

2. PLANNING APPROACH FOR FUTURE SECTOR DEVELOPMENT
 2.6 Planning Principles and Data Management
 2.6.1 Planning Principles

Table 2.6.1 Updated Guideline for Preparation of PW4SP

COMPOSITION OF FIGURES AND TABLES BY CHAPTER/SECTION

Table of Contents	Contents	Tables & Figures Supporting Report		
		Main Report	Supporting Report	Data Report
1. INTRODUCTION				
1.1 Sector Development in the Philippines	Nationwide sector development			
1.2 Provincial Sector Planning	Outline of provincial sector planning			
1.2.1 Objectives of Sector Planning				
1.2.2 Scope of Sector Planning				
1.2.3 Financing of Sector Plan				
1.3 The Provincial Plan for the Province				
1.3.1 Preparation of the Plan		Fl.3.1 Flow Diagram of Sector Planning	Fl.3.1 Organization Chart for Implementation of PW4SP	*1.3.1 List of Report/Data/Information/Materials Collected
1.3.2 Outline of the Report				
1.4 Acknowledgments				
2. PLANNING APPROACH FOR FUTURE SECTOR DEVELOPMENT				
2.1 General				
2.2 Planning Framework	* Sector Arrangements with Reference to National Master Plan and Medium-Term Development Plan	T2.2.1 National Sector Coverage Targets		

Table 2.6.1 Figure 2.6.1

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		Main Report	Supporting Report	Data Report
2.3 Sector Objectives	<ul style="list-style-type: none"> - Water Supply Coverage - Sanitation and Sewerage Coverage 			
2.4 Current Sector Policies and Strategies	<ul style="list-style-type: none"> - Self-Reliance - Integrated Approach - Cost Recovery - Sustainability - Private Sector Participation - Water Resources Management 			
2.5 Major Legislation and Regulations Affecting the Sector	<ul style="list-style-type: none"> - Local Government Code - Water Code of the Philippines - Philippine Environmental Code - National Drinking Water Standards - Plumbing Code of the Philippines - Code on Sanitation - National Building Code 			
2.6 Planning Principles and Data Management	<ul style="list-style-type: none"> - Constraints and required arrangements to undertake planning work - Data storage processing and retrieval 	F2.6.1		
2.6.1 Planning Principles		F2.6.2	Institutional Hierarchical System of the Philippines Structure of Questionnaire	
2.6.2 Data Management				
		T2.6.1	Data File Linkages	
		T2.6.2	Key Parameter	
		T2.6.3	Composition of Well Sources and Specific Capacity	
		T2.6.4	Annual Distribution of Investment Cost Required by Sub-sector for Medium-term Development Plan	
		T2.6.5	Level I Safe & Unsafe Percentage	
		T2.6.7	Scoring Factor for Municipal Investment Ranking for Urban Water Supply	
		T2.6.8	Scoring Factor for Municipal Comprehensive Investment Ranking	

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3.	PROVINCIAL PROFILE				
3.1	General	<ul style="list-style-type: none"> - Location of Province - Administrative composition 	<p>F3.1.1 Location Map</p> <p>T3.1.1 Outline of City/Municipalities</p>		
3.2	Natural Conditions and Geographical Features	<ul style="list-style-type: none"> - Classification of climate by type and its characteristics - Average rainfall, temperature and wind direction 			
3.2.1	Meteorology				
3.2.2	Land Use	<ul style="list-style-type: none"> - Current land use 	<p>T3.2.1 Current Land Use</p>		
3.2.3	Topography and Drainage	<ul style="list-style-type: none"> - Topographical characteristics of the province: mountains, major rivers and its flow rates, and water quality of typical rivers 	<p>F3.2.1 Major River Networks</p> <p>T3.2.2 Drainage Areas and Flow Rates of Major Rivers</p>		
3.3	Socio-economic Conditions				
3.3.1	Economic Activities and Household Income	<ul style="list-style-type: none"> (1) Brief description on major economic activities (2) Discussion on (a) household income level and (b) occupation 	<p>F3.3.1 Distribution of Households by Income Class</p> <p>F3.3.2 Population Distribution by Occupation</p>	<p>T3.3.1 Distribution of Households by Income Class</p> <p>T3.3.2 Gainful Workers by Occupation Group and Major Industry Group</p>	<p>T3.3.1 Number of Elementary School, High School and Other Served Facilities</p>
3.3.2	Basic Infrastructure	<ul style="list-style-type: none"> (1) Description on current basic infrastructure in the province (roads, electricity, telecom, postal services, transportation, banking facilities, tourism facilities, schools, etc.) 	<p>T3.3.1 Provincial Outline on Public Services</p> <p>T3.3.2 Public Facilities and Services by Municipality</p>		

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3.3.3 Education	(2) Discussion on public facilities and services (schools, public markets, banks and hospitals) by municipality Description on (a) education levels and (b) literacy level	F3.3.3 Population Distribution by Highest Attainment of Education	T3.3.3 Household Population by Highest Educational Attainment	
3.4 Population				
3.4.1 Previous Population Development	(1) Population data of NSO for the census periods from 1960 to 1990 together with projected (1995) population (2) Special issues, if any, which affected the present population of the province, i.e., special development and those of Mt. Pinatubo eruption in 1991	T3.4.1 Previous Population Development by Municipality F3.4.1 Previous Population Development of the Province		
3.4.2 Classification of Urban and Rural Areas	(1) Urban and rural areas classified at barangay level based on the definition of NSO (2) Re-classification of urban and rural areas based on actual condition by PSPPT	F3.4.2 Present Population Distribution T3.4.2 Outline of Urban and Rural Areas in the Province	F3.4.1 Distribution of Urban and Rural Areas	
3.4.3 Present Population Distribution	(1) No. of barangays, households & population, household size by urban and rural area	T3.4.3 Household Numbers and Household Sizes		
3.5 Health Status				
3.5.1 Morbidity, Mortality and Infant Mortality	- Ten leading causes of morbidity, mortality and infant mortality and comparison with national level - Identification and rank of diseases related to water among the 10 leading causes	T3.5.1 Number and Rates of Ten Leading Causes of Morbidity, Mortality and Infant Mortality		T3.5.1 Morbidity, Mortality and Infant Mortality by Municipality (Annual Incidence per 100,000 Persons)

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		Main Report	Supporting Report	
3.5.2 Water Related Diseases	<ul style="list-style-type: none"> - Classification of water-borne, based, washed, vector related diseases - Enumeration of water related diseases and their incidence - Discussion on the health implications of sanitation 	T3.5.2 Reported Cases and Deaths of Notifiable Water Related Diseases, (Year)	T3.5.1 Number and Ratio to Population of Health Facilities and Medical Practitioners	Number of Health Facilities and Practitioners by Municipality
3.5.3 Health Facilities and Practitioners	<ul style="list-style-type: none"> - No. of medical facilities and practitioners, its ratio to population and comparison with national level 			
3.6 Environmental Conditions				
3.6.1 General	<ul style="list-style-type: none"> - Scope of the subject limited to the sector 			
3.6.2 Water Pollution	<ul style="list-style-type: none"> - Evaluation of existing drainage system, its function as a disposal point of domestic wastewater - Evaluation of industrial wastewater discharge - Existing classification of rivers in terms of water quality and extent of water pollution of water bodies 		T3.6.1 DENR Water Quality Criteria/Water Usage and Classification for Fresh Water	Municipal Solid Waste Collection and Disposal by Municipality
3.6.3 Solid Waste Disposal	<ul style="list-style-type: none"> - Evaluation of solid waste collection and disposal 	T3.6.1 Municipal Solid Waste Collection and Disposal, and Service Coverage		
4. EXISTING FACILITIES AND SERVICE COVERAGE				
4.1 Water Supply				
4.1.1 General	<ul style="list-style-type: none"> (1) Types and composition of existing water supply facilities by service level 		T4.1.1 Details on Existing Level III Systems	

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COMPOSITION OF FIGURES AND TABLES BY CHAPTER/SECTION

Table of Contents	Contents	Main Report	Tables & Figures Supporting Report	Data Report
	<p>(2) Survey results compiled from questionnaire by service level shall be arranged to urban and rural areas at municipal level</p> <p>(3) Service coverage shall be counted as percentage of population served by the existing facilities. Further classification by safe and unsafe sources together with adequacy of service are incorporated in the service coverage</p>		T4.1.2 Existing Level II Systems	
4.1.2 Types of Facilities and Definition of Service Level Standard	(1) Adequacy of service defined by DOH	T4.1.1 Composition of Water System/Facility by Service Level		
4.1.3 Level III Systems	(1) Description of existing Level III system: - No. of WD & Level III (being operated by LGUs) - Type of major water sources - Range of water consumption	T4.1.2 Information on Existing Level III Systems		T4.1.3 List of Subdivisions by Municipality
	(2) Operating conditions of WIDs: - Range of service (No. of connection) - Range of charge collection efficiency	T4.1.3 Information on Water Districts		
4.1.4 Level II Systems	(1) Description of existing Level II system - No. of operating Level II systems - Type of major water source - Range of household coverage (2) Operating conditions: - Water supply interruption - Water quality - Collection efficiency	T4.1.4 Information on Existing Level II Systems		

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4.1.5 Level I Facilities	(1) Description of existing Level I facilities: - No. of operational and non-operational facilities - Safe and unsafe sources - Ownership by public and private (2) Problem areas: - Needs for rehabilitation and replacement of existing facilities (1) Criteria of adequate service based on the national standard (2) Service coverage (percent of population served by safe sources) in urban and rural areas by municipality (3) On-going projects by municipality	T4.1.5 Information on Existing Level I Facilities T4.1.6 Operating Status of Existing Wells in the Province	T4.1.3 Percentage of Unsafe Water Sources by IPHO T4.1.4 No. of Level I Facilities by Safe and Unsafe Classification T4.1.5 Estimation of Unserved Population by Municipality T4.1.6 Estimation of Population Covered by Safe and Unsafe Source by Municipality	
4.1.6 Water Supply Service Coverage	(1) Criteria of adequate service based on the national standard (2) Service coverage (percent of population served by safe sources) in urban and rural areas by municipality (3) On-going projects by municipality	T4.1.7 Water Supply Service Coverage by Municipality F4.1.1 Water Supply Coverage of the Province F4.1.2 Existing Water Supply Service Coverage Map		
4.2 Sanitation and Sewerage	- Brief discussion of government policies/guidelines on sanitation and sewerage as spelled out in the Code of Sanitation and NUSSMP - Coverage of the PW4SP (HII, school toilets and public toilets)			
4.2.1 General	- DOH/DECS classification by service level - Types of toilet facilities considered as sanitary and unsanitary in this sector plan - Definition of served and unserved/unserved		F4.2.1 Standard Structure of Private Toilet Facility F4.2.2 Standard Structure of School Toilet Facility	
4.2.2 Types of Facilities and Definition of Service Level Standard	- Definition of served and unserved/unserved			

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COMPOSITION OF FIGURES AND TABLES BY CHAPTER/SECTION

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		Main Report	Supporting Report	Data Report
4.2.3 Sanitation Facilities and Service Coverage (1) Household Toilets	<ul style="list-style-type: none"> - No. of Households with sanitary toilet facilities and underserved, by municipality - Service coverage (percent of household with sanitary toilet facilities and underserved/underserved in urban and rural area, by municipality) 	<p>T4.2.1 Sanitation Facilities and Service Coverage of Household Toilets, Urban and Rural, 1994</p> <p>F4.2.1 Provincial Service Coverage of Household Toilet Facilities, 1994</p>	<p>T4.2.1 Sanitation Facilities and Service Coverage of Household Toilets, by Type, by Municipality, Urban and Rural, 1994</p>	
(2) School and Public Toilets	<ul style="list-style-type: none"> - No. of School and public toilets by municipality - Service coverage (percent of students adequately served by sanitary facilities and percent of public utilities with sanitary facilities) 	<p>F4.2.2 Existing Household Toilets Service Coverage Map</p> <p>T4.2.2 School Toilet Facilities and Service Coverage in 1994</p>		
(3) On-going Projects	<ul style="list-style-type: none"> - On-going projects by municipality (service coverage) 	<p>T4.2.3 Public Toilet Facilities and Service Coverage in 1994</p>		
(4) Problem Areas	<ul style="list-style-type: none"> - Common problems encountered with regards to physical and social standpoints 			
4.2.4 Sewerage Facilities	<ul style="list-style-type: none"> - Presence/absence of sewerage facilities, if none, description of existing condition on sewerage disposal - If present, description of sewerage system 			

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Table of Contents	Contents	Main Report	Supporting Report	Data Report
5. EXISTING SECTOR ARRANGEMENTS AND INSTITUTIONAL CAPACITY				
5.1 General				
5.2 Sector Reforms	<ul style="list-style-type: none"> - NEDA Board Resolution No. 4 - NEDA Board Resolution No. 5 			
5.3 Sector Institutions	<ul style="list-style-type: none"> - Existing Institutional Arrangements - Sector Financing 	F5.3.1 Functional Relationships		
5.4 Sector Agencies at the National Level	<ul style="list-style-type: none"> (To be discussed for each of the major agencies) - Existing mechanisms and processes to deliver or support services to provinces, municipalities and barangays (financial, technical and institutional) - Mechanisms for coordination and collaboration with LGUs - Existing capacity of national agency to implement sector projects (technical, financial, institutional) - Actual programs being implemented by national sector agencies focusing on transfer of appropriate technologies and approaches - Actual experiences and practices of national agency in project implementation - Problem areas 			
(1) DILG				
(2) LWUA				
(3) DPWH				
(4) DOH				
(5) Other Agencies (NEDA, DOF, NWRB, DBM, DENR, DECS, MWSS)				

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5.5	<p>Sector Agencies at the Local Level</p> <p>(1) Provincial Level</p> <ul style="list-style-type: none"> - PPDO - PEO - PHO <p>(2) Municipal and Barangay Levels</p> <ul style="list-style-type: none"> - MDO - MEO - Barangay Councils - RIU/BIIS <p>(3) Field Offices of Central Sector Agencies</p> <ul style="list-style-type: none"> - DPWH DEO - DILG P/MLGOO - NEDA RO and RDC <p>(4) Water Districts</p> <p>(5) RWSAs</p> <p>(6) BWSAs</p> <p>(7) Others (including CIBOs)</p>	<p>(To be discussed for each of the agencies)</p> <ul style="list-style-type: none"> - General description of mandate and responsibility - Present capacity of local agency to undertake: the LGU level within the sector - Project identification and priority-setting - Establishment of community-based organization - Project preparation and planning - Project implementation - Operation and maintenance - Monitoring and evaluation - Financial resources (Refer to Chap 6) - Actual experiences and practices of local agencies on project implementation - Mechanism for coordination and collaboration level among local offices to implement, coordinate and monitoring of program activities - Extent of private sector participation - Linkage with national government agencies 		<p>FS.5.1 Organization Chart of the PPDO</p> <p>FS.5.2 Organization Chart of PEO</p> <p>FS.5.3 Organization Chart of PHO</p>	
5.6	<p>External Support Agencies Active in the Sector</p> <p>(1) Multilateral Agencies</p>	<ul style="list-style-type: none"> - The World Bank (IBRD) - The Asian Development Bank (ADB) - The United Nations Development Program and the United Nations Children's Fund (UNICEF) 			

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<p>(2) Bilateral Agencies</p> <p>(3) NGOs and Private Sector</p> <p>5.7 Current Community Development and Training Approaches</p> <p>5.7.1 Community Development</p>	<ul style="list-style-type: none"> - The Japan International Cooperation Agency (JICA) - The Overseas Economic Cooperation Fund (OECF) - The Australian International Development Assistance Bureau (AIDAB) - The Danish International Agency (DANIDA) - KIW - The Royal Government of the Netherlands <ul style="list-style-type: none"> - Existing CD approaches to promote participation of local beneficiaries - Experiences/practices on participation of project beneficiaries - Financial contributions from beneficiaries - Strategies for targeting involvement of women - Organization and training of beneficiaries <ul style="list-style-type: none"> - Staffing situation (quality and quantity) - Existing training programs of sector agencies and mechanisms for implementation (technical and management training) - Access to technical information - Available training and information materials ▫ Types and contents ▫ Mode of dissemination 			
<p>5.7.2 Human Resources Development & Training</p>				

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<p>5.7.3 Sanitation/Hygiene Education</p>	<ul style="list-style-type: none"> - Actual experiences and practices of sector agencies - Existing health/hygiene education programs of sector agencies and mechanisms for implementation <ul style="list-style-type: none"> * DOH (Implementing program on Public Toilets) * DECS (Implementing program on School Toilets) - Mechanisms and resources for mass dissemination of information and other social marketing programs - Hygiene educational materials available <ul style="list-style-type: none"> * Types and content * Mode of dissemination - Actual experiences and practices of sector agencies (national-and focal-level) 			
<p>5.8 Existing Sector Monitoring (1) National Level (2) Local Level</p>				
<p>6. PAST FINANCIAL PERFORMANCE IN WATER SUPPLY AND SANITATION</p>				
<p>6.1 General</p>	<ul style="list-style-type: none"> * Basic idea and brief contents of this chapter 			
<p>6.2 Past Public Investment</p>				

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6.2.1	Past Public Investment by the Central Government Agencies and LGUs	(1) Study on the previous public investment to the province by concerned agencies	T6.2.1 Previous Sector Investment to the Province by Concerned Agency	T6.2.1 Past Internal Revenue Allotment to Municipalities from Central Government	
6.2.2	Sources of Local Fund	(2) Role of past IRA in the provincial finance (profile of sector investment to allotted IRA in the province)	T6.2.2 Past Internal Revenue Allotment to the Province from Central Government		
6.3	Cost Recovery	- Study on cost recovery in water supply by service level and sanitation (WD, RWSA and BWSA)			
6.4	Affordability	- Affordability of water rates by service level and sanitation costs by users in comparison with income level	T6.4.1 Affordability in Water and Sanitation Services		
6.5	Past Financial Performance of WDs and RWSAs/BWSAs	- Study on past financial performance of WDs RWSAs/BWSAs	T6.5.1 Financial Indicators of Water Districts		
7.	WATER SOURCE DEVELOPMENT				
7.1	General	- Available water sources and their application to suit the locality - Study approach with justification focusing on groundwater - Water Availability Map & standard well specification	T6.5.2 Loan Status of Water Districts		

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(2) Basic Data/Report with Conditions	<ul style="list-style-type: none"> - Major reports and hydrogeological maps used as basis of the study (with conditions and limitations) - Effective data to supplement the base materials 					
(3) Utilization and Up-dating	<ul style="list-style-type: none"> - Manner of out-put in PW4SP - Updating methods clarifying what factors can be modified and updated 					
(4) Existing Water Sources in the Province	<ul style="list-style-type: none"> - Description of existing water sources in the province 	T7.1.1	Existing Groundwater Sources in the Province			T7.1.1
7.2 Geology	<ul style="list-style-type: none"> - Classification of geologic rock units (3 types: Recent, Pliocene to Pleistocene, Pleistocene and Old rock units) - Distribution of each rock units and their proportion by municipality - Hydrogeological characteristics of each units 	F7.2.1	Geological Map			
7.3 Groundwater Sources	<ul style="list-style-type: none"> - Definition and classification of groundwater sources - shallow well area (with high yield area) - deep well area (with high yield area) - difficult area 	F7.3.1	Groundwater Availability Map			
7.3.1 Classification of Ground-water Sources						
7.3.2 Groundwater Availability in the Province					F7.3.1	Work Flow of Groundwater Availability Map
(1) Shallow Well Area	<ul style="list-style-type: none"> - Shallow well distribution 					T7.3.1
						Well Inventory by Municipality

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(2) Deep Well Area	<ul style="list-style-type: none"> - Technical information of shallow well (Depth, SWL, SPC-CP) - Deep well distribution - Technical information of deep well (Depth, SWL, SPC-CP) 		F7.3.2	Groundwater Potential Area in the Province	
(3) Difficult Area	<ul style="list-style-type: none"> - Distribution and proportion of difficult areas - Geological & Topographical characteristics of the area 		F7.3.4	Potential Areas of High Yielding and With Salt Intrusion Problem Area Category in Ground-water Utilization	
(4) Water Quality of Groundwater	<ul style="list-style-type: none"> - Possible area of salt water intrusion - Iron & Manganese problem area 		T7.4.1	Existing Spring Sources by Municipality	
7.4 Spring Sources	<ul style="list-style-type: none"> - Distribution of spring sources - Technical information 		F7.5.1	Study River Basin and Water Sampling Points	
7.5 Surface Water Sources	<ul style="list-style-type: none"> - Major rivers in the province - Typical feature of the river both in quality and flow 		T7.5.1	River Information and Related Data	T7.5.1
			T7.5.2	Water Quality Analysis Results	Water Quality Examination Results
7.6 Future Development Potential of Water Sources	<ul style="list-style-type: none"> - Potential water sources in each municipality (especially for rural area) with standard specifications by well type (shallow well, deep well, and spring) 		T7.6.1	Existing Well Sources	Individual Well Location and Specifications Map
			T7.6.2	Standard Specifications of Wells by Municipality	

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<p>8. FUTURE REQUIREMENTS IN WATER SUPPLY AND SANITATION IMPROVEMENT</p>				
<p>8.1 General</p>	<p>(1) Physical targets</p> <ul style="list-style-type: none"> - Provincial sector targets in context of the National Sector Master Plan and the National Medium-Term Development Plan - Population to be served by target year based on the NSO population projection and broken down to urban and rural areas at municipal level by sub-sector - Public school students to be served by target year based on projected school enrollment at municipal level - Projected number of public utilities by target year at municipal level 			
	<p>(2) Physical requirements</p> <ul style="list-style-type: none"> - Required facilities classified by urban and rural areas by sub-sector with implementation criteria - Equipment for construction, rehabilitation and O&M to be identified 			
	<p>(3) Identification of priority projects</p> <ul style="list-style-type: none"> - Criteria for identifying priority projects - Priority projects by sub-sector 			

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8.2 Targets of Provincial Sector Plan	<p>(1) Percentages of beneficiaries or utilities to be served as target indicator</p> <p>(2) Setting up of provincial sector targets by sub-sector</p> <ul style="list-style-type: none"> - Water supply - Sanitation - Sewerage - Solid waste 	T8.2.1	Provincial Sector Targets	T8.2.1	Estimation of Base Year Service Coverage of Water Supply
		T8.2.2	Base Year Service Coverage of Water Supply	T8.2.2	Population Covered in Phase I Provided by Served Population in the Base Year (Water Supply)
		T8.2.3	Base Year Service Coverage of Household Toilets	T8.2.3	Number of Households Served by Sanitary Toilets in the Base Year (1995)
		T8.2.4	Base Year Service Coverage of Public School Toilets and Public Toilets	T8.2.4	Number of Public School Students Served by School Toilets in the Base Year (1995)
		T8.2.5	Base Year Service Coverage of Municipal Solid Waste System in 1995	T8.2.5	Number of Public Utilities with Sanitary Toilets in the Base Year (1995)
				T8.2.6	Household Coverage in Phase I Provided by Existing Facilities in the Base Year (Household Toilets)
				T8.2.7	Public School Students and Public Utilities Coverage in Phase I Provided by Existing Facilities in the Base Year

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8.3 Projection of Frame Values	(1) Methodology for population projection by urban and rural areas by municipality <ul style="list-style-type: none"> - Base figures and conditions: 1990 population census and future population by urban and rural areas by municipality by target year as projected by NSO - Review/verify past population development characteristics by urban and rural areas at regional and provincial level - Review/compare past population in urban and rural areas at provincial level - Identify areas/municipalities where adjustment of projected population is necessary - Identify areas/municipalities to be excluded from PW4SP - Establish future population of urban and rural areas by municipality by target year for 	T8.3.1 Future Population by Urban and Rural Area by Municipality	T8.3.1 Population Distribution in Urban and Rural Areas T8.3.2 Past Population Development T8.3.3 Population Projection for Target Years: Region and Province T8.3.4 Provincial Population for Target Years T8.3.5 Projected Number of Households by Urban and Rural Area by Municipality by Target Year	
8.3.2 School Enrollment Projection	(1) Methodology for school enrollment projection by municipality <ul style="list-style-type: none"> - Determine school age population - Determine participation rate of total school enrollment and participation rate of public school enrollment - Establish future participation rate of total school enrollment and participation rate of public school enrollment - Conditions used for projection of the number of public utilities toilets 	T8.3.2 Projected Public School Enrollment and Number of Public Utilities by Municipality	T8.3.6 Projected School Enrollment by Municipality by Target Year	
8.3.3 Projection of the Number of Public Utilities			T8.3.7 Projected Number of Public Utilities by Municipality by Target Year	

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8.3.4 Planning Area and Population to be Served by the Sewerage System	- Conditions used to define planning area and population to be served			
8.3.5 Number of Households to be Served by Municipal Solid Waste Collection System	- Condition used to determine population to be served			
8.4 Types of Facilities and Implementation Criteria				
8.4.1 Water Supply	<ul style="list-style-type: none"> - Classification of service level by urban and rural area - Optimum number of persons to be served by type and level of service - Limited utilization/application of Levels I & II systems - Rehabilitation/replacement of Level I facilities 	T8.4.1 Groundwater Productivity T8.4.2 Standard Specifications of Level I Wells	F8.4.1 Standard Structure of Wells (Open-hole Drilling and Gravel Pack Method)	
8.4.2 Sanitation	<p>(1) HH toilets: One sanitary toilet per household is considered. Type of facility is dependent on the existing or planned water supply level of community</p> <p>(2) School and public utilities toilets</p> <ul style="list-style-type: none"> - Future assumption on the number of public schools/utilities toilets - Standard DECS coverage based on a 1:50 facility-student ratio will be followed and the standard designs of RESP will be adopted. - Standard FW4SP designs (with modification) for public toilets will be adopted 			

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8.4.3	Urban Sewerage	<ul style="list-style-type: none"> - Staged implementation of the sewerage program for limited urban area. - Requirement of garbage collection trucks is considered. 		F8.4.2	Staged Improvement in Sewerage Collection Method
8.4.4	Solid Waste				
8.5	Service Coverage by Target Year				
8.5.1	Water Supply	<p>(1) Assumptions/conditions adopted</p> <ul style="list-style-type: none"> - Criteria on number of persons served by type and level of service through the future - Limited utilization/application of Levels I & II systems <p>(2) Additional population to be served by target year</p> <ul style="list-style-type: none"> - Present population served in urban and rural areas at each municipality (1994) 	<p>T8.5.1 Population to be served by Target Year (Water Supply)</p> <p>F8.5.1 Map Showing Future Water Supply Service Coverage by 2000</p> <p>F8.5.2 Map Showing Future Water Supply Service Coverage by 2010</p>	<p>T8.5.1 Population to be Served by Level II System in Phase I</p> <p>T8.5.2 Population to be Served in Phase I (Water Supply)</p> <p>T8.5.3 Population to be Served in Phase II (Water Supply)</p>	
8.5.2	Sanitation	<p>(1) Household toilets</p> <ul style="list-style-type: none"> - Present household served by type of toilet facility in urban and rural areas at municipal level (1994) - Households to be served by type of toilet facility in urban and rural areas at municipal level by target year - Additional households to be served by type of toilet facility in urban and rural areas at municipal level by target year 	<p>T8.5.2 Additional number of Households to be Served by Target Year (Household Toilets)</p> <p>F8.5.3 Map Showing Household Toilets Service Coverage by 2000</p> <p>F8.5.4 Map Showing Household Toilets Service Coverage by 2010</p>	<p>T8.5.4 Additional Number of Households to be Served in Phase I (Household Toilets)</p> <p>T8.5.5 Additional Number of Households to be Served in Phase II (Household Toilets)</p>	

Table - T1 - Figure - F

• Questionnaire form

COMPOSITION OF FIGURES AND TABLES BY CHAPTER/SECTION

Table of Contents	Contents	Main Report	Supporting Report	Data Report
8.5.3 Urban Sewerage	(2) School toilets - Present number of public school students adequately served at municipal level (1994) - Number of public school students to be served at municipal level by target year - Additional public school students to be served at municipal level by target year (3) Public utilities toilets - Present number of sanitary public toilets at municipal level (1994) - Projected number of sanitary public utilities toilets at municipal level by target year (new construction) - Additional public utilities toilets at municipal level by target year - Assumptions adopted to define service coverage - Population to be served by target year (2010)	T8.5.3 Additional Number of Public School Students to be Served by Target Year (School Toilets) T8.5.4 Additional Number of Public Utilities with Sanitary Toilets by Target Year	T8.5.6 Additional Number of Public School Students to be Served in Phases I and II (School Toilets) T8.5.7 Number of Public Utilities with Sanitary Toilets in Phases I and II	
8.5.4 Solid Waste	- Assumptions adopted to define service coverage - Population to be served by target year (2000)	T8.5.5 Population to be Served by Urban Sewerage in Phase II		
8.6 Facilities, Equipment and Rehabilitation to Meet the Target Services		T8.5.6 Additional No. of Urban Households to be Served by Municipal Solid Waste System in Phase I		
8.6.1 Water Supply	(1) Water supply facilities by service level by target year	T8.6.1 Water Supply Facilities Required by Target Year	T8.6.1 Urban Water Supply Facilities Required by Target Year	

Table - T. Figure - F

- Questionnaire form

COMPOSITION OF FIGURES AND TABLES BY CHAPTER/SECTION

Table of Contents	Contents	Tables & Figures		
		Main Report	Supporting Report	Data Report
8.6.2 Sanitation	<p>(2) Equipment:</p> <ul style="list-style-type: none"> - Well drilling equipment for water source development - Workshop bldg., and its equipment/tools - Major transportation equipment for construction and O&M <p>(3) Rehabilitation</p> <ul style="list-style-type: none"> - Wells and handpumps - Urban household toilets required by target year - Rural household toilets required at municipal level by target year - Public school toilets required at municipal level by target year - Public utilities toilets required at municipal level by target year 	<p>T8.6.2 Plan for Expansion of Existing Level III System</p> <p>T8.6.3 Rural Water Supply Facilities Required by Target Year</p>		
8.6.3 Urban Sewerage and Solid Waste	<ul style="list-style-type: none"> - Additional units of truck required to meet service coverage 	<p>T8.6.2 Sanitation Facilities Required by Target Year</p> <p>T8.6.3 Number of Garbage Collection Trucks Required in Phase I</p>	<p>T8.6.4 Urban Household Toilets Required by Target Year</p> <p>T8.6.5 Rural Household Toilets Required by Target Year</p> <p>T8.6.6 Public School Toilets Required by Target Year</p> <p>T8.6.7 Public Toilets Required by Target Year</p>	
8.7 Identification of Priority Projects for Medium-Term Development	<p>(1) Criteria for identifying priority projects</p> <p>(2) Description of identified projects by mode of service in each sub-sector</p>			

Table - T. Figure - F

* Questionnaire form

COMPOSITION OF FIGURES AND TABLES BY CHAPTER/SECTION

Table of Contents		Contents	Main Report	Supporting Report	Data Report
9.	SECTOR MANAGEMENT PLAN				
9.1	General				
9.2	Sector Management	<ul style="list-style-type: none"> - Situational Analysis: Developing the Vision - Service Provision Policies and Objectives - Operating Policies - Regulatory Policies - Financing System 	<p>P9.2.1 Sector Management Model</p> <p>P9.2.2 Flow of Funds</p>		
9.3	Institutional Arrangements				
9.4	Project Management Arrangements	<ul style="list-style-type: none"> - Level I - Level II - Level III 		P9.4.1	<ul style="list-style-type: none"> Formats for Level I Project Data and Level II Feasibility Study
9.5	Community Involvement Models	<ul style="list-style-type: none"> - Policy: responsibilities - Potential future development needs 	T9.5.1		Summary of Community Development Study Sites
9.6	Human Resources Development and Training	<ul style="list-style-type: none"> - Policy: responsibilities 			
10.	COST ESTIMATES FOR FUTURE SECTOR DEVELOPMENT				
10.1	General	<p>(1) Methodology adopted to cost estimates</p> <p>(2) Composition of cost estimates</p> <ul style="list-style-type: none"> - Costs for required facilities by urban and rural areas at municipal level together with equipment for construction/rehabilitation and O&M 			

Table - T. Figure - F

* Questionnaire form

COMPOSITION OF FIGURES AND TABLES BY CHAPTER/SECTION

Table of Contents	Contents	Main Report	Supporting Report	Data Report
10.2 Assumptions for Cost Estimates	<ul style="list-style-type: none"> - Costs for sector management and recurrent costs 			
(1) Unit Cost of facilities	<ul style="list-style-type: none"> - Establish unit cost (per capital/HH or facility) by type and level of service based on: <ul style="list-style-type: none"> - Existing standard unit costs of sector agencies concerned (DPWH, LWUA and DOH) - Typical standards development for PW4SP (i.e., deep wells by different depths) 	<p>T10.2.1 Unit Cost of Facilities by Type and Service Level</p>	<p>T10.2.1 Unit Cost of Level I (Deep Well - 30m Depth)</p>	
(2) Unit costs of equipment based on the standard unit cost and recent procurement record at sector agencies concerned (DPWH, LWUA, DOH)		<p>T10.2.2 Unit Cost of Equipment and Vehicle</p>	<p>T10.2.2 Unit Cost of Level I (Deep Well - 50m Depth)</p>	
(3) Sector management costs	<ul style="list-style-type: none"> - Establish percentages to base cost or unit cost for following sector management activities: <ul style="list-style-type: none"> - Engineering studies - Community development and training - Health and hygiene education - Logistics support 		<p>T10.2.3 Unit Cost of Level I (Deep Well - 70m Depth)</p> <p>T10.2.4 Unit Cost of Level I (Deep Well Rehabilitation)</p> <p>T10.2.5 Unit Cost of Level I (Shallow Well-18m Depth)</p> <p>T10.2.6 Unit Cost of Level II (600 Service Population)</p> <p>T10.2.7 Unit Cost of Level III (5,000 Service Population)</p> <p>T10.2.8 Unit Cost of Level III (10,000 Service Population)</p> <p>T10.2.9 Unit Cost of Level III (15,000 Service Population)</p>	

Table - T, Figure - F

• Questionnaire form

COMPOSITION OF FIGURES AND TABLES BY CHAPTER/SECTION

Table of Contents	Contents	Main Report	Supporting Report	Data Report
	(4) Recurrent costs Establish unit cost or percentage to base cost for following purposes: - Regular operation cost - Spare parts and equipment replacement, and - Management cost		T10.2.10 Unit Cost of Flush Water Sealed with Septic Tank Toilet T10.2.11 Unit Cost of Pour Flush with Double Pit Latrine T10.2.12 Unit Cost of Ventilated Improved Pit Latrine (VIP) T10.2.13 Unit Cost of School Toilet T10.2.14 Unit Cost of Public Toilet	
10.3 Cost of Required Facilities and Equipment				
10.3.1 Cost of Required Facilities	- Costs of required facilities by type and service level of each sub-sector by municipality	T10.3.1 Construction Cost of Required Facilities by Municipality	T10.3.1 Construction Cost of Water Supply Facilities Required for Phase I (2000)	
10.3.2 Cost of Required Equipment and Vehicle	- Costs of required equipment (by municipality and province)	T10.3.2 Cost of Equipment and Vehicle	T10.3.2 Construction Cost of Water Supply Facilities Required for Phase II (2010) T10.3.3 Costs of Sanitation Facilities Required for Phase I (2000) T10.3.4 Costs of Sanitation Facilities Required for Phase II (2010)	

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* Questionnaire form

COMPOSITION OF FIGURES AND TABLES BY CHAPTER/SECTION

Table of Contents		Contents	Main Report		Supporting Report		Data Report
Table of Contents	Contents		Main Report	Supporting Report	Main Report	Supporting Report	
10.4	Recurrent Cost	- Recurrent costs	T10.4.1	Recurrent Cost	T10.3.5	Breakdown of Community Development and Training Cost	
11.	FINANCIAL ARRANGEMENTS						
11.1	General	- Scope of the study with limitations and future development needs	F11.1.1	Sector Budget Allocation			
			F11.1.2	General Flow of Financial Arrangements for Relevant Sector Development			
11.2	Projection of IRA	- Study on fund availability: Internal Revenue Allotment and other sources to be negotiated/arranged	F11.2.1	Trial Allocation of Internal Revenue Allotment (IRA) to Municipalities for Relevant Sector Development			
			T11.2.1	Projected Internal Revenue Allotment for Medium-Term Sector Development			
			T11.2.2	Projected Allotment of IRA to the Relevant Sector by Component, 1996-2000			
11.3	Additional Funding Requirements	- Financial shortfall to implement Medium-Term Development Plan	T11.3.1	Financing Requirements for Sector Component for the Province	T11.3.1	Percentages for Annual Investment	
			T11.3.2	Additional Fund Requirements for the Medium-Term Plan			

* Questionnaire form. Table - T. Figure - F

COMPOSITION OF FIGURES AND TABLES BY CHAPTER/SECTION

Table of Contents	Contents	Main Report	Supporting Report	Data Report
11.4 Medium-Term Implementation Arrangements	<ul style="list-style-type: none"> - Implementation arrangements with available funds for relevant sector 	T11.3.3 Internal Revenue Allotment for Water Supply and Sanitation Sector by Municipality (Medium-Term Development/1996-2000)	T11.4.1 Comprehensive Investment Need Ranking of the Municipalities	
11.4.1 Reference Scenarios in Different Funding Levels	<ul style="list-style-type: none"> - Trial calculation on the allocation of projected IRA to municipalities for Medium-Term Development 	F11.4.1 Relationship Between Funding Levels and Percent of Coverage for Water Supply Sector		
11.4.2 Alternative Counter-measures	<ul style="list-style-type: none"> - Acquisition of external funds - Augmentation of sector finance - Private sector participation - Effective and economical investment 	F11.4.2 Relationship Between Funding Levels and Percent of Coverage for Sanitation Sector		
11.5 Cost Recovery	<ul style="list-style-type: none"> - Discussion of the cost recovery by beneficiaries (O&M and other costs) and possible arrangement by LGUs 	T11.4.1 Municipal Investment Need Ranking for Urban Water Supply		
		T11.4.2 Distribution of Provincial IRA to Municipalities for Urban Water Supply		
		T11.4.3 Municipal Investment Need Ranking		

Table - 11: Figure - F
- Questionnaire form

COMPOSITION OF FIGURES AND TABLES BY CHAPTER/SECTION

Table of Contents	Contents	Tables & Figures		
		Main Report	Supporting Report	Data Report
12. MONITORING				
12.1 General				
12.2 Sector Monitoring	<ul style="list-style-type: none"> - Monitoring activities with responsibilities in different administrative levels 			
12.3 Project Monitoring	<ul style="list-style-type: none"> - Monitoring activities at project level 			
12.4 Evaluation of Plan Implementation and Updating the PW4SP	<ul style="list-style-type: none"> - Manner of follow-up and feed back in planning and project implementation 		T12.4.1 Draft Formats for Annual Sector Performance Summary Report (Provincial and Municipal Levels)	

Table - T, Figure - F

* Questionnaire form

2.6.2 Data Management

2.6.2.1 QUESTIONNAIRE FORMS

STRUCTURE OF QUESTIONNAIRE

Grouping of Questionnaire	Data Level						
	Nat. R	Reg. R	Prov. P	Mun. M	Bar. B	Sys./Fac. S/F	Ind. I
1 SOCIO ECONOMIC DATA							
1.1 Administrative Composition				M 1.1	B 1.1		
1.2 Past Population				M 1.2.1	B 1.2.1		
				M 1.2.2	B 1.2.2		
1.3 Projected Population				M 1.3	B 1.3		
1.4 Household Number				M 1.4	B 1.4		
1.5 Services				M 1.5	B 1.5		
1.6 Occupation Category				M 1.6	B 1.6		
1.7 Family Income, Education and Literacy				M 1.7	B 1.7		
2 LAND USE DATA							
2.1 Existing Land Use				M 2.1	B 2.1		
2.2 Future Land Use				M 2.2	B 2.2		
3 HEALTH DATA							
3.1 Morbidity and Mortality				M 3.1	B 3.1		
3.2 Facility and Practitioner				M 3.2	B 3.2		
4 WATER SOURCE DATA							
4.1 General Information				M 4.1	B 4.1		
4.2 Water Source				M 4.2	B 4.2		
5 WATER SUPPLY SYSTEMS							
5.1 Level II Systems						S 5.1.1	
						S 5.1.2	
5.2 Level III Systems						S 5.2.1	
						S 5.2.2	
						S 5.2.3	
5.3 Level I Facilities						F 5.3.1	
						F 5.3.2	
						F 5.3.3	
6 ENVIRONMENTAL SANITATION							
6.1 Private Toilet				M 6.1	B 6.1		
6.2 School/Public Toilet				M 6.2	B 6.2		
6.3 Drainage Facility				M 6.3	B 6.3		
6.4 Solid Waste Collection and Disposal				M 6.4	B 6.4		
7 INVESTMENT DATA							
7.1 Previous annual Investment			P 7.1				
7.2 Planned Annual Investment			P 7.2				

Note: Barangay level questionnaire forms are for reference purpose only

1. SOCIO-ECONOMIC DATA

PROVINCIAL WATER SUPPLY, SEWERAGE AND SANITATION SECTOR PLAN

Content: Socio-economy - Administrative Composition				Date:	Page:	Filename: socio.xls		
Data Collection Level : Municipal				Prov. No. :	Sheetname: (N) Administrative Composition			
Region Number:				Prov. Name:	Form Number: M.1.1			
NEDA Geographic Code	Municipality	City	Municipal	STATUS			NO. OF BARANGAYS	
				Class	Established Year	Original Barangay Name	Urban	Rural
		x	x	#	(YYYY)	Char.	#	#
Provincial Total								

PROVINCIAL WATER SUPPLY, SEWERAGE AND SANITATION SECTOR PLAN

Content: Socio-economy - Past Population		Date:	Page:	Filename: socio.xls				
Data Collection Level: Municipal		Prov. No.:		Sheetname: (M) Past Population				
Region Number:		Prov. Name:		Form Number: M 1.2.1				
NEDA Geographic Code	Municipality	1903	1918	1939	1948	1960	1970	1975
		#	#	#	#	#	#	#
	Provincial Total							

PROVINCIAL WATER SUPPLY, SEWERAGE AND SANITATION SECTOR PLAN

Content: Socio-economy - Past Population		Date:	Page:	Filename: socio.xls									
Data Collection Level : Municipal		Prov. No. :	Sheetname: (M) Past Population										
Region Number:		Prov. Name:	Form Number: M 1.2.2										
NEDA Geographic Code	Municipality	PAST POPULATION (NSO)											
		1980				1990				1994			
		Urban #	Rural #	Total #	Urban #	Rural #	Total #	Urban #	Rural #	Total #	Urban #	Rural #	Total #
Provincial Total													

PROVINCIAL WATER SUPPLY, SEWERAGE AND SANITATION SECTOR PLAN

Content: Socio-economy - Household			Date:	Page:	Filename: socio.xls					
Data Collection Level: Municipal			Prov. No. :	Sheetname: (M) Household						
Region Number:			Prov. Name:	Form Number: M 1.4						
			NUMBER OF HOUSEHOLDS							
NEDA Geographic Code	Municipality	1980 (Census by NSO)			1990			1995		
		Urban #	Rural #	Total #	Urban #	Rural #	Total #	Urban #	Rural #	Total #
Provincial Total										

PROVINCIAL WATER SUPPLY, SEWERAGE AND SANITATION SECTOR PLAN

Content: Socio-economy - Services		Date:		Page:		Filename: socio.xls					
Data Collection Level: Municipal		Prov. No.:				Sheetname: (M) Services					
Region Number:		Prov. Name:				Form Number: M 1.5					
		SERVICES (As of month-year)									
NEDA Geographic Code	Municipality	Elementary School			High School			College	Hospital	Market	Bank
		Public #	Private #	Total #	Public #	Private #	Total #				
Provincial Total											

PROVINCIAL WATER SUPPLY, SEWERAGE AND SANITATION SECTOR PLAN

Content: Socio-economy - Occupation		Date:	Page:		Filename: socio.xls			
Data Collection Level : Municipal		Prov. No. :			Sheetname: (M) Occupation			
Region Number:		Prov. Name:			Form Number: M 1.6			
PERSONS BY OCCUPATION CATEGORY								
NEDA Geographic Code	Municipality	Professional, Technical & Related Workers #	Administrative, Executive and Managerial #	Sales Worker #	Service Worker #	Agricultural, Animal Husbandry & Forestry workers, Fisherman and Hunters #	Production & related workers, Transport Equipment Operators and Laborers #	Occupation not adequately defined or reported #
Provincial Total								

PROVINCIAL WATER SUPPLY, SEWERAGE AND SANITATION SECTOR PLAN

Content: Socio-economy - Family Income, Education and Literacy		Date:	Page:	Filename: socio.xls										
Data Collection Level : Municipal		Prov. No. :	Sheetname: (M) Family Income and Education											
Region Number:		Prov. Name:	Form Number: M 1.7											
NEDA Geographic Code	Municipality	Number of Family by Income Class (Annual) (1990 Census)					Population by Highest Level of Education					Literacy of Population 10 Years and Over (1989 Survey)		
		Under P14,999 #	P15,000 to P29,999 #	P30,000 to P39,999 #	P40,000 to P59,999 #	P60,000 and over #	Pre- school #	Elem. #	Secondary (High School) #	Tertiary (College & Post Graduate) #	Literate #	Illiterate #		
Provincial Total														

PROVINCIAL WATER SUPPLY, SEWERAGE AND SANITATION SECTOR PLAN

Content: Socio-economy - Administrative Composition		Date:	Page:	Filename: socio.xls						
Data Collection Level: Barangay		Mun. No.:	Sheetname: (B) Administrative Composition							
Region Number:		Prov. Name:	Mun. Name:	Form Number: B.I.1						
NEDA Geographic Code	Barangay	STATUS				Original Barangay Name	Total Area (Hectare)	NO. OF BARANGAY		
		City	Municipal	Class	Established Year			Urban	Rural	Total
		x	x	#	(YYYY)	Char.	#	#	#	
Municipal Total										

PROVINCIAL WATER SUPPLY, SEWERAGE AND SANITATION SECTOR PLAN

Content: Socio-economy - Past Population		Date:	Page:					Filename: socio.xls
Data Collection Level: Barangay		Prov. No.:	Mun. No.:	Sheetname: (B) Past Population				
Region Number:		Prov. Name:	Mun. Name:	Form Number: B.1.2.1				
		PAST POPULATION (NSO)						
NEDA Geographic Code	Barangay	1903	1918	1939	1948	1960	1970	1975
		#	#	#	#	#	#	#
Municipal Total								

PROVINCIAL WATER SUPPLY, SEWERAGE AND SANITATION SECTOR PLAN

Content: Socio-economy - Projected Population			Date:	Page:	Filename: socio.xls					
Data Collection Level: Barangay			Prov. No.:	Sheetname: (B) Projected Population						
Region Number:			Prov. Name:	Form Number: B 1.3						
POPULATION PROJECTION										
NEDA Geographic Code	Barangay	1995			2000			2010		
		Urban #	Rural #	Total #	Urban #	Rural #	Total #	Urban #	Rural #	Total #
Municipal Total										

PROVINCIAL WATER SUPPLY, SEWERAGE AND SANITATION SECTOR PLAN

Content: Socio-economy - Household		Date:	Page:	Filename: socio.xls			
Data Collection Level: Barangay		Prov. No.:	Mun. No.:	Sheetname: (B) Household			
Region Number:		Prov. Name:	Mun. Name:	Form Number: B 1.4			
		NUMBER OF HOUSEHOLDS					
NEDA Geographic Code	Barangay	1980 (Census by NSO)			1995		
		Urban #	Rural #	Total #	Urban #	Rural #	Total #
Municipal Total							

PROVINCIAL WATER SUPPLY, SEWERAGE AND SANITATION SECTOR PLAN

Content: Socio-economy - Services			Date:	Page:	Filename: socio.xls						
Data Collection Level : Barangay			Prov. No. :	Mun. No. :	Sheetname: (B) Services						
Region Number:			Prov. Name:	Mun. Name:	Form Number: B 1.5						
SERVICES (As of month-year)											
NEDA Geographic Code	Barangay	Elementary School			High School			College	Hospital	Market	Bank
		Public #	Private #	Total #	Public #	Private #	Total #				
Municipal Total											

PROVINCIAL WATER SUPPLY, SEWERAGE AND SANITATION SECTOR PLAN

Content: Socio-economy - Occupation		Date:	Page:		Filename: socio.xls			
Data Collection Level : Barangay		Prov. No. :	Mun. No. :		Sheetname: (B) Occupation			
Region Number:		Prov. Name:	Mun. Name:		Form Number: B I.6			
PERSONS BY OCCUPATION CATEGORY								
NEDA Geographic Code	Barangay	Professional, Technical & Related Workers #	Administrative, Executive and Managerial #	Sales Worker #	Service Worker #	Agricultural, Animal Husbandry & Forestry workers, Fisherman and Hunters #	Production & related workers, Transport Equipment Operators and Laborers #	Occupation not adequately defined or reported #
Municipal Total								

PROVINCIAL WATER SUPPLY, SEWERAGE AND SANITATION SECTOR PLAN

Content: Socio-economy - Family Income, Education and Literacy			Date:			Page:		Filename: socio.xls				
Data Collection Level: Barangay			Prov. No.:			Mun. No.:		Sheetname: (B) Family Income and Education				
Region Number:			Prov. Name:			Mun. Name:		Form Number: B 1.7				
NEDA Geographic Code	Barangay	Number of Family by Income Class (Annual) (1990 Census)					Population by Highest Level of Education				Literacy of Population 10 Years and Over (1989 Survey)	
		Under P14,999	P15,000 to P29,999	P30,000 to P39,999	P40,000 to P59,999	P60,000 and over	Pre-school	Elem.	Secondary (High School)	Tertiary (College & Post Graduate)	Literate	Illiterate
		#	#	#	#	#	#	#	#	#	#	#
Municipal Total												

2. LAND USE DATA

PROVINCIAL WATER SUPPLY, SEWERAGE AND SANITATION SECTOR PLAN

Content: Land Use - Existing Land Use		Date:	Page:	Filename: landusc.xls		
Data Collection Level : Municipal		Prov. No. :	Sheetname: (M) ExistingLandUse			
Region Number:		Prov. Name:	Form Number: M 2.1			
NEDA Geographic Code	Municipality	EXISTING LAND USE (IN HECTARES) YEAR:				
		Forest Land	Grassland	Built-up	Agricultural	Mangrove, Fishponds, In-land Water Areas
		#	#	#	#	#
Provincial Total						

PROVINCIAL WATER SUPPLY, SEWERAGE AND SANITATION SECTOR PLAN

Content: Land Use - Future Land Use		Date:		Page:		Filename: landuse.xls	
Data Collection Level: Municipal		Prov. No.:		Sheetname: (M) FutureLandUse			
Region Number:		Prov. Name:		Form Number: M 2.2			
FUTURE LAND USE (IN HECTARES) YEAR:							
NEDA Geographic Code	Municipality	Forest Land	Grassland	Built-up	Agricultural	Mangrove, Fishponds, In-land Water Areas	Openlands
		#	#	#	#	#	#
Provincial Total							

PROVINCIAL WATER SUPPLY, SEWERAGE AND SANITATION SECTOR PLAN

Content: Land Use - Existing Land Use		Date:	Page:			Filename: landuse.xls
Data Collection Level: Barangay		Prov. No.:	Mun. No.:	Sheetname: (B) ExistingLandUse		
Region Number:		Prov. Name:	Mun. Name:	Form Number: B 2.1		
EXISTING LAND USE (IN HECTARES) YEAR:						
NEDA Geographic Code	Barangay	Forest Land #	Grassland #	Built-up #	Agricultural #	Mangrove, Fishponds, Inland Water Areas #
						Openlands #
Municipal Total						

PROVINCIAL WATER SUPPLY, SEWERAGE AND SANITATION SECTOR PLAN

Content: Land Use - Future Land Use		Date:	Page:	Filename: landuse.xls			
Data Collection Level: Barangay		Prov. No.:	Mun. No.:	Sheetname: (B) FutureLandUse			
Region Number:		Prov. Name:	Mun. Name:	Form Number: B 2.2			
FUTURE LAND USE (IN HECTARES) YEAR:							
NEDA Geographic Code	Barangay	Forest Land	Grassland	Built-up	Agricultural	Mangrove, Fishponds, In- land Water Areas	Openlands
		#	#	#	#	#	#
Municipal Total							

3. HEALTH DATA

PROVINCIAL WATER SUPPLY, SEWERAGE AND SANITATION SECTOR PLAN

Content: Health - Morbidity and Mortality			Date:	Page Number:		
Data Collection Level: Municipal		Region Number:	Filename: health.xls			
Prov. Number:		Mun. Number:	Sheetname: (M) Morbidity and Mortality			
Prov. Name:		Mun. Name:	Form Number: M 3.1			
Cause Group Diseases of:	Disease No.	Name of Diseases (Group)	Water Related Diseases	Number of Cases		
				Morbidity	Mortality	Infant Mortality
Infective and Parasitic (001-136)	A.01	2-4/ Typhoid/Paratyphoid	X			
	A.02	5-7/ Dysentery	X			
	A.03	8-10/ Intestinal Parasites	X			
	A.04	11-13/ Diarrhea	X			
	A.05	14-16/ Tuberculosis				
	A.06	17-19/ Conjunctivitis	X			
	A.07	20-22/ Whooping Cough				
	A.08	23-25/ Throat/Ear/Nose				
	A.09	26-28/ Tetanus				
	A.10	29-31/ Septicemia				
	A.11	32-34/ Cholera	X			
	A.12	35-37/ Varicella, Chickenpox				
	A.13	38-40/ Measles				
	A.14	41-43/ Dengue Fever	X			
	A.15	44-46/ Viral Hepatitis	X			
	A.16	47-49/ Malaria	X			
	A.17	50-52/ Schistosomiasis	X			
	A.18	53-55/ Filariasis	X			
	A.19	56-58/ Venereal Diseases				
	A.20	59-61/ Other Bacter./ Viral Dis.				
Neoplasms (140-239)	B.01	62-64/ Malignant Neoplasms				
	B.02	65-67/ Leukemia				
Endocrine, Nutritional & Metabolic (250-279)	C.01	68-70/ Diabetes Mellitus				
	C.02	71-73/ Nutritional Deficiencies				
	C.03	74-76/ Endocrine Disorder				
Blood & Blood Forming Organs (280-289)	D.01	77-79/ Anemias				
Mental Disorder (290-319)	E.01					
Nervous System and Sense Organs (320-389)	F.01	80-82/ Meningitis				
	F.02	83-85/ Nervous System				
Circulatory Systems (390-459)	G.01	86-88/ Heart Diseases				
	G.02	89-91/ Vascular Diseases				
Respiratory Systems (460-519)	H.01	92-94/ Bronchitis				
	H.02	95-97/ Pneumonia				
	H.03	98-100/ Influenza				
	H.04	101-103/ Obstructive Pulmonary				
	H.05	104-106/ ARI				
Digestive System (520-579)	I.01	107-109/ Appendicitis				
	I.02	110-112/ Gastroint. Cobis				
	I.03	113-115/ Chronic Liver Disease				
	I.04	116-118/ Other Diges. Diseases				
Genito-Urinary System (580-629)	J.01	119-121/ Kidney/ Nephritis				
	J.02	122-124/ Urinary Infections				
Complication of Pregnancy & the Puerperium (630-676)	K.01	125-127/ Prematurity				
Skin & Subcutaneous Tissue (680-709)	L.01	128-130/ Skin Diseases	X			
	L.02	131-133/ Scabies	X			
Musculoskeletal & Connective Tissue (710-739)	M.01	134-136/ Arthrop., Rheumatism				
Congenital Anomalies (740- 759)	N.01	137-139/ Congenital Anomalies				
Certain Causes of Prenatal Morbidity & Mortality (760-779)	P.01	140-142/ Birth Trauma				
	P.02	143-145/ Birth Injuries & Difficult Labor				
	P.03	146-148/ Resp. Fetus/Newborn				
	P.04	149-151/ Other Prenatal Causes				
Symptoms & Ill-defined Condition (780-799)	Q.01	152-154/ Senility				
	Q.02	155-157/ Ill-Defined Condition				
Accidents, Poisoning & Violence (800-999)	R.01	158-160/ Burns				
	R.02	161-163/ Suffoc. Foreign Body				
	R.03	164-166/ Other Accidents				

PROVINCIAL WATER SUPPLY, SEWERAGE AND SANITATION SECTOR PLAN

Content: Health - Morbidity and Mortality			Date:	Page Number:		
Data Collection Level: Barangay		Region Number:		Filename: health.xls		
Prov. Number:	Mun. Number:	Bgy. Number:		Sheetname: (B) Morbidity and Mortality		
Prov. Name:	Mun. Name:	Bgy. Name:		Form Number: B 3.1		
Cause Group Diseases of:	Disease No.	Name of Diseases (Group)	Water Related Diseases	Number of Cases		
				Morbidity	Mortality	Infant Mortality
Infective and Parasitic (001-136)	A.01	2-4/ Typhoid Paratyphoid	X			
	A.02	5-7/ Dysentery	X			
	A.03	8-10/ Intestinal Parasites	X			
	A.04	11-13/ Diarrhea	X			
	A.05	14-16/ Tuberculosis				
	A.06	17-19/ Conjunctivitis	X			
	A.07	20-22/ Whooping Cough				
	A.08	23-25/ Throat/Ear/Nose				
	A.09	26-28/ Tetanus				
	A.10	29-31/ Septicemia				
	A.11	32-34/ Cholera	X			
	A.12	35-37/ Varicella, Chickenpox				
	A.13	38-40/ Measles				
	A.14	41-43/ Dengue Fever	X			
	A.15	44-46/ Viral Hepatitis	X			
	A.16	47-49/ Malaria	X			
	A.17	50-52/ Schistosomiasis	X			
	A.18	53-55/ Filariasis	X			
	A.19	56-58/ Venereal Diseases				
	A.20	59-61/ Other Bacter./ Viral Dis.				
Neoplasms (140-239)	B.01	62-64/ Malignant Neoplasms				
	B.02	65-67/ Leukemia				
Endocrine, Nutritional & Metabolic (250-279)	C.01	68-70/ Diabetes Mellitus				
	C.02	71-73/ Nutritional Deficiencies				
	C.03	74-76/ Endocrine Disorder				
Blood & Blood Forming Organs (280-289)	D.01	77-79/ Anemias				
Mental Disorder (290-319)	E.01					
Nervous System and Sense Organs (320-389)	F.01	80-82/ Meningitis				
	F.02	83-85/ Nervous System				
Circulatory Systems (390-459)	G.01	86-88/ Heart Diseases				
	G.02	89-91/ Vascular Diseases				
Respiratory Systems (460-519)	H.01	92-94/ Bronchitis				
	H.02	95-97/ Pneumonia				
	H.03	98-100/ Influenza				
	H.04	101-103/ Obstructive Pulmonary				
	H.05	104-106/ ARI				
Digestive System (520-579)	I.01	107-109/ Appendicitis				
	I.02	110-112/ Gastroint. Cobitis				
	I.03	113-115/ Chronic Liver Disease				
	I.04	116-118/ Other Diges. Diseases				
Genito-Urinary System (580-629)	J.01	119-121/ Kidney/ Nephritis				
	J.02	122-124/ Urinary Infections				
Complication of Pregnancy & the Puerperium (630-676)	K.01	125-127/ Prematurity				
Skin & Subcutaneous Tissue (680-709)	L.01	128-130/ Skin Diseases	X			
	L.02	131-133/ Scabies	X			
Musculoskeletal & Connective Tissue (710-739)	M.01	134-136/ Arthrop., Rheumatism				
Congenital Anomalies (740- 759)	N.01	137-139/ Congenital Anomalies				
Certain Causes of Prenatal Morbidity & Mortality (760-779)	P.01	140-142/ Birth Trauma				
	P.02	143-145/ Birth Injuries & Difficult Labor				
	P.03	146-148/ Resp. Fetus/Newborn				
	P.04	149-151/ Other Prenatal Causes				
Symptoms & Ill-defined Condition (780-799)	Q.01	152-154/ Semity				
	Q.02	155-157/ Ill-Defined Condition				
Accidents, Poisoning & Violence (800-999)	R.01	158-160/ Burns				
	R.02	161-163/ Suffoc. Foreign Body				
	R.03	164-166/ Other Accidents				

4. WATER SOURCE DATA

PROVINCIAL WATER SUPPLY, SEWERAGE AND SANITATION SECTOR PLAN

Content: Water Sources - General Information		Page:	Date:	Filename: h20-res.xls			
Data Collection Level: Municipal		Prov. No.	Shtname: (M) General Information				
Region Number:		Prov. Name:	Form No.: M 4.1				
Municipal Number/Municipal Name							
Type of Source		Shallow Well	Deep Well	Spring	Shallow Well	Deep Well	Spring
General Information	1/ Total Number of Source	#					
	Implementation						
	2/ Government Agency	#					
	3/ Private	#					
	Usage						
	4/ Drinking	#					
	5/ Washing/Bathing	#					
	6/ Gardening	#					
	7/ Irrigation	#					
	8/ Industrial	#					
	Water Quality						
	9/ High Iron/Manganese Content	#					
	10/ High Chloride Content	#					
11/ Turbidity/Color/Smell	#						
Production							
12/ Less/No Water in dry season	#						
13/ Usable through the year	#						
Well Information	Technical						
	14/ Diameter < 100 mm (4")	#					
	15/ Diameter >= 100 mm (4")	#					
	16/ SWL < 5 m below ground	#					
	17/ SWL >= 5 m below ground	#					
	18/ Specific Capacity < 3 m ³ /hr/m	#					
	19/ Specific Capacity >= 3 m ³ /hr/m	#					
	20/ B-Value < 1,000 s/m ³	#					
	21/ B-Value >= 1,000 s/m ³	#					
	22/ C-Value < 60,000 s ² /m ⁶ (Well Loss Const.)	#					
23/ C-Value >= 60,000 s ² /m ⁶	#						
Aquifer Information	Technical						
	24/ T-Value < 0.001 m ² /s	#					
	25/ T-Value >= 0.001 m ² /s	#					
	26/ S-Value < 0.01	#					
	27/ S-Value >= 0.01	#					
	Geology						
	28/ Alluvial Formation	#					
29/ Volcanic Formation	#						
30/ Limestone Formation	#						
31/ Sandstone Formation	#						
32/ Other Sediment Formation	#						
Spring Info.	Technical						
	33/ Minimum Yield < 10 m ³ /h	#					
	34/ Minimum Yield >= 10 m ³ /h	#					
	Other						
	35/ Tapped Using Gravity	#					
36/ Undeveloped Spring	#						
37/ Untapped Spring	#						

LEGEND: # - Specify figure

PROVINCIAL WATER SUPPLY, SEWERAGE AND SANITATION SECTOR PLAN

Content: Water Sources - General Information		Page:	Date:	Filename: b20-res.xls			
Data Collection Level: Barangay		Prov. No.:	Mun. No.:	Sheetname: (B) General Information			
Region Number:		Prov. Name:	Mun. Name:	Form No. : B 4.1			
Barangay Number/Barangay Name							
Type of Source		Shallow Well	Deep Well	Spring	Shallow Well	Deep Well	Spring
General Information	1/ Total Number of Source	#					
	Implementation						
	2/ Government Agency	#					
	3/ Private	#					
	Usage						
	4/ Drinking	#					
	5/ Washing/Bathing	#					
	6/ Gardening	#					
	7/ Irrigation	#					
	8/ Industrial	#					
	Water Quality						
	9/ High Iron/Manganese Content	#					
	10/ High Chloride Content	#					
11/ Turbidity/Color/Smell	#						
Production							
12/ Less/No Water in dry season	#						
13/ Usable through the year	#						
Well Information	Technical						
	14/ Diameter < 100 mm (4")	#					
	15/ Diameter >= 100 mm (4")	#					
	16/ SWL < 5 m below ground	#					
	17/ SWL >= 5 m below ground	#					
	18/ Specific Cap. < 3 m ³ /hr/m	#					
	19/ Specific Cap. >= 3 m ³ /hr/m	#					
	20/ B-Value < 1,000 s/m ³	#					
	21/ B-Value < 1,000 s/m ³	#					
22/ C-Value < 60,000 s ² /m ⁴ (Well Loss Const.)	#						
23/ C-Value >= 60,000 s ² /m ⁴	#						
Aquifer Information	Technical						
	24/ T-Value < 0.001 m ² /s	#					
	25/ T-Value >= 0.001 m ² /s	#					
	26/ S-Value < 0.01	#					
	27/ S-Value >= 0.01	#					
	Geology						
28/ Alluvial Formation	#						
29/ Volcanic Formation	#						
30/ Limestone Formation	#						
31/ Sandstone Formation	#						
32/ Other Sediment Formation	#						
Spring Info.	Technical						
	33/ Minimum Yield < 10 m ³ /h	#					
	34/ Minimum Yield >= 10 m ³ /h	#					
	Other						
	35/ Tapped Using Gravity	#					
36/ Undeveloped Spring	#						
37/ Untapped Spring	#						

LEGEND: # - Specify figure

PROVINCIAL WATER SUPPLY, SEWERAGE AND SANITATION SECTOR PLAN

Content: Water Sources - Untapped Spring Information		Page No.:
Data Collection Level: Barangay	Mun. No.:	Date:
Region Number:	Mun. Name:	Filename: h2o-res.xls
Prov. No.:	Brgy. No.	Shtname: (B) Spring
Prov. Name:	Brgy. Name:	Form no.: B 4.2
Description of Information	Number	Data
Owner of the Untapped Spring Site		
Production during dry Season (Liter/minute)		
Distance from the spring source to entrance of the service area.		
Number of Households in the service area.		
Elevation Difference between the spring source and the service area ensuring gravity		
SKETCH (Location of Spring, Service and Transmission Route)		

PROVINCIAL WATER SUPPLY, SEWERAGE AND SANITATION SECTOR PLAN

Content: Water Sources - Well Information		Page No.:
Data Collection Level: Barangay	Mun. No.:	Date:
Region Number:	Mun. Name:	Filename: h2o-res.xls
Prov. No.:	Brgy. No.	Shtname: (B) Well
Prov. Name:	Brgy. Name:	Form no.: B 4.3
Description of Information	Number	Data
Owner of the Well		
Well Depth		
Water Level		
Use		
Abstract		
Water Quality		
Production		
Year Constructed		
Number of Household		
SKETCH (Location of Well, Service and Transmission Route)		

5. WATER SUPPLY SYSTEMS

PROVINCIAL WATER SUPPLY, SEWERAGE AND SANITATION SECTOR PLAN

Content: WATER SUPPLY - Level II System		Date:	Page:	Filename: h20supp.xls
Data Collection Level: System		Prov. No.:	Mun. No.:	Shiname(S): Level II PI-2
Region No.:	Province Name:		Mun. Name:	Form No.: S 5.1.1
INFO. GROUP	INFO DESCRIPTION	CODE	DATA	
System Identification	2/ Identification (Source No.)	#		
	3/ Name/Owner of System	ch		
	4/ Coordinates Scheme Cntr.	#		
System Coverage	5/ Barangay a	#		
	6/ Barangay b	#		
	7/ Barangay c	#		
	8/ Barangay d	#		
	9/ Barangay e	#		
	10/ Barangay f	#		
Original Design Assumption Fill in: 14 -15 or 16-17	11/ Construction Year	#		
	12/ Population in Service Area	#		
	13/ No. of Households in Service Area	#		
	14/ Rural Pop. Served by Communal Faucets	#		
	15/ Urban Pop. Served by Communal Faucets	#		
	16/ No. of Rural HH Served by Communal Faucets	#		
	17/ No. of Urban HH Served by Communal Faucets	#		
	18/ Number of Communal Faucets	#		
Actual System Including Extension Fill in: 22-23 or 24-25	19/ Year of Update	#		
	20/ Pop. in Service Area	#		
	21/ No. of Households in Service Area	#		
	22/ Rural Pop. Served by Communal Faucets	#		
	23/ Urban Pop. Served by Communal Faucets	#		
	24/ No. of Rural HH Served by Communal Faucets	#		
Water Sources	25/ No. of Urban HH Served by Communal Faucets	#		
	26/ Number of Communal Faucets	#		
Distribution System	27/ Type of Source	#		
	28/ Source Capacity (m ³ /h)	#		
	29/ Length of Transmission Main (m)	#		
	30/ Length of Distribution Main (m)	#		
	31/ Number of Reservoirs	#		
	32/ Total Volume of Reservoirs (m ³)	#		
	33/ No. of Metered Communal Faucets	#		
Service Level during Dry Season	34/ No. of Unmetered Communal Faucets	#		
	35/ Supply Period (hrs/d)	#		
	Dirty Water			
	36/ a) Everyday	#		
	37/ b) Once a Week	#		
	38/ c) Once a Month	#		
	39/ d) Occasionally	#		
	Taste / Smell			
	40/ a) Good Taste	#		
	41/ b) Salty Taste	#		
	42/ c) Woody Taste	#		
	43/ d) Metallic Taste	#		
	44/ e) Others	#		
	Supply Interruption			
45/ - Power Failure (times/month)	#			
46/ - Pump Breakdown (times/month)	#			
47/ - Pipe Burst (times/month)	#			
48/ - Other (times/month)	#			
Water Pressure				
49/ - No. of Faucets w. Adeq. Pres. (% of total)	#			
50/ - No. of Faucets w. Inadeq. Pres. (% of total)	#			

PROVINCIAL WATER SUPPLY, SEWERAGE AND SANITATION SECTOR PLAN

Content: WATER SUPPLY - Level II System		Date:	Page:	Filename: h20supp.xls
Data Collection Level: System		Prov. No.:	Mun. No.:	Sheetname: (S)Level II P2-2
Region No.:	Province Name:	Mun. Name:	Form No.: S 3.1.2	
INFO. GROUP	INFO DESCRIPTION	CODE	DATA	
Staff	51/ No. of Technical Professionals	#		
	52/ No. of Administrative Staff	#		
	53/ No. of Collectors	#		
	54/ Total No. of Staff	#		
Repair	Who does the repair ?			
	55/ a) Local Tradesman	x		
	56/ b) MEO/CEO	x		
	57/ c) PEO	x		
	58/ d) DEO	x		
Expenditures	59/ Annual Expenditures (Pesos/Yr)	#		
	60/ - Wages (Pesos/Yr)	#		
	61/ - Fuel, Chemicals, Materials (Pesos/Yr)	#		
	62/ - Transport (Pesos/Yr)	#		
	63/ - Repairs (Pesos/Yr)	#		
	64/ - Loan Repayment (Pesos/Yr)	#		
	65/ - Others (Pesos/Yr)	#		
Tariff Structure	66/ Consumers Payment (Pesos/year)	#		
	67/ a) Per pail (Pesos/pail)	#		
	68 b) Per volume (Pesos/m ³)	#		
	69/ c) Per household (Pesos/HH)	#		
	70/ d) Others	x		
	71/ Average Collection Efficiency (%)			
Billing	72/ Annual Billings	#		
	73/ Billings to P.F. Consumers (Pesos/Yr)	#		
	74/ Billings to H.C. Consumers (Pesos/Yr)	#		
	75/ Expected Subsidies (Pesos/Yr)	#		
	76/ Others (Pesos/Yr)	#		
Revenues	77/ Annual Income (Pesos/Yr)	#		
	78/ - Payment by P.F. Consumers (Pesos/Yr)	#		
	79/ - Payment by H.C. Consumers (Pesos/Yr)	#		
	80/ - Subsidies (Pesos/Yr)	#		
	81/ - Others (Pesos/Yr)	#		

PROVINCIAL WATER SUPPLY, SEWERAGE AND SANITATION SECTOR PLAN

Content: WATER SUPPLY - Level III System		Date:	Page:	Filename: h20supp.xls
Data Collection Level: System		Prov. No.:	Mun. No.:	Shtname(S): Level III P1-2
Region No.:	Province Name:	Mun. Name:	Form No.: S 3.2.1	
INFO. GROUP	INFO DESCRIPTION	CODE	DATA	
System Identification	2/ Identification (Source No.)	#		
	3/ Name Owner of System	ch		
	4/ Coordinates Scheme Contr.	#		
System Coverage	Municipalities Covered by System			
	5/ Municipality a	#		
	6/ No. of Cov. Rural Bgys. in Mun. a	#		
	7/ No. of Cov. Urban Bgys. in Mun. a	#		
	8/ Municipality b	#		
	9/ No. of Cov. Rural Bgys. Mun. b	#		
	10/ No. of Cov. Urban Bgys. Mun. b	#		
	11/ Municipality c	#		
	12/ No. of Cov. Rural Bgys. Mun. c	#		
	13/ No. of Cov. Urban Bgys. Mun. c	#		
Original Design Assumption Fill in: 22 -25 or 26-30	14/ Construction Year	#		
	15/ Size of Service Area	(ha)	#	
	16/ Population in Service Area	#		
	17/ Households in Service Area	#		
	18/ Area with Level III Services	(ha)	#	
	19/ Area with Level II Services	(ha)	#	
	20/ Area with Level I Services	(ha)	#	
	21/ Area with No Services	(ha)	#	
	22/ Rural Pop. with Level III Services	#		
	23/ Urban Pop. with Level III Services	#		
	24/ Population with Level II Services	#		
	25/ Population with Level I Services	#		
	26/ Population with No Services	#		
	27/ Rural Households w/ Level III Services	#		
	28/ Urban Households w/ Level III Services	#		
	29/ Households with Level II Services	#		
	30/ Households with Level I Services	#		
	31/ Households with No Services	#		
	32/ House Connections	#		
	33/ Population per House Connection	#		
34/ Households per House Connection	#			
35/ Communal Faucets	#			
36/ Population per Communal Faucets	#			
37/ Households per Communal Faucets	#			
Actual System Including Extension Fill in: 46-49 or 51-54	38/ Year of Update	#		
	39/ Size of Service Area	(ha)	#	
	40/ Population in Service Area	#		
	41/ Households in Service Area	#		
	42/ Area with Level III Services	(ha)	#	
	43/ Area with Level II Services	(ha)	#	
	44/ Area with Level I Services	(ha)	#	
	45/ Area with No Services	(ha)	#	
	46/ Rural Pop. with Level III Services	#		
	47/ Urban Pop. with Level III Services	#		
	48/ Population with Level II Services	#		
	49/ Population with Level I Services	#		
	50/ Population with No Services	#		
	51/ Rural Households with Level III Services	#		
52/ Urban Households with Level III Services	#			
53/ Households with Level II Services	#			
54/ Households with Level I Services	#			
55/ Households with No Services	#			
56/ House Connections	#			
57/ Population per House Connection	#			
58/ Communal Faucets	#			
59/ Pop. per Communal Faucet	#			
60/ HH per Communal Faucet	#			

PROVINCIAL WATER SUPPLY, SEWERAGE AND SANITATION SECTOR PLAN

Content: WATER SUPPLY - Level III System		Date:	Page:	Filename: h20supp.xls	
Data Collection Level: System		Prov. No.:	Mun. No.:	Shlname (S) Level III P2-4	
Region No.:	Province Name:	Mun. Name:	Form No.: S 5.2.2		
INFO. GROUP	INFO DESCRIPTION	CODE	DATA		
Water Sources	61/ Main Source A: (Source Type)	#			
	62/ Source No.	#			
	63/ Source Capacity (m ³ /h)	#			
	64/ Operating Time (hrs/d)	#			
	65/ Main Source B: (Source Type)	#			
	66/ -Source No.	#			
	67/ -Source Capacity (m ³ /h)	#			
	68/ -Operating Time (hrs/d)	#			
	69/ Main Source C: (Source Type)	#			
	70/ -Source No.	#			
	71/ -Source Capacity (m ³ /h)	#			
	72/ -Operating Time (hrs/d)	#			
	73/ Main Source D: (Source Type)	#			
	74/ -Source No.	#			
	75/ -Source Capacity (m ³ /h)	#			
	76/ -Operating Time (hrs/d)	#			
	77/ Main Source E: (Source Type)	#			
	78/ -Source No.	#			
	79/ -Source Capacity (m ³ /h)	#			
	80/ -Operating Time (hrs/d)	#			
	81/ Main Source : F (Source Type)	#			
	82/ -Source No.	#			
	83/ -Source Capacity (m ³ /h)	#			
	84/ -Operating Time (hrs/d)	#			
	Other Well Sources		#		
	85/ -Number	#			
	86/ -Total Capacity (m ³ /h)	#			
	87/ -Total Production (m ³ /d)	#			
	Other Surface Water Sources		#		
	88/ -Number	#			
	89/ -Total Capacity (m ³ /h)	#			
90/ -Total Production (m ³ /d)	#				
Other Spring Sources		#			
91/ -Number	#				
92/ -Total Capacity	#				
93/ -Total Production	#				
Water Production		#			
94/ Grand Total Production	#				
Last Year's Production		#			
Production Statistics	95/ -January (m ³ /month)	#			
	96/ -February (m ³ /month)	#			
	97/ -March (m ³ /month)	#			
	98/ -April (m ³ /month)	#			
	99/ -May (m ³ /month)	#			
	100/ -June (m ³ /month)	#			
	101/ -July (m ³ /month)	#			
	102/ -August (m ³ /month)	#			
	103/ -September (m ³ /month)	#			
	104/ -October (m ³ /month)	#			
	105/ -November (m ³ /month)	#			
	106/ -December (m ³ /month)	#			
Transmission/ Distribution	107/ Length of Transmission Mains (m)	#			
	108/ Length of Distribution Mains (m)	#			
	109/ Number of Reservoirs	#			
	110/ Total Volume of Reservoirs (m ³)	#			

PROVINCIAL WATER SUPPLY, SEWERAGE AND SANITATION SECTOR PLAN

Content: WATER SUPPLY - Level III System		Date:	Page:	Filename: h20supp.xls
Data Collection Level: System		Prov. No.:	Mun. No.:	Subname (S): Level III P3-4
Region No.:	Province Name:	Mun. Name:	Form No.: S 5.2.3	
INFO. GROUP	INFO DESCRIPTION	CODE	DATA	
Service Level (Dry Season)	111/ Supply Period (hrs/d)	#		
	Dirty Water	#		
	112/ a) Everyday	#		
	113/ b) Once a Week	#		
	114/ c) Once a Month	#		
	115/ d) Occasionally	#		
	Taste / Smell	#		
	116/ a) Good Taste	#		
	117/ b) Salty Taste	#		
	118/ c) Woody Taste	#		
	119/ d) Metallic Taste	#		
	120/ e) Others	#		
	Supply Interruption	#		
	121/ - Power Failure (times/month)	#		
	122/ - Pump Breakdown (times/month)	#		
	123/ - Pipe Burst (times/month)	#		
	124/ - Other (times/month)	#		
	Water Pressure	#		
	125/ - Supply, 2nd floor (% of Total)	#		
	126/ - Supply, Ground floor (% of Total)	#		
127/ - Inadequate Pressure (% of Total)	#			
Consumer	Domestic H.C. Consumers	#		
	128/ - Number of Metered Connections	#		
	129/ - Consumption (m ³ /d)	#		
	130/ - Number of Unmetered Connections	#		
	Domestic P.F. Consumers	#		
	131/ - Number of Metered Public Faucets	#		
	132/ - Consumption (m ³ /d)	#		
	133/ - Number of Unmetered Public Faucets	#		
	Institutional Consumers	#		
	134/ - Number of Metered Connections	#		
	135/ - Consumption (m ³ /d)	#		
	136/ - Number of Unmetered Connections	#		
	Commercial Consumers	#		
	137/ - Number of Metered Connections	#		
	138/ - Consumption (m ³ /d)	#		
	139/ - Number of Unmetered Connections	#		
Industrial Consumers	#			
140/ - Number of Metered Connections	#			
141/ - Consumption (m ³ /d)	#			
142/ - Number of Unmetered Connections	#			
Staff	143/ No. of Technical Professionals	#		
	144/ No. of Operators	#		
	145/ No. of Technical Support Staff	#		
	146/ No. of Administrative Staff	#		
	147/ No. of Collectors	#		
	148/ Total No. of Staff	#		
	149/ Metered Consumption (m ³ /year)	#		
Consumption	150/ - January (m ³ /month)	#		
	151/ - February (m ³ /month)	#		
	152/ - March (m ³ /month)	#		
	153/ - April (m ³ /month)	#		
	154/ - May (m ³ /month)	#		
	155/ - June (m ³ /month)	#		
	156/ - July (m ³ /month)	#		
	157/ - August (m ³ /month)	#		
	158/ - September (m ³ /month)	#		
	159/ - October (m ³ /month)	#		
	160/ - November (m ³ /month)	#		
	161/ - December (m ³ /month)	#		
	162/ Last Year's Consumption (m ³ /year)	#		

PROVINCIAL WATER SUPPLY, SEWERAGE AND SANITATION SECTOR PLAN

Content: WATER SUPPLY - Level III System		Date:	Page:	Filename: h20supp.xls
Data Collection Level: System		Prov. No.:	Mun. No.:	Shtname: (S) Level III P4-4
Region No.:	Province Name:	Mun. Name:	Form No.: S 5 2 4	
INFO. GROUP	INFO DESCRIPTION	CODE	DATA	
Consumption (continued)	163/ - Domestic (Pesos/m ³)	#		
	164/ - Institutional (Pesos/m ³)	#		
	165/ - Commercial (Pesos/m ³)	#		
	166/ - Industrial (Pesos/m ³)	#		
	167/ - Others (m ³ /yr)	#		
Expenditures	168/ Annual Expenditures (Pesos/yr)	#		
	169/ - Wages (Pesos/yr)	#		
	170/ - Fuel, Chem., Materials (Pesos/yr)	#		
	171/ - Transport (Pesos/yr)	#		
	172/ - Repairs (Pesos/yr)	#		
	173/ - Loan Repayment (Pesos/yr)	#		
	174/ - Others (Pesos/yr)	#		
Tariff Structure	Residential Consumption:			
	173/ 0 - 10 m ³ /month (Pesos/m ³)	#		
	176/ 11 - 20 m ³ /month (Pesos/m ³)	#		
	177/ 21 - 30 m ³ /month (Pesos/m ³)	#		
	178/ 31 - 40 m ³ /month (Pesos/m ³)	#		
	179/ 41 & Up m ³ /month (Pesos/m ³)	#		
	180/ Flat Rate per Month (Pesos/m ³)	#		
	Institutional Consumption:			
	181/ 0 - 10 m ³ /month (Pesos/m ³)	#		
	182/ 11 - 20 m ³ /month (Pesos/m ³)	#		
	183/ 21 - 30 m ³ /month (Pesos/m ³)	#		
	184/ 31 - 40 m ³ /month (Pesos/m ³)	#		
	185/ 41 & Up m ³ /month (Pesos/m ³)	#		
	186/ Flat Rate per Month (Pesos/m ³)	#		
	Commercial Consumption:			
	187/ 0 - 10 m ³ /month (Pesos/m ³)	#		
	188/ 11 - 20 m ³ /month (Pesos/m ³)	#		
	189/ 21 - 30 m ³ /month (Pesos/m ³)	#		
	190/ 31 - 40 m ³ /month (Pesos/m ³)	#		
	191/ 41 & Up m ³ /month (Pesos/m ³)	#		
	192/ Flat Rate per Month (Pesos/m ³)	#		
	Industrial Consumption:			
	193/ 0 - 10 m ³ /month (Pesos/m ³)	#		
194/ 11 - 20 m ³ /month (Pesos/m ³)	#			
195/ 21 - 30 m ³ /month (Pesos/m ³)	#			
196/ 31 - 40 m ³ /month (Pesos/m ³)	#			
197/ 41 & Up m ³ /month (Pesos/m ³)	#			
198/ Flat Rate per Month (Pesos/m ³)	#			
199/ Avg. Collection Efficiency (%)	#			
Revenues	200/ Annual Revenues (Pesos/yr)	#		
	201/ - Residential (Pesos/yr)	#		
	202/ - Institutional (Pesos/yr)	#		
	203/ - Commercial (Pesos/yr)	#		
	204/ - Industrial (Pesos/yr)	#		
	205/ - Others (Pesos/yr)	#		
	Policy on Non-Payment			
	206/ - Time Before Disconnect (days)	#		
207/ - Annual No. of Disconnect	#			
208/ - Reconnection Fee (Pesos)	#			

PROVINCIAL WATER SUPPLY, SEWERAGE AND SANITATION SECTOR PLAN

Content: Water Supply - Level I Facility		Date:	Page:		Filename:h20supp.xls																			
Data Collection Level: Municipal		Province Number:	Province Name:		Shname:(F)Level I																			
Region Number:		Form No.: F 5.3.1																						
NEDA Geographic Code	Municipality	Area	Public Facility				Private Facility				Total													
			Deep Well	Shallow Well	Covered/Improved Dug Well	Open Dug Well	Developed Spring	Sub-Total	Deep Well	Shallow Well		Covered/Improved Dug Well	Open Dug Well	Rain Collector	Sub-Total									
		Urban																						
		Rural																						
		Total																						
		Urban																						
		Rural																						
		Total																						
		Urban																						
		Rural																						
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		Total																						
		Urban																						
		Rural																						
		Total																						
Provincial Total		Urban																						
		Rural																						
		Total																						

6. ENVIRONMENTAL SANITATION DATA

7. INVESTMENT DATA

PROVINCIAL WATER SUPPLY, SEWERAGE AND SANITATION SECTOR PLAN

Content: Finance - Past Investment in 1994 (the latest single year)		Date:	Page:	Filename: finance.xls								
Data Collection Level: Provincial		Prov. No.:	Sheetname: (P) Past Invest 1994									
Region Number:		Form Number: P 7.2										
FUNDING CATEGORY		INVESTMENT IN 1000 (THOUSAND) PESOS										
Agency	Funds/Programs	Shallow Wells	Deep Wells	Sprung Develop.	Well Rehab.	Rain Collector	Level II System	Level III System	Sewer System	Private Latrines	School Toilets	Public Toilets
		#	#	#	#	#	#	#	#	#	#	#
	DILG											
	DPWH											
	LWJA											
	DOH											
	General Fund											
	IRA											
	Other (specify)											
	Other (specify)											
	General Fund											
	IRA											
	Other (specify)											
	(specify)											
	(specify)											
	(specify)											
	CDF											
	Other (specify)											
	(specify)											
	(specify)											
	(specify)											
	CONGRESSMAN'S OFFICE											
	OTHERS											
	(specify)											

Notes:
 1) IRA: Internal Revenue Allotment
 2) CDF: Countryside Development Fund

PROVINCIAL WATER SUPPLY, SEWERAGE AND SANITATION SECTOR PLAN

Content: Finance - Past Investment in 1990-1994		Date:	Page:	Filename: invest.xls								
Data Collection Level: Provincial		Prov. No.:	Sheetname: (P) Past Invest 90-94									
Region Number:		Prov. Name:	Form Number: P 7.1									
FUNDING CATEGORY		INVESTMENT IN 1000 (THOUSAND) PFSOS										
Agency	Fund/Programs	Shallow Wells	Deep Wells	Spring Development	Well Rehab.	Rain Collector	Level II System	Level III System	Sewer System	Private Latrines	School Toilets	Public Toilets
		#	#	#	#	#	#	#	#	#	#	#
	DILG											
	DPWH											
	LWUA											
	DOH											
	General Fund											
PROVINCE	IRA											
	Other (specify)											
	Other (specify)											
	General Fund											
MUNICIPALITIES (Total in the province)	IRA											
	Other (specify)											
	(specify)											
	(specify)											
	(specify)											
NGO	CDF											
	Other (specify)											
CONGRESSMAN'S OFFICE	(specify)											
	(specify)											
	(specify)											
OTHERS	(specify)											

Notes :
 1) IRA : Internal Revenue Allotment
 2) CDF: Countryside Development Fund

8. INSTITUTIONAL DATA

Institutional Data Survey
October 1994

Province: _____

Introduction:

One of the important elements of the provincial water supply and sanitation sector masterplan is the formulation of the institutional arrangements for managing the sector in the future. The following information are required to come up with the institutional arrangements, including training and financing mechanisms. Please do not be constrained by the space provided in the format; use additional sheets, as needed. Institutional information, by its very nature cannot be standardized into set tables.

1. Institutional Structure

- a. Attach a copy of the current organizational structure of the Province (Annex A). Additional information about special (or ad hoc or interim) bodies relevant to water, environment or health organized by the Provincial Government may be included.
- b. Attach a detailed organization chart of the PPDO (Annex A-1), the PEO (Annex A-2) and the IPHO (Annex A-3), including staff positions (name of incumbent not needed; indicate whether position is regular, contractual or casual).
- c. Attach typical municipal government organization chart (Annex B).
- d. Attach typical barangay organization chart including special committees (Annex C).

2. Table S.1: Current Practices and Policies. How are the following project activities presently done by the LGU for locally-funded water supply and sanitation projects? Assess positive/negative aspects and strong/weak points.

	How done?	Assessment
a. Sector Monitoring		
b. Project Identification		
c. Priority Determination		
d. Budget Allocation		

e.	Feasibility Studies		
f.	Detailed Design		
g.	Community Mobilization		
h.	Bid Documents Preparation		
i.	Procurement of Goods		
j.	Procurement of Services		
k.	Drilling		
l.	Construction		
m.	Rehabilitation		
n.	Health & Hygiene Education		
o.	Operation & Maintenance		
p.	Cost Recovery Policy. Collection of Fees.		
q.	Spare Parts Sourcing		

r.	Technical Training		
s.	Management Training		
t.	Preventive Maintenance		
u.	Minor Repairs		
v.	Major Repairs		
w.	Water Quality Testing		
x.	Project Monitoring		

3. Table 5.2: LGU-funded Projects. How much have the LGUs (provincial and municipal) actually spent for water and sanitation projects and services in the last three years?

Project Name	Implementor*	Date Started	Date Finished	Total Cost	Brief Scope of Work

* Mark with * if done by administration.

4. Community (or Beneficiary) Participation in Financing.

- a. What are the experiences with projects which require a financial contribution from the beneficiaries? Are there successful and unsuccessful experiences? (Level 1/2)
- b. Are there any successful home improvement credit facilities which may be tapped in the future for water and sanitation? Can future project funds be channelled through the rural banks or other mechanisms?

5. Table 5.3: Non-Government Organizations. List down the NGOs who deal with water, environment or health activities. Enclose brief description, including contact person and address, of the NGO and of their project/s, if available.

Name of NGO (Include name of contact, positions, address, telephone)	Natl or Local? / Year Established	Major Areas of Activity or Expertise	Example of Recent Projects

6. Table 5.5: Existing Training Institutes (with faculty) who can be tapped for future sector management and technical training activities. This may include technical/vocational schools, colleges and universities, NMYC centers, etc. List name of institute, existing courses, interest and potentials for collaboration in future training activities. Collect brochures, if available.

Name of Institute (include name of contact, position, address, tel.)	Private or Public?	Year Established	Relevant Courses or Workshops Conducted	How many regular teaching staff (mgmt and technical)?	Brief description of facilities	Interested in future collaboration?

7. Table 5.5: Other Existing Community-based Organization or Projects whose project experiences and approaches can help in determining future implementation strategies (Examples, Women's Clubs, Youth Clubs, civic clubs, etc.)

Name of CBO (include name of contact, position, address, tel.)	Location of activities	Primary objective	Year established	Example of current projects or activities

8. What local strategies could be considered to increase private sector participation in the sector?
 - a. How many local, province-based well drillers are there? How can we optimize their participation in future sector projects?
 - b. How many hardware stores selling plumbing and sanitary fixtures are there in the province? Do we have hardware stores in all municipalities?
 - c. How many "pakiaw" contractors are there in the province?
9. Are there other examples of successful community-based projects (any sector) from which the project can learn from?
10. Any other information, comments or suggestions which can help in formulating the sector institutional arrangements at the LGU level for the future?

(9) OTHER INFORMATION REQUIREMENTS

The following information are required separately from the questionnaires:

(1) Boundary of Urban and Rural Areas

The boundary of urban and rural areas in each municipality shall be indicated on the provincial map to be provided.

(2) Provincial Development Plan

(3) Socio-Economic Profile

(4) List of Major Industries

The list of major factories by municipality shall be prepared showing their name, type of industry, location, number of employees, water resource/s and consumption, existence of wastewater treatment facility.

(5) List of Priority Project Site/s

The list of priority project sites for the following sub-sectors being proposed or planned by the provincial and municipal governments shall be submitted together with the basis justifying priority:

- 1) Water Supply - Levels I, II and III
- 2) Sanitation
 - a. Public School Toilets
 - b. Household Toilets

(6) Unit Cost Base

2.6.2.2 DEFINITION OF TERMS

AIDE MEMOIRE

**SUBJECT : ESTABLISHMENT OF A COMMON DEFINITION OF TERMS
RELATING TO WATER SUPPLY, SEWERAGE AND SANITATION**

DATE : 12 January, 1995

1. From December 1993 up to June 1994, the NEDA conducted a series of nationwide orientation workshops to cover Phase I of the UNICEF-Assisted Updating of the 1988-2000 Water Supply, Sewerage and Sanitation Master Plan of the Philippines.
2. Based on the discussions during the workshops and based on the data gathered from the local government units (LGUs), regional line agencies and other entities concerned with the sector, the need to establish a common definition of terms relating to water supply, sewerage and sanitation was brought to light.
3. A consensus on a common definition of terms in the sector to be adopted by all sector agencies needs to be reached in order to facilitate uniformity in data collection and sector monitoring.
4. On April 22, 1994, the NEDA conducted a one-day small-group workshop held in Quezon City, the objective of which was to come-up with a position paper for submission to higher authorities and for subsequent adoption as the official definition of terms by the government. The workshop was attended by representatives from LWUA, NSCB, NSO, MWSS, DPWH, DILG, DENR, UNICEF, NWRB, ITN and NEDA.
5. A succeeding workshop was held in Cavite on 28-29 June 1994 to finalize and agree on the definition of terms to be used in the sector.
6. Annexes A and B contain the definition of terms relating to water supply and sanitation & sewerage as agreed upon during the two (2) workshops held for the purpose. The Annexes likewise include other additional definition of terms submitted by concerned agencies to NEDA after the Cavite workshop.
7. For consideration/adoption.

ANNEX A

DEFINITION OF TERMS IN WATER SUPPLY

Levels of Service

1. **Level I (point source)** - a protected well or a developed spring with an outlet but without a distribution system, generally adaptable for rural areas where the houses are thinly scattered. A Level I facility normally serves an average of 15 households.
2. **Level II (communal faucet system or standposts)** - a system composed of a source, a reservoir, a piped distribution network, and communal faucets. Usually, one faucet serves 4 to 6 households. Generally suitable for rural and urban fringe areas where houses are clustered densely to justify a simple piped system.
3. **Level III (waterworks system or individual house connection)** - a system with a source, a reservoir, a piped distribution network and household taps. It is generally suited for densely populated urban areas.

Urban Area - definition includes the criteria on the economic and social functions of barrios, poblaciones and central districts as follows:

1. In their entirety, all municipal jurisdictions which, whether designated as chartered cities, provincial capital or not, have a population density of at least 1,000 persons per square kilometer.
2. Poblaciones or central districts of municipalities and cities which have a population density of at least 500 persons per square kilometer.
3. Poblaciones or central districts (not included in nos. 1 and 2) regardless of population size which have the following:
 - a. Street pattern, i.e., network of streets in either at parallel or right angle orientation;
 - b. At least six establishments (commercial, manufacturing, recreational and/or personal services); and
 - c. At least three of the following:
 - i) a town hall, church or chapel with religious services at least once a month;
 - ii) a public plaza, park or cemetery;
 - iii) a market place or building where trading activities are carried on at least once a week;and

- iv) a public building like school, hospital, puenericulture and health center or library.
4. Barrios/Barangays having at least 1,000 inhabitants which meet the conditions setforth in no. 3 above, and predominantly non-farming/fishing.

Rural Area - all areas not falling under the urban classification.

Rural Waterworks and Sanitation Associations (RWSAs) - non-stock, non-profit organizational envisioned to operate and manage Level II water supply facilities.

Barangay Waterworks and Sanitation Associations (BWSAs) - non-stock, non-profit organiza-tions envisioned to operate and manage Level I water supply facilities.

Water Supply - the supply of water for domestic, municipal, industrial/commercial uses.

Water Supply Coverage - refers to the number of people in a given community or geographical areas who have access to safe water. The extent to which the population of a geographical area is covered (expressed in terms of the number of people served compared to the total population of that community or area).

Adequately Served - refers to those with access to safe water in accordance with the following rate of consumption:

- Level I . . . at least 20 liters/capita/day
- Level II . . . at least 60 liters/capita/day
- Level III . . . at least 100 liters/capita/day

Service Coverage - the no. of people a facility can serve.

Water Systems

- A. **Groundwater** - is that portion of the rainwater which has percolated into the earth to form un-derground deposits called aquifers (water-bearing soil formations).

Groundwater as a source of water supply can be extracted through the following:

- 1. **Wells** - groundwater can be tapped by digging a hole or sinking pipes into the ground and installing water-drawing equipment such as pumps. Wells can be classi-fied according to the following:

- a. **Deepwell** - are wells with depths greater than 20 meters constructed in areas characterized by aquifers or water-bearing formations generally located at a depth of more than 20 meters below ground surface (mbgs).
- b. **Shallow Well** - are wells with depth of not more than 20 meters and are recommended for rural water supply development, particularly levels I and II services. Static water level in these areas are generally within 6 meters below ground surface.
- c. **Dug Well** - normally circular or rectangular in shape, with diameter ranging from 1 to 1.5 meters. After the well is dug, it is necessary to put a masonry, brickwork or reinforced concrete which serve as protection against surface or outside contamination.

2. **Springs** - spring water occurs when water in water-bearing stratum reaches the surface of the ground. Spring can be developed by enlarging the water outlet and constructing an intake structure for water catchment and storage.

B. **Surface Water** - is a mixture of surface run-off and groundwater. Surface sources includes rivers, lakes, streams, ponds and impounding reservoirs.

Aquifer - water-bearing strata.

Water Right - is the privilege granted by the government to use and appropriate water.

Water Permit - is a document to appropriate water rights.

Salt Intrusion - encroachment of salt water upon fresh water.

Contaminated Water - water that contains microorganisms, chemicals, industrial or other wastes and is hence unfit for its intended use.

Population Underserved - population inadequately served.

Population Unserved - population without access to water supply facility.

Population Served - no. of population adequately served by a water system.

Level I - no. of Level I systems x 15 HH x 6 persons/HH

Level II - no. of Level II facility x 5 HH x 6 persons/HH

Level III - no. of connections x no. of persons served/connection

Rainwater Cisterns/Collectors/Catchers - reservoirs, tanks or vessels for the storage of rainwater.

Reliable Water Supply - efficient delivery of water supply in terms of quantity and quality.

Safe Drinking Water/Potable Water - water that is free of microorganisms or disease-producing bacteria (pathogens). In addition, the water should not possess undesirable tastes, odors, color, levels of radioactivity, turbidity or chemicals and it should pass the standards of the Philippine National Standards for Drinking Water (NSDW).

Service Area - geographic jurisdiction of water utilities.

Non-revenue Water - unbilled water.

Appropriate Technology - suited to local conditions and resources.

Infiltration Galleries - horizontal wells which collect water over the entire length.

Accounted-for-Water - billed water.

Access to Water Supply Facilities - access to water supply is categorized as follows:

Level I - the farthest user is not more than 250 meters from the point source.

Level II - the farthest house is not more than 25 meters from the communal faucet system.

Level III - the house has service connection from the system.

Private Water System - privately-owned water supply system.

Public Water System - system owned by the government.

ANNEX B

DEFINITION OF TERMS IN SEWERAGE AND SANITATION

Environmental Sanitation - the control of all those factors in man's physical environment which exercise or may exercise a deleterious effect on his physical development, health and survival.

Sanitation - the development and practical application of sanitary measures for the sake of cleanliness and protecting health.

Sanitary Toilet - is an approved type of toilet facility used for receiving and disposing human waste (feces and urine).

APPROVED TYPES OF TOILET FACILITIES

Type I

- a. Facilities requiring small amount of water to wash excreta into the receiving space/pit.
- b. Non-water carriage toilet facility requiring no water to wash excreta into the receiving space/pit.
e.g. ventilated improved pit latrine, sanitary pit privy

Type II

Water carriage type having a pour-flush or flush-type toilet facility and a septic vault/tank as the disposal facility.

Type III

Water carriage type with pour-flush or flush-type toilet facilities connected to septic tanks and/or to sewerage system to treatment plants.

1. **Flush** - type of toilet facility with a water-sealed toilet bowl or water closet and a mechanical device used to wash excreta into the receiving public sewer or any private sewage disposal plants/units by the use of flushing water with traps to provide "water seal."
2. **Pour Flush** - type of toilet facility with a water-sealed toilet bowl that is flushed by manually pouring water to wash excreta into the receiving space/pit.
3. **Ventilated Improved Pit** - refers to an on-site toilet facility wherein the pit receives excreta directly from the user and therefore does not require water for flushing; it com-

prises a lined pit, vent pipe with a fly screen., cover slab and a superstructure which allows entry of fresh air into the pit.

4. **Sanitary Pit Privy** - type of toilet facility without using any amount of water, with a pit of at least 1-2 meters depth, a hole of one square-meter; provided with a floor covering, a riser, seat with cover which are all fly and rodent proof and a building for privacy.

Unsanitary Toilet - a type of facility used for receiving and disposing human waste which does not fall under the category of approved types of toilet facilities.

UNAPPROVED/UNSANITARY TYPES

1. **Open Pit Privy** - a pit of at least the same dimension as the sanitary pit privy, provided with pit flooring, with or without riser and seat and without cover to protect from flies and rodents.
2. **Overhang** - a structure provided with flooring and with an opening built above the body of water or above the ground without pit under it, used for defecation or the disposal of human waste. It may be a part of the house or a separate structure outside the house.

LEVELS OF TOILET USE

1. **Communal** - a toilet facility shared by two or more households.
2. **Public** - a toilet facility located at public places like markets, bus stations, etc. intended for public use.
3. **School** - a toilet facility located in a school essentially for the use of students.
4. **Household** - a toilet facility being used by an individual household.

Sewerage - facilities that collect human waste and sullage from residences and establishments usually piped and conveyed in structures (sewers, pump stations) for eventual treatment and safe disposal. Piped sewerage includes a collection system (street laterals), a conveyance system (truck sewers and pump stations), and a treatment plant/disposal system.

Human Waste - solid (fecal matter) and liquid (urine) wastes which originate from human.

Sullage - liquid wastes that do not carry excreta and which normally results from washing, bathing and laundry.

Storm Drainage System - a system comprising of conduits, pipes and other appurtenances for effecting drainage and used for conveying rain water, surface water or similar wastes.

Unsanitary Drainage System - an open ditch system of conveying domestic wastes and rainwater into a final disposal site without treatment. Includes open canals.

Households Without Toilet - households without any toilet facility but uses other areas for defecation like bodies of water like rivers, lakes, open fields, coastal areas, etc.

Access - availability of toilet facility within the household premises which can be used anytime by any member of the household.

On-site - human waste is deposited and treated where the toilet facility is located.

Off-site - human waste is transported for treatment away from where the toilet facility is located.