

10.3 Cost of Required Facilities and Equipment

10.3.1 Cost of Required Facilities

Table 10.3.1 Construction Cost of Water Supply Facilities Required for Phase I (2004)

Unit: P. 1,000

Name of Municipality/City	Rural Water Supply													Grand Total		
	Urban Water Supply Level III			New System											Level I Rehabilitation	Total
	Level II			Level I					Spring Dev.	Subtotal						
	Level III			Deep Well		Shallow Well										
	40 m	80 m	120 m	40 m	80 m	120 m	Shallow Well	Spring Dev.	Subtotal							
Almagro	380												380			
Basey	13,041	2,881					494	2,241	5,617				19,780			
Calbayog City	99,302												99,302			
Calbiga	5,203												5,203			
Catbalogan (Capital)		4,034					247	2,241	6,522				6,577			
Daram	15,070												15,070			
Gandara	8,440						247	2,241	7,098				15,601			
Hinabangan			400				412	1,494	2,306				2,314			
Jiabong							330	747	1,077				2,627			
Marabut	1,550						82		835				4,848			
Matuguiniao	4,005						165	747	1,712				8,238			
Motiong	6,510		800					747	2,476				4,529			
Pagsanghan	2,030												16,368			
Paranas (Wright)	13,878						412	1,494	2,482				1,435			
Pinabacdao	1,435												4,170			
San Jorge	4,170												4,162			
San Jose De Buan	3,250						165	747	912				4,770			
San Sebastian	2,855							747	1,900				21,905			
Santa Margarita	19,990							747	1,900				23,956			
Santa Rita	20,380						330	1,494	3,552				4,819			
Santo Niño	3,660						412	747	1,159				2,735			
Tagapul-An	2,735												2,645			
Talalora	2,645												4,385			
Tarangnan	4,385												10,951			
Villareal	4,200							1,494	6,681				1,535			
Zumarraga	1,535												47,658			
Provincial Total	240,649	1,201	23,051	752	3,296	17,928	346	47,658	288,307							

Table 10.3.2 Construction Cost of Water Supply Facilities Required for Phase II (2010)

Unit: P.1,000

Name of Municipality/City	Urban Water Supply Level III	Rural Water Supply										Level I Rehabilitation	Total	Grand Total
		New System												
		Level I												
		Deep Well		Shallow Well	Spring Dev.	Subtotal								
40 m	80 m	120 m												
Almagro	1,182			2,802							2,802		2,802	3,984
Bacey	21,859	20,746		4,367			2,241				27,354	283	27,638	49,497
Calbayog City	186,767													186,767
Calbiga		2,305		2,390							4,695	31	4,726	4,726
Carbalogan (Capital)	94,464	36,306		2,225			2,241				40,772	496	41,268	135,732
Daram	33,632			4,614							4,614		4,614	38,246
Gandara	19,614	34,001		2,060			2,241				38,302	464	38,766	58,380
Hinabangan	5,365	1,153		989							2,141	16	2,157	7,522
Jiabong	6,120	2,802		4,532			1,494				8,828	55	8,883	15,003
Marabut	4,296			2,390			747				3,137		3,137	7,433
Manguinabon	13,165		8,275	906							9,182	87	9,268	22,433
Motong	19,219	6,004		1,154			747				7,904	118	8,022	27,241
Pagsanghan	6,385	14,983					747				15,730	205	15,935	22,320
Paranas (Wright)	24,560	2,305		2,472			1,494				6,271	31	6,303	30,862
Pinacdao	4,310	9,221		1,813							11,053	126	11,159	15,469
San Jorge	12,912	5,187		1,730							6,917	71	6,988	19,900
San Jose De Buan	10,483			2,637			747				3,384		3,384	13,867
San Sebastian	8,556	8,644		82			747				9,474	118	9,592	18,148
Santa Margarita	46,074	15,560		1,483							16,307	212	16,519	62,593
Santa Rita	47,296	6,915		6,922			747				7,669	94	7,763	57,283
Santo Niño	10,792			1,730							1,730		1,730	18,460
Tagapul-An	8,446			577							977	8	985	10,176
Talalora	7,737	400												8,722
Tarangnan	13,588	42,069									42,069	575	42,643	56,232
Villareal	11,877	73,764					1,494				75,258	1,007	76,266	88,143
Zumarraga	4,536			2,554							2,554		2,554	7,090
Provincial Total	623,235	273,159	8,275	50,429	17,928	358,997	3,998	362,995	986,229					

Table 10.3.3 Cost for Sanitation Facilities Required for Phase I (2004)

Name of Municipality/City	Urban Sanitation						Rural Sanitation						Total Public Investment Cost	Total Construction Cost	Public School Toilets	Total Public Investment Cost	Total Construction Cost		
	Household Toilets			Public School Toilets	Total Public Investment Cost	Total Construction Cost	Household Toilets			Sub-total of Public Investment	Sub-total of Construction Cost	Public School Toilets						Sub-total of Public Investment	Sub-total of Construction Cost
	Flush	Pour Flush	VIP/Dry				Flush	Pour Flush	VIP/Dry										
Almagro	161	118	14	294	6	294	6	294	6	6,394	582	6,976	330	934	7,910	1,254			
Basey	3,657	6,719	696	11,072	336	11,688	1,168	12,240	1,503	14,963	1,072	16,035	748	2,802	18,837	3,550			
Calbayog City	41,262	100,966	8,158	150,386	5,048	10,274	10,274	160,660	15,322	4,055	203	4,055	203	2,102	6,157	2,304			
Calbiga	1,472	3,034	284	4,790	152	467	467	5,257	619	7,015	497	7,512	351	1,401	8,913	1,752			
Canbalagan (Capital)	16,928	30,917	3,238	51,083	1,546	5,371	368	56,822	7,285	10,774	781	11,555	539	2,102	13,657	2,640			
Daram	5,313	5,713	675	11,700	286	934	934	12,634	1,220	10,893	795	11,688	545	1,868	13,556	2,413			
Gandara	3,197	4,410	440	8,048	221	467	467	8,515	688	12,121	951	13,073	606	1,868	14,941	2,474			
Hinabangan	1,702	3,404	327	5,433	170	701	701	6,133	871	2,368	107	2,475	118	701	3,175	819			
Jabong	1,288	2,590	249	4,127	130	467	467	4,594	597	6,882	604	7,486	344	934	8,420	1,278			
Marabut	621	474	71	1,166	24	1,166	24	1,166	24	4,159	291	4,450	208	934	5,384	1,142			
Matiguniao	1,426	2,072	199	3,697	104	3,697	104	3,697	104	1,450	107	1,557	73		1,557	73			
Motong	2,392	2,590	305	5,287	130	5,287	130	5,287	130	4,114	298	4,413	206		4,413	206			
Pasasinghan	805	1,288	114	2,206	64	2,206	64	2,206	64	3,226	263	3,489	161	701	4,190	862			
Paranas (Wright)	4,209	9,709	824	14,741	485	1,168	1,168	15,909	1,653	4,484	64	4,548	224	1,401	5,949	1,625			
Panabacdao	529	459	64	1,052	23	1,052	23	1,052	23	6,038	518	6,557	302	1,168	7,724	1,469			
San Jorge	1,472	2,383	220	4,075	119	4,075	119	4,075	119	5,017	369	5,386	251	701	6,087	951			
San Jose De Buan	1,334	1,746	185	3,265	87	3,265	87	3,265	87	2,250	192	2,441	112		2,441	112			
San Sebastian	1,058	1,288	142	2,488	64	2,488	64	2,488	64	2,235	163	2,398	112	467	2,865	579			
Santa Mangarin	8,165	10,212	1,093	19,470	511	1,168	1,168	20,638	1,678	1,080	85	1,080	54	234	1,314	288			
Santa Rita	8,119	12,861	1,179	22,159	643	1,401	1,401	23,560	2,044	5,417	433	5,924	275	1,168	6,670	1,438			
Santo Nino	1,518	1,598	192	3,308	80	3,308	80	3,308	80	5,491	433	5,924	275	934	6,858	1,209			
Tagnapulan	1,242	2,028	185	3,454	101	3,454	101	3,454	101	3,271	241	3,512	164	701	4,213	864			
Talalona	1,035	873	121	2,029	44	2,029	44	2,029	44	2,324	192	2,515	116	467	2,982	585			
Tarangnan	1,702	1,791	220	3,713	90	3,946	323	3,946	323	9,576	845	10,421	479	1,635	12,055	2,113			
Villacal	1,564	1,288	185	3,036	64	3,270	298	3,270	298	9,161	689	9,850	458	1,868	11,718	2,326			
Zumarraga	552	459	64	1,075	23	1,075	23	1,075	23	7,045	582	7,627	382	1,168	8,795	1,520			
Provincial Total	112,723	210,989	19,440	343,152	10,549	367,571	368	367,571	34,968	151,804	10,721	162,525	7,590	28,254	190,778	35,844			

Unit: P. 1,000

Table 10.3.4 Cost for Sanitation Facilities Required for Phase II (2010)

Unit: P 1,000

Name of Municipality/City	Urban Sanitation						Rural Sanitation						Total Public Investment Cost	Total Construction Cost	Public School Toilets	Total Public Investment Cost	
	Household Toilets			Total Public Investment Cost	Public School Toilets	Public Toilets	Total Construction Cost	Household Toilets			Sub-total of Construction Cost	Sub-total of Public Investment					
	Flush	Pour Flush	VIP/Dry					Flush	Pour Flush	VIP/Dry							
Almagro	782	59	841	3	841	3	3	14,933	14,933	727	3,036	17,969	3,782	17,969	3,036	17,969	3,782
Basy	26,772	15	26,787	1	27,721	935	935	21,253	11,569	21,253	7,939	40,761	9,002	40,761	7,939	40,761	9,002
Calbayog City	286,396	20,838	307,234	1,042	326,615	20,422	465,251	9,775	879	10,604	41	16,675	6,112	16,675	6,071	16,675	6,112
Calbiga	11,017	562	11,579	28	11,579	28	28	11,736	5,773	11,736	587	21,479	4,556	21,479	3,970	21,479	4,556
Carabugan (Capital)	140,001	9,916	149,917	486	154,120	4,699	227,526	9,315	21,356	30,671	1,068	36,976	7,372	36,976	6,305	36,976	7,372
Daram	30,222	3,493	33,715	175	34,182	642	48,501	28,668	28,668	1,433	6,071	34,739	7,502	34,739	6,071	34,739	7,502
Gandara	17,342	1,584	18,926	79	18,926	79	79	28,934	28,934	1,447	6,305	35,239	7,751	35,239	6,305	35,239	7,751
Hinabangan	13,984	1,302	15,286	65	15,286	65	65	7,696	7,696	385	1,868	9,564	2,253	9,564	1,868	9,564	2,253
Jiabong	11,753	1,746	13,499	87	13,499	87	87	18,885	18,885	944	3,503	22,387	4,447	22,387	3,503	22,387	4,447
Marabut	2,875		2,875		2,875			9,117	9,117	456	2,569	11,685	3,024	11,685	2,569	11,685	3,024
Matuguiniao	8,901	1,421	10,322	71	10,322	71	71	4,869	4,869	243	701	5,570	944	5,570	701	5,570	944
Montong	13,041	1,214	14,255	61	14,255	61	61	10,686	10,686	534	2,569	13,254	3,103	13,254	2,569	13,254	3,103
Pagsanjan	4,255	311	4,566	16	4,566	16	16	10,005	10,005	500	2,102	12,106	2,602	12,106	2,102	12,106	2,602
Paranas (Wright)	29,601	1,628	31,229	81	31,229	81	81	12,092	5,313	17,405	605	21,374	4,574	21,374	3,970	21,374	4,574
Pinabacdao	2,921	281	3,202	14	3,202	14	14	14,282	14,282	714	3,503	17,785	4,217	17,785	3,503	17,785	4,217
San Jorge	8,786	1,228	10,014	61	10,014	61	61	12,861	12,861	643	2,335	15,196	2,978	15,196	2,335	15,196	2,978
San Jose De Buan	6,923	400	7,323	20	7,323	20	20	5,002	5,002	250	934	5,936	1,384	5,936	934	5,936	1,384
San Sebastian	5,796	562	6,358	28	6,358	28	28	5,520	5,520	276	1,168	6,688	1,449	6,688	1,168	6,688	1,449
Santa Margarita	40,135	1,302	41,467	67	41,701	300	65,941	19,669	19,669	983	3,970	23,639	4,953	23,639	3,970	23,639	4,953
Santa Rita	41,400	2,250	43,650	112	44,584	1,046	67,583	12,269	12,269	613	2,802	15,071	3,415	15,071	2,802	15,071	3,415
Santo Nito	7,153		7,153		7,153			8,791	8,791	440	1,868	10,659	2,308	10,659	1,868	10,659	2,308
Tacapulan	5,474		5,474		5,474			5,994	5,994	300	1,401	7,395	1,701	7,395	1,401	7,395	1,701
Talibora	5,198	178	5,376	9	5,376	9	9	23,192	23,192	1,160	5,137	28,329	6,297	28,329	5,137	28,329	6,297
Tarangnan	9,085	681	9,766	34	9,766	34	34	22,452	22,452	1,123	5,604	28,056	6,727	28,056	5,604	28,056	6,727
Villarreal	8,073	533	8,606	27	8,606	27	27	18,100	18,100	905	3,503	21,603	4,408	21,603	3,503	21,603	4,408
Zumarraga	3,082	281	3,363	14	3,363	14	14	354,830	354,830	17,742	90,165	486,960	108,106	486,960	90,165	486,960	108,106
Provincial Total	740,968	51,815	792,783	2,591	819,869	29,677	967,469	41,745	41,745	17,742	90,165	486,960	108,106	486,960	90,165	486,960	108,106

10.3.2 Unit Cost of Required Equipment and Vehicles

Unit cost (CIF Manila) of equipment was referred to the market price in 1998 as follows.

(1) Medium size rotary drilling rig

Type: Truck-mounted top head drive mud circulation type

Rated drilling capacity: 150m depth for 250mm diameter of borehole

Equipment composition:

One unit of truck-mounted drilling rig

Each one set of operating accessories, drilling tools, casing tools and fishing tools

One set of spare parts (equivalent to 10% of above equipment/tool cost)

Unit cost: Peso 32,314,000 per set

(2) Medium size percussion drilling equipment

Type: Truck-mounted cable percussion type

Rated drilling capacity: 150m depth for 250mm diameter of borehole

Equipment composition:

One unit of truck-mounted drilling rig

Each one set of operating accessories, drilling tools, pipe handling tools and fishing tools

One set of spare parts (equivalent to 10% of above equipment/tool cost)

Unit cost: Peso 25,582,000 per set

(3) Well rehabilitation equipment

Equipment composition:

One unit of diesel engine driven air compressor (7.5 kg/cm² x 500 liter/min.)

One set of air hose and hose fittings

Unit cost: Peso 280,000 per set

(4) Service truck

Type: Diesel engine driven 4 tons truck equipped with crane

Unit cost: Peso 1,200,000 per unit

(5) Support vehicle

Type: Diesel engine driven pick-up truck with electric winch

Unit cost: Peso 590,000 per unit

(6) Refuse collection truck

Type: Closed type compactor truck with 5m³ of payload capacity

Unit cost: Peso 2,057,000 per unit including spare parts

(7) Maintenance tools

One set of maintenance tools for O&M of Level I facility shall be provided to respective municipality.

Unit cost: Peso 11,000 per unit

(8) Water quality testing kits

One set of water quality testing kits for O&M of Level I facility shall be provided to respective municipality.

Type: Ammonia-nitrogen/Iron testing kit

Unit cost: Peso 16,400 per unit

10.3.3 Cost for Laboratory

Required cost for new laboratory including building/facility and instruments/chemicals and additional cost for upgrading of existing laboratory are shown in Table 10.3.5 and Table 10.3.6, respectively.

Table 10.3.5 Cost for New Laboratory

(Cost: Peso)

Item	Unit	Unit Cost	Q'ty	Amount
1. Building				
New Building	m ²	15,000	57	855,000
2. Instruments				
Turbidity meter	set	37,500	1	37,500
Color meter	set	10,500	1	10,500
pH/Residual chlorine checker	set	16,000	1	16,000
Incubator	set	105,000	1	105,000
Refrigerator	set	26,800	2	53,600
Sterilizer	set	54,000	1	54,000
Water quality testing kits	set	320,000	1	320,000
Electric stove	set	1,100	1	1,100
Range hood	set	11,000	1	11,000
Sub-total				608,700
3. Accessories				
Sink	LS			
Working table	LS			
Shelf	LS			
Office desk	LS			
Chair	LS			
Sub-total				65,000
4. Glassware/Chemicals				
Glassware/Chemicals	LS			110,000
Total				1,638,700

Note: LS - Lump Sum

Source: DOH standard price in 1993

Unit Cost: Adjusted to 1998 Price Level

Table 10.3.6 Cost for Upgrading Laboratory

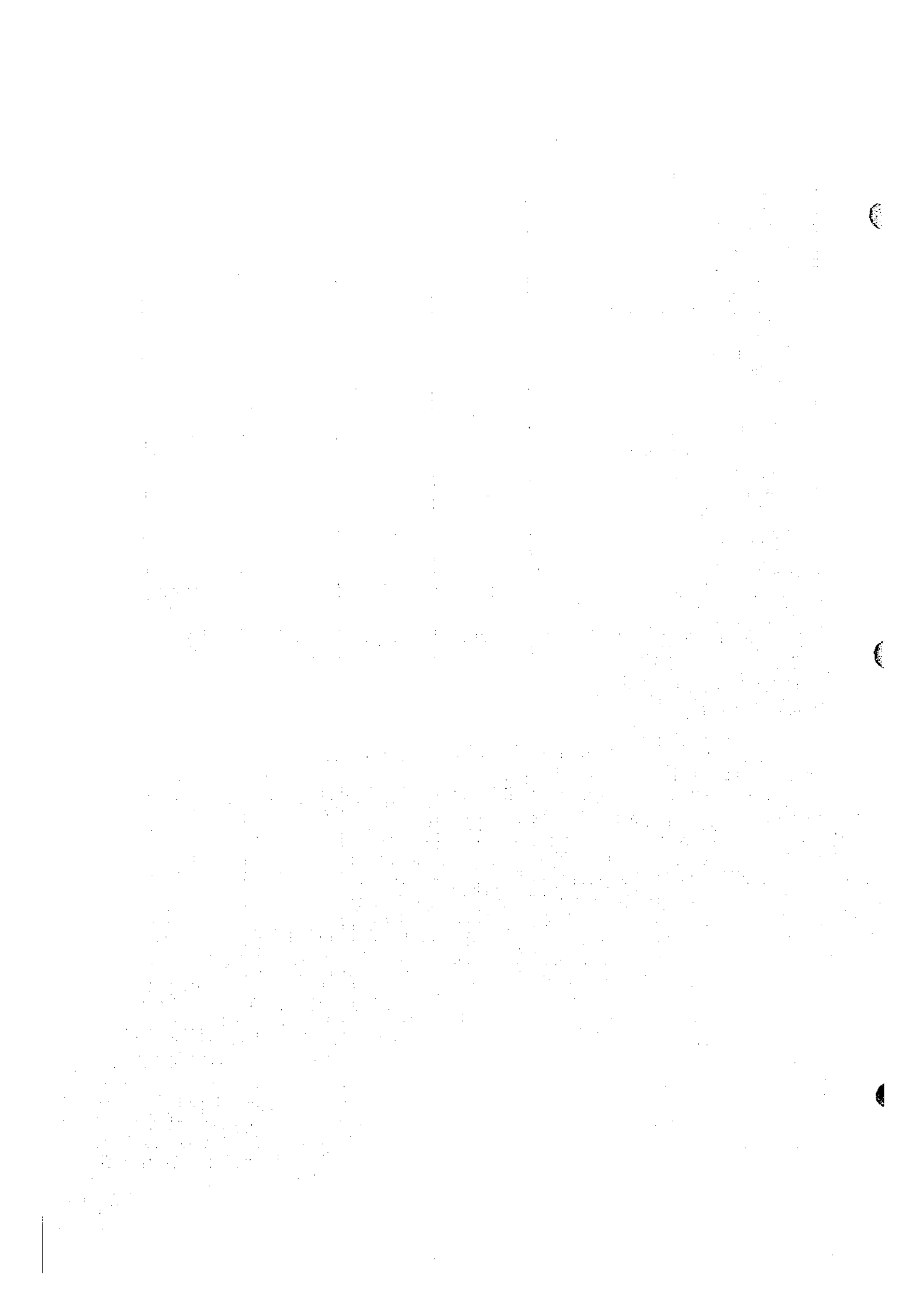
(Cost: Peso)

Item	Unit	Unit Cost	Q'ty	Amount
1. Instruments				
Turbidity meter	set	37,500	1	37,500
Color meter	set	10,500	1	10,500
pH/Residual chlorine checker	set	16,000	1	16,000
Incubator	set	105,000	0	0
Refrigerator	set	26,800	1	26,800
Sterilizer	set	54,000	0	0
Water quality testing kits	set	320,000	1	320,000
Electric stove	set	1,100	1	1,100
Range hood	set	11,000	1	11,000
Sub-total				422,900
2. Glassware/Chemicals				
Glassware/Chemicals	LS			55,000
Total				477,900

Note: LS - Lump Sum

Source: DOH standard price in 1993

Unit Cost: Adjusted to 1998 Price Level



11. FINANCIAL ARRANGEMENTS FOR MEDIUM-TERM DEVELOPMENT PLAN

11.3 Additional Funding Requirements

Percentages for Annual Investment

Percentages of annual investment for different fields of implementation activities are assumed for each sub-sector as general indication and summarized in Table 11.3.1. Assumptions on investment timing shall be subject to change, especially for individual projects depending on fund availability and relevant conditions such as land acquisition and institutional set-up.

Table 11.3.1 Percentages for Annual Investment

Sub-Sector	Component	2000	2001	2002	2003	2004	Total
Urban Water Supply	Level III System						
	Feasibility Study and Detail Design	50	50	0	0	0	100
	Construction & Supervision	0	20	30	30	20	100
	Institutional Development	30	20	20	20	10	100
Rural Water Supply	Level I Facility						
	Detail Design	50	50	0	0	0	100
	Construction & Supervision	0	20	30	30	20	100
	Institutional Development	30	30	20	10	10	100
	Level II System						
	Detail Design	100	0	0	0	0	100
	Construction & Supervision	50	50	0	0	0	100
	Institutional Development	50	50	0	0	0	100
Sanitation	Urban Household Toilet	12	22	22	22	22	100
	Rural Household Toilet	12	22	22	22	22	100
	Public School Toilet	12	22	22	22	22	100
	Public Toilet	12	22	22	22	22	100
	Disinfection of Level I Wells	12	22	22	22	22	100
	Detail Design	100	0	0	0	0	100
	Construction & Supervision	0	20	30	30	20	100
Institutional Development	30	30	20	10	10	100	

Note: Institutional development includes:

1. Capacity enhancement program
2. Community management program,
3. Health and hygiene education
4. Water quality surveillance, and
5. Administrative support.

Urban water supply:

- Engineering services for feasibility study and detailed design will be undertaken in the first two years.

- Construction work accompanied by supervisory services will be commenced partially in 2nd year and in full operation from 3rd year to 4th year.
- Community development will take place from the first year.

Rural water supply (Level I):

- Engineering services for detailed design will be undertaken during the first two years for Level I and completed within the first year for Level II.
- Construction work accompanied by supervisory services will be partially commenced from the first year and in full operation from 2nd year for Level I, while Level II will be completed within first two years.
- Community development and training will take place from the first year for Level I, while Level II will be completed within the first two years.

Sanitation:

- Engineering services for detailed design will be completed within the first year.
- Construction work accompanied by supervisory services will be partially commenced in the first year and in full operation from 2nd year.
- Community development and training will be in full operation from the first year.

11.4 Medium-Term Implementation Arrangements

11.4.2 Alternative Countermeasures

Comprehensive Investment Need Ranking for the Municipalities

Table 11.4.1 presents the comprehensive investment need ranking for the municipalities.

11.5 National Government Assisted Level I Water Supply and Sanitation Project

Presented in Table 11.5.1 are the available IRA for GOP-Assisted Level I Water Supply and Rural Sanitation Project for Eligible Municipalities. Allotment of IRA for rural water supply and rural sanitation comprise of provincial available IRA and municipal available IRA.

Table 11.5.2 presents the urban sanitation project for eligible municipalities, while Table 11.5.3 presents the summary of the total available IRA for GOP-assisted Level I Water Supply and Sanitation project.

The FIRR for Level I water supply project is calculated using a discount rate of 0.09 percent, as presented in Table 11.5.4.

Table 11.6.1 presents the investment program of GOP-assisted Level I Water supply and Sanitation Project.

O&M for Rural Water Supply

Table 11.6.2 shows the O&M cost for Level I facilities which include the reconstruction cost, rehabilitation cost and recurrent cost per household per year for O&M. Table 11.6.3 presents the O&M cost per HH per month by facility and proportion to monthly family income while Table 11.6.4 shows the family income.

O&M for Sanitation

Table 11.6.5 presents the O&M cost for rural sanitation while Table 11.6.6 presents the O&M cost for urban sanitation.

Table 11.4.1 Comprehensive Investment Need Ranking of the Municipalities

Name of Municipality/ City	Evaluation Factor (% of Underserved and Unserved Population or Households)						Score by Sub-Sector						Weighted Score by Sub-Sector						Synthetic Investment Need Ranking
	Urban Water Supply	Rural Water Supply	Urban Sanitation	Rural Sanitation	Urban Water Supply	Rural Sanitation	Urban Water Supply	Rural Water Supply	Urban Sanitation	Rural Sanitation	Urban Water Supply	Rural Water Supply	Urban Sanitation	Rural Sanitation	Urban Water Supply	Rural Water Supply	Urban Sanitation	Rural Sanitation	
Almagro	N.A.	21	58	69	69	69	0.76	0.20	1.00	1.00	1.00	0.05	0.25	0.25	0.25	0.25	0.25	0.74	21
Basey	N.A.	45	58	69	69	69	0.63	0.60	1.00	1.00	1.00	0.16	0.15	0.25	0.25	0.25	0.81	16	
Calbayog City	N.A.	29	58	69	69	69	0.57	0.20	1.00	1.00	1.00	0.14	0.05	0.25	0.25	0.25	0.69	25	
Calbiga	N.A.	30	58	69	69	69	0.27	1.00	1.00	1.00	1.00	0.07	0.25	0.25	0.25	0.25	0.82	13	
Catbalogan (Capital)	N.A.	51	58	69	69	69	0.49	0.80	1.00	1.00	1.00	0.12	0.20	0.25	0.25	0.25	0.76	20	
Daram	N.A.	28	58	69	69	69	0.83	0.20	1.00	1.00	1.00	0.21	0.05	0.25	0.25	0.25	0.86	8	
Gandara	N.A.	42	58	69	69	69	0.27	0.40	1.00	1.00	1.00	0.07	0.15	0.25	0.25	0.25	0.67	26	
Himalbanyan	N.A.	37	58	69	69	69	0.27	0.60	1.00	1.00	1.00	0.07	0.15	0.25	0.25	0.25	0.72	23	
Jabang	N.A.	49	58	69	69	69	0.86	0.60	1.00	1.00	1.00	0.22	0.15	0.25	0.25	0.25	0.87	7	
Marabut	N.A.	50	58	69	69	69	0.56	1.00	1.00	1.00	1.00	0.14	0.25	0.25	0.25	0.25	0.89	5	
Matiguao	N.A.	70	58	69	69	69	0.66	0.60	1.00	1.00	1.00	0.17	0.15	0.25	0.25	0.25	0.82	13	
Motong	N.A.	43	58	69	69	69	1.00	0.40	1.00	1.00	1.00	0.25	0.10	0.25	0.25	0.25	0.85	9	
Pagsanjan	N.A.	40	58	69	69	69	0.80	0.60	1.00	1.00	1.00	0.20	0.15	0.25	0.25	0.25	0.85	9	
Paranas (Wright)	N.A.	48	58	69	69	69	0.76	0.40	1.00	1.00	1.00	0.19	0.10	0.25	0.25	0.25	0.79	19	
Pinabacdao	N.A.	31	58	69	69	69	1.00	0.20	1.00	1.00	1.00	0.25	0.05	0.25	0.25	0.25	0.80	18	
San Jorge	N.A.	29	58	69	69	69	1.00	1.00	1.00	1.00	1.00	0.17	0.25	0.25	0.25	0.25	0.92	2	
San Jose De Buan	N.A.	86	58	69	69	69	0.66	1.00	1.00	1.00	1.00	0.17	0.25	0.25	0.25	0.25	0.90	3	
San Sebastian	N.A.	44	58	69	69	69	1.00	0.60	1.00	1.00	1.00	0.25	0.15	0.25	0.25	0.25	0.89	5	
Santa Margarita	N.A.	79	58	69	69	69	0.56	1.00	1.00	1.00	1.00	0.14	0.25	0.25	0.25	0.25	0.81	16	
Santa Rita	N.A.	40	58	69	69	69	0.83	0.40	1.00	1.00	1.00	0.21	0.10	0.25	0.25	0.25	0.85	3	
Santo Niño	N.A.	49	58	69	69	69	1.00	0.60	1.00	1.00	1.00	0.25	0.15	0.25	0.25	0.25	0.90	3	
Tagapul-an	N.A.	31	58	69	69	69	1.00	0.40	1.00	1.00	1.00	0.25	0.10	0.25	0.25	0.25	0.85	9	
Talalora	N.A.	16	58	69	69	69	0.76	0.20	1.00	1.00	1.00	0.19	0.05	0.25	0.25	0.25	0.74	21	
Tarangnan	N.A.	36	58	69	69	69	0.93	0.40	1.00	1.00	1.00	0.23	0.10	0.25	0.25	0.25	0.83	12	
Villares	N.A.	82	58	69	69	69	1.00	1.00	1.00	1.00	1.00	0.25	0.25	0.25	0.25	0.25	1.00	1	
Zumarraga	N.A.	21	58	69	69	69	0.59	0.20	1.00	1.00	1.00	0.15	0.05	0.25	0.25	0.25	0.70	24	
Provincial Total	N.A.	41	58	69	69	69													

Note:

(1) Scoring to Underserved and Unserved Percentage.

(2) Assumed Weight by Sub-Sector for Synthetic Evaluation by Municipality.

Score	Range of Underserved and Unserved Percentage						Allocated Weight
	61 < %	41 < %	21 < %	1 < %	0 < %	0	
1.0	61 < %	41 < %	21 < %	1 < %	0 < %	0	
0.8	51 < %	31 < %	21 < %	1 < %	0 < %	0	
0.6	41 < %	30 < %	21 < %	1 < %	0 < %	0	
0.4	31 < %	20 < %	11 < %	1 < %	0 < %	0	
0.2	21 < %	10 < %	1 < %	0 < %	0	0	

Table 11.5.4 FIRR for Level I Water Supply

Year	Nos. of Deep Well	Nos. of Shallow Well	Spring Devt	Construction Cost	Rehab. and Replacement Cost	O & M Cost	Cash Outflow	No. of Households	Water Rate Per Month Per Household	Loans and Subsidies	Cash Inflow	Net Value
1	0	0	0	0	0	0	0	0	182	0	0	0
2	5	5	3	5,308,000	0	0	5,308,000	195	182	0	425,880	(4,882,120)
3	7	7	4	7,281,800	0	53,080	7,334,880	465	182	0	1,015,560	(6,319,320)
4	7	7	4	7,281,800	0	125,898	7,407,698	735	182	0	1,605,240	(5,802,458)
5	4	4	2	3,947,600	0	198,716	4,146,316	885	182	0	1,932,840	(2,213,476)
6					0	238,192	238,192	885	182	0	1,932,840	1,694,648
7					0	238,192	238,192	885	182	0	1,932,840	1,694,648
8					0	238,192	238,192	885	182	0	1,932,840	1,694,648
9					0	238,192	238,192	885	182	0	1,932,840	1,694,648
10					0	238,192	238,192	885	182	0	1,932,840	1,694,648
11					0	238,192	238,192	885	182	0	1,932,840	1,694,648
12					805,500	238,192	1,043,692	885	182	0	1,932,840	889,148
13					1,127,700	238,192	1,365,892	885	182	0	1,932,840	566,948
14					1,127,700	238,192	1,365,892	885	182	0	1,932,840	566,948
15					644,400	238,192	882,592	885	182	0	1,932,840	1,050,248
16					0	238,192	238,192	885	182	0	1,932,840	1,694,648
17					0	238,192	238,192	885	182	0	1,932,840	1,694,648
18					0	238,192	238,192	885	182	0	1,932,840	1,694,648
19					0	238,192	238,192	885	182	0	1,932,840	1,694,648
20					0	238,192	238,192	885	182	0	1,932,840	1,694,648

Discount rate for NPV = 0.09 per year

TOTAL 2,497,046
 FIRR 1.3%
 NPV 701,006

Table 11.6.1 Investment Program of GOP-Assisted Level I Water Supply and Sanitation Project

Category	Total Amount	1st year	2nd year	3rd year	4th year	5th year
A. Const. & Civil Works						
1. Water Supply	23,818,620	0	4,763,724	7,145,586	7,145,586	4,763,724
2. Sanitation	42,968,500	0	8,593,700	12,890,550	12,890,550	8,593,700
3. Land Acquisition	360,000	0	72,000	108,000	108,000	72,000
B. Equip./Logistic Support	1,148,300	0	1,148,300	0	0	0
C. Consultancy Services						
1. Hydrogeological Survey	1,148,000	1,148,000	0	0	0	0
2. D/D and Const. Sv.	7,386,183	2,954,473	1,477,237	1,477,237	738,618	738,618
D. Institutional Devt.						
1. Capacity Enhanc. Prog.	3,200,000	960,000	960,000	640,000	520,000	520,000
2. Commu. Manag. Prog.	1,023,150	306,945	306,945	204,630	102,315	102,315
3. Health & Hygiene Educ.	171,000	51,300	51,300	34,200	17,100	17,100
4. Water Quality Surveil.	66,500	19,950	19,950	13,300	6,650	6,650
5. NGO Assistance	114,000	34,200	34,200	22,800	11,400	11,400
6. Administrative Support	1,200,000	360,000	360,000	240,000	120,000	120,000
E. Physical Contingency (10% of sub-total A+B+C+D)	8,260,425	583,487	1,778,736	2,277,630	2,146,022	1,474,551
Total (A+B+C+D+E+F)	90,864,679	6,418,355	19,566,091	25,053,933	23,606,241	16,220,058
F. Others						
1. Price Contingency	27,732,623	1,958,933	5,971,727	7,646,660	7,204,813	4,950,491
2. Value Added Tax (VAT)	3,552,748	250,933	765,021	979,592	922,988	634,193
Grand Total	122,150,049	8,628,242	26,302,839	33,680,185	31,754,042	21,804,742

Note: Item A includes equity of users.

O&M Cost for GOP Assisted Level I Water Supply Project

Table 11.6.2 O&M Cost for Level I Facilities

	Deep Well	Shallow Well	Spring Dev't
Nos. of Facilities to be Constructed	23	23	13
Nos. of HHs to be Served	345	345	195
Reconstruction Cost (Peso)			
Unit Cost	531,000	82,400	747,000
Ttl. Reconst. Cost	12,213,000	1,895,200	
Ttl. Reconst. Cost/year	610,650	189,520	
Cost per HH/year	1,770	549	
Rehabilitation Cost (Peso)			
Unit Cost	78,700		
Ttl. Rehab. Cost	1,810,100		
Ttl. Rehab. Cost/year	181,010		
Cost per HH/year	525		
Recurrent Cost for O&M (Peso)			
Cost per HH/year	100	50	50
O&M Cost Total (Peso)			
Cost per HH/year	2,395	599	50

Note: 1) Reconstruction of deep and shallow wells shall be conducted every 20 and 10 years, respectively.

Spring development is excluded due to more than 20 years facility life.

2) Rehabilitation is applicable to deep wells every 10 years.

Table 11.6.3 O&M Cost per HH/month by Facility and Proportion to Monthly Family Income

	Deep Well	Shallow Well	Spring Dev't
O&M Cost per HH/month	200	50	4
Proportion (Mean)	2.7%	0.7%	0.1%
Proportion (Median)	3.5%	0.9%	0.1%

Table 11.6.4 Family Income (Unit: Pesos)

Annual ¹⁾		Monthly ²⁾	
Mean	Median	Mean	Median
45,864	34,606	7,518	5,673

Note: 1) 1994 NSO Family Income and Expenditure Survey

2) Estimated value in 2004 applying 7% inflation rate/year

O&M Cost for GOP Assisted Sanitation Project

Table 11.6.5 O&M Cost for Rural Sanitation (Unit: Pesos)

Nos. of Facilities to be Constructed		Unit Construction Cost		Yearly O&M Cost
Public Toilets	School Toilets	Public Toilets	School Toilets	
0	103	358,400	233,500	1,202,525

Note: O&M cost includes the salaries of maintenance staff, cost of pumping sludge from septic tanks, and rehabilitation cost, which is assumed to be equivalent to 5% of construction cost.

Table 11.6.6 O&M Cost for Urban Sanitation (Unit: Pesos)

Nos. of Facilities to be Constructed		Unit Construction Cost		Yearly O&M Cost
Public Toilets	School Toilets	Public Toilets	School Toilets	
0	36	358,400	233,500	420,300

12. MONITORING FOR MEDIUM-TERM DEVELOPMENT PLAN

12.4 Evaluation of Plan Implementation and Updating the PW4SP

Table 12.4.1 Draft Formats for Annual Sector Performance Summary Report (Provincial and Municipal Levels)

Form P-1

Province of _____
 Provincial Water & Sanitation Monitoring System
 Annual Sector Performance Summary Report
 Period Covered : _____ to _____

I. Service Coverage

Municipality (1)	LAST YEAR				THIS YEAR			
	Population (2)	Persons with Safe Water & Sanitary Toilets (3)	Persons with Safe Water Only (4)	Persons with Sanitary Toilets Only (5)	Population (6)	Persons with Safe Water & Sanitary Toilets (7)	Persons with Safe Water Only (8)	Persons with Sanitary Toilets Only (9)
1.								
2.								
3.								
4.								
5.								
6.								
7.								
8.								
9.								
10.								
11.								
12.								
13.								
14.								
15.								
Total								
% Served								
	Targets							

II. Sources & Uses of Capital Development Funds

Source of Fund (1)	Budget for Water Supply & Sanitation (2)	Actual Disbursement (3)	Uses of Funds							
			Water Source Development (4)	Water Supply Transmission (5)	Water Storage/Treatment & Distribution (6)	Household Toilets (7)	School Toilets (8)	Public Toilets (9)	Others (10)	
A. Local Funds.										
Provincial Funds										
Municipal Funds										
A.										
B.										
C.										
D.										
E.										
F.										
G.										
H.										
I.										
J.										
SUB-TOTAL										
B. National Funds										
DPWH										
DOH										
LWUA										
SUB-TOTAL										
C. External Funds										
NGO										
NGO										
NGO										
SUB-TOTAL										
TOTAL										

V. Water Resources: Report any major changes in the availability and quality of water in the province. Attach map.

VI. Unit Cost Summary : Based on projects actually implemented and paid for during the reporting period, indicate the following average unit costs

1. Shallow Well (w/o hand pump) = _____ / Meter Depth
2. Deep Well (w/o pump) = _____ / Meter Depth
3. Pipeline = _____ / meter
4. Storage Tanks = _____
5. Others, _____

Municipality of _____
 Provincial Water & Sanitation Monitoring System

Annual Sector Performance Summary Report

Period Covered: _____ to _____

I. Service Coverage

Name of Barangay (1)	LAST YEAR				THIS YEAR			
	Population (2)	Persons with Safe Water & Sanitary Toilets (3)	Persons with Safe Water Only (4)	Persons with Sanitary Toilets Only (5)	Population (6)	Persons with Safe Water & Sanitary Toilets (7)	Persons with Safe Water Only (8)	Persons with Sanitary Toilets Only (9)
1.								
2.								
3.								
4.								
5.								
6.								
7.								
8.								
9.								
10.								
11.								
12.								
13.								
14.								
15.								
16.								
17.								
Total								
% Served								

II. Sources & Uses of Capital Development Funds.

Source of Funds (1)	Budget (2)	Actual Disbursement (3)	Uses of Funds							Others (10)	
			Water Source Development (4)	Water Supply Transmission (5)	Water Storage/ Treatment & Distribution (6)	Household Toilets (7)	School Toilets (8)	Public Toilets (9)			
Municipal Funds											
Barangay Funds											
A.											
B.											
C.											
D.											
E.											
F.											
G.											
H.											
I.											
J.											
K.											
L.											
M.											
N.											
O.											
P.											
Q.											
R.											
S.											
T.											
U.											
V.											
SUB-TOTAL											
NGO											
NGO											
SUB-TOTAL											
TOTAL											





JICA