

Chapter 7

7.0 Financing the Plan

7.1 GENERAL

The financial requirements of the plan comprises the investment costs or capital outlay which are categorized as vehicles and equipment; structures and physical development and pre-development cost; and the operating costs which in this plan are sub categorized into personnel salaries and wages (or personal services) and operational expenses (or maintenance and other operating expenses). Costs were derived by stage such that investment and operating costs were determined for stage 1 – reduction at source; stage 2 – collection and transport; stage 3 – materials recovery; and stage 4 – disposal management.

In the same- manner, revenues were estimated by stage and by sources. Being part of the general ISWM strategy, the revenues stream becomes part of the financial aspect of the plan and is considered in the analysis of overall financial performance of the ISWM program.

The ISWM program will be mostly funded out of the LGU general fund and will be implemented or under the management and direction of the municipal government unit, except for the Sanitary Land Fill (SLF). The LGU intends to implement the SLF as an economic venture as the LGU local funds are not capable to finance the establishment of the facility. Jagna, in consultation with the cluster LGUs will come up with agreed implementation arrangements in the establishment and operation of the SLF. Hence the LGU general fund will handle the cost and revenue streams of stages 1-3 and operation of controlled dump up to year 2006 in stage 4. The financial aspect for the establishment and operation of the cluster SLF will be treated separately in this chapter. The cluster SLF may be established as a separate entity.

7.2 ISWM Funds Requirements

The 10-year Jagna ISWM plan (excluding the SLF) will require about Php.24.1 million to implement. Only about 19% of the total or Php4.6 million are investment costs or capital outlay while the 81% or Php19.5 million are operating costs that comprises personal service and maintenance and other operating expense (MOOE). Tables 1, 2 and 3 below shows the cost by stage and annual breakdown.

**Table 1:
Summary Funding Requirements (2004-2014)**

Category	Program Management	Reduction & Segregation @ Source	Collection & Transport	Materials Recovery	Disposal Management	Total	%
Personal Services & MOOE	2,012	4,526	8,166	1,757	2,780	19,243	81%
Capital Outlay		-	3,600	943	8	4,551	19%
Total	2,012	4,526	11,766	2,700	2,788	23,794	

**Table 2:
10-Year ISWM
Investment Cost**

Cost Category	Reduction at Source	Collection	MRF	Disposal	Total
I. Vehicles & Equipment		3,600	459	-	4,059
II. Structures & Physical Dev't			484	8	492
III. Pre-Dev't Expenses				-	-
Total	-	3,600	943	8	4,551

**Table 3:
Total Funding Requirements (2004-2014)**

Category	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Total
Personal Services & MOOE stage 1-4)	-	1,432	1,388	1,467	1,688	1,654	1,710	1,928	1,82	1,935	2,147	17,231
Program Management (MENRO Office)		160	168	176	185	194	204	214	225	236	248	2,012
Capital Outlay	264	1,681	4	-	-	-	252	-	2,350	-	-	4,551
Total	264	3,273	1,560	1,643	1,873	1,849	1,849	2,142	4,457	2,172	2,396	23,794

The above costs are mainly for the municipal government of Jagna. These do not include the barangay government operational requirements for their responsibility to collect recyclables from urban and rural residential sources. The establishment of barangay portable MRFs are however included in the municipal budget in the form of the barangay assistance on ISWM implementation. Likewise, the above costs already

include salaries, wages and benefits of all personnel assigned full time to the ISWM implementation including the ISWM officer under the MENRO. Excluded are the personal services requirements of the part-time personnel such as the members of ESWMB and TWG, Treasurer's office personnel handling collection of fees and the PNP Environmental Desk Officer that will participate in the enforcement activities of ISWM. All costs are at year 2004 prices.

7.3. Investment Costs

7.3.a. Initial Investment Costs

It is estimated that the implementation of the ISWM programs will require a total initial investment of Php. 264,000. The amount covers the construction of MRF cluster barangay building. (see Table 4 below).

7.3.b Additional Investment Costs

Additional investments will be incurred in the succeeding years to replace fully depreciated assets and for the conversion of open dump to controlled dump. In year 2005, a total of Php 1.68 million will be required to purchase 1 unit compactor, assistance to barangay for the installation of portable MRFs in each barangay, composting equipment for the central MRF and the filling materials for the controlled dump. Funds of about PhP 2.35 million shall be required by year 2013 to replace vehicles and equipments and another PhP 252,000 to replace the MRF office and composting equipment. The LGU will establish MRFs in 25 barangays in year 2005 which will cost them PhP 100,000.00. Table 4 tabulates the additional investment requirements for the ten-year period that total PhP 4.3 million.

It should be noted that such costs pertain only to those that will be taken on by the local government unit and do not include those to be incurred by the various barangays for their respective SWM programs. The costs of existing vehicles and equipment and of past SWM-related expenditures of the LGU are likewise not included in the summary.

Table 4:
Summary Capital Expenditures

in thousand pesos												
	Y2004	Y2005	Y2006	Y2007	Y2008	Y2009	Y2010	Y2011	Y2012	Y2013	Y2014	TOTAL
Reduction at Source		P -	P -	P -	P -	P -	P -	P -	P -	P -	P -	-
Collection												
Vehicles & Equipment		1,250	-	-	-	-	-	-	-	2,350		3,600
MRF												
Vehicles & Equipment		207	-	-	-	-	252					459
Structures & Physical development & contingencies	264	220		-								484
Sub-total	264	427	-	-	-	-	252	-	-	-	-	943
Disposal Controlled Dump												
Vehicles & Equipment												
Structures & Physical development		4	4									8
Pre-operating expenses												
Sub-total		4	4	-	-	-	-	-	-	-	-	8
Totals	264	1,681	4	-	-	-	252	-	-	2,350	-	4,551

7.2. Operating Costs

The annual breakdown of the cash operating costs is presented in Table 5 (Details are shown in Annexes 7.d to 7.g). Expenditures range from PhP 1.5 to PhP 2.0 million per year, though the largest annual cost is in its Collection and Transport operations. It is expected that the initial year will post higher IEC expenses as the LGU plans to do a massive IEC campaign. The least cost is the operation of the MRF as the costs are kept to the barest maximum hoping to be able to recover its costs for self-sufficiency purposes. The bulk of operation cost at stage 1 is the wages of street sweepers and honorarium of the enforcement team. Operational costs for disposal management consists of operation cost of the controlled dump in years 2005 and 2006 and the tipping fees to the SLF beginning year 2007. The LGU assumes the lower

rage of the tipping fee estimates. An additional operating expense is the personnel and MOOE requirements of the MENRO ISWM Office.

**Table 5:
Cash Operating Costs**

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	TOTAL
Reduction at Source											
Engineering	244	246	257	258	270	258	284	271	286	284	2,657
IEC	58	13	13	66	15	15	76	17	18	88	379
Enforcement	140	140	140	147	147	147	155	155	155	163	1,490
Sub-total	442	399	410	472	432	421	515	443	458	535	4,526
Collection											
Engineering	678	696	716	752	774	796	836	861	888	932	7,929
IEC	19	20	21	22	23	24	25	26	27	28	237
Sub-total	697	716	737	774	797	821	861	888	915	961	8,166
MRF											
Engineering	127	128	129	136	137	138	145	147	148	155	1,390
IEC	25	-	-	29	-	-	34	-	-	39	127
Entrepreneurship	17	18	18	23	24	25	27	28	29	32	241
Sub-total	169	146	147	187	160	163	206	175	177	226	1,757
Disposal (controlled dump)											
Engineering	124	127	-	-	-	-	-	-	-	-	251
IEC											-
Sub-total	124	127	-	-	-	-	-	-	-	-	251
Disposal -tipping fee											
			172	254	265	306	345	376	385	426	2,529
MENRO ISWM Office											
	160	168	176	185	194	204	214	225	236	248	2,012
Totals	1,592	1,556	1,643	1,873	1,849	1,914	2,142	2,107	2,172	2,396	19,243

7.4. Revenue Generation

7.4.a. Main Sources of Revenues

The ISWM program is expected to generate revenues from the following sources:

a. Fines and Penalties

Any violations of the municipal ordinance that will entail each household to observe proper waste collection and segregation will be fined. There are regulations with regard to environmental management that are already in place. Review and improvement of these existing regulations will be effected and corresponding enforcement measures will be imposed. Sources of fines and penalties are the non-segregation of waste, collection of urban household biodegradable and other violations such as anti-littering, etc. The municipality of Jagna hopes to decrease the number of violations by 10% every year as IEC campaign is intensified, starting at 70% compliance on the first year to maximum 90% compliance beginning year 3..

b. Garbage fee

Garbage fees will be charged for the waste collection and other services. Households in the collection area will be billed monthly garbage fee from as high as PhP 50.00 for the high residential category, PhP 30 for medium residential category to as low as P20.00 for the poor and urban poor category. The monthly rates for institutions and commercial establishments range from a high of PhP 500.00 for the general large business establishments to a low of PhP 20.00 for small food stalls, *sari-sari* stores and general stalls. Small industries, in the likes of “calamay” makers shall be asked to pay of a minimum of PhP 50.00 per month. The collection of the garbage fee from the business establishments will be integrated into the payment of their annual business permits. Households will be billed separately and a collector from the Treasurer’s office will be detailed for this function. Collection of the garbage fee will start right after the implementation of the first round of the IEC campaign. Detailed schedule of garbage fee is presented in table 2 of Annex 7.e.

Fines and penalties for late or non-payment of garbage fees will be identified by the LGU.

c. Sale of recyclable materials and fertilizers

The MRF will be managed as one of the LGU’s economic enterprises. Income derived from its materials recovery activities and composting/organic

fertilizer production will be used for the operation and maintenance of the facility. Certain types of recycled materials have been identified as saleable, namely: paper, plastic, glass and metal. Percentage of probability of these items being marketed and their respective prevailing market prices have been determined. These provided the basis in the estimation of revenues for the ten year program under the MRF operations. Schedule of the sales of recyclable materials and the compost products are shown in Annex 7.h.

7.4.b. Projected Revenues

Table 6 summarizes the different revenues that will be earned at different stages of the project. Details are also shown in Annexes 7.d to 7.g. It is assumed the revenues will be generated by LGU Jagna for hosting the SLF. However, no amounts are yet placed in the revenue stream from disposal as it is difficult to determine at this stage. Hence, the table below shows understated revenue estimates for the implementation of Jagna ISWM program.

**Table 6:
Revenues**

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Total
Reduction at Source											
Fines & fees	362	291	219	219	219	262	263	263	263	263	2,622
Collection											
Garbage fees	649	722	736	761	936	960	978	995	1,079	1,125	8,941
MRF											
Sale of recycled materials	92	95	100	148	154	175	180	197	202	222	1,565
Disposal											
Income from operation of SLF											
Totals excld disposal	1,104	1,107	1,055	1,127	1,309	1,398	1,420	1,455	1,544	1,609	13,128

7.5. Cash Projections

The LGU anticipates its first revenues to be achieved in six months after the pre-development stage – though this could be sooner. The earnings that will be generated will finance the operating cash requirements of the project but will not be sufficient to raise the significant amounts needed for the procurement of compactor and construction of MRF in 2005. Provided the milestones are achieved, only year 1, which is the pre-implementation year, years 2, 7 and 10 shall have a negative cash balances because of the purchase of new vehicles and equipment. LGU subsidies will have to be poured in during these years.

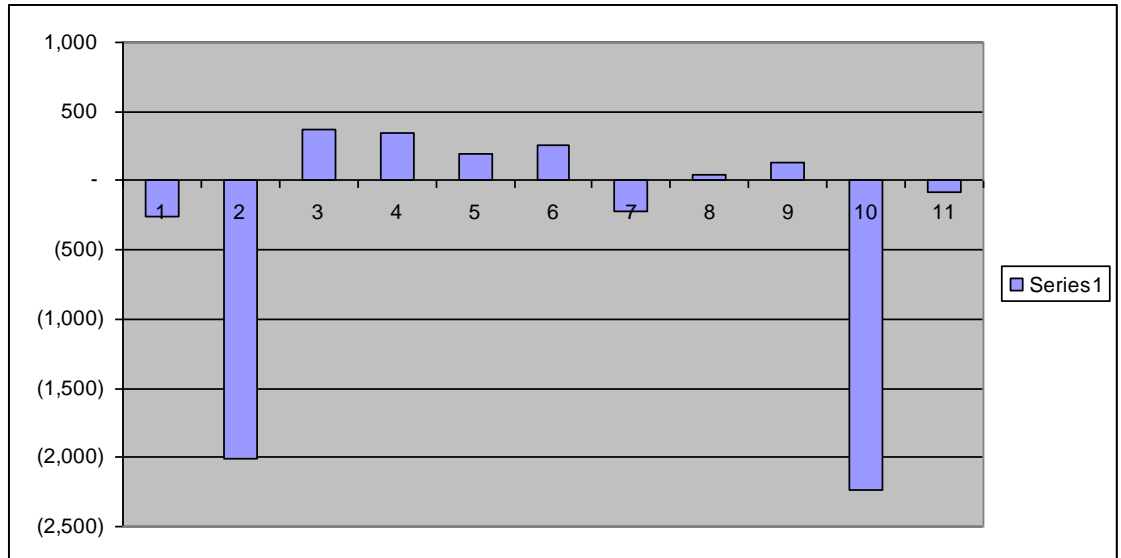
Forecast Operating Cash Balances for the next ten years. (Illustrative projections for the ten year period is shown as Annex 7.i)

**JAGNA
ISWM
Projected
Cash Flow**
in thousand
pesos

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	Pre- imple- ment ation	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Net income (Loss)											
Reduction at Source		(80)	(108)	(192)	(253)	(213)	(158)	(253)	(180)	(195)	(272)
Collection		(47)	6	(1)	(13)	139	139	116	108	164	164
MRF		(768)	(51)	(47)	(39)	(6)	(240)	(26)	22	25	(4)
Disposal				-	-	-	-	-	-	-	-
Total		(895)	(154)	(239)	(306)	(81)	(259)	(163)	(51)	(6)	(112)
Net Operating cash generated	-	(895)	(154)	(239)	(306)	(81)	(259)	(163)	(51)	(6)	(112)
Adjustments in Balance Sheet Accounts											
Capital expenditures	(264))	(1,681)	(4)	-	-	-	(252)	-	(2,350)	-	-
Net cash Inflow (Outflow)	(264))	(2,576)	(158)	(239)	(306)	(81)	(511)	(163)	(2,401)	(6)	(112)
Beginning cash balance		160	(2,416)	(2,573)	(2,813)	(3,119)	(3,199)	(3,710)	(3,873)	(6,273)	(6,280)
Ending cash balance (deficit)	(264))	(2,416)	(2,573)	(2,813)	(3,119)	(3,199)	(3,710)	(3,873)	(6,273)	(6,280)	(6,392)

Operating Cash Forecast



7.7 Comparison of ISWM Cost and Internal Revenue Allotment (IRA)

Usually more than 80% of the LGU annual revenue is the internal revenue allotment (IRA) coming from the national government. This is the main source for the LGUs personal services and MOOE and normally the only source for the 20% development fund were capital outlays (investment costs) are charged.

The LGU IRA the last 5 years increase at an average rate of 6.6%, from Php21.5 million in year 2000 to Php27.7million in year 2004. Assuming a lower annual increase of 5%, the LGU-IRA is projected to increase to Php29.1million in year 2005 to Php45.2 million in year 2014.

The table below shows the comparison of ISWM financial program with the projected IRA. Column 4 shows the percentage of the ISWM budget (operating + investment costs) over the IRA, column 6 shows the percentage of ISWM operating costs only over the IRA and in the last column, the percentage of projected cash requirement less the projected ISWM revenue and income. Column 4 shows that except for the 11% share of total ISWM cost over IRA in years 2005 and 2013 (due to garbage compactor purchase), the ISWM expenditures ranges at 5%-6% of IRA. Excluding the investment costs, the total operational requirements of ISWM is only around 5% of the IRA (Column 6). Finally, considering the ISWM revenue stream, the annual cash requirements will only be about 1% of IRA (Column 9) except again in years 2005 and 2013. These figures indicate that the LGU-IRA will most likely sustain the implementation of the program.

**Table 7:
Proportion of ISWM Cost and Cash Flow over IRA**

Year	Projected IRA	Total Annual ISWM Cost	% of ISWM Total Budget/IRA	Annual ISWM Operating Expense	% of ISWM Operating Expense/IRA	Projected Income	Projected Cash Requirements	% of ISWM Cash Reqs/IRA
2004	27,749,322	264,000	1%	-	0%	-	264,000	1%
2005	29,136,788	3,272,468	11%	1,431,808	5%	1,103,673	2,168,795	7%
2006	30,593,628	1,560,127	5%	1,388,167	5%	1,107,155	452,972	1%
2007	32,123,309	1,643,242	5%	1,466,842	5%	1,055,496	587,746	2%
2008	33,729,474	1,872,916	6%	1,687,696	5%	1,127,352	745,564	2%
2009	35,415,948	1,848,558	5%	1,654,077	5%	1,308,582	539,976	2%
2010	37,186,745	2,166,362	6%	1,710,257	5%	1,397,671	768,691	2%
2011	39,046,083	2,142,149	5%	1,927,734	5%	1,420,118	722,031	2%
2012	40,998,387	4,456,645	11%	1,881,509	5%	1,454,699	3,001,947	7%
2013	43,048,306	2,171,753	5%	1,935,361	4%	1,543,759	627,994	1%
2014	45,200,722	2,395,548	5%	2,147,335	5%	1,609,494	786,054	2%

7.7 Jagna Cluster SLF Financial Analysis

7.7.1 SLF Investment and Operation Costs

The establishment of Jagna SLF will entail capital outlay (investment costs) and operations cost. Total project cost of the proposed Jagna SLF is PhP49.0 million. This comprise an estimated PhP 38.3 million capital outlay and PhP 10.7 million operating expense.

1) Investment Costs

The capital outlay are composed of the lot acquisition, landfill construction, utilities and support facilities, equipment, SLF closure and the pre-development costs.

Tables 1 and 2 shows the breakdown and lumpsums of the investment costs indicated annually. The landfill will constructed in three phases

(2006, 2009, and 2012) and the entire facility to be operational beginning year 2007.

Table 1:

Table 1

SLF Establishment Cost, P'000				
Breakdown		qty	Cost	Amount
lot purchase	ha	1.5	200	300
road opening	km	2	1,000	2,000
landfill devt	ha	1	6,000	6,995
support facilities	set	1	2,500	2,500
Equipment				4,900
Dumptruck	unit	1	1,500	1,500
Backhoe	unit	1	2,500	2,500
Loader	unit		2,000	-
Shoptools	set	1	100	100
weigh bridge	unit	1	500	500
other equipment	set	1	300	300
Total				16,695
SLF closure	5%	1	6,000	9,773
Equipment replacement				6,254
Contingencies	10%			3,484
Grand Total				38,326
pre-devt costs		2,120		
FS				
EIS	3%	578		
Detailed Engg	4%	771		
Const Mgt	4%	771		

support facilities	2,500,000
leachate treatment plant	300,000
storm drains	200,000
sp. waste containment system	100,000
ground water monitoring wells	40,000
gas monitoring wells	40,000
office, motorpool & lab bldgs	620,000
light and water	200,000
fence, greens, aesthetics	400,000
road, parking, open spaces	600,000

Table 2:

Disposal Estimates

9.03% 9.65%

	LGU Cluster	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	total
	Jagna	1319	1358	1450	2145	2234	2577	2641	2884	2952	3264	3387	3412	3720	4056	
	Duero	224	785	945	1029	1114	1200	1289	1380	1397	1413	1427	1441	1580	1733	
	Guindulman	1458	1473	1488	1502	1518	1533	1548	1563	1579	1595	1611	1627	1643	1660	
	Candijay	1519	1535	1550	1565	1581	1597	1613	1629	1645	1662	1678	1695	1712	1729	
	Anda	536	541	547	552	558	563	569	575	580	586	592	598	604	610	
	Garcia Hernandez	1071	1082	1093	1104	1115	1126	1137	1149	1160	1172	1183	1195	1207	1219	
	Total cluster, kg/day	6,128	6,774	7,072	7,898	8,118	8,596	8,798	9,179	9,314	9,691	9,878	9,968	10,467	11,007	
	Total, annual tons	2,237	2,473	2,581	2,883	2,963	3,138	3,211	3,350	3,400	3,537	3,606	3,638	3,820	4,017	
	Total, annual cum	9,853	10,893	11,372	12,699	13,054	13,823	14,146	14,760	14,976	15,583	15,883	16,029	16,830	17,698	
SLF	assumed no. of layers, m	8	8	8	8	8	8	8	8	8	8	8	8	8	8	
	compaction factor	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
	estimated reqd area, sqm	616	681	711	794	816	864	884	922	936	974	993	1,002	1,052	1,106	0.95
	area incldg utilities, greens; ha	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1.24
	soil cover thickness, m	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	
	soil cover needed, cum	1,847	2,042	2,132	2,381	2,448	2,592	2,652	2,767	2,808	2,922	2,978	3,005	3,156	3,318	
	soil cover cost, P/cum	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
	annual soil cover cost, P'000	4	4	4	5	5	6	6	6	6	6	7	7	7	7	

2) Operation Cost

Operation will have to be efficient to keep the costs as its minimum without sacrificing environmental and design requirements and standards. Operating expenses will be mostly salaries and wages, equipment repair and maintenance. Purchase of soil cover is costed though suitable and sufficient soil cover may be available at site. Miscellaneous expenses to include administrative and monitoring costs are likewise included. Possible interest expense particularly for the investment fund requirements are not included in the estimate. Annual operating expense is between Php 0.9 - 1.25 million over 10 years or a total of Php10.7 million. Tables 3 and 4 shows breakdown of personal services and equipment operation while the total operation costs are shown in table 5.

Table 3:

Disposal Operations, Personal services				
SLF operator	1	1000	360	yr 1 only
Lab technician	1	250	90	
Operator	2	200	144	
Checker	1	150	54	
Utility workers	2	130	94	
Sub- Total	7	1730	742	
Total Wages			742	
%increase every 3 years				5%

Table 4:

schedule of fuel, oil & lubricants					schedule of maintenance	
vehicle	no	daily li consump	cost / liter	annual cost	monthly	annual cost
multi-purpose equipt	1	40	20	288	6000	72
dump truck	1	20	20	144	4000	48
loader				0		0
oil & lub	20%	of fuel cost		86		
	total			518		120

7.7.2 Revenue Stream

The main revenue source of the facility will come from the tipping fees of the disposed wastes. The computation of revenue stream is assumed that the project will be operated through a separate entity so that all users will be charged with fees. Table 5 shows the cash flow of the Jagna SLF.

Table 5:
JAGNA ISWM - Disposal, Sanitary Landfill
 Projected Income Statement
 in thousand pesos 1000

	Implementation Phase												Totals
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	
Tipping Fees													
Cluster LGUs			5,163	5,765	5,926	6,275	6,422	6,701	6,799	7,075	7,211	7,277	64,615
Operating Expenses													
Engineering													
SLF operator			360										
Lab technician			90	90	90	95	95	95	99	99	99	104	955
Operator			-	-	-	-	-	-	-	-	-	-	-
Checker			54	54	54	57	57	57	60	60	60	63	573
Utility			-	-	-	-	-	-	-	-	-	-	-
Sub-total	-	-	504	144	144	151	151	151	159	159	159	167	1,889
MOOE													
Gasoline			544	572	600	630	662	695	729	766	804	844	6,846
Maintenance			126	132	139	146	153	161	169	177	186	195	1,585
Filling Materials			5	6	6	6	6	6	7	7	7	7	63
Electricity/Water Fee			4	4	5	5	5	5	6	6	6	7	53

			20	21	22	23	24	26	27	28	30	31	252
Miscellaneous													
Sub-total	-	-	700	735	772	810	850	893	937	984	1,033	1,085	8,799
Education	6			7			8						21
Enforcement													
Entrepreneurship													
Total Operating Expenses	6	-	1,204	886	916	961	1,010	1,044	1,096	1,143	1,192	1,251	10,708
Capital Outlay	2,662	12,540	0	0	2,547	0	6,879	2,948	0	0	0	10,751	38,326
Total Project Cost	2,668	12,540	1,204	886	3,462	961	7,889	3,992	1,096	1,143	1,192	12,002	49,034
Net Income (Loss)	(2,668)	(12,540)	3,959	4,879	2,464	5,314	(1,466)	2,709	5,703	5,932	6,019	(4,725)	15,581
Net Income (Loss) excl capital outlay	(6)	-	3,959	4,879	5,011	5,314	5,413	5,657	5,703	5,932	6,019	6,026	53,907

Based on the computation of disposable wastes and the estimated costs and schedule of expenditures:

- a) If the project intends to recover all investment costs and operating expenses, the tipping fee will cost PhP2,000 /ton of disposed waste to be able to have an approximate breakeven using 15% hurdle rate. Using the above tipping fee, total estimated revenue (table 5) will be PhP54.12 million. Table 6 shows the disposal cost per LGU per month and per annum.

Table 6:

BASED ON TOTAL PROJECT COST	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	totals
Annual Tipping Fees, P'000/yr			5,163	5,765	5,926	6,275	6,422	6,701	6,799	7,075	7,211	7,277	50,127
Jagna			1,058	1,566	1,630	1,881	1,928	2,105	2,155	2,383	2,472	2,491	14,707
Duero			690	751	813	876	941	1,007	1,020	1,031	1,042	1,052	7,130
Garcia Hernandez			798	806	814	822	830	839	847	855	864	873	6,611
Guindulman			1,086	1,097	1,108	1,119	1,130	1,141	1,153	1,164	1,176	1,188	8,998
Candijay			1,131	1,143	1,154	1,166	1,177	1,189	1,201	1,213	1,225	1,237	9,375
Anda			399	403	407	411	415	419	424	428	432	436	3,307
cost P/ton			2,000	2,000	2,000	2,000	2,000	2,000	2,200	2,200	2,200	2,200	
													totals
Monthly Tipping Fees, P'000/mo			430	480	494	523	535	558	567	590	601	606	4,177
Jagna			88	130	136	157	161	175	180	199	206	208	1,226
Duero			58	63	68	73	78	84	85	86	87	88	594
Garcia Hernandez			66	67	68	69	69	70	71	71	72	73	551
Guindulman			90	91	92	93	94	95	96	97	98	99	750
Candijay			94	95	96	97	98	99	100	101	102	103	781
Anda			33	34	34	34	35	35	35	36	36	36	276

- b) Should the project be provided with grant fund for the establishment of the facility and only the operating costs are to be recovered, the tipping fee will be PhP325 /ton to be able to approximately breakeven at 15% hurdle rate. Estimated total revenue over 10-years is PhP11.2 million, a little higher

than the 10-year estimated operating expenses of PhP10.7 million. Table 7 below shows the disposal cost per LGU per month and per annum.

Table 7:

BASED ON TOTAL OPERATING EXPENSE	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	totals
Annual Tipping Fees, P'000/yr			839	937	963	1,020	1,148	1,198	1,215	1,265	1,289	1,301	8,584
Jagna			172	254	265	306	345	376	385	426	442	445	2,529
Duero			112	122	132	142	168	180	182	184	186	188	1,224
Garcia Hernandez			130	131	132	134	148	150	151	153	154	156	1,129
Guindulman			176	178	180	182	202	204	206	208	210	212	1,537
Candijay			184	186	188	189	210	213	215	217	219	221	1,601
Anda			65	65	66	67	74	75	76	76	77	78	565
cost P/ton			325	325	325	325	358	358	358	358	358	358	
													totals
Monthly Tipping Fees, P'000/mo			70	78	80	85	96	100	101	105	107	108	715
Jagna			14	21	22	25	29	31	32	35	37	37	211
Duero			9	10	11	12	14	15	15	15	16	16	102
Garcia Hernandez			11	11	11	11	12	12	13	13	13	13	94
Guindulman			15	15	15	15	17	17	17	17	18	18	128
Candijay			15	15	16	16	18	18	18	18	18	18	133
Anda			5	5	6	6	6	6	6	6	6	7	47

- c) Should the LGU opt to operate its own SLF, the total investment cost is PhP22.66 million and total 10-year operating expense of PhP8.57 million. Total SLF cost (year 2007 – 2014) is PhP31.23 million. This is still based on daily disposable waste of 1.8 tons/day (year 2007) at 4 layers (meter) of waste landfilling and compaction factor of 2. The same SLF facilities are assumed to be constructed. At the above cost, the Jagna disposed waste will come out at PhP 5,600 /ton to be able to recover the investment outlay and operating expense. If only the operating expense are to be recovered the waste disposal cost will come out at PhP1,150 /ton.

7.8 Financing

Revenues generated at different stages of the project will partially finance the cash operating requirements. Inasmuch as these will not be sufficient to support the planned implementation of the project, funding for the capital expenditures may be taken from the LGU's 20% Development Fund and or from external fund sources. .