



National Irrigation Commission Ltd.

*"Irrigation...Making the Difference in Agriculture"*

## 2016-2017 ANNUAL REPORT





# TABLE OF CONTENTS

<b>Vision Statement, Mission Statement and Core Values</b> .....	3
<b>Corporate Data</b> .....	4
<b>Overview of the NIC</b> .....	5
<b>Map of Irrigation Districts</b> .....	6
<b>Messages</b>	
<b>Minister without portfolio (Water, Works &amp; Housing)</b>	
Minister of Economic Growth and Job Creation.....	7
Chairman.....	8
Acting Chief Executive Officer.....	9
<b>Board of Directors</b> .....	11
<b>NIC District &amp; Advisory Monitoring Committees</b> .....	13
<b>Executive Team</b> .....	14
<b>Directors Compensation</b> .....	15
<b>Senior Executives Compensation</b> .....	16
<b>Year in Review</b>	
Corporate and Legal Services .....	17
Engineering and Technical Services .....	22
Project Development Services .....	43
Public Relations.....	49
Information Systems .....	53
Commercial Operations.....	56
Finance and Corporate Planning.....	60
Internal Audit .....	64
<b>Financial Statements</b> .....	65
<b>Supplementary Financial Statements</b> .....	



# VISION

NIC, a collaborative, efficient, innovative, customer-oriented and viable organization making our contribution to facilitate a substantial increase in agricultural productivity in irrigated areas.

## MISSION STATEMENT

To enable improvement in agricultural productivity, production and prosperity through the provision of reliable, efficient and affordable irrigation and related services to farmers and other customers while ensuring the viability of the Commission.

## CORE VALUES

Teamwork  
Respect  
Excellence  
Commitment  
Knowledge-Driven



# CORPORATE DATA

## **REGISTERED OFFICE**

National Irrigation Commission Limited  
Head Office  
191 Old Hope Road, Kingston 6  
Tel: 876-977-4022/6727 or 876-618-0172  
Fax: 876-927-2696  
E-mail: nic@cwjamaica.com

## **THE OPERATION CENTRE**

15 Barrett Street, Spanish Town  
St. Catherine  
Tel: 876-984-0625/5792 or 876-469-1910  
Fax: 876-984-0532

## **DISTRICT OFFICES:**

### **St. Catherine Irrigation District**

Rio Cobre Office  
17 Barrett Street, Spanish Town  
St. Catherine  
Tel: 876-984-2334 or 876-489-8801  
Fax: 876-984-8401

### **St. Dorothy's Office**

Bodles, Old Harbour, St. Catherine  
Tel: 876-983-2712 or 876-489-8781  
Fax: 876-745-2759

### **Yallahs Irrigation District**

Yallahs Office  
Yallahs, St. Thomas  
Tel: 876-706-3159 or 876-489-8912  
Fax: 876-706-3160

### **Mid-Clarendon Irrigation District**

Mid-Clarendon Office  
Osbourne Store, May Pen  
Clarendon  
Tel: 876-987-3140/3259 or 876-469-1909  
Fax: 876-987-3139

## **New Forest Irrigation District**

New Forest Office  
New Forest P.A., Manchester  
Tel: 876-371-0794

## **St. Elizabeth Irrigation & Drainage District**

Hounslow Office  
Watchwell P.A., St. Elizabeth  
Tel: 876-965-0714 or 876-489-8918  
Fax: 876-965-0232

## **Braco Irrigation District**

Braco Office  
Duncans, Trelawny  
Tel: 876-954-2147 or 876-489-9095  
Fax: 876-954-2295

## **AUDITORS**

KPMG  
6 Duke Street  
Kingston, Jamaica  
Tel: 876-922-6640  
Fax: 876-922-7198

## **ATTORNEYS-AT-LAW**

DunnCox  
48 Duke Street  
Kingston, Jamaica  
Tel: 876-965-0714  
Fax: 876-965-0232



# OVERVIEW OF THE NIC

The mandate of the National Irrigation Commission Limited (NIC) is:

“to manage, operate, maintain and expand the existing and future irrigation schemes and systems as may now or hereafter be established by the Government of Jamaica or by any Department or Agency thereof... to fix and collect the rates or charges to be paid... for the use of such water.”

Services are provided to agricultural and industrial users in the Eastern, Central and Western Regions as follows:

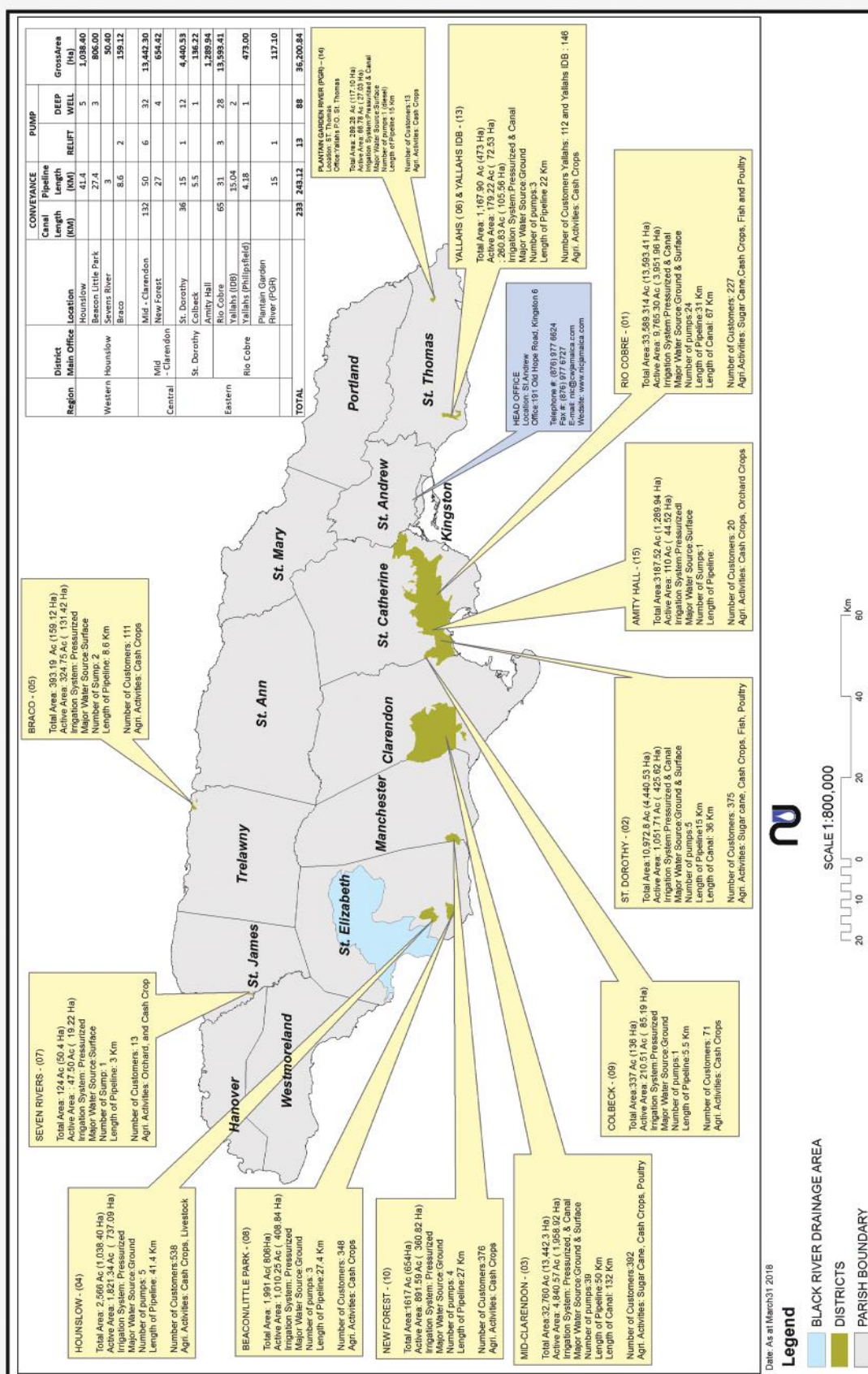
Eastern Region:	St. Catherine: Rio Cobre, St. Dorothy's Office, Colbeck and Amity Hall; St. Thomas: Yallahs, Yallahs IDB and Plantain Garden River;
Central Region:	Clarendon: Mid-Clarendon and Ebony Park/Spring Plain; Manchester: New Forest/Duff House;
Western Region:	St. Elizabeth: Hounslow and Beacon/Little Park; St. James: Seven Rivers; Trelawny: Braco.

The NIC also provides drainage services in the Black River area. This area refers to:

“that portion of the Black River including the banks thereof, from the sea to Lacovia Bridge; the Upper Morass area; the Y.S. River area; the areas described in the Additional Areas (Parish of St. Elizabeth) Reclamation Order, 1953, published in the Jamaica Gazette Supplement Proclamations, Rules and Regulations on the 26th day of January, 1953; and such other areas in the parish of St. Elizabeth as the Minister may, by order, specify for the purposes of Irrigation Act.”



# MAP OF IRRIGATION DISTRICTS



Date: As at March 31 2018





# MESSAGE FROM

**Hon. Dr. Horace Chang, MP**  
**Minister without portfolio (Water, Works & Housing)**  
**Ministry of Economic Growth and Job Creation**

The period April 2016 to March 2017 was a special time of reflection and assessment as the National Irrigation Commission Limited, (NIC) marked its thirtieth (30th) anniversary as an Agency of Government. During these thirty years, the agency has contributed immensely to agricultural output, job creation and community development.

The Agency, which currently operates under the portfolio of the Ministry of Economic Growth and Job Creation, is implementing new policy directives and much has been accomplished during the period under review. Special note is made of the preparatory work for the proposed Essex Valley Agricultural Development Project (EVADP) in St Elizabeth, where the NIC has been the driver of that project and has facilitated consultations with all stakeholders, and visits from multilateral agencies such as the Caribbean Development Bank. Special note must be made of their pivotal role in ensuring that the Monymusk Sugar Factory remained operational to facilitate the completion of the recent crop.

Additionally, the Agency's effort in capacity building was enhanced when other stakeholders in the water and agricultural sectors were invited to participate in the Optimizing Irrigation Water Management to Improve Crop Output and Water Quality Output by the International Atomic Energy Agency Project.

The opportunity for increased agriculture across the nation comes with the opportunity to encourage crop diversification as an additional method to assist farmers to become profitable which will result in contributing to the country's economic growth.

I would like to thank the Board of Directors of the NIC for their dedicated service and the implementation of some new policy directives which has, and will continue to strengthen the foundation of the Agency, as it continues to play a vital role to increase the nation's agricultural output.

I also commend the management and staff of the NIC for their commitment to nation building particularly in the agriculture sector.

**Dr. Horace Chang, MP**  
**Minister without portfolio (Water, Works & Housing)**





# MESSAGE FROM THE CHAIRMAN

**Senator Aubyn Hill**  
**Chairman**

For fiscal year 2016-2017, the National Irrigation Commission Limited (NIC) placed emphasis on improving water management capabilities, reducing energy consumption, increasing the Commission's use of renewable energy, the training of our staff and management transformation initiatives. The period also welcomed former Board Chairman and Director Mr. V. Oliver Nembhard who took control as the Acting Chief Executive Officer.

Making an important difference in agriculture in Jamaica requires the consistently high level performance of well-trained and motivated persons who see themselves as important in the productivity chain. All of the NIC's efforts are focused on delivering real growth, prosperity and national development.

The new Board's vision is to transform the NIC into a well-recognized, productive and efficient irrigation water agency. Several internal committees and the management and staff of the NIC are working to make our vision a reality in the business and lives of the thousands of NIC customers which depend on us for a consistent supply of water to their farms. In the past year the NIC offered training to over two hundred (200) staff members.

The NIC is expecting growth in potential revenue from newly established irrigation schemes. One such scheme is at Amity Hall in St Catherine. It is now fully operational with 13 new customers working on 36.4 hectares of land resulting in increased agricultural productivity and rural development.

The agency faced numerous difficulties in the past year but was able to keep its collection rate above the 90% level.

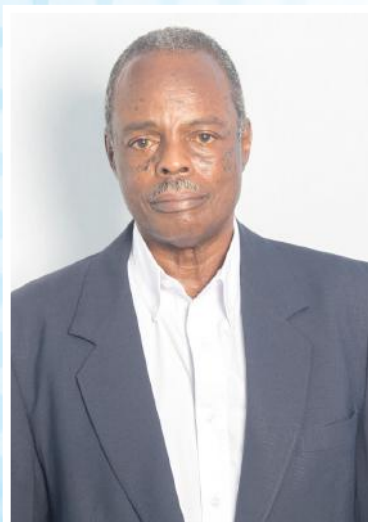
The Board of Commissioners commends the management and staff for striving to deliver service at international standards. To the Minister and his team at Ministry of Economic Growth and Job Creation and the various agencies that supported NIC during the past fiscal year, we express our heartfelt gratitude.

As we look forward to more and new challenges, we also expect even greater positive outputs in the next fiscal year from; Essex Valley and other areas in St. Elizabeth, from South Clarendon and South St. Catherine. We are confident that the Board of Directors, the Chief Executive Officer, executives, managers and the staff of the NIC, will make every effort to deliver to the highest possible professional and ethical standards.

A handwritten signature in black ink, appearing to be 'A. Hill', written over a light blue background.

**Senator Aubyn Hill**  
**Chairman**





# MESSAGE FROM THE CHIEF EXECUTIVE OFFICER

**V. Oliver Nembhard**  
**Acting Chief Executive Officer**

The National Irrigation Commission Limited (NIC) has been entrusted with the mandate to manage, operate, maintain and expand existing and future irrigation schemes. Despite challenges, much has been achieved for the agency's operations in the 2016/2017 financial year.

The repositioning of the NIC to serve under the Ministry of Economic Growth and Job Creation required acceleration in the pace of our operations over the past year. I am pleased to report that we have realized the following achievements this year:

## **1. Canal Rehabilitation (Mid-Clarendon and St. Catherine):**

- Rhymesbury Project (Lines 27, 32 and 35): Rehabilitation of 0.915 km of concrete lined canal network
- Old Milk River Project: Rehabilitation of 1 km of concrete lined canal network
- Parnassus Pipeline: Replacing 2.3 km of asbestos pipes with PVC pipes
- Old Harbour Canal (Phase 1): Rehabilitation of 840m of concrete lined canal network.

## **2. River Cleaning (St. Elizabeth):**

- Black River Upper and Lower Morass areas cleaned of aquatic growing plants and removal of silt in order to mitigate against flooding of residential and farming communities.

## **3. Improvement of Water Quality:**

- Installation of four gravel filtration systems to improve water quality supplied to farmers in the Braco Irrigation District, Trelawny.

## **4. Improvement of Irrigation Systems:**

- Design and construction of pump houses at Yallahs - Plantain Garden River (PGR), St. Thomas and Spring Plains/Ebony Park, Clarendon.

## **5. Essex Valley Agricultural Development Project, St. Elizabeth:**

- Commencement of the preliminary works required for the implementation of the Essex Valley Agricultural Development Project (EVADP) which is expected to enhance the production and productivity of farmers on 700 hectares in Essex Valley.

## **6. Energy Management:**

- Implementation of cost saving measures such as irrigation scheduling, rate changes Jamaica Public Service Company (JPSCo.) and installation of Variable Frequency Drives (VFDs).



## **7. Scholarship Awards (2015/16 – 2016/17):**

- Award of Fourteen Scholarships valued at over Seven Hundred Thousand Dollars (\$700,000.00) to Secondary and Tertiary students who are children of employees at the NIC.

## **8. Monymusk Irrigation System Rehabilitation:**

- Operating the Monymusk irrigation system.

I must extend sincere gratitude to the Board of Directors, Management and Staff for their dedication, contribution and hard work during the Financial Year. I use this opportunity to also thank all our stakeholders for supporting the Commission in achieving its goal of irrigation making the difference in the development of the agriculture sector.

To our valued customers across our irrigation districts, we thank you for your business this past year. The NIC affirms our commitment to you which is embodied in our mission statement to provide reliable, efficient and affordable irrigation and related services. We look forward to serving you well in the years to come.

In the next financial year, we expect to advance the Essex Valley Agricultural Development Project, strengthen our network and relationship with other agencies and departments tasked with managing Jamaica's water resources and make greater strides in restructuring the organization for improved effectiveness and efficiency.

Looking forward to new opportunities for the Commission to realize our vision, NIC expects that there will be some challenges ahead. However, the Commission embraces them in confidence that our commitment to playing a role in enabling improvement in agricultural productivity, production and prosperity coupled with our zero tolerance for failure will ensure our success.

**V. Oliver Nembhard\***  
**Acting Chief Executive Officer**

*\*V. Oliver Nembhard: October 5, 1950 - May 26, 2017*



# BOARD OF DIRECTORS



**Senator Aubyn Hill**  
Chairman



**Dr. Horace Charoo**  
Deputy Chairman



**Genille Attalla**



**Ralden Bellanfante**



**Joseph Handal**



**Krishan James**



**Robert Martin**



**Anthony Masters, Jr.**



**Nigel Myrie**





**Theresa Turner**



**Rupert Williams**



**Sharon Williamson**



**George Wright**



**Venice Williams**  
Corporate Secretary



# DISTRICT & ADVISORY MONITORING COMMITTEES

**Tenure: Appointed to serve for three (3) years**

## **BRACO**

Genille Attalla (Chairman)  
Donovan White  
Kenneth Binns  
Mervyn Green  
Ronique Henry  
Iru Linton  
Alex Campbell  
Vincent Blair  
Rachel Webb  
Stacey Mason

## **MID-CLARENDON**

Dr. Horace Charoo (Chairman)  
Marvin Lawrence  
Charles Reid  
Courtney Peters  
Andrew Lodenquai  
Donovan Hinds  
Baldwin Atkins  
Ralden Bellanfante

## **ST. CATHERINE**

Joseph Handal (Chairman)  
Carlene Martin  
Jennifer Hull  
Theresa Turner  
Keith Knight  
Trevon Garvey  
Cecil Taylor  
Sydney Roman  
Andre Griffiths

## **ST. ELIZABETH**

Krishan James (Chairman)  
Denese Palmer (Vice Chairman)  
Aslyn Parchment  
John Davis  
Sylton Sibblis  
Orlando Nembhard  
Linzo Manderson  
Chandia Walters  
Oneil Wright



# EXECUTIVE TEAM



**V. Oliver Nembhard**  
Acting Chief Executive Officer



**Edgar Watson**  
Director of Finance and  
Corporate Planning



**Wayne Barrett**  
Director of Commercial  
Operations



**Joseph Gyles**  
Acting Director of Engineering  
and Technical Services



**Viola Cammock**  
Acting Director of Corporate  
and Legal Services



**Milton Henry**  
Acting Project Director



# DIRECTORS' COMPENSATION

Position of Director	Fees (\$)	Motor Vehicle Upkeep/Travelling or Value of Assignment of Motor Vehicle (\$)	Honoraria (\$)	All Other Compensation including non-Cash Benefits as applicable (\$)	Total (\$)
Chairman Current: Aubyn Hill	165,112.50	2,350.00	-	-	167,462.50
Deputy Chairman: Current: Dr. Horace Charoo	111,712.50	143,714.60	-	-	255,427.10
Statutory Director Current: Anthony Masters	78,562.50	91,983.00	-	-	170,545.50
Statutory Director Current: Genille Attalla	82,575.00	135,645.00	-	-	218,220.00
Statutory Director Current: George Wright	53,737.50	138,077.60	-	-	191,815.10
Statutory Director Current: John Plummer	37,575.00	43,653.60	-	-	81,228.60
Statutory Director Current: Joseph Handal	78,900.00	23,575.20	-	-	102,475.20
Statutory Director Current: Krishan James	86,887.50	147,756.00	-	-	234,643.50
Statutory Director Current: Nigel Myrie	117,337.50	277,864.00	-	-	395,201.50
Statutory Director Current: Oliver Nembhard	62,137.50	148,642.20	-	-	210,779.70
Statutory Director Current: Ralden Ballanfante	99,150.00	138,888.00	-	-	238,038.00
Statutory Director Current: Robert Martin	103,312.50	4,446.20	-	-	107,758.70
Statutory Director Current: Rupert Williams	87,637.50	45,918.00	-	-	133,555.50
Statutory Director Current: Sharon Williamson	107,400.00	18,602.60	-	-	126,002.60
Statutory Director Current: Theresa Turner	94,987.50	72,591.00	-	-	167,578.50
Statutory Director Previous: Balfour Hewitt	11,625.00	56,782.00	-	-	68,407.00
Statutory Director Previous: Carolyn Campbell	5,250.00	-	-	-	5,250.00
Chairman Previous: Conrad Douglas	12,000.00	582.80	-	-	12,582.80
Statutory Director Previous: Emile Spence	9,000.00	1,109.20	-	-	10,109.20
Statutory Director Previous: Howard Hill	14,250.00	5,170.00	-	-	19,420.00
Statutory Director Previous: Keith Verley	5,250.00	376.00	-	-	5,626.00
Statutory Director Previous: Linford Cooper	14,250.00	38,087.60	-	-	52,337.60
Statutory Director Previous: Ludgar Parish	9,000.00	11,844.00	-	-	20,844.00
Statutory Director Previous: Miranda Wellington	9,000.00	14,852.00	-	-	23,852.00
Statutory Director Previous: Oswald Bent	9,000.00	27,730.00	-	-	36,730.00
Statutory Director Previous: Rankin Watson	11,625.00	28,912.00	-	-	40,537.00
<b>Total A</b>	<b>1,477,275.00</b>	<b>1,619,152.60</b>	<b>-</b>	<b>-</b>	<b>3,096,427.60</b>



BOARD SUB-COMMITTEE COMPENSATION (B)					
Horace Buckley: Rep. Science, Technology, Energy and Mining; Committee - Projects, Energy and Technology	20,812.5	1,240.80	-	-	22,053.30
Lancelot White: Rep. Sugar Industry Research Institute; Committee - Projects, Energy and Technology	20,812.5	18,010.40	-	-	38,822.90
Sacha Lawrence Rose: Rep. Ministry of Finance & Public Service; Committee - Audit	8,325.00	-	-	-	8,325.00
Yvonne Barrett Edwards: Rep. Science, Technology, Energy and Mining; Committee - Projects, Energy and Technology	2,625.00	-	-	-	2,625.00
<b>Total B</b>	<b>52,575.00</b>	<b>19,251.20</b>	<b>-</b>	<b>-</b>	<b>71,826.20</b>
<b>Total A and B</b>	<b>1,529,850.00</b>	<b>1,638,403.80</b>	<b>-</b>	<b>-</b>	<b>3,168,253.80</b>

## SENIOR EXECUTIVES' COMPENSATION

Position of Senior Executive	Year	Salary (\$)	Additional Payments (\$)	Travelling Allowance (\$)	Other Allowances (\$)	Total (\$)
Chief Executive Officer Joseph Gyles	2016/2017	4,357,752.00		30,492.00	16,140.00	4,404,384.00
Chief Executive Officer (Acting) - V Oliver Nembhard	2016/2017	3,676,254.00		409,340.00	293,004.00	4,378,598.00
Director 1, Finance & Corporate Planning - Edgar Watson	2016/2017	4,588,152.00		1,402,608.00	48,000.00	6,038,760.00
Director 2, Commercial Operations - Wayne Barrett	2016/2017	2,902,058.00		596,277.00	49,000.00	3,547,335.00
Director 3, Engineering & Technical Services - Milton Henry	2016/2017	5,976,617.00		1,402,608.00	290,861.00	7,670,086.00
Director 4, Corporate & Legal Services - Viola Cammock	2016/2017	2,651,468.00		705,709.00	525,662.00	3,882,839.00
<b>TOTAL</b>		<b>24,152,301.00</b>	<b>-</b>	<b>4,547,034.00</b>	<b>1,222,667.00</b>	<b>29,922,002.00</b>



# YEAR IN REVIEW:

## Corporate and Legal Services

### CORPORATE OBJECTIVES

- To develop a cadre of professionals through human resource programmes which support and expand staff competencies and ultimately enhance the sustainable delivery of service to our customers.
- To implement and monitor the administrative systems, procedures and policies of the Commission; to ensure the protection of its assets and legal rights and to provide an efficient support system through general office services.

### Corporate & Legal Services Division

During the year in review, the Corporate and Legal Services Division, sought to support the Commission's strategic direction through implementation of programmes designed to strengthen governance, leadership, management, staff capacity and the industrial relations climate within the organisation. These programmes included Training and Development initiatives across all levels designed to ensure that staff competencies support organizational needs. The Performance Management Appraisal System (PMAS) previously implemented was reviewed and reinforced, in pursuit of a performance driven culture within the Commission. The Property, Transport, Occupational Safety and Health (PTOSH) Unit continued to improve its management of the company's fleet vehicles and adaptation of OSH best practices. Advancement was made in the Vesting Project implemented in 2015, to strengthen the registration of NIC's proprietary interest within declared irrigation areas.

### Legal Services

During the period April 2016 to March 2017, Legal Services had oversight for:

1. Implementation of strategies to protect the Commission's irrigation infrastructure through securing lands for reservations and the acquisition of easements.
2. Implementation of the Vesting Project which seeks to register NIC's proprietary interest on lands within declared irrigation areas.
3. Managing litigation and negotiating claims against the Commission in a cost effective manner.
4. Cost containment initiatives.

There were five (5) cases during the financial year involving wrongful dismissal, unfair dismissal, debt recovery, negligence and wrongful death. Three (3) of these claims reside in the Supreme Court and all are still outstanding; the matters of wrongful dismissal and debt recovery are set for trial dates in 2017 and 2018. The matter of negligence and wrongful death was unsuccessful at mediation and has been referred to the Supreme Court for case management conference. The other matters of wrongful and unfair dismissal were submitted to the Ministry of Labour and Social Security for conciliation. Only one (1) was settled.



### **The Vesting Project**

Sections 16 to 18 of the Irrigation Act require the NIC to register its proprietary interest within the declared irrigation areas by way of a Vesting Order. The Vesting Project is of significant importance as non-registration of the proprietary interest could result in several issues including:

1. Limited capacity to pursue matters of encroachment in the Courts as the NIC does not hold registered title to canal lands.
2. An explosion of squatter settlements on properties along canal infrastructure resulting in safety issues for the staff.
3. Expenditure of public funds on infrastructure which are not held as assets on the Company's book.
4. Claims for negligence where houses constructed close to canals are damaged during flood or from see page.
5. Prevention of effective maintenance due to the construction of infrastructure on canal reservations.
6. On the sale of lands owned by the Commissioner of Lands (COL) - Titles being issued to private land interests of the NIC being noted.
7. Current lease arrangement for properties that should have been vested, with liabilities to pay property taxes.

Through use of Geographic Information System (GIS) technology to determine co-ordinates of all infrastructure owned by the NIC, a schedule was sent to the National Land Agency (NLA) in December 2015 for verification of ownership.

The NIC and NLA met in April 2016, at which time it was agreed that the NIC will extract the parcels belonging to the COL indicating the preferred method for vesting (Purchase, Lease, Easement etc.). This schedule was compiled and sent to NLA in December 2016 for verification and the commencement of the vesting process. The verification process is close to completion; however, the vesting process has not commenced.

An online database was also created to host information captured through the use of GIS technology about each infrastructure (pump house, canals, field offices, houses, etc.). A programme is now being designed to establish an organization wide code for each asset, and access granted to a designated team to update the database on a bi-weekly basis.

## **PROPERTY, TRANSPORT AND OCCUPATIONAL SAFETY AND HEALTH UNIT**

### **Transport - Vehicle Management System**

The PTOSH Unit's cost cutting initiative continues to be successful in decreasing gas consumption for fleet vehicles since its implementation in October 2014. This has been primarily due to the collaborative efforts of the responsible Managers and dispatchers of the vehicles. The year-to-date (YTD) average on petrol for April 2016 to March 2017 was above expectation.

### **Registration of Lien and Security Agreement**

The Unit continues the securing of staff motor vehicle loans, by registering the transactional agreement with the Companies Office of Jamaica on the National Security Interest in Personal Property (NSIPP) website and ensuring the endorsement of lien on each motor vehicle certificate of title.

### **Occupational Safety & Health (OSH)**

In anticipation of the enactment of the Jamaica Occupational Safety and Health Act (JOSHA) and Regulations, the NIC/OSH policy is being revised and a manual is being developed. The main purpose is to update the policy to reflect current trends and practices in OSH.



Throughout the year in review, the Unit's efforts focused on the following areas:

- Conducting risk assessment on the activities of trenching, excavating and working with pipes containing asbestos material.
- Procurement of personal protective equipment for employees exposed to hazardous chemicals during field applications at the Braco and New Forest Systems.
- Safety training for personnel supervising construction type and pipe repair activities.
- Implementing recommendations derived from Safety Audit report on St. Dorothy's Workshop. Some areas of focus were:
  - Layout of equipment;
  - Relocation of storage for material;
  - Relocation of welding plant; and
  - Improving Personal Protective Equipment (PPE) usage.

The Unit continues to investigate accidents, correct hazards and hazardous situations, guides the selection of appropriate PPE, recommends appropriate training, and guides the implementation of solutions that are based on the outcome of risk assessments.

## **HUMAN RESOURCES AND INDUSTRIAL RELATIONS DEPARTMENT**

### **Performance Management Appraisal System (PMAS)**

Further to the implementation of the Performance Management Appraisal System (PMAS) in April 2015, additional training sessions were organized for managerial and supervisory staff to reinforce the effective use and application of the PMAS system. This supported the strengthening of a performance driven culture throughout the organization.

### **Manpower Leave Planning**

Over the year in review, the Department continued to manage the scheduling and taking of vacation leave by all eligible employees. The objectives of this leave management approach are to promote an improved work life balance for our employees and to further reduce accrued vacation leave cost for the organization. For the review period, a further reduction of 11% was realized in the total accrued leave cost.

### **Scholarship Awards**

In 1998, the National Irrigation Commission Limited and the Unions representing the workers partnered to establish a Scholarship Awards Programme for children of permanent employees. The programme has expanded over the years to include both Secondary and Tertiary Awardees. For the year in review, fourteen (14) Scholarship Awards totaling Seven Hundred Thousand Dollars (\$700,000.00) were presented for the years 2015/16 and 2016/17. This included the Board of Directors' Award for the period 2015/16 granted to one male and one female child of a member of staff who had completed Grade 11 in 2015.





**Scholarship Awardees, L-R: Kenyata Thomas, Abigail Pollack, Marshalee Cain, Claudia Jones, Allesandro Anderson, Debra –Ann Gordon, Ackeem Austin, Josan Munroe, Jamier Ferguson, Gersandre Thompson, Jhaneel Burrell, Shadane Jonas, Shanice Brown and Olivia Kennedy.**

### Staff Development

A number of capacity building programmes for staff were implemented throughout the year in review by the Training and Development Unit. These initiatives were designed to support and strengthen the strategic direction and needs of the organisation. A number of staff members across all levels were trained over the period in various disciplines in the form of in-house training sessions as well as external seminars.



**International Atomic Energy Agency (IAEA) Workshop – Mr. Peter Buss, Manager of Agronomic Research and Development at Sentek Technologies, Adelaide, South Australia at the Research and Development Division, Bodles Research Station, in one of several classroom sessions with representatives of NIC and other Agencies.**





***Backhoe Operators Training – Practical Sessions***



***Stress Management Session***

### **Industrial Relations**

Further to the collaborative efforts of the Board, Management and Unions involved, there was resolution of outstanding disciplinary and industrial relations matters. A concerted effort was made to achieve and maintain industrial harmony between the organisation and the Unions representing staff, by means of frequent and open dialogue with all parties involved. The Union Negotiations for the period have been partially concluded.



# YEAR IN REVIEW:

## Engineering & Technical Services

### CORPORATE OBJECTIVE

- To implement methods which will improve efficiencies in procurement, conveyance and delivery of irrigation water to enhance the quality and reliability of service.

The activities of the Engineering & Technical Services (ETS) Department are summarized as follows:

1. Optimizing Infrastructural Effectiveness & Sustainability;
2. Enhancing Production Through Distribution & Conveyance Systems;
3. Facilitating the Optimization of Energy Use; and
4. Enhancing Organizational Development & Institutional Strengthening.

### OVERVIEW

During the financial year, the following units within the ETS Department were engaged in activities aligned with the Priority Programmes in the NIC's Strategic Business Plan for the period 2015-2018:

- Design;
- Energy Management;
- Civil;
- Electrical/Mechanical/Workshop;
- Operations (Eastern, Central & Western); and
- Security.

Notwithstanding the resource constraints, the Engineering team continued to focus on the delivery of the organizational goals. The agreed targets were achieved in several key areas including irrigation water delivery, civil works installation, mechanical maintenance and security risk reduction.

### WATER PRODUCTION

The Department employed various strategies such as water rotation and irrigation scheduling to deliver flows to customers.

During the year, the NIC produced a total of 64.5 million cubic metres of water and sold 43.2 million cubic metres or 67%, exceeding 66.3% for the prior year.



## SUMMARY PRODUCTION VERSUS INVOICING BY DISTRICT IN APR. 2016 – MAR. 2017

**Table 1: Volume of Water Produced and Sold During 2016/17 Financial Year**

Col. 1	Col. 2	Col. 3	Col. 4	Col. 5	Col. 6	Col. 7	Col. 8	Col. 9	Col. 10
Location	Produced (m3)	Invoiced (m3)	%Age Invoiced	Inv. Target (%)	Energy used (kWh)	JPSCO Energy Cost (\$)	Energy Cost (\$/m3) Prod.	JPSCO Energy Cost (\$/m3) Inv.	Kwh/m3 produced
Colbeck	174,067	148,890	85.5%	85%	71,422	3,427,037.53	19.69	23.02	0.41
St. Dorothy	8,117,192	5,193,759	64.0%	65%	1,259,125	35,510,759.38	4.37	6.84	0.16
Blocks A - E, Bernard Lodge	5,196,622	3,623,012	69.7%	85%	1,259,077	35,898,879.85	6.91	9.91	0.24
Amity Hall	177,010	-	0.0%	85%	59,501	2,231,749.07	12.61	#DIV/0!	0.34
Plantain Garden River	95,620	10,856	11.4%	85%	-	-	0.00	0.00	0.00
Phillipsfield/Heartease /Norris	816,900	694,405	85.0%	85%	307,810	10,608,623.31	12.99	15.28	0.38
Rio Cobre Open Canal	6,501,513	17,232,683	65.0%	65%	-	-	0.00	0.00	0.00
TOTAL (EASTERN REGION)	41,078,923	6,903,605	65.5%	65%	2,956,935	87,677,049.14	2.13	3.26	0.07
New Forest/Duff House	1,475,500	1,268,141	85.9%	85%	1,239,441	31,449,314.39	21.31	24.80	0.84
Mid Clarendon	3,074,185	7,061,198	54.0%	65%	3,925,624	126,691,797.83	9.69	17.94	0.30
Vernamfield	411,381	490,096			168,146	4,981,917.40	12.11	10.17	0.41
Spring Plain/St. Jago	1,150,123.43	975,618.92	0.85		399,241.20	16,275,785.90	14.15	16.68	0.35
TOTAL (CENTRAL REGION)	6,111,190	9,795,054	60.8%	65%	5,732,452	179,398,815.52	11.14	18.32	0.36
Hounslow	3,591,730	3,335,869	92.9%	85%	1,291,953	45,063,175.08	12.55	13.51	0.36
Beacon/Little Park	3,063,914	2,626,052	85.7%	85%	1,895,281	49,572,198.37	16.18	18.88	0.62
Braco	642,786	562,850	87.6%	85%	172,031	5,393,471.02	8.39	9.58	0.27
Seven Rivers	26,765	49,587	185.3%		-	-	0.00	0.00	0.00
TOTAL (WESTERN REGION)	7,325,195	6,574,358	89.7%	85%	3,359,266	100,028,844.47	13.66	15.21	0.46
OVERALL	4,515,308	3,273,017	67.07%	65%	2,048,653	367,104,709	5.69	8.48	0.19

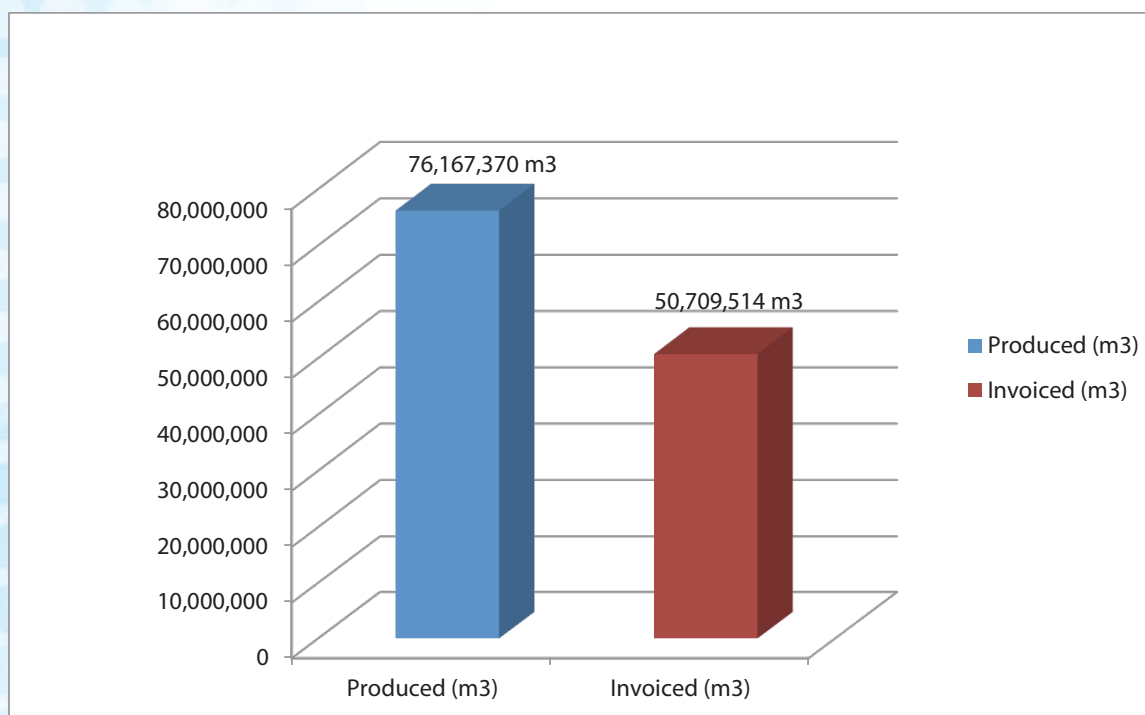
### KEY P: Pressurized

REGION	Produced (m3)	Invoiced (m3)	%Inv	Unit Energy Cost (\$/m3) Prod.	Unit Energy Cost (\$/m3) Sold.
Eastern	41,078,923	26,903,605	65.5%	2.13	3.26
Central	16,111,190	9,795,054	60.8%	11.14	18.32
Western	7,325,195	6,574,358	89.7%	13.66	15.21
OVERALL	64,515,308	43,273,017	67.07%	5.69	8.48

KEY	
	Off target by more than 10%
	Off target by 10% or less
	Meets target



**Figure 1: Volume produced and sold during Financial Year 2016/17**



The NIC also employed several strategies to reduce system losses which were successful, primarily in the Rio Cobre and Mid-Clarendon Districts. However, there were some limitations due to resource constraints especially for the canal rehabilitation activities.

## ENERGY MANAGEMENT UNIT

The general objectives of the Energy Management Unit include:

- Developing and implementing strategies to increase efficiencies and reduce the NIC's energy demand;
- Implementing systems and procedures to minimize energy consumption and associated costs for buildings and irrigation infrastructure;
- Evaluating and implementing alternative energy solutions for electricity generation to offset the NIC's dependence on the Jamaica Public Service Company Limited (JPSCo); and
- Monitoring existing retrofits to ensure maximum energy and cost reduction possible.

### Performance 2016/17 Financial Year (FY)

For the 2016/17 financial year, the NIC consumed 12.03 giga watt hours (GWh) of energy to power its pumping and office operations at a cost of \$392.3M. This is a decrease of 24% in energy consumption and 20% in energy costs compared to the 2015/16 FY.

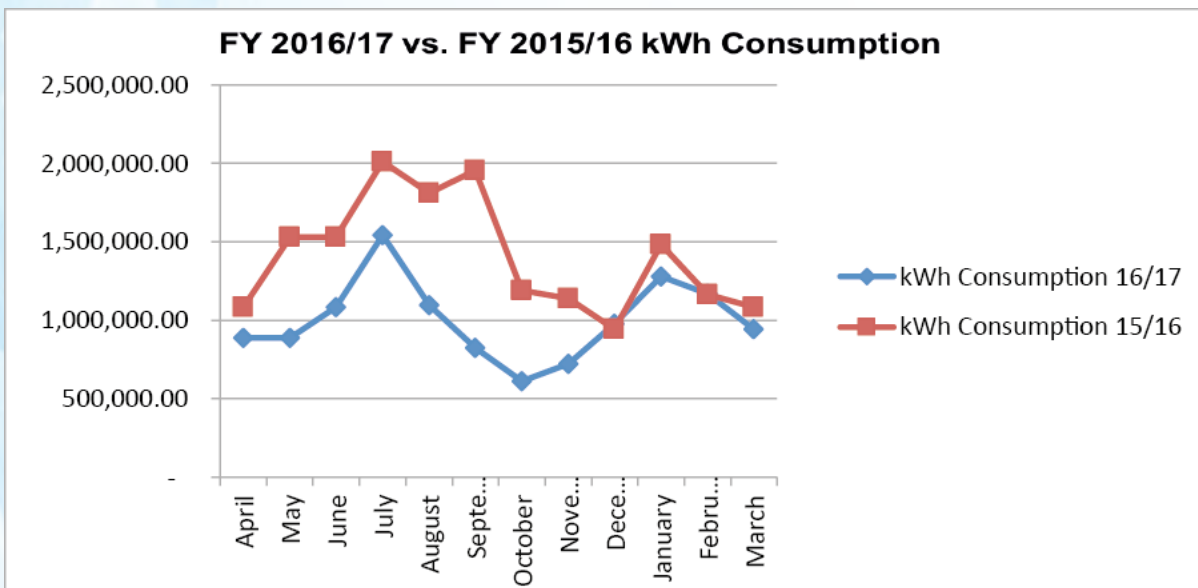


**Table 2: Energy Consumption and Cost for the Past Three Financial Years**

Period	Energy Consumption (GWh)	Pump Energy Cost (\$)
2014/15	12.54	484.0M
2015/16	16.68	492.3M
2016/17	12.71	392.3M

Energy costs for FY 2016/17 was 31% below the projected cost of \$569.9M for the period as a result of reduced pumping hours due to significant rainfall as well as lower than expected fuel and IPP charges from the JPSCo at the beginning of the financial year. Fuel and IPP charges account for approximately 45% of all JPSCo billing charges to the NIC.

The average cost for energy from JPSCo increased by 61% from \$19.02/kWh in April 2016 to \$30.74/kWh in March 2017.

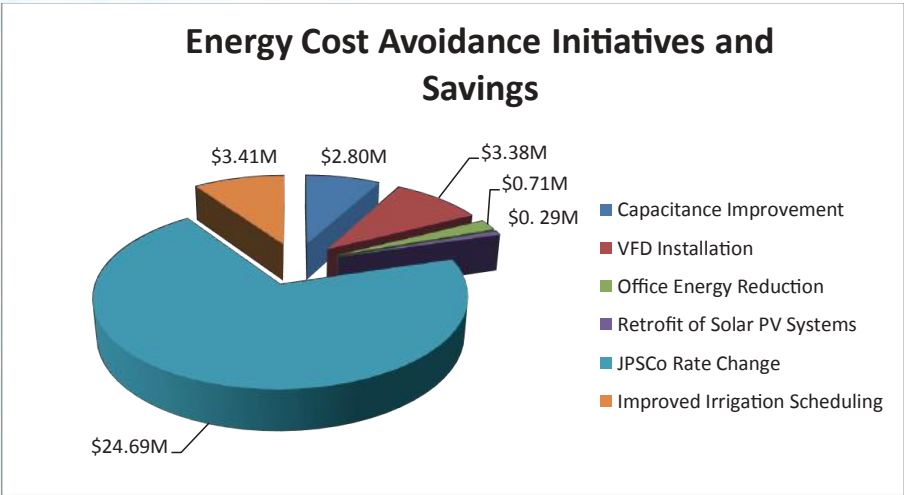
**Figure 2: Graph showing comparison of kWh energy consumption for FY 2016/17 and 2015/16**

### Energy and Energy Cost Avoidance

The Energy Management Unit has an energy cost avoidance target of 10% of JPSCo billing charges but achieved 9.0% avoidance to the sum of \$35.28M. Cost avoidance was as a result of energy management strategies, practices and retrofits aimed at reducing the NIC's energy demand. Through the energy management programme, the use of 205,000 kWh was avoided for the year without compromising water production or staff comfort levels. This figure represents 1.6% of the total annual consumption. Monthly kVA demands were reduced by 170 kVA or 4% of the average monthly demand.



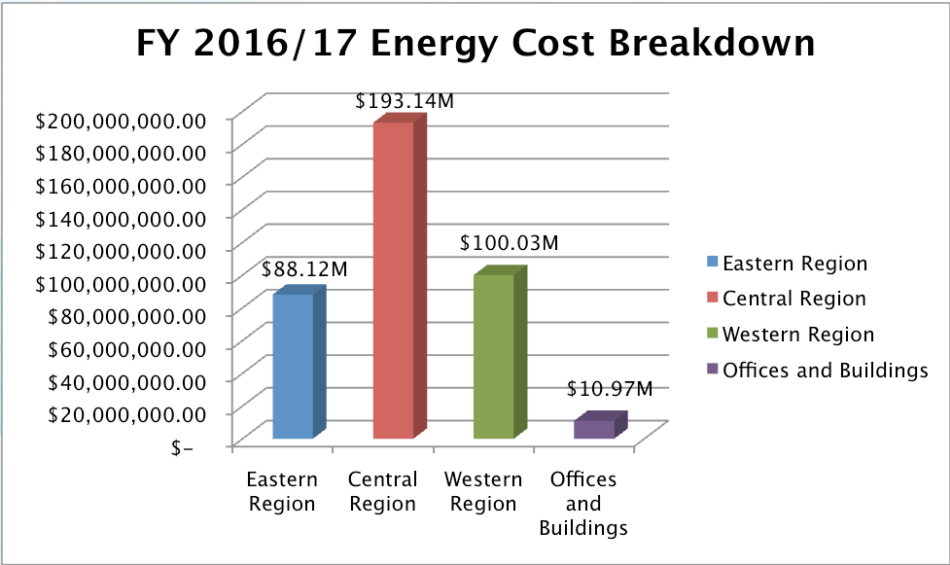
Figure 3: Energy cost avoidance initiatives and resulting savings



**Total Energy Cost per Region**

The Central Region accounted for 49% of the total energy cost for pumping activities while the Eastern Region utilized 22% and the Western Region accounted for 26%. Eleven (11) offices and administrative building accounted for 3% of the total energy cost. Figure 4 gives a breakdown of energy charges per region.

Figure 4: FY 2016/17 Energy Cost Breakdown



While the target energy consumption per cubic meter of water produced of 0.20 kWh/m<sup>3</sup> was exactly met, the target for energy cost per cubic meter produced was missed. The target was \$4.57/m<sup>3</sup> while an actual of \$5.06/m<sup>3</sup> was achieved. This is an 11% deviation from target and was due to a number of factors including:

- Lower water production from pumps utilizing a JPSCo Rate 40 tariff due to extended rainfall;
- High energy requirements and low efficiency motors for water pumping; and
- Very little self-generation of energy from solar photovoltaic (PV) systems at pump stations.

The Energy Management Unit is bolstering efforts to advance the retrofit of solar PV systems at a minimum of two pump stations and one office within the next financial year. A study is in progress to establish motor



load efficiencies at pump facilities across the three regions and develop a motor replacement programme with priority given to energy reduction yields.

### **Optimizing Irrigation Water Management to Improve Crop Output and Water Quality Output (IAEA Project)**

Implementation of the NIC's project with the International Atomic Energy Agency (IAEA) commenced with procurement of equipment and supplies, capacity building exercises and establishment of the NIC's Hounslow and Braco demonstration plots in St. Elizabeth and Trelawny respectively. Final preparations are being made for planting and data collection of the first of three crop cycles for this project phase.

**Table 3: IAEA's Contribution to the Project**

<b>Item Description</b>	<b>Cost (JMD)</b>
Drip Irrigation System	1,989,443.55
N -15 Urea Fertilizer	532,215.84
Neutron probe and an alyser/soil moisture sensors	2,154,720.00
Weather Station	673,350.00
Technical Officer Support Mission	673,350.00
<b>TOTAL</b>	<b>\$6,023,079.39</b>

**Table 4: NIC's Expenditure to date**

<b>Item Description</b>	<b>Cost (JMD)</b>
Drip Irrigation System	\$504,232.79
Planting Material	\$61,400.00
Fertilizers	\$108,656.00
Chemicals for Pest Management	\$273,206.00
<b>TOTAL</b>	<b>\$947,494.79</b>

An official Opening Ceremony for the IAEA workshop was held on August 22, 2016. The workshop included thirty-one (31) individuals from the NIC, Rural Agricultural Development Authority (RADA), Jamaica Agricultural Society (JAS), Ministry of Industry, Commerce, Agriculture and Fisheries (MICAFA), National Environment and Planning Agency (NEPA), University of the West Indies (UWI) and International Centre for Environment and Nuclear Sciences (ICENS). The participants received practical and theoretical training in soil, plant and water monitoring and management using isotopic and soil, water and salinity technologies.



## REHABILITATION - PROJECTS

The Civil Works Team continued efforts to improve the system maintenance of infrastructural improvements as outlined below.

**Table 5: Rehabilitation of irrigation infrastructure**

Section	Scope	Distance (m)	Impact	Jobs Created
Line 27, Rhymesbury	Canal rehabilitation with reinforced inner lining	620	5% reduction in water loss	65
Line 39, Rhymesbury	Reinforced HDPE Drain Pipe to replace old Masonry canal	480	“	15
Line 32, Rhymesbury	Canal rehabilitation with reinforced inner lining	170	“	17
Parnassus Pump Line	Replace asbestos cement pipe with PVC pipe	2,700	“	28
Line 35, Rhymesbury	Canal rehabilitation with reinforced inner lining	460	“	98
Old Milk River	Canal rehabilitation with reinforced inner lining	1,128	“	125
Spring Plain Pipe line Extension	Collaborated with Red Stripe to install PVC pipe line & 4 hydrants	370	Brought 35 acres of Cassava into Production	6
Old Harbour Branch	Rehabilitation of masonry canal with rubble stone	2,500	10 %reduction conveyance loss	80
River Cleaning, St. Elizabeth	Cleaned the Black River Upper and Lower Morass areas of aquatic growing plants and removed silt	63 ,560	Mitigation against flooding of residential and farming communities	1583
Improvement of Water Quality	Installation of gravel filtration system to improve water quality supplied to farmers in the Braco Irrigation District		Improved water quality	6



## PICTORAL DISPLAY OF REHABILITATION WORKS



***West Main Canal – Broken Sections***



***Old Harbour Branch Canal - Reconstruction of Stone Masonry Wall***





***Old Milk River Canal – Cracked Sections***



***Old Milk River – Repair Using Pipes***



***Old Milk River – Construction of Reinforcement Inner Lining***



***Reconstruction of Rhymesbury Canal  
Line 35***



***Completed Section of Line 35,  
Rhymesbury***





***Rhymesbury Line 39 – Leaking Section***



***Rhymesbury Line 39 - New Reinforced HDPE Pipes being installed***





***Rhymesbury Line 39 - Works advanced to complete HDPE pipe installation terminating in distribution chamber***



***Parnassus Pipe - Leaking Line AC Pipeline***





***Parnassus Pump Line - New PVC Pipeline***



***Gravel Filtration System Installed at Ebony Park***



## ELECTRICAL/MECHANICAL AND WORKSHOP

### Electrical/Mechanical Maintenance

In keeping with the corporate objectives, the Electrical/Mechanical Unit continued to undertake repair and maintenance as well as installation of assets with the aim of improving the efficiency of NIC's infrastructure. The Unit also participated in initiatives related to feasibility studies and designs of new Irrigation Systems.

### Preventative Maintenance Programme

The continuous execution of a scheduled Preventative Maintenance (PM) Programme has proven to be a critical tool in managing the asset portfolio of the NIC's pumping equipment, inclusive of pumps, motors and motor control centres (MCCs). A quarterly preventative maintenance programme has been implemented for the electrical and mechanical elements of the pumping plants. The work undertaken is outlined in Table 6.

**Table 6: Preventative Maintenance Achievement**

Activities	Apr 2016 – Jun 2016	Jul 2016 – Sep 2016	Oct 2016 – Dec 2016	Jan 2017 – Mar 2017	Proposed cycle	Contractor	Completed %
	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>			
<b>Electrical</b>	x	x	x	x	<b>4</b>	<b>NIC Staff Personnel</b>	<b>100</b>
<b>Mechanical</b>	x	x	x	x	<b>4</b>	<b>NIC Staff Personnel</b>	<b>100</b>
<b>Electrical</b>	x	x	x	x	<b>4</b>	<b>NIC Staff Personnel</b>	<b>100</b>
<b>Mechanical</b>	x	x	x	x	<b>4</b>	<b>External Contractor</b>	<b>100</b>
<b>Electrical</b>	x	x	x	x	<b>4</b>	<b>External Contractor</b>	<b>100</b>
<b>Mechanical</b>	x	x	x	x	<b>4</b>	<b>External Contractor</b>	<b>100</b>
	<b>Key</b>						
	<b>x</b>	<b>Service cycle completed</b>					
	<b>0</b>	<b>Service cycle not done</b>					

The targeted service cycles for all regions were achieved during the period under review. During the 2016/2017 financial year, a total of twelve (12) motors and seven (7) pumps were removed for general servicing and repairs. An initiative was also taken to procure a total of six (6) motors, three (3) variable speed drives (VFDs) and two (2) pump turbines and pump fittings as spare parts. This restorative maintenance programme was necessary to replace aging equipment, reduce downtime and improve both operation and production efficiencies. To date, one (1) submersible motor has been replaced the remaining equipment are being procured as outlined in Table 7.



**Table 7: Status of Replacement Motors, Pumps, Pump Fittings and Variable Frequency Drives**

Region	Location	Scope of work	Budget (\$J)	Impact	Comments
Central	Duff House	Replacement of motor and drop cable	10,000,000.00	Provide additional 1300 USGMP of irrigation water to the	Motor and cable has been installed pumping unit operational
Central	Parnassus	Replacement of motor	6,500,000.00	Improve operational efficiency	Motor being procured
Central	Rhymesbury Relift	Replacement of motor	1,000,000.00	Improve operational efficiency	Motor being procured
Central	New Forest	Replacement Motor	4,700,000.00	Reduce downtime	Motor being procured
Western	Little Park F3	Replacement Motor	3,500,000.00	Reduce downtime	Motor being procured
Eastern	Sandy Bay	Replacement of motor	1,700,000.00	Improve operational efficiency	Motor has been procured
Eastern	Cow Park A	Replacement of Turbine	1,000,000.00	Improve operational efficiency	Turbine being procured
Eastern	Bodles #2	Replacement of Turbine	1,700,000.00	Improve operational efficiency	Turbine being procured
Eastern Central Western		Pump fittings, to facilitate preventative maintenance	9,000,000.00	Reduce downtime, improve operational efficiency	Pump fittings are being procured
Central	Lower Rhymesbury Relift	Variable Frequency Drive (VFD) Installation	2,413,000.00	Reduce operational cost	Variable Frequency Drive being procured
Central	Upper Rhymesbury D/W	Variable Frequency Drive (VFD) Installation	4,064,000.00	Reduce operational cost	Variable Frequency Drive being procured
Central	Clarendon Park #1	Variable Frequency Drive (VFD) replacement	762,000.00	Reduce operational cost	Variable Frequency Drive being procured

In the Central Region, the Decoy and Duke Street pumping stations were rehabilitated to provide an additional 4,000 US gallon per minute (USGPM) of irrigation water to the Region. The works involved retrofitting of motor control centres (MCCs), repairs to motor and restoration of JPSCo power supply.

The Plumwood Well located in New Forest Irrigation Scheme was retrofitted with pump, motor and VFD. The electrical and civil works are in progress and slated for completion in May 2017. The completion of this pump station will provide an additional 900 USGPM of irrigation water to the New Forest network,



thereby enabling the NIC to provide a more reliable service and increased supply to meet the demand of its customers.

## WORKSHOP – SUMMARY OF ACTIVITIES

The Workshop focused on achieving the objective of optimizing infrastructural effectiveness and sustainability.

The initiatives undertaken to meet this objective included:

- Standardization of parts for the production of saddles;
- Streamlining of workshop floor space to provide additional work areas for the electrical department; and
- Utilizing rubber liners in sluice gates to reduce water losses.

**Table 8: Items produced for the Financial Year**

Item #	Description	Quantity
1	Sluice Gates	52
2	Saddles	38
3	Risers and Nipples	178
4	Flumes	28
5	Flange Adapter	16

### Major Achievements for the review period included:

- i. Modification to storage container facility at the St. Dorothy District Office.
- ii. Fabrication of templates for construction of canal inspection chambers across the regions.
- iii. Fabrication works for the new Project Office converting 960 sq. ft. of container spacing to provide 1600 sq. ft. of office space.





## DESIGN UNIT

During the Financial Year 2016/17, the Design Unit was mandated to carry out an assessment of the proposed Agro Park sites throughout the island as outlined in Table 9.

**Table 9: Summary Engineering Design Scope of Works - Agro Parks**

Project No.	Name of Project	Scope of Works	Area Impacted Hectare	Design Status				Implementation Status	Project/Designed Engineer's Estimate J\$	General Comments	Market Value of Engineering Design Services Fees for Works Completed in 2016 J\$
				Concept	Preliminary	Final	Weighted Overall percentage				
1	Spring Garden, Portland	Agro Park: complete irrigation system works	90	100%	100%	100%	100%	0%	72,100,000.00	Awaiting approval of funding: IDB	3,605,000.00
2	Downs Valley, Hounslow, St. Elizabeth	Agro Park: Cadastral and Engineering survey along with complete irrigation system excluding pumping station	87	100%	100%	100%	70%	0%	66,600,290.68	Cadastral and engineering survey completed. Final design underway. Supply and installation contract awaiting completion of procurement approval process.	2,331,010.17
3	Braco, Trelawny	NIC: Irrigation water quality improvement system	162	100%	25%	50%	100%	42%	13,160,000.00	Sand media filtration component completed. Expansion of sump outstanding	685,500.00
4	Yallahs, St. Thomas	NIC: Norris Sand Separator	92	100%	0%	100%	100%	0%	2,311,607.73	Awaiting completion Procurement approval process	115,580.39
5	Blocks, St. Catherine	NIC: Complete irrigation system works	1,829	100%	0%	100%	18%	0%	166,847,000.00	Design process awaiting the completion of GIS data collection	1,459,911.25
6	Pedro Plain Expansion	NIC: complete irrigation system works	2,581	100%	100%	0%	10%	0%	7,488,650,000.00	Awaiting feasibility study and funding	7,488,650.00
7	Amity Hall, St. Catherine	NIC: Pumping station rehabilitation	61	100%	100%	0%	10%	0%	TBD	Awaiting topographic survey to finalize pumping station design	TBD
8	Hill Run, St. Catherine	Agro Park: Facilitate process of engineering design External Review	267	100%	100%	100%	100%	0%	202,718,906.40	Review finalized with partial funding in place	202,718.91
9	Plantain Garden River (PGR), St. Thomas	Organic Farming irrigation	14	100%	100%	100%	100%	0%	11,000,000.00	Awaiting funding	275,000.00
	<b>TOTAL</b>		<b>5,183</b>						<b>8,023,387,804.81</b>		<b>16,163,370.72</b>

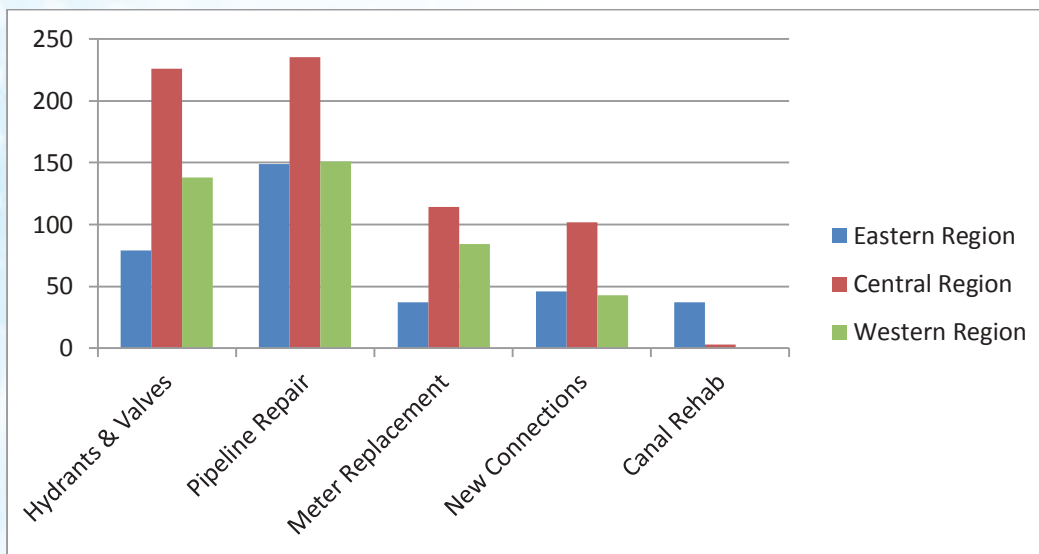


## CIVIL WORKS MAINTENANCE

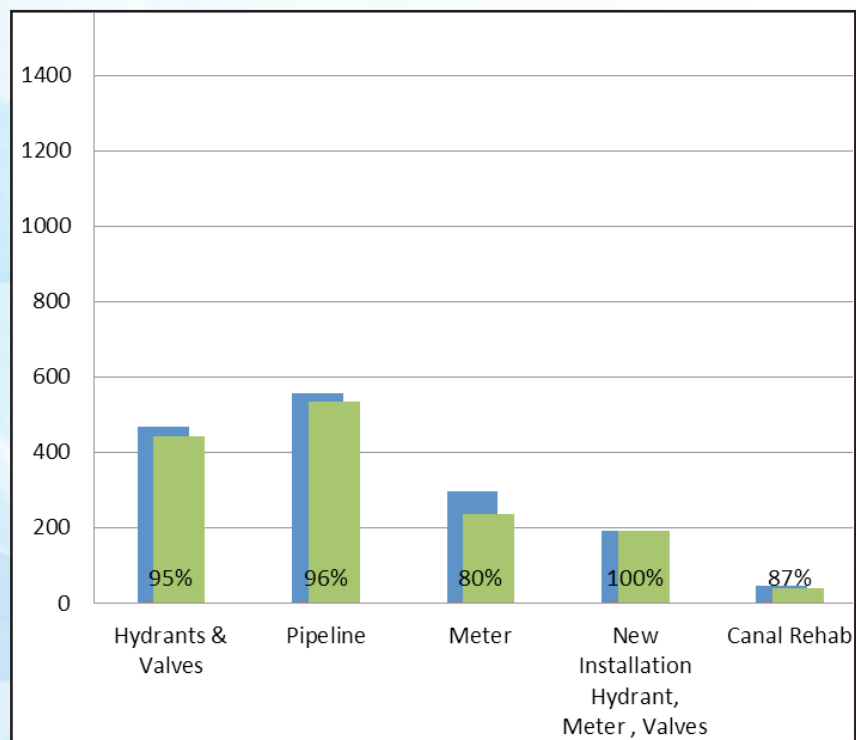
The Civil Works Unit is charged with the responsibility of maintaining and establishing new and existing structural designs; determining engineering costs, facilitating preventative maintenance and effecting connection and reconnection to systems.

The Civil Engineering team responded to service requests during the Financial Year; including 535 pipe repairs and 191 new meter connections as outlined in Figures 5 and 6.

**Figure 5: Major Activities Conducted by the Civil Unit**



**Figure 6: YTD performance on civil works maintenance**



Of the 1557 requests for maintenance/repairs submitted to the unit, 1444 were successfully satisfied.



## SECURITY SERVICES

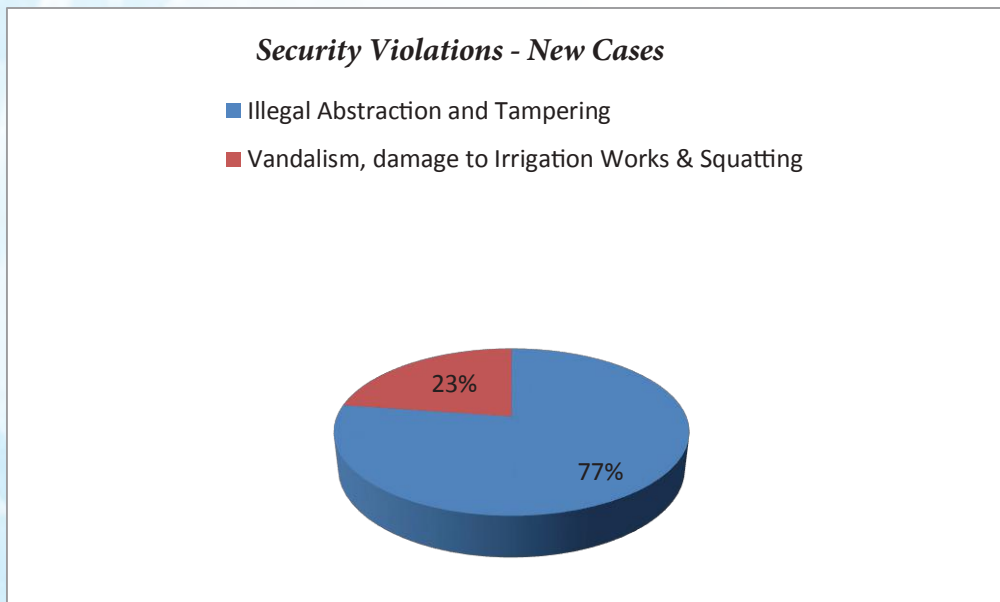
The mandate of the Security Unit is to reduce security risks to employees and properties through the identification, implementation and monitoring of security measures. During the financial year, a total of 22 major security incidents were committed against the Commission's systems island-wide.

The main security violations continued to be:

- Illegal abstraction of water and tampering with NIC equipment;
- Vandalism and damage to irrigation infrastructure;
- Squatting and encroachment on the canal reservations.

Of the twenty-two (22) incidents, 17 or 77% were for illegal abstraction and tampering; the remaining five cases or 23% comprised vandalism, damage to irrigation infrastructure, squatting and encroachment. Although there were two incidents of vandalism during the year, the Commission recorded a reduction in these types of incidents over the previous year. Figure 7 shows the analysis of incidents.

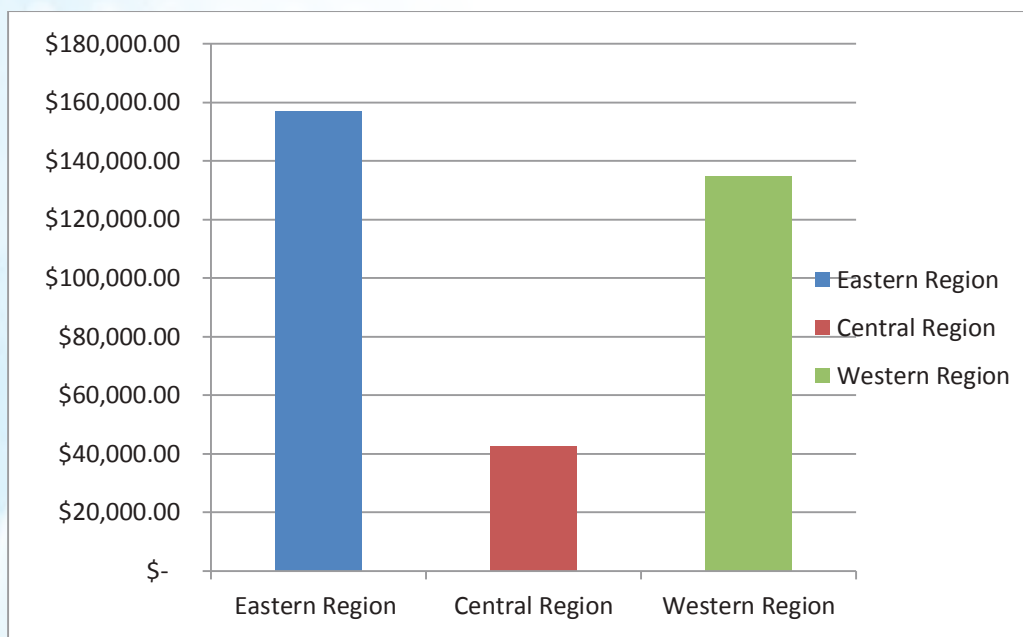
**Figure 7: Analysis of security incidents**





The total funds recovered by the Commission during the period under review from persons sanctioned for the offences of illegal abstraction and tampering or damage to irrigation infrastructure was \$334,036.94, as shown in Figure 8.

**Figure 8: Funds Recovered**



Employees who traverse the volatile areas on a daily basis, especially within the St. Catherine and Mid-Clarendon areas continue to express security concerns. While these risks cannot be totally eliminated, the Security Unit implemented the following measures to deter criminal acts against staff and properties:

- Increased security patrol by private security and in-house personnel;
- Increased enforcement of sanctions against offenders;
- Phased implementation of security technologies within the systems;
- Requests to respective Police jurisdictions for increased patrol of volatile and remote areas;
- Serving of notices of removal to approximately fifty-five (55) squatters residing on the canal reservations in St. Catherine;
- Swiftly removing new structures erected on canal reservations;
- Increased patrol during the summer months to prevent illegal recreational activities such as the blocking of the canals for swimming and bathing.

An ongoing public sensitization programme to raise awareness of the occurrences, sanctions and adverse effects of misuse and vandalism of the NIC systems is in place to further curtail some of the problems encountered.



## BREACHES: TAMPERING AND ILLEGAL ABSTRACTION IN MID-CLARENDON



*Illegal connection*



*Damaged Pump Shaft at Gravel Hill Pumping Station*





***Power supply cable stolen from Dam 2  
Motor Control***



***Motor Control Panel damaged by vandals***



# YEAR IN REVIEW:

## Project Development Services

### APPROACH TO IRRIGATION PROJECT DEVELOPMENT

A strategic outcome of the National Irrigation Commission Limited'S (NIC) 2015 Business Plan is increasing project funding access to support climate change and food security initiatives in order to expand access to irrigation water. This outcome is also desired by the Government of Jamaica (GOJ) which has identified the irrigated agriculture subsector for immediate expansion in order to meet the targets under the current growth strategy. The NIC is also seeking to ensure a robust and strategic response to the droughts experienced in 2014 and 2015, which negatively impacted growth in the agricultural sector during that period. As a direct response, the NIC has initiated its Project Development team to mobilize funding and ensure the approval and implementation of externally funded irrigation projects. Currently the core team incorporates available internal resources and also partners with the following key ministries and public agencies in order to develop projects:

1. Ministry of Economic Growth and Job Creation (MEGJC);
2. Ministry of Industry, Commerce, Agriculture and Fisheries (MICAF);
3. Planning Institute of Jamaica (PIOJ); and
4. Agro Investment Corporation (AIC).

During the year development work commenced on four major projects which are at various stages of implementation (See Table 10) namely:

1. Essex Valley Agricultural Development Project (EVADP);
2. South Clarendon, South St. Catherine and Kitson Town Project;
3. Pedro Plains Agricultural Development Project (PPADP); and
4. Update of the National Irrigation Development Plan (NIDP).



**Table 10: Development status and estimated cost for Project Development Services PDU Projects**

Proj. No.	Title	Estimated Cost (US\$)*1000	Funding Source	Status	Executing Partners
1	Essex Valley Agricultural Development Project (EVADP)	41.7 (£35.612)	UK -CIF	Project Approved by CDB & UK -CIF on March 27 to be implemented by August 31, 2022	MEGJC, NIC, AIC
2	South Clarendon, South St. Catherine and Kitson Town Project	20 (£17.5)	UK -CIF	Concept Summary approved by Public Investment Management Secretariat (PIM SEC ) and submitted to UK -CIF for funding consideration	MEGJC, NIC, AIC
3	Pedro Plains Agricultural Development Project (PPADP)	70	TBD	Concept Summary approved by PIMSEC on April 12, 2017.	MEGJC, NIC, AIC
4	Update of the National Irrigation Development Plan (NIDP)	1.0	TBD	Concept Summary prepared by NIC	NIC, MEGJC
	<b>TOTAL US(\$)</b>	<b>132.7</b>			

#### **IMPLEMENTATION OF PROJECTS FUNDED UNDER UNITED KINGDOM-CARIBBEAN INVESTMENT FUND (UK-CIF)**

To date, the UK-CIF is the principal source of funding for irrigation projects. The GOJ has been allocated approximately £53 million pounds of grant funds under the UK-CIF announced in 2016 by former UK Prime Minister David Cameron. The UK-CIF is being administered by the Caribbean Development Bank (CDB) and the GOJ has agreed that this allocation be dedicated to irrigation projects. In furtherance of this position, the NIC worked with MEGJC and its partner agencies AIC and PIOJ to successfully develop and obtain approval for two projects as follows:

1. Essex Valley Agricultural Development Project (EVADP); and
2. South Clarendon, South St. Catherine and Kitson Town Project.



## ESSEX VALLEY AGRICULTURAL DEVELOPMENT PROJECT



***Callaloo being grown without proper irrigation in Essex Valley, St. Elizabeth***

On March 6, 2017 the EVADP valued at £35,612 was approved by the CDB and UK-CIF for implementation over the period August 31, 2017 to August 31, 2022. This project aims to enhance the production and productivity levels of approximately 700 farmers on 718 hectares of land in a socially inclusive, gender equitable and climate sensitive manner. The EVADP will be implemented by the MEGJC with NIC and AIC as partners. It must be noted that the feasibility study for the EVADP was completed in August 2012, under the National Irrigation Development Programme (NIDP). The project will be funded as follows:

UK-CIF (grant):	£ 35,515 million
GOJ:	£ 0.097 million
<b>TOTAL</b>	<b>£ 35,612 million</b>

This project is expected to employ 360 persons during construction along with an additional 1400 persons on farming activities. The major components, associated costs and funding source are detailed in Table 11 below.

***Table 11: EVADP Components and Associated Costs***

INPUTS	ESTIMATED COST (£'000)		
	CDB/UK - CIF	GOJ	Total
1. Irrigation Infrastructure	16,835	-	16,835
2. Market Access Infrastructure	5,209	-	5,209
3. Renewable Energy	4,967	-	4,967
4. Technical Assistance	581	34	615
5. Land	0	49	49
6. Project Management	1,539		1,539
7. Vehicles, Furniture and Equipment	196		196
8. Physical Contingencies	3,620	7	3,627
9. Price Contingencies	2,568	7	2,575
<b>TOTAL (£'000)</b>	<b>35,515</b>	<b>97</b>	<b>35,612</b>



In order to expedite the project implementation, the CDB has agreed that the Director of Engineering and Technical Services be appointed Interim Project Manager. To date the following key activities have commenced under the EVADP:

- **Construction of the project office at the NIC's Head Office.** This activity is approximately 40% complete and will house the Project Execution Unit (PEU).
- **Acquisition of the required lands.** Being required for the several project components including construction of Market Access Infrastructure and Renewable Energy Systems, eleven (11) parcels of lands are to be provided by the GOJ. To date the NIC has engaged the National Land Agency (NLA) to obtain the available lots and also submitted to MEGJC, a Cabinet Submission to ensure the necessary Cabinet approval for the acquisitions.

During the upcoming Financial Year, the NIC will continue work to successfully implement the EVADP including the Land Acquisition along with the Climate Vulnerability Consultancy, Cadastral Surveys and Water Resource Development required to ensure the timely completion of the project.

### **SOUTH CLARENDON, SOUTH ST. CATHERINE AND KITSON TOWN PROJECT**

Prepared jointly by AIC and NIC, the Concept Summary for this project was approved by Public Investment Management Secretariat (PIMSEC) during the year and submitted to the United-Kingdom Department for International Development (DFID) on February 9, 2017 for funding consideration under the UK-CIF programme. The project proposal comprises irrigated agriculture development on 3,500 hectares of land in Southern Clarendon and Southern St. Catherine areas to include Kitson Town. Overall this project aims to diversify the crops being cultivated on former sugar lands.

The main elements of the proposal include:

- Irrigation Infrastructure Installation;
- Renewable Energy Systems Installation;
- Market Access infrastructure Installation; and
- Capacity Building for Beneficiaries.

It is expected that during the upcoming Financial Year, DFID will agree a Technical Assistance (TA) package to include a feasibility study on the proposed project followed by the development and implementation. This will further enhance agricultural productivity primarily on lands now lying idle as a result of the downturn in the local sugar industry.

## **OTHER PROJECTS BEING DEVELOPED**

As outlined in Table 11, work during the year commenced on proposals for both the Pedro Plains Irrigation Project and the Update of the NIDP.

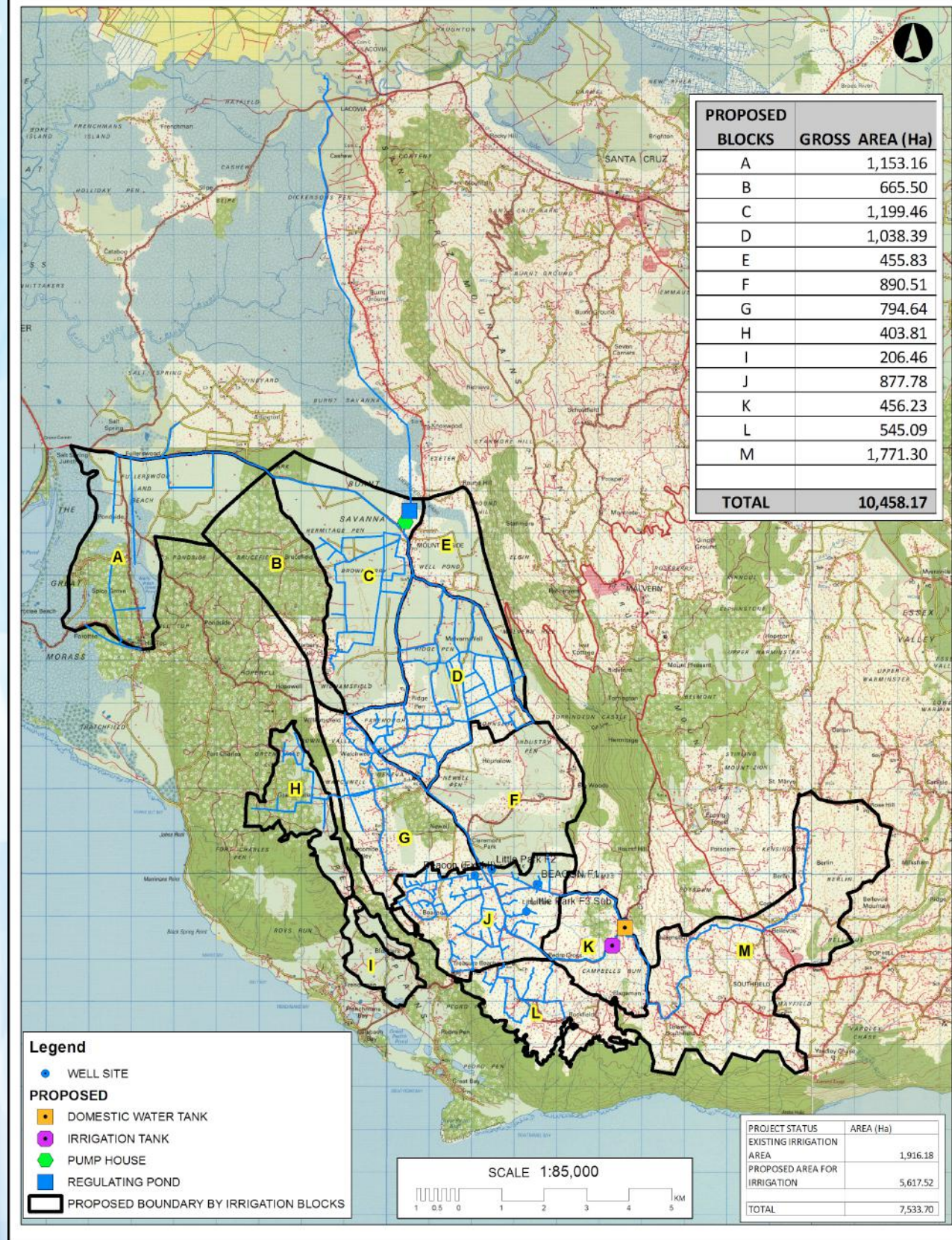
### **(a) Pedro Plains Irrigation Project**

The objective of this project is to bring into irrigated agriculture production an additional 1,450 hectares of land in Pedro Plains, St. Elizabeth by utilizing flows from the Black River. This would increase the area under irrigation by 124%. Some communities to be served include Brucefield, Mountainside and Newell. The Plan Level irrigation layout was completed and the project is expected to cost US\$70 million. The Concept Summary document will be presented to PIMSEC for approval during the upcoming Financial Year.

To date, the NIC has made an initial approach to the French Government for funding of the feasibility phase of the project.



## CONCEPTUAL: ASSESSMENT OF POTENTIAL IRRIGATION DEVELOPMENT - BLACK RIVER WATER SUPPLY





### **(b) Update of the NIDP**

The GOJ in 1998 commissioned the NIDP with the PIOJ being the executing agency. Of over 125 projects that were identified and reviewed, 83 projects were evaluated and 51 were proposed for implementation over the period 1998 to 2015. Additionally there is a need to reassess the potential for the irrigation sector taking into consideration key emerging issues including:

- the impact of climate change;
- the need to include renewable energy initiatives;
- use of treated effluent for irrigation;
- land use changes; and
- impact of revised agricultural product marketing standards including Global GAP.

The NIC during the year developed a Concept Summary for a project to revise and update the NIDP. This project is expected to cost US\$1 million and will be presented to PIMSEC for approval early in the upcoming Financial Year.



# YEAR IN REVIEW:

## Public Relations

During the Financial Year 2016-2017, the Public Relations Unit continued its focus on enhancing its internal and external communication processes. Using print and electronic methods as the main sources, great efforts were made to keep stakeholders and the general public informed and updated about the operations of the Commission.

In keeping with the stated strategy to actively promote NIC's employees and their contributions and achievements, features were done on several staff members in our newsletter, The Channel.

The work of the Commission was showcased in traditional and new media inclusive of several radio interviews and posts on social media which highlighted the activities of the Commission. This was further enhanced with publications in the print media about NIC's involvement in the:

- Implementation of the Essex Valley Agricultural Development Project, financed by the United Kingdom-Caribbean Infrastructure Fund (UK-CIF) and administered by the Caribbean Development Bank (CDB) and the Government of Jamaica (GOJ).
- Rehabilitation and improvement of the canal infrastructure.
- Operations of the Monymusk irrigation system in Clarendon.
- Partnership with the International Atomic Energy Association (IAEA) to facilitate training in 'Optimizing Irrigation Water Management to Improve Crop Output and Water Quality Control'.



**(L-R) Mr. Peter Buss, Manager of Agronomic Research and Development at Sentek Technologies, Adelaide, South Australia and Dr. Lee Heng, Technical Officer from International Atomic Energy Agency (IAEA) in Vienna, Austria.**

The Commission was featured on AgriViews, a television programme aired on Television Jamaica (TVJ) on June 12 and 14, 2017. In the St. Catherine Irrigation District, the feature focused on NIC's role in supplying water and maintaining the resources at the Innswood Artificial Groundwater System, as well as the filtration system installed at the Port Henderson Pump Station which improved our services to farmers.





***Mr. Rohan Stewart, Regional Systems Manager demonstrating use of the filtration system at the Port Henderson Pump Station in St. Catherine.***

In the Mid-Clarendon District, the programme featured the operation of the St. Toolis pump; the ramp service at Ebony Park; irrigation provided to the livestock and poultry industries; and the drip irrigation system used in vegetable farming and large scale sugarcane production in Vernamfield.



***Mr. Gary Morrison, Systems Operator in the Mid-Clarendon Irrigation District turns a gate to regulate water at the Ebony Park Pump Station.***



***Mr. Andel Bent, Assistant Energy Engineer (R) and Mr. Phillip O'Reggio, Mechanical Engineer discussing the features of the Motor Control Centre (MCC) at the Ebony Park Pump Station.***

### **Exhibitions and Promotional Events**

NIC participated in several exhibitions throughout the year to include:

- The Jamaica Agricultural Society's 2nd National Agricultural Food Security & Economic Summit on April 19, 2016. Power106FM highlighted our participation in the event.
- Calabar High School's Career Day Exposition on April 19, 2016. Power106FM and the Jamaica Observer highlighted our participation in the event.





***Mrs. Lorraine Geddes-McDonald (R), Commercial Manager engages students and teachers of Calabar High School at the School's Career Day Expo.***

- Denbigh Agricultural, Industrial and Food Show in August 5-7, 2016. NIC's exhibitions featured the growing of crops, mounted displays with posters, a scaled model of NIC's operation over its several districts as well as an operational fish pond. Our activities at the event were posted on social media and also highlighted through interviews on Power 106 FM and Jamaica Information Service (JIS) Radio.  
NIC's nominee for the Inter-American Institute for Cooperation on Agriculture (IICA) Youth in Agriculture Business Award, Mr. Martin Zsifkovics was presented with his award at the Denbigh Show. He is a young farmer and customer of the NIC in St. Elizabeth.
- National Ceremony and Exhibition for World Food Day, on October 14, 2016 at the College of Agriculture, Science and Education (CASE) in Portland. Mrs. Lorraine Geddes-McDonald, Director of Commercial Operations (Acting) was interviewed on an Outside Broadcast by Power106FM.
- All- Island Jamaica Cane Farmers' Association - 75th Anniversary Celebration on November 21, 2016. NIC's participation was publicized on Power106FM.
- Eat Jamaican Day Exhibition, on November 25, 2016 at Devon House, Kingston. NIC's participation was publicized on Power106FM.
- Hague Agricultural and Food Show, on Ash Wednesday, March 1, 2017 in Hague, Trelawny.





***Mr. Fabian Mason (L), Field Assistant in the Braco Irrigation District engages patrons at the Hague Agricultural and Food Show.***

### **Other Publications and Broadcasts**

- The Gleaner and Observer on December 25 and 28, 2016, respectively, published news stories about the NIC's involvement with a new drip irrigation project in New Forest, Manchester which was being hailed as a proactive measure for safeguarding the nation's food supply.
- Tropical Farmer's Almanac 2017- An advertisement of the activities was placed in the publication.
- Daily Observer published a News Story on February 1, 2017 showcasing NIC's operation of the Monymusk Irrigation System in Clarendon. Love 101 FM reported the story that same day.
- Daily Observer published a News Story on NIC's Scholarship Awards on February 19, 2017.
- The Gleaner published a full page of NIC's achievements and contribution to development and growth in a special advertising feature on March 2, 2016 .
- The Jamaica Observer published an advertisement in the World Water Day supplement on March 22, 2017.

During the next Financial Year, the Public Relations Unit will continue to strengthen internal and external communication with increased online presence and outreach activities so as to foster stronger relationships with all stakeholders and the general public. This will develop greater efficiency, increase information flow and overall productivity.



# YEAR IN REVIEW:

## Information Systems

### **Corporate Objective:**

To use Information and Communication Technology (ICT) to enable improvements in NIC's business processes and provide support services to achieve corporate goals.

### **2016-2017 INFORMATION SYSTEMS GOALS**

The Information Systems Department supports the NIC **'Learning and Growth'** pillar by contributing the policy of: *"We have the right tools, processes, information and structure to execute the strategy".*

Priorities under the NIC Operational Plan for the review period were:

- Increase volume of irrigation water delivered to 46 million cubic metres;
- Increase Total Revenue collected from Water Sales to \$540 million;
- Improve operational efficiency.

To facilitate the achievement of corporate objectives, some project initiatives included:

#### **The procurement of ICT infrastructure**

Project involved the acquisition of software and hardware to upgrade and for expansion of supporting infrastructure to meet current and five year projection needs. This included the acquisition of:

- Two high performance servers and two high capacities Network Attached Storage for virtualization of services;
- Windows Server 2012 Operation System Software to upgrade and improve network domain management and security;
- The acquisition of Microsoft SQL database software facilitate upgrade of the Microsoft Dynamics Suite and other databases needs;
- Microsoft SharePoint Server Enterprise software upgrade to improve file sharing and document management;
- Network routers to improve speed, management and security of the Virtual Private Network;
- A high volume scanner for files conversion to facilitate the establishment of a Digital Library; and
- Purchase of replacement computer hardware and the review and establishment of plans to deploy and upgrade the infrastructure.

#### **Application system upgrade for water loss and protection management**

This initiative involved the modification and upgrade of software systems to facilitate change in requirement for recording water production and consumption in the open canal system.

These developments allow for more accurate estimates of water flows by ensuring the recording of specific time of service to customers in hours.

#### **Inventory system upgrade expansion**

The system was expanded from two to five District Offices and users trained to support the corporate objective to enhance the overall efficiency of our inventory management.



## Geographic Information Systems (GIS) development

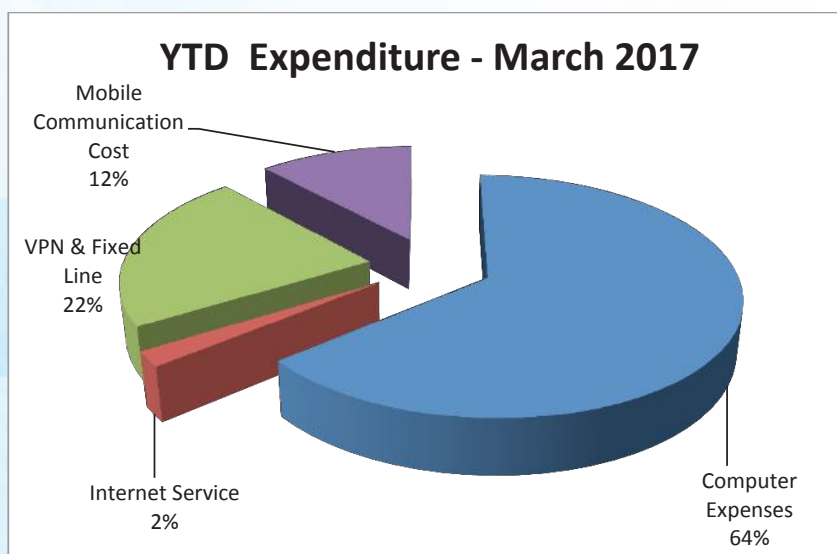
The GIS Unit commenced asset audits for two Irrigation Districts. In the Caymanas Blocks, the objective was to evaluate the current layout of the pipeline network for simulation and analysis for irrigation design purposes. At the end of the financial year, 159 sections (over 27km) of the main pipeline network had been identified. In the Mid-Clarendon Irrigation District, the objective was to conduct a canal audit of the irrigation network for the assessment of its features and operating condition for database update and maintenance purposes. At the end of the reporting period, approximately 85 km of open canal network was surveyed to include 70 canals and over 30 km of pipelines.

## Management and use of IT Resources

**Table 12: Information Systems Performance Matrix for the Management of Resources**

	Year-To-Date March 2017			Comment
	Actual	Target	Variance	
Number of databases developed/improved as a percentage of database projects started	90%	100%	-10%	
Number of IT Security breaches discovered or reported by users	0	0	0	
Downtime of IT Major System (Minutes)	0	2160	-2160	
Number of Help Desk requests satisfied within service standards as a percentage of total requests	97%	80%	17%	
Number of new/ improved business processes supported by IT	14	12	2	
Number of Projects Completed as a percent of total projects started	70%	80%	-10%	
% of major business processes supported by IT	77.69%	90.00%	-12.31%	

**Figure 9: Information Systems Expenditure Distribution by Major Categories**





## EXPECTATIONS FOR NEXT YEAR

The road map for next year to support corporate objectives will be focused on:

- New Server infrastructure in a virtual environment to upgrade domain for user and document management and security;
- Network routers to improve speed and security;
- Microsoft SQL Server and Microsoft Dynamics Suite upgrade;
- New Corporate email systems to improve remote access;
- Infrastructure to host corporate digital library to improve document management; and
- Phase 1 and phase 2 of In-house hosted Voice over Internet Protocol (VOIP) PBX system for the NIC.



# YEAR IN REVIEW:

## Commercial Operations

### Corporate Objectives:

To expand the customer base, maximize the collection of revenue and ensure continued customer satisfaction.

### Water Sales and Drainage

Water Sales and Drainage charges for the financial year 2016/2017 decreased by approximately 18.5% from \$648.04M to \$527.93M. Revenue from new customers accounted for approximately \$1.67M of this amount. The targeted volume billed of 46 million cubic metres fell by 6.5% or 3 million cubic metres to 43 million cubic metres.

A number of factors contributed to the decline in revenues and subsequent reduction in volume of water billed. These included:

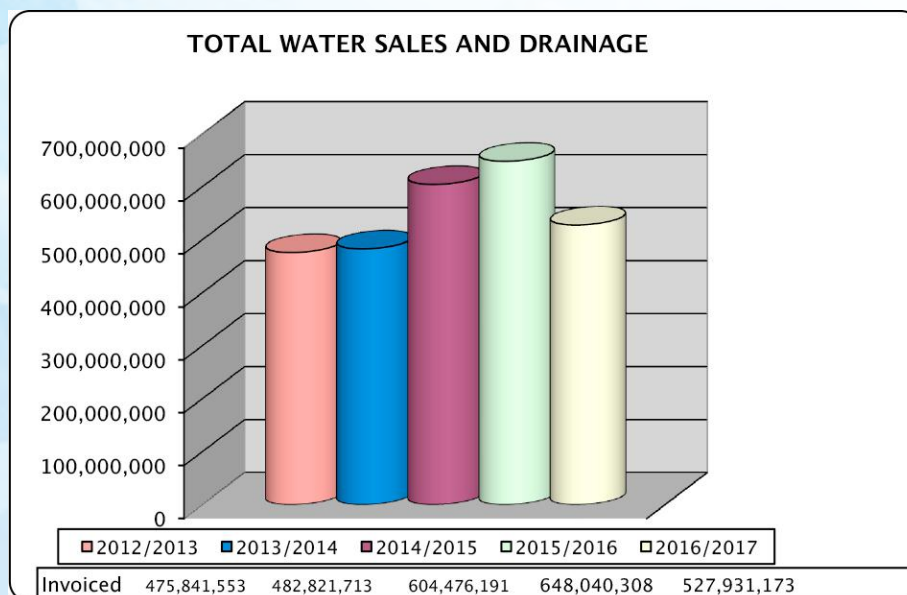
- Decrease in demand from sugarcane farmers;
- Decreased land use for sugarcane production;
- Excessive rainfall during the period compared to extreme drought conditions in the previous financial year 2015/2016. This resulted in lower demand for the product; and
- Systems downtime.

The percentage collection rate remained in excess of 90% and the Commission exceeded its collection target by \$46.6M (9.6%) to reach \$532.6M. The NIC continues to partner with its credit challenged customers and utilizes varied strategies with a view to optimizing revenue collection.

In response to our customers need, the NIC is now moving to implement outsourced collection points. Customers will have the opportunity of utilizing a number of options for bill payments.

The Commission's levels of invoicing for the financial years 2012/2013 to 2016/2017 are outlined below:

**Figure 10: Total Water Sales and Drainage**



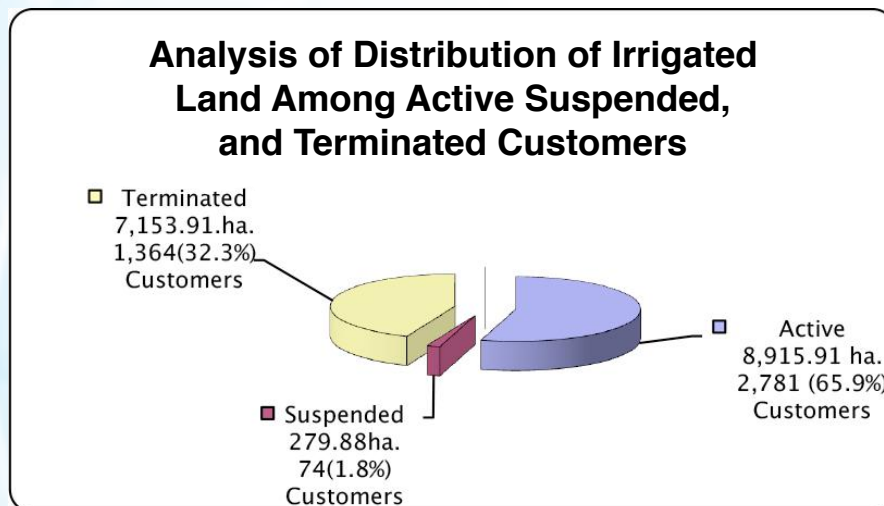


## Customer Service

The NIC aims to meet the needs of its customers with efficiency and fairness, respect, and at all times providing a friendly service. To this end, continuous customer engagement remains our utmost priority.

During the year, through collaborative efforts, the Commercial and Human Resources Departments continued training of key personnel in Customer Service. This training is expected to result in improved service delivery of the highest quality to our customers.

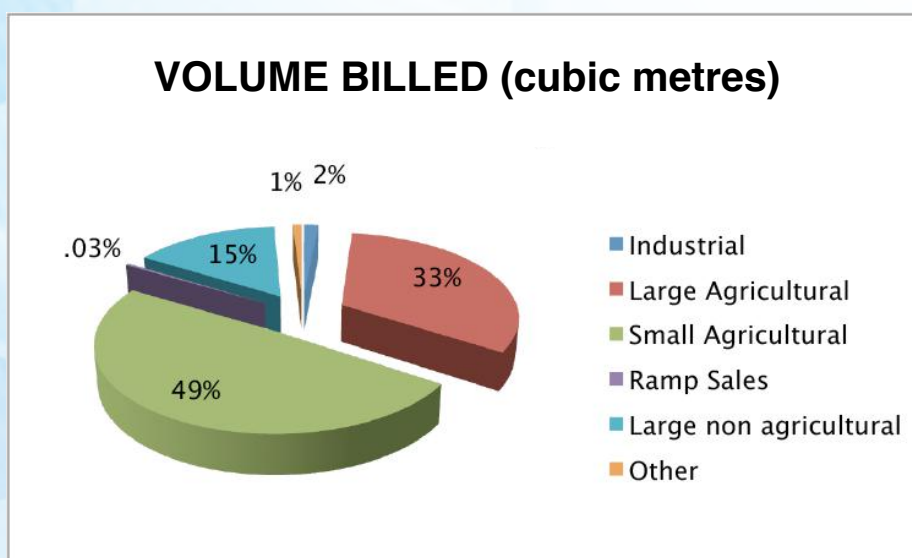
**Figure 11: Analysis of Customers and Service Areas**



The pie chart above depicts the distribution of irrigated lands among customers classified as active, suspended and terminated. Based on the total customer base of 4,219 occupying approximately 16,349.70 hectares of land, 65.9% or 2,781 customers on 8,915.91 hectares were active while 1.8%, 74 customers on 279.88 hectares were suspended; and 32.3% or 1,364 customers on 7,153.91 hectares were terminated. The number of active customers on irrigated lands decreased from 2,824 to 2,781 reflecting a 1.5% decrease.

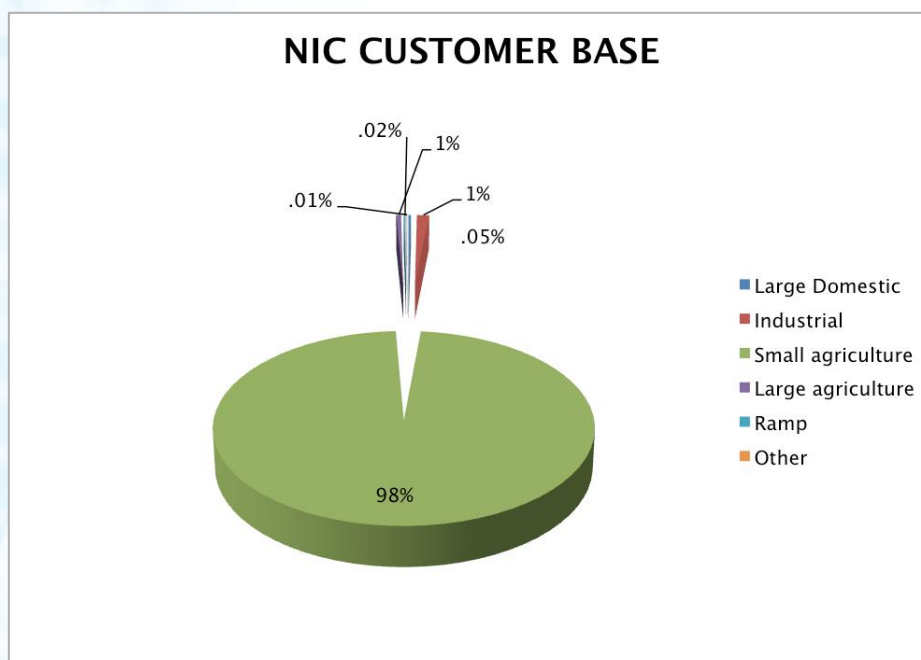
## Customer Base

**Figure 12: Volume Billed (Cubic Metres)**





**Figure 13: NIC Customer Base**



The Pie Chart above is reflective of the classification of NIC's customers.

Small agricultural users accounted for 98% of number of customers and 49% of volume billed while large agricultural users represented 0.05% of customers and 33% of the total volume billed. Large non-agricultural users accounted for 0.02% of customers and 15% of the total volume billed, while industrial users accounted for 0.1% of customers and 2% of the total volume billed.

Ramp Sales accounted for less than 1% of volume billed. Sugarcane accounted for 6% of the customer base. While aquaculture accounted for 0.01%. Other crops grown accounted for 92%.

Large customers accounted for 79% of the total revenue

#### **Newly Established Irrigation Scheme:**

The newly established irrigation schemes continue to contribute to the growth in potential revenues for the organization. The most recently commissioned scheme, Amity Hall in St Catherine is now fully operational with 13 of the 16 applicants actively engaged.

#### **Customer Care**

During the period, the NIC has experienced a reduction in customer complaints. The Commission continues to maintain improved service delivery and remains committed to delivering the highest quality of service.

#### **Irrigation Water Applications**

During the year, new applications for water were received and reviewed from the NIC's Eastern, Central and Western Regions as follows:

- **Eastern Region:**  
Approximately 70 applications with a corresponding acreage of 106.78 hectares were granted.
- **Western Region:**  
Some 119 applications were approved for a total of 970.39 hectares.



The Commercial Department is committed to achieving the following projected targets for the 2017/2018 fiscal year:

- Eight percent (8%) increase in the customer base;
- Eight percent (8%) increase in active lands under production;
- Volume of water sold of 36.4 million cubic metres; and
- Revenue intake of \$485 million.



# YEAR IN REVIEW:

## Finance and Corporate Planning

### Corporate Objectives:

To continue the development of financial management systems to provide accurate, reliable, timely and relevant information for decision-making to ensure the financial resources are optimally developed to drive service delivery.

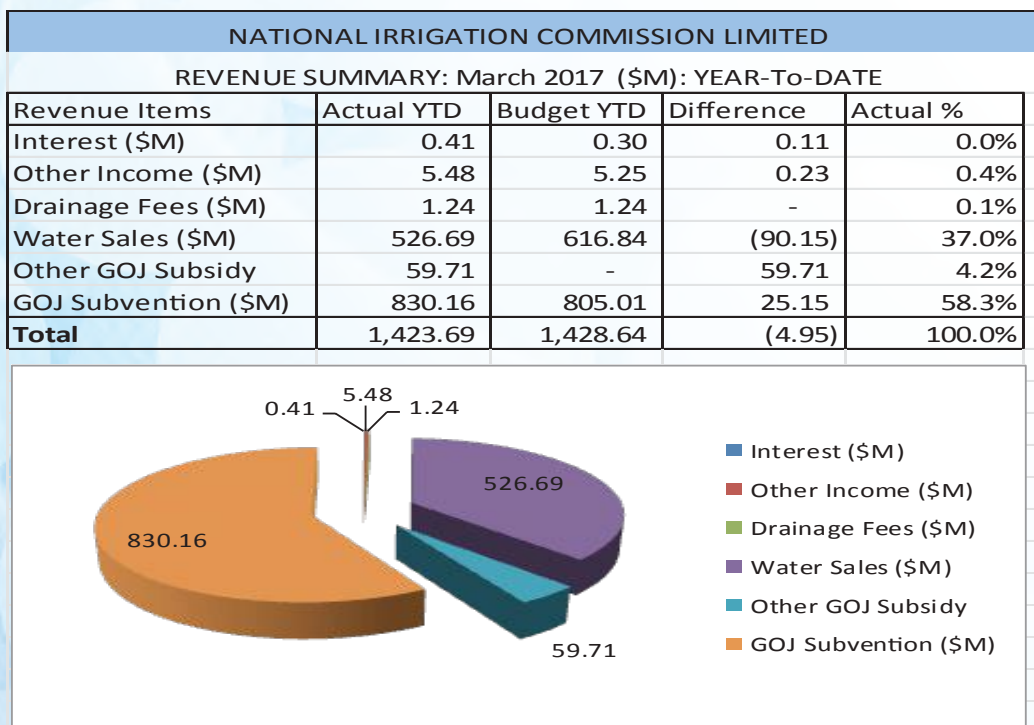
### FINANCIAL SUMMARY

The Commission recorded a surplus of Two Million (\$2.3M) for Financial Year 2016/2017. This represents a decline of (\$184.1M) relative to the previous year's surplus of \$186.4M.

### REVENUE

Total Income for Year 2016/2017 was \$1.42 billion, a decline of \$0.09 billion, compared to the previous year's income figure of \$1.51 billion. The reduction in revenue was due primarily to reduced demand for irrigation water resulting from increased rainfall following two seasons of drought.

**Fig 14: Revenue Summary: March 2017 (\$M): Year-to-Date**



### GOJ SUBSIDY

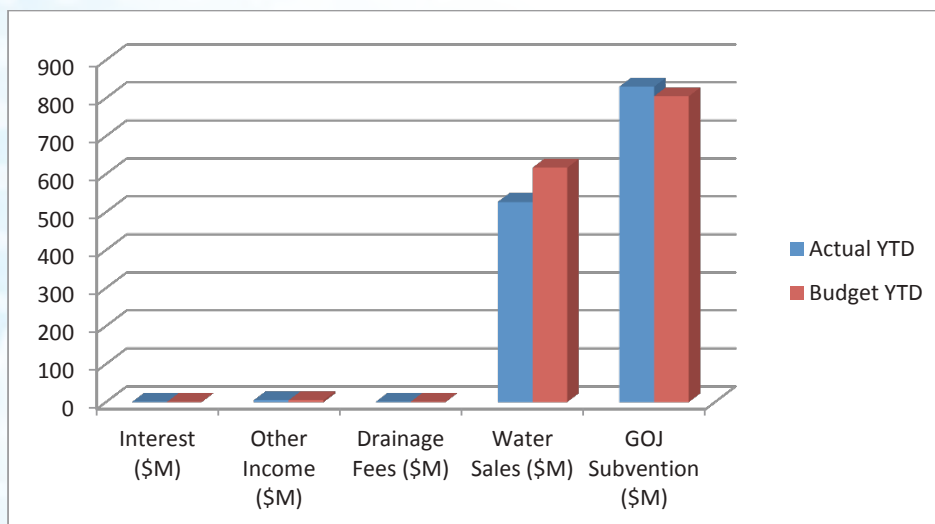
Government of Jamaica (GOJ) subsidy amounted to \$830.16 million or 58.3% of total revenue. This exceeded the budgeted figure of \$805.01 million by \$25.15 million. The subsidy of \$830.16 million represents a decrease of \$23.46 compared to the figure of \$853.62 million provided by the GOJ in the previous year. However, the GOJ provided other subsidies amounting to \$59.71 million.



## WATER SALES & DRAINAGE CHARGES

Revenue from water sales experienced a decline, falling from \$648 million in the previous year to \$526.69 million, a reduction of \$121.31 million or 18.72%. The reduction was reflective of the changes in climatic conditions as the Island began to experience significant increase in rainfall following two seasons of drought.

**Fig 15: Revenue Items – Year 2016/2017**

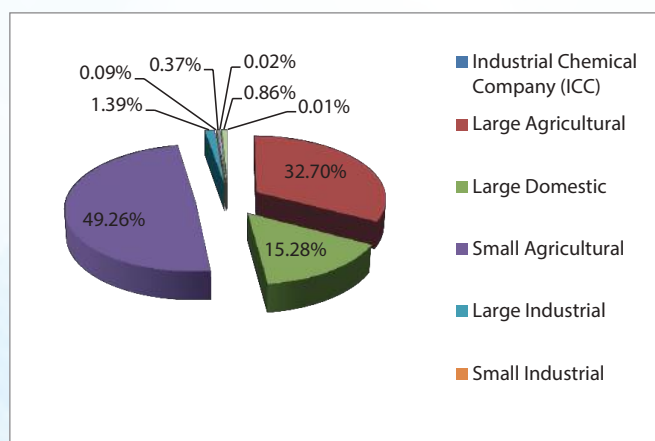


The Commission used the period to undertake a number of major repairs in the Mid Clarendon and St. Elizabeth Districts, in order to improve the reliability of the system and in anticipation of resumption of the usual demand pattern.

The customer base of the Commission includes large and small Farmers as well as a number of industrial users. However approximately 82.35% of the customer base represents agricultural users.

**Fig 16: Revenue Items – Year 2016/2017**

NIC - CUSTOMER BASE: Y-T-D: March 2017		
Customer Type	% of Sale	Cu.Met Sold
Industrial Chemical Company Ltd. (ICC)	0.01%	4,320
Large Agricultural	32.70%	14,060,317
Large Domestic	15.28%	6,571,125
Small Agricultural	49.26%	21,181,233
Large Industrial	1.39%	599,673
Small Industrial	0.09%	38,023
Ramp Sales	0.37%	160,446
Rapid Response Unit (RRU)	0.02%	9,216
Other	0.86%	370,307
	100.00%	42,994,658



### INCOME FROM DRAINAGE OPERATIONS

Significant work was carried out by the Commission during the year as required by the Drainage Act, the Commission still continues its struggle to generate satisfactory income from this operation. Revenue from drainage charges again remained flat at \$1.2M for Year 2016/2017 as the Commission endeavours to make representation for the long awaited increase in drainage charges.



## OPERATING EXPENDITURE

Total expenses for the Year 2016/2017 amounted to \$1.455 billion, an increase of \$0.133 billion or 10.06% over the previous year's expenditure of \$1.322 billion.

Operating cost amounted to \$1.077 billion, an increase of \$0.054 billion or 5.3% compared to the previous year's figure of \$1.03 billion. The Commission experienced mixed fortunes during the year with electricity pumping cost decreasing to \$392.26 million, a reduction of \$69.60 million compared to the previous year's actual cost of \$461.86 million. The following factors contributed to the reduction:

- Lower demand as a result of increased rainfall;
- Decrease in world oil prices;
- Introduction of 'varied pumping hours' to effect operating efficiencies;
- Use of JPSCo rates that better represent the Commission's pattern of usage;
- Installation of Variable Frequency Drives (VFD); and
- Better on-farm water management.

On the other hand, the Commission had to (i) pay arrears in salary increases for the two-year period 2015/2017, as part of the wage settlement with the unions, and (ii) assume responsibility for the operations of the Monymusk Irrigation System in mid-year, as mandated by way of Cabinet Decision No. 18/16 dated June 6, 2016.

## CAPITAL WORKS

During the year the Commission was provided with Capital "A" funding of \$196.5 million to assist in canal restoration works within the Mid Clarendon and St. Catherine Districts, including parts of:

- Upper Old Harbour Phase 1;
- Upper Old Harbour Main Canal Restoration - Phase 2;
- Upper Old Harbour Main Canal – Emergency Work (Effluent);
- Old Harbour – Lower Main Canal (Sharper Lane);
- Rhymesbury – Line #32;
- Rhymesbury – Line #35;
- Rhymesbury – Line #27;
- Rhymesbury – Line #39;
- Parnassus;
- Old Milk River Rehabilitation Project – Phase 1;
- Old Milk River Rehabilitation – Phase 2; and
- Bernard Lodge Well Rehabilitation: Newlands #3.

Allocation was also made to assist in the acquisition of critical spare parts to sustain the existing pumping infrastructure.



**Table 13 - National Irrigation Commission Limited Five Year Statistics**

SIGNIFICANT METRICS	\$'000	\$'000	\$'000	\$'000	\$'000
	2016/2017	2015/2016	2014/2015	2013/2014	2012/2013
Shareholders' Equity	542,197	614,335	367,891	447,268	627,535
% Inc/(dec.) compared to prior year	-11.74%	66.98%	-17.75%	-35.18%	6.95%
Total Assets	1,307,416	1,263,887	1,152,446	1,161,994	1,263,443
% Inc/(dec.) compared to prior year	3.44%	9.66%	-0.82%	-8.02%	0.26%
PROFIT & LOSS ACCOUNT					
Operating Revenue	1,363,983	1,501,662	1,235,205	984,543	1,005,853
(%Dec)/% Inc. compared to prior year	-9.17%	21.57%	25.46%	-2.12%	0.59%
Accumulated Surplus	134,067	206,205	-40,238	39,138	219,405
(% Decr.)/% Inc. compared to prior year	-34.98%	612.46%	-203%	-82%	23%
IMPORTANT RATIOS					
Admin. Exps. as a % of Total Cost	56.15%	21.76%	20.57%	20.74%	24.45%
Operating Exp. as a % of Total Cost	43.85%	78.23%	79.73%	79.26%	75.45%
Electricity Exp. as a % of Total Cost	14.18%	35.49%	36.14%	29.99%	27.25%
Electricity Exps. as a % of Operating Cost	32.33%	45.36%	45.56%	37.83%	36.14%
Rates/Water Sales as a % of Total Cost	19.07%	49.69%	44.24%	40.45%	46.95%
Rates/Water Sales as a % of Operating Cost	43.48%	63.52%	55.77%	51.03%	62.27%
GOJ Subsidy as a % of Total Cost	51.14%	65.58%	46.06%	42.03%	52.25%
GOJ Subsidy as a % of Operating Cost	116.62%	61.82%	58.07%	53.03%	68.29%

Total assets decreased marginally from \$1.26B to \$1.25B by \$0.01B or 0.79% relative to the previous year. The slight decline in the Commission's asset base was due mainly to the impairment in the Commission's stock of old irrigation equipment.

Accounts Payable and accrued charges increased by \$3.63 million from \$308.12 million in the previous year to \$311.75 million due mainly to provision made for amounts due to the Government, presently under review.

The surplus of \$2 million reported for the Year 2016/2017 resulted in an increase of 0.64% in Shareholders' Equity.

During the year the Commission continued to engage with a number of local and international institutions including the Caribbean Development Bank (CDB) responsible for managing the UK-Caribbean Infrastructure Fund (UK-CIF); the French and Mexican Embassy in respect of infrastructure development support; the Jamaica Social Investment Fund (JSIF) for completion of the acquisition and installation of the industrial well pump set for Plumwood in Manchester; completion of the joint financing of the Braco Filtration System with the GOJ/Adaptation Fund and Agro Investment Corporation (AIC). There was also collaboration with the Agricultural Competitiveness Programme (ACP), Rural Agricultural Development Authority (RADA); and the Sugar Transformation Unit (STU) of the Ministry of Industry, Commerce, Agriculture and Fisheries.

The Finance Department, in keeping with its objective of automating the corporate reporting system, continued to work with the Information System Department. This was facilitated by the budgetary support provided during the Year 2016/2017 which allowed for the acquisition of necessary hardware and software to upgrade the system.



# YEAR IN REVIEW:

## Internal Audit

### Corporate Objective:

The objective of Internal Audit is to conduct an independent systematic review, assessing risks and evaluating the controls designed to address those risks, thus providing management with the assurance that its operations are being conducted effectively, efficiently and economically.

During the financial year 2016/17, the NIC's Internal Audit Department completed audits and investigations resulting in reports which produced numerous recommendations for improvements in internal controls and operations.

### Investigative Activities:

**Table 14 - Investigation Audit Summary**

Audits Completed	Audits Planned	Pending Audits	Follow-Up Audits
12	12	-	3

Audit activities planned for 2016/2017:

- **Operational**

- I. **Contracts:** General works which included: Tendering, Evaluation, Selection, Performance, and Termination.

- II. **Procurement & Management of:** Items in stores, Fixed Assets, Annual Stock/Inventory/Survey.

- III. **Projects:** Recurring Demonstration Plot.

- IV. **Outstation visits to Districts and Project Sites.**

- V. **Special Assignment.**

- **Financial**

- Examination of NIC's financial operations.

- **Administrative**

- Review of Human Resource processes

- **Field Operations:**

- Review of Pump House operations;  
– Canal site visits, Agro Parks visits

- **Follow-Up Audit:**

- Hounslow meter audit  
Procurement audit  
NIC Property Management audit

### Management/Reporting Structure of the Internal Audit Unit

The chief Internal Auditor (CIA) reports to the Board of Directors and the Audit Committee. The Unit currently has two vacant posts for an Audit Specialist and a Field Auditor.



**NATIONAL IRRIGATION COMMISSION LIMITED**  
**Financial Statements**  
**Year ended**  
**March 31, 2017**





KPMG  
Chartered Accountants  
P.O. Box 76  
6 Duke Street  
Kingston  
Jamaica, W.I.  
+1 (876) 922 6640  
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To the Members of  
NATIONAL IRRIGATION COMMISSION LIMITED

## **Report on the Audit of the Financial Statements**

### *Opinion*

We have audited the financial statements of National Irrigation Commission Limited ("the company"), set out on pages 5 to 40, which comprise the statement of financial position as at March 31, 2017, the statements of profit or loss and other comprehensive income, changes in equity and cash flows for the year then ended, and notes, comprising significant accounting policies and other explanatory information.

In our opinion, the accompanying financial statements give a true and fair view of the financial position of the company as at March 31, 2017 and of the company's financial performance and cash flows for the year then ended in accordance with International Financial Reporting Standards (IFRS) and the Jamaican Companies Act.

### *Basis for Opinion*

We conducted our audit in accordance with International Standards on Auditing (ISAs). Our responsibilities under those standards are further described in the *Auditors' Responsibilities for the Audit of the Financial Statements* section of our report. We are independent of the company in accordance with the International Ethics Standards Board for Accountants Code of Ethics for Professional Accountants (IESBA Code), and we have fulfilled our other ethical responsibilities in accordance with the IESBA Code. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

KPMG, a Jamaican partnership and a member firm of the KPMG network of independent member firms affiliated with KPMG International Cooperative ("KPMG International"), a Swiss entity.

R. Tarun Handa  
Cynthia L. Lawrence  
Rajan Trehan  
Norman O. Rainford  
Nigel R. Chambers

W. Gihan C. de Mel  
Nyssa A. Johnson  
Wilbert A. Spence  
Rochelle N. Stephenson



## INDEPENDENT AUDITORS' REPORT (CONTINUED)

To the Members of  
NATIONAL IRRIGATION COMMISSION LIMITED

### **Report on the Audit of the Financial Statements (Continued)**

#### *Responsibilities of Management and Those Charged with Governance for the Financial Statements*

Management is responsible for the preparation of financial statements that give a true and fair view in accordance with IFRS and the Jamaican Companies Act, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is responsible for assessing the company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the company or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the company's financial reporting process.

#### *Auditors' Responsibilities for the Audit of the Financial Statements*

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with ISAs, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.





Page 3

## INDEPENDENT AUDITORS' REPORT (CONTINUED)

To the Members of  
NATIONAL IRRIGATION COMMISSION LIMITED

### **Report on the Audit of the Financial Statements (Continued)**

#### *Auditors' Responsibilities for the Audit of the Financial Statements (Continued)*

- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the company's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the company's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditors' report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditors' report. However, future events or conditions may cause the company to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.





Page 4

INDEPENDENT AUDITORS' REPORT (CONTINUED)

To the Members of  
NATIONAL IRRIGATION COMMISSION LIMITED

**Report on additional matters as required by the Jamaican Companies Act**

We have obtained all the information and explanations which, to the best of our knowledge and belief, were necessary for the purposes of our audit.

In our opinion, proper accounting records have been maintained, so far as appears from our examination of those records, and the financial statements, which are in agreement therewith, give the information required by the Jamaican Companies Act in the manner required.

A handwritten signature of the KPMG firm, written in blue ink, appearing as 'KPMG' in a cursive, stylized font.

Chartered Accountants  
Kingston, Jamaica

July 17, 2017




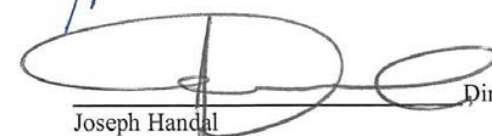
# NATIONAL IRRIGATION COMMISSION LIMITED

## Statement of Financial Position March 31, 2017

	<u>Notes</u>	<u>2017</u>	<u>2016</u>	<u>2015</u>
<b>CURRENT ASSETS</b>				
Cash and cash equivalents	4	128,476,981	81,351,963	17,077,842
Investments	5	22,683,918	20,285,504	9,135,198
Accounts receivable	6	116,615,066	155,566,430	132,716,305
Current portion of long-term receivable	7	9,043,179	14,419,650	11,720,109
Inventories		63,500,990	70,744,822	66,669,536
Income tax recoverable		<u>9,097,119</u>	<u>9,019,995</u>	<u>8,934,725</u>
<b>Total current assets</b>		<u>349,417,253</u>	<u>351,388,364</u>	<u>246,253,715</u>
<b>NON-CURRENT ASSETS</b>				
Long-term receivable	7	8,387,410	11,152,427	17,587,187
Employee benefits asset	8(a)	158,451,000	153,790,000	112,666,000
Intangible asset	9	5,220,132	6,525,097	7,830,065
Property, plant and equipment	10	<u>730,766,006</u>	<u>741,031,276</u>	<u>768,109,254</u>
<b>Total non-current assets</b>		<u>902,824,548</u>	<u>912,498,800</u>	<u>906,192,506</u>
<b>Total assets</b>		<b><u>\$1,252,241,801</u></b>	<b><u>1,263,887,164</u></b>	<b><u>1,152,446,221</u></b>
<b>CURRENT LIABILITIES</b>				
Accounts payable and accrued charges	11	311,748,722	308,117,340*	432,606,409*
Government of Jamaica project advances	12	113,544,605	96,959,527	73,714,276
Taxation		<u>39,738,616</u>	<u>39,738,616</u>	<u>-</u>
<b>Total current liabilities</b>		<u>465,031,943</u>	<u>444,815,483</u>	<u>506,320,685</u>
<b>NON-CURRENT LIABILITIES</b>				
Long-term liability	13	-	1,244,845	17,832,092
Deferred credit	14	<u>271,382,220</u>	<u>305,281,934</u>	<u>341,303,533</u>
<b>Total non-current liabilities</b>		<u>271,382,220</u>	<u>306,526,779</u>	<u>359,135,625</u>
<b>Total liabilities</b>		<u>736,414,163</u>	<u>751,342,262</u>	<u>865,456,310</u>
<b>EQUITY</b>				
Share capital	15	100	100	100
Capital reserve	16	408,130,161	408,130,161	408,130,161
Investment revaluation reserve	17	98,712	40,585	-
Accumulated surplus/(deficit)		<u>107,598,665</u>	<u>104,374,056*</u>	<u>( 121,140,350)*</u>
<b>Total equity</b>		<u>515,827,638</u>	<u>512,544,902</u>	<u>286,989,911</u>
<b>Total liabilities and equity</b>		<b><u>\$1,252,241,801</u></b>	<b><u>1,263,887,164</u></b>	<b><u>1,152,446,221</u></b>

The financial statements on pages 5 to 40 were approved for issue by the Board of Directors on July 17, 2017 and signed on its behalf by:

  
\_\_\_\_\_  
Senator Aubyn Hill Chairman

  
\_\_\_\_\_  
Joseph Handal Director

\* Restated (see note 30)

The accompanying notes form an integral part of the financial statements.



**NATIONAL IRRIGATION COMMISSION LIMITED**

**Statement of Profit or Loss and Other Comprehensive Income**  
**Year ended March 31, 2017**

	<u>Notes</u>	<u>2017</u>	<u>2016*</u>
<b>Operating revenue</b>			
Water sales and drainage charges		527,931,174	648,040,308
Government of Jamaica subsidy on behalf of farmers	18	830,156,069	853,621,723
Other Government of Jamaica subsidy		<u>59,714,712</u>	<u>-</u>
		1,417,801,955	1,501,662,031
Cost of producing water and distributing it to farm gates	20	<u>(1,077,282,182)</u>	<u>(1,023,678,631)</u>
<b>Gross operating surplus</b>		340,519,773	477,983,400
Amortisation of deferred credit	14	33,899,714	36,021,599
Other income	19	5,936,632	10,888,022
Administrative expenses	20	<u>( 377,990,510)</u>	<u>( 298,692,577)*</u>
<b>Profit before finance costs and taxation</b>		2,365,609	226,200,444
Finance costs	21	<u>-</u>	<u>( 22,422)</u>
<b>Profit before taxation</b>		2,365,609	226,178,022
Taxation charge	22	<u>-</u>	<u>( 39,738,616)</u>
<b>Profit for the year</b>	23	<u>2,365,609</u>	<u>186,439,406</u>
<b>Other comprehensive income</b>			
Item that will never be reclassified to profit or loss			
Remeasurement of employee benefits asset	8(f)	859,000	39,075,000
Item that is or may be reclassified subsequently to profit or loss			
Increase in the fair value of available-for-sale investments		<u>58,127</u>	<u>40,585</u>
Total other comprehensive income		<u>917,127</u>	<u>39,115,585</u>
Total comprehensive income for the year		<u>\$ 3,282,736</u>	<u>225,554,991</u>

\* Restated (see note 30)

The accompanying notes form an integral part of the financial statements.



# NATIONAL IRRIGATION COMMISSION LIMITED

## Statement of Changes in Equity Year ended March 31, 2017

	<u>Share capital</u>	<u>Capital reserve</u>	<u>Investment revaluation reserve</u>	<u>Accumulated surplus/(deficit)</u>	<u>Total</u>
Balances at March 31, 2015:					
As previously reported	100	408,130,161	-	( 40,238,649)	367,891,612
Prior year adjustments [note 30(c)]	-	-	-	( 80,901,701)	( 80,901,701)
As restated	<u>100</u>	<u>408,130,161</u>	<u>-</u>	<u>(121,140,350)</u>	<u>286,989,911</u>
Profit for the year:					
As previously reported				207,328,125	207,328,125
Prior year adjustments [note 30(d)]	-	-	-	( 20,888,719)	( 20,888,719)
As restated	<u>-</u>	<u>-</u>	<u>-</u>	<u>186,439,406</u>	<u>186,439,406</u>
<b>Other comprehensive income</b>					
Remeasurement of employee benefits asset	-	-	-	39,075,000	39,075,000
Increase in fair value of available-for-sale investments	-	-	40,585	-	40,585
Total other comprehensive income	<u>-</u>	<u>-</u>	<u>40,585</u>	<u>39,075,000</u>	<u>39,115,585</u>
Total comprehensive income for the year	<u>-</u>	<u>-</u>	<u>40,585</u>	<u>225,514,406</u>	<u>225,554,991</u>
Balances at March 31, 2016, as restated	<u>100</u>	<u>408,130,161</u>	<u>40,585</u>	<u>104,374,056</u>	<u>512,544,902</u>
Balances at March 31, 2016:					
As previously reported	100	408,130,161	40,585	206,164,476	614,335,322
Prior year adjustments [note 30(c)]	-	-	-	(101,790,420)	(101,790,420)
As restated	<u>100</u>	<u>408,130,161</u>	<u>40,585</u>	<u>104,374,056</u>	<u>512,544,902</u>
Profit for the year	<u>-</u>	<u>-</u>	<u>-</u>	<u>2,365,609</u>	<u>2,365,609</u>
<b>Other comprehensive income</b>					
Remeasurement of employee benefits asset	-	-	-	859,000	859,000
Increase in fair value of available-for-sale investments	-	-	58,127	-	58,127
Total other comprehensive income	<u>-</u>	<u>-</u>	<u>58,127</u>	<u>859,000</u>	<u>917,127</u>
Total comprehensive income for the year	<u>-</u>	<u>-</u>	<u>58,127</u>	<u>3,224,609</u>	<u>3,282,736</u>
Balances at March 31, 2017	<u>\$100</u>	<u>408,130,161</u>	<u>98,712</u>	<u>107,598,665</u>	<u>515,827,638</u>

The accompanying notes form an integral part of the financial statements.



# NATIONAL IRRIGATION COMMISSION LIMITED

## Statement of Cash Flows Year ended March 31, 2017

	<u>Notes</u>	<u>2017</u>	<u>2016</u>
<b>Cash flows from operating activities</b>			
Profit for the year		2,365,609	186,439,406*
Adjustments:			
Depreciation	10	41,818,062	42,567,778
Amortisation of intangible asset	9	1,304,965	1,304,968
Asset written off	10	-	7,159,751
Loss on disposal of property, plant and equipment		-	8,584
Amortisation of deferred credit	14	( 33,899,714)	( 36,021,599)
Employee benefits asset		( 3,802,000)	( 2,049,000)
Taxation	22	-	39,738,616
Interest income		( 722,627)	( 630,000)
Foreign exchange gains on bank balances		( <u>34,085</u> )	( <u>36,580</u> )
		7,030,210	238,481,924
<b>Decrease/(increase) in current assets</b>			
Investments		( 2,340,287)	( 11,109,721)
Accounts receivable		38,942,027	( 22,843,683)
Inventories		7,243,832	( 4,075,286)
Income tax recoverable		( 77,124)	( 85,270)
<b>(Decrease)/increase in current liabilities</b>			
Accounts payable and accrued charges		3,631,382	(124,489,069)*
Government of Jamaica project advances		<u>16,585,078</u>	<u>23,245,251</u>
Net cash provided by operating activities		<u>71,015,118</u>	<u>99,124,146</u>
<b>Cash flows from investing activities</b>			
Purchase of property, plant and equipment	10	( 31,552,792)	( 22,658,135)
Long-term receivable		8,141,488	3,735,219
Interest received		<u>731,964</u>	<u>623,558</u>
Net cash used in investing activities		( <u>22,679,430</u> )	( <u>18,299,358</u> )
<b>Cash flows from financing activity</b>			
Long-term liability, being net cash used in financing activity		( <u>1,244,845</u> )	( <u>16,587,247</u> )
Net increase in cash and cash equivalents		47,090,933	64,237,541
Effect of exchange rate fluctuations on cash held		34,085	36,580
Cash and cash equivalents at beginning of the year		<u>81,351,963</u>	<u>17,077,842</u>
<b>Cash and cash equivalents at end of the year</b>		<u>\$128,476,981</u>	<u>81,351,963</u>

\* Restated [see note 30(e)]

The accompanying notes form an integral part of the financial statements.



## NATIONAL IRRIGATION COMMISSION LIMITED

Notes to the Financial Statements  
Year ended March 31, 2017

### 1. Identification

National Irrigation Commission Limited (company) is incorporated and domiciled in Jamaica, and is wholly-owned by the Government of Jamaica through the Accountant General. The company's registered office is located at 191 Old Hope Road, Kingston 6.

The principal activities of the company are:

- (a) The management, operation, maintenance and expansion of existing and future irrigation schemes established by the Government. The principal schemes currently in operation are Hounslow, Braco, Mid-Clarendon, Rio Cobre, Yallahs, Beacon/Little Park, Seven Rivers, Colbeck, St. Dorothy, New Forest and Yallahs.
- (b) The identification and designation of the persons who shall be entitled to use the water generated by the irrigation schemes and the fixing and collection of rates or charges for such services rendered.

### 2. Statement of compliance and basis of preparation

#### (a) Statement of compliance

The financial statements are prepared in accordance with International Financial Reporting Standards (IFRS) and comply with the provisions of the Jamaican Companies Act.

#### **New and amended standards that became effective during the year**

Certain new and amended standards which were issued, came into effect during the current financial year. The company has assessed them and has adopted those which are relevant to the financial statements, viz;

- IAS 1, *Presentation of Financial Statements*, effective for accounting periods beginning on or after January 1, 2016 has been amended to clarify or state the following:
  - specific single disclosures that are not material do not have to be presented even if they are a minimum requirement of a standard;
  - the order of notes to the financial statements is not prescribed;
  - line items on the statement of financial position and the statement of profit or loss and other comprehensive income (OCI) should be disaggregated if this provides helpful information to users. Line items can be aggregated if they are not material;
  - specific criteria is now provided for presenting sub-totals on the statement of financial position and in the statement of profit or loss and OCI with additional reconciliation requirements for the statement of profit or loss and OCI; and
  - the presentation in the statement of OCI of items of OCI arising from joint ventures and associates are accounted for using the equity method follows IAS 1 approach of splitting items that may, or that will never, be classified to profit or loss.



2. Statement of compliance and basis of preparation (continued)

(a) Statement of compliance (continued)

**New and amended standards that became effective during the year (continued)**

- *Improvements to IFRS 2012-2014* cycle, contain amendments to certain standards and interpretations and are effective for accounting periods beginning on or after January 1, 2016. The main amendments applicable to the company is as follows:
  - IFRS 7, *Financial Instruments: Disclosures*, has been amended to clarify when servicing arrangements are in the scope of its disclosure requirements on continuing involvement in transferred assets in cases when they are derecognised in their entirety. A servicer is deemed to have continuing involvement if it has an interest in the future performance of the transferred asset -e.g. if the servicing fee is dependent on the amount or timing of the cash flows collected from the transferred financial asset; however, the collection and remittance of cash flows from the transferred asset to the transferee is not, in itself, sufficient to be considered 'continuing involvement'.
  - IAS 19, *Employee Benefits*, has been amended to clarify that high-quality corporate bonds or government bonds used in determining the discount rate should be issued in the same currency in which the benefits are to be paid. Consequently, the depth of the market for high-quality corporate bonds should be assessed at the currency level and not the country level.
- Amendments to IAS 16 and IAS 38, *Classification of Acceptable Methods of Depreciation and Amortisation* are effective for accounting periods beginning on or after January 1, 2016.
  - The amendment to IAS 16, *Property, Plant and Equipment* explicitly states that revenue-based methods of depreciation cannot be used. This is because such methods reflect factors other than the consumption of economic benefits embodied in the assets.
  - The amendments to IAS 38, *Intangible Assets* introduce a rebuttal presumption that the use of revenue-based amortisation methods is inappropriate for intangible assets.

The adoption of these amended standards did not result in any changes to the presentation and disclosures in the financial statements.



2. Statement of compliance and basis of preparation (continued)

(a) Statement of compliance (continued)

**New and amended standards in issue but not yet effective**

At the date of approval of these financial statements, certain new and amended standards were in issue but were not yet effective and had not been early-adopted by the company. The company has assessed them and has concluded that the following may be relevant to its operations:

- Amendments to IAS 7, *Statement of Cash Flows*, effective for accounting periods beginning on or after January 1, 2017, requires an entity to provide disclosures that enable users of financial statements to evaluate changes in liabilities arising from financing activities, including both changes arising from cash flows and non-cash flows.

The company is assessing the impact that these amendments will have on its 2018 financial statements.

- Amendments to IAS 12, *Income Taxes*, effective for accounting periods beginning on or after January 1, 2017, clarifies the following:
  - The existence of deductible temporary difference depends solely on a comparison of the carrying amount of an asset and its tax base at the end of the reporting period, and is not affected by possible future changes in the carrying amount or expected manner of recovery of the asset.
  - A deferred tax asset can be recognised if the future bottom line of the tax return is expected to be a loss, if certain conditions are met.
  - Future taxable profits used to establish whether a deferred tax can be recognised should be the amount calculated before the effect of reversing temporary differences.
  - An entity can assume that it will recover an asset for more than its carrying amount if there is sufficient evidence that it is probable that the entity will achieve this.
  - Deductible temporary differences related to unrealised losses should be assessed on a combined basis for recognition unless a tax law restricts the use of losses to deductions against income of a specific type.

The company is assessing the impact that these amendments will have on its 2018 financial statements.



2. Statement of compliance and basis of preparation (continued)

(a) Statement of compliance (continued)

**New and amended standards in issue but not yet effective (continued)**

- IFRS 15, *Revenue From Contracts With Customers*, effective for accounting periods beginning on or after January 1, 2018, replaces IAS 11, *Construction Contracts*, IAS 18, *Revenue*, IFRIC 13, *Customer Loyalty Programmes*, IFRIC 15, *Agreements for the Construction of Real Estate*, IFRIC 18, *Transfer of Assets from Customers* and SIC 31, *Revenue – Barter Transactions Involving Advertising Services*. It does not apply to insurance contracts, financial instruments or lease contracts, which fall in the scope of other IFRSs. It also does not apply if two companies in the same line of business exchange non-monetary assets to facilitate sales to other parties.

The company will apply a five-step model to determine when to recognise revenue, and at what amount. The model specifies that revenue should be recognised when (or as) an entity transfers control of goods or services to a customer at the amount to which the entity expects to be entitled. Depending on whether certain criteria are met, revenue is recognised at a point in time, when control of goods or services is transferred to the customer; or over time, in a manner that best reflects the entity's performance.

There will be new qualitative and quantitative disclosure requirements to describe the nature, amount, timing, and uncertainty of revenue and cash flows arising from contracts with customers.

The company is assessing the impact that his standards will have on its 2019 financial statements.

- IFRS 9, *Financial Instruments*, which is effective for annual reporting periods beginning on or after January 1, 2018, replaces the existing guidance in IAS 39 *Financial Instruments: Recognition and Measurement*. IFRS 9 includes revised guidance on the classification and measurement of financial assets and liabilities, including a new expected credit loss model for calculating impairment of financial assets and the new general hedge accounting requirements. It also carries forward the guidance on recognition and derecognition of financial instruments from IAS 39. Although the permissible measurement bases for financial assets – amortised cost, fair value through other comprehensive income (FVOCI) and fair value through profit or loss (FVTPL) - are similar to IAS 39, the criteria for classification into the appropriate measurement category are significantly different.

IFRS 9 replaces the 'incurred loss' model in IAS 39 with an 'expected credit loss' model, which means that a loss event will no longer need to occur before an impairment allowance is recognised.

The company is assessing the impact that these amendments will have on its 2019 financial statements.



2. Statement of compliance and basis of preparation (continued)

(a) Statement of compliance (continued)

**New and amended standards in issue but not yet effective (continued)**

- IFRS 16, *Leases*, which is effective for annual reporting periods beginning on or after January 1, 2019, eliminates the current dual accounting model for lessees, which distinguishes between on-balance sheet finance leases and off-balance sheet operating leases. Instead, there is a single, on-balance sheet accounting model that is similar to current finance lease accounting. Lessees will be required to bring all major leases on-balance sheet, recognising new assets and liabilities. The on-balance sheet liability will attract interest; the total lease expense will be higher in the early years of a lease even if a lease has fixed regular cash rentals. Optional lessee exemption will apply to short-term leases and for low-value items with value of US\$5,000 or less.

Lessor accounting remains similar to current practice as the lessor will continue to classify leases as finance and operating leases. Finance lease accounting will be based on IAS 17, *Lease Accounting*, with recognition of net investment in lease comprising lease receivable and residual asset. Operating lease accounting will be based on IAS 17, *Operating Lease Accounting*.

Early adoption is permitted if IFRS 15, *Revenue from Contracts with Customers* is also adopted.

The company is assessing the impact that the standard will have on its 2020 financial statements.

(b) Basis of preparation

The financial statements are prepared on the historical cost basis, except for available-for-sale investments carried at fair value and are presented in Jamaica dollars which is the functional currency of the company.

The preparation of the financial statements in accordance with IFRS assumes that the company will continue in operational existence for the foreseeable future. This means, in part, that the statements of profit or loss and other comprehensive income and financial position assume no intention or necessity to liquidate the company or curtail the scale of operations. This is commonly referred to as the going concern basis.

(c) Accounting estimates and judgements

The preparation of the financial statements in conformity with IFRS requires management to make estimates and assumptions that affect the reported amounts of, and disclosures relating to, assets, liabilities, contingent assets and contingent liabilities at the reporting date and the income and expenses for the year then ended. Actual amounts could differ from those estimates.



2. Statement of compliance and basis of preparation (continued)

(c) Accounting estimates and judgements (continued)

The estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognised in the year in which the estimate is revised, if the revision affects only that year, or in the year of the revision and future years, if the revision affects both current and future years.

Key sources of estimation uncertainty

Judgements made by management in the application of IFRS that have a significant effect on the financial statements and estimates with a significant risk of material adjustment in the next financial year are presented below:

- Pension benefits

The amounts recognised in the statements of financial position and profit or loss and other comprehensive income for pension benefits are determined actuarially using several assumptions. The primary assumptions used in determining the amounts recognised include the discount rate used to determine the present value of estimated future cash flows required to settle the pension obligations.

The discount rate is determined based on the estimate of yield on long-term Government securities that have maturity dates approximating the terms of the company's obligation; in the absence of such instruments in Jamaica, it has been necessary to estimate the rate by extrapolating from the longest-tenor security on the market. Any changes in loss assumptions would impact the amounts recorded in the financial statements for these obligations.

- Allowance for impairment losses

In determining amounts recorded for impairment of accounts receivable in the financial statements, management makes judgements regarding indicators of impairment, that is, whether there are indicators that suggest there may be a measurable decrease in the estimated future cash flows from accounts receivable, for example, repayment default and adverse economic conditions. Management also makes estimates of the likely estimated future cash flows from impaired accounts receivable, as well as the timing of such cash flows. Historical loss experience is applied where indicators of impairment are not observable on individual significant accounts receivable and total trade accounts receivable with similar characteristics, such as credit risks.

- Determination of fair value of investments

When determining the fair value of investments, the company uses valuation techniques that maximise the use of relevant observable inputs and minimise the use of unobservable inputs. The chosen valuation technique incorporates all the factors that market participants would take into account in pricing a unit.



3. Significant accounting policies

(a) Financial instruments: - classification, recognition and de-recognition, and measurement

A financial instrument is any contract that gives rise to a financial asset of one entity and a financial liability or equity instrument of another entity. In these financial statements, financial assets have been determined to comprise cash and cash equivalents, investments, accounts receivable and long-term receivable. Financial liabilities comprise accounts payable and accrued charges and Government of Jamaica project advances.

Financial instruments are classified, recognised and measured in accordance with the substance of the terms of the contracts as set out herein.

(i) Classification of financial instruments

The company classifies non-derivative financial assets as loans and receivables and available-for-sale. Management determines the appropriate classification of investments at the time of purchase. Securities acquired and loans granted with fixed or determinable payments and which are not quoted in an active market, are classified as loans and receivables.

The company classifies non-derivative financial liabilities into the other financial liabilities category.

(ii) Non-derivative financial assets and financial liabilities – recognition and derecognition  
The company recognises a financial instrument when it becomes a party to the contractual terms of the instrument.

The company initially recognises loans and receivables and debt securities on the date when they are originated. All other financial assets and financial liabilities are initially recognised on the trade date.

The company derecognises a financial asset when the contractual rights to the cash flows from the asset expire, or it transfers the rights to receive the contractual cash flows in a transaction in which substantially all of the risks and rewards of ownership of the financial asset are transferred, or it neither transfers nor retains all or substantially all the risks and rewards of ownership and does not retain control over the transferred asset. Any interest in such derecognised financial assets that is created or retained by the company is recognised as a separate asset or liability.

The company derecognises a financial liability when its contractual obligations expire or are discharged or cancelled.

Financial assets and financial liabilities are offset and the net amount presented in the statement of financial position when, and only when, the company has the legal right to offset the amounts and intends either to settle them on a net basis, or to realise the assets and settle the liabilities simultaneously.



3. Significant accounting policies (continued)

- (a) Financial instruments: - classification, recognition and de-recognition, and measurement (continued)

- (i) Non-derivative financial assets – measurement

*Loans and receivables:* On initial recognition loans and receivables are measured at fair value plus any directly attributable transaction costs. Subsequent to initial recognition, they are measured at amortised cost, using the effective interest method, less impairment losses.

- (b) Cash and cash equivalents

Cash comprises cash in hand and demand and call deposits with banks. Cash equivalents are short-term, highly liquid investments where original maturities do not exceed three months, are readily convertible to known amounts of cash, are subject to an insignificant risk of changes in value, and are held for the purpose of meeting short-term cash commitments, rather than for investment or other purposes. Cash and cash equivalents are measured at amortised cost.

- (c) Investments

Investments consist of resale agreements and units held in NCB Capital Markets CAPFunds.

- (i) The company purchases Government securities and agrees to resell them on a specified date and at a specified price ('resale agreements' or 'reverse repos'). The company, on paying cash to the counterparty, sometimes, takes possession of the underlying securities, although title is not formally transferred, unless that counterparty fails to repurchase the securities on the date specified or to honour other conditions.

Resale agreements are accounted for as short-term collateralised lending. Resale agreements are classified as loans and receivables and are carried at amortised cost less impairment. The difference between the purchase and resale considerations is recognized on the accrual basis over the period of the engagement, using the effective interest method.

- (ii) Units held in NCB Capital Markets CAPFunds are classified as available-for-sale and are carried at fair value. Changes in the fair value are included in the investment revaluation reserve.

- (d) Property, plant and equipment and depreciation

- (i) Owned assets

Property, plant and equipment are measured at cost, less accumulated depreciation and impairment losses [see note 3(h)].

Cost includes expenditures that are directly attributable to the acquisition of the asset. The cost of replacing part of an item of property, plant and equipment is recognised in the carrying amount of the item if it is probable that the future economic benefits embodied in the part will flow to the company and its cost can be reliably measured.



3. Significant accounting policies (continued)

(d) Property, plant and equipment and depreciation (continued)

(ii) Depreciation

Property, plant and equipment with the exception of capital work-in-progress are depreciated using the straight-line method at annual rates estimated to write down the assets to their residual values over their expected useful lives. The depreciation rates are as follows:

Building and leasehold improvements	2½%
Utility plant	2-3%
Furniture, fixtures and equipment	10% and 20%
Computer equipment	20%
Motor vehicles	20%
Machinery and equipment	2½%

The depreciation rates, useful lives and residual values are reassessed at each reporting date.

(e) Capital grants

Grants for acquisition of property, plant and equipment and amounts equivalent to the value of property, plant and equipment received as gifts, (including an amount equivalent to the values ascribed to utility plant at the districts, which were taken over by way of gift in 1990), are included in the Deferred Credit account. Annually, an amount equivalent to the depreciation charge for the year on these assets is transferred to profit or loss.

(f) Inventories

Inventories are measured at the lower of cost or net realisable value determined on the first-in-first-out basis.

(g) Employee benefits

Employee benefits comprise all forms of consideration given by the company in exchange for service rendered by employees. These include current or short-term benefits such as salaries, bonuses, NIS contributions, annual leave; post-employments benefits such as pension; and other long-term employee benefits such as termination benefits.

Employee benefits that are earned as a result of past or current service are recognised in the following manner: Short-term employee benefits are recognised as a liability, net of payments made, and charged as expense. The expected cost of vacation leave that accumulates is recognised when the employee becomes entitled to the leave. Post-employment benefits are accounted for as described below.



3. Significant accounting policies (continued)

(g) Employee benefits (continued)

Post-employment benefits, comprising pension obligations, included in the financial statements, are actuarially determined by a qualified independent actuary, appointed by management. The appointed actuary's report outlines the scope of the valuation and the actuary's opinion. The actuarial valuation is conducted in accordance with IAS 19, and the financial statements reflect the company's post-employment benefit asset as computed by the actuary. In carrying out their audit, the auditors rely on the work of the actuary and the actuary's report.

(i) Defined benefit pension plan

The company's net asset in respect of the defined-benefit pension plan is calculated by estimating the amount of future benefit that employees have earned in return for their service in the current and prior periods; that value is discounted to determine the present value, and the fair value of any plan assets is deducted. The discount rate is the yield at reporting date on long-term Government bonds that have maturity dates approximating the terms of the company's obligation. The calculation is performed by a qualified actuary, using the projected unit credit method.

When the benefits of the plan are changed or when a plan is curtailed, the resulting change in benefit that relates to past service or the gain or loss on curtailment is recognised immediately in profit or loss. The company recognises gains and losses on the settlement of a defined benefit plan when the settlement occurs.

Remeasurement of the net benefit asset, which comprises actual gains and losses, the return on plan assets (excluding interest) and the effect of the asset ceiling (if any, excluding interest), are recognised immediately in other comprehensive income. The company determines the net interest income on the net defined benefit asset for the period by applying the discount rate used to measure the defined benefit obligation at the beginning of the annual period to the then-net defined benefit asset, taking into account any changes in the net defined benefit asset during the period as a result of contributions and benefit payments. Net interest expense and other expenses related to defined benefit plans are recognised in profit or loss.

(ii) Termination benefits

Termination benefits are expected at the earlier of when the company can no longer withdraw the offer of those benefits and when the company recognises cost for a restructuring. If benefits are not expected to be settled wholly within 12 months of the end of the reporting period, then they are discounted.



3. Significant accounting policies (continued)

(h) Impairment

The carrying amounts of the company's assets are reviewed at each reporting date to determine whether there is any indication of impairment. If any such indication exists, the asset's recoverable amount is estimate. An impairment loss is recognised whenever the carrying amount of an asset or its cash-generating unit exceeds its recoverable amount. Impairment losses are recognised in profit or loss.

(i) Calculation of recoverable amount

The recoverable amount of the company's receivables is calculated as the present value of expected future cash flows, discounted at the original effective interest rate inherent in the asset. Receivables with a short duration are not discounted.

The recoverable amount of other assets is the greater of their fair value less costs to sell and value in use. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. For an asset that does not generate largely independent cash inflows, the recoverable amount is determined for the cash-generating unit to which the asset belongs.

(ii) Reversals of impairment

An impairment loss in respect of receivables is reversed, if the subsequent increase in recoverable amount can be related objectively to an event occurring after the impairment loss was recognised.

In respect of other assets, an impairment loss is reversed, if there has been a change in the estimates used to determine the recoverable amount.

An impairment loss is reversed only to the extent that the assets carrying amount does not exceed the carrying amount that would have been determined, net of depreciation or amortisation, if no impairment loss had been recognised.

(i) Taxation

Income tax on the profit or loss for the year comprises current and deferred tax. Income tax is recognised in profit or loss, except to the extent that it relates to items recognised in other comprehensive income in which case it is recognised in other comprehensive income.

Current tax is the expected tax payable on the taxable income for the year, using tax rates enacted at the reporting date, and any adjustment to tax payable in respect of previous years.

Deferred tax is provided for temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for taxation purposes. The amount of deferred tax provided is based on the expected manner of realisation or settlement of the carrying amount of assets and liabilities, using tax rates enacted at the reporting date.

A deferred tax asset is recognised only to the extent that it is probable that future taxable profits will be available against which the asset can be utilised. Deferred tax assets are reduced to the extent that it is no longer probable that the related tax benefit will be realised.



3. Significant accounting policies (continued)

(j) Accounts receivable

Accounts receivable are measured at their cost, less impairment losses.

(k) Intangible asset

Intangible asset, which represents computer software costs, is measured at cost less accumulated amortisation and, if any, impairment losses. It is being amortised on the straight-line basis at annual rates estimated to write down the assets over their expected useful lives, not exceeding a period of ten years. Costs associated with maintaining computer software programs are recognised as expense as incurred.

(l) Accounts payable and accrued charges

Accounts payable and accrued charges are measured at their cost.

(m) Foreign currencies

Foreign currency balances at the reporting date are translated at the rates of exchange ruling on that date.

Transactions in foreign currencies are converted at the rates of exchange ruling at the dates of those transactions.

Gains and losses arising from fluctuations in exchange rates are included in profit or loss.

(n) Related parties

A related party is a person or entity that is related to the company.

(A) A person or a close member of that person's family is related to the company if that person:

- (i) has control or joint control over the company;
- (ii) has significant influence over the company; or
- (iii) is a member of the key management personnel of the company or of a parent of the company.

(B) An entity is related to a company if any of the following conditions applies:

- (i) the entity and the company are members of the same group (which means that each parent, subsidiary and fellow subsidiary is related to the others).
- (ii) one entity is an associate or joint venture of the other entity (or an associate or joint venture of a member of a group of which the other entity is a member).
- (iii) both entities are joint ventures of the same third party.
- (iv) one entity is a joint venture of a third entity and the other entity is an associate of the third entity.



## NATIONAL IRRIGATION COMMISSION LIMITED

### Notes to the Financial Statements (Continued) Year ended March 31, 2017

#### 3. Significant accounting policies (continued)

##### (n) Related parties (continued)

(B) An entity is related to a company if any of the following conditions applies (continued):

- (v) the entity is a post-employment benefit plan for the benefit of employees of either the company or an entity related to the company.
- (vi) the entity is controlled, or jointly controlled by a person identified in (A).
- (vii) a person identified in (A)(i) has significant influence over the entity or is a member of the key management personnel of the entity (or of a parent of the entity).
- (viii) the entity, or any member of a group of which it is a part, provides key management personnel services to the company or to the parent of the company.

A related party transaction is a transfer of resources, services or obligations between related parties, regardless of whether a price is charged.

##### (o) Revenue recognition

Revenue from water sales and drainage services is recognised in profit or loss when water is delivered to the customer, drainage services are rendered and the amounts can be reliably measured.

Government subsidy and other funding are recognised when received.

##### (p) Interest income and expense

Interest income and expense are recognised in profit or loss on the accrual basis, using the effective interest method.

#### 4. Cash and cash equivalents

	<u>2017</u>	<u>2016</u>
Cash	119,779	109,315
Bank balances	<u>128,357,202</u>	<u>81,242,648</u>
	<u>\$128,476,981</u>	<u>81,351,963</u>

#### 5. Investments

	<u>2017</u>	<u>2016</u>
Loans and receivables		
Resale agreements [see note (i) below]	21,289,226	18,993,939
Available-for-sale carried at fair value		
Units held in NCB Capital Markets CAPFunds	<u>1,349,692</u>	<u>1,291,565</u>
	<u>\$ 22,683,918</u>	<u>20,285,504</u>

(i) This balance includes \$12,937,741 (2016: \$10,886,521) which is being held in escrow on behalf of two former employees who died intestate; and is not available to the company for operational use.

(ii) At the reporting date, the fair value of underlying securities used as collateral for resale agreements was \$22,471,943 (2016: \$19,967,903).



# NATIONAL IRRIGATION COMMISSION LIMITED

Notes to the Financial Statements (Continued)  
Year ended March 31, 2017

## 6. Accounts receivable

	<u>2017</u>	<u>2016</u>
Trade receivables for water sales and drainage charges [note 26(b)(ii)]	141,270,035	148,901,675
Staff loans	10,224,735	22,563,266
Other receivables	<u>23,987,773</u>	<u>24,729,871</u>
	175,482,543	196,194,812
Provision for impairment losses	<u>( 58,867,477)</u>	<u>( 40,628,382)</u>
	<u>\$116,615,066</u>	<u>155,566,430</u>

The aging of trade receivables at the reporting date was:

	<u>2017</u>		<u>2016</u>	
	<u>Gross</u>	<u>Impairment allowance</u>	<u>Gross</u>	<u>Impairment allowance</u>
Not past due	40,789,068	2,252,494	48,295,511	67,149
Past due 1-30 days	31,001,767	4,469,735	34,235,945	72,260
Past due 31-60 days	11,257,510	1,286,369	16,649,149	312,454
Past due 61-90 days	2,421,235	574,994	4,520,425	152,296
More than 90 days	<u>55,800,455</u>	<u>50,283,885</u>	<u>45,200,645</u>	<u>40,024,223</u>
	<u>\$141,270,035</u>	<u>58,867,477</u>	<u>148,901,675</u>	<u>40,628,382</u>

The movement in the allowance for impairment in respect of trade receivables during the year was as follows:

	<u>2017</u>	<u>2016</u>
Balance as at April 1	40,628,382	29,465,453
Amounts written back	(11,551,980)	(14,147,902)
Provision recognised	<u>29,791,075</u>	<u>25,310,831</u>
Balance as at March 31	<u>\$58,867,477</u>	<u>40,628,382</u>

## 7. Long-term receivable

	<u>2017</u>	<u>2016</u>
Refundable utility deposits	2,575,379	2,575,379
Employee loans	<u>14,855,210</u>	<u>22,996,698</u>
	17,430,589	25,572,077
Less: Current portion	<u>( 9,043,179)</u>	<u>(14,419,650)</u>
	<u>\$ 8,387,410</u>	<u>11,152,427</u>

Employee loans are for the purchase of motor vehicles and are repayable over 4-8 years. The interest rate on motor vehicle loans is 0%. The loans are remeasured at commercial bank interest rate and are secured by the respective motor vehicles [see note 26(b)(iii)] on which the loans are outstanding.



# NATIONAL IRRIGATION COMMISSION LIMITED

Notes to the Financial Statements (Continued)  
Year ended March 31, 2017

## 8. Employee benefits asset

The company sponsors a defined-benefit pension plan for all employees who have satisfied certain minimum service requirements. The benefits are computed at 2% of pensionable salary for each year of membership in the plan and on other increments as determined by the pension plan.

Amounts recognised in the financial statements in respect of this benefit are as follows:

(a) The amounts recognised in the statement of financial position are determined as follows:

	<u>2017</u>	<u>2016</u>
Present value of funded obligation	( 954,686,000)	( 980,933,000)
Fair value of plan assets	1,313,495,000	1,134,723,000
Unrecognised asset due to asset ceiling	( 200,358,000)	-
Asset recognised in the statement of financial position	<u>\$ 158,451,000</u>	<u>153,790,000</u>

(b) Movement in the amounts recognised in the statement of financial position:

	<u>2017</u>	<u>2016</u>
Balance at beginning of year	153,790,000	112,666,000
Contributions paid	18,576,000	17,443,000
Pension expense recognised in profit or loss	( 14,774,000)	( 15,394,000)
Remeasurement recognised in other comprehensive income	<u>859,000</u>	<u>39,075,000</u>
Balance at end of year	<u>\$ 158,451,000</u>	<u>153,790,000</u>

(c) Movement in the present value of obligation:

	<u>2017</u>	<u>2016</u>
Balance at beginning of year	980,933,000	857,595,000
Service costs	30,337,000	27,773,000
Interest on obligation	86,706,000	79,814,000
Employees' contributions	20,531,000	18,656,000
Benefits paid	( 61,720,000)	( 35,708,000)
Annuities purchased	25,883,000	-
Actuarial (gains)/losses arising from:		
Changes in financial assumptions	( 68,561,000)	68,774,000
Experience adjustments	<u>( 59,423,000)</u>	<u>( 35,971,000)</u>
Balance at end of year	<u>\$ 954,686,000</u>	<u>980,933,000</u>



# NATIONAL IRRIGATION COMMISSION LIMITED

Notes to the Financial Statements (Continued)  
Year ended March 31, 2017

## 8. Employee benefits asset (continued)

### (d) (i) Movement in fair value of plan assets:

	<u>2017</u>	<u>2016</u>
Fair value of plan assets at beginning of year	1,134,723,000	970,261,000
Employees' contributions	20,531,000	18,656,000
Employer's contributions	18,576,000	17,443,000
Interest income on plan assets	102,269,000	92,193,000
Benefits paid	( 61,720,000)	( 35,708,000)
Annuities purchased	25,883,000	-
Actuarial gains/(losses) arising from:		
Change in financial assumptions	(3,840,000)	4,003,000
Experience adjustments	<u>77,073,000</u>	<u>67,875,000</u>
Fair value of plan assets at end of year	<u>\$1,313,495,000</u>	<u>1,134,723,000</u>

### (ii) Plan assets consist of the following:

	<u>2017</u>	<u>2016</u>
International equity fund	70,969,000	67,150,000
Global markets fund	35,484,000	24,697,000
Equity fund	260,218,000	204,207,000
Fixed income fund	106,453,000	41,841,000
Mortgage and real estate fund	272,046,000	220,331,000
Money market fund	59,141,000	54,700,000
Foreign currency fund	236,562,000	281,052,000
Adjustments	( 1,357,000)	2,776,000
Value of purchased annuities	132,042,000	111,424,000
CPI indexed fund	<u>141,937,000</u>	<u>126,545,000</u>
	<u>\$1,313,495,000</u>	<u>1,134,723,000</u>

### (e) Expense recognised in profit or loss:

	<u>2017</u>	<u>2016</u>
Current service costs	30,337,000	27,773,000
Interest on obligation	86,706,000	79,814,000
Interest income on plan assets	<u>(102,269,000)</u>	<u>(92,193,000)</u>
Net pension expense included in staff costs (note 24)	<u>\$ 14,774,000</u>	<u>15,394,000</u>

### (f) Amounts recognised in other comprehensive income:

	<u>2017</u>	<u>2016</u>
Experience adjustments	63,862,000	(103,846,000)
Change in financial assumptions	<u>( 64,721,000)</u>	<u>64,771,000</u>
	<u>\$( 859,000)</u>	<u>( 39,075,000)</u>

### (g) As mortality continues to improve, estimates of life expectancy are expected to increase. The effect on the projected employee benefit asset of an increase of one year in the life expectancy is approximately \$12.79 million.



# NATIONAL IRRIGATION COMMISSION LIMITED

Notes to the Financial Statements (Continued)  
Year ended March 31, 2017

## 8. Employee benefits asset (continued)

### (h) Sensitivity analysis on projected employee benefits asset:

The calculation of the projected benefits asset is sensitive to the assumptions used. The table below summarizes how the projected employee benefit obligation measured at the end of the reporting period would have increased/(decreased) as a result of a change in the respective assumptions by one percentage point. In preparing the analyses for each assumption, all others were held constant. The economic assumptions are somewhat linked as they are all related to inflation. Hence, for example, a 1% reduction in the long-term discount rate would cause some reduction in the medical trend rate.

	<u>2017</u>		<u>2016</u>	
	<u>1%</u>	<u>1%</u>	<u>1%</u>	<u>1%</u>
	<u>Decrease</u>	<u>Increase</u>	<u>Decrease</u>	<u>Increase</u>
	\$	\$	\$	\$
Discount rate	137,914,000	(108,096,000)	157,479,000	(122,322,000)
Future salary increases	( 52,202,000)	59,643	( 57,326,000)	65,736,000
Future pension increases	( <u>72,261,000</u> )	<u>83,476,000</u>	( <u>82,290,000</u> )	<u>95,464,000</u>

### (i) Liability duration:

	<u>2017</u>	<u>2016</u>
Active members and all participants	<u>32 years</u>	<u>32 years</u>

### (j) The principal actuarial assumptions (expressed as weighted averages) used were as follows:

	<u>2017</u>	<u>2016</u>
Discount rate	9.5%	9.0%
Inflation rate	6.5%	5.5%
Future salary increases	6.5%	5.5%
Future pension increases	<u>3.5%</u>	<u>4.0%</u>

### (k) The company expects to pay \$31,755,000 in contributions to the plan in 2017/2018 (2016/2017: \$34,133,000).

## 9. Intangible asset

	<u>Computer software</u>	
	<u>2017</u>	<u>2016</u>
<b>Cost</b>	<u>13,049,961</u>	<u>13,049,961</u>
<b>Amortisation</b>		
At beginning of year	6,524,864	5,219,896
Charge for the year	<u>1,304,965</u>	<u>1,304,968</u>
At end of year	<u>7,829,829</u>	<u>6,524,864</u>
<b>Net book value</b>	<u>\$ 5,220,132</u>	<u>6,525,097</u>



# NATIONAL IRRIGATION COMMISSION LIMITED

## Notes to the Financial Statements (Continued) Year ended March 31, 2017

### 10. Property, plant and equipment

	<u>Building &amp; leasehold improvements</u>	<u>Utility plant</u>	<u>Furniture, fixtures &amp; equipment</u>	<u>Motor vehicles</u>	<u>Machinery and equipment</u>	<u>Capital work-in- progress</u>	<u>Total</u>
<b>Cost</b>							
March 31, 2015	99,116,068	1,711,598,502	110,683,835	27,762,421	21,096,677	94,074,092	2,064,331,595
Additions	948,500	9,490,455	5,891,145	-	-	6,328,035	22,658,135
Disposals	-	-	( 142,568)	-	-	-	( 142,568)
Reclassification	4,041,735	-	-	-	-	( 4,041,735)	-
Written off	-	-	-	-	-	( 7,159,751)	( 7,159,751)
March 31, 2016	104,106,303	1,721,088,957	116,432,412	27,762,421	21,096,677	89,200,641	2,079,687,411
Additions	1,733,765	9,801,077	11,914,491	5,169,379	-	3,068,064	31,686,776
March 31, 2017	105,840,068	1,730,890,034	128,346,903	32,931,800	21,096,677	92,268,705	2,111,374,187
<b>Depreciation</b>							
March 31, 2015	22,016,520	1,165,860,394	82,787,696	20,868,057	4,689,674	-	1,296,222,341
Charge for the year	2,468,778	29,654,496	6,960,554	2,956,883	527,067	-	42,567,778
Eliminated on disposals	-	-	( 133,984)	-	-	-	( 133,984)
March 31, 2016	24,485,298	1,195,514,890	89,614,266	23,824,940	5,216,741	-	1,338,656,135
Charge for the year	2,493,261	28,149,054	6,903,655	3,879,009	527,067	-	41,952,046
March 31, 2017	26,978,559	1,223,663,944	96,517,921	27,703,949	5,743,808	-	1,380,608,181
<b>Net book values</b>							
March 31, 2017	\$ 78,861,509	507,226,090	31,828,982	5,227,851	15,352,869	92,268,705	730,766,006
March 31, 2016	\$ 79,621,005	525,574,067	26,818,146	3,937,481	15,879,936	89,200,641	741,031,276
March 31, 2015	\$ 77,099,548	545,738,108	27,896,139	6,894,364	16,407,003	94,074,092	768,109,254

- (i) Included in building and leasehold improvements are leasehold improvements with net book value of \$50,112,827 (2016: \$52,606,089).
- (ii) Capital work-in-progress represents internal projects, relating to lining of canals, construction of building and other construction works, funded by the Government of Jamaica, which are undertaken and managed by the company. The cost to complete the projects has not been quantified to date. There are currently no contractual commitments related to completion of these projects, as they are being carried out by the company as, and when, funds become available.

### 11. Accounts payable and accrued charges

	<u>2017</u>	<u>2016</u>
Customer deposits	17,440,093	15,342,140
Trade payables	51,245,304	106,043,295
Accrued vacation leave (note 13)	35,330,195	34,706,204
Provision for litigation settlement	9,815,810	3,811,228
Education tax payable including interest	106,681,230	93,349,816*
Other accruals	26,573,718	25,693,632
Other payables (i)	29,236,614	20,730,421
General Consumption Tax (GCT) payable	35,425,758	8,440,604*
	<u>\$311,748,722</u>	<u>308,117,340</u>

- (i) Other payables include \$12,937,741 (2016: \$10,888,526) received from Sagicor Life Jamaica Limited on behalf of former employees who died intestate, this is held in investments [note 5(i)].

\* Restated (see note 30)



# NATIONAL IRRIGATION COMMISSION LIMITED

## Notes to the Financial Statements (Continued) Year ended March 31, 2017

### 12. Government of Jamaica project advances

This balance represents the net unspent portion of funds received from the Government of Jamaica (GOJ) and its agencies for the following projects:

	<u>2017</u>	<u>2016</u>
National Irrigation Development Plan (NIDP)		
- Implementation	42,705,225	42,705,225
Miscellaneous capital projects	28,427,531	11,842,453
Rain Water Harvesting Project	( 11,000)	( 11,000)
GOJ Agricultural Productivity Projects	38,164,064	38,164,064
Fishing Beach Projects	<u>4,258,785</u>	<u>4,258,785</u>
	<u>\$113,544,605</u>	<u>96,959,527</u>

### 13. Long-term liability

	<u>2017</u>	<u>2016</u>
Unused vacation leave	35,330,195	35,951,049
Current portion (see note 11)	<u>(35,330,195)</u>	<u>(34,706,204)</u>
	<u>\$ -</u>	<u>1,244,845</u>

### 14. Deferred credit

	<u>Balance at March 31, 2015</u>	<u>Movement during the year</u>	<u>Balance at March 31, 2016</u>	<u>Movement during the year</u>	<u>Balance at March 31, 2017</u>
Grant for acquisition of properly, plant and equipment (net of disposals)	294,498,893	-	294,498,893	-	294,498,893
Property, plant and equipment gifted by Agro 21 Corp., net, in 1991	1,198,152	-	1,198,152	-	1,198,152
Property, plant and equipment gifted by Ministry of Agriculture	1,203,061	-	1,203,061	-	1,203,061
Property, plant and equipment transferred from NIDP Project	1,896,725	-	1,896,725	-	1,896,725
Property, plant and equipment, other than utility plant, gifted by district irrigation authorities	3,520,295	-	3,520,295	-	3,520,295
Utility plant acquired under CDB/IDB project and utility plant of previously unrecorded irrigation authorities capitalised during 1991	141,941,917	-	141,941,917	-	141,941,917
Utility plant acquired out of project funds	591,096,098	-	591,096,098	-	591,096,098
Revaluation surplus on inventories	1,233,211	-	1,233,211	-	1,233,211
Irrigation pipes gifted by Chinese Government	41,993,367	-	41,993,367	-	41,993,367
Computers funded by the NIDP Project	14,546,237	-	14,546,237	-	14,546,237
Global Positioning System (GPS) units funded by the NIDP Project	854,367	-	854,367	-	854,367
Motor vehicle acquired out of NIDP project funds	2,945,000	-	2,945,000	-	2,945,000
Motor vehicle gifted by the Ministry of Agriculture and Fisheries	950,000	-	950,000	-	950,000
Customer Relationship Management System (CRMS) funded by the NIDP	13,049,961	-	13,049,961	-	13,049,961
Expenditure on contracts-in-progress (net of amounts expensed out of GOJ project advances)	<u>33,100,318</u>	<u>-</u>	<u>33,100,318</u>	<u>-</u>	<u>33,100,318</u>
	1,144,027,602	-	1,144,027,602	-	1,144,027,602
Amortisation transferred to profit or loss	<u>( 802,724,069)</u>	<u>(36,021,599)</u>	<u>( 838,745,668)</u>	<u>(33,899,714)</u>	<u>( 872,645,382)</u>
	<u>\$ 341,303,533</u>	<u>(36,021,599)</u>	<u>305,281,934</u>	<u>33,899,714</u>	<u>271,382,220</u>



## NATIONAL IRRIGATION COMMISSION LIMITED

### Notes to the Financial Statements (Continued) Year ended March 31, 2017

#### 14. Deferred credit (continued)

The net book value of property, plant and equipment, with the cost of which the deferred credit account was increased at the date of acquisition, is eliminated from the deferred credit account on the disposal of the assets.

#### 15. Share capital

	<u>2017</u>	<u>2016</u>
Authorised, issued and fully-paid:		
100 ordinary shares at no par value	<u>\$100</u>	<u>100</u>

#### 16. Capital reserve

This represents previously determined revaluation surplus on property, plant and equipment which, on first-time adoption of IFRS, was deemed part of the cost of the utility plant.

#### 17. Investment revaluation reserve

This represents the increase in the fair value of investments classified as available-for-sale.

#### 18. Government of Jamaica subsidy on behalf of farmers

The purpose of this subsidy is to significantly reduce the portion of the cost of providing irrigation water to farmers which would normally be recovered from them as rates. By this means, Government subsidises irrigated agriculture.

In light of the last review conducted by the Office of Utilities Regulation, the company estimated that the subsidy would need to be \$922.2 million (2016: \$846.5 million) in order for the company to deliver irrigation water as required by farmers, in the context of the schemes mentioned in note 1(a). Following the improved weather conditions, \$830.156 million (2016: \$853.622 million) was approved by Parliament and paid to the company.

#### 19. Other income

	<u>2017</u>	<u>2016</u>
Finance income:		
Investments and cash and cash equivalents	356,764	347,371
Other	365,863	282,629
Amortisation of interest on concessionary loans	1,403,669	3,643,365
Foreign exchange gains on bank balances	34,085	36,580
Service fees	2,027,097	3,655,135
Miscellaneous	<u>1,749,154</u>	<u>2,922,942</u>
	<u>\$5,936,632</u>	<u>10,888,022</u>



# NATIONAL IRRIGATION COMMISSION LIMITED

## Notes to the Financial Statements (Continued) Year ended March 31, 2017

### 20. Expenses by nature

	<u>2017</u>	<u>2016*</u>
Amortisation of intangible assets (note 9)	1,304,965	1,304,968
Advertising and public relations	3,414,199	4,095,545
Advisory committee fees and related expenses	761,450	2,187,194
Bad debts, net of recoveries	18,372,757	11,162,929
Bank charges	1,015,993	685,834
Computer expenses	17,752,741	6,711,086
Depreciation (note 10)	41,818,062	42,567,778
Directors' expenses	4,930,115	7,956,503
Electricity	392,264,305	461,865,786
Equipment hireage	5,705,599	2,488,750
Fuel and lubricants	4,549,424	4,941,022
General Consumption Tax (GCT)	34,381,956	11,511,907
General expenses	3,838,434	2,778,786
Haulage	2,331,250	4,173,238
Insurance	10,394,444	10,481,013
Interest and penalties	827,287	2,887,150
Interest on concessionary loans	1,134,231	2,309,545
Loss on disposal of property, plant and equipment	-	8,584
Maintenance of conveyance system (labour)	103,109,475	47,734,554
Motor vehicle fuel, repairs and maintenance	18,997,459	15,207,735
Office maintenance, rental and property taxes	8,731,745	3,718,409
Office refreshments	4,152,039	3,215,309
Office utilities	11,254,954	12,610,997
Other expenses	265,516	290,537
Professional fees	23,517,822	14,520,597
Regulatory fees	345,000	867,647
Repairs to buildings, distribution canals, pipelines and pumps,	63,667,491	41,787,424
Salaries, wages and related costs (note 24)	640,810,214	565,837,826
Security	18,111,906	20,054,382
Special projects expenses	1,591,491	1,798,235
Stationery	4,384,835	3,551,335
Subscriptions and donations	302,037	278,166
Telephone, postage, data, etc.	<u>11,233,496</u>	<u>10,780,437</u>
	<u>\$1,455,272,692</u>	<u>1,322,371,208</u>

Presented as follows:

Cost of producing water distributing it to farms	1,077,282,182	1,023,678,631
Administrative expenses	<u>377,990,570</u>	<u>298,692,577</u>
	<u>\$1,455,272,752</u>	<u>1,322,371,208</u>

\* Restated (see note 30)



# NATIONAL IRRIGATION COMMISSION LIMITED

Notes to the Financial Statements (Continued)  
Year ended March 31, 2017

## 21. Finance costs

	<u>2017</u>	<u>2016</u>
Interest on bank overdraft	\$ <u>-</u>	<u>22,422</u>

## 22. Taxation

- (a) The provision for income tax is computed at 33 $\frac{1}{3}$ % of the results for the year, as adjusted for tax purposes, and is made up as follows:

	<u>2017</u>	<u>2016</u>
(i) Current tax charge:		
Provision for charge on current year's profits, being actual tax charge recognised	\$ <u>-</u>	<u>39,738,616</u>

- (b) The actual taxation charge differs from the "expected" tax charge for the year as follows:

	<u>2017</u>	<u>2016</u>
Profit before taxation	\$ <u>2,365,609</u>	<u>226,178,022*</u>
Computed "expected" tax charge	788,536	75,392,674
Tax effect of treating items differently for financial statements and tax reporting purposes -		
Depreciation, amortisation and capital allowances	9,090,818	10,723,421
Foreign exchange gain, capital	( 11,362)	( 12,192)
Amortisation of deferred credits	(11,299,905)	( 12,005,999)
Expenses not allowed for tax purposes	417,702	1,095,832
Loss on disposal of property, plant and equipment	-	2,861
Interest on concessionary loans	( 89,813)	( 444,562)
Tax losses	3,155,172	( 33,706,354)
Other	( 2,051,148)	( 1,307,065)
Actual tax charge recognised	\$ <u>-</u>	<u>39,738,616</u>

\* Restated (see note 30)

- (c) At March 31, 2017, taxation losses amounting to approximately \$257,000,000 (2016: \$249,000,000) are available for set-off against future taxable profits, subject to agreement by the Commissioner General, Tax Administration Jamaica. As at January 1, 2014, tax losses may be carried forward indefinitely; however, the amount that can be utilised in any one year is restricted to 50% of the taxable profits for that year.
- (d) Deferred tax asset of approximately \$85,666,000 (2016: \$83,000,000) in respect of taxation losses and temporary differences has not been recognised in the financial statements, due to the uncertainty that future profits will be generated within the foreseeable future against which the asset can be realised.



Notes to the Financial Statements (Continued)  
Year ended March 31, 2017

(a) The company has a related party relationship with its associates and key management personnel, comprising directors and certain senior executives.



## NATIONAL IRRIGATION COMMISSION LIMITED

Notes to the Financial Statements (Continued)  
Year ended March 31, 2017

### 25. Related party balances and transactions (continued)

- (b) The statement of financial position includes balances, arising in the ordinary course of business, with related parties as follows:

	<u>2017</u>	<u>2016</u>
	\$	\$
Accounts receivable:		
Directors	1,275,321	1,411,986
Long-term receivables:		
Employee loans - key management personnel	<u>756,250</u>	<u>3,420,833</u>

- (c) The statement of profit or loss and other comprehensive income includes transactions with key management personnel in the ordinary course of business, as follows:

	<u>2017</u>	<u>2016</u>
	\$	\$
Compensation paid to other key management personnel:		
Salaries to other key management personnel	29,922,002	34,129,604
Post-employment benefits	<u>683,000</u>	<u>665,000</u>
	<u>30,605,002</u>	<u>34,794,604</u>
Interest income from key management personnel	<u>62,427</u>	<u>301,190</u>

### 26. Financial risk management

- (a) Overview:

The company has exposure to the following risks from its use of financial instruments and its operations:

- Credit risk
- Liquidity risk
- Market risk
- Operational risk

This note presents information about the company's exposure to each of the above risks, the company's objectives, policies and processes for measuring and managing risk and the company's management of capital. Further quantitative disclosures are included throughout these financial statements.

The Board of Directors has overall responsibility for the establishment and oversight of the company's risk management framework. The Board has established the Audit and Risk Management Committee, which is responsible for developing and monitoring the company's risk management policies. The committee reports bi-monthly to the Board of Directors on its activities.



26. Financial risk management

(a) Overview (continued):

The company's risk management policies are established to identify and analyse the risks faced by the company, to set appropriate risk limits and controls and to monitor risks and adherence to limits. Risk management policies and systems are reviewed regularly to reflect changes in market conditions and the company's activities. The company, through its training and management standards and procedures, aims to develop a disciplined and constructive control environment in which all employees understand their roles and obligations.

The Audit and Risk Management Committee oversees management's monitoring of compliance with the company's risk management policies and procedures and reviews the adequacy of the risk management framework in relation to the risks faced by the company. The Audit and Risk Management Committee is assisted in its oversight role by Internal Audit. Internal Audit undertakes both regular and *ad hoc* reviews of risk management controls and procedures, the results of which are reported to the Audit and Risk Management Committee.

(b) Credit risk:

Credit risk is the risk of financial loss to the company, if a customer or counterparty to a financial instrument fails to meet its contractual obligations, and arises principally from cash and cash equivalents, resale agreements, trade receivables and long-term motor vehicle loans to employees.

(i) Cash and cash equivalents and investments

Cash and cash equivalents and investments are held with financial institutions which the company regards as strong.

The company limits its exposure to credit risk by investing only in liquid securities that are backed by the Government of Jamaica through established counterparties that are licensed under the Financial Institutions Act and registered with the Financial Services Commission. Consequently, management does not expect any counterparties to fail to meet their obligations. Collateral is held for resale agreements.

(ii) Trade receivables

The company's exposure to credit risk is influenced mainly by the individual characteristics of each customer. The company has a policy under which each customer is analysed before being contracted for the supply of services. Contracted customers are required to make a refundable security deposit that is based on three months projected consumption with regard to the customer's holdings. Customers that fail to meet the company's benchmark for the supply of services may transact with the company on a prepayment basis.

Credit risk is concentrated in the ten largest customers who hold more than 50 percent of the company's trade receivables.



## NATIONAL IRRIGATION COMMISSION LIMITED

Notes to the Financial Statements (Continued)  
Year ended March 31, 2017

### 26. Financial risk management (continued)

#### (b) Credit risk (continued):

##### (ii) Trade receivables (continued)

The Director of Commercial Operations has overall responsibility for ensuring the timely collection of outstanding receivables. The Commercial Department reports on the status of collections and receivables to the Finance and Performance Management Committee monthly.

##### *Allowances for impairment*

The company establishes an allowance for impairment that represents its estimate of incurred losses in respect of trade receivables based on pre-determined criteria. The main component of this allowance is a specific loss component that relates to individual exposures.

The allowance account in respect of trade receivables is used to record impairment losses, unless the company is satisfied that no recovery of the amount owing is possible; at that point, management obtains permission from the Minister of Agriculture and Fisheries to write off the amounts against the receivable balance directly.

##### *Exposure to credit risk*

The maximum exposure to credit risk for trade receivables at the reporting date by geographic region was:

	<u>Carrying amount</u>	
	<u>2017</u>	<u>2016</u>
St. Thomas	3,007,437	2,788,824
St. Catherine	79,138,096	79,828,968
Clarendon	23,323,787	31,245,681
St. Elizabeth	32,404,226	31,217,806
Trelawny	2,871,256	3,357,958
St. James	<u>525,233</u>	<u>462,438</u>
	<u>\$141,270,035</u>	<u>148,901,675</u>

##### (iii) Long-term receivable

The company grants loans to its employees to facilitate the purchase of motor vehicles. Loans are repayable over a period of 4-8 years; however, the repayment period may not exceed the expected remaining years to retirement of individual employees. Management does not expect any counterparty to fail to meet his/her obligations.



26. Financial risk management (continued)

(b) Credit risk (continued):

(iii) Long-term receivable (continued)

*Collateral held against financial assets*

Loans granted are secured by the registration of a lien on the motor vehicles acquired as well as a bill of sale. Estimates of the fair values are based on the sum insured of the collateral, at each reporting date. The fair value of these collateral as at March 31, 2017 was \$161,609,000 (2016: \$44,880,000).

There has been no change to the company's exposure to credit risk or the manner in which it measures and manages this risk.

(c) Liquidity risk:

Liquidity risk is the risk that the company will not be able to meet its financial obligations as they fall due. The company's approach to managing liquidity is to ensure, as far as possible, that it will always have sufficient liquidity to meet its liabilities when due, under both normal and stressed conditions, without incurring unacceptable losses or risking damage to the company's reputation.

Typically, the company ensures that it has sufficient cash on demand to meet expected operational expenses.

The contractual outflow for accounts payable and accrued charges is represented by its carrying amount and may require settlement within 12 months of the reporting date. Government of Jamaica project advances represents the amounts remaining from Government grants and multilateral financing received to finance the company's capital budget as well as to undertake specific NIDP projects. Funds are received from the Government and multilateral agencies based on an approved budget.

There has been no change to the company's exposure to liquidity risk or the manner in which it measures and manages the risk.

(d) Market risk:

Market risk is the risk that changes in market prices, such as foreign exchange rates and interest rates, will affect the company's income or the value of its holdings of financial instruments. The objective of market risk management is to manage and control market risk exposures within acceptable parameters, while optimising the return on risk.



26. Financial risk management (continued)

(d) Market risk (continued):

(i) Currency risk

The company is exposed to currency risk on purchases and borrowings that are denominated in a currency other than the functional currency of the company, primarily, the United States Dollar (US\$). The company's net exposure at reporting date was:

	<u>2017</u> US\$	<u>2016</u> US\$
Cash and cash equivalents	<u>5,301</u>	<u>5,323</u>

The average exchange rate for the US dollar in terms of Jamaica dollars, at March 31, 2017 was: US\$1.00 = J\$128.22 (2016: J\$121.3628).

*Sensitivity analysis*

A 6% (2016: 6%) strengthening of the US\$ against the Jamaica dollar would have increased profit by \$40,782 (2016: \$38,761). A 1% (2016: 1%) weakening would have decreased profit by \$6,797 (2016: \$6,460). This analysis assumes that all other variables, in particular, interest rates, remain constant. The analysis is performed on the same basis as for 2016.

(ii) Interest rate risk

Interest rate risk is the risk that the value of a financial instrument will fluctuate due to changes in market interest rates.

*Profile*

At the reporting date, the interest rate profile of the company's interest-bearing financial instruments were at fixed rate and are carried at cost as follows:

	<u>Carrying amount</u>	
	<u>2017</u>	<u>2016</u>
Resale agreements	21,289,226	18,993,939
Employee loans	<u>10,224,734</u>	<u>22,563,266</u>
	<u>\$31,513,960</u>	<u>41,557,205</u>

All the company's interest-bearing financial instruments are carried at fixed rates and are not fair valued; therefore a change in interest rate will not affect the carrying value if the financial instruments or the company's cashflows.

There has been no change to the company's exposure to market risk or the manner in which it measures and manages this risk.



26. Financial risk management (continued)

(e) Operational risk:

Operational risk is the risk of direct or indirect loss arising from a wide variety of causes associated with the company's processes, personnel, technology and infrastructure, and from external factors other than credit, market and liquidity risks such as those arising from legal and regulatory requirements and generally accepted standards of corporate behaviour. Operational risks arise from all of the company's operations.

The company's objective is to manage operational risk so as to balance the avoidance of financial losses and damage to the company's reputation with overall cost effectiveness and to avoid control procedures that restrict initiative and creativity.

The primary responsibility for the development and implementation of controls to address operational risk is assigned to senior management. This responsibility is supported by the development of overall company standards for the management of operational risk, including the following:

- requirements for appropriate segregation of duties, including the independent authorisation of transactions;
- requirements for the reconciliation and monitoring of transactions;
- compliance with regulatory and other legal requirements;
- training and professional development;
- ethical and business standards; and
- risk mitigation, including insurance where this is effective.

Compliance with the company's standards is supported by a programme of periodic reviews undertaken by the internal audit unit. The results of internal audit reviews are discussed with management, with summaries submitted to the Board of Directors, the Audit Committee and senior management of the company, and action is taken to deal with the matters reported.

There has been no change to the company's exposure to operational risk or the manner in which it measures and manages this risk.

(f) Capital management:

The company is not subject to any externally imposed capital requirements.

It is the Board's policy to maintain a strong capital base so as to sustain the future operation of the company. The Board of Directors monitors the return on capital, which the company defines as total equity.



27. Fair values

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Market price is used to determine fair value where an active market exists as it is the best evidence of the fair value of a financial instrument.

**Determination of fair value and fair value hierarchy**

IFRS specifies a hierarchy of valuation techniques based on whether the inputs to those valuation techniques are observable or unobservable. The different levels have been defined as follows:

Level 1 – Quoted prices (unadjusted) in active markets for identical assets or liabilities.

Level 2 – Discounted cash flow technique using a discount rate from observable market data, i.e. average of several brokers/dealers market indicative yields in active markets for identical assets or liabilities.

Level 3 – Valuation techniques using significant unobservable inputs.

The fair values of cash and cash equivalents, accounts receivable and accounts payable are assumed to approximate to their carrying values, due to their short-term nature.

The fair value of long-term receivable approximates to its carrying value as no discount is expected on settlement.

The fair values of resale agreements included in investments approximate their carrying values due to their short-term nature. The units held in NCB Capital Markets CAPFunds (note 5) are classified as Level 2 in the fair value hierarchy.

28. Contingent liabilities

- (a) There are a number of claims against the company by various third parties. The claims are at different stages and no provision has been made in these financial statements for any as management believes that the company will be successful in its defence, and the company has insurance in place to cover these claims.
- (b) A claim was made against the company by an ex-employee in which the court awarded cost to the ex-employee. An amount of \$3,784,256 (2016: \$3,784,256) is included in accounts payable (note 11) pending any claims.
- (c) A claim was made by an ex-employee, during the year, for unjustifiable dismissal as her contract of employment was terminated by letter dated August 23, 2016.

The matter came up for conciliation at the Ministry of Labour and the parties have arrived at a settlement to compensate the claimant for nine month's gross salary in full and final settlement, in addition to paying her for other sums due.

A provision of \$4,653,574 was included in accounts payable (note 11) at the reporting date.

The matter has been subsequently settled.



# NATIONAL IRRIGATION COMMISSION LIMITED

Notes to the Financial Statements (Continued)  
Year ended March 31, 2017

## 29. Capital commitments

Commitments for capital expenditure were as follows:

	<u>2017</u>	<u>2016</u>
Capital commitments	<u>\$72,591,298</u>	<u>33,701,109</u>

## 30. Prior year restatements

- (a) In the previous years, the company did not account for the employer's portion of education tax which became due and payable on the amendment of section 7(i) of the Education Tax Act (2003). The amounts due as of March 31, 2011 and subsequent years, include interest, have been quantified and have now been recognised.
- (b) In the previous years, the company accounted for its payment of input tax for General Consumption Tax purposes on the cash basis. On a monthly basis, the company would accumulate its charges for input tax and submit the information to its responsible Ministry, which would make the payments; these were accounted for as part of its subvention. During the current financial year, the responsible Ministry redirected this responsibility to the company to pay its input tax. At the reporting date, the company applied the accruals basis in accounting for this liability. This resulted in an accrual of \$35.42M as at March 31, 2017, of which \$8.44M relates to prior years and was appropriately recognised in the financial statements.

The effects of these transactions on the financial statements of the prior periods are as follows:

- (c) Effect on the statement of financial position:

	Accounts payable and accrued <u>charges</u>	Accumulated surplus/ <u>deficit</u>
Balances at March 31, 2015		
As previously reported	<u>351,704,708</u>	( 40,238,649)
Prior year adjustments [see (a) above]	78,778,447	( 78,778,447)
[see (b) above]	<u>2,123,254</u>	( 2,123,254)
	<u>80,901,701</u>	( 80,901,701)
March 31, 2015, as restated	<u>\$432,606,409</u>	(121,140,350)
Balances at March 31, 2016		
As previously reported	<u>206,326,920</u>	206,164,476
Prior year adjustments [see (a) above]	93,349,816	( 93,349,816)
[see (b) above]	<u>8,440,604</u>	( 8,440,604)
	<u>101,790,420</u>	(101,790,420)
March 31, 2016, as restated	<u>\$308,117,340</u>	104,374,056



NATIONAL IRRIGATION COMMISSION LIMITED

Notes to the Financial Statements (Continued)  
Year ended March 31, 2017

30. Prior year restatements (continued)

(d) Effect on profit for the year ended March 31, 2016:

Accumulated  
surplus/  
deficit

Profit for the year, as previously reported

207,328,125

Prior year adjustments

( 20,888,719 )

As restated

\$186,439,406

(e) Other than restatement of comparatives for profit for the year and accounts payable and accrued charges by \$20,888,719, there was no effect on the statement of cash flows for the year ended March 31, 2016.



NATIONAL IRRIGATION COMMISSION LIMITED

SUPPLEMENTARY INFORMATION TO THE  
FINANCIAL STATEMENTS

YEAR ENDED MARCH 31, 2017



**NATIONAL IRRIGATION COMMISSION LIMITED**

**Government of Jamaica Project Advances  
As at and for year ended March 31, 2017**

<b>PROJECTS</b>	<b>At beginning of year</b>	<b>Received during year</b>	<b>Total</b>	<b>Capital work</b>	<b>Expenditure capitalised</b>	<b>Non-capital expenditure</b>	<b>Capital 'B' expenditure</b>	<b>Capital funds utilized for deposits on fixed assets</b>	<b>2017</b>	<b>2016</b>
Non Such Agro Park, St. Mary (Account #454120-00-00)	1,670,635	-	1,670,635	(2,314,512)	-	-	-	-	( 643,877)	( 643,877)
Fabrication of gates and installation of mechanical devices	990,144	-	990,144	-	( 966,068)	( 24,076)	-	-	-	-
Construction of storage reservoirs	1,200,220	-	1,200,220	-	-	( 1,200,220)	-	-	-	-
Colbeck	578,305	-	578,305	-	-	( 578,305)	-	-	-	-
Construction of Dam	14,143,538	-	14,143,538	( 50,000)	( 14,022,668)	( 30,245)	-	-	40,625	40,625
Hounslow	2,198,189	-	2,198,189	-	-	( 2,198,189)	-	-	-	-
Lining of Canals	216,655,055	196,520,000	413,175,055	(22,459,738)	(118,005,430)	(199,074,912)	-	(33,338,822)	40,296,153	13,602,386
National Irrigation Development Plan	1,651,435,748	-	1,651,435,748	-	-	-	(1,608,245,522)	-	43,190,226	43,190,226
National Irrigation Development Plan - Implementation	448,435,563	-	448,435,563	-	-	-	( 448,920,563)	-	( 485,000)	( 485,000)
Other capital projects	254,444,544	-	254,444,544	-	(187,221,888)	( 40,805,819)	-	-	26,416,837	26,416,837
Joint Venture- New-Era rehab infrastructure	2,701,354	-	2,701,354	-	-	( 528,773)	-	-	2,172,581	2,172,581
Ext. Block E Pipeline	2,639,774	-	2,639,774	-	( 2,547,798)	-	-	-	91,976	91,976
Second Sugar-Rehabilitation	151,069,666	-	151,069,666	-	(149,502,023)	( 1,567,643)	-	-	-	-
Thetford	29,094,791	-	29,094,791	-	( 29,070,822)	( 23,969)	-	-	-	-
Yallahs	25,336,710	-	25,336,710	-	( 24,394,104)	( 942,606)	-	-	-	-
Rain Water - Harvesting Project	12,896,074	-	12,896,074	-	-	(12,907,074)	-	-	( 11,000)	( 11,000)
Energy Saving Projects	6,042,125	-	6,042,125	-	-	( 8,006,974)	-	-	( 1,964,849)	( 1,964,849)
Vernamfield Irrigation-System Project phase I	65,700,000	-	65,700,000	(13,065,725)	-	( 44,259,849)	-	-	8,374,426	10,678,024
Agro Parks Project	30,000,000	-	30,000,000	(39,567,158)	-	( 4,111,330)	-	-	( 13,678,488)	( 3,518,465)
Fishing Beach Projects	70,000,000	-	70,000,000	-	-	( 65,741,215)	-	-	4,258,785	4,258,785
Port Henderson re lift pump - Station-STU	6,500,000	-	6,500,000	( 6,057,174)	-	-	-	-	448,826	1,290,035
PGR Pump House Construction-STU	1,590,000	500,000	2,090,000	( 2,231,820)	-	-	-	-	( 141,820)	128,192
Ebony Park filtration system-STU	3,000,000	403,532	3,403,532	( 3,277,244)	-	-	-	-	126,288	( 15,128)
Wind Monitoring Project	5,174,718	-	5,174,718	-	-	( 5,213,557)	-	-	( 38,839)	( 38,839)
IDB Well Sites	485,000	-	485,000	-	-	-	-	-	485,000	485,000
Vernam Irrigation System Phase 2	4,400,000	-	4,400,000	( 560,000)	-	-	-	-	3,840,000	1,536,402
JB I Project Funds-Schwallenburgh Green House	-	2,431,128	2,431,128	(1,664,373)	-	-	-	-	766,755	-
	<u>\$3,008,382,153</u>	<u>199,854,660</u>	<u>3,208,236,813</u>	<u>(91,241,744)</u>	<u>(525,730,801)</u>	<u>(387,214,756)</u>	<u>(2,057,166,085)</u>	<u>(33,338,822)</u>	<u>113,544,605</u>	<u>96,959,527</u>



## NATIONAL IRRIGATION COMMISSION LIMITED

### Expenses

Year ended March 31, 2017

#### Cost of producing and distributing water to farm gates

	<u>2017</u>	<u>2016</u>
Depreciation	41,818,062	42,567,778
Electricity	392,264,305	461,865,786
Equipment hireage	5,708,599	2,488,750
Fuel and lubricants	4,549,424	4,941,022
General expenses	3,842,215	2,778,786
General insurance	8,432,689	8,332,192
Haulage	2,331,250	4,173,238
Maintenance of conveyance system (labour)	103,109,475	47,734,554
Motor vehicle fuel, repairs and maintenance	15,064,075	12,573,646
Telephone, postage, data, etc.	3,198,337	3,403,131
Office refreshments	2,474,862	1,482,250
Stationery	2,059,003	1,984,096
Computer expenses	1,670,856	831,221
Bank charges	131,438	144,467
Regulatory fees	345,000	867,647
Office rent and property taxes	1,483,000	895,667
Office utilities	6,916,909	7,535,227
Advisory committee fees and related expenses	761,450	2,187,194
Professional fees	1,314,583	1,537,306
Repairs to buildings, distribution canals, pipelines, pumps, etc. (material)	63,667,491	41,787,424
Salaries, wages and related costs (see below)	405,510,994	357,437,581
Security	<u>10,628,165</u>	<u>16,129,668</u>
Total cost of producing and distributing water	<u>\$1,077,282,182</u>	<u>1,023,678,630</u>

#### Salaries, wages and related costs

Personnel emoluments	272,837,174	234,421,937
Insurance scheme	22,898,166	21,181,772
Statutory contributions	12,662,715	10,422,354
Staff welfare	2,045,424	2,847,475
Accrued vacation leave	1,252,279	2,709,847
Travel and subsistence	92,694,564	83,835,183
Training	<u>1,120,672</u>	<u>2,019,013</u>
	<u>\$ 405,510,994</u>	<u>357,437,581</u>



NATIONAL IRRIGATION COMMISSION LIMITED

Expenses (Continued)  
Year ended March 31, 2017

Salaries, wages and related costs included in administrative expenses

	<u>2017</u>	<u>2016</u>
Personnel emoluments	146,559,458	134,868,543
Pension benefit cost (net of contribution)	14,774,000	15,394,000
Insurance scheme	8,598,307	9,923,282
Statutory contributions	24,831,919	17,422,358
Vacation leave	( 1,873,133)	( 4,645,744)
Gratuities	2,233,956	2,748,751
Staff welfare	1,096,345	863,774
Training	2,462,011	3,047,471
Travel and subsistence	<u>36,616,357</u>	<u>28,777,810</u>
	<u>\$235,299,220</u>	<u>208,400,245</u>



