

SOLID WASTE MANAGEMENT PROGRAM of QUEZON CITY



ABOUT QUEZON CITY



- The **HEALTHCARE AND WELLNESS CENTER** in Asia
- The country's **KNOWLEDGE INDUSTRY CAPITAL**
- One of the **MOST COMPETITIVE Cities – ICT Capital of the Philippines**
- The **GREEN LUNG** of the METROPOLIS

HIGHLY URBANIZED CITY

The **BIGGEST** and **MOST POPULATED** city in Metro Manila

- Land area - 160,112 sq. km. or about $\frac{1}{4}$ of the total land area of Metro Manila
- Population - Approximately 3 million
- Has the largest number of registered business establishments with more than 60,000

SOLID WASTE PROFILE



Per Capita Waste Generation
.88 kgs /person /day



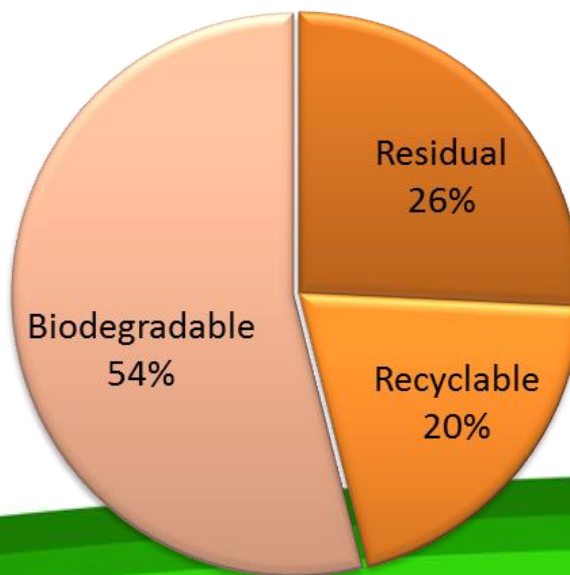
Average Volume Disposed at
the SLF
1,609.79 tons / day



Projected 2017 Population
(2010 NSO)
3,375,524



QC Waste Generation
2,970 tons / day



| BIODEGRADABLE | | 54% |
|---------------|----------------------|--------|
| | Kitchen / Food Waste | 43.17% |
| | Garden Waste | 9.43% |
| | Other Organic | 1.35% |

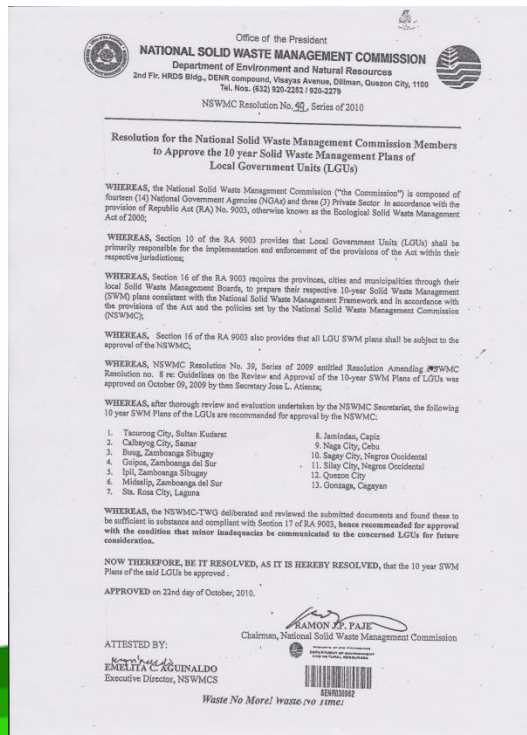
| NON-BIODEGRADABLE (Recyclable) | | 20% |
|-----------------------------------|---------|-------|
| | Plastic | 9.64% |
| | Paper | 8.65% |
| | Glass | 1.15% |
| | Metal | 0.86% |

TEN YEAR SOLID WASTE MANAGEMENT PLAN



- The Quezon City 10-year Solid Waste Management (SWM) Plan was **approved by the NSWMC on October 22, 2010.**
- Currently being updated which will include the following strategies and objectives:

- ✓ Encourage more barangays to strengthen the role of their SWM committees as well as improve their SWM plan
- ✓ Establish and upgrade more Materials Recovery Facilities / Materials Recovery Systems in Barangays
- ✓ Improved IEC campaign
- ✓ Improved monitoring system on compliance to the City's environmental policies, programs and ordinances
- ✓ Improved kitchen waste collection system
- ✓ Expand household toxic/hazardous waste collection and treatment system
- ✓ Implement Disaster Waste Management
- ✓ Implement Post Closure Care Activities for the closed Payatas Disposal Facility, including its possible conversion into an industrial / eco park
- ✓ Establish technology-based waste processing facilities and systems such as centralized composting facility, biodigesters and WTE facility in the City



SOLID WASTE COLLECTION SYSTEM



✓ Dedicated Collection – included in the Terms of Reference:

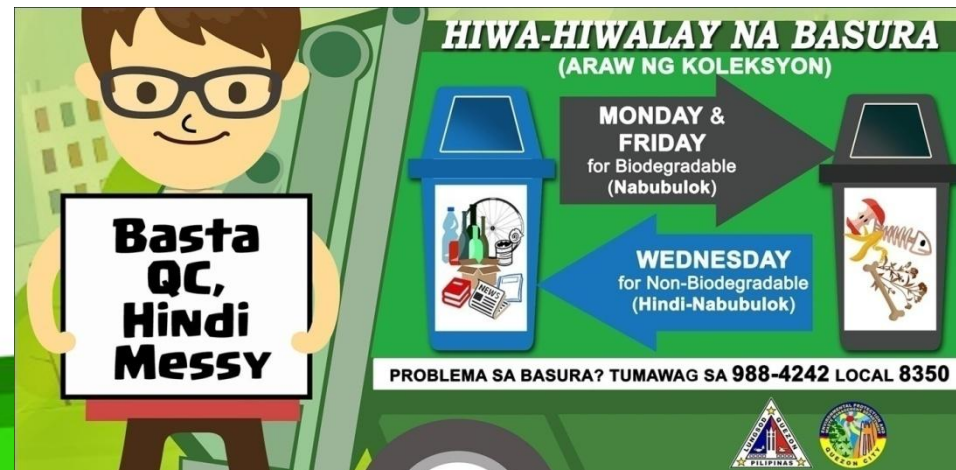
- Biodegradable wastes
- Non-biodegradable wastes

More than 99% Garbage Collection Efficiency

PACKAGE CLEAN UP SYSTEM

Contracted out to private service providers thru **competitive bidding**. **Service Contractor is responsible in providing:**

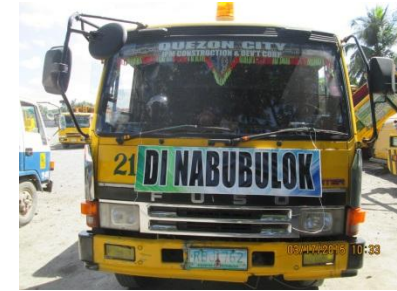
1. Solid Waste Cleaning, Collection and Disposal Services
2. Street Sweeping Services
3. Cleaning and Clearing Operations
4. IEC Campaign & Enforcement support



WASTE REDUCTION PROJECTS

COMMUNITY-BASED PROJECTS

- Segregation at source
- Recycling Activities
- Kitchen Waste Collection
- Bulky Waste Collection



SCHOOL BASED PROJECTS

- Batang Eco Savers Club
- Junior Environment Advocates Project



INSTITUTION BASED PROJECTS

- Quezon City Hall Waste Segregation
- Quezon City Hall MRF
- Recyclables Trading at QC Malls



OTHER PROJECTS on SWM

1. Toxic and Hazardous Waste Collection, Treatment and Disposal Project



*10,011 kgs of BFLs
30 kgs of spent
household batteries*

2. Management of Waterways and Tributaries



- *Involves the manual clean-up of the City's rivers and creeks*
- *Piloted the use of Automatic Trash Rake*

OTHER PROJECTS on SWM

3. Environmental Monitoring & Enforcement

- *Community (Barangay) Participatory Watch*
- *Zero Litter Campaign*
- *Green Desk Project*
- *Deputation as Environmental Enforcers*



4. Incentive Mechanisms

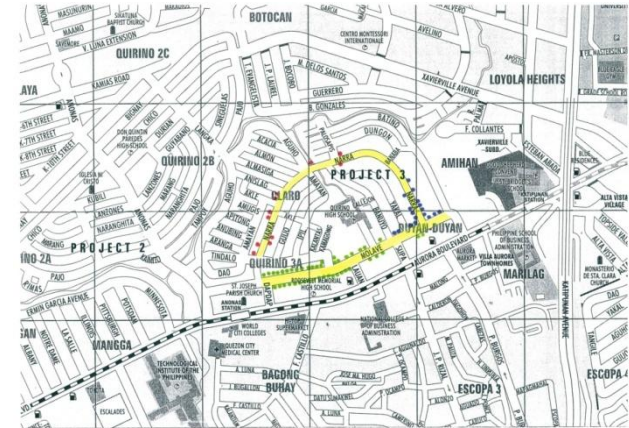
- *Cash incentive for communities (Barangay) practicing Effective Waste Reduction Measures*
- *Cash Incentive for communities (Barangay) utilizing their own barangay truck for the collection of MSWs*
- *Recognition thru various awards*
- *Provision of financial support for the establishment of Materials Recovery Facilities, procurement of tri-bikes and pushcarts for the door-to-door collection of recyclable materials*



PROJECTS IN THE PIPELINE

1. Centralized Collection and Treatment of Hazardous Wastes from Printing Establishments

- Aims is to have a centralized collection and safe disposal of ink formulation/inorganic pigments and contaminated wastes generated from printing establishments, especially small generators.



2. Centralized Collection of Used Oil and Grease Trap Wastes from Food Establishments

- Aims to ensure the proper collection, transport, treatment and disposal of used oil and grease trap wastes from food establishments along strategic areas in the City



PROJECTS IN THE PIPELINE

3. Disaster Waste Management

- In a Symposium and Scoping Workshop organized by the United Nations Environment Programme – International Environmental Technology Centre, Quezon City was chosen to implement a pilot project on disaster waste management.



4. Automated Based Monitoring System

- The EPWMD deemed it necessary to upgrade, enhance, and modernize its monitoring system by implementing an automated-based monitoring Command Center.
- All Dispatching Offices of the City's garbage hauling contractors will be linked in the system to have real-time updates on operations. Through this system, actual reports on the operations can be obtained as it happens and the EPWMD can immediately act upon issues and concerns.

THE BIOGAS FACILITY



As part of the post-closure care and maintenance, in 2007, the City Government signed a Memorandum of Agreement with Pangea Green Energy for the extraction, collection, processing, flaring and conversion into electricity of the biogas at the disposal facility.

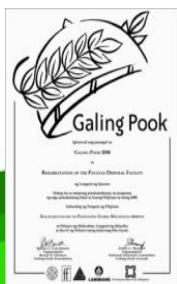
Blessing of the Expansion of the Biogas Emission Reduction Project through the Quezon City Government and PANGEA Green Energy Philippines, Inc.

- The expansion added two 320 kW capacity generators which would bring the facility's generating capacity to a total of 1.5 megawatts



Awards and Recognition

The rehabilitation of the Payatas Dumpsite and the Biogas Facility earned a **Galing Pook Award in 2008**, and more recently the **Meralco Luminaries**, for exemplary contributing to nation building and helping the country achieve world-class stature.



CHALLENGES IN E-WASTE COLLECTION

- Lack of space to temporarily store household e-wastes
 - Quezon City partnered with malls to set up drop-off points for electronic and other recyclable wastes
 - Needs to intensify information campaign to inform the residents of the City's waste market project
- Difficulty in finding storage facilities for E-wastes as alternative for MRFs
 - Clustering of MRFs is encouraged
- Small businesses can not individually hire transporters/treaters of e-wastes due to the small amount of e-wastes they generate
 - Needs to cluster themselves in order to be feasible for treater to collect

EXPECTATIONS

- **Networking with other participants regarding different technologies for the recovery and treatment of wastes**
- **Cost-effective technologies for community-based and centralized waste treatment and processing**
- **Effective waste recovery and recycling strategies**
- **Strategies and programs on extended producer responsibility**
- **Assistance in the formulation of appropriate and effective policies on e-waste management**



THANK YOU!