



Government of the Republic of Trinidad and Tobago
Ministry of Public Utilities

Public Accounts (Enterprises) Committee

Sixth Report of the Public Accounts (Enterprises) Committee on
the Examination of the Audited Accounts, Balance Sheet and
Other Financial Statements of the Trinidad and Tobago Solid
Waste Management Company Limited for the Financial Years
2008 to 2013

**The Ministry of Public Utilities' Responses to Issues, Observations &
Recommendations**

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1. INTRODUCTION

- 1.1. A report entitled the Sixth Report of the Public Accounts (Enterprises) Committee (“PAEC”) on the Examination of the Audited Accounts, Balance Sheets and Other Financial Statements of the Trinidad and Tobago Solid Waste Management Company Limited (“SWMCOL”) for the Financial Years 2008 to 2013 was laid in the House of Representatives on April 12, 2017 and in the Senate on April 25, 2017.

- 1.2. **Standing Orders 100 (6) and 110 (6) of the Senate and the House of Representatives** respectively require the Ministry with responsibility for the Ministry/Body reported on by a Joint Select Committee to present to each House a paper responding to the recommendations/comments contained in the report.

- 1.3. In accordance with the above Standing Orders, the Ministry of Public Utilities and SWMCOL have prepared a response on behalf of the Honourable Fitzgerald Hinds, Minister of Public Utilities. The said response as contained in this paper is being submitted for the consideration of the House of Representatives and the Senate.

2. AUDITED FINANCIAL STATEMENTS AND INTERNAL AUDIT REPORTS

2.1. Observations and Recommendations of the Committee

Accountability to Parliament for the utilization of public funds was weakened by the failure of SWMCOL to submit its audited financial statements and internal audit reports in a timely manner for scrutiny. It was noted that the Company was late in submitting the necessary documents for the financial years 2014 and 2015. In oral response, SWMCOL indicated that the late submission of these audited financial statements was due to a change in the company's auditors and consequently, SWMCOL had to await the necessary approval from the Ministry of Finance. However, these documents were completed and are currently awaiting Board approval. The Committee was advised that these documents should be submitted within a month of the Public Hearing which was held on February 15, 2017.

Recommendations:

(a) SWMCOL should implement stringent measures to adhere to the stipulated deadlines set out in Section 3.1 of the State Enterprises Performance Monitoring Manual

(b) Strengthen the internal controls and processes to ensure the timely preparation and submission of Financial Statements

2.2. Ministerial Response

(a) SWMCOL should implement stringent measures to adhere to the stipulated deadlines set out in Section 3.1 of the State Enterprises Performance Monitoring Manual.

SWCOL has implemented a system for the monthly monitoring of the reporting requirements stipulated by the State Enterprises Performance Monitoring Manual. See SWCOL's State Enterprises Performance Monitoring Compliance Report as at March 31, 2017, attached at **Appendix 1**. The responsibility for monitoring this matrix has been assigned to Corporate Project Officer at SWCOL who reports directly to the Chief Executive Officer.

(b) Strengthen the internal controls and processes to ensure the timely preparation and submission of Financial Statements.

SWCOL currently has the necessary controls and processes in place to ensure the timely preparation and submission of financial statements, which includes a fully staff finance and accounting

division and specific financial procedures to ensure that source documents including bills and activity sheets are processed on a timely basis.

3. SUSTAINABILITY AND VIABILITY OF SWMCOL

3.1. Observations and Recommendations of the Committee

The Committee was concerned about the sustainability and viability of SWMCOL after continuous losses were recorded for the period 2010 to 2013. It was noted that in the original accounts for the financial year 2010, an operating profit of \$18Million was recorded and was later restated as an operating loss of \$0.5Million in the subsequent year. It was understood that the persistent trend of losses recorded on SWMCOL's statements arose after CEPEP Company was created and the CEPEP function of SWMCOL was removed in 2009. It was important to note that SWMCOL had the responsibility for CEPEP since its inception in 2002 and brought in a significant cash flow to the Company through its management fees. From 2010 when CEPEP was removed, SWMCOL became dependent on its core functions of removing the country's waste to generate revenues. Thus, the decline in profits recorded on the Company's financial statements highlighted the inefficiencies within SWMCOL's core operations. In addition, there has been an increasing level of concern

of the viability of the company since 2013, wages and salaries exceeded fifty (50) per cent of revenues whilst managing operating losses. SWMCOL stated that in going forward the solution lied in increasing the revenue streams based on the existing staff structure and equipment resources. In addition, the company intends to create new lines of business, expand the existing lines, and regain some of the lines that were lost such as the vacuum tanker service. The company stated that a very good vacuum tanker activity was in effect but due to the lack of the maintenance equipment, the vacuum tanker line virtually went to zero.

Recommendations:

(a) SWMCOL should reintroduce the vacuum tanker service in an attempt to increase revenues and implement internal control policies to ensure adequate maintenance of equipment by July 30, 2017.

(b) SWMCOL should continue the tyre shredding initiative in attempt to boost revenues

3.2. Ministerial Response

(a) SWMCOL should reintroduce the vacuum tanker service in an attempt to increase revenues and implement internal control

policies to ensure adequate maintenance of equipment by July 30, 2017.

SWMCOL has already reintroduced its vacuum tanker service line and has a specific plan in place for marketing this line, which is already bearing fruit.

- (i) SWMCOL's Vacuum Tanker Line is geared towards faecal and other liquid organic wastes which are collected from industrial and commercial clients.
- (ii) The line was discontinued in 2013 when the trucks involved became unserviceable.
- (iii) SWMCOL has since refurbished two trucks and purchased a third truck which has allowed this line to resume. This has allowed us to move from a revenue of \$31,375 in 2013 to \$1,200,580 in 2016. For 2017, we expect to earn over \$2,000,000 in this line in the upcoming year.

(b) SWMCOL should continue the tyre shredding initiative in attempt to boost revenues

Please refer to the responses provided in paragraph 7 below.

4. STATUS OF STRATEGIC PLAN

4.1. Observations and Recommendations of the Committee

The company appeared to be in breach of implementing its Strategic Plan. According to the State Enterprises Performance Monitoring Manual, a strategic plan “is the process of developing organization wide statements of policy, strategies and goals so communicated as to ensure participation by the entire organization. It involves the establishment by the Company of objectives guiding policies and strategies for reaching the goals, which are to be in alignment with the Strategic Plan of the respective Line Ministry. Changes in long range Strategic Plans alter the character and direction of an organization. SWMCOL stated that the last Strategic Plan was implemented for the period 2010 – 2012. A plan is currently being prepared for the period 2016 – 2019. However, it was advised that the reason for the delay of the 2016 – 2019 Strategic Plan was due to the change in government in 2015.

Recommendations:

(a) SWMCOL should have its Strategic Plan for the period 2016-2019 approved by the Minister of Public Utilities by April 30, 2017.

(b) SWMCOL should submit a copy of the Strategic Plan to the PAEC no later than May 30, 2017.

4.2. Ministerial Response

- (a) *SWMCOL should have its Strategic Plan for the period 2016-2019 approved by the Minister of Public Utilities by April 30, 2017.*

SWMCOL's strategic plan was approved by the Board of Directors on May 25, 2017, and submitted to the Ministry shortly thereafter.

- (b) *SWMCOL should submit a copy of the Strategic Plan to the PAEC no later than May 30, 2017.*

The Strategic Plan, attached as **Appendix 2**, is currently under review by the line Ministry of Public Utilities. It is anticipated that the review of the Strategic Plan will be completed by July 31, 2017 and thereafter the Plan will be forwarded to the PAEC through the line Ministry.

5. HEALTH AND SAFETY

5.1. Observations and Recommendations of the Committee

The Company has been operating below the Occupational Safety and Health Act (OSHA) standards, including both local and international standards, due to the lack of funding necessary to effectively operate sanitary landfill sites. Though no health and safety issues have arisen among existing workers, there were reports of salvagers on sites, including death to employees of contractors. However, it was

advised that SWMCOL's employees are covered with life and health insurance now.

Recommendations:

- (a) SWMCOL should conduct an investigation into the cost of upgrading the facilities to ensure that it meets the OSHA standards by May 30, 2017.***
- (b) SWMCOL should liaise with the Ministry of Public Utilities to obtain funding for the improvement of facilities by June 30, 2017.***
- (c) SWMCOL should provide safety training sessions for both staff and contractors on a quarterly basis commencing from the second quarter of 2017.***

5.2. Ministerial Response

- (a) SWMCOL should conduct an investigation into the cost of upgrading the facilities to ensure that it meets the OSHA standards by May 30, 2017.***

SWMCOL continues to liaise with the Ministry of Public Utilities on this matter. SWMCOL's quarterly Health, Safety and Environmental legislative compliance review was conducted in March 2016. See attached Summary HSE Legislative Compliance Report (**Appendix 3**).

In January, 2017, the Ministry of Public Utilities informed SWMCOL that Cabinet had approved the upgrade of the welfare facilities at the Beetham Landfill site at a cost not to exceed \$3.4

Million. The scope of works to be undertaken in FY2017 includes:

- (i) provision of a pipe borne water supply to the administrative facilities by the Water and Sewage Authority (WASA);
- (ii) upgrade of the sewage septic system;
- (iii) upgrade of the staff welfare facilities such as: toilets, showers, changing and locker rooms, sanitizing area and lunch room.

However, the following areas of non-compliance to the OSHA remain to be addressed:

- (i) Security and Safety. There is an increased presence of salvagers onsite at all three landfills managed by SWMCOL as a result of a reduced security presence. As a cost saving measure SWMCOL took the decision to reduce onsite security at its landfills.
- (ii) Health and Welfare. SWMCOL has had to significantly reduce its access road development and upgrade works at all three (3) landfill sites. This not only poses a safety risks to waste haulers and SWMCOL operators, who have to navigate makeshift roadways to access the tipping area, it also poses a health risk, as a result of the excessive contaminated dust generated under dry weather conditions.

(b) SWMCOL should liaise with the Ministry of Public Utilities to obtain funding for the improvement of facilities by June 30, 2017.

While representations were made, the Ministry of Finance was only able to accommodate the payment of backpay of arrears in the mid-year review. The Ministry is therefore awaiting confirmation of the budget for fiscal 2018 to determine whether an allocation will be granted for the improvement of facilities.

(c) SWMCOL should provide safety training sessions for both staff and contractors on a quarterly basis commencing from the second quarter of 2017.

SWMCOL continues to provide ongoing safety training for staff and contractors, including orientation sessions and toolbox meetings. However, SWMCOL will introduce orientation sessions for all waste haulers contracted by the Regional Corporations. SWMCOL is currently awaiting the implementation of new contractual arrangements with waste haulers before proceeding with this activity.

6. ENVIRONMENTAL MONITORING

6.1. Observations and Recommendations of the Committee

The entity failed to actively participate in environmental monitoring which is a critical factor in ensuring proper landfill management. However, SWMCOL advised that due to the lack of funding available, the company was unable to do so. In 2014, studies conducted by the University of the West Indies revealed that there was an issue with the presence of leachate in the nation's water sources. Moreover, SWMCOL continued to be challenged with effectively monitoring the perennial issue of the landfills that affect the nearby environs causing serious economic and medical difficulties to the population. These issues raised a high level of concern to the Committee because if not treated in an urgent manner, the health of citizens can become endangered, resulting in various illnesses such as cancer, asthma, disabilities in children, etc. SWMCOL advised that the company was currently engaged in a pilot study at the Guanapo site with respect to the treating of the issue of leachate. The company stated that no further measures were implemented to effectively monitor environmental issues emanating from the landfill sites but only received \$1Million which was not sufficient to rectify these issues.

Recommendations

- (a) SWMCOL should prioritize their allocation of funding to ensure that they effectively manage the landfill sites.***
- (b) Upon completion of the pilot studies being undertaken regarding the lead content in water sources, the company should make the public aware of the findings and recommendations no later than May 31, 2017.***
- (c) The Permanent Secretary of the Ministry of Public Utilities should seek the support of the Minister to make representation under the mid-year review to get additional funding to ensure proper landfill management by April 30, 2017.***
- (d) SWMCOL should look at ways of generating additional revenues to assist in effective environmental monitoring practices.***

6.2. Ministerial Response

- (a) SWMCOL should prioritize their allocation of funding to ensure that they effectively manage the landfill sites.***

Over the years, SWMCOL has been faced with increasing costs to increasing waste volumes entering the landfills under its purview. It is anticipated that in the absence of implementing appropriate waste diversion policies and systems, waste volumes entering the nation's landfills will continue to increase. Notwithstanding, SWMCOL continues to prioritize the use of the allocated subvention to undertake essential operational activities. The subvention continues to be allocated among:

- (i) Equipment Rental, which accounts for on average sixty percent (60%) of expenditure, given that SWMCOL currently does not own key landfill operations equipment;
- (ii) Security, which accounts for an estimated eleven percent (11%) of expenditure;
- (iii) Cover Materials, which is essential to ensure the daily compaction of wastes entering the landfill sites and reduce the risks of landfill fires. For the FY 2016, four per cent (4%) of landfill expenditure was attributed to the purchase of covering materials. This represented a fifty per cent (50%) reduction from the previous fiscal year and was necessitated to reduce operational costs.
- (iv) Administrative fee of thirteen per cent (13%) of allocated subvention payable to SWMCOL to manage the three (3) landfill sites.

Other essential environmental protection and health and safety activities such as roadway development, air and ground and surface water monitoring, leachate management, training and development are not conducted to the extent mandated by best practices. SWMCOL requires additional funding to adopt these proper landfill management best practices. SWMCOL has in the past proposed the establishment of a landfill user fee. This has

also been a recommendation of the Solid Waste Management Strategic Plan of Trinidad and Tobago.

(b) Upon completion of the pilot studies being undertaken regarding the lead content in water sources, the company should make the public aware of the findings and recommendations no later than May 31, 2017.

SWMCOL has partnered with the Ministry of Planning and Development, the Global Environmental Facility (GEF), United Nations Industrial Development Organisation (UNIDO) and the Basel Convention Regional Centre for the Caribbean (BCRC), to undertake the – Development and Implementation of a Sustainable Management Mechanism for Persistent Organic Pollutants in the Caribbean.

The project is being implemented over three (3) years commencing FY2016 and seeks to build both institutional and human resource capacity to deal with the impacts of both intentionally and unintentionally produced Persistent Organic Pollutants (POPs) in eight (8) of the Caribbean countries that are parties to the Stockholm Convention. In addition, the project has identified the Guanapo Landfill as a priority site for remediation and will therefore develop site remediation plans, undertake

technology selection and a cost and benefit assessment at an estimated cost of US\$820,000 (TT\$5,458,084).

The remediation plans developed under this regional project would serve as models for remediating similar sites such as the Beetham and Forres Park Landfills and other landfills within the region. SWMCOL would be required to implement the clean-up and remediation activities and environmental monitoring controls to mitigate further risks of environmental contamination. The estimated cost of plan implementation is US\$10.012 million (TT\$66,939,787), which represents SWMCOL's projected operating costs for managing the Guanapo Landfill site over a five (5) year period.

(c) The Permanent Secretary of the Ministry of Public Utilities should seek the support of the Minister to make representation under the mid-year review to get additional funding to ensure proper landfill management by April 30, 2017.

Over the period 20096 to 2017, SWMCOL has received an annual subvention of \$75 Million, even though SWMCOL requested an annual subvention of \$120 Million to manage the three landfills and implement proper environmental protection and control measures.

Unfortunately, while efforts were made to have additional funding allocated to SWMCOL in the mid-year review for landfill management, the Ministry was only able to secure funding to pay the arrears of salaries and emoluments for SWMCOL's workers. This effort will however continue and it is hoped that in Fiscal 2018 SWMCOL will receive an increased allocation.

(d) SWMCOL should look at ways of generating additional revenues to assist in effective environmental monitoring practices.

As a State Enterprise, SWMCOL is of the view that it should be provided with the first opportunity to provide waste removal services for all government ministries and state enterprises at agreed upon, competitive rates. Only where, SWMCOL is unable to provide the service, should these Ministries and State Enterprises engage the private sector.

SWMCOL has submitted a proposal to the Ministry of Public Utilities, a copy of the proposal can be found at **Appendix 4**.

The proposal is currently being considered.

7. TYRE DISPOSAL

7.1. Observations and Recommendations of the Committee

The success of SWMCOL's efforts at tyre shredding has been hampered by the indiscriminate dumping practices by several contractors. The company advised that in order to mitigate the practice of tyre dumping proposals were made to several Ministries to implement a deposit on tyre purchases which would be used to pay for a proper disposal system and upon return of old/used tyres fifty (50) per cent of the deposit would be refunded as a reward for returning them as opposed to dumping. Moreover, by implementing this policy, SWMCOL can aid in achieving the following

- (a) Reducing the amount of tyres entering the nation's landfills by ninety-eight (98) per cent within an eighteen (18) month period.
- (b) Assisting the Regional Corporations in their fight to eradicate the threat of breeding grounds for the deadly *Aedes aegypti* mosquito.
- (c) Attaining a return on investment of this operation.
- (d) Assisting in repositioning the brand as an innovator in the industry.
- (e) Assisting in the changing of attitudes of the population as it relates to recycling and environmental initiatives

Recommendations:

- (a) SWMCOL should work more closely with the relevant Ministries to implement the tyre deposit policy at all tyre firms throughout Trinidad and Tobago by July 31, 2017.***
- (b) SWMCOL should conduct meetings with tyre companies across Trinidad and Tobago in order to sensitize those companies as to the need of the implementation of the new policy.***
- (c) SWMCOL should educate the general public of this new initiative/approach through an effective marketing strategy involving the use of print media and flyers.***
- (d) SWMCOL should seek to discuss with the Ministry of Public Utilities and relevant stakeholders to consider implementation of International Best Practice for the disposal of waste.***

7.2. Ministerial Response

- (a) SWMCOL should work more closely with the relevant Ministries to implement the tyre deposit policy at all tyre firms throughout Trinidad and Tobago by July 31, 2017.***

It should be noted that the introduction of a tyre deposit system requires the enactment of enabling legislation. However, SWMCOL will continue to work closely with all the relevant Agencies and Ministries on this matter, as well as, the expansion of SWMCOL's mandate to include the functions of the proposed Waste Recycling Management Authority.

- (b) SWMCOL should conduct meetings with tyre companies across Trinidad and Tobago in order to sensitize those companies as to the need of the implementation of the new policy.***

SWMCOL has brought this matter to the attention of the Environmental Management Authority under whose remit the issues of improper disposal of waste tyres would fall.

- (c) SWMCOL should educate the general public of this new initiative/approach through an effective marketing strategy involving the use of print media and flyers.***

This matter involves business to business discussions and transactions as SWMCOL is not geared to deal with the general public in issues of waste tyre collection.

- (d) SWMCOL should seek to discuss with the Ministry of Public Utilities and relevant stakeholders to consider implementation of International Best Practice for the disposal of waste.***

International best practice includes the implementation of a tipping fee for the disposal of waste. SWMCOL would welcome such a system which would provide the necessary funds for the proper operation of the landfill sites.

8. MISCELLANEOUS OBSERVATIONS BY THE LINE MINISTRY AND THE TRINIDAD AND TOBAGO SOLID WASTE MANAGEMENT COMPANY

8.1. TRINIDAD AND TOBAGO SOLID WASTE MANAGEMENT COMPANY LIMITED PROFILE

In reviewing the PAEC's report, in particular the references made to SWMCOL's profile, it was noted that the following programmes were referenced as being managed by SWMCOL:

- The Community-based Environmental Protection and Enhancement Programme (CEPEP) responsible for cleaning, enhancing and beautifying the environment.
- The Community Environmental Improvement Initiative (CEII) responsible for educating the general public on the need to conserve the environment.
- The Dead Animal Removal Team (DART) who oversees the removal and disposal of animal carcasses from the roads.
- The Disaster Emergency Response Team (DERT) which was developed after Hurricane Ivan's devastating impact on Grenada in 2004 is to be assisted by CEPEP in times of disaster relief.
- "I LOVE MY BEACH PROGRAMME" whose aim is to help with the cleaning of the nation's beaches.

These programmes now fall under the purview of CEPEP and as such no longer form part of SWMCOL's mandate.

8.2. DEADLINES GIVEN BY THE COMMITTEE

It was observed that the report was laid in the House of Representatives on April 12, 2017 and in the Senate on April 25, 2017; and thereafter sent to the Ministry on May 2, 2017. It was also observed that deadlines were given for the end of April and May. Unfortunately, however, having regard to the fact that the Ministry only received the report on May 2, 2017, it was not possible to meet these deadlines. The Ministry however continues to work with SWMCOL on the issues identified in the report and will make every effort to meet the revised deadlines stated herein.

**STATE ENTERPRISES PERFORMANCE MONITORING REPORTING REQUIREMENTS
COMPLIANCE REPORT
AS AT THE END OF SECOND QUARTER OF FISCAL YEAR 2017**

The Trinidad & Tobago Solid Waste Management Company Limited (SWMCOL) has continued to maintain a close relationship with the Investment Division, Ministry of Finance and our line Ministry, the Ministry of Public Utilities. The matrix below outlines the SWMCOL's compliance to the reporting requirements as outlined in the State Enterprises Performance Monitoring Manual, as at the end of the Second Quarter of the Fiscal Year, 2017.

STATE ENTERPRISES PERFORMANCE MONITORING

ANNUAL REPORTS									
DOCUMENT	DETAILS	SUBMISSION DATE	RECEIVING AGENCY	RESPONSIBILITY	LAST REPORT SUBMITTED	YES	NO	PART LY	REASON(S) FOR NON-COMPLIANCE
Strategic Plan	To provide an indication of programmes and targets in critical areas of enterprise performance.	Six (6) months prior to start off period of the Plan, for companies receiving subventions. (end of March)	1. MOF- Investments Division 2. Line Ministry	CEO		X			<ul style="list-style-type: none"> The Strategic Plan 2016-2019 was submitted to the Ministry of Public Utilities as the new line Ministry.
Annual Budget	To operationalize the activities and objectives set out in the Strategic Plan.	Six (6) months prior to start of financial year, for companies receiving subventions. (end of March)	1. MOF- Investments Division 2. Line Ministry	CEO/ GMs/ Management Accountant		X			<ul style="list-style-type: none"> The Recurrent Budget for Fiscal Year 2018 was submitted to MPU. Meeting to discuss draft estimates scheduled for April 21, 2017.

DOCUMENT	DETAILS	SUBMISSION DATE	RECEIVING AGENCY	RESPONSIBILITY	LAST REPORT SUBMITTED	YES	NO	PART LY	REASON(S) FOR NON-COMPLIANCE
Annual Audited Financial Statements/ Management Letters issued by Statutory Auditors	To facilitate ongoing monitoring.	Not less than twenty-one (21) days before each Annual Meeting of the shareholders or within such other time specified. Failure to comply will attract a penalty of \$100.00 for every day, or part thereof.	1. Registrar of Companies, Ministry of Legal Affairs	BOD/external Auditor/ GMF&CS/ Corporate Secretary					<ul style="list-style-type: none"> Audited Financials 2014 and 2015 were completed and submitted. AGM to be held to ratify Financials 2014, 2015. Audited Financials 2016 are due.
	Email to coth@parliament.org and submission of two (2) originals and 20 copies to the Minister of Finance for submission to the Parliament and the Public Accounts (Enterprise) Committee	Four (4) months after end of financial year (end of January)	2. MOF- Investments Division 3. Line Ministry	BOD/external Auditor/ GMF&CS/ Corporate Secretary	2013		X		
Annual Performance Appraisal Reports	To facilitate ongoing monitoring.	Four (4) months after end of Financial Year. (end of January).	1. Line Ministry	Corporate Secretary	2014		X		<ul style="list-style-type: none"> Appraisal due to be undertaken as at end of January, 2017.
Administrative Reports	Under Section 66D of the Constitution of the Republic of Trinidad & Tobago, Act No 29 of 1999, State Agencies are required to report to the public on their performance annually.	End of June.	1. Line Ministry	CEO	FY2015 – submitted on Sept. 2016	X			<ul style="list-style-type: none"> Preparation of Administrative Report FY2016 to commence in April, 2017. Administrative Report FY2015 was submitted to MPU in September, 2016.

DOCUMENT	DETAILS	SUBMISSION DATE	RECEIVING AGENCY	RESPONSIBILITY	LAST REPORT SUBMITTED	YES	NO	PART LY	REASON(S) FOR NON-COMPLIANCE
QUARTERLY REPORTS									
Quarterly Returns Reports	State Enterprises are required to submit reports to the Investment Division to facilitate ongoing monitoring.	End of first month after each Quarter (i.e. end of January, April, July, October)	1. MOF- Investments Division	GMF&CS	March 31, 2017	X			
Quarterly Status of Loan /Overdraft/Investments in Securities Portfolios	To facilitate ongoing monitoring.	End of first month after Quarter. (i.e. end of January, April, July, October)	1. MOF- Investments Division	GMF&CS	March 31, 2017	X			
Quarterly Status Litigation	To facilitate ongoing monitoring.	End of first month after Quarter. (i.e. end of January, April, July, October)	1. MOF- Investments Division	Corporate Secretary			X		Litigation reports are outstanding for Q1 and Q2.
Corporation Tax/ Business Levy/ Green Fund Levy	To facilitate ongoing monitoring.	Last day of each Quarter (December, March, June, September)		GM FC&S	March 27, 2017	X			<ol style="list-style-type: none"> 1. Corporation Tax paid as at March 31, 2017 -\$00.00 2. Business Levy paid as at March 31, 2017 - \$53,957.26 3. Green Fund Levy as at March 31, 2017 - \$26,978.63
Internal Audit Reports	To facilitate ongoing monitoring.	Fourteen (14) working days after end of Quarter.	1. MOF- Investment Division	Internal Auditor	February 17, 2017	X			Outstanding Audit Reports for FY2016 were submitted to MOF.

MONTHLY REPORTS									
Monthly Cash Statements of Operations	To facilitate ongoing monitoring.	Fifteen (15) working days after each month end	1. MOF- Investments Division Line Ministry	GMF&CS	March 31, 2017	X			
Monthly Return of Award of Contracts	To facilitate ongoing monitoring.	Fourteen (14) working days after each month end	1. MOF-Investment Division	Procurement	April 4, 2017	X			Notice submitted for the months: Jan., Feb., and March, 2017.
Board Minutes	To ensure that the Board proceedings are within the framework of the Strategic Plan and GORTT policy decisions.	One (1) week following confirmation.	1. MOF- Investment Division	Corporate Secretary	April 18, 2017	X			Confirmed Minutes for meetings held in January and February, 2017 both were submitted to MOF& MPU on April 18, 2017.

Get into Green



with

SWMCOL

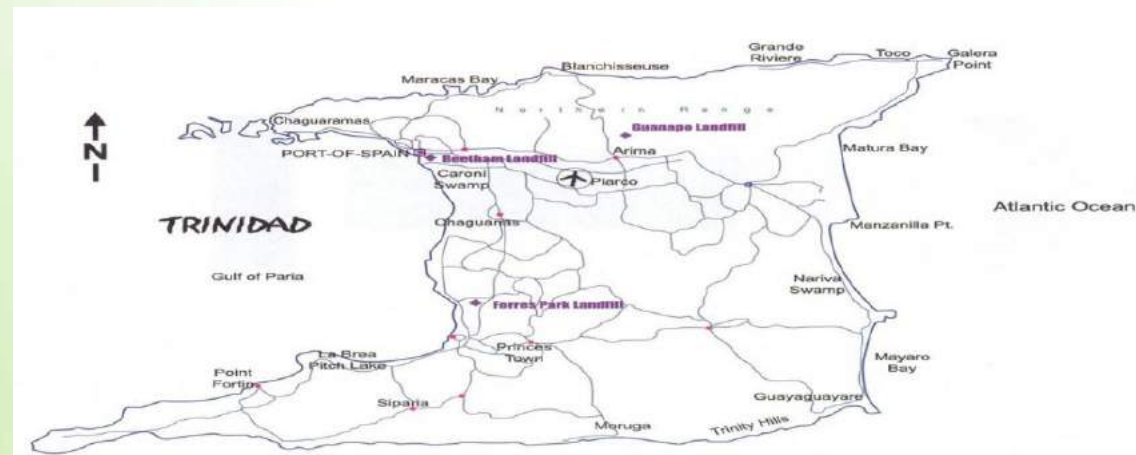
Your Partner In Defence Of The Environment

STRATEGIC FRAMEWORK 2015-2019

SWMCOL AT A GLANCE



- Established on November 12th, 1980 as a limited liability company, wholly -owned by Corporation Sole.
- Responsible for the management, collection, treatment and disposal of all wastes, including solid, liquid, hazardous and special waste in Trinidad and Tobago.
- Receives Government funding to manage the three (3) largest national Landfills: Beetham Estate which serves the northwest region of Trinidad; Forres Park which serves the southern and central regions and Guanapo which serves the northeast region.



- Provides waste management consultancy, technical support and project management to Municipalities and other public and private sector stakeholders.
- Total Staff of 210 of which 89 are permanent monthly, 120 are permanent daily paid and 8 are contracted.
- Current commercial lines of business: General Waste; Special Waste; Liquid and Hazardous Waste; Waste Paper Recovery; Portable Sanitation Rentals. Figure 1 summarises the existing business lines of SWMCOL.



★ Landfill Management

All systems of waste management require the support of well-managed landfills to dispose of the residues or discards from various operational processes.

SWMCOL manages and operates the following landfill sites in Trinidad:

- Beetham, which serves the northwest
- Guanapo, which serves the northeast
- Forres Park, which serves the central and southern regions

A National Integrated Waste Management System (NIWMS) is envisioned for the future of waste management in Trinidad & Tobago

The main features of the NIWMS include:

- Diversion of recyclable wastes such as compostable products, paper, plastics, glass, tyres, scrap metal, and electronic waste
- Diversion of biomedical and hazardous wastes requiring special treatment
- Establishment of transfer stations and material recovery facilities to provide more efficient waste transfer and separation

Under the NIWMS the quantities of waste requiring final disposal will be significantly reduced.



★ General Waste Collection

General Waste refers to commercial, residential or yard waste that poses little or no threat to its handlers or the environment.



SWMCOL leases bins in a variety of sizes to meet the needs of our customers and ensures that waste is collected and disposed in an environmentally sound and efficient manner.



★ Liquid Waste Collection

Liquid waste is any waste in a liquid state of matter. It includes industrial waste such as by-products from food-processing and production plants, municipal waste, chemical by-products, agricultural waste, oily waste, faecal waste, and wastewater.

Vacuum tankers are used to remove liquid waste from clients' premises. Once a service is requested, a site visit is conducted to ensure that the site is accessible and the service can be done.

Liquid waste that is removed is transported to either the Beetham Landfill for treatment and disposal or in the case of oil waste it may be taken for recycling.



SWMCOL's newest addition is a mobile dewatering system with the unique capability of extracting wastewater from sludge, or sludge from wastewater.

SWMCOL also undertakes the refurbishment and repair of sewage treatment plants.



★ Management of Special Waste

"Special" wastes are wastes that pose a threat to human health and the environment and thus require special handling and disposal processes.

They are usually non-biodegradable, voluminous, uncompactable, odorous, contaminated and unfit for use or reuse.

They require special handling, separation, containment, and pre-treatment or pre-processing to achieve proper disposal at the landfill.

The following lists some of the common types of waste that fall into this category:

- Asbestos Containing Materials
- Defective Food & Beverage Items
- Pharmaceutical Waste
- Poultry Waste (Offal)
- Abattoir Waste
- Used Tyres
- Derelict vehicles
- Waste from Ships & Aircraft
- Bulky household waste
- White waste (i.e. appliances)
- Obsolete or unserviceable machinery



★ Waste Paper Recovery

SWMCOL is one of the major pioneers of recycling in Trinidad and Tobago.

SWMCOL's paper recycling/recovery operation was formally commissioned in May 1991. Today, SWMCOL provides waste paper collection services to a number of commercial clients cross the country.

The following types of recyclable paper are targeted:

White Ledger – this refers to all types of white paper with or without print, excluding thermal fax paper. Most types of office paper fall into this category, including copy paper, letterheads, notebook paper and ledger paper.

Computer Paper – this refers to continuous-feed paper, usually solid white, or blue- or green-ink lined, that is used specifically for computer print-outs.

Coloured Paper – same as White Ledger but the paper is coloured.

Mixed Paper – a mixture of various grades of recyclable waste paper not limited by fibre content. This includes most types of clean, dry paper, including glossy paper, magazines, windowed envelopes, and sticky note pads.



★ Portable Sanitation Services

SWMCOL is the nation's leading rental service of portable toilets of all types, from a basic "porta potty" or portable toilet to deluxe styles suitable for elegant events. In addition to offering portable restrooms for virtually any occasion, event or situation, we pride ourselves on providing the most professional service in the business.

Our special event and construction specialists work closely with you to plan portable toilet solutions in locations across the country. We're always there with the right equipment when and where you need it. We have the experience, the capability, and above all a commitment to delivering the best service in the industry.



Mobile Trailer (w/Male & Female Units)

Regular Units

Flush units with lights

Ambassador (flush with sinks)

Wheelchair accessible units

Portable Shower Units

Executive Summary

SWMCOL has developed this Strategic Framework for the five (5) year period, 2015-2019, to address the immediate and long-term challenges of managing the nation's waste streams and to effectively deliver its core mandate which is, '***to manage the collection, handling, treatment and disposal of waste in Trinidad and Tobago***',

Predicated on the broader sectoral policy agenda of the Government of Trinidad & Tobago (GOTT), as articulated in the Integrated Waste Management Policy (NIWMP), 2013 and the National Environment Policy, 2006, this Strategic Framework provides a much needed **roadmap** for **the repositioning** of SWMCOL to the leader and provider of choice for environmentally-sound waste management services.

Recent feasibility studies conducted on behalf of the GOTT, assessed the existing waste management system and highlighted the various gaps and deficiencies to achieving a holistic, integrated and environmentally-sound waste management system. The gaps highlighted included, *inter alia*: institutional and organisational issues, technical and infrastructural issues, socio-economic issues, waste minimisation and recovery issues, regulation and enforcement issues and education and awareness issues.

This Strategic Framework sets a clear roadmap for SWMCOL to transform the national perception of waste as purposeless and to recognise waste as a valuable resource.

In order to achieve this, SWMCOL has considered not only the environmental and stakeholder issues inhibiting a change in perception, but also the deficiencies in its own internal capacity to lead the transformation of the waste sector. This approach to conceptualising this Strategic Framework would ensure that it is **DELIVERY-FOCUSED** and **RESPONSIVE** to the current and future needs of the waste sector.

Over the period 2015-2019, SWMCOL will realign its vision to the sectoral policies of the GOTT and refocus its efforts to **develop key waste management infrastructure and policies to maximise the extraction of value** from these resources under the theme '***Get into Green with SWMCOL***'.

SWMCOL will seek **TO DEVELOP MODERN RESOURCE RECOVERY** and **DISPOSAL INFRASTRUCTURE** and **STRENGTHEN** its **SYSTEMS, PROCESSES** and **COMPETENCIES**, **WHILE DEEPENING ITS RELATIONS WITH STAKEHOLDERS** and **CUSTOMERS** by focusing on these **five (5) priority areas and seven (7) associated goals**:

WASTE DIVERSION AND RESOURCE RECOVERY

GOAL 1: To reduce the health risks to the public and the environment by minimising land-filling and maximising resource recovery.

MODERN COLLECTION, TREATMENT AND DISPOSAL INFRASTRUCTURE

GOAL 2: To protect the health of workers, the public and the environment from the impact of improper treatment and disposal of hazardous and non-hazardous wastes.

GOAL 3: To safe guard human health and restore the environment by remediating existing unsanitary landfills and illegal dump sites.

WASTE INFORMATION MANAGEMENT AND SECURITY SYSTEMS

GOAL 4: To develop appropriate waste information monitoring and management systems that will provide accurate waste characterisation data for future planning.

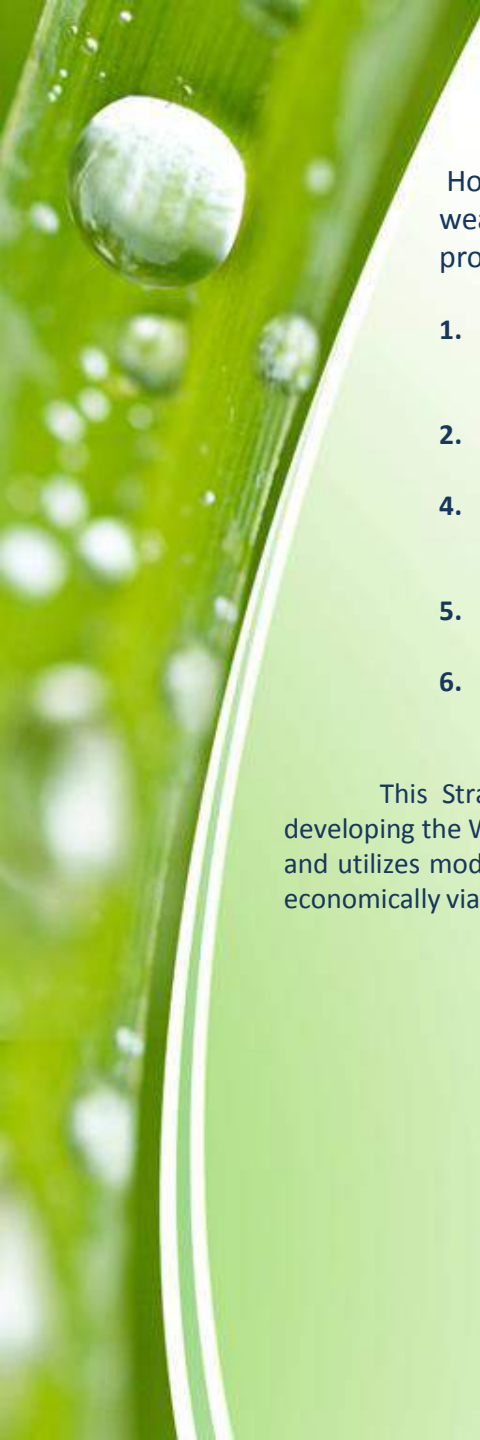
GOAL 5: To mitigate the adverse health and socio-economic impacts of inadequate landfill security systems.

COST RECOVERY AND REVENUE GENERATION

GOAL 6: To develop and implement appropriate economic instruments to support cost reduction and recovery and revenue generation that will lead to added shareholder value.

EDUCATION AND PUBLIC AWARENESS

GOAL 7: To foster and develop strong community and stakeholder commitment to responsible waste management.



However, as a result of the internal capacity insufficiencies at SWMCOL and the existing gaps and weaknesses in the local waste management system, **six (6) enabling strategies** were identified as proprietary measures. These strategies include:

- 1. Collaborate with key stakeholders to develop an appropriate incentive, penalty and enforcement legislative framework.**
- 2. Attract and retain highly skilled staff and build the capacity of the current staff.**
- 4. Cultivate cultural change within SWMCOL through accountability, ownership and appropriate organisational structures.**
- 5. Build strategic supply-chain partnership to facilitate the movement of end products and services.**
- 6. Improve the quality of service delivery by employing innovative and technologically driven processes to improve business competitiveness and customer loyalty.**

This Strategic Framework embodies a five (5) year perspective on deriving value from waste resources by developing the Waste Management Sector to an integrated and sustainable system that possesses adequate infrastructure and utilizes modern technologies for the collection, treatment and disposal systems that are environmentally sound and economically viable.

SWMCOL and the State of Waste Management Today


SWMCOL manages the three (3) largest landfills in Trinidad: Beetham Estate which serves the northwest region; Forres Park which serves the southern and central regions and Guanapo which serves the northeast region of Trinidad. The Studley Park Landfill in Tobago is wholly- managed by the Tobago House of Assembly .

The Forres Park site is the only site of the three (3) sites managed by SWMCOL, that was developed with engineered environmental protection systems comprising a leachate collection system and groundwater monitoring wells. The Beetham and Guanapo sites, however, were originally indiscriminate dumps where open burning of waste was practiced. Although, the latter sites were subsequently converted to managed landfills, they lack scientifically engineered infrastructural and environmental monitoring systems required to efficiently mitigate and monitor the risk of landfill pollutants and effluents being released to the environment. This risk is of great concern, since communities were developed within the vicinity of these sites over recent years. Additionally, the Beetham site, which is the largest of the three sites, is located within the Caroni Swamp, a sensitive natural ecosystem of mangroves and home to the national bird, the Scarlet Ibis.

The Beetham, Guanapo and Forres Park Landfills receive solid waste from a combination of domestic, commercial and industrial sources. It was estimated that over 700,000 tonnes of solid waste is generated annually in Trinidad, of which, approximately 95 percent is disposed by land-filling.



The GOTT provides a subvention to fund the operations of the landfills. Over the past five (5) years, SWMCOL has functioned in an evolving waste management environment. There has been increasing waste generation volumes and complexities, coupled with a global movement to the adoption of the Waste Management Hierarchy as the cornerstone to developing national strategic policies and practices to extract maximum value from resources while minimising the amount of waste generated (see [Figure 3](#)).



In the absence of national waste reduction and avoidance strategies, it is projected that national waste volumes will continue to increase, consistent with projected population growth, increased urbanisation, industrial expansion and increased consumerism. This translates to increases in waste management and operational costs, such as: collection, transportation, storage and other disposal costs.

Notwithstanding, that the GOTT has affirmed its sectoral agenda for the sustainable development of the Waste Sector, through the Integrated Waste Management Policy (NIWMP), 2013 and the National Environment Policy, 2006. The company has however faced funding constraints as a result of various management challenges which have impeded its ability to efficiently deliver its national mandate and lead the development of the waste sector, through the adoption of advanced, modern, integrated and sustainable waste management methods and solutions.

Therefore, within the context of the policy framework of the GOTT, SWMCOL has examined the:

- nature of the environment within which it operates;
- key environmental and stakeholder issues;
- internal capacity issues;
- infrastructural requirements;
- current legislative framework;

Table 1 below summarizes the main issues and potential opportunities for SWMCOL to strategically expand and lead the development of the waste sector.

TABLE 1 – Summary of Key Issues, Gaps and Opportunities for SWMCOL

KEY ISSUES	GAPS	OPPORTUNITIES FOR SWMCOL
<p>Waste Information Management and Security</p>	<ul style="list-style-type: none"> ■ Manual information collection system ■ Lack of information management and dissemination systems ■ Inadequate security measures 	<ul style="list-style-type: none"> ■ Waste information collection, capturing and recording systems ■ Legislated reporting requirements for stakeholders ■ Security Infrastructure
<p>Waste Collection Services</p>	<ul style="list-style-type: none"> ■ Inflexibility of current waste collection systems to support source-separated collection ■ Lack of Transfer Stations within waste centroids ■ High transportation/ Contractor costs ■ Aged / Inadequate SWMCOL vehicle fleet ■ Subvention funded as oppose to market driven 	<ul style="list-style-type: none"> ■ Structured integrated waste collection systems for Municipal Corporations ■ Development of Transfer Stations ■ Shared role for SWMCOL in waste management at Municipal Corporations ■ Strategies to deal with illegal dumping ■ Implementation of Fleet Modernisation Programme ■ Develop appropriate cost recovery mechanisms
<p>Processing and Treatment</p>	<ul style="list-style-type: none"> ■ Lack of physical, biological and or thermal processing of municipal waste which is landfilled 	<ul style="list-style-type: none"> ■ Materials Recovery Facility for physical processing/ separation of co-mingled Municipal waste ■ Composting facility for the biological processing of organic wastes ■ Thermal Treatment to process hazardous and biomedical waste

KEY ISSUES	GAPS	OPPORTUNITIES FOR SWMCOL
Disposal	<ul style="list-style-type: none"> ■ Inefficiency of current facilities ■ Co-disposal of hazardous, biomedical waste , organic and recyclable with Municipal waste ■ Existing landfills in need of rehabilitation ■ Disposal of construction and demolition waste 	<ul style="list-style-type: none"> ■ Construction of a new engineered sanitary landfill ■ Waste diversion and recovery programs ■ Developing rehabilitation programs for existing sites and illegal dump sites
Institutional/ Legislation	<ul style="list-style-type: none"> ■ Lack of enabling legislation 	<ul style="list-style-type: none"> ■ Greater involvement in the development of guiding policies and enabling legislation
Waste minimisation and diversion	<ul style="list-style-type: none"> ■ Lack of adoption of Producer pay, Polluter Pay and User pay principles ■ Lack of MMR facility to recover co-mingled municipal wastes ■ Lack of readily available markets 	<ul style="list-style-type: none"> ■ Developing waste minimisation and recycling programs (Organic, paper, glass, plastics, tyres, steel ,aluminium, e-waste) ■ Greater involvement in developing enabling legislation ■ Develop partnerships and secure markets for recyclable wastes.
Education, Capacity building and awareness needs	<ul style="list-style-type: none"> ■ Shortage of skills and expertise in waste management ■ Inadequate education and awareness on waste management issues ■ Low awareness of the services provided by SWMCOL. 	<ul style="list-style-type: none"> ■ Developing appropriate programs to increase awareness ■ Attracting and retaining highly skilled staff ■ Partnering with educational institutions to develop research and development programmes

THE VISION OF SWMCOL

EVOLVE from this...



To this....



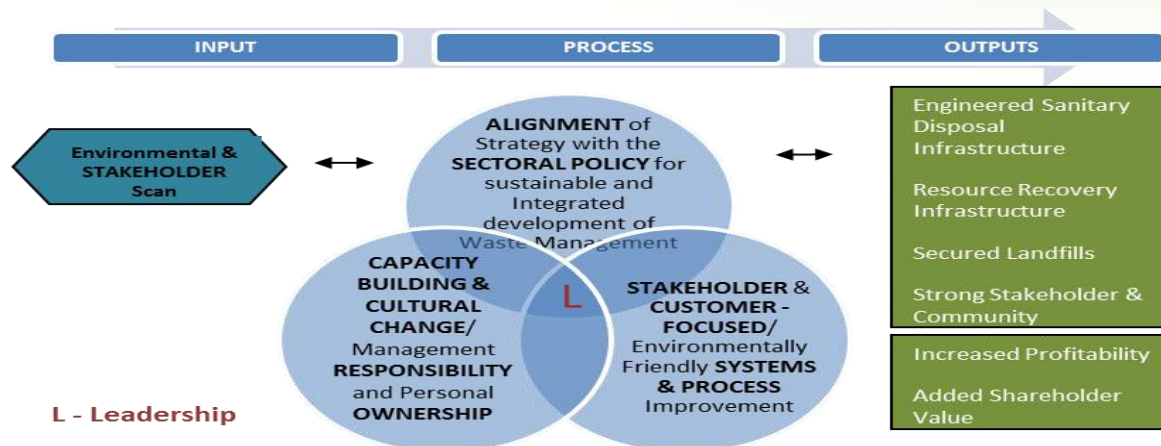
REALISING THE VISION



To chart the way forward, the Board of Directors and the Chief Executive Officer, initiated a collaborative strategic planning process which engaged both internal and external stakeholders.

Staff forums were held to provide a platform for staff across all levels of the company to express their views. Round table sessions were also held with key stakeholders to consult on the company's proposed future plans for the transformation of the waste sector to recognise waste as a valuable resource that can generate further economic activity.

This collaborative approach to examining the environmental and stakeholder issues, in addition to the internal capacity of the organisation was critical to the conceptualising the Strategic Framework 2015-2019. This approach (illustrated below) ensured that the Framework was **RESPONSIVE** to the current needs of the waste sector and **DELIVERY-FOCUSED** to accomplishing the business goals of the company.



REALISING THE VISION



Realigning its vision to the sectoral policy of the GOTT, SWMCOL will refocus its resources over the period 2015-2019, to develop key waste management infrastructure and maximise the extraction of value from recoverable and recyclable waste resources under the theme 'Get into Green with SWMCOL'.

This umbrella theme of 'Get into Green with SWMCOL', is a call to action by SWMCOL and is intended to promote the transformation of the attitudes and behaviours of individuals, communities and the public and private sectors towards waste. This will be done through the adoption of international best practices for waste management, the introduction of advanced technologies for waste recovery, treatment and disposal and positive reinforcement (legislative and otherwise) aimed at preserving the environment.

To support this call of action, SWMCOL will work to close the gaps and strengthened the systems of **five (5) priority areas**, through the parallel accomplishment of **seven (7) associated goals**:

WASTE DIVERSION AND RESOURCE RECOVERY

GOAL 1: To reduce the health risks to the public and the environment by minimising land-filling and maximising resource recovery.

MODERN COLLECTION, TREATMENT AND DISPOSAL INFRASTRUCTURE

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GOAL 4: To develop appropriate waste information monitoring and management systems that will provide accurate waste characterisation data for future planning.

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COST RECOVERY AND REVENUE GENERATION

GOAL 6: To develop and implement appropriate economic instruments to support cost reduction and recovery and revenue generation that will lead to added shareholder value.

EDUCATION AND PUBLIC AWARENESS

GOAL 7: To foster and develop strong community and stakeholder commitment to responsible waste management.

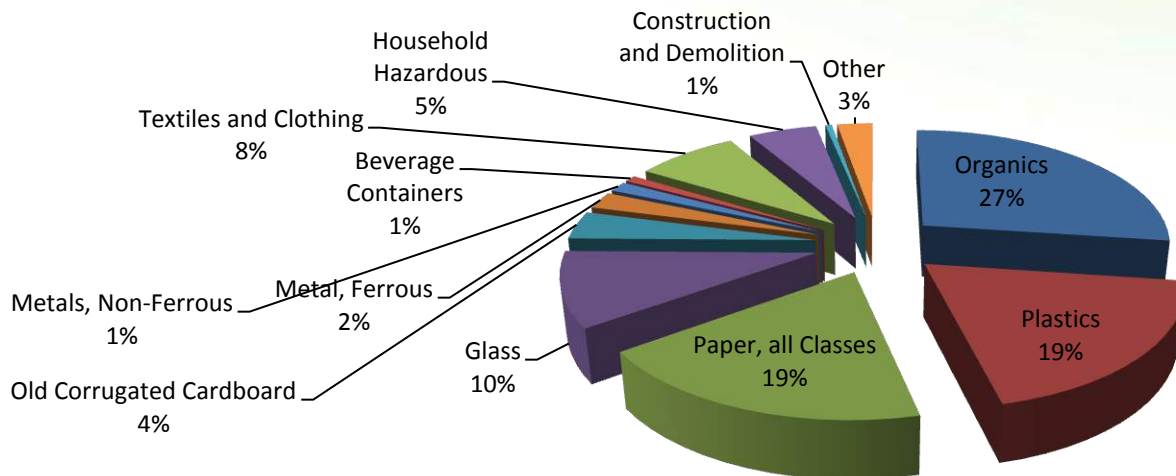
Priority Area - 1


Waste Diversion & Resource Recovery

Resources currently move through our local economy in a linear manner from extraction - to processing and production - to consumption and finally -to disposal through land-filling. This not only leads to a range of environmental and public health problems, but it is in effect wastage of valuable resources.

Land-filling of waste is equivalent to burying natural resources which could be used as secondary raw materials or as sources of energy.

The recent waste characterisation study¹ reported, that of the estimated 700,000 tonnes of waste entering the landfill annually, about one third is from Institutional, Commercial and Industrial (ICI) sources and two-thirds from households as Municipal Solid Waste (MSW). The study highlighted that the dominating materials in the MSW stream were organics at 27 percent , plastics at 19 percent , paper also at 19 percent and glass at 10 percent. When combined with the other non-dominating recyclable in the MSW stream, a total of 84 percent of the MSW stream was recyclable. See [Chart 1](#) below.





SWMCOL recognises that increasing urbanisation and rising consumerism are the main socio-economic factors driving the requirement for diversion of waste from landfills. However, with limited landfill space and the 'not-in-my-backyard' mentality of citizens, concerted measures must be taken to address the nation's reliance on landfilling.

The NIWMP speaks to the establishment of a National Waste Diversion/ Minimization Strategy to address waste avoidance and reduction at source and shared responsibility through Generator Responsibility Schemes (GRS). While SWMCOL is positioned to provide technical and advisory support, the development process of the enabling legislative and enabling framework would involve consultation and involvement from a multiplicity of stakeholders and Government Agencies.

SWMCOL's GOAL - 1

To reduce the health risks to the public and the environment by minimising land-filling and maximising resource recovery.

Consistent with the NIWMP, the company will seek to **incrementally reduce the quantity of waste requiring landfilling by 50 percent within ten (10) years** by employing **sustainable collection measures and waste recovery strategies**, that are of international best practice standards, to recover recyclable materials from the ICI waste stream and the co-mingled MSW stream.

The objectives of SWMCOL are to:

- **establish appropriate Transfer Stations out-fitted with resource recovery infrastructure on a phased basis over the next five (5) years.**
- **support business development opportunities in recycling and create sustainable employment.**

Congruent with the sectoral policy, to concentrate waste disposal to a single engineered sanitary landfill, it is economically prudent to develop appropriately sized transfer stations at strategic locations, in proximity to the centroids of waste generated throughout the country.

Although, the 2010 waste characterization study recommended a system of seven (7) transfer stations at maximum and four (4) transfer stations at minimum, SWMCOL will in the first instance and on a phased basis, establish Transfer Stations at the landfill sites currently managed by the company.

As part of the development of an integrated collection, processing and disposal system, SWMCOL will conduct further analysis to determine the need and feasibility of siting additional Transfer Stations within the network. Consideration, however will be given to the diversion and recovery initiatives implemented by the company, haulage costs and the associated siting risks, given that most centroids are located either close to or within densely settled communities.

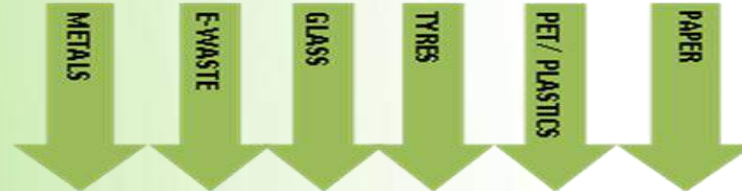
The Transfer Station will contain:

1. **Loading and unloading bays; and**
2. **Material Recovery Facilities (MRF) comprising a state-of-the-art sorting line, multi-purpose shredders, balers and storage area.**

This initiative require major capital investment and SWMCOL will explore all financing options available, including, government funding and debt financing. Nonetheless, the establishment of MRFs will place the company in a better position to expand its current paper recovery operations and to undertake the recovery of organics for composting, tyres, e-waste, metals and construction and demolition waste.



TRANSFER STATIONS & MATERIALS RECOVERY FACILITIES (MRF)
Beetham/ Forres Park/
Guanapo




DOWN STREAM INDUSTRIES



COMPOST

FARMERS



Additionally, the company will continue to advance the partnership formed with the Ministry of the Environment and Water Resources through the Environmental Management Agency (EMA) and the Green Fund and other state agencies, such as, the Institute of Marine Affairs (IMA) and the CEPEP Company Limited, to execute a National Beverage Container Clean-up Project (BCCP) to recover improperly disposed beverage containers (PET plastics and glass bottles).

The MRFs will not provide additional employment opportunities for both skilled and unskilled labour, but also feedstock to the PET processing facility constructed under the BCCP.

Further, the company will explore end-markets and private and public partnerships with innovative industries that span the creative, technological and manufacturing sectors, to supply the recovered resources as secondary raw materials in the production of recycled products.

Priority Area - 2

Modern Collection, Treatment & Disposal Infrastructure

Even with a significant reduction in volume of waste being produced and a greater emphasis on waste reuse and recycling, there will always be a portion of the waste stream that cannot be practicably or economically avoided or recovered.

Residual waste has to be managed in an environmentally sound manner. As a priority, robust collection, treatment and disposal systems have to be in place to handle those residual wastes responsibly, with the objective to protect the health of workers - the most valuable resources of SWMCOL, the wider public and the environment, through sound management practices.

Therefore, over the period 2015-2019, SWMCOL will promote and adopt measures to minimize and where possible eliminate the risk of any significant adverse effects associated with the collection of waste and the operation of waste treatment and disposal facilities.

SWMCOL's GOAL - 2

To protect the health of workers, the public and the environment from the impact of improper collection, treatment and disposal of hazardous and non-hazardous wastes.

The objectives are to ensure sustainable collection practices, the proper treatment of all residual MSW, special waste and hazardous waste and to ensure sufficient long-term waste disposal capacity that is environmentally and publicly acceptable.

SWMCOL will therefore:

- **Implement a Fleet Modernization Programme;**
- **construct a new Engineered Sanitary Landfill on a phased basis;**
- **establish an Anaerobic Composting Facility on a modular basis; and**
- **establish a Hazardous Waste Treatment Facility (incineration and autoclaving)**

Under the current legislation, the Ministry of Local Government (MOLG) is responsible for the collection of MSW through the fourteen (14) Municipal Corporations. SWMCOL will continue to support MOLG by managing the tendering process, given that approximately 90 percent of this collection function is performed by private contractors. Moreover, SWMCOL will actively assist Municipalities to develop a structured and integrated waste collection system that ensures efficient servicing schedules and value for money from private MSW collection contractors.

To revamp and strengthen its own waste collection capability, SWMCOL will implement a phased Fleet Modernisation Programme over the period 2015-2019, at a total cost of approximately \$28 Million.

Approximately 40 percent of the current fleet of vehicles owned and operated by SWMCOL are inoperable and the company has faced significantly high recurrent maintenance cost for the fleet annually. The current state of these operational assets affect the quality of service the company provides to its existing customers and its ability to develop and expand to new markets (particularly, in the Central, South and Tobago regions) and ultimately its bottom-line profits.

The Fleet Modernisation Programme will entail:

- 1. The acquisition of vehicles to supplement the existing fleet and the replacement of 40 percent and refurbishment of 37 percent of the existing fleet; and**
- 2. The development of appropriate operational, maintenance and quality assurance procedures and systems.**



Central to the transformation of the waste management system is the construction of an Engineered Sanitary Landfill as a long-term disposal solution for all inert waste and residual waste from the MRFs.




It has been noted that the GOTT has signed a Memorandum of Understanding (MOU) with the Government of Nova Scotia, endorsing the adoption and application of the Nova Scotia model of integrated waste management in Trinidad and Tobago. Therefore, SWMCOL will pursue co-operative ventures under this MOU, to utilise the expertise of Canadian waste companies and capitalize on their familiarity with the local waste sector, to duly site, design and construct an engineered landfill with a twenty-five (25) year capacity development plan.

This landfill will feature:

- 1. a buffer zone determined by international best standards;**
- 2. Environmental control systems for storm-water, leachate and landfill gas management and monitoring;**
- 3. a daily cover management system; and**
- 4. disposal standards and regulations.**

The new engineered landfill will be the central point of final disposal for non-recoverable wastes and inert hazardous ICI and bio-medical wastes.

However, in order to centralize final disposal, it is imperative that SWMCOL address the challenges of inadequate treatment facilities. Organic, bio-medical and other hazardous waste streams must be treated before being disposed. Therefore, in addition to the establishment of MRFs (to sort and process recoverable wastes), the company will establish a composting facility and a hazardous waste treatment facility, as part of its infrastructural development network. The company will explore public-private partnerships and government financial assistance to establish these conversion technologies to extract value from organics and to bring hazardous wastes to an inert state, respectively.



The availability of proper collection and treatment equipment and infrastructure – compactors, dewatering trucks, hook hoists, transfer stations, MRFs, composting facilities and hazardous waste facilities - are all the required supporting infrastructure to a centralised environmentally-sound engineered landfill. **The establishment of these infrastructural advances are critical to closing the loops in the local waste sector.**

SWMCOL's GOAL - 3

To safeguard human health and restore the environment by remediating existing unsanitary landfills and illegal dumpsites.

Only through the availability of adequate infrastructure (Transfer Stations, MRF, Engineered Landfill, Composting Facility and Hazardous Waste Facility) would it be possible for the company to action its agenda to remediate the Beetham and Guanapo landfill sites, in addition to other illegal dump sites.

Remediation care of dumps and unsanitary landfills is generally a long process that is dependent on the waste types, volumes and the existing environmental control infrastructure at the sites. The normal timeframe to full remediation for similar type landfills is approximately twenty (20) to thirty (30) years.

The objective is to:

- 1. contain existing waste at the sites;**
- 2. clean up contamination at the sites; and**
- 3. maintain and monitor environmental controls to ensure that there are no further risks of environmental contamination.**

Usually, the remediation plans for a landfill are incorporated into the preliminary planning and initial design of a landfill, to determine the suitability for remediation. However, the Beetham and Guanapo Landfills did not benefit from that type of preliminary planning, as they were initially open dumps in the 1980s. Remediation care requires substantive financial investment. As such, the company will actively engage stakeholders to access the required funding to develop the comprehensive remediation plans for these sites.

In the interim of remediating the sites, SWMCOL will continue to establish and implement control measures to curb fires, odours, indiscriminate salvaging and the overall impact to the surrounding mangrove wetland.

Priority Area - 3

Waste Information and Security Systems

The key to effective monitoring is the availability of relevant, adequate and accurate information. There is a need for the collection and analysis of reliable information to inform future planning for the sector.

Historically, SWMCOL collects data manually which has not always been efficient and has resulted in limited data collection.

WASTE INFORMATION MANAGEMENT AND SECURITY SYSTEMS

GOAL 4: To develop appropriate waste information monitoring and management systems that will provide accurate waste characterisation data for future planning.

GOAL 5: To mitigate the adverse health and socio-economic impacts of inadequate landfill security systems.

SWMCOL will therefore adopt new technologies consistent with industry best practices to address the information gaps, viz, limited consistent and accurate information and the lack integrated reporting systems.

SWMCOL will improve its existing data collection systems and processes in the short to medium term to improve the quality of data captured. The long-term objective of the company is to implement **Geographical Information Systems (GIS)** to monitor the flow of waste through the establishment of an industry database. This will entail the tracking of waste generation, collection, re-use, recycling, reprocessing and disposal.

In addition to the information system, another critical component to efficient operations is the security infrastructure and systems.

Salvagers commonly breach the security boundaries, in order to access the comingled wastes disposed at the landfill sites and engage in open burning activities to extract copper material from for examples car tyres, exposing nearby communities and the public to the hazards of landfill fires.



Further, the company has faced challenges in securing its fixed assets, notably – portable toilets, bins and fleet vehicles.

To mitigate these challenges, SWMCOL will implement a fire mitigation and prevention strategy. As an initial step, SWMCOL will undertake on a phased-basis a number of security project(s):

- 1. an upgrade of the camera system to infrared camera technology including thermal imagery;**
- 2. the acquisition of all- terrain vehicles;**
- 3. the expansion of the existing Global Positioning Systems (GPS); and**
- 4. the introduction of Radio Frequency Identification (RFID) tags.**

Priority Area - 4 Cost Recovery and Revenue Generation

The viability of efficient waste management services is dependent on the balance of the cost recovery and revenue generation frameworks and supporting environmental policies. This is true for developed countries and has also been proven to be true for Trinidad and Tobago.

The MSW sector is primarily funded by the GOTT - SWMCOL receives government subvention to manage the landfills and Municipal Corporations also receives government subvention to fund the collection of MSW. On the other hand, the ICI sector features SWMCOL competing with private business to collect and dispose of generated wastes.

Collectively, the heavily subsidized and unregulated MSW sector and the underdeveloped ICI waste sector, do not fully capture the costs of landfill disposal as compared to collection and transportation costs. As such, these sectors have not promoted optimal utilization of waste services nor provided the required incentives (regulatory and economic) to reduce waste generation and ensure the equitable allocation of the associated costs of collection, recovery, processing and the full environmental costs of disposal.

In this regard, SWMCOL will review its cost recovery and revenue generation frameworks for all its commercial lines, with a view to developing and implementing economic instruments that will promote long-term behaviour modification and greater ownership of responsibility from all waste generators.

SWMCOL's GOAL - 6

To develop and implement appropriate economic instruments to support cost reduction and recovery and revenue generation that will lead to added shareholder value.

The principal objective of SWMCOL is to sustainably protect and conserve the environment. However, in a market economy, with economic agents, consideration has to be given to the implementation of financial incentives, in a structured and formal approach, as a means to improving the cost-effectiveness of waste management and by extension, environmental management.



Through its line Ministry, SWMCOL will:

- **institute a multi-stakeholder process involving public sector institutions, the private sector and civil society, among others, to identify and implement economic instruments for waste management.**
This will entail the analysis of the feasibility of introducing deposit-refund schemes and other Generator Responsibility Schemes, including appropriate user and disposal charges at the landfills to support greater cost effectiveness in waste minimization, diversion and recovery.
- **initiate the process to strengthen the institutional and legislative capacity in the assessment, design and implementation of economic instruments.**

To enhance its revenue generating capability, SWMCOL will:

- **implement cost-saving initiatives to reduce the main drivers of operational costs;**
- **Implement revenue generating initiatives.**
Over the period 2015-2019, SWMCOL will launch a marketing campaign to reposition its brand. The company will also revise the pricing strategy for its commercial lines in order to support its objective of achieving operational excellence.

Priority Area - 5 Education and Public Awareness

Through the *'Chase Charlie away'*, anti-litter and illegal dumping campaign and the *Community & Youth Outreach Programme (CYOP)*, SWMCOL over the years, has been actively educating and sensitizing communities, the private sector and Non-Governmental organizations on protecting and conserving the environment through proper waste management practices.

Over the period 2015-2019, SWMCOL will enhance and expand its *Public Education, Awareness and Communication Programme* under the umbrella theme of *'Get into Green with SWMCOL'*.


EDUCATION AND PUBLIC AWARENESS

GOAL 7: To foster and develop strong community and stakeholder commitment to responsible waste management.

The programme will comprise a series of initiatives to promote increased public interaction, participation and ownership in support of the waste diversion and recovery strategies of SWMCOL. The objectives will be to:

1. **fulfill the public education and awareness objects outlined at Chapter 31 in the Ordinance of the company:**
 - *To educate the public on the hazards of poor sanitation and on their role in maintaining a clean and healthy environment; and*
 - *To maintain close liaison with community groups and other public and private agencies in planning and undertaking country-wide and region-wide clean-up campaigns and to encourage public participation in such initiatives.*



- 
2. educate and promote the 'Four Rs' - Reduce, Reuse, Recover, Recycle;
 3. provide targeted visibility for the services and initiatives of the company; and
 4. provide a forum for multi-stakeholder feedback on the wider waste management strategy and institutional issues.

Implementation Framework

The Strategic Framework 2015-2019 reflects an inclusive and integrated process of strategic planning. The five-year strategic planning cycle outlines strategic goals and strategies that have been developed through widespread stakeholder involvement and revolves around the overall Mission, Vision, Goals and Objectives of SWMCOL.

The Executive Management Team will have the primary oversight and overall responsibility for leading and supporting the implementation of major initiatives outlined in the Framework. During implementation, a series of strategies will be designed to move SWMCOL forward towards the accomplishment of its goals. The five (5) priority areas and seven (7) goals identified will be developed into a series of three-year Operational Plans, which will have at its core a system of SMART objectives, activities, measures/indicators, targets, timelines, resource needs and responsibilities/accountabilities.

An integrated review process of the Framework will be established through a series of annual and biennial reviews of the Operational Plan. Progress will be monitored according to the alignment of objectives as reflected in meeting Key Performance Indicators (KPIs) targets.

The success of this Framework will depend on the commitment of all stakeholders and the availability of the required funding both recurrent and non-recurrent. The five priority areas underpinning the strategic direction are expected to remain constant, but opportunities and unforeseen events may mean that components of the plan would have to be revised accordingly, giving consideration to resources, successes, current conditions and the guiding sectoral policy.

The monitoring and evaluation of the Framework will be undertaken utilising the Balance Scorecard (BSC) management system to monitor organisation performance against the attainment of the strategic goals. Thereby, establishing accountability; and developing an incentive framework for goal achievement. This implementation strategy will also serve as a tool for organisational learning, communication, strategic change, and improvement of existing management processes.



SUMMARY REPORT
SWMCOL HSE. LEGISLATIVE COMPLIANCE
REPORT.DRAFT2.03.2016



REPORT#SWM.HSE-OSHA.EMA.COMPLIANCE REPORT.03.2016
(Submitted to Ria Ramdeen for MoPU)

REVIEW DATE: MARCH 2016

Executive Summary

SWMCOL’s quarterly Health, Safety and Environmental legislative compliance review was conducted in March 2016. The purpose of these reviews is to identify areas of non-compliances with a view toward implementing compliant actions within reasonable timeframes. This report reflects the overall Company compliance status and that of each department / operational site. It should be noted that the overall compliance status is non-linear and subjected to the dynamics of the operations and therefore reflect the overall position of the company at the time of the review.

The primary Health, Safety and Environmental legislations reviewed for compliance are namely:-

- (i) The Occupational Safety and Health Act 2004 of T&T (OSHAct),
Sections; II-General Duties; IV-Safety; V-Fire; VI-Health and VII-Welfare
- (ii) The Environmental Management Act 2000 (EMA) and Regulations under;
The Air Pollution Rules, 2014; The Water Pollution Rules, 2001;The Noise Pollution Control Rules, 2001;
The Certificate of Environmental Clearance (CEC) Rules, 2001

The *non-weighted* compliance scale below was used to evaluate and report on the compliance status of the organisation;-

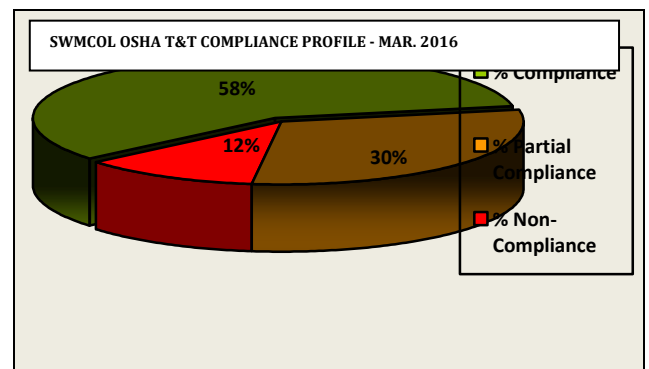
FULL COMPLIANCE;	Evidence that ALL provisions have been made in accordance with the stipulations of the legislation and recognised HSE regulations
PARTIAL COMPLIANCE;	Provisions to meet the requirements of the HSE legislations and or regulations are; work in progress or that one or more of SWMCOL’s operational sites have recorded full compliance.
NON-COMPLIANCE;	No provisions to comply with the requirements of the HSE legislations and or recognised regulations are evident.

Key Findings; OSHAct Compliance

SWMCOL’s attained an overall 58% full compliance, 30% partial compliance and 12% non-compliance to the OSHAct for the sections reviewed. There was an overall improvement in the compliance by three percent (3%), mainly attribute to improvements made in the welfare facilities at NAMDEVCO, Beverage Container Recycling Facility (BCRF), Guanapo and Tobago, the closure of the Paper Recovery Facilities and signage and distribution of the HSE Policy statement by the CEO.

Table : SWMCOL OSH Act T&T Compliance Profile – Mar.2016

SWMCOL COMPLIANCE PROFILE to the T&T OSHAct.2004:					
Period 2012-2016					03/2016
Scale	March 2012	Sept.– Dec. 2012	May 2013	May 2014	March 2016
% COMPLIANCES	45%	48%	46%	53%	58%
% PARTIAL COMPLIANCES	39%	35%	42%	32%	30%
% NON-COMPLIANCES	16%	17%	12%	15%	12%



The table below gives a breakdown of SWMCOL’s Compliance profile to the OSH Act T&T by the sections reviewed.

Table: SWMCOL Compliance Profile according Sections of the OSH Act T&T 2004 -Mar.2016

OSHA SECTIONS REVIEWED	% FULLY COMPLIANT	% PARTIAL COMPLIANCE	% NON-COMPLIANT
SECTION VI - HEALTH & SECTION VII – WELFARE	80%	13%	7%
PART II-GENERAL DUTIES of the EMPLOYER 6. (1)	44%	35%	21%
PART IV- SAFETY	53%	47%	0%
PART V- FIRE	58%	13%	17%

While there were OSHA non-compliances detected in various sections of the Act, the majority of the non-compliances were experienced under PART II - General Duties of the Employer and Section V – Fire. This was mainly due the deficient resources to implement safe work procedures in particular proper landfill fire prevention and mitigation measures such as; daily covering of waste; installation of effective fire response and suppressant infrastructure and equipment; the non-issuance of the Statutory Fire Certificates for the Beverage Container Facilities (accumulation of combustibles) in the Transport and Maintenance Department and the Head Office.

Other major OSHA Non-Compliances and areas identified for improvement are listed below and in APPENDIX 1.

Sections VI and VII - Health and Welfare

- ✓ Upgrade of Welfare Facilities; Toilets, Changing / Locker Room, Lunch Room; Beetham, Guanapo and Forres Park landfills
- ✓ Upgrade / provision of office spaces for operational / administrative staff at; Beetham
- ✓ Upgrade of Security Housing Facilities – Forres Park, Beetham and Guanapo
- ✓ Lack of pipe borne water supply to the sites ; Beetham, Forres Park & Guanapo
- ✓ Upgrade of Workshop; Mechanics, Welding and Wash Bay to allow for better housekeeping and safe work systems
- ✓ Provision of Locker facilities ; Beetham Landfill and PM staff
- ✓ Upgrade of Drainage at All landfill sites (drains are being clogged with materials from salvaging activities) and the Beetham Yard
- ✓ Provision of roadway Lighting ; All Landfill sites

PART II - General Duties of the Employer

- ✓ Provision of resources to implement improvements in Landfill Operations & Fire Mitigation measure, Control of salvaging, Inspection of contractors and Safe Work Procedures; All Landfills
- ✓ Improvement in preventative maintenance programmes, calibration, certification programme for vehicles, equipment / machinery and tools – T&M
- ✓ Implementation of the Hazardous Communication Programme (HAZCOM).

PART IV - Safety

- ✓ Provision of resources to upgrade the frontal access and perimeter fencing on all landfills and leachate ponds; Beetham, Guanapo and Forres Park
- ✓ Implementation of safe work systems – All departments.

PART V - Fire

- ✓ Provision of resources to implement improvements to; Fire Prevention Measures, Fire Detection and Response Equipment & Infrastructure at all landfills; Beetham, Forres Park and Guanapo. Measures such as; Daily

Compacting and Covering, Alarms, Fire Hydrants, Fire Suppressant System, Access Roadways, Control of salvaging.

Key Findings; EMAct Compliance

SWMCOL’s current compliance to the EMAct is 20%. The main areas of non-compliances were identified as the incomplete statutory registration of source emission to Air and Water related to all the landfills and the BCRF. The Company in the process of meeting with the Environmental Management Authority (EMA) to determine a way forward with this as the Landfills are treated under special provisions. Additionally baseline emissions levels has to be quantified. Once these requirements are met compliance will then be measured by any limits / standards imposed upon SWMCOL by any permits which may come into effect.

SWMCOL COMPLIANCE PROFILE TO THE EMAct 2000		
Number of Actionable Items	Items Completed	% Compliance
20	4/20	20

The table below gives a breakdown of the compliance by the sections reviewed

EMA SECTIONS REVIEWED	% FULLY COMPLIANT	% NON-COMPLIANT
ENVIRONMENTAL MANAGEMENT ACT, 2000, 35(2) – CERTIFICATE OF ENVIRONMENTAL CLEARANCE (CEC)	100%	0%
THE AIR POLLUTION RULES, 2014 – Registration Only	40%	60%
THE WATER POLLUTION RULES, 2001	12.5%	87.5%
THE NOISE POLLUTION CONTROL RULES, 2001	0%	100%
THE CERTIFICATE OF ENVIRONMENTAL CLEARANCE (CEC) RULES, 2001, 7. (2) – DISPLAYED	0%	100%

Areas for EMA Cmpliance improvement were identified as follows:-

Air Pollution Rules; Water Pollution Rules

- ✓ Air and Water Quality Baseline Data; All Landfills and BCRF
- ✓ Air and Water Source Emissions Registration and Reporting for; All Landfills and BCRF
- ✓ Air and water Quality Monitoring ; All landfills and BCRF

Noise Pollution Control Rules

- ✓ Conduct Noise Surveillance Assessment; BCRF

CEC

- ✓ Display CEC certificate at BCRF

Areas for improving Environmental Pollution Mitigation:-

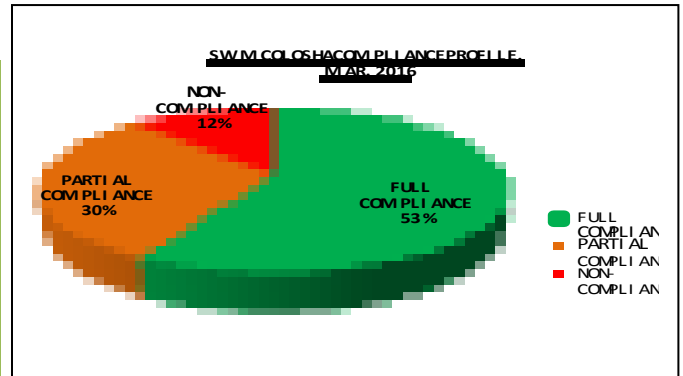
- ✓ Provision of resources to implement improvements to Fire Prevention Measures and Fire Detection and Response Equipment & Infrastructure at all landfills ; Beetham, Forres Park and Guanapo. Measures such as; Daily Compacting and Covering, Alarms, Fire Hydrants, Fire Suppressant System, Access Roadways, Control of salvaging at All Landfills
- ✓ Provision of resources to install Gas and Leachate Management Systems at all three landfills
- ✓ Provision at resources to expand the Environmental Quality Surveillance to include ground and surface water monitoring at all landfills.

APPENDIX 1 - SWMCOL-MAJOR OSHAct NON-COMPLIANCES; ACTIONABLE ITEMS.03.2016

SWMCOL COMPLIANCE PROFILE.MARCH.2016

SWMCOL COMPLIANCE PROFILE to the T&T OSH Act.2004, SECTIONS:- PARTS; II-GENERAL DUTIES, IV- SAFETY, V- FIRE, VI-HEALTH and V11 WELFARE
Period 2012-2016 . 03/2016

OSHA COMPLIANCE PROFILE:	MARCH 2012	DEC 2012	MAY 2013	MAY 2014	March 2016
OSHA FULL COMPLIANCES	45%	48%	46%	53%	58%
TOTAL OSHA PARTIAL COMPLIANCES	39%	35%	42%	32%	30%
TOTAL OSHA NON-COMPLIANCES	16%	17%	12%	15%	12%



SWMCOL-MAJOR OSHA NON-COMPLIANCES

The following Significant Health and Safety Concerns and OSHAct Non-Compliances have been identified from the annual General Health and Safety Risk Assessments and updated with information provided from the quarterly health and safety facility inspections. Note this is a partial list. These OSHA concerns are reported in the QHSE monthly performance reports. The items highlighted in green are being addressed; those highlighted in red are critical areas of concern that needs to be addressed in the short term.

- **Head office – O/standing – The Emergency Evacuation Procedure and access.**
 1. Fire certificate O/Standing from Fire Services - 1
- **Portable Toilet Services – NAMDEVCO**
 2. Unclean male washroom and changing room
 3. Proximity to Market – not an appropriate site for Portable Toilet Services (PTS) as this may result in adverse environmental impacts such as offensive odour discomfort and contamination of water ways.
 4. Gate need repairs, hinges damaged, unstable and is a hazard, as it can fall on vehicles / persons.
 5. **Manual Handling of PT units – unsafe practice. Hydraulic lift equipment installed in some vehicles. Still not installed on all vehicles.**
- **BCRF**
 6. Fire Hazard - Unsafe storage of large piles of post-consumer plastic bottles
 7. Fire Certificate
- **Beetham – Transport & Maintenance Yard (Workshops- Mechanic, Welding, Tyre, Spray Painting and Wash Bay**
- **S6 – Safe Maintenance of Plant, Work System, Unsafe Work Conditions, Inadequate and Unsuitable Tools/Equipment:-**
 8. Washing Bay area at Beetham is located next to the welding shop- **Presently being relocated to the Southern end of the Operations yard – 85% Completed**
 9. Configuration of workshop areas is poorly constructed creating unsafe conditions, fire and explosion hazards and unhealthy exposure to fumes; welding and spray painting activities occur simultaneously and in close proximity - **Expansion and upgrades to the Workshop is currently ongoing – 75% Completed**
 10. Workshop Shop facilities – Inadequate space – workshop being extended – **Same as above.**
 11. Housekeeping in T&M Admin/Manager office was unsatisfactory – office cleaning needed
 12. Storage of truck batteries – temporarily stored in between the mechanic and spray shop
 13. Diesel tank to be repaired in accordance with MOEnergy requirements; Diesel Storage Tank, use of Breaker as main switch; Non-compliance with Min of Energy requirements

APPENDIX 1

14. Inspections Scheduled in July 2013- Unsuitable Tools – man made and make shift tools in used by Welders, Electricians and Tyre Man – Basic and specialized tools were purchased for all Manchanics during the month of June, 2012. Supervisors need to ensure that they are properly used.
15. Tyre shop – unsuitable tools – hydraulic systems to remove tyres – We are currently upgrading the electrical system of the workshop in order to utilize the Compressor and Hydraulic Tools which was already purchased.
16. Calibration of Equipment and Tools
17. Certification of Equipment and Tools – (slings, hiab, BCRF Boiler – certified.2015, hydraulic and compressed systems etc..)
18. Mechanic Shop facility – Inadequate space, Unsuitable Tools.
19. Conditions of Lunch room and toilet and bath areas – unsanitary
20. Lockers – although some were provided still inadequate
21. Oil sump needs repairs and upgrading
22. Safety signage to be installed – PPE – Safety Signage was purchased however we are awaiting the completion of the workshops upgrade before installation.
 - Drainage
23. Drainage and Floor condition - The floors of the welding and mechanic shops are muddy and collect water during the rainy season and are dusty during the dry season; a very unsafe and unhealthy working condition. This would be completed with Scope 1 works
 - Fire
24. Fire Certificate
25. Fire alarm and response equipment need to be upgraded installed – An assessment was completed and a proposal was submitted by the Fire Service Contractor.
- Welfare: CLEANLINESS;
26. Upgrade / provision of office spaces for operational / administrative staff at; Beetham
27. Upgrade of Welfare Facilities; Toilets, Changing / Locker Room, Lunch Room to accommodate all staff including landfill
28. Conditions of Lunch room, toilet and bath areas –
Although the toilet facilities have been upgraded the lack of adequate water supply leaves the units in an unsanitary condition as they are unable to flush completely. The employees are required to fill the flush tank manually.
29. Health Hazard – septic tank wage system need upgrading, in the rainy season the system overflows week. Short term control implemented with weekly pumping of tanks.
30. NO water supply on main line and inadequate supply from storage tanks
- Beetham / Landfill – Tipping Area
31. Fire Risks – Handling Landfill Fires to be formally implemented with a planned and established guided procedure
 - S6 – Safe Maintenance of Plant, Work System, Unsafe Work Conditions, Inadequate and Unsuitable Tools/Equipment:-
32. Absence of adequate lighting – Lighting Towers are currently being used on the Landfill
33. No lighting along the Road way entering landfills
- ✓ Completed Absence of rest booth
34. NO water supply on main line and inadequate supply from storage tanks
35. Large uncovered waste needs improved
36. Inadequate segregation of persons and equipment
37. Salvagers – Health Risk, Fire Risks, Security Risk
38. Possible contamination of Air and Water; monitoring of landfill effluents; air and leachate effluent, air quality being addressed. Initial results of AAQ indicate conformance with EMA Draft Air Pollution Rules.
39. Substandard Contractors, Equipment and Work Procedures, not wearing PPE
40. Landfill Planning needs improvement
41. Salvaging persistent creating an unsafe, disorganised and sometimes uncontrolled operations
- Guanapo /Landfill
- Welfare: CLEANLINESS;
42. Upgrade of Security Housing Facilities
43. Upgrade Welfare Toilets, Changing / Locker Room, Lunch Room I

- FIRE
- 44. Fire Risks – Handling Landfill Fires to be formally implemented by a procedural plan
- 45. Unsafe storage of large quantities of post consumer plastic bottles
- S6 – Safe Maintenance of Plant, Work System, Unsafe Work Conditions, Inadequate and Unsuitable Tools/Equipment:-
- 46. Uncovered waste – improvement observed – 02/2016
- 47. Inadequate segregation of persons and equipment
- 48. Salvagers – Health Risk, Fire Risks, Security Risk
- 49. Possible contamination of Air and Water; monitoring of landfill effluents; air and leachate effluent, air quality being addressed. Leachate Banks not secured from public access?
- 50. Security / Police booth to upgrade .
- Welfare
- 51. No water supply on main line and inadequate supply from storage tanks
- 52. Rest booths required
- Forres Park Landfill
- FIRE
- 53. Unsafe storage of large quantities of post consumer plastic bottles
- 54. Fire Risks – Handling Landfill Fires to be formally implemented by a plan
- S6 – Safe Maintenance of Plant, Work System, Unsafe Work Conditions, Inadequate and Unsuitable Tools/Equipment:-
- 55. Large uncovered waste persists – improvements observed
- 56. Inadequate segregation of persons and equipment
- 57. Salvagers – Health Risk, Fire Risks, Security Risk
- 58. Possible contamination of Air and Water; monitoring of landfill effluents; air and leachate effluent, air quality being addressed. Leachate Banks not secured from public access?
- 59. Poor lighting
- 60. Rest booths required
- Tobago
- S6 – Safe Maintenance of Plant, Work System, Unsafe Work Conditions, Inadequate and Unsuitable Tools/Equipment:-
- Operation have been re-located and facilities are being provided – to be assessed
- Uneven surface and lack of drainage on the compound.
- Transfer station – To be updated
- 61. Fires Risk - Unsafe storage of whole and shredded tyres
- 62. No fire plan
- HSE Management
- 63. Annual Risk Assessment – o/s
- 64. Fire Certificates
- 65. Emergency Evacuation Procedures for 3/6 site outstanding
- 66. MSDS updated and storage on site outstanding
- 67. HAZMAT Programme has been developed but needs to be rolled out
- 68. Lock out and Tag – in part
- 69. HS POLICY MANUAL Draft
- 70. HS EMPLOYEE HANDBOOK
- 71. Roll Out of HSE Programmes & Procedures - wip



Trinidad and Tobago Solid Waste Management Company Limited.

Business proposal as it relates to servicing the public sector

Prepared by CSM Division -David Manswell GMCSM

Date: 25th, April; 2017..

1. Mission

SWMCOL's Mission is to provide integrated and environmentally-sound waste management solutions that promote maximisation of resource value and a culture of care for the environment.

2. Vision

SWMCOL's Vision is to lead the attainment of environmentally responsible waste management and be the preferred service provider in Trinidad and Tobago and the region.

3. Overview

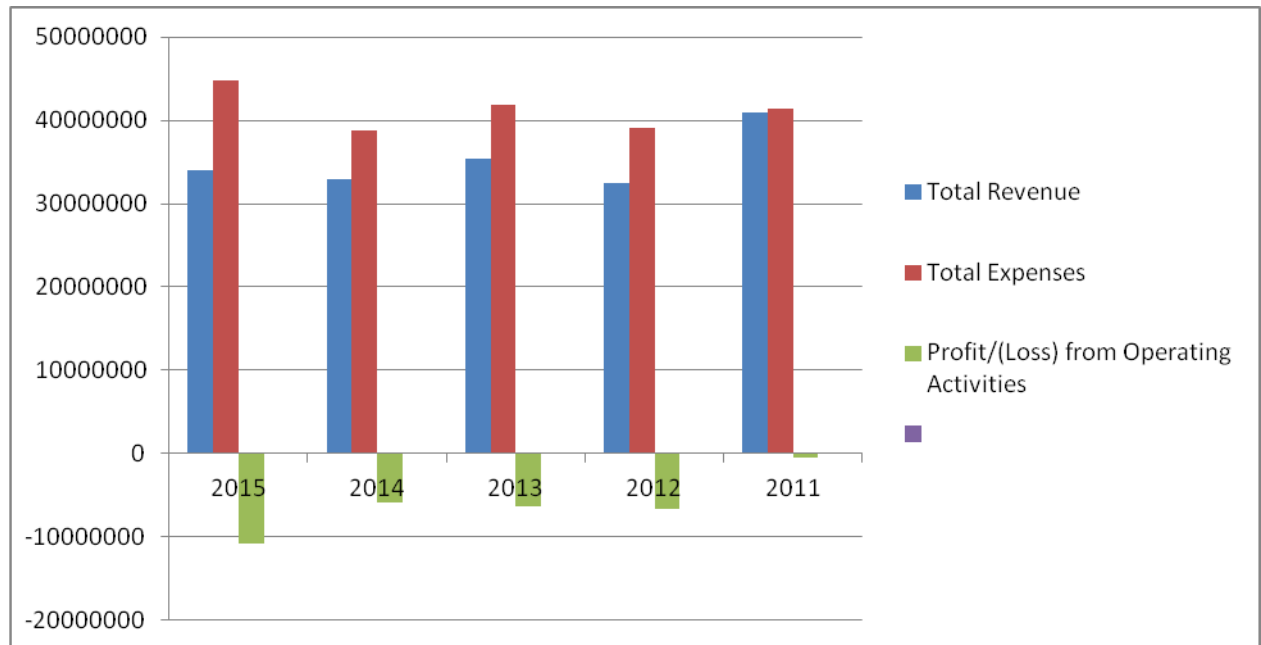
Trinidad and Tobago Solid Waste Management Company Limited (SWMCOL) is a waste management company which was established on June 30th, 1980. It is located in the city of Port of Spain and is owned by the Government of Trinidad and Tobago. Consequently, SWMCOL is viewed as the Government's authority for waste management for Trinidad. In addition to managing the three landfills which are strategically located in the East, West and Central parts of Trinidad; SWMCOL also provides commercial services such as general waste collection and disposal, plastic recycling, liquid waste collection and disposal; and recently the company developed one of its dormant strategic business unit (SBU) that being commercial waste water.

Over the years, SWMCOL has seen an erosion of its market-share from eighty five percent to thirty percent in the general waste segment of the market with the major competitor controlling sixty percent of the market.

This drop in market share could be attributed to increased levels of competition from two major rivals, Waste Disposal Ltd and Central Equipment Rentals, coupled with the fact that the company is unable to grasp opportunities when they arise due to lack of equipment capacity. This has resulted in the SWMCOL obtaining annual revenues of just around (30 million) for a five year period which translates to an average loss of (6 million) for the period .See fig 1 below.

Analysis of income for the period 2011-2015

	2015	2014	2013	2012	2011
Total Revenue	33940,610	32865,217	35408,690	32388,392	40941,781
Total Expenses	44740,427	38741,445	41821,084	39011,358	41449,744
Profit/(Loss) from Operating Activities	(10799,817)	(5876,228)	(6412,394)	(6622,966)	(507,963)



It is against this background that SWMCOL is soliciting the assistance of the Ministry of Public Utilities as it relates to targeting the public sector as a specific niche market ,as we see this as a potential for growth. **One is proposing that the Caribbean Airlines model be adopted whereby all state agencies are required to explore the opportunities of using SWMCOL before exploring alternative waste management solutions.** The benefits to be derived would be reduction in the

waste management cost of the various state agencies due to SWMCOL's current strategy of being a one stop shop for all waste management service.

4. Why should SWMCOL become the preferred provider/be considered by state agencies?

The **Vision** of the company is to become the provider of choice for integrated environmental services with a reputation for rendering highly reliable services at competitive prices and ensuring customer satisfaction. To this end SWMCOL is seeking assistance in entering this market segment as we believe our current strategy of being the best cost provider will add value to the government sector. Moreover, state to state collaboration will result in reduced waste management cost for all potential customers in this segment due to scale economies; coupled with waste reduction through recycling and waste diversion initiatives. A perfect example of SWMCOL's strategy in motion is the recent acquisition of the waste management account for the South West Regional Authority, Movie-Towne, South park Cinema and industrial Plant Services Limited where the company provides a "cocktail" of service i.e. vacuum tanker service general waste removal and disposal and special waste removal and disposal which equates to an annual combined value of just over nine hundred and seventy five thousand (\$957,000.00). This is testimony of the confidence being place in SWMCOL by major companies in the market.

4.1 SWOT Analysis.

Strengths:

1. One of the major strengths of the company is the ability to provide all waste management service under one roof. This value proposition will allow our customers to benefit from reduce cost via the bundle package method/strategy which is usually ideal in periods of economic adjustment due to the added value that provided from the buy one get another at equal or reduce cost.
2. Knowledgeable staff in comparison to competitors when it comes to hazardous waste and waste water treatment plant.

Weaknesses:

1. Low staff morale. To remedy this one is proposing an improvement of the welfare facilities at the landfill, coupled with financial incentive for staff that assists in realising the company's objectives.
2. SWMCOL is unable to grasp opportunities when they arise due lack of excess capacity as a result of aged equipment.
3. With the country currently going through a period of economic adjustment paired with the recent downgrade-then stable condition of the country by the Standard and Poor's rating agency. The government may not be in position to assist with capital investment.
4. There are currently only two government ministries that utilises the services of SWMCOL. They are the Ministry of National Security and the Ministry of Health.

Opportunities:

1. Research indicates the central/south segment of the market is expected to grow by 15 % due to the recent construction of malls, supermarkets and cinemas in that segment. This presents an opportunity for SWMCOL to open a hub at the Forres Park landfill which is located in central to serve this segment. However, this must be supported by communication strategies via social media, telemarketing, personal selling and advertising via the press.
2. There also the opportunity of educating the employees in the public sector about the benefits of waste separation and recycling. This will act as a communications vehicle as it relates to government policy of SWMCOL becoming a recycling authority and the government would be viewed as leading from the front.

Threats:

1. Within the last 6 months there have been 4 new entrants into the market. To be effective in this regard the company will have to offer bundle packages and compete on value for money as SWMCOL is the only one- stop shop in the country for waste management.
2. The two major competitors outperform SWMCOL in terms of fleet and equipment. To put this into context SWMCOL has four (8) stationary compactors while the major competitor Waste Disposal has over one hundred (100) compactors. It is important to note that this piece of equipment is a major revenue earner for any waste management company.

4.2 PESTEL Analysis:

Political:

The government recently announced changes to the local government structure which will give the Chairman of the Regional Corporation authority to manage their own affairs; one such area being waste disposal. Additionally, with the recent announcement by the Honourable Minister of Planning Ms. Camille Robinson-Regis that SWMCOL will become a recycling authority. This presents an opportunity for SWMCOL to solidify its relationship with the Regional Corporations via the Ministry of Rural and Local Government with the aim of introducing them to the new technology and methods of waste disposal in addition to curb side recycling throughout Trinidad and Tobago which will facilitate government's agenda of preservation of the environment.

Additionally, the State Enterprises Performance Monitoring Manual (SRPMM) state that companies are required as part of their operations to reduce or eliminate pollution especially in cases where their output causes it collaboration with SWMCOL, as it relates to proper waste management will assist in this regard.

Economical:

Trinidad and Tobago is currently in a period of economic adjustment and with the low switching cost; customers are looking to get value for money re: waste disposal. One way to manage this threat is by offering bundle packages. SWMCOL is the only waste company that specialises in all three major waste types; special disposal, general waste and liquid waste. Consequently, the company can provide additional value at competitive prices to the government sector.

Social:

With the effects of climate change and flooding in Trinidad, the population has a greater appreciation for environmental conservation. This appreciation provides an ideal opportunity for SWMCOL to introduce its new tyre shredder and multipurpose shredder to the market which shreds old vehicles, old appliances, plastic and wood for recycling. This could be done in addition to the removal of regular waste and the implementation of a recycling initiative at all government

ministries; thereby emphasising the added value benefit while stimulating behavioural change re environment preservation.

Technological:

Introduction of a mobile paper shredder geared towards government ministries re confidential shredding.

Environmental:

While SWMCOL could be complimented for introduction of shredders and engaging in curb side recycling, one is proposing that all ministries implement a recycling initiative at their location. SWMCOL could facilitate by offering public education and collection of recycled material.

Legal:

With the recent outbreak of the Zika virus in Trinidad, the government has passed legislation; increasing the fees for littering. This present an opportunity for SWMCOL to target the Ministry of Rural and Local Government via the regional corporation as many of their burgesses usually have exposed waste. The aforementioned should act as justification for SWMCOL’s consideration as a provider to the state.

5. What is required for SWMCOL to be effective in this niche market?

Proposed Strategies:

There are usually five competitive strategies a firm can adopt in order to be competitive in the market. They are as follows: low cost provider, broad differentiation, focused low cost, focused differentiation and best cost provider strategy. The strategy currently being adopted by SWMCOL is a best cost provider strategy. As indicated in the PESTEL analysis, Trinidad is currently in a period of economic adjustment and due to the low switching cost; customers are seeking waste haulers who can provide value for money.

Our current level of activity is realising 83% of our revenue goals. An analysis of our current activity profile suggests that we need to achieve the following and targeting the ministries will assist in accomplishing same:

Line of Business	Increased # of Clients	% Increase
------------------	------------------------	------------

General Waste Collection	31	30
Portable Toilet Rental	32	33
Vacuum Tanker Cleaning	169	80

Objective and Forecast Grid. Figure 1.1

Objectives	Current	Forecast
Sales Volume	\$1.8million per month	\$2.3 million per month for fiscal 2017
Market Share	30%	38% by the end of the fourth quarter of 2018 and 49% by the end of the third quarter of 2021.
Revenue	-\$400,000.00 per month	+\$500,000.00 per month for fiscal 2017 and 3.4million per month during fiscal 2020-2021

To ensure that the aforementioned objectives are realized, together with the data obtained from the market analysis, consideration should be given to appropriate marketing strategies via the marketing mix coupled with capital investment.

In addition, SWMCOL is currently pursuing strategic initiatives that would see the development of both the Southern and Tobago markets given that preliminary research has indicated that both sectors has growth potential.

For the Tobago market emphasis would be placed on the following:

- Construction Sector;
- Tourism (hotel and recreational facilities); and
- The Tobago House of Assembly (THA)

For the southern/central market emphasis would be placed on the following:

- Waste audits: Medical Waste Industry, Regional Health Authorities;
- Supermarkets, Eteck Parks and LABIDCO;
- Commercial shredding and general waste collection; and
- Vacuum tanker services.

The challenge to SWMCOL's operation as it relates to these plans is decentralising our operations and capital investment.

Currently SWMCOL operations capacity consists of

04 – Hoist Trucks

03 – Truck Mounted Compactors (TMC's)

02 – Vacuum Tankers (4500 gallons in total)

08 – Stationary Compactors

01 – Mobile Tyre Shredder

01 – Multi-purpose Shredder

This capacity is supplemented largely by contractors for the supply of hoist and vacuum tanker trucks, which significantly increases our cost of sales. Currently we generate an average income of \$1.8 million per month which consists of our servicing of long term contract clients and short term cash clients across all lines of business. Capital investment in equipment is essential to SWMCOL begin able better leverage our current portfolio of customers by begin the only fully service provider in Trinidad and Tobago. Return on investment will be realised via a reduced cost of sales due to reduced use of contractors and greater efficiencies in our overall operational cost.

Table C: Vehicles to be purchased in FY2018

Qty	Name of Equipment	Equipment Description	Unit Cost TT\$	Total Cost TT\$
2	Vacuum Tanker	Mercedes Benz Actros 3348 with 18000 Liter Cesspool. GVW 26,000kg	1,550,000	3,100,000
2	Combination Hook Lift and Cable Hoist	Mercedes Benz Actros 3348 with Dualift Combination Hook Lift and Cable Hoist	1,500,000	3,000,000
1	Mounted Crane Truck	Mercedes Benz Actros 2635 with Palfinger PK 32080 30 Tonne meter articulating crane.GVW 26000kg	840,000	1,680,000
1	Material Handler	Materials Handler – 825 E Series	2,462,625	2,462,265
1	Forklift	Forklift – Caterpillar GC45K –LP-SWB 2.5 Ton Diesel	268,238	268,238
2	Flatbed Truck	Iveco ML 150E24 Euro111 MY2016 Chassis cab with steel platform 23 '(feet) GVW 15,000kg	810,000	1,620,000
	Total Cost			12,130,503

6. Enabling Strategies to support the strategic initiatives:



Marketing

(a) Product/Service:

SWMCOL is in the service industry and the product is 90 percent intangible and 10 percent tangible; with the 10 percent representing the actual placement of bins at the customers' residence/place of business. Therefore, it is being proposed that SWMCOL adopts a more holistic approach to marketing by moving away from being a sales-led organization to a market led organization. Selling focuses on the needs of the seller; marketing on the needs of the buyer. Selling is preoccupied with the seller's need to convert his product into cash; marketing with the idea of satisfying the needs of the customer by means of the product and the whole cluster of activities/ services associated with creating, delivering and finally consuming it.

(b) Place:

Information in the SWOT analysis revealed that there is anticipated growth in the central/southern sector of the market where there is a mixture of Multinational, Government Agencies and Energy companies. It is against this background that it is proposed that SWMCOL capitalises on its strength and establish a sub-office on the central landfill site which will serve that sector of the market.

This course of action should be economical, seeing that SWMCOL owns the land and infrastructure, one is proposing that three vehicles, one Operations Supervisor and one Account Executive be stationed at this location with the aim of increasing market share. Furthermore, research has indicated that over 90 percent of the target market uses the internet on a daily basis to transact business. Therefore, a recommendation is being made for SWMCOL's website/facebook to be used as a place of business as it relates to quotations, invoices and payments. Each current and new customer in the target market will be furnished with their individual access code, where they can view their account status. SWMCOL's bank account number will also be shared so that payments could be made via Wire Transfers.

c) Price:

In light of the objectives currently being pursued, one is proposing that SWMCOL adopts a best cost provider strategy. By SWMCOL setting competitive/low price for its service, this will aid in stimulating the market and thus contribute to a growth in market share.

This strategy was selected for the following reasons:

- One anticipates unit cost to fall with increased customers/sales in the same geographic location; thus benefiting from economies of scale.
- By setting a lower price, this will discourage new entrants and assist in driving out '800 Junk' and 'Bartholomew Transport' the other recent entrants to the market.
- One anticipates the market to become more price sensitive due to the recent announcement of economic adjustment; SWMCOL will be viewed as attractive.

(d) People:

It will be a process in futility for SWMCOL to promote its product to this niche but maintain inadequate customer service. It is against this background that one is proposing customer service training be provided for shop-floor workers to middle management. The drivers should be

courteous when visiting the clients place of business by offering common pleasantries such as “Good Morning” and “Have a great day” in addition to ensuring that the bins are sanitized and repositioned correctly.

(e) Process:

The following processes are being proposed to assist in adding value to the customer experience.

1. Implementing a “live chat” on the company’s website/face book page so questions can be answered and issues resolved.
2. Advising our bankers, Scotia Bank that our customers have indicated their willingness to pay via wire transfer and as such we are requesting that the necessary system be put in place to facilitate this request.
3. Strengthening the strategic alliance with K & I Auto Service Co Ltd. as this will boost capacity especially in the targeted market segment.
4. Improving the communications between marketing and operation thereby improving efficiency and revenue growth.

(f) Promotion:

It is imperative that SWMCOL understands and embraces the role of communication/promotion, as this is a key in the marketing mix. One of the weaknesses highlighted in the SWOT analysis was, SWMCOL failed in its responsibility to communicate its product offering to the target market. Therefore the following communication objectives are being recommended:

1. To increase brand awareness as it relates to product offering by fifty five percent via the use of both traditional and new media.
2. To aid in increasing sales from -\$400,000.00 to \$3,400,000.00 in the long term.

To ensure SWMCOL achieves its communications objectives, the appropriate channel/mix must be selected due to the complexity of the customer buying behaviour. As a consequence the following channels are being suggested.

(g) Personal Selling:

This aspect of the mix is vital because of the competitive nature of the environment. This strategy provides an ideal opportunity for the Account Executive to engage in relationship marketing by

becoming more intimate with the needs of the customers. For this to be accomplished it will require the sales staff to be on the field for no less than four times per week. This approach will assist in allaying fears of potential customers on the spot, reinforce what was communicated via the advertising/public ed mix and contribute to accomplishing objective of the company which is increase revenue.

7. What will be the financial and non financial benefits to GORTT and state entities (clients) should this be approved?

Financial Benefits

- SWMCOL, in 1986, was mandated by the then government to compete in the market place in order to meet its operational expenditure. Should this proposal be approved we will be able to once again operate at profitable levels, thus funding our core functions in-house and reducing our reliance on state subventions ever year. Moreover, the state agencies would benefit from quality service at a reduced cost thereby reducing their disposal bill as indicated by the South West Regional Health Authority (SWRHA) example listed above.
- Additionally, SWMCOL would provide recycling and waste management public education strategies to assist the ministries in positioning themselves as leaders in protecting and preserving the environment. This once successful will assist enhancing the CSR aspect of the ministries which fits nicely with government policy as it relates to recycling and environmental protection.