH

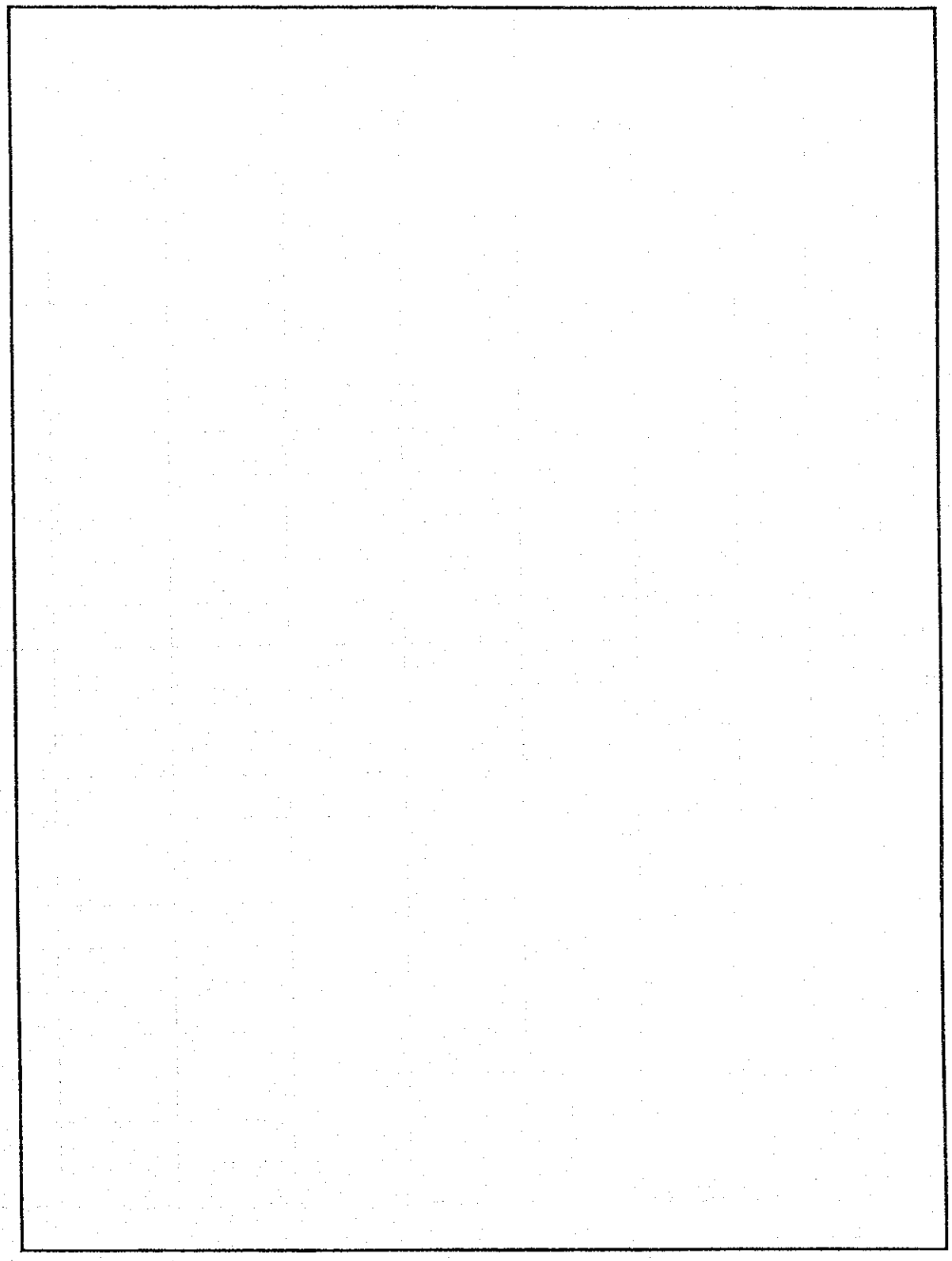
II. Basic Design Data

1. Present Population : _____
2. Design Population (Present Population X 1.16) : _____
3. Average Day Demand: _____ X _____ : _____
   (Per Capita Consumption) (Design Pop.)
4. Maximum Day Demand: 1.3 X _____ : _____
   (Average Day Demand)

Annex 4

SCHEMATIC DIAGRAM OF THE SYSTEM

_____ Rural Water Supply Project



Annex 5

DESIGN OF PIPE LINES

_____ Rural Water Supply Project

SECTION (1)	NODES From (2)	NODES To (3)	SECTION LENGTH(M) (4)	HOUSEHOLD SERVED (5)	PEAKFLOW (LPS) (6)	PIPE DIA (MM) (7)	HEAD LOSS PER 100M (8)	ACTUAL HEADLOSS (9)	REMARK (10)

Annex 6

DESIGN OF RESERVOIR AND PUMP

_____ Rural Water Supply Project

A. DESIGN

1. Determine Capacity of Reservoir, (C_r)

   C_r = 1/4 x Average Day Demand

   C_r = 1/4 x D_a (LPD)

   C_r = _____ liters

2. Determine Minimum Water Elevation, (WL_m)

   WL_m = total head loss + Minimum Pressure in Main (Meters)

   For Barangay System, Min. Pressure = 5 psi (use 3M.)

   For Poblacion System, Min. Pressure = 10 psi (use 7M.)

   WL_m = _____ M.

   Note : The bottom of the storage tank should be higher than this elevation.

B. DESIGN OF PUMP

1. Determine Pump Capacity, Q_p (LPS)

   Q_p = Max. Day Demand (LPD)/ Operating Time (Sec.)

   Q_p = 78 P_d/T where: P_d = Design Population

   T = Operating Time in Seconds

   Q_p = _____ LPS

2. Calculate Total Dynamic Head, TDH (Meters)

   TDH = Depth of Pumping Level + by Maximum Reservoir Elevation + friction loss

   TDH = _____ m

3. Calculate Brake Horsepower Requirement :

$$\text{Brake Horsepower} = \frac{Q_p \times TDH}{75 \times \text{Efficiency}}$$

Brake Horsepower = _____ Hp

Where :

Efficiency for Centrifugal Pump, 30-60 %

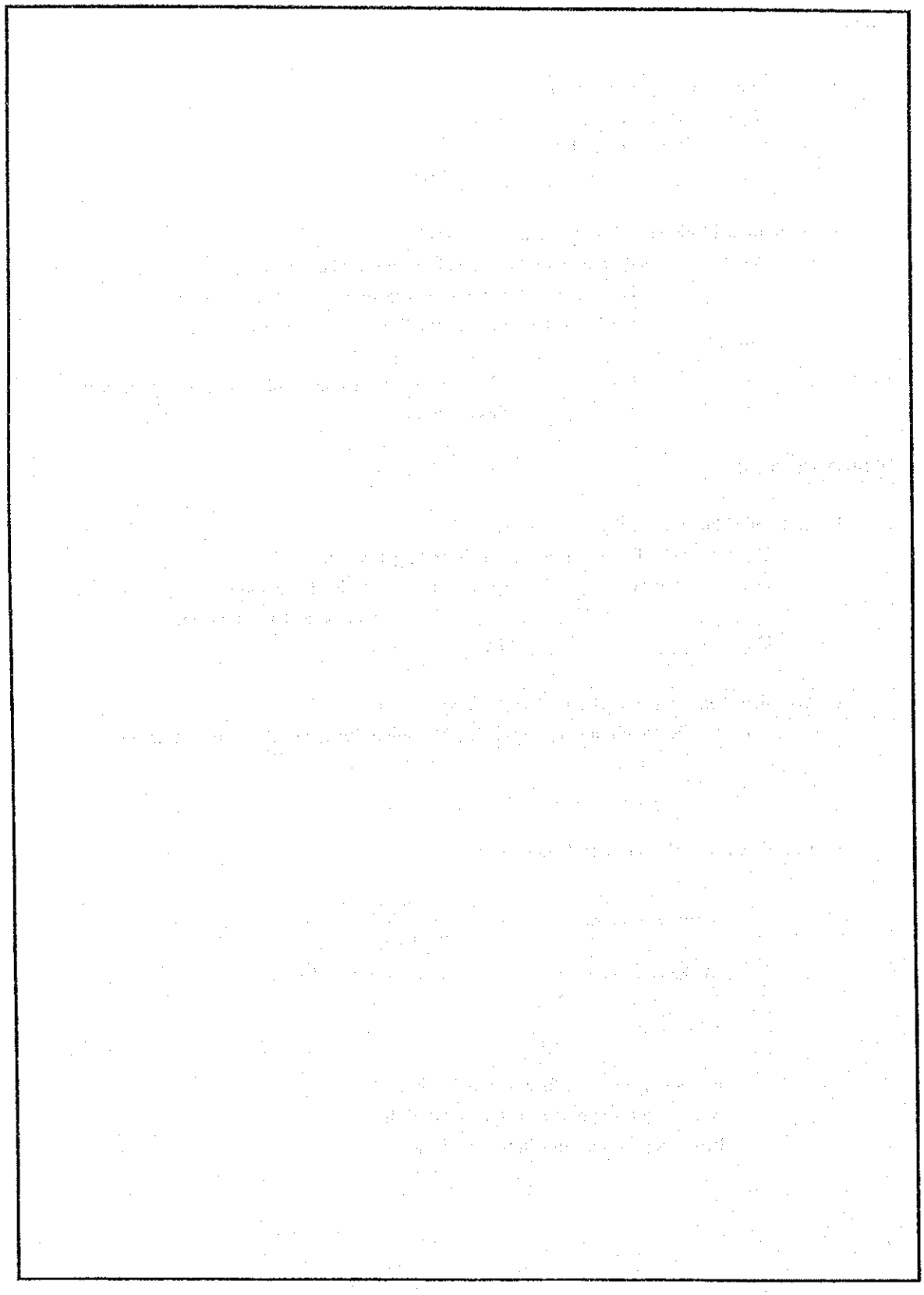
Efficiency for Submersible Pump, 50-60 %

Efficiency for Jetmatic Pump, 20-30 %

Annex 7

DETAILED DESIGN PLAN

_____ Rural Water Supply Project



Annex 8

PIPES SCHEDULE

_____ Rural Water Supply Project

PIPE DIAMETER (1) mm	SECTION LENGTH (2) m	REQUIRED PIPES (3)	ACTUAL NO. OF PIPES (4)	ADDITIONAL PIPES (5)

Annex 9A

FITTINGS SCHEDULE (G.I. PIPES)

_____ Rural Water Supply Project

NODES / SECT LENGTH	COUPLING Qty.	COUPLING Size	UNION PATENTE Qty.	TEE STD.	TEE REDUCER	BUSHING REDUCER	ELBOW STD / ELBOW REDUCER	COUPLING REDUCER	FAUCET	NIPPLE	VALVES

Annex 9B

FITTINGS SCHEDULE (PVC PIPES)

_____ Rural Water Supply Project

NODES / SECT LENGTH	SOCKET		STD. / ELBOW REDUCER	STD. / TEE REDUCER	SOCKET ADAPTOR	SOCKET REDUCER	G. I. FITTINGS			OTHERS
	Qty.	Size					VALVES	FAUCET	ELBOW	

Annex 10

BILL OF MATERIALS

_____ Rural Water Supply Project

QUANTITY	UNIT	DESCRIPTION	UNIT COST	TOTAL COST

Annex 11

COST SUMMARY

_____ Rural Water Supply Project

I. ESTIMATED COST OF THE SYSTEM

1. a) Cost of Pipes	₱ _____	
b) Cost of Fittings	_____	
Total Cost of Pipes and Fittings		₱ _____
2. Cost of Reservoir		_____
3. Cost of Pump		_____
4. Labor Cost		_____
a) 10% of Pipes & Fittings (For G.I. Pipes)		
b) 25% of Pipes & Fittings (For PVC Pipes)		
5. Cost of Freight and Handling		_____
6. Contingencies 5% (Pipes & Fittings - Labor)		_____
Total Cost of the System		₱ _____

For gravity system, omit cost of pump.

II. FINANCIAL DATA

1. Total Cost of the System	₱ _____
2. Local Equity	_____
3. Amount of Loan	_____

Annex 12

FINANCIAL ANALYSIS

_____ Rural Water Supply Project

A. RELEVANT DATA

1. Pumping Hours : _____ hrs.
2. Pump Horsepower : _____ HP
3. Cost/KWH : ₱_____
4. Pump Cost : ₱_____
5. Amount of Loan : ₱_____
6. Loan Terms : _____ % (interest per annum)
   : _____ years (Repayment Period)
7. Number of Households : _____

B. COMPUTATION OF MONTHLY EXPENSES (Omit non-applicable items)

1. Operations
   a. Salaries _____ x _____ = P _____
   b. Office Supplies _____ x _____ = P _____
   c. Power _____ x _____ = P _____
   d. Chemical _____ x _____ = P _____
   e. Miscellaneous _____ x _____ = P _____

2. Asset Replacement
   a. Pump _____ / _____ (Life (mos.)) = P _____
   b. Pipelines _____ / _____ (Life (mos.)) = P _____
   c. Tank _____ / _____ (Life (mos.)) = P _____
   d. Others _____ / _____ (Life (mos.)) = P _____

3. Amortization _____ (CRF) x _____ (Loan Amt.) = P _____

4. Maintenance (2% of Capital Equipt.costs annually)
   .02 X _____ /12 = P _____

6. Total Monthly Expenses = P _____

C. COMPUTATION OF WATER FEE

Monthly Water Fee Per Household :

_____ (Total Monthly Expenses) / _____ (No. of HH) = P _____

Annex 13

AVAILABILITY OF LOCAL EQUITY

Item	Amount
I. Cash	₱ _____

II. Labor

Type of Labor	No. of Workers	No. of Days	Rate Per Day	
_____	_____	_____	_____	
_____	_____	_____	_____	
_____	_____	_____	_____	
_____	_____	_____	_____	
_____	_____	_____	_____	_____

III. Materials

Type of Materials	Quantity	Unit Cost	
_____	_____	_____	
_____	_____	_____	
_____	_____	_____	
_____	_____	_____	
_____	_____	_____	_____

TOTAL ₱ _____

I certify that the items listed above represent the local share of the project cost. _____ _____ Association President Date	Noted by : _____ _____ Municipal Sector Liason Date

Responsibilities and Qualifications of a CO/CD Worker

1. Tasks of a CD/CO Worker

(a) As Facilitator

- Enhances individual and group strengths and helps minimize weaknesses and conflicts;
- Heightens community unity; and,
- Assists individuals and groups to respond to common interests.

(b) As Trainor and Educator

- Discerns educational needs of people;
- Helps in consciousness-raising to enable group or individual capability development;
- Assists leaders in developing new leaders;
- Continually dialogues with people; and,
- Helps develop self-determination among leaders and members.

(c) As Advocate

- Helps analyze and articulate critical issues;
- Assists others to understand and reflect upon these issues; and
- Evokes and provokes relevant discussion and actions.

(d) As Researcher

- Conducts social analysis
- Engages in participatory research with the people as partners;
- Helps create research designs for people's use and interest; and
- Integrates with the people to understand social phenomenon from the people's viewpoint.

(e) As Planner

- Conducts initial analysis of area resources and potentials;
- Assists local group's planning, strategizing and creative action; and
- Helps systematize people's actions to attain desired goals.

(f) As Catalyst

- Initiates discussions and actions regarding critical issues; and
- Monitors and nurtures growth of individuals and groups to facilitate long-term social change for people's welfare.

2. Personal characteristics of a CD/CO Worker

a) Must possess an innate and genuine love for people, which enables them to share with the people in their desire for change;

b) Must have a commitment to help people in the desire to participate in changing society. The commitment sustains them and enables them to persevere.

c) Must have a basic trust in the people, be willing to learn from them, and have faith with them.

d) Must be adaptable, flexible, able to adjust to people and circumstances and able to move with people when and where they decide to move.

e) Must be ready to learn and unlearn, be open to self-assessment and accept criticism; be able to drop pre-determined notions and stereotypes; and swallow their pride while remaining resourceful in the process.

f) Must have patience with people but not with situations so that they can keep the people moving. The people must not be pushed. A CO must keep pace with them.

g) Must be able to analyze problems, communicate with the people in their own language and work at the people's level. Only the can they start a process of critical awareness.

h) Must be able to follow the growth of critical awareness by generating with the people appropriate action towards change and transformation of the community.

3. Lifestyle and Method of Work of CD/CO Worker

(a) In Method of Work

- People-oriented, i.e. serving the interest of the people by not insisting on own project proposals.
- Able to work informally among people, and not be overburdened with committee structures.
- Able to protect the community from outside intervention such as inappropriate projects.

(b) In Lifestyle

- Humble, simple and immerse oneself in the life of the community;
- Free of self-interest, which makes commitment unclear and dubious, and expect to reward;
- Able to identify with the people, see themselves as different, and be aware of the limitations of such;
- Open to be transformed by identification with, and involvement in the community;
- Able to develop the internal strength to accept frustrations and loneliness at times.

4. The CD/CO Worker: A Catalyst, Missionary and Visionary

a) He/she works with people, not for them.
b) He/she considers people as intelligent and with numerous experiences.
c) He/she lets the people grow.
d) He/she builds up the people's cohesiveness.
e) He/she builds up the people's organization.
f) He/she believes that people can change and can bring about change in society.

5. Desired Characteristics of a CD/CO Worker

a) Should have respect for and faith in the people they are working with; believe in the potential power and age-old wisdom of the masses.

b) Should go to the people as learners, not as teachers; listen more than talk; facilitate more than lead. Should not have the messianic or redeemed complex - but instead believe that it is the masses who will be their own redeemer.

c) Should try to know the people, their socio-economic, political and cultural situation and problems before starting any program or action.

d) Should be simple and austere in lifestyle.

e) Should have the capacity and humility to withdraw as soon as the people are ready to manage their own affairs; aims at becoming dispensable.

f) Capable of improving other's skills and knowledge.

g) Is needed in order to maintain the community's interest and participation, as well as, to maintain and accelerate the momentum needed.

h) Requires that the CO be at least several steps ahead of the community, but having in mind the direction of the community will be going and how to reach the desired goals.

9.5.5 Approaches to CD

Typical CD Work

Community Organizing Handbook for Water Supply and Sanitation

Community organizing for water supply and sanitation projects is aimed at forming user groups through a process that integrates the hardware (technical aspects) and software (social aspects) components of a water supply and sanitation project.

People's participation, which can be gauged against the extent to which they themselves are involved in the decision-making processes, their willingness to stake local resources, (both in cash and in kind) and the extent to which trainings have improved the knowledge, skills and attitudes of the people are some of the indicators of a good community organizing work.

The Community organizing process is developing a partnership with the community. The Community organizer is simply a catalyst in the community's efforts to build their self-confidence to operate, maintain and sustain their water supply and sanitation service.

The CO Framework

The CO Handbook is one of the tools that a community worker may use as a guide in organizing user's groups for community-managed water supply and sanitation facilities. It is presented in three (3) major stages following the community-organizing framework. These stages are a) Formation of Organization; b) Development of Organization; and c) Consolidation of Organization.

The process contains a chronology of activities that starts with the deployment of community organizer and ends up with his/her exit from the community.

Except for steps 9 and 10 of Stage II and Step 20 of Stage III which need not be undertaken for a Level I, all the rest applies to Levels I and II water supply projects. level I water supply projects refer to point source facility catering to a cluster of ten to fifteen households while level II refers to a waterworks that has a distribution system such as multiple tapstands.

The ***Formation of Organization*** stage covers activities intended to enlist community participation and make community understand the concepts, processes and importance of organizing a group that will become responsible for eliciting maximum participation for WATSAN activities.

The ***Development of Organization*** stage covers activities intended to build capability of water users' organization, which include trainings and full participation in both technical and social activities. It also includes the CO worker's sharing and transferring of organization development and community organizing technology to the leaders of the water users' association. In this way, the community will be able to increase their capability for self-management.

The ***Consolidation of Organization*** stage consists of activities intended to "tie loose ends." This is to ensure that at the exit of the CO worker, the water users' association can sustain its operations without an external catalyst.

The last part of the Handbook is a compilation of useful tips in recording the minutes of the community meetings, contents of a spot map, sample tapstand membership form and

tapstand membership list, characteristics of a CO worker and community leaders and others. All these are appended as additional guides to enhance the organization process and facilitate the attainment of the CO objective.

Community Organizer

The community organization worker as a catalyst is one who believes that the people are the main actors in the processes and that his/her role is that of facilitating the community organizing process; improving the skills and knowledge of the community; and that he/she has to withdraw as soon as the people are ready to manage their affairs.

Objectives of the CO Work

The General Objective of the CO work is to form a community-based water user's association that will operate, maintain and sustain their water supply and sanitation facilities.

Stages of CO Work

Each of the three stages of CO work as contained in the framework is distinctly characterized by various activities needed to ensure that the organization will continue to function even after the exit of the CO worker.

Phase I is characterized by the formal entry of the CO worker to the community. This is marked by courtesy call first to the barangay leaders and then to the community. These activities require thorough understanding of the nature of the project.

The CO worker needs various tools to undertake these activities. A chart preferably in the local dialect that explains the concept of the project and the roles of the various stakeholders is very important. The community profile is one tool that also needs to be validated by the community themselves. The profile serves as a CO tool in facilitating community decisions.

Phase II is characterized by a series of trainings intended to provide adult learning processes to the water users' association. This includes practical and workable approaches needed to synchronize activities and provide appropriate mix of technical and social knowledge and skills to the water users.

Phase III begins when the organization is formalized, water system potability is ensured, legal documents are executed and facility is turned-over to the water users' association for their operation and maintenance. This phase ends when the community organizer exits from the community, leaving behind an organization with positive indicators for sustainability.

1. ENTRY STRATEGIES

CO DEPLOYMENT

Objective	:	Indorse the CO worker to the community by provincial and municipal level implementors
Expected Result	:	CO worker is introduced to the barangay officials and the community
Suggested Strategy	:	Community meeting
Facilitator	:	Barangay Captain
Co-facilitator	:	Municipal Level Implementor

Agenda in the first orientation meeting and courtesy call to barangay council:

- Title of the project
- Objectives
- Stakeholders and their roles, responsibilities and accountabilities
- Funding and counterparting
- Project features or components
- How the project will be executed
- Timetable
- Inputs and outputs (largely trainings)
- Role of the intermediaries (NGOs)
- Solicit/request for CO volunteers to participate in profiling and spot mapping

VALIDATION OF COMMUNITY PROFILE AND SPOT MAPPING

Objective : To establish socio-economic, political and technical information about community directly or indirectly related to water and sanitation.
Expected Results : Validated secondary data from the community
Suggested Strategies :

- Home visits
- Focus group discussion
- Visit to RHUs, MPDO, MHO, local school
- Community meeting

CONTENTS OF THE SPOT MAP

- Natural features (creeks, river, lakes, mountains, water sources)
- Man-made structure (houses, buildings, bridges, roads, schools, cemetery, halls, markets, water system facilities)
- Technical data (distance, north orientation, elevations, scale, date prepared, source of information, persons/agencies involved, names of places, boundaries, legend, index to adjoining sheets, coordinates)

2. PRESENTATION OF VALIDATED PROFILE TO THE COMMUNITY

Objective : To further enrich and refine data in the profile
Expected Results :

- Profile validated by the community

- Surfacing of thoughts on:
  - How project will be implemented on the site
  - How the facility will be designed and constructed
  - How the community perceived their role in the project
- Solicit counterpart
- Determine/recommend long list of potential core group members

Facilitator : CO worker
Audience : Key informants (farmers, church leaders, teachers, etc.)

3. DEVELOPMENT OF CRITERIA FOR SELECTION OF CORE GROUP

Objectives : To enlist people interested to work actively that will assist in CO activities

Expected Results : Core group members elected
- Role and function of core group drawn
- Adhoc committees formed and function's drawn
- Committee chairman selected
- Plan of action done

IDEAL SELECTION CRITERIA FOR CORE GROUP MEMBERS

- Must have the time and commitment to do community development activities in their locality
- Proven leadership skills
- Direct exposure and experience in community development project/activities
- Have some basic knowledge and/or skills in community organizing
- Good moral standing
- No criminal record
- Should be one of the beneficiaries
- With good interpersonal relationship with the community
- Should be literate

ROLES AND FUNCTIONS OF THE WATER CORE GROUP

- Initiates the planning and implementation of action on water related activities
- Preparation of water project feasibility study/design community survey and spot map to further validate the importance of the project to the community at large
- Mobilize community resources specifically: the time, skills and efforts of the people
- Resources of the local agency, i.e., money, technical know-how, equipment, machines
- Disseminate information, keeps the community informed about the status of the water project
- Hears and considers suggestions of people with regards to the appropriate activities of the project
- Facilitates the expansion of water core group into Barangay/Rural Waterworks Association.

COMPOSITION OF THE CORE GROUP

- Technical persons who can be trained on the technical aspects of the project
- Individual who are trusted and respected by community
- Those who have a strong liking to work for people
- Those who have a spirit of volunteerism
- Those who are resourceful
- Individuals who are understanding and patient enough to go with the pace of the community
- Together with the community, they should be able to identify the:

  - Objectives of the group
  - Define roles and responsibilities
  - Clear expectations to members and group as a whole

ADHOC COMMITTEES CO-TERMINUS WITH THE CORE GROUP

- Education and recruitment

- Monitoring, evaluation and control
- Coordination and manpower
- Documentation (to include preparation of legal documents)

FUNCTIONS OF THE COMMITTEES

a. Education and recruitment
   - Project information drive
   - Advocacy on water supply, sanitation, health care and hygiene

b. Monitoring, evaluation and control
   - Inspects and accepts hardware, tools and equipment
   - Acts as property custodian
   - Monitor the evaluation
   - Initiate action planning relative to construction activities

c. Coordination and manpower
   - Coordinate resources from stakeholders
   - Do follow-ups and issue reminders
   - planning and manpower scheduling in terms of number and distribution
   - Coordinate technical activities in project site

d. Documentation
   - Facilitate the issuance of legal documents such as right of way permit, deed of donation, certification water source site, etc.

4. ASSIST IN SITE SELECTION AND FEASIBILITY STUDY

Objectives	:	To identify potential water source sites
Expected Results	:	Water source site for development identified (or prospecting for wells)
Suggested Strategy	:	Technical data gathered

5. PRESENTATION OF TECHNICAL FINDINGS

Objectives	:	To come up with recommendations on the technical study
Expected Results	:	Decision by the community on the technical findings
	:	Water samples collected from agreed upon water source site (for spring only)
Suggested Strategy	:	Meeting of the core group
Facilitator	:	LGU Technical Team
CO-facilitator	:	CO worker

By the end of Phase I of Community organizing work, the following milestones must have been achieved:

- Water Core Group formed
- Adhoc Committees formed and chairman named
- Water source site identified and initial studies done
- Community profile and spot map completed and validated

While at this stage, there is no way yet of gauging the certainty of making the project succeed in terms of a community-managed facility, a thorough understanding by the beneficiaries of the project features, stockholders, tasks, inputs, outputs and other important information about the project which is done formally as the opening salvo of the CO to the

community and, later, on a more informal manner , as the CO integrates to the community is one of the most critical part of this phase.

As community organizing progresses, the deepening sessions of the CO worker in reinforcing project concepts such as strategies for community initiatives towards addressing key issues affecting their community that are directly or indirectly related to water are reinforcing mechanisms in providing impetus to the development of an informal water users' organization, as infant as a water core group.

6. HUMAN RESOURCE DEVELOPMENT TRAINING

Objective	:	To build a strong and cohesive team from among the core group members and barangay officials (if appropriate)
Expected Results	:	Trained core group members on Human Resource Development
Facilitator	:	CO worker
Co-facilitator	:	Core group members

7. PRESENTATION OF TECHNICAL DESIGN

Objective	:	Generate community decision on appropriate technology to be used
Expected Results	:	Generate community decision on appropriate technology to be used
Suggested Strategy	:	Community meeting to discuss - Initial findings on technical feasibility study - Presentation of technology options
Facilitator	:	Technical Team

8. FACILITATION ON LEGAL WORKS AND DOCUMENTS

Objective	:	Prepare necessary legal documents
Expected Results	:	Legal documents required in WATSAN projects prepared
Facilitator	:	Committee Chairman
CO-facilitator	:	CO Worker

LIST OF DOCUMENTS REQUIRED IN IMPLEMENTING WATSAN PROJECTS

- Barangay Resolution desiring to avail of a water facility to be submitted to the LGU
- Building permit of WATSAN facility, from LGU
- Waiver form DENR (if water system components such as the source, tank, pipelines are situated in areas other that private lands) to use the site(s) for community development
- Right of way permit from private land owners, specifically for spring sites and pipeline routes
- Deeds of donation from private landowners for water tank and tapstand sites
- Certificate of water quality source to be developed and tapped, from DOH
- Certificate of water quality produced through the water system facility, from DOH
- Letter of acknowledgment from the municipal mayor endorsing the water system management to the water users' association formed
- Accreditation pertinent papers (needed for the accreditation of RWSAs/BWSAs at the LGU level)

- Water rights
- Water permit
- Drilling permit

9. **PRESENTATION OF DRAFT TECHNICAL DESIGN**
(Skip This Activity If Level I)

Objective : To inform the community of the results of the feasibility study conducted

Expected Results:

- Location of major components such as well drilling site, transmission and distribution pipelines
- Tanks and tapstands are identified
- Community acceptance of design
- Local counterpart generated

Suggested Strategies:

- Community meeting
- Site visit to proposed structures/facilities' location

INFORMATION TO BE PRESENTED TO THE COMMUNITY

- Role of technical people
- Contents of typical water system technical plan
- Presentation of design specifications and explanation of plan contents /drawings in layman's terms
- Presentation of program of work (POW) , bill of materials and cost estimates
- Validation of data gathered and used in the designing
- Solicit ideas, opinions, comments and preferences
- Come-up with compromises, and if appropriate determine local counterpart

Note: If system is Level II, spring source, dispersed tapstands and dispersed household clusters, technical information is limited to the number of tapstands that can be provided and the approximate location of tapstands relative to the cluster.

10. **MOBILIZATION OF COMMITTEE ON DOCUMENTATION**
(skip this activity if Level I)

Objective	:	To facilitate additional legal work requirement for tapstand, pipeline and other major system components
	:	To ensure a formal listing of tapstand membership
Expected Results	:	Completed legal documentation requirement membership per tapstand known
Facilitator	:	Committee Chairman, Committee on Documentation and Education and Membership
CO-facilitator	:	CO worker

11. CONFIRMATION OF MEMBERSHIP BY TAPSTAND

Objective	:	To confirm final membership by tapstand To undertake information campaign on the importance of grouping and houserules formulation
	:	To select tapstand leader
Expected Results	:	Final listing of membership per tapstand
	:	Formulated tapstand houserules
	:	Tapstand leader selected
Suggested Strategy	:	Undertake meeting per tapstand
Facilitator	:	CO worker
CO-facilitator	:	Chairman, Committee on Education and Recruitment

DISCUSSION POINTS IN FORMULATING TAPSTAND HOUSERULES

a. Getting water:
   - How will water be fetched?
   - When will water be fetched?
   - Who can fetch water?

b. Monitoring
   - List down who fetches and how much volume of water was taken

c. Water tariff due the specific tapstand

d. Sanitation around the tapstand and around the cluster

e. Beautification and physical development in the tapstand site

f. Financial management regarding water tariffs

12. PRESENTATION OF FINAL TECHNICAL DESIGN

Objective	:	To present and approve the final technical design
Expected Results	:	Finalized counterpart agreement
	:	Construction scheduling developed
Suggested Strategy	:	Meeting among tapstand leaders, core group and barangay council

13. TRAINING ON HYGIENE, SANITATION AND HEALTH CARE

Objective	:	Conduct of training on health and hygiene
Expected Results	:	Awareness on community health aspects
Suggested Strategy	:	Community meeting, or
	:	Meeting by tapstand grouping
Organizer	:	CO Worker, community and rural sanitary inspector
Training Management	:	LGU
Audience	:	Core Group, Barangay Officials, Barangay Health Workers, Rural Sanitary Inspectors, and Barangay Nutrition Scholars

14. SOURCE FOR EXCRETA DISPOSAL MATERIALS AND/OR FACILITIES

Objective	:	To make available to the community facilities for excreta disposal (if conditions and culture warrant)
Expected Results	:	Materials/facilities for excreta disposal constructed individually by members of the community in their households

Suggested Strategy	:	Core group members together with CO worker make representations with LGUs to source materials or facilities
Facilitator	:	Core group members
CO-facilitator	:	CO worker

15. ORGANIZATIONAL MANAGEMENT TRAINING

Organizer	:	CO and the community
Training Management	:	LGU
Audience	:	tapstand leaders, core group and barangay officials

16. PRE-CONSTRUCTION CONFERENCE

Objective	:	To generate work plan and tasking for the construction activities
Expected Results	:	Activities and roles identified
	:	Commitment to participate generated
Suggested Strategy	:	Hold a community meeting
Facilitator	:	Technical team
Co-facilitator	:	CO worker

AGENDA IN THE PRE-CONSTRUCTION CONFERENCE

- Presentation of schedule of work and tasking
- Determine quantities of resources needed
- Labor arrangements
- Salaries/wages, if any that will be incurred
- Mobilization of committees
- Arrangement on materials storage

17. MOBILIZATION FOR DELIVERY OF MATERIALS

Objective	:	To ensure that materials delivered at the community are all accounted for
Expected Results	:	Materials delivered all accounted for and in accordance to the agreed upon specifications in the technical design
Suggested Strategy	:	Specific committee to handle delivery, and storage of materials , and, if need be, disposition of materials
Facilitator	:	Committee to be agreed upon by the core group
Co-facilitator	:	CO worker

18. ACTION PLANNING FOR CONSTRUCTION

Objective	:	To spell out what to expect during the construction processes
Expected Results	:	Smooth implementation of construction activities
Facilitator	:	CO worker
Co-facilitator	:	Technical Team
Suggested Strategy	:	Core group meeting

STEPS TO BE UNDERTAKEN:

- Identify activities related to construction

- Define activity schedule and resources required
- Identify the type of manpower skills required per activity
- Monitoring and documentation of major water system components
- Progress reporting, evaluation and action planning
- Monitoring and documentation on construction of major water system components
- Repeat cycle until completion

19. DEVELOPMENT OF EXIT PLAN

Objective	:	To plan for the transfer of responsibility from CO worker to core group members
Expected Results	:	Core group informed of activities ahead and the expected time of withdrawal of the CO worker
	:	An exit plan containing task list and specific person responsible
	:	Organizational development program developed
Suggested Strategy	:	Core group meeting
Facilitator	:	CO worker
Co-facilitator	:	Technical Team
Audience	:	Community members

At the end of the Development of Organization Phase, the following milestone must have been achieved:

- Basic organizational development training such as value formation, leadership and team building and sanitation, health care and hygiene education must be done
- CO exit plan jointly developed by the CO together with the community
- All legal documents completed
- Pre-construction conference done
- Materials for construction delivered and accepted by the community
- Organizational strengthening such as involvement of a greater number of community members participating in mobilization activities and increased awareness on key issues through information exchange

The success of the phase rests on the extent the community had participated in the activities and learned from the processes as inputs to the community's capability for self-management. On the other hand, one of the most crucial factors to participation rests on the depth and broadness of their understanding of the project concept, features, processes, stakeholders, tasks, and responsibilities coupled with the need for water supply facility, a condition validated in the first orientation meeting done by the CO upon entry to the community.

The inputs that will be provided by the CO and the technical team will provide the necessary honing skills for the core group and tapstand leaders to have the confidence to accept more challenges in the next phase. These challenges are contained in the Exit Plan, which was formulated by the local stakeholders. The Plane will be implemented in Phase III stage to signal the weaning process of the community from the CO worker.

20. PRESENTATION, COMPARISON & COLLATION OF TAPSTAND HOUSERULES

(skip this activity if Level I)

Objectives : Collate similar houserules formulated in the previous activity

Expected Results : Collated houserules

	:	Identified houserules appropriate for by-laws
Suggested Strategy	:	Meeting of tapstand leaders
Facilitator	:	CO worker
Co-facilitator	:	Core Group Member

21. DRAFTING OF CONSTITUTION AND BY-LAWS

Objective	:	To develop a set of policies and by-laws that will govern the operation of the organization
Expected Results	:	Constitution and by-laws ready for ratification
Suggested Strategy	:	Meeting of core group and tapstand leaders

22. RATIFICATION OF CONSTITUTION, BY-LAWS AND POLICIES

Facilitator	:	CO Worker
Co-facilitator	:	Core Group Member
Expected Results	:	Constitution ratified
	:	Officers elected

23. FACILITY/SYSTEM TEST RUN

The community participates in ocular operation and test run of facility installed

Facilitator	:	Technical Team

24. WATER QUALITY TEST

Objective	:	To ensure potability of water from facility
Expected Result	:	Water facility is to provide potable water to community
Suggested Strategy	:	Collect water sample from tapstand
	:	Submit sample to DOH for test and certification

25. TURN-OVER OF FACILITY/SYSTEM

Officers elected organize and manage facility turnover ceremony

26. OPERATION, MAINTENANCE AND REPAIR TRAINING

Trainer	:	Technical team
Trainees	:	Community-appointed Plumber, Meter Reader (if there is a meter installed), Tapstand leader and RWSA/BWSA officers

27. FINANCIAL MANAGEMENT TRAINING

Trainer	:	NGO, LGU or Water District
Trainees	:	Bookkeeper, Tapstand Leader and RWSA/BWSA officer

28. RWSA/BWSA REGISTRATION AND ACCREDITATION

Facilitator	:	RWSA/BWSA officer
Co-facilitator	:	CO worker

Registration of BWSA/RWSA to appropriate government agencies is done. Options on where to register shall be presented and decided upon by the organization.

Possible Options:

In the absence of a clear national policy on B/RWSA registration, the following Registering Agencies could be presented as options:

a. Securities and Exchange Commission
b. Bureau of Rural Workers
c. Local Waterworks Utilities Administration
d. Department of Social Welfare and Development
e. Cooperatives Development Authority

Accreditation of BWSA/RWSA is done through the municipal local government unit.

29. FORMAL EXIT OF THE CO WORKER

Facilitator	:	RWSA Officer
Co-facilitator	:	CO worker
Suggested Strategy	:	Hold a community meeting
Agenda	:	Assessment of CO Exit Plan
	:	Planning for the operation and management of water facility
	:	Scheduling of CO visits
	:	Scheduling of RWSA/BWSA and CO formal linking with other organizations and agencies
	:	Formal turn-over of CO responsibility to RWSA/BWSA

At the end of the Consolidation Phase, the following milestones are achieved:

- Facility is turned-over hc RWSA/BWSA and is functioning as intended and has it set of officers, constitution and by-laws and policies
- Plan for operation, maintenance and repair of system is installed

At the end of the community organizing process, the degree of capability of RWSA/BWSA in the operation and maintenance of water supply facility and maintaining their organizational health can be gauged on the extent of participation of the members in resolving problems and making decisions. The extent of focus of team building and leadership inputs is crucial in how the members of the RWSAs/BWSAs are willing to make amend allow some compromises among each other. On the other hand, the technical soundness of the design and execution of the construction ensures the long-term sustainability of the system.

By this time, the CO has exited but maintains monitoring visits until he/she is fully confident that the organization is strong enough to take decisions, plan and implement their WATSAN related activities and knows where to access support (in terms of financial, institutional and technical) when needed.

Source: ***Water Supply and Sanitation Program Management Office***
Department of the Interior and Local Government