



# **LAPORAN TAHUNAN | 2016** ***ANNUAL REPORT***



**Lembaga Air Kuching**  
***Kuching Water Board***

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*Di sini kami berbakti  
Membekal air berkualiti  
Berkhidmat dengan intergriti  
Kami warga K.W.B.*

*Berdaya maju, berdaya saing  
Setiap langkah perlu seiring  
Berkerjasama berganding bahu  
Untuk satu hala tuju*

*Berganding tangan; bersatu hati  
Bersama kita jadikan realiti  
Satu wawasan pegangan kami  
Ke arah perkhidmatan cemerlang*

## Our Vision

“

To Be a Dedicated and Dynamic Water Supply Agency with Culture and Values that are Excellence Driven and Performance Oriented which Consistently Provides Services that meet Full Consumers' Satisfaction.

”

## Our Mission

“

To Provide Adequate and Reliable, Quality Potable Water Supply at Acceptable Charges to All Consumers within its Area of Jurisdiction at the Highest Attainable Standards in Quality and Service.

”

## Our Slogan

“

Towards Service Excellence.

”



# Chairman's Statement

**YBhg. Dato Sri Ahmad Tarmizi Bin Haji Sulaiman**  
Chairman  
Kuching Water Board



## INTRODUCTION

On behalf of the Board of Directors of Kuching Water Board, I am pleased to present the Annual Report and Audited Financial Statements for the twelve (12) months of financial year ended 31 December 2016.

## REVIEW OF FINANCIAL PERFORMANCE

The Financial Statement of the Board for the year 2016 was prepared based on The Malaysian Private Entity Reporting Standard (MPERS). The conversion from Private Entity Reporting Standards (PERS) to Malaysian Private Entity Reporting Standards (MPERS) is required to meet the Malaysian Accounting Standard Board (MASB) standard requirements.

The overall financial performances of the Board remain showing growth. For the year 2016, the Board has recorded a net profit after taxation of RM33,460,376 showing an increase of 70% or RM13,727,009 as compared to 2015. Total revenue was RM150,035,388, total expenditure was RM117,268,882 and tax adjustment was RM693,870.

Total asset rose by 6% to RM1,002,718,808, total liabilities decreased by 5% to RM639,843,820 and the Board retained earning increased by 34% to RM362,874,988. To finance major development projects, the Board will continue to seek interest free loans or grants from the government. As at 31st December 2016 total loan balance stood at RM292,409,506.

## PLANNING AND DEVELOPMENT

The main focus of the Board's development programme is to meet the projected water demand to support the growth and development in Kuching, Samarahan and its surrounding areas in line with the State's socio-economic development plan. Through the working cooperation between the Board and JKR Water Supply Department in the Interboundary Water Supply Committee forum enabled the needs of water supply in the rural areas being planned effectively.

## DEMAND AND SUPPLY

An estimated 850,000 residents in Kuching, Samarahan and its surrounding areas enjoyed the supply of fully treated water.

The Board's treatment plants at Batu Kitang and Matang produced a total of 191,633 megalitres per year of treated water in 2016. This represents an increase of 6.58 as compared to 2015.

The average daily production increased by 6.09 from 493 MLD in 2015 to 523 MLD in 2016. The maximum daily production during the year was 575 MLD, whereas the minimum daily production was 440 MLD.

## WATER QUALITY CONTROL

Kuching Water Board is in compliance with the National Drinking Water Quality Surveillance Programme. A total of 1,627 water samples were collected for bacteriological examination and 365 water samples were collected for physiochemical testing and were analyzed by the Department of Chemistry.

For treated water, Kuching Water Board registered a bacteriological compliance rate of 97.5%. Practically all or close to 100% of the treated water samples were free from Faecal Coliform bacteria throughout the years.

## INFORMATION TECHNOLOGY

The Board's focused on Information Technology by replicating the data and records in order to enhance data security from outdated technology. In fulfillment of data security required by the Information Security Management System, the Board embarked for assessment of alternative backup data centre in 2015. The effort is to upgrade and enhance its computer systems as well as to provide better service to its customers. The Board is actively expanding on its IT integration in terms of systems, data and applications to allow advanced development that capable of supporting Board's current and future requirements.

## HUMAN RESOURCE DEVELOPMENT

Enhancement of quality services provided by the Board's personnel is supported with continuous training either through In-house or attending relevant external training programme in established Institutions. A total of RM500,000 was allocated to serve this purpose.

## APPRECIATION

On behalf of the Board, I wish to thank the Management and staff for their hard work, dedication and loyalty throughout the year in their efforts to provide the best service to our consumers.

To our Board Members, I wish to thank them for their dedicated service and valued contributions towards the positive progress and performance of Kuching Water Board.

I also wish to thank both the State and Federal governments for their continued support, the

Minister of Public utilities, the Permanent Secretary, Ministry of Public utilities and JKR Personnel's for their guidance, assistance and support.

Last but not least, I wish to thank our customers for their support and cooperation especially in promptly reporting water leakages and other supply shortcomings to Kuching Water Board.

We will continue to upgrade the level of service and enhance our capacity in our endeavour to provide safe, reliable and consistent supply of water to our customers.



**YBhg Dato Sri Ahmad Tarmizi B. Haji Sulaiman**  
*Chairman*  
Kuching Water Board



# Corporate Information

## CHAIRMAN

YBhg. Dato Sri Ahmad Tarmizi B. Hj. Sulaiman,  
*State Financial Secretary*  
PNBS, DJBS

## MEMBERS

Tuan Haji Ubaidillah Bin Haji Abdul Latip (PPC, PBK, PPB)  
*Permanent Secretary, Ministry of Public Utilities*

Tuan Haji Ir. Zuraimi Bin Haji Sabki (PPC, PPB)  
*Director of Public Works*

YBhg. Datu Dr. Zulkifli Bin Jantan (PBK, DJBS)  
*Director of Sarawak Health Department*

Encik Lau Ting Ping (PPC)

Tuan Haji Mahran Bin Jamel

Encik Chai Ming Lu

Dr. Azizah Binti Abdullah

Encik Bong Joon Fook

( until 1 April 2016 )



## Members of The Board



YBhg. Dato Sri Ahmad Tarmizi Bin Haji Sulaiman



Tuan Haji Ubaidillah Bin  
Haji Abdul Latip



YBhg. Datu Dr. Zulkifli Bin  
Jantan



Ir. Hj Zuraimi B.  
Hj Sabki



Encik Lau Ting Ping



Dr. Azizah Binti  
Abdullah



Tuan Haji Mahran Bin Jamel

Encik Chai Ming Lu

Encik Bong Joon Fook



# Senior Management



Mohamad Sabari Bin Shakeran  
*General Manager*



Wong Soon Sing, PPB  
*Deputy General Manager*  
*Planning, Development & Production Department*  
*cum Senior Chemist*



Moses A. Joseph, ABK  
*Deputy General Manager*  
*Distribution Department*



Dayang Amelia Binti Abang Haji Morshidi  
*Board Secretary/*  
*Administration & Human*  
*Resource Department*



Chebby Bin Loren, ABS  
*Chief Accountant*

**Auditor**  
Auditor General Malaysia

**Head Office**  
Kuching Water Board  
Jalan Batu Lintang, 93200 Kuching, Sarawak

Tel: 082-222222 Fax: 082-222259  
Website: [www.kwb.gov.my](http://www.kwb.gov.my)



# Corporate Information

## INTRODUCTION

The Board was established on 1st January 1959 by authority of the Kuching Water Board Order 1959, Notification No. S.12 of 1959, made under Sections 2 and 3 of the Water Supply Ordinance to take over the Kuching Water Supply from the Public Works Department, Sarawak.

The Board is responsible for the administration, management and supervision of all waterworks situated within its jurisdiction of supply. The policy of the Board is to extend mains and to develop other facilities to provide adequate and reliable supply of fully treated quality water within its area of supply. The water supply system conforms in all aspects to modern requirements, and the development programme is drawn up to meet the projected growth in demand.

Originally, the area of supply covered only 44.8km<sup>2</sup> (17.3 sq. miles). The supply area was subsequently increased in stages over the years to cater for the water demands of developments outside it as they could not be conveniently or feasibly supplied by the Public Works Department. In 1963 and 1973, the supply area was increased to 90.7km<sup>2</sup> (35 sq. miles) and 225km<sup>2</sup> (87 sq. miles) respectively. The supply boundary was extended further in 1988 to cover the current area of 730km<sup>2</sup> (282 sq. miles) as shown in Appendix 18.

On 1st June 1995, the existing Water Supply Ordinance (Sarawak Cap. 141) was repealed and replaced by the Water Ordinance 1994. On 1st January 2001, the Board was re-established under the Kuching Water Board Order, 2001 and effective from the same date, the Board consists of the following members:-

- the State Financial Secretary or his nominee (Chairman);
- the Director of Public Works, Sarawak;
- the Director of Health, Sarawak;
- the Permanent Secretary, Ministry of Public Utilities;
- the Chairman of Padawan Municipal Council; and
- six (6) other members to be appointed by the Minister.

## ORGANISATION

Since the Board's inception in 1959, it has operated as an independent state owned organisation. It has its own offices, treatment plants, workshops, stores and transport facilities. The Board operates one counter at UTC Sarawak and two SBBS counters at Head Office at Jalan Batu Lintang and Jalan Song Thian Cheok respectively.

## STAFF STRENGTH

The total staff strength at the end of year 2016 was 502 against the previous years as exhibited in the table below:

Year	Professional & Managerial	Support Group	Total
2016	19	483	502
2015	19	491	510

## FINANCE AND ACCOUNTS

### Revenue

The financial positions of the Board for the year 2016 remain healthy. The Board recorded a total revenue of RM150,035,388 an increased of 15%. Water sales and water related services contributed 72% or RM108,398,546 to the total revenue of the Board. Another 18% or RM 41,636,842 was contributed by other sources such as interest on fixed deposit and deferred income i.e income from government grants and capital contributions.

Summary of the revenue is shown as per table below:

Revenue Details	Amount (RM)
Water Sales	106,198,052
Income from related water services	2,200,494
Income from Investment	5,129,517
Deferred income (amortization)	15,131,469
Deferred income from Grants and Capital Contribution	21,247,206
Other Income	128,650
<b>TOTAL</b>	<b>150,035,388</b>



## EXPENDITURE

For the year 2016, total expenditure was RM117,268,882, showing an increased of 1% or RM2,608,639. The cost of production and distribution contributed 83% to the total expenditure, while 17% was administration and finance cost. Prudent expenditure policies of the Board and strict budgetary control have contributed to the success of the Board in controlling the expenditure. Summary of the expenditure is shown as per table below:

Expenditure Details	Amount (RM)
Production Cost	50,146,309
Distribution and Selling Costs	47,017,050
Administration Cost	17,309,308
Finance Cost	12,780
Other Operating Cost	2,783,435
<b>TOTAL</b>	<b>117,268,882</b>

Note :

For this reporting, the comparison figures are obtained from the original audited financial statement of 2015 (not the restated 2015 figure as presented in the 2016 financial statement).

## DEMAND AND SUPPLY

### CONSUMPTION

The average daily gross consumption increased by 6.09% from 493 megalitres in 2015 to 523 megalitres in 2016. The maximum daily consumption during the year was 575 megalitres per day, whereas the minimum daily consumption was 440 megalitres per day.

### PRODUCTION

The Board's treatment plant at Batu Kitang and Matang produced a total of 191,663 megalitres of fully treated water representing an increased of 6.09% over the 2015 water production.

Summary of the total production and consumption is shown as per table below:

Year	Production of treated water (megalitres)	% increased in production	Average daily consumption (megalitres)	% increased in consumption
2016	191,633	6.09%	523	6.09%
2015	179,818	4.75%	493	4.89%
2014	171,671	4.62%	470	3.30%
2013	164,093	3.00%	455	5.32%
2012	159,323	2.33%	432	1.17%
2011	155,693	1.67%	427	1.91%
2010	153,136	4.93%	419	4.75%
2009	145,935	1.93%	400	2.04%
2008	143,175	3.70%	392	3.70%
2007	138,130	8.30%	378	8.30%

## BATU KITANG WATERWORKS

The Batu Kitang Treatment Plant Complex is situated near the bank of Sungai Sarawak Kiri, about 64.37km from the sea. Raw water is pumped from the river to the Treatment Plant where it undergoes the conventional treatment process of coagulation, flocculation, sedimentation, filtration, disinfection and pH adjustment. Coagulation is by the alumlime process and disinfection is by chloramines. Fluoridation has been practiced since 1966. The fully treated water is later pumped to the various reservoirs and service tanks in and around the Kuching Network System for distribution.

Module No. 1 of the Treatment Plant with its first raw water intake and a capacity of 14MLD (3MgD) was commissioned in 1957. In 1965, the capacity was increased to 18MLD (4MgD) after the changing of the pump impellers and the construction of a second stage pumping station as well as two underground reservoirs at Batu Lintang. Extension works to further increase the plant capacity to 27MLD (6MgD) commenced in October 1968 and was completed in 1970. The extension of this Module No. 1 was then designated as the plant's Module No. 2.

In November 1976, construction work on Module No. 3, with a present capacity of 41MLD (9MgD) and comprising of a new treatment plant and raw water intake, was started and commissioned in November 1978.

Scope with the ever increasing demand for water, construction work on Module No.4 commenced in November 1983. As an extension of the Module No. 3, the maximum capacity of this Module No. 4 is 55MLD (12MgD). It was substantively commissioned towards the end of 1986.

The construction of Module No. 5 Treatment Plant with a capacity of 100MLD including a new raw intake under the Stage 2 Expansion of Kuching Water Supply "Big Leap" Development Project commenced in December 1991 and was substantively completed and commissioned in August 1994.

In order to cater for the increasing water demands and to ensure reliable supply up to the completion and commissioning of Module No. 5 Plant in 1994, major staged improvement works to Raw Water Intake Nos. 1 and 2, including the laying of an 840mm diameter steel raw water pumping main from Intake No. 2 to Module Nos. 3 and 4 were commenced in 1990 and were substantively completed by the end of 1992. The improvement works included installation of new submersible pump sets, booster pump sets, back rack screens for debris removal and desludging systems at both



intakes and refurbishment of existing Kubota pump sets at Intake No.2. Other notable improvement works carried out in 1994 included the upgrading of standby power generator set for Module Nos. 3 and 4 and Intake No. 2.

Around mid-1996, work commenced on the design and construction for the Batu Kitang Module 6 of 100MLD capacity to meet the rapidly increasing water demands of the Kuching City and its surrounding areas for another 10 years.

Construction works on the Module 6 Plant commenced on 24th March 1998 and was practically completed and commissioned in May 2000.

Detailed design for the Module 7 Plant 4 was substantively completed in 1998. Earthwork for the Module 7 Plant commenced on 1st December 1997 and was practically completed in September 1998. However, due to KWB's tight financial position, the construction of the 100MLD capacity of the Plant had to be deferred to commence early in the 8MP. Construction work for Module 7 Plant 4 actually commenced in June 2002 and was completed and commissioned on 9th August 2006.

Upgrading of Plant 3 from 200MLD to 400MLD commenced in November 2013 and is expected to be completed in June 2017. Batu Kitang Treatment Plant Complex accounted for 98% of the total water production in 2016.

## **MATANG WATERWORKS**

The original waterworks constructed by the White Rajahs to supply water to Kuching Town was situated in the Matang Hills, some 12 miles from the town. The water was relatively clear and distributed untreated.

This source continued to be in use even after the Batu Kitang Plant was commissioned in 1957. In 1960, chlorination was introduced and the possibility of building a treatment plant in the Hills was investigated.

Construction of a 9MLD (2MgD) treatment plant near the Matang Dam commenced in 1964 and the plant was put into operation in March 1966. Raw water from the mountain streams was piped to the plant where full treatment similar to that at Batu Kitang Plant was carried out before it gravitates into the distribution system.

However, production from Matang Treatment Plant was dependent on rainfall and during the dry months output may fall to as low as 10% of its maximum capacity. To improve the reliability of the water supply, work was commenced in December 1973 on the construction of a 60 million gallon earth storage basin at Matang, below the Sungai Sebut catchment. The storage basin was completed in February 1976.

With the development of the Kuching North Bank, it was decided that the Matang Treatment Plant be extended to increase the capacity from 9MLD (2MgD) to 16MLD (3.5MgD). Extension works which included the construction of a 1.5 million gallon balancing reservoir commenced in January 1976 and was completed in April 1977. The extension was commissioned in July 1977.

The Matang Water Sources continued to be an important supply of treated water in particular to areas around Matang, which is being developed at a rapid pace. To ensure that Matang Treatment Plant can adequately sustain its reliability and to meet the demands for treated water, upgrading and retrofitting works at the Matang Treatment Plant proper commenced in early January 2001 and was substantively completed at the end of March 2002. Two other major works, also implemented in tandem to ensure continued reliability and sustainability of Matang raw water sources were the renewal of the raw water pipeline from Sungai Cina to Matang Plant which commenced in March 2001, and the raising of the Sungai Sebut Storage commenced in January 2002 to increase live storage to 520 MI. These works were substantively completed in July 2003 and April 2003 respectively. Construction of lower reservoir Booster Station commenced in June 2015 with a complete period of 12 months. The Booster Station, drawing treated water from Batu Kitang Treatment Plant shall compliment the water supply to Sungai Cina, Sempadi and Rambungan areas. The Matang Treatment Plant accounted for about 2% of the total water production in 2016.



## WATER QUALITY CONTROL

The execution of Board's stringent water surveillance programme augmented by the National Drinking Water Quality Programme ensured that safe and wholesome drinking water supply was maintained throughout the year.

During the year, a total of 27,970 water samples from the Raw Water Sources, Treatment Plant Pumping Mains, Reservoirs & Tanks and Distribution System were taken for Physiochemical and Bacteriological Examination. Out of the number, 23,103 samples were analysed physiochemically while the remaining 6,867 samples were examined bacteriologically.

A total of 27,978 samples or 93.35% were analysed at the Board's Water Quality Control Laboratory while the rest of 1,992 samples or 6.65% were sent to the Chemistry Department for analysis. The breakdown of the samples analyzed for year as at 31 December is shown below:-

Parameter Location	Board's Laboratory	Chemistry Department
<b>Physico-chemical Examination</b>		
Intakes & Sources	967	48
Water Treatment Processes	16,981	-
Treatment Plant P.M.	1,790	89
Reservoirs & S. Tanks	879	115
Distribution System	1,633	84
Special Sample (Sungai Sarawak)	488	29
<b>Total</b>	<b>22,738</b>	<b>365</b>
<b>Bacteriological Examination</b>		
Intakes & Sources	964	204
Treatment Plant P.M.	1,786	375
Reservoirs & S. Tanks	877	483
Distribution System	1,613	536
Special Sample (Sungai Sarawak)	-	29
<b>Total</b>	<b>5,240</b>	<b>1,627</b>

## PIPE'S DISTRIBUTION NETWORK

### Mains

During the year 2016, 955 repairs were carried out on trunk and distribution mains. The total length of water mains within the Board's Distribution Network as at the end of 2016 is 2,555 km. The Board's emergency service was operated on a 24-hour basis with the number of service calls and minor repairs received on pipe burst and service leaks attended to during the year was at 8,123.

The breakdown of the types of service request received during the year is shown below:

Type of Request	Total Complaints Received & Attended
Main Burst	171
Main Leak	784
Communication Pipe Leak	4,150
Dirty Water	281
No Water	1,819
Low Pressure	918
<b>TOTAL</b>	<b>8,123</b>

### Meters

Routine checking on water meters were carried out. A total of 3,183 faulty meters were changed and 233 meters were renewed during the year.

### New Service Connections

The total number of new services connected during the year was 5,374. Of this 3,954 or 73.60% of connections were for domestic consumers and 1,420 or 26.40% were for commercial consumers. The summary of new service connections is as shown below:

Year	Domestic consumer	%	Commercial Consumer	%	Total New service connection
2016	3,954	74.60	1,420	26.40	5,379
2015	4,275	74.30	1,481	25.70	5,756
2014	3,895	79.23	1,021	20.77	4,916
2013	4,452	76.16	1,390	23.78	5,845
2012	4,042	68.92	1,823	31.08	5,865
2011	2,877	81.16	668	18.84	3,545
2010	3,862	82.50	820	17.50	4,682
2009	3,981	81.44	907	18.56	4,888
2008	4,796	84.78	861	15.22	5,657
2007	4,996	83.39	995	16.61	5,991





## **Main Extension**

A total length of 54.36 km of new water mains ranging in sizes from 100mm to 600mm diameter was laid to serve housing estates and commercial developments been handed over to the Board.

## **NON-REVENUE WATER (NRW)**

### **Active Leakage Control**

Since 1993, leakage control programmes were implemented with the setting up of Leakage Control Zones (LCZ) and District Metering Areas (DMA) each comprising of 200 to 2000 consumers. The leakage control zones and district metering areas have to be continuously monitored and its leakage level controlled and maintained at an achievable economic level of leakage. As at 31st December 2016, a total of 178 Leakage Control Zones and 103 District Metering Areas had been set up within the Kuching Water Board Supply Network to monitor and manage leakage level of the Board's distribution network system. Since the implementation of active leakage control in year 1993, a total of 2,836 nos. of leaks from pipes and services and 946 nos. of water thefts had been detected and addressed.

### **NRW Target**

The Board's Non-Revenue Water (NRW) level for the year was 33% as compared with the national average of about 40% and the nationally accepted satisfactory level of 25%. The Board targets to reduce the percentage of its NRW within the range of 2% - 3% annually from the present NRW level of about 33%, and to achieve an NRW level of 25% by the end of 2020, in line with the Ministry of Public Utilities/State Government's NRW target of 25% for all Water Authorities in the State by the same period.

### **Approach In Reducing NRW**

The Board had implemented a holistic approach towards reducing its NRW by ensuring a faster renewal/upgrading of leakage prone pipelines, particularly asbestos cement pipelines, prompt detection and repair of all leakages, a continuous replacement of aged water meters to minimize meter under-registration, quality design and construction of new distribution system, as well as pressure/flow monitoring and management of the distribution network system. Inculcating a culture of leakage reporting and other supply shortcomings, both within the Department and from the public, such as through the introduction of "Friends of KWB" programme is part of the Board's strategy to help achieve earlier detection and repair of leakages. During the year, a total of 4,934 numbers of leaks from pipes and services were repaired and addressed.

The Board's NRW Task Force Committee in the year 2000 had concluded that most of the NRW was attributed to leakages from the pipeline network system, particularly from the aged asbestos cement pipes. About 40% of the Board's total pipelines then were of asbestos cement and they contributed to about 70% of all pipeline bursts. Replacement of leakage prone old asbestos cement and lead jointed cast iron pipes, with priority accorded to the worst areas, is one of the priorities in tracking NRW for the Board.

### **Mains Renewal/Upgrading**

Commencing from year 2000, action was initiated to renew/upgrade the existing aged asbestos cement pipes and other old pipes in a more systematic manner. A total length of 90.05km of pipelines had been renewed/upgraded during the 10th Malaysia Plan (10MP). As at the end of 2016, 54% or about 325km of some 600 km of old asbestos cement and cast iron pipes had been renewed/upgraded.

Mains renewal involves high capital expenditure. Therefore, in order to ensure a more efficient and effective approach in the reduction of water loss from the distribution network system, replacement of aged and leak-prone water mains shall be prioritized accordingly based on pipe burst records and water loss flow measurements via district metering.

### **NRW Management And Control Programme**

NRW Management & Control Programme for KWB has been in place since 2006. The Board had benchmarked its NRW reduction and control approaches and efforts against the other Water Supply Agencies (WSA) in the State and the scope of the Board's NRW Management & Control Programme includes adopting a better and more effective leakage detection and control strategy, use of advanced/standardized leakage detection equipments and tools to ensure optimized operation, as well as extensively implement other NRW management and control strategies such as pressure management, setting up of District Metering Areas (DMA) and close monitoring of leakage level, 'Active Leakage Control', GIS/Asset Management, and better maintenance of the Board's distribution system.

The Board had employed the modern and internationally accepted holistic 'International Water Association' (IWA) approach and methodology of Non Revenue Water (NRW) Management to manage and reduce NRW. This methodology shall involve using IWA Water Balance in quantifying NRW, using 'Infrastructure Leakage Index (ILI)' as indicator and



target, establishment of District Metering Areas, and the use of technology to reduce and manage NRW. A methodology for the determination of the 'Optimal/Economic Level of Leakage' for the Board had been established and the 'Optimal/Economic Level of Leakage' shall be determined to serve as guides to a more feasible NRW reduction target.

The objectives of the Board's NRW Management & Control Programme are to achieve high performance on water supply system, to reduce its NRW level gradually to reach the State's target of 25%, and to reduce NRW continuously in tandem with the 10th Malaysia Plan which includes installation and monitoring of leakage detection equipments, establishment of district metering areas with remote logging and monitoring, pressure management, rehabilitation of aged water mains, replacement of aged water meters under the meter renewal programme, and 'Active Leakage Control' activities.

### **ISO 9001 Quality Management System**

The Internal Quality Audit was conducted on 19-20 April 2016, in which the scope of the audit only covered activities involving the production of potable water and consumer related services.

ISO 9001:2008 Quality Management Systems was reviewed to ensure the ISO 9001 remains relevant and valid with current environment. Thus, the transition of Board's quality management system from ISO 9001:2008 to ISO 9001:2015 has been implemented in year 2016. The internal audit for the transition was conducted on 12 to 14 October 2016 and Surveillance 1 cum Upgrade Audit by external auditor M/s Intertek Certification International Sdn. Bhd. was conducted on 9 to 11 November 2016.

Certificate of Registration to certify that the quality management system of Kuching Water Board has been conformed to the requirements of ISO 9001:2015 was issued on 4 January 2017 and to be expired on 15 December 2018.

### **ISO/IEC: 27001 Information Security Management System**

Information Security Management System Internal Audit for the year 2016 was conducted on 25 to 29 January 2016, while Surveillance 2 Audit by external auditor M/s Cyber Security Malaysia was conducted on 1 to 2 March 2016.

Certificate of Registration on the information security management system of Kuching Water Board has been conformed to the requirements of ISO/IEC 27001:2013, which is issued on 11 April 2017, was subsequently extended for another three (3) years and to be expired on 10 April 2020.

### **Visitors**

A total of 228 visitors comprising of waterworks federal department, engineers, consultants, health inspectors, oversea specialist, VIPs, students and teachers from school to university level visited the Batu Kitang Water Treatment Plants in 2016.



## YB Datuk Dr Stephen Rundi Anak Utom, Minister of Public Utilities visit to Kuching Water Board





## Water Awareness Run 2016





## Water Awareness Run 2016





# Financial Statements

## PENYATA Pengerusi dan Seorang Ahli Lembaga Pengarah

Kami, **DATO SRI AHMAD TARMIZI BIN HAJI SULAIMAN**, yang merupakan Pengerusi dan salah seorang Ahli Lembaga Pengarah **LEMBAGA AIR KUCHING**, dengan ini menyatakan bahawa, pada pendapat Lembaga Pengarah, lembaran imbangan, penyata pendapatan, penyata perubahan dalam ekuiti, dan penyata aliran wang tunai yang berikut ini berserta dengan nota-nota di dalamnya adalah disediakan untuk menunjukkan pandangan yang benar dan saksama berkenaan kedudukan **LEMBAGA AIR KUCHING** pada **31 Disember 2015** dan hasil kendaliannya dan aliran wang tunai bagi tahun yang berakhir pada tarikh tersebut.

Bagi pihak Lembaga,



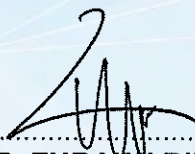
NAMA: **DATO SRI AHMAD TARMIZI B.  
HAJI SULAIMAN**

GELARAN: **Pengerusi**

Tarikh: 27/04/2016

KUCHING

Bagi pihak Lembaga,



NAMA: **IR. ZURAIMI BIN HJ. SABKI**

GELARAN: **Ahli Lembaga**

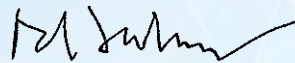
Tarikh: 27 APR 2016

KUCHING

## PENGAKUAN OLEH PEGAWAI UTAMA YANG BERTANGGUNGJAWAB KE ATAS PENGURUSAN KEWANGAN LEMBAGA AIR KUCHING

Saya, **MOHAMAD SABARI BIN SHAKERAN** pegawai utama yang bertanggungjawab ke atas pengurusan kewangan **LEMBAGA AIR KUCHING**, dengan ikhlasnya mengakui bahawa lembaran imbangan, penyata pendapatan, penyata perubahan dalam ekuiti dan penyata aliran wang tunai yang berikut ini berserta dengan nota-nota di dalamnya mengikut sebaik-baik pengetahuan dan kepercayaan saya, adalah betul dan saya membuat ikrar ini dengan sebenarnya mempercayai bahawa ianya itu adalah benar dan atas kehendak-kehendak Akta Akuan Berkanun, 1960.

Sebenarnya dan sesungguhnya )  
diakui oleh penama di atas )  
di KUCHING, SARAWAK )  
pada tarikh 15 APR 2016 )



Di hadapan saya,



D S Law Centre  
Ground Floor, Lot 564  
Lorong Rubber 6  
93400 Kuching, Sarawak





## **LAPORAN KETUA AUDIT NEGARA MENGENAI PENYATA KEWANGAN LEMBAGA AIR KUCHING BAGI TAHUN BERAKHIR 31 DISEMBER 2015**

### **Laporan Mengenai Penyata Kewangan**

Penyata Kewangan Lembaga Air Kuching bagi tahun berakhir 31 Disember 2015 telah diaudit oleh wakil saya yang merangkumi Lembaran Imbangan pada 31 Disember 2015 dan Penyata Pendapatan, Penyata Perubahan Dalam Ekuiti serta Penyata Aliran Tunai bagi tahun berakhir pada tarikh tersebut, ringkasan polisi perakaunan yang signifikan dan nota penjelasan lain.

#### *Tanggungjawab Lembaga Pengarah Terhadap Penyata Kewangan*

Lembaga Pengarah bertanggungjawab terhadap penyediaan dan persembahan penyata kewangan tersebut yang saksama selaras dengan piawaian pelaporan kewangan yang diluluskan di Malaysia dan Ordinan Badan Berkanun (Prosedur Kewangan Dan Perakaunan), 1995. Lembaga Pengarah juga bertanggungjawab terhadap kawalan dalaman yang ditetapkan perlu oleh pengurusan bagi membolehkan penyediaan penyata kewangan yang bebas daripada salah nyata yang ketara sama ada disebabkan oleh fraud atau kesilapan.

#### *Tanggungjawab Juruaudit*

Tanggungjawab saya adalah memberi pendapat terhadap penyata kewangan tersebut berdasarkan pengauditan yang dijalankan. Pengauditan telah dilaksanakan mengikut Akta Audit 1957 dan piawaian pengauditan yang diluluskan di Malaysia. Piawaian tersebut menghendaki saya mematuhi keperluan etika serta merancang dan melaksanakan pengauditan untuk memperoleh jaminan yang munasabah sama ada penyata kewangan tersebut bebas daripada salah nyata yang ketara.

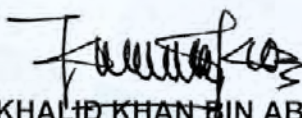


Pengauditan meliputi pelaksanaan prosedur untuk memperoleh bukti audit mengenai amaun dan pendedahan dalam penyata kewangan. Prosedur yang dipilih bergantung kepada pertimbangan juruaudit, termasuk penilaian risiko salah nyata yang ketara pada penyata kewangan sama ada disebabkan oleh fraud atau kesilapan. Dalam membuat penilaian risiko tersebut, juruaudit mempertimbangkan kawalan dalaman yang bersesuaian dengan entiti dalam penyediaan dan persembahan penyata kewangan yang memberi gambaran yang benar dan saksama bagi tujuan merangka prosedur pengauditan yang bersesuaian tetapi bukan untuk menyatakan pendapat mengenai keberkesanan kawalan dalaman entiti tersebut. Pengauditan juga termasuk menilai kesesuaian polisi perakaunan yang diguna pakai dan kemunasabahan anggaran perakaunan yang dibuat oleh pengurusan serta persembahan penyata kewangan secara menyeluruh.

Saya percaya bahawa bukti audit yang saya peroleh adalah mencukupi dan bersesuaian untuk dijadikan asas bagi pendapat audit saya.

## *Pendapat*

Pada pendapat saya, penyata kewangan ini memberikan gambaran yang benar dan saksama mengenai kedudukan kewangan Lembaga Air Kuching pada 31 Disember 2015 dan prestasi kewangan serta aliran tunainya bagi tahun berakhir pada tarikh tersebut selaras dengan piawaian pelaporan kewangan yang diluluskan di Malaysia.

  
(KHALID KHAN BIN ABDULLAH KHAN)  
b.p. KETUA AUDIT NEGARA  
MALAYSIA

KUCHING  
TARIKH: 08 AUG 2016





# Balance Sheet

	Note	2016 RM	(Restated) 2015 RM
<b>NON-CURRENT ASSETS :</b>			
Property, plant and equipment	5	766,290,515	736,183,170
Other investment	6	1,022,870	1,022,870
Deferred taxation	7	3,341,505	1,416,505
		<u>770,654,890</u>	<u>738,622,545</u>
<b>CURRENT ASSETS :</b>			
Inventories	8	25,388,889	22,916,504
Trade receivables	9	13,669,015	14,606,104
Other receivables, deposits and prepayments	10	14,502,825	6,832,487
Fixed deposits	11	168,088,359	149,407,061
Cash and bank balances		10,414,830	11,220,904
		<u>232,063,918</u>	<u>204,983,060</u>
<b>TOTAL ASSETS</b>		<u><b>1,002,718,808</b></u>	<u><b>943,605,605</b></u>
<b>EQUITY :</b>			
Reserves	12	<u>362,874,988</u>	<u>329,389,403</u>
<b>NON-CURRENT LIABILITIES</b>			
Provision for employee benefits	13	1,790,100	1,688,000
Term loans	14	273,936,839	251,799,736
Deferred income	15	306,764,459	302,470,182
		<u>582,491,398</u>	<u>555,957,918</u>
<b>CURRENT LIABILITIES</b>			
Trade payables		12,623,887	3,522,631
Other payables and accruals	16	26,134,968	34,959,754
Provision for employee benefits	13	120,900	289,000
Term loans	14	18,472,667	19,486,899
		<u>57,352,422</u>	<u>58,258,284</u>
<b>TOTAL LIABILITIES</b>		<u><b>639,843,820</b></u>	<u><b>614,216,202</b></u>
<b>TOTAL EQUITY AND LIABILITIES</b>		<u><b>1,002,718,808</b></u>	<u><b>943,605,605</b></u>

The notes on pages 12 to 29 form an integral part of these financial statements.

# Income Statements

		2016	(Restated) 2015
	Note	RM	RM
<b>CONTINUING OPERATIONS</b>			
Revenue	17	106,198,052	100,951,068
Cost of production		(50,146,309)	(47,867,849)
<b>Gross profit</b>		<b>56,051,743</b>	<b>53,083,219</b>
Other income	18	38,707,819	46,127,658
Distribution and selling cost		(47,017,050)	(46,060,682)
Administration cost	19	(17,309,308)	(17,964,257)
Other operating expenses		(2,783,435)	(2,771,478)
<b>Results from operating activities</b>		<b>27,649,769</b>	<b>32,414,460</b>
Finance income		5,129,517	5,010,781
Finance cost		(12,780)	(25,188)
Net finance (cost/income)		5,116,737	4,985,593
<b>Profit before tax</b>	20	<b>32,766,506</b>	<b>37,400,053</b>
Tax expenses	21	(693,870)	(4,122,751)
<b>Profit for the year</b>		<b>33,460,376</b>	<b>41,522,804</b>

The notes on pages 12 to 29 form an integral part of these financial statements.



# Statement of Changes in Equity

for the year ended 31 December 2016

	RESERVES RM
Balance as at 1 January 2015	
As previously stated	250,166,275
Effects of adopting MPERS	41,562,087
1 January 2015 (restated)	<u>291,728,362</u>
Net profit for the year	
As previously stated	19,733,367
Effects of adopting MPERS	17,927,674
Net profit for the year (restated)	<u>37,661,041</u>
Balance as at 31 December 2015 (restated)	329,389,403
Prior year adjustment	25,209
Net profit for the year	33,460,376
Balance as at 31 December 2016	<u><u>362,874,988</u></u>

The notes on pages 12 to 29 form an integral part of these financial statements.

# Cash Flow Statements

for the year ended 31 December 2016

	2016 RM	2015 RM
<b>Cash Flows From Operating Activities</b>		
Net profit before taxation	32,766,506	37,400,053
<b>Adjustments for :-</b>		
Depreciation and amortisation	43,242,649	41,966,739
Interest expense	12,780	25,188
Interest income	(5,129,517)	(5,010,781)
Inventory impairment	898,782	-
Loss on disposal of property, plant and equipment	-	29,210
Allowances for employee benefits	193,741	334,915
(Debts allowances written back )/Allowances for doubtful debts	(109,200)	1,813,000
Transfer from deferred income	(21,247,205)	(22,623,770)
Government Grant	(15,131,469)	(20,086,558)
Tax paid	(1,750,046)	(1,881,246)
	980,515	14,653,255
<b>Operating Profit Before Working Capital Changes</b>	33,747,021	30,263,871
Increase in inventories	(3,371,167)	(296,445)
Decrease/(Increase) in trade receivables	1,046,289	(4,982,835)
Increase in other receivables, deposits and prepayments	(6,954,894)	(6,370,051)
Increase/(Decrease) in trade payables	9,101,256	(241,172)
(Decrease)/Increase in other payables and accruals	(9,084,528)	14,229,500
	(9,263,044)	2,338,997
<b>Cash Flow From Operations</b>	24,483,977	32,602,868
Interest paid	(12,780)	(25,188)
<b>Net Cash Generated From Operating Activities</b>	24,471,197	32,577,680
<b>Cash Flows From Investing Activities</b>		
Capital expenditure	(58,677,308)	(141,311,766)
Grants and capital contributions received	11,868,796	11,782,810
Interest received	4,958,199	5,465,038
Proceeds from disposal of property, plant and equipment	-	4,230
<b>Net cash Used In Investing Activities</b>	(41,850,313)	(124,059,688)
<b>Cash Flows From Financing Activities</b>		
Proceeds from term loans	54,771,229	62,286,531
Repayment of term loans	(19,516,889)	(16,802,955)
<b>Net Cash Provided By Financing Activities</b>	35,254,340	45,483,576
<b>Net Increase/(Decrease) In Cash and Cash Equivalents</b>	17,875,224	(45,998,432)
<b>Cash And Cash Equivalents At Beginning Of The Year</b>	160,627,965	206,626,397
<b>Cash And Cash Equivalents At End Of The Year</b>	178,503,189	160,627,965
<b>Cash And Cash Equivalents Comprise Of :-</b>		
Cash and bank balances	10,414,830	11,220,904
Fixed deposits	168,088,359	149,407,061
	178,503,189	160,627,965

The notes on pages 12 to 29 form an integral part of these financial statements.



# Notes to the Financial Statements

for the year ended 31 December 2016

## 1 General Information

Kuching Water Board (the Board) was established on 1<sup>st</sup> January 1959 by authority of the Kuching Water Board Order 1959, Notification No.S.12 of 1959, made under Sections 2 and 3 of the Water Supply Ordinance.

The Board's registered office and principal place of business is located at Jalan Batu Lintang, Kuching, Sarawak.

The principal activity of the Board is to produce and distribute potable water to consumers within its supply areas.

The financial statements were authorised for issue by the Board on 16 June 2017.

## 2 Basis Of Preparation

The financial statements of the Board have been prepared in accordance with the applicable approved accounting standards in Malaysia.

### a. Statement Of Compliance

The financial statements of the Board have been prepared in accordance with the Malaysian Private Entities Reporting Standard (MPERS). These are the Board's first financial statements prepared in accordance with MPERS.

In the previous years, the financial statement of the Board was prepared in accordance with Private Entity Reporting Standards (PERS). The financial impacts on transition to MPERS are disclosed on note 27.

### b. Basis Of Measurement

The financial statements have been prepared on the historical cost basis other than as disclosed in Note 4.

### c. Use Of Estimates And Judgments

The preparation of the financial statements in conformity with MPERS requires management to make judgments, estimates and assumptions that effect the application of accounting policies and the reported amounts of assets, liabilities, income and expenses. Actual results may differ from these estimates.

Estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognised in the period in which the estimates are revised and in any future periods affected.

There are no significant areas of estimation uncertainty and critical judgments in applying accounting policies that have significant effect on the amounts recognised in the financial statements.

## 3 Financial Risk Management Policies

The Board is exposed to credit risk, interest rate risk and liquidity risk in the normal course of the Board's business. The Management's agreed policies for managing each of these risks are summarised below:-



# Notes to the Financial Statements

for the year ended 31 December 2016

## 3 Financial Risk Management Policies (continued)

### a. Interest Rate Risk

Surplus funds are placed with government approved financial institutions with competitive and favorable interest rates.

### b. Liquidity Risk

The Board monitors and maintains a level of cash and cash equivalents deemed adequate by Management to finance the Board's operations and to mitigate the effects of fluctuations in cash flows.

### c. Credit Risk

Management has a credit policy in place and the exposure to credit risk is monitored on an ongoing basis. Customers are requested to place an initial deposit at the time of signing of the agreement for water supply. Their water supplies are disconnected if the customers default in payment within a stipulated time frame.

## 4 Significant Accounting Policies

### a. Revenue And Other Income Recognition

(i) Revenue from sales of water is recognised based on metered usage upon delivery of the water.

(ii) Interest income from placement of fixed deposit with approved financial institutions is accrued on a time apportioned basis.

(iii) Dividend income is recognised in the income statement when the shareholder's right to receive payment is established.

#### (iv) Government Grants

Government grants are recognised as follows:

- (a) A grant that does not impose specified future performance conditions on the recipient is recognised in income when the grant proceeds are receivable.
- (b) A grant that imposes specified future performance conditions on the recipient is recognised in income only when the performance conditions are met.
- (c) Grants received before the revenue recognition criteria are satisfied are recognised as deferred income.

Government grants are measured at fair value of the assets received or receivable.

Government loan at below-market interest rate at initial recognition is measure at fair value and the difference between the nominal value and the fair value of this loan is recognised as government grant.

Grants related to a development project requested to be implemented by government agencies are presented as a deferred income and recognised in profit or loss on a straight-line basis over the useful lives of the related assets or over the terms of the grant received, whichever is applicable.



# Notes to the Financial Statements

for the year ended 31 December 2016

## 4 Significant Accounting Policies (continued)

### a. Revenue And Other Income Recognition (continued)

#### (v) Deferred Income

Consumers are required to contribute towards the cost of revenue-earning capital projects. These capital expenditures are credited to the deferred income account and released to the profit or loss on a straight line basis over the expected useful lives of the assets except for those relating to projects not yet completed.

The contributions are amortised as follows:

Mains	25 years
Communication pipes	20 years
Government grants	useful lives of the related assets or over the terms of the grant received, whichever is applicable.

### b. Property, Plant And Equipment

#### (i) Recognition and measurement

The cost of an item of property, plant and equipment is recognised as an asset when it is probable that future economic benefits associated with the item will flow to the Board and the cost of the item can be measured reliably.

At initial recognition, all items of property, plant and equipment are measure at cost less any accumulated depreciation and any impairment losses.

Cost includes expenditure that are directly attributable to the acquisition of the assets and any other costs directly attributable to bring the assets to working condition for its intended use. The cost of self-constructed assets also includes the cost of materials and direct labor.

Purchase software that is integral to the functionality of the related equipment is capitalised as part of that equipment.

Capital Work-in-progress is valued at cost and where appropriate includes supervision expenses. Work-in-progress shall be capitalised when the asset is substantially functional and the date of capitalisation shall be based on the date of handing over to Kuching Water Board.

When significant parts of an item of property, plant and equipment have different useful lives, they are accounted for as separate items (major components) of property, plant and equipments.

The gain or loss on disposal of an item of property, plant and equipment is determined by comparing the proceeds from disposal with the carrying amount of property, plant and equipment and is recognised net within "other income" or "other expenses" respectively in profit or loss.



# Notes to the Financial Statements

for the year ended 31 December 2016

## **b. Property, Plant And Equipment (continued)**

### **(ii) Subsequent Cost**

The cost of replacing a component 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 within the component will flow to the Board, and its cost can be measured reliably.

The carrying amount of the replaced component is derecognised to profit or loss. The costs of the day-to-day servicing of property, plant and equipment are recognised in profit or loss as incurred.

### **(iii) Depreciation**

Depreciation is based on the cost of an asset less its residual value. Significant components of individual assets are assessed, and if a component has a useful life that is different from the remainder of that asset, then that component are depreciated separately.

Depreciation as recognised in profit or loss on a straight-line basis over the estimated useful lives of each component of an item of property, plant and equipment from the date that they are available. Fully depreciated assets are retained in the accounts at nominal value of RM1.00 until they are no longer in use and no further charge for depreciation is made in respect of these assets.

Leasehold land is amortised over the period of the respective leases.

Capital Work-in-progress is not depreciated but is subject to impairment test if there is any indication of impairment.

The estimated useful lives have been taken as follow:

Leasehold Land	60 years
Treatment plant, mains and ancillary works	25 years
Meters and pipes	10 - 20 years
Buildings and furniture	10 - 25 years
Machinery, vehicles and equipment	5 years

Property, plant and equipment are written down to recoverable amount if the recoverable amount is less than their carrying value. Recoverable amount is the higher of an asset's net selling price and its value-in-use.

## **c. Other Investment**

Other investment is measure initially at cost.

Subsequently, the investment is measure at fair value with any change therein recognised in profit or loss for the period in which they arise.



# Notes to the Financial Statements

for the year ended 31 December 2016

## 4 Significant Accounting Policies (continued)

### d. Inventories

Inventories for capital projects and maintenance accounts are measured at the lower of cost. The cost of inventories is calculated using the weighted average method, and includes expenditure incurred in acquiring the inventories.

At each reporting date, the Board will assess whether any inventories are impaired by determining if the inventories are damaged, slow moving or obsolete. This yearly assessment requires judgment and estimates. If any item is impaired, the Board reduces the carrying amount of the inventory. That reduction is an impairment loss and it is recognised immediately in profit or loss.

### e. Financial Instruments

Financial instruments carried on the Statement of Financial Position include cash and bank balances, investment, receivables, payables and borrowings.

#### (i) Initial Recognition and Measurement

The Board recognises a financial asset and a financial liability in the statement of financial position when, and only when, the Board becomes a party to the contractual provisions of the instrument.

On initial recognition, all financial assets and financial liabilities are measured at fair value, which is generally the transaction price plus transaction cost if the financial asset or financial liabilities is not measured at fair value through profit or loss.

For instruments measured at fair value through profit or loss, transaction costs are expensed through profit or loss when incurred.

#### (ii) Subsequent Measurement of Financial Assets

For the purpose of subsequent measurement, the Board classifies financial assets into two categories namely: (a) financial assets measured at fair value through profit or loss; and (b) financial assets that are debt instruments, measured at amortised cost.

##### *(a) Financial assets measured at fair value through profit or loss*

Financial assets are classified as at fair value through profit and loss when financial assets are within the scope of Section 12 of the MPERS or if the financial assets are publicly traded or their fair value can otherwise be measured reliably without undue cost of effort.

Changes in fair value are recognised in profit or loss.

##### *(b) Financial assets that are debt instruments measured at amortised cost*

After initial recognition, debt instruments are measured at amortised cost using the effective interest method. Debt instruments that are classified as current assets are measured at the undiscounted amount of the cash or other consideration expected to be received.

After initial recognition, financial assets are subject to review for impairment in accordance with Note 4 (f).



## 4 Significant Accounting Policies (continued)

### e. Financial Instruments (continued)

#### (iii) Subsequent Measurement of Financial Liabilities

After initial recognition, financial liabilities are classified into one of three categories: (a) financial liabilities measured at fair value through profit or loss; (b) financial liabilities measured at amortised cost; and (c) loan commitments measured at cost less impairment.

##### *(a) Financial liabilities measured at fair value through profit or loss*

Financial liabilities are classified as at fair value through profit or loss when financial liabilities are within the scope of Section 12 of the MPERS or if the financial liabilities are publicly traded or their fair value can otherwise be measure reliably without undue cost of effort.

##### *(b) Financial liabilities measured at amortised cost*

After initial recognition, financial liabilities other than financial liabilities at fair value through profit or loss are measured at amortised cost using the effective interest method. Gains or losses are recognised in profit or loss when the financial liabilities are derecognised or impaired.

##### *(c) Loan commitments measured at cost less impairment*

Commitments to receive loan that meet the conditions of Section 11 of the MPERS are measured at cost less impairment.

#### (iv) Effective interest method

Effective interest method is a method of calculating the amortised cost of financial instruments and of allocating the interest income over the relevant period. The effective interest rate is the rate that exactly discounts estimate future cash receipts through the expected life of the financial instruments or, when appropriate, a shorter period, to the carrying amount of the financial instruments.

#### (v) Derecognition of Financial Instruments

Financial Assets are derecognised when the contractual rights to the cash flow from the financial assets expire, or are settled, or the Board transfers to another party substantially all of the risks and rewards of ownership of the financial assets.

On derecognition of financial assets in their entirety, the differences between the carrying amounts and the sum of the consideration received and any cumulative gains or losses are recognised in profit or loss in the period of transfer.

Financial liabilities are derecognised when the obligation specified in the contract is discharged, cancelled or expires.

Any difference between the carrying amounts of the financial liabilities derecognised and the consideration paid is recognised in profit or loss.

#### (vi) Allowance For Doubtful Debts

Known bad debts are written off and specific allowance is made for those considered to be doubtful.



# Notes to the Financial Statements

for the year ended 31 December 2016

## 4 Significant Accounting Policies (continued)

### e. Financial Instruments (continued)

#### (vii) Borrowing Costs

Borrowing cost are recognised as expenses in profit and loss in the period in which they are incurred by using the effective interest method.

#### (viii) Cash and Cash Equivalents

Cash and Cash equivalents in the statements of cash flow comprise cash and bank balances, short-term bank deposits and other short-term, highly liquid investments that are readily convertible to cash with insignificant risk of changes in value.

### f. Impairment of Assets

The carrying values of assets, other than inventories, are reviewed at each balance sheet date to determine whether there is an indication of impairment. Impairment is measured by comparing the carrying values of the assets with their recoverable amounts.

The recoverable amount is the higher of an asset's net selling price and value-in-use. The net selling price is the amount obtainable from the sale as an asset at arm's length transaction.

Value-in-use is the present value of estimated future cash flow expected to arise from the continuing use of an asset and from its disposal at the end of its useful life. Recoverable amount are estimated for individual assets or, if it is not possible, for the cash generating unit.

An impairment loss is recognised in the profit or loss for assets carried at cost, whenever the carrying amount of an asset exceeds its recoverable amount. When there is an indication that the impairment loss recognised in prior years for an asset no longer exists or has decreased, a reversal of this impairment loss will be recorded in the profit or loss.

### g. Income Taxes

Income taxes on profit or loss for the year comprise of current and deferred tax. Current tax is the expected amount of income taxes payable in respect of the taxable profit for the year and is measured using the tax rates that have been enacted at the balance sheet date.

Deferred taxation is calculated, using the liability method at the current tax rate in respect of all temporary differences between the carrying amount of an asset or liability in the balance sheet and its tax base including unused tax losses and capital allowances.

A deferred tax asset is recognised only to the extent that it is probable that taxable profit will be available against which the deductible temporary differences can be utilised. The carrying amount of deferred tax assets is reviewed at each balance sheet date.



# Notes to the Financial Statements

for the year ended 31 December 2016

## 4 Significant Accounting Policies (continued)

### g. Income Taxes (continued)

If it is no longer probable that sufficient taxable profit will be available to allow the benefit of part or all of that deferred tax asset to be utilised, the carrying amount of the deferred tax asset will be reduced accordingly. When it becomes probable that sufficient taxable profit will be available such reduction will be reversed to the extent of the taxable profit.

### h. Employee Benefits

#### (i) Short-term and Long-term Benefits

Wages, salaries, bonuses and social security contributions are recognised as expenses in the year in which the associated services are rendered by employees of the Board. Short-term accumulating compensated absences such as paid annual leave are recognised when services rendered by employees that increase their entitlement to future compensated absences and short-term non-accumulating compensated absences such as sick leave are recognised when absences occur.

#### (ii) Defined Contribution Plan

As required by law, the Board makes contributions to the government pension scheme and the Employee Provident Fund. Such contributions are recognised as expenses in the profit or loss as incurred.

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# Notes to the Financial Statements

for the year ended 31 December 2016

## 5 Property, Plant and Equipment

	Land RM	Treatment plant, mains and ancillary works RM	Meters and pipes RM	Machinery, vehicles and equipment RM	Buildings and furniture RM	Work- in- progress RM	Total RM
<b>2016</b>							
<b>Cost</b>							
Beginning of year	8,201,900	1,081,508,780	68,115,219	24,357,777	19,902,211	174,756,574	1,376,842,461
Additions	-	14,672,586	-	-	-	58,577,308	73,349,994
Reclassification	-	12,342,518	4,044,769	1,645,287	215,823	(18,248,397)	-
End of year	8,201,900	1,108,523,984	72,159,988	26,003,064	20,118,034	251,682,279	1,450,192,455
<b>Accumulated Depreciation</b>							
Beginning of year	2,398,687	561,962,725	40,070,380	21,283,131	14,944,366	-	640,659,291
Charge for the year	127,222	38,307,298	3,151,154	1,145,850	511,125	-	43,242,649
End of year	2,525,909	600,270,023	43,221,534	22,428,981	15,455,493	-	683,901,940
<b>Net book value</b>							
- end of year	5,675,991	508,253,961	28,938,454	3,574,083	4,662,541	251,682,279	766,290,515
- beginning of year	5,803,213	519,546,055	28,044,839	3,074,646	4,957,843	174,756,574	736,183,170
<b>2015</b>							
<b>Cost</b>							
Beginning of year	8,201,901	1,051,730,179	64,024,587	23,281,433	19,526,806	56,713,254	1,223,478,162
Additions	-	12,090,536	-	-	-	141,311,766	153,402,302
Adjustment	(1)	-	-	(1)	-	(1)	(3)
Disposals	-	(38,000)	-	-	-	-	(38,000)
Reclassification	-	17,726,065	4,090,832	1,076,345	375,403	(23,268,445)	-
End of year	8,201,900	1,081,508,780	68,115,219	24,357,777	19,902,211	174,756,574	1,376,842,461
<b>Accumulated Depreciation</b>							
Beginning of year	2,271,463	524,610,969	37,055,100	20,313,269	14,446,314	-	598,897,115
Charge for the year	127,222	37,356,317	3,015,280	969,865	498,055	-	41,866,739
Adjustment	2	(1)	-	(3)	(1)	-	(3)
Disposals	-	(4,560)	-	-	-	-	(4,560)
End of year	2,398,687	561,962,725	40,070,380	21,283,131	14,944,366	-	640,659,291
<b>Net book value</b>							
- end of year	5,803,213	519,546,055	28,044,839	3,074,646	4,957,843	174,756,574	736,183,170
- beginning of year	5,930,438	527,119,210	26,969,487	2,963,164	5,080,494	56,713,254	624,781,047

As at 31st December 2016 included in work-in-progress are leasehold land costing RM1,446,516 (RM1,446,516 in 2015). The titles to these leasehold land are in the process of being transferred to Kuching Water Board.



# Notes to the Financial Statements

for the year ended 31 December 2016

## 6 Other Investment

	2016 RM	Restated 2015 RM
Unit trust at Market value - Quoted in Malaysia	<u>1,022,870</u>	<u>1,022,870</u>

Other investment consists of investment in unit trust from Amanah Saham Sarawak. At year end the market value of the unit trust is RM1.00 per unit.

## 7 Deferred Taxation

	2016 RM	2015 RM
Balance at 1st January	(1,416,505)	97,177
Transfer to profit or loss	<u>(1,925,000)</u>	<u>(1,513,682)</u>
Balance at 31st December	<u>(3,341,505)</u>	<u>(1,416,505)</u>

The deferred taxation arises as a result of :

Deferred tax liability		
- Property, Plant and Equipment capital	89,649,368	99,260,754
Deferred tax assets		
- Unabsorbed capital allowance	<u>(92,990,873)</u>	<u>(100,677,259)</u>
	<u>(3,341,505)</u>	<u>(1,416,505)</u>

## 8 Inventories

	2016 RM	2015 RM
Pipes and fittings, meter, spare parts and chemical carried at cost	26,287,671	22,916,504
Impairment loss on Inventory	<u>(898,782)</u>	<u>-</u>
	<u>25,388,889</u>	<u>22,916,504</u>

The amount of inventories recognised as an expense amounted to RM898,782 (2015 : RM Nil) during the financial year.

## 9 Trade Receivables

	2016 RM	Restated 2015 RM
Trade receivables	18,212,815	19,259,104
Less: Allowance for doubtful debts	<u>(4,543,800)</u>	<u>(4,653,000)</u>
	<u>13,669,015</u>	<u>14,606,104</u>



# Notes to the Financial Statements

for the year ended 31 December 2016

## 9 Trade Receivables (continued)

	2016 RM	Restated 2015 RM
Allowance for doubtful debts		
As at 1 January	4,653,000	2,840,000
(Reduction)/Additional Allowances	(109,200)	1,813,000
As at 31 December	<u>4,543,800</u>	<u>4,653,000</u>

## 10 Other Receivables, Deposits and Prepayments

	2016 RM	Restated 2015 RM
Other receivables, deposits and prepayments	14,949,703	7,304,574
Less: Allowance for doubtful debts	(446,878)	(472,087)
	<u>14,502,825</u>	<u>6,832,487</u>

## 11 Fixed Deposits

All the Board's fixed deposits are placed with licensed banks approved by the Ministry of Finance Malaysia.

## 12 Reserves

Being a Statutory Body, the Board does not have shareholder's fund and the reserve is represented by the Boards' retained earning.

## 13 Provision for Employee Benefits

	2016 RM	2015 RM
Balance as at 1 <sup>st</sup> January	1,977,000	1,733,000
Provision during the year	193,741	334,915
Utilisation of provision during the year	(259,741)	(90,915)
Balance at 31 <sup>st</sup> December	<u>1,911,000</u>	<u>1,977,000</u>
At 31 <sup>st</sup> December		
Current	<u>120,900</u>	<u>289,000</u>
Non-current:		
Later than 1 year but not later than 2 years	180,300	110,000
Later than 2 years but not later than 5 years	354,800	327,000
Later than 5 years	1,255,000	1,251,000
	<u>1,790,100</u>	<u>1,688,000</u>
	<u>1,911,000</u>	<u>1,977,000</u>



# Notes to the Financial Statements

for the year ended 31 December 2016

## 14 Term Loans

	2016 RM	Restated 2015 RM
Non-Current		
State Government Loan – unsecured	273,936,839	251,799,736
Current		
State Government Loan – unsecured	18,472,667	19,486,899
Total	<u>292,409,506</u>	<u>271,486,635</u>

The average interest rate of the State Government Loan is 6.56% per annum. The Loans are repayable between 16 to 20 annuities commencing between year 2000 and 2020.

## 15 Deferred Income

Deferred income represents government grants and capital contributions by consumers towards the cost of capital projects as follow:

	2016 RM	Restated 2015 RM
(a) Government Grant		
Balance at 1 <sup>st</sup> January	1,545,600	1,612,800
Received during the year	3,163,843	4,000,000
Recognised in profit or loss	(67,200)	(4,067,200)
Balance at 31 <sup>st</sup> December	<u>4,642,243</u>	<u>1,545,600</u>
(b) Capital Contributions		
Balance at 1 <sup>st</sup> January	300,924,581	301,310,686
Received during the year	22,377,641	19,873,346
Recognised in profit or loss	(21,180,006)	(20,259,450)
Balance at 31 <sup>st</sup> December	<u>302,122,216</u>	<u>300,924,582</u>
Total Deferred Income	<u>306,764,459</u>	<u>302,470,182</u>

## 16 Other Payables and Accruals

	2016 RM	Restated 2015 RM
Collateral and temporarily deposit	16,969,171	16,078,266
Other payable	8,712,698	17,240,325
Accruals	453,099	1,641,164
	<u>26,134,968</u>	<u>34,959,755</u>



# Notes to the Financial Statements

for the year ended 31 December 2016

## 17 Revenue

	2016 RM	2015 RM
Water Sales	<u>106,198,052</u>	<u>100,951,068</u>

## 18 Other Operating Income

	2016 RM	Restated 2015 RM
Income from related water services	2,200,494	1,714,450
Income from other sources	128,650	0
Government Grant	15,131,469	24,086,558
Deferred income on Capital Contribution and Government grant	<u>21,247,206</u>	<u>20,326,650</u>
	<u>38,707,819</u>	<u>46,127,658</u>

## 19 Administration Cost

	2016 RM	2015 RM
Finance department expenses	4,703,196	4,467,701
Administrative department expenses	11,578,947	12,581,841
Depreciation	<u>1,027,165</u>	<u>914,715</u>
	<u>17,309,308</u>	<u>17,964,257</u>

## 20 Profits From Operation

The following items have been charged/(credited) in arriving at the profit from operation :

	2016 RM	2015 RM
Depreciation on property, plant and equipment	43,242,649	41,966,739
Board members' remuneration	76,000	92,090
Loss on disposal of property, plant and equipment	-	29,210
Auditor's remuneration	27,957	26,128
(Debts Written Back)/Allowances for doubtful-debts	(109,200)	1,813,000
Rental charges	<u>58,080</u>	<u>58,080</u>



# Notes to the Financial Statements

for the year ended 31 December 2016

## 21 Taxation

	2016 RM	2015 RM
Current year taxation in respect of:		
(a) investment and interest income	1,231,130	1,252,695
(b) Provision for Deferred Tax Assets/ reduction in over provision Deferred Tax Liabilities	<u>(1,925,000)</u>	<u>(5,375,446)</u>
	<u>(693,870)</u>	<u>(4,122,751)</u>

The numerical reconciliation between the average effective tax rate and the applicable tax rate are as follow:

	2016 %	2015 %
Applicable tax rate	<u>24.00</u>	<u>25.00</u>
Tax effect in respect of:-		
Expenses not deductible for tax purposes	0.71	3.47
Tax Exempt Income	(32.96)	(55.85)
Depreciation of non-qualifying assets	6.03	13.32
Over Provision of reduction in deferred tax liabilities in prior year	11.43	(15.88)
Change in income tax rate	<u>0.17</u>	<u>-</u>
Average Effective Tax Rate	<u>9.38</u>	<u>(29.94)</u>

The YB Minister of Finance had under Section 127(3)(b) of the Income Tax Act 1967 granted the Board exemption, since the year of assessment 2001, in respect of the followings:

- (a) allocations given by State or Federal Government in the form of grants for operating expenses;
- (b) allocations given by State or Federal Government in the form of grants or loan for development expenditure ; and
- (c) any other donations or contributions received by the Board.

A further exemption, Income Tax (Exemption No.22) Order 2006, effective from year of assessment 2006 was also granted to the Board by the YB Minister of Finance under the same Section in respect of the followings:

- (a) income relating to the allocations given by the Federal and State Government in the form of grants or subsidies, and
- (b) the income received in respect of an amount chargeable and collectible from any person in accordance with the provision of the Act regulating the Board; or
- (c) any donation or contribution received.



# Notes to the Financial Statements

for the year ended 31 December 2016

## 22 Financial Instruments

### (a) Interest Risk

The interest rate risk that financial instruments' value will fluctuate as a result of changes in the market interest rates and the effective weighted interest rate on classes of financial asset and financial liability are as below

	Less than 1 year RM	1 to 5 years RM	More than 5 years RM	Total RM	Effective interest rate during the year
Financial Assets					
Fixed deposit	168,088,359	-	-	168,088,359	3.3% -4.25%
Financial Liability					
Loan	19,516,889	102,451,907	169,404,398	291,373,194	6.56%

### (b) Credit Risk

The carrying amount of cash and cash equivalents, trade receivables and other receivables represent the Board's maximum exposure to credit risk. At the balance sheet date, there were no significant concentrations of credit risk.

### (c) Fair Values

The fair values of the financial assets and liabilities approximate their carrying values.

The following methods and assumptions are used to estimate the fair value of each class of financial instruments.

#### i. Deposit, Cash And Bank Balances

The carrying amount of cash and bank balances approximates fair value due to the relatively short term maturity of these instruments.

#### ii. Trade And Other Receivables And Payables

The historical cost carrying amount of receivable and payables subject to normal trade credit terms approximates fair value. The carrying amounts of other receivables and payables are reasonable estimates of fair value because of their short maturity.

#### iii. Other Investment

The fair value of publicly traded instrument is based on the quoted market prices prevailing on that day.

#### iv. Borrowings

The carrying amount of both short and long term borrowings approximate the fair value because the loans are interest free and for those loans that bear interest the interest rates are fixed and the interest amount had been accrued and capitalised to the loan.

#### v. Long Term Employee Benefits

The carrying value of the long term employee benefits approximate the fair value determined using discounted cash flow analysis based on fixed deposit interest rate.



# Notes to the Financial Statements

for the year ended 31 December 2016

## 23 Capital Commitments

Contracts for developments and indents for purchases entered into by the Board but not provided for in the accounts as at 31 December 2016 amounted to approximately RM36,833,756 (2015: RM85,035,854).

## 24 Staff Information

	2016	2015
Number of staff	<u>531</u>	<u>531</u>
	RM	RM
Staff cost comprises:		
(i) Staff salaries, bonus and allowances	26,121,662	25,783,979
(ii) Provision for employee benefits – Golden HandShake	193,741	353,993
(iii) Others	<u>1,054,909</u>	<u>1,112,555</u>
Contribution under defined contribution plan :		
(i) Employee Provident Fund	400,036	390,428
(ii) Government pension scheme	<u>2,264,897</u>	<u>2,185,898</u>

## 25 Currency

All amounts are stated in Ringgit Malaysia (RM).

## 26 Comparative Figure

During the year, the Board changed the classification of certain items in its financial statements as a result of the adoption of MPERS, thus the following comparative figures has been reclassified to conform with the current financial year's presentation.

	As Previously Reported 2015 RM	As Restated 2015 RM
<b>Statement of Financial Position</b>		
<b>Non-Current Assets</b>		
Deferred Taxation	-	1,416,505
<b>Long Term and Deferred Liabilities</b>		
Deferred Taxation	-	-
<b>Current Assets</b>		
Trade Receivables	13,927,790	14,606,104
<b>Current Liabilities</b>		
Other Payables and accruals	<u>34,281,440</u>	<u>34,959,755</u>



# Notes to the Financial Statements

for the year ended 31 December 2016

## 27 Explanation of transition to the MPERS

As stated in note 2a, these are the first financial statements of the Board prepared in accordance with MPERS.

The accounting policies set out in notes 4 have been applied in preparing the financial statements of the Board for the financial year ended 31 December 2016, and the comparative information presented in these financial statements for the financial year ended 31 December 2015.

### 27.1 Reconciliation of equity

	Note	31.12.2015 RM	01.01.2015 RM
Total equity previously reported		269,899,642	250,166,275
Other investment	a	699,639	69,939
Government grants	b	43,195,028	41,492,148
Government loans	c	20,086,558	-
Deferred tax	d	3,861,764	-
Total equity under MPERS		<u>329,389,403</u>	<u>291,728,362</u>

### 27.2 Reconciliation of profit

	Note	2015 RM
Total profit previously reported		19,733,367
Fair value adjustment to other investment	a	-
Government grants	b	1,702,880
Government loans	c	20,086,558
Deferred tax	d	(3,861,764)
Profit for the year under MPERS		<u>37,661,041</u>

The transition to MPERS has resulted in the following changes in accounting policies :

#### (a) Fair value adjustment to other investment

In prior years' financial statement, other investment was stated at cost. Upon adoption of MPERS, this financial instrument is measured at fair value.

#### (b) Government grants

In prior years' financial statement, grant received from government was credited to the deferred income account and released to the Income Statement on a straight line basis over the expected useful lives of the assets. Upon the adoption of MPERS, all government grants are recognised as income in profit and loss when the grant proceeds are receivable.

#### (c) Government loans

In prior years' financial statement, government loans were measure based on the nominal amounts of the loans received. Upon adoption of the MPERS, the government loan received from year 2015 onwards at below-market interest rate is measured at fair value.



# Notes to the Financial Statements

for the year ended 31 December 2016

## 27 Explanation of transition to the MPERS (continued)

### 27.2 Reconciliation of profit (continued)

#### (c) Government loans(continued)

Interest of 6.56% p.a is calculated using the effective cost method. The Board recognised the benefits it derive from receiving government loan below-market interest rate as government grants in the profit or loss.

#### (d) Deferred Tax

The deferred tax adjustments relate to the government grant transitional adjustments.



# Performance Indicators 2016

	Financial Performance Indicator	2015	2016
1	Average O & M cost increase % Average increase in water production cost	2.0 -3.16	1.0 4.7
2	Unit Production Cost (sen)      Total O&M cost/ Total cum. water produced	0.64	0.61
3	Average cost of water sold (sen)      Total O&M/ Total cum. water sold	0.97	0.94
4	Average tariff (sen) (RM)      Total Revenue/ Total cum water sold	0.86	1.20
5	Operating ratio      Total O&M/ Total Revenue (exclude interest)	0.92	0.81
6	Ratio of Total Domestic Consumption/ Total Industrial Consumption	1.54	1.59
7	Ratio of Total Revenue of Domestic Consumption/ Total Revenue of Industrial Consumption	0.92	0.98
8	Collection Efficiency (%)      Total Annual Collection/ Total Annual Billings	103	114
9	Average Collection Period of Debts (days) Total Debt x 365 days/Total billed	74	61



## Financial Performances

	2012	2013	2014	2015	2016
<b>Basic Statistic</b>	(,000)	(,000)	(,000)	(,000)	(,000)
Water sales	90,033	91,258	93,375	100,951	106,198
Total Revenue	109,555	113,039	126,154	130,270	150,035
Operating expenditure	105,051	105,704	112,055	114,660	117,268
Net Profit	7,143	9,985	19,142	19,733	33,460
Long Term Loan	238,470	255,684	245,890	271,856	292,409
<b>Performance Ratio</b>					
Net Profit Ratio	6.50%	8.80%	15.10%	15.14%	292,409
Current ratio	5.5	4.6	5.9	3.6	4.0
Return on Total Asset	0.90%	1.20%	2.20%	2.08%	3.3%
Long Term Debt to Equity (Reserves)	0.7	0.7	0.9	1.0	0.8

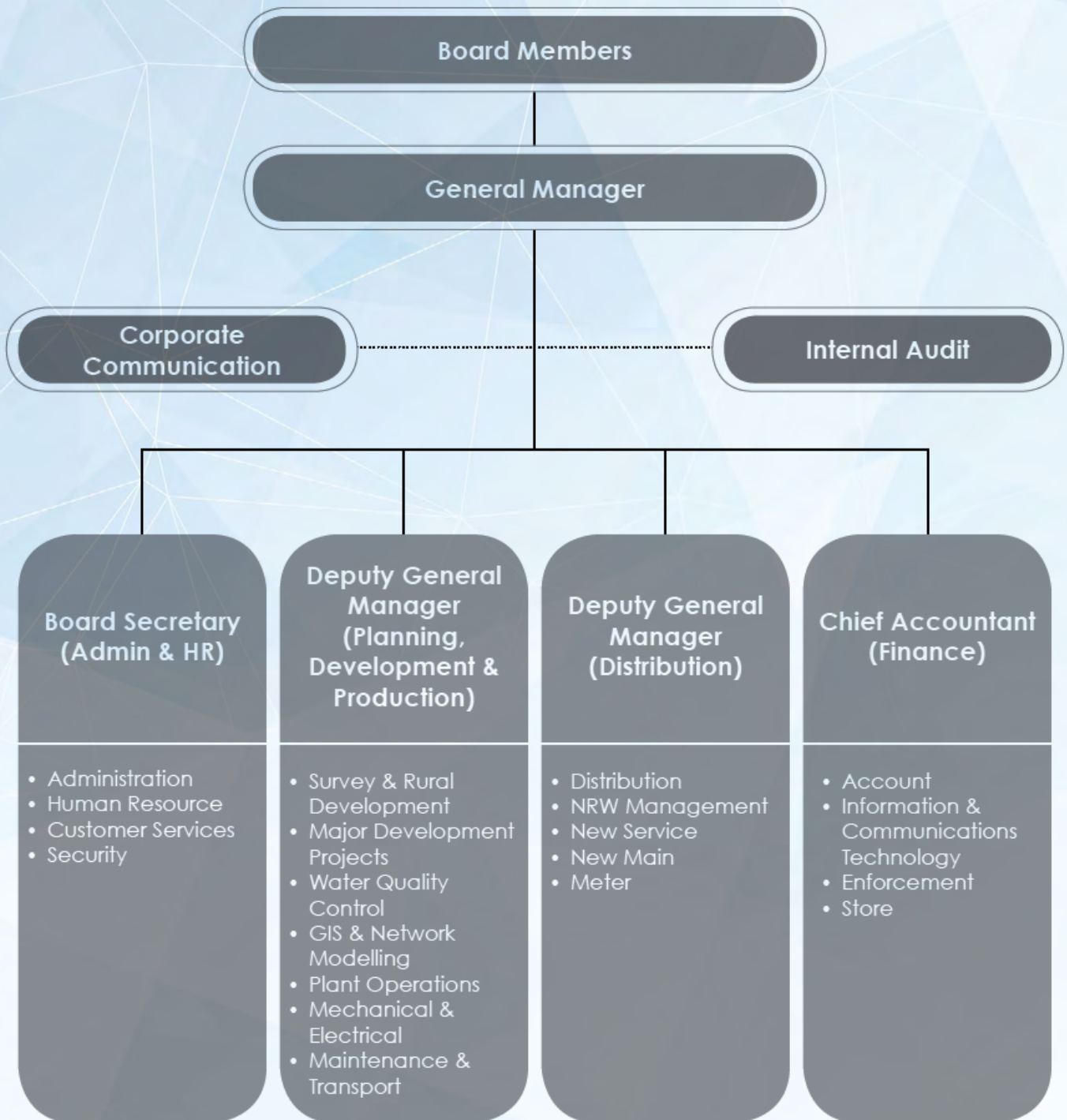
# Appendices

<b>Appendix</b>	<b>Description</b>
1	Kuching Water Board Organization Chart
2	Human Resources Training 2016
3	Water Production & Gross Consumption – 2016
4	Water Consumption Analysis – 2016
5	Consumers' Normal Monthly Consumption – 2016
6	Kuching Water Board Raw Water Quality – Extracted from the Report of Chemistry Department for the Year 2016
7	Kuching Water Board Treated Water Quality – Extracted from the Report of Chemistry Department for the Year 2016
8	Treatment Plants and Pumping Stations 2016
9	Comparison of Pipe Lengths Laid (Km) Against Pipe Type and Size (mm) for 2016
10	Metered Water Consumption – 2016
11	Profitability Trend 2007 - 2016
12	Annual Water Sales 2007 – 2016
13	Analysis of Consumers Connections, Consumption and Revenue for 2016
14	Percentage of NRW for Years 2007 – 2016
15	KWB New Water Connections 2007 – 2016
16	KWB Mains Laid 2007 – 2016
17	Scale of Water Charges
18	Statutory Boundary of Kuching Water Board



# KWB Organizational Chart

## Appendix 1



# Human Resources Training 2016

## Appendix 2

### Allocation

RM 600,000.00

Type Of Training	No. Attended
<b>1) External Training (88 Programmes) Local &amp; Overseas</b>	237 Officers (Scale A & Support Group)
<b>2) Inhouse Training (16 Programmes)</b>	795 Officers (Scale A & Support Group)
<b>a) Kursus Aplikasi dan Amalan 5S Dalam Pengurusan Rekod dan Fail 1st Session</b>  21-22 April 2016 KWB/Smart Management Development At Hotel Harvour View, Kuching  2nd Session 25-26 April 2016 KWB/Smart Management Development At Hotel Harvour View, Kuching  3rd Session 27-28 April 2016 KWB/Smart Management Development At Hotel Harvour View, Kuching  4th Session 3-4 May 2016 KWB/Smart Management Development At Hotel Harvour View, Kuching	18 Officers (Scale A & Support Group)  20 Officers (Scale A & Support Group)  21 Officers (Support Group)  19 Officers (Support Group)
<b>b) Kursus Perlupusan Rekod</b>  1st Session 28-29 April 2016 KWB/Smart Management Development At Hotel Grand Continental, Kuching  2nd Session 9-10 May 2016 KWB/Smart Management Development At Hotel Harvour View, Kuching  3rd Session 9-10 May 2016 KWB/Smart Management Development At Hotel Grand Continental, Kuching  4th Session 18-19 May 2016 KWB/Smart Management Development At Hotel Harvour View, Kuching	19 Officers (Scale A & Support Group)  17 Officers (Support Group)  22 Officers (Scale A & Support Group)  20 Officers (Support Group)



# Human Resources Training 2016

<p><b>c) Basic First Aid [Refresher Course]</b></p> <p>1st Session 29-30 April 2016 Malaysian Red Crescent At Waling-Waling Quarters, Jalan Maxwell</p> <p>2nd Session 29-30 July 2016 Malaysian Red Crescent At Waling-Waling Quarters, Jalan Maxwell</p>	<p>6 Officers (Support Group)</p> <p>1 Officer (Scale A)</p>
<p><b>d) Ten Disciplines For High Performance Team</b></p> <p>1st Session 3-4 May 2016 KWB/INSAN HRD Consultancy At The Waterfront Hotel, Kuching</p> <p>2nd Session 5-6 May 2016 KWB/INSAN HRD Consultancy At The Waterfront Hotel, Kuching</p>	<p>33 Officers (Support Group)</p> <p>35 Officers (Support Group)</p>
<p><b>e) ISO 9001:2015 Awareness and Risk Management Training</b></p> <p>1st Session 9 May 2016 East West Techno Link At The Waterfront Hotel, Kuching</p> <p>2nd Session 10 May 2016 East West Techno Link At The Waterfront Hotel, Kuching</p>	<p>25 Officers (Scale A &amp; Support Group)</p> <p>31 Officers (Scale A &amp; Support Group)</p>
<p><b>f) Program Persediaan Persaraan</b></p> <p>1st Session 9-10 May 2016 KWB/INSAN HRD Consultancy At The Waterfront Hotel, Kuching</p> <p>2nd Session 11-12 May 2016 KWB/INSAN HRD Consultancy At The Waterfront Hotel, Kuching</p>	<p>19 Officers (Support Group)</p> <p>19 Officers (Support Group)</p>
<p><b>g) Taklimat “Never Trust Fire”</b></p> <p>20 May 2016 Kwb/Pertubuhan Pencegahan Kebakaran Kuala Lumpur At Batu Kitang Lecture Hall</p>	<p>51 Officers (Scale A &amp; Support Group)</p>

# Human Resources Training 2016

<b>h) Service From The Heart</b>  1st Session 13-14 June 2016 KWB/Farwide Sdn Bhd At Hotel Merdeka Palace, Kuching  2nd Session 15-16 June 2016 KWB/Farwide Sdn Bhd At Hotel Merdeka Palace, Kuching	33 Officers (scale A & Support Group)  31 Officers (Scale A & Support Group)
<b>i) Ceramah Pencegahan Rasuah</b>  12 August 2016 Suruhanjaya Pencegahan Rasuah Malaysia At KWB Board Room, Batu Lintang	22 Officers (Scale A & Support Group)
<b>j) Latihan Penggunaan Handheld Untuk Kakitangan Bintawa</b>  29 August 2016 Kuching Water Board At KWB Board Room, Batu Lintang	17 Officers (Scale A & Support Group)
<b>k) ISO 9001:2015 Quality Management System Iso 9001:2015 Internal Auditors Training</b>  1-2 September 2016 East west Technolink Consultants (KL) At Hotel Riverside Majestic, Kuching	41 Officers (Scale A & Support Group)
<b>l) Diabetes Food Camp</b>  25 September 2016 Diabetes Malaysia Cawangan Sarawak At Diabetes Resource Centre, Jalan Maxwell	16 Officers (Scale A & Support Group)
<b>m) Occupational Safety and Health Awareness Program</b>  1st Session 26-27 September 2016 KWB/Smart Management Development At The Waterfront Hotel, Kuching  2nd Session 28-29 September 2016 KWB/Smart Management Development At The Waterfront Hotel, Kuching	26 Officers (Scale A & Support Group)  27 Officers (Scale A & Support Group)
<b>n) Finance For Non-Finance Professions</b>  1st Session 10-11 October 2016 KWB/Comfori Sdn Bhd At Hotel Merdeka Palace, Kuching  2nd Session 27-28 October 2016 KWB/Comfori Sdn Bhd At Hotel Merdeka Palace, Kuching	23 Officers (Scale A & Support Group)  24 Officers (Scale A & Support Group)



# Human Resources Training 2016

<p><b>o) Safety Training For Safety Training Committee Members</b></p> <p>1st Session 17-18 October 2016 KWB/Smart Management Development At The Waterfront Hotel, Kuching</p> <p>2nd Session 19-20 October 2016 KWB/Comfori Sdn Bhd At Hotel Merdeka Palace, Kuching</p>	<p>29 Officers (Scale A &amp; Support Group)</p> <p>24 Officers (Scale A &amp; Support Group)</p>
<p><b>p) Kursus Pemantapan dan Kecekapan Kumpulan Sokongan Menyerlahkan Profesionalisme Warga Kerja” (Khusus Untuk Pembantu Tadbir (P/O) N17 – Pembaca Meter</b></p> <p>1st Session 5-6 December 2016 KWB/Farwide Sdn Bhd At Hotel Riverside Majestic, Kuching</p> <p>2nd Session 7-8 December 2016 KWB/Farwide Sdn Bhd At Hotel Riverside Majestic, Kuching</p>	<p>18 Officers (Support Group)</p> <p>20 Officers (Support Group)</p>
<p><b>q) Incident investigation, Reporting &amp; Prevention</b></p> <p>1st Session 14-15 December 2016 KWB/Smart Management Development At Hotel Riverside Majestic, Kuching</p> <p>2nd Session 21-22 December 2016 KWB/Smart Management Development At Hotel Riverside Majestic, Kuching</p>	<p>23 Officers (Scale A &amp; Support Group)</p> <p>27 Officers (Scale A &amp; Support Group)</p>
<p><b>r) Kursus Induksi Khusus</b></p> <p>20 December 2016 KWB At KWB Board Room, Batu Lintang</p>	<p>18 Officers (Support Group)</p>

# Human Resources Training 2016

## 3) Industrial Training

### a) Degree

Programme	Total	Attachment
Bachelor in Civil Engineering	2 Students	New Mains Unit, New Service Unit, Meter Unit
Bachelor in Information Science	1 Student	ICT Unit
Bachelor in Mechanical	2 Students	Mechanical Unit
Bachelor in Chemical	6 Students	Water Quality Control Unit
Bachelor in Electronic	4 Students	Electrical Unit

### b) Diploma

Programme	Total	Attachment
Diploma in Technology Management	1 Student	Administration & Human Resource
Diploma in Information Technology	1 Student	Administration & Human Resource
Diploma in Business Administration	1 Student	Administration & Human Resource
Diploma in Mechanical	1 Student	Mechanical Unit
Diploma in Electronic	1 Student	Electrical Unit

### c) Certificate

Programme	Total	Attachment
Certificate in Occupational Safety and Health	3 Students	Technical Department
Certificate in Tourism	2 Students	Consumer Service Unit



# WATER PRODUCTION & GROSS COMSUMPTION 2016 (IN MEGALITRES)

## Appendix 3

YEAR 2016	WATER PRODUCTION (ML)				GROSS CONSUMPTION (MLD)			
	Batu Kitang Plant			Matang Plant	Total Production (ML)	Average Daily	Minimum Daily	Maximum Daily
	Plant 1 Modules 1 & 2	Plant 2 Modules 3 & 4	Plant 3 Modules 5 & 6					
Jan	648.724	2,804.520	5,085.105	7,099.780	239.700	15,877.829	512.188	526.483
Feb	547.931	2,628.980	4,700.109	6,667.920	245.340	14,790.280	510.010	545.082
March	651.928	2,807.240	4,837.595	7,103.880	272.120	15,672.763	505.573	521.353
April	599.407	2,922.800	4,880.086	6,887.830	261.780	15,551.903	518.397	548.259
May	669.802	2,623.700	5,944.395	6,899.070	270.506	16,407.473	529.273	544.745
June	637.874	2,359.220	5,916.299	6,367.700	255.210	15,536.303	516.877	575.359
July	677.914	2,457.080	6,100.744	6,750.440	221.216	16,207.394	522.819	547.203
Aug	697.731	2,422.680	6,164.022	6,798.660	221.216	16,304.309	522.819	545.721
Sept	675.954	2,520.450	5,975.732	6,495.500	258.341	15,925.977	530.866	558.621
Oct	699.027	2,629.570	6,118.276	6,847.280	308.538	16,602.691	535.571	554.636
Nov	695.132	2,525.280	5,875.751	6,613.390	302.448	16,012.001	533.733	557.999
Dec	734.899	2,680.150	6,113.726	6,922.800	322.918	16,774.493	541.113	560.096
Total (ML)	7,936.323	31,381.670	67,711.840	81,454.250	3,179.333	191,663.416		
Average Daily (mld)	21.684	85.742	185.005	222.553	8.687	523.671		

Total Metered Consumption : 124,441.214 megaliters

Non-Revenue Water :

\* Max - Daily Gross Consumption : 575.359 megaliters

+ Min - Daily Gross Consumption : 440.375 megaliters

Note - ML : Million Litre  
MLD : Million Litre Per Day

# WATER CONSUMPTION ANALYSIS 2016 (M3)

## Appendix 4

Month	Domestic			Domestic / Commercial			Commercial			Standpipes			Processed			Total	
	Metered Consumption	No. of Services	%	Metered Consumption	No. of Services	%	Metered Consumption	No. of Services	%	Metered Consumption	No. of Services	%	Metered Consumption	No. of Services	%	Metered Consumption	No. of Services
Jan	6,254,041	157,380	53.05	2,108,221	2,497	17.88	3,374,335	21,881	28.62	25,532	92	0.22	26,014	16	0.22	11,788,143	181,866
Feb	5,459,248	147,116	52.73	1,870,381	2,105	18.06	2,978,930	19,302	28.77	20,702	92	0.20	24,420	16	0.24	10,353,681	168,631
Mar	4,953,620	153,831	50.75	1,650,752	2,233	16.91	3,112,270	20,413	31.88	22,787	90	0.23	21,709	17	0.22	9,761,138	176,584
Apr	4,347,191	142,893	46.72	1,836,514	2,060	19.74	3,083,124	19,975	33.13	14,460	71	0.16	24,006	15	0.26	9,305,295	165,014
May	4,775,211	144,977	48.15	2,072,495	2,118	20.90	3,021,520	20,443	30.47	22,727	98	0.23	25,143	17	0.25	9,917,096	167,653
Jun	5,313,606	141,106	50.95	1,866,441	2,096	17.90	3,201,695	19,506	30.70	14,908	74	0.14	31,956	15	0.31	10,428,606	162,797
Jul	5,238,602	133,551	47.63	2,307,633	1,983	20.98	3,391,125	19,389	30.83	24,369	110	0.22	37,492	17	0.34	10,999,221	155,050
Aug	4,816,657	138,777	49.66	1,873,624	1,976	19.32	2,967,489	19,848	30.60	17,389	84	0.18	23,670	14	0.24	9,698,829	160,699
Sep	5,453,083	145,675	49.93	1,944,029	2,016	17.80	3,479,516	19,522	31.86	17,124	77	0.16	28,090	13	0.26	10,921,852	167,303
Oct	5,332,542	155,674	49.96	1,999,613	2,105	18.74	3,296,602	21,229	30.89	21,044	99	0.20	22,988	18	0.22	10,672,789	179,125
Nov	5,213,531	139,741	47.62	2,344,445	2,059	21.41	3,347,068	18,485	30.57	11,861	82	0.11	32,091	15	0.29	10,948,996	160,382
Dec	4,220,512	129,686	43.76	2,216,583	1,895	22.98	3,165,260	18,294	32.82	14,728	78	0.15	28,485	17	0.30	9,645,568	149,970
<b>Total :</b>	<b>61,377,854</b>			<b>24,090,731</b>			<b>38,418,934</b>			<b>227,631</b>			<b>326,064</b>			<b>124,441,214</b>	



# CONSUMERS' NORMAL MONTHLY CONSUMPTION 2016

## Appendix 5

CONSUMPTION (M3)	DOMESTIC		COMMERCIAL/ DOMESTIC		COMMERCIAL		STANDPIPES		PROCESSED	
	No. of Consumers	%	No. of Consumers	%	No. of Consumers	%	No. of Consumers	%	No. of Consumers	%
0.000	10,428	8.26	160	8.75	2,708	15.72	7	8.97	0	0.00
0.001 - 5.000	9,710	7.70	245	13.40	3,491	20.27	1	1.28	0	0.00
5.001 - 10.000	9,616	7.62	221	12.08	1,944	11.29	2	2.56	0	0.00
10.001 - 15.000	11,762	9.32	147	8.04	1,160	6.73	2	2.56	0	0.00
15.001 - 20.000	12,822	10.16	102	5.58	864	5.02	0	0.00	0	0.00
20.001 - 25.000	12,081	9.57	108	5.90	699	4.06	1	1.28	1	6.67
25.001 - 30.000	10,855	8.60	117	6.40	583	3.38	1	1.28	1	6.67
30.001 - 35.000	9,069	7.19	90	4.92	476	2.76	4	5.13	0	0.00
35.001 - 40.000	7,789	6.17	86	4.70	376	2.18	3	3.85	0	0.00
40.001 - 45.000	5,981	4.74	57	3.12	342	1.99	2	2.56	0	0.00
45.001 - 50.000	4,836	3.83	43	2.35	320	1.86	4	5.13	0	0.00
50.001 - 100.000	16,977	13.46	264	14.43	1,773	10.29	12	15.38	1	6.67
100.001 - 150.000	2,542	2.01	93	5.08	799	4.64	9	11.54	3	20.00
150.001 - 200.000	765	0.61	42	2.30	417	2.42	2	2.56	0	0.00
200.001 - 250.000	303	0.24	19	1.04	259	1.50	4	5.13	0	0.00
250.001 - 300.000	168	0.13	10	0.55	150	0.87	5	6.41	0	0.00
300.001 - 350.000	102	0.08	7	0.38	122	0.71	3	3.85	0	0.00
350.001 - 400.000	56	0.04	2	0.11	82	0.48	2	2.56	0	0.00
400.001 - 450.000	49	0.04	2	0.11	66	0.38	5	6.41	0	0.00
450.001 - 500.000	22	0.02	0	0.00	54	0.31	1	1.28	0	0.00
OVER 500.000	241	0.19	14	0.77	539	3.13	8	10.26	9	60.00
<b>Grand Total :</b>	126,174	100.00	1,829	100.00	17,224	100.00	78	100.00	15	100.00

# KUCHING WATER BOARD RAW WATER QUALITY

Extracted from the Report of Chemistry Department for the year 2016

## Appendix 6

Parameter	Location	Recommended Criteria	Raw Water			
			Batu Kitang Intakes	Sungai Cina	Matang Dam	Sebutut Basin
<b>No. of Samples Analysed</b>			<b>12</b>	<b>12</b>	<b>12</b>	<b>12</b>
<b>Group I Parameter</b>						
pH (H <sup>+</sup> )		5.5 - 9.0	7.0	6.8	6.1	6.0
Color (Hazen)		300	44	<10	11	31
Turbidity (NTU)		1000	47	1.0	2.0	4.1
<b>Group II Parameter (unit in ppm)</b>						
TDS at 105 - 110°C		1500	-	-	-	-
Total Organic Carbon			-	-	-	-
Chemical Oxygen Demand COD		10	-	-	-	-
Biochem. Oxygen Demand BOD		6	<2	<2	<2	<2
Ammonia (N)		1.5	0.1	0.1	<0.1	<0.1
Nitrate (N)		10	<0.5	<0.5	<0.5	<0.5
Detergent (MBAS)		1.0	-	-	-	-
Total Hardness (CaCO <sub>3</sub> )		500	25	5	<5	<5
Fluoride (F)		1.5	<0.1	<0.1	<0.1	<0.1
Chloride (Cl)		250	<1	2	1	1
Iron (Fe)		1.0	0.75	0.03	0.11	0.53
Manganese (Mn)		0.2	0.04	<0.01	0.02	0.03
<b>Group III Parameter (unit in ppm)</b>						
Arsenic (As)		0.05	<0.001	<0.001	<0.001	<0.001
Mercury (Hg)		0.001	<0.001	<0.001	<0.001	<0.001
Cadmium (Cd)		0.005	<0.0002	<0.0002	<0.0002	<0.0002
Lead (Pb)		0.1	0.001	0.001	<0.001	<0.001
Chromium (Cr)		0.05	<0.001	<0.001	<0.001	<0.001
Silver (Ag)		0.05	<0.002	<0.002	<0.002	<0.002
Copper (Cu)		1.0	0.003	0.002	0.003	0.003
Zinc (Zn)		1.5	0.033	0.009	0.021	0.011
Magnesium (Mg)		150	0.87	0.48	0.34	0.36
Sodium (Na)		200	2	2	1	1
Selenium (Se)		0.01	<0.001	<0.001	<0.001	<0.001
Sulphate (SO <sub>4</sub> )		400	<5	<5	<5	<5
<b>Group IV Parameter (unit in ppb)</b>						
Alpha-BHC			<0.020	<0.020	<0.020	<0.020
Beta-BHC			<0.020	<0.020	<0.020	<0.020
Lindane / Gamma-BHC		2	<0.020	<0.020	<0.020	<0.020
Delta-BHC			<0.020	<0.020	<0.020	<0.020
Heptachlor		0.03	<0.005	<0.005	<0.005	<0.005
Heptachlor-Epoxide		0.03	<0.005	<0.005	<0.005	<0.005
Alpha-Endosulfan			<0.020	<0.020	<0.020	<0.020
Beta-Endosulfan			<0.020	<0.020	<0.020	<0.020
Endosulfan-Sulfate			<0.020	<0.020	<0.020	<0.020
4,4-DDE			<0.020	<0.020	<0.020	<0.020
4,4-DDD			<0.020	<0.020	<0.020	<0.020
4,4-DDT		2	<0.020	<0.020	<0.020	<0.020
Aldrin		0.03	<0.005	<0.005	<0.005	<0.005
Dieldrin		0.03	<0.005	<0.005	<0.005	<0.005
Endrin			<0.020	<0.020	<0.020	<0.020
Metaoxychlor		20	<0.020	<0.020	<0.020	<0.020
Endrin-Aldehyde			<0.020	<0.020	<0.020	<0.020
Alpha-Chlordane		0.2	<0.020	<0.020	<0.020	<0.020
Gamma-Chlordane		0.2	<0.020	<0.020	<0.020	<0.020



# KUCHING WATER BOARD TREATED WATER QUALITY

Extracted from the Report of Chemistry Department for the year 2016

## Appendix 7

Parameter	Location	National Guidelines for Drinking Water Quality	Treated Water							Matang Plant
			Batu Kitang							
			Plant 1 M 1 & 2	Plant 2 M 3      M 4		Plant 3 M5      M6		Plant 4 M7      M8		
Coliform Organism		MPN / Membrane Filtration Method : - Must not be detected in any 100 ml sample	* 1	* 0	* 1	* 1	* 1	* 0	* 0	* 0
Membrane Filtration Method :										
E. Coli		- Absent in 100 ml sample	* 0	* 0	* 0	* 0	* 0	* 0	* 0	* 0
Membrane Filtration Method :										
Taste and Odour		-	-	-	-	-	-	-	-	-
Group I Parameter										
Re. Chlorine (Total)		Not less than 1.00	2.4	2.1	2.1	2.3	2.3	1.7	2.1	1.7
pH (H <sup>+</sup> )		6.5 - 9.0	7.9	7.9	7.9	8.4	7.9	8.1	8.2	8.3
Color (Hazen)		15	<10	10	<10	<10	<10	<10	<10	<10
Turbidity (NTU)		5	2.4	3.9	3.1	3.3	2.5	2.4	2.6	0.5
Group II Parameter (unit in ppm)										
TDS at 105 <sup>o</sup> - 110 <sup>o</sup> C		1000	-	-	-	-	-	-	-	-
Ammonia (N)		1.5	0.3	0.4	0.4	0.3	0.9	0.3	0.5	0.3
Nitrate (N)		10	<0.5	<0.5	<0.5	<0.5	<0.5	1	1.39	<0.5
Total Hardness (CaCO <sub>3</sub> )		500	42	47	46	41	40	43	41	14
Fluoride (F)		0.4 - 0.6	<0.1	0.30	0.10	0.10	<0.1	<0.1	0.20	0.30
Chloride (Cl)		250	5	4	4	3	4	3	3	3
Iron (Fe)		0.3	0.05	0.06	0.05	0.12	0.03	0.04	0.07	0.03
Manganese (Mn)		0.1	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.01
Aluminium (Al)		0.2	0.23	0.33	0.29	0.38	0.10	0.26	0.18	0.12
Group III Parameter (unit in ppm)										
Arsenic (As)		0.01	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Mercury (Hg)		0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cadmium (Cd)		0.003	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Lead (Pb)		0.01	0.001	0.001	<0.001	0.001	<0.001	<0.001	<0.001	<0.001
Chromium (Cr)		0.05	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silver (Ag)		0.05	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Copper (Cu)		1.0	0.001	0.002	<0.001	<0.001	0.001	<0.001	<0.001	0.002
Zinc (Zn)		3	0.004	0.008	0.005	0.002	0.005	0.003	0.003	0.004
Magnesium (Mg)		150	0.90	0.94	0.93	0.76	0.90	0.90	0.92	0.46
Sodium (Na)		200	2	2	2	1	2	2	2	2
Selenium (Se)		0.01	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Sulphate (SO <sub>4</sub> )		250	22	20	20	18	18	18	16	5
Choloform (CHCl <sub>3</sub> )		0.2	0.010	0.010	0.003	0.002	0.011	0.005	0.003	0.004
Bromoform (CHBr <sub>3</sub> )		0.1	0.002	0.001	0.001	<0.001	0.001	0.001	<0.001	0.001
Dibromochloromethane (CHClBr <sub>2</sub> )		0.1	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Bromodichloromethane (CHCl <sub>2</sub> Br)		0.06	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Group IV Parameter (unit in ppb)										
Alpha-BHC			<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Beta-BHC			<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Lindane / Gamma-BHC		2	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Delta-BHC			<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Heptachlor		0.03	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Heptachlor-Epoxide		0.03	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Alpha-Endosulfan			<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Beta-Endosulfan			<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Endosulfan-Sulfate			<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
4,4-DDE			<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
4,4-DDD			<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
4,4-DDT		2	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Aldrin		0.03	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Dieldrin		0.03	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Endrin			<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Metaoxychlor		20	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Endrin-Aldehyde			<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Alpha-Chlordane		0.2	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Gamma-Chlordane		0.2	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020

Note : \* number of violation

# TREATMENT PLANTS AND PUMPING STATIONS 2016

## Appendix 8

Item	Particulars	Batu Kitang Plant								Remarks	
		Plant 1 Modules 1 & 2		Plant 2 Modules 3 & 4		Plant 3 Modules 5 & 6		Plant 4 Modules 7 & 8		Matang Plant	
1	Total Production, ML	7,936.323		31,381.670		67,711.840		81,454.250		3,179.333	191,663.416
2	Production cost per 1,000 Litres (In cents)	26.259		15.075		17.410		16.103		40.529	17.22
3	Plant Operation : Average Daily Hours : Minimum : Maximum	24:00 23:10 24:00		24:00 23:10 24:00		24:00 23:10 24:00		24:00 23:10 24:00		24:00 22:99 24:00	
4	Chemical Consumption (Kgs) Aluminium Sulphate Hydrated Lime Liquid Chlorine [Post] Liquid Chlorine [Intm] Anydrous Ammonia Sodium Silicofluoride Sodium Silicate Sodium Bicarbonate Polymer Coagulant Polymer Flocculant Aluminium ChloroHydrate Polyaluminium Chloride (PAC)	366,584.69 107,612.61 31,850.15 - 5,159.14 2,350.37 - - - 162.51 708.03 - -		1,196,595.92 471,199.14 99,388.30 - 25,780.00 6,349.63 - - - 512.50 1,098.55 - -		2,697,558.77 1,099,629.95 222,178.45 - 53,107.58 7,475.00 - - - 1,025.02 1,458.31 - -		3,001,412.00 1,335,012.50 267,396.40 - 69,896.90 17,343.53 - - - 787.60 2,885.14 - -		26,595.22 42,355.26 10,414.60 - 2,497.62 1,586.00 4,616.73 1,308.69 - - - -	7,288,746.60 3,055,809.46 631,227.90 0.00 156,441.24 35,104.53 4,616.73 1,308.69 2,487.63 6,150.03 0.00 0.00
5	Electricity Consumption (KWH)	3,351,771		6,004,543		21,201,936		22,009,004		428,909	52,996,163
6	Pumping Hours (a) Raw Water Pumps No.1 No.2 No.3 No.4 No.5 No.6 No.7 No.8 No.9 (b) Treated Water Pumps No.1 No.2 No.3 No.4 No.5 No.6 No.7 No.8 No.9 No.10 (c) Lowlift Pumps (Raw Water) No.1 No.2	Hours Mins		Hours Mins		Hours Mins		Hours Mins			

Note : Modules 8, Plant 4 was commissioned in September 2011



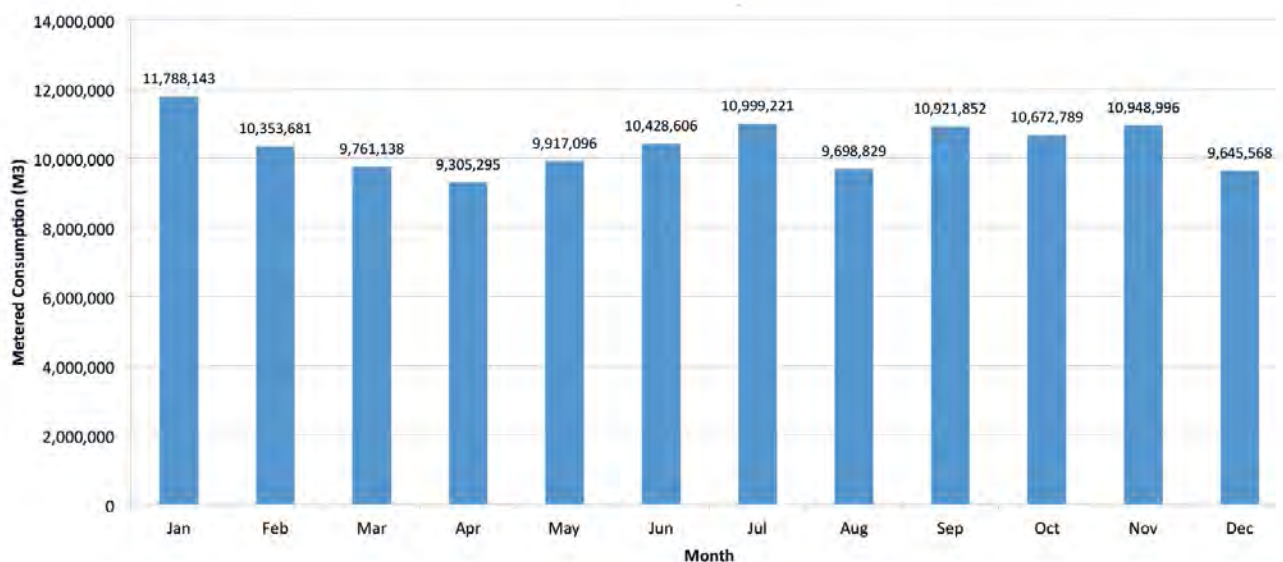
## COMPARISON OF PIPE LENGTHS LAID (KM) AGAINST PIPE TYPE AND SIZE (MM) FOR 2016

### Appendix 9

Types of Pipes	100mm-150mm	200mm-400mm	450mm-600mm	700mm-1000mm	Total
A.C.	-	-	-	-	-
D.I.	29.74 km	20.64 km	1.4 km	-	51.78 km
HDPE	2.33 km	0.25 km	-	-	2.58 km
Steel	-	-	-	-	-

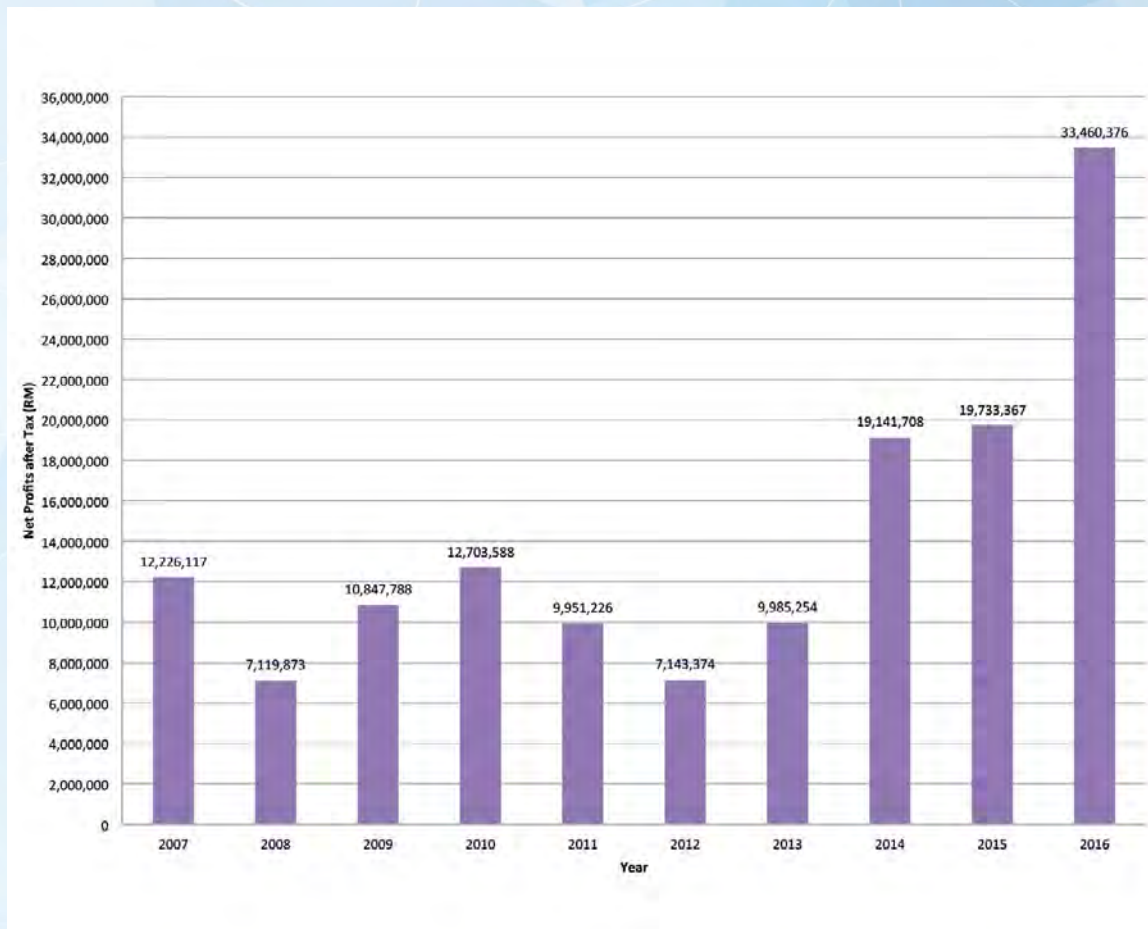
## METERED WATER CONSUMPTION 2016

### Appendix 10



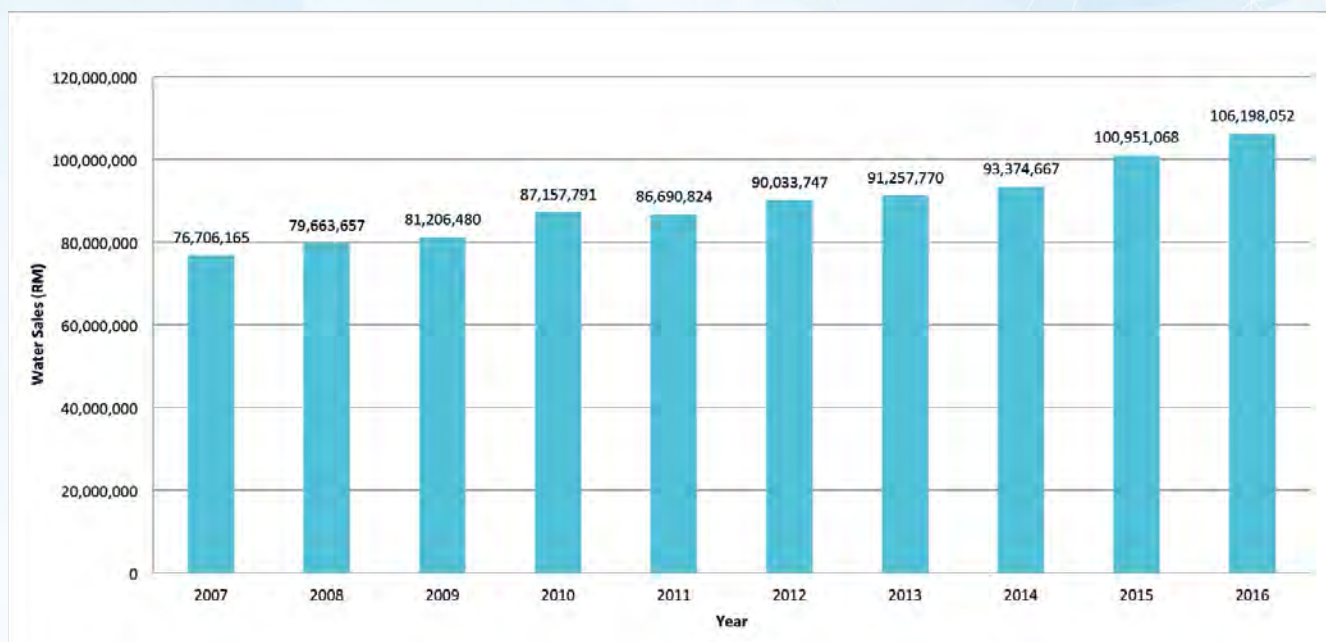
## PROFITABILITY TREND 2007-2016

### Appendix 11



## ANNUAL WATER SALES 2007 – 2016

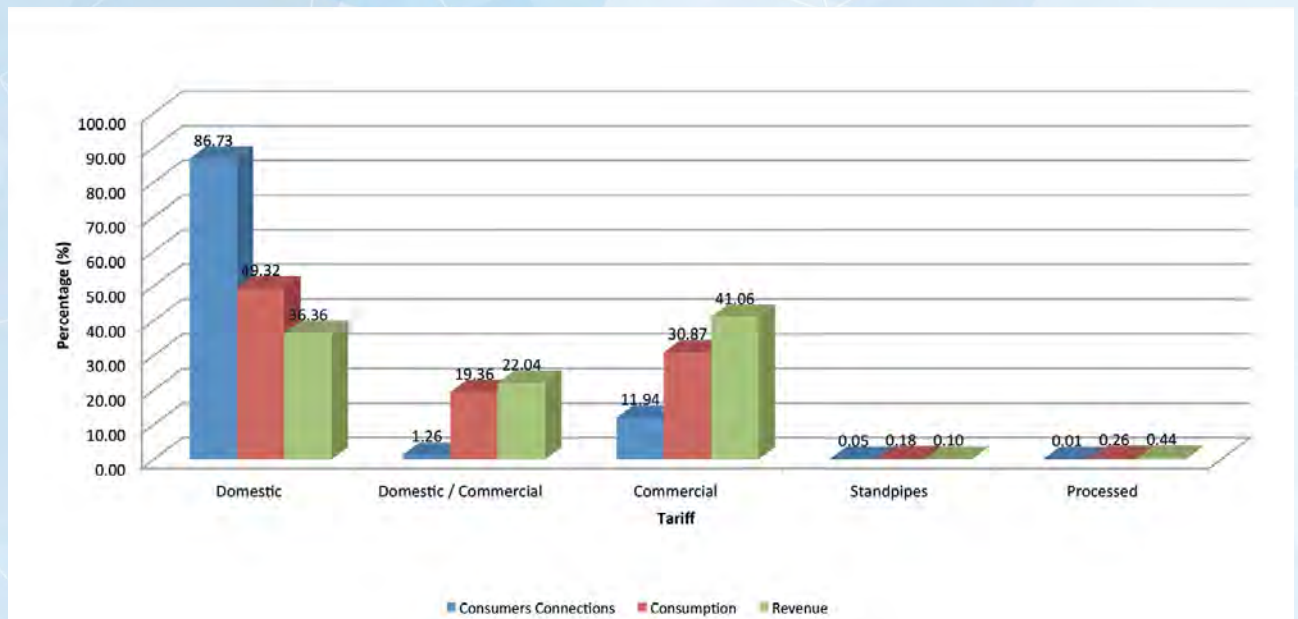
### Appendix 12





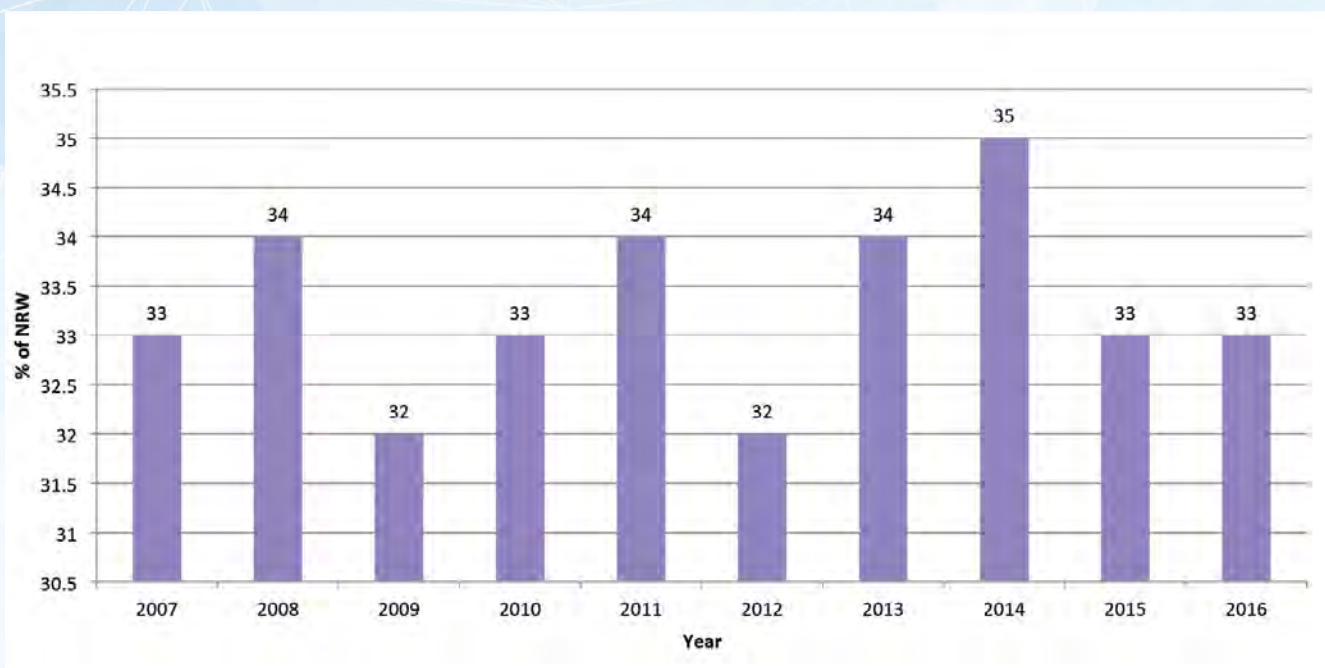
## ANALYSIS OF CONSUMERS CONNECTIONS, CONSUMPTION AND REVENUE FOR 2016

### Appendix 13



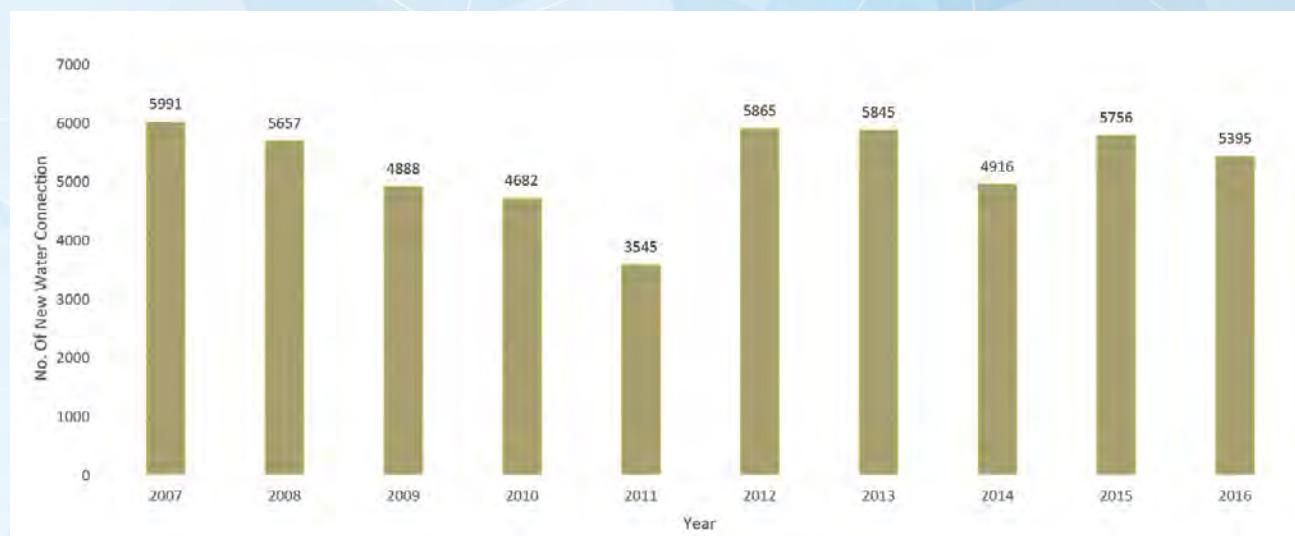
## PERCENTAGE OF NRW FOR YEAR 2007 – 2016

### Appendix 14



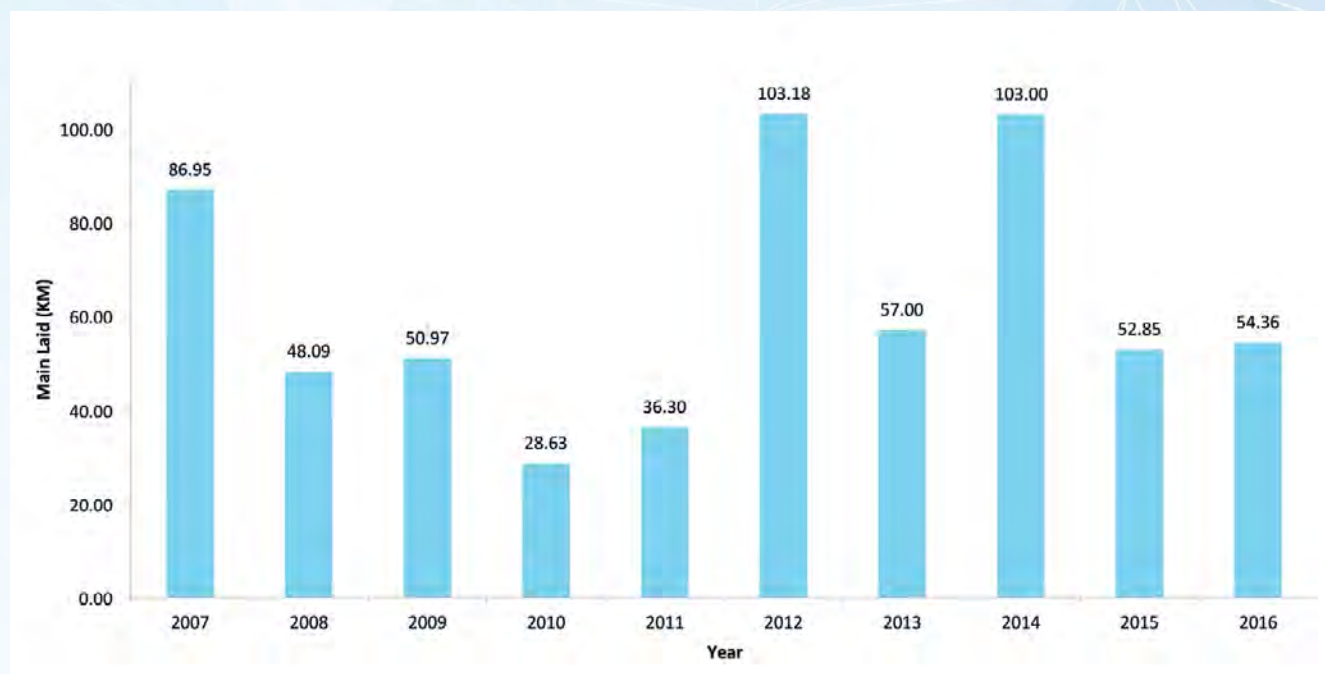
## KWB NEW WATER CONNECTIONS 2007 – 2016

### Appendix 15



## KWB MAINS LAID 2007-2016

### Appendix 16





## SCALE OF WATER CHARGES

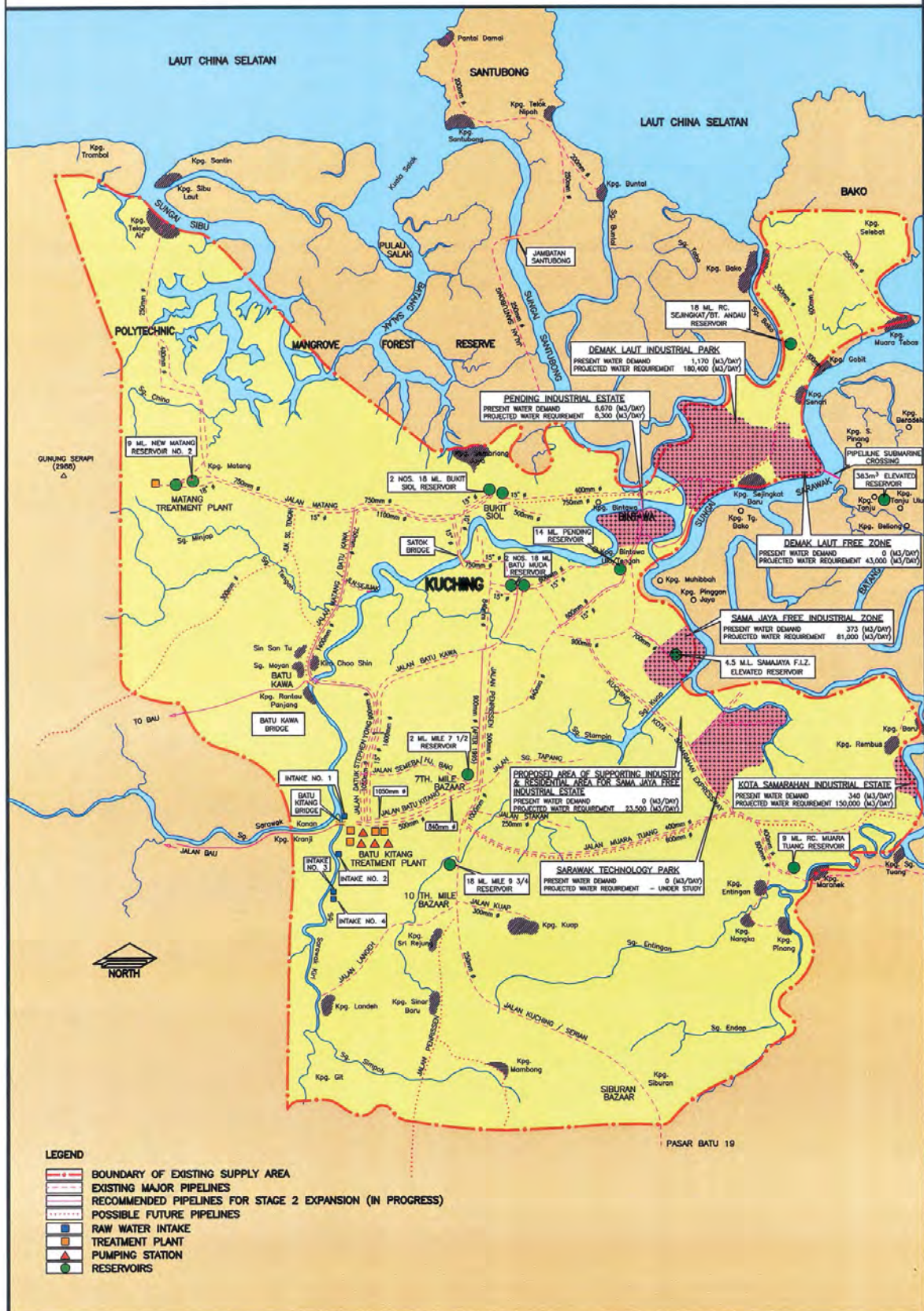
### Appendix 17

Domestic Rate		Per 1,000 Litre
Minimum Charge in any one month		RM 4.40
1,000 to 15,000 litres in any one month		RM 0.48
In excess of 15,000 litres but not exceeding 50,000 litres in any one month		RM 0.72
The excess over 50,000 litres in any one month		RM 0.76
Domestic/Commercial Rate		
Minimum Charge in any one month		RM 18.70
1,000 to 25,000 litres in any one month		RM 0.83
The excess over 25,000 litres in any one month		RM 0.95
Commercial Rate		
Minimum Charge in any one month		RM 22.00
1,000 to 25,000 litres in any one month		RM 0.97
The excess over 25,000 litres in any one month		RM 1.06
Special Commercial Rate for Water Processed for Sale		
Minimum Charge in any one month		RM 27.50
1,000 to 25,000 litres in any one month		RM 1.21
The excess over 25,000 litres in any one month		RM 1.33
Public Standpipes		RM 0.43
Water Collected at Depot (Customer's Transport)		RM 0.43
Water to Ship		RM 1.70
Meter Rents		Per Month or Part of a Month
15 mm		RM 0.55
20 mm		RM 1.65
25 mm		RM 2.20

# STATUTORY OF KUCHING WATER BOARD

## Appendix 18

### STATUTORY BOUNDARY OF KUCHING WATER BOARD





# **KUCHING WATER BOARD**

**Jalan Batu Lintang, 93200 Kuching, Sarawak, Malaysia**

**Tel : 082 - 222222**

**Faks : 082 - 222259**

**Call Centre : 082 - 222333**

**Website : [www.kwb.gov.my](http://www.kwb.gov.my)**