B

FUTURE REQUIREMENTS AND DEVELOPMENT PLAN

T

8. FUTURE REQUIREMENTS IN WATER SUPPLY AND SANITATION IMPROVEMENT

8.2 Targets of Provincial Sector Plan

Name of		Pupulation	Rpda	tion Served	by 1997 F	adities	Ripula		iened by P g Projects	lanned ^y	Ry	citation Ser	ved in the	Base Year	(1997)
Meniopality	Area	(1997)	Lod III	ladli	Ibal	Total	[eq]]	اللهما	Indi	Total	Fed (I	lodii	[od]	Total	Ritentage Contrage
	Utan	6,697	6,247			6,247					6,247			6,247	93
นและการ	Rual	42,918	7,513	2,965	15,184	25,662					7,513	2,965	15,184	25,662	(0)
Ì	Total	49,615	B,760	2,965	15,184	31,909					13,760	2,965	15,184	31,909	61
	Utan	41,880	30,498		6,778	37,276					30,498		6,778	37,276	89
Ngis (Capital)	Rinal	68,430	3,735	2,830	47,067	53,632					3,735	2,830	47,067	53,632	78
••••	lictal	110,322	34,233	2,830	53,845	20,908					34,233	2,830	53,845	90,908	82
	Uttan	11,181		934	4,400	5,433						934	4,400	5,403	43
Con Marcolino	Rmi	20,227		1,318	879	2,197						1,318	879	2,197	11
	Total	31,408		2,252	5,348	7,600	1					2,252	5,318	7,600	24
	Ullen	6,751	3,239	1,672	1,684	6,595					3,239	1,672	1,684	6595	98
hynny	Rual	36,595		150	33,793	33,943			1			150	33,793	33,943	93
- /	Total	43,346		1,822	35,477	40,538					3,239	1,822	35,477	40,538	94
	Utan	5,167	{		963	963					1		963	963	19
lose Abad Sartos	Rural	43,612			8,795	8,795	1		1	1			8,795	8,795	20
(Trini dad)	Total	48,800			9,758	9,758	1						9,758	9,758	20
	Urban	5,925	2,049		290	2,339					2,049		290	2,339	3)
Kiblasan	8 ral	32,00		2,423	10,681	13,10			1	1	1	2,423	10,681	13,104	41
	Total	37,931	2,049	2,423	10,971	15,44			1		2,049	2.423	10,971	15,40	41
	Utan	6,737		<u> </u>	3,355				<u> </u>	<u> </u>	1,578		1,355	4,933	73
Magaysay	Riral	36,39			21,502				1		967	3,376	21,502	25,845	71
	Total	43,130	2,545		24,857	30,778			1		2,545	3,376	24,857	30,778	71
	Uten		918		1,735	265					918		1,735	2,653	- 58
Malalag	Rurai	27,12			4,190						1,150	353	14,190	15,693	58
(mang	Total	31,72									2,068	353	15,925	18,340	58
	Utan				150			1	1	t	5,623		150	5,773	45
Malita	Riral	72,12			20,00				1		2,342	3,536	20,006	25,884	36
14 661123	Total	8,00						 		1	7,965	3,536	20,150	31,657	37
	Uten				451			<u> </u>		f	2,14		451	2,592	65
Matanao	Rual	40.61						┨────	+	1	9	2,781	24,523	27,39	61
. » para cuto	Total	44,62				29,99		!			2,235	2,78			67
	Uta				1,80					1	6492		1,860	8,352	
Patab	Rira	13,70					7				1.5%	1,025		6,797	50
1.00.000.0	Total	23,00							· • • • • • • • • • • • • • • • • • • •	- · · · · ·	8,06				
	Urba				5,56			1		1	8,47	+	5,568		
Senta Chuz	Riral	40,32			1 <u></u>			-}		1	1,00				
	Total	61,11								1	9,50	<u> </u>			
	Utar				1,55					+	1,88		1,55	3,45	
Santa Maria	Rural	36,26		93						+		939	*		
OTTER MALES		43,00								-	1,88				
	Total							1				1,30		1,30	
Sama mai	Rural			1,30	4,21	1,30 3 4,21		+			1	<u> </u>	4,213		
Srangani	and the second second			1,30						1		1,300			
	Total				2,28					1	90		2,28	3,18	
a	Utto									1	1,00		10,850		
Isto	Rura				10,85			+	-{		1,90		13,14		
	Total	<u></u>			13,14	_		┥━━━	+	+				the second s	
	Uła								+		20,04				
PWSP Study Are								} -		+	19,39				
	Tota	676,59	8 89,44	0 29,66	<u>e 277,77</u>	8_336,85	<u>۶۹ </u>	1	<u> </u>		89,44	<u>y 27,00</u>	277,77	1 370.00	<u>1)'</u>

Table 8.2.1	Estimation of Base Year Service Coverage of Water Supply
T NOLA CIMIT	notification of mass rate of the orthogen and the first

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Name of	Area	Populat	lon Served	by 1997 Fa	cilities	199	07	200	3
Municipality		Level III	Level II	Levelt	Total	Total Population	Coverage (%)	Total Population	Coverage (%)
	Urban	6,247		The second se	6,247	6,697	93	7,039	89
ansalan	Rural	7,513	2,965	15,184	25,662	42,918	60	45,110	57
	Total	13,760	2,965	15,184	31,909	49,615	64	52,149	61
	Urban	30,498		6,778	37,276	41,886	89	46,518	80
Digos (Capital)	Rural	3,735	2,830	47,067	53,632	68,436	78	76,002	71
	Total	34,233	2,830	53,845	90,908	110,322	82	122,520	74
	Urban		934	4,469	5,403	11,181	48	12,845	42
Don Marcelino	Rural		1,318	879	2,197	20,227	11	23,235	. 9
	Total		2,252	5,348	7,600	31,408	24	36,080	21
	Urban	3,239	1,672	1,684	6,595	6,751	98	7,556	87
lagonoy	Rural		150	33,793	33,943	36,595	93	40,959	83
	Total	3,239	1,822	35,477	40,538	43,346	94	48,515	84
	Urban	i		963	963	5,167	19	5,515	17
ose Abad Santos	Rural	<u> </u>		8,795	8,795	43,642	20	46,578	19
Trinidad)	Total			9,758	9,758		20	52,093	19
	Urban	2,049		290	2,339		39	6,712	35
Kiblawan	Rural		2,423	10,681	13,104		41	36,262	36
	Total	2,049		10,971	15,443		41	42,974	36
	Urban	1,578		3,355	4,933		73	7,327	67
Magsaysay	Rural	967			25,845		71	39,579	65
inagaa joo j	Total	2,545			30,778		71	46,906	66
	Urban	918		1,735				5,066	52
Malalag	Rural	1,150					58	29,881	53
at a la l	Total	2,068						34,947	52
	Urban	5,623		150			45	13,702	42
Malita	Rural	2,342					36	76,627	34
	Total	7,96						90,329	35
	Urban	2,14		451				4,356	60
Matanao	Rural	- 2,14						44,113	62
Matanao	Total	2,23						48,469	
	Urban			1,860			90	10,116	
Padada	Rural	1,570						14,909	
rauaua	Total	8,062		and the second s				25,025	61
	Urban		-	5,568				22,971	61
Santa Cruz	Rural	1,02						44,560	
Sama Cruz			and the second					67,531	
	Total Urban	9,50		5 22,198 1,554				7,297	
Santa Maria			93					39,272	
Saika Marta	Rural							46,569	
	Total Urban	1,88	1,30		1,30		1	3,029	
Samaani			1,300					15,936	
Sarangani	Rural		1 10	4,21				18,965	
	Total		1,30					6,092	
a	Urbar			2,28					
Sulop	Rural			10,85				21,630	
L	Total			13,14				27,722	1
· · · · · ·	Urbar					and the second sec		166,141	
PW4SP Study A								594,653	
	Total	89,44	0 29,66	6 277,77	8 396,88	4 696,59	5 57	760,794	1 52

Table 8.2.2Population Coverage in Phase I Provided by Served Populationin the Base Year (Water Supply)

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			Number of	Househelds	s Using Sau	Households Using Sanitary Toilets in 1997	ts in 1997	Кесіріст	Projects	Kecipsent Ans of Flanneavon-goung Projects	Tuton-		House	helds Using	g Sanitary	Toilets in 1	Households Using Sanitary Tollets in the Base Year (1997)	ar (1997) -	
Name of	Area	ŝ	Households										EAN	ber			C O	Coverage (*/)	
Municipality		(1661)	(1997)	Flush Tollets	Pour	NIPON	Total	Fluch	Four Flush	VIP/DIA	Total	Flush	Four	VIP/Dry	Total	Flush	Peur Flush	~U1411	Total
	(Crhan	6,697	500,1	N.	177%	COL	900					32	198		906	2	Ç	r.	2
Bansulan	Kurai	410,24	×,705	82	6 216	526	7,271					ç	6,716	573	144	-	F	= :	2
	Total	49,615	00101	14	15.77	1,076	8,767					411	1.17		× /6/	I			
	(Lirban	41.8X6	8.513	2.278	4 813	161	7,288	:				2,278	4,813	561	7,2881	21	5	r :	2
Diane (Canital)	E SA	68.4.16	13.687	102	1 045	1.81	13,443					161	11,685	1,361	13,443	5	×	<u>0</u>	ş
(search and) and		441 011	90.00	<u>, , , , , , , , , , , , , , , , , , , </u>	X07 V1	1	20.731					5175	16.498	1 458	20,711	12	74	~	5
	11.1.1	1×1	2.54	4	767	20	X3H	 -				42	767	62	838	7	\$		ŝ
Des Marceline		1000	XLXL	1	1 972	050	2.935	ľ				13	1,972		2,935		2	22	۶
		11.400	000	3	2 710	010	5.72		Ī			\$\$	2,739		3,7731	1	46	16	ε 3
	11-4-1	194.7	11/18		100		XQX		ſ			Ă	209		90X	f.	4	12	59
		0,/21	101.1		10,	1	0.14	ľ	ſ			×	5001	040	691.9	-	20	51	ä
Amuñer						1	50					56	1075	1 200	\$ 475	1.	8	4	х1
		0 T 1			167	Ň	102	T		ŀ		8	471	3	694	2	47.	8	8
ose Abad Santos		10	10.7			2	170	T		Ī	l	3	4.698	ſ	5,861		\$5	5	69
Trinidad)	Eny 2	4.0,04.4	#/#'C		020 2		200		ĺ		ľ	62	<u>5</u> (6)	Γ		-	3	2	69
	locat	45,80%	00 ⁴ /	3	401.0	201			Í			4	133		Ŀ		Å.	l ≏	3
-	CTOAR	674'C	707.1	¥.		001			Í				1 488		ľ	-	ŝ	*	¥
newelor,	Kural	.12,006	0,100		7.754			t	Ť	Ī	t	ľ	10	-	< 030	-	1	a i	9
	10	1:6'1	7.87						T		T	*	Ş		758		47	è	*
	Crean	6.7.37	× -	5	2							2	ACAA	ſ	\$ 463		62	ŝ	39
Magsyssy	r T T	50.01	04.1	, i	4/4/4	007	00010		T	T	t	5	XC0 5		6.421	-	8	2	£
	1019	45,1,50	A HER	10	\$20.0	00101			Ţ		ſ	8	658	L		5	8	51	×
	CLOAN	24.00	10n	2.5					ļ		ľ	3	4.2%2	8%	5.174	-	*	2	66
	Total	1.1.1.1	\$		UPO P	Š	6007			ŀ	ŀ	2	4,940		6,007	-	56	16	8
	action of	12 807	0 4 00	017	1 404	202	1,716					011	1,404		1,716	4	8	×	3
Malita	Rus I	121.27	14.310	278	10.411	1.525	12,214			·		278	10411	1,525	12,214	2	5	-	ŝ
I	To a	040.28	16.809	388	11.815	1.7271	13,930			-		388	11.8:5	1,727	13, 930	f i	- 20	2	2
	1.1.1	4 010	108	174	245	1	592		ſ			174	267	121	592	33	31	21	74
		40.615	AC2 6	3	4 867	1 1 20	\$90,4	ſ	ſ			3	4,867	1,150	6,065	-	62	15	77
		1200	929 ×	222	\$ 11.5		E.			ſ		222	5,114	1.32.1	6.657	3	59	151	11
		0 2471	1 810	170	CA2	¥	746		ſ			120	542	2	746	4	8	5	4
Padada	161.5	11,204	2.X14	45	- 2.545	Ŀ						45	2,545	8	2,680	11	8	10	£
	Total	100.12	107	165	3.087							165	3,087	174	3.426	4	67	4	7
	nedal 1	20 787	4.026	22	1.553	356	2.129	ſ				220	1,553	356	2,129	\$	×	3	9
Santa Critz		401.04	X 001	7.6	43	1.261	7 057					73	5,643	1 12	2 057	-	71	2	3 5
t .	Tot		12.077	202	2.194	1.69	981.6	:				S6 2	26 2	5 I	9.186	4	\$	4	2
	1 irban	6.73X	1 100	8	73X	16	869					8	7.38		69%	ñ	5	~	3
Santa Maria	Kum	36.264	0.900	32	4.693	1,1161	5,846					37	4,693	1,116	5,846		19	ŝ	¥
	Tenal	43.002	8.266	46	5.431	1.207	6,715					11	16745	1,207	6,715		3	ž	×
	liman	2.746	615	°	33	153	425					161	3S6		425	5	49	93	ដ
Satanyani	Ruma	14.447	2.690	2	286	\$31	1.323					2	786	· 525	1.323		58	ខ្ល	\$
	Total	17,193	3.209	Ř	- 92	\$28	1,748					23	1,042	678	1,748		X	ñ	R
	Orban	204.5	1.177	116	499	112	121					116	499	211	727	10	4	2	Ş
Sulon	kum)	20,365	4.155	8	1.543	1.026	2.591					22	1,543	1,026	2,591		37	52	ş
	Total	26,337	266.2	138	2,042	1,1381	318.0				-	138	2,042	1,138	3,318.	5	38	Ä	Ş
	1 Jrhan	1512101	30.000	3.312	14.568	2.318	F.,					3,312	14,568		20,1981	11 1	44	×	67
Provincial Total	Rus.	121 121	107.02	ſ			1000	ľ			Í	1 145	21.144	15 414		-	Ş	4	84
					į		11111111												

Table 8.2.3 Number of Households Served by Sanitary Toilcts in the Base Year (1997)

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Name of Municipality	1997 Total Number of Public School Student	1997 Total Standard No. of Number of Public Student that can be School Student Served by 1997	No. of Student to be Served by Planned /On- going Projects	Standard No. of Students that can be Served by Toilets in Base Year (1997)	Coverage (%)
Daracian	10.287	3,600	0	3.600	35
Dausateur Diene (Canital)	26.738		0	6,240	23
Dan Marcelino	5,561	2.640	0	2,640	47
Harmon	9,066		0	3.360	37
Irose Abad Santos (Trinidad)	6,339	2,880	0	2.880	45
Kihlawan	6.650	2,400	0	2,400	36
Mageaveav	9.749	3,360	0	3,360	34
1.1.4500 000	6,766	2,640	0	2,640	39
Malita	16,878	9,120	0	9,120	54
Matanao	10,270	4,320	0	4,320	42
Padada	4,236	1,920	0	1,920	45
Santa Chiz	15,498	6,240	0	6,240	40
Santa Maria	9,744	5,280	0	5,280	54
Carandani	7.290	3,120	0	3,120	43
Sulon	6,515	2,640	0	2.640	41
1	151,587	59,760	0	59.760	39
PW4SP Study Area	151,587				59.760

Table 8.2.4 Number of Public School Student Served by School Toilets in Base Year (1997)

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 $\{ f_{1,1}^{(i)}, f_{1,2}^{(i)} \}$

	Name of Musicipality	Туре	No. of PU with Toitets In 1997		No. of PU with Toilets In Planned On- going Project	No. of PU with Sauitary Toilets in Planned On- going Projects	No. of PU with Toilets la Base Year 1997	No. of PEI with Sanitary Toilets in Base year 1997	Coverses (*/-
Basklant		Public Market					1	1	100
Part Figured 1 <t< td=""><td>ĺ</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>	ĺ								
real222222			1	1			1	ŀ	100
Able Markar 2 2 2 2 2 2 2 3 Mark (Paylow)			· · · · · · · · · · · · · · · · · · ·					2	100
Spatic Lapitol Spatic			2	2				2	100
Pack Dispond				2		[1
Tesh22230No MarcelionDav frequer Tenninal<									[
Pails Marter 1 1 1 1 1 100 Sox Marceline Image			2	2			2	2	100
Pair Program res res <t< td=""><td></td><td></td><td></td><td>1</td><td></td><td></td><td>ł</td><td></td><td>100</td></t<>				1			ł		100
Perk Program Perk Program<	Des Mussilins	Bus Jeepney Terminal							
Pable Marter 100 fad 1 1 1 1 1 1 100	Jon Marcenno	Parks Playground							
Bay/Reperty Terminal Image: Product of the second of the sec			1	1			1	1	100
Park Biggeond		Public Market		1			l	I	100
Park Biggeond				1					
India111111low Abd Sansy Park Flag gend1111100low Abd Sansy Park Flag gend111100100Roll Abd Sansy Park Flag gend1111100Roll Abd Sansy Park Flag gend111100100Roll Abd Sansy Park Flag gend111100	listopa			1					
Operations Point Marker 1			1	1		1	1	1	100
Bart Proper Terminal Image of the second secon				1		1	1	11	100
Part Sty geond	lose Abad Santos			1					
Teal 1 1 1 1 1 1 100 Köles an Polike Karlet 1 1 1 100 100 100 Parks Playground -<	(Trinidað)		1		[l		J	
Notes farter: 1 1 1 1 100 Bus leggesy Terminal Parks Physicand 1 1 1 100 Majsay say Parks Physicand 1 1 1 100 Majsay say Parks Physicand 1 1 1 100 Majsay say Parks Physicand 1 1 1 100 Parks Physicand 1 1 1 1 100 Majsay say Parks Physicand 1 1 1 1 100 Malalag Bus leggesy Terminal Parks Physicand 1 1 100 1 100 Malalag Bus leggesy Terminal Bus leggesy Terminal 1 1 100 10			1	1			1	1	100
Bits Propey Terminal Image: second sec		Public Market	1	1	1		1	1	100
Parks Playgoond			1	1	1			1	1
Ford 1 1 1 1 100 Magka) (ay) Pablic Market 1 1 1 100 Park Playgound - - - - - Park Playgound 1 1 1 100 1 100 Maskal Playgound 1 1 1 1 100 -	Kiblawan		<u>↓</u>	1		1		T	
Abic Maler 1 - 1 1 1 100 Busceptor Terminal Parks Playgound 1 1 1 1 1 100 Malsiay Malslag Busceptor Terminal Parks Playgound 1 1 1 100 Malslag Busceptor Terminal Parks Playgound 1 1 100 100 Malsia Parks Playgound 1 1 100 100 100 Malsia Busceptor Terminal Busceptor Terminal 1 1 1000			1	1 1	1		1	1	100
Massaysay Bay Legacy Terminal Parks Playgound N N N Totut 1 1 1 1 100 Malsage Nuble Market 1 1 100 100 Malsage Nuble Market 1 1 100 100 Bus Legacy Terminal 1 1 1 100 100 Parks Playgound 1 1 1 100 100 Parks Playgound 1 1 1 100 100 Parks Playgound 1 1 1 100 100 100 Matanao Bus Legacy Terminal 1 1 100 <t< td=""><td></td><td>· · · · · · · · · · · · · · · · · · ·</td><td></td><td></td><td>1</td><td></td><td>1</td><td>1</td><td>100</td></t<>		· · · · · · · · · · · · · · · · · · ·			1		1	1	100
Parks Phyground Image of the second sec				1.	1				1
Text111100MalalagRukley Arel111100Parls Phyground111100Parls Phyground111100Total111100Parls Phyground11100Parls Phyground11 <td>Magsaysay</td> <td></td> <td></td> <td>1</td> <td>1</td> <td>1</td> <td>1</td> <td></td> <td></td>	Magsaysay			1	1	1	1		
Nuble Market 1 1 1 100 Malalag Bask Reprey Terminal	1		· · ·	1. 1			1	1	100
Bis / Reprey Terminal Image: Provide the second secon					1			1	
Parks Play ground Image Image <thimage< th=""> <thimage< th=""> Image</thimage<></thimage<>				· ·	1	1 .			
Total 1 1 1 100 Makina Pakis Market 3 1 33 1 33 Makina Bus/recover Terminal	Malalag		+	+	1	1			
Pakic Market 3 1 3 1 33 Bus/Reproxy Terminal Parks Playground		and the second sec	1	1	·····			1	100
Maita Bus/Legoey Terminal Image: Constraint of the second			· · · · · · · · · · · · · · · · · · ·					1	33
Parks Playground Image: constraint of the second seco		}			1	1			
Total3133133Matanabi20 bills (Market512020Parke Play ground	Malita					•••			
Public Market 5 1 20 Bus/Teegney Terminal			3	<u> </u>	-	1	3	1	33
Matanap Busileepney Terminal Parks Playground Image: Constraint of the second					1			1	20
Parks Playground Image: constraint of the second seco				-		1			
Total 5 1 20 Padada Public Market 1 1 1 100 Bus/Jeepexy Terminal Image: Construct Structure Image: Constructure	Matanao		<u> </u>						
Padsda Public Market 1 1 1 100 Bas/leepney Terminal Parks Playground Image: Constraint of the second sec	· · · · · ·			1 1		· · · · · · · · · · · · · · · · · · ·	5	1 1	20
Basileepacy Terminal									100
Parks Playground Image: splayground Image: sp				1	· · · · · · · · · · · · · · · · · · ·	1			
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		Parks Playground							

Table 8.2.5 Number of Public Utilities with Sanitary Toilets in the Base Year (1997)

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Name of Municipality Banaalan Digoo (Capital)		No. of Hou.	No. of Household Served by		Xisting Pacilities			ŝ	Coverage in 1997	-					రీ	Coverage in 2003	5		
contraction of the second seco							Perce	Percentage of Served Households	ed Househe	14=	Served Pop	Population	10	Pen	Percentage of Served Households	ved Househ	olda	Served Population	Pulation
sursalar Digos (Capital)		Hauf'	Pour Flush	VIP/04	Total		dial di	Four Flugh	VIP/ Dry	Tour	Number	*	111	dauf?	Four Plush	VIP/ Dry	Total	Number	*
tunsalan Digos (Capital)		5	KA1	101	9996	1,705	11	62	ŀ	7	a,755	71	1,466	R	39	ţ,	3	5,021	3
isnaatian Sigos (Capital)	Uruan		1416.4		144.6	x 7051	-	7	-	2	096'5	×o	9,150	-	73	-	Ŷ	1012.04	ŝ
igos (Capital)	Torra I	170	C(2) L	010	x 707	10,100		2	-	87	10,715	87	10.616		14	2	\$	45,240	2
igos (Capital)	1041				3 246	1		5	~	ş	36,022	ź	9,455	24	51	4	77	780,047	F
igos (Lapital)	Libra				114	1000		ŝ	0	š	41,04%	ş	15,200		77	0	ŝ	74,1071	ž
	Kura		0011		112.00	000.00	. 6	74	-	\$	77,070	s	24,655	=	62	9	×	302,611	1
	1013	C/D ¹ 2	474 04801			2011 C		9		8	4,161	2	2,475	2	31	-	7	- 8	치
	(rhan	ŝ	10/				+-			1	8.498	ę	400		45	22	62	17,8401	5
Don Marcelino	Kura		212			0.05	+		Í	1	12 8591	3	6,884	-	94	4	. 55	22,844	8
	Total	x	562.5				-	¥ ;	:	39	10.01	ç	520	, ,	9	=	5.	4,472	23
	Urban	38	ŝ	ĺ	82	1,358	~	4	7	È.	CUX'C	;	9 L L X		69	1	3	1207, 12	٤
Hagonoy	Rural	X	5,091	1,040	6,169	7,304	_	0/		1	1.00	8	10000	-	9		2	38.274	t;
	Totai	701	1,69,1	1,206	6,975	X,602	-	8	-	2			10,01	ļ	1	×	8	1.82	\$
	Urban	2X)	471	195	¥.	82	-			2				T	Ş	1	¥8	32.244	Ŷ
ose Abad Santos (Trinidad)	Rutal	34	4,698	1,129	5,861	8,474		2		5 5	001	5	101.01	-	5		Ş	36.1211	3
	Total	62	591'5		6,555	0,4%		\$5	4	8	7117	8	COLUL MIC		-		5	4 249	8
	Urban	421	553	180	781	1,232	-	4 5	15	3	102.6	2	CAC'	-	Ş	;	22	1022 02	2
Kiblewan	Rural	33	1,048	1,130	5,151	6,155		ŝ	ž	g.	1.7.	5	0.17.0		; 3		ŗ	X 5 7	5
	Total	75	4,541	1,316	5,932	7.367	-	5	8	2	8,710	2		ŀ		2	3	4205	X
	Urban I	26	604	128	358	1.29%			2	×.		2	1		Ş	41	1	11 354	2
Magbaysay	Rural	10	4,424	1,208	5,663	7,150		5		2	226,6	2	0.,17	ŀ	: *	2	i i	and N	Ŗ
	Total	52	5,028	0001	5,421	8,44B		8	9	۶	622°6	0	1001		2				2
	Urban	101	658	145	833	ž	- -	3	2	ž	4,047				3	ľ	ž	5	ź
Malalag	Kural	42	4,282		-5,174	\$,30%	-	50	2					Ţ	ŗ	1	ŝ	11.156	58
	Total	u -	0940	\$	6,007	5,256	-	2	2	\$	8r248	5	2420	Ţ	•		ž	0443	65
	Urben	011 -	1,404	202	1,716	2,499	-	8	×	8	2.00	6			40	ļ	NO.	100 100	ş
Malita	Kural	278	10.411	1,525	12,214	-14,310		73	-	2	2060	2	1077 C1	ļ	5 2		2 ×	74.437	ž
	Total	388	11,815	1,727	019.010	10,809	••	2	2	2	109'61	3			2	Ę	2	10121	ž
	Urban	174	247		502	X.	;;	F	N		2007	2	VV7 0	L	10		16	2	10
Matanao	Kurai	48	4,867	0.1.1	\$00'0	1,520		2	2		0001	ł	24.6	ľ	ş	1	12	1421.75	7
	Total	222	5,114		0,057	8,630					5070		Uno I	•	3 5		Ä	4.173	ž
	Urban	- 120	22		91	1 819		9 5			1 - 10'C	ð	100	-	1	ſ	×	14,243	ž
Pedada	Kura	45	7.545	8	2,680	2,814	7	2 2 2		2 2	0,044		5.041	-	19		33	18,416	Ş
	Total	165	3,087	471	0.4.0	101		c i	,	5	10.800		10.1	[~	4	20		1:00:11	47
	Urbw	220	555	9.5	7-1-7	0.0					104 51	ŝ	175.8	-	X	5	2	39,302	Ş.
Santa Cruz	Rum	-			1001			- 5		ş	20102	2	SMEVI	6	X	1	\$	51,205	\$
		162	011	50				3 5	.,	·	1157	5	4.4	-	52	•	- 61	4,810	6)
	Uthan	Ş	155	1	AUR	- 40 V	- -		4	X	5 660	2	7.538		29	15	72	33,101	۶,
Santa Mana	Enx.		4 0%	0.00		2.2.45		5 8	5	3	10.174	18	8,952		- 19	13	75	37.911	75
	i otal		1000			2.5		67	2	Ŷ	2,252	ç	573	-1	45	37	74	1.467	2
			744			2 600		62	ຊ	49	1.346	\$ 1	3,96,5		36	18 -	45	7,893	Ŷ
sarangan	T-25	ž	2011	678	1748	1 200	-	32	5	я	3,5081	X	3,541	1	9 :	2	4	10,360	\$
		911	3	121	127	1,177	10	42	101	ŝ	105.5	62 (1,238	•	07	~	%		3
5.120 100	U. OL		19	1.026	195.2	A, 155	-	18	52	29	192,6	. 29	4,370	_	35	ก	\$	<u>8</u>	2
40	Total		2.042	1,138	3.3.18	51.6.2	 -	ж	21	62	7,1X2	42	5,608	-	ጽ	ន	¥.	17,1641	2
		1	XVS PI	2.318	20.198	10.050	1. =	4×	*	67	101,269	67	33,064	01	44	-	9	110,8371	ō
antich Sendu Anna			221.14		100.04	107.177	-	5 5	4	ž	131,274	**	117,057	-	03	2	2	400 160	F.
		1.3.4	K7 912	122	110,141	1.7,467		î	1	8	232.543	Ŷ	150,121	-	3	2	ŝ	+01,000 I	Ŕ.

Table 8.2.6 Households Coverage in Phase I Provided by Existing Facilities in the Base Year (Household Toilets)

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Table 8.2.7 Public School Students and Public Utilities Coverage in Phase I by Existing Facilities in the Base Year

		Public School Toilets	ool Toi	lets				Public	Public Toilets		
	Std. No. of	Coverage in 1997	1997	Coverage in 2003	1 2003	Cove	Coverage in 1997		Cov	Coverage in 2003	
Name of Municipalities	Student that can be Served by Base Year	Total No. of Public School Students	%	Total No. of Public School Student		No. of PU with Toilets in Base Year	No. of PU with Sanitary Toilets in Base Year	%	No. of PU with Toilets	No. of PU with Sanitary Toilets in Base Year	%
Bansalan	3.600	1	35	11,473	31	2	2	100	9	7	66.667
Digos (Capital)	6.240	26.738	23	31.379	20	2	63	100	4	61	50
Don Marcelino	2,640	5,561	47	6,875	38	۲		100	7	+-1	ŝ
Hagonoy	3,360	9,066	37	10,826	31	1	+1	100	2	-1	50
Jose Abad Santos (Trinidad)	2,880	6,339	45	7.550	38	1	1	100			100
Kiblawan	2,400	6,650	36	8,196	29	1	1-1	100	5	1	50
Magsaysay	3.360	9,749	34	11,207	30	1		100	2	1	50
Malalag	2,640	6,766	39	7,910	33	1	1	100	2		50
Malita	9,120	16.878	54	19,375	47	3		33	4		25
Matanao	4,320	10,270	42	11.817	37	S		20	6		11
Padada	1.920	4.236	45	4,956	39			8	5		S
Santa Cruz	6,240	15,498	40	18,024	35	2	1	50	С		33
Santa Maria	5,280	9,744	54	11.274	47	2	1	50	G		33
Sarangani	3,120	7,290	43	7,919	39	1	1	100			100
Sulop	2.640	6.515	41	5.247	50	2	2	100	(A)	1	67
PW4SP Study Area	59,760	151.587	39	174,028	34	26	18	69	40	18	45

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8.3 **Projection of Frame Values**

8.3.1 Review of Past Population Development and Population Projection

- (1) Review of past population development
 - 1) Characteristics of past population development

Major statistical data of past population development are shown in Table 8.3.1 in which urban and rural population are adjusted by PPDO to reflect present conditions.

	D		Total	1		Urban		-	Rural	
Area	Description	1980	1990	1995	1980	1990	1995	1980	1990	1995
Region-XI	Population	3,346,803	4,458,829	5,052,730	1,133,338	2,108,693	1,782,376	2,213,465	2,350,136	3,270,354
Argion-Al	Growth Rate	2.91%		2.53%	6.41%		-3.31%	0.60%		6.83%
D 1.1	Population	1,133,599	1,482,745	1,683,909	509,429	774,131	812,957	624,170	708,614	870,95
Davao del Sur	Growth Rate	2.72%		2.58%	5.20%		0.98%	1.35%		4.21%
our	Percentage 1/	33.9%	33.3%	33.3%	44.9%	36.7%	45.6%	28.2%	30.2%	26.6%

 Table 8.3.1
 Past Population Development

Note: 1/ Provincial population percentage to regional population

During the census year from 1980 to 1990 and from 1990 to 1995 which was the latest census year, the following population development was observed:

- The province (including Davao City) recorded a 2.72% average annual growth rate (1980-1990) which was slightly lower than that of the region at 2.91%, while the growth rate of 2.58% (1990-1995) showed almost the same as the region's rate of 2.53%.
- Percentage of provincial population to the regional population was almost unchanged between 1980 and 1995.
- 2) 1995 population distribution in urban and rural areas

The 1995 population census results conducted by NSO were reviewed in terms of population distribution to urban and rural areas. The population by municipality was confirmed as shown in Table 8.3.2.

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Municipality	Total	1995 Cen	sus Data	Adjusted P	opulation
······································	Population	Urban	Rural	Urban	Rural
Bansalan	48,894	6,600	42,294	6,600	42,294
Digos (Capital)	106,565	40,460	66,105	40,460	66,105
Don Marcelino	29,968	2,170	27,798	2,170	27,798
Hagonoy	41,752	14,864	26,888	14,864	26,888
Jose Abad Santos (Trinidad)	47,833	7,450	40,383	7,450	40,383
Kiblawan	36,375	3,851	32,524	3,851	32,524
Magsaysay	41,979	6,557	35,422	6,557	35,422
Malalag	30,733	4,455	26,278	4,455	26,278
Malita	83,457	12,660	70,797	12,660	70,797
Matanao	43,455	3,905	39,550	3,905	39,550
Padada	22,384	9,048	13,336	9,048	13,336
Santa Ciuz	59,139	20,116	39,023	20,116	39,023
Santa Maria	41,919	6,568	35,351	6,568	35,351
Sarangani	16,648	2,659	13,989	2,659	13,989
Sulop	25,968	5,707	20,261	5,707	20,261
PW4SP Area	677,069	147,070	529,999	147,070	529,999
Davao City	1,006,840	665,887	340,953	665,887	340,953
Province	1,683,909	812,957	870,952	812,957	870,952

Table 8.3.2 Population Distribution in Urban and Rural Areas

(2) Manner of population projection

The latest population study, the National and Regional Population Projections was issued by NSO based on the 1995 census results including the growth rates and demographic conditions of the respective regions. However, at this time of PW4SP preparation, the provincial/municipal population has not yet been published by. It appears that there is already a long delay since the conduct of the 1995 Population Census. Meanwhile, the NSO's possible method to be applied for provincial and municipal population projection was confirmed.

As a local based projection, the Study on the Davao Integrated Development Program (DIDP) Master Planning is currently implemented under the technical cooperation of JICA, however, the population projection has not yet been completed. In this respect, the possible method of NSO was adopted for this PW4SP. The regional population projected by the NSO was employed for this planning. The following are the manner of projection with conditions/assumptions employed for provincial and municipal population in the future.

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- Population projections for the provinces are first generated based on population projections for the Region XI taken from a published volume on regional population projection for the years 1995 to 2020. The regional population is projected based on the 1995 Census of Population
- The ratio method is used for the projection of both provincial and municipal population.
 - For the provincial level projections, ratios (R) of the population of the concerned provinces to the population of the region are projected. These ratios are multiplied to the projected population of the region for each projection year.
 - Similarly, for the municipal population projections, ratios of the population of the municipalities of each concerned province to the population of the province are projected. These ratios are multiplied to the projected population of the province for each projection year.
 - The basic assumption adopted is that for each concerned province, and for each
 of the municipality in the province, the rate (r) at which the ratios change will
 gradually decline so that they will all become zero after 50 years from 1995.
 This implies that stability of the ratios will be attained after 50 years from 1995.
 - Based on this assumption, a schedule of ratios of the provinces in the same region, and of the municipalities in the same province is derived for each projection year using the formula:

$$R(k) = R(0) \prod_{1}^{k} (1 + r - kr / 50)$$

where; R(k) =

- R(k) = ratio in kth year from 1995 of the population of the province to that of the region or of the population of the municipality to that of the province
- R(0) = ratio in 1995 of the population of the province to that of the region or of the population of the municipality to that of the province
 - r = initial rate of change of the ratio
 - k = "k"th year from 1995
- The initial rate of change is derived based on the levels and trends of the ratios observed in the 1970, 1980 and 1995 censuses.

- A geometric formula for calculating the rate at which the ratio changes is adopted, that is, r is equal to $(\ln(P_2/P_1))/n$, where P₂ is the ratio in Year₂, P₁, in Year₁, and n is the number of years between Year₁ and Year₂. Thus for instance, for the intercensal period 1970-1980, the rate of change in the ratio is equal to $\ln(P_{1980}/P_{1970})$.
- 3) In the present application(r), the concerned provinces and municipalities are classified into following four types based on the trends of their ratios as observed in the censuses of 1970, 1980, 1990 and 1995:
 - Type I provinces/municipalities that showed unidiretional trend in their ratios, that is, consistently increasing or decreasing from 1970 to 1995 (r is positive or negative for intercensal periods 1970-1980, 1980-1990 and 1990-1995;
 - Type II -- provinces/municipalities that showed unidirectional trend in their ratios only from 1980 to 1995 (r is positive or negative for the last two intercensal periods only, that is, 1980-1990 and 1990-1995);
 - Type III provinces/municipalities that showed unidirectinal trend in their ratios only from 1970 to 1990 (r is positive or negative for the first two intercensal periods only, that is 1970-1980 and 1980-1990);
 - Type IV provinces/municipalities with erratic trends.

In general, the initial rate to be used for each type of province or municipality is determined according to the following criteria.

- For type I province or municipality, the initial rate is equal to the lowest observed annual rate change in the ratio or lower to the average annual rates observed during the 1980-1990 and 1990-1995 periods, whichever produces a more demographically probable result;
- For type II province or municipality, the initial rate is equal to lower to the average annual rates observed during 1980-1990 and 1990-1995 periods;
- For type III province or municipality, the initial rate is equal to one-half of the average annual rate during the period 1990-1995; and

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- For type IV province or municipality, the initial rate is equal to one-half of the average annual rate during the period 1990-1995, or it is equal to zero if the ratio in 1995 is equal to or higher than 0.20. An initial rate of zero means that the ratio observed in 1995 would remain the same throughout the projection period.

The province of Davao der Sur (including Davao City) is classified as "type I" based on the past level and trend of ratios of change, and the initial rate of change was estimated at -0.0052. While, those of the municipalities were established as shown below.

Municipality	Initial Ratio	Municipality	Initial Ratio
Bansalan	-0.00723	Malita	-0.00625
Digos (Capital)	-0.00210	Matanao	-0.00417
Don Marcelino	0.00098	Padada	-0.00401
Hagonoy	-0.00138	Santa Cruz	-0.00256
Jose Abad Santos	-0.00582	Santa Maria	-0.00444
Kiblawan	-0.00027	Sarangani	-0.00272
Magsaysay	-0.00404	Sulop	-0.00722
Malalag	-0.00285	•	

(3) Present population (1997) -

The present population of the province including the municipalities was estimated in application of the initial rates of change as mentioned above. This means that the trend of past population development is assumed to have been prevailing up to the present. Household size in 1997 was also assumed to be the same as that in 1995.

(4) Projection of provincial population by target year

Review of provincial population projected by target year applying the aforementioned method as shown in Table 8.3.3, revealed that the future provincial population also reflected the discounted growth rate, which was the same as the regional population projection.

- Population in 2003 results from the average annual growth rate of 2.21% (1995-1998) and 2.13% (1998-2003).
- Population in 2010 with the base year of 2003 results from the average annual growth rate of 1.83% (2003-2010).
- Present profile of municipal population distribution both in urban and rural areas is assumed to prevail through the future.

- Household size in the year 2003 is assumed to be the same as the 1995 population census results, while that in the year 2010 is assumed to be 4 persons/household for the whole province in accordance with the target of the national family planning.

		Gro	wth Rate (%)		Populatio	n and Provin	cial Share in th	e Region
ţ	<u> </u>	T	ſ					Target	Year
Area	1980 -	1990 -	1995-	1998 -	2003 -	1995	1997	2003	2010
	1990	1995	1998	2003	2010	NSO Census	Planning Base Year	Medium Term	Long Term
Region XI	2.91	2.53	2.69	2.45	2.11	5,052,730	5,331,644	6,173,575	7,146,889
IN GIVE AL		(13.1)	6.3	(8.9)	<u>(13.9)</u>				
-	2.72	2.58	2.21	2.13	1.83	1,683,909	1,757,633	1,998,270	2,269,227
Davao del Sur	Ī					33.3%	33.0%	32.4%	31.8%

Table 8.3.3Growth Rates and Population Projection for Target Years:
Region and Province

Note: () shows percentage of growth rate decline from the previous period.

Table 8.3.4 shows the provincial population by urban and rural area for the target years and the year 1995. Table 8.3.5 presents projected number of households for the target years.

Area	Population/ Composition	1995	1997	2003	2010
Total	Population	1,683,909	1,757,633	1,998,270	
Urban	Population	812,957	852,942	984,562	1,134,381
Area	Composition (%)	48	49	49	50
Rural	Population	870,952	904,691	1,013,708	1,134,846
Area	Composition (%)	52	51	51	50

Table 8.3.4 Provincial Population for Target Years

.

	n	Household Size	70					Z	Number of Households	Iouseholds					
Vame of Municipality		1005	5		1995			1997			2003			2010	
	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Totai
Ransalan	4.80	4.93	4.91	1.375	8.582	150.6	1.395	8,705	10,100	1.466	9,150	10,616	1,846	11.829	13.675
Diane (Canital)	4 92	5.00	4.97	8.219	13.211	21,430	8,513	13,687	22,200	9,455	15.200	24,655	12,886	21.053	33,939
Don Marcelino	5.19	5.27	5.26	418	5.275	5.693	2,154	3,838	5,992	2,475	4,409	6.884	3.680	6,657	10.337
Haronov	4.97	5.01	4,99	2,988		8,359	1,358	7,304	8,662	1,520	8,175	\$69,6	2,109	11,434	13,543
Jose Abad Santos (Trinidad)	5.21	5.15	5.16	1,430	7,843	9,273	566	8,474	9,466	1 059	9,044	10,103	:,469	12,402	13,87;
Kihlawan	4.81	5.20	5.16	800	6,254	7,054	1,232	6,155	7,387	1,395	6,973	8,368	1,897	10.246	12,143
VesvesveM	5.19	5.09	5.10	1,263	6,961	8,224	1,298	7,150	8,448	1,412	7,776	9,188	1,988	10,738	12,726
Malalao	4.85	5.11	5.07	918	5,141	6.059	948	5,308	6,256	1.045	5.848	6.893	1,392	8.211	9.603
Malita	5 16	502	5 05	2,452	14,060	16,512	2,495	14,310	16.809	2,655	15,204	17,859	3,632	20,311	23,943
Matanao	4 99	5.19	5.17	783	7.626	8,409	804	7.826	8,630	873	8,500	9,373	1,180	11.952	13,132
Padada	5 11	4.87	4.97	1.770	2.736	4,506	1,819	2,814	4,633	1.980	3.061	5.041	2,745	4,046	6.791
Santa Chiz	5.10	2 2	5.06	3,945	7.749	11.694	4,076	8,001	12,077	4,504	8,841	13,345	6,331	12,282	18,613
Santa Maria	5.16	5.21	5.20	1.274	6,786	8,060	1,306	6.960	8.266	1,414	7,538	8,952	1.971	10,609	12.580
Sarangani	5.29	5.37	5.35	503	2,607	3,110	519	2.690	3,209	S73	2.968	3.541	834	4.385	5,219
Sulop	4.92	4.95	4.95	1,159	4,092	5,251	1,177	4,155	5,332	1,238	4,370	5.608	1.599	5,676	7,275
PW4SP Study Area	5.02	5.08	5.07	29,297	-	133,591	30,090	107.377	137,467	33,064	117,057	150,121	45,559	161.831	207.390

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			1997					2003					2010		
		Total En	1.	Public Sch.	h. Enrollment		Total E	Total Enrollment	Public Sch	Public Sch. Encollment		Total E	Fotal Enrollment	Public Sch	Public Sch. Farolimen
Name of Munkcipality	School Age Population	. 4	Partici- pation Ratr	Number	Partici- pation Rate	School Age Population	Number	Partici- pation Rate	Number	Partici- pation Rate	School Age Population	Number	Partici- pation Rate	Number	Partici- pation Rate
Bansalan	13.312	12,445		10.287	7	13,992	13,292	56	11 473	82	14,677	13,943	95	12,475	85
Digos (Capital)	29,432	29,674	101	26,738	91	32,686	32,032	ý8 .	31,379	96	36,217	35,493	98	34,768	8
Don Marcelino	9.207	5.561	60	5.561	60	10,577	6,875	65	6,875	65	12.121	8,485	5	8,485	70
Hagonoy	11.796	9,582	81	9,066	77	13.203	11,355	86	10,826	82	14,743	13.269	8	12.532	85
Jose Abad Santos	15,377	6.560	43	6:339	41	16,412	7,878	48	7,550	46	17.479	9.613	55	8.740	S
Kiblawan	11,129	7,844	02	6,650	60	12,609	9,457	75	8,196	65	14,252	11,402	80	9.976	70
Magsaysay	12,124	10,973	16	9.749	80	13,185	12,526	56	11,207	85	14,308	13.593	95	:2.877	8
Malalag	8,864	166'9	64	6,766	76	9,765	8,203	84	7,910	81	10,733	9.660	8	9.123	85
Malita	24,981	17,712	12	16,878	89	26,541	19,906	75	:9,375	73	28,140	22.512	80	21.105	75
Matanao	12.363	11,105	8	10,270	83	13,428	12,488	93	11.817	88	:4,553	13,534	8	13.098	8
Padada	6.074	5,189	85	4.236	70	6,608	5.947	8	4,956	75	7,173	6.456	6	5,738	80
Santa Cruz	16,91	16,016	56	15,498	16	18,775	17,649	94	18,024	96	20,699	19,457	56	19.871	96
Santa Maria	12,393	10,610	86	9,744	- 79	13,421	12,079	90	11.274	84	:4,503	13,053	8	13,053	8
Sarangani	7.478	7.290	26	7,290	26	8,249	7,837	56	7.919	96	9.079	8,625	95	8,716	%
Sulop	5.090	6,890	135	6.515	128	5.354	5,247	86	5.247	- 86	5.620	5.508	98	5.508	98
PW4SP Study Area	196.611	164,442	84	151,587	7	214,805	182,771	85	174,028	<u>8</u>	234.297	204,603	87	196.065	78

Table 8.3.6 Projected School Enrollment by Municipality by Target Year

8.3.2 School Enrollment Projection

8.3.3 Projection of the Number of Public Utilities

Table 8.3.7 Projected Number of Public Utilities by Municipality by Target Year

Name of	1	1997	20	03	201	0
Municipality	Туре	No. of Public Utilities	Proposed Construction	Total	Proposed Construction	Total
	Public Market	1		<u> </u>	1	2
Bansalan	Bus/Jeepney Terminal			!		I
	Parks/Playground Total			<u></u>		!
	Public Market	2		<u>3</u>		4
	Bus/Jeepney Terminal	`	2	2	Z	
Digos (Capital)	Parks/Playground		 	·	•·	2
	Total	2	2	4	2	6
	Public Market	1		1		1
Don Marcelino	Bus/Jeepney Terminal		11	1		1
	Parks/Playground				 	
	Total Public Market	· -·· -		2	[2
	Bus/Jeepney Tenninal	· · · · · · · · · · · · · · · · · · ·	<u>├</u>	<u> </u>		2
Hagonoy	Parks/Playground		┨────┥			<u>ı</u>
	Total	1		2	1	3
	Public Market	1		1	<u>∤</u> }	<u>í</u>
Jose Abad Santos	Bus/Jeepney Terminal	L		········	t	
(Trinidad)	Parks/Playground	ļ				
	Total	1		1		1
	Public Market	l l	ŀ	1	<u> </u>]	1
Kiblawan	Bus/Jeepney Terminal Parks/Playground			1	↓	1
	Total	<u> </u>		2	╉╺────┤	
	Public Market	<u> </u>		1	} }	2
	Bus/Jeepney Terminal	<u>↓</u>	1			<u>I</u>
Magsaysay	Parks/Playground		· · · · · · · · · · · · · · · · · · ·	•		_ _
	Total	1	1	2		2
	Public Market	1		1		1
Malalag	Bus/Jeepney Terminal		1	1		1
Ũ	Parks/Playground	<u> </u>				
	Total Public Market	$\frac{1}{3}$	1	2		2
	Bus/Jeepney Terminal	·····		3	2	5
Malita	Parks/Playground		· · · · · · · · · · · · · · · · · · ·	<u> </u>		i
	Total	3		4	2	6
	Public Market	5		5		
Matanao	Bus/Jeepney Terminal		1	I I		l
	Parks/Playground					
	Total	5	1	6		6
	Public Market	1		1	<u>l</u>	2
Padada	Bus/Jeepney Terminal Parks/Playground		<u> </u>	1		<u> </u>
	Total	+				
	Public Market	2	·	2		3
Santa Cruz	Bus/Jeepney Terminal	<u> </u>				<u> </u>
Santa Cruz	Parks/Playground	·				
	Total	2		3		3
	Public Market	2		2		2
Santa Maria	Bus/Jeepney Terminal	L	1	1		1
	Parks/Playground		L			
	Total Public Market	2	1	- 3		3
	Bus/Jeepney Terminal	1	ŧ	<u> </u>	1	2
Sarangani	Parks/Playground		·	·		· · · · · · · · · · · · · · · · · · ·
	Total	1		1	1	2
	Public Market	1	1	1	· · · · · · · · · · · · · · · · · · ·	1
Sulop	Bus/Jeepney Terminal		1	1	1	— i
	Parks/Playground	1		1		1
	Total	2	1	3		3
	Public Market	24	<u> </u>	24	8	32
PW4SP Study Are	a Bus/Jeepney Terminal	<u> </u>	14	14		14
	Parks/Playground	2 26	<u> </u>	2	ļ	2
	Total	<u>L 20</u>	14	40	8	48

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8.4 Types of Facilities and Implementation Criteria

8.4.1 Water Supply

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(1) Urban water supply

1) Untapped spring

First priority is given to seek for utilization of untapped spring with large discharge capacity. During the course of PW4SP preparation, various untapped spring sources have been identified. Considerably large scale untapped spring sources having discharge capacity of more than 100 cu.m/day are then selected as potential water sources and rapidly evaluated as shown in Table 8.4.1.

		Untapped	Spring			Population	Population	Served by		
Nane of Municipality	Location (Name of	Discl Capa (cu.m	city	Elev. Diffr.	Dist. from Mun.	can be Served by Untapped	Existing Wa System/Faci Ye	lity in Base	Future Popul	
	Barangay)	100%	70%	(m)	(km)	Spring	Level III	Total	2003	2010
	Balagona	2,170	1,520	Unknewn	15.0	15,200				
Bansalan	Gagpang	870	600	Uaknowa	18.0	6,000	6,247	6,247	7,039	7,384
	Sub-total	3,040	2,120			21,200				
Don Marcelino	Agoo	120	S 0	Unknown	Unknown	800	0	4,469	12,845	14,719
Jose Adad Santos	Caburan Small	160	110	Unknown	5.0	1,100	0	963	5,515	5,874
Sta. Cruz	Ragabrab	1,360	950	Unknown	5.0	9,500	8,745	14,043	22,971	25,325

Table 8.4.1 Rapid Evaluation of Untapped Spring for Use in Urban Water Supply

<u>Bansalan</u>

Two untapped spring sources have been identified in this municipality with a total discounted discharge of about 2,120 cu.m/day or equivalent to supply for about 21,200 persons. This water source potential is more than the estimated water demand even in Phase II period. In this respect, any excess amount may be utilized to cater for neighboring municipalities under the proposed Malalag Bay Alliance Water Supply (MBAWS). However, elevation of these sources are subject to verification and their distance from poblacion (more than 15 km) is also subject for evaluation on economic feasibility.

Don Marcelino

The identified untapped spring source has a marginal discharge between Level II system and Level III system. When the future urban population is taken into account, this untapped spring can not be a major source of water supply and would rather be utilized for Level II system in barangay Agoo where it is situated. Stable/reliable discharge volume as well as elevation and distance from barangay Agoo are subject to further verification.

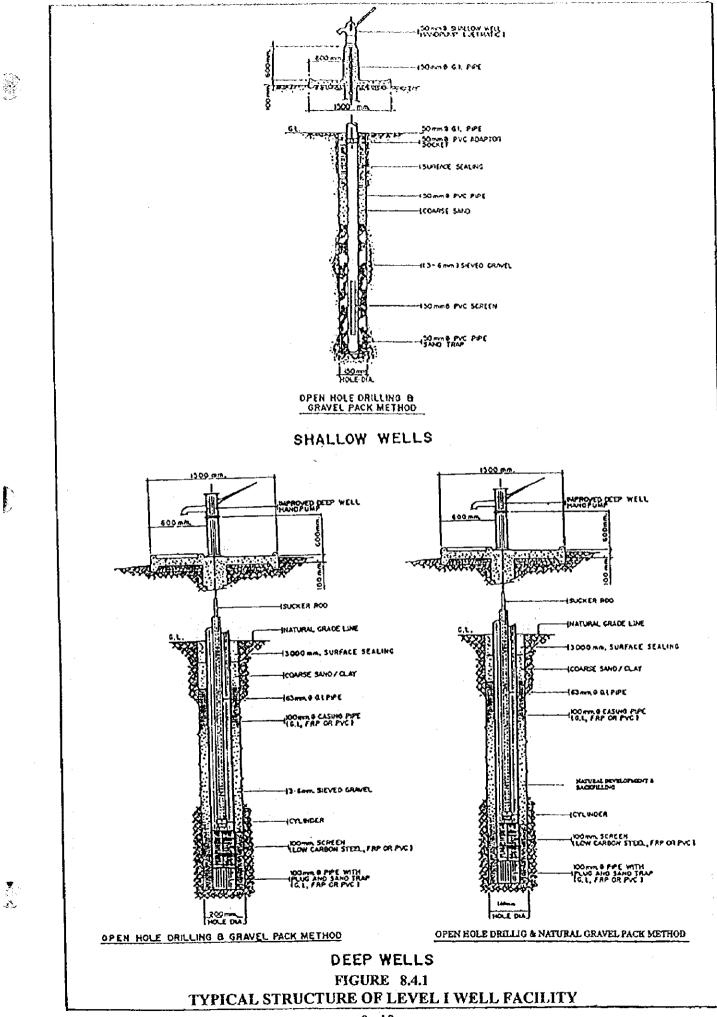
Jose Abad Santos

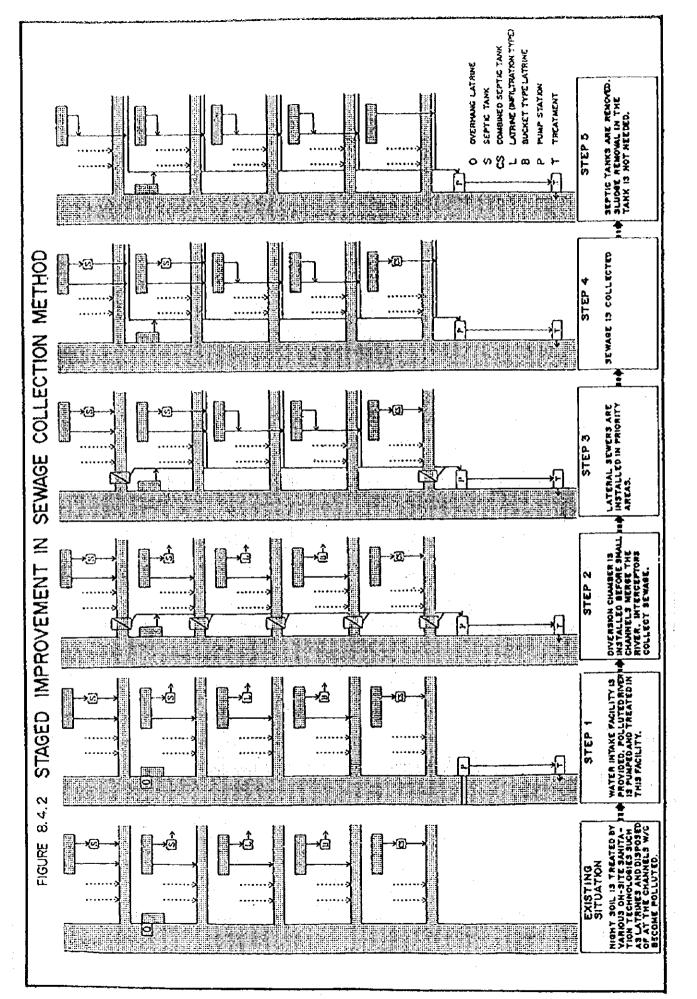
This untapped spring has also marginal discharge as just above the service coverage of Level II system, while future urban population of the municipality is expected to reach about 5,500 persons during the Phase I period. In this regard, this spring may be developed as a source of Level II system for barangay Caburan Small. Elevation is not known at this moment and is subject to actual confirmation for its utilization.

Santa Cruz

The identified untapped spring has a discounted discharge of about 950 cu.m/day or capable to serve for about 9,500 persons. The municipality of Santa Cruz has an existing Level III system which is presently serving for about 8,700 persons and another 5,300 persons are depending on Level II system and/or Level I facilities. During Phase I period, the additional 9,000 persons are to be served. In this respect, the untapped spring situated in barangay Ragabrab has enough potential to serve for these population, although its elevation from the poblacion is not yet verified.

As evaluated on the above, the municipalities of Bansalan and Santa Cruz have considerably favorable untapped spring sources for Level III system. It shall be noted, however, that confirmation of difference of elevation between untapped spring and potential service area, as well as distance and topographic conditions is prerequisite to realize this option. Discharge measurement of each spring throughout the year is also indispensable to obtain dependable/reliable discharge of the springs. ų.





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8.5 Service Coverage by Target Year

8.5.1 Water Supply

(1) Population to be served by Level II system in Phase I

Twenty-eight (28) untapped spring sources were confirmed to be suitable for Level II systems in rural water supply by the time of PW4SP preparation as shown in Table 8.5.1. Conditions and assumptions applied for this estimate are as follows:

Source capacity:

The average source capacity of untapped spring was assumed to meet the need of 100 households based on the review of existing Level II systems with spring sources.

Number of system:

Twenty-eight (28) untapped springs were considered to serve twenty-eight (28) Level II systems in twenty-eight (28) rural barangays of 9 municipalities.

Name of Municipality	Number of Untapped Spring	Number of Barangay to be Served	Number of Households to be Served	Population to be Served
Bansalan	4	4	402	1,972
Digos (Capital)				
Don Marcelino	2	2	200	1,054
Hagonoy				
Jose Abad Santos (Trinidad)	2	2	200	1,030
Kiblawan	4	4	403	2,080
Magsaysay			<u> </u>	
Malalag	4	4	403	2,044
Malita				
Matanao	7	7	703	3,633
Padada				
Santa Cruz	1	1	100	
Santa Maria	2	2	200	<u></u>
Sarangani	2	2	201	1,074
Sulop			<u> </u>	<u> </u>
PW4SP Study Area	28	28	2,812	14,433

Table 8.5.1 Population to be Served by Level II System in Phase I

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(2) Population to be served by target year

<u>Phase I</u>

For urban area, the additional service coverage was estimated to be served by Level III service. For rural area, the population to be served by Level II systems with untapped springs was first calculated and the rest of additional service coverage was estimated to be served by Level I facilities.

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<u>Phase II</u>

For urban area, the population served by Level I and II facilities in base year was considered to be absorbed by Level III service aside from the additional service coverage to be estimated by the sector target. For rural area, all existing facilities in Phase I was assumed to be utilized through the future.

The population to be served by target year is exhibited in Table 8.5.2 and Table 8.5.3.

(Water Supply)	
Phase I	
to be Served in	
Population	
Table 8.5.2	

		Popu	Population Served in the Base Year	in the Base	Year					Constant and the second a	-			
Name of Municipality	Area							Service Coverage	overage		Addi	Additional Population to be Served	tion to be Se	ved
		Level []]	Level II	Level I	Total	Population	Level III	Level II	Level I	Total	Level III	Level II	Level I	Total
	1 chan	A.247			6.247	7,059	6.247			6,247				
Asocalar	Rural	513.7	2.965	15,184	25,662	45,110	7,513	4,937	16,872	29,322		1,972	1,6350,1	000'E.
	Total	13.760	2,965	15,184	31,909	52,149	13,760	4,937	16,872	35,569		1,972	1,6331	999
	Linhan	30.498		6,77X	37,276	46,518	30,498		6,178	37,276			-	
Olivos (Capital)	Rural		2,830	47.067	53,632	76,002	3 735	2,830	47,067	53,632		-	-	
	Total	34.233		53,845	90,908	122,520	34,233	2,430	53,845	806'06		-		
	1 Ichan		10	4,469	5.403	12,845	4 ×73	934	4,469	10,276	4 871			4,873
Den Maccalino	len 1		XIC 1	64, 8	2,107	21.215		2.372	12,731	15,103		1,054(11,852	12,906
			326	5.148	1600	30.080	4 8/3	3.706	17.200	25.379	4,873	1,054	11,852	17,779
	1 1444	0101		1 684	505.9	7 556	3.239	1.672	1.684	6,595	5			
	Crown	1	:	100 10	11011	40.050		9	11.703	33,943				
Hagonoy	Kural	014 6	202	CC1.25	STA OA	48.515	0101	1 (22)	35.477	40.538			-	
	1 0121				1.0		1940		18	4.412	1440			3,449
ł	Lirban			200	204	44.578		0.01	20.746	30.276		1 030	20,451	21,481
ose Abad Santos (Trinidad)	Kural			0	2 4	900 03	1 446	(1) (1)	000 02	297.27	7 440	1.030	20.451	24,930
	Total			2 7	2005 C		000 3	222	Co.	\$ 170				3.03.1
	Urban	740,7		107 V.	1.0.1	2 1 1 1	200	105 8	10 067	23.570		2.080	386.8	10,466
Kibiawan	Kural		-	1000		102100	0%0 >	105.4	10 357	040 XC	3.031		3X6.X	13,497
	Total	2.044	1	1/6/0	Chefe Land	+/A'7*	202		1 2555	C12 2				
	Urban	1,578		CCC E	554.	1761	N.V	2446	103 10	342.25				
Magaysay	Kural	8		202.12		2007	¢.	744 6	120 20	CO2 11	0.0			070
	[otal	٩.	0/5'6	10.42	0// OC	240 Y	2215	2	17.5	4 0.1				1400
	LT091			101	15, 401	123.00	0511	2 307	15 X76	19.423	i.	2.044	1,686	3,730
Sererew.	Tatel	2.068		15 025	18.346	34.947	3.468	2.397	119,71	. 23,476	1,400	2,044	1,686	
	irhan -	1.5.623		50	5.773	13.702	10,812		130	10,962	681'5		· · · ·	5,189
Ve)tra	Kinal - r	CPC C-	91315	20.006	25.884	76,627	2,342	3,536	43,930	49,808	1.12	İ	23,924	23,924
	Total	200.5		20.156	31,657	90.329	13 154		44,080	00.770	5,189		23,924	29,113
			:	157	2.532	4.356	1034		451	3,4%5	668		· · · · ·	803
	Pure la	10	2 7X1	24.523	27.398	44.113	8	6414	22,165	28,673		3.633		3,633
	Tatal	2.2.5		24.974	20.990	48,469	3 128	6414	22,616	32,158	863	3,033		4,526
	1 Irhan	001	1	1, 860	8.352		6 492		1,860		the second second second		-	
Partscha		- 1.570	1 025	4.202	6.797	14,909	1,570	1,025	2,096	169'6			2,894	2,894
	Total	8.052		6.062	10,149	25,025	8,062	520'1	8,956	18,043			2.894	2,894
	I than	8.475	}	5,568	14,043	22,971	12 800		5,568	14,377	4,334			1.5
Santa Cruz	Kura	0.01	4 065	16.630	121,721	44,560	1.026	4,569	-23,369	28,964		20	6.739	7.243
	fotal	0.501	1	22,198	35,764	67.531	13,835	4,569	28,937	47,341	4 334	504	6,739	11.577
	Linhan	1.883		1.554		7.207	4 2%4		1,554	5,838	2.401			2,401
Santa Maria	Kural		938	14,111	15,049	39,272		086 [23,547	25,527		1,042	9,436	10.478
	Total	1.843	1.14	15,665	18,486	46,569	4.284	0861	25,101	31,365	2.401	1,042		12,879
	Urban		-		1,300	3,029	1,123	005-1		2,423	1,123		-	1,123
Sarancani	Rural			4.213	4,213	956,21		1,074	9,284	10,358			5,071	6,145
	Total	1	006"1-	4.213		18,965	1,123	2,374	9,284	12,781	1,123	1,074	5,071	1,268
	Urban	805		2,289	3,189	6,092	2,585		2,289	4,874	1 685		-	1,685
Sulor	Rural	1.000		10,856	11,856	21,630	1 000	-	13,060	14,060			7.0K	2,204
	Total	0061		13,145	15,045	27.722	3,585	-	15,349	18,934	1 685		2.204	0.83
	Urban	70.043	1 00	31,146	\$60,801	166,141	99,350	3.906	- 31,146	134 402	29.307			29,307
PVV4SP Study Area	Rural	19.397		246.632	291.789	594,653	19,397	40,193	338,605	398,195		14,433	155,34	108.764

Yang Aluncinghiry And Aluncing Long Li Long Li<				Population Served in 2003	rved in 2003					Phase II	Phase II Coverage (2010)	(0)			
	Name of Municipality	Area				T			Service C	OVERARE		Additiona	I Populati	ion to be Serv	Z
International Team			Level III	المحما	Level I		Total Population	Level 111	Level 11	Level I	Total		vel II	Level 2	Total
Line Num Num <td></td> <td>1111</td> <td>A 747</td> <td></td> <td></td> <td>6.247</td> <td>7.384</td> <td>2,015</td> <td></td> <td></td> <td>7,015</td> <td>768</td> <td>ŀ</td> <td></td> <td>768</td>		1111	A 747			6.247	7.384	2,015			7,015	768	ŀ		768
Image: constrained by the co		1000	7 414	4 017	16,872	20.322	47.317	2,513		31,555	44,005		-	14,68.3	14.6%3
(Linking) (Linking) <t< td=""><td>(Sansalan</td><td>Potenting</td><td>3.760</td><td>4.937</td><td>16,872</td><td>35,569</td><td>102,445</td><td>14,528</td><td></td><td>31,555</td><td>51,020</td><td>76%</td><td>-</td><td>14,053</td><td>15.45</td></t<>	(Sansalan	Potenting	3.760	4.937	16,872	35,569	102,445	14,528		31,555	51,020	76%	-	14,053	15.45
(Lobic) (Euric) (Line) (Line		1 Inhan	30.49X		6.778	37.276	51,542	48,965			48,965	18,467			99 X
Hollow Tena 5-533 2-594 5,463 5,704 <th< td=""><td></td><td>0.00</td><td>777</td><td>Ι.</td><td>ł</td><td>53.632</td><td>84,212</td><td></td><td></td><td>71,752</td><td>78,317</td><td></td><td></td><td>24 OK5</td><td>24 6K5</td></th<>		0.00	777	Ι.	ł	53.632	84,212			71,752	78,317			24 OK5	24 6K5
Control Control <t< td=""><td>(imider) solitor</td><td></td><td>210 22</td><td>11</td><td></td><td>900.000</td><td>135,754</td><td></td><td></td><td>71,752</td><td>127,282</td><td>18,467</td><td></td><td>24.685</td><td>43, 152</td></t<>	(imider) solitor		210 22	11		900.000	135,754			71,752	127,282	18,467		24.685	43, 152
Genellio Control Contro Control Control <t< td=""><td></td><td>1 POUR</td><td>20740</td><td>Ľ</td><td></td><td>10 276</td><td>14.719</td><td></td><td></td><td>:</td><td>13,983</td><td>9,110</td><td></td><td></td><td>9.110</td></t<>		1 POUR	20740	Ľ		10 276	14.719			:	13,983	9,110			9.110
Mathematication Control		Urban	C/0'#		177 61	101.51	26,627	:		22,391	24,763		-	0,000	9,660
United Table (70)	Don Marcelue	KUIRI	110			25 870	41.346	13,983		165 22	38,746	9,110		9.000	18,770
United Table Upp Up		I OTAL	010 4			6 W5	8,437	8.015			8,015	4, 776	_		4.776
0) (1) (2)		Line i	46710	7/01		110011	45.736			42,384	42,534	· · · · · · · · · · · ·		8,591	165.8
Microscol Constrained Constrained <thconstrained< th=""> <thconstrained< th=""> <</thconstrained<></thconstrained<>	Hagonoy	Kural	OFC F	50	717 25	100	54.173	:		42,384	50,549	4,776		x,591	13.367
Mail Annolis (Trindat) Undational (Trindat) Undatio	-	1 0(3)	Y62,6	77U1			7L3 Y	180				2 131		-	2,131
Mark Smink (Timulat) Team Vision		Urban				444	X04 0X			45,104	46.134			15, X5X	15,858
Interim Under State Under State <	Jose Abad Santos (Trinidad)	Runal	ł		24.240	27.2 22	000-1	1 X X40		41.104	\$1.714	161.2		15,KS8	086'21
Hole Color Color <thc< td=""><td></td><td>Total</td><td>3,449</td><td>÷</td><td>NOZ 01</td><td>100</td><td>2041C</td><td>2016 L .</td><td></td><td></td><td>7 208</td><td>2.1281</td><td>ŀ</td><td></td><td>2,12%</td></thc<>		Total	3,449	÷	NOZ 01	100	2041C	2016 L .			7 208	2.1281	ŀ		2,12%
Main Total Stant		Urban	-5,080		962	0/00	30007			11/11	38,136			14.546	14,546
(Holin) (200) <	Kiblawan	Rurat		4,503		0/4 22	CUCUP			11 11	45.724	2.128		14 545	10.674
Unda 2,001 2,001 3,000 5,000					19.357	28.940	45,572	907 ⁴ /		CINICE	1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	144			5.046
Under Eurol 3,3,10 1,3,2,0 3,5,4,0 5,5		Urban	2,507			5.X62	166,7	ece'z	ŝ	107.34	10.04	~		14 0901	14.090
Teal 3,34 3,30 3,430 3,500 3,	[Maysaysay	Rural	294	3,376	1.1	25 845	42,950					6 0.44	Ì	14 000	144
B D(main 1.318 1.731 9.403 5.549 5.549 5.549 5.549 5.549 5.549 5.549 5.549 5.549 5.549 5.549 5.549 5.549 5.549 5.549 5.549 5.549 5.745 1.111 1.111 Ima 1.061 3.046 5.506 5.500 5.540 5.549 5.569 5.549 5.769 1.111 1.111 Ima 1.061 1.016 1.016 2.016 5.540 5.540 5.540 5.549 5.749 1.111		Total	3,474			107 11	106'05				4/4/	- 00	t	-	2.075
R Total 1 (150 2.971 15,570 2.971 15,570 2.971 11,121 2.971 <th< td=""><td></td><td>Urban</td><td>2.318</td><td></td><td></td><td>4 053</td><td>5,563</td><td></td><td></td><td></td><td>27.5</td><td></td><td></td><td>11 171</td><td></td></th<>		Urban	2.318			4 053	5,563				27.5			11 171	
Treal Treal <th< td=""><td>Malalag</td><td>Rural</td><td>051.1-</td><td>2,397</td><td>15,876</td><td> 19.423</td><td>32,843</td><td><u> </u></td><td>i ser</td><td>20,00</td><td></td><td></td><td></td><td>101.11</td><td>100</td></th<>	Malalag	Rural	051.1-	2,397	15,876	19.423	32,843	<u> </u>	i ser	20,00				101.11	100
Horis 10,682 10,082 </td <td></td> <td>Total</td> <td></td> <td>1</td> <td>110,11</td> <td>23.476</td> <td>-38,414</td> <td>6,440</td> <td></td> <td>1410</td> <td></td> <td></td> <td>T</td> <td></td> <td>580</td>		Total		1	110,11	23.476	-38,414	6,440		1410			T		580
Number 2,44 3,50 4,000 6,174 3,500 6,007 5,500 <th5< td=""><td></td><td>Urban</td><td></td><td></td><td></td><td>10.962</td><td>14,528</td><td>13,802</td><td></td><td></td><td>222 24</td><td>24</td><td></td><td>747 247</td><td>25,347</td></th5<>		Urban				10.962	14,528	13,802			222 24	24		747 247	25,347
Total Total 1(14) 3(26) 4(27) 6(144) 2(25) 4(27) 6(144) 2(25) 4(27) 6(144) 2(25) 4(26) 1(5)	Malita	Rural	2,42	3,536	-	49 808	\$1,242			//0/00	2000 C	1000	T	75 747	777 242
Unime J.0.04 A.145 4.7.10 4.444 J.7.951 4.4401 7.731 4.401 7.731 4.7.104 1.5.734		Total	13,154		44 080	60 770	02,770			110'40	101.10	14501	1-		1.450
Built Runal N133 Add (a) 22,105 32,033 45,044 75,053 45,456 75,053 45,456 75,053 45,456 75,053 45,456 75,053 45,456 75,053 45,466 75,053 45,466 75,053 45,466 75,053 45,467 75,053 45,469 75,053 45,469 75,053 45,469 75,053 45,469 75,053 45,469 75,053 45,469 75,053 45,469 75,053 45,469 75,053 45,469 75,053 45,669 10,755 76,693 11,256 11,256 10,755 76,993 16,755 76,993 16,756 16,755 76,993 16,756 16,755 76,993 16,756 16,756 16,756 16,756 16,755 76,993 16,756 <td></td> <td>Urben</td> <td>3,034</td> <td>1</td> <td>1</td> <td>3 485</td> <td>4,720</td> <td>-</td> <td></td> <td></td> <td></td> <td></td> <td>t</td> <td>14.788</td> <td>15.788</td>		Urben	3,034	1	1	3 485	4,720	-					t	14.788	15.788
Total 3,128 0.444 22,016 3,218 0,412 1,025 1,026 3,040 5,041 5,041 Unban 1,014 1,025 7,066 9,031 10,415 1,025 1,570 1,526 3,540 5,541 Runal 1,010 1,025 7,066 9,631 16,115 1,025 1,547 5,540 5,541 Runal 1,010 1,025 7,066 9,631 1,016 2,403 1,1250 16,775 Runal Runal 1,010 4,560 3,006 4,560 4,006 6,051 1,025 1,250 16,775 Runal Runal 1,010 4,560 3,010 4,560 3,006 5,013 1,379 1,379 1,379 Runal Runal 1,010 2,543 7,461 1,460 2,463 1,379 1,379 1,379 1,379 Runal Runal Runal 1,026 4,560 4,0066 6,051 1,379 <	Matanao	Rural	94	0.414		28.673	47,K0X			CCA'75	100,000	125	T	15.788	17.238
Urban 6.482 1.500 1.530 5.361 <th< td=""><td></td><td>Total</td><td>3,128</td><td>····6.414</td><td></td><td>32,158</td><td>52,528</td><td></td><td></td><td>566°10</td><td>10.00</td><td>070</td><td></td><td>201</td><td>1040</td></th<>		Total	3,128	····6.414		32,158	52,528			566°10	10.00	070		201	1040
Runi 1.1570 1.025 7.006 9.01 1.010 1.025 1.2477 2.3426 5.901 5.745 Total Total 1.025 8.005 1.025 1.2477 2.3405 1.250 1.025 1.250 1.025 1.250 1.025 1.250 1.025 1.250 1.025 1.2477 2.3461 5.391 1.250 1.025 1.250 1.025 1.2457 2.3461 7.341 7.351 3.301 1.250 1.025 3.301		Urban			1,860	8.552	196'01	0.432	1.1		222.01			19.7	2
Total Total % 002 % 002 % 005 <th< td=""><td>Padada</td><td>Rurat</td><td>1,570</td><td></td><td>7,096</td><td>169'6</td><td>16,185</td><td>1,5/0</td><td></td><td>242</td><td>10.00</td><td>1 040</td><td></td><td>101.5</td><td>101.6</td></th<>	Padada	Rurat	1,570		7,096	169'6	16,185	1,5/0		242	10.00	1 040		101.5	101.6
Cura Iurea 12,500 5,500 16,773 25,350 26,000 45,600 26,500 45,600 16,775 Cura Total 1,3,05 4,500 25,500 25,500 25,500 45,600 45,600 16,775 Maria Urban 1,3,05 4,500 25,527 4,500 25,507 25,50		Total		1.1.5	8,956	18.043	27,100	200,21		16-171	090	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			1.250
Cuta Rural 1.02b 4.500 23,500 49,113 1.00b 4.500 20,748 11.250 16,725 Vieta 1.3x05 4.500 23,500 7,443 7,401 1,500 7,401 1,200 16,725 Waria Urban 4,201 1,554 7,831 7,801 1,500 7,801 1,000 13,979 Waria Urban 4,224 1,305 5,532 7,801 1,521 13,091 13,979 Note 1,123 1,123 1,564 5,533 7,801 1,523 13,091 13,979 Note 1,123 1,123 1,136 2,533 5,505 5,037 1,074 15,237 13,07 13,995 Note Urban 2,123 1,135 1,334 1,335 1,074 15,237 13,07 13,995 Not Urban 2,355 2,333 1,074 1,5237 19,74 5,044 13,975 Note 1,014		Urban	12,809		5,568	18.377	25,22	24,059			45 A90	~~~~		16.725	16.725
Total Total 13,835 4,809 23,597 4,744 74,453 25,005 4,204 1,100 1,309 1,309 Maria Urban 4,284 1,583 7,481 7,481 7,485 7,491 1,309 1,309 Maria Runal 1,980 25,401 31,365 5,437 7,485 7,491 3,207 1,399 Runal Total 1,123 1,074 9,254 1,335 3,334 3,167 1,078 3,204 1,399 Sin Total 1,123 1,074 9,254 1,233 1,677 1,5237 1,6311 5,593 Sin Total 1,123 1,074 9,254 1,2781 5,035 3,067 3,786 5,953 5,953 Sin Total 1,024 9,2541 1,3,537 1,6,71 1,5,237 1,6,311 2,044 5,553 Runal 2,038 1,3,146 1,3,146 5,329 5,014 5,326 5,053	Sants Cruz	Runat	1,026	1	591 22	20 22	49,128	1,026			011.01	11 160		14 754	27.075
Maria Urbain 4,244 1,554 5,633 7,661 1,960 77,466 7,976 7,3796 7,3766		Total	13,835	4.569	28,937	47 34	74,455		ł		1012	1 207			3207
Maria Rural Rural Rural 1,980 23,541 2,522/1 5,001 11,090 21,001 11,001 13,007		Urban	4,284		1.554	5.838	100X'/		000	27 AVA	YV7 01			13,939	1, 93.0
Total 4,284 1,380 25,101 31,305 5,167 1,202 6,311 2,048 5,534 5,671 1,5237 16,311 2,048 5,553 5,553 5,537 16,311 2,564 5,553 7,553 5,553 7,553 5,553 7,553 5,553 7,554 7,556 7,556 7,556 7,556 7,556 7,556 7,556 7,556 7,556 7,556 7,556 7,556 7,556 7,556	Santa Maria	Rual		1,980	× 22	700	10475			27 446	46.953	1,007	╞	13.939	17 546
Mini Urbun L/123 L/2014 9.254 L/339 J/1014 15,237 16,311 6,311 5,533 Mini Total -1,123 -1,074 9,254 10,358 17,339 3,167 15,237 16,311 - 5,533 Mini Total -1,123 -2,074 9,254 12,731 16,743 2,044 - 5,533 Virban -2,085 -2,239 4,874 6,395 6,075 16,075 3,490 - 7,054 Kural 1,000 1,004 22,700 1,000 20,114 21,114 - 7,054 Yosh 3,585 3,596 18,094 27,005 1,000 20,114 21,114 - 7,054 Yosh 0,035 3,066 11,465 194,001 1,000 20,114 21,114 - 7,054 Yosh 0,035 3,036 18,036 29,068 7,055 2,064 7,054 7,054 Yosh </td <td></td> <td>Total</td> <td>4,2%4</td> <td>1,980</td> <td></td> <td>1000110</td> <td>275 MC</td> <td></td> <td></td> <td></td> <td>141</td> <td>2.044</td> <td></td> <td></td> <td>2 044</td>		Total	4,2%4	1,980		1000110	275 MC				141	2.044			2 044
Sani Rural - 1,074 9,224 10,233 1,523 9,478 2,044 5,553 Total -1,123 2,374 9,284 12,181 20,015 1,074 15,237 19,478 2,044 5,553 Urban -1,000 -1,016 1,074 15,237 19,478 2,054 5,055 Rual 1,000 -1,300 14,060 22,703 1,000 20,114 21,114 7,056 7,054 Rual 1,000 1,000 20,114 27,119 7,016 7,054 <td< td=""><td></td><td>Urbun</td><td>1,123</td><td>8</td><td></td><td></td><td></td><td>101 1</td><td></td><td>120 31</td><td>111.91</td><td></td><td></td><td>5.953</td><td>5.953</td></td<>		Urbun	1,123	8				101 1		120 31	111.91			5.953	5.953
Total "1,123 x,234 4,124 x,005 5,075 5,490 7,024 Urban 2,000 13,000 14,060 22,703 1,000 20,114 21,114 7,000 7,054 Rual 3,365 3,900 11,166 20,015 20,114 27,119 7,056 7,054 Total 3,365 3,900 31,146 113,600 182,200 173,119 77,119 73,709 7,054 WaSP Study Area Rual 19,313 19,349 20,114 27,119 73,709 70,54 WaSP Study Area Rual 19,313 19,3119 40,109 23,310 20,314 27,119 73,709 20,518	Sarangani	Rural		2		10.00	4. C. 1	2 147	074	15.237	19.478	-2.044	-	565	1,997
Untern Untern<		Total				10/ 71	305.3				6.075	3.490			3,490
Rutal 1,000 1,300 1,000 1,5,349 1,000 7,015 20,114 77,189 3,490 7,054 Total 3,385 15,349 15,349 18,034 20,014 77,189 3,490 7,054 WaSP Study Area 0,133 3,406 31,146 113,419 73,709 203,810 WaSP Study Area 8,101 13,313 19,397 40,193 358,005 394,195 203,810 WaSP Study Area 8,101 19,397 40,193 542,415 73,709 203,810		Crban	C8C17		11 040	11000	202 66			20.114	21.114			7,054	7,054
Lotat 3,300 1,500 1,500 1,5,00 23,769 20,810 Urban 99,350 3,906 31,146 113,119 73,769 203,810 Runal 19,397 40,193 53,805 599,93 647,318 19,397 40,193 73,769 203,810 Runal 119,397 40,193 532,615 602,000 30,810 203,810	dorne	KURS	202 5		1011 21	10 01	20.008			20.114	27.189	3,490		1.054	10,544
Urban 93,330 5,556 51,1660 154,8665 156,557 154,556 40,195 542,615 602,005 203,810 203,810 85,814 155,556 156,557 156,515 155,515 602,005 1575,124 73,769 205,810 205,810 155,5155 155,515 155,515 155,515 155,515 155,515 155,515 155		10(3)	696.6			107 PL 01	016 681	011261			173.119	73.7691			73,769
10001 10,207 205000 205		1			041 10	101 101	X12 744	10.107		542.415	602,005			203,810	203,810
	PW4SF Study Area	÷		11 100	120.00	100 000	825 068	192 516		542,415	775,124	73,769		203 X 10	277,574

Table 8.5.3 Population to be Served in Phase II (Water Supply).

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		No. of Household Served	Jold Served		in the				Phase	Phase I Coverage (2003)				
			Based Y	Year				Household Coverage	Coverage		V	Additional No. of HHs to be Served	HHS to be Servi	7
Name of Municipality	Area	Flush	Pour Flush		Total	Total No. of HHs	Plach	Pour Flush	VIP/Drv	Total	Flush	Pour Flush	VIP/IDry	Total
							LON LON		117	1.173	261		41	5
	Urban	32		101	\$	- 400	200		274-1	8 275	020		262	55
Bansalan	Rural	22		56	1 11 1	<u>0,1,0</u>	14			9.408			276	86
	Total	114		1.076	1 77 1	10.010	6	1001		100		104		8
	Urban	2.278		197	7,288	9,455	1 221		l	UNY LI				16
Divos (Canital)	Kumi	195		1.361	13,443	15,200	684		707	10061	101			2
	Total	2.675		1,55%	13,443	24,655	2.575			1000				
	1 (100	42		. 29	838	2,475	495			8	CC#	ľ		282
	1010	1			2,935	4,409	11	3,360	\$95	3,968			411	ŝ
Don Marceling	Kurat		014 6	020	2,035	6, XH4	805	•		5,948	453	-	201	10.1
	1 0131	20		1	×	1.520	202		122	1,216	•		:	Â.
	Urban				041 4	8126	38			7,358				1,18
Hagonoy	Rural	2				0 404	Car L	2,006		8,574	. 266		8	2
	Total	e l		0071	1101	0.00	616			547	184			X
	Urban	ž		501	044	VC0,1	77			8 140				2,21
lose Abad Santos (Trinidad)	Rural	34		1,129	5,861	9,044			ļ	200		2266	36	- 2,54
	Total	62		1,324	5.861	10,103		(C.W.)			75-			Ą
	Urban	42	1	186	781	1,395	-		·					51
V (h)nuen	Runal	33	3,988	1,130	5,151	6,973			J	0/740				2
	Total	12		1,316	5,151	8,368	. 312	∽ 5		225		204		
				128	758	1,412	283	-			17	:		
	0.001			1.208	5,063	7,776	350	5,598						5
vidgady			\$ 028	1.336	5,063	9,188	-				920	505 ⁻¹		
	10131			571	LLX	1.045	2	:						
-	Crean	3		1055	5.174	5.848	263		684 	5,203	221			3
Malaleg	Kurai			2 Y	174		472		1			:		4
	10(31	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			1,1,5	2535	531			. :				4
	Urban	2					17.4	10 947	-					4.
Malita	Rural	278				050 5	2101			1	128		538	<u>.</u>
	Total	388	:		1.214							206		2
	Urban	124	1		265		61	1001						51
Viatanao	Kural	4¥	:	-	6,065	•••								<u>, ,</u>
	Total	222		-	6,065	N	:						7.	87.X
	Urban	120	:	24	746	1,980		0:0'1		1001				4
Padada	Rural	45			2,680									- -
	Total	165			2,680				:					. 60
		060	12521		2,129		:			3,603	E			
ū						8.841								2
	ie my	5/H		1004	1057		662.1	\$,707	1,554		1,006	112,1		1
	1 1111		244		:		1			1,131				4
	Urnan							5,729						0.0
Santa Maria	Kural					ĺ				1		1,6	ន	100
	Total	7	158.0		244	10.10				458	8			140
	Urban	16			100									1,472
Sarangani	Rural			070	2001			2.555		3.129	8	1,513		•
	Total		1.042		140									**
	Urban				171	00.1					175			1,7
Sulop	Rurat	ŝ	2421	1,020	165.5		245	3,789	020					0.2
	Total	151			12017								252	7.4
	Urban	210.6	ť	:	20,198	100.0	1000		ſ	ľ	2 202	14,098		18,26
PWASP Knuhy Ares	-	101	1441	12121	270.02									

8.5.2

Sanitation

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(Secol)

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			No. households	Served in 2003					Phase ;	Phase II Coverage (2010)	(01			
Name of Municipality	Area					Total No. of		Household Coverage	Coverage		Ad	Additional No. of HHs to be Served	HHs to be Serv	2
		flush	Pour Flush	QVALA	Total	HHS SHH	Plush	Pour Flush	VIP/Dry	Total	Rush	Pour Flush	VIP/Dry	Total
	2 (choo	100		117	1.173	94%	6×7	913	117	1,717	346	1051	0	ž
	Pural I	11	6.538	1.235	X,235	628,11	1,124	8,879	1,235	11.238	712	2.291	0	3,003
	Total	502		1,352	9,408	13,675	11111	0,702	1,352	12,955	1,106	2,441	0	122
	Urban	168'1		254	7,564	12,X86	4,794	6.434	250	11,984	104'Z		5	0.44
Divos (Capital)	Kurat	0.84			13,680	21,053	2,000	15,94X	2,052	20,000	1.310	2000		
	Total	2,575			21.244	33,939	6,724	22,382	2,808	31,984	4,219	1200	5	10, /40
	Urban	495			0%6'1	3,680	1,369	1,×55	198	3,422	874	8	6	
Den Marcelino	kural	13	3,360	595	3,968	6,657	13	5,716	ŝ	6.324	0	2,356	0	2,350
	Total	SON			5,948	10,337	1,382	7,571	793	9,746	874	2,924	ō	3.795
		104			1,216	2,109	7%4	1 055	122	1961	480	265	ò	C#1
Harrowski	1000	N1			7.358	11,434	38	9,720	1,104	10,862	o	3,504	0	3,504
	Total	342		1,226	8,574	13,543	822	10,775	1,226	12,23	480	3,769	0	4.249
	1 1444			×	247	1,469	546	235	85	9901	334	185	¢	\$19
Territory Second Contractory	Crown	A 14		1221	X 140	12.402	X	10.527	1221	11,782	0	3,642	0	3,642
10000 7000 340100 (1110000)	Total			YUL I	8 0x7	13.871	580	11,262	1,306	13, 148	334	3,827	0	4,161
	1014	202 4		112	111	1.807	706	946	-112	1,764	427	221	0	648
1 KV 34 2000 -	United in the second se			3	6.276	10,246	33	x,700	£	9,734	0	3.458	0	3.458
VIDIAW DI	Fuid	512		1.001	7 392	12.143	662	902'6	1,053	11,498	427	3,679	0	4,106
	1014	525	714	111	1.130	988	740	966	113	648.1	457	262	0	719
	Crown	107		10501	808.9	10.738	2967	8.184	1,050	10,201	617	2.586	ļo	3,203
Angeleration .	Toto!	117 J	i	1.163	x, 128	12.726	1.707	0.130	1,163	12,050	1,074	2,848	0	3,922
	f Jahan	200	3	X	836	1.392	518	603	2	1.295	8	150	0	459
	Ontri I			084	5.263	8,211	084	6,231	- 789	7,800	512	2.020	o	2,537
Several Se	Total	472		\$73	6009	9,603	1,298	6,924	873	9,005	826	2,120	0	2,996
	[trhan	103		212	2,124	3,632	1,351	1,815	212	3,37#	820	434	õ	1
	(start	0.84	10,447	2.053	13.684	115.02	066'1	215,212	2,053	19,295	1,246	4,365	•	5,611
	Total	1215		2.265	15.808	23,943	3,281	17,127	2,265	22,673	2,066	4.799	•	6,865
	I Irhan	521		0	860	1,180	439	58%	20	1,097	264	135	0	8
Narras C	1 1 1 1 1	96		1.148	7.650	11.952	3	10,112	1,148	11.354	õ	3 704	ō	3 704
April 10141	Toras	590	6.861	1.218	8.348	13,132	533	10,700	1,218	12,451	264	3 839	õ	4, 103
	Lirhan	3%6		X51	1 584	2,745	1,021	1,374	158	2,553	625	22	0	696
Padada	Nurzi	138		413	2 755	4,046	384	3,047	-413	3,844	246	843	0	1.089
	Tota	534	3,234	571	4,339	164'9	1,405	4,421	571	6,397.	871	1.187	0	2,058
	(Jrhan	18		360	3,603	6.331	2,355	3,173	360	5,888	1,454	831	0	
Santa Cruz	Rural	308	1.1	961.1	7.957	12,282	1,026	9,44K	1,194	11.668	628	3 083	0	
	Total	1.299		455,1	11,560	14.613	3,381	12,621	1,554	17.556	2,082	3 914	0	966.0
	Urban	283		113	1,131	1,971	733	08.7	113	1 53	450	252	ŏ	202
Santa Maria	Kumi	37		1210,1	6,784	10,609	37	9,024	1,018	10.079	Ó	3,295	Ó	3.295
	Tota	320		161,1	7 915	12,5K0	770	10.01	1,131	11,912	450	3.547	0	3,87
	(Lirban	\$11.	ь	46	458	¥2¥	310	420	46	776	1951	123	0	318
Saraneani	Rutal	12		401	2,671	4,385	. 12	3.753	401	4,166	ō	1,495	0	1.493
0	Total	127		747	3.129	5,219	220	4,173	467	4,942	195	1 618	0	1.813
	Urban	248		3	066	1,599	\$65 .	793	8	1,487	ž	<u>Š</u>	•	497
Sules	Rural	197		290	3,933	5,676	539	4,263	590	5,392	342	1.17	ō	1,459
	Total	445	084 0	689	4,923	7.275	1.134	950.5	689	6,879	689	1 267	ö	1 956
	Urban	6,615	ţ,	2,045	26,450	45,559	16.94X	22.777	2,645	42,370	10,333	5,5871	ō	15,920
PIV4SP Study Area	Rumi	3.387	1	15,804	105,352	161,831	110'6	- 123,924	- 15,804	153, 739	5,624	42,763	0	48,387
	Tota	- 10,002	103.351	1×,449	131,802	207,390	25,959	151,701	18,449	196,109	15,957	48,350	0	64,307

Table 8.5.5 Additional Number of Households to be Served in Phase II (Household Toilets)

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			Phase I Coverage (2003)	erage (2003)		Phase II Coverage (2010)	'erage (2010)
Name of Municipality	Std. No. of Public School Student that can be Served in the Base Year (1997)	Projected No. of Public School Student in 2000	Public School Students Coverage	Additional No. of Public School Student to be Served	Projected Number of Pulic School Students in 2010	Public School Students Coverage	Additional No. of Public School Students to be Served
Ransalan	3,600	11.473	6,884	3,284	12,475	086.6	3.096
Diros (Canital)	6.240		18,827	12,587	34,768	27,814	8.987
Don Marcelino	2.640		4,125	1,485	8,485	6.788	2.663
Havonov	3.360	10,826	6,496	3.136	12.532	10,026	3.530
Jose Abad Santos (Trinidad)	2,880		4,530	1,650	8,740	6.992	2,462
Kiblawan	2,400	8,196	4,918	2,518	9.976	7.981	3.063
Magsaysay	3,360	11,207	6.724	3,364	12.877	10.302	3.578
Malatae	2,640	016'2	4,746	2,106	9,123	7.298	2,552
Mahta	9,120	19,375	11,625	2,505	21,105	16,884	5.259
Matanao	4,320		060'1	2,770	13.098	10.478	3.388
Padada	1.920	4,956	2.974	1,054	5.738	4,590	1,616
Santa Cruz	6.240		10.814	4.574	19,871	15.897	5.083
Santa Maria	5.280		6.764	1,484	13.053	10,442	3,678
Sarangani	3,120	7.919	4,751	1.631	8.716	6.973	2.222
Sulop	2.640	5,247	3.148	508	5.508	4,406	1.258
PW4SP Study Area	59.760	174,028	104.416	44,656	196.065	156.851	52,435

Table 8.5.6 Additional Number of Public School Students to be Served in Phases I and II (School Toilets)

8 - 27

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> 1. 1. 2.

			n Base Year 1973	Pb	ase I Coverage (2	003)	2P	ase I Coveroge (2)10)
Nome of Municipality	Type	No. of PU with Tollets Facilities	No. of FU with Sanitary Toilets	No. of PU with Tollety Facilities	Add'L No. of Public Utilities with Sanktory Toflets	No. of PU with Sanitary Tollets	No. of PU with Tollets Facilisies	Add'L No. of Public Utilities with SanItary Toffely	No. of PU with Sankary Toilets
	Public Market	1	1	1		1	2	1	2
Bansalan	Bus/Jeepney Terminal	<u> </u>		<u> </u>	<u> </u>	<u> </u>	1		1
	Parks Playground		·!			1	1		1
	Total	2		3	11	3	4	<u>ı</u>	4
	Public Market	2	2	2		2	. 4	2	4
Digos (Capital)	Bas/Jeepney Terminal Parks Playground			2	2	2	2		2
	Total	2	2	4			·····	···	
	Public Market	1 1	1		2	<u> </u>	6	2	6
Don Marcelino	Bus/Jeepney Terminal	<u> </u>		· · · ·		1	1		
Citin Marcelling	Parks Playground	··		·•		<u> '</u>	·····	<u> </u>	<u> </u>
	Total	1	1	2	1	2	2		2
	Public Market	ł	1	1		1	2	1	2
Hagonoy	Bustleepney Terminal			1	1	1	1		
	Parks Playground								·····
	[cta]		1	2	1	2	3	1	3
	Public Market		1.	1		F	1		1
Jose Abad Santos (Trinidad)	Bus Jeepney Terminal		 						
(aranadad)	Parks Playground		·						
	Total Bublic Montant	<u>!</u>	1	1		<u> </u>		l	
	Public Market	1	- · ·	<u> </u>		···· ·			
Kiblawan	Bus/Jeepney Terminal Parks/Playground			<u> </u>	1	<u> </u>	<u> </u>		<u> </u>
	Total	1	·····	· · · · · ·					
······································	Public Market	<u> </u>		2	11	2	2		2
	Bus/Jeepney Terminal	<u> </u>		1	1			·	
Magsaysay	ParksPlayground			- · <u>· · · ·</u>	<u> </u>	∤′	1		<u> </u>
	Total	1		2	1	2	2		<u> </u>
	Public Market	1	1	·	· · · · · ·				2
Matalag	Bus/Jeepney Terminal			1	1		1		
	Parks/Playground					†			
·····	Totat	1	<u> </u>	2	1	2	2		2
	Public Market	3		3	2	3	5	2	5
Malita	Bus Scepney Terminal			I	. 1	I	1		I
	Parks/Playground								
·	Tout	3	!	4	3	4	. 6	2	5
	Public Market	5	<u> </u>	5	4	5	5		5
Matasao	Bus/Jeepney Terminal Parks Playground	<u> </u>	<u> </u>	ļ!	<u> </u>		1		<u> </u>
	Total	5				<u> </u>	· · ·		
	Public Market			6	5	6	6		6
0	Bus Jeepney Terminal	·	t'		1	i 1	2	1	2
Padada	Parks Playground	1	<u> </u>	<u> </u>		<u>├</u>	1	f	1
	Fotal	1	1	2	1	2	3	· · · ·	j
	Public Market	2	i	2	1	2	2	ti	2
Santa Cruz	Bus/Jeepney Terminal			1	1	1	1	l	
	Parks/Playground	L						1	t
	Total	2	1	3	2	3	3		3
	Public Market	2	I	2	1	2	2		2
Santa Maria	Bus/Jeepney Terminal	L			1		1		1
	Parks/Playground			 		I			
	Total Rubic Made	2		3	2	3	3	·	3
	Public Market Bus/Jeepney Terminal	<u> </u>	<u> </u>			<u> </u>	2	1	2
Sarangani	Parks Playground		<u> </u>						<u>↓ </u>
	Total	1			l			·	
	Public Markes	1	1			<u> </u>	2	1	2
S. Inc	Bus/Jergney Terminal	_	1	'				<u> </u>	1
Sulop	Parks Playground	1	1			<u>├</u>			<u> </u>
	Total	2	2	3	t	3	3		3
	Public Market	24	16	24	8	24	32	8	3
PW4SP Study Area	Bus/Jeepney Terminal		·····	14	14	<u>н п</u>		.	14
i i iriici oluuy Area	Parks Playground	2	2	2		2	2		2
	Total	26	18	40	22	40	48	8	48

Table 8.5.7 Additional Number of Public Utilities with Sanitary Toilets in Phase I and II

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

8.6.1 Water Supply

(1) Required water supply facilities

Urban water supply:

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

As reference, the following requirements were also estimated:

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

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

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

Rural water supply:

Rural water supply facilities required by target year shown in Table 8.6.3(a) were estimated as the number of Level II systems with number of communal faucets and the number of Level I wells broken-down to deep and shallow wells. Twenty-cight (28) untapped springs suitable for Level II system were confirmed during this PW4SP preparation.

(2) Required well drilling and rehabilitation equipment

Presently, only one unit of truck-mounted percussion drilling rig is available at DPWH-DEO in the province.

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

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

	Referen	e on E 1	Council	Existing Lev ge in 1997	el 131 Syste			Phase I (200	3) Requirements			Passe 11 (201) Requirement	in an
Name of	Name of			22 in 1997	Type of		Addidonal	Number of	Daily Average			Namber of	Daily Average	Number of
Municipality	Operating Bady	Ara	No. of Barazgay Seried	Seined Population	Water	Plan for Expansion	Population		Water Demand (m ³ /day)	Spriag Dev"W Deep Well	Population	Ifouse Connections	Water Demand (m ³ /day)	Spring Devi <i>tal</i> Deep Well
Bansalan	Bansalan WD	Urban	ŀ	6,247									HAT I A TRADUCTOR	
		Rurat	10	7,513	OW/SP	No	[768	192	17	L.
Oigos (Capital)	Digos WD	Fotal Urban	<u> </u>	13,760 30,498			┣──…							
		Rural	6	3,735	ъw	No					18,467	4,637	1,117	3
		Fotal	·,	34,233							10,401	1,011	8,847	3
Oon Marcelano	Not Applicable	Urban	NA.	N.A.								·		
		Rural	NA.	<u>. NA</u>	N.A.	N.A.	4,873	939	487	L	9,110	2,278	911	2
Hagonoy	Hagoney WD	Total						└──-						
3	and a second second	Urban Rural		1,370	ow	No		1			4,776	1,194	478	
		Total		1,370			i]			4,730	1,194	476	I
	Hagonoy RWSA	Urban	1	1,869			1							
		Rural			DW	No		!						
		Tetal	!	1,869			1							
	Municipal Total	Urban	2	3,239										
	ter an	Rural Total		1 110				1						
Jose Abad Santos	Not Applicable	Urban	N.A.	3,239 N.A.	1.00000	10.01000		<u>├</u>	* ~ ~ ~ ~ ~ ~ ~					
(Trinidad)	1	Rural	N.A	NA	NA	N.A.	3,449	662	345	L	2,131	\$33	213	1
		Total	L	L]	<u> </u>				l				l .
Kiblawan	Kiblau 20 WD	Urban	<u> </u>	2,049	1			1		···· ·····				
		Roman Total			ÐW	No	3,031	630	303	t	2,128	532	213	ŧ
Мадчаувау	Magsaysay RWSA			2,049	├ ──		ł	+						
		Rural		<u></u>	DW	No	929	179	93	L	5,046	1,262	505	
	L	Fotal	1 1	1,578	1	Ι.				-	2,000	1,	202	1 .
	Terul WWA	Urban			I		1							
		Rural	<u> </u>	967	58	No								
	}	Total		967										1
	Municipal Total	Urban Rural	<u>'</u>	1.578							1]
	1	Total		<u>967</u> 2,545				1						
Malalag	Malalag WWS	Urban		915	1 Calcins	1		i			 			
		Rural	2	L 150) DW	No	1,400	289	140	1	2,972	743	297	1
Malita	14.0. 5	Total	3	2,066		Į	ļ							
14.374	Malita RWSA	Urban		5,623	OW	I				_				
		Rural Fotat	<u>'</u>	2,342 7,965	1	No	5,189	1,006	\$19	1	2,990	748	299	3
Maturae	Marga WWA	Unban	tť		t	{	ł		<u> </u>		}			
		Rural	1	94	שט	No	893	179	69	1	1,450	363	145	1
		Total		94	1	1				Į				-
	Matanao RWSA	Urban	ļ	2,141							ļ			
		Rural	–−		DW	No				1				
		Total Urban		2,14)	100000	1000000	-							
	Municipal Total	Rwal	† i	2,141				1	1		ļ	1		
		Torat	2	2,235	1				ł		1	1		
Padala	Padada WSC	Urban	1	6,492	1	1	T		<u> </u>	l	l			<u> </u>
	1	Rural	<u> </u>	899	DW	No		1	1		3,940	985	394	1
	Piape RWSA	Fotal Urban	^{\$}	199	1	<u> </u>	-{	1	Ì					
		Rural	,	671	ow	No	1		Į		1			
	L	Totat	1 3	671			1		1	ł	1			
	[Urban		6,492			1	1				-		
	Municipal Yotaf		7	1,570					1			Į		1
Santa Cina	Sta Cour NWW	Total		8,062		1	1							I
7 w 15 m 1 - 11 i Z	Dia Cruz NUW W	Urban Rurat	1	3,475		No	4,334	850		l .				
	1	Total	†·	9,501	-	1 ***	1,1,1	650	433	1	11,250	2,813	1,125	2
Santa Maria	Sta. Maria RWSA	Urtan	1 1	1,883		1	1	+	<u> </u>					{
	1	Rerat	1		0W	No	2,491	455	240	1	3,207	802	321	
	. 	Total		1,883	L							l_		1
Sarungani	Not Applicable	Urban	NA	N.A.	1.					I	1	Г · ·		1
	1	Rovat -	NA	<u> NA</u>	N.A.	N.A.	1,123	212	112		2,044	511	204	1 I I
Sutep	Sulty RWSA	Fotal Urban		900	<u>}</u>					<u> </u>		ł		┨─────
	1	Rurat		1,000		No	1,685	342	\$ 69		3,490	373	349	1
		Fotal	1	1,900	4	L								1
		Urban	14	70,041			1	T			1	1		t——
PW45P	Study Area	Rural_					29,307	\$,753	2,930	- 11	73,769	38,446	7,378	19
		Tera		89,440).		1	1	1	L	1	1	3	ł.

Table 8.6.1 Urban Water Supply Facilities Required by Target Year

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Table 8.6.2 Plan for Expansion of Existing Level III Systems	
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	Table over 1 and 2 meres to notenader to that I are one				
		Additional Arcas	Additional	Additional Water Sources	'ater Sources
Name of Municipality	Name of Opcrating Body	Barangay to be	Population to be Served	Type	Capacity (m ³ /day)
Bansalan	Bansalan WD				
Digos (Capital)	Digos WD				
Hagonoy	Hagonoy WD				
	Hagonoy RWSA	•			
	Municipal Total	-			
Kiblawan	Kiblawan WD				
Magsaysay	Magsaysay RWSA				
	Tacul WWA				
	Municipal Total				
Malalag	Malalag WWS				
Malita	Malita RWSA				
Matanao	Manga WWA				
	Matanao RWSA				
-	Municipal Total				
Padada	Padada WSC				
	Piape RWSA				
	Municipal Total				
Santa Cruz	Sta. Cruz MWW				
Santa Maria	Sta. Maria RWSA				
Sulop	Sulop RWSA				
	PW4SP Study Area				

 \mathcal{N} as in

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			Phas	ie I (2003) F	Phase I (2003) Requirements	S				Pha	use II (2010	Phase II (2010) Requirements	ints	
	No.	Level II			Le	Level I					Level	rel I		
Name of Municipality	Number of	No. of		Number of	Number of Deep Wells		No. of			Number of Deep Wells	Deep Wells		No. of	L L
	System	Faucets	30 m	80 B	70 m	Sub-total	Wells		30 m	50 m	70 m	Sub-total	Wells	1 017
Bansalan					121	12	Ĩ	23		<u> </u>	123	[521]	: 22	225
Digos (Capital)											124	124	288	412
Don Marcelino	2	07	8			90	142	150	¢.	je je		6	152	161
Надолоу										116		911	28	4
Jose Abad Santos (Trinidad)	7	07		14		14	152	265		41		14	251	
Kibiawan	4	81		4		4	E	108		8		8	145	243
Magsaysay										881		188	42	235
Malalae	7	18			61	61	3	22			159	159	27	186
Malita				8 4		48	268	ĥ		65		65	365	430
Matanao	6	141									159	159	105	764
Padada					36	36	4	40			18	13	6	8
Santa Cruz	-	20		18		18	14	68		56		56	223	279
Santa Mana	2	4		103		103	18	121		661		8	X	233
Sarangani	2	14		19		19	***	69		30		30	20	100
Sulop				27		27	'n	30		101 107		101	ir:	18
PW4SP Study Area	28	565	8	273	67	348	618	1,227	6	873	646	1,528	1.877	3.405

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

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

			-	Phase I (2003)	2003) Requirements	50					<u>م</u>	Phase II (2010) Requirements) Requireme	D C C		
			50	Share of Public	"ublic Facility (85%)	*/a)					S	Share of Public Facility (85%)	: Facility (85	(*/a)		
Name of Municipality			Percentage Allocat Percentage Allocat	Percentage Allocated to Public Wells (85%) and Percentage Allocated to Public Spring Dev. (15%)	ed to Public Wells (85%) and ed to Public Spring Dev. (15%)	s (85%) and g Dev. (15%					Percentage	Percentage Allocated to Public Wells (85%) and Percentage Allocated to Public Spring Dev. (15%)	Public Welli Public Sprin	s (85%) and g Dev. (15%		
		Number of	Number of Deep Wells		No. of	1	No. of Spring	Grand		Number of	Number of Deep Wells		No. of	, , ,	No. of	Crand
	E 0£	Е 93	- 20 m	Sub-total	Vells		Dev.		30 m	50 IB	70 m	Sub-total	Wells		Dev.	Total
Bansalan				9	3	121	n	.20			68	58 0	88	241	31	ଥ
Digos (Capital)											¥		~ •	162	53	ŝ
Don Marcelino	9			9	103	(01	61	128	\$	•		9			21	ព
Hagonoy										84		84			181	
Jose Abad Santos (Trinidad)			10	101	181	161	34	222		01		01	181	161		
Kiblawan		r.	32 -	32	46	84	14	92		12		12	\$01			202
Magsaysay	-									321		136				
Malalag		ŀ		14 14	1	16	3	19			114		50		5	
Maluta		ĺ	35	35	3	229	4	269		47		47				366
Matanao											114	pti i	26	061	3	13
Padada			27	7 27	7	29	S	ጽ			65	55	9	65		7
Santa Cruz		-	3	:3	52	65	1	92		41		41	160	201		152
Santa Maria		7.	75	54		88	51	1		143		143	ກ	168	8	101
Sarangani		ŕ	14	14	32	46	8	54		22		22	50	12	61	8
Sulop		2	20	20	2	22	4	26		4		122	8		151	ğ
PW4SP Study Area	\$	661	9 50	0 255	553	890	156	1,046	\$. 631	466	1,103	1.354	2,457	437	2,894

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Medium size percussion drilling rig (truck-mounted type for deep well): Average performance

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

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

Required number

- 15 sets for the total 693 deep wells

Well rehabilitation equipment:

Average performance

- I well/7 days (well redevelopment and finishing work Annual accomplishment

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

Required number

- 2 sets for 10% of 693 Level I deep wells

Support vehicle:

Type - pick-up truck with winch, double cab Required number

- 2 units for well rehabilitation

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

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

In addition to the above, service trucks equipped with crane are required for each unit of medium size rotary and percussion rigs for hauling drilling tools and water.

			Pha	Phase I (2003)]	003) Requirements	ents					Phs	Phase II (2010) Requirements	Kequirem	ents	4	
		D EI I VIII III D	A state of MUC to be Served	1		No. of HHs to he Served	o he Served		Pdd	Additional HHs to be Served	Is to be Sei	rved	Z	No. of HHs to be Served	6 be Ser	- 1
Name of Municipanty	AUK	Down Fluck		Total	Fluch	Pour Flush	dIA	Total	Flush	Pour Flush	۹I۷	Total	Flush	Pour Flush	VIP	Tota
	LIUSH I	FIUSH FOUT FIUSH		1000	1.70		V -	246	105	: 50		Sta	394	150		k
Bansalan	261		7		107		1 933	222	200 6	1 417		4 420	2.903	1.517		42(
Digos (Capital)		8	559	663		407	666	003	5.X.2	1.0.1			120	280		1
Adverting	454	520	169	1.142	453	520	169	1,142)	874	200		ji ji	1/0	3		
	790				266	188		454	480	265		745	480	507		
Vologen Antipatrical and a second s	101			763	154	92		263	334	185		519	334	185		610
ose Abad Santos (I minado	101				725	CL 1		007	427	221		848	427	122		248 248
<pre>Ciblawan</pre>	257			ŝ	107		Ť	100	1.34	747		710	457	262		1 719
daesavsav	257	130		387	257	150		100	i,	202			22			052
	170			641	179			179	309	150		AC+	ŝ			
Aritrick				127	174		0	431	820	434		1,254	820	454		407-1
vanta	17#		2			306		307	2764	135		399	264	135		86 200
Matanao		200				3		040	363	772		0,00	509	344		696
Padada	276	488	74		270	435	7	0.0				306.6	0201	153		2,2,5
anta Chiz	681	684	4	1,474	189	289	4	1,474	44			10717				i c r
	247		5	265	243		22	265	450	252		702	84 24			1/1
Santa Mana		Ţ			8	14		140	195	123		318	195	123		31
Sarangani	Ś							776	247	150		497	347	150		497
Sulop	132	44		0/7	1.34					200		1000	10.22	7 4 47		15 970
PWASP Study Area	3.690	2.861	852	7,403	3,690	2.861	852	7,403	10,333]	186,6		IN76°CI	CCC.V1	1,00%		

Table 8.6.4 Urban Household Toilets Required by Target Year

Table 8.6.5 Rural Household Toilets Required by Target Year

			Phas	Phase I (2003) F	2003) Requirements	suts				•	Pha	Phase II (2010) Requirements	Requirem	ents		
Name of Municipality	244	Additional HHs to be Served	s to be Ser	4		No. of HHs to be Served	oe Server	- P	I PPV	Additional HHs to be Served	to be Ser	Ý6d		No. of HHs to be Served	222	
Amediament to allight	Fluch	Such Pour Flich		Total	Flush	Pour Flush	۸IP	Total	Flush P	Flush Pour Flush	VIP	Total	Flush	Pour Flush	VIP	Total
	Vec -	1000		ŝ	- C		292	592		1677		3,003	712	2,291		3,003
Bansalan	200		707	420			103	0.10	1 315	5 DNA		6.320	1.316	5,004		6,320
Digos (Capital)	287		-691	973	197		140	016	2121		T	2220		256		22
Don Marrelino		1.388		1.388	;	1,388		1,388	•	2.356		0007		DCC.2		
		1.156	¥,	1 1 80	ľ	1.125	2	1.189		3,504		3,504		3,504	-1	50.0
Hagonoy		101 0	6	1.		2187	8	- 2.279		3.642		3,642		3,642		3,642
Jose Abad Santos (I mildad		10117			T			1214		827 5		3.458		3.458		3,458
Kiblawan		1,514		410.1 4					217	707 6		1 202	613	2.586		3.203
Macsavsav	916	1,174		1,493		1,174		1.495	10	105.2		001		0000		503 0
Malalace	1.66			221	221	• ,	;	221	517	2,020		1502	. 217	7,020		1000
971717		727	365	1 470	404	516	528	1 470	1 246	4 365		5,611	1.246	4,365		5,611
Manta		ŀ	071	203 1	A.	1431				3 704		3.704		3.704	-	3.704
Matanao	40	117.1		1001			000		112	247		10801	720	543		680
Padada	8			416	52		525	40	047	nto		1.14 5		2 002		1162
Santa Oniz	325	722		1,047	325	122		1,047	628	3,083		11/5	970	0010		
Contra Maria				1.036		1,036		1,036		3,295		3,295		3.295		CK7.5
Calles Patrice		1 472		1.472		1.472		1,472		1,495		1.495		1.495		1,495
Cultar Sultar	175			1.778	175	1,603		1,778	342	1.117		1,459	342	1,117	ĺ	1,459
DWASP Study Area	2000	i.	14 098 1 960	18.260	2.202	14.098	1,960	18,260	5,624	42,763		48,387	5,624	42,763		48,387

8.6.2 Sauitation

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	Phase 1 (2003)	Requireme	nts	Phase II (2010	Requireme	nts
Name of Municipality	Additional Public School Students to be Served	No. of Toilet Unit	No. of Toilet Facilities	Additional Public School Students to be Served	No. of Toilet Unit	No. of Toilet Facilities
Bansalan	3,284	83	17	3,096	78	16
Digos (Capital)	12,587	315	63	8,987	225	45
Don Marcelino	1,485	38	8	2,663	67	14
Hagonoy	3,136	79	16	3,530	89	18
Jose Abad Santos (Trinidad)	1,650	42	9	2,462	62	13
Kiblawan	2,518	63	13	3,063	27	16
Magsaysay	3,364	85	17	3,578	90	18
Malalag	2,106	53	11	2,552	64	13
Malita	2,505	63	13	5,259	132	27
Matanao	2,770	70	14	3,388	85	17
Padada	1,054	27	6	1,616	41	9
Santa Cruz	4,574	115	23	5,083	128	26
Santa Maria	1,484	38	8	3,678	3 92	19
Sarangani	1,631	41	9	2,222	2 50	5 12
Sulop	508	13	3	1,25	3 32	<u>; </u>
PW4SP Study Area	44,656	1,125	230	52,43	5 1,318	3 270

Table 8.6.6 Public School Toilets Required by Target Year

Table 8.6.7 Public Toilets Required by Target Year

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	8	hase I (2003) Re Number of Pub			P	hase 11 (2010) R Number of Pub		
Name of Municipality	Public Market	Bus/Jeepney Terminal	Parks/ Playground	Total	Public Market	Bus/Jeepney Terminal	Parks/ Playground	Total
Bansalan		1		1	<u> </u>			1
Digos (Capital)		2		2	2			2
Don Marcelino		1		1				
Hagonoy		1		1	<u> </u>	<u> </u>		1
Jose Abad Santos (Trinidad)								
Kiblawan		<u> </u>		<u> </u>				
Magsaysay		1		1				
Malalag		1		1			l	
Malita	2	11		3	2		· · · · · · · · · · · · · · · · · · ·	2
Matanao	4	1		5				
Padada		1		<u> </u>	1			<u> </u>
Santa Cruz	<u> </u>	1		2				
Santa Maria	1	1		2		<u> </u>	ļ	
Sarangani			ļ	L	<u> </u>			1
Sulop		1	<u> </u>		<u> </u>	<u> </u>		<u> </u>
PW4SP Study Area	8	14		22	8			8