10 COST ESTIMATES FOR FUTURE SECTOR DEVELOPMENT

10.2 Assumption for Cost Estimates

(1) Unit Construction Cost

The base information in previous PW4SP, such as bill of quantities and unit cost of respective component facilities was fully utilized, which was referred to the standards of relevant sector agencies. Escalation rates experienced between 1995 and 1998 in terms of major construction materials and equipment rental were studied using NSO statistics (wholesale price index). Market prices of these items were also canvassed to compare with calculated prices in 1998 from those in 1995 in application of the escalation rates.

In general, escalated prices meet canvassed prices in most of the materials. Escalation rates between 1995 and 1998 were employed in round figures. Some of them (pipe materials, etc.) were, however, deferred at previous level due to considerable price stabilization in the last year.

The Table 10.2.1 shows the prices of the major materials by facility.

Table 10.2.1 Price of Major Materials by Facility

Major Materials	Water Supply			Sanitation			Projection by Major Materials					Canvassed & Collected Price		Comparison (1), (2) & (3)
							NSO Wholesale Price Index			Price				
	L-I	L-II	L-III	ST, PT	Flush type	VIP, Dry	1995	1998	Escalation	1995	1998(1)	DPWH(2)	CIA(3)	
1. Aggregate	x	x	x	x	x	x	311.6	367.5	5.7%					Almost the same with (2) & (3).
Sand										304	359	330	350	
Gravel										385	454	418	500	
2. Cement	x	x	x	x	x	x	197.4	214.1	2.7%	117	127	126	105	ditto
3. Fuel	x		x				601.6	742.6	7.3%	1,100	1,358	1306		ditto
4. Metal pipe	x	x	x				208.7	226.3	2.7%					Price of GI casing is almost the same with (2) and screen is 12% lower than (2).
4" x 3m, GI										2,625	2,846	2763		
4" x 3m, Screen										4,313	4,667	5291		
5. PVC pipe	x	x	x	x			199.2	223.4	3.9%					Price of PVC pipe is almost the same with (2) and 7% higher than (3).
2" x 3m										813	912	882	852	
1-1/2" elbow										13	15		40	
6. Reinforcing	x	x	x	x	x	x	201.4	221.9	3.3%					Almost the same with (3).
12mm x 6m										68	75		75	
10mm x 6m										49	54		45	
7. Lumber				x	x	x	268.5	296.8	3.4%					
8. Paint				x			128.0	140.1	3.1%					Almost the same with (3).
Enamel, QDE										266	291		310	
9. Machinery	x		x				254.8	254.8	0.0%					

L-I: Deep well/shallow well, L-II: Major materials are the same as those of L-I spring development,
ST: School toilet, PT: Public toilet, Flush type: Flush water sealed w/ septic tank and Pour flush w/ double latrine,
CIA: Construction Industry Authority of the Philippines, prevailing prices for the month of December 1998

GI: Galvanized iron steel pipe for well casing, Screen: Low carbon steel and wound wire type

Table 10.2.2 (a) Unit Cost of Level I (Gravel Packed Deep Well - 40m Depth)

(Cost: Peso)

Description	Qty.	Unit	Unit Cost	Amount
A. Mobilization/Demobilization/Site Preparation		LS		52,000
B. Drilling of Well & Installation of Steel Casing/Screen				
1. Materials				
(1) 100mm x 3m Steel Casing with coupling	11	pcs.	2,846	31,306
(2) 100mm x 3m Steel Casing with one end closed	1	pc.	2,997	2,997
(3) 100mm x 3m Low Carbon Steel Screen	2	pcs.	4,667	9,334
(4) Casing Centralizer	2	set	1,925	3,850
2. Labor, Fuel, Lubricant and others				
Well Drilling for 40 m depth at 200mm borehole	40	m	2,500	100,000
3. Borehole Logging	1	no	16,000	16,000
4. Freight Cost (10% of Materials)		LS		4,749
Sub-Total of B				**168,236**
C. Well Development and Pumping Test				
Well Development	24	hr.	5,500	132,000
Pumping Test	6	hr.	5,000	30,000
Sub-Total of C				**162,000**
D. Gravel Packing, Installation of Handpump and Construction of Platform				
1. Materials				
(1) Improved Deep Well Cylinder Pump (Afridev Type)	1	set	11,815	11,815
(2) 63mm x 6m Riser Pipe and Pump Rod	6	pcs.	1,880	11,280
(3) #10 Sieved Gravel	1	cu.m	1,026	1,026
(4) Coarse Sand	1	cu.m	359	359
(5) Cement for Sanitary Seal	4	bags	127	508
(6) Pump Base and Platform				
1) Cement	4	bags	127	508
2) Gravel	2	cu.m	454	908
3) Sand	1	cu.m	359	359
4) Plywood (1,200mm x 2,400mm x 6mm)	1	pc.	294	294
5) Form Lumber (50mm x 75mm x 1,800mm)	6	pcs.	52	312
6) Nail	1	kg.	40	40
Sub-Total of D-1				27,409
2. Labor (40% of D-1.)				10,964
3. Freight Cost (10% of Materials)		LS		2,741
Sub-Total of D				**41,114**
E. Indirect Cost				
Profit (10% of A, B, C & D)				42,335
Overhead Expense (13% of A, B, C & D)				55,036
VAT (10% of Labor, Profit & Overhead Expense)				20,834
Sub-Total of E				**63,169**
Total of Construction Cost (A+B+C+D+E)				**354,519**
F. Estimated Government Expenses				
1. Preliminary & Detailed Engineering Cost		LS		3,600
2. Construction Supervision		LS		2,400
3. Water Quality Analysis		LS		1,400
Sub-Total of F				**7,400**
GRAND TOTAL				**361,919**
SAY				**361,900**

Note: LS - Lump Sum
Source: DPWH standard price in 1994 & LWUA Water Supply Feasibility Study Methodology Manual 1998
Unit Cost: Adjusted to 1998 Price Level

Table 10.2.2 (b) Unit Cost of Level I (Natural Gravel packed Deep Well - 40m Depth)

(Cost: Peso)

Description	Qty.	Unit	Unit Cost	Amount
A. Mobilization/Demobilization		**LS**		**52,000**
B. Drilling of Well & Installation of Steel Casing/Screen				
1. Materials				
(1) 100mm x 3m Steel Casing with coupling	11	pcs.	2,846	31,306
(2) 100mm x 3m Steel Casing with one end closed	1	pc.	2,997	2,997
(3) 100mm x 3m Low Carbon Steel Screen	2	pcs.	4,667	9,334
(4) Casing Centralizer	0	set	1,925	0
2. Labor, Fuel, Lubricant and others				
Well Drilling for 40 m depth at 150mm borehole	40	m	1,600	64,000
3. Borehole Logging	1	no	16,000	16,000
4. Freight Cost (10% of Materials)		LS		4,364
Sub-Total of B				**128,001**
C. Well Development and Pumping Test				
Well Development	12	hr.	5,500	66,000
Pumping Test	6	hr.	5,000	30,000
Sub-Total of C				**96,000**
D. Gravel Packing, Installation of Handpump and Construction of Platform				
1. Materials				
(1) Improved Deep Well Cylinder Pump (Afridev Type)	1	set	11,815	11,815
(2) 63mm x 6m Riser Pipe and Pump Rod	6	pcs.	1,880	11,280
(3) #10 Sieved Gravel	0	cu.m	1,026	0
(4) Coarse Sand	1	cu.m	359	359
(5) Cement for Sanitary Seal	3	bags	127	381
(6) Pump Base and Platform				
1) Cement	4	bags	127	508
2) Gravel	2	cu.m	454	908
3) Sand	1	cu.m	359	359
4) Plywood (1,200mm x 2,400mm x 6mm)	1	pc.	294	294
5) Form Lumber (50mm x 75mm x 1,800mm)	6	pcs.	52	312
6) Nail	1	kg.	40	40
Sub-Total of D-1				26,250
2. Labor (40% of D-1.)				10,502
3. Freight Cost (10% of Materials)		LS		2,626
Sub-Total of D				**39,384**
E. Indirect Cost				
Profit (10% of A, B, C & D)				31,539
Overhead Expense (13% of A, B, C & D)				41,000
VAT (10% of Labor, Profit & Overhead Expense)				14,704
Sub-Total of E				**46,243**
Total of Construction Cost (A+B+C+D+E)				**295,628**
F. Estimated Government Expenses				
1. Preliminary & Detailed Engineering Cost		LS		3,600
2. Construction Supervision		LS		2,400
3. Water Quality Analysis		LS		1,400
Sub-Total of F				**7,400**
GRAND TOTAL				**303,028**
SAY				**303,000**

Note: LS - Lump Sum
Source: DPWH standard price in 1994 & LWUA Water Supply Feasibility Study Methodology Manual 1998
Unit Cost: Adjusted to 1998 Price Level

Table 10.2.2(c) Unit Cost of Level I (Gravel Packed Deep Well - 40m Depth) for Acid Water

(Cost Peso)

Description	Qty.	Unit	Unit Cost	Amount
A. Mobilization/Demobilization/Site Preparation		LS		52,000
B. Drilling of Well & Installation of Steel Casing/Screen				
1. Materials				
(1) 100mm x 3m PVC Casing with Socket	11	pcs.	2,038	22,418
(2) 100mm x 3m PVC Casing with Plug	1	pc.	980	980
(3) 100mm x 3m Stainless Steel Screen	2	pcs.	12,700	25,400
(4) Casing Centralizer	2	set	1,925	3,850
2. Labor, Fuel, Lubricant and others				
Well Drilling for 40 m depth at 200mm borehole	40	m	2,500	100,000
3. Borehole Logging	1	no	16,000	16,000
4. Freight Cost (10% of Materials)		LS		5,265
Sub-Total of B				**173,913**
C. Well Development and Pumping Test				
Well Development	24	hr.	5,500	132,000
Pumping Test	6	hr.	5,000	30,000
Sub-Total of C				**162,000**
D. Gravel Packing, Installation of Handpump and				
1. Materials				
(1) Improved Deep Well Cylinder Pump (Afridev Type)	1	set	11,815	11,815
(2) 63mm x 3m PVC Riser Pipe and SUS Pump Rod	12	pcs.	2,450	29,400
(3) #10 Sieved Gravel	1	cu.m	1,026	1,026
(4) Coarse Sand	1	cu.m	359	359
(5) Cement for Sanitary Seal	4	bags	127	508
(6) Pump Base and Platform				
1) Cement	4	bags	127	508
2) Gravel	2	cu.m	454	908
3) Sand	1	cu.m	359	359
4) Plywood (1,200mm x 2,400mm x 6mm)	1	pc.	294	294
5) Form Lumber (50mm x 75mm x 1,800mm)	6	pcs.	52	312
6) Nail	1	kg.	40	40
Sub-Total of D-1				45,529
2. Labor (40% of D-1.)				18,212
3. Freight Cost (10% of Materials)		LS		4,553
Sub-Total of D				68,294
E. Indirect Cost				
Profit (10% of A, B, C & D)				45,621
Overhead Expense (13% of A, B, C & D)				59,307
VAT (10% of Labor, Profit & Overhead Expense)				22,314
Sub-Total of E				**67,935**
Total of Construction Cost (A+B+C+D+E)				**392,142**
F. Estimated Government Expenses				
1. Preliminary & Detailed Engineering Cost		LS		3,600
2. Construction Supervision		LS		2,400
3. Water Quality Analysis		LS		1,400
Sub-Total of F				**7,400**
GRAND TOTAL				399,542
SAY				399,500

Note: LS - Lump Sum
Source: DPWH standard price in 1994 & LWUA Water Supply Feasibility Study Methodology Manual 1998
Unit Cost: Adjusted to 1998 Price Level

Table 10.2.3 (a) Unit Cost of Level I (Gravel Packed Deep Well - 80m Depth)

(Cost: Peso)

Description	Qty.	Unit	Unit Cost	Amount
A. Mobilization/Demobilization/Site Preparation		LS		54,000
B. Drilling of Well & Installation of Steel Casing/Screen				
1. Materials				
(1) 100mm x 3m Steel Casing with coupling	24	pcs.	2,846	68,304
(2) 100mm x 3m Steel Casing with one end closed	1	pc.	2,997	2,997
(3) 100mm x 3m Low Carbon Steel Screen	2	pcs.	4,667	9,334
(4) Casing Centralizer	2	set	1,925	3,850
2. Labor, Fuel, Lubricant and others				
Well Drilling for 40 m depth at 200mm borehole	80	m	2,500	200,000
3. Borehole Logging	1	no	18,000	18,000
4. Freight Cost (10% of Materials)		LS		8,449
Sub-Total of B				**310,934**
C. Well Development and Pumping Test				
Well Development	24	hr.	5,500	132,000
Pumping Test	6	hr.	5,000	30,000
Sub-Total of C				**162,000**
D. Gravel Packing, Installation of Handpump and Construction of Platform				
1. Materials				
(1) Improved Deep Well Cylinder Pump (Afridev Type)	1	set	11,815	11,815
(2) 63mm x 6m Riser Pipe and Pump Rod	8	pcs.	1,880	15,040
(3) #10 Sieved Gravel	1	cu.m	1,026	1,026
(4) Coarse Sand	1	cu.m	359	359
(5) Cement for Sanitary Seal	4	bags	127	508
(6) Pump Base and Platform				
1) Cement	4	bags	127	508
2) Gravel	2	cu.m	454	908
3) Sand	1	cu.m	359	359
4) Plywood (1,200mm x 2,400mm x 6mm)	1	pc.	294	294
5) Form Lumber (50mm x 75mm x 1,800mm)	6	pcs.	52	312
6) Nail	1	kg.	40	40
Sub-Total of D-1				31,169
2. Labor (40% of D-1.)				12,468
3. Freight Cost (10% of Materials)		LS		3,117
Sub-Total of D				**46,754**
E. Indirect Cost				
Profit (10% of A, B, C & D)				57,369
Overhead Expense (13% of A, B, C & D)				74,579
VAT (10% of Labor, Profit & Overhead Expense)				34,442
Sub-Total of E				**91,811**
Total of Construction Cost (A+B+C+D+E)				**533,499**
F. Estimated Government Expenses				
1. Preliminary & Detailed Engineering Cost		LS		3,600
2. Construction Supervision		LS		2,400
3. Water Quality Analysis		LS		1,400
Sub-Total of F				**7,400**
GRAND TOTAL				**540,899**
SAY				**540,900**

Note: LS - Lump Sum
Source: DPWH standard price in 1994 & LWUA Water Supply Feasibility Study Methodology Manual 1998
Unit Cost: Adjusted to 1998 Price Level

Table 10.2.3 (b) Unit Cost of Level I (Natural Gravel Packed Deep Well - 80m Depth)

(Cost: Peso)

Description	Qty.	Unit	Unit Cost	Cost
A. Mobilization/Demobilization/Site Preparation		LS		54,000
B. Drilling of Well & Installation of Steel Casing/Screen				
1. Materials				
(1) 100mm x 3m Steel Casing with coupling	24	pcs.	2,846	68,304
(2) 100mm x 3m Steel Casing with one end closed	1	pc.	2,997	2,997
(3) 100mm x 3m Low Carbon Steel Screen	2	pcs.	4,667	9,334
(4) Casing Centralizer	0	set	1,925	0
2. Labor, Fuel, Lubricant and others				
Well Drilling for 80 m depth at 150mm borehole	80	m	1,600	128,000
3. Borehole Logging	1	no	18,000	18,000
4. Freight Cost (10% of Materials)		LS		8,064
Sub-Total of B				**234,699**
C. Well Development and Pumping Test				
Well Development	12	hr.	5,500	66,000
Pumping Test	6	hr.	5,000	30,000
Sub-Total of C				**96,000**
D. Gravel Packing, Installation of Handpump and Construction of Platform				
1. Materials				
(1) Improved Deep Well Cylinder Pump (Afridev Type)	1	set	11,815	11,815
(2) 63mm x 6m Riser Pipe and Pump Rod	8	pcs.	1,880	15,040
(3) #10 Sieved Gravel	0	cu.m	1,026	0
(4) Coarse Sand	1	cu.m	359	359
(5) Cement for Sanitary Seal	3	bags	127	381
(6) Pump Base and Platform				
1) Cement	4	bags	127	508
2) Gravel	2	cu.m	454	908
3) Sand	1	cu.m	359	359
4) Plywood (1,200mm x 2,400mm x 6mm)	1	pc.	294	294
5) Form Lumber (50mm x 75mm x 1,800mm)	6	pcs.	52	312
6) Nail	1	kg.	40	40
Sub-Total of D-1				30,016
2. Labor (40% of D-1.)				12,006
3. Freight Cost (10% of Materials)		LS		3,002
Sub-Total of D				**45,024**
E. Indirect Cost				
Profit (10% of A, B, C & D)				42,972
Overhead Expense (13% of A, B, C & D)				55,864
VAT (10% of Labor, Profit & Overhead Expense)				23,884
Sub-Total of E				**66,856**
Total of Construction Cost (A+B+C+D+E)				**430,579**
F. Estimated Government Expenses				
1. Preliminary & Detailed Engineering Cost		LS		3,600
2. Construction Supervision		LS		2,400
3. Water Quality Analysis		LS		1,400
Sub-Total of F				**7,400**
GRAND TOTAL				**437,979**
SAY				**438,000**

Note: LS - Lump Sum
Source: DPWH standard price in 1994 & LWUA Water Supply Feasibility Study Methodology Manual 1998
Unit Cost: Adjusted to 1998 Price Level

Table 10.2.3 (c)

Table 10.2.3 (c) Unit Cost of Level I (Gravel Packed Deep Well - 80m Depth) for Acid Water

(Cost: Peso)

Description	Qty.	Unit	Unit Cost	Cost
A. Mobilization/Demobilization/Site Preparation		**LS**		**54,000**
B. Drilling of Well & Installation of Steel Casing/Screen				
1. Materials				
(1) 100mm x 3m PVC Casing with Socket	24	pcs.	2,038	48,912
(2) 100mm x 3m PVC Casing with Plug	1	pc.	980	980
(3) 100mm x 3m Stainless Steel Screen	2	pcs.	12,700	25,400
(4) Casing Centralizer	2	set	1,925	3,850
2. Labor, Fuel, Lubricant and others				
Well Drilling for 40 m depth at 200mm borehole	80	m	2,500	200,000
3. Borehole Logging	1	no	18,000	18,000
4. Freight Cost (10% of Materials)		LS		7,914
Sub-Total of B				**305,056**
C. Well Development and Pumping Test				
Well Development	24	hr.	5,500	132,000
Pumping Test	6	hr.	5,000	30,000
Sub-Total of C				**162,000**
D. Gravel Packing, Installation of Handpump and Construction of Platform				
1. Materials				
(1) Improved Deep Well Cylinder Pump (Afridev Type)	1	set	11,815	11,815
(2) 63mm x 3m PVC Riser Pipe and SUS Pump Rod	16	pcs.	2,450	39,200
(3) #10 Sieved Gravel	1	cu.m	1,026	1,026
(4) Coarse Sand	1	cu.m	359	359
(5) Cement for Sanitary Seal	4	bags	127	508
(6) Pump Base and Platform				
1) Cement	4	bags	127	508
2) Gravel	2	cu.m	454	908
3) Sand	1	cu.m	359	359
4) Plywood (1,200mm x 2,400mm x 6mm)	1	pc.	294	294
5) Form Lumber (50mm x 75mm x 1,800mm)	6	pcs.	52	312
6) Nail	1	kg.	40	40
Sub-Total of D-1				55,329
2. Labor (40% of D-1.)				22,132
3. Freight Cost (10% of Materials)		LS		5,533
Sub-Total of D				**82,994**
E. Indirect Cost				
Profit (10% of A, B, C & D)				60,405
Overhead Expense (13% of A, B, C & D)				78,527
VAT (10% of Labor, Profit & Overhead Expense)				36,106
Sub-Total of E				**96,511**
Total of Construction Cost (A+B+C+D+E)				**568,561**
F. Estimated Government Expenses				
1. Preliminary & Detailed Engineering Cost		LS		3,600
2. Construction Supervision		LS		2,400
3. Water Quality Analysis		LS		1,400
Sub-Total of F				**7,400**
GRAND TOTAL				**575,961**
SAY				**576,000**

Note: LS - Lump Sum
Source: DPWH standard price in 1994 & LWUA Water Supply Feasibility Study Methodology Manual 1998
Unit Cost Adjusted to 1998 Price Level

Table 10.2.4 (a) Unit Cost of Level I (Gravel Packed Deep Well - 120m Depth)

(Cost: Peso)

Description	Qty.	Unit	Unit Cost	Amount
A. Mobilization/Demobilization/Site Preparation		LS		56,000
B. Drilling of Well & Installation of Steel Casing/Screen				
1. Materials				
(1) 100mm x 3m Steel Casing with coupling	37	pcs.	2,846	105,302
(2) 100mm x 3m Steel Casing with one end closed	1	pc.	2,997	2,997
(3) 100mm x 3m Low Carbon Steel Screen	2	pcs.	4,667	9,334
(4) Casing Centralizer	2	set	1,925	3,850
2. Labor, Fuel, Lubricant and others				
Well Drilling for 120 m depth at 200mm borehole	120	m	2,500	300,000
3. Borehole Logging	1	no	20,000	20,000
4. Freight Cost (10% of Materials)		LS		12,148
Sub-Total of B				**453,631**
C. Well Development and Pumping Test				
Well Development	24	hr.	5,500	132,000
Pumping Test	6	hr.	5,000	30,000
Sub-Total of C				**162,000**
D. Gravel Packing, Installation of Handpump and Construction of Platform				
1. Materials				
(1) Improved Deep Well Cylinder Pump (Afridev Type)	1	set	11,815	11,815
(2) 63mm x 6m Riser Pipe and Pump Rod	10	pcs.	1,880	18,800
(3) #10 Sieved Gravel	1	cu.m	1,026	1,026
(4) Coarse Sand	1	cu.m	359	359
(5) Cement for Sanitary Seal	4	bags	127	508
(6) Pump Base and Platform				
1) Cement	4	bags	127	508
2) Gravel	2	cu.m	454	908
3) Sand	1	cu.m	359	359
4) Plywood (1,200mm x 2,400mm x 6mm)	1	pc.	294	294
5) Form Lumber (50mm x 75mm x 1,800mm)	6	pcs.	52	312
6) Nail	1	kg.	40	40
Sub-Total of D-1				34,929
2. Labor (40% of D-1.)				13,972
3. Freight Cost (10% of Materials)		LS		3,493
Sub-Total of D				**52,394**
E. Indirect Cost				
Profit (10% of A, B, C & D)				72,403
Overhead Expense (13% of A, B, C & D)				94,123
VAT (10% of Labor, Profit & Overhead Expense)				48,050
Sub-Total of E				**120,453**
Total of Construction Cost (A+B+C+D+E)				**712,478**
F. Estimated Government Expenses				
1. Preliminary & Detailed Engineering Cost		LS		3,600
2. Construction Supervision		LS		2,400
3. Water Quality Analysis		LS		1,400
Sub-Total of F				**7,400**
GRAND TOTAL				**719,878**
SAY				**719,900**

Note: LS - Lump Sum
Source: DPWH standard price in 1994 & LWUA Water Supply Feasibility Study Methodology Manual 1998
Unit Cost: Adjusted to 1998 Price Level

Table 10.2.4 (b) Unit Cost of Level I (Natural Gravel Packed Deep Well - 120m Depth)

(Cost: Peso)

Description	Qty.	Unit	Unit Cost	Cost
A. Mobilization/Demobilization/Site Preparation		LS		56,000
B. Drilling of Well & Installation of Steel Casing/Screen				
1. Materials				
(1) 100mm x 3m Steel Casing with coupling	37	pcs.	2,846	105,302
(2) 100mm x 3m Steel Casing with one end closed	1	pc.	2,997	2,997
(3) 100mm x 3m Low Carbon Steel Screen	2	pcs.	4,667	9,334
(4) Casing Centralizer	0	set	1,925	0
2. Labor, Fuel, Lubricant and others				
Well Drilling for 120 m depth at 150mm borehole	120	m	1,600	192,000
3. Borehole Logging	1	no	20,000	20,000
4. Freight Cost (10% of Materials)		LS		11,763
Sub-Total of B				341,396
C. Well Development and Pumping Test				
Well Development	12	hr.	5,500	66,000
Pumping Test	6	hr.	5,000	30,000
Sub-Total of C				96,000
D. Gravel Packing, Installation of Handpump and Construction of Platform				
1. Materials				
(1) Improved Deep Well Cylinder Pump (Afridev Type)	1	set	11,815	11,815
(2) 63mm x 6m Riser Pipe and Pump Rod	10	pcs.	1,880	18,800
(3) #10 Sieved Gravel	0	cu.m	1,026	0
(4) Coarse Sand	1	cu.m	359	359
(5) Cement for Sanitary Seal	3	bags	127	381
(6) Pump Base and Platform				
1) Cement	4	bags	127	508
2) Gravel	2	cu.m	454	908
3) Sand	1	cu.m	359	359
4) Plywood (1,200mm x 2,400mm x 6mm)	1	pc.	294	294
5) Form Lumber (50mm x 75mm x 1,800mm)	6	pcs.	52	312
6) Nail	1	kg.	40	40
Sub-Total of D-1				33,776
2. Labor (40% of D-1.)				13,510
3. Freight Cost (10% of Materials)		LS		3,378
Sub-Total of D				50,664
E. Indirect Cost				
Profit (10% of A, B, C & D)				54,406
Overhead Expense (13% of A, B, C & D)				70,728
VAT (10% of Labor, Profit & Overhead Expense)				33,064
Sub-Total of E				87,470
Total of Construction Cost (A+B+C+D+E)				565,530
F. Estimated Government Expenses				
1. Preliminary & Detailed Engineering Cost		LS		3,600
2. Construction Supervision		LS		2,400
3. Water Quality Analysis		LS		1,400
Sub-Total of F				7,400
GRAND TOTAL				572,930
SAY				572,900

Note: LS - Lump Sum
Source: DPWH standard price in 1994 & LWUA Water Supply Feasibility Study Methodology Manual 1998
Unit Cost: Adjusted to 1998 Price Level

Table 10.2.4(c) Unit Cost of Level I (Gravel Packed Deep Well - 120m Depth) for Acid Water

(Cost: Peso)

ription	Quantity	Unit	Unit Cost	Cost
A. Mobilization/Demobilization/Site Preparation		LS		56,000
B. Drilling of Well & Installation of Steel Casing/Screen				
1. Materials				
(1) 100mm x 3m PVC Casing with Socket	37	pcs.	2,038	75,400
(2) 100mm x 3m PVC Casing with Plug	1	pc.	980	980
(3) 100mm x 3m Stainless Steel Screen	2	pcs.	12,700	25,400
(4) Casing Centralizer	2	set	1,925	3,850
2. Labor, Fuel, Lubricant and others				
Well Drilling for 120 m depth at 200mm borehole	120	m	2,500	300,000
3. Borehole Logging	1	no	20,000	20,000
4. Freight Cost (10% of Materials)		LS		10,564
Sub-Total of B				**436,200**
C. Well Development and Pumping Test				
Well Development	24	hr.	5,500	132,000
Pumping Test	6	hr.	5,000	30,000
Sub-Total of C				**162,000**
D. Gravel Packing, Installation of Handpump and Construction of Platform				
1. Materials				
(1) Improved Deep Well Cylinder Pump (Afridev Type)	1	set	11,815	11,815
(2) 63mm x 3m PVC Riser Pipe and SUS Pump Rod	20	pcs.	2,450	49,000
(3) #10 Sieved Gravel	1	cu.m	1,026	1,026
(4) Coarse Sand	1	cu.m	359	359
(5) Cement for Sanitary Seal	4	bags	127	508
(6) Pump Base and Platform				
1) Cement	4	bags	127	508
2) Gravel	2	cu.m	454	908
3) Sand	1	cu.m	359	359
4) Plywood (1,200mm x 2,400mm x 6mm)	1	pc.	294	294
5) Form Lumber (50mm x 75mm x 1,800mm)	6	pcs.	52	312
6) Nail	1	kg.	40	40
Sub-Total of D-1				65,129
2. Labor (40% of D-1.)				26,052
3. Freight Cost (10% of Materials)		LS		6,513
Sub-Total of D				**97,694**
E. Indirect Cost				
Profit (10% of A, B, C & D)				75,189
Overhead Expense (13% of A, B, C & D)				97,746
VAT (10% of Labor, Profit & Overhead Expense)				49,899
Sub-Total of E				**125,088**
Total of Construction Cost (A+B+C+D+E)				**744,982**
F. Estimated Government Expenses				
1. Preliminary & Detailed Engineering Cost		LS		3,600
2. Construction Supervision		LS		2,400
3. Water Quality Analysis		LS		1,400
Sub-Total of F				**7,400**
GRAND TOTAL				**752,382**
SAY				**752,400**

Note: LS - Lump Sum
Source: DPWH standard price in 1994 & LWUA Water Supply Feasibility Study Methodology Manual 1998
Unit Cost: Adjusted to 1998 Price Level

Table 10.2.5 Unit Cost of Level I (Deep Well Rehabilitation)

(Cost: Peso)

Description	Q'ty	Unit	Unit Cost	Amount
A. Mobilization/Demobilization		LS		8,000
B. Well Rehabilitation				
1. Materials				
(1) Cylinder Pump Set	1	set	9,570	9,570
(2) Cement for Surface Sealing	4	bags	127	508
(3) Pump Base and Platform				
1) Cement	4	bags	127	508
2) Gravel	2	cu.m	454	908
3) Sand	1	cu.m	359	359
4) Plywood (4' x 8' x 1/4")	1	pc.	294	294
5) Form Lumber (2" x 3" x 6")	6	pcs.	52	312
6) Nail	1	kg.	40	40
Sub-Total of B-1				12,499
2. Labor (40% of B-1)				5,000
3. Freight Cost (10% of Materials)				1,250
Sub-Total of B				**18,749**
C. Well Development		LS		31,000
D. Indirect Cost				
Profit (10% of A, B & C)				5,775
Overhead Expense (13% of A, B & C)				7,507
VAT (10% of Profit & Labor)				4,178
Sub-Total of D				**17,460**
Total of Construction Cost (A+B+C+D)				75,209
E. Estimated Government Expenses				
1. Preliminary & Detailed Engineering Cost		LS		1,300
2. Supervision		LS		800
3. Water Quality Analysis		LS		1,400
Sub-Total of E				**3,500**
GRAND TOTAL				**78,709**
SAY				**78,700**

Note: LS - Lump Sum

Source: DPWH standard price in 1994

Unit Cost: Adjusted to 1998 Price Level

Table 10.2.6 Unit Cost of Level I (Shallow Well - 18m Depth)

(Cost: Peso)

Description	Q'ty	Unit	Unit Cost	Amount
A. Mobilization/Demobilization		LS		20,000
B. Drilling of Well & Installation of Steel Casing/Screen				
1. Materials				
(1) 63mm x 6m PVC Pipe with socket	2	pcs.	912	1,824
(2) 63mm x 3m PVC Pipe with plug	1	pc.	452	452
(3) 63mm PVC Socket	1	pc.	12	12
(4) 63mm x 3m PVC Screen	1	pc.	1,443	1,443
(5) Casing Centralizer	2	set	725	1,450
2. Labor, Fuel, Lubricant and others				
Well Drilling for 18 m depth at 150mm borehole	18	m	1,600	28,800
3. Freight Cost (10% of Materials)		LS		373
Sub-Total of B				34,354
C. Well Development	4	hr.	2,000	8,000
D. Gravel Packing, Installation of Handpump and Construction of Platform				
1. Materials				
(1) 50mm Jetmatic Handpump	1	set	2,807	2,807
(2) 50mm Riser Pipe and Foot Valve	1	pc.	118	118
(3) #10 Sieved Gravel	0.1	cu.m	1,026	103
(4) Coarse Sand	0.07	cu.m	359	25
(5) Cement for Sanitary Seal	4	bag	127	508
(6) Pump Base and Platform				
1) Cement	4	bags	127	508
2) Gravel	1	cu.m	454	454
3) Sand	1	cu.m	359	359
4) Plywood (1,200mm x 2,400mm x 6mm)	1	pc.	294	294
5) Form Lumber (50mm x 75mm x 1,800 mm)	1	pc.	52	52
6) Nail	1	kg.	40	40
Sub-Total of D-1				5,268
2. Labor (40% of D-1.)				2,107
3. Freight Cost (10% of Materials)		LS		527
Sub-Total of D				7,902
E. Indirect Cost				
Profit (10% of A to D)				7,026
Overhead Expense (13% of A to D)				9,133
VAT (10% of Profit & Overhead Expense)				1,616
Sub-Total of E				8,642
Total of Construction Cost (A+B+C+D+E)				78,898
F. Estimated Government Expenses				
1. Preliminary & Detailed Engineering Cost		LS		1,300
2. Construction Supervision		LS		800
3. Water Quality Analysis		LS		1,400
Sub-Total of F				3,500
GRAND TOTAL				82,398
SAY				82,400

Note: LS - Lump Sum

Source: DPWH standard price in 1994 & LWUA Water Supply Feasibility Study Methodology Manual 1998

Unit Cost: Adjusted to 1998 Price Level

Table 10.2.7 Unit Cost of Level I (Spring Development)

(Cost: Peso)

Description	Q'ty	Unit	Unit Cost	Amount
A. Mobilization/Demobilization		LS		24,000
B. Construction of Spring Box				
1. Materials		LS		42,700
2. Labor (35% of 1.)		LS		14,945
3. Freight Cost (10% of Materials)		LS		4,270
Sub-Total of B				61,915
C. Installation of Pipelines & Fittings				
1. Transmission Materials				
63mm dia. PVC Pipe (Class 12.5 with socket)	330	pcs.	959	316,470
63mm dia. Tee	1	no.	172	172
Solvent Cement	26	cans	140	3,640
63mm dia. Elbow (90 deg.)	3	nos.	89	267
63mm dia. Elbow (45 deg.)	1	pc.	99	99
50mm dia. Gate Valve	2	pcs.	900	1,800
50mm dia. x 1m Stand Pipe	1	pc.	177	177
63mm x 50mm GI Nipple	1	pc.	123	123
50mm dia. Union Patent	3	pcs.	192	576
63mm x 50mm dia. Reducing Socket	2	pcs.	113	226
50mm dia. GI Elbow (90 deg.)	2	pcs.	79	158
63mm x 50mm dia. Socket Adapter	2	pcs.	167	334
50mm dia. GI Gate Valve	2	pcs.	791	1,582
13mm dia. Brass Faucet	2	pcs.	59	118
Sub-Total of Materials				325,624
Labor (35% of Material Cost)		LS		113,968
Freight Cost (10% of Materials)		LS		32,562
Sub-Total of C				472,154
D. Indirect Cost				
1. Transmission Main				
Profit (10% of C)				47,215
Overhead Expense (13% of C)				61,380
VAT (10% of Profit, Overhead Expense & Labor)				22,256
2. Source Facilities				
Profit (10% of A, B)				25,775
Overhead Expense (13% of A, B)				8,592
VAT (10% of Profit, Overhead Expense & Labor)				4,931
Sub-Total of D				170,149
Total Construction Cost (A+B+C+D)				728,218
E. Estimated Government Expenses				
1. Preliminary & Detailed Engineering and RWSA Formation		LS		2,400
2. Supervision		LS		15,000
3. Water Quality Analysis		LS		1,400
Sub-Total of E				18,800
GRAND TOTAL				747,018
SAY				747,000

Note: LS - Lump Sum

Source:
DPWH standard price in 1994
LWUA Water Supply Feasibility Study Methodology Manual 1998

Unit Cost: Adjusted to 1998 Price Level

Table 10.2.8 Unit Cost of Level II (600 Service Population)

Sheet 1 of 2 (Cost: Peso)

Description	Q'ty	Unit	Unit Cost	Amount
A. Mobilization/Demobilization		LS		36,000
B. Construction of Spring Box & Ground Reservoir				
1. Materials		LS		128,000
2. Labor (35% of 1.)		LS		44,800
3. Freight Cost (10% of Materials)		LS		12,800
Sub-Total of B				185,600
C. Installation of Pipelines & Fittings				
1. Transmission Pipeline Materials				
63mm dia. PVC Pipe (Class 12.5 with socket)	500	pcs.	959	479,500
63mm dia. Tee	1	no.	172	172
Solvent Cement	40	cans	140	5,600
63mm dia. x 50mm Nipple	3	nos.	159	477
63mm dia. Union Patent	1	pc.	203	203
63mm dia. x 50mm dia. Reducing Socket	2	pcs.	123	246
63mm dia. Elbow (90 deg.)	1	pc.	89	89
63mm dia. Elbow (45 deg.)	1	pc.	99	99
63mm dia. Gate Valve	3	pcs.	1,320	3,960
Sub-Total of Materials				490,346
Labor (35% of Material Cost)		LS		171,621
Freight Cost (10% of Materials)		LS		49,035
Sub-Total of Transmission Main				711,002
2. Distribution Pipeline Materials				
50mm dia. PVC Pipe (Class 12.5 with socket)	20	pcs.	531	10,620
38mm dia. PVC Pipe (Class 12.5 with socket)	30	pcs.	353	10,590
20mm dia. PVC Pipe (Class 40 with socket)	10	pcs.	118	1,180
13mm dia. x 1 m Stand Pipe	10	pcs.	110	1,100
Solvent Cement	4	cans	140	560
Fittings				
a. 50mm dia. x 150mm PVC Nipple	3	pcs.	147	441
b. 32mm dia. x 150mm PVC Nipple	3	pcs.	89	267
c. 13mm dia. x 150mm GI Nipple	40	pcs.	29	1,160
d. 50mm dia. Union Patent	1	pcs.	192	192
e. 32mm dia. Union Patent	2	pcs.	83	166
f. 13mm dia. Union Patent	10	pcs.	29	290
g. 50mm dia. x 32mm dia. Reducing Socket	6	pcs.	106	636
h. 32mm dia. x 20mm dia. Reducing Socket	10	pcs.	82	820
i. 20mm dia. x 13mm dia. Reducing Socket	10	pcs.	64	640
j. 50mm dia. PVC Elbow (90 deg.)	2	pcs.	64	128
k. 13mm dia. GI Elbow (90 deg.)	20	pcs.	15	300
l. 20mm dia. x 13mm dia. Socket Adapter	10	pcs.	48	480
m. 50mm dia. GI Gate Valve	2	pcs.	791	1,582
n. 32mm dia. GI Gate Valve	2	pcs.	447	894
o. 13mm dia. GI Gate Valve	24	pcs.	271	6,504
p. 13mm dia. Brass Faucet	24	pcs.	59	1,416
q. 50mm dia. Tee	4	pcs.	153	612
r. 32mm dia. Tee	6	pcs.	129	774
s. Water Meter	24	pcs.	1,004	24,096
t. Water Meter Box	24	pcs.	1,297	31,128
Sub-Total of Materials				96,576

Table 10.2.8 Unit Cost of Level II (600 Service Population)

Sheet 2 of 2 (Cost: Peso)

Description	Q'ty	Unit	Unit Cost	Amount
Labor (35% of Material Cost)		LS		33,802
Freight Cost (10% of Materials)		LS		9,658
Sub-Total of Distribution Pipeline				140,036
Sub-Total of C				**851,038**
D. Indirect Cost				
1. Transmission Main				
Profit (10% of C-1)		LS		71,100
Overhead Expense (13% of C-1)		LS		92,430
VAT (10% of Profit, Overhead Expense and Labor)		LS		33,515
2. Source Facilities and Distribution Pipeline				
Profit (10% of A, B, C-2)		LS		36,164
Overhead Expense (13% of A, B and C-2)		LS		47,013
VAT (10% of Profit, Overhead Expense and Labor)		LS		16,178
Sub-Total of D				**296,400**
Total Construction Cost (A+B+C+D)				**1,369,038**
E. Estimated Government Expenses				
1. Preliminary & Detailed Engineering and RWSA Formation		LS		2,400
2. Supervision		LS		15,000
3. Water Quality Analysis		LS		1,400
Sub-Total of E				**18,800**
Total Estimated Cost				**1,387,838**
Unit Cost per Person Served				**2,313**
SAY				**2,300**

Note: LS - Lump Sum

Source:
DPWH standard price in 1994
LWUA Water Supply Feasibility Study Methodology Manual 1998

Unit Cost: Adjusted to 1998 Price Level

Table 10.2.9 Unit Cost of Level III (5,000 Service Population)

(Cost: Peso)

Description	Q'ty	Unit	Unit Cost	Amount
A. Mobilization/Demobilization		LS		360,000
B. Source Development and Storage				
1. Deep Well	1	No.	2,001,000	2,001,000
2. Deep Well Pump	1	No.	832,000	832,000
3. Chlorinator House & Equipment	1	LS	632,000	632,000
4. Storage Tank (250 cu.m)	1	No.	1,300,000	1,300,000
Sub-Total of B				**4,765,000**
C. Transmission Main				
1. 160mm dia.	500	LM	1,320	660,000
Sub-Total of C				**660,000**
D. Distribution Main				
1. 160mm dia.	1,000	LM	1,320	1,320,000
2. 110mm dia.	3,000	LM	1,090	3,270,000
3. 90mm dia.	3,000	LM	684	2,052,000
4. 75mm dia.	6,000	LM	637	3,822,000
Sub-Total of D				**10,464,000**
E. Service Connections	**1,000**	**Nos.**	**2,288**	**2,288,000**
F. Miscellaneous				
1. Vehicle	1	No.	649,000	649,000
2. Office & Workshop Bldg.	1	No.	645,000	645,000
3. Office Equipment	1	LS	118,000	118,000
4. Tools and Spare Parts	1	LS	110,000	110,000
Sub-Total of F				**1,522,000**
Total Direct Cost (A+B+C+D+E+F)				**20,059,000**
G. Indirect Cost (25% of Direct Cost)				**5,014,750**
Total Estimated Cost				**25,073,750**
Unit Cost per Person Served				
For New Construction				5,015
			SAY	**5,000**
For Expansion of Existing System (Exclude F.)				4,634
			SAY	**4,600**

Note: LS - Lump Sum
Cost of spring development includes additional transmission main, but it shall be confirmed by survey in the implementation stage.
Source: LWUA standard price in 1994
Unit Cost: Adjusted to 1998 Price Level

Table 10.2.10 Unit Cost of Level III (10,000 Service Population)

(Cost: Peso)

Description	Q'ty	Unit	Unit Cost	Amount
A. Mobilization/Demobilization		LS		360,000
B. Source Development and Storage				
1. Deep Well	1	No.	2,001,000	2,001,000
2. Deep Well Pump	1	No.	832,000	832,000
3. Chlorinator House & Equipment	1	LS	632,000	632,000
4. Storage Tank (250 cu.m)	1	No.	1,300,000	1,300,000
Sub-Total of B				**4,765,000**
C. Transmission Main				
1. 160mm dia.	500	LM	1,320	660,000
Sub-Total of C				**660,000**
D. Distribution Main				
1. 160mm dia.	2,000	LM	1,320	2,640,000
2. 110mm dia.	5,000	LM	1,090	5,450,000
3. 90mm dia.	6,000	LM	684	4,104,000
4. 75mm dia.	9,000	LM	637	5,733,000
Sub-Total of D				**17,927,000**
E. Service Connections	**2,000**	**Nos.**	**2,288**	**4,576,000**
F. Miscellaneous				
1. Vehicle	1	No.	649,000	649,000
2. Office & Workshop Bldg.	1	No.	645,000	645,000
3. Office Equipment	1	LS	118,000	118,000
4. Tools and Spare Parts	1	LS	110,000	110,000
Sub-Total of F				**1,522,000**
Total Direct Cost (A+B+C+D+E+F)				**29,810,000**
G. Indirect Cost (25% of Direct Cost)				**7,452,500**
Total Estimated Cost				**37,262,500**
Unit Cost per Person Served				
For New Construction				3,726
				3,700
For Expansion of Existing System (Exclude F.)				3,536
				3,500

Note: LS - Lump Sum
Cost of spring development includes additional transmission main, but it shall be confirmed by survey in the implementation stage.
Source: LWUA standard price in 1994
Unit Cost: Adjusted to 1998 Price Level

Table 10.2.11 Unit Cost of Level III (15,000 Service Population)

(Cost: Peso)

Description	Q'ty	Unit	Unit Cost	Amount
A. Mobilization/Demobilization		LS		360,000
B. Source Development and Storage				
1. Deep Well	2	No.	2,001,000	4,002,000
2. Deep Well Pump	2	No.	832,000	1,664,000
3. Chlorinator House & Equipment	2	LS	632,000	1,264,000
4. Storage Tank (250 cu.m)	2	No.	1,300,000	2,600,000
Sub-Total of B				9,530,000
C. Transmission Main				
1. 160mm dia.	1,000	LM	1,320	1,320,000
Sub-Total of C				1,320,000
D. Distribution Main				
1. 160mm dia.	3,000	LM	1,320	3,960,000
2. 110mm dia.	7,000	LM	1,090	7,630,000
3. 90mm dia.	8,000	LM	684	5,472,000
4. 75mm dia.	10,000	LM	637	6,370,000
Sub-Total of D				23,432,000
E. Service Connections	3,000	Nos.	2,288	6,864,000
F. Miscellaneous				
1. Vehicle	1	No.	649,000	649,000
2. Office & Workshop Bldg.	1	No.	645,000	645,000
3. Office Equipment	1	LS	118,000	118,000
4. Tools and Spare Parts	1	LS	110,000	110,000
Sub-Total of F				1,522,000
Total Direct Cost (A+B+C+D+E+F)				43,028,000
G. Indirect Cost (25% of Direct Cost)				10,757,000
Total Estimated Cost				53,785,000
Unit Cost per Person Served				
For New Construction				3,586 3,600
For Expansion of Existing System (Exclude F.)				3,459 3,500

Note: LS - Lump Sum
Cost of spring development includes additional transmission main, but it shall be confirmed by survey in the implementation stage.
Source: LWUA standard price in 1994
Unit Cost: Adjusted to 1998 Price Level

Table 10.2.12 Unit Cost of Flush Water Sealed with Septic Tank Toilet

(Cost: Peso)

	Description	Q'ty	Unit	Unit Cost	Amount
A.	**Demolition**		LS		1,100
B.	**Earthwork**				
	1. Materials				
	(1) Gravel Fill	1	cu.m	454	454
	Sub-Total of B-1				454
	2. Labor				
	(1) Excavation	6	cu.m	140	840
	(2) Backfill	2	cu.m	127	254
	(3) Gravel Fill	1	cu.m	166	166
	Sub-Total of B-2				1,260
	Sub-Total of B				1,714
C.	**Concrete Work**				
	1. Materials				
	Slab on wood planks				
	(1) 16 - 2" x 8" x 6' Coco Lumber	128	bd.ft	8	1,024
	(2) 10mm dia x 6.0m Rebar	3	pc.	58	174
	(3) #16 Tie Wire	0.5	kg	58	29
	(4) Cement	10	bag	137	1,370
	(5) Sand	1.5	cu.m	359	539
	(6) Gravel	2	cu.m	454	908
	(7) Stone Lining with Mortar	1	LS	1,250	1,250
	Sub-Total of C-1				5,294
	2. Labor (30% of C-1)				1,588
	Sub-Total of C				6,882
D.	**Carpentry Work**				
	1. Materials				
	(1) Nipa	60	pc.	2	120
	(2) 1.5m x 1.8m, amakan	3	pc.	75	225
	(3) 2" x 3" x 10' Coco Lumber	20	bd.ft	11	220
	(4) 2" x 2" x 10' Coco Lumber	33.3	bd.ft	10	333
	(5) 3" dia. Bamboo	3	light	21	63
	(6) Assorted CWN	4	kg	43	172
	(7) Rattan wire	20	pc.	1	20
	Sub-Total of C-1				1,153
	2. Labor (30% of C-1)				346
	Sub-Total of C				1,499
E.	**Plumbing**				
	1. Materials				
	(1) Water Closet	1	set	4,900	4,900
	(2) Water line and sanitary fixtures	1	LS	1,650	1,650
	Sub-Total of E-1				6,550
	2. Labor (30% of E-1)				1,965
	Sub-Total of E				8,515
F.	**Transportation Cost** (excluding indigenous materials)	1	LS	540	540
G.	**Indirect Cost**				
	Profit (10% of A - F)				2,025
	VAT (10% of Profit & Labor)				718
	Sub-Total of F				2,743
	Total of Construction Cost (A+B+C+D+E+F+G)			SAY	22,993 23,000

Note: LS - Lump Sum
Source: DOH standard price in 1993
Unit Cost: Adjusted to 1998 Price Level

Table 10.2.13 Unit Cost of Pour Flush with Double Pit Latrine

(Cost: Peso)

	Description	Q'ty	Unit	Unit Cost	Amount
A.	**Earthwork**				
	1. Materials				
	(1) Gravel Fill	1	cu.m	454	454
	Sub-Total of A-1				454
	2. Labor				
	(1) Excavation	6	cu.m	140	840
	(2) Backfill	2	cu.m	127	254
	(3) Gravel Fill	1	cu.m	166	166
	Sub-Total of A-2				1,260
	Sub-Total of A				**1,714**
B.	**Concrete Work**				
	1. Materials				
	Slab on wood planks				
	(1) 16 - 2" x 8" x 6' Coco Lumber	128	bd.ft	8	1,024
	(2) 10mm dia x 6.0m Rebar	3	pc.	58	174
	(3) #16 Tie Wire	0.5	kg	58	29
	(4) Cement	10	bag	137	1,370
	(5) Sand	1.5	cu.m	359	539
	(6) Gravel	2	cu.m	454	908
	(7) Stone Lining with Mortar	1	LS	1,250	1,250
	Sub-Total of B-1				5,294
	2. Labor (25% of B-1)				1,323
	Sub-Total of B				**6,617**
C.	**Carpentry Work**				
	1. Materials				
	(1) Nipa	60	pc.	2	120
	(2) 1.5m x 1.8m, amakan	3	pc.	75	225
	(3) 2" x 3" x 10' Coco Lumber	20	bd.ft	11	220
	(4) 2" x 2" x 10' Coco Lumber	33.3	bd.ft	10	333
	(5) 3" dia. Bamboo	3	light	21	63
	(6) Assorted CWN	4	kg	43	172
	(7) Rattan wire	20	pc.	1	20
	(8) Pale (medium)	1	pc.	203	203
	(9) 3" dia. PVC x 3m	1	pc.	665	665
	(10) 3" dia. PVC Elbow	2	pc.	70	140
	(11) PVC solvent	1	pint	54	54
	(12) Ga. 31" x 8' plain GI sheet	1	sheet	214	214
	Sub-Total of C-1				2,429
	2. Labor (25% of C-1)				607
	Sub-Total of C				**3,036**
D.	**Plumbing**				
	1. Material				
	(1) Toilet Bowl-Squat Type	1	pc.	703	703
	(2) 75mm dia x 6.0m PVC Pipe	1	pc.	152	152
	Sub-Total of D-1				855
	2. Labor (25% of D-1)				214
	Sub-Total of D				**1,069**
E.	**Transportation Cost** (excluding indigenous materials)	1	LS	340	340
F.	**Indirect Cost**				
	Profit (10% of A - D)				1,547
	VAT (10% of Profit & Labor)				495
	Sub-Total of F				**2,042**
	Total Construction Cost (A+B+C+D+E+F)			**SAY**	**14,818** **14,800**

Note: LS - Lump Sum
Source: DOH standard price in 1993
Unit Cost: Adjusted to 1998 Price Level

Table 10.2.14 Unit Construction Cost of Ventilated Improved Pit Latrine

(Cost: Peso)

Description	Q'ty	Unit	Unit Cost	Amount
A. Earthwork				
1. Materials				
(1) Gravel Fill	0.5	cu.m	454	227
Sub-Total of A-1				227
2. Labor				
(1) Excavation	3	cu.m	140	420
(2) Backfill	1	cu.m	127	127
(3) Gravel Fill	0.5	cu.m	166	83
Sub-Total of A-2				630
Sub-Total of A				**857**
B. Concrete Work				
1. Materials				
Slab on wood planks				
(1) 2" x 8" x 6' Coco Lumber	64	bd.ft	8	512
(2) 10mm dia x 6.0m Rebar	2	pc.	58	116
(3) #16 Tie Wire	0.5	kg	58	29
(4) Cement	4	bag	137	548
(5) Sand	0.5	cu.m	359	180
(6) Gravel	0.5	cu.m	454	227
(7) Stone Lining with Mortar	1	LS	1,200	1,200
Sub-total of B-1				2,812
2. Labor (25% of B-1)				703
Sub-Total of B				**3,515**
C. Carpentry Work				
1. Materials				
(1) Nipa	60	pc.	2	120
(2) 1.5m x 1.8m, amakan	3	pc.	75	225
(3) 2" x 3" x 10' Coco Lumber	20	bd.ft	11	220
(4) 2" x 2" x 10' Coco Lumber	33.3	bd.ft	10	333
(5) 3" dia. Bamboo	3	light	21	63
(6) Assorted CWN	4	kg	43	172
(7) Rattan wire	20	pc.	1	20
(8) 3" x 3" hinges	2	pc.	32	64
Sub-Total of C-1				1,217
2. Labor (25% of C-1)				304
Sub-Total of C				**1,521**
D. Plumbing				
1. Material				
(1) 50mm dia. PVC Pipe	1	pc.	76	76
(2) Fly Screen	1	pc.	59	59
Sub-Total of D-1				135
2. Labor (25% of D-1)				41
Sub-Total of D				**176**
E. Transportation Cost (excluding indigenous materials)	1	LS	170	**170**
F. Indirect Cost				
Profit (10% of A - E)				624
VAT (10% of Profit & Labor)				230
Sub-Total of F				**854**
Total Construction Cost (A+B+C+D+E+F)			SAY	**7,093** **7,100**

Note: LS - Lump Sum
Source: DOH standard price in 1993
Unit Cost: Adjusted to 1998 Price Level

Table 10.2.15 Unit Construction Cost of Pit Latrine

(Cost: Peso)

Description	Q'ty	Unit	Unit Cost	Amount
A. Earthwork				
1. Materials				
(1) Gravel Fill	0.3	cu.m	454	136
Sub-Total of A-1				136
2. Labor				
(1) Excavation	2	cu.m	140	280
(2) Backfill	0.6	cu.m	127	76
(3) Gravel Fill	0.3	cu.m	166	50
Sub-Total of A-2				406
Sub-Total of A				542
B. Concrete Work				
1. Materials				
Slab on wood planks				
(1) 2" x 8" x 6' Coco Lumber	38	bd.ft	8	304
(2) 10mm dia x 6.0m Rebar	1	pc.	58	58
(3) #16 Tie Wire	0.5	kg.	58	29
(4) Cement	3	bag	137	411
(5) Sand	0.3	cu.m	359	108
(6) Gravel	0.3	cu.m	454	136
(7) Stone Lining with Mortar	1	LS	700	700
Sub-total of B-1				1,746
2. Labor (25% of B-1)				436
Sub-Total of B				2,182
C. Carpentry Work				
1. Materials				
(1) Nipa	30	pc.	2	60
(2) 1.0m x 1.8m, amakan	3	pc.	75	225
(3) 2" x 3" x 10' Coco Lumber	14	bd.ft	11	154
(4) 2" x 2" x 10' Coco Lumber	24	bd.ft	10	240
(5) 3" dia. Bamboo	3	light	21	63
(6) Assorted CWN	3	kg	43	129
(7) Rattan wire	14	pc.	1	14
(8) 3" x 3" hinges	2	pc.	32	64
Sub-Total of C-1				949
2. Labor (25% of C-1)				237
Sub-Total of C				1,186
D. Transportation Cost (excluding indigenous materials)	1	LS	170	170
E. Indirect Cost				
Profit (10% of A -D)				391
VAT (10% of Profit & Labor)				164
Sub-Total of E				555
Total Construction Cost (A+B+C+D+E)			SAY	4,635 4,600

Note: LS - Lump Sum
Source: DOH standard price in 1993
Unit Cost: Adjusted to 1998 Price Level

Table 10.2.16 Unit Cost of School Toilet

Sheet 1 of 5 (Cost: Peso)

	Description	Q'ty	Unit	Unit Cost	Amount
A.	**Mobilization and Demobilization**		LS		6,000
B.	**Earthwork**				
	1. Materials				
	(1) Gravel Fill	3	cu.m	454	1,362
	Sub-Total of B-1				1,362
	2. Labor				
	(1) Excavation	16	cu.m	140	2,240
	(2) Backfill	5	cu.m	127	635
	(3) Gravel Fill	3	cu.m	166	498
	Sub-Total of B-2				3,373
	Sub-Total of B				**4,735**
C.	**Concrete Work**				
	1. Materials				
	(1) Cement	61	bags	137	8,357
	(2) Sand	4	cu.m	359	1,436
	(3) Gravel	8	cu.m	454	3,632
	(4) Rebars: 12mm dia x 6m	38	pcs.	79	3,002
	10mm dia x 6m	57	pcs.	58	3,306
	(5) #16 Tie Wire	8	kg.	58	464
	(6) Formworks:				
	1/4" Plywood	6	pcs.	477	2,862
	2" x 2" x 10', Coco Lumber	200	bd.ft.	10	2,000
	Sub-Total of C-1				25,059
	2. Labor (30% of C-1)		LS		7,518
	Sub-Total of C				**32,577**
D.	**Masonry Work**				
	1. Materials				
	(1) 6" CHB	800	pcs.	6	4,800
	(2) 4" CHB	260	pcs.	5	1,300
	(3) Cement	97	bags	137	13,289
	(5) Sand	10	cu.m	359	3,590
	(6) Rebars: 12mm dia x 6m	30	pcs.	79	2,370
	10mm dia x 6m	11	pcs.	58	638
	(7) #16 Tie Wire	4	kg.	58	232
	(8) Scaffolding:				
	2" x 4" x 8' x 10pcs., Coco Lumber	53	bf.	8	424
	Sub-Total of D-1				26,643
	2. Labor (30% of D-1)		LS		7,993
	Sub-Total of D				**34,636**
E.	**Roofing Work**				
	1. Materials				
	(1) GA #26 Corr. GI (1 = 10')	20	pcs.	310	6,200
	(2) GA #24 Pln. GI Flashing	3	pcs.	300	900
	(3) GA #24 Pln. GI Gutter (Pre-Fab)	9	pcs.	300	2,700
	(4) Umbrella Nails 2-1/2"	12	kg.	50	600
	(5) Rafter - 2" x 5" x 18' = 5pcs.	75	bf.	35	2,625
	(6) Purlins - 2" x 2" x 12' = 18pcs.	72	bf.	35	2,520
	(7) WD Cleats - 2" x 2" x 10" = 6pcs.	20	bf.	35	700
	(8) Nailers - 2" x 2" x 12' = 30pcs.	120	bf.	35	4,200
	- 2" x 2" x 10' = 36pcs.	120	bf.	35	4,200

Table 10.2.16 Unit Cost of School Toilet

Sheet 2 of 5 (Cost: Peso)

Description	Q'ty	Unit	Unit Cost	Amount
(9) Fascia Board				
1" x 12" x 12' = 4pcs.	48	bf.	35	1,680
1" x 12" x 18' = 2pcs.	36	bf.	34	1,224
(10) Wood Plate				
2" x 4" x 20' = 2pcs.	27	bf.	34	918
(11) 1/4" Thk. Mar. Plywood 4'x8'	14	pcs.	32	448
(12) C.W.N. Assorted	15	kg.	43	645
(13) 3" dia x 3m Downspout (PVC)	3	pcs.	91	273
(14) 3" dia Elbow (PVC)	2	pcs.	70	140
(15) 3" dia Coupling (PVC)	1	pcs.	26	26
(16) Ceiling Vent				
1" x 1" x 8' = 4pcs.	3	bf.	29	87
(17) Screen (1/8" x 1/8")	1	yd.	91	91
Sub-Total of E-1				30,177
2. Labor (30% of E-1)		LS		9,053
Sub-Total of E				**39,230**
F. Carpentry Work				
1. Materials				
(1) D - 1 Hollow Core Tanguile Flush Type Door w/ Louver (.80x2.20)	2	sets	1,620	3,240
(2) D - 2 Hollow Core Tanguile Flush Type Door (.60x2.10)	1	sets	1,216	1,216
(3) D - 3 Louver Door (.60x1.40)	5	sets	1,013	5,065
(4) Door Jambs (Apitong)				
2" x 6" x 14" = 1pc.	14	bf.	37	518
2" x 6" x 10" = 2pcs.	20	bf.	36	720
2" x 6" x 10" = 1pc.	18	bf.	35	630
2" x 4" x 12" = 5pcs.	40	bf.	34	1,360
(7) Wooden Jalousie Window With 5 Blades (.40x.50)	14	set	338	4,732
(8) Window Jambs (Apitong)				
2" x 6" x 16" = 5pcs.	80	bf.	36	2,880
2" x 6" x 14" = 1pc.	14	bf.	35	490
2" x 6" x 10" = 1pc.	10	bf.	34	340
(9) Cabinet				
3/4" x 4' x 8' = 1pc. (plyboard)	1	pc.	878	878
Sub-Total of F-1				22,069
2. Labor (30% of F-1)		LS		6,621
Sub-Total of F				**28,690**
G. Tile Work				
1. Materials				
(1) 4-1/4" x 4-1/4", Glazed Tiles	1,950	pcs.	5	9,750
(2) 0.10m x 0.20m, Floor Tiles	900	pcs.	7	6,300
(3) Cement	4	bags	137	548
(4) White Cement	1	bag	742	742
Sub-Total of G-1				17,340
2. Labor (30% of G-1)		LS		5,202
Sub-Total of G				**22,542**

Table 10.2.16 Unit Cost of School Toilet

Sheet 3 of 5 (Cost: Peso)

Description	Q'ty	Unit	Unit Cost	Amount
H. Plumbing Work				
1. Materials				
(1) Toilet Bowl - Squat Type	3	sets	703	2,109
(2) Toilet Bowl - Sit Type	2	sets	703	1,406
(3) Lavatory	2	sets	3,300	6,600
(4) 4" dia x 3m PVC San. Pipe	4	pcs.	175	700
(5) 3" dia x 3m PVC San. Pipe	7	pcs.	98	686
(6) 1-1/2" dia x 3m, PVC San. Pipe	4	pcs.	59	236
(7) 2" dia. x 3m, PVC San. Pipe	4	pcs.	62	248
(8) 6" x 4", Floor Drain	5	pcs.	98	490
(9) 2" dia. Elbow PVC	4	pcs.	53	212
(10) 4" dia WYB PVC	2	pcs.	38	76
(11) 4" dia. x 3" dia. WYB PVC	12	pcs.	35	420
(12) 4" dia. x 2" dia. TEE PVC	4	pcs.	36	144
(13) 4" dia. TEE PVC	3	pcs.	47	141
(14) 1-1/2" dia. WYB PVC	1	pcs.	20	20
(15) 4" dia. Clean Out PVC	3	pcs.	41	123
(16) 3" dia. Clean Out PVC	1	pcs.	32	32
(17) Faucet	3	pcs.	59	177
(18) 3" dia. x 2" dia. WYB PVC	2	pcs.	32	64
(19) 1-1/2" dia. Elbow PVC	6	pcs.	40	240
(20) PVC Cement	1	can	142	142
(21) Check Valve 1-1/2"	1	pcs.	214	214
(22) 4" P-Trap	5	pcs.	77	385
Sub-Total of H-1				14,865
2. Labor (30% of H-1)		LS		4,460
Sub-Total of H				**19,325**
I. Painting				
1. Materials				
(1) Acrylic, Semi Gloss	8	gals.	295	2,360
(2) Concrete Sealer	4	gals.	233	932
(3) Acri Color: Wood	4	gals.	200	800
(4) Enamel, QDE	6	gals.	310	1,860
(5) Wood Putty	1	gals.	342	342
(6) Paint Thinner	1	gals.	67	67
(7) Tinting Color	4	pint	45	180
(8) Sand Paper (Assorted)	15	pcs.	8	120
(9) Miscellaneous	1	LS	1,200	1,200
(10) Roof Paint (green, ready-mix)	2	gals.	319	638
Sub-Total of I-1				8,499
2. Labor (30% of I-1)		LS		2,550
Sub-Total of I				**11,049**
J. Electrical Work				
1. Materials				
(1) 40 Watts Fluorescent Lamp	2	sets	289	578
(2) Elect. Wire TW #12	24	M	7	168
(3) Elect. Conduit - 1/2" dia x 10"	4	pcs.	88	352
(4) Entrance Cap. 1/2" dia	1	pc.	32	32
(5) Switch Outlet, Flush Type	2	pcs.	44	88
(6) Utility Box 2"x3"	2	pcs.	12	24

Table 10.2.16 Unit Cost of School Toilet

Sheet 4 of 5 (Cost: Peso)

Description	Q'ty	Unit	Unit Cost	Amount
(7) Porcelain Receptacle 2" dia	2	pcs.	7	14
(8) Safety Switch 60A, 250V	1	set	555	555
(9) Electrical Tape	1	roll	25	25
Sub-Total of J-1				1,836
2. Labor (30% of J-1)		LS		551
Sub-Total of J				**2,387**
K. Hardware				
1. Materials				
(1) 3" x 3" Butt Hinges (Loose Pin)	10	pcs.	20	200
(2) 4" x 4" Butt Hinges (Loose Pin)	12	pcs.	36	432
(3) Door Lockset (Schlage US)	3	pcs.	650	1,950
(4) Barrel Bolt (4")	5	pcs.	45	225
(5) Cabinet Pull (4")	5	pcs.	7	35
(6) Water Storage Cover				
Checkered Plate 1/4" thick				
1-7/16" x 5/8", L-bar & flat bar	1	set	1,116	1,116
5/8" x 9/16", L-bar & flat bar	2	set	629	1,258
(7) Padlock	1	pcs.	429	429
Sub-Total of K-1				5,645
2. Labor (30% of K-1)		LS		1,694
Sub-Total of K				**7,339**
L. Septic Tank and Sewage Basin				
1. Materials				
(1) 4" CHB	180	pcs.	5	900
(2) Cement	18	bags	137	2,466
(3) Sand	2	cu.m	359	718
(4) Gravel	1	cu.m	454	454
(5) Rebars: 10mm dia x 6m	29	pcs.	58	1,682
(6) #16 Tie Wire	2	kg.	58	116
(7) Formworks: Coco Lumber				
2" x 3" x 10' = 12pcs.	60	bf.	11	660
1/4" x 4' x 8', Plywood ord.	2	pcs.	477	954
C.W.N. (Assorted)	2	kg.	43	86
Sub-Total of L-1				8,036
2. Labor (30% of L-1)		LS		2,411
Sub-Total of L				**10,447**
M. Shallow Well (18 depth)				
a. Drilling of Well & Installation of Steel Casing/Screen				
1. Materials				
(1) 63mm x 6m PVC Pipe with socket	2	pcs.	912	1,824
(2) 63mm x 3m PVC Pipe with plug	1	pc.	452	452
(3) 63mm PVC Socket	1	pc.	12	12
(4) 63mm x 3m PVC Screen	1	pc.	1,443	1,443
Sub-Total of M-a-1				3,731
2. Labor, Fuel, Lubricant and others				
Well Drilling for 18m depth at 150mm borehole	18	m	1,600	28,800
Sub-Total of M-a				32,531
b. Well Development	1	LS	600	600

Table 10.2.16 Unit Cost of School Toilet

Sheet 5 of 5 (Cost: Peso)

Description	Q'ty	Unit	Unit Cost	Amount
M. c. Gravel Packing, Installation of Hand-Pump and Construction of Platform				
1. Materials				
(1) 50mm Jetmatic Handpump	1	set	2,807	2,807
(2) 50mm x 1m GI Pipe (Sch. 40)	1	pc.	118	118
(3) #10 Sieved Gravel	0.1	cu.m	1,026	103
(4) Coarse Sand	0.07	cu.m	359	25
(5) Cement for Sanitary Seal	1	bag	127	127
(6) Pump Base and Platform				
1) Cement	4	bags	127	508
2) Gravel	1	cu.m	454	454
3) Sand	1	cu.m	359	359
4) Plywood (1,200mm x 2,400mm x 6mm)	1	pc.	294	294
5) Form Lumber (50mmx75mmx1,800mm	1	pc.	52	52
6) Nail	1	kg.	40	40
Sub-Total of M-c-1				4,887
2. Labor (40% of M-c-1)		LS		1,955
Sub-Total of M-c				6,842
Sub-Total of M				**39,973**
N. Freight Cost (11% of Materials for A - M excluding sand and gravel)		**LS**		**18,042**
O. Indirect Cost				
Profit (10% of A - N)				27,697
VAT (10% of Profit & Labor)				8,108
Sub-Total of O				**35,805**
Total of Construction Cost (A to O)				312,777
P. Estimated Government Expenses				
1. Preliminary & Detailed Engineering Cost	1	LS	2,400	2,400
2. Construction Supervision	1	LS	1,800	1,800
Sub-Total of P				**4,200**
GRAND TOTAL				316,977
			SAY	**317,000**

Note: LS - Lump Sum
Source: DOH standard price in 1993
Unit Cost: Adjusted to 1998 Price Level

Table 10.2.17 Unit Cost of Public Toilet

Sheet 1 of 5 (Cost: Peso)

	Description	Q'ty	Unit	Unit Cost	Amount
A.	**Mobilization and Demobilization** (2.4% of B - M)		LS		7,000
B.	**Earthwork**				
	1. Materials				
	(1) Gravel Fill	3	cu.m	454	1,362
	Sub-Total of B-1				1,362
	2. Labor				
	(1) Excavation	15.88	cu.m	140	2,223
	(2) Backfill	4.97	cu.m	127	631
	(3) Gravel Fill	3	cu.m	166	498
	Sub-Total of B-2				3,352
	Sub-Total of B				4,714
C.	**Concrete Work**				
	1. Materials				
	(1) Cement	61	bags	137	8,357
	(2) Sand	4	cu.m	359	1,436
	(3) Gravel	8	cu.m	454	3,632
	(4) Rebars: 12mm dia x 6m	38	pcs.	79	3,002
	10mm dia x 6m	57	pcs.	58	3,306
	(5) #16 Tie Wire	8	kg.	58	464
	(6) Formworks:				
	1/4" Plywood	6	pcs.	477	2,862
	2" x 2" x 10" (Coco Lumber)	200	bd.ft.	10	2,000
	Sub-Total of C-1				25,059
	2. Labor (30% of C-1)				7,518
	Sub-Total of C				32,577
D.	**Masonry Work**				
	1. Materials				
	(1) 6" CHB	800	pcs.	6	4,800
	(2) 4" CHB	260	pcs.	5	1,300
	(3) Cement	97	bags	137	13,289
	(5) Sand	10	cu.m	359	3,590
	(6) Rebars: 12mm dia x 6m	30	pcs.	79	2,370
	10mm dia x 6m	11	pcs.	58	638
	(7) #16 Tie Wire	4	kg.	58	232
	(8) Scaffolding:				
	2" x 4" x 8" = 10pcs. (Coco Lumber)	53.33	bf.	8	427
	Sub-Total of D-1				26,646
	2. Labor (30% of D-1)				7,994
	Sub-Total of D				34,640
E.	**Roofing Work**				
	1. Materials				
	(1) GA #26 Corr. GI (1 = 10')	20	pcs.	310	6,200
	(2) GA #24 Pln. GI Flashing	3	pcs.	300	900
	(3) GA #24 Pln. GI Gutter (Pre-Fab)	9	pcs.	300	2,700
	(4) Umbrella Nails 2-1/2"	12	kg.	50	600
	(5) Rafter - 2" x 5" x 18' = 5pcs.	75	bf.	35	2,625
	(6) Purlins - 2" x 2" x 12' = 18pcs.	72	bf.	35	2,520
	(7) WD Cleats - 2" x 2" x 10" = 6pcs.	20	bf.	35	700

Table 10.2.17 Unit Cost of Public Toilet

Sheet 2 of 5 (Cost: Peso)

Description	Q'ty	Unit	Unit Cost	Amount
(8) Nailers - 2" x 2" x 12' = 30pcs.	120	bf.	35	4,200
- 2" x 2" x 10' = 36pcs.	120	bf.	35	4,200
(9) Fascia Board				
1" x 12" x 12' = 4pcs.	48	bf.	35	1,680
1" x 12" x 18' = 2pcs.	36	bf.	34	1,224
(10) Wood Plate				
2" x 4" x 20' = 2pcs.	26.66	bf.	34	906
(11) 1/4" Thk. Mar. Plywood 4' x 8'	14	pcs.	32	448
(12) C.W.N. Assorted	15	kg.	43	645
(13) 3" dia x 3m Downspout (PVC)	3	pcs.	91	273
(14) 3" dia Elbow (PVC)	2	pcs.	70	140
(15) 3"dia Coupling (PVC)	1	pcs.	26	26
(16) Ceiling Vent, 1" x 1" x 8' x 4pcs.	2.67	bf.	29	77
(17) Screen (1/8" x 1/8")	1	yd.	91	91
Sub-Total of E-1				30,156
2. Labor (30% of E-1)				9,047
Sub-Total of E				**39,203**
F. Carpentry Work				
1. Materials				
(1) D - 1 Hollow Core Tanguile				
Flush Type Door w/ Louver (0.80 x 2.2	2	sets	1,620	3,240
(2) D - 2 Hollow Core Tanguile				
Flush Type Door (0.60 x 2.10)	1	sets	1,216	1,216
(3) D - 3 Louver Door (0.60 x 1.40)	5	sets	1,013	5,065
(4) Door Jambs (Apitong)				
2" x 6" x 14" = 1pc.	14	bf.	37	518
2" x 6" x 10" = 2pcs.	20	bf.	36	720
2" x 6" x 10" = 1pc.	18	bf.	35	630
2" x 4" x 12" = 5pcs.	40	bf.	34	1,360
(7) Wooden Jalousie Window				
With 5 Blades (0.40 x 0.50)	14	set	338	4,732
(8) Window Jambs (Apitong)				
2" x 6" x 16" = 5pcs.	80	bf.	36	2,880
2" x 6" x 14" = 1pc.	14	bf.	35	490
2" x 6" x 10" = 1pc.	10	bf.	34	340
(9) Cabinet				
3/4" x 4' x 8' = 1pc. (plyboard)	1	pc.	878	878
Sub-Total of F-1				22,069
2. Labor (30% of F-1)				6,621
Sub-Total of F				**28,690**
G. Tile Work				
1. Materials				
(1) 4-1/4" x 4-1/4" Glazed Tiles	1,950	pcs.	5	9,750
(2) 0.10 x 0.20m Floor Tiles	900	pcs.	7	6,300
(3) Cement	4	bags	137	548
(4) White Cement	1	bag	742	742
(5) Tiles Fittings		LS		5,650
Sub-Total of G-1				22,990
2. Labor (30% of G-1)				6,897
Sub-Total of G				**29,887**

Table 10.2.17 Unit Cost of Public Toilet

Sheet 3 of 5 (Cost: Peso)

Description	Q'ty	Unit	Unit Cost	Amount
II. Plumbing Work				
1. Materials				
(1) Urinal	3	sets	1,253	3,759
(2) Toilet Bowl - Squat Type	6	sets	703	4,218
(3) 4" dia x 3m PVC San. Pipe	6	pcs.	175	1,050
(4) 3" dia x 3m PVC San. Pipe	4	pcs.	98	392
(5) 2" dia x 3m PVC San. Pipe	3	pcs.	62	186
(6) 3/4" dia x 6m GI Pipe Sch. 40	5	pcs.	288	1,440
(7) 1/2" dia x 6m GI Pipe Sch. 40	1	pcs.	213	213
(8) 4" x 4" WYE PVC	1	pcs.	38	38
(9) 3" dia Elbow PVC	10	pcs.	70	700
(10) 3" dia 45 degrees Bend PVC	2	pcs.	85	170
(11) 2" dia Elbow PVC	6	pcs.	53	318
(12) 2" dia 45 degrees Bend PVC	2	pcs.	68	136
(13) 1/2" dia Elbow GI	5	pcs.	40	200
(14) 4" dia 3" dia WYE PVC	8	pcs.	52	416
(15) 3/4" dia TEE GI	7	pcs.	70	490
(16) 1/2" dia TEE GI	5	pcs.	55	275
(17) 4" dia x 2" dia TEE PVC	6	pcs.	36	216
(18) 4" dia Clean Out PVC	3	pcs.	41	123
(19) 2" dia Clean Out PVC	1	pcs.	29	29
(20) Faucet	10	pcs.	59	590
(21) 3" dia x 2" dia Elbow Reducer PVC	1	pcs.	85	85
(22) 3" dia x 2" dia WYE PVC	3	pcs.	29	87
(23) 2" dia x 2" dia WYE PVC	3	pcs.	17	51
(24) PVC Cement	1	can	142	142
(25) 4" dia x 2" dia WYE PVC	2	pcs.	47	94
(26) Gate Valve 3/4" dia	1	pcs.	142	142
(27) Gate Valve 1/2" dia	1	pcs.	112	112
(28) Water Meter 3/4" dia	1	pcs.	1,488	1,488
(29) 3/4"dia x1/2"dia Elbow Reducer GI	1	pcs.	21	21
Sub-Total of H-1				17,181
2. Labor (30% of H-1)				5,154
Sub-Total of H				**22,335**
I. Painting				
1. Materials				
(1) Acrylic, Semi Gloss	8	gals.	295	2,360
(2) Concrete Sealer	4	gals.	233	932
(3) Acri Color: Wood	4	gals.	200	800
(4) Enamel, QDE	6	gals.	310	1,860
(5) Wood Putty	1	gals.	342	342
(6) Paint Thinner	1	gals.	67	67
(7) Tinting Color	4	pint	45	180
(8) Sand Paper (Assorted)	15	pcs.	8	120
(9) Miscellaneous		LS		1,200
(10) Roof Paint (green, ready-mix)	2	gals.	319	638
Sub-Total of I-1				8,499
2. Labor (30% of I-1)				2,550
Sub-Total of I				**11,049**

Table 10.2.17 Unit Cost of Public Toilet

Sheet 4 of 5 (Cost: Peso)

Description	Q'ty	Unit	Unit Cost	Amount
J. Electrical Work				
1. Materials				
(1) 40 Watts Fluorescent Lamp	2	sets	289	578
(2) Elect. Wire TW #12	24	m	7	168
(3) Elect. Conduit - 1/2" dia x 10"	4	pcs.	88	352
(4) Entrance Cap. 1/2" dia	1	pc.	32	32
(5) Switch Outlet, Flush Type	2	pcs.	44	88
(6) Utility Box 2" x 3"	2	pcs.	12	24
(7) Porcelain Receptacle 2" dia	2	pcs.	7	14
(8) Safety Switch 60A, 250V	1	set	555	555
(9) Electrical Tape	1	roll	25	25
Sub-Total of J-1				1,836
2. Labor (30% of J-1)				551
Sub-Total of J				**2,387**
K. Hardware				
1. Materials				
(1) 3" x 3" Butt Hinges (Loose Pin)	10	pcs.	20	200
(2) 4" x 4" Butt Hinges (Loose Pin)	12	pcs.	36	432
(3) Door Lockset (Schlage US)	3	pcs.	650	1,950
(4) Barrel Bolt (4")	5	pcs.	45	225
(5) Cabinet Pull (4")	5	pcs.	7	35
(6) Water Storage Cover				
Checkered Plate 1/4" thick				
1.44x0.633 w/ L bar & flat bar	1	set	1,116	1,116
(7) 0.645x0.633 w/ L bar & flat bar	2	set	629	1,258
(8) Padlock	1	pcs.	429	429
Sub-Total of K-1				5,645
2. Labor (30% of K-1)				1,694
Sub-Total of K				**7,339**
L. Septic Tank and Sewage Basin				
1. Materials				
(1) 4" CHB	180	pcs.	5	900
(2) Cement	18	bags	137	2,466
(3) Sand	1.50	cu.m	359	539
(4) Gravel	1	cu.m	454	454
(5) Rebars: 10mm dia x 6m	29	pcs.	58	1,682
(6) #16 Tire Wire	2	kg.	58	116
(7) Formworks: Coco Lumber				
2" x 3" x 10' = 12pcs.	60	bf.	11	660
1/4" plywood ord. 4' x 8'	2	pcs.	477	954
C.W.N. (Assorted)	2	kg.	43	86
Sub-Total of L-1				7,857
2. Labor (30% of L-1)				2,357
Sub-Total of L				**10,214**
M. Concrete Water Tank (Elevated)				
1. Earth Work				
(1) Materials				
1) Gravel Fill	1	cu.m	454	454
Sub-Total of M-1 (1)				454

Table 10.2.17 Unit Cost of Public Toilet

Sheet-5 (Cost: Peso)

Description	Q'ty	Unit	Unit Cost	Amount
(2) Labor				
1) Excavation	14.70	cu.m	140	2,058
2) Backfill	13.08	cu.m	127	1,661
3) Gravel Fill	1	cu.m	166	166
Sub-Total of M-1 (2)				3,885
Sub-Total of M-1				4,339
2. Materials				
(1) Cement	62	bags	137	8,494
(2) Sand	4.50	cu.m	359	1,616
(3) Gravel	8	cu.m	454	3,632
(4) Rebars: 12mm dia x 6m	160	pcs.	79	12,640
(5) #16 Tie Wire	4	kg.	58	232
(6) Formworks:				
1/4" plywood	12	pcs.	477	5,724
2" x 3" x 16' = 60pcs.	480	bf.	9	4,320
(7) C.W.N. (Assorted)	5	kg.	43	215
Sub-Total of M-2				49,890
3. Labor (30% of M-2)				14,967
Sub-Total of M				**69,196**
N. Freight Cost (11% of Materials for A - M excluding sand and gravel)				**22,322**
O. Indirect Cost				
Profit (10% of A - M)				32,155
VAT (10% of Profit & Labor)				10,474
Sub-Total of O				**42,629**
Total of Construction Cost (A to O)				364,182
P. Estimated Government Expenses				
1. Preliminary & Detailed Engineering Cost		LS		2,400
2. Construction Supervision		LS		1,800
Sub-Total of P				**4,200**
GRAND TOTAL				368,382
			SAY	368,400

Note: LS - Lump Sum
Source: DOH standard price in 1993
Unit Cost: Adjusted to 1998 Price Level

(3) Sector Management Cost

Cost of community development and training was estimated at 12% of the total construction cost of Level I & II water supply facilities and public toilets and at 3% of the total construction cost of Level III water supply systems. This was formulated based on the following:

a. The 12% was derived on the basis of DILG's past experience in BWSA formation; and
b. The 3% was derived on the basis of LWUA's past experience in the institutional strengthening needs of WDs.

These ratios adopted for estimating community development and training cost will allow the province to meet with its needs for community development in the sector management. The following breakdown provides a view of the components under this category.

Table 10.2.18 Breakdown of Community Development and Training Cost

Component	Share of Cost (%)
1. Preparation for Training Activities	10
1.1 Transportation	1
1.2 Technical Assistance	1
1.3 Food	1
1.4 Supplies and Materials including Production of Training Kits	6
1.5 Generation of Training Aids	1
2. Conduct of Training Activities	53
2.1 Transportation	5
2.2 Food	12
2.3 Accommodation	33
2.4 Training Room Rental	1
2.5 Miscellaneous	2
3. Field Visits to Support BWSA Formation	37
3.1 Transportation	5
3.2 Food	15
3.3 Accommodation	12
3.4 Field	4
Total	100

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	Urban Water Supply Level III	Rural Water Supply								Grand Total
		New System						Level I Rehabili-tation	Total	
		Level II	Level I							
			Deep Well			Shallow Well	Spring Dev.	Subtotal		
			40 m	80 m	120 m					
Allen	5,440					330	1,494	1,824	1,824	7,264
Biri	1,355					247	747	994	994	2,349
Bobon	3,225			2,881			1,494	4,375	4,415	7,640
Capul										
Catarman (Capital)				9,797			4,482	14,279	134	14,413	14,413
Catubig	2,505				7,523		2,988	10,511	79	10,590	13,095
Gamay	1,500			5,187			2,241	7,428	71	7,498	8,998
Laoang											
Lapinig	2,235			1,729			747	2,476	24	2,499	4,734
Las Navas	4,480				6,771		2,241	9,012	71	9,083	13,563
Lavezares											
Lope De Vega	1,595				3,009		1,494	4,503	31	4,535	6,130
Mapanas	1,455			2,305			747	3,052	31	3,084	4,539
Mondragon	3,480										3,480
Palapag	3,610			5,763			2,988	8,751	79	8,830	12,440
Pambujan	6,140			3,458			1,494	4,952	47	4,999	11,139
Rosario											
San Antonio	435										435
San Isidro											
San Jose	1,660			2,305		82	1,494	3,882	31	3,913	5,573
San Roque	4,820			2,881			1,494	4,375	39	4,415	9,235
San Vicente	840										840
Silvino Lobos	1,810				3,009		747	3,756	31	3,788	5,598
Victoria				1,153		247	1,494	2,894	16	2,910	2,910
Provincial Total	46,585			37,459	20,312	906	28,386	87,063	724	87,787	134,372

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

Unit: P 1,000

Name of Municipality	Urban Water Supply Level III	Rural Water Supply								Grand Total
		New System						Level I Rehabili-tation	Total	
		Level I								
		Deep Well			Shallow Well	Spring Dev.	Subtotal			
		40 m	80 m	120 m						
Allen	33,782				2,142	1,494	3,636		3,636	37,418
Biri	11,132				1,648	747	2,395		2,395	13,527
Bobon	19,933		17,289			1,494	18,783	236	19,019	38,951
Capul	21,935				906		906		906	22,841
Catarman (Capital)	112,648		61,086			4,482	65,568	834	66,402	179,050
Catubig	20,258			44,386		2,988	47,374	464	47,838	68,096
Gamay	12,530		28,814		412	2,241	31,467	394	31,861	44,391
Laoang	40,572				7,169		7,169		7,169	47,741
Lapinig	18,409		10,949			747	11,696	150	11,846	30,255
Las Navas	27,472			36,863		2,241	39,104	386	39,489	66,961
Lavezares	17,025		10,373		1,483		11,856	142	11,998	29,023
Lope De Vega	13,533			24,826		1,494	26,320	260	26,580	40,113
Mapanas	12,172		12,102		165	747	13,014	165	13,179	25,351
Mondragon	21,805		26,509				26,509	362	26,871	48,676
Palapag	22,999		35,730			2,988	38,718	488	39,206	62,204
Pambujan	38,679		21,323			1,494	22,817	291	23,108	61,786
Rosario	12,860		10,373		330		10,703	142	10,844	23,704
San Antonio	3,491				1,318		1,318		1,318	4,810
San Isidro	11,945		3,458		4,038		7,495	47	7,543	19,488
San Jose	13,565		13,255		412	1,494	15,161	181	15,342	28,907
San Roque	31,248		31,696			1,494	33,190	433	33,623	64,871
San Vicente	6,412				330		330		330	6,742
Silvino Lobos	15,019			18,808		747	19,555	197	19,751	34,770
Victoria	14,250		6,915		1,483	1,494	9,893	94	9,987	24,237
Provincial Total	553,674		289,871	124,882	21,836	28,386	464,975	5,265	470,240	1,023,914

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

Unit: P 1,000

Name of Municipality	Urban Sanitation									Rural Sanitation							
	Household Toilets									Household Toilets							
	Flush	Pour Flush	VIP/Dry	Sub-total of Cons-truction Cost	Sub-total of Public Invest-ment	Public School Toilets	Public Toilets	Total Cons-truction Cost	Total Public Invest-ment Cost	Flush	Pour Flush	VIP/Dry	Sub-total of Cons-truction Cost	Sub-total of Public Invest-ment	Public School Toilets	Total Cons-truction Cost	Total Public Invest-ment Cost
Allen	3,013	4,188		7,201	209	701	368	8,270	1,278		1,406		1,406	70	467	1,873	537
Biri	621	2,190		2,811	110			2,811	110		7,948		7,948	397	467	8,415	864
Bobon	1,725	4,514		6,239	226	467		6,706	693		2,664		2,664	133	701	3,365	834
Capul		2,634		2,634	132	234		2,868	365		2,901		2,901	145	467	3,368	612
Catarman (Capital)	7,912	858		8,770	43	2,102	368	11,240	2,513		13,512		13,512	676	2,569	16,081	3,244
Catubig							368	368	368						1,401	1,401	1,401
Gamay	759	1,376		2,135	69			2,135	69		15,481		15,481	774	1,401	16,882	2,175
Laoang						701		701	701						2,102	2,102	2,102
Lapinig	1,127	2,575		3,702	129	234	737	4,673	1,099		5,550		5,550	278	467	6,017	745
Las Navas	2,461	4,884		7,345	244	467	368	8,180	1,080		44		44	2	1,168	1,212	1,170
Lavezares															1,168	1,168	1,168
Lope De Vega	759	1,746		2,505	87			2,505	87		6,305		6,305	315	467	6,772	782
Mapanas	805	1,968		2,773	98			2,773	98		4,396		4,396	220	467	4,863	687
Mondragon	1,771	4,174		5,945	209	234		6,178	442		12,787		12,787	639	1,168	13,955	1,807
Palapag	2,116			2,116		467		2,583	467		2,131		2,131	107	1,635	3,766	1,741
Pambujan	2,967	7,178		10,145	359	701		10,846	1,059		10,138		10,138	507	934	11,072	1,441
Rosario		385		385	19			385	19		4,174		4,174	209		4,174	209
San Antonio	253			253				253			2,220		2,220	111	467	2,687	578
San Isidro	805	1,480		2,285	74			2,285	74		15,525		15,525	776	1,401	16,926	2,177
San Jose	759	104		863	5			863	5		3,804		3,804	190		3,804	190
San Roque	2,070			2,070		467		2,537	467						701	701	701
San Vicente	529	1,080		1,609	54			1,609	54		4,040		4,040	202		4,040	202
Silvino Lobos											11,796		11,796	590	467	12,263	1,057
Victoria		2,220		2,220	111			2,220	111		11,944		11,944	597	701	12,644	1,298
Provincial Total	30,452	43,556		74,008	2,178	6,772	2,210	82,990	11,160		138,765		138,765	6,938	20,782	159,546	27,720

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

Unit: P 1,000

Name of Municipality	Urban Sanitation									Rural Sanitation							
	Household Toilets					Public School Toilets	Public Toilets	Total Construction Cost	Total Public Investment Cost	Urban Sewerage	Household Toilets					Public School Toilets	Total Construction Cost	Total Public Investment Cost
	Flush	Pour Flush	VIP/Dry	Sub-total of Construction Cost	Sub-total of Public Investment						Flush	Pour Flush	VIP/Dry	Sub-total of Construction Cost	Sub-total of Public Investment			
Allen	26,979	666		27,645	33	1,868		29,513	1,901	41,267		16,472		16,472	824	2,569	19,041	3,392
Biri	6,854	799		7,653	40	467		8,120	507			15,244		15,244	762	2,335	17,579	3,097
Bobon	16,008	770		16,778	38	467		17,245	505			20,113		20,113	1,006	3,036	23,149	4,041
Capul	12,305			12,305		467		12,772	467			9,339		9,339	467	1,635	10,973	2,101
Catarman (Capital)	86,572	10,863		97,435	543	6,071		103,506	6,614	130,086	12,236	65,682		77,918	3,284	11,442	89,360	14,726
Catubig	13,593			13,593		467		14,060	467			31,376		31,376	1,569	6,538	37,914	8,107
Gamay	7,636	429		8,065	21		368	8,434	390			36,719		36,719	1,836	6,305	43,023	8,140
Laoang	31,326			31,326		1,401	368	33,095	1,769	43,304		69,456		69,456	3,473	10,975	80,431	14,447
Lapinig	11,408	1,598		13,006	80	934	368	14,309	1,382			14,030		14,030	702	2,335	16,365	3,037
Las Navas	22,080	1,258		23,338	63	1,401	368	25,107	1,832			31,243		31,243	1,562	5,137	36,380	6,699
Lavezares	9,361			9,361		467		9,828	467			24,346		24,346	1,217	5,371	29,717	6,588
Lope De Vega	8,349	1,110		9,459	56	234		9,693	289			25,071		25,071	1,254	2,802	27,873	4,056
Mapanas	7,475	636		8,111	32	467	368	8,947	867			16,768		16,768	838	2,802	19,570	3,640
Mondragon	17,549	1,288		18,837	64	934	368	20,139	1,367			41,129		41,129	2,056	5,371	46,500	7,427
Palapag	18,308	266		18,574	13	1,401	368	20,344	1,783			41,544		41,544	2,077	7,239	48,782	9,316
Pambujan	31,395	3,907		35,302	195	1,635		36,937	1,830	47,180		27,543		27,543	1,377	4,437	31,979	5,814
Rosario	7,245	1,006		8,251	50		737	8,988	787			16,650		16,650	833	2,569	19,219	3,401
San Antonio	2,139			2,139				2,139				12,462		12,462	623	2,102	14,563	2,725
San Isidro	8,372	666		9,038	33	467	368	9,873	869		3,772	45,540		49,312	2,277	7,239	56,550	9,515
San Jose	8,303	533		8,836	27	467		9,303	494			19,506		19,506	975	3,269	22,775	4,244
San Roque	25,553	4,529		30,082	226	1,168		31,249	1,394	38,011		27,780		27,780	1,389	3,269	31,049	4,658
San Vicente	3,864			3,864			737	4,601	737			6,024		6,024	301	1,168	7,193	1,469
Silvino Lobos	10,212	1,066		11,278	53	234		11,511	287			19,447		19,447	972	1,868	21,315	2,840
Victoria	7,866			7,866		467		8,333	467			18,663		18,663	933	3,036	21,698	3,969
Provincial Total	400,752	31,391		432,143	1,570	21,482	4,421	458,046	27,472	299,848	16,008	652,147		668,155	32,607	104,862	772,997	137,449

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/cm^2 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 $5m^3$ 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	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 Water Supply	Urban Sanitation	Rural Sanitation	Urban Water Supply	Rural Water Supply	Urban Sanitation	Rural Sanitation	Total Weighted Score	
Allen	N.A.	46	41	41	0.93	0.60	1.00	0.60	0.23	0.15	0.25	0.15	0.78	8
Biri	N.A.	41	71	72	0.76	0.60	1.00	1.00	0.19	0.15	0.25	0.25	0.84	3
Bobon	N.A.	40	56	41	0.66	0.40	1.00	0.60	0.17	0.10	0.25	0.15	0.67	16
Capul	N.A.	32	50	51	0.49	0.40	1.00	0.80	0.12	0.10	0.25	0.20	0.67	17
Catarman (Capital)	N.A.	42	36	38	0.59	0.60	0.80	0.40	0.15	0.15	0.20	0.10	0.60	19
Catubig	N.A.	57	10	15	0.93	0.80	1.00	0.20	0.23	0.20	0.25	0.05	0.73	13
Gamay	N.A.	46	53	56	0.93	0.60	1.00	0.80	0.23	0.15	0.25	0.20	0.83	4
Laoang	N.A.	27	22	27	0.59	0.20	0.60	0.20	0.15	0.05	0.15	0.05	0.40	24
Lapinig	N.A.	39	57	63	0.83	0.40	1.00	1.00	0.21	0.10	0.25	0.25	0.81	6
Las Navas	N.A.	64	44	36	1.00	1.00	1.00	0.40	0.25	0.25	0.25	0.10	0.85	2
Lavezares	N.A.	30	19	24	0.76	1.00	0.40	0.20	0.19	0.25	0.10	0.05	0.59	20
Lope De Vega	N.A.	76	52	52	1.00	1.00	1.00	0.80	0.25	0.25	0.25	0.20	0.95	1
Mapanas	N.A.	50	54	51	0.93	0.60	1.00	0.80	0.23	0.15	0.25	0.20	0.83	4
Mondragon	N.A.	25	52	51	0.83	0.20	1.00	0.80	0.21	0.05	0.25	0.20	0.71	14
Palapag	N.A.	50	28	30	0.93	0.60	0.60	1.00	0.23	0.15	0.15	0.25	0.78	8
Pambujan	N.A.	38	56	60	0.83	0.40	1.00	0.80	0.21	0.10	0.25	0.20	0.76	10
Rosario	N.A.	27	39	46	0.32	0.20	0.80	0.60	0.08	0.05	0.20	0.15	0.48	23
San Antonio	N.A.	28	36	40	0.76	0.20	0.80	0.40	0.19	0.05	0.20	0.10	0.54	21
San Isidro	N.A.	23	51	53	0.63	0.20	1.00	0.80	0.16	0.05	0.25	0.20	0.66	18
San Jose	N.A.	41	37	41	0.76	0.60	0.80	0.60	0.19	0.15	0.20	0.15	0.69	15
San Roque	N.A.	34	27	23	0.76	0.40	0.60	0.20	0.19	0.10	0.15	0.05	0.49	22
San Vicente	N.A.	17	60	62	0.76	0.20	1.00	1.00	0.19	0.05	0.25	0.25	0.74	12
Silvino Lobos	N.A.	69	8	84	1.00	1.00	0.20	1.00	0.25	0.25	0.05	0.25	0.80	7
Victoria	N.A.	32	59	66	0.59	0.40	1.00	1.00	0.15	0.10	0.25	0.25	0.75	11
Provincial Total	N.A.	40	40	42										

Note:

(1) Scoring to Underserved and Unserved Percentage.

Score	Range of Underserved and Unserved Percentage		
1.0	61 < %	41 < %	61 < %
0.8	51 < % < 60	31 < % < 40	51 < % < 60
0.6	41 < % < 50	21 < % < 30	41 < % < 50
0.4	31 < % < 40	11 < % < 20	31 < % < 40
0.2	% < 30	% < 10	% < 30

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

0.25	0.25	0.25	0.25	Allocated Weight

Table 11.5.1 Available IRA for GOP-Assisted Level I Water and Rural Sanitation Project for Eligible Municipalities

(Unit: 1,000 Pesos)

Name of City or Municipality	Ttl Nos. of Bgy. in Rural Area	Class	Rural Water Supply									Rural Sanitation									
			Nos. of Related Bgy.	R. Water Supply Allotment of IRA		Nos. of LEVEL I Facilities				Prov. Avail. IRA	Mun. Avail. IRA	Sub-total Avail. IRA	No.of Related Bgy.	Rural Sanitation Allotment of IRA		Number of Toilets				Prov. Avail. IRA	Mun. Avail. IRA	Sub-total Avail. IRA
				Prov.	Muni.	Deep Wells	Shallow Wells	Spring Dev't	Ttl Related					Prov.	Muni.	Public Mkt.	Bus Term.	School Toilet	Ttl. Related				
Allen	14	5th	6	526	561	0	4	2	6	526	561	1,087		274	165			2	2	274	165	440
Biri	7	6th	4	287	580	0	3	1	4	287	580	867		369	504			2	2	369	504	873
Bobon	15	5th	7	1,272	1,540	5	0	2	7	1,272	1,540	2,812		360	291			3	3	360	291	651
Capul	7	5th	0	0	0	0	0	0	0	0	0	0		0	897			2	2	0	897	897
Catarman (Capital)	36	3rd	0	4,154	5,361	17	0	6	0			0		1,054	1,207			11	11	1,054	1,207	2,261
Catubig	39	5th	14	3,052	3,201	10	0	4	14	3,052	3,201	6,253		523	423			6	6	523	423	947
Gamay	23	5th	12	2,161	2,185	9	0	3	12	2,161	2,185	4,346		746	634			6	6	746	634	1,380
Laoang	50	4th	0	0	0	0	0	0	0	0	0	0		0	3,082			9	9	0	3,082	3,082
Lapinig	13	5th	4	720	847	3	0	1	4	720	847	1,567		334	252			2	2	334	252	586
Las Navas	49	5th	12	2,618	2,469	9	0	3	12	2,618	2,469	5,087		457	318			5	5	457	318	775
Lavezares	22	5th	0	0	0	0	0	0	0	0	0	0		0	1,712			5	5	0	1,712	1,712
Lope De Vega	21	6th	6	1,307	2,297	4	0	2	6	1,307	2,297	3,604		345	396			2	2	345	396	741
Mapanas	11	6th	5	889	1,394	4	0	1	5	889	1,394	2,283		317	310			2	2	317	310	628
Mondragon	22	4th	0	0	0	0	0	0	0	0	0	0		640	1,418			5	5	640	1,418	2,059
Palapag	28	5th	14	2,545	2,424	10	0	4	14	2,545	2,424	4,968		621	478			7	7	621	478	1,099
Pambujan	18	5th	8	1,441	1,340	6	0	2	8	1,441	1,340	2,781		535	386			4	4	535	386	921
Rosario	9	6th	0	0	0	0	0	0	0	0	0	0			306			0	0			0
San Antonio	9	6th	0	0	0	0	0	0	0	0	0	0		0	847			2	2	0	847	847
San Isidro	12	4th	0	0	0	0	0	0	0	0	0	0		0	3,192			6	6	0	3,192	3,192
San Jose	12	5th	7	1,128	1,553	4	1	2	7	1,128	1,553	2,681		174	75			0	0	0		0
San Roque	10	5th	7	1,272	1,363	5	0	2	7	1,272	1,363	2,636		321	216			3	3	321	216	538
San Vicente	5	6th	0	0	0	0	0	0	0	0	0	0		0	296			0	0	0		0
Silvino Lobos	23	5th	5	1,092	1,780	4	0	1	5	1,092	1,780	2,871		424	497			2	2	424	497	921
Victoria	13	6th	7	839	1,951	2	3	2	7	839	1,951	2,790		493	870			3	3	493	870	1,364
Total	468		118	25,302	30,845	92	11	38	118	21,148	25,484	46,632		7,989	18,776	0	0	89	89	7,815	18,098	25,913
Total Available IRA Fund			72,545																			

Table 11.5.2 Available IRA for GOP-Assisted Urban Sanitation Project for Eligible Municipalities

Name of City or Municipality	Ttl Nos. of Bgy. in Urban	Class	Nos. of Related Bgy.	Urban Sanitation Allotment of IRA		Number of Toilets				Prov. Avail. IRA	Mun. Avail. IRA	Sub-total Avail. IRA
				Prov.	Muni.	Public Mkt.	Bus Term.	School	Ttl Related			
Allen	6	5th		377	393	0	1	3	4	377	393	771
Biri	1	6th		56	64	0	0	0	0			0
Bobon	3	5th		224	242	0	0	2	2	224	242	465
Capul	5	5th		0	536	0	0	1	1	0	536	536
Catarman (Capital)	19	3rd		748	935	0	1	9	10	748	935	1,683
Catubig	8	5th		130	111	0	1	0	1	130	111	241
Gamay	3	5th		44	20	0	0	0	0			0
Laoang	6	4th		0	1,027	0	0	3	3	0	1,027	1,027
Lapinig	2	5th		341	372	2	0	1	3	341	372	713
Las Navas	4	5th		335	294	1	0	2	3	335	294	629
Lavezares	4	5th		0	0	0	0	0	0			0
Lope De Vega	1	6th		49	44	0	0	0	0			0
Mapanas	2	6th		52	44	0	0	0	0			0
Mondragon	2	4th		151	347	0	0	1	1	151	347	499
Palapag	4	5th		159	128	0	0	2	2	159	128	287
Pambujan	8	5th		330	284	0	0	3	3	330	284	614
Rosario	2	6th		0	28	0	0	0	0			0
San Antonio	1	6th		0	0	0	0	0	0			0
San Isidro	2	4th			109	0	0	0	0			0
San Jose	4	5th		6	2	0	0	0	0			0
San Roque	6	5th		159	144	0	0	2	2	159	144	303
San Vicente	2	6th		0	79	0	0	0	0			0
Silvino Lobos	3	5th		0	0	0	0	0	0			0
Victoria	3	6th		56	74	0	0	0	0			0
Total	101			3,216	5,278	3	3	29	35	2,954	4,813	7,767
Total Available IRA Fund			7,767									

Table 11.5.3 Total Available IRA for GOP-Assisted Level I Water Supply and Sanitation Project

Name of City or Municipality	Water Supply	Sanitation		Total
	Rural	Urban	Rural	
Allen	1,087	771	440	2,297
Biri	867	0	873	1,740
Bobon	2,812	465	651	3,928
Capul	0	536	897	1,433
Catarman (Capital)	0	1,683	2,261	3,944
Catubig	6,253	241	947	7,441
Gamay	4,346	0	1,380	5,726
Laoang	0	1,027	3,082	4,109
Lapinig	1,567	713	586	2,866
Las Navas	5,087	629	775	6,490
Lavezares	0	0	1,712	1,712
Lope De Vega	3,604	0	741	4,345
Mapanas	2,283	0	628	2,911
Mondragon	0	499	2,059	2,557
Palapag	4,968	287	1,099	6,354
Pambujan	2,781	614	921	4,315
Rosario	0	0	0	0
San Antonio	0	0	847	847
San Isidro	0	0	3,192	3,192
San Jose	2,681	0	0	2,681
San Roque	2,636	303	538	3,476
San Vicente	0	0	0	0
Silvino Lobos	2,871	0	921	3,792
Victoria	2,790	0	1,364	4,154
Total	46,632	7,767	25,913	80,312

Table 11.5.4 FIRR for Level I Water Supply

Year	Nos. of Deep Well	Nos. of Shallow Well	Spring Dev't	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	265	0	0	0
2	15	2	8	15,286,300	0	0	15,286,300	375	265		1,192,500	(14,093,800)
3	23	3	13	23,981,300	0	152,863	24,134,163	960	265		3,052,800	(21,081,363)
4	23	3	13	23,981,300	0	392,676	24,373,976	1,545	265		4,913,100	(19,460,876)
5	14	1	8	14,594,200	0	632,489	15,226,689	1,890	265		6,010,200	(9,216,489)
6					0	778,431	778,431	1,890	265		6,010,200	5,231,769
7					0	778,431	778,431	1,890	265		6,010,200	5,231,769
8					0	778,431	778,431	1,890	265		6,010,200	5,231,769
9					0	778,431	778,431	1,890	265		6,010,200	5,231,769
10					0	778,431	778,431	1,890	265		6,010,200	5,231,769
11					0	778,431	778,431	1,890	265		6,010,200	5,231,769
12					1,345,300	778,431	2,123,731	1,890	265		6,010,200	3,886,469
13					2,057,300	778,431	2,835,731	1,890	265		6,010,200	3,174,469
14					2,057,300	778,431	2,835,731	1,890	265		6,010,200	3,174,469
15					1,184,200	778,431	1,962,631	1,890	265		6,010,200	4,047,569
16					0	778,431	778,431	1,890	265		6,010,200	5,231,769
17					0	778,431	778,431	1,890	265		6,010,200	5,231,769
18					0	778,431	778,431	1,890	265		6,010,200	5,231,769
19					0	778,431	778,431	1,890	265		6,010,200	5,231,769
20					0	778,431	778,431	1,890	265		6,010,200	5,231,769

Discount rate for NPV = 0.09 per year

TOTAL	7,979,907
FIRR	1.3%
NPV	2,075,417

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

Unit: Peso

Category	Total Amount	1st year	2nd year	3rd year	4th year	5th year
A. Const. & Civil Works						
1. Water Supply	70,534,180	0	14,106,836	21,160,254	21,160,254	14,106,836
2. Sanitation	38,633,080	0	7,726,616	11,589,924	11,589,924	7,726,616
3. Land Acquisition	750,000	0	150,000	225,000	225,000	150,000
B. Equip./Logistic Support	1,249,500	0	1,249,500	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.	12,090,899	4,836,359	2,418,180	2,418,180	1,209,090	1,209,090
D. Instiutional Devt.						
1. Capacity Enhanc. Prog.	3,200,000	960,000	960,000	640,000	320,000	320,000
2. Commu. Manag. Prog.	1,529,340	458,802	458,802	305,868	152,934	152,934
3. Health & Hygiene Educ.	255,600	76,680	76,680	51,120	25,560	25,560
4. Water Quality Surveil.	99,400	29,820	29,820	19,880	9,940	9,940
5. NGO Assistance	170,400	51,120	51,120	34,080	17,040	17,040
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)	13,086,040	792,078	2,758,755	3,668,431	3,482,974	2,383,802
Total (A+B+C+D+E+F)	143,946,438	8,712,860	30,346,309	40,352,736	38,312,716	26,221,817
F. Others						
1. Price Contingency	44,272,261	2,679,733	9,333,331	12,410,914	11,783,484	8,064,799
2. Value Added Tax (VAT)	5,897,546	356,970	1,243,301	1,653,269	1,569,688	1,074,319
Grand Total	194,116,245	11,749,562	40,922,941	54,416,919	51,665,888	35,360,936

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	75	11	32
Nos. of HHs to be Served	1,125	165	480
Reconstruction Cost (Peso)			
Unit Cost	609,700	82,400	747,000
Ttl. Reconst. Cost	45,727,500	906,400	
Ttl. Reconst. Cost/year	2,286,375	90,640	
Cost per HH/year	2,032	549	
Rehabilitation Cost (Peso)			
Unit Cost	78,700		
Ttl. Rehab. Cost	5,902,500		
Ttl. Rehab. Cost/year	590,250		
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	2,657	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 toMonthly Family Income

	Deep Well	Shallow Well	Spring Dev't
O&M Cost per HH/month	221	50	4
Proportion (Mean)	3.0%	0.7%	0.1%
Proportion (Median)	4.5%	1.0%	0.1%

Table 11.6.4 Family Income (Unit: Pesos)

Annual [1]		Monthly [2]	
Mean	Median	Mean	Median
45,485	29,673	7,456	4,864

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)

os. of Facilities to be Constructed		Unit Construction Cost		Yearly O&M Cost
Public Toilets	School Toilets	Public Toilets	School Toilets	
0	89	358,400	233,500	1,039,075

Note: O&M cost includes the salaries of maintenance staff, cost of pumpng 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)

os. of Facilities to be Constructed		Unit Construction Cost		Yearly O&M Cost
Public Toilets	School Toilets	Public Toilets	School Toilets	
6	29	358,400	233,500	446,095

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

Province of _____ Form P- 1

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									

III. School Sanitation (Source, DECS)

School (Location) (1)	No. of Students Enrolled (2)	Water Supply Adequate ? (Y/N) (3)	No. of Functioning Toilet Units (4)	Facility: Student Ratio (5)

IV. Incidence of Diarrhea (Source IPHO)

Month (1)	Last Year (2)	This Year (3)
January		
February		
March		
April		
May		
June		
July		
August		
September		
October		
November		
December		

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 _____

Form M - 1

Provincial Water & Sanitation Monitoring System

Annual Sector Performance Summary Report

Period Covered : _____ to _____

I. Service Coverage

	LAST YEAR				THIS YEAR			
Name of Barangay (1)	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						
			Water Source Development (4)	Water Supply Transmission (5)	Water Storage/ Treatment & Distribution (6)	Household Toilets (7)	School Toilets (8)	Public Toilets (9)	Others (10)
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.									
W.									
SUB-TOTAL									
NGO									
NGO									
NGO									
SUB-TOTAL									
TOTAL