

**Water Utility: Dipolog City Water District (DCWD)**

Dipolog City, Zamboanga del Norte, Philippines

**Contact Details:** General Manager: PALUCA, SANTANDER, PABLITO  
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**Services Provided:** Piped water, . . . Other: Equipment rental/lease  
**Utility Type:** Government with no reporting for WS&S, . . . .

**Private Sector Involvement:** None, . . . .

**Source of Raw Water:** . . . Groundwater,

**Treatment Method:** , Disinfection, Filtration, , Aeration, ,

**Water Supply System description:**

Production capacity = 8,122 m3/day		Distribution network = 214 km		Storage capacity = 400 m3
Area of Responsibility		Present Service Area		
Area (sq km)	136	41		
Population	117,971	94,531		
No. of Towns = 13		Population served = 38,964		
<u>No. of connections:</u>	Domestic (Households) = 5,872	Non Domestic = 644		Total Connections = 6,516
Typical service connection length = 5 m		Connections with operating meter = 6,494		
System input volumes:	Produced by W.U. = 2.2 million m3/year	Bulk water imported = zero		
Water consumption:	Metered cons. = 1.6 million m3/year	% Unmetered cons. = 2% of metered cons.		Ave. meter inaccuracy = N/A
Water Sales:	Domestic = 0.9 million m3/year	Non Domestic = 0.2 million m3/year		Bulk Water sales = 0.1 million m3/year
<u>System Performance:</u>	No. of connections with intermittent supply = 25		Typical duration of supply = 24.0 hours / day	
No. of pipe breaks in distribution system = 24 / year		Typical water pressure in mains = 3 m.		
Chlorine Residuals:	Tests required = N/A	Tests carried out = N/A		Tests passed = N/A

**Human Resources (Staff)**

<u>Type of employment:</u>	Permanent staff: salaried Government employees, , , Casual/part-time: wages, Contracted out to outside company/agency,			
<u>No. of staff (FTE):</u>	Corporate Services = 10	Water Supply = 21	Other = zero	Total = 31
<u>Staff Training:</u>	No. Trained = 3 / year	Training days = 9 / year	Training costs = 1.37% of total operating budget	

**Customer information**

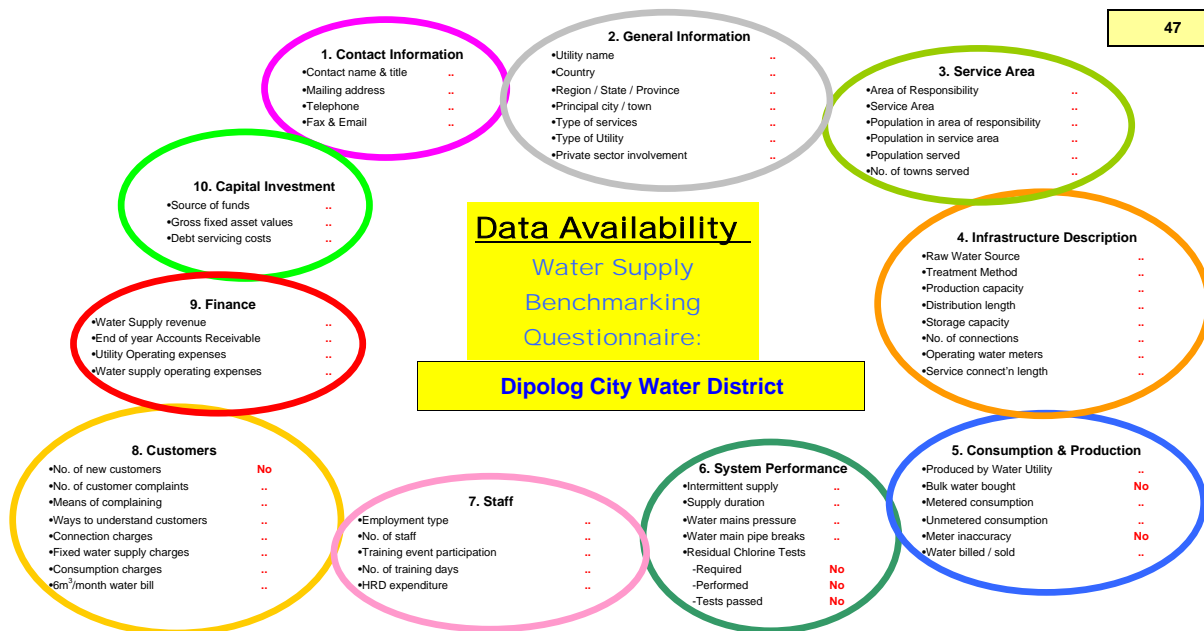
Customer interaction:	New connections = N/A	Customer complaints = 3,532 / year
Complaint method:	In person, By telephone, , By letter, Other method: SMS	
Understanding customers by:	Customer interactions, Responding to complaints, , ,	

**Charges & Fees**

<u>Typical connection charge:</u>	Domestic = 2,500PHP / conn. (45 US\$ / conn.)		Non Domestic = 2,500PHP / conn. (45 US\$ / conn.)		
<u>Fixed water charge:</u>	Domestic = 165PHP / month (3 US\$ / conn.)		Non Domestic = 330PHP / month (6 US\$ / conn.)		Bulk water sales = N/A
<u>Water consumption tariff</u> (typical of all towns and in each category):	Tariff Block 1	Tariff Block 2	Tariff Block 3	Tariff Block 4	
Domestic	From - To (m <sup>3</sup> )	0 - 10	10 - 20	20 - 30	>30
	Price (PHP / m <sup>3</sup> )	17	28	30	34
	(US\$ / m <sup>3</sup> )	\$0.30	\$0.51	\$0.54	\$0.60
Non Domestic	From - To (m <sup>3</sup> )	0 - 10	10 - 20	20 - 30	>30
	Price (PHP / m <sup>3</sup> )	33	56	60	67
	(US\$ / m <sup>3</sup> )	\$0.59	\$1.01	\$1.08	\$1.20
Bulk Water	From - To (m <sup>3</sup> )				
	Price (PHP / m <sup>3</sup> )	45			
	(US\$ / m <sup>3</sup> )	\$0.81			
Water bill for household consuming 6 m <sup>3</sup> /month =				165 PHP / month	(2.96 US\$ / month)

**Finances**

<u>Revenue:</u>	Water Sales	Other water related	Subsidies & grants	Total	Year end Accounts Receivable
PHP / year	27,100,000	1,300,000	zero	28,400,000	4,000,000
US\$ / year	\$485,489	\$23,289	zero	\$508,778	\$71,659
<u>Operating Expenses:</u>	Water supply	Other services	Company Overhead	Total	
PHP / year	10,341,000	zero	10,421,000	20,762,000	
US\$ / year	\$185,256	zero	\$186,689	\$371,946	
<u>Water Supply Operating breakup:</u>	Labor	Electricity	Chemicals & materials	Contracted out	Other expenses
PHP / year	1,430,000	2,632,000	527,000	1,628,000	3,193,000
US\$ / year	\$25,618	\$47,152	\$9,441	\$29,165	\$57,202
<u>Investment funds source:</u>	Own internal funds, , Loan from Government Bank, , , ,				
<u>Fixed Assets value:</u>	Water supply	Other services	Company Overhead	Total	Debt Servicing Costs
PHP	38,700,000	zero	14,500,000	53,200,000	3,250,000
US\$	\$693,300	zero	\$259,764	\$953,063	\$58,223



## Calculation of Overall Performance Indicator (OPI)

Customer Indicators	Value	Rank
Service Coverage in existing service area (%)	41.2%	(38 / 45)
Meter coverage (% with operating water meter)	99.7%	(42 / 46)
Customer complaints / 1000 connections	542.1	(4 / 41)

Water Supply Systems O&M	Value	Rank
Supply Continuity (% of time water available)	100.0%	(1 / 47)
Residual Chlorine tests passed (%)	#N/A	
Total Unmetered Consumption (% of metered cons.)		
Infrastructure Leakage Index [ILI]	53.1	(20 / 26)

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**Overall Performance Indicator (OPI) = - 0.26**

Number of Standardized Indicators available = 11

Overall Ranking = (36 / 47)

Human Resource Indicators	Value	Rank
Total water related staff / 1000 connections	4.8	(10 / 38)
Investment in staff training (days / staff)	0.3	(22 / 33)
Ave. cost of employment / staff (% of per capita GNI)	77%	(35 / 37)

Financial Indicators	Value	Rank
Operating Cost Coverage (water sales only)	1.31	(15 / 43)
Unit water cost (US\$ / m <sup>3</sup> of system input)	\$0.17	(32 / 43)
Water system asset value / Prod'n capacity (US\$ / m <sup>3</sup> /day)	\$85	(12 / 35)
Debt servicing ratio (% of total operating revenue)		

Financial Indicators: Annual expenses & revenue			
Operating Cost Coverage		Expenses	
Operating Cost Coverage (water sales only)	1.31	Overhead expenses / Total Operating expenses ratio	0.50
Operating Cost Coverage (total revenue)	1.37	Labour costs / Water operating expenses	0.14
		Electricity costs / Water operating expenses	0.26
		Chemical & other materials costs / Water operating expenses	0.05
		Contracted out services costs / Water operating expenses	0.16
Revenue			
Water sales revenue / Total revenue ratio	0.95	Unit water cost (US\$ / m <sup>3</sup> of metered cons.)	0.34
Subsidies & Grants / Total revenue ratio	0.00	(US\$ / m <sup>3</sup> of system input)	0.17
Revenue Collection period (months)	1.77	Debt servicing ratio (% of total operating revenue)	11.4%
Unit water price - ave. (US\$ / m <sup>3</sup> of metered cons.)	0.44		

Fixed Assets	
Corporate Fixed Assets / Total Fixed Assets	0.27
Water system asset values	
Asset value / Total water related assets	0.73
Asset value / Prod'n capacity (US\$ / m <sup>3</sup> /day)	85
Asset value / pipe length (US\$ / m. pipe)	3
Asset value / Customer (US\$ / conn.)	106

System Input	
Production capacity utilization (%)	74%
Bulk water imported (% of total system input)	0%
System Input Rate (litres/person/day)	
	151
(m <sup>3</sup> /connection/month)	
	27.0
System Input / Distribution ratio (m <sup>3</sup> /day per km pipe)	28.0
System Input / Storage ratio (m <sup>3</sup> /day per m <sup>3</sup> storage)	15.1
Supply Continuity (% customers with continuous supply)	
	100%
Supply Continuity (% of time water available)	
	100%

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**OPI Ranking = 36 / 47**

Human Resource Indicators			
Human Resource Utilisation		Human Resource Development	
Overhead staff ratio (% of total FTE staff)	32%	Staff Training participation rate (% staff)	10%
Water supply staff ratio (% of total FTE staff)	68%	Staff Training duration rate (days / staff)	0.3
Total water related staff / 1000 connections	4.80	Investment in staff training (% of direct labour costs)	9.91%
Direct water supply staff		Investment in staff training (% of total operating costs)	1.37%
Staff / 1000 connections	3.20	Human Resources Costs	
Staff / 1000 m <sup>3</sup> /day system input	3.50	Ave. cost of employment / staff (% of per capita GNI)	0.77
Staff / 100 km of pipework	9.80	Contracting out services / in-house Labour costs ratio	1.10

Distribution	
Distribution / customer (m. pipe per connection)	32.8
Storage / customer (m <sup>3</sup> per connection)	0.10
Residual Chlorine	
Sampling compliance (%)	#N/A
Tests passed (%)	#N/A
Non Revenue Water (UFW)	
% of System Input	50%
m <sup>3</sup> / km / day	14.1
m <sup>3</sup> / connection / day	0.46
NRW adjusted for continuous supply (% of System Input)	50%
Unbilled Authorized & Unauthorized Cons. (% of metered cons.)	2%
Unmetered cons. due to meter inaccuracies (% of metered cons.)	#N/A
Total Unmetered Consumption (% of metered cons.)	#N/A
Infrastructure Leakage Index [ILI]	53.10
Mains failures ratio (breaks / km pipe / year)	0.10

Water consumption	
Bulk water exported (% of total metered cons.)	5%
Average domestic water charges (% of per capita GNI)	1%
Metered consumption rate	
- Domestic (litres/person/day)	66
- Total Cons. (litres/person/day)	77
(m <sup>3</sup> /conn/month)	14
Total consumption - metered & unmetered (litres/person/day)	79.00
(m <sup>3</sup> /conn/month)	14.00
Domestic share of total metered consumption (%)	85%
Non Domestic share of total metered consumption (%)	14%

Demography	
Average town / city size (persons / town)	9,075
Population density in area of responsibility (persons/sq.km)	866
Population density in existing service area (persons/sq.km)	2,334
Average Household size (persons / domestic connection)	
	7
Customer Interactions	
Customer complaints / 1000 connections	542

Connections	
Service Coverage in area of responsibility (%)	33%
Service Coverage in existing service area (%)	41%
Domestic / Non-Domestic connections ratio	9.1
Domestic / Non-Domestic consumption rate ratio	4.6
New connection growth rate (% / year)	
	#N/A
New domestic connection cost (US\$ / connection)	45
New domestic connections (% of per capita GNI)	1%
Meter coverage (% with operating water meter)	
	100%
Billed unmetered consumption (% of metered cons.)	-31%

# Water Sales & Production Information

## Dipolog City Water District

