Jagna Waterworks System
Business Plan (2011-2015)

Table of Contents

I. EXECUTIVE SUMMARY

This business plan was conceived as a tool to enhance the financial and operational sustainability of the Jagna Waterworks System (JWS). Specifically, it creates a framework for moving closer to the realization of the utility's Vision and Mission by generating a five-year map which outlines the decisions to be made and the concrete steps necessary to realize the professed objectives.

The JWS is one of the Municipality's economic enterprise programs. As such it is expected to be able to operate autonomously using its own organization and its own resources. At the moment, although the water utility is able to raise funds to cover its operations, it remains heavily dependent on subsidies provided by the LGU. It has therefore embarked on a journey to sustainability.

An assessment of its current state of affairs kicked off the process. A look at its internal as well as its external conditions revealed a need for: organizational change; investments in physical as well as in human assets; improvements in management systems; securing water resources; better service to more citizens; and generating adequate revenues to position itself for long-term operability.

The assessment allowed the JWS to focus on the following strategic goals for this five-year business plan and the means to achieve these targets:

Strategic Goals	Major Action Items
Increased water production to allow for water availability 24/7	1. Rehabilitate and expand Lonoy source 2. Improve Canukso reservoir 3. More pumping stations
Potable and safe water conforming to Department of Health standards	1. Lonoy source slope protection 2. Filtration and chlorination facilities 3. Regular water testing and analysis
Upgraded Distribution System for network integrity	1. Rehabilitate GI pipes 2. Reroute pipelines near canals and drains 3. Revamp/Replace Canjulao pipeline network
Protection and conservation of watersheds	1. Ordinance banning illegal forest activities 2. Deputize 'Bantay Lasang' 3. Reforest watershed areas
Efficient and effective customer service	1. Extend coverage to 3 more barangays 2. Customer orientation training 3. Information & education campaigns on water conservation & leak reporting 4. Database Information system 5. Community awareness & participation, say, in reporting leaks 6. Hotline & text inquiry facility
Improved Human Resources and	1. Create Municipal Water Board

Management Systems for more efficient operations	2. Permanent supervisory position 3. Formulate Water Operations Manual 4. Skills training and technical exchanges 5. Acquire & improve operating and maintenance facilities & equipment 6. Performance incentives
Increase revenues to eliminate subsidies, operate efficiently, and enable expansion to serve more of the populace	1. New water tariff rates 2. Water meters & charges for public and other non-revenue taps 3. Efficient collections 4. Incentives and penalties enforcement

II. GENERAL DESCRIPTION OF THE UTILITY

a. Brief History and Background Information

The Jagna Waterworks System (JWS) is a water utility that was established in 1925 and is currently run by the local government unit. It is registered with the National Water Resources Management Board (NWRMB) and having been granted a permit to operate a water utility, is responsible for the water supply of the municipality of Jagna. Its present service area covers 11 out of the municipality's 33 barangays. Jagna has a total population of 32,034 and a population density of 265 persons/km^2.

Jagna is very fortunate to have abundant supplies of water with excellent quality. Most of the spring sources are naturally located at an elevation higher than the service area, so that water can be distributed to the consumers by gravity alone, thereby saving production costs. The utility draws water from Tinubdan Spring located in Barangay Lonoy, estimated to yield 4,572 cubic meters of water per day from an elevation 165 meters above the service area. Another source is Tubod spring in Barangay Malbog which yields about 4,147 cubic meters a day and is elevated some 175 meter high. Still another source is a spring at Sitio Catabog, Barangay Cantuyoc with an elevation of some 160 meters and yielding about 3,500 cubic meter of water a day. Finally, there are deep wells in Barangay Poblacion, Canjulao and Can-upao from which water is extracted through submersible pumps. The water is treated with chlorine powder to counteract possible contamination by coliform bacteria. The water supplied is used for domestic, institutional, commercial, water refilling stations, and fire protection services.

Staff complements and appointments, including top management, as well as staff salaries, MOOE and Capital Outlays are all under local government control. Tariff is set through a municipal ordinance with its attendant public hearings and consultations. The ordinance is integrated in the Municipal Revenue Code.

Some of the existing pipe networks are very old and deteriorated already and that causes leaking and water loss. During rainy seasons, water turbidity is also experience due to the uncover channel of water down to the spring.

b. Administrative Area Profile Information

Barangays	2006		2007		2008		2009	
	Connect-ions	Population Served	Connect-ions	Population Served	Connect-ions	Population Served	Connect-ions	Population Served
Tejero	232	1,160	246	1,230	272	1,300	273	1,365
Poblacion	156	780	159	795	164	820	239	1,195
Pangdan	62	310	59	295	58	290	61	305
Pagina	184	920	188	940	183	915	201	1,005
Looc	152	760	159	795	162	810	159	795
Canjulao	317	1,585	393	1,965	426	2,030	429	2,145
Can-upao	145	725	191	955	237	1,085	237	1,185
Cabugason	-		-		4	20	104	520
Tubod Mar	-						65	325
Cabungaan	5		6		5	25	9	45
TOTAL	**1,288**	**6,240**	**1,404**		**1,511**		**1,777**	**8,885**

Consumers are not presently categorized as commercial, industrial or institutional. Tariff rates, however, are graduated based on consumption. The minimum rate is P25 per 10 cubic meters and the rate increases with volume use.

c. Key Statistical Performance Information

The JWS uses key performance indicators to assess its operational and financial performance. Data for 2009 are shown in the table below.

INDICATOR	Unit of Measure	2009
Customer Satisfaction		
Population Served	Number	8,885
Active Connections	Number	1,815
Billed Connections	Number	1,777
Water Resource Management		
Actual Production (volume)	Cubic Meters	954,154
Billed Consumption (volume)	Cubic Meters	629,742
Average Consumption per connection/month (volume)	Cubic Meters	28.91
Average daily consumption per capita (volume)	Liters	192.76
Systems Loss Management		
Non-Revenue Water (volume)	Cubic Meters	324,412
% NRW to Total Production	Percentage	34%
Financial Management		
Collection Efficiency	Percentage	87%
Total Water Billing/Sales	Pesos	1,678,956
Total Water Collections	Pesos	1,459,923
Collection Period	Days	111
Operating Ratio	Percentage	113

Human Resource Management		
Total Workforce	Number	18
Regular	Number	6
Casual	Number	
Job Order	Number	12
Staff/1,000 Connections	Number	9.92

Funding for the water utility comes from the 20% Development Fund which provides from P200T to P300T per annum. In 2007 the Congressional Party List Akbayan gave P6M financial assistance to the JWS.

III. VISION-MISSION STATEMENTS

VISION

The Jagna Waterworks System stands to provide safe, potable, affordable and sustainable water supply.

MISSION

Guided by our vision, we commit ourselves to:

- *Provide sufficient potable water.*
- *Deliver quality services through competent and committed personnel and endeavor to continually enhance systems and technology.*
- *Ensure sustainable water resources by being proactive in the preservation of the environment;*
- *Become a financially viable and self-sustaining water utility.*

IV. ASSESSMENT OF CURRENT CONDITIONS AND PRIORITY ISSUES

a. Current Conditions – Internal

- ***Physical Assets***

Some basic assets are lacking. Notable among these are the absence of: a filtration and water treatment facility; access to the sewerage network; a mother meter, leak detection devices, a calibration machine for flow meters; and a utility vehicle for emergency and operational response.

Some existing assets also need rehabilitation. The network of pipes is archaic and leaky with 70% of the distribution mains already worn out; maintenance equipment and tools are old.

On the positive side, water distribution is done by gravity since water supplies are upstream. Water pumps are therefore used mainly as boosters.

- ***Human Resource***

Personnel assigned to the waterworks have increased from 13 in 2008 to 18 in 2010. Of the 18 employees, 6 are regular employees while 12 are on a job-order status. However, while staff are generally dedicated, the quality of personnel has suffered due to insecurity of tenure, low salaries, lack of skills training, and political interference in hiring practices.

Staffs are not available during weekends, customer focus is inadequate, and execution of service levels is spotty.

- ***Financial State***

Funding appropriations for utility development has little priority; water tariff rates are low at P6 per cubic meter while the cost of providing the service comes up to P13 per cubic meter; public taps do not have water meters and, worse, are not paid; and collection efficiency is poor at 87% consequently deteriorating the collection period from 40 days in 2008 to 111 days in 2009.

The net result is that the LGU needs to spend a substantial amount of subsidy just to operate the waterworks. While some investment is being done, the capital needs cannot be fully supported by the Municipality.

- ***Management Systems***

There is currently no policy making body overseeing the water utility. The waterworks is at the moment headed by the Municipal Planning and Development Coordinator double-hatting as the Water System Supervisor who reports directly to the Municipal Mayor. There is an inactive Jagna Waterworks Management Board that soon to be strengthened to be functional.

Preventive maintenance is not in place; the JWS water master plan needs updating; disconnection policies are weakly enforced; and there is no written operations manual for policies, systems and procedures. However, there is now a service contract policy to the new connection starting year 2009.

Not all systems are negative. Among the upbeat items are: a partially automated computerized billing system which is already operational; financial ring-fencing has been adopted, financial management guidelines are being implemented, and both initiatives are producing constructive results in terms of financial as well as in operational measures; water is a priority project of the LGU and a Water Master Plan has been drawn up.

b. Current Conditions – External

- ***Water Resource***

Water source at Lonoy Spring is reliable and supply is sufficient during the rainy months. However, inadequate water supply is experienced during the summer months and when there are dry spells. This is exacerbated by a shortness of water conservation awareness in users.

Threats exist in water use for irrigation and by water refilling stations because extraction from Lonoy Spring can be done by anybody, so the water utility competes with other users for this water supply. Also habitation near water sources is a possible cause of contamination.

Even then, opportunities for new sources abound in places like Odiong, Balili and other possible locations.

- ***Legislation***

Tariff rates are set by the sangguniang bayan and now due for revision since the tariff rates was approved sometime in 2002. Also adjustments in the minimum wage as well as proposals to change the government's salary standardization scheme could greatly affect the utility's costs especially since some 70% of total costs are for personnel expenses.

- ***Service Area***

In 2009, the utility provided water to 8,885 out of the 32,034 citizens in just 11 of the 33 barangays of the municipality, i.e., only about 27.7% of the total population had potable water supply serve by the utility.

This is not simply an indictment of low coverage, it is also indicative of the huge potential that the waterworks system has for further growth through expansion and development.

- ***Political Environment***

Elections are due in 2013. This falls right in the middle of this business plan period. Any increases in fees that are planned will have to be made either on the first year (2011) or early in the second year (2012) so as to be politically palatable.

- ***Climate***

The La Niña is expected to extend for most of 2011 according to the latest information from the Weather Bureau. Assuming the weather behaves as expected, this will be favorable for the JWS. However, if the climate shifts the other way, there will be more pressure to increase the water supply and some timetables may need to be shortened.

c. Priority Issues

Based on the foregoing assessment and considering the resources available, the JWS has identified five priority areas for this five-year Business Plan. These are in the areas of water availability, water potability, water source conservation, distribution system integrity, customer service, human resource & management systems, as well as financial health. These are further elaborated on in the immediately succeeding chapter V and action items are detailed in the Performance Improvement Program in chapter VIII.

V. STRATEGIC GOALS

In order to realize our vision and mission, our roadmap for this endeavor will be the following strategic goals:

1.1 Increase Water Production

The objective is to provide continuous water supply to subscribers in the service area 24 hours a day, seven days a week; by the end of the third year of this business plan horizon. This is in line with our Charter mandate and will set the stage for broadening the reach of the water service into new areas and customers.

1.2 Provide Safe and Potable Water

By the end of year four of this business cycle, we should be able to provide our customers with safe and potable water within the standards set by the Department of Health. While water availability is a basic human need, this has to be safe for drinking in order to be truly useful.

1.3 Upgrade Water Distribution System

System losses are probably the most pressing technical challenge for the water utility. This double whammy of increased cost coupled with water and revenue loss deals a considerable blow to the financial bottom line. With 70% of the JWS needing rehabilitation, this objective underpins many of the other action items in this business plan.

1.4 Protection of Watershed

Sustain our water resources by the protection and reforestation of our watershed areas which are the prime sources of our water supply. This will be realized by enacting a local ordinance by the third year of the business plan, prohibiting illegal forest activities. This ordinance will be supported by activities that will ensure effective implementation.

1.5 Quality Service

Provide our clientele with service that is efficient and effective, starting from the first year of this plan and continuing thereafter as standard operating procedure. This initiative will include intensifying the involvement of the citizenry in improving service quality. Measurable

improvements will be in the area of improved service reaction time and less customer complaints.

1.6 Improve Human Resource and Management Systems

Address issues relating to the quality of personnel specifically those concerning organization, security of tenure, skills, equipment, and support facilities. Likewise strengthen management systems like a management board, policy enforcement, and written operating procedures.

1.7 Revenue Generation

Become a self-sustaining economic enterprise by improving revenue generation using various tools to jointly boost income and optimize costs. Self-sustainability will mean no subsidy from the LGU; sufficient resources for operations, maintenance and capital investments; as well as the capability to expand in order to fully supply the requirements of the existing and potential water market.

VI. WATER DEMAND MANAGEMENT ANALYSIS AND WATER SALES FORECAST

Administrative Area Population and Served Population

Based on the 2007 Census, the LGU had an average population growth rate of 0.5%. In 2008, only 28% of the population was being serviced by the water utility, although this coverage is expected to increase to 30% in 2012 and further grow in the future.

	2010 Base Year	2011	2012	2013	2014	2015
Population/Customer Profile						
Population in the Administrative Area	32,034	32,194	32,355	32,517	32,680	32,843
Population Covered by Others	805	805	805	805	805	805
Serviceable Population	31,229	31,389	31,550	31,712	31,875	32,038
Population Served by Registered Connections	8,885	9,103	9,465	9,514	9,562	9,611
Unserved Population	22,344	22,286	22,085	22,198	22,312	22,427
% of Population Provided Water Service	28%	29%	30%	30%	30%	30%
Registered Water Connections						
Registered Household Connections	**1,777**	**1,821**	**1,893**	**1,903**	**1,912**	**1,922**
Metered HH Connections	1,777	1,821	1,893	1,903	1,912	1,922
Non-metered HH Connections	0	0	0	0	0	0
% Metered HH Connections	100%	100%	100%	100%	100%	100%
No. of New Metered HH Connections per Year		44	72	10	10	10

Projected Increases in Service Connections

The table below shows the assumptions used in the forecast for population and increases in the service connections. Commercial connections are expected to increase 5% annually while institutional connections are estimated to increase by 0.5%. Population growth is expected to remain constant at 0.5%.

Projected Population Increase (%)	0.50%
Projected Commercial Connection Increase (%)	12.60%
Projected Institutional Connection Increase (%)	28.70%
Projected Industrial Connection Increase (%)	0.00%
No. of Persons per Household	5.00

Household connections are estimated to increase by 146 bringing the total connections to 1,922 in 2015 from 1,777 connections in 2010. On the other hand, commercial metered connection is estimated to increase from 138 to 225 due to the metering of what are now 76 unmetered connections plus 11 new connections in 2011. In 2015, total commercial connections will reach 273 or a total increase of 27.5%.

Service Connections

	2010 Base Year	2011	2012	2013	2014	2015
Registered Water Connections						
Registered Household Connections	**1,777**	**1,821**	**1,893**	**1,903**	**1,912**	**1,922**
Metered HH Connections	1,777	1,821	1,893	1,903	1,912	1,922
Non-metered HH Connections	0	0	0	0	0	0
% Metered HH Connections	100%	100%	100%	100%	100%	100%
No. of New Metered HH Connections per Year		44	72	10	10	10
Registered Active Commercial Connections	**214**	**225**	**236**	**248**	**260**	**273**
Metered Connections	138	225	236	248	260	273
Non-metered Connections	76	0	0	0	0	0
% Metered Connections	64%	100%	100%	100%	100%	100%
f New Metered Commercial Connections per Year		87	11	12	12	13
Registered Active Institutional Connections	**21**	**21**	**21**	**21**	**21**	**22**
Metered Connections	15	21	21	21	21	22
Non-metered Connections	6	0	0	0	0	0
% Metered Connections	71%	100%	100%	100%	100%	100%
f New Metered Institutional Connections per Year		6	0	0	0	0
Registered Active Industrial Connections	**0**	**0**	**0**	**0**	**0**	**0**
Metered Connections	0	0	0	0	0	0
Non-meteredConnections	0	0	0	0	0	0
% Metered Connections	0%	100%	100%	100%	100%	100%
. of New Metered Industrial Connections per Year		0	0	0	0	0

Institutional connections are estimated to increase only by 1. However, there were 6 unmetered institutional connections in 2010 and these will be converted to metered connections. Total metered institutional connections will be 22 by the end of 2015.

Water Demand Forecast

	2010 Base Year	2011	2012	2013	2014	2015
Total Water Sales - Volume						
Total Household Consumption (m³/year)	648,605	664,509	690,948	694,491	698,052	701,630
Metered HH Water Sales	647,870					
Non-metered HH Water Sales						
Total Commercial Consumption (m³/year)	32,682	34,362	36,169	37,977	39,876	41,870
Metered Water Sales	14,462	34,362	36,042	37,874	39,707	41,692
Non-metered Water Sales	18,220					
Total Institutional Consumption (m³/year)	12,000	12,000	12,000	12,000	12,000	12,000
Metered Water Sales	12,000	12,000	12,000	12,000	12,000	12,000
Non-metered Water Sales	0					
Total Industrial Consumption (m³/year)	0	0	0	0	0	0
Metered Water Sales	0					
Non-metered Water Sales	0					

Given the increase in service connections from 1,777 in 2010 to 1,922 for households, from 214 to 273 for commercials connections, it is estimated that water sales volume will increase from 693,287 m^3 in 2010, to 739,117 m^3 in 2012, and 755,500 m^3 in 2015 or a 9% increase in 2015 from 2010.

Per Capita Demand and Per Connection Demand

	2010 Base Year	2011	2012	2013	2014	2015
Per Capita Demand for Business Plan (l/c/d) (14	**597**	**597**	**597**	**597**	**597**	**597**
Household (100-120)	200	200	200	200	200	200
Commercial (15-25)	84	84	84	84	84	84
Institutional (15-30)	313	313	313	313	313	313
Industrial (15-35)	0					
Per Connection Demand (m³/month)						
Household	30	30	30	30	30	30
Commercial	13	13	13	13	13	13
Institutional	48	47	47	47	47	48
Industrial	0	0	0	0	0	0

Based on the trend of usage among user categories, it is projected that per capita demand will remain the same at 200, 84, 313 liters per day for household, commercial and institutional users. The assumption for commercial and institutional is 5 persons per connection.

Non-Revenue Water Forecast

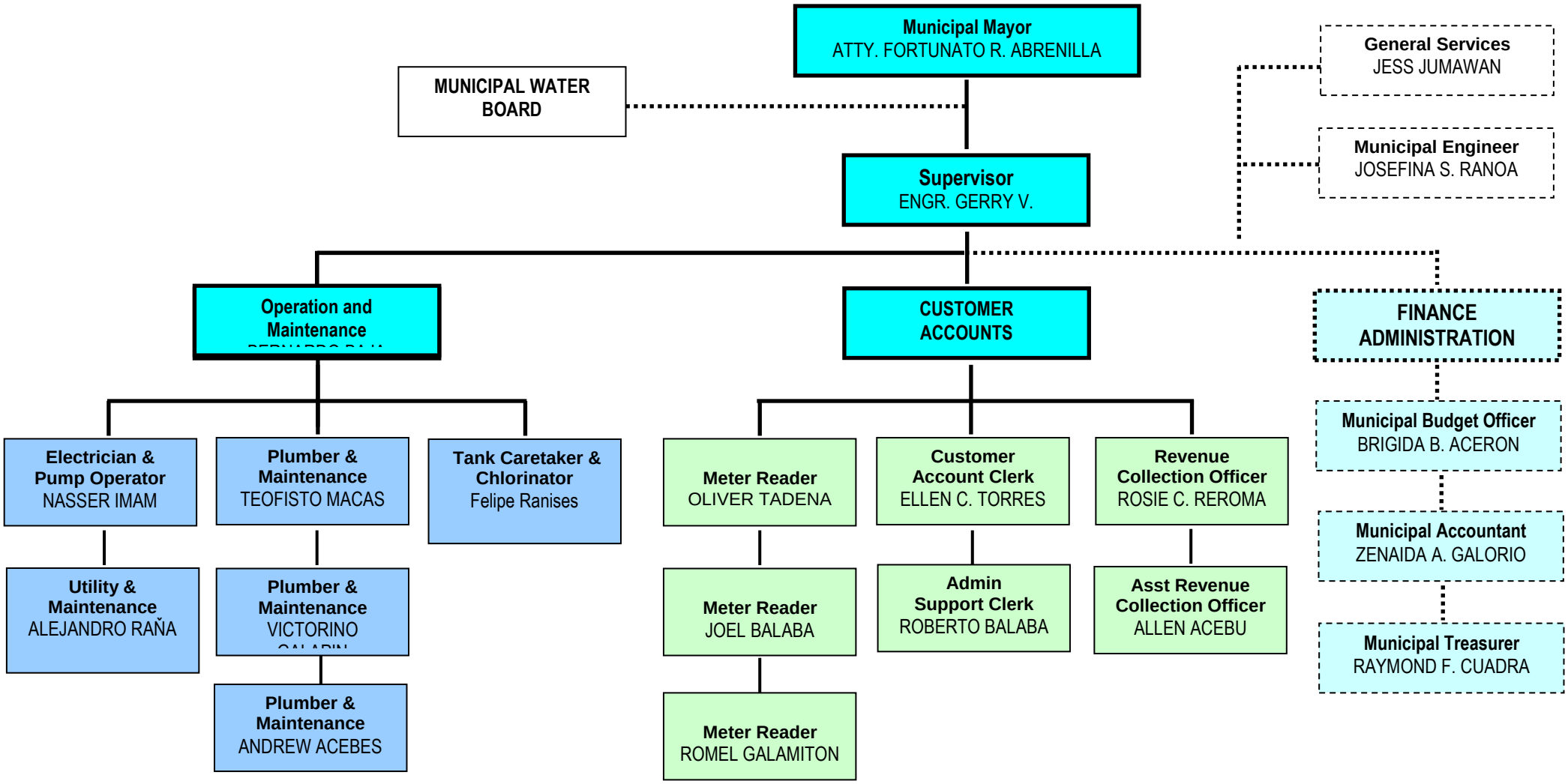
	2010 Base Year	2011	2012	2013	2014	2015
Retail Water Demand (m^3/day)	1,899	1,948	2,025	2,040	2,055	2,070
Bulk Water Sales (m^3/day)						
Total Water Demand (Ave. m^3/day)	1,899	1,948	2,025	2,040	2,055	2,070
Produced Water (m^3/day)	2,878	2,878	3,078	3,078	3,078	3,078
Purchased Water (m^3/day)	0					
Total Water to System (m^3/day)	2,878	2,878	3,078	3,078	3,078	3,078
Allowance for % NRW	34%	32%	34%	34%	33%	33%

Non-revenue water is projected to decrease to 32% in 2011 due to the metering of all public taps like the Municipal Hall, the Police Office, Rural Health Units, plazas, and the fish, meat and a portion of the vegetable section in the public market and increase in household connections. The NRW will, however, is estimated to be within the same level at 33-34% from 2012 to 2013 as the rehabilitation of old and worn out pipes that contribute to high water loss and seepage is still going on within the period.

VII. ORGANIZATIONAL STRUCTURE AND STAFFING PLAN

The proposed organizational structure is shown in the following chart. In essence, the existing basic structure and staffing is maintained while enhancing the group with the addition of a Municipal Water Board (MWB). The MWB will function as the water utility's policy-making and oversight body.

JAGNA WATERWORKS SYSTEM
Revised Organizational Structure



VIII. PERFORMANCE IMPROVEMENT PROGRAM TO ACHIEVE STRATEGIC GOALS

a. Increase Water Production

Activities:

- Conduct ocular survey/study of potential water sources. Presently the water source is also used by irrigation. Some time in the future when scarcity of water arises especially during long dry spells, potential water sources are already identified and ready for development and tapping.
- Rehabilitate and expand Lonoy Spring box.
- Pipe laying of parallel 6" diameter PVC pipe from Lonoy to Canukso Reservoir to augment water supply. This is based on the Jagna Waterworks Master Plan.
- Construct a bigger reservoir. Based on the projected demand of volume of water and the growing population, there is a need to construct a bigger reservoir as a long term plan. Approximately 287 new connections is expected to be installed within the plan period of which 220 is to be installed in year 1 and 2 alone.
- Drill and install water pumping stations in Canjulao and Can-upao to augment the production. Presently, 1.5 HP and 2 HP submersible pumps are already acquired and ready for installation.
- Installation of mother meter may be possible for accurate computation of water production but has the least priority since it entails bigger amount of money.

b. Provide Safe and Potable Water

Activities:

- Construct slope protection/retaining wall of water source in Lonoy.
- Install filtration facility to address water turbidity problems especially during heavy rains.
- Install chlorinator in each of the reservoir intake and apply regular chlorination.
- Regular water testing and analysis done by the sanitary inspector.

c. Upgrade Water Distribution System

Activities:

- Replacement of old GI pipe networks into PVC or PE pipes. For 2011, replacement is done in Brgy. Canjulao.
- Re-route pipelines along canals and drainage in Brgy Canjulao.
- Upgrade distribution system and install stub-out system.
- Acquire and install leak detecting device if replacement of GI pipes is not yet completed.

d. Protection of Watershed

Activities:

- Tree-growing activities in the Watershed areas.
- Deputation of "Bantay Lasang" residents.

- Enact local ordinance prohibiting illegal forest activities.

e. Quality Service

Activities:

- Expand coverage area to adjacent barangays. Expansion will commence when the parallel 6" diameter pvc pipes had been installed and bigger reservoir has been constructed in Bunga Mar, Alejawan and Pangdan. In this plan, expansion budget will only be for Bgy.Pangdan. Additional funds will be sourced out further expansion in other barangays.
- Develop database information system e.g. JWS website.
- Build community awareness and participation e.g. report leaking problems.
- Intensify IEC campaign on water conservation.
- Install hotline contact numbers and SMS or texts inquiry system.

f. Human Resource and Management Systems

Activities:

- Create permanent supervisory position for JWS.
- Formulate Water Operations Manual.
- Equip plumbers with appropriate small tools and equipment.
- Acquire utility vehicle for its operation.
- Apply incentive schemes to plumbers and meter readers.
- Institute performance contracting.
- Conduct plumbing skills trainings.
- Cross-visits to advance water works systems; twinning arrangement; & technical exchanges in waterworks learning sites.

g. Revenue Generation

Activities:

- Implement Proposed New Water Tariff Rates.
- Put into practice 'Operation Cut-Off' for delinquents and long overdue accounts.
- Offer discounts to on time payers.
- Schedule water fee collections in far flung barangays.
- Install flow meters for public taps including the wet market and the slaughter house.
- Bill and charge public taps.
- Monitor and evaluate operational cost, income and expenditures.
- Provide water meter to marginalized consumers (NF meter) on an installment basis.
- Reduce and monitor Non-revenue water taps.

IX. FIVE-YEAR FINANCIAL FORECAST

a. Capital Expenditures

Item	Qty.	Unit Cost	Total Cost	2010 Base Year	2011	2012	2013	2014	2015
			(PhP '000)						
Capital Renewal									
Rehab old GI pipes	1	LS	**0.400**			0.400			
Upgrade distribution	1	LS	**0.300**				0.300		
			0.000	0.000					
Total Capital Renewal			**0.700**	**0.000**	**0.000**	**0.400**	**0.300**	**0.000**	**0.000**
Capital Repair and									
Fixed Operating	1	LS	**0.200**			0.200			
Rerouting of pipes along	1	LS	**0.150**		0.150				
Const. retaining wall at	1	LS	**0.150**				0.150		
Rehab and Improvement	1	LS			0.300				
Total Capital Repair			**0.800**	**0.000**	**0.450**	**0.200**	**0.150**	**0.000**	**0.000**
New Capital									
Install 6" dia pipe from	1	LS	**1.000**		1.000				
Construct reservoir	1	LS	**1.200**			1.200			
Install new pump	1	LS	**0.350**				0.350		
Instal distribution mains	1	LS	**0.300**				0.300		
Intall flow meters	1	LS	**0.060**		0.060				
Acquire leak detecting	1	LS	**0.100**				0.100		
Acquire utility vehicle	1	LS	**0.235**		0.235				
Total New Capital			**3.245**	**0.000**	**1.295**	**1.200**	**0.750**	**0.000**	**0.000**
Capital Investments									
Install filtration facility	1	LS	**10.000**					5.000	5.000
Install chlorinator	1	LS	**0.200**			0.200			
Install 6" dia pipe from	1	LS	**2.000**		0.500	1.500			
Total Capital			**12.200**	**0.000**	**0.500**	**1.700**	**0.000**	**5.000**	**5.000**
Grand Total			**16.945**	**0.000**	**2.245**	**3.500**	**1.200**	**5.000**	**5.000**

The water utility would be requiring a total of P16.945 million for capital outlays. The investment obligation is highest in 2014 and 2015 at P5.0M each year due to the installation of a filtration facility. These will be sourced mainly from grants from the national & provincial governments, and from the development assistance of senators. Other investment requirements will come from the 20% Development Fund of the LGU and from revenues generated by the utility.

b. Operating Costs

Expenses	2010	2011	2012	2013	2014	2015
Personal Services						
Salaries and Wages						
Regular Staff (Full-Time)	388,656	466,387	559,665	559,665	559,665	559,665
Regular Staff (Shared Function)	190,807	158,023	189,628	189,628	189,628	189,628
Casual Staff	0	0	0	0	0	0
Contractual/Job Order Staff	611,520	377,520	396,396	416,216	437,027	458,878
Allowances						
Personnel Economic Relief Allowance (PERA)	61,590	72,000	72,000	72,000	72,000	72,000
Additional Compensation (ADCOM)	61,590	72,000	72,000	72,000	72,000	72,000
Representation Allowance	29,558	15,840	15,840	15,840	15,840	15,840
Transportation Allowance	29,558	15,840	15,840	15,840	15,840	15,840
Clothing/Uniform Allowance	12,000	24,000	24,000	24,000	24,000	24,000
Bonuses						
13th Month Pay	49,100	38,866	46,639	46,639	46,639	46,639
Cash Gift	142,850	60,000	60,000	60,000	60,000	60,000
Productivity Incentive Bonus	7,120	12,000	12,000	12,000	12,000	12,000
Contributions						
Life and Retirement Insurance Contributions	67,038	74,929	89,915	89,915	89,915	89,915
PAG-IBIG Contributions	6,160	7,200	7,200	7,200	7,200	7,200
PHILHEALTH Contributions	6,581	7,200	7,200	7,200	7,200	7,200
ECC Contributions	4,545	7,200	7,200	7,200	7,200	7,200
Sub Total	***1,668,673***	***1,409,006***	***1,575,523***	***1,595,342***	***1,616,153***	***1,638,005***
Maintenance and Other Operating Expenses						
Travel Expenses						
Travel - Local	48,142	30,000	33,000	36,300	39,930	43,923
Gasoline, Oil and Lubricants	32,225	40,000	44,000	48,400	53,240	58,564
Training	2,419	15,000	16,500	18,150	19,965	21,962
Materials and Supplies						
Office Supplies	42,936	45,000	49,500	54,450	59,895	65,885
Accountable Forms Expenses	990	5,000	5,500	6,050	6,655	7,321
Other Supplies	61,366	60,000	66,000	72,600	79,860	87,846
Treatment Chemicals	20,000	30,000	33,000	36,300	39,930	43,923
Electricity						
Waterworks Operation	146,971	160,000	176,000	193,600	212,960	234,256
Office	24,000	25,000	27,500	30,250	33,275	36,603
Communications						
Telephone - Landline	6,985	9,000	9,900	10,890	11,979	13,177
Telephone - Mobile	5,400	7,200	7,920	8,712	9,583	10,542
Internet	6,800	7,000	7,700	8,470	9,317	10,249
Repair and Maintenance						
Office Buildings	15,000	1,000	1,100	1,210	1,331	1,464
Office Equipment	1,813	4,000	4,400	4,840	5,324	5,856
Transportation Equipment	35,562	20,000	22,000	24,200	26,620	29,282
Civil Works	25,341	100,000	110,000	121,000	133,100	146,410
Other Maintenance and Operating Expenses	4,614	10,000	11,000	12,100	13,310	14,641
O&M Contingency						
Sub Total	***480,564***	***568,200***	***625,020***	***687,522***	***756,274***	***831,902***
Total Operation and Maintenance	**2,149,237**	**1,977,206**	**2,200,543**	**2,282,864**	**2,372,427**	**2,469,906**

Total projected operating expenses for 5 years will total P11.302M or an average of P2.26M per year. Expense on the first year of implementation is lower than the base year due to the reduction of job-order personnel from 12 to only 8, shared cost allocation, and decreases in other operating and maintenance costs. The shared cost allocation will reduce from 10% to only 5% except for the time spent by the MPDC which is retained at 30%.

c. Revenue Needs

Description	Base Year (PhP)	(PhP)	(PhP)	(PhP)	(PhP)	(PhP)
Total Operation and Maintenance	**2,149,237**	**1,977,206**	**2,200,543**	**2,282,864**	**2,372,427**	**2,469,906**
Debt Service						
Interest Payments from Revenues	0	0	0			
Principal Repayment from Revenues	0	0	0	0		
Debt Repayment Reserve						
Sub Total (4)	**0**	**0**	**0**	**0**	**0**	**0**
Capital Expenditures						
Capital Renewal Expenditures	0	0	400,000	300,000	0	0
Capital Repair and Replacement	0	450,000	200,000	150,000	0	0
New Capital Investment	0	1,995,000	2,700,000	750,000	5,000,000	5,000,000
Sub Total (5)	**0**	**2,445,000**	**3,300,000**	**1,200,000**	**5,000,000**	**5,000,000**
Subsidies						
Subsidies from Central/Local Government		1,300,000.0	1,300,000.0	1,200,000.0	2,000,000.0	2,000,000.0
Sub Total (6)		**1,300,000.0**	**1,300,000.0**	**1,200,000.0**	**2,000,000.0**	**2,000,000.0**
Total Revenue Needs (1+2+3+4+5-6)	**2,149,237**	**3,122,206**	**4,200,543**	**2,282,864**	**5,372,427**	**5,469,906**
Collection Efficiency		**0.95**	**0.95**	**0.95**	**0.95**	**0.95**
Adjusted Revenue Needs	**2,149,237**	**2,966,095**	**3,990,515**	**2,168,721**	**5,103,806**	**5,196,411**

The utility will be requiring a total of P19.43M to finance its operating and capital investment requirements. This is net of LGU subsidy, national & provincial grants & donations, and development assistance facilities from the congressmen and senators. Subsidies, grants and donations are expected to raise P7.8M over the 5-year period. The remaining revenue needs will be internally financed from savings of previous years' operations.

Fifty Eight (58) percent of its total cash requirement will be used for maintenance and other operating expenses while 42% will be for capital outlay. The first year investments will be financed from the grant of Senator Juan Miguel Zubiri and from the 20% Development Fund of the LGU.

d. Pricing Strategy

The present tariff rate is not enough to cover operational requirements. There is no fee structure distinction between households, businesses, or institutional connections, i.e. a uniform rate of P25 for the first 10 cubic meters is applied for all connection types. This is effectively P2.5 per cubic meter with any excess over 10 cubic meters billed at P2.70 per cubic meter.

Description	2010 Base Year	2011	2012	2013	2014	2015
Water Connections						
Household	1,777	1,821	1,893	1,903	1,912	1,922
Commercial	214	225	236	248	260	273
Institutional	21	21	21	21	21	22
Industrial	0	0	0	0	0	0
Sewer Connections						
Household	0	0	0	0	0	0
Commercial	0	0	0	0	0	0
Institutional	0	0	0	0	0	0
Industrial	0	0	0	0	0	0
Water Sales						
Retail (m^3/day)	1,776	1,948	2,025	2,040	2,055	2,070
Bulk (m^3/day)						
Per Capita Water Demand						
Household (l/c/d)	200	200	200	200	200	200
Commercial (l/c/d)	84	84	84	84	84	84
Institutional (l/c/d)	313	313	313	313	313	313
Industrial (l/c/d)	0	0	0	0	0	0
Tariff and Fees						
lonthly Minimum Charge per Service Connection						
Household	25	25	50	50	50	70
Commercial	25	25	70	70	70	90
Institutional	25	25	60	60	60	80
Industrial						
Commodity Charges (PhP/m^3)						
Household	2.7	5.0	6.0	6.0	8.0	8.0
Commercial	0.0	5.0	8.0	8.0	10.0	10.0
Institutional	0.0	5.0	7.0	7.0	9.0	9.0
Industrial	0.0					
Bulk Water Tariff (PhP/m^3)						

The utility intends to increase the rate by 100% for household connections and apply different fee levels for various kinds of connections. Commercial establishments will be levied 180% and institutional connections will be charged 140% of the present rate effective 2012. The increased rates will bring about higher revenues of P4.2M in 2012 from only 2.4 in 2011. Another round of increases from 30-40% is expected to be implemented in 2015. A cash flow surplus of P.278M is expected on the second year of implementation. Cash flow deficits on the first year will be financed through the excess fund balance of P1.0M as at end of Dec. 2010.

Description	2010 Base Year	2011	2012	2013	2014	2015
Revenues						
Minimum Charge (PhP)						
Household	533,100	546,172	1,135,805	1,141,629	1,147,482	1,614,710
Commercial	64,200	67,410	198,185	208,095	218,499	294,974
Institutional	6,300	6,332	15,272	15,348	15,425	20,669
Industrial	0	0	0	0	0	0
Commodity Charges (PhP)						
Household	1,166,614	2,184,686	2,725,932	2,739,910	3,671,943	3,690,766
Commercial		40,446	67,949	71,347	93,643	98,325
Institutional		46,853	65,922	66,252	85,607	86,035
Industrial		0	0	0	0	0
Revenues by Customer Category (PhP)						
Household	1,699,714	2,184,686	3,861,737	3,881,539	4,819,425	5,305,476
Commercial	64,200	107,856	266,135	279,441	312,142	393,299
Institutional	6,300	53,185	81,194	81,600	101,032	106,704
Industrial	0	0	0	0	0	0
Revenues from Bulk Water Sales	0	0	0	0	0	0
Revenues from Specific Fees and Charges	80,038	60,000	60,000	60,000	60,000	60,000
Total Revenues (from Price Strategy)	**1,850,252**	**2,405,727**	**4,269,066**	**4,302,580**	**5,292,598**	**5,865,479**
Total Revenue Needs with the Collection Rate	**2,149,237**	**2,966,095**	**3,990,515**	**2,168,721**	**5,103,806**	**5,196,411**
Annual Cash Flow Surplus	**-298,984**	**-560,368**	**278,550**	**2,133,859**	**188,792**	**669,068**
Accumulative Cash Flow Surplus	**-298,984**	**-859,353**	**-580,803**	**1,553,056**	**1,741,848**	**2,410,916**

X. BUSINESS PLAN UPDATE PROCESS

A mid-year assessment shall be conducted every August to evaluate accomplishments vis-à-vis targets. If necessary, a catch-up plan will then be drawn. An annual assessment and business plan review should be carried out every February. The annual assessment and review shall be attended by all JWS staff, the LGU local finance group, the Municipal Water Board, the Sangguniang Bayan, and the Mayor.

Appendix A – Detailed Performance Improvement Plan

PERFORMANCE IMPROVEMENT PLAN	TITLE OF STRATEGIC GOAL **Increase Water Production**

Statement of Strategic Goal Addressed:

Continuous water supply to subscribers in the service area 24 hours a day, seven days a week

Department (s) and Key Manager (s) Responsible:

Municipal Mayor, MPDC, JWS Supervisor

Description of Actions to be Taken:

Conduct ocular survey/study of potential water sources
Rehabilitate and expand Lonoy Spring box
Tap additional 6 dia. PVC pipe from Lonoy to Canukso Reservoir
Construct a bigger reservoir at Canukso
Prospect possible sites for water pumping stations
Install mother meter

Schedule of Tasks, Key Milestones, Performance Indicator:

Action Item	2011	2012	2013	2014	2015	
Conduct ocular survey/study of potential sources						
Rehabilitate and expand Lonoy Spring Box						
Tap additional 6" diameter pvc pipe from Lonoy to Canukso reservoir.						
Costruct a bigger reservoir						
Prospecting possible sites for water pumping						
Install mother meter						

Use of Capital, Amount and Timing:

Capital Expenditure	2011	2012	2013	2014	2015	Total
Rehab and expand existing spring box	300,000					300,000
Tap additional 6" diameter pvc pipe from Lonoy to Canukso reservoir.	1,500,000	1,500,000				3,000,000
Construct reservoir at Canukso		1,200,000				1,200,000
Prospecting possible site for water pumping station			350,000			
Install mother meter	60,000					60,000
Total	**1,860,000**	**2,700,000**	**350,000**	**-**	**-**	**4,910,000**

Measurable Improvement in Performance:

1. Availability of water 24/7 starting 4th quarter of 2013

PERFORMANCE IMPROVEMENT PLAN	TITLE OF STRATEGIC GOAL **Provide Safe Potable Water**

Statement of Strategic Goal Addressed:

Provide customers with safe potable water within the standards set by the Department of Health

Department (s) and Key Manager (s) Responsible:

Municipal Mayor, MPDC, MHO, JWS Supervisor

Description of Actions to be Taken:

Construct slope protection/retaining wall of water source in Lonoy
Install filtration facility
Install chlorinator and regular chlorination
Regular water testing and analysis

Schedule of Tasks, Key Milestones, Performance Indicator:

Action Item	2011	2012	2013	2014	2015	
Construct slope protection/retaining wall of water source in Lonoy						
Install filtration facility						
Install chlorinator and regular chlorination						
Regular testing and analysis						

Use of Capital, Amount and Timing:

Capital Expenditure	2011	2012	2013	2014	2015	Total
Construct slope protection/retaining wall			150,000			150,000
Install filtration facility				5,000,000	5,000,000	10,000,000
Install chlorinator		200,000				200,000
						-
Total	**-**	**200,000**	**150,000**	**5,000,000**	**5,000,000**	**10,350,000**

Measurable Improvement in Performance:

Water potability standard set by DOH met by end of 2014

PERFORMANCE IMPROVEMENT PLAN	TITLE OF STRATEGIC GOAL **Upgrade Water Distribution System**

Statement of Strategic Goal Addressed:

Integrity of water distribution network

Department (s) and Key Manager (s) Responsible:

Municipal Mayor, MPDC, JWS Supervisor

Description of Actions to be Taken:

Rehabilitate old GI pipes into PVC or PE
Upgrade distribution and install stab-out systems
Reroute pipelines along canals and drainage
Revamp Canjulao pipeline networks
Acquire leak detecting device

Schedule of Tasks, Key Milestones, Performance Indicator:

Action Item	2011	2012	2013	2014	2015	
Rehabilitate old GI pipes						
Upgrade distribution and stab-out systems						
Reroute pipelines along canals and drainage						
Revamp Canjulao leak detecting device						
Acquire leak detecting device						

Use of Capital, Amount and Timing:

Capital Expenditure	2011	2012	2013	2014	2015	Total
Rehabilitate old GI pipes		400,000				400,000
Upgrade distribution and stab-out systems						-
Reroute pipelines along canals and drainage	75,000		300,000			375,000
Revamp/Replace Canjulao leak detecting device	400,000					
Acquire leak detecting device			100,000			100,000
Total	**475,000**	**400,000**	**400,000**	**-**	**-**	**1,275,000**

Measurable Improvement in Performance:

1. Reduced NRW to only 30% in 2011, 25% in 2012 and 2013 and to only 20% in 2014 and 2015
2. Reduced maintenance cost

PERFORMANCE IMPROVEMENT PLAN	TITLE OF STRATEGIC GOAL **Protection of Watershed**

Statement of Strategic Goal Addressed:

Sustained water supply and conservation and protection of water sources

Department (s) and Key Manager (s) Responsible:

Municipal Mayor, MPDC, JWS Supervisor

Description of Actions to be Taken:

Conduct of tree growing activities in the watershed areas
Deputization of Bantay Lasang
Enactment of Ordinance prohibiting illegal forest activities
Rehabilitate and protect watershed area

Schedule of Tasks, Key Milestones, Performance Indicator:

Action Item	2011	2012	2013	2014	2015	
Conduct tree growing activities						
Deputization of Bantay Lasang						
Enactment of Ordinance						

Use of Capital, Amount and Timing:

Capital Expenditure	2011	2012	2013	2014	2015	Total
						-
						-
						-
						-
Total	**-**	**-**	**-**	**-**	**-**	**-**

Measurable Improvement in Performance:

Sustained water supply
Security of water sources

PERFORMANCE IMPROVEMENT PLAN	TITLE OF STRATEGIC GOAL **Quality Service**

Statement of Strategic Goal Addressed:

Provide clients with effective and efficient water delivery service

Department (s) and Key Manager (s) Responsible:

Municipal Mayor, MPDC, JWS Supervisor

Description of Actions to be Taken:

Expand coverage area to additional 3 baranggays
Develop database information system
Build community awareness and participation
Intensify IEC campaigns
Install hotline and texts inquiry system

Schedule of Tasks, Key Milestones, Performance Indicator:

Action Item	2011	2012	2013	2014	2015	
Expand coverage area to adjacent barangays						
Develop database information system e.g. JWS website						
Build community awareness and participation e.g. report leaking problems						
Intensify IEC campaign on water conservation						
Install hotline and texts inquiry system						

Use of Capital, Amount and Timing:

Capital Expenditure	2011	2012	2013	2014	2015	Total
Expansion to 3 baranggays			300,000			300,000
						-
						-
						-
Total	**-**	**-**	**300,000**	**-**	**-**	**300,000**

Measurable Improvement in Performance:

1. Response time to service requests improved by end of 2013
2. Minimized customer complaint

PERFORMANCE IMPROVEMENT PLAN	TITLE OF STRATEGIC GOAL **Improve Human Resource and Management Systems**

Statement of Strategic Goal Addressed:

Improve personnel quality and strengthen management system

Department (s) and Key Manager (s) Responsible:

Municipal Mayor, MPDC, JWS Supervisor

Description of Actions to be Taken:

Formulate Water Operations Manual
Equip plumbers with appropriate tools and equipment
Acquire utility vehicle
Apply incentive schemes to plumbers and meter readers
Institute performance contracting
Conduct plumbing skills trainings
Cross-visits to advance water works systems; twinning arrangement; & technical exchanges in waterworks learning sites

Action Item	2011	2012	2013	2014	2015	
Formulate Water Operations Manual						
Equip plumbers with appropriate tools and equipt						
Acquire utility vehicle						
Apply incentive schemes to JWS staff						
Institute performance contracting						
Conduct plumbing skills trainings						
Cross-visits to advance water works systems; twinning arrangement; & technical exchanges in waterworks learning sites						

Use of Capital, Amount and Timing:

Capital Expenditure	2011	2012	2013	2014	2015	Total
Acquisition of tools and equipment		200,000				200,000
Acquisition of vehicle	235,000					235,000
						-
						-
Total	**235,000**	**200,000**	**-**	**-**	**-**	**435,000**

Measurable Improvement in Performance:

1. Skilled, motivated and efficient waterworks staff
2. Improved waterworks operational and financial performance

PERFORMANCE IMPROVEMENT PLAN	TITLE OF STRATEGIC GOAL **Improve Revenue Generation**

Statement of Strategic Goal Addressed:

Self-sustaining econmic enterprise of the LGU

Department (s) and Key Manager (s) Responsible:

Municipal Mayor, MPDC, JWS Supervisor, WWStaff

Description of Actions to be Taken:

Implement Proposed New Water Tariff Rates
Put into practice 'Operation Cut-Off' for delinquents and long overdue accounts
Offer discounts to on time payers
Schedule water fee collections in far flung barangays
Install flow meters for public taps including the wet market and the slaughter house
Bill and charge public taps
Monitor and evaluate operational cost, income and expenditures
Provide water meter to marginalized consumers (NF meter) on an installment basis
Reduce and monitor Non-revenue water taps

Action Item	2011	2012	2013	2014	2015	
Implement Proposed New Water Tariff Rates						
Put into practice 'Operation Cut-Off' for delinquents and long overdue accounts						
Offer discounts to on time payers						
Schedule water fee collections in far flung barangays						
Install water meters for public taps including the wet market and the slaughter house						
Bill and charge public taps						
Monitor and evaluate operational cost, income and expenditures						
Provide water meter to marginalized consumers (NF meter) on an installment basis						
Reduce and monitor Non-revenue water taps						

Use of Capital, Amount and Timing:

Capital Expenditure	2011	2012	2013	2014	2015	Total
Total	-	-	-	-	-	-

Measurable Improvement in Performance:

1. Inreased revenues starting 2012
2. Self-sustaining operation by 2015

Appendix B: Workbook Worksheets