



**Ministry of Water, Land,
Environment & Climate Change**

“Enabling Jamaica's Sustainable Future”

ACCOMPLISHMENTS 2014 - 2015; PROJECTIONS 2015 - 2016



Hon. Robert Pickersgill, MP





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Environment & Climate Change**



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**ACCOMPLISHMENTS 2014-2015
PROJECTIONS 2015-2016**

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FOREWORD

For Jamaica to reach its economic and social goals in the stated time frame, the Ministry of Water Land Environment and Climate Change is a vital part of the process of nation building in this the twenty-first century. Our objectives and those of the nation must be in harmony, if we are to achieve developed nation status by 2030.

For our efforts to be successful, the 2015/16 programme, as outlined in the national budget, has to be complimented by the plans of the Ministry in tandem with all the other areas of government. The plans and programmes outlined in this booklet will be anchored on the previous Sectoral Presentations, the promises made and the promises kept, as we move to improve the lives of our citizens.

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Water, Land, Environment and Climate Change touch the lives of all Jamaicans, from all walks of life, and the portfolio Agencies of the Ministry will seek to ensure that life, as we know it, is protected and enhanced for generations to come.

This booklet contains all the main undertakings of the Ministry and its plans for the future. It summarises the achievements and the progress made, during the last fiscal year, and points to the projects that will be undertaken in this financial year.

The inputs for this document were generated by the Agencies and Departments of the Ministry of Water Land Environment and Climate Change.

Some of the plans and programmes outlined here were made possible through kind support from our international partners such as the United States Agency for International Development (USAID), the European Union (EU), the Inter-American Development Bank (IDB), the World Bank, the United Nations Environment Programme (UNEP); United Nations Development Programme (UNDP); the Government of the People's Republic of China; the Global Environment Fund (GEF), the Caribbean Community Climate Change Centre (5Cs); the Global Water Partnership; the Korea International Cooperation Agency (KOICA); the Korea Cadastral Survey Cooperation (KCSC); the City of Hagen, Germany, the Community based organisations and Non-Government Organisations as well our many stakeholders.

VISION, MISSION and CORE VALUES



STRATEGIC OBJECTIVES

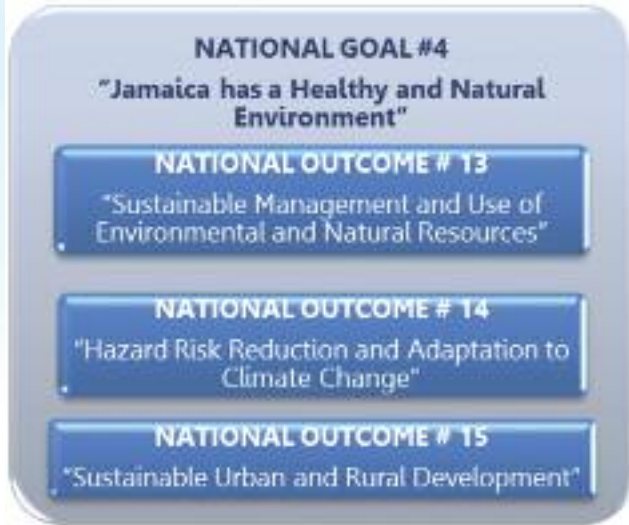
- 1) Sustainable management of the island's water resources, while providing universal access to potable water and sewerage services;
- 2) Equitable, broad-based land ownership and protection of property rights;
- 3) Sustainable management of the island's environment;
- 4) Increased resilience to climate change.

VISION 2030

The Ministry's priority policies, programmes and projects have been planned and developed as outlined in the National Development Plan Vision 2030 as illustrated below:



In the Ministry's efforts to make "Jamaica the place of choice to live, work, raise families and do business"



the Sector Outcomes have also been...instrumental in our planning activities.

Some of the Sector Outcomes are:

- All water and sanitation needs are met using modalities that are safe and sustainable
- Capabilities to address hazards and climate change improved
- Stakeholders participate in the planning and managing of the development and use of the island's water resources
- Capacity enhanced to effectively plan and manage the development and use of the island's water resources
- The financial base for future water and sanitation needs strengthened
- A strategic and integrated framework for delivering sustainable development established

- Developmental sectors integrated into the planning framework and created balanced and integrated development
- Places where people are proud to live created
- A process of growth and diversification in the rural economy/rural areas created
- A comprehensive programme of biodiversity and ecosystem management developed
- The negative impact of waste on Jamaica's ecosystems reduced
- Integrate/Infuse environmental issues in economic and social decision-making processes
- Mechanisms in place to ensure that the management of natural resources are consistent with international standards
- Natural Resources are used in a sustainable way
- Environmental leadership capacity across public and private sector institutions developed and improved
- All Jamaicans are aware of environmental issues and share responsibility for protecting the environment
- A system of environmental monitoring and compliance created
- A comprehensive framework for hazard risk reduction developed

PORTFOLIO AGENCIES

Water & Sewerage

Agencies

Water Resources Authority
National Water Commission
Rural Water Supply Limited
Central Wastewater Treatment Company (CWTC)

Division

Water Monitoring

Land and Physical Planning

Agencies

National Land Agency
Real Estate Board

Divisions

Land Policy Administration and Management
Policy Planning and Standards
Land Administration and Management Programme (LAMP)
National Spatial Data Management

Environment & Climate Change

Forestry Department
National Environment and Planning Agency (NEPA)

Divisions

Environment and Risk Management
Climate Change
Meteorological Service

EXECUTIVE MANAGEMENT TEAM



**Hon. Robert D. Pickersgill, M.P.
Minister**



**Hon. Ian Hayes, M.P.
Minister of State**



**Dr. Alwin Hales, J.P.
Permanent Secretary**



**Dr. Sharon Crooks, J.P.
Director General**



**Lt. Col (Ret'd) Oral Khan, J.P.
Chief Technical Director**

HEADS OF AGENCIES/DEPARTMENTS



Mark Barnett,
Actg. President
National Water
Commission



Albert Daley,
Principal Director
Climate Change
Division



Keith Goodison,
Managing Director
Central Waste Water
Treatment Plant



Marilyn Headley,
Chief Executive Officer/
Conservator of the
Forest

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Basil Fernandez,
Managing Director
Water Resources
Authority



Peter Knight,
Chief Executive Officer
National Environment
and Planning Agency



Kleisha Rhoden,
Project Director
Land Administration
and Management
Programme



Jeffery Spooner,
Managing Director
Meteorological Service



Althea Stewart
Secretary/Manager
Negril Green Island
Local Planning Authority



Elizabeth Stair,
Chief Executive Officer/
Commissioner of Lands
National Land Agency



Audley Thompson,
Managing Director
Rural Water Supply
Company Limited



Sandra Watson,
Chief Executive Officer
Real Estate Board

WATER PORTFOLIO

**"Water is the most critical resource issue of our lifetime and our children's lifetime.
The health of our waters is the principal measure of how we live on the land."**

Luna Leopold

Consistent with the Vision 2030 goal of making potable water available to all Jamaicans and ensuring the sewage generated is adequately treated to protect public health and the natural environment, major development projects are being/have been undertaken in the Water and Sanitation sectors.



Groundbreaking ceremony for the Rio Cobre Pipeline

THE NATIONAL WATER COMMISSION



Mission Statement

To contribute positively to national development by providing high quality potable water and sewerage services to residents and businesses through a competent and motivated team in a cost effective and sustainable manner

Background

The National Water Commission, as Jamaica's premier water service provider, distributes more than 90% of the potable water in the country, serving more than 2,000,000 persons daily through more than 400,000 legal customer accounts. More than 500,000 Jamaicans are also served by sewerage services provided by the NWC.

The NWC has an operating network of more than 11,000 kilometres of water and sewer pipelines stretching across Jamaica's hills and valleys, more than 1,000 electricity dependent locations, more than 160 underground wells, over 110 river sources (via numerous water treatment plants) and about 150 spring sources.

2014 -15 MAJOR ACHIEVEMENTS

Water

Jamaica Water Supply Improvement Project (JWSIP) Category B

Work is progressing satisfactorily on the second component of the Jamaica Water Supply Improvement Project - Category 'B' Works. It includes work in Trelawny, St. Catherine, St. Ann, St. James, Portland and Westmoreland

- **The Martha Brae Water Treatment Plant Expansion**

This project included the rehabilitation of the six million gallons per day (6MGD) Water Treatment Plant and the construction of a new 5 MGD Treatment Plant.



200, 000 persons in the parishes of St. Ann (Harmony Cove), Trelawny, St. James, Hanover and Westmoreland are now being impacted by this project, which produces 5 million gallons of water per day. The project, which commenced in July 2013 was completed and commissioned into service in February 2015 at a cost of US\$14M or J\$1.6 B.

Other projects that are funded under the JWSIP are:

- **Mount Rosser/Ewarton Water Supply Improvement Project**

This project, constructed at a cost of US\$4.5M or more than J\$460M benefitted not only the immediate communities of Ewarton and Mount Rosser, but also to the surrounding areas of Polly Ground, Tucker Road, Tucker Lane, Coghiel Road, Johnson Road and Lopez Heights.

- **Norwood Water Supply System**

Cost \$460 M, benefitting 11,000 residents

- **Rio Cobre Pipeline Segment 2 Replacement**

The pipeline between Content District and Ferry was replaced to reduce losses by 2 million gallons per day (mgd) and improve the supply to Kingston and St. Andrew, Spanish Town and Portmore at a cost of J \$2.6 Billion.



- **Supply & Installation of Domestic & Commercial Water Meters**

40,000 meters were installed islandwide to enhance accuracy in the measurement of consumer consumption.

100,000 persons were impacted at a cost: \$1.8 Billion.

- **Bogue Water Treatment Plant**

The Bogue Water Treatment Plant in St. Ann, which was commissioned into service in April 2015, was refurbished at a cost of US\$4,044,417 or approximately J\$465M and will impact 360,000 persons.

The upgrading of the facility will now guarantee continuous service, not only to the residents of Ocho Rios, but also those along the entire northern coastal belt from North East. St. Ann, through to Western and Central St. Mary.



Commissioning of the Bogue Water Treatment Plant

Port Antonio Water, Sewerage & Drainage Project

Work has been substantially completed for Phase 1 of the Port Antonio Water, Sewerage and Drainage project, which has resulted in the upgrading of 10km of water mains and the installation of 8km of new sanitary sewers (including house connections), 3 km of storm water drainage conduits and associated sea outfalls. This project is being done at a cost of \$1.9 Billion, and 75,000 persons will be impacted.



Water works – Port Antonio



Sewer Works in progress, Fort George Street, Portland

- **Lucea Water Supply Improvement Project**



Ground was broken for the Lucea Pipeline Replacement & Non Revenue Water (NRW) Reduction project in September 2013.

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The works included the construction of a 6 kilometre transmission pipeline through Lucea, to allow water from the Great River Treatment Plant to better supply all areas along the corridor leading to Negril.



The new pipeline is intended to maximise the quantity of water being transferred and eliminate the high levels of non-revenue water from badly leaking pipelines.

The US\$12.6M or J\$1B project has increased the reliability of supply to the area, and improved service to communities along the tourism belt from Lucea to Negril. Other areas which have benefitted include Clifton, Ashkenish, Dias, Cacoon, Middlesex and Medley with approximately 100,000 persons.

- **Network Management and Social intervention, Revenue Enhancement / Protection Project**

This is being carried out in the parishes of Trelawny, St James, Hanover and Westmoreland to complement and facilitate sustainability of capital works on the Martha Brae, Mt. Rosser/Ewarton and the Lucea Water Supply Improvement Projects at a cost of J\$380M.

Other Projects undertaken by the NWC are:

- **Clarks Town Water Supply Project**

This project was carried out in two phases.

- Phase 1, which commenced in March 2012 at a cost of approximately J\$4.3M, involved the installation of 2.5 Kilometers of pipeline and was completed in December 2013.
- The second phase involved the installation of 5.1 kilometers of pipeline, which will now supply water to the communities of Clarks Town, Georgia and Duncans. The project, which commenced in March 2014, was completed in December 2014 at a cost of approximately J\$90 million and benefits more than 10,000 citizens.

- **Scotts Cove to Belmont Pipeline Replacement.**

This project was implemented in collaboration with the National Works Agency under its road rehabilitation works. It involved the construction of 15 km of pipeline to replace the existing line. This project is intended to eliminate excessive breaks and leakage, reduce maintenance costs and provide an improved supply of water to Belmont and other communities between Scott's Cove and Belmont. Approximately 10,000 persons are expected to benefit from this \$470 M project.

Ongoing Projects

- The Hounslow Water Supply and Upgrading at Project a cost of more than \$40 Million in South West St. Elizabeth
- The rehabilitation of 26 water supply facilities now nearing completion in the Corporate Area, at a cost of \$1.7 Billion and with approximately 750,000 intended beneficiaries (virtually all KSA constituencies benefit).
- Phase 1 of the Port Antonio Water, Sewerage and Drainage project substantially completed

at a cost of \$1.9 Billion, with 75,000 persons to benefit (East Portland Constituency).

- The Artificial Aquifer Recharge Project which is aimed at securing the sustainable abstraction of water from the Spanish Town Aquifer at a cost of \$1 Billion, to benefit several St. Catherine and Corporate Area constituencies.

26 Water Supply Facilities

Work is now nearing completion on the rehabilitation of 26 water supply facilities including well sources, pumping stations and reservoirs in the Corporate Area, at a cost of \$1.7 Billion and with about 750,000 intended beneficiaries.

Rural Water Upgrading Programme

The following projects are being implemented by the NWC in partnership with the Rural Water Supply Limited:

- **Burnt Savannah Knoxwood Water Supply System (South West St. Elizabeth)**

This J\$60 million project has been completed and was commissioned into service in October 2014.



The works involved the replacement of the former pipe layout, which was inadequate and old, with a more organized system, thereby ensuring improved connectivity and adequate delivery of water.

Additionally, 2, 000 meters of iron pipeline were installed from the pumping station to the border of Burnt Savannah and Knoxwood. The well station was upgraded and the storage capacity improved with the addition of a 100-thousand gallon storage reservoir.

The expected benefits of this project include:-

- Operational improvements and energy savings
- A reduction in maintenance and operation costs to correct leaks and regulate supply
- Improvements in efficiency and reliability of supply to over 3000 customers in the project area including residential and commercial customers, as well as schools
- Elimination of the need for regular trucking of water to the beneficiaries
- **Cascade/Claremont/Jericho Water Supply System (Eastern Hanover)**

The overall project, which is 54% complete, seeks to address the severe water supply problems experienced by residents of Cascade, Claremont, Jericho and adjoining districts in the hilly region of Eastern Hanover. These communities are currently served by an inadequate and intermittent system that harnesses water from the Mammee Pen River.

Approximately 9,000 residents in Eastern Hanover will benefit from this project, which should be completed at an estimated cost of J\$300 Million.

- **Nonpariel Water Supply System, Westmoreland**

The beneficiary communities of this project are Nonpariel, Sheffield, Orange Hill, Little London, Mount Airy, Good Hope and Whitehall. The project is 33% complete and is projected to cost J\$450 M. It is scheduled for completion in January, 2016.



Hon. Robert Pickersgill and member of Parliament Hon. Dr. Wykeham McNeil sign a contract for the Nonpariel Water Supply System. Looking on is Mayor Bertel Moore.

- **Mason River/Kellits/Sandy River Water Supply System, Northern Clarendon**

This system, which is 40% complete, will improve and upgrade the water supply in the communities of Kellits (Crofts Hill), Mason River, Sandy River, Rhoden Hall, Elbow Corner, Douglas Castle and Macknie at a cost of \$205 million.



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Groundbreaking event for the Mason River/Kellits Water Supply System

- **Eastern Westmoreland Distribution Pipeline Improvement** – The overall work is 98% complete. at a cost of \$81 million. Commissioning and handing over is scheduled for June 2015.
- **Agualta Vale/High Gate /Richmond/Islington Water Supply System, South East/Central St. Mary** – Work has commenced and is expected to be completed in August 2016 at a cost of \$750 million.

NWC K-Factor Programme

- **Western Hanover Distribution Improvement** is 96% complete at a cost of \$60 million.
- **Goldmine Water Supply Improvement, Western St. Catherine.** Work is scheduled to commence in May 2015 at a cost of \$40 million.
- **Tank & Pump Rehabilitation Programme**
The NWC, in order to improve its reliability of service and to reduce energy consumption, has embarked on a tank and pump and energy efficiency programme.

The total cost for this exercise is \$8B. This programme will be implemented over five years, dependent on budgetary fiscal space allocation.

During financial year 2014/2015, recommendations were made for the procurement of 71 replacement pump sets, at a total cost of J\$350M. A number of these pumps have already been installed. Based on energy conservation calculations, when these pumps are installed the NWC will realize a savings of approximately J\$280M annually. Thirteen (13) bolted steel tanks have been ordered at a cost of J\$220M, and approvals are awaited for the procurement of an additional 18 at a cost of J\$302M. These will serve as replacement tanks. Repairs are to be undertaken on additional 37 steel and concrete tanks to provide better storage within the distribution system.

See Appendix 1

Projections – 2015-2016

- **The Essex Valley Water Supply System (Nain to Junction) South East St. Elizabeth**
Estimated cost \$58.8 million, to benefit 14,000 persons
- **Baron Hill to Samuel Prospect Water Supply – North Trelawny**
Projected cost \$65 million
- **Tank and Pump Operational Efficiency Improvement**
Work will continue islandwide at a cost of \$250 million

SEWERAGE PROJECTS

Over the last 4 years the National water Commission (NWC) has completed construction of new sewers to protect underground water supplies, public health and the environment as well as improve property values and development prospects in these areas and in keeping with the national development imperatives.

The sewers are located at:

- Mona Road (side road),
- 13 side roads off Hope Road,
- Swallowfield Road,
- Upper Montrose/Montrose/ Lady Musgrave Road,
- Halifax Avenue
- Sewerage component of Phase 1 of the Port Antonio Water, Sewerage and Drainage project.



- **Darling Street Sewage Pumping Station – \$634M**

Harbour View Sewage Treatment Plant

Phases 2 and 3 of the rehabilitation of the **Harbour View Sewage Treatment Plant** have been undertaken, providing improved public health and environmental conditions.

Portmore Sewerage Network

Work continues on the reconfiguration of the **\$1.8 Billion** Portmore Sewerage Network. This includes the



Groundbreaking for the Portmore Sewerage Reconfiguration Project at the Bridgeport Sewage Treatment Plant

retirement of five (5) existing treatment plants and the transfer of sewage to Soapberry to reduce public health/environmental pollution, particularly in Hunts Bay. This has resulted in the achievement of greater operational efficiencies and has impacted 180,000 persons in St. Catherine.

Sanitary Sewerage System

Major rehabilitation and upgrading of the sanitary sewerage system in the communities of Majestic Gardens, Seaview Gardens and Riverton Meadows in South and South Western St Andrew, also commenced to address unsatisfactory public health conditions and environmental hazards at a capital cost of \$1.35 Billion.



The Most Hon. Portia Simpson-Miller, Prime Minister of Jamaica, Commissions into service the Negril Wastewater Treatment Plant

Projections 2015/2016

Work will commence on the upgrading of Sewage Treatment Plants under the CrEW Project at a cost of \$1.2B at:

- Boscobel
- Elleston Flats
- Hughenden
- Acadia
- Bay Farm Villa

CENTRAL WASTEWATER TREATMENT COMPANY (CWTC) (Soapberry Treatment Plant)



Mission Statement

To efficiently and effectively collect, treat and dispose of wastewater in accordance with the license and standards set by NEPA to ensure the protection of the natural environment.

14 Background

Central Wastewater Treatment Company Limited (CWTC) is a special purpose company established for the implementation of Phase 1A of the KMA Wastewater Treatment Project. The facilities constructed by the company are intended to treat almost all of the wastewater generated in the Kingston and St. Andrew Area (KSA) as well as wastewater from Portmore in St. Catherine.

CWTC was incorporated as a limited liability company under the laws of Jamaica. Its present shareholders are the National Water Commission and Ashtröm Building Limited.

Tariff Determination - The OUR approved a tariff application for the CWTC with effect from September 1, 2013. This is a major achievement, as the plant has been in operation since 2008 without a tariff rate and an established revenue stream. This tariff rate has replaced the interim rate awarded through the NWC Tariff Determination in May 2008. The CWTC is due for a tariff rate review by September 1, 2015.

Soapberry Treatment Plant (STP) Expansion –

With the flows from the NWC networks in the KSA, Portmore and the Caymanas Development by the



Soapberry Ponds

Urban Development Corporation (UDC), it is anticipated that the treatment plant will reach full capacity by 2017.

The CWTC is currently working along with the Ministry to identify investors to double the capacity of the plant.



Aerial View

Revaluation of Assets – The CWTC will undertake a revaluation exercise, during the course of the 2015/2016 financial year.

National Environment Planning Agency (NEPA) License – The license issued by NEPA for the

operations of the STP expires August 2015. The review of the performance of the plant under the license will be undertaken with NEPA prior to the expiry date.



Soapberry Ponds

RURAL WATER SUPPLY LIMITED



Mission Statement

To effectively manage the implementation of projects by ensuring adherence to standards, time schedules and budget.

Rural Water Upgrading and Repairs

Upgrading and rehabilitation of minor water supply systems were carried out during the Fiscal Year 2014/2015 at a cost of **J\$53.0M**, benefitting 10,500 residents in the following parishes:

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- St. Mary
- St. Thomas
- St. Catherine
- St. James
- Portland
- Clarendon



Commissioning of the Windsor Heights Water Supply System

- **St Mary** (South East) Seaton Water Supply System – ongoing works are 50% complete with full completion scheduled for April 2015.
- **St. Thomas** (Western) – Hagley Gap and Kerrick Hill Minor Water Supply System are fully completed.

- **St. Thomas** (Eastern) - Richmond Hill Pipeline Upgrade works commenced January 2015. Ongoing works are 20% completed with full completion scheduled for May 2015.
- **St. Catherine** (West Central) Williams Gully - completed
- **St. Catherine** (Western) Windsor Heights Upgrade – completed.
- **St. James** (South) Horse Guard Garlands W/S Phase1 – 85% complete.
- **St. James** (West Central) Gutters Retirement W/S - 80% complete with completion scheduled for March 2015
- **St Thomas** (Western) Llandewey W/S - 90% complete
- **Portland** (Eastern) Haining/Belle Castle W/S - completed
- **Clarendon** (Northern) Distribution Improvements - 95% complete

Rainwater Harvesting and Catchment Tank Rehabilitation Programme.

Based on data gleaned from the Ministry of Local Government through the Parish Councils, there are



Rainwater Harvesting – Rose Hall, St. Elizabeth

two hundred eighty-two (282) catchment tanks islandwide. The approximate cost to repair these is \$250M. Twenty one (21) were refurbished during the Financial Year 2012 -2013.

For the Financial Year, 2013-2014, \$47M was utilised to rehabilitate an additional thirty-nine (39) tanks.

Budgetary allocation of **\$41M** was provided under the Estimate of Expenditure for the Rural Water supply programme, Island-wide Catchment Tank Rehabilitation and Rainwater Harvesting Programme. This was utilised to rehabilitate another **thirty-five (35)** rainwater catchment tank throughout the island.

The community of Giblatore in West Central/North Central St. Catherine benefitted from a rainwater harvesting project, utilising household roof guttering and black plastic tanks. Approximately 500 households benefitted from this project.



Giblatore Rainwater Harvesting Project

Since the start of the programme in 2012/2013, ninety-five (95) catchment tanks have been refurbished, at a cost of approximately **J\$100M**, benefitting approximately **28,500** people.

Rainwater Harvesting Projects & Rehabilitated Catchment Tanks



Commissioning of the Portsea Rainwater Catchment Tank

A total of J\$41M was spent during the Financial Year 2014/2015 to rehabilitate the following Catchment Tanks:

Rehabilitated Tanks

1. Manchester

1. Ballynure (North) – complete
2. Bottom Elliston (South) – complete
3. French Park (South) – complete
4. New Forrest 1&2 (South) – complete
5. Windsor Forrest (South) – complete
6. Lancaster (South) – complete
7. Newfield (South) – complete
8. Bakers Common (North East) – complete
9. Chantilly (North East) – complete
10. Maidstone (North West) – complete
11. Lyndhurst (North West) – complete
12. Coley Mountain (North West) – complete

2. St. Elizabeth

- Portsea (South East) – complete
- Genus (South East) – complete
- Northampton (South East) – complete
- Melksham (South East) – complete
- Sevens Corner (North East) – complete

3. St. Ann

1. Plantain Walk (South West) – complete
2. Gibraltar (South West) – complete
3. Irons Mountain (South West) – works ongoing, 50% complete
4. Endeavor (South West) – complete
5. Rosetta (South West) – partially completed, tank to be covered
6. Knibb Street (South West) – complete
7. Grants Mountain (South West) – complete
8. Thatchfield (North West) complete

4. Clarendon

1. Ashley (North Central) – complete
2. Cumberland (North West) – complete
3. Bowens Gate (North West) – ongoing, 90% complete
4. Mt. Pleasant (North West) – ongoing 50% complete
5. Richmond Park/Fogo Road (North West) – ongoing, 80% complete
6. Long Bough (Northern) – completed
7. Simon (North Central) – completed

5. Westmoreland

1. Kilmarnock (Eastern Westmoreland) – complete
2. Argyle Mountain (Eastern Westmoreland) – 70% complete
3. Charles Mountain (Eastern Westmoreland) – complete
4. York Mountain (Eastern Westmoreland) – complete
5. Holly Hill (Eastern Westmoreland) – works to commence, end March

Projections 2015/2016

J\$43m has been budgeted to carry out rehabilitation and repairs to catchment tanks as follows:

No.	# of Tanks	Parishes
1	6	Clarendon
2	4	(Eastern) Westmoreland
3	7	Manchester
4	7	St. Ann
5	5	St. Elizabeth
6	2	St. Thomas
7	2	St. Mary

• **Rainwater Harvesting Projects in Schools**

Rainwater Harvesting Projects will also be undertaken in two schools: the Anchovy High School’s new campus, in Mountpelier, South St. James and at the Ferncourt High School in South East St. Ann.

• **Water Supply Systems Upgrading projects**

J\$47M has been earmarked for the following water supply systems:

No.	Parishes	Projects
1	Westmoreland (Western)	Belle Isle Water Supply System
2	Portland (Eastern System)	Islington Water Supply System
3	Portland (Western)	Minor Water Supply Upgrading
4	St. Thomas (Eastern)	Richmond Hill/Pear Tree River
5	St. Thomas (Western)	Arntully Water Supply Upgrade

6	St. Catherine (North West)	Cassava Pond Water Supply System
7	St. Catherine (North Eastern)	Lucky Valley/Mount Industry/Pear Tree Grove
8	St Andrew (West Rural)	Clydesdale Water Supply
9	St. James (South)	Tangle River
10	Manchester (South)	Minor Water Supply Improvement

Household Water Harvesting Solutions

This project will be promoted in rural communities, which are devoid of adequate sources and piped water. A pilot project will commence in the parishes of Manchester and St. Ann during the financial year.

• **Rural Water Supply Development Strategy**

Grant funding in the sum of J\$29 million has been provided by the Inter-American Development Bank (IDB) to fund the Rural Water Supply Development Strategy review and to update the Water Sector Policy.

This study is being conducted to ascertain areas without access to potable water and to provide solutions by employing different modalities. These will include piped water solutions and rainwater harvesting systems.

The Strategy seeks to provide water supply through several projects via different modalities in non-utility service areas. Under the draft National Water Sector Policy (2014), universal access to water supply for all Jamaicans is targeted for 2030.

The National Water Commission (NWC), through its Parish Plans, aims to provide 85% coverage of piped water supply in utility service areas. The remaining 15% will fall within non-utility service areas. An amount of \$9.48M has been included in the budget to carry out surveys and investigations into developing water supply solutions for all parishes in rural Jamaica.

Ministry of Water, Land, Environment & Climate Change
ACHIEVEMENTS 2014-2015 AND PROJECTIONS 2015-2016

Key achievements as at the end of January 30, 2015 include:

- Consultations among Special Interest Groups for compilation of a Draft Updated Water Policy
- Islandwide consultations have been organised to review the Rural Water Supply Development Strategy, which was drafted by the Consultants Castalia. The Strategy will be implemented mainly by Rural Water Supply Limited in subsequent fiscal periods.



Water Policy Consultation

WATER RESOURCES AUTHORITY



Laughlands Great River, St. Ann

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Mission Statement

To ensure the sustainability of Jamaica's water resources through continual assessment and proper management, promotion of conservation and protection, and optimal development of these resources. To ensure rational and equitable allocation of the nation's water resources and to reduce conflicts among water users.

Background

The Water Resources Authority (WRA) was established in April 1996 with one of its objectives being to increase public awareness of the importance of water resources management to sustainable development.

The public awareness programme was a success and positioned the WRA as the premier hydrologic agency for the island and the Caribbean. It has now become routine to consult the WRA on all matters relating to water resources management and development.

Over the years, the capacity of the WRA has been on the decline as a result of the inability of the Authority to retain its qualified professional staff

due to the low emoluments paid and the lack of funding for projects and research. The WRA is again in the capacity rebuilding phase, having recruited some young geology and engineering graduates from UWI and is mentoring them to effectively carry out the mandate of the WRA.

The capacity rebuilding is being done to undertake the necessary research and projects, which are critical to water resources management, as the impacts of climate change on water resources intensifies.

The following projects have been completed:

1. An evaluation of the water resources of the Upper Rio Cobre Sub-Basin (Linstead – Ewarton – Lluidas Vale) through funding from the International Atomic Agency (IAEA)

This project involved the use of isotopes of oxygen and hydrogen in water, to trace the origin of the water resources; carbon 14 to date the age and retention time in the aquifer of the water and the physical and chemical characteristics to determine anthropogenic impacts on water quality. The analysis of the data is ongoing and a final report will be issued in 2015.

Members of staff have also benefitted from training in isotope hydrology in Austria, in dye tracing techniques locally and in Kentucky by the IAEA and Western Kentucky University as well as technical visits to institutions overseas.

The WRA also received equipment and materials for the execution of dye tracing exercises and water quality equipment to carry out field measurements and establish a small water quality laboratory.

2. With funding from UNESCO, an assessment for the impact of climate change on water resources of the Yallahs River Alluvium Aquifer was conducted. The project included the development of a groundwater management model. The results of the model indicate that the reliable yield of the aquifer has been exceeded as the daily abstraction of 29,627m³ is greater than the reliable yield. The model also indicated that the potential risk to water quality from saltwater intrusion is high, as the over abstraction has

reduced outflow that would push out the salt-water. Climate change scenarios indicate a decrease in rainfall of 0.52% by 2030 to 18.4% by 2080. This decline in rainfall has to be compensated for by a reduction in groundwater abstraction. The WRA will gradually reduce abstraction, while moving to have improvements in the efficiency of water transmission and uses.

3. An aquifer vulnerability map for the island using a DRASTIC methodology was also prepared. The vulnerability map indicates the potential risk to contamination at various locations across the island. The risk is greatest on the limestone aquifers that are Karstic and have high secondary permeability. This information is used to guide the development approval process and the determination of mitigating conditions for the protection of water resources.
4. The Authority is now completing reports on the following projects:
 1. Evaluation of the mud stacking and drying facility at Ewarton and the impact of the closure of Mt. Rosser Red Mud Lake on water quality in the Linstead and White River catchments
 2. The determination of the reliable yield of ungauged catchments so as to guide allocation of water resources



Laughlands Great River, St. Ann

3. The impact on water quality due to the change by the Ministry of Education from pit toilets to flush systems -- the introduction of water in the flush system will provide a transport medium for pathogens and contaminants from the sewage to the ground

water. This is even more critical when the systems are located atop the limestone aquifers that cover 50% of the island and contain 90% of the groundwater reserves of Jamaica.

4. Assessment of the impacts of climate change on water resources availability in the Orange-Fish River catchments and the Great River Basin. This assessment will delineate the climate change impacts on water availability and will assist the NWC in meeting the water demand of Negril.

Supporting these projects has been the work of the Information and Computer Technology (ICT) Unit in terms of GIS and the Data and Resource Monitoring Unit (DRMU) in terms of the provision of data for the projects and the determination of the water resources status and climate change impacts.



Google Map

Among the achievements of the ICT Unit are the following:

- Acquisition and enhancement, internally, of the online hydrologic database "WebMap" that takes advantage of new technology, Google Earth and Google Map, multi-browser support and a faster web engine -- this online database is accessible by everyone and has reduced the time spent dealing with data requests. The online database has current data up to December 2014 for surface and ground waters, stream flow and rainfall.
- The Aquarius software that will reduce the need for manual computation of aspects of stream flow and allow for better management of time series data -- this software is also being used by the United States Geological Service (USGS) and Environment Canada. The WRA is on track with the technology.

- The determination of the potential for rainwater harvesting at different levels of reliability across Jamaica in collaboration with the United Nations Food and Agriculture Organisation (FAO) and the National Irrigation Commission (NIC) to enhance agricultural development and production and improve rural access to water and standard of living
- Mapping of sinkholes and surface and ground water sources primarily springs in deep rural areas that will be critical to the implementation of the Water Sector Policy and the Rural Water Development Strategy

The Data and Resource Monitoring Unit (DRMU) carried out the installation of a number of intensity rain gauges across the island under the Pilot Programme for Climate Resiliency (PPCR). The WRA's intensity rain gauge network complements that of the Meteorological Service and adds data for the analysis that will determine the climate change impact on water resources. The DRMU also upgraded the Rio Cobre Flood Warning System and has continued to give updates to the ODPEM during periods of extreme weather where flooding of the Bog Walk Gorge is possible.

The DRMU continued to maintain and upgrade the national hydrologic monitoring network of river stations and index wells to garner data and information for assessing the availability, use and guide allocation of water resources. This will be enhanced in 2015 by funding from the World Bank through the SPCR in the installation of data loggers for continuous recording of data, real time transmission of data to the WRA and the improvement of the output from the flood warning system through the use of alternate energy to power the servers that send out the alerts to staff and ODPEM.

Maintaining the position of the island in a positive water resources balance is a major objective of the mandate of the WRA. The Permits and Licences Unit continues to keep a tight rein on the allocation, use and reporting of abstraction as required under Section 19 of the Water Resources Act 1995. The Unit provides the technical support to the Board of the Authority in its assessment of applications to drill wells and abstract water from wells, rivers and springs. This technical support is critical to the adequate provision of good quality water for the implementation of projects, agricultural expansion

and meeting the public water demands. The equitable and transparent allocation of water has meant that, over the years, the WRA has facilitated national development without conflict among users and without any detrimental impact on water availability.

In 2014 the WRA granted 96 licences for abstraction and use of water with total water renewed of 827,560m³/day (182 million per day), total new allocation of 12,543m³/day (2.76migd) and seven well drillers licences granted.



Rio Bueno River at Dornoch, Trelwany

The Water Resources Authority continues to manage the island's water resources in an efficient, effective and sustainable manner to ensure that future generations of Jamaicans can have water to meet all their demands. In the coming year, the WRA will begin the public awareness programme with all licensees for the implementation, in 2016/2017 FY, of a volume based fee/water abstraction charge that will finance the WRA's field programmes, research and maintenance of the hydrologic network (the only one in the English speaking Caribbean).

The application of technology will improve the quality of the data being collected and the analysis for dissemination to all users. However the human capacity of the WRA must be retained and improved for effective management of water resources, if we are to achieve all the goals set out in the "Vision 2030 Jamaica National Development Plan", which either directly or indirectly depend on a safe, adequate and reliable water supply to make **"Jamaica the place of choice to live, work, raise families and do business"**.

THE LAND PORTFOLIO



23

“Land is the only source of the material life of the people. It provides food and shelter. It furnishes work and wealth. It is the basis of all production, of all development, of all security, of all growth. It is, in very truth, the root of our being”

– Rt. Excellent Norman Washington Manley

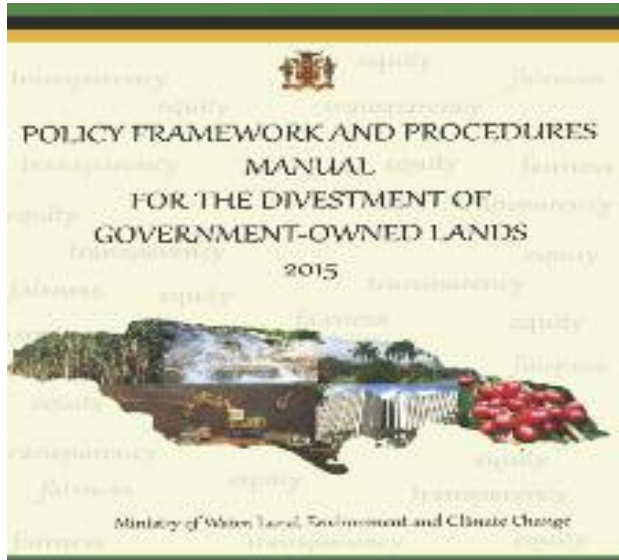
LAND POLICY & ADMINISTRATION DIRECTORATE

Land is a key natural resource in any country. We depend on it to provide food and shelter – the two most basic essentials of our very existence.

The Ministry has continued on the course to create a broad-based “ownership society” where persons, no matter their socio-economic status, can own land and have a Certificate of Title to prove their ownership. In this way they are able to unlock the asset for their own economic advancement.

Achievements 2014/15

The Divestment Manual



The Policy Framework and Procedures Manual for the Divestment of Government Owned Lands was launched on March 27, 2015. The Policy Manual standardises and codifies best practices which have been developed over the years. It provides clear guidelines, procedures and institutional mechanisms to ensure transparency and efficiency in the process by which lands are divested by the public entities.

It also promotes economic development, facilitates a broad-based ownership of land, streamlines governance structure to improve accountability, and enables social capital to successive generations of Jamaicans.

Applications approved for Divestment

During 2014, 61 applications, valuing \$140 million were approved for divestment. This will enable and enhance the opportunities for sustainable livelihood and wealth creation, stimulate economic expansion, and enhance the country's Gross Domestic Product.

Ministerial Orders approved by Honourable Minister

Many land owners, though living for years on their land, would not be able to obtain registered Titles without Ministerial intervention as provided for under the Registration of Titles Cadastral Mapping and Tenure Clarification (Special Provisions) Act. Over the period, two hundred and twenty-eight (228) Ministerial Orders were granted, which enabled approximately 232 owners to make applications to register their parcels of land.

Projections 2015/2016

Revision of the 1996 National Land Policy

About 60 per cent of the National Land Policy (NLP) (1996) that was reviewed and revised by the stakeholder (MDAs) was apprised by the Steering Committee and recommendations made for finalisation. Work on the balance is in progress. It is envisaged that the first draft of revised NLP will be completed for wider stakeholder consultation during the last quarter of 2015/16.

LAND ADMINISTRATION AND MANAGEMENT PROGRAMME



LAMP is a Government initiative, which was established to assist all owners of land in Jamaica to obtain registered certificates of title for their land as well as to implement a number of recommendations contained in the National Land Policy.

**REGISTER FOR
LAMP AND GET
YOUR TITLE IN
6 MONTHS**

Click here to find out more

Conditions Apply

Achievements – Financial Year 2014/2015



Certificates of Titles

Eight hundred and six (806) new titles have been processed and 359 new titles updated.

Adjudication Committees

Four (4) Adjudication Committees have been established and published in the Jamaica Gazette. They are operating in the South East, South West, North West, and North East areas of St Elizabeth.

These committees will adjudicate on files presented by the Land Administration and Management Programme (LAMP) for beneficiaries who apply to register land but have difficulty proving root of title because they have no document evidencing ownership. The Committees (consisting of a Lawyer, a Commissioned Land Surveyor, a Justice of the Peace (JP) as well as persons living in the community where the land is located, will consider the applicant's claim to the land, examine the applicant and persons who testify on his behalf, examine any person opposing the applicant and make a determination as to the rights and interest in the land. The record of the decision will then be used in support of the application to register the land.



Meeting of the Adjudication Committee – Northeast St. Elizabeth

To date, there are six committees now operating as follows:

- One(1) in Kingston – Rose Town
- One (1) in Narine lands, St Catherine
- Four (4) in St. Elizabeth

Additional committees are scheduled to be established in Manchester and Clarendon by mid-2015.

Over 66 matters have been adjudicated for the financial year 2014/2015.

Landowners who do not have title and do not have documentation in support of their ownership to the land are encouraged to make use of the Adjudication Committees established in their area. They should also utilise the services of Land Administration and Management Programme (LAMP) to obtain their registered titles.

Publications and Sensitisation

LAMP has partnered with other Government agencies and active community organisations to reinforce the public awareness message.

- Five (5) Legal Seminars were organised to inform the community about the services available through LAMP. A total of sixty (60) attorneys participated in the seminars.
- LAMP participated in the Public Relations and Communications Practitioners Workshop on media relations, which was sponsored by the Press Association of Jamaica.

Titling Ceremonies

Ceremonies were held in Mandeville (Manchester) and Spanish Town (St. Catherine), where over 250 certificate of titles were delivered to beneficiaries.



Titling Ceremony – Golf View Hotel, Mandeville

Improved Operations and Customer Service

The LAMP office was relocated to 16a Half Way Tree Road in June 2014. This move is tied to a new Document Management System, which was funded by the Government of Korea through the KOICA project.

This Document Management System enables faster processing of applications and improved customer service. With this system, LAMP will be better able to improve on its deliverables.

Plans are also underway to improve the Lampja website as well as the Facebook and Twitter accounts.

Development Bank of Jamaica (DBJ) Grant

A Memorandum of Understanding was signed with the Development Bank of Jamaica (DBJ) in August 2014 to provide assistance to 2,000 landowners in the parishes of St. Catherine, Manchester, Clarendon, and St. Elizabeth to pay for their certificates of title.

So far, over 110 landowners have received their Certificates of Title, and another 1,890 are expected to be delivered in the next financial year. The DBJ will provide a total of \$80M, while the Ministry will provide counterpart funding in the sum of \$20M.



to address the concerns of persons who have been resettled but are yet to obtain titles for the land on which they live.

Under the MOU, Certificates of Title will be obtained for 100 parcels of land in the parish of St. Ann in the first instance.

Lamp is now seeking to produce titles for 100 parcels of land in St. Ann.

Other Bauxite Companies be engaged, in due course, to have this vexed issue of the provision of certificates of titles for persons who have been resettled resolved.

Projections

During the 2015/16 fiscal period it is aimed that the following will be accomplished:

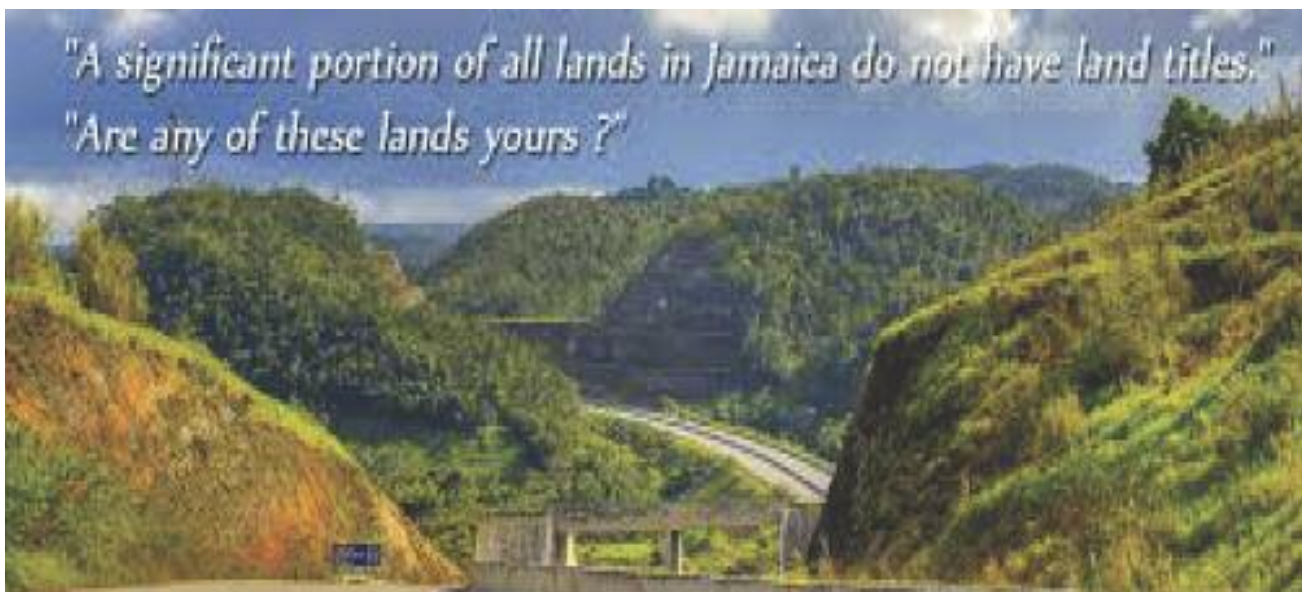
- Add 12,000 parcels of land to the National Grid
- Submit 9,000 tax roll amendments
- Establish 8 Adjudication Committees
- Update 240 Land Titles
- Deliver an additional 1,000 Certificates of Title

Memorandum of Understanding (MOU) with Bauxite Companies

In 2011, LAMP signed a Memorandum of Understanding with Noranda Bauxite Company Limited



LAMP training session with Noranda Bauxite Company



THE NATIONAL LAND AGENCY



"The best investment on earth is earth."
Louis Glickman.

Mission Statement

It is the mission of the National Land Agency (NLA) to ensure that Jamaica has:

- An efficient and transparent land titling system that guarantees security of tenure.
- A National Land Valuation database that supports equitable property taxation.
- Optimal use of Government-owned lands.
- A basic infrastructure on which to build a modern spatial information system designed to support sustainable development.

OVERVIEW

The National Land Agency (NLA) began its operations on April 1, 2001, as an Executive Agency.

The establishment of the Agency, a result of the Government of Jamaica's Public Sector Modernisation Programme, was aimed at integrating the core land functions of Government – Land Titles, Survey and Mapping, Land Valuation and Estate Management (of Crown Land). This resulted in the merger of four Government departments responsible for land administration these are the Land Valuation Department, the Titles Office, the Surveys Department and the Lands Department. The traditional service that the Agency provides, land titling, is one of the cornerstones for development.



STRATEGIC OBJECTIVES

The Agency's Key Performance Indicators are based on the following six strategic objectives:

- To improve quality and ensure timely delivery of services
- To establish an efficient, coherent and transparent service for the management of Crown lands
- To become a client-focused organisation, through ongoing consultation with stakeholders
- To build a strong organisation with a highly qualified and motivated staff
- To improve quality of Finance and Financial Management
- To improve on land tenure

ACHIEVEMENTS & HIGHLIGHTS

At the end of the 2014/2015 financial year, the National Land Agency's performance in the delivery of its Statutory Services, in relation to its targets, was 96%. This is an improvement over the preceding financial year, 2013/2014, when the performance was 91%.

Over the period under review, the following operational improvements were made, including the reduction in turnaround times to issue new titles:

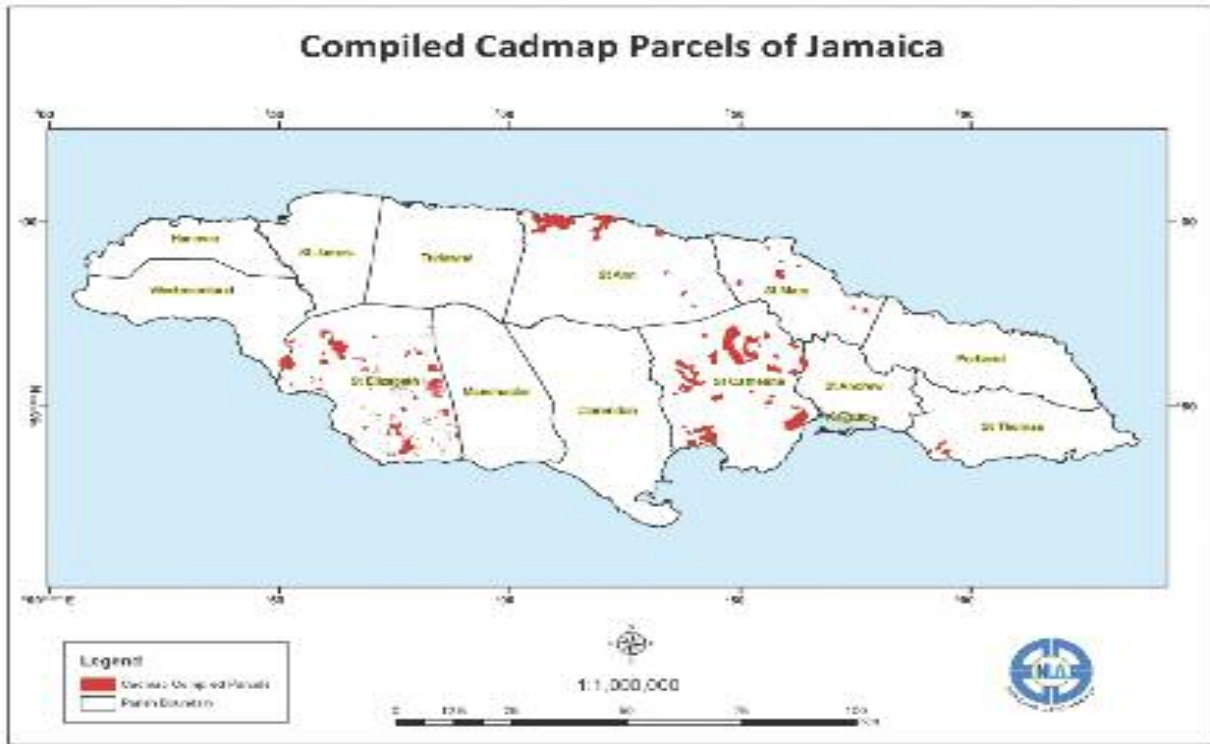
Performance Indicator	Target	2014/2015 Performance (March 1, 2015)	2013/2014 Performance (March 31, 2014)
Turnaround time to issue First Registration titles <ul style="list-style-type: none"> ▪ Titles with Plans ▪ Titles without Plans 	85% completed in 30 days 90% completed in 20 days	99% 100%	97% 100%
Turnaround time to issue other titles <ul style="list-style-type: none"> • Titles with plans • Titles without plans 	60% completed in 30 days 85% completed in 15 days	100% 99%	69% completed in 30 days 80% completed in 15 days
Turnaround Time to issue other Certificates of Title (under Section 77): <ol style="list-style-type: none"> 1. Titles with plans • Titles without plans 	65% completed in 30 days 85% completed	100% 99%	71% completed in 30 days 80% completed
• Number of New Titles Issued	-	8,520	8,472
Turnaround Times to Register Transfers and Mortgages	90% completed in 5 days	99%	99% completed in 5 days
Number of Endorsements of Transfers and Mortgages on existing Titles	60,000	83,907	61,795

Number of Parcels Registered

As at March 1, 2015, 58.01 per cent of the number of parcels of land on the Valuation Roll were with a registered title against the annual target of 57.65 per cent. To date, a total of 475,683 registered parcels were recorded on the Valuation Roll out of a total of 819,957 parcels.

Cadastral Map Development

- 143,210 parcels of land were compiled and coordinated in the Cadastral Map database out of the total 819,957 parcels of land on the Valuation Roll.
- 17.74% of the Digital Cadastral Map has been built to date against the annual target of 16.4%.



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Figure 1: Coordinated Parcels in the Cadastral Map as at March 1, 2015
Titles prepared in the Name of the Commissioner of Lands

Four hundred and ninety (490) titles were issued in the name of the Commissioner of Lands during the fiscal year 2014/2015, surpassing the annual target of 300 titles.

Land Inventory Project

Field inspections for the Land Inventory Project to improve the management of Crown lands are expected to be completed in 2015/2016.

As at March 1, 2015, the total number of parcels added to the inventory was 34,834, broken down as follows:

- 31,704 Land Settlement parcels
- 3,130 large parcels including properties held in trust for Agencies such as the National Insurance Scheme (NIS) and the national Water Commission (NWC)

Estate Management System (EMS)

The Estate Management System is a computerised system that has been put in place to manage properties owned by the Commissioner of Lands.

12,838 properties were added to the Property Inventory component of the Estate Management System (EMS) as at March 1, 2015, bringing a total of 12,838 properties to date. This represented 37 per cent of the total number of properties in the name of the Commissioner of Lands to be inventoried on the Valuation Roll. To date a total of 8,240 files have been indexed and scanned into the system as follows:

- 321 Leases
- 48 Rental (Government Houses)
- 23 National Insurance Fund Properties
- 7,823 Land Settlement lots
- Three (3) Grants of Licence
- 22 Additional Volumes (leases).

REVENUE AND COLLECTIONS

As at March 1, 2015, collections from **eLandjamaica**, NLA's online service, were \$21.5 million which exceeded the annual target of \$18 million. \$22.6 million was collected in 2013/2014. An additional 464 subscribers were added to the **eLandjamaica** service as at March 1, 2015, bringing the total number of subscribers to three thousand, five hundred and thirty-nine (3,539).

Revenue earned from **Map products** was \$10 million above the annual target of \$3 million.

This compares to the \$5.68 million that was earned in 2013/2014.

Estate Management Collections

As at March 1, 2015, collections from Sales and Lease of Crown Lands totalled \$179.22 million, above the previous year when \$143.5 million was collected. See Table 1 below:

Description	YTD – March 1, 2015 (\$)	YTD – Mar 31, 2014 (\$)
Crown Land Lease	106,284,289.70	93,912,560.08
Crown Property Sales - Deposit	26,449,950.00	1,517,800.84
Crown Property Sales - Instalments	46,490,171.18	48,070,630.25
Total	179,224,410.88	143,500,991.17

Table 1. Collection from Sales and Lease of Crown Lands at March 1, 2015.

Public Education

The NLA continued to carry out regular outreach meetings in various parishes to advise persons, not only of the Agency's products and services, but to discuss titling issues, such as, the benefits of having a registered title; probate issues; valuation and property tax issues and other land-related matters. During the period, ten (10) events were held with approximately 700 persons in attendance.



New Services

One new service has been implemented to date to improve customer satisfaction. This is a Quick Drop Box at the Land Titles Division. The Lodgement Lobby Depository/ Quick Drop Box offers cus-

tomers the option to deposit their lodgements in a lobby depository/drop box instead of queuing at the Assessor. The secure lodgement lobby depository will enhance customer satisfaction by:

- Reducing the traffic in the main customer service area during days of high volume
- Customers utilising this service will enjoy extended service hours. The service will be accessible from 8:00 am to 4:30 pm on regular work days allowing an additional hour of service.

An additional service is to be implemented by March 31, 2015. This new service, JAMPROP Jamaica, is a subscription that will allow customers to access sale information online.

KEY INITIATIVES PLANNED 2015/2016



There are a number of key initiatives and plans earmarked as future endeavours for the NLA namely:

Customer Service Improvement

eLandjamaica and iMapjamaica Merger:

Discussions are ongoing with Consultants to merge and upgrade these services.

Increased Scanning and Digitisation of Records

The Agency will commence this project that which is aimed at making additional documents readily available to the public through the internet via eLandjamaica and to extend the lifespan of the physical documents held in storage.

The Documentation Centre is a library and archival storage for map-related records including survey plans and maps of Jamaica. Land Surveyors, members of the public and several Ministries, Departments

and Agencies (MDAs) usually access these records for professional services, planning and research purposes.

Sensitization on the Amendments to the Land Surveyors Regulations

The Land Surveyors Regulations was amended and Gazetted in January 2014. The amendments to the Regulations are also part of the process of achieving a comprehensive Cadastral Map as all surveyors are now mandated to align all surveys to the national grid to facilitate the compilation and coordination of parcels of land into the Cadastral Map database. Over the medium term, the Agency intends to continue to sensitise Land Surveyors on a phased basis about the new requirements and on how it will accelerate the number of parcels coordinated and compiled for the building of the Cadastral Map.

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DEVELOPMENT, PLANNING, POLICY AND MONITORING DIVISION

Development Approvals Process

The need to expedite the Development Approvals Process (DAP) has been a continuing concern for a number of years.

The general view has been that if the Government and the regulators could find a way to reduce decisionmaking time in the subdivision and development applications process, this would enable the economy to experience an appreciable growth in Gross Domestic Product (GDP). It would also improve business facilitation and further improve Jamaica's ranking in the World Bank's "Ease of Doing Business Report".

In response to these complaints, last year, a Committee comprising high level representatives from the relevant government ministries, department and agencies; developers; planning; design and building professionals; and other professionals in the public and private sector reviewed the current DAP and made recommendations on how to simplify and improve its efficiency.

A draft Implementation Plan including timelines for the implementation of the recommendations has been completed and is being finalised for the Cabinet's approval and implementation.

Some of the approved recommendations are:

- The proposal for the assessment of all Planning and Building applications 21 units or more (housing schemes, apartments, townhouses, hotels etc.) that do not conform with the permitted development, to be undertaken by a multi-agency joint technical team (MJTT)
- The assessment of all subdivision applications 21 lots or more by the MJTT
- The assessment of all planning applications for power plants, factories, offices and commercial buildings over 10,000 square metres to be undertaken by the MJTT
- The assessment of all applications falling within sensitive areas (protected or conservation areas) that do not conform with the permitted development

All stakeholders must be advised that further measures are being put in place to make Jamaica a better place to do business, thereby fulfilling the growth agenda while preserving our natural environment.

LEGISLATION

Town and Country Planning Act (Bill)

The long-awaited amendments to the Town and Country Planning Act will enable greater effectiveness to the regulation of development and land use in Jamaica. This is a process that has been ongoing for over ten (10) years.

The suggestions, decisions and recommendations of all the stakeholders including the Attorney General's Chambers, the local planning authorities, Ministry of Local Government and Community Development, the National Environment and Planning Agency (NEPA) and other stakeholders have been considered and the agreed proposals for amendments will be completed shortly.

Some of the key proposed amendments include:

- The introduction of Development Plans as legal Planning instruments along with Development Orders. It is the intention of this administration to update these Orders and/or Plans every five (5) years to ensure that they remain current and relevant.

- Provision for public participation in the planning process.
- Strengthened enforcement mechanisms including revised period for the serving of Stop and Enforcement Notices
- The extension of the Act to Jamaica's territorial waters to include the continental shelf, the exclusive economic zone and the natural and artificial accretions (keys and islands)
- The Minister to issue Planning Policy Guidelines that will be used along with the other instruments to guide development within the island. These Planning Policy Guidelines will allow for a more consistent, transparent and accountable decision making process.

Subdivision Applications Confirmed

At the end of the 2014/2015 financial year a record total of seven hundred (700) applications were confirmed - an indication that the Jamaican economy is heading on the right path to growth.

Projections 2015/2016

Policy Guideline on the Minimum Size of Studio Housing Unit

It is a common practice for owners/ developers to apply for and receive planning permission to construct "super studios" from the local planning authorities or the Town and Country Planning Authority, as the case may be.

While these housing developments have been approved in accordance with the specification as outlined on the development plans, there is evidence that some of these "super studios", which are of various sizes are later converted into additional bedrooms, (sometimes up to three), larger apartments or other uses.

This practice has not only impacted the approved densities of the developments resulting in an increase in the number of habitable rooms, but also carrying amenities such as sewage capacity. This higher density which is unplanned frequently leads to other undesirable outcomes such as lack of parking spaces, localized traffic congestion and overcrowding in the developments.

Against this background, a Planning Policy Guideline for the maximum size for studios in multifamily housing developments will be issued to the relevant development approval agencies and local planning authorities for implementation early in this financial year.

Gated Communities and Town Houses Legislation

Work continues on the preparation of new legislation to govern the maintenance of and management of common areas in gated communities such as town houses and commercial complexes. This legislation will be similar to the Strata Titles Act which governs the management of apartment complexes.

The Real Estate Board is currently undertaking the tendering process to hire a consultant to prepare the proposals for the drafting of the legislation.



Gated Community – Caribbean Estate, Portmore, St. Catherine

A Revised Residential Density Zoning Policy for Jamaica

Jamaica is increasingly becoming more urbanised which has resulted in increasing demand and pressure on our finite land resources. As a result there will be a review of existing residential density standards in urban areas as a development planning strategy. The increase in residential densities will also maximise the use of scarce land resources and take advantage of economies of scale in respect of infrastructural investments, such as central sewerage treatment and disposal facilities as well as transport systems.

This matter will be brought to the Cabinet, early in this financial year, for agreement and sign off on the proposals to increase residential development densities in some urban areas.

Policy on Rainwater Harvesting

The protracted period of drought this year has highlighted the need for all households in Jamaica to increase their water storage capacity so that reliable potable water supplies can be maintained in their households.

In this regard, a draft national rainwater harvesting policy guideline for all new and existing residential and commercial developments has been prepared.

The policy guideline will outline standards and procedures for the harvesting of rainwater, which mostly goes to waste in residential areas. Where feasible, rainwater harvesting will be a requirement and condition of approval for all new residential and commercial developments in Jamaica.

The policy guideline will be finalised and issued to the relevant development approval agencies/bodies early in this financial year.

REAL ESTATE BOARD & COMMISSION OF STRATA CORPORATIONS



Mission Statement

The Real Estate Board seeks to operate a profitable, market driven, customer-focused organisation that regulates the activities of real estate practitioners, including land developers, to ensure their professional and ethical conduct in conforming to the law and to protect the public, while providing a fulfilling and harmonious staff atmosphere.

Functions

1. Consider applications from real estate practitioners
2. Monitor real estate developers
3. Make enquiries and collect information necessary for conducting its functions
4. Hold and conduct examinations as are required for registration and
5. Generally to take all lawful measures necessary to carry out its functions.

Achievements:

Protecting Real Estate Purchasers

For the 2014-15 financial year, the Real Estate Board assisted in protecting the nation's reputation in real estate matters. This is a very important task as it encourages persons, especially in those in the diaspora, to invest in real estate in Jamaica.

One thousand eight hundred and forty two (1,842) **purchasers' deposits** in real estate transactions were protected **to the tune of J\$16,914,000,378.00 and US\$33,526,970.84.**

- \$25.7M was spent on court costs last year to protect these depositors.

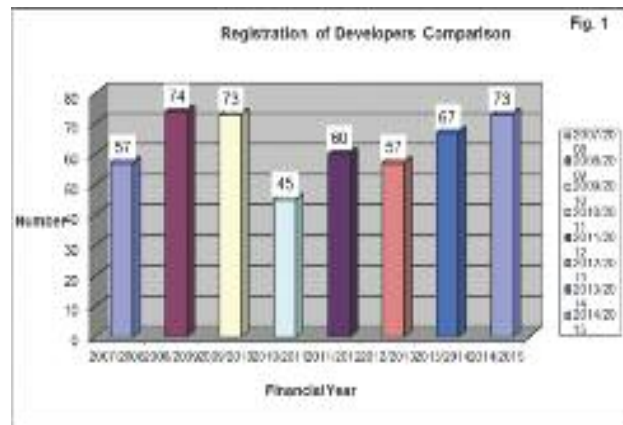
- \$149.15M was recovered for 80 depositors in four (4) failed schemes during the year.

This intervention has helped to restore consumer confidence in real estate market.

Registering & Monitoring Development Schemes

The registration of developers over the past three years is clear indication that the economy is on a continual path of improvement and recovery as 73 developments were registered for the construction of 1,565 units, of which 179 were commercial and a further 1,845 lots. This added a total of 3,231 units/lots to the housing pool. Additionally the Board noted a trend of developers registering large schemes (in excess of 200 units).

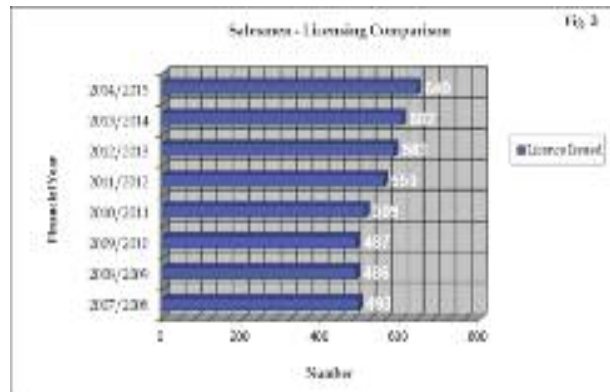
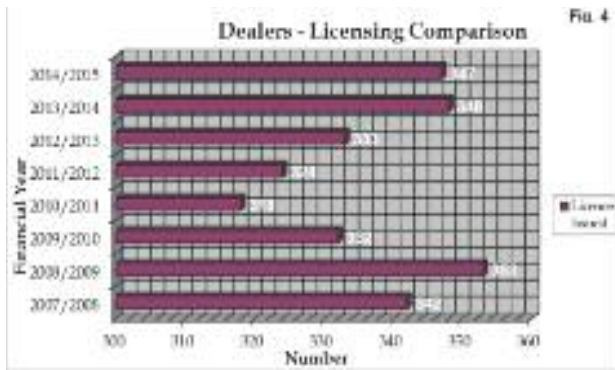
All development schemes are registered within 30 days of receipt of a completed application.



Registration & Licencing of Dealers and Salesmen

Two hundred and three (203) jobs were added to the persons engaged in the real estate sales industry, 30 as dealers and 173 as salesmen.

347 dealers were licensed and 640 salesmen. Although the number of dealers' licences issued decreased by .29% over the previous year (see the graphs below) the number of salesmen's licences issued grew by 6.31%.



Two challenges were resolved for Proprietors of Strata Plans:

- The collection of unpaid maintenance fees
- The resolution of disputes.

For the first time in decades, the Strata Complexes are collecting maintenance fees which have been outstanding for many years. The fees are collected through two avenues:

- Granting of Power of Sale Certificates
- The Facilitation of Dispute Resolutions.

Since 2012, outstanding maintenance fees to the tune of **\$110.97M** has been collected through the Power of Sale method. This method is usually used as a last resort.

The figures below outlines Certificates granted:

Power of Sale Applications



There was a significant increase in the number of applications for Power of Sale Certificates in 2013/2014 financial year with an estimated value in the region of \$45,260,972.60. This decreased by 67% in 2014/2015 resulting in a decrease in the estimated value to \$13,006,844.70.



COMMISSION OF STRATA CORPORATIONS IMPACT 2012/2013 - 2014/2015

Functions

1. Monitor, regulate and supervise strata corporations
2. Keep a register of strata corporations
3. Facilitate the resolution of disputes within strata corporations
4. Consider complaints re maintenance contributions
5. Enforce by-laws and
6. Perform other functions conferred by the Act and the Minister.

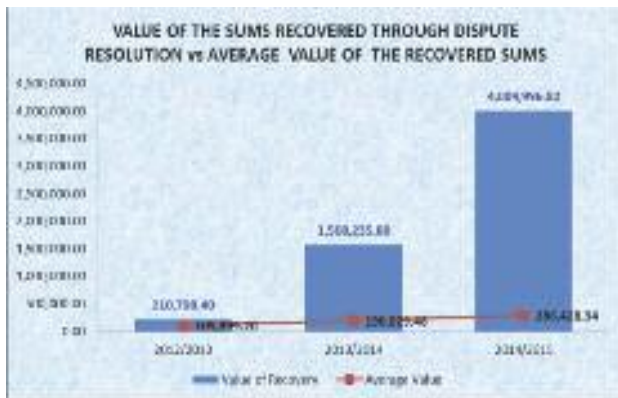
The estimated value of all the applications from April 2012 to February 28, 2015 is approximately \$72.7M. The Commission has issued Power of Sale Certificates for 72% of the applications totalling \$52.7M.

Dispute Resolution Applications

The table and information below outlines the total number of applications for Dispute Resolution that were received and the number of these cases that concerned outstanding maintenance fees.



There was a 35% increase in the number of Dispute Resolution in 2013/2014 and a further increase of 29% in 2014/2015. There has also been a gradual increase in the number of cases for the recovery of outstanding maintenance fees which are heard by the Commission of Strata Corporations. There were two successful cases relating to recovery of maintenance in 2012/2013. During the following financial year, 2013/2014, there was a 300% increase in the number of successful maintenance fees cases while there was a 75% increase in these cases in 2014/2015.



There was a 640% increase in the value of the recovery in 2013/2014 over the preceding financial when \$1.57M was collected. There was a 156%

increase in 2014/2015 to \$4.0M. The average value of the recovered sums per application rose by 86% in 2013/2014 (\$196,029.48) and again by 46% in 2014/2015 (\$286,428.34).

Summary of the performance of the Real Estate Board and the Commission of Strata Corporations - See Appendix #3



Commission of Strata Corporations - Anti-money Laundering Workshop

Projections for the 2015 – 16 Financial Year

The following are the key activities for both the Real Estate Board & the Commission of Strata Corporations for the new financial year:

- **Legislation:**
 - Amending the Real Estate (Dealers and Developers) Act
 - Drafting legislation to govern the operations of “Gated Communities”
 - Drafting legislation to unify the organization and entities
 - Amending the Registration (Strata Titles) Act.
- Unifying the Real Estate Board, the Commission of Strata Corporations and the Registrar of Timeshare to ensure cost reduction, greater economies of scale and greater efficiencies in the administration of the organization.
- Establishing the systems and administration of the Registrar of Timeshare and operationalising this Registrar.
- Approving all applications to register as dealers, salesmen, developers, strata corporations and

Ministry of Water, Land, Environment & Climate Change
ACHIEVEMENTS 2014-2015 AND PROJECTIONS 2015-2016

developers of Timeshare Plans within 30 days of receipt of all properly completed applications.

- Improving the organization's business processes to ensure that they better satisfy the customers' needs.
- Preparing all licences and the required support documents within 7 days of receipt of payment.
- Enhancing the real estate practitioners' knowledge through continued professional training.
- Enhancing public education through enhanced Public Relations programmes. Collaborating with other entities involved in the real estate market such as the National Housing Trust (NHT) and Building Societies to disseminate information to assist in the protection of real estate purchasers.

NATIONAL SPATIAL DATA MANAGEMENT DIVISION



Mission Statement

To coordinate the development, implementation, maintenance and management of a national spatial data infrastructure and to promote the sharing and use of geospatial data so citizens, communities and Government can access and use place-based data to make better decisions.

Accomplishments 2014-2015

The global geospatial community continued to support sustainable development planning with particular focus on the United Nations Post-2015 Development Agenda for which geospatial data management is identified as a critical success factor. In this regard, the Third High Level Forum on United Nations Global Geospatial Information Management in Beijing in October, in which Jamaica participated, addressed the role of geospatial information in the Post-2015 Development Agenda.

Jamaica also participated in the Fourth Session of the UN Committee of Experts on Global Geospatial Information Management (UN-GGIM) held in August in New York where there was adoption of a resolution on the establishment of a Global Geodetic Reference Frame (GGRF) for Sustainable Development, which was co-sponsored by Jamaica at the UN General Assembly. The GGRF outlines the value of ground-based observations and remote satellite sensing when monitoring changes in socio-economic or environmental subjects over time. Such geospatial measurements can support sustainable development policymaking, climate change monitoring and natural disaster management, and also have a wide range of applications for transport, agriculture and construction.

NERGIST Capacity Building

During the year, the National Spatial Management Division (NSDMD) led the process to launch of the National Emergency Response Geographic Information Systems Team (NERGIST). Thirty (30) volunteers were trained to assist the Office of Disaster Preparedness and Emergency Management (ODPEM) in post-disaster impact assessments and GIS technical analysis. In this regard, the Division collaborated with the ODPEM to deliver two series of three module capacity building workshops which were held from January - March and July - August 2014. The objective was to help to develop the requisite skills of NERGIST volunteers to conduct field global Navigation Satellite System (GNSS) data collection, spatial analyses and post-disaster initial damage assessments. On successful completion of all the requisite components of the training, each participant was awarded a 'NERGIST Certified' certificate, and are now deemed qualified to provide support to ODPEM as a NERGIST Professional in the case of a disaster. Team members were also awarded a United States Agency for International Development (USAID) 'Initial Damage Assessment' certificate upon successful completion of module three of the workshop series. The certificates were presented at two graduation ceremonies in June and September.



Figure: Fifteen NERGIST members from thirteen GOJ Ministries and entities received certification – June 19, 2014.

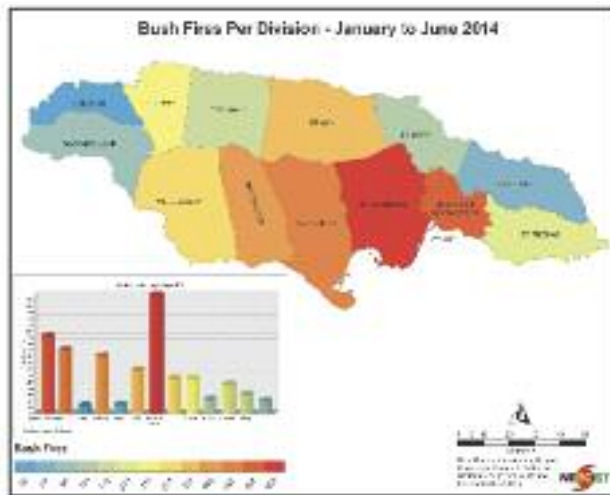
The NERGIST group was instrumental **Drought Impact Mapping** to assess the impact of the recent drought on the island and the mapping of the locations



Figure: Graduation exercise for second batch of NERGIST certified professionals – September 17, 2014.

of drought-affected areas and bush fire incidents islandwide, using GIS and related technology. Communities most impacted by bush fires in the parishes of St. Catherine, Kingston, St. Andrew, Clarendon and St. Ann were also mapped. The group prepared a series of GIS web applications and digital maps highlighting communities most affected by bush fires between January and September 2014 as well as the location and status of hydrants. These maps assisted the OPDEM and the Jamaica Fire Brigade to assess the impact of these incidents and support planning for future events.

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Additionally, the team developed a **Chikungunya Web Application** to assess the spread and impact of the Chikungunya virus (Chik V) which affected the island. The application was used to identify possible breeding sites by mapping 129 reported cases of Chik V for the months of September to October along with information on incident description and fatalities.



Geospatial Web Applications

The availability, accessibility and sharing of Jamaica's geospatial data was enhanced by the development and maintenance of mobile and web-enabled GIS applications. Among these were the:

Disaster Risk Information Platform (DRIP), developed for the parish of St. Catherine, is a compilation of risk information that serves to inform decision-making by the Parish Council. The DRIP serves as a tool to identify, analyze and disseminate lessons learnt, best practices, technologies and methodologies for disaster risk reduction. The NSDMD developed the platform to create an information hub where users are able to access studies, maps, and research related to hazard, risk and vulnerability information specific to St. Catherine. The DRIP also has a geospatial interface where web-maps can be published and geospatial data downloaded.



FIG - Screenshot of DRIP showing the flooding events islandwide and in parish of St Catherine and important infrastructure.



FIG : Screenshot of DRIP showing storm tracks and flooding associated with select Hurricanes in proximity to critical infrastructure.

Geospatial Damage Assessment Tool (GeoDAT), is a post-impact assessment tool/application (app) developed specifically for the NERGIST. The mobile application allows for rapid assessment to evaluate the impact of a disaster event. GeoDAT was developed by the NSDMD and seeks to improve the efficiency with which post-impact data are collected and facilitate the speedier preparation of damage assessment reports. Data can be collected on a variety of mobile devices such as tablets or smartphones and then uploaded to a web-based service for real-time viewing and analysis by disaster management officials. The application integrates to device cameras and GPS technology allowing assessors to photograph and precisely map damage locations. Aggregate data from assessor reports can be viewed in a dashboard format and downloaded to support requests for disaster aid from other agencies involved in the disaster response process.

Projections for 2015/16

In 2015/16, The National Spatial Management Division will complete the National Spatial Data Infrastructure Policy to coordinate the development, implementation, maintenance and management of a National Spatial Data Infrastructure. This aims to promote the sharing and use of current, accurate and comprehensive geospatial data so citizens, communities and Government can access and use location based data to make informed decisions.

The Division is moving forward to establish an enterprise licence arrangement for GIS software. There are several entities within government offices that currently utilize GIS, are creators of spatial data and services, value adders and end users. Several private sector entities are end users of GIS products and services provided by the GOJ. Currently, there is a haphazard method to the payment of GIS licences. Multiple Government entities enter into separate arrangements for GIS licences. In some instances, purchases are made under project activities and entities are unable to sustain the upkeep of these licences, resulting in loss of technical support to users. Pooling these resources for contribution towards an enterprise licence arrangement would rebound to the benefit of the Government. With an Enterprise Licencing Arrangement (ELA), users are able to reduce complexity by uniting software licensing into a single organization-wide agreement; and optimize technology spending with lower costs of software compliance and asset management.

THE ENVIRONMENT & CLIMATE CHANGE PORTFOLIOS



Environment and Risk Management Division

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The Environment and Risk Management Division is responsible for the development of the environmental policy and legislative frameworks for the country under the guidance of the Permanent Secretary. In addition, the Division is responsible for the formulation of the climate change policy framework in collaboration with the Climate Change Division (CCD). It also provides policy support to select agencies and departments of the Ministry, namely the National Environment and Planning Agency (NEPA), the Forestry Department and the Meteorological Service of Jamaica.

Accomplishments – 2014/2015

Policies

- Obtained Cabinet approval for the tabling of the Climate Change Policy Framework for Jamaica (White Paper) in the Houses of Parliament.
- Public consultations on the draft Dolphin Policy for Jamaica (Green Paper) were finalized.
- In addition, in collaboration with the National Environment and Planning Agency (NEPA), the following draft policies were finalised
 - The Biosafety Policy
 - The Wildlife Trade Policy
 - The Beach Access and Management Policy
 - The Overwater Structures Policy and Guidelines, and



Public Consultation for the Dolphin Policy

- The National Policy on Environmental Management Systems (EMS).

These draft policies will be forwarded to Cabinet for approval as Green Paper in the 2015/16FY, thereafter tabled in Parliament then subject to public consultations.

Work continued during the year on the draft National Policy and Strategy on the environmentally sound management of hazardous wastes.

Legislation

Drafting instructions for several regulations under the Natural Resources Conservation Authority (NRCA) Act were submitted to the Chief Parliamentary Counsel. This includes the Managed Resource Protected Areas Regulations and an amendment to the Marine Park Regulations.

Projects

Work continued on the implementation of the National Quick Start Programme Trust Fund Project (QSPTF) which aims to build the country's capacity to manage chemicals and hazardous wastes in an environmentally sound manner. The elements of the Project include:

- Preparation of drafting instructions for chemicals
- Updating of the National Chemicals Profile
- Development of an inventory of priority chemicals (asbestos and mercury)
- Hazardous Wastes Operators (HAZWOPER) training

- Development of a National Chemicals Emergency Response Protocol
- Development and implementation of a National Programme for the environmentally sound management of electrical and electronic wastes (e-wastes) with emphasis on used and end-of-life mobile phones and computing equipment and related accessories.

The Project was officially launched in March 2015.



Launch of the National Quick Start Programme Trust Fund Project (QSPTF)

The Division is the Project executing agency and the implementing agencies are the Ministry of Health, the National Environment and Planning Agency, the Office of Disaster Preparedness and Emergency Management (ODPEM) and the National Solid Wastes Management Authority (NSWMA).

Multilateral Environmental Agreements

A number of sensitization sessions were undertaken with stakeholders, primarily the relevant public sector agencies, on the Minamata Convention on Mercury (Jamaica signed this Agreement in October 2013). Based on the contributions from stakeholders, a draft road map for country's accession to the Convention has been developed.

The Ministry continued to represent Jamaica at the regional discussions on Principle 10 (access to environmental information and environmental justice) of the Rio Declaration on Environment and Development. Negotiations will commence within the Latin America and Caribbean region in May 2015 on the development of a regional instrument to govern the implementation of Principle 10.

Submissions were sent to Cabinet requesting approval for Jamaica to accede to the:

- Amendment to the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal (commonly referred to as the 'Ban Amendment').
- The Land-based Sources (LBS) of Marine Pollution Protocol under the Cartagena Convention for the Protection and Development of the Marine Pollution of the Wider Caribbean Region (commonly referred to as 'The Cartagena Convention').



Towards a Green Economy

The Government of Jamaica received financial support from the European Union and the United Nations Environment Programme (UNEP) to undertake a green economy assessment study. This study was undertaken under a regional green economy project. The study focused on five (5) key sectors, namely water, energy, tourism, construction, and agriculture. A copy on the study may be obtained from the Ministry's website (www.mwlecc.gov.jm). In addition, a National Workshop on the green economy was held in November 2014 and a Regional Conference on the Green Economy held in February 2015.



Asad Naqvi, ETB UNEP, shows Ministers the drawings made by students from primary and secondary schools who participated in the Green Economy Poster Competition. Looking on is Minister Clifton Clayton Fitzroy Burgin, Saint Vincent and Grenadines.

UNEP Sub-regional Office for the Caribbean

Cabinet gave approval for the hosting of the United Nations Environment Programme (UNEP) sub-regional office for the Caribbean. The office will be located at the Seabed Authority building in Kingston. It should be noted that negotiations began between UNEP and the Government of Jamaica on the Host Country Agreement.

Projections 2015/2016

Drafting Instructions for Environmental Impact Assessment (EIA)

- Work will continue on the finalization of drafting instructions for Environmental Impact Assessment (EIA) Regulations under the NRCA Act.

Wildlife Protection Act

- The Division will work with NEPA and other key stakeholders on, inter alia, the preparation of drafting instructions for an amendment to the Wildlife Protection Act to allow for the inclusion of flora and certain endemic species of fauna not currently covered by the Act.

Protected Areas

- Preparation of a revised policy and drafting instructions for legislation to govern protected areas.

Dolphin Policy

- The revised draft Policy will be sent to Cabinet for approval as a White Paper

Projects

Global Fuel Economy Initiative (GFEI)

The Division will be collaborating with United Nations Environment Programme (UNEP) and UTech in the implementation of project entitled "Stabilizing Greenhouse Gas Emissions from Road transport through Doubling of Global Vehicle Fuel Economy" under the Global Fuel Economy Initiative (GFEI).

Multilateral Environmental Agreements

- **Minamata Convention on Mercury**
Additional sensitization sessions on the provisions of the Agreement will be held with the private sector and civil society.
- **Nagoya Protocol on Access and Benefit Sharing**
Work will continue on issues related to the country's preparation for accession to the Nagoya Protocol on Access and Benefit Sharing under the Convention on Biological Diversity and the Protocol Concerning Specially Protected Areas and Wildlife (SPAW Protocol) under the Cartagena Convention.

Government of Jamaica/UNEP Host Country Agreement for the UNEP Sub-regional Office for the Caribbean

Conclude negotiations with the United Nations Environment Programme (UNEP).

THE METEOROLOGICAL SERVICE



Mission Statement

The Mission of the Meteorological Service is to take full advantage of man's present knowledge of weather and climate; to take steps to improve significantly that knowledge and to foresee and prevent potential man-made changes in climate that might be adverse to the well-being of humanity.

Background

The Meteorological Service Division remains committed to the monitoring of weather and climate conditions over Jamaica and the wider Region, especially during this year's Hurricane Season. Adequate staffing is in place and equipment remains operational and the nation will remain fully informed and warned in the event of a tropical cyclone threat.

1. 2014 Year in Review:

- **Warmest Year on Record:**

According to National Oceanic and Atmospheric Administration (NOAA), the year 2014 was the warmest year on record since records began in 1880. The annually averaged global temperature was 0.69°C or 1.24°F above the 20th century average.

On average, the preliminary data for Jamaica is also showing an increasing warming trend.

- **Rainfall/Drought Update:**

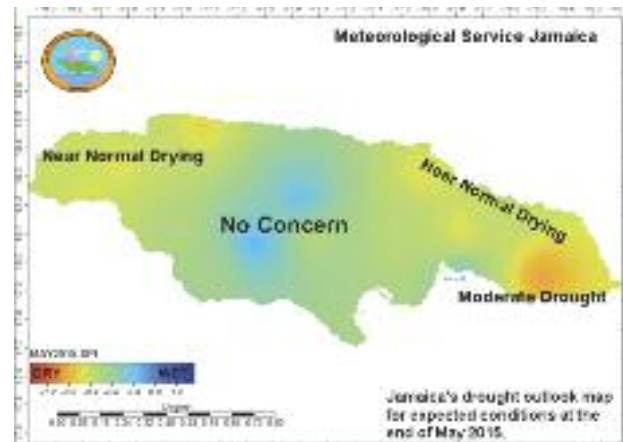
The amount of rainfall recorded in Jamaica for 2014 was 85% of its normal amounts. Below normal rainfall was recorded during nine months of 2014, with the months of June (33%), July (37%) and October (51%) recording below 60% of normal rainfall. During the months of June, August and October all thirteen (13) parishes recorded below normal rainfall.

- **Drought Conditions Throughout 2014:**

The June/July period recorded the worst drought conditions with all parishes reporting drought. This was followed by the period February through to April with 5 parishes experienced varying levels of drought. At the parish level Clarendon recorded the highest occurrence of drought with varying levels of drought occurring 67% of the year, followed by St. Mary with 58% and St. Thomas with 50%.

- **Rainfall/Drought Projection: April to August 2015**

The projection for the period April to August 2015 is that most areas are likely to experience near-normal to above-normal rainfall. There is an increased probability for this scenario during the latter part of the period. Sections of some southern parishes are likely to experience normal levels of drought during the early part of the period.



Drought Projection to the end of May 2015

2. Improved Public Communication: Common Alerting Protocol (CAP)

The Common Alerting Protocol (CAP) initiative is a mechanism for coupling the issuance of severe weather warning messages with modern technologies to provide more efficient and effective communication for prompt and appropriate response. With the establishment of an inter-agency Core Group, plans are now in place for improved public communication of warnings through all available media

3. Forecast for the 2015 Hurricane Season:

The 2015 Atlantic Basin Hurricane Season is projected to be one of the least active seasons since the middle of the 20th century. The forecast is for 7 Named Storm (12 is the average), 3 Hurricane (average 6) and one Major Hurricanes. This is as a result of a moderate strength El Niño and a fairly cool tropical and subtropical Atlantic.

4. Climate Services Tools/Products:

Achievements

The Meteorological Service is now empowered to produce:

- Probabilistic forecast as to the likelihood of a drought across the island for 3 to 6 months in advance;
- Five (5) day weather forecast for the island downscaled to the community level;
- Seasonal Rainfall Forecast – The prediction of the amounts of rainfall for the upcoming season;
- CAMI Bulletin- Which provides climate information for the agriculture sector to help guide decision-making at the farm level. The bulletins provide information on precipitation and suggest possible impacts on the agriculture sector.

The Meteorological Service has also conducted a number of Farmers' fora – Where farmers and extension officers are introduced to the science of Meteorology and trained on the use of the products.

Future Plans for Climate Services

- The development of additional products in particular Soil Moisture monitoring tool as well as a Fire Weather monitoring tool
- The continued collaboration with RADA on the development of a Pest and Disease Forecasting Platform
- Enhance access to information, especially at the farm level through collaboration with key partners.
- The conducting of evaluation of climate services development and dissemination to improve on products and the overall process
- The extension of Climate Services to other sectors upon successful completion of collaborating

with the Ministry of Agriculture and Fisheries (MoAF).

Other Areas of Work

• Tide Gauge Monitoring in Jamaica

Tide Gauge monitoring is currently taking place at three sites: Montego Bay, Port Antonio and Port Royal. The Montego Bay and Port Antonio are outfitted with Chinese Tide Gauges and Port Royal is outfitted with gauges from UNAVCO out of the United States of America. Real time data from the Port Royal gauge may be viewed from the website www.ioc-sealevelmonitoring.org/station.php?code=ptro and this is a part of the Caribbean Tsunami Warning Programme.



Tide gauge located at Port Antonio Pier.

5. World Meteorological Day:

World Meteorological Day was celebrated on Monday March 23 under the theme "Climate Knowledge for Climate Action" with the following activities at the Undercroft, University of the West Indies:

- Opening ceremony and all day exposition;
- The launch of a Quiz Competition for grades 4 & 5 students;
- A Public Lecture with guest lecture by Dr. Arlene Laing (Dr. Arlene Laing, Lead Author with the COMET Program and the National Center for Atmospheric Research).



Students in attendance at activities to commemorate World Meteorological Day 2015.

6. International Climate Change Focal Point:

The Meteorological Service continues to function as the Climate Change focal point for the United Nations Framework Convention on Climate Change (UNFCCC) and actively participates in the Climate Change Conference and its Subsidiary Bodies and Ad Hoc Working Groups Meetings. Jamaica continues to represent the Group of Latin America and the Caribbean (GRULAC) on the Adaptation Fund Board and the Adaptation Committee.

7. State of Preparedness:

All systems and staff complement for analysis, communication and warning of weather and climate are at a satisfactory level.

FORESTRY DEPARTMENT



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Mission Statement

To manage Government owned Forest Ecosystems; and encourage private participation in forestry according to national environmental policies.

Introduction

The Forestry Department is the Government's lead agency charged with managing and conserving Jamaica's forest resources, particularly those found on Crown Lands. Our goal to "manage and conserve the forest resources of Jamaica for the benefit of present and future generations" is uppermost in our minds as we strive to be an effective Executive Agency.

Achievements as Per Stated Targets Operational Plan 2014/2015

The Forestry Department embarked on several activities during the financial year 2014/2015 seeking to support the GOJs goals as stated in the Vision 2030 – Outcomes 13 & 14.

Achievements 2014/2015

- Two Forest Management Plans were approved by the Hon. Minister during the year. They are Stephney-Johns Vale FMP and the Windsor FMPs. (See NPAS project below for more details)
- Tabling of the new **Forest Policy** as a Green Paper. A series of ten (10) public consultations to discuss the new Forest Policy and to garner feedback from citizens commenced in Morant Bay, St. Thomas on Tuesday, April, 21, 2015 and will end at the Forestry Department's Head Office in Kingston on June 24, 2015.
- **Launch of the Sawmill Licensing Programme**
Under the Forest Regulations of 2001, the Forestry Department is mandated to regulate the island's sawmilling industry. The Sawmill Licensing Programme was launched in September, 2014 as a means of achieving that objective and will result in the formation and maintenance of a register of operators. The Legal & Enforcement Division of the Agency has been conducting stakeholder consultations by parish and since the launch fifty-eight (58) licence applications have been received and thirty-five (35) licences have been approved and 17 issued.

Once in operation, the registry will provide data on the number of sawmill operators in the island, the number of persons employed in the sector, and the species of timber that are generally harvested. The data will also be used by the Agency to better control the logging practices within the Forest Reserves and will also assist the Government in enacting policies within the Agricultural and Manufacturing sectors.



Launch of Sawmill Licensing Programme

- **Completion of Land Use/Cover Assessment.** In 2013, the Agency initiated the process for this assessment with funding under the Government of Jamaica/United Nations Environment Programme (GOJ/EU/UNEP) Climate Change Adaptation and Disaster Risk Reduction Project.

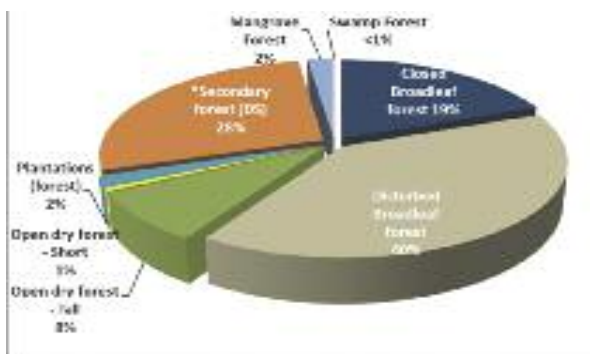
The Agency began sourcing the data in 2012 and a full and comparative analysis was conducted between 2013 and 2014. The findings represent the most comprehensive analysis of forest cover change in Jamaica. The results have revealed the following:

- **Forty (40) percent or 441,000 hectares of the island is now classified as forest.** This is mainly as a result of the Agency's use of a more refined methodology based on improved technology and the availability of high resolution satellite imagery. The Agency acquired multi-spectral satellite images with resolution of less than one metre (0.6m) which was 50 times better than the 30m resolution used in the previous analysis.

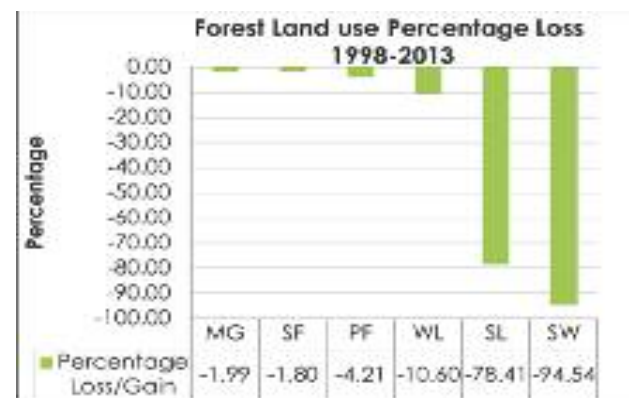
The natural colour and high spectral resolution of the imagery, allowed for better visual and differentiation of features based on the variation of colours tones, texture, shape, pattern, and relationships to other objects. This essentially made it easier to identify different land cover classes and more precisely delineate the forest cover.

There has been an overall increase in forest cover equivalent to 0.41 % or 1394 hectares annually. This increase was mainly due to conversion of non-forested land into secondary forests. If this trend continues, we expect that in 10 to 15 years the secondary forests will result in a greater proportion of disturbed broadleaf forests.

Forest cover classifications (2013)



- **There have been losses in the quality of forests,** particularly the closed broadleaf and disturbed broadleaf forests, the open dry forests and swamp forests. Some of the significant changes have been the conversion of open dry forests to bare lands, particularly along the south coast. Our broadleaf and swamp forests have been mainly replaced by cultivation, buildings and infrastructural developments.
- At the parish level, we have seen the largest losses in forest cover in St. Ann, Hanover, and Clarendon, while there have been notable gains in St. Mary, St. Thomas and Manchester.



New Nursery Facility



The Agency has revamped its Nursery operations having commissioned into use a state-of-the-art shade house and seed germination facility earlier in the financial year. This has resulted in a more efficient production process and a significant decrease in seedling mortality in the Nursery. This facility is now producing seedlings of a higher quality for the Agency's reforestation programmes and for sale to its customers.



PROJECTS

- **Completion of the Jamaica Rural Economy & Ecosystem Adapting to Climate Change (JaREEACH) ACDI/VOCA**

The project's primary objective was the reforestation of 200 hectares of degraded lands and the implementation of sustainable livelihood programmes for communities existing adjacent to the reserve. The Stephney-John's Vale Forest Reserve was identified as a critical area for forest management and conservation by the Forestry Department. The reserve is one of the largest forest reserves covering 6675 hectares and is in the Rio Bueno Watershed Management Unit (WMU). The reserve is classified as a disturbed broadleaf forest resulting mainly from encroachment for agricultural purposes.



The Jamaica rural Economy & Ecosystem Adapting to Climate Change (JaREEACH) ACDI/VOCA project commenced in December 2013 and ended on October 31, 2014.

Eight (8) areas were reforested under the project: Grants Mountain, Tingley, Douglas Castle, Cowley, John's Vale, Little River, Prickley Pole and Cedar Valley, all within the Water Management Unit.

Just over 200 hectares of land were planted within these areas. The project also saw the implementation of local level management structures through the formation and launch of three (3) Local Forest Management Committees (LFMCs), namely in the Grants Mountain, Hessen Castle and Stephney.

Several demonstration plots were established within the areas planted and close the communities for which LFMCs, have been formed to reinforce sustainable land management and utilization of forest resources. These demonstration plots served as the training grounds or field school for 285 farmers within communities or areas which the project impacted.

In short, under the project, the Forestry Department saw the following successes:

- The implementation of specific activities detailed within the Stephney-John's Vale Forest Management Plan and Silviculture Plan
- The production of 141,391 seedlings to support the reforestation of 172 hectares of degraded land.

The implementation of an agro-forestry/sustainable livelihood programme, including:

- The establishment of seven (7) demonstration plots. These demonstration plots sought to highlight sustainable land management farming practices. The plots are between 0.5 hectares and 1.5 hectares and comprise of the farmers regular cash crops (example: pumpkin, hot pepper, cabbage, sweet pepper and sweet potatoes) mixed with timber and fruit tree seedlings. The plots were established in the following:

- Three (3) in Douglas Castle
- One (1) in Hessen Castle
- One (1) in Grants Mountain
- Two (2) in Stephney

Farmers participated in several field work days (workshops) where topics such as – Agroforestry systems, land preparation, spacing, crop care and

chemical use (safety measures) were discussed and practical application of these topics were illustrated.

For each demonstration plot, a farm plan was completed which detailed the farm production data, pest management applications and earning potential of farm. A combination of 13,348 fruit trees and pineapple suckers and 6,151 timber seedlings were distributed to farmers to integrate in their demonstration plots.

National Protected Areas Systems (NPAS) Project

- **Development of Forest Management Plans (FMP) in protected areas of the North Western Region and the South Eastern Region. (North Western Region: Stephney-John's Vale Forest Reserve; South Eastern Region: Windsor Castle)**

The Development of Forest Management Plans (FMP) in protected areas of the North Western Region (Stephney-John's Vale Forest Reserve) and the South Eastern Region (Windsor Castle) was seen to be the ideal small grants project under the Sustainable National Protected Areas Systems (NPAS) project. The two FMPs were approved by the Honourable Minister. The project seeks to support the safeguarding of Jamaica's biodiversity through the strengthening of planned and effective management of "protected areas" – protected areas in this instance being Forest Reserves and Forest Management Areas.

There are two key deliverables:

1. To reverse the decline of forest resources within the Stephney-Johns Vale Forest Reserve and the Windsor Castle Forest Estate.
2. To create a system that recognizes the attributes of each forest estate with the objective of sustainably managing the area to generate optimum levels of goods and services.

Projections for 2015/2016 Financial Year

1. Commence phase one of a five (5) year project funded by the IDB and implemented by the National Environment and Planning Agency (NEPA), the project is valued at a little over US\$12 million. The Agency will seek to build on work done under the recently concluded Climate Change Adaptation & Disaster Risk Reduction project. Key outputs for the Forestry Department over the five year period will include:
 - Reforestation of 400 hectares or over 900 acres of land.
 - Training of six community groups,(four of which were created under the CCA&DRR project) in forest fire management, creating a map of the high risk areas for fire and developing forest fire management plans for those communities,
2. The Agency will continue the process of revising and updating the National Forest Management and Conservation Plan (2001). The purpose of the Plan is to provide a 10-year road map for the conservation and sustainable use of the national forest resources to meet the country's needs.



National Tree Planting Day 2015 – Church's Teachers' College, Mandeville, Manchester

NATIONAL ENVIRONMENT & PLANNING AGENCY



Mission Statement

To maintain high standards of professionalism among our members in order to improve the environmental capacity and practices in Jamaica.

Background

The National Environment and Planning Agency has focused on activities related to spatial planning; environmental management; compliance with, and enforcement of environmental legislation; application management; and conservation and protection of Jamaica's natural resources.

The specific targets included:

- (1) Publishing the Provisional Development Order for Kingston and St. Andrew
- (2) Expanding the NEPA Air Quality Monitoring Network to include
 - i) Mandeville and
 - ii) Spanish Town
- (3) Strengthening environmental and planning monitoring and enforcement actions for breaches
- (4) Preparing three background papers towards the National Spatial Plan
- (5) Increasing the percentage of applications processed within stipulated time of 70 days.
 - a. Facilitate Development through Pre-consultation and facilitation by the Development Assistance Centre.
- (6) Expansion of implementation of the Watershed Area Management Model (WAMM).

(7) Preparing four (4) draft Protected Area Management Plans for:

- i) Pedro Cays
- ii) Palisadoes-Port Royal MP
- iii) Ocho Rios MP and iv) Discovery Bay Fish Sanctuary.

The Development Assistance Centre (DAC)

This Centre continues to add value to the investment and development landscape by providing a facilitator mechanism for dialogue between investors and the regulatory arms of Government. Through the DAC valuable advice is provided on the technical environmental and planning related requirements to enable the feasibility of projects to be assessed and to assist with the preparation of complete applications. This assistance has enabled the DAC to adhere to its tag line of "Creating Development Value".

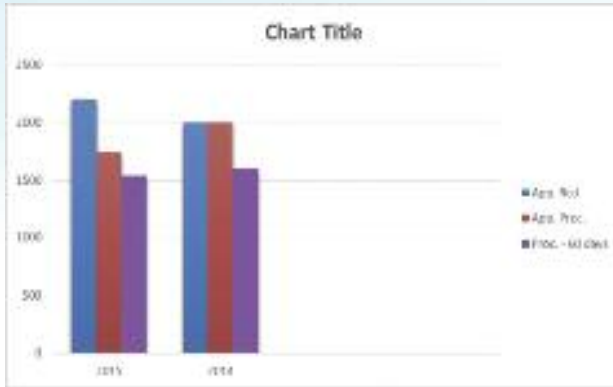
In the last fiscal year, in excess of 357 clients were served and technical advice on more than 115 projects was facilitated. This has resulted in the submission of more than 91 development applications with a better than 85% approval rate and greater than 95% within the stipulated times.

Development Assistance Review Process

The Agency has been steadfast in its efforts to reduce processing time and improve the efficiency of the Development Assistance Review Process for the 2014 – 2015 Fiscal Year.

Consequently, as at 25 February 2015, the Agency has received approximately 2,195 applications and has processed a total of 1,742 of which 1,538 were processed within sixty days. This compares favourably with the prior year when a total of **1,994** applications were processed, **1,605** being processed within seventy (70) days.

The Agency continues to reduce the time taken to process applications year after year from, on average, 70 days in 2013-14 to 60 days in 2014-15.



Achievements 2014/2015

- **The Applications Management and Data Automation (AMANDA) System**

This System which was implemented in 2005, allows for improved efficacy and efficiency of the Development Application Review Process (DARP). It provides greater transparency in the monitoring and tracking of development applications and facilitates a public interface via the "Amanda public portal" on the Internet.

Further work on this is ongoing and it is anticipated that soon the Ministry along with our partners will be able to announce great advancements in the way that applications are made. We are confident that the strides that have been made in the ease of doing business reports will continue.

Project Implementation

1. National Ozone Unit

This Unit focuses on the phase-out of ozone-depleting substances. Due to continued training of refrigeration personnel and customs officers, and with effective public education, Jamaica was able to meet the 2015 national hydrochlorofluorocarbons (HCFC) phase-out target set by the Montreal Protocol. The import quota of HCFC was reduced by 10% of the baseline consumption rate.

The Trade Order for Ozone Depleting Substances (ODS) Legislation to regulate and control import and export of HCFCs was drafted.

Yallahs River/Hope River Integrated Watershed Management Project

As the effects of Climate Change become more and more evident watersheds are integral to the

production of potable water resources as they collect store and release water which is harnessed by the National Water Commission (NWC).

Therefore, work has commenced on the implementation of the J\$407M Yallahs River/ Hope River Integrated Watershed Management Project. The Global Environmental Facility through the Inter-American Development Bank (IDB), has provided funding for this project which is expected to be completed in five (5) years. This will provide the needed boost to the two most degraded watersheds in the country. It will also address the ongoing water woes within the Kingston Metropolitan Area.

Protected Area System Master Plan

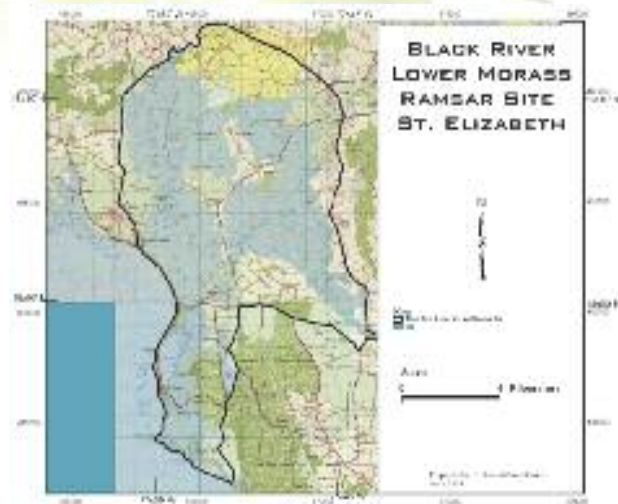
Jamaica's protected areas are managed primarily by the Fisheries Division, Forestry Department, Jamaica National Heritage Trust and the Natural Resources Conservation Authority (NRCA)/National Environment and Planning Agency (NEPA). Protected areas cover approximately 18% of the country's land area as well as 15% of its archipelagic waters.

Management and Business Plans are being developed for a number of protected areas to act as exemplars of best practice for other Protected Areas to pattern.



The NRCA and NEPA are responsible for approximately thirty-one (31) of Jamaica's protected areas which include Game Sanctuaries/Reserves (20) declared under the Wild Life Protection Act; "protected areas" (2) declared under the Beach Control Act, as well as a "national park" (1), "marine parks" (2), "protected areas" (5) and an "environmental protection area" (1) designated under Act.

Jamaica also has four Ramsar sites designated under the Convention on Wetlands of International Importance especially as Waterfowl Habitat (Ramsar Convention) to which Jamaica is a party.



In order to improve the management of protected areas in Jamaica, management and zoning plans for specific sites are being developed. (2014-2015) management plans for two (2) marine parks (Negril and Montego Bay) are currently being finalised.

Zoning plans for five (5) areas, the Negril and Montego Bay Marine Parks, Palisadoes-Port Royal Protected Area (P-PRPA), Coral Spring-Mountain Spring Protected Area and the Ocho Rios Marine Park Protected Area (ORMPPA) have been developed.



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There is currently an approved Policy for Jamaica's System of Protected Areas. A Protected Areas System Master Plan (PASMP) was developed and submitted to Cabinet during 2014 for its consideration. The PASMP will provide a framework for the management of Jamaica's network of protected areas. The finalization of the PASMP was a key action identified in Vision 2030 Jamaica: National Development Plan (2009).

A project supported by the Global Environment Facility (GEF)/United Nations Development Programme (UNDP) entitled "Strengthening the operational and financial sustainability of the National Protected Area System" is currently being implemented and is supporting the achievement of actions identified in the PASMP.

This project addresses challenges relating to protected areas including those pertaining to financing, management, policies and legislation.



Projections

During financial year (2015-2016) two (2) additional management plans will be prepared (P-PRPA and ORMPPA) and one (1) additional zoning plan (Black River).

Additionally, a Carrying Capacity Study of the Black River is to be undertaken with funding from the Tourism Enhancement Fund (TEF) to ensure that that human uses are managed in such a way that the impact on the natural resources of the River is minimized or mitigated.

Biodiversity Strategy & Action Plan (NBSAP)





Though Jamaica has the highest number of endemic plants and birds of all the Caribbean islands we are ranked Fifth of the World's Eight Biodiversity Hotspots. As a party to the Convention on Biodiversity, an amount of J\$22M was received under the National Biodiversity Strategy and Action Plan project to update the 2003 National Diversity Strategy and Action Plan. As we move to protect the islands valuable natural resources, the updated NBSAP will outline strategies and actions for the management of the country's rich diversity of plants and animals until 2020 in line with the plan of action for the International Biodiversity Convention.



Increasing Resilience of the Negril Coastline

The Adaptation Fund has provided the sum of J\$22M to assist with the preparation of standards

and guidelines for the coastline developments in Negril and to prepare a Climate Change Adaptation Plan the area. These guidelines and Adaptation Plan for Negril will be part of the GOJ's efforts to address the erosion problems along the coastline of other communities such as Font Hill, Hellshire and Alligator Pond.

A major component of the project is the construction of two breakwater structures in the Long Bay area of Negril. These are aimed at protecting the beach from further destructive erosion. The aim is to halt the loss of approximately one meter of shoreline per year. We held extensive consultations, entertained objections from some stakeholders, and after consideration of all the evidence, the Cabinet has approved the implementation of this important project even as we continue to engage the Negril Community.

Licensed Air Discharge Facilities

Thirty-eight (38) major air discharge facilities have been licenced by the Natural Resources Conservation Authority. Licences applications are now being reviewed for a number of the newly owned sugar manufacturing facilities.

Additionally, applications for licences which were granted five years ago under the NRCA Air quality regulations of 2006 are currently being reviewed for renewal.

Promulgation of the Motor Vehicle Emissions Standards for Jamaica

The NRCA (**Air Quality Regulations, 2006**) provide the framework for regulating emissions from major and significant point sources and are developed pursuant to the section 38 of the NRCA Act, 1991.



The NRCA (**Ambient Air Quality Standards**) Regulations, 1996 underpins the responsibility of the government to ensure that the ambient air quality protects human and environmental health. The Regulations and Standards underpin the NRCA/NEPA national air quality monitoring programme.

The review of the provision of the motor vehicle emission standards (VES) for Jamaica has been completed and will be implemented the Ministry of Transport Works and Housing.

It is useful to note that the National Air Quality Programme covers both public and private sector facilities. Presently, NEPA operates four air monitoring stations in the Corporate Area and St. Catherine. These are located at Old Hope Road, Spanish Town Road, Cross Roads and Waterford (fire station). Two additional monitoring stations are operational in Montego Bay and May Pen. Currently the monitoring programme is being expanded to Spanish Town and Mandeville.

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There are seven monitoring stations operated by licensed air pollutant discharge Licensee in the KMA: two operated by JPSCo: Rockfort and Marcus Garvey Drive (Garmex); one at Petrojam Limited, Marcus Garvey Drive, three operated by Caribbean Cement Company Limited: Rockfort, Caribbean Maritime Institute premises and College Commons) and one by Jamaica Private Power Company, Rockfort. Overall, thirty-nine industry facilities islandwide are licensed under the Regulations. All are mandated by conditions of their licence to undertake self-monitoring activities and report on emissions released. This allows NEPA to tabulate and assess air pollutant loadings and air quality levels across the country.

The air quality Standards and Regulations as well as the NEPA National Air Quality Monitoring Programme and Reports can be viewed on its website at <http://www.nepa.gov.jm>. The website has information on incidents reports on the Riverton and other fire, as well as, annual emissions.



Watershed Management



The island is divided into twenty-six (26) Watershed Management Units (WMUs) comprising all the land from the mountains to the sea and containing over 100 streams and rivers. These WMUs consists essentially of 33 watershed areas, which fall within ten (10) Hydrological basins (or regions). Steep slopes usually in excess of 20 degrees characterize the land in the upper part of the WMUs. Limestone derived soils cover about 65% of the watersheds and the remaining areas are composed of soils derived from weathered igneous and metamorphic rocks.



Major issues affecting the watershed areas include, improper disposal of solid waste; poor farming practices; soil erosion and landslides; flooding; clearing of wetlands and blocked drains and sink-holes.

A recent review of the WMUs shows that with the exceptions of the Swift River, New Savannah River and Drivers River Watersheds have retained the quality ranking they received in 1999. All the others have shown signs of deterioration.

Confirmation Notices for four (4) Provisional Development Orders namely for the Negril and Green Island Area along with the Parishes of Portland, Trelawny and Manchester are almost completed. These four (4) Provisional Development Orders will be confirmed during the upcoming financial year with the finalization of the Confirmation Notices.

The review of the draft Development Orders for Kingston and St. Andrew, Clarendon and St. Thomas were completed during the financial period 2014-15 and sent to the Chief Parliamentary Counsel for review. The draft development order for Saint Catherine (excluding Portmore) is undergoing final review and is expected to be sent to the Chief Parliamentary Counsel for review in short order. It is expected that these four development orders will be promulgated during this financial year.

During the current 2015-16 financial year the draft development order for the parish of St. Mary will be prepared. This order, when gazetted, will bring the entire parish under planning control for the first time. It is expected that in the financial year 2016-2017 the Development Order for Portmore will be drafted and promulgated. So, the entire island should be under the control of the Town and Country Planning Act by 2017. It is intended that these Development Orders will be reviewed and updated every five (5) years, to ensure that they remain current and relevant.

Advancement in the development order drafting and promulgation process is due in part to the Tourism Enhancement Fund which has played a major role in providing financial support to the National Environment and Planning Agency and the Town and Country Planning Authority for the development order preparation process. This support will be received during the 2015-16 financial years for the drafting and or the promulgation of several development orders including; Hanover, St. James, St. Elizabeth, Westmoreland and Kingston and St. Andrew.

Planning and Research

This is critical to ensuring continuous development of planning knowledge, the development of effective and timely policies and the promotion of sound decision-making. In the 2014-15 financial year the Agency prepared one (1) planning research paper on "Noise" and a Planning Policy Guideline Document on 'Wind and Solar Farms'. In this financial year two (2) research papers on 'Cemetery' and 'Planning for Walkability in Urban Areas' will be

prepared as well as a Planning Policy Guideline Document on 'Green Development'. In addition during the last financial year It was indicated that there would be planning policy guidelines with respect to residential studios. The guideline document for studios in multifamily development will be implemented during the 2015-16 financial year.

The overall purpose of this Planning Policy is to guide members of the public and the Planning Authorities by providing clarity on the size and other appropriate criteria (requirements) for the Construction of studio units. Additionally, it aims to ensure consistency and equity in the assessment and decisions taken on these developments.

Geographic Information System (GIS)

Geographic Information Systems allows the undertaking of spatial operations to support research, policy making and decision making. In the 2014-15 financial year, critical components of the GIS Strategic Plan was implemented. This include the creation of a Land Use Data Collection Application to automate the collection and data entry of land use data. The creation of this application is expected to increase the efficiency and effectiveness of the data collection and entry process. The collection of land use data is a critical component in the preparation of Development Orders and Development Plans. In the 2015-16 financial year, a web based Zoning Information System Application will be developed to enable members of the public to readily access planning and zoning information to support land based decision-making and research.

Compliance and Enforcement of Environmental Legislation

For the 2014-15 period, the National Environment and Planning Agency has issued 788 enforcement instruments of which 116 were for hard enforcement actions. Enforcement instruments include warning notices and warning letters; cessation orders, stop notices, enforcement notices, warning to suspend or revoke and summonses served. Compliance levels vary from 100% to 36% with the average compliance level being 67%. For the year to date, 25 environmental and planning matters are before the Court.

In comparison with the similar period for the 2013/2014 operational year, 793 enforcement actions were taken with an average compliance level of 50%. This suggests, that there is an increase in compliance rate during the 2014-15 financial year and this is indicative of the enforcement efforts of NEPA.

NEGRIL/GREEN ISLAND AREA LOCAL PLANNING AUTHORITY



Overview

The Negril/Green Island Area Local Planning Authority was appointed by the then Minister in charge of planning in 1984 under Section 5 (1) of the Town & Country Planning Act. The Authority was established to monitor 74,000 acres of land within the parishes of Westmoreland and Hanover to deal primarily with development applications and enforcing measures for breaches against the various Planning Laws.

Mission Statement

1. To ensure orderly and progressive planning and development of land described in the Negril/Green Island Development Order which includes portions of Westmoreland and Hanover.
2. To administer the proper management of the assets of the Authority.

The setting up of the Local Planning Authority became necessary then due to the rapid growth of development in the area, coupled with the fact that Negril had become the fastest growing tourist resort in the country which had made it even more urgent to provide for orderly development of the lands within the area.

Function & Responsibilities

The major functions of the Authority as set out by the Town and Country Planning Act are to:

3. Receive all planning applications and dispatch those called in to the Authority.
4. Inform applicants of the date on which they should receive a response to their applications and their rights.

5. Inform applicants of their right to be heard by a person appointed by the Authority if they so desire, if the application is called-in.
6. Keep the planning register which records all applications received by the Local Planning Authority.
7. Process and decide on applications not called in by the Authority.
8. Serve stop notices and enforcement notices.
9. Take legal action against those who breach the planning regulations including the right to enter and demolish.
10. Apply to the courts where necessary or expedient for an injunction to restrain any breach of planning control.
11. Duly authorize any person in writing to enter upon any land, at any reasonable time to undertake inspection or serve notice for planning breaches.
12. Control the display of advertisements.
13. Revoke or modify planning permission.

The Negril Development Order Area by nature is an ecologically delicate one and is quite vital to the Regional and National Economy, simply because it is home to one of Jamaica's tourist resort. The many failures as they relate to planning and development within the area can be attributed to various factor; however, one of the key factors concerns the status and autonomy of the Authority. Nevertheless the Authority continues to work with other Government agencies, NGOs and Local Groups to achieve a balance between development and the environment.

Appointment of the Authority

The Authority was appointed and gazetted on November 21, 2005.

Lands Managed and Occupied by the Negril/Green Island Area Local Planning Authority

The Authority now manages assets which consist of 5.06 hectares (12.5 acres) of land situated on the seaward side of the Norman Manley Boulevard near the centre of the town. Part of the land, approximately 2.12 hectares (5.25 acres), comprises the Craft Market with one hundred and forty-two (142) craft shops, the Community Centre Building, a Public Change Room and an Administrative Block. Of the remaining 2.83 hectares (7 acres), a portion has been developed as a sea park and named the Norman Manley Sea Park.

Assessment of Development Applications Processed by the Authority

During the year under review, the Authority accepted a total of seventy-nine (79) development applications. Of this amount, fifty-two (52) or 65.82% were granted planning permission. The remaining twenty-seven (27) applications were forwarded to the Town & Country Planning Authority for a decision.

There has been a significant increase in the number of residential rooms proposed within the Negril Development Order Area. Whitehall and West End accounted for one hundred and ninety-two (192) rooms to be built within the Development Order area. This will provide additional housing solutions for lower and middle income earners in the resort town of Negril.

Table 1 Applications Submitted for the Period April 2014- March 2015

QUANTITATIVE ANALYSIS OF DEVELOPMENTS WITHIN THE NEGRIL DEVELOPMENT ORDER AREA

Table 1 Applications Submitted for the Period April 2014- March 2015

Location	No. of Application Submitted	No. of Proposed Rooms	No. of Proposed Residential	No. of Proposed Resort	No. of Proposed Commercial	No. of Proposed Mixed Use	No. of Proposed Parking	No. of Proposed Recreational	No. of Proposed Institutional
Whitehall	32	102	30	-	1	-	-	1	-
VistaBellin	3	14	3	-	-	-	-	-	-
Nehill	3	4	3	-	-	-	-	-	-
Negril Estate	4	14	4	-	-	-	-	-	-
West End	7	90	4	-	2	-	-	-	1
Pitkellency	1	2	1	-	-	-	-	-	-
Westland	1	4	1	-	-	-	-	-	-
Sheffield	3	7	2	-	-	-	-	-	-
Norman Manley Blvd.	15	39	1	6	4	-	1	3	-
Non Parcel Rd.	1	-	-	-	1	-	-	-	-
Orange Bay	6	12	5	-	1	-	-	-	-
Green Island	1	3	-	-	-	1	-	-	-
Mt. Airy	1	2	1	-	-	-	-	-	-
Winchester	2	5	3	-	-	-	-	-	-
Total	79	298	58	6	9	1	1	4	1

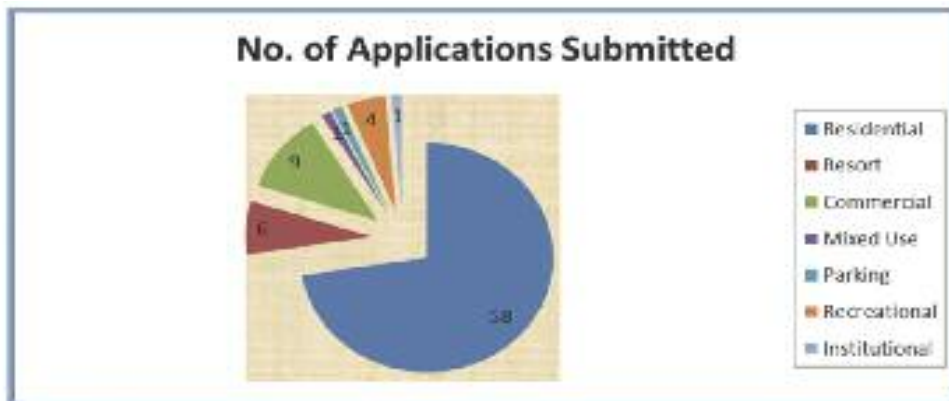


Table 2 Land use Classification of Development Applications Submitted for the Period April 2014-March 2015

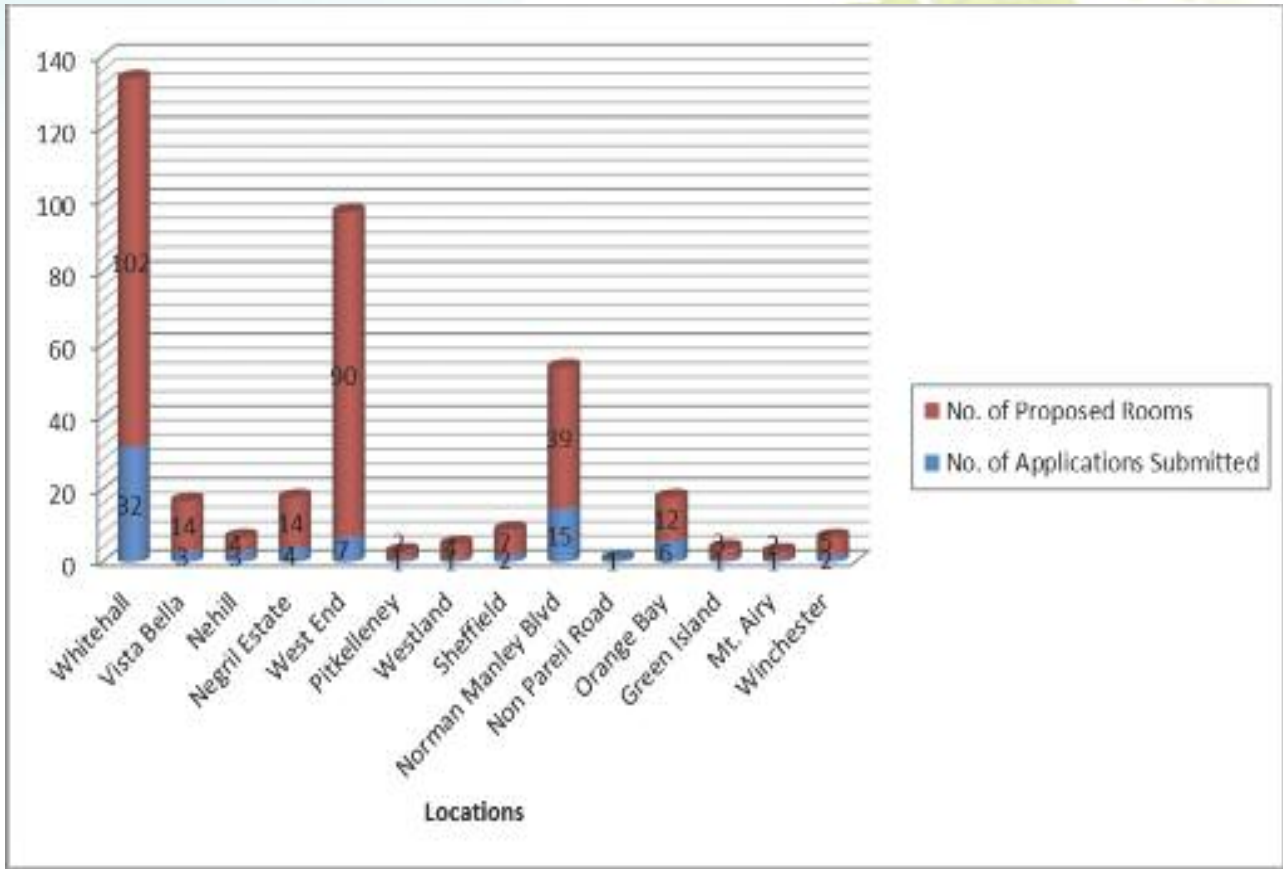
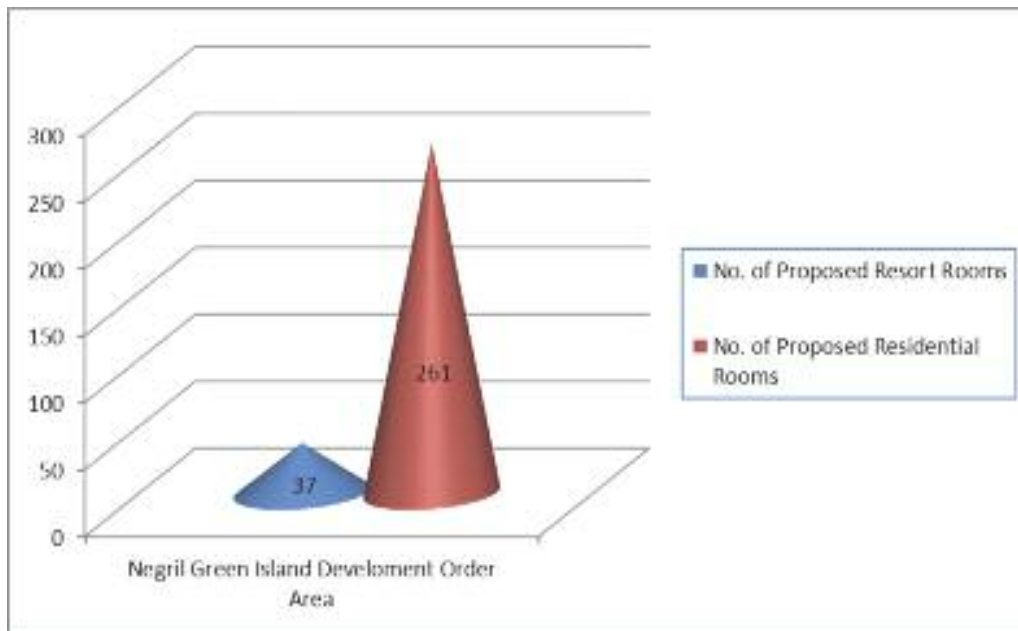


Table 3 No. of Applications Submitted vs No. of Proposed Rooms for the Period April 2014 to March 2015



Proposed increased allowance to construct up to Four (4) Storeys in the Negril Green Island Development Order Area

- Increase in permitted floors in the Negril Green Island Development Order Area

<i>Advantages</i>	<i>Disadvantages</i>
The proposed increase in height with a fix density should lead to a reduction in footprints and increase in open/green space on the ground level.	As the land is sandy there is the likelihood of increased bearing load on the soil and possible increase erosion
The proposed increase in height should reduce the likelihood of encroaching onto the Negril Morass and breach of the 150 setback from the high water mark.	Likelihood of increase pressure on existing infrastructural systems such as (Sewer, Transportation, etc)
The proposed increase could lead to an increase in investments in the area, an increase in the guest room capacity of the area and improve the economy of the area.	Increase in height and room capacity and occupants could lead to the carrying capacity of the area being exceeded which although unknown at this time could have serious consequences both socially, economically and environmentally for the area in the medium to long term.

CLIMATE CHANGE

Since climate change will result in a long term shift in the environment within which we all live, plan and build, the impacts of climate change can derail all our sustainable development plans and play havoc with the lives and livelihoods of all citizens. With climate change, we must change the way we approach sustainable development.

Mission Statement

The mission of the Climate Change Division is "To facilitate integrated and inclusive development in Jamaica, to advance an equitable and climate resilient society with adaptive capacity in a low carbon economy and in line with Vision 2030 Jamaica."

Strategic Objectives

- 1) Coordinate national climate change efforts at all levels and with all actors including the public sector and non-governmental agencies.
- 2) Lead the formation of a viable National Climate Change Strategy & Action Plan in accordance with Jamaica's national plan, and coordinate the mainstreaming of climate change considerations in national policies and development plans and processes.
- 3) Coordinate and facilitate Jamaica's strategic and unified position in global and regional climate change negotiations.
- 4) Coordinate, guide and monitor activities at local and national levels to strengthen adaptive capacities, reduce vulnerabilities to the adverse impacts of climate change and enhance climate resilience, including through low carbon development.
- 5) Facilitate partnerships across the public sector, civil society and the private sector, including the media to increase public awareness, education and training related to climate change issues.
- 6) Coordinate, support and enhance national level information and knowledge generation, analysis and dissemination in collaboration with research and other institutions.
- 7) Help mobilise climate finance and other resources including funds from the private sector to support the establishment of a climate resilient society.

Achievements 2014/2015

Focal Point Network

A network of focal points has been formed across Government and training in resilience building screening tools has been provided. This will better equip the focal points in coordinating the mainstreaming of climate change in their respective Departments.



Focal Point Network Training Seminar

Sector Strategy and Action Plans

The Climate Change Division has also begun with the Ministry of Agriculture and Fisheries and the Forestry Department to develop sector action plans for climate resilience building.

Eleven (11) of these sector action plans will be developed over the next few years, which will be fed into the national planning and budgetary exercises. During the next financial year, with assistance from the United States Agency for International Development (USAID), work will commence on the Transportation sector.

Projects and Programmes

- **Reducing Greenhouse Gas Emissions: Jamaica's Nationally Appropriate Mitigation Strategy**

Jamaica is a Small Island Developing State, which means, on aggregate that we do not emit many greenhouse gases. However, Jamaica must still play its part to account for, and where possible, to lower these emissions. This can be achieved through interventions in the energy sector. A draft strategy to reduce greenhouse gas emissions has been prepared in collaboration with the Ministry of Science, Technology, Energy and Mining and the Organisation Latin American Energy Organisation (OLADE).

- **International Engagement and Climate Finance**

Jamaica continues to play its part in the international fora for the advancement of a new protocol on Climate Change to replace the existing one. These United Nations sponsored talks will conclude in Paris in November and representatives from the Ministry will be in attendance to ensure that our voice is heard and to ensure that the Paris Protocol is in keeping with Jamaica's interest as well as that of our negotiating partners.

Jamaica will continue to play a leading role in international climate negotiations in such bodies as CARICOM, the Alliance of Small Island States (AOSIS), and other UN negotiating bodies. Focus is placed on the need for ambitious mitigation measures by large emitters of greenhouse gasses, the loss and damage associated with climate change, and the means to implement resilience building, such as climate finance. Efforts will be continued to place Jamaica in a position to readily access climate change financing; the Green Climate Fund, a fund within the United Nations, has already affirmed the Ministry as the National Designated Authority for Jamaica.

(GEF). This is the third such inventory that Jamaica has conducted. The inventory will include emissions sources and sinks since 2006. This project Agreement was signed with the GEF and the United Nations Development Programme in August 2014.

Jamaica aims to build a robust and dynamic inventory with full updates every two years. During 2015/16, the first Biennial Update Report (BUR) will be prepared and submitted to the UNFCCC.



United Nations Conference on Climate Change where Jamaica was represented in Bonn, Germany

- **Pilot Programme for Climate Resilience**

Funding to the tune of US\$18.5M was secured from the Climate Investment Fund (CIF) and will be made available through the Inter-American Development Bank (IDB) to support, among other things, the mainstreaming of climate change across a number of critical sectors such as health, tourism, water, human settlement and coastal resources. Other components include the strengthening institutional capacity, implementation of a pilot agricultural sector adaptation project, as well as the financing of climate change adaptation in the agricultural sector and other adaptation projects at the community level.



Hon. Robert Pickersgill with the UN Secretary General, Ban Ki-moon, at the United Nations Conference on Climate Change in Lima, Peru

- **Third National Communication (TNC) & Biennial Update Report to the United Nations Framework Convention on Climate Change (UNFCCC)**

An inventory of Jamaica's greenhouse gas emissions and carbon stocks is presently being prepared with funding from the Global Environmental Facility

CONCLUSION

The challenges of the year just ended were only overcome through the hard work and professionalism of the entire staff of the Ministry and portfolio Agencies.

Some of the policies and programmes outlined last year were fulfilled and during this fiscal year we intend to execute the projected plans and policies in a more timely, efficient and transparent manner

in support of the Vision 2030 Goal of ensuring that “Jamaica has a healthy and natural environment”.

We stand ready to answer any queries which may arise as a result of information contained in this booklet. We are aware that we have an awesome responsibility to the people of Jamaica and with your help we shall not fail.

APPENDICES

Appendix # 1

K-Factor Update

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What is the K-Factor?

The K-Factor is an OUR approved percentage charge that appears on the bills of NWC customers and is used to fund the implementation of an approved set of capital projects in order to improve service to customers. The percentage charge varies from year to year based on the OUR's Tariff Determination.

The K-Factor is not new, having been used to fund a meter and pump replacement programme in 1999 and designated to fund NRW reduction and sewerage improvement and sewerage expansion essentially since 2008 with revisions in 2013.

K-Factor is also used in many other countries and in many different utility services, under a variety of names.

A related factor to the K-Factor is the X-Factor. The X-Factor is essentially an efficiency-gains calculation that is passed on to the customer on the assumption that the K-Factor investments would have yielded financial benefits to the NWC. The X-Factor represents a credit on customers' bills reducing the billed amount monthly.

The K-Factor for September 2014 to September 2015 is **14%**, before which the X-Factor of **5.5%** is deducted. The K-Factor for September 2015 to September 2016 will remain at **14%** but the X-Factor will rise to **9.7%**.

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What was the K-Factor intended for?

Not all NWC proposed projects qualify for K-Factor funding as funds collected from the K-factor are intended specifically for OUR approved activities aimed at:

1. Reducing the level of NRW from the currently estimated 70% to below 45% of production within the next 6 years.
2. Improving energy efficiency in the operation of major water supply and sewerage facilities.
3. Improving the compliance of NWC's sewerage operations with the stipulations of the National Environment and Planning Agency (NEPA).
4. Increasing sewerage coverage in Kingston and St. Andrew.

- **How much money has been collected for/in K-Factor funds and how much is now available?**

K-factor Billing, Deemed Collected and Expended between 2008 and 2015

Billing Year	2008/2009	2009/2010	2010/2011	2011/2012	2012/2013	2013/2014	2014/2015 April-December
Billed 000,s	511,864	1,755,242	2,493,756	3,457,131	3,999,786	3,984,630	2,363,361
Deemed 000,s	460,678	1,579,718	2,244,381	3,111,418	3,599,808	3,613,030	2,174,292
Disbursements 000,s	108,726	588,417	2,796,312	3,441,863	7,107,209	7,258,634	1,942,500

(It is to be noted here, that under the OUR's ruling, the NWC is required to pay over 92% of billing into the K-Factor account, regardless of whether or not those funds have been collected from customers. Given that the NWC's collection to billing ratio has rarely been at or above 92%, in effect this has resulted in the NWC having to pay over into the K-Factor accounts moneys that would be otherwise needed for on-going operations. This anomaly has been repeatedly appealed by the NWC, with no change to date from the OUR.)

As at February 2015, the K-Factor's bank account balances were as follows:

- (a) JMD Closing Balance 28/02/15: **JMD 717,244,532.77**
- (b) USD Closing Balance 28/02/15: **USD 173,634.50**

As at the end of February 2015, there were two months' worth of deemed K-Factor funds (for November and December 2014) amounting to **J\$475,549,505** that were yet to be paid over by the NWC into the K-Factor accounts.

It is to be noted that the projected K-Factor cash flow will not be sufficient to sustain any up-coming or new projects. Hence, no new commitments are being made and projects not yet started are being delayed to coincide with funding availability.

- **How many projects have been undertaken (completed, in progress, committed)?**

There are **130** projects/activities identified under the K-Factor portfolio of projects islandwide. As at February 2015, **59** were already completed, **31** were ongoing and **40** were upcoming (See attached project listing).

- **How much of the K-Factor funds were not paid over or used for administration or normal operations?**

As confirmed by the Auditor General's Report, the NWC had been late (as of November 2014) in transferring \$0.7 billion of deemed K-factor amounts to the K-Factor account. This represented 3 months of K-Factor funds deemed to have been collected. That figure has since decreased to \$0.47 billion at end of February 2015 with a commitment from the NWC gradually eliminate this arrear and to remain current.

The NWC is discussing with the OUR, concerns raised by the Auditor General regarding the NWC's treatment of "Supervisory Fee", resulting in what the Auditor General has determined to be transfers to NWC's Operational account amounting to \$1.08 billion from the K-Factor account. Based on those discussions, NWC will make arrangements to reimburse the K-Factor account any amount paid for "Supervisory Fee" deemed to have been ineligible for withdrawal or treatment as such.

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What is planned for the K-Factor going forward?

Given the above, it is clear that the K-Factor Programme – in its previous mode of operations – was not sustainable and that expectations raised under the programme were over-ambitious and unrealistic. NWC is therefore revising the operations of the K-Factor programme to be more realistic and to better take into account the present financial constraints and the many risks associated with K-factor works achieving their objectives. These include:

- The 92% collections to billing target not being met, resulting in NWC having to pay over into the K-Factor accounts moneys that were billed but not collected.
- Projects not being completed on time based on delays in procurement process, funding, etc., delaying achievement of targets yet requiring pay-out of X-Factor funds on schedule
- Projected benefits not being realized for any number of reasons including unrealistic expectations, over-stated benefits, illegal connections, persons not signing on as customers, customers not paying billed amounts, etc.
- Selection of projects for immediate implementation that will not realize significant efficiency gains.

The implementation plan for the K-Factor Programme going forward includes the sourcing of more capital financing to undertake the approved projects, with those loans being repaid from K-Factor funds instead of being paid for directly by K-Factor resources.

Appendix 1A - portfolio of K-Factor projects

Approved K-Factor Projects as at January 2015								
No.	Parish	Project Name	Approval Date	Project Scheduled Completion Date	Estimated Cost (\$M)	Type	Status	Expenditure (\$M)
1	Clarendon	Birds Hill Water Supply Project	Apr-10		87.45	Potable Water	completed	18.37
2	Clarendon	Birds Hill/Chateaux/Palmers Cross (Additional Works)	Apr-10		2.46	Potable Water	completed	-
3	Manchester	Christiana/Spaulding - Christiana/Sedburgh	Jan-11		35.91	Potable Water	completed	29.57
4	Manchester	Christiana/Spaulding - Limit/Cobla/Mizpah	Jan-11		40.87	Potable Water	completed	16.44
5	Manchester	Christiana/Spaulding - Limit/Sedburgh	Jan-11		43.01	Potable Water	completed	28.88
6	Manchester	Christiana/Spaulding - Spaulding/Limit	Jan-11		40.87	Potable Water	completed	24.72
7	Manchester	Christiana/Spaulding - Tweedside to Pecham	Jan-11		75.32	Potable Water	completed	55.56
8	KSA	Coopers Hill Potable Water Welded Steel Tank	Apr-10		8.23	Potable Water	completed	7.28
9	KSA	Coopers Hill Potable Water Welded Steel Tank – Phase 2	Sep-11		16.625	Potable Water	completed	14.7
10	St. James	Cornwall Court Water Treatment Plant Replacement - Cornwall Court/Montego Bay Sewerage	Jan-10		353.07	Waste water	completed	50.91
11	St. Elizabeth	Dalintober to Sandy Ground	Jan-10		17.92	Potable Water	completed	5.88
12	Islandwide	Data Collection for Pipeline Networks	Jan-10		62.27	Potable Water	completed	4.43
13	KSA	Downtown Kingston Sewerage (Darling Street WWTP)	Sep-11		1,633.35	Waste water	completed	630.91
14	St. Elizabeth	Essex Valley Water Supply-Pipeline Replacement	Nov-10		224.76	Potable Water	completed	141.19
15	Portland	Fruitful Vale Water Supply Improvement	Aug-12		7.46	Potable Water	completed	0.98
16	KSA	Hope Road Street Sewers	Apr-10		73.45	Waste water	completed	42.88
17	KSA	Hopefield Avenue Sanitary Sewer	Apr-10		50.76	Waste water	completed	0.49
18	KSA	Jamaica Water Supply Improvement Project - Category A: Additional Works	Apr-10		893.54	Potable Water	completed	912.63
19	KSA	Jamaica Water Supply Improvement Project - Pipeline Network components	Apr-10		3,614.07	Potable Water	completed	3,614.07
20	Clarendon	Kellits Water Supply Rehabilitation and Upgrade	Apr-10		23.94	Potable Water	completed	16.02
21	KSA	Kingston Metropolitan Area (KMA) Water Supply and Rehabilitation Project - NRW Reduction Component	Apr-10		390.89	Potable Water	completed	425.07
22	KSA	Kingston Water and Sanitation Project	Apr-10		1,800	Potable Water	completed	1,569.13
23	KSA	KMA Water Supply Rehabilitation Project – Lot 2B	Feb-13		1,465.16	Potable Water	completed	1,196.28
24	KSA	Lady Musgrave/Montrose/Upper Montrose road Sanitary Collector Sewers	Jan-10		76.03	Waste water	completed	43.27
25	St. Elizabeth	Luana to Sandy Ground	Jan-10		10.05	Potable Water	completed	8.4
26	Manchester	Malborough to Berry Hill	Jan-10		49.64	Potable Water	completed	4.61
27	St. Ann	Mamme Bay Water Supply System	Apr-10		73.68	Potable Water	completed	14.79
28	KSA	Mona Plaza/Old Hope Road Sewer	Apr-10		22.25	Waste water	completed	-
29	KSA	Mona Road (Extension) & Roads Leading Off Sanitary Collector Sewers	Aug-11		53.565	Waste water	completed	68.96
30	KSA	Mona Road Sanitary Sewer Extension	Aug-11		18.22	Waste water	completed	14.53
31	Westmoreland	Negril Ponds Rehabilitation	Nov-10		77.83	Waste water	completed	54.45
32	Trelawny, St. James, Hanover & sections of Westmoreland	North Western Parishes Project	Apr-10		410	Potable Water	completed	118.33
33	St. James	Norwood - St James	Sep-11		11.2	Potable Water	completed	11.4
34	St. Catherine	Old Harbour and Greater Old Harbour Water Supply	May-13		43.89	Potable Water	completed	50.37
35	KSA	Paddington Terrace Collector Sewer	Apr-10		35.85	Waste water	completed	32.31
36	KSA	Palisades Peninsula Pipeline Replacement	Jan-13		206.15	Potable Water	completed	245.8
37	Eastern-St. Mary & Portland	Pipeline Replacement - In-house 1 & 2 (St Mary and Portland)	Nov-10		97.63	Potable Water	completed	43.6
38	KSA	Rehabilitation of a Section of Warminster Avenue Collector Sewer	Apr-11		8.641	Waste water	completed	-
39	KSA	Rehabilitation of the Old Hope Road Sanitary Collector Sewer	Apr-10		12.48	Waste water	completed	-
40	KSA	Ruthven Road Collector Sewer	Apr-10		23.8	Waste water	completed	3.82
41	KSA	Salisbury Avenue Collector Sewer	Nov-10		42.7	Waste water	completed	26.33
42	KSA	Sanitary Collection Sewers Barbican Road/Cedar Valley/Standpipe Lane/Ravinia/College Green	Aug-12		41.63	Waste water	completed	-
43	KSA	Swallowfield Road Sanitary Collector Sewers	Aug-11		23.04	Waste water	completed	13.56
44	KSA	The Rehabilitation of the Mountain Terrace/Nannyville/Independence Park/Stadium Gardens/Swallowfield Sanitary Collector Sewer	Apr-10		30.24	Waste water	completed	25.26
45	St. Catherine	Twickenham Park Wastewater Treatment Plant	Apr-10		210	Waste water	completed	61.54
46	KSA	Washington Boulevard Sewer Expansion Works	Aug-11		3	Waste water	completed	4.3
47	KSA	Washington Boulevard Sewer Expansion Works – Phase 2	Aug-11		6.43	Waste water	completed	13.54
48	KSA	Waterloo Road Sewer Expansion Project	Nov-10		18	Waste water	completed	17.26
49	KSA	Western Treatment Works - Diversion Sewer	Apr-10		34	Waste water	completed	44.65
50	KSA	Wiggan Loop Sanitary Collection Sewers	Jan-10		29.82	Waste water	completed	46.76
51	Clarendon	Woodside to Guinep Tree	Nov-10		107.78	Potable Water	completed	35.07
52	KSA	Halifax Avenue / Kings Drive Sanitary Collector Sewers	Dec-13		6.46	Waste Water	Completed	3.105
53	Hanover	Cascade/Claremont/Jericho W/S	Apr-13	Aug-15	271.25	Potable Water	Ongoing	84.66
54	KSA	Barbican Road/Cedar Valley/Standpipe Lane/Ravinia/College Green [Extension]	Apr-10	Jan-15	41.63	Waste water	Ongoing	33.26

55	St. Ann	Browns Town and Greater Browns Town (Minnards) Pipeline Replacement (St Ann)	Sep-12	TBD	241.4	Potable Water	Ongoing	0.66
56	St. Elizabeth	Brucefield to Babury Hill	Jan-10	TBD	30.05	Potable Water	Ongoing	1.27
57	St. Elizabeth	Burnt Savanna/Knoxwood Water Supply Mains Replacement and Upgrading	May-13	Nov-14	59.96	Potable Water	Ongoing	52.84
58	Hanover	Chichester Shettlewood Water Supply – Hanover	Sep-11	Dec-15	19.4	Potable Water	Ongoing	13.87
59	Trelawny	Georgia to Silversands	Apr-10		49.87	Potable Water	completed	43.98
60	Trelawny	Clarks Town to Georgia mains replacement	Apr-10	Dec-14	229.58	Potable Water	Ongoing	156.87
61	Islandwide	Consumer Metering Installation	Apr-10	TBD	825	Potable Water	Ongoing	266.93
62	St. Mary	Derry Hazzard Water Supply	Apr-11	No activity	3.001	Potable Water	Ongoing	1.36
63	Westmoreland	Eastern Westmoreland Water Supply Upgrading	May-13	Nov-14	80.68	Potable Water	Ongoing	61.31
64	KSA	Harbour View Sewage Treatment Rehabilitation	Nov-13	Nov-14	702.65	Waste water	Ongoing	1,047.69
65	KSA	Hope High Level - St Andrew	Sep-11	Dec-15	10.3	Potable Water	Ongoing	8.11
66	St. Elizabeth	Hounslow Water Supply and Upgrade (Extension to Fort Charles)	Apr-10	Nov-15	167.34	Potable Water	Ongoing	48.60
67	Islandwide	Jamaica Water Supply Improvement Project (All components, including Lucea Pipeline) - Cat B	Jul-13	Feb-15	7,845.30	Potable Water	Ongoing	7,346.50
68	KSA	Lot F Downtown Kingston Sewerage Extension	Oct-12	May-16	745	Waste water	Ongoing	587.08
69	Clarendon	Mason River/Kellits/Sandy River Water Supply Scheme	May-13	Aug-15	202.31	Potable Water	Ongoing	44.22
70	Manchester	Melrose Mevs –Manchester	Sep-11	Dec-15	10.4	Potable Water	Ongoing	7.83
71	St. Catherine	Mount Royal Estate Housing Development -St Catherine	Sep-11	Dec-15	10.2	Potable Water	Ongoing	7.78
72	Westmoreland	Non-Pariel Water Supply Mains Replacement and Upgrading	May-13	Nov-15	444.54	Potable Water	Ongoing	47.10
73	St. Elizabeth	Parklee/Mountainside	Sep-11	Dec-15	10.4	Potable Water	Ongoing	7.84
74	St. Elizabeth	Phoenix Park Housing Development – St Elizabeth,	Sep-11	Dec-15	10.4	Potable Water	Ongoing	8.46
75	Portland	Port Antonio Water Supply Sewage and Drainage	Jan-10	Dec-14	475.3	Potable & Waste Water	Ongoing	317.90
76	Islandwide	Production Metering - Phase 1	Apr-10	TBD	129.6	Potable Water	Ongoing	24.16
77	St. Thomas	Prospect Pen – St Thomas,	Sep-11	Dec-15	10.3	Potable Water	Ongoing	7.81
78	St. Elizabeth	Santa Cruz Water Supply Phase 1B	Nov-10	Sep-15	74.71	Potable Water	Ongoing	0.26
79	St. Ann	Seville Water Supply – Tank Replacement	Nov-10	No activity	17.83	Potable Water	Ongoing	15.32
80	KSA	Sewerage of Seymour Lands/Trafalgar Park/New Kingston - The construction of Fair View/Seymour/Retreat Avenue Collector Sewer	Apr-10	Sep-15	37.04	Waste water	Ongoing	4.29
81	Trelawny	Sherwood Content – Trelawny,	Sep-11	Dec-15	8.6	Potable Water	Ongoing	6.36
82	Islandwide	Tanks and Pump Rehabilitation for Operational Efficiency	Mar-13	Sep-15	640	Potable Water	Ongoing	95.24
83	Westmoreland	Whitehouse Pipeline Replacement	Jan-13	Dec-14	207.9	Potable water	Ongoing	205.25
84	St. Thomas	Yallahs Wastewater Stabilization Ponds	Jul-12		46.48	Waste water	completed	39.95
85	St. Mary	Agualta Vale Supply Mains Replacement & Upgrading	Jul-13	Sep-16	839.43	Potable Water	Ongoing	52.31
86	KSA	Duhaney Park Sewage Force Main (Gravity Sewer Pipeline Repair Component)	Aug-12		32.579	Waste water	completed	17.93
87	St. Elizabeth	Essex Valley Water Supply Phase 2 (Nain to Junction)	Jul-13	Aug-15	255.88	Potable Water	Ongoing	45.09
88	Hanover	Western Hanover Water Supply	Jun-13	Dec-14	678.025	Potable Water	Ongoing	57.33
89	St. Catherine	Portmore Sewerage Reconfiguration Project	Oct-13	Apr-16	2,776.80	Waste Water	Ongoing	1,010.91
90	KSA	Dillsbury/Millsborough Avenue Sewer Extension Project - KSA	Mar-14	Dec-14	9.85	Waste water	Ongoing	14.08
91	St. Elizabeth	Black River and Greater Black River Pipeline Replacement	May-13		493.37	Potable Water	Upcoming	-
92	KSA	Constant Spring Sewers	Jan-10		393.07	Waste water	Upcoming	-
93	Trelawny	Dornoch to Baron Hill Water Supply	Jan-10		79.27	Potable Water	Upcoming	-
94	KSA	Duhaney Park Sewage Force Main	May-13		55.15	Waste water	Upcoming	-
95	KSA	Forest Hill Mains Replacement	Apr-10		30.45	Potable Water	Upcoming	-
96	Manchester	Greater Mandeville Water supply	Apr-10		429.99	Potable Water	Upcoming	-
97	Portland	Mount Pleasant and Environs Water Supply	Jun-13		257.57	Potable Water	Upcoming	-
98	Westmoreland	Roaring River/Savanna-la-Mar and Greater Savanna-la-Mar Water Supply	Mar-13		1,685.28	Potable Water	Upcoming	-
99	KSA	Sandhurst Crescent Mains Replacement	Aug-11		12.12	Waste water	Upcoming	-
100	Manchester	Victoria Town CrossKeys: Grove Town to Smithfield Pipe Replacement	Jan-10		33	Potable Water	Upcoming	-
101	St. Catherine	Eltham Park	May-08		145.77	Waste water	Upcoming	-
102	St. Mary	Boscobel (CReW)	May-08		235.04	Waste water	Upcoming	-
103	KSA	Elleston Flats (CReW)	May-08		235.04	Waste water	Upcoming	-
104	KSA	Acadia (CReW)	May-08		135.6	Waste water	Upcoming	-
105	KSA	Hughenden (CReW)	May-08		316.4	Waste water	Upcoming	-
106	KSA	Bay Farm Villa (CReW)	May-08		113	Waste water	Upcoming	-
107	St. Catherine	De La Vega City Housing (CReW)	May-08		113	Waste water	Upcoming	-
108	St. Catherine	Blackwood Gardens (CReW)	May-08		90.4	Waste water	Upcoming	-
109	Clarendon	Lionel Town Housing Scheme (CReW)	May-08		79.1	Waste water	Upcoming	-
110	St. Catherine	Ensom City Housing Scheme (CReW)	May-08		203.4	Waste water	Upcoming	-
111	Clarendon	Longville Housing Scheme (CReW)	May-08		113	Waste water	Upcoming	-
112	Clarendon	Paisley Pen Housing Scheme (CReW)	May-08		79.1	Waste water	Upcoming	-
113	Westmoreland	Shews Burry Housing Scheme (CReW)	May-08		79.1	Waste water	Upcoming	-
114	St. Thomas	Red Hills Pen Housing Scheme (CReW)	May-08		259.9	Waste water	Upcoming	-
115	Clarendon	Wood Stock STP	May-08		185.32	Waste water	Upcoming	-
116	St. Mary	Anchovey STP	May-08		172.89	Waste water	Upcoming	-
117	St. Mary	Stock Holm STP	May-08		169.5	Waste water	Upcoming	-
118	St. Catherine	Nightingale Grove STP	May-08		180.8	Waste water	Upcoming	-
119	St. Catherine	Crofts Hill STP	May-08		192.1	Waste water	Upcoming	-
120	Clarendon	Bushy Park STP	May-08		418.1	Waste water	Upcoming	-
121	St. Catherine	Claremont STP	May-08		203.4	Waste water	Upcoming	-
122	St. Catherine	Old Harbour Villas STP	May-08		271.2	Waste water	Upcoming	-
123	St. Thomas	East Prospect STP	May-08		305.1	Waste water	Upcoming	-

124	St. Catherine	Greater Portmore Ponds & Constructed Wetlands	May-08		1,695	Waste water	Upcoming	-
125	St. Thomas	Springfields (Moon Base) STP	May-08		113	Waste water	Upcoming	-
126	St. Catherine	Innswood Village	May-08		113	Waste water	Upcoming	-
127	Trelawny	Vanzie Lands	May-08		67.8	Waste water	Upcoming	4.75
128	Clarendon	Mineral Heights	May-08		67.8	Waste water	Upcoming	1.97
129	Clarendon	Hayes 1 & 2	May-08		67.8	Waste water	Upcoming	-
130	Clarendon	Horizon Park	May-08		67.8	Waste water	Upcoming	1.87
131	Islandwide	K-Factor Project Management & Admin. (PIU)				Potable & Waste Water	Ongoing	46.21
132	Islandwide	K-Factor Project Management Unit (PMU)				Potable & Waste Water	Ongoing	80.42
		Total			40,954.10			21,740.03

Appendix 2

The following submission sets out by constituency, water, wastewater and drainage projects that have been completed since 2012 and those that are in progress. Some proposed projects are also included. (In most instances, both constituencies in which the work is done and where beneficiaries reside are identified. Hence, one project may be listed under multiple constituencies given either the areas of work and or the geographical distribution of the beneficiary communities. Similarly, the description provided for a project under one constituency does not assume that all the activities listed and the benefits described were contained within or limited to that particular constituency only.) Included also is information on the Tank and Pump Programme.

PROJECTS IMPACTING CONSTITUENCIES ISLANDWIDE

There are some projects (2 of which are identified here) which cannot be defined by geographical boundaries as their implementation and impact are expected to be felt in virtually every constituency islandwide. These projects could therefore be listed under each of the 63 constituencies; however, for convenience they are listed here once.

1. Meter Installation Projects

These activities involved the supply and installation of 133,000 domestic and commercial water meters to enhance accuracy in the measuring of consumer consumption/billing and reduce Non Revenue Water (NRW) islandwide.

Project Status: Completed

Project Budget: \$7.03B

2. Solid State Meter Procurement

To procure 50,000 domestic and commercial solid state meters to improve billing and revenue accuracy.

Funded by: INTER-AMERICAN DEVELOPMENT BANK (IDB)

Implementation Date: August 2015

Completion Date: December 2016

Status: Awaiting NCC approval of re-submission

Project Budget \$835M

Kingston and St. Andrew

East Kingston and Port Royal Palisadoes Pipeline Replacement

Replacement of 6km of pipes between the Harbour View and the Norman Manley International Airport (NMIA) round-a-bouts in conjunction with roadway improvement works undertaken by the National Works Agency benefiting Port Royal and NMIA.

Start Date: June 2013

Completion Date: November 2013

Project Budget: \$230M

1. Mona and Hope Water Treatment Plants Rehabilitation

Rehabilitation of the Mona and Hope Water Treatment Plants to restore their reliable production output to 16 and 6 imperial million gallons daily (imgd), respectively, and to enable them to better serve more than 200,000 persons in the Corporate Area.

Funded by: Inter-American Development Bank (IDB) under the Kingston Water and Sanitation Project

Started: November 2011

Completed: May 2013

Project Budget: \$1.8B

2. Rehabilitation of KSA Potable Water Supply Systems (26 water supply facilities project)

Rehabilitation of 26 Wells, Pumping Stations and Storage Tanks to increase reliability of service in KSA to include works at Montgomery Corner, Kirkland Heights, Ferry Hill, Forest Hills Deep Well, Chancery Hall Deep Well, Chancery Hall Reservoir, Gordon Town Reservoir, Rock Pond Reservoir, Hope Pastures Reservoir, Hydra Drive, Chancery Hall Reservoir Nos. 1 and 2, Sterling Castle and Chancery Pipeline.

Funded by: INTER-AMERICAN DEVELOPMENT BANK (IDB)

Implementation Date: December 2012

Completion Date: May 2015

Status: 95%

Project Budget: \$2.54B

3. Non- Revenue Water (NRW) Reduction in Kingston and St Andrew

Network Audit, mains replacement and various measures aimed at reducing and controlling NON-REVENUE WATER (NRW) to 25% in the Kingston and St. Andrew (KSA) to increase available supply of potable water as well as to extend population coverage to 95% of persons in KSA.

Funded by: IDB

Project Duration: May 2015 - June 2020

Status: 5% - Contract being finalized

Project Budget \$4.9B

West Kingston

1. Rio Cobre Pipeline Replacement (Bog Walk Gorge)

Replacement of aged Rio Cobre pipeline between Bog Walk and Flat Bridge ,resulting in the elimination of leaks and increasing of supplies to thousands of NWC customers in sections of St. Catherine, Kingston and St. Andrew. Project was completed in March 2012 at a cost of \$1B.

2. Mona and Hope Water Treatment Plants Rehabilitation

Rehabilitation of the Mona and Hope Water Treatment Plants to restore the reliable production output to 16 and 6 imperial million gallons daily (imgd) respectively and to better serve more than 200,000 persons in the Corporate Area.

Funded by: INTER-AMERICAN DEVELOPMENT BANK (IDB) under the Kingston Water and Sanitation Project

Started: November 2011

Completed: May 2013

Project Budget: \$1.8B

3. Rehabilitation of Potable Water Supply Systems (26 water supply facilities project)

Rehabilitation of 26 Wells, Pumping Stations and Storage Tanks to increase reliability of service in KSA to include works at Montgomery Corner, Kirkland Heights, Ferry Hill, Forest Hills Deep Well, Chancery Hall Deep Well, Chancery Hall Reservoir, Gordon Town Reservoir, Rock Pond Reservoir, Hope Pastures Reservoir, Hydra Drive, Chancery Hall Reservoir Nos. 1 and 2, Sterling Castle and Chancery Pipeline.

Funded by: INTER-AMERICAN DEVELOPMENT BANK (IDB)

Implementation Date: December 2012

Completion Date: May 2015

Status: 95%

Project Budget: \$2.54B

4. Non- Revenue Water (NRW) Reduction in Kingston and St Andrew

Network Audit, mains replacement and various measures aimed at reducing and controlling NON-REVENUE WATER (NRW) to 25% in the Kingston and St. Andrew (KSA) to increase available supply of potable water as well as to extend population coverage to 95% of persons in KSA.

Funded by: INTER-AMERICAN DEVELOPMENT BANK (IDB)

Project Duration: May 2015 - June 2020

Status: 5% - Contract being finalized

Project Budget \$4.9B

5. Rio Cobre Pipeline Replacement (Flat Bridge to Ferry)

The Replacement of 14 km of aged large diameter pipes from Content to Ferry, St. Catherine resulting in the reduction of physical losses by approximately 2.0 imperial million gallons daily (imgd). Funding: Bank of Nova Scotia Commercial Loan/ K-Factor funds.

Project started in February 2013 and was completed in February 2015 at a cost of \$3B.

6. Artificial Limestone Aquifer Recharge in St. Catherine

Construction of 5.0 imperial million gallons daily (imgd) Aquifer Recharge System for Lower Rio Cobre basin at Innswood, St. Catherine to secure sustainable abstraction of ground water for Greater Spanish Town. Funding: INTER-AMERICAN DEVELOPMENT BANK (IDB)

Implementation: August 2014

Completion Date: November 2015

% Completed as at March 2015: Approximately 42%

Project Budget: \$1.26B

Central Kingston

Non- Revenue Water (NRW) Reduction in Kingston and St Andrew

Network Audit, mains replacement and various measures aimed at reducing and controlling NON-REVENUE WATER (NRW) to 25% in the Kingston and St. Andrew (KSA) to increase available supply of potable water as well as to extend population coverage to 95% of persons in KSA.

Funded by: INTER-AMERICAN DEVELOPMENT BANK (IDB)

Project Duration: May 2015 - June 2020

Status: 5% - Contract being finalized

Project Budget \$4.9B

1. Rio Cobre Pipeline Replacement (Bog Walk Gorge)

Replacement of aged Rio Cobre pipeline between Bog Walk and Flat Bridge, resulting in the elimination of leaks and increasing supplies to thousands of customers in sections of St. Catherine, Kingston and St. Andrew. Project was completed in March 2012 at a cost of \$1B.

2. Rio Cobre Pipeline Replacement (Flat Bridge to Ferry)

The Replacement of 14 km of aged large diameter pipes from Content to Ferry, St. Catherine resulting in the reduction of physical losses by approximately 2.0 imperial million gallons daily (imgd). Funding: Bank of Nova Scotia (BNS) commercial loan/ K-Factor funds.

Project started in February 2013 and was completed in February 2015 at a cost of \$3B.

3. Artificial Limestone Aquifer Recharge in St. Catherine

Construction of 5.0 imperial million gallons daily (imgd) Aquifer Recharge System for Lower Rio Cobre basin at Innswood, St. Catherine to secure sustainable abstraction of ground water for Greater Spanish Town. Funding: INTER-AMERICAN DEVELOPMENT BANK (IDB)

Implementation: August 2014

Completion Date: November 2015

% Completed as at March 2015: Approximately 42%

Project Budget: \$1.26B

East Rural St. Andrew

1. Mona and Hope Water Treatment Plants Rehabilitation

Rehabilitation of the Mona and Hope Water Treatment Plants to restore the reliable production output to 16 and 6 imperial million gallons daily (imgd) respectively and to better serve more than 200,000 persons in the Corporate Area.

Funded by: INTER-AMERICAN DEVELOPMENT BANK (IDB) under the Kingston Water and Sanitation Project

Started: November 2011

Completed: May 2013

Project Budget: \$1.8B

2. Rehabilitation of Potable Water Supply Systems (26 water supply facilities project)

Rehabilitation of 26 Wells, Pumping Stations and Storage Tanks to increase reliability of service in KSA to include works at Montgomery Corner, Kirkland Heights, Ferry Hill, Forest Hills Deep Well, Chancery Hall Deep Well, Chancery Hall Reservoir, Gordon Town Reservoir, Rock Pond Reservoir, Hope Pastures Reservoir, Hydra Drive, Chancery Hall Reservoir Nos. 1 and 2, Sterling Castle and Chancery Pipeline.

Funded by: INTER-AMERICAN DEVELOPMENT BANK (IDB)

Implementation Date: December 2012

Completion Date: May 2015

Status: 95%

Project Budget: \$2.54B

3. Construction and Replacement of Wastewater Treatment Plant

Construction of new sewage treatment plant at Elletson Flats as well as new sanitation infrastructure to facilitate housing and other development as well as to improve public health and environmental conditions.

Funding: INTER-AMERICAN DEVELOPMENT BANK (IDB) / Commercial Loan

Start Date: October 2014

Completion: End of 2015

Contract Document completed and approval received for contract award which is awaiting finalization of loan funding arrangements.

Project Budget: \$470M

4. Harbour View Sewerage Project (Phases 1 and 2)

Refurbishment and upgrading of the Harbour View Sewage Treatment Plant to improve public health and environmental conditions. Completed in February 2015 at a cost of \$560M.

5. Non- Revenue Water (NRW) Reduction in Kingston and St Andrew

Network Audit, mains replacement and various measures aimed at reducing and controlling NON-REVENUE WATER (NRW) to 25% in the Kingston and St. Andrew (KSA) to increase available supply of potable water as well as to extend population coverage to 95% of persons in KSA.

Funded by: INTER-AMERICAN DEVELOPMENT BANK (IDB)

Project Duration: May 2015 - June 2020

Status: 5% - Contract being finalized
Project Budget \$4.9B

6. Tank and Pump Replacement and/or upgrading for:

- Constitution Hill

7. Clydesdale / Content Gap / Guava Ridge Water Supply Project

This proposed project to be funded by the K-Factor fund will involve de-silting and repairing the intake structure on the Clyde River, install parallel pipelines and increase capacity of storage reservoir at an estimated cost of \$445M.

West Rural St. Andrew

1. Rehabilitation of Constant Spring and Seaview Water Treatment Plants

Refurbishment of Constant Spring and Seaview Water Treatment Plants resulting in the provision of a combined capacity of 24 million gallons per day of high quality water. Completed in March 2012 at a cost of \$1.1B.

2. Stony Hill Water Supply Improvement Project

Improvement in water supply to Stony Hill and surrounding areas. Resulting in the reduction of commercial losses; regularization of supply to 760 households in informal settlements; increase in service hours for approximately 2,360 households.

Completed in December 2012 at a cost of \$900M

3. Rehabilitation of Potable Water Supply Systems (26 water supply facilities project)

Rehabilitation of 26 Wells, Pumping Stations and Storage Tanks to increase reliability of service in KSA to include works at Montgomery Corner, Kirkland Heights, Ferry Hill, Forest Hills Deep Well, Chancery Hall Deep Well, Chancery Hall Reservoir, Gordon Town Reservoir, Rock Pond Reservoir, Hope Pastures Reservoir, Hydra Drive, Chancery Hall Reservoir Nos. 1 and 2, Sterling Castle and Chancery Pipeline

Funded by: INTER-AMERICAN DEVELOPMENT BANK (IDB)

Implementation Date: December 2012

Completion Date: May 2015

Status: 95%

Project Budget: \$2.54B

4. Non- Revenue Water (NRW) Reduction in Kingston and St Andrew

Network Audit, mains replacement and various measures aimed at reducing and controlling NON-REVENUE WATER (NRW) to 25% in the Kingston and St. Andrew (KSA) to increase available supply of potable water as well as to extend population coverage to 95% of persons in KSA.

Funded by: INTER-AMERICAN DEVELOPMENT BANK (IDB)

Project Duration: May 2015 - June 2020

Status: 5% - Contract being finalized

Project Budget \$4.9B

5. Tank and Pump Replacement and/or upgrading for :

- Constant Spring/Tavistock
- Barnett Wood/Padmore
- Cavaliers
- Isaac Hole
- King Weston

North Central St. Andrew

1. Rehabilitation of Constant Spring and Seaview Water Treatment Plants

Refurbishment of Constant Spring and Seaview Water Treatment Plants resulting in the provision of a combined capacity of 24 million gallons per day of high quality water. Completed in March 2012 at a cost of \$1.1B.

2. Stony Hill Water Supply Improvement Project

Comprehensive improvement in water supply to Stony Hill and surrounding areas, resulting in the reduction of commercial losses; regularization of supply to 760 households in informal settlements; increase in service hours and service reliability for approximately 2,360 households or approximately 10,000 persons.

Completed in December 2012 at a cost of \$900M

3. Rehabilitation of Potable Water Supply Systems (26 water supply facilities project)

Rehabilitation of 26 Wells, Pumping Stations and Storage Tanks to increase reliability of service in KSA to include works at Montgomery Corner, Kirkland Heights, Ferry Hill, Forest Hills Deep Well, Chancery Hall Deep Well, Chancery Hall Reservoir, Gordon Town Reservoir, Rock Pond Reservoir, Hope Pastures Reservoir, Hydra Drive, Chancery Hall Reservoir Nos. 1 and 2, Sterling Castle and Chancery Pipeline.

Funded by: INTER-AMERICAN DEVELOPMENT BANK (IDB)

Implementation Date: December 2012

Completion Date: May 2015

Status: 95%

Project Budget: \$2.54B

4. Non- Revenue Water (NRW) Reduction in Kingston and St Andrew

Network Audit, mains replacement and various measures aimed at reducing and controlling NON-REVENUE WATER (NRW) to 25% in the Kingston and St. Andrew (KSA) to increase available supply of potable water as well as to extend population coverage to 95% of persons in KSA.

Funded by: INTER-AMERICAN DEVELOPMENT BANK (IDB)

Project Duration: May 2015 - June 2020

Status: 5% - Contract being finalized

Project Budget \$4.9B

5. Rio Cobre Pipeline Replacement (Bog Walk Gorge)

Replacement of aged Rio Cobre pipeline between Bog Walk and Flat Bridge resulting in the elimination of leaks and increasing supplies to thousands of customers in sections of St. Catherine, Kingston and St. Andrew. Project was completed in March 2012 at a cost of \$1B.

6. Rio Cobre Pipeline Replacement (Flat Bridge to Ferry)

The Replacement of 14 km of aged large diameter pipes from Content to Ferry, St. Catherine resulting in the reduction of physical losses by approximately 2.0 imperial million gallons daily (imgd). Funding: Bank of Nova Scotia (BNS) commercial loan/ K-Factor funds.

Project started in February 2013 and was completed in February 2015 at a cost of \$3B.

7. Artificial Limestone Aquifer Recharge in St. Catherine

Construction of 5.0 imperial million gallons daily (imgd) Aquifer Recharge System for Lower Rio Cobre basin at Innswood, St. Catherine to secure sustainable abstraction of ground water for Greater Spanish Town. Funding: INTER-AMERICAN DEVELOPMENT BANK (IDB)

Implementation: August 2014

Completion Date: November 2015

% Completed as at March 2015: Approximately 42%

Project Budget: \$1.26B

8. Tank and Pump Replacement and/or upgrading for :

- Constant Spring/Tavistock

Eastern St. Andrew

1. Mona and Hope Water Treatment Plants Rehabilitation

Rehabilitation of the Mona and Hope Water Treatment Plants to restore the reliable production output to 16 and 6 imperial million gallons daily (imgd) respectively and to better serve more than 200,000 persons in the Corporate Area.

Funded by: Inter-American Development Bank (IDB) under the Kingston Water and Sanitation Project

Started: November 2011

Completed: May 2013

Project Budget: \$1.8B

2. Rehabilitation of Potable Water Supply Systems (26 water supply facilities project)

Rehabilitation of 26 Wells, Pumping Stations and Storage Tanks to increase reliability of service in KSA to include works at Montgomery Corner, Kirkland Heights, Ferry Hill, Forest Hills Deep Well, Chancery Hall Deep Well, Chancery Hall Reservoir, Gordon Town Reservoir, Rock Pond Reservoir, Hope Pastures Reservoir, Hydra Drive, Chancery Hall Reservoir Nos. 1 and 2, Sterling Castle and Chancery Pipeline.

Funded by: INTER-AMERICAN DEVELOPMENT BANK (IDB)

Implementation Date: December 2012

Completion Date: May 2015

Status: 95%

Project Budget: \$2.54B

3. Non- Revenue Water (NRW) Reduction in Kingston and St Andrew

Network Audit, mains replacement and various measures aimed at reducing and controlling NON-REVENUE WATER (NRW) to 25% in the Kingston and St. Andrew (KSA) to increase available supply of potable water as well as to extend population coverage to 95% of persons in Kingston & St. Andrew (KSA).

Funded by: INTER-AMERICAN DEVELOPMENT BANK (IDB)

Project Duration: May 2015 - June 2020

Status: 5% - Contract being finalized

Project Budget \$4.9B

4. Mona Sanitary Sewers

Construction of central sewage collection system for communities off Mona Road. Project was completed in November 2012 at a cost of \$50M.

5. Hope Road /Utech Sewers

Construction of 1.5 km of sanitary sewers from Papine to Liguanea. Extension of sanitation infrastructure, to facilitate development of university campus and approximately 100 households. Funding: K-Factor / UTECH

Status: Evaluation stage.

Project Budget: \$140M

North East St. Andrew

1. Rehabilitation of Potable Water Supply Systems (26 water supply facilities project)

Rehabilitation of 26 Wells, Pumping Stations and Storage Tanks to increase reliability of service in KSA to include works at Montgomery Corner, Kirkland Heights, Ferry Hill, Forest Hills Deep Well, Chancery Hall Deep Well, Chancery Hall Reservoir, Gordon Town Reservoir, Rock Pond Reservoir, Hope Pastures Reservoir, Hydra Drive, Chancery Hall Reservoir Nos. 1 and 2, Sterling Castle and Chancery Pipeline.

Funded by: INTER-AMERICAN DEVELOPMENT BANK (IDB)

Implementation Date: December 2012

Completion Date: May 2015

Status: 95%

Project Budget: \$2.54B

2. NRW Reduction in Kingston and St Andrew

Network Audit, mains replacement and various measures aimed at reducing and controlling NON-REVENUE WATER (NRW) to 25% in the Kingston and St. Andrew (KSA) to increase available supply of potable water as well as to extend population coverage to 95% of persons in Kingston and St. Andrew (KSA).

Funded by: INTER-AMERICAN DEVELOPMENT BANK (IDB)

Project Duration: May 2015 - June 2020

Status: 5% - Contract being finalized

Project Budget \$4.9B

3. Rio Cobre Pipeline Replacement (Bog Walk Gorge)

Replacement of aged Rio Cobre pipeline between Bog Walk and Flat Bridge resulting in the elimination of leaks and increasing supplies to thousands of customers in sections of St. Catherine, Kingston and St. Andrew. Project was completed in March 2012 at a cost of \$1B.

4. Rio Cobre Pipeline Replacement (Flat Bridge to Ferry)

The Replacement of 14 km of aged large diameter pipes from Content to Ferry, St. Catherine resulting in the reduction of physical losses by approximately 2.0 imperial million gallons daily (imgd). Funding: Bank of Nova Scotia (BNS) commercial loan/ K-Factor funds.

Project started in February 2013 and was completed in February 2015 at a cost of \$3B.

4. Dillsbury/Millsborough Avenue Sewers

Construction of 2,200m of 200 and 300mm main sewers to increase coverage, retire the old Housing Agency of Jamaica (HAJ) Sewage Treatment Plant and improve public health conditions.

Funding: K-Factor

Status: Engineering designs being done (Draft phase)

5. Halifax Avenue Sanitary Collector Sewers, Barbican, St. Andrew

Construction of approximately 160m of 200mm (8") Nominal Diameter sanitary collector sewers to facilitate residential development and increase in building density. Completed in February, 2014 at a cost of \$7M.

6. Rehabilitation of Constant Spring and Seaview Water Treatment Plants

Refurbishment of Constant Spring and Seaview Water Treatment Plants resulting in the provision of a combined capacity of 24 million gallons per day of high quality water. Completed in March 2012 at a cost of \$1.1B.

7. Construction of Conveyance Systems from Decommissioning of Wastewater Treatment Plants

Transfer sewers from 4 decommissioned sewage treatment plants (at Hughenden, Arcadia, Bay Farm and Springfield). It includes retiring old non-functioning Sewage Treatment Plants (STPs) to reduce energy / maintenance costs, utilize available capacity of more efficient facility as well as improve public health and environmental conditions for population of approximately 10, 000 persons or 0.5 imperial million gallons daily (imgd)

Funded by: INTER-AMERICAN DEVELOPMENT BANK (IDB) / Commercial Loan

Implementation Date: November 2014

Completion Date: December 2015

Project Budget: \$430M

8. Artificial Limestone Aquifer Recharge in St. Catherine

Construction of 5.0 imperial million gallons daily (imgd) Aquifer Recharge System for Lower Rio Cobre basin at Innswood, St. Catherine to secure sustainable abstraction of ground water for Greater Spanish Town. Funding: INTER-AMERICAN DEVELOPMENT BANK (IDB)

Implementation Date: August 2014

Completion Date: November 2015

% Completed as at March 2015: Approximately 42%

Project Budget: \$1.26B

South St. Andrew

1. Sector F Sewerage Renewal

Rehabilitation of sewerage system in Majesty Gardens, Seaview, Riverton City and Whitfield Town. Rehabilitation of sanitation infrastructure to improve public health and environmental conditions with 3,255 customers to benefit from the project.

Funding: K-Factor

Start Date: December 2015

Completion Date: May 2016

Project Budget: \$1.32B

2. Rio Cobre Pipeline Replacement (Bog Walk Gorge)

Replacement of aged Rio Cobre pipeline between Bog Walk and Flat Bridge resulting in the elimination of leaks and increasing supplies to thousands of customers in sections of St. Catherine, Kingston and St. Andrew. Project was completed in March 2012 at a cost of \$1B.

3. Rio Cobre Pipeline Replacement (Flat Bridge to Ferry)

The Replacement of 14 km of aged large diameter pipes from Content to Ferry, St. Catherine resulting in the reduction of physical losses by approximately 2.0 imperial million gallons daily (imgd).

Funding: Bank of Nova Scotia (BNS) commercial loan/ K-Factor funds.

Project started in February 2013 and was completed in February 2015 at a cost of \$3B.

4. Mona and Hope Water Treatment Plants Rehabilitation

Rehabilitation of the Mona and Hope Water Treatment Plants to restore the reliable production output to 16 and 6 imperial million gallons daily (imgd) respectively and to better serve more than 200,000 persons in the Corporate Area.

Funded by: INTER-AMERICAN DEVELOPMENT BANK (IDB) under the Kingston Water and Sanitation Project

Started: November 2011

Completed: May 2013

Project Budget: \$1.8B

5. Rehabilitation of Potable Water Supply Systems (26 water supply facilities project)

Rehabilitation of 26 Wells, Pumping Stations and Storage Tanks to increase reliability of service in KSA to include works at Montgomery Corner, Kirkland Heights, Ferry Hill, Forest Hills Deep Well, Chancery Hall Deep Well, Chancery Hall Reservoir, Gordon Town Reservoir, Rock Pond Reservoir, Hope Pastures Reservoir, Hydra Drive, Chancery Hall Reservoir Nos. 1 and 2, Sterling Castle and Chancery Pipeline

Funded by: INTER-AMERICAN DEVELOPMENT BANK (IDB)

Implementation Date: December 2012

Completion Date: May 2015

Status: 95%

Project Budget: \$2.54B

6. Non- Revenue Water (NRW) Reduction in Kingston and St Andrew

Network Audit, mains replacement and various measures aimed at reducing and controlling NON-REVENUE WATER (NRW) to 25% in the Kingston and St. Andrew (KSA) to increase available supply of potable water as well as to extend population coverage to 95% of persons in Kingston and St. Andrew (KSA).

Funded by: INTER-AMERICAN DEVELOPMENT BANK (IDB)

Project Duration: May 2015 - June 2020

Status: 5% - Contract being finalized

Project Budget \$4.9B

7. Artificial Limestone Aquifer Recharge in St. Catherine

Construction of 5.0 imperial million gallons daily (imgd) Aquifer Recharge System for Lower Rio Cobre basin at Innswood, St. Catherine to secure sustainable abstraction of ground water for Greater Spanish Town. Funding: INTER-AMERICAN DEVELOPMENT BANK (IDB)

Implementation: August 2014

Completion Date: November 2015

Approximately 42% completed as at March 2015:

Project Budget: \$1.26B

Western St. Andrew

1. Rio Cobre Pipeline Replacement (Bog Walk Gorge)

Replacement of aged Rio Cobre pipeline between Bog Walk and Flat Bridge resulting in the elimination of leaks and increasing supplies to thousands of customers in sections of St. Catherine, Kingston and St. Andrew. Project was completed in March 2012 at a cost of \$1B.

2. Rio Cobre Pipeline Replacement (Flat Bridge to Ferry)

The Replacement of 14 km of aged large diameter pipes from Content to Ferry, St. Catherine resulting in the reduction of physical losses by approximately 2.0 imperial million gallons daily (imgd). Funding: Bank of Nova Scotia (BNS) commercial loan/ K-Factor funds.

Project started in February 2013 and was completed in February 2015 at a cost of \$3B.

3. Rehabilitation of Potable Water Supply Systems (26 water supply facilities project)

Rehabilitation of 26 Wells, Pumping Stations and Storage Tanks to increase reliability of service in KSA to include works at Montgomery Corner, Kirkland Heights, Ferry Hill, Forest Hills Deep Well, Chancery Hall Deep Well, Chancery Hall Reservoir, Gordon Town Reservoir, Rock Pond Reservoir, Hope Pastures Reservoir, Hydra Drive, Chancery Hall Reservoir Nos. 1 and 2, Sterling Castle and Chancery Pipeline.

Funded by: INTER-AMERICAN DEVELOPMENT BANK (IDB)

Implementation Date: December 2012

Completion Date: May 2015

Status: 95%

Project Budget: \$2.54B

4. Sector F Sewerage Renewal

Rehabilitation of sewerage system in Magesty Gardens, Seaview, Riverton City and Whitfield Town. Rehabilitation of sanitation infrastructure to improve public health and environmental conditions with 3,255 customers to benefit from the project. Funding: K-Factor

Start Date: December 2015

Completion Date: May 2016

Project Budget: \$1320M

5. Non- Revenue Water (NRW) Reduction in Kingston and St Andrew

Network Audit, mains replacement and various measures aimed at reducing and controlling NON-REVENUE WATER (NRW) to 25% in the Kingston and St. Andrew (KSA) to increase available supply of potable water as well as to extend population coverage to 95% of persons in KSA.

Funded by: INTER-AMERICAN DEVELOPMENT BANK (IDB)

Project Duration: May 2015 - June 2020

Status: 5% - Contract being finalized

Project Budget \$4.9B

6. Artificial Limestone Aquifer Recharge in St. Catherine

Construction of 5.0 imperial million gallons daily (imgd) Aquifer Recharge System for Lower Rio Cobre basin at Innswood, St. Catherine to secure sustainable abstraction of ground water for Greater Spanish Town. Funding: INTER-AMERICAN DEVELOPMENT BANK (IDB)

Implementation: August 2014

Completion Date: November 2015

% Completed as at March 2015: Approximately 42%

Project Budget: \$1.26B

South Eastern St. Andrew

1. Rehabilitation of Potable Water Supply Systems (26 water supply facilities project)

Rehabilitation of 26 Wells, Pumping Stations and Storage Tanks to increase reliability of service in KSA to include works at Montgomery Corner, Kirkland Heights, Ferry Hill, Forest Hills Deep Well, Chancery Hall Deep Well, Chancery Hall Reservoir, Gordon Town Reservoir, Rock Pond Reservoir, Hope Pastures Reservoir, Hydra Drive, Chancery Hall Reservoir Nos. 1 and 2, Sterling Castle and Chancery Pipeline.

Funded by: INTER-AMERICAN DEVELOPMENT BANK (IDB)

Implementation Date: December 2012

Completion Date: May 2015

Status: 95%

Project Budget: \$2.54B

2. Mona and Hope Water Treatment Plants Rehabilitation

Rehabilitation of the Mona and Hope Water Treatment Plants to restore the reliable production output to 16 and 6 imperial million gallons daily (imgd) respectively and to better serve more than 200,000 persons in the Corporate Area.

Funded by: INTER-AMERICAN DEVELOPMENT BANK (IDB) under the Kingston Water and Sanitation Project

Started: November 2011

Completed: May 2013

3. Non- Revenue Water (NRW) Reduction in Kingston and St Andrew

Network Audit, mains replacement and various measures aimed at reducing and controlling NON-REVENUE WATER (NRW) to 25% in the Kingston and St. Andrew (KSA) to increase available supply of potable water as well as to extend population coverage to 95% of persons in KSA.

Funded by: INTER-AMERICAN DEVELOPMENT BANK (IDB)

Project Duration: May 2015 - June 2020

Status: 5% - Contract being finalized

Project Budget \$4.9B

4. Fairway Avenue/Seymour Avenue/ Retreat Avenues Collector Sewer

Construction of 1.2 Km of 250 m from Lady Musgrave/Argyle Roads to Old Hope Road and 0.3 km along Seymour Avenue. New sanitation infrastructure to facilitate housing and other developments. Funding: K-Factor

Start Date: March 2015

Completion Date: November 2015

Status: 5% completed. Contract reactivated; Material in NWC Stores. Instruction to mobilize to be given.

Project Budget: \$60M

5. Swallowfield Road Sewer

Construction of 400 sanitary sewers along North Avenue. The project resulted in an additional 33 households in Eastern St. Andrew being able to connect to the central sewerage system in KSA. Completed in June 2013 at a cost of \$25M.

6. Hope Road (Side Roads) Sanitary Sewers

Construction of 1.7 km of secondary sewers to connect all side roads between Kings House and Matilda's Corner to facilitate connection of customers in the vicinity to the KSA central sewerage system, which drains to the Soapberry Treatment Plant. Impacting 30,000 persons.

Start Date: April 2013

Completion Date: August 2013

Project Budget: \$90M

North West St. Andrew

1. Rehabilitation of Potable Water Supply Systems (26 water supply facilities project)

Rehabilitation of 26 Wells, Pumping Stations and Storage Tanks to increase reliability of service in KSA to include works at Montgomery Corner, Kirkland Heights, Ferry Hill, Forest Hills Deep Well, Chancery Hall Deep Well, Chancery Hall Reservoir, Gordon Town Reservoir, Rock Pond Reservoir, Hope Pastures Reservoir, Hydra Drive, Chancery Hall Reservoir Nos. 1 and 2, Sterling Castle and Chancery Pipeline.

Funded by: INTER-AMERICAN DEVELOPMENT BANK (IDB)

Implementation Date: December 2012

Completion Date: May 2015

Status: 95%

Project Budget: \$2.54B

2. Non- Revenue Water (NRW) Reduction in Kingston and St Andrew

Network Audit, mains replacement and various measures aimed at reducing and controlling NON-REVENUE WATER (NRW) to 25% in the Kingston and St. Andrew (KSA) to increase available supply of potable water as well as to extend population coverage to 95% of persons in KSA.

Funded by: INTER-AMERICAN DEVELOPMENT BANK (IDB)

Project Duration: May 2015 - June 2020

Status: 5% - Contract being finalized

Project Budget \$4.9B

3. Rio Cobre Pipeline Replacement (Bog Walk Gorge)

Replacement of aged Rio Cobre pipeline between Bog Walk and Flat Bridge resulting in the elimination of leaks and increasing supplies to thousands of customers in sections of St. Catherine, Kingston and St. Andrew. Project was completed in March 2012 at a cost of \$1B.

4. Rio Cobre Pipeline Replacement (Flat Bridge to Ferry)

The Replacement of 14 km of aged large diameter pipes from Content to Ferry, St. Catherine resulting in the reduction of physical losses by approximately 2.0 imperial million gallons daily (imgd). Funding: Bank of Nova Scotia (BNS) commercial loan/ K-Factor funds.

Project started in February 2013 and was completed in February 2015 at a cost of \$3B.

5. Construction of Conveyance Systems from Decommissioning of Wastewater Treatment Plants

Transfer sewers from 4 decommissioned sewage treatment plants (at Hughenden, Arcadia, Bay Farm and Springfield). It includes retiring old non-functioning Sewage Treatment Plants (STPs) to reduce energy / maintenance costs, utilize available capacity of more efficient facility, improve public health and environmental conditions for population of approximately 10, 000 persons or 0.5 imperial million gallons daily (imgd)

Funded by: INTER-AMERICAN DEVELOPMENT BANK (IDB) / Commercial Loan

Implementation Date: November 2014

Completion Date: December 2015

Project Budget: \$430M

6. Artificial Limestone Aquifer Recharge in St. Catherine

Construction of 5.0 imperial million gallons daily (imgd) Aquifer Recharge System for Lower Rio Cobre basin at Innswood, St. Catherine to secure sustainable abstraction of ground water for Greater Spanish Town. Funding: INTER-AMERICAN DEVELOPMENT BANK (IDB)

Implementation: August 2014

Completion Date: November 2015

% Completed as at March 2015: Approximately 42%

Project Budget: \$1.26B

East Central St. Andrew

1. Rehabilitation of Potable Water Supply Systems (26 water supply facilities project)

Rehabilitation of 26 Wells, Pumping Stations and Storage Tanks to increase reliability of service in KSA to include works at Montgomery Corner, Kirkland Heights, Ferry Hill, Forest Hills Deep Well, Chancery Hall Deep Well, Chancery Hall Reservoir, Gordon Town Reservoir, Rock Pond Reservoir, Hope Pastures Reservoir, Hydra Drive, Chancery Hall Reservoir Nos. 1 and 2, Sterling Castle and Chancery Pipeline.

Funded by: INTER-AMERICAN DEVELOPMENT BANK (IDB)

Implementation Date: December 2012

Completion Date: May 2015

Status: 95%

Project Budget: \$2.54B

2. Mona and Hope Water Treatment Plants Rehabilitation

Rehabilitation of the Mona and Hope Water Treatment Plants to restore the reliable production output to 16 and 6 imperial million gallons daily (imgd) respectively and to better serve more than 200,000 persons in the Corporate Area.

Funded by: INTER-AMERICAN DEVELOPMENT BANK (IDB) under the Kingston Water and Sanitation Project

Started: November 2011

Completed: May 2013

Project Budget: \$1.8B

3. NRW Reduction in Kingston and St Andrew

Network Audit, mains replacement and various measures aimed at reducing and controlling NON-REVENUE WATER (NRW) to 25% in the Kingston and St. Andrew (KSA) to increase available supply of potable water as well as to extend population coverage to 95% of persons in KSA. Funded by: INTER-AMERICAN DEVELOPMENT BANK (IDB)

Project Duration: May 2015 - June 2020

Status: 5% - Contract being finalized

Project Budget \$4.9B

4. Rio Cobre Pipeline Replacement (Bog Walk Gorge)

Replacement of aged Rio Cobre pipeline between Bog Walk and Flat Bridge resulting in the elimination of leaks and increasing supplies to thousands of customers in sections of St. Catherine, Kingston and St. Andrew. Project was completed in March 2012 at a cost of \$1B.

5. Rio Cobre Pipeline Replacement (Flat Bridge to Ferry)

The Replacement of 14 km of aged large diameter pipes from Content to Ferry, St. Catherine resulting in the reduction of physical losses by approximately 2.0 imperial million gallons daily (imgd). Funding: Bank of Nova Scotia (BNS) commercial loan/ K-Factor funds.

Project started in February 2013 and was completed in February 2015 at a cost of \$3B.

6. Artificial Limestone Acquirer Recharge in St. Catherine

Construction of 5.0 imperial million gallons daily (imgd) Aquifer Recharge System for Lower Rio Cobre basin at Innswood, St. Catherine to secure sustainable abstraction of ground water for Greater Spanish Town. Funding: INTER-AMERICAN DEVELOPMENT BANK (IDB)

Implementation: August 2014

Completion Date: November 2015

% Completed as at March 2015: Approximately 42%

Project Budget: \$1.26B

Southern St. Andrew

1. Rehabilitation of Potable Water Supply Systems (26 water supply facilities project)

Rehabilitation of 26 Wells, Pumping Stations and Storage Tanks to increase reliability of service in KSA to include works at Montgomery Corner, Kirkland Heights, Ferry Hill, Forest Hills Deep Well, Chancery Hall Deep Well, Chancery Hall Reservoir, Gordon Town Reservoir,

Rock Pond Reservoir, Hope Pastures Reservoir, Hydra Drive, Chancery Hall Reservoir Nos. 1 and 2, Sterling Castle and Chancery Pipeline.

Funded by: INTER-AMERICAN DEVELOPMENT BANK (IDB)

Implementation Date: December 2012

Completion Date: May 2015

Status: 95%

Project Budget: \$2.54B

2. Mona and Hope Water Treatment Plants Rehabilitation

Rehabilitation of the Mona and Hope Water Treatment Plants to restore the reliable production output to 16 and 6 imperial million gallons daily (imgd) respectively and to better serve more than 200,000 persons in the Corporate Area.

Funded by: INTER-AMERICAN DEVELOPMENT BANK (IDB) under the Kingston Water and Sanitation Project

Started: November 2011

Completed: May 2013

Project Budget: \$1.8B

3. Non- Revenue Water (NRW) Reduction in Kingston and St Andrew

Network Audit, mains replacement and various measures aimed at reducing and controlling NON-REVENUE WATER (NRW) to 25% in the Kingston and St. Andrew (KSA) to increase available supply of potable water as well as to extend population coverage to 95% of persons in Kingston and St. Andrew (KSA).

Funded by: INTER-AMERICAN DEVELOPMENT BANK (IDB)

Project Duration: May 2015 - June 2020

Status: 5% - Contract being finalized

Project Budget \$4.9B

4. Rio Cobre Pipeline Replacement (Bog Walk Gorge)

Replacement of aged Rio Cobre pipeline between Bog Walk and Flat Bridge resulting in the elimination of leaks and increasing supplies to thousands of customers in sections of St. Catherine, Kingston and St. Andrew. Project was completed in March 2012 at a cost of \$1B.

5. Rio Cobre Pipeline Replacement (Flat Bridge to Ferry)

The Replacement of 14 km of aged large diameter pipes from Content to Ferry, St. Catherine resulting in the reduction of physical losses by approximately 2.0 imperial million gallons daily (imgd). Funding: Bank of Nova Scotia (BNS) commercial loan/ K-Factor funds.

Project started in February 2013 and was completed in February 2015 at a cost of \$3B.

6. Artificial Limestone Aquifer Recharge in St. Catherine

Construction of 5.0 imperial million gallons daily (imgd) Aquifer Recharge System for Lower Rio Cobre basin at Innswood, St. Catherine to secure sustainable abstraction of ground water for Greater Spanish Town. Funding: INTER-AMERICAN DEVELOPMENT BANK (IDB)

Implementation: August 2014

Completion Date: November 2015

% Completed as at March 2015: Approximately 42%

Project Budget: \$1.26B

West Central St. Andrew

1. Rehabilitation of Potable Water Supply Systems (26 water supply facilities project)

Rehabilitation of 26 Wells, Pumping Stations and Storage Tanks to increase reliability of service in KSA to include works at Montgomery Corner, Kirkland Heights, Ferry Hill, Forest Hills Deep Well, Chancery Hall Deep Well, Chancery Hall Reservoir, Gordon Town Reservoir,

Rock Pond Reservoir, Hope Pastures Reservoir, Hydra Drive, Chancery Hall Reservoir Nos. 1 and 2, Sterling Castle and Chancery Pipeline.

Funded by: INTER-AMERICAN DEVELOPMENT BANK (IDB)

Implementation Date: December 2012

Completion Date: May 2015

Status: 95%

Project Budget: \$2.54B

2. Mona and Hope Water Treatment Plants Rehabilitation

Rehabilitation of the Mona and Hope Water Treatment Plants to restore the reliable production output to 16 and 6 imperial million gallons daily (imgd) respectively and to better serve more than 200,000 persons in the Corporate Area.

Funded by: INTER-AMERICAN DEVELOPMENT BANK (IDB) under the Kingston Water and Sanitation Project

Started: November 2011

Completed: May 2013

Project Budget: \$1.8B

3. Non- Revenue Water (NRW) Reduction in Kingston and St Andrew

Network Audit, mains replacement and various measures aimed at reducing and controlling NON-REVENUE WATER (NRW) to 25% in the Kingston and St. Andrew (KSA) to increase available supply of potable water as well as to extend population coverage to 95% of persons in KSA.

Funded by: INTER-AMERICAN DEVELOPMENT BANK (IDB)

Project Duration: May 2015 - June 2020

Status: 5% - Contract being finalized

Project Budget \$4.9B

4. Rio Cobre Pipeline Replacement (Bog Walk Gorge)

Replacement of aged Rio Cobre pipeline between Bog Walk and Flat Bridge resulting in the elimination of leaks and increasing supplies to thousands of customers in sections of St. Catherine, Kingston and St. Andrew. Project was completed in March 2012 at a cost of \$1B.

5. Rio Cobre Pipeline Replacement (Flat Bridge to Ferry)

The Replacement of 14 km of aged large diameter pipes from Content to Ferry, St. Catherine resulting in the reduction of physical losses by approximately 2.0 imperial million gallons daily (imgd).

Funding: Bank of Nova Scotia (BNS) commercial loan/ K-Factor funds.

Project started in February 2013 and was completed in February 2015 at a cost of \$3B.

6. Construction of Conveyance Systems from Decommissioning of Wastewater Treatment Plants

Transfer sewers from 4 decommissioned sewage treatment plants (at Hughenden, Arcadia, Bay Farm and Springfield). It includes retiring old non-functioning Sewage Treatment Plants (STPs) to reduce energy / maintenance costs, utilize available capacity of more efficient facility, improve public health and environmental conditions for population of approximately 10,000 persons or 0.5 imperial million gallons daily (imgd)

Funded by: INTER-AMERICAN DEVELOPMENT BANK (IDB) / Commercial Loan

Implementation Date: November 2014

Completion Date: December 2015

Project Budget: \$430M

7. Artificial Limestone Aquifer Recharge in St. Catherine

Construction of 5.0 imperial million gallons daily (imgd) Aquifer Recharge System for Lower Rio Cobre basin at Innswood, St. Catherine to secure sustainable abstraction of ground water for Greater Spanish Town. Funding: INTER-AMERICAN DEVELOPMENT BANK (IDB)

Implementation: August 2014

Completion Date: November 2015

% Completed as at March 2015: Approximately 42%
Project Budget: \$1.26B

ST. CATHERINE

South Central St. Catherine

1. Rio Cobre Pipeline Replacement (Bog Walk Gorge)

Replacement of aged Rio Cobre pipeline between Bog Walk and Flat Bridge resulting in the elimination of leaks and increasing supplies to thousands of customers in sections of St. Catherine, Kingston and St. Andrew. Project was completed in March 2012 at a cost of \$1B.

2. Rio Cobre Pipeline Replacement (Flat Bridge to Ferry)

The Replacement of 14 km of aged large diameter pipes from Content to Ferry, St. Catherine resulting in the reduction of physical losses by approximately 2.0 imperial million gallons daily (imgd). Funding: Bank of Nova Scotia (BNS) commercial loan/ K-Factor funds.

Project started in February 2013 and was completed in February 2015 at a cost of \$3B.

3. Artificial Limestone Aquifer Recharge in St. Catherine

Construction of 5.0 imperial million gallons daily (imgd) Aquifer Recharge System for Lower Rio Cobre basin at Innswood, St. Catherine to secure sustainable abstraction of ground water for Greater Spanish Town. Funding: INTER-AMERICAN DEVELOPMENT BANK (IDB)

Implementation: August 2014

Completion Date: November 2015

% Completed as at March 2015: Approximately 42%

Project Budget: \$1.26B

South East St. Catherine

1. Portmore Sewerage Reconfiguration Project

Decommissioning of 4 sewage treatment plants and conversion to pumping stations, installation of sewers to re-direct sewage flows within sections of Portmore to Soapberry. Retire old non-functioning Sewer Treatment Plants to reduce energy and maintenance costs and utilize available capacity of more efficient facility. Funding: K-Factor/NWC.

Start Date: April 2014

Completion Date: March 2016

Status (as at September 30, 2014): Final Engineering Designs were submitted and the requisite licenses and permit have been granted. Groundbreaking exercise was held on September 9, 2014.

Project Budget: \$2.65B

2. KMA (JICA) Lot 2B (Portmore) Pipeline

Construction of 10km of transmission pipelines from Caymanas Estates to Marley Hill to increase the supply capability along with 3km of distribution reinforcement mains to improve service to communities in Portmore, Greater Portmore and Hellshire. Benefiting 180,000 persons. Completed in December 2013 at a cost of \$1.4B

3. Rio Cobre Pipeline Replacement (Bog Walk Gorge)

Replacement of aged Rio Cobre pipeline between Bog Walk and Flat Bridge resulting in the elimination of leaks and increasing supplies to thousands of customers in sections of St. Catherine, Kingston and St. Andrew. Project was completed in March 2012 at a cost of \$1B.

4. Rio Cobre Pipeline Replacement (Flat Bridge to Ferry)

The Replacement of 14 km of aged large diameter pipes from Content to Ferry, St. Catherine resulting in the reduction of physical losses by approximately 2.0 imperial million gallons daily (imgd). Funding: Bank of Nova Scotia (BNS) commercial loan/ K-Factor funds.

Project started in February 2013 and was completed in February 2015 at a cost of \$3B.

5. Artificial Limestone Aquifer Recharge in St. Catherine

Construction of 5.0 imperial million gallons daily (imgd) Aquifer Recharge System for Lower Rio Cobre basin at Innswood, St. Catherine to secure sustainable abstraction of ground water for Greater Spanish Town. Funding: INTER-AMERICAN DEVELOPMENT BANK (IDB)

Implementation: August 2014

Completion Date: November 2015

% Completed as at March 2015: Approximately 42%

Project Budget: \$1.26B

6. TANK AND PUMP PROGRAMME

Tank and Pump Replacement and/or upgrading for:

- Rio Cobre/Tulloch Springs/Bybrook 2 and 4/Eastern Headworks
- Bowens Pen
- Half Way Tree **\$1.9M**
- Portmore No. 1

South West St. Catherine

1. Old Harbour Bay Pipeline

Construction of 2.7 kilometers of water transmission pipeline from the New Harbour Village Housing Development to the Old Harbour Bay Square and also along Terminal Road from its intersection with the Old Harbour Bay main road to the entrance of the Bourkesfield Housing Scheme. Improved water supply which is benefiting 23,000 persons.

Start Date: February 2013

Completion Date: August 2013

Project Budget: \$80M

2. TANK AND PUMP PROGRAMME

Tank and Pump Replacement and/or upgrading for:

- Graham Well/Bannister
- Spring Village

West Central St. Catherine

1. Kitson Town Water Supply Project

Construction of a major rural water supply scheme resulting in piped potable water being available to an additional 15,000 persons for the first time in 40 years. Completed in December 2012 at a cost of \$7M.

2. Goldmine Rehabilitation Project

Rehabilitation of Water Treatment Plant and Storage Tank to improve potable water supply to rural community of 15,000 persons in Cocoa Ridge, Bellas Gate, Rhule Town, Bois Content, Bagham, Planters Hall, Marlie Hill, Breeze Mill, Hill Top, Bellefield, Browns Hall, Blue Hole, Wood Hall, Bartons, Macca Tree and Fisher Spring. Funding: NWC

Start Date: October 2014

Completion Date: June 2015

Status (as at September 30, 2014): Contracts for construction services and electro-mechanical goods are at the procurement stage.

Project Budget: \$70M

3. TANK AND PUMP PROGRAMME

Tank and Pump Replacement and/or upgrading for:

- Brown's Town/Frazers Content
- Goldmine – Cocoa Ridge

4. Goldmine Water Supply Water Treatment Plant and Cocoa Walk Storage Tank.

Rehabilitation of the Goldmine Water Supply Water Treatment Plant and Cocoa Walk Storage Tank. Benefits include improved potable water supply to rural community of 15,000 persons.

Status: Ongoing

Eastern St. Catherine

1. Rio Cobre Pipeline Replacement (Bog Walk Gorge)

Replacement of aged Rio Cobre pipeline between Bog Walk and Flat Bridge resulting in the elimination of leaks and increasing supplies to thousands of customers in sections of St. Catherine, Kingston and St. Andrew. Project was completed in March 2012 at a cost of \$1B.

2. Rio Cobre Pipeline Replacement (Flat Bridge to Ferry)

The Replacement of 14 km of aged large diameter pipes from Content to Ferry, St. Catherine resulting in the reduction of physical losses by approximately 2.0 imperial million gallons daily (imgd). Funding: Bank of Nova Scotia (BNS) commercial loan/ K-Factor.

North East St. Catherine North Central St. Catherine

1. Rio Cobre Pipeline Replacement (Bog Walk Gorge)

Replacement of aged Rio Cobre pipeline between Bog Walk and Flat Bridge resulting in the elimination of leaks and increasing supplies to thousands of customers in sections of St. Catherine, Kingston and St. Andrew. Project was completed in March 2012 at a cost of \$1B.

2. Rio Cobre Pipeline Replacement (Flat Bridge to Ferry)

The Replacement of 14 km of aged large diameter pipes from Content to Ferry, St. Catherine resulting in the reduction of physical losses by approximately 2.0 imperial million gallons daily (imgd). Funding: Bank of Nova Scotia (BNS) commercial loan/ K-Factor.

3. Sligoville Water Supply Improvement Project

The rehabilitation of the Sligoville Water Supply Project involved the replacement of all eight water pumps used on the four-stage pumping system to serve areas including Breadfruit Gully, Pleasant Hill, Keith Hall, Binns Close, Bottom Jackson, Bottom Kensington, James Mountain, Cedar Valley, Stanberry Grove, Top Kensington, Sligoville Community, Top Mary's Village, James Lane, Burke Lane, Sligoville Main Rd, and Winchester Storage Tank. This project was completed and officially commissioned in 2013.

4. Artificial Limestone Aquifer Recharge in St. Catherine

Construction of 5.0 imperial million gallons daily (imgd) Aquifer Recharge System for Lower Rio Cobre basin at Innswood, St. Catherine to secure sustainable abstraction of ground water for Greater Spanish Town. Funding: INTER-AMERICAN DEVELOPMENT BANK (IDB)

Implementation: August 2014

Completion Date: November 2015

% Completed as at March 2015: Approximately 42%

Project Budget: \$1.26B

5. Richard Hall / Mt. Dawson Water Supply Project

This proposed project to be funded by the K-Factor fund will involve installing new transmission pipelines from Well G to Richard Hall and from Richard Hall to Mount Dawson as well as upgrading relift station, repairing storage reservoir and installing new distribution pipelines at an estimated \$35M.

East Central St. Catherine

1. Portmore Sewerage Reconfiguration Project

Decommissioning of 4 sewage treatment plants and conversion to pumping stations, installation of sewers to re-direct sewage flows within sections of Portmore to Soapberry. Retire old non-functioning Sewer Treatment Plants to reduce energy and maintenance costs and utilize available capacity of more efficient facility. Funding: K-Factor/NWC

Start Date: April 2014

Completion Date: March 2016

Status (as at September 30, 2014): Final Engineering Designs were submitted and the requisite licenses and permit have been granted. Groundbreaking exercise was held on September 9, 2014.

Project Budget: \$2.650B

2. Rio Cobre Pipeline Replacement (Bog Walk Gorge)

Replacement of aged Rio Cobre pipeline between Bog Walk and Flat Bridge resulting in the elimination of leaks and increasing supplies to thousands of customers in sections of St. Catherine, Kingston and St. Andrew. Project was completed in March 2012 at a cost of \$1B.

3. Rio Cobre Pipeline Replacement (Flat Bridge to Ferry)

The Replacement of 14 km of aged large diameter pipes from Content to Ferry, St. Catherine resulting in the reduction of physical losses by approximately 2.0 imperial million gallons daily (imgd). Funding: BNS/ K-Factor.

Project started in February 2013 and was completed in February 2015 at a cost of \$3B.

4. KMA (JICA) Lot 2B (Portmore) Pipeline

Construction of 10km of transmission pipelines from Caymanas Estates to Marley Hill to increase the supply capability along with 3km of distribution reinforcement mains to improve service to communities in Portmore, Greater Portmore and Hellshire. Benefiting 180,000 persons. Completed in December 2013 at a cost of \$1.4B

5. Artificial Limestone Aquifer Recharge in St. Catherine

Construction of 5.0 imperial million gallons daily (imgd) Aquifer Recharge System for Lower Rio Cobre basin at Innswood, St. Catherine to secure sustainable abstraction of ground water for Greater Spanish Town. Funding: INTER-AMERICAN DEVELOPMENT BANK (IDB)

Implementation: August 2014

Completion Date: November 2015

% Completed as at March 2015: Approximately 42%

Project Budget: \$1.26B

6. TANK AND PUMP PROGRAMME

Tank and Pump Replacement and/or upgrading for:

- Sue River/Glengoffe

South St. Catherine

1. Rio Cobre Pipeline Replacement (Bog Walk Gorge)

Replacement of aged Rio Cobre pipeline between Bog Walk and Flat Bridge resulting in the elimination of leaks and increasing supplies to thousands of customers in sections of St. Catherine, Kingston and St. Andrew. Project was completed in March 2012 at a cost of \$1B.

2. KMA (JICA) Lot 2B (Portmore) Pipeline

Construction of 10km of transmission pipelines from Caymanas Estates to Marley Hill to increase the supply capability along with 3km of distribution reinforcement mains to improve service to communities in Portmore, Greater Portmore and Hellshire. Benefiting 180,000 persons. Completed in December 2013 at a cost of \$1.4B

3. Rio Cobre Pipeline Replacement (Flat Bridge to Ferry)

The Replacement of 14 km of aged large diameter pipes from Content to Ferry, St. Catherine resulting in the reduction of physical losses by approximately 2.0 imperial million gallons daily (imgd). Funding: Bank of Nova Scotia (BNS) commercial loan/ K-Factor funds.

Project started in February 2013 and was completed in February 2015 at a cost of \$3B.

4. Artificial Limestone Aquifer Recharge in St. Catherine

Construction of 5.0 imperial million gallons daily (imgd) Aquifer Recharge System for Lower Rio Cobre basin at Innswood, St. Catherine to secure sustainable abstraction of ground

water for Greater Spanish Town. Funding: INTER-AMERICAN DEVELOPMENT BANK (IDB)

Implementation: August 2014

Completion Date: November 2015

% Completed as at March 2015: Approximately 42%

Project Budget: \$1.26B

North West St. Catherine

1. Linstead / Ewarton / Mt. Rosser Water Supply Upgrading

Construction and improvement of water supply facilities. Extension of and improved service to rural townships. Funding: BNS/K-Factor

Start Date: May 2013

Completion Date: Feb 2015

Project Budget: \$460M

2. Lluidas Vale Pump Replacement

Procurement of pump to serve Lluidasvale and Worthy Park areas. Installation Date: 1st Quarter 2015 financial year.

Project Cost: \$4,080,617.80

3. Bowers Pen Pump Replacement

Procurement of pump to serve Bowers Pen, Claremont Drive, sections of Old Harbour Town, Bowers Drive, Succaba, Bannister and Old Harbour Bay areas.

Installation Date: 1st Quarter 2015 financial year

Project Cost: \$4,418,330.39

4. Wakefield/Ewarton/Linstead Well Rehabilitation Project

To rehabilitate Wakefield #1 and #2, Nutshell, Jericho #2, Dinthill, Bybrook #1 and #3 in order to increase abstraction efficiencies in the wells serving these rural communities.

Funding: NWC

Start Date: September 2014

Completion Date: March 2015

Project Budget: \$55M

5. TANK AND PUMP PROGRAMME

Tank and Pump Replacement and/or upgrading for:

- Lluidasvale
- Nutshell/Windalco
- Spring-Cedar Valley
- Jericho
- Bybrook

6. John's Groyne Water Supply Project

This proposed project to be funded by the K-Factor fund will involve extending a spring source by installing pipeline to serve Palms, Treadways and McGrath High School at an estimated cost of \$17M.

Central St. Catherine

1. Artificial Limestone Aquifer Recharge in St. Catherine

Construction of 5.0 imperial million gallons daily (imgd) Aquifer Recharge System for Lower Rio Cobre basin at Innswood, St. Catherine to secure sustainable abstraction of ground water for Greater Spanish Town. Funding: INTER-AMERICAN DEVELOPMENT BANK (IDB)

Start Date: April 2014

Completion Date: September 2015

% Completed as at March 2015: Approximately 42%

Project Budget: \$1.270B

2. Rio Cobre Pipeline Replacement (Bog Walk Gorge)

3.

Replacement of aged Rio Cobre pipeline between Bog Walk and Flat Bridge resulting in the elimination of leaks and increasing supplies to thousands of customers in sections of St. Catherine, Kingston and St. Andrew. Project was completed in March 2012 at a cost of \$1B.

4. Rio Cobre Pipeline Replacement (Flat Bridge to Ferry)

The Replacement of 14 km of aged large diameter pipes from Content to Ferry, St. Catherine resulting in the reduction of physical losses by approximately 2.0 imperial million gallons daily (imgd). Funding: Bank of Nova Scotia (BNS) commercial loan/ K-Factor.

Project started in February 2013 and was completed in February 2015 at a cost of \$3B.

5. Artificial Limestone Aquifer Recharge in St. Catherine

Construction of 5.0 imperial million gallons daily (imgd) Aquifer Recharge System for Lower Rio Cobre basin at Innswood, St. Catherine to secure sustainable abstraction of ground water for Greater Spanish Town. Funding: INTER-AMERICAN DEVELOPMENT BANK (IDB)

Start Date: April 2014

Completion Date: September 2015

% Completed as at March 2015: Approximately 42% Project Budget: \$1.270B

6. Tawes Pen Sewerage Rehabilitation Project

The \$100M JSIF funding previously being pursued has not materialized. Hence NWC is exploring a less costly alternative approach of interconnecting the Tawes Pen sewerage facility with the Horizon Park Sewerage facility to be effected over a 9 month period.

7. TANK AND PUMP PROGRAMME

Tank and Pump Replacement and/or upgrading for:

- Lime Tree **\$2.0M**

CLARENDON

North Clarendon

1. Bullhead / Mason River / Kellits

Source development and gravity pipeline to provide potable water to rural community of approximately 7,402 persons. The payback period is 2.3yrs.

Funding: K-Factor

Start: June 2013

Completion: August 2018

Status: 50% completed. Civil Works and Pipeline Contract on-going; six (6) other tenders are being addressed.

Project Budget: \$280M

2. Mason River / Kellits / Bullhead / Sandy River water supply

Construction and improvement of the Mason River/Kellitts/Bullhead/Sandy River water supply system in nine (9) material / equipment supply and construction contracts involving 27km of transmission / distribution pipes and storage tanks. Improved supplies to benefit a population of 6,500 persons.

Status: Ongoing

Project Budget: \$205M

North Central Clarendon

1. Soursop Turn to Chapleton replacement Pipeline

Supply and installation of 13.0km of 150mm and 2.0km of 100mm of transmission mains plus 15km of 50mm of distribution lines to replace the existing aged network. Upgrading of aged infrastructure in collaboration with National Works Agency (NWA) road improvement works.

Funding: K-Factor

Start Date: April 2015

Completion Date: December 2015

Status: 2% completed. Pipeline designs completed and passed to National Works Agency (NWA) to facilitate preparation of a Memorandum of Agreement (MOA) to coordinate road and plying works

Project Budget: \$250M

2. Tank and Pump Replacement and/or upgrading for:

- Eastern May Pen - Curatoe Hill
- Rock River

North West Clarendon

1. Christiana/Spaulding WS Christiana-Sedburgh Pipeline

Construction of 2.0km of 250mm dia. from the Christiana Town Centre to the Sedburgh Storage Tanks. Benefiting 25, 000 persons. Completed in October 2013 at a cost of \$30M.

2. Bull Head / Mason River / Kellits / Sandy River Water Supply Project

This proposed K-Factor funded project will involve the construction of intake structures and chlorine contact tank to abstract water from the Bullhead source as well as installing gravity pipeline and construct storage reservoir at an estimated cost of \$202M.

3. Nine Turns / Etric Hall Water Supply Project

This proposed K-Factor funded project will involve the construction of spring entombment and install gravity distribution pipelines at an estimated cost of \$15M.

Central Clarendon

1. Upgrade, rehabilitation of the Highland Meadows (May Pen) housing development sewerage facilities

Installation of 140m of 200/100 mm sanitary sewers, together with restoration of a pumping persons. Completed in May 2014 at a cost of \$15M.

2. Tank and Pump Programme

Curatoe Hill Pump Replacement

Procurement of pump to serve Curatoe Hill, Canaan Heights, Canaan Heights, Hazard, Trenton Rd, Inglewood, Sunny Acres, Paisley Ave, Chatteau, Coates Pen, Hunts pen, Savannah Cross, Burnt Ground

Installation Date: 1st Quarter 2015 financial year

Project Cost: \$7,547,494.33

3. Tank and Pump Replacement and/or upgrading for:

- Eastern May Pen -Palmetto Pen and Twin Palm **\$7.0M**

South East Clarendon

Longsville Water Supply Upgrading

Successfully completed by the National Housing Trust

1. Mitchell Town Improvement Project

This proposed K-Factor project proposes to upgrade distribution pipelines and install service connections within Mitchell Town at an estimated cost of \$35M. Initial activities on this project have already started using in-house resources.

2. Tank and Pump Programme

Tower Hill Pump Replacement

Procurement of pump to serve Twin Palm Estates

Installation Date: 1st Quarter 2015 financial year

Project Cost: \$7,010,500.50

Tank and Pump Replacement and/or upgrading for Eastern May Pen:

- Chatteau
- New Town/Lionel Town New Town
- York Town
- Rocky Settlement

South West Clarendon

Tank and Pump Replacement and/or upgrading for Eastern May Pen:

- Rhymesbury/Ebony Park
- Toll Gate

MANCHESTER

North East Manchester

1. Christiana/Spaulding WS Christiana-Sedburgh Pipeline

Construction of 2.0km of 250mm dia. from the Christiana Town Centre to the Sedburgh Storage Tanks. Benefiting 25, 000 persons. Completed in October 2013 at a cost of \$30M.

2. TANK AND PUMP PROGRAMME

Tank and Pump Replacement and/or upgrading for:

- Two Meetings/Christiana

North West Manchester

1. Mile Gully Water Supply Project

This proposed K-Factor funded project proposes to drill and develop a new well at Evergreen, install transmission and distribution pipelines, repair existing storage reservoir and construct a new storage reservoir at an estimated cost of \$250M.

South Manchester

1. North Hope /Bottom Hope Distribution Pipeline (Contract M-BH 250P)

Construction of 0.4km of 100mm distribution pipeline in Bottom Hope and 0.4km of 50mm (2") distribution pipeline in North Hope. This extension of distribution network is to increase customer base, increase revenue and improve service levels. Funding: K-Factor.

Start Date: February 2015

Completion Date: June 2015

Project Budget: \$15M

2. Marlborough to Berry Hill, Manchester

Construction of approx. 3.2 kilometers of 250mm (10") transmission to replace the existing encrusted PVC pipeline and restore supply volumes to areas south of Mandeville including Knockpatrick. Improved water supply benefiting 23,000 persons. Completed in August 2013 at a cost of \$20M.

TANK AND PUMP PROGRAMME

3. Comfort Pump Replacement

Procurement of Pump to serve Ingleside, section of Grey Ground, Grove Place

Installation Date: 1st Quarter 2015 financial year

Project Cost: \$8,421,450.00

4. Broadleaf Pump Replacement

Procurement of Pump to serve Land Settlement, Hanbury, Kendal, New Green

Installation Date: 1st Quarter 2015 financial year
Project Cost: \$8,058,625.00

5. Porus Pump Replacement

Procurement of Pump to serve Porus, Trinity, Red Berry, Comfort, Broadleaf, Royal Flat, Williamsfield

Installation Date: 1st Quarter 2015 financial year
Project Cost: \$8,452,500.00

6. Queen Town Pump Replacement

Procurement of Pump to serve Restore, Smithfield, Grove Town, Warwick

Installation Date: 1st Quarter 2015 financial year
Project Cost: \$8,761,432.79

7. Victoria Town Submersible Pump Replacement

Procurement of Pump to serve Victoria Town, Queen Town, Pusey Hill, Campbell's Field, Cassava Piece

Installation Date: 1st Quarter 2015 financial year
Project Cost: \$8,403,944.29

8. Porus Well #1 Submersible Pump Replacement

Procurement of pump to serve Porus, Trinity, Red Berry, Comfort, Broadleaf, Royal Flat, Williamsfield.

Installation Date: 1st Quarter 2015 financial year
Project Cost: \$4,206,879.99

9. Porus Well #2 Pump Replacement

Procurement of pump to serve Porus, Trinity, Red Berry, Comfort, Broadleaf, Royal Flat, Williamsfield

Installation Date: 1st Quarter 2015 financial year
Project Cost: \$5,232,186.92

10. Tank and Pump Replacement and/or upgrading for:

- Cowick Park
- Porus
- Victoria Town to Pusey Hill

Central Manchester

1. Marlborough to Berry Hill, Manchester

Construction of approx. 3.2 kilometers of 250mm (10") transmission to replace the existing encrusted PVC pipeline and restore supply volumes to areas south of Mandeville including Knockpatrick. Improved water supply benefiting 23,000 persons. Completed in August 2013 at a cost of \$20M.

2. North Hope /Bottom Hope Distribution Pipeline (Contract M-BH 250P)

Construction of 0.4km of 100mm distribution pipeline in Bottom Hope and 0.4km of 50mm (2") distribution pipeline in North Hope. This extension of distribution network is to increase customer base, increase revenue and improve service levels. Funding: K-Factor.

Start Date: February 2015
Completion Date: June 2015
Project Budget: \$15M

ST. ELIZABETH

North East St, Elizabeth

1. Santa Cruz Phase 1B - Pipeline

Construction of 3.4km of 250mm DI pipes from Santa Cruz to Lovely Point. Extension of transmission main to improve service to 23,000 persons. Funding: NWC

Start Date: February 2015
Completion Date: October 2015

Status: 5% completed
Project Budget: \$40M

2. Burnt Savannah / Knoxwood water supply scheme

Construction of the Burnt Savannah / Knoxwood water supply scheme in St Elizabeth comprising 24km of transmission / distribution pipelines in five (5) material supply and pipelaying contracts. To improve supply to benefit 9,500 persons .

Status: Ongoing
Project Budget: \$60M

3. TANK AND PUMP PROGRAMME

Tank and Pump Replacement and/or upgrading for:

- Content Well-Santa Cruz
- Pepper/Goshen
- Union-Marlborough
- Bogue
- New Forest
- South Hampton
- Parklee
- Siloah

North West St. Elizabeth White Hall/New Market Project

This proposed project to be funded by the K-Factor fund proposes to develop the White Hall well and construct a well pumping station, install transmission and distribution pipelines, construct a relift station and storage reservoir at an estimated cost of \$145M.

1. Magotty/Tavistock

This project is among an approved list of proposed projects not yet implemented due primarily to financial constraints and fiscal space limitations. This proposed K-Factor project will involve installing relift stations, transmission and distribution pipeline and storage reservoir at Carris Brook at an estimated \$120M.

South East St. Elizabeth

1. Essex Valley Contract 1D - Well and Relift Station Equipment

To supply and install well and relift station equipment and the laying of pipeline to well site in order to provide potable water to rural community of 14, 000 persons. Funding: NWC

Start Date: September 2014

Completion Date: May 2015

Status: 15% completed. Contract has been formalized and duly signed by all parties. Requested instruments from the Contractor and is in the process of establishing Letter of Credit for Overseas procurement portion of contract.

Project Budget: \$100M

2. Essex Valley Contract 2 - Transmission Main (Construction)

Supply and Install 9 km of 300mm and 14km of 50mm P.V.C pipeline from Nain to Junction, a relift station and 100,000 gallon reservoir. Improved service to rural community of 14, 000 persons, expected payback period is 4.7yrs. Funding: K-Factor / Bank of Nova Scotia (BNS) commercial loan

Start Date: October 2014

Completion Date: September 2015

Status: 15% completed. Contractor mobilized and pipelaying works have commenced on the 1st segment of 3km pipelines while efforts are made to procure the remaining 7km of pipes.

Project Budget: \$110M

3. Barbary Hall / North Parottee Water Supply Project

This proposed K-Factor funded project will rationalize the existing well sources - Little Park well, Newell well, Hounslow well etc. -, reconstruct the Parottee well, construct a new storage reservoir, expand transmission and distribution network at an estimated cost of \$889M.

South West St. Elizabeth

1. Hounslow to Parottee Water Supply St. Elizabeth Phase 1: Hopewell Well to Hill Top Storage Tank.

Replacement / upgrading of the aged 4" pipes extending from the Hopewell Well site to the Hill Top storage tank with approximately 0.5 km of transmission pipelines. Benefitting 20,000 persons.

Start Date: May 2013

Completion Date: December 2013

Project Budget: \$68M

2. Hounslow Water Supply and Upgrade, St. Elizabeth. Phase2B - Newell Square to Williamsfield

Upgrading of the existing 4" CI Transmission/distribution pipeline with 2.7km of 250mm Ductile Iron pipeline from Newell Square to Williamsfield to improve potable water supply and reduction in NON-REVENUE WATER (NRW) levels. 2.3km of pipes laid. Funding: K-Factor

Start Date: February 2014

Completion Date: February 2015

Project Budget: \$39M

3. Sandy Ground to Black River and Greater Black River Pipeline Replacement

Replacement of approx. 8.8km of 250mm Ductile Iron(DI), 6km of 150mm DI and 7.5km of 50mm PVC pipe from Sandy Ground to Black River WS Scheme resulting in the reduction/eradication of water losses and regulate supply and to improve supply efficiency and reliability to over **2,526** customers and to reduce NON-REVENUE WATER (NRW) . Payback period is approx. 1.8yrs. Funding: K-Factor

Implementation date: To be determined.

Project Budget: \$635M

4. Burnt Savannah / Knoxwood water supply scheme

Construction of the Burnt Savannah / Knoxwood water supply scheme in St Elizabeth comprising 24km of transmission / distribution pipelines in five (5) material supply and pipelaying contracts. To improve supply to benefit 9,500 persons .

Status: Ongoing

Project Budget: \$60M

5. TANK AND PUMP PROGRAMME

Tank and Pump Replacement and/or upgrading for:

- Dalintober-Black River **\$5.6M**
- Hounslow **\$3.6M**

WESTMORELAND

Central Westmoreland

1. Dunbars Corner to Mannings High School Replacment Pipeline

Installation of 1km of 400mm PVC pipes Upgrading of transmission main to improve service to 23, 000 persons. Funding: NWC

Start Date: April 2015

Completion Date: December 2015

Status: 5% completed

Project Budget: \$40M

2. TANK AND PUMP PROGRAMME

Tank and Pump Replacement and/or upgrading for:

- Roaring River/Diverston
- Venture River/Williamsfield

Eastern Westmoreland

1. Scotts Cove to Belmont Pipeline Replacement

Construction of 15 km of 300 mm pipeline to replace existing line to eliminate excessive breaks and leakage, reduced maintenance costs and improved supply to Belmont and communities between Scott's Cove and Belmont to impact 10,000 persons.

Status: Ongoing

Project Budget: \$545M

2. Eastern Westmoreland W/S Cedar Valley and Bethel Town Pipeline Extensions

Supply and Construction of 12km of pipelines as well as rehabilitation of a storage tank to improve service to New Roads, Leamington, Jonhson, Amity and Bethel Town.

Status: Ongoing

Project Budget: \$81M

3. TANK AND PUMP PROGRAMME

Tank and Pump Replacement and/or upgrading for:

- Dantrout/St. Leonards
- Roaring River/Barneyside
- Duanvale/Retrieve

Western Westmoreland

1. Repairs of Great River and Martha Brae Water Treatment Plant (including intake)

Upgrade of Great River and Martha Brae Water Treatment Plants to increase reliability of supply, water quality assurance and revenue by \$16M/mth. Funding: Bank of Nova Scotia (BNS) commercial loan

Start Date: February 2013

Completion: February 2015

Status: 100%

Project Budget: \$320M

2. Expansion of the Martha Brae Water Treatment Plant

Construction of a new 5 MGD module at the Martha Brae Water Treatment Plant. This resulted in an increased supply to the north western parishes from St Ann to Westmoreland.

Funding: Bank of Nova Scotia (BNS) commercial loan

Start Date: May 2013

Completion Date: February 2015

Project Budget: \$1.64B

3. Logwood to Negril Water Supply - NonPariel/ Sheffield/ Orange Hill

Construction of Pipelines, two (2) pumping stations and two (2) storage reservoirs in order to improve supply to meet development needs. Funding: K-Factor

Start Date: June 2013

Completion Date: October 2015

Status (as at September 30, 2014): Civil, pipeline and E and M contracts are on-going, other tenders are at the procurement stage.

Project Budget: \$220M

4. Non-Parish / Orange Hill / Retirement water supply scheme in Westmoreland

Construction of water supply systems in eight (8) material / equipment supply contracts and construction contracts involving 32km of transmission / distribution pipelines, two (2) pumping stations and two (2) storage reservoirs. Improved supplies to benefit 20,500 persons

Status: Ongoing

Project Budget: \$450M

5. Network Management and Social Intervention

Network management, social intervention and revenue enhancement in the parishes of Trelawny, St. James, Hanover and Westmoreland to complement and facilitate sustainability of capital works. To impact 170,000 persons. Completed in February 2015 at a cost of \$380M.

HANOVER

Western Hanover

1. Repairs of Great River and Martha Brae Water Treatment Plant (including intake)

Upgrade of Great River and Martha Brae Water Treatment Plants to increase reliability of supply, water quality assurance and revenue by \$16M/mth. Funding: Bank of Nova Scotia (BNS) commercial loan

Start Date: February 2013

Completion: February 2015

Status: 100%

Project Budget: \$320M

2. Expansion of the Martha Brae Water Treatment Plant

Construction of a new 5 MGD module at the Martha Brae Water Treatment Plant. This resulted in an increased supply to the north west parishes from St Ann to Westmoreland. Funding: Bank of Nova Scotia (BNS) commercial loan

Start Date: May 2013

Completion Date: February 2015

Project Budget: \$1.64B

3. Lucea Transmission Main

Supply and installation of 5.8 km of 500mm Transmission Main through Lucea to increase supply to areas west of Lucea including Negril. Payback period is less than a year. Funding: Bank of Nova Scotia (BNS) commercial loan/K-Factor

Start Date: May 2013

Completion Date: March 2015

Project Budget: \$1.04B

4. North Western Parishes Project (NWPP) NRW Reduction / Control.

Technical Assistance for network operation and NON-REVENUE WATER (NRW) Reduction / Control. Social Intervention for Revenue Protection / Enhancement. Resulting in the reduction of commercial and physical losses. Funding: Bank of Nova Scotia (BNS) commercial loan/K-Factor

Start Date: May 2013

Completion Date: February 2015

Project Budget: \$415M

5. Network Management and Social Intervention

Network management, social intervention and revenue enhancement in the parishes of Trelawny, St. James, Hanover and Westmoreland to complement and facilitate sustainability of capital works. To impact 170,000 persons . Completed in February 2015 at a cost of \$380M.

6. Tank and Pump Replacement and/or upgrading for:

- Great River/Lookout
- Logwood/Esher Hill

7. Prospect / Grange / Rock Spring Project

This proposed project to be funded by the K-Factor fund will involve construction of a relift station and commissioning of a pipeline from Prospect to Kendal and construct a service reservoir at an estimated cost of \$258M.

Eastern Hanover

1. Repairs of Great River and Martha Brae Water Treatment Plant (including intake)

Upgrade of Great River and Martha Brae Water Treatment Plants to increase reliability of supply, water quality assurance and revenue by \$16M/mth. Funding: Bank of Nova Scotia (BNS) commercial loan

Start Date: February 2013

Completion: February 2015

Status: 100%

Project Budget: \$320M

2. Expansion of the Martha Brae Water Treatment Plant

Construction of a new 5 MGD module at the Martha Brae Water Treatment Plant. This resulted in an increased supply to the north west parishes from St Ann to Westmoreland. Funding: Bank of Nova Scotia (BNS) commercial loan

Start Date: May 2013

Completion Date: February 2015

Project Budget: \$1.64B

3. Lucea Transmission Main

Supply and installation of 5.8 km of 500mm Transmission Main through Lucea to increase supply to areas west of Lucea including Negril. Payback period is less than a year. Funding: Bank of Nova Scotia (BNS) commercial loan/K-Factor

Start Date: May 2013

Completion Date: March 2015

Project Budget: \$1.04B

4. North Western Parishes Project (NWPP) NRW Reduction/Control

Technical Assistance for network operation and NON-REVENUE WATER (NRW) Reduction/Control. Social Intervention for Revenue Protection / Enhancement. Resulting in the reduction of commercial and physical losses. Funding: Bank of Nova Scotia (BNS) commercial loan/K-Factor

Start Date: May 2013

Completion Date: February 2015

Project Budget: \$415M

5. Cascade / Claremont / Jericho Water Supply.

Installation of two (2) relift stations, 22 km of pipelines and two (2) storage tanks to provide potable water to rural communities. It involves interconnecting to the Great River/Lucea pipeline, constructing a relift station at Paradise to pump to storage reservoir to be constructed at German Hill, gravity from German Hill to feed Claremont, Retreat and Jericho, constructing a relift station at Pengat, constructing a transmission pipeline

from proposed relift station to tank at Cascade, and gravity feed to feed Pondsides and environs, Funding: K-Factor
Start Date: February 2013
Completion Date: October 2015
% Completion: 70%
Project Budget: \$300M

6. Network Management and Social Intervention

Network management, social intervention and revenue enhancement in the parishes of Trelawny, St. James, Hanover and Westmoreland to complement and facilitate sustainability of capital works. To impact 170,000 persons. Completed in February 2015 at a cost of \$380M.

7. Tank and Pump Replacement and/or upgrading for:

- Great River/Lookout
- Great River/Lookout and Macquarie
- Great River/Lookout and Orchard

ST. JAMES

South St. James

1. Repairs of Great River and Martha Brae Water Treatment Plant (including intake)

Upgrade of Great River and Martha Brae Water Treatment Plants to increase reliability of supply, water quality assurance and revenue by \$16M/mth. Funding: Bank of Nova Scotia (BNS) commercial loan
Start Date: February 2013
Completion: February 2015
Status: 100%
Project Budget: \$320M

2. Expansion of the Martha Brae Water Treatment Plant

Construction of a new 5 MGD module at the Martha Brae Water Treatment Plant. This resulted in an increased supply to the north western parishes from St Ann to Westmoreland. Funding: Bank of Nova Scotia (BNS) commercial loan
Start Date: May 2013
Completion Date: February 2015
Project Budget: \$1.64B

3. North Western Parishes Project (NWPP) NRW Reduction / Control

Technical Assistance for network operation and NON-REVENUE WATER (NRW) Reduction / Control. Social Intervention for Revenue Protection / Enhancement. Resulting in the reduction of commercial and physical losses. Funding: Bank of Nova Scotia (BNS) commercial loan/K-Factor
Start Date: May 2013
Completion Date: February 2015
Project Budget: \$415M

4. Network Management and Social Intervention

Network management, social intervention and revenue enhancement in the parishes of Trelawny, St. James, Hanover and Westmoreland to complement and facilitate sustainability of capital works. To impact 170,000 persons. Completed in February 2015 at a cost of \$380M.

5. Elderslie/Niagara/Garlands

Upgrade the Node Spring source at Elderslie; install transmission and distribution pipelines; construct storage reservoir. Possibly interconnect Tangle River source. Estimated Project Cost. \$89M.

6. Maroon Town / Tangle River / Maldon Water Supply Project

This proposed project to be funded by K-Factor resources proposes to upgrade the Spring source and Treatment plant, transmission and distribution replacement, replace/install pumps and storage tank replacement at an estimated cost of \$300M.

7. TANK AND PUMP PROGRAMME

Tank and Pump Replacement and/or upgrading for:

- Mafoota/Rohampton
- Niagara/Johnson
- Tangle River
- Vaughnsfield

West Central St. James

1. Repairs of Great River and Martha Brae Water Treatment Plant (including intake)

Upgrade of Great River and Martha Brae Water Treatment Plants to increase reliability of supply, water quality assurance and revenue by \$16M/mth. Funding: Bank of Nova Scotia (BNS) commercial loan

Start Date: February 2013

Completion: February 2015

Status: 100%

Project Budget: \$320M

2. Expansion of the Martha Brae Water Treatment Plant

Construction of a new 5 MGD module at the Martha Brae Water Treatment Plant. This resulted in an increased supply to the northwestern parishes from St Ann to Westmoreland. Funding: Bank of Nova Scotia (BNS) commercial loan

Start Date: May 2013

Completion Date: February 2015

Project Budget: \$1.64B

3. Northwestern Parishes Project (NWPP) NRW Reduction/ Control

Technical Assistance for network operation and NON-REVENUE WATER (NRW) Reduction/Control. Social Intervention for Revenue Protection / Enhancement. Resulting in the reduction of commercial and physical losses. Funding: Bank of Nova Scotia (BNS) commercial loan/K-Factor

Start Date: May 2013

Completion Date: February 2015

Project Budget: \$415M

4. Network Management and Social Intervention

Network management, social intervention and revenue enhancement in the parishes of Trelawny, St. James, Hanover and Westmoreland to complement and facilitate sustainability of capital works. To impact 170,000 persons. Completed in February 2015 at a cost of \$380M.

5. TANK AND PUMP PROGRAMME

• Belmont Pump Replacement

Procurement of pump to serve Belmont, Wiltshire,

Installation Date: 1st Quarter 2015 financial year

Project Cost: \$6,323,850.00

• Tower Hill Pump Replacement

Procurement of pump to serve Tower Hill Storage Tank

Installation Date: 1st Quarter 2015 financial year
Project Cost: \$4,783,425.00

Tank and Pump Replacement and/or upgrading for:

- Great River/Granville
- Martha Brae/Torodo Heights
- Pitfour
- Worchester
- Fairfield
- Great River/Terminal
- Reading Spring
- Bogue Treatment Plant

Central St, James

1. Repairs of Great River and Martha Brae Water Treatment Plant (including intake)

Upgrade of Great River and Martha Brae Water Treatment Plants to increase reliability of supply, water quality assurance and revenue by \$16M/mth. Funding: Bank of Nova Scotia (BNS) commercial loan

Start Date: February 2013

Completion: February 2015

Status: 100%

Project Budget: \$320M

2. Expansion of the Martha Brae Water Treatment Plant

Construction of a new 5 MGD module at the Martha Brae Water Treatment Plant. This resulted in an increased supply to the north west parishes from St Ann to Westmoreland.

Funding: Bank of Nova Scotia (BNS) commercial loan

Start Date: May 2013

Completion Date: February 2015

Project Budget: \$1.64B

3. North Western Parishes Projects NRW Reduction / Control.

Technical Assistance for network operation and NON-REVENUE WATER (NRW) Reduction/Control. Social Intervention for Revenue Protection / Enhancement. Resulting in the reduction of commercial and physical losses. Funding: Bank of Nova Scotia (BNS) commercial loan/K-Factor

Start Date: May 2013

Completion Date: February 2015

Project Budget: \$415M

4. Network Management and Social Intervention

Network management, social intervention and revenue enhancement in the parishes of Trelawny, St. James, Hanover and Westmoreland to complement and facilitate sustainability of capital works. To impact 170,000 persons. Completed in February 2015 at a cost of \$380M.

North West St. James

1. Repairs of Great River and Martha Brae Water Treatment Plant (including intake)

Upgrade of Great River and Martha Brae Water Treatment Plants to increase reliability of supply, water quality assurance and revenue by \$16M/mth. Funding: Bank of Nova Scotia (BNS) commercial loan

Start Date: February 2013

Completion: February 2015

Status: 100%

Project Budget: \$320M

2. Expansion of the Martha Brae Water Treatment Plant

Construction of a new 5 MGD module at the Martha Brae Water Treatment Plant. This resulted in an increased supply to the north west parishes from St Ann to Westmoreland.

Funding: Bank of Nova Scotia (BNS) commercial loan

Start Date: May 2013
Completion Date: February 2015
Project Budget: \$1.64B

3. North Western Parishes Projects NRW Reduction / Control.

Technical Assistance for network operation and NON-REVENUE WATER (NRW) Reduction/Control. Social Intervention for Revenue Protection / Enhancement. Resulting in the reduction of commercial and physical losses. Funding: Bank of Nova Scotia (BNS) commercial loan/K-Factor

Start Date: May 2013
Completion Date: February 2015
Project Budget: \$415M

4. Network Management and Social Intervention

Network management, social intervention and revenue enhancement in the parishes of Trelawny, St. James, Hanover and Westmoreland to complement and facilitate sustainability of capital works. To impact 170,000 persons. Completed in February 2015 at a cost of \$380M.

5. Norwood Water Supply Upgrading

Installation of pipeline from existing Norwood Tank (Hendon to proposed tank site at Section G and install relift station) to increase supply to address service deficiencies for 11,000 persons in upgraded informal communities. Funding: Bank of Nova Scotia (BNS) commercial loan/K-Factor

Start Date: August 2013
Completion Date: February 2015
Project Budget: \$460M

6. TANK AND PUMP PROGRAMME

Tank and Pump Replacement and/or upgrading for:

- Catherine Mount/West Gate
- Martha Brae/Torado Heights
- Martha/Terminal
- Reading Spring

East Central St. James

1. Repairs of Great River and Martha Brae Water Treatment Plant (including intake)

Upgrade of Great River and Martha Brae Water Treatment Plants to increase reliability of supply, water quality assurance and revenue by \$16M/mth. Funding: Bank of Nova Scotia (BNS) commercial loan

Start Date: February 2013
Completion: February 2015
Status: 100%
Project Budget: \$320M

2. Expansion of the Martha Brae Water Treatment Plant

Construction of a new 5 MGD module at the Martha Brae Water Treatment Plant. This resulted in an increased supply to the north west parishes from St Ann to Westmoreland. Funding: Bank of Nova Scotia (BNS) commercial loan

Start Date: May 2013
Completion Date: February 2015
Project Budget: \$1.64B

3. North Western Parishes Projects NRW Reduction / Control.

Technical Assistance for network operation and NON-REVENUE WATER (NRW) Reduction/ Control. Social Intervention for Revenue Protection / Enhancement. Resulting in the reduction of commercial and physical losses. Funding: Bank of Nova Scotia (BNS) commercial loan/K-Factor
Start Date: May 2013
Completion Date: February 2015
Project Budget: \$415M

4. Network Management and Social Intervention

Network management, social intervention and revenue enhancement in the parishes of Trelawny, St. James, Hanover and Westmoreland to complement and facilitate sustainability of capital works. To impact 170,000 persons . Completed in February 2015 at a cost of \$380M.

5. TANK AND PUMP PROGRAMME

Tank and Pump Replacement and/or upgrading for:

- Appleton Spring
- Canaan-Cedar Hill
- Porto Bello

TRELAWNY

North Trelawny

1. Clark's Town W/S Pipeline Replacement

The installation of 5.1km of 250mm and 0.9km of 100mm pipes to replace existing old asbestos cement pipes resulting in reduced leakage and improved supply to Clarks Town, Duncans, Georgia and environs to benefit 10,000 persons. Completed in November 2014 at a cost of \$35M.

2. Repairs of Great River and Martha Brae Water Treatment Plant (including intake)

Upgrade of Great River and Martha Brae Water Treatment Plants to increase reliability of supply, water quality assurance and revenue by \$16M/mth. Funding: Bank of Nova Scotia (BNS) commercial loan

Start Date: February 2013

Completion: February 2015

Status: 100%

Project Budget: \$320M

3. Expansion of the Martha Brae Water Treatment Plant

Construction of a new 5 MGD module at the Martha Brae Water Treatment Plant. This resulted in an increased supply to the north west parishes from St Ann to Westmoreland. Funding: Bank of Nova Scotia (BNS) commercial loan

Start Date: May 2013

Completion Date: February 2015

Project Budget: \$1640M

4. North Western Parishes Projects NRW Reduction/Control

Technical Assistance for network operation and NON-REVENUE WATER (NRW) Reduction / Control. Social Intervention for Revenue Protection / Enhancement. Resulting in the reduction of commercial and physical losses. Funding: Bank of Nova Scotia (BNS) commercial loan/K-Factor

Start Date: May 2013

Completion Date: February 2015

Project Budget: \$415M

5. Network Management and Social Intervention

Network management, social intervention and revenue enhancement in the parishes of Trelawny, St. James, Hanover and Westmoreland to complement and facilitate sustainability of capital works. To impact 170,000 persons . Completed in February 2015 at a cost of \$380M.

6. TANK AND PUMP PROGRAMME

Tank and Pump Replacement and/or upgrading for:

- Duansvale/Cavell Hill
- Wakefield/Bounty Hall

7. Dornoch / Jackson Town / Stewart Town Project

This proposed K-Factor funded project will involve rehabilitation of the Dornoch treatment plant and pumping station, upgrading the transmission and distribution pipelines, and realigning the distribution pipeline running cross country at an estimated cost of \$1.1B.

South Trelawny

1. TANK AND PUMP PROGRAMME

Tank and Pump Upgrading for:

- Barnstaple/Stewart Town
- Troy/New Hope
- Ulster Spring

2. Albert Town Water Supply Project

This proposed K-Factor supported project proposes to construct a raw water intake and pumping station on the Quashi river, construct slow sand filter plant, install transmission and distribution pipelines, repair and refurbish a storage reservoir at an estimated cost of \$179M.

ST. ANN

North East St. Ann

1. Refurbishment of Bogue Water Treatment Plant, Ocho Rios

Refurbishment of Bogue Water Treatment Plant, Ocho Rios to increase reliability of supply, water quality assurance and increase NWC's revenue billed by approx. Jm\$38M / mth.

Funding: Bank of Nova Scotia (BNS) commercial loan

Start Date: February 2013

Completion: February 2015

Project Budget: \$560M

2. TANK AND PUMP PROGRAMME

Tank and Pump Replacement and/or upgrading for:

- Cool Shade
- Higgin Town
- Lime Hall
- Roaring River/Charles Town
- Shaw Park/Harrison Town

3. Higgin Town Water Supply Project

This proposed K-Factor supported project will involve equipping the Green Park Well, installing transmission and distribution pipeline, constructing storage reservoir and relief station, extending the system to serve Bamboo at an estimated cost of \$150M.

North East St. Ann

1. Repairs of Great River and Martha Brae Water Treatment Plant (including intake)

Upgrade of Great River and Martha Brae Water Treatment Plants to increase reliability of supply, water quality assurance and revenue by \$16M/mth. Funding: BNS

Start Date: February 2013

Completion: February 2015

Status: 100%

Project Budget: \$320M

2. Expansion of the Martha Brae Water Treatment Plant

Construction of a new 5 million gallons per day (MGD) module at the Martha Brae Water Treatment Plant. This resulted in an increased supply to the north west parishes from St Ann to Westmoreland. Funding: BNS

Start Date: May 2013

Completion Date: February 2015

Project Budget: \$1.64B

3. Network Management and Social Intervention

Network management, social intervention and revenue enhancement in the parishes of Trelawny, St. James, Hanover and Westmoreland to complement and facilitate sustainability of capital works. These works have impacted 170,000 persons. Completed in February 2015 at a cost of \$380M.

4. TANK AND PUMP PROGRAMME

Tank and Pump Replacement and/or upgrading for:

- Brown's Town/Benin
- Cardiff Hall/Valley Minor
- Cool Shade
- Dornoch River/Thicketts
- Liberty
- Dinthill

5. Queenhythe Water Supply System

This proposed K-Factor funded project will involve developing and equipping a well, installing transmission and distribution pipelines, and constructing a storage reservoir at an estimated cost of \$108M.

South East St. Ann

1. TANK AND PUMP PROGRAMME

Tank and Pump Replacement and/or upgrading for:

- Claremont
- McNie
- Moneague Road Side
- Rose Mount/Hope Well
- Walkerswood

South West St. Ann

1. TANK AND PUMP PROGRAMME

Tank and Pump Replacement and/or upgrading for:

- Norwood
- Thatch Hill

ST. MARY

Central St. Mary

1. Refurbishment of Bogue Water Treatment Plant , Ocho Rios

Refurbishment of Bogue Water Treatment Plant, Ocho Rios. Resulting in the increased reliability of supply, water quality assurance and increase NWC's revenue billed by approx.

Jm\$38M / mth. Funding: BNS

Start Date: February 2013

Completion Date: February 2015

Project Budget: \$560M

2. Iter Boreale to Agualta Vale W/S

Develop new sources of supply and install transmission facilities to serve Highgate / Richmond and environs Improved service to existing supply areas with Yr2030 population of 38,000 persons and increased capacity for new developments. Funding: K-Factor / NHT

Start Date: October 2014

Completion Date: June 2016

Status (as at September 30, 2014): Availability of Chovey Well has been resolved and detailed engineering designs are now being finalized. The first contracts have been let and one satisfactorily completed.

Project Budget: \$890M

3. Iter Boreale - Highgate W/S.

Develop new sources of supply and install transmission facilities to serve Highgate / Richmond and environs. Benefits include improved service to existing supply areas with Yr 2030 population of 38,000 persons and increased capacity for new developments.

Status: Ongoing

4. TANK AND PUMP PROGRAMME

Tank and Pump Replacement and/or upgrading for:

- Bogue Treatment Plant
- Martha Hall

- Islington

South East St. Mary

1. Iter Boreale to Aqualta Vale W/S

Develop new sources of supply and install transmission facilities to serve Highgate / Richmond and environs to provide improved service to existing supply areas with projected 2030 population of 38,000 persons and increased capacity for new developments. Funding: K-Factor / NHT

Start Date: October 2014

Completion Date: June 2016

Status (as at September 30, 2014): Availability of Chovey Well has been resolved and detailed engineering designs are now being finalized. The first contracts have been let and one satisfactorily completed.

Project Budget: \$890M

2. TANK AND PUMP PROGRAMME

Tank and Pump Replacement and/or upgrading for:

- Bogue Treatment Plant

Western St. Mary

1. Construction and Replacement Wastewater Treatment Plant

Construction of new sewage treatment plants at Boscobel (600 m³ /d)

New sanitation infrastructure to facilitate housing and other development as well as to improve public health and environmental conditions. Funding: INTER-AMERICAN DEVELOPMENT BANK (IDB) / Commercial Loan

Start Date: October 2014

Completion Date: November 2015

Status (as at September 30, 2014): Cabinet approval issued on November 25, 2013.

Contract Document completed and award awaiting finalization of loan funding arrangements

Project Budget: \$470M

2. Refurbishment of Bogue WTP, Ocho Rios

Refurbishment of Bogue WTP, Ocho Rios. Resulting in the increased reliability of supply, water quality assurance and increase NWC's revenue billed by approx. Jm\$38M / mth. Funding: BNS

Start Date: February 2013

Completion Date: February 2015

Project Budget: \$560M

3. TANK AND PUMP PROGRAMME

Tank and Pump Replacement and/or upgrading for:

- Salisbury
- White River
- Hamilton Mountain
- Gayle Springs
- Labrynth

4. Mason Hall Water Supply

This proposed K-Factor project will involve abstracting water from the White River source, constructing water treatment plant and pumping station, constructing storage reservoir, installing transmission and distribution pipelines within Mason Hall service area at an estimated cost of \$1.6B.

PORTLAND

East Portland

1. Port Antonio Water, Sewerage and Drainage Stage 1 Works

Construction of 10km of 100 /150 / 250mm pipes, 5 km of sanitary sewers and drainage conveyance including coastal revetment, sewerage and storm water drainage facilities. Resulting in Non Revenue Water (NRW) reduction, improvement in potable water service and public health conditions incl. flooding. Funding: INTER-AMERICAN DEVELOPMENT BANK (IDB)

Start Date: March 2013

Completion Date: March 2015

Project Budget: \$2.3B

2. Port Antonio Sewage Treatment Plant

To construct 0.2 imperial million gallons daily (imgd) sewage treatment plant, equip 3 sewage pumping stations and install 3km of transmission sewers from Caneside River to the plant. New sanitation infrastructure to facilitate housing and other development as well as to improve public health and environmental conditions. Funding: INTER-AMERICAN DEVELOPMENT BANK (IDB)

Implementation Date: January 2016

Completion Date: July 2017

Status: Request for Competitive Proposals being prepared

Project Budget: \$920M

3. TANK AND PUMP PROGRAMME

Tank and Pump Replacement and/or upgrading for:

- Fairy Hill/Sherwood Forest
- Grants Level/Richmond Hill
- Long Bay/Rose Garden
- Norwich/Snow Hill
- Windsor Forest

WEST PORTLAND CONSTITUENCY

1. TANK AND PUMP PROGRAMME

Tank and Pump Replacement and/or upgrading for:

- Charles Town
- Hart Hill/Windsor Castle

ST. THOMAS

Western St. Thomas

1. Construction of Conveyance Systems from Decommissioning of Wastewater Treatment Plants

Transfer sewers from 4 decommissioned sewage treatment plants (at Hughenden, Arcadia, Bay Farm and Springfield). It includes retiring old non-functioning Sewage Treatment Plants (STPs) to reduce energy / maintenance costs, utilize available capacity of more efficient facility, improve public health and environmental conditions for population of approximately 10, 000 or 0.5 imperial million gallons daily (imgd)

Funded by: INTER-AMERICAN DEVELOPMENT BANK (IDB) / Commercial Loan

Implementation Date: November 2014

Completion Date: December 2015

Project Budget: \$430M

2. Yallahs Sewers

Rehabilitation of the Yallahs Housing Scheme facility to include construction of 1.5 km of 300 mm diameter to transfer sewer from yallahs to the West Albion Treatment including cross of the Yallahs River.

Completed: December 2013

Project Cost: \$35M

3. TANK AND PUMP PROGRAMME

Tank and Pump Replacement and/or upgrading for:

- Albion Heights
- Batchelor's Hall
- Needham Pen
- Prospect-Johns town
- River Head/LLandewey
- South Haven
- Spring Garden
- Spring Field-Morant Bay
- White Hall/Soho
- Seaforth

4. Seaforth/Whitehall/Soho Water Supply

This proposed K-Factor funded project proposes to relocate the Whitehall filter plant, improve intake structure at Plantain Garden River source, and upgrade the distribution system at an estimated cost of \$105M.

Eastern St. Thomas

1. TANK AND PUMP PROGRAMME

Tank and Pump Replacement and/or upgrading for:

- Batchelor's Hall
- Golden Valley
- New Pera – Barking Lodge
- Spring Field-Morant Bay

Appendix # 4

*Receivables by Parish
Constituency
March 2015*

<i>PARISH/CONSTITUENCY</i>	<i>NO. OF ACCOUNTS</i>	<i>RECEIVABLES</i>
KINGSTON		
WESTERN	4,386	1,465.7
CENTRAL	2,338	265.4
EAST & PORT ROYAL	7,439	688.9
TOTAL	14,163	2420
ST. ANDREW		
SOUTH WESTERN	3,642	525.8
SOUTHERN	3,558	822.6
SOUTH EASTERN	10,828	748.3
NORTH EASTERN	12,878	317.8
NORTH WESTERN	14,642	570.8
WESTERN	8,814	708.2
EASTERN	6,540	235.5
EAST CENTRAL	10,625	355.5
WEST CENTRAL	5,677	605.4
NORTH CENTRAL	8,713	254.2
EAST RURAL	7,510	680.1
WEST RURAL	7,513	508.9
TOTAL	100,940	6333.1
ST. THOMAS		
WESTERN	9,605	500.3
EASTERN	9,636	375.4
TOTAL	19,241	875.7
ST. CATHERINE		
NORTH WEST	9,592	778.2
NORTH EAST	2,051	215.2
NORTH CENTRAL	4,915	301.9
WEST CENTRAL	5,069	298.2
CENTRAL	13,943	1,118.1
EASTERN	7,905	708.7
SOUTH CENTRAL	8,022	369.1
SOUTH EASTERN	14,717	331.8
EASTERN CENTRAL	8,792	330.1
SOUTH	19,564	414.5
SOUTH WEST	6,851	483.2
TOTAL	101,421	5,349.0
ST. MARY		
WESTERN	11,709	388.9
CENTRAL	4,665	179.7
SOUTH EAST	5,250	319.5
TOTAL	21,624	888.1
PORTLAND		
WESTERN	4,154	87.7
EASTERN	8,945	170.7
TOTAL	13,099	258.4
CLARENDON		
SOUTH EAST	16,251	713.0
SOUTH WEST	6,043	226.9
CENTRAL	7,656	312.9
NORTH WEST	1,990	124.9
NORTH CENTRAL	2,504	93.1
NORTH	1,484	48.3

TOTAL	35,928	1,519.1
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*Receivables by Parish Constituency
March 2015*

<i>PARISH/CONSTITUENCY</i>	<i>NO. OF ACCOUNTS</i>	<i>RECEIVABLES</i>
ST. ANN		
NORTH EAST		656.1
SOUTH EAST		198.5
NORTH WEST		237.8
SOUTH WEST		15.7
TOTAL	24,542	1,108.1
MANCHESTER		
SOUTH	3,277	95.5
CENTRAL	15,445	327.3
NORTH WEST	724	15.5
NORTH EAST	2,998	119.2
TOTAL	22,444	557.5
ST. ELIZABETH		
SOUTH EAST	8,677	280.9
SOUTH WEST	4,564	230.1
NORTH EAST	8,722	295.4
NORTH WEST	2,037	63.8
TOTAL	24,000	870.20
ST. JAMES		
SOUTH	3,319	165.6
EAST CENTRAL	8,348	295.9
CENTRAL	8,800	505.2
WEST CENTRAL	11,873	533.9
NORTH WEST	9,934	595.2
TOTAL	42,274	2,095.8
TRELAWNY		
NORTH	13,587	261.5
SOUTHERN	1,230	100.8
TOTAL	14,817	362.3
WESTMORELAND		
EASTERN	3,506	145.1
WESTERN	8,211	474.8
CENTRAL	13,870	658.8
TOTAL	25,587	1,278.7
HANOVER		
EASTERN	10,150	224.1
WESTERN	4,550	92.2
TOTAL	14,700	316.3
GRAND TOTAL	474,780	\$24.2B

Appendix # 5

NWC Receivables/Debt Profile

February 2015

The table below represents a breakdown of the total Receivables (\$24B) by account classification:-

Classification of Accounts	Amounts Outstanding	Amount Outstanding (360 Days and over)
Residential	\$ 19,298,024,079.90	\$ 14,586,929,824.78
Commercial	\$ 2,238,312,588.78	\$ 1,486,064,126.25
Government	\$ 1,955,529,919.90	\$ 470,517,743.66
Condominium	\$ 304,547,582.70	\$ 252,925,982.85
Employee	\$ 4,557,892.28	\$ 1,437,774.66
School	\$ 132,450,295.14	\$ 25,458,843.38
GRAND TOTAL	\$ 23,933,422,358.70	\$ 16,823,334,295.58

- Of the total receivables outstanding, Designated Inner City/Socially Challenged Areas account for \$5.2B.
- Supplies that have been disconnected, during the Revenue Recovery Process, account for \$7B of the total receivables.

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Appendix # 5

Real Estate Board and Commission of Strata Corporations: Performance Report April 1, 2014 to March 31, 2015				
No.	Programme	Major Tasks/ Targets	Planned Targets for the Period.	Year to date
2.	Customer Care	Investigation initiated within prescribed timeline.	Investigations initiated within seven (7) working days for 100% of complaints received by the Board.	Target achieved. <ul style="list-style-type: none"> • 100%
		Investigation reports are prepared within prescribed timelines after investigations are completed	70% of investigation reports prepared within four (4) weeks of completing the investigation.	Target exceeded <ul style="list-style-type: none"> • 100% or 13 prepared
		Dispute resolution sessions set within prescribed timeline.	70% of the dispute resolution sessions are set within 21 working days	Target exceeded <ul style="list-style-type: none"> • 100%
		Letter of registration acceptance/approval issued to developers within prescribed timeline.	70% of letters of registration/refusal issued to developers within seven (7) working days of the Board's approval.	Target exceeded <ul style="list-style-type: none"> • 100% or 69 developer approval letters issued with seven (7) working days.
		Licenses issued within prescribed timeline.	70% of licenses issued within three (3) working days of receipt of all documents. 0-30% of licenses issues within five (5) working days.	Target exceeded <ul style="list-style-type: none"> • 437 or 96 % of the applications for dealer licenses were processed within 3 working days • 669 or 93% were issued processed issued within 3 working days.
		Real Estate Institute established.	Acquire appropriate resources; engage course facilitators and sensitize practitioners of course requirements.	Target achieved <ul style="list-style-type: none"> • Real Estate Institute Operational

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		Timely processing of applications for Power of sale Certificates	70% of the Power of Sale Applications approved by the Board within forty (40) working days of the receipt of all required documents.	Target exceeded <ul style="list-style-type: none"> The Commission has at 2014/15 approved Fifty-one (51) Power of Sale Certificate applications; forty-seven (47) or 92% were processed within 40 working days.
3.	Revenue Growth	Reduced delinquencies.	Increase revenue collected from delinquent customers by 6.4 million	Target exceeded by 268%
4.	Regulation and monitoring functions.	Steps taken to register unregistered development schemes.	Initiate registration of 70% of development schemes identified as unregistered within the quarter.	Target exceeded <ul style="list-style-type: none"> Thirty- two (32) unregistered development schemes were detected. 90% or 29 of those developers were written to, and thirteen (13) have so far registered.
		Steps taken to register unregistered strata corporations.	Initiate registrations of 70% of new Strata Corporations identified as being unregistered within the quarters.	<ul style="list-style-type: none"> Sixty –four (64) unregistered strata corporations detected. Registration initiated for 58 or 90 %. Forty-one (41) complied.
		Monitoring visits conducted by REB to developers.	Conduct 200 monitoring visits to developers.	Target exceeded <ul style="list-style-type: none"> 404 monitoring visits were completed
		Monitoring visits conducted by REB to dealers and salesmen	One hundred and twenty (120) monitoring visits to real estate dealers	Partially achieved <ul style="list-style-type: none"> One hundred and thirteen (113) or 94% of the monitoring visits completed.
		Monitoring visits conducted by the CSC.	Conduct 160 monitoring visits for the Commission.	Target exceeded <ul style="list-style-type: none"> 181 or 113% monitoring visits conducted
		Visits to local planning authorities and KSAC to collect data.	Visits to eight (8) local planning authorities.	Target exceeded <p>150% or 12 visits made to local planning authorities.</p>
		Audit Strata Corporation	Conduct eight (8) audits and four (4) follow up audits.	Target exceeded <ul style="list-style-type: none"> 112% or 9 audits were done . 100% or (4) follow up visits.

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		Time taken to log request for case to be heard by Tribunal.	80% of requests for cases to be heard by Tribunal logged within two (2) working day	Target exceeded. <ul style="list-style-type: none"> • 100% or 5 requests were made and logged within two (2) working days.
		Notification of respondent to appear before Tribunal within 5 working days.	80% of respondents to be notified within 5 working days of an appellant request for case to be heard by Tribunal.	Target achieved. <ul style="list-style-type: none"> • 100% or 5 respondents notified within the targeted time.
	Governance	Develop new strategic plan	Complete the Strategic Plan	Target achieved. <ul style="list-style-type: none"> • Strategic plan completed.

