



THE WATER AUTHORITY OF THE CAYMAN ISLANDS  
2002 ANNUAL REPORT

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MCM Consultants



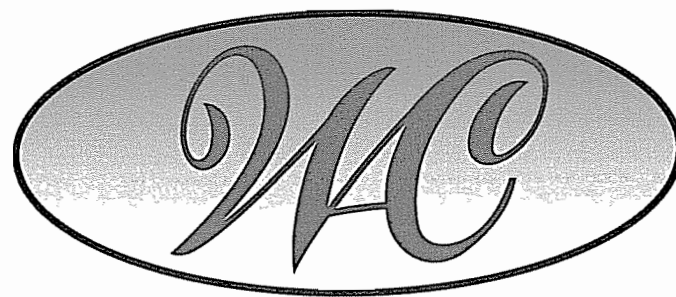
2002 ANNUAL REPORT

# THE WATER AUTHORITY OF THE CAYMAN ISLANDS

## ANNUAL REPORT 2002

This document is produced by The Water Authority of the Cayman Islands

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The Water Authority of the Cayman Islands

## Our Mission Statement

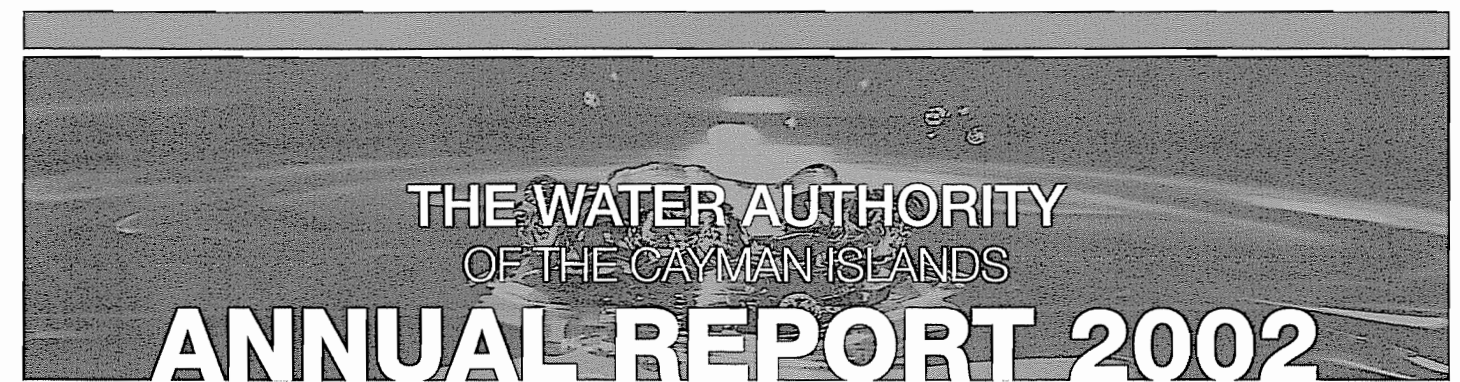
"To ensure that the entire population of the Cayman Islands have access to pure, wholesome and affordable supply of potable water; and to provide advice to Government on all matters related to water supply in these islands, including regulation of other entities who are licensed by Government to provide public water supplies.

To protect and develop groundwater resources for the benefit of present and future populations of these islands.

To provide for the collection, treatment and disposal of sewage within these islands in a manner that is safe, efficient and affordable.

To operate in such a manner as to be financially self-sufficient, while contributing to the economy of these islands and achieving a reasonable and acceptable return on capital investments."

*The Ministry of Community Services, Youth,  
Sports and Women's Affairs*



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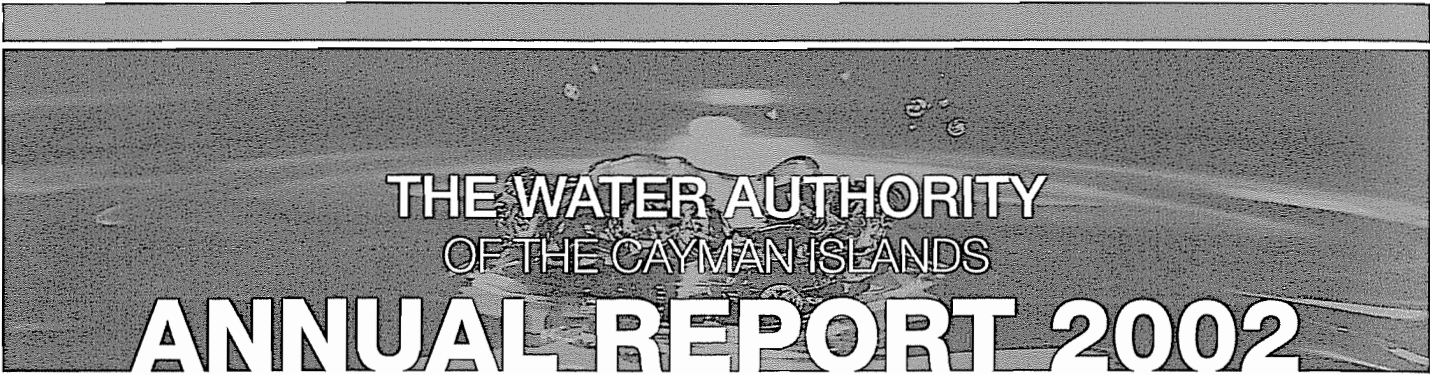


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Board Members

The Water Authority is managed by a Chief Executive Officer (or Director) on permanent employment terms, and a Board of Directors, which is appointed every two years by the Governor of the Cayman Islands.

The Board met regularly with nine meetings being held in 2002.

2002 Water Authority Board Members

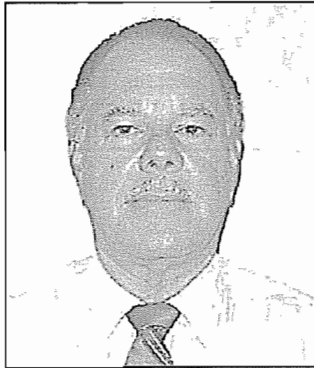
- Chairman:** Mr B Watler
- Members:** Permanent Secretary, CS, Y, S & GA
- Mr Carson Ebanks, JP
- Senior Assistant Secretary, CS, Y, S & GA
- Ms Dorine Whittaker
- Deputy Financial Secretary,
- Mr A Joel Walton JP
- Mr Rolston Anglin, MLA West Bay
- Mr Harry Chisholm JP
- Mr J Ebanks
- Mr Richard Flowers
- Mr Otto Watler
- Mr Jerry Wood
- Secretary:** Director of the Water Authority
- Dr Gelia Frederick-van Genderen

Senior Management Team

- Director** Dr Gelia Frederick-van Genderen, PhD
- Deputy Director & Human Resources** Mrs Gloria Glidden, BA CPA
- Financial Controller** Ms Lori Bergman, BComm CA
- Customer Service Manager** Mrs Joanna Welcome-Martinez
- New Works & Engineering** Mr Tom van Zanten MSc Eur Eng
- Operations Manager-Water Supply** Mr Thomas Hill, Master Plumber
- Operations Manager – Wastewater** Mr Joseph Gadsby
- Operations Manager-Cayman Brac** Mr Burnstein Banks
- Water Resources & Quality Control** Mr Hendrik-Jan van Genderen MSc Eur Eng
- Information Systems** Mr John Bodden, BA



## Chairman's Report



**ON BEHALF** of the Board of Directors of The Water Authority of the Cayman Islands, I am pleased to present the 2002 Annual Report. We take pride in the level of service that the Water Authority provides, and the effective way in which it operates. While there is much to be proud of, we are never content to rest on our laurels, but are continuously seeking

new ways to become more efficient, effective, and responsive to the growing needs of our customers.

My sincere appreciation to all Water Authority Board Members and the Ministry of Community Services, Youth, Sports & Women's Affairs for their support of the Water Authority throughout the year as we work together for the people of the Cayman Islands. It has been my privilege to work with persons committed to ensuring the Authority is well positioned to meet the infrastructure needs of these Islands while ensuring a strong focus on prudent financial management and accountability.

The slow but sustained recovery of our local economy after the impact of the 11 September 2001 terrorist attacks in the United States has resulted in minimal growth in our operating revenues. Nevertheless, 2002 has been another year of sound fiscal management.

In the last year, many significant projects were undertaken to ensure the Water Authority fulfilled its mission. Extensions to the public water system and a number of major projects that got underway this year mean we will continue to be able to meet the needs of customers in an effective and efficient manner for many years to come.

We are proud of our work as we seek to fulfill our mission and serve our customers. The information contained in this document stands as proof of the essential work all staff of the Water Authority is engaged in. On behalf of the Board, I would like to thank all Water Authority employees for their hard work, commitment and dedication as we strive together to provide a high quality of service to our customers and the general public.

  
Brainard Watler  
Chairman

## Director's Report



**THIS ANNUAL REPORT** documents the statistics and provides an overview of the operations, statutory, and financial activities of the Water Authority during the 2002 fiscal period. Despite lower-than-anticipated growth, our financial picture remains strong because of prudent expense management.

2002 has been a year of challenges, but also of significant

accomplishments of which we are proud. We extended the public water system in East End, George Town, and Bodden Town. Major projects that continue or have been identified as necessary to fulfill our mission effectively include a new Reverse Osmosis plant at Red Gate Water Works Site, a water works facility for the Eastern districts, and, most significantly, the Grand Cayman Wastewater Treatment Works facility.

We continue to seek opportunities and options to improve the service to our customers. We introduced new payment options for customers, making it as convenient as possible.

These and other accomplishments are the result of the contributions and commitment of everyone in Water Authority. My sincere thanks to our Water Authority staff for their hard work and dedication over the years.

Looking ahead, even with the slow recovery after the 2001

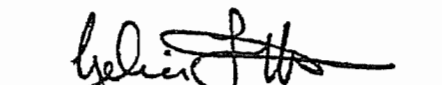
terror attacks in the United States of America, our business environment is projected to grow significantly and steadily over the next five years, therefore we will continue to make significant investments to support and meet this anticipated growth.

The Water Authority family was deeply saddened by the sudden and tragic death of Mr Kevin George Bush, Assistant Operator in the Water Supply Operations Department and extends our deepest sympathy to his family and friends. We will miss him very much.

We are pleased to be able to contribute to our community through involvement in various worthwhile projects and community events.

We continue to focus on improving the workplace environment and providing various training opportunities for our employees to increase their skills and qualifications. With the help of all of our committed staff, we look forward to meeting the needs of our customers for years to come.

I thank the Board and the Ministry of Community Services, Youth, Sports & Women's Affairs for their support and direction as we work together to serve our customers. The Water Authority is well positioned to continue to meet the future needs of the Islands' development while still providing a high standard of services.

  
Gelia Frederick-van Genderen, PhD  
Director

## Finance

### General Financial Comments

As previously noted, there was very limited growth in 2002 in many areas, consistent with other sectors of the local economy.

Looking forward, operating revenue for the first six months of 2003 is expected to increase 2.1%, mainly from increased water revenue in Grand Cayman. Operating expenses will increase by 14%, due to water purchases, repairs, depreciation expenses, inventory purchases at the beginning of the year, maintenance and wages. Administrative expenses will also increase significantly, mainly due to payments in audit fees, insurance, licence fees and consultancies, and human resource requirements. Our five-year cash flow forecast indicates higher net profits due to the proposed rate increase of 7% in 2003 (see below), expected water cost savings, and expected annual growth of 8%. There will be additional loan interest, higher wastewater treatment works and Red Gate Water Works operating costs, and significantly higher debt service payments due to new project financing. The long-term forecast shows higher profitability as additional revenue from continued development and new service area extensions come on-line. Further contributing to the expected increase in net profit is the reduction in loan interest expense and principal repayments after 2004, when the Syms Property Loan and the US\$20.5 million First-Caribbean Bank (previously CIBC) Loan will be fully repaid.

### Rates

The rates for water supply and sewerage service remained unchanged from March 1995. Additional sewerage rate categories were added to the Water Authority Regulations in 1998 in order to accommodate the possible integration of the Walkers Road Government Schools, Community College of the Cayman Islands and Truman Bodden Sports Complex into the public sewerage system.

### 2002 Public Sewerage Rates

| Group                                                         | SFU's per ft <sup>2</sup> | SFU per Unit |
|---------------------------------------------------------------|---------------------------|--------------|
| Store                                                         | 0.0275                    |              |
| Office                                                        | 0.0375                    |              |
| Beauty salon, surgery, bar, club, water sports                | 0.0475                    |              |
| Food handling, garage, photo lab                              | 0.0575                    |              |
| Schools, colleges, technical training facilities              | 0.0375                    |              |
| Public swimming pools, public sports stadia and public parks: |                           |              |
| Toilet, plus                                                  |                           | 20           |
| Urinal, plus                                                  |                           | 50           |
| Wash basin.                                                   |                           | 20           |
| Residential and Hotels                                        |                           |              |
| Residential bedroom                                           |                           | 6            |
| Residential bathroom                                          |                           | 14           |
| Hotel room                                                    |                           | 18           |
| Rate per SFU                                                  | \$1.48 per month          |              |

SFU: Sewerage Fixture Units

### 2002 Public Water Supply Rates

| Group                                      | \$ per cubic metre |
|--------------------------------------------|--------------------|
| Groundwater                                | \$2.33             |
| Desalinated water Grand Cayman             |                    |
| Residential under 12 m <sup>3</sup> /month | \$4.01             |
| Residential over 12 m <sup>3</sup> /month  | \$4.81             |
| Commercial                                 | \$4.81             |
| Public Authority                           | \$4.35             |
| Truck                                      | \$4.01             |
| Desalinated water Cayman Brac              |                    |
| Piped water (all customer types)           | \$5.60             |
| Truck                                      | \$7.00             |

It has become apparent that with the country's water and wastewater infrastructure development needs, our financial commitments, and the cost of doing business in Cayman there is a need to review the current rate structure.

Since our public water supply and sewerage systems became operational in 1988, there have been only three rate increases-in 1990, 1991, and 1995. Since then there has been a steady climb of prices for goods in the Cayman Islands that has directly increased the cost of doing business. At some point, it is necessary to pass on these increased costs to the consumer in order to continue our high standard of service as such a rate review is planned for 2003.

### Capital Works

#### Financing Requirements

The additional financing for the Grand Cayman Wastewater Treatment Work Projects was obtained from FirstCaribbean Bank International, without the need for a Government guarantee, evidence of the strong confidence lenders have in our fiscal stability. This additional US\$4.4 million loan brings the total borrowed amount for the project to US\$17.2 million. It is planned that this loan will be paid in full by 2012.

We will reinvest approximately CI\$1.944 million of retained earnings into capital works, including the East End Water Supply Project, extensions in Frenchman's Crescent, completion of the pipe storage and workshop in Lower Valley, professional services for the administration building extension, and other minor extensions and repairs. These projects will not require any additional borrowing, but additional funds will likely be necessary in the next fiscal cycle.

### Government Contributions

The Government agreed to contributions of CI\$150,000 per year for 2000 and 2001 in 2001 and will be paid on a quarterly basis during the next fiscal period. We do not anticipate being able to provide any further contributions until the 2004/2005 fiscal year, and are currently in discussions with the Government around this issue.

As we continue to prudently manage our finances and fulfill our mission, we look forward to making significant contributions for years to come.

### Financial Commentary for the fiscal period ended 31 December 2002

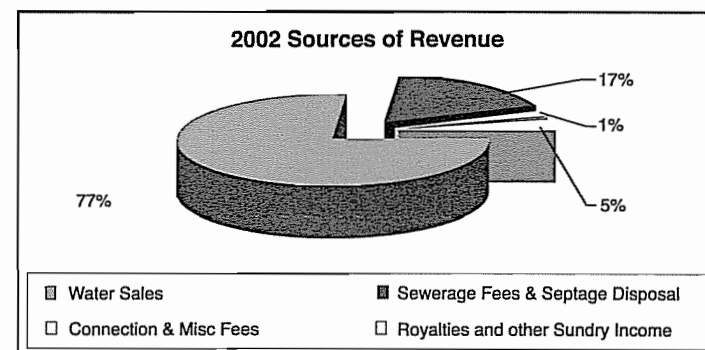
2002 has been another year of sound fiscal management despite minimal growth in operating revenues.

The lack of growth in operating revenues is attributable to the slow down in the local economy as a result of the 11 September 2001 terrorist attacks plus the fact that we have not increased rates since 1995 despite significant capital infrastructure projects.

Where possible we have adopted new technologies to help deliver service efficiently and this contributed to the significant reduction in operating expenses.

### Results from Operations

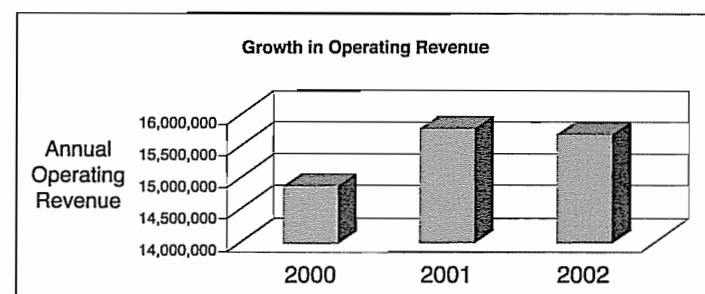
Operating revenues increased slightly in 2002 to CI\$14.97m from CI\$14.90m in 2001. Water sales for 2002 were CI\$12.02m. This equates to 77% of total revenues as illustrated in the chart below.



### Margin Analysis

Gross profit margin for the year increased to 43.57% from 37.16% last year. This improvement is reflected in the net profit margin of 31% which is in turn up from 24.74% in 2001.

These marginal improvements were achieved with relatively flat growth over the past two years as illustrated below. The increase in profitability is a direct result of the decrease in operating expenses. Return on Assets was 9.62%.



### Operating & Administration Expense

Operating expenses decreased significantly in 2002 to CI\$8.45m from CI\$9.36m in 2001 representing a 9.75% reduction. Much of the decline is due to the reduced cost in purchasing water which declined to CI\$3.43m in 2002 from CI\$4.1m in 2001.

Administration expenses have remained relatively constant for the year at CI\$2.73m versus CI\$2.71m in 2002. Administrative expenses represent 18.27% of operating revenues.

### Financial Condition, Liquidity and Capital Resources Cash & Cash Equivalents

Our cash position at the end of 2002 improved to CI\$1.26m from CI\$0.90m in 2001 even after capital infrastructure investments of CI\$5.1m and the repayment of long term debt of CI\$3.7m were made.

Increases in our cash holding were due to the ability of our operations to generate a 12.8% increase in operating cash flows from the prior year.

Current assets to current liabilities are lower than we would like at 60%. However, our net earnings exceeded interest obligations on the long term debt during the year by a factor of nearly 9.

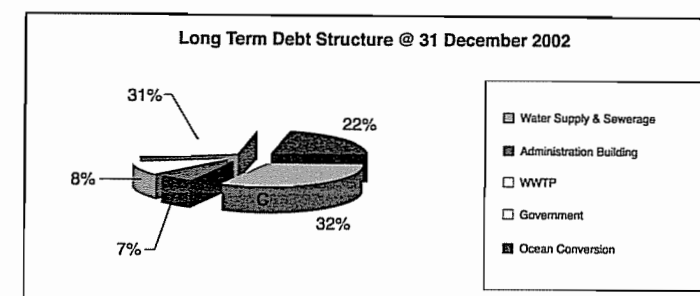
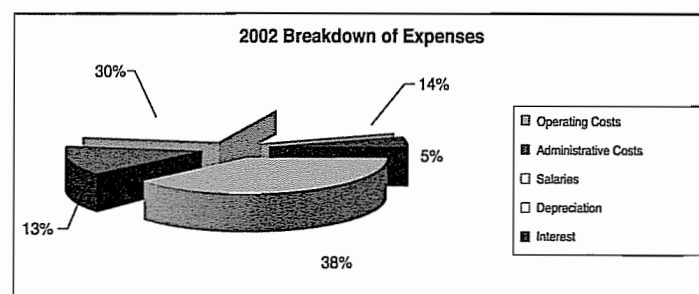
### Fixed Assets

Fixed asset acquisitions for 2002 totaled CI\$5.1m.

Most of the Capital Expenditure in 2002 was directed towards the water supply and sewerage system with nearly CI\$3m worth of capital expenditure invested in the water supply system.

Significant investments are also being made in the Grand Cayman Wastewater Treatment Works as we are anticipating increased demand for wastewater flows in this part of Grand Cayman as result of several large developments underway or planned for the area. We fully expect the continued capital investment will pay dividends both in terms of supporting increased revenue growth and reduced operating expenses.

The Long Term debt of The Authority is held for specific projects-see below for details.



## Administration

### Focus on Service

Good service is good business, and we continually strive to improve our service. In mid-2002, we introduced a number of new payment options for customers, including debit and credit card payment, acceptance of payments at all Fosters Food Fair locations, online payments with Royal Bank of Canada.

We believe our focus on service extends to the betterment of the greater community. To that end, we made a significant (\$50,000) contribution to the Quincentennial Committee's Heroes' Square, and supported a variety of sport and youth organisations. We also established a committee to review requests for sponsorship of long-term studies and research.

Internally, audits were completed on a number of sewerage accounts, and adjustments made that resulted in approximately \$14,000 of additional monthly revenue. Audits were also carried out on all inactive water accounts, resulting in the discovery of eleven accounts that were active in the field, with estimated water usage worth over \$43,000.

### Human Resources

At the end of 2002, the Water Authority had 93 employees, 74% of whom are Caymanian. Twenty-five percent of the non-Caymanian staff are married to Caymanians or have Caymanian family connections. The Authority's is structured in ten departments: Executive, Finance, Customer Service, New Works & Engineering, Human Resources & Administration, Water Supply Operations, Wastewater Operations, Cayman Brac Operations, Information Systems, and Water Resources & Quality Control.

This year, the HR Department filled 12 vacant posts, and coordinated six promotions and six lateral moves internally. The department also coordinated professional development activities for 30% of all staff, and supported the formation of a social activities committee. Upcoming projects and goals include preparation of an Employee Handbook through outsourcing, establishment of an HIV/AIDS in the Workplace policy, and the development of an Incentive Against Absences programme.

We also established a committee to review staff requests for sponsorship of long-term studies and research.

In 2002, we recognised our employees in the following categories: the prestigious Chairman's Award, the "Employee-of-the-Quarter" and the ten-year service award.

### Chairman's Award-2002

The distinguished Chairman's Award for 2002 was awarded to Mr George Hydes for his outstanding service and dedication to duty.

### Ten and Fifteen Years of Service Award-2002

At the annual Staff Meeting and the annual Christmas dinner, we recognised several employees for their ten or more years of continuous service to the Authority. These were:

#### 15 Years of Service

Mr Loy Tivy, Superintendent-Collection System.

#### 10 Years of Service

Mr Danny Manderson, Procurement Officer, and Mr Vernon Whittaker, Reinstatement Foreman-WS.

### Employee-of-the-Quarter Awards-2002 January-March 2002

The first quarter award was given to Mr Dominique Ebanks in recognition of his hard work and dedication displayed in his performance and continuous commitment to our customer service at the Authority.

#### April-June 2002

The second quarter award was presented to Mr Kirk Johnson, Mr Barrington Ingram and Mr Richard McField in recognition and appreciation of the outstanding work performed in rebuilding our Vermeer T-755 Trencher.

#### July-September 2002

The third quarter award was presented to Ms Shivoan Bodden in appreciation and recognition of her hard work, dedication, and continuous commitment to the Authority in the capacity of Accounts Payable Officer in our Finance Department.

#### October-December 2002

The fourth quarter awards were presented to Ms Marcela Martinez-Ebanks in recognition of her hard work and dedication in managing our Laboratory during the fourth quarter of 2002.

### Training

The Water Authority continued its commitment to Training and Development of staff by supporting numerous training activities in 2002. These ranged from conferences, short courses at the Community College of the Cayman Islands to 4-year degrees overseas and locally.

The Authority is a member of the Caribbean Basin Water Management Programme, Inc. (CBWMP) which is a regional organisation for water utilities. This year, CBWMP was



approved to utilise the American Board of Certification's process to certify regional water and wastewater operators. This is a great opportunity for professional development of our operational staff. We are aiming to have all operators at the Authority certified by 2008, this will involve significant commitment by staff and the Authority to implement. This year we identified the first employees to begin studying for the exams using materials provided by CBWMP and as well as the California State University-Sacramento, Office of Water Programs. We look forward to their success in 2003.

We continue to assist school groups and other organisations with educational tours of our laboratory and operation facilities.

#### IT

We engaged the services of a Geographical Information Systems Consultant to assist with assessing our current status in GIS development and to help prepare a strategic plan towards implementation. Additionally, we made improvements to the security management of our network.

Approximately 10,000 customer files were scanned and converted to electronic files.

#### Physical Work Environment

The preliminary design of the extension to the current administration building (which was designed to meet the staff levels and needs in 1996, and so cannot meet current needs) commenced in the latter part of this year. It is anticipated that the conceptual design and the preparation of the contract documents for construction of this extension will be completed early in 2003, with construction to begin shortly thereafter.

## Capital Works & Operations

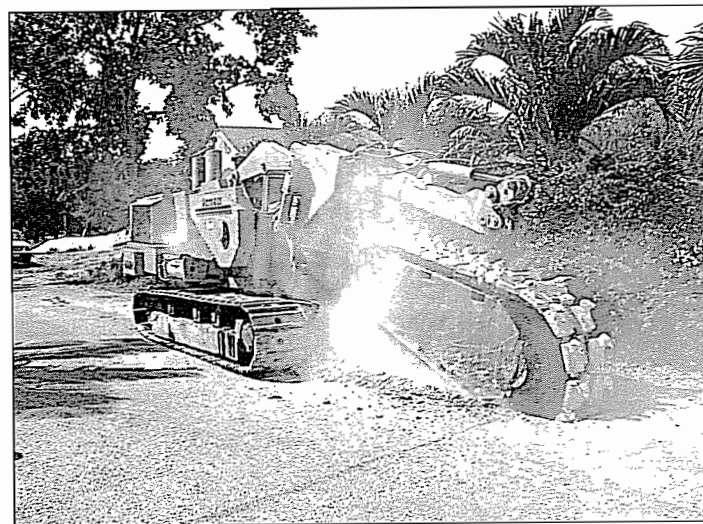
#### Capital Improvements to Water & Wastewater Infrastructure

One of the major aims of the Water Authority's mission is meeting the demand for water services of the residents and businesses of the Cayman Islands. This demand has continued to increase as the economy and residents of the Islands grow, but demand slowed considerably in 2002. There was approximately a 1% growth in demand for public water supply, compared to a forecasted increase of 7% per annum over the next five years. To reflect this lower-than-anticipated growth, the forecast for the coming 2003 year was adjusted to 3%. Lower growth can be attributed to two main factors—a slowing local economy, and the continuing effects of the terror attacks of September 11, 2001 in the USA.

Despite these decreased growth forecasts, we must continue to plan for and meet the needs of our existing and future customers. We will continue to extend the

water distribution system throughout the remaining eastern districts in Grand Cayman in order to meet the needs of both residential customers and large developments in the area. The increased number of connections and customers due to the extension will result in a positive impact on our income.

A 2001 policy amendment allowed the extension of the public water supply into older subdivisions provided the net profit was expected to provide at least a 15% return on investment after 2 years. In 2002, we were faced with the issue of clear and demonstrated hardship on some residents because of this provision. To address this issue, we requested and received endorsement from the Executive Council to extend the water distribution into two areas with significant need, a section of Midland Acres and Mahogany Estates, even though the provision would not be met. These extensions were completed in 2002.



*Private Contractor Construction Management Engineering Company starts work on Mahogany Estates Piped Water Supply July 2002*

Despite this year's flat growth, we anticipate further increases as the local economy recovers and development accelerates. We will continue to upgrade all aspects of our operations in order to ensure we have the infrastructure necessary to meet these demands and satisfy the need for reliable water infrastructure that enables and encourages future development.

#### Extension & Enhancement of the Public Water Distribution System

We continually upgrade our systems in order to effectively and efficiently serve the needs of our customers. This year was no exception as the public water supply was extended by just over 1.8 miles in East End along Austin Conolly Drive. We have given the East End Water Supply Extension project high

priority in the next year, as we have committed to providing piped water to the Castaway's Cove development by June 2003. The water production licence of Morritt's Tortuga Club and Thompson Resorts, are set to expire in April 2003, so we want to ensure that piped water is available for those properties as well. Large customers at the end of water mains ensure better operational performance of the distribution system and help to support the investment to provide service to less dense residential areas.

In George Town, we completed approximately 1 mile of upgrades on Shamrock Road from Ocean Club to Soto Lane and on Crewe Road from Melody Lane to Desmond Lane. These upgrades will allow us to provide consistent supply as demand on the line increases and also reduce the number of pipeline breaks previously experienced in this area.

A meter vault was constructed on the Harquail By-Pass (Esterley Tibbetts Road), between our distribution system and the Cayman Water Company's system. The project was completed in February 2002 at the contracted cost, and our new works crew subsequently installed all pipe work and access covers.

The design was completed for the extension of 0.6 miles to connect the water distribution system between Lyndhurst Avenue and Bobby Thompson Way, but the project was not completed this year due to external factors. Work on the project will commence in June 2003, and will become a very important feature in the operation and performance of the distribution system as it will address the low pressures experienced in the eastern sections of the George Town distribution system during periods of high demand.

Our New Works Crew extended the water distribution system into the Bodden Town by-pass Road and tender documents were issued to extend the system into Frenchman's Crescent.

Work on Phase 1 of the North Side Piped Water Supply Extension will commence in July 2003, covering 1.3 miles from Frank Sound Junction to the Botanic Park Road entrance. The extension from Botanic Park Road to Cayman Kai is scheduled for completion in 2006.

The Midland Acres project was completed by our in-house crew while the Mahogany Estates project was put out to tender due to limited in-house resources. The contract was awarded to the lowest bidder, Construction Management and Engineering Company (CMEC), and was completed on time at the end of October 2002.

In the future, we plan to put more of these types of pipeline extensions out to tender provided the prices are reasonable. Although this "managed competition" option is initially more costly than doing the work in-house, it will allow us to complete jobs more quickly without the added burden of increasing

overheads (e.g., salaries, insurance, pension etc.). This option is also attractive in view of the present economic situation. We anticipate receiving competitive bids for this work, while receiving some good public relations for providing work to contractors. Going forward, we will evaluate the economic feasibility of continuing to use managed competition for similar pipeline expansion programmes against establishing a second new works pipelaying crew.

A variety of activities were undertaken on Cayman Brac to ensure the quality of our operations in the area.

The expansion of the water plant to 540 m<sup>3</sup>/day was started in the latter part of this year. Although this project has been delayed, it has not affected our ability to provide services in the area, partially due to realized improvements in productivity because of the installation of new abstraction wells in 2001. Another item that impacted our service in Cayman Brac was the acquisition of a re-conditioned water truck to add to our resources.

The upcoming year will be a transition year for our services on Cayman Brac, as the Operations Manager has indicated his intention to retire early in 2003. To ensure a smooth transition, an Assistant Operations Manager was hired this year and is being trained by the current Operations Manager. Also in the New Year, we will design and put to tender a new office building for our staff located in Cayman Brac, a project put on hold in the last year because of lack of resources. We will also review the feasibility of extending the piped water supply to Faith Hospital, another project that has been delayed.

#### Major Projects

Despite relatively flat growth in the last year, we continued to proceed with planned improvements and projects that are necessary to ensure we serve our customers to the best of our ability. A total of twelve more subdivisions were added to the water distribution system, and over 3 miles of pipeline were added to the system. Work was completed or started on a number of significant projects such as the Red Gate Site and Grand Cayman Wastewater Treatment Works, which will allow us to meet the needs of customers effectively and efficiently for years to come.

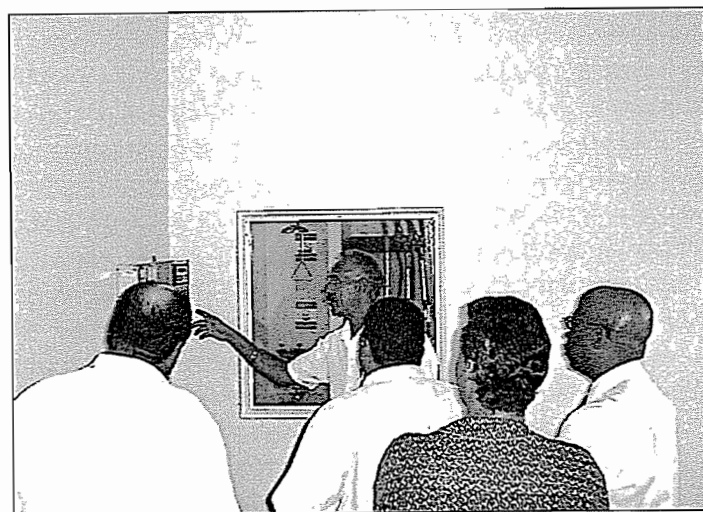
One of our major undertakings is at the Red Gate Site, where we began to implement the master plan for the site in accordance with the planning permission received in 2001. Foremost amongst these was a new Reverse Osmosis (RO) plant, a state-of-the-art facility with a water production capacity of 3000 m<sup>3</sup> per day. Early in 2002, the contract to build the plant was signed with Ocean Conversion (Cayman) Ltd., and the project was completed and fully operational by November 2002.



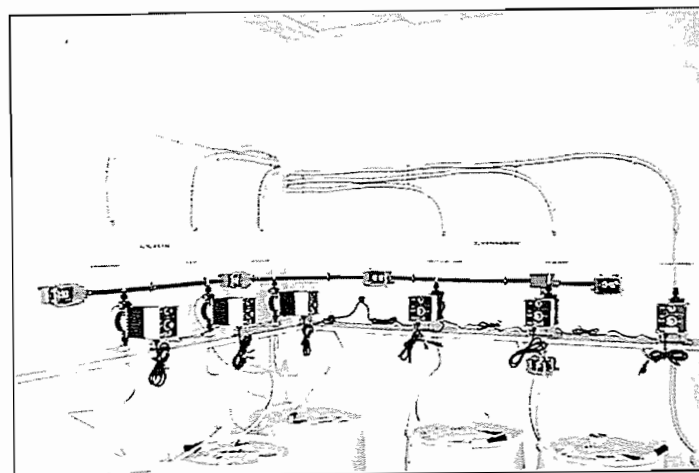


Honourable Minister Frank McField, Ministry Officials, Water Authority Board and Senior Management tour North Sound RO Plant with Ocean Conversion Cayman Ltd Representatives

Other projects at the site include a new post-treatment facility (chlorination building), which is now ready to receive and treat water from the two production plants at the site, preparation of access roads and relocation of the brine disposal well of the older Red Gate plant.



Operations Manager Thomas Hill explains dosing equipment at the new post-treatment facility at Red Gate Water Works



Chemical dosing tanks at the new post-treatment facility at Red Gate Water Works

Work still to be completed at the site includes paving of the access roads, installation of road drainage wells, and planting of a landscaping buffer. As well, in order to ensure efficient service, a new two-million gallon capacity water tank will need to be erected on site. It is planned to put this project out to tender in 2003, with work scheduled to be completed late the same year.

Turning to the East End Water Works project, the location of the new water production and storage facility to service customers in the Eastern Districts was revisited. The facility, once slated for the current East End Reservoir Site, will now be in the Frank Sound/North Side area. The project name will be changed to the "North Side Water Works" to indicate the new location. We have found 15 acres of suitable land available at a reasonable price, and have accounted for this purchase in the 2003 budget. This site will initially be used as a re-pumping facility to help ensure efficient service during times of peak demand, and will later be converted into a full-fledged facility.

The master plan for the site will be completed this year and will then be submitted for approval, with work to prepare the site to commence shortly thereafter.

Also this year, work commenced on the Lower Valley Pipe Storage and Workshop Facility, with an expected completion date of February 2003. Upon completion of the facility itself, the additional work necessary on the site-paving the access roads, constructing road drainage wells, extending the existing fence to include the pump house, and installation of an electronic access card gate-will be addressed.



Construction on the Lower Valley Pipe Storage and Workshop Facility

While we are fulfilling our mandate to provide the collection, treatment and disposal of sewage within the islands in a safe, efficient and affordable manner, the current wastewater treatment works remains under significant stress, and it is becoming a challenge to keep ahead of potential problems. However, we are currently meeting this challenge through numerous activities.

We are making much needed repairs to the high density polyethylene liner at the waste stabilization pond, which is a potential leakage path for wastewater from the ponds and

a risk to the stability of the embankment. These repairs will impact daily operations, and are only a temporary solution.

We also plan to tender the rehabilitation of 5,400 linear feet of pipeline in the system.

Looking ahead, we will need to extend the sewerage system into various parts of the West Bay Beach area, while also addressing the above-noted concerns.

After extensive negotiations, the contract for the construction of the Authority's largest project to-date, the Grand Cayman Wastewater Treatment Works, was awarded to a joint venture bid by Hadsphatic International and Wharton Smith. By the end of 2002, work had commenced on this significant undertaking, which will allow us to meet the Island's wastewater needs for many years to come.

## Operational Performance of Water & Wastewater Facilities

### Public Water Supply-Grand Cayman

In 2002 the demand for piped water supply in Grand Cayman (GCM) was down from previous years, almost 2% over the volume of water sold in 2001. We attributed this continued slow growth to two main factors, one being the slowdown of the local economy and secondly, the slowing economy combined with the after effects of the terrorist attacks in the United States of America on 11 September, 2001.

Although the growth rate declined, pipeline connections increased to 9,484 by the end of December 2002, representing an increase of just over 7%.

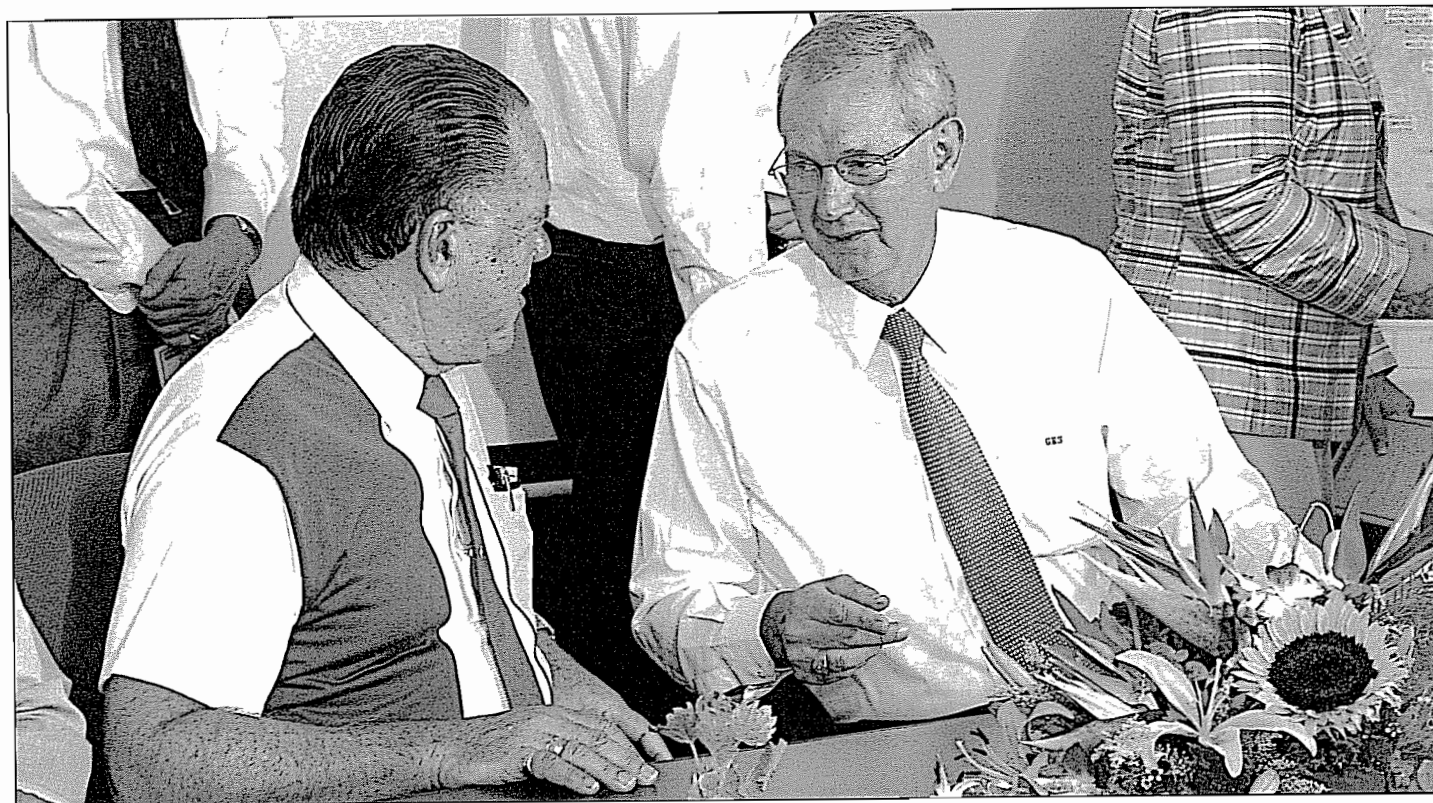
The average daily water sales were 6,279m<sup>3</sup> per day representing 87% of the contracted production capacity. Production capacity at our Red Gate Water Works site was increased to in November 2002 when the new RO Plant became operational.

### Public Water Supply-GCM

#### Summary of Operations

|                                         | 2002      | 2001      | 2000      | Unit           |
|-----------------------------------------|-----------|-----------|-----------|----------------|
| Total Desalinated Water Purchased       | 2,490,452 | 2,543,429 | 2,443,745 | m <sup>3</sup> |
| Total Desalinated Water Sold            | 2,291,755 | 2,253,657 | 2,193,074 | m <sup>3</sup> |
| Pipeline Sales                          | 2,291,755 | 2,192,348 | 2,131,226 | m <sup>3</sup> |
| Trucked Sales                           | 2,226,008 | 60,829    | 53,192    | m <sup>3</sup> |
| Unaccounted for Water                   | 8.0       | 11.4      | 10.0      | %              |
| # of Pipeline Connections               | 9,484     | 8,866     | 8,335     | No.            |
| Average Daily Water Sales               | 6,279     | 6,174     | 5,992     | m <sup>3</sup> |
| Daily Sales as % of Contracted Capacity | 87        | 86        | 83        | %              |
| Water purchased from CWC                | 34,500    | 21,329    | 2,362     | m <sup>3</sup> |
| Water Sold to CWC                       | 0         | -6        | 8,297     | m <sup>3</sup> |





Water Authority Chairman Mr Brainard Watler shares a moment with Mr George Smith, President and CEO of WSI at the contract signing 12 September 2002



Groundbreaking Ceremony for Grand Cayman Wastewater Treatment Works 12 September 2002

The distribution system experienced a reduction in unaccounted for water, a 3.4% below the previous year. The losses are attributed to the age of consumer meters, un-metered fire hydrants, ruptured water mains, periodic flushing of water services and mains. Nevertheless, unaccounted for water bears further investigation and subsequent action to further improve the overall efficiency of the Authority's operations consequently we contracted with a leak detection consultant to assist in identifying leaks.

#### Public Water Supply-GCM

##### Water Sales by Consumer Group (m<sup>3</sup>)

|                         | 2002      | 2001      | 2000      |
|-------------------------|-----------|-----------|-----------|
| Single Residential      | 1,548,421 | 1,484,620 | 1,414,123 |
| Multi-Residential       | 87,681    | 92,653    | 91,008    |
| Commercial & Industrial | 463,704   | 484,515   | 478,912   |
| Truckers                | 65,747    | 60,829    | 53,192    |
| Public Authorities      | 126,203   | 130,560   | 147,183   |
| CWC                     | 0         | -6        | 8,297     |

#### Public Water Supply-GCM

##### Connections per Consumer Group at end of Dec02

##### Average Usage per Consumer Group (m<sup>3</sup>/Connection)

| Month                               | Single Resident | Multi-Residential | Commercial | Public Authority | Total |
|-------------------------------------|-----------------|-------------------|------------|------------------|-------|
| Dec-02                              | 8,332           | 63                | 960        | 129              | 9,484 |
| Average usage m <sup>3</sup> /month | 19              | 99                | 49         | 116              | 23    |
| Average # of customers/month        | 7,739           | 57                | 840        | 114              | n/a   |

From the tables above, water sales to our single residential customers increased by just over 4% while the number of customers in this category increased by 7% from the previous year. Water sales to multi-residential customers decreased by about 5%, while the number of our customers in this category increased by about 7%. Water sales to our commercial and industrial customers increased showed an decrease of 4% over 2001 sales to commercial customers and sales to Public Authority customers went down by 3%. The volume of water sold to truckers showed an increase of 7.2% in 2002.

#### Public Water Supply-Cayman Brac

In 2002, total water sales for the Authority's Cayman Brac (CYB) operation decreased by almost 5% compared to 2001. Active pipeline accounts decreased from 100 to 96. Pipeline sales showed a decrease of around 15% over 2001, while trucked sales increase by 7%.

#### Public Water Supply-CYB

##### Summary of Operational Data

|                                                                        | 2002   | 2001   | 2000   | Unit                |
|------------------------------------------------------------------------|--------|--------|--------|---------------------|
| Total Water Produced                                                   | 66,739 | 72,636 | 67,316 | m <sup>3</sup>      |
| Total Water Sold                                                       | 63,055 | 67,728 | 64,580 | m <sup>3</sup>      |
| Total Storage Losses                                                   | 2,553  | 1,837  | 2,416  | m <sup>3</sup>      |
| Total Pipeline Losses                                                  | 2,517  | 4,418  | 559    | m <sup>3</sup>      |
| Water Loss as % of Production                                          | 5.63   | 6.66   | 2.65   | %                   |
| Approx. Cost of Sales (operational expenses)                           |        | \$5.40 | \$6.09 | CIS/m <sup>3</sup>  |
| Pipeline Sales                                                         | 36,307 | 42,752 | 40,158 | m <sup>3</sup>      |
| Trucked Sales                                                          | 26,747 | 24,976 | 24,422 | m <sup>3</sup>      |
| Number of Pipeline Connections                                         | 96     | 100    | 92     | No.                 |
| Daily Water Sales (% of Nominal Plant Capacity 227m <sup>3</sup> /day) | 76.1   | 81.7   | 77.9   | %                   |
| Avg. Daily Plant Production                                            | 183    | 199    | 184    | m <sup>3</sup> /day |

#### Public Water Supply-CYB

##### Connections per Consumer Group at end of Dec02

##### Average Usage per Consumer Group (m<sup>3</sup>/Connection)

| Month                               | Single Resident | Commercial | Public Authority | Total Pipeline | Avg Trucked |
|-------------------------------------|-----------------|------------|------------------|----------------|-------------|
| Dec-02                              | 71              | 20         | 5                | 96             | 326         |
| Average usage m <sup>3</sup> /month | 15              | 85         | 13               | 113            | 7           |
| Average # of customers/month        | 70              | 23         | 5                | n/a            | 326         |

## Challenges

### Unaccounted-for Water

In 2001, a review of our data indicated an increasing trend in unaccounted-for water. When the first months of 2002 indicated the continuation of this trend, with unaccounted-for water levels staying above 15%, we accelerated our plans to bring these down to a more acceptable level. Efforts focused on the following two areas:

#### • Leakage

All leaks affect our efficiency, but an undetected major leak somewhere in the Spotts area of Shamrock Road was leading to the loss of a substantial amount of water. With the assistance of a consultant, this leak and a number of others major leaks were discovered. This process, and the knowledge gained from the consultant and transferred to in-house staff, will save significant amounts of money and improve the ability to meet demand during peak periods. Our next step is to formalize an in-house leak detection unit whose responsibility will be to balance water usage and purchase, and then investigate unaccounted-for-water by examining operational data and using specialized equipment for leak detection in the distribution systems. Additionally, all reservoirs, with one exception, were checked for leaks and determined to be effectively leak-free. The remaining reservoir will be checked in the upcoming year.

### • Stuck Meters

Equipment that has malfunctioned or simply become worn can cause losses in revenue. To combat this, we have been increasing our monitoring of equipment, which has resulted in immediate benefits-for example, a review of zero consumption water meters identified six stuck meters, resulting in estimated revenue value of over \$75,000. Reports on a formal meter replacement programme and policy were drafted, and are under review. One potential change that will be reviewed is the use of Automated Meter Reading (AMR). Use of this new technology has the potential to reduce human resources needs and human error, but is expensive to implement and maintain. The opportunities presented by this technology will be further examined in 2003.

### Public Sewerage-Grand Cayman

The number of customers connected to the public sewer system at the end of 2002 increased to 282 from 255 at the end of 2001, an increase of 11%. Revenue generated from sewerage increased by 6% over that of 2001. Revenue from five septage truckers providing service on Grand Cayman increased significantly by 20% more than in 2001.

#### Public Sewerage System-GCM

##### Summary of Operations

|                        | 2002      | 2001      | 2000      | Unit           |
|------------------------|-----------|-----------|-----------|----------------|
| Total Sewage Treated   | 1,727,000 | 1,916,615 | 1,692,018 | m <sup>3</sup> |
| Average Daily Flow     | 4,731     | 5,251     | 4,623     | m <sup>3</sup> |
| Average Daily Septage  | 40        | 38        | 38        | m <sup>3</sup> |
| Total # of Connections | 282       | 255       | 261       |                |
| Total Sewerage Fees    | \$2.66    | \$2.50    | \$2.32    | Mil C/\$       |
| # of Septage Customers | 5         | 5         | 6         |                |
| Total Septage Fees     | \$62,404  | \$52,019  | \$52,712  |                |

After we identified leaking areas in the sewer lines on the West Bay Beach Sewerage System via the 2001 Closed Circuit TV (CCTV) survey, we were able to repair some of the leaks and as a result the flow to the works reduced. Additionally, the average salinity of the incoming wastewater was reduced by 20%. Twelve pumping stations continued to be monitored weekly for EC which is used as an indicator of groundwater intrusion into the sewerage system.

### Wastewater Treatment Works-Grand Cayman

From the operational data, the average daily flow to the treatment works in 2002 decreased by approximately 10%. This is attributed to two factors, reassessment of the flow metering system as well as the repairs to various leaks in the collection system.

We monitored the performance of the waste stabilisation ponds generally every quarter.

The overall unfiltered biochemical oxygen demand (BOD<sub>uf</sub>) removal efficiency of the waste stabilisation ponds remained comparable to 2001 as did that of the faecal coliform removal.

#### Operational Performance of the Wastewater Treatment Plant

| Year | Average BOD-5 day (mg/l) |                |              | Average Daily Flow (m <sup>3</sup> /day) | Average Raw sewage EC (µS/cm) |
|------|--------------------------|----------------|--------------|------------------------------------------|-------------------------------|
|      | Raw sewage               | Final effluent | %age removal |                                          |                               |
| 1988 | 213.0 (g)                | 13.0 (g)       | 94.0         | 728.3                                    | 3787 (g)                      |
| 1989 | 174.0 (g)                | 36.0 (g)       | 80.0         | 1611.2                                   | 6551 (g)                      |
| 1990 | 103.5 (c)                | 25.4 (g)       | 75.0         | 2898.2                                   | 11955 (c)                     |
| 1991 | 76.4 (c)                 | 20.8 (g)       | 73.0         | 4116.9                                   | 16749 (c)                     |
| 1992 | 68.9 (g)                 | 19.6 (g)       | 71.5         | 4843.9                                   | 21282 (g)                     |
| 1993 | 94.2 (g)                 | 22.8 (g)       | 75.8         | 2954.6                                   | 17462 (g)                     |
| 1994 | 117.6 (c)                | 26.0 (g)       | 77.9         | 2979.9                                   | 13303 (c)                     |
| 1995 | 121.0 (c)                | 23.4 (g)       | 81.0         | 2936.1                                   | 12106 (c)                     |
| 1996 | 142.4 (c)                | 31.5 (g)       | 77.9         | 3232.1                                   | 12907 (c)                     |
| 1997 | 161.8 (c)                | 34.6 (g)       | 78.6         | 3231.0*                                  | 14564 (c)                     |
| 1998 | 158.0 (c)                | 26.7 (g)       | 83.0         | 4094.0*                                  | 21147 (c)                     |
| 1999 | 105.7 (c)                | 23.9 (g)       | 77.4         | 5472.0                                   | 21499 (c)                     |
| 2000 | 110.7 (c)                | 36.0 (g)       | 67.5         | 4623.0                                   | 20623 (c)                     |
| 2001 | 176.3 (c)                | 33.2 (g)       | 81.2         | 5251.0                                   | 19643 (c)                     |
| 2002 | 172.4 (c)                | 32.8 (g)       | 81.0         | 4731.0                                   | 16435 (c)                     |

NOTE: BOD = Biochemical Oxygen Demand; EC electrical conductivity; g = grab sample; c = 24hr composite sample. Average flows are corrected for flow meter errors, \*corrected figures from 1998 Annual Report.

#### Operational Performance of the Wastewater Treatment Plant

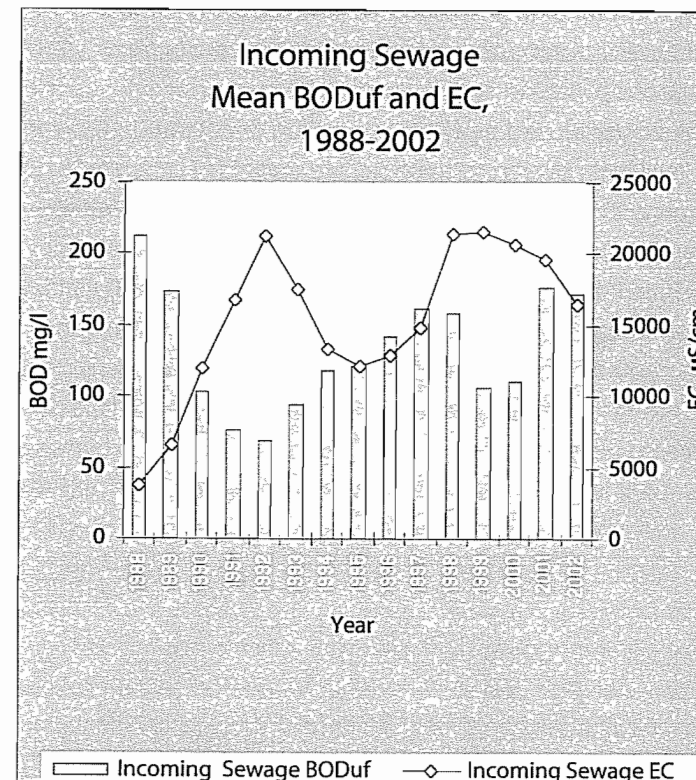
##### Average FC (cfu/100ml)

| Year | Raw sewage (g)         | Final effluent (g)     | %age reduced |
|------|------------------------|------------------------|--------------|
| 1988 | 4.39 x 10 <sup>6</sup> | 1.68 x 10 <sup>3</sup> | 99.962       |
| 1989 | 1.62 x 10 <sup>6</sup> | 2.87 x 10 <sup>3</sup> | 99.998       |
| 1990 | 3.18 x 10 <sup>6</sup> | 7.30 x 10 <sup>3</sup> | 99.998       |
| 1991 | 2.77 x 10 <sup>6</sup> | 1.55 x 10 <sup>4</sup> | 99.440       |
| 1992 | 1.52 x 10 <sup>6</sup> | 5.84 x 10 <sup>3</sup> | 99.616       |
| 1993 | 3.22 x 10 <sup>6</sup> | 4.26 x 10 <sup>3</sup> | 99.868       |
| 1994 | 9.29 x 10 <sup>7</sup> | 2.04 x 10 <sup>4</sup> | 99.904       |
| 1995 | 1.38 x 10 <sup>7</sup> | 2.53 x 10 <sup>4</sup> | 99.817       |
| 1996 | 6.89 x 10 <sup>6</sup> | 2.75 x 10 <sup>4</sup> | 99.601       |
| 1997 | 4.36 x 10 <sup>6</sup> | 2.13 x 10 <sup>4</sup> | 99.512       |
| 1998 | 3.46 x 10 <sup>6</sup> | 1.53 x 10 <sup>4</sup> | 99.558       |
| 1999 | 4.91 x 10 <sup>6</sup> | 1.28 x 10 <sup>4</sup> | 99.740       |
| 2000 | 7.21 x 10 <sup>6</sup> | 4.36 x 10 <sup>4</sup> | 99.396       |
| 2001 | 3.96 x 10 <sup>6</sup> | 2.52 x 10 <sup>4</sup> | 99.363       |
| 2002 | 2.93 x 10 <sup>6</sup> | 1.79 x 10 <sup>4</sup> | 99.419       |

NOTE: FC=Faecal coliform bacteria; cfu = colony forming units; g = grab sample; c = 24hr composite sample.

Sludge depth is measured annually as part of the operational performance monitoring of the sewage treatment works. There was no significant change in the mean sludge depth in the facultative and maturation ponds.

With the various operational problems relating to salinity and hydraulic loading, the waste stabilisation ponds performed as expected.



Sludge depth is measured annually as part of the operational performance monitoring of the sewage treatment works. There was no significant change in the mean sludge depth in the facultative and maturation ponds.

#### Average Sludge Depth in Waste Stabilisation Ponds

| Year | Pond 1.1 (metres) | Pond 1.2 (metres) | Pond 2.1 (metres) | Pond 2.2 (metres) |
|------|-------------------|-------------------|-------------------|-------------------|
| 1990 | 0.145             | 0.164             | 0.054             | 0.041             |
| 1991 | 0.346             | 0.294             | 0.215             | 0.241             |
| 1992 | 0.385             | 0.362             | 0.177             | 0.217             |
| 1993 | 0.345             | 0.371             | 0.303             | 0.298             |
| 1994 | 0.343             | 0.345             | 0.123             | 0.126             |
| 1995 | 0.318             | 0.243             | 0.144             | 0.140             |
| 1996 | 0.388             | 0.341             | 0.162             | 0.133             |
| 1997 | 0.405             | 0.365             | 0.140             | 0.122             |
| 1998 | 0.605             | 0.594             | 0.169             | 0.179             |
| 1999 | 0.693             | 0.695             | 0.196             | 0.216             |
| 2000 | 0.663             | 0.725             | 0.209             | 0.229             |
| 2001 | 0.734             | 0.830             | 0.253             | 0.231             |
| 2002 | 0.730             | 0.830             | 0.230             | 0.230             |

With the various operational problems relating to salinity and hydraulic loading, the waste stabilisation ponds performed as expected.

### Laboratory Services & Water Quality

The safety and quality of the water we provide customers is our paramount concern, and our most sacred trust. Without the confidence of our customers, our ability to continue operations would be doubtful. Not surprisingly, we take every step necessary to ensure water quality.

Our laboratory achieved a significant milestone this year as it received accreditation in key parameters through the American Association for Laboratory Accreditation (A2LA).



Celebration and recognition ceremony for Lab staff for achieving A2LA Accreditation

### Laboratory Services

Our laboratory carries out the chemical and biological analyses for the Authority's operations, monitoring programmes and private requests. The major monitoring programmes of the laboratory are:

- Quality control of the piped public water supplies (Grand Cayman and Cayman Brac), and East End reservoir and wellfield;
- Monitoring of Lower Valley and East End groundwater resources;
- Research and monitoring of the West Bay Beach sewerage system and sewage treatment works;
- Coastal water monitoring in the Hog Sty Bay area;
- Providing water quality monitoring services for other Authority projects or research as required;
- Providing the public with laboratory services for water analyses; and,
- Compliance monitoring of private wastewater treatment works.



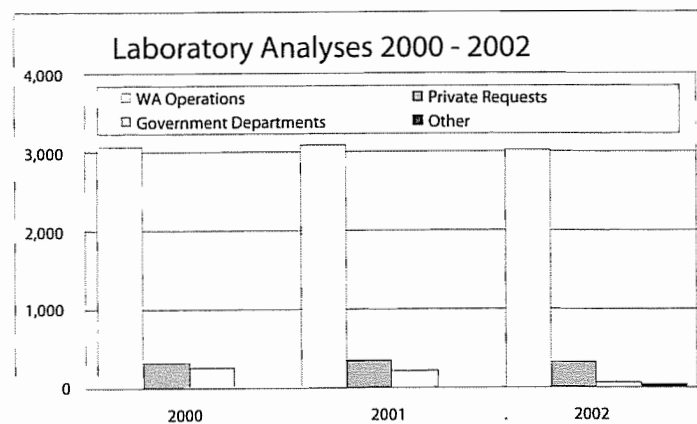
### A2LA Accreditation

The American Association for Laboratory Accreditation (A2LA) performed the final assessment audit for laboratory accreditation in January 2002 and the Water Authority's laboratory achieved accreditation status on in May 2002. A2LA is a US-based accreditation body that imposes strict standards upon laboratories seeking accreditation. By granting accreditation, A2LA confirms the technical competency of our laboratory personnel to perform specific types of water analysis. The laboratory was accredited in the environmental testing field for analysis of the following parameters: Total and Free Chlorine Residual, Total Dissolved Solids (TDS), Electrical Conductivity (EC), pH, Total and Faecal Coliform bacteria, and Heterotrophic Plate Count.

To further improve quality control, we expanded our participation in the Aquacheck (WRc, UK) Proficiency Testing Programme by adding the following wastewater parameters to the existing proficiency testing programme: Biological Oxygen Demand, Chemical Oxygen Demand and Suspended Solids. Twenty-four proficiency samples were analysed during 2002, 10 for microbiological analysis and 14 for chemical analysis. This represents a 33% increase in the proficiency samples analysed compared to 2001.

### Monitoring Programmes

The majority of the laboratory's activities relate to comprehensive monitoring programmes of the Authority's operations and accreditation requirements. Our laboratory's workload significantly increased in 2002 because of the additional quality assurance. The number of samples analysed in 2002 was 3,477, this amount was similar to previous years.



### Public Piped Water Supply-Grand Cayman

We monitor the public piped water distribution system with regular testing of chlorine residuals, total and faecal coliform bacteria, heterotrophic plate count bacteria (HPC), EC, total dissolved solids (TDS), pH, zinc and orthophosphate at specific sampling points.

Water produced by OCL, at the Red Gate and the Lower Valley Water Works, is tested twice daily for TDS and pH levels prior to storage in the Authority's reservoirs. Water entering the distribution system is analysed twice daily for TDS, pH and chlorine residuals. Zinc and orthophosphate analyses are carried out weekly. Bacteriological analyses are carried out each working day.

Throughout the distribution system we have sample taps installed at operationally strategic positions. Monitoring of these sampling taps is carried out in accordance with a set schedule.

#### Quality of Water entering Distribution System from Red Gate Water Works

| Parameter                                 | Mean |
|-------------------------------------------|------|
| Free Chlorine (mg/l)                      | 0.34 |
| pH (units)                                | 7.45 |
| EC (µS/cm)                                | 426  |
| TDS (mg/l)                                | 203  |
| Zinc (mg/l)                               | 0.59 |
| Orthophosphate (mg/l)                     | 1.68 |
| Heterotrophic Bacteria (estimated cfu/ml) | 0    |

All faecal coliform results were negative

#### Quality of Water entering Distribution System from Lower Valley Water Works

| Parameter                                 | Mean |
|-------------------------------------------|------|
| Free Chlorine (mg/l)                      | 0.37 |
| pH (units)                                | 7.47 |
| EC (µS/cm)                                | 400  |
| TDS (mg/l)                                | 192  |
| Zinc (mg/l)                               | 0.61 |
| Orthophosphate (mg/l)                     | 1.74 |
| Heterotrophic Bacteria (estimated cfu/ml) | 0    |

All faecal coliform results were negative

The level of boron, which in previous years exceeded the World Health Organization Drinking Water Guideline Values, did not exceed this limit in 2002 both in the water distributed from the Red Gate Water Works and the Lower Valley Water Works. Boron is naturally occurring in seawater and its removal is not efficient in the RO process. There are on-going discussions amongst scientist in the drinking water quality field and in fact the USA does not issue a guideline value for boron concentration in drinking water.

Our laboratory collected 32 samples in relation to queries from customers regarding water quality. Written reports were provided to customers, and where necessary, they were advised on the action to take regarding problems encountered on their side of the meter box.

### Public Piped Water Supply-Cayman Brac

The TDS and pH of water entering the reservoir from our Cayman Brac reverse osmosis plant are tested on a daily basis. Water entering the distribution system is analysed daily for TDS, pH and chlorine residuals. Bacteriological and zinc analysis are carried out weekly. We have 3 sample taps within the distribution system and these are monitored monthly.

#### Quality of Water entering Distribution System from West End Water Works

| Parameter                                 | Mean |
|-------------------------------------------|------|
| Free Chlorine (mg/l)                      | 0.23 |
| pH (units)                                | 7.54 |
| TDS (mg/l)                                | 126  |
| Zinc (mg/l)                               | 0.27 |
| Heterotrophic Bacteria (estimated cfu/ml) | 0    |

All faecal coliform results were negative

### East End Wellfield & Reservoir

Our East End wellfield and reservoir were established by the Authority in 1985 and remains our oldest operation. Fresh groundwater, pumped from the East End lens is aerated and chlorinated and stored in the reservoir. This water is sold to trucking companies. We monitor the product water daily for chlorine residuals, pH, EC and TDS.

#### Quality of Product Water from East End Reservoir

| Parameter            | Mean |
|----------------------|------|
| Free Chlorine (mg/l) | 0.34 |
| pH (units)           | 7.93 |
| EC (µS/cm)           | 862  |
| TDS (mg/l)           | 476  |

All faecal coliform results were negative

The levels of trihalomethanes in the product water from the East End reservoir, which in previous years exceeded the World Health Organization Drinking Water Guideline Values, did not exceed these limits in 2002.

### George Town Harbour Water Quality Monitoring Programme

We commenced the George Town Harbour Water Quality monitoring programme in 1991 as a joint study between the Water Authority and the Department of the Environment. The results to date have not identified any significant pollution. The monitoring programme was reduced to a lower frequency in 2002.

The programme includes 18 sampling points. All samples were analysed for faecal coliform and enterococci bacteria in addition to various physico-chemical parameters. The highest average faecal coliform result was 8.5 cfu/100ml at sample point 1-additional. The highest individual faecal coliform result obtained in 2002 was 27 cfu/100ml at sample point 1-additional.

The overall average enterococci bacteria densities in 2002 have increased slightly since 2001. The highest average for enterococci was 5.8 cfu/100ml at sample point 1-additional with sample point 1(surface) having the highest individual enterococci result of 20 cfu/100ml.

#### George Town Harbour Water Quality Monitoring Programme

| Year | Mean Faecal coliform bacteria (cfu/100ml) | Mean Enterococci bacteria (cfu/100ml) |
|------|-------------------------------------------|---------------------------------------|
| 1991 | 1.9                                       | 3.2                                   |
| 1992 | 9.8                                       | 2.4                                   |
| 1993 | 19.2                                      | 1.4                                   |
| 1994 | 0.6                                       | 0.5                                   |
| 1995 | 0.4                                       | 0.3                                   |
| 1996 | 2.1                                       | 0.5                                   |
| 1997 | 0.4                                       | 0.2                                   |
| 1998 | 1.0                                       | 0.2                                   |
| 1999 | 5.9                                       | 1.5                                   |
| 2000 | 3.2                                       | 0.5                                   |
| 2001 | 4.0                                       | 0.3                                   |
| 2002 | 1.4                                       | 2.7                                   |

The physico-chemical parameters of the 18 main sample points are as expected for tropical marine coastal water. We found the mean faecal coliform and enterococci results for all 18 sampling points to be well within the EU and EPA guidelines.

## Water Resources & Statutory Licencing

### Water Resources

As stewards of the water resources of the Islands, we monitor the environmental impact various activities on the Islands have on this precious resource.

This year, we continued our review and involvement in existing environmental remediation projects at ESSO Jackson Point Terminal, Texaco Walkers Road Service Station, Texaco Jackson Point Terminal, Texaco West Bay Road Service Station and the Kaibo. Investigations commenced at sites such as the fuel spill at the Government Fuel Facility.

We also initiated investigations into surface water quality in the dyke road system near the wastewater treatment works, and continued a comprehensive review of quarry operations in the Cayman Islands.

In addition to our operations, our Water Resources Department fulfills an important regulatory role. By November 2002, we had reviewed and issued 15 licences and permits, reviewed 153 planning applications, and completed various reviews and amendments on a number of licence holders. We have undertaken a revision of current Development Control guidelines and requirements to ensure they remain relevant and effective. We also maintain a voice at the table of government through representation on various governmental committees.

### Rainfall

In Grand Cayman, we collect rainfall data from the Authority's datalogging rain gauges and manual gauges that are operated by dedicated volunteers. The Authority also exchanges data with the Meteorological Service, the Queen Elizabeth II Botanic Park and the Mosquito Research and Control Unit.

Average rainfall in Grand Cayman for all the stations of

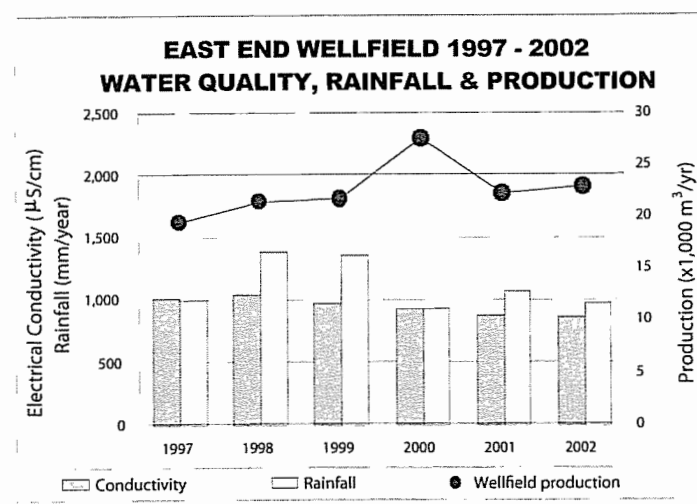
which data are collected was 1,208 mm (47.5") in 2002, compared to 1,224 mm (48") in 2001 and 992 mm (39") in 2000. The wettest month was September.

## Groundwater Monitoring & Use

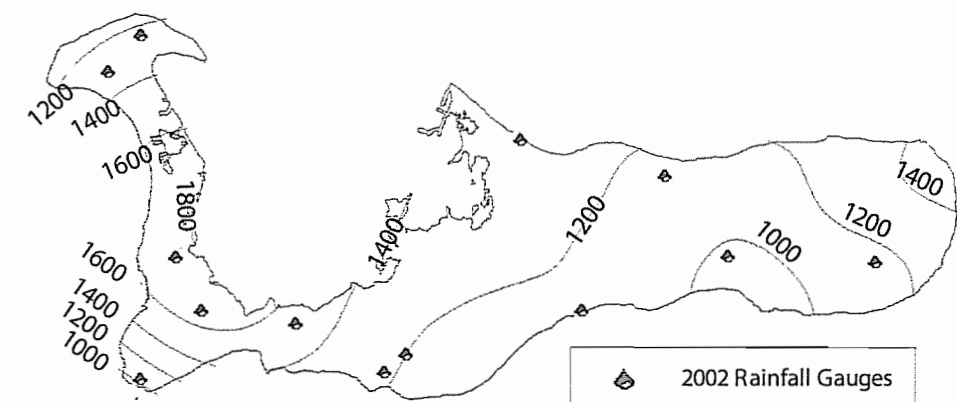
### Groundwater Monitoring

In 2002 we continued monitoring programmes on our groundwater resources. Data are collected from observation wells, piezometers, water level loggers and raingauges. The network of 4 automated data logging raingauges in Grand Cayman, installed in previous years was completed with 12 additional gauges. Also the network of monitoring wells at the East End fresh water lens and the Authority's Wastewater Treatment Works were rehabilitated.

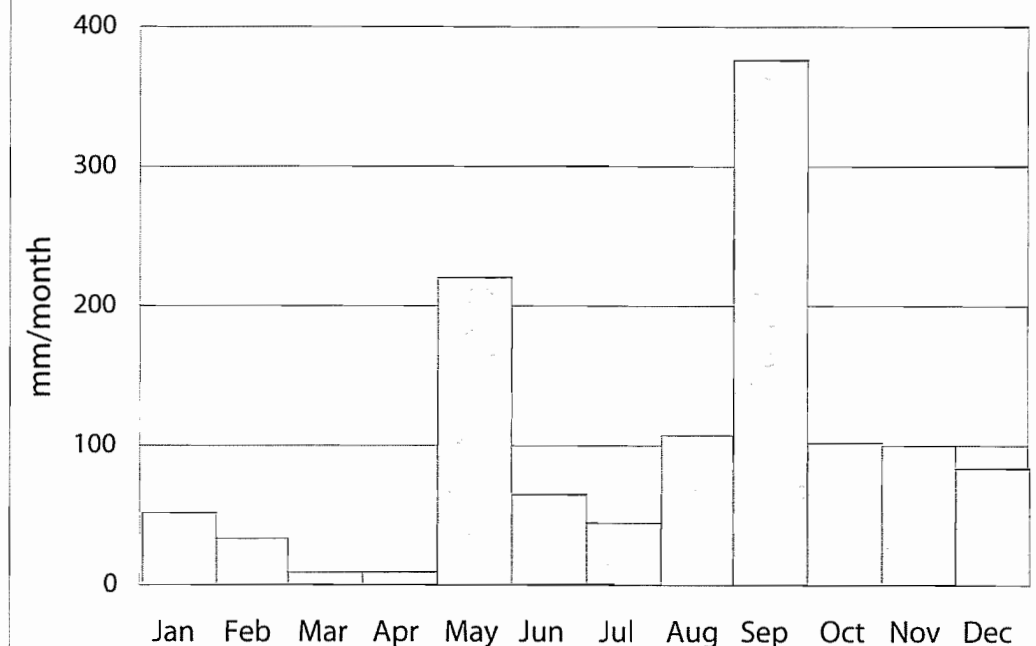
The salinity of the groundwater abstracted by the Authority from the East End fresh water lens did not change significantly compared to previous years, and production remained at similar levels. The average electrical conductivity (EC) of the product water from the reservoir was 861 mS/cm, with fluctuations of less than 10% throughout the year. This demonstrates that the operational management of the East End wellfield and reservoir in 17 years of operation is a sustainable method to manage and exploit the East End fresh water lens.



## ANNUAL RAINFALL 2002 - mm/year



## MONTHLY RAINFALL GRAND CAYMAN 2002





### Water Quality of Canals in Dyke Roads

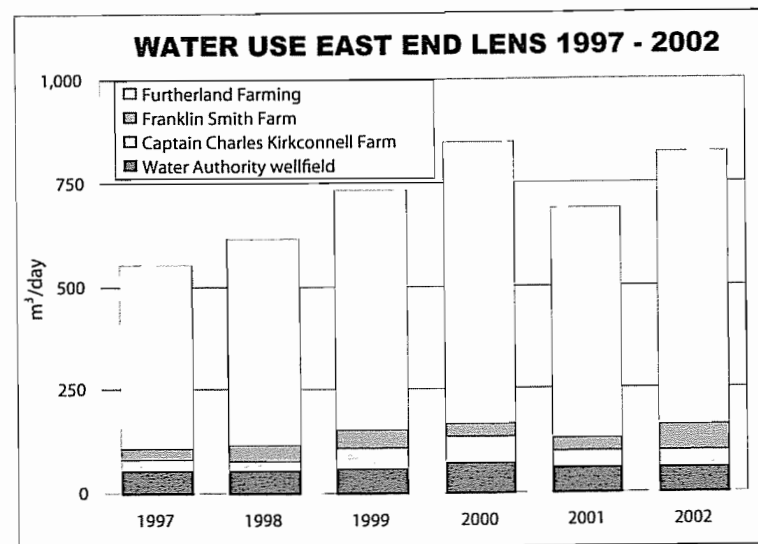
In September 2002, as a result of a complaint of an alleged sewage spill in the Dyke Road canal system north of the Wastewater Treatment Works and the George Town Sanitary Landfill, we carried out substantial sampling of the area. The alleged sewage spill was not confirmed, however the bacteriological water quality of the water in the canal system is poor compared to the monitoring results in the George Town Harbour area. Therefore the Authority together with the Department of the Environment and the Department of Environmental Health decided to continue to further study the water quality in the area to determine whether this area is affected by pollution.

### Groundwater Use

Our oldest remaining operation, the East End wellfield

and reservoir, completed its seventeenth year of operation. Although nowadays water production at this facility is very modest compared to the volume of fresh water produced by reverse osmosis plants in the Cayman Islands, the East End wellfield and reservoir continue to provide a reliable and wholesome source of potable water derived from fresh groundwater from the East End lens to trucking companies.

The 3 commercial farms located on the East End lens use fresh groundwater for irrigation. We monitor their abstraction; in 2002 Furtherland Farm used the majority with 656 m<sup>3</sup>/day, whereas the abstraction by Captain Charles Kirkconnell Farm and Franklin Smith Farm was limited to 39 m<sup>3</sup>/day and 63 m<sup>3</sup>/day respectively. The Water Authority abstracted 62 m<sup>3</sup>/day from the East End wellfield. The total commercial abstraction in 2002 averaged 820 m<sup>3</sup>/day.



### Groundwater Remediation & Fuel Spills

As part of our responsibility under the Water Authority Law, we carry out investigations of fuel spills to ensure that public health, the environment and groundwater are protected and that the responsible organizations achieve effective remediation. Both ESSO and Texaco have experienced spills and have taken their responsibility for remediation seriously.

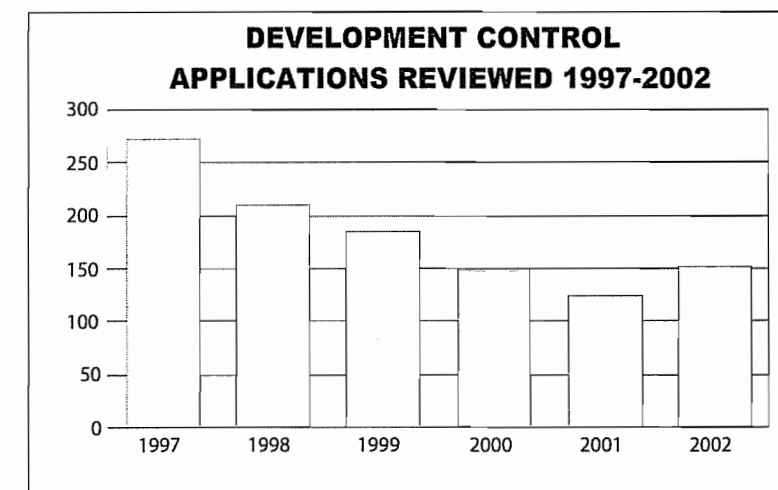
In January 2002 approximately 2,500 imperial gallons of gasoline leaked into the ground at the Texaco Government Refueling Facility located at North Sound Road due to a faulty fuel line and non-functioning line leak detection system. Texaco responded quickly to this spill and recovered 85% of the product in the first 9 days after the spill. By the end of February 95% of the product was recovered. Texaco's consultant installed monitoring wells at the facility to determine the impact on the groundwater. Due to the rapid and effective response after the spill and the favourable conditions for natural attenuation the residual dissolved petroleum hydrocarbons in the groundwater reduced rapidly. Sampling of the monitoring wells in July 2002 indicated that the residual levels of chemicals of concern in the groundwater were below the World Health Organization Drinking Water Guideline Values. We agreed that Texaco would carry out further sampling of the monitoring wells in early 2003 to confirm that the remediation was complete.

In August 2002, during re-development of the ESSO

Industrial Park Fuel Station, petroleum hydrocarbon contamination was detected in the groundwater at the site. Subsequently ESSO's consultant carried out further investigation to determine the extent and origin of the contamination. Investigative work included installation of monitoring wells, sampling of soil and groundwater and determination of groundwater flow. In October it became clear that oil was present in the monitoring well that was installed in the area where the former Rustcheck facility had been located. Other monitoring wells at the site indicated low levels of dissolved petroleum hydrocarbon contamination. We will continue to monitor ESSO's remediation of this site.

The Texaco Jackson Point Terminal is under remediation since 1998 after leaks from a fuel pipeline and a storage tank in 1998 and a storage tank in 2001. Hurricane Michelle damaged the product recovery systems at the terminal in November 2001; by mid-2002 the equipment was repaired. Texaco's consultant continued installation of an additional comprehensive product recovery system to recover and treat free product from the area impacted by the 2001 fuel spill. Monitoring of residential water wells at adjacent properties and the marine environment indicated no negative impacts outside the terminal.

In 2002 Texaco re-developed the Walkers Road Service Station; this site has been under active remediation since 1995. In November 2002 the contaminated soil in the area where residual contamination was present was



excavated and transported off site for composting to reduce residual petroleum hydrocarbons. The excavated area, prior to backfill with clean soil, was treated and conditioned to remove residual contamination. It is expected that the composting of the soil will remove residual hydrocarbons and that the treatment of the source area at the service station will reduce residual hydrocarbon to acceptable levels.

Development Control

One of our responsibilities is to review new development to determine the requirements in respect of water supply, wastewater treatment and disposal and impacts on groundwater. In 2002 the number of plans submitted for review by the Planning Department increased to 153 compared to 125 during the previous year.

Water Resources Licencing

In 2002 as part of our responsibilities under the Water Authority Law, we issued the following licences and permits:

|                                   |   |
|-----------------------------------|---|
| • Groundwater Abstraction Licence | 3 |
| • Discharge Permit                | 2 |
| • Quarry Permit                   | 2 |
| • Canal Work Permit               | 1 |
| • Well Drillers Licence           | 5 |
| • Cesspool Emptier's Licence      | 5 |

Water Supply Concessions

Under the Water (Production and Supply) Law the Governor in Cabinet issues concessions to produce and supply water. We administer the licences of these concessions and advise Government in respect of issues relating to this Law.

Performance of Water Supply Concessions

|                            | Production<br>(US gallon) | Royalty<br>(\$) |
|----------------------------|---------------------------|-----------------|
| Little Cayman Beach Resort | 3,480,700                 | 6,091           |
| Morritt's Tortuga Club     | 19,828,300                | 20,968          |
| Royal Reef Resort          | 4,353,700                 | 4,228           |
| On the Bay Development     | 613,030                   | 1,839           |

Cayman Water Company Performance  
(US gallon)

|                                  | 2002        | 2001        |
|----------------------------------|-------------|-------------|
| Water produced                   | 537,313,460 | 499,661,300 |
| Water purchased                  | 0           | 0           |
| Total water sold                 | 522,990,953 | 474,032,912 |
| Seven Mile Beach                 | 272,930,520 | 265,234,643 |
| West Bay                         | 131,310,040 | 130,641,725 |
| Westin                           | 18,217,690  | 19,827,230  |
| Hyatt-Britannia                  | 52,229,857  | 0           |
| Water Authority                  | 8,920,066   | 5,634,334   |
| Trucks                           | 420,800     | 519,400     |
| Safe Haven (non-potable)         | 38,961,980  | 52,175,580  |
| Unaccounted for water            | 2.67%       | 5.13%       |
| Fuel adjustment per 1,000 US gal | \$ 1.00     | \$ 1.08     |
| Royalty                          | \$ 614,218  | \$ 578,203  |

In the course of 2002 the Authority and the Cayman Water Company prepared an amendment to the Company's water production and supply licence to facilitate the Company to trade its shares publicly, improvements in water quality, improvements in water quality testing and an equitable method to calculate the monthly energy adjustment factor. By the end of 2002 the proposed amendment was approved by the Water Authority Board and Cabinet was advised accordingly. It is expected that the amendment will come in effect in 2003.

Additionally, the Water Authority Board and Cabinet approved the sale of Ocean Conversion (Cayman) to Consolidated Water Company, the parent company of Cayman Water Company. During negotiations, concerns regarding the aesthetic quality of Cayman Water Company's water were addressed and they agreed to improve the quality of their water to meet our standards.

In February 2002 Cayman Water Company acquired the water production plant of the Hyatt-Britannia and commenced operation of this facility.

In 2002 Government issued a water production licence to Rum Point Investment Company Ltd. to produce and supply water for their facility at Rum Point. It is expected that the reverse osmosis plant for Rum Point will be installed in the early part of 2003.

Other current holders of water production licences are Little Cayman Beach Resort, Morritts Tortuga Club, Thompson's Royal Reef Resort, and On the Bay Development.

Plumbers' Examination Board

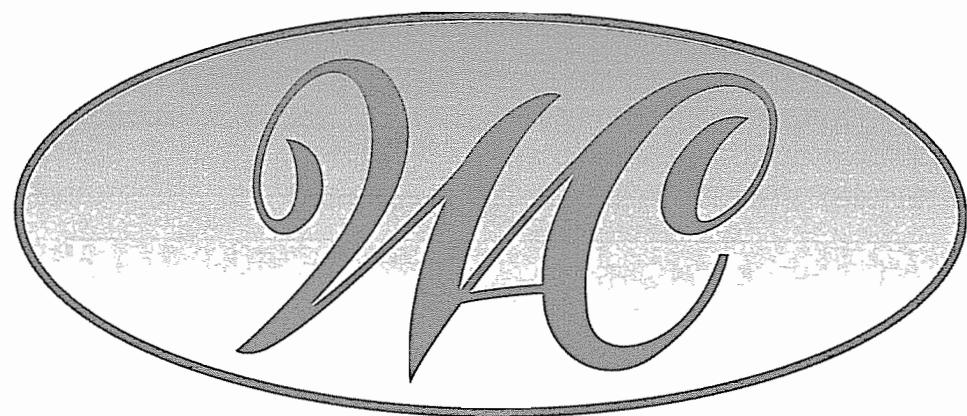
The Plumbers' Examination Board met on two occasions in 2002 to review applications. Theoretical examinations were held on two occasions during the year to assess applicant's ability. The following licences were approved:

| Category   | 2002 | Total at 31-Dec-02 |
|------------|------|--------------------|
| Apprentice | 2    | 183                |
| Journeyman | 5    | 144                |
| Master     | 2    | 48                 |

Members of the Plumbers' Examination Board at the end of the year:

|                   |                                                                                                                                                               |
|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Chairman:</b>  | Mr Thomas Hill<br>Operations Manager WAC                                                                                                                      |
| <b>Members:</b>   | Mr James Smith<br>Plumbing Inspector, BCU<br>Mr James Merren<br>Master Plumber, Plumbing Contractor<br>Mr Victor Yates<br>Master Plumber, Plumbing Contractor |
| <b>Secretary:</b> | Mrs Leatha Morejon<br>Accounts Receivable Officer, WAC                                                                                                        |

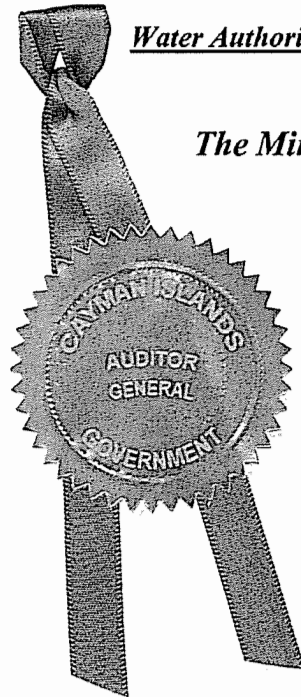




**THE WATER  
AUTHORITY**  
OF THE CAYMAN ISLANDS

FINANCIAL STATEMENTS  
2002

*The Ministry of Community Services, Women's Affairs, Youth and Sports*



# THE WATER AUTHORITY OF THE CAYMAN ISLANDS

## FINANCIAL STATEMENTS 2002

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Cayman Islands

## Water Authority of the Cayman Islands

### CERTIFICATE OF THE AUDITOR GENERAL

**To the Members of the Water Authority of the Cayman Islands  
And the Financial Secretary of the Cayman Islands**

I have audited the financial statements of the Water Authority of the Cayman Islands for the year ended 31 December 2002 as set out on pages 3 to 18 in accordance with the provisions of Section 17(1) of the Water Authority Law (1996 Revision), and Section 45(1) of the Public Finance and Audit Law (1997 Revision).

#### **Respective Responsibilities of Management and the Auditor General**

These financial statements are the responsibility of the Authority's management. My responsibility is to express an opinion on the financial statements based on my audit.

#### **Basis of Opinion**

My examination was made in accordance with International Standards on Auditing which require that I plan and perform my audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. I believe that my audit provides a reasonable basis for my opinion.

#### **Opinion**

In my opinion, these financial statements present fairly, in all material respects, the financial position of the Water Authority of the Cayman Islands as at 31 December 2002, and the results of its operations and its cash flows for the year then ended in accordance with International Accounting Standards.

In rendering my certificate on the financial statements of the Water Authority of the Cayman Islands, I have relied on the work carried out on my behalf by Ernst & Young who performed their work in accordance with International Standards on Auditing.

N K Esdaile  
Auditor General

18 June 2003

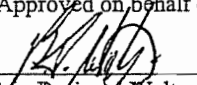
## Water Authority of the Cayman Islands

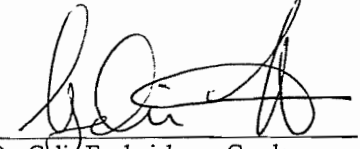
## Balance Sheets

As At 31<sup>st</sup> December 2002 and 2001

(Stated in Cayman Islands Dollars)

| CURRENT ASSETS                              | NOTES | 2002                | 2001                |
|---------------------------------------------|-------|---------------------|---------------------|
| Cash on Hand                                |       | 1,700               | 1,650               |
| Cash at Bank                                |       | 1,265,894           | 905,011             |
| <b>Total Cash and Cash Equivalents</b>      |       | <b>1,267,594</b>    | <b>906,661</b>      |
| Accounts Receivable                         | 3     | 1,859,009           | 1,606,286           |
| Inventory                                   | 4     | 378,850             | 425,037             |
| Prepaid Expenses                            |       | 57,731              | 41,337              |
| <b>Total Current Assets</b>                 |       | <b>3,563,184</b>    | <b>2,979,321</b>    |
| <b>CURRENT LIABILITIES</b>                  |       |                     |                     |
| Accounts Payable                            |       | 723,537             | 716,610             |
| Loans Payable                               |       | 231,309             | 229,845             |
| Contract Retention Payable                  |       | 98,460              | -                   |
| Interest Payable                            | 5     | 35,168              | 33,063              |
| Customer Deposits                           |       | 725,611             | 713,981             |
| Customer Deposits on Construction Contract  |       | 23,327              | 23,327              |
| Customer Project Loans                      | 6     | 36,944              | 37,436              |
| Current Maturities on Long Term Liabilities |       | 4,071,647           | 3,766,648           |
| <b>Total Current Liabilities</b>            |       | <b>5,946,003</b>    | <b>5,520,910</b>    |
| <b>NET CURRENT LIABILITIES</b>              |       | <b>(2,382,819)</b>  | <b>(2,541,589)</b>  |
| <b>FIXED ASSETS</b>                         |       |                     |                     |
| Land - Freehold                             |       | 3,139,599           | 3,139,599           |
| Buildings                                   |       | 2,317,395           | 1,918,111           |
| Water Supply System                         |       | 23,717,983          | 20,834,801          |
| Sewerage System                             |       | 7,407,420           | 7,848,250           |
| Other Assets                                |       | 1,153,191           | 1,274,607           |
| Construction in Progress                    |       | 2,124,080           | 1,272,667           |
| <b>Total Fixed Assets</b>                   | 7     | <b>39,859,668</b>   | <b>36,288,035</b>   |
| <b>TOTAL NET ASSETS</b>                     |       | <b>37,476,849</b>   | <b>33,746,446</b>   |
| <b>LONG TERM LIABILITIES</b>                | 8     | <b>(12,255,311)</b> | <b>(13,015,447)</b> |
| <b>NET ASSETS</b>                           |       | <b>25,221,538</b>   | <b>20,730,999</b>   |
| <b>EQUITY REPRESENTED BY:</b>               |       |                     |                     |
| Contributed Capital                         | 9     | 1,085,223           | 1,085,223           |
| Retained Earnings                           |       | 24,136,315          | 19,645,776          |
| <b>Total Equity</b>                         |       | <b>25,221,538</b>   | <b>20,730,999</b>   |

Approved on behalf of the Board on the 18<sup>th</sup> of June 2003
  
 Mr. Brainard Walter  
 Chairman

  
 Dr. Gelid Frederick van Genderen  
 Director

The accompanying notes form an integral part of these financial statements

Water Authority of the Cayman Islands  
Statement of Net Income and Retained EarningsFor the Year Ended 31<sup>st</sup> December 2002

(Stated in Cayman Islands Dollars)

| INCOME                                                     | Notes | 2002                 | 2001                 |
|------------------------------------------------------------|-------|----------------------|----------------------|
| Gross Operating Revenue                                    |       | 14,975,559           | 14,901,645           |
| Less: Operating Expenses                                   |       | (8,450,568)          | (9,363,896)          |
| <b>Gross Operating Surplus for the Year</b>                |       | <b>6,524,991</b>     | <b>5,537,749</b>     |
| Sundry Income                                              |       | 703,787              | 861,974              |
| <b>Operating Surplus for Year</b>                          |       | <b>7,228,778</b>     | <b>6,399,723</b>     |
| <b>OTHER EXPENSES</b>                                      |       |                      |                      |
| Administrative Expenses                                    |       | (2,736,702)          | (2,712,052)          |
| <b>Net Income for Year</b>                                 |       | <b>4,492,076</b>     | <b>3,687,671</b>     |
| Pension Adjustment                                         | 11    | 148,463              | -                    |
| <b>Net Income for the Year after Pension Adjustment</b>    |       | <b>4,640,539</b>     | <b>3,687,671</b>     |
| <b>Retained Earnings at the Beginning of the Year</b>      |       | <b>19,645,776</b>    | <b>16,108,105</b>    |
| <b>Retained Earnings Before Contribution to Government</b> |       | <b>24,286,315</b>    | <b>19,795,776</b>    |
| Contribution to Government                                 | 10    | (150,000)            | (150,000)            |
| <b>Retained Earnings at End of Year</b>                    |       | <b>\$ 24,136,315</b> | <b>\$ 19,645,776</b> |

The accompanying notes form an integral part of these financial statements



**Water Authority of the Cayman Islands**  
**Statement of Income**  
For the Year Ended 31<sup>st</sup> December 2002  
(Stated in Cayman Islands Dollars)

|                                   | <u>2002</u>          | <u>2001</u>       |
|-----------------------------------|----------------------|-------------------|
| <b>OPERATING REVENUE</b>          |                      |                   |
| Water Sales                       | 12,020,056           | 11,997,246        |
| Sewerage Fees                     | 2,660,179            | 2,501,985         |
| Septage Disposal                  | 62,404               | 52,019            |
| Agency Work                       | 10,586               | 26,451            |
| Connection and Miscellaneous Fees | 222,334              | 323,944           |
| <b>Total Operating Revenue</b>    | <u>14,975,559</u>    | <u>14,901,645</u> |
| <b>SUNDRY INCOME</b>              |                      |                   |
| Royalties                         | 647,436              | 608,633           |
| Statutory Licencing Fees          | 15,324               | 56,676            |
| Interest Earned                   | 8,514                | 25,979            |
| Other                             | 32,513               | 170,686           |
| <b>Total Sundry Income</b>        | <u>703,787</u>       | <u>861,974</u>    |
| <b>TOTAL REVENUE</b>              | <u>\$ 15,679,346</u> | <u>15,763,619</u> |

The accompanying notes form an integral part of these financial statements

**Water Authority of the Cayman Islands**  
**Statement of Expenses**  
For the Year Ended 31<sup>st</sup> December 2002  
(Stated in Cayman Islands Dollars)

|                                                    | <u>NOTES</u> | <u>2002</u>          | <u>2001</u>          |
|----------------------------------------------------|--------------|----------------------|----------------------|
| <b>OPERATING EXPENSES</b>                          |              |                      |                      |
| Water Purchases                                    |              | 3,422,901            | 4,183,431            |
| Depreciation Expense                               | 7            | 1,379,153            | 1,355,996            |
| Salaries                                           |              | 1,235,357            | 1,144,037            |
| Wages                                              |              | 1,026,419            | 908,301              |
| Loan Interest                                      |              | 457,441              | 824,677              |
| Repairs and Maintenance                            |              | 419,260              | 379,873              |
| Electricity                                        |              | 258,653              | 299,440              |
| Supplies                                           |              | 204,974              | 213,380              |
| Miscellaneous                                      |              | 42,918               | 41,398               |
| Land Lease Expense                                 | 12           | 12,335               | 13,363               |
| Obsolete Inventory Expense                         |              | (8,843)              | -                    |
| <b>Total Operating Expenses</b>                    |              | <u>8,450,568</u>     | <u>9,363,896</u>     |
| <b>ADMINISTRATIVE EXPENSES</b>                     |              |                      |                      |
| Salaries                                           |              | 1,066,011            | 922,635              |
| Staff Training and Benefits                        |              | 717,151              | 682,419              |
| Telephone and Utilities                            |              | 162,811              | 154,625              |
| Insurance                                          |              | 152,640              | 119,290              |
| Miscellaneous                                      |              | 147,710              | 217,125              |
| Depreciation Expense                               | 7            | 142,720              | 144,858              |
| Office and Lab Supplies                            |              | 119,546              | 96,148               |
| Loan Interest                                      |              | 52,972               | 77,399               |
| Licenses and Dues                                  |              | 45,271               | 75,292               |
| Repairs and Maintenance                            |              | 38,770               | 29,038               |
| Legal Fees                                         |              | 10,854               | 16,449               |
| Office Rental                                      |              | 3,600                | 3,600                |
| Bad Debt Expense                                   |              | 47,393               | 159,374              |
| Audit Fees                                         |              | 29,253               | 13,800               |
| <b>Total Administrative Expenses</b>               |              | <u>2,736,702</u>     | <u>2,712,052</u>     |
| <b>TOTAL OPERATING AND ADMINISTRATIVE EXPENSES</b> |              | <u>\$ 11,187,270</u> | <u>\$ 12,075,948</u> |

The accompanying notes form an integral part of these financial statements

**Water Authority of the Cayman Islands**  
**Statement of Cash Flows**  
For the Year Ended 31<sup>st</sup> December 2002  
(Stated in Cayman Islands Dollars)

| <b>CASH FLOW FROM OPERATING ACTIVITIES</b>                   | <b>NOTES</b> | <b>2002</b>         | <b>2001</b>        |
|--------------------------------------------------------------|--------------|---------------------|--------------------|
| Net Income for Year                                          |              | 4,492,076           | 3,687,671          |
| Adjustments to Reconcile Net Income to Net Cash Provided by: |              |                     |                    |
| Operating Activities                                         |              |                     |                    |
| Depreciation                                                 |              | 1,521,873           | 1,500,854          |
| Gain on Sale of Fixed Assets                                 |              | -                   | (5,726)            |
| Interest Earned                                              |              | (8,514)             | (25,979)           |
| Interest Expense                                             |              | 510,413             | 902,076            |
|                                                              |              | <u>6,515,848</u>    | <u>6,058,896</u>   |
| Net Change in Working Capital                                |              |                     |                    |
| Interest Paid                                                |              | (508,308)           | (901,925)          |
| Accounts Receivable                                          |              | (252,723)           | 63,281             |
| Inventory                                                    |              | 46,187              | (2,251)            |
| Prepaid Expense                                              |              | (16,394)            | (7,241)            |
| Accounts Payable                                             |              | 6,927               | 9,037              |
| Contract Retention Payable                                   |              | 98,460              | (2,859)            |
| Customer Deposits                                            |              | 11,630              | 18,257             |
| Customer Deposits on Construction Contract                   |              | -                   | (2,582)            |
| Customer Project Loans                                       |              | (492)               | (830)              |
| Net Cash Provided by Operating Activities                    |              | <u>5,901,135</u>    | <u>5,231,783</u>   |
| <b>CASH FLOW FROM INVESTING ACTIVITIES</b>                   |              |                     |                    |
| Interest Received                                            |              | 8,514               | 25,979             |
| Cost of Fixed Assets Purchased                               |              | (1,630,086)         | (1,006,600)        |
| Proceeds from Sale of Fixed Assets                           |              | -                   | 5,726              |
| Construction in Progress                                     |              | (851,413)           | (623,741)          |
| Net Cash Used by Investing Activities                        |              | <u>(2,472,985)</u>  | <u>(1,598,636)</u> |
| <b>CASH FLOWS FROM FINANCING ACTIVITIES</b>                  |              |                     |                    |
| Proceeds of Long Term debt                                   |              | 753,270             | -                  |
| Repayment of Long Term Debt                                  |              | (3,671,951)         | (3,311,295)        |
| Loans Payable                                                |              | 1,464               | 229,845            |
| Overdraft Facilities                                         |              | -                   | (244,542)          |
| Contribution to Government                                   |              | (150,000)           | (150,000)          |
| Net Cash Used by Financing Activities                        |              | <u>(3,067,217)</u>  | <u>(3,475,992)</u> |
| Net Increase in Cash and Cash Equivalents During the Year    |              | 360,933             | 157,155            |
| Cash and Cash Equivalents at the Beginning of the Year       |              | 906,661             | 749,506            |
| Cash and Cash Equivalents at End of Year                     |              | <u>\$ 1,267,594</u> | <u>\$ 906,661</u>  |

The accompanying notes form an integral part of these financial statements

**Water Authority of the Cayman Islands**  
**Notes to the Financial Statements**  
For the Year Ended 31<sup>st</sup> December 2002  
(Stated in Cayman Island Dollars)

**1. Establishment and Principal Activity**

The Water Authority of the Cayman Islands ("the Water Authority") is a statutory body established on 1st January 1990 under the Water Authority Law (Law 18 of 1982), as amended.

The Water Authority is principally engaged in the management of water supply and sanitation affairs of the Cayman Islands including the provision of public water supplies, sewerage systems and the management, development and protection of water resources.

As at 31 December 2002, the Water Authority had 93 employees (2001: 91 employees). The Water Authority is located at 13 G Red Gate Road, P.O. Box 1104 George Town, Grand Cayman, Cayman Islands.

**2. Significant Accounting Policies**

These financial statements have been prepared in accordance with International Accounting Standards (IAS) issued by the International Accounting Standards Committee (IASC), and interpretations issued by the Standing Interpretations Committee of the IASC. The significant accounting policies adopted by the Water Authority in these financial statements are as follows:

*(a) Basis of preparation*

The financial statements of the Water Authority are presented in Cayman Island dollars and are prepared on the accrual basis under the historical cost convention.

*(b) Fixed Assets*

(i) Property plant and equipment are stated at acquisition cost less accumulated depreciation. Construction work in progress is stated at cost, which includes all expenditures related directly to specific projects and an allocation of fixed and variable overheads incurred in the contract activities. The Water Authority does not capitalize interest as part of the construction cost of fixed assets.

(ii) Depreciation is charged to the income statement on a straight-line basis over the estimated useful lives of items of property, plant and equipment, and other assets that are accounted for separately.

Freehold Land is not depreciated. The estimated useful lives of the other fixed assets are as follows:

|                            |               |
|----------------------------|---------------|
| Buildings                  | 50 Years      |
| Water and Sewerage Systems | 15 - 50 Years |
| Other Assets               | 5 - 10 Years  |

*(c) Foreign currency translation*

Assets and liabilities denominated in currencies other than Cayman Islands Dollars are translated at exchange rates in effect at the balance sheet date. Revenue and expense transactions denominated in currencies other than Cayman Islands Dollars are translated at exchange rates ruling at the date of those transactions. Gains and losses arising on translation are included in the Statement of Income and Expenses.

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*(d) Allowance for bad debts*

Management of the Authority establishes an allowance for bad debts based on estimates of accounts receivable balances that are uncollectible. The allowance is expensed and an equal amount is set-up as a provision for bad debts, which is netted off against gross accounts receivable balances.

**2. Significant Accounting Policies (continued)**

Management determines the extent of the allowance based on its knowledge of individual debtors' past performance.

*(e) Inventory and Allowance for Obsolete Inventory*

Inventory, which consist of consumable spares is accounted for on the first-in, first-out basis, and is stated at the lower of cost and net realizable value. Management of the Authority establishes an allowance for obsolescence of inventory items when it determines that those items are no longer usable in the Authority's operations. The allowance is expensed and an equal amount is set-up as a provision for obsolete inventory, which is netted-off against gross inventory balances. The allowance is equal to the book value of inventory that management considers no longer usable.

*(f) Interest Expense*

All interest and other costs incurred in connection with borrowings are expensed as incurred as part of Loan Interest. The interest expense of loan payments is recognised in the income statement using the effective interest rate and or straight line method as appropriate.

*(g) Cash & cash equivalents*

For the purpose of the Statement of Cash Flows, cash and cash equivalents are considered as cash held on demand and fixed deposits with an original maturity of three months or less.

*(h) Revenue recognition*

The Authority bills its customers monthly for water consumed, sewerage and other services. Revenue derived from such sources is taken to income on a bill rendered basis. As in previous years no account has been taken of unread water consumption, sewerage and other services at the end of the financial year.

*(i) Employees benefits*

(i) The Authority has an actuarial valuation conducted every three years, and any gains or losses arising are adjusted against the Income Statement.

(ii) Members enrolled in the Public Service Pensions Plan prior to 01 January 2000 are governed by Section 28 to 45 (Defined Benefits) of the Public Service Pensions Law, 1999. Those members enrolled in the Plan after 01 January 2000 are governed by Section 46 to 66 (Defined Contributions) of the Public Service Pensions Law, 1999. A board decision was made in July 1998 that all new employees of the Authority at that date would be enrolled in a local approved pension plan (British Caymanian Pension).

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*(j) Financial Instruments**(i) Classification*

A financial asset is classified as any asset that is cash, a contractual right to receive cash or another financial asset, exchange financial instruments under conditions that are potentially favourable or an equity instrument of another enterprise. Financial assets comprise of cash and cash equivalents and accounts receivables.

A financial liability is any liability that is a contractual obligation to deliver cash or another financial instrument or to exchange financial instruments with another enterprise under conditions that are potentially unfavourable. Financial liabilities comprise long and short term debt.

*(ii) Recognition*

The Authority recognises financial assets and financial liabilities on the date it becomes party to the contractual provisions of the instrument. From this date, any gains and losses arising from changes in fair value of the assets or liabilities are recognised in the statements of income.

*(iii) Derecognition*

A financial asset is derecognised when the Water Authority realises the rights to the benefits specified in the contract or loses control over any right that comprise that asset. A financial liability is derecognised when it is extinguished, that is when the obligation is discharged, cancelled, or expires.

*(iv) Measurement*

Financial instruments are measured initially at cost which is the fair value of the consideration given or received. Subsequent to initial recognition all financial assets are measured at their estimated fair value.

Financial liabilities are subsequently measured at amortised cost, being the amount at which the liability was initially recognised less any principal repayments plus any amortisation (accrued interest) of the difference between that initial amount and the maturity amount.

**3. Accounts Receivable**

|                         | <u>2002</u>        | <u>2001</u>        |
|-------------------------|--------------------|--------------------|
| Trade Receivables       | 2,119,363          | 1,813,085          |
| Non Trade Receivables   | 100,667            | 106,929            |
| Provision for Bad Debts | (361,021)          | (313,728)          |
|                         | <u>\$1,859,009</u> | <u>\$1,606,286</u> |

**4. Inventories**

|                                     | <u>2002</u>      | <u>2001</u>      |
|-------------------------------------|------------------|------------------|
| Water Supply and Sewerage Materials | 387,431          | 436,170          |
| Office Supplies                     | -                | 6,467            |
| Provision for Obsolete Inventory    | (8,581)          | (17,600)         |
|                                     | <u>\$378,850</u> | <u>\$425,037</u> |



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**5. Interest Payable**

|                       | <u>2002</u>     | <u>2001</u>     |
|-----------------------|-----------------|-----------------|
| On Customer Deposits  | 32,912          | 32,912          |
| Loan Interest Payable | 2,256           | 151             |
|                       | <u>\$35,168</u> | <u>\$33,063</u> |

Section 9 of the Water Authority Regulations, 1988 specified that interest be calculated on customers' deposits at the rate of 5% per annum from the date of payment of the deposits, and the interest earned shall be added to the customers' deposits. This section of the Regulations was revoked on the 8<sup>th</sup> of February 1994. Interest payable on customer deposits has been calculated only on deposits which were taken before the 8<sup>th</sup> of February 1994 and which the Authority held on the date of these financial statements. Interest has been accrued up until the date on which the Regulation was revoked.

**6. Customer Project Loans**

Customer project loans represent balances outstanding at the year-end of \$36,944 (2001: \$37,436) in respect of funds collected from private individuals to carry out capital works in the South Sound area of George Town in 1989. These funds are interest free and are repayable by way of a 10% rebate on the individual's annual water consumption charges.

**7. Fixed Assets**

| Cost                            | Freehold<br>Land | Buildings    | Water Supply  | Sewerage     | Other Assets | Construction<br>In Progress | Total        |
|---------------------------------|------------------|--------------|---------------|--------------|--------------|-----------------------------|--------------|
| At 31 December 2001             | 3,139,599        | 2,045,153    | 26,020,230    | 11,411,779   | 2,991,713    | 1,272,667                   | 46,881,141   |
| Additions                       | -                | -            | 2,649,558     | -            | 234,570      | 2,237,668                   | 5,121,796    |
| Disposals                       | -                | -            | -             | -            | -            | -                           | -            |
| Transfers between fixed assets  | -                | 440,187      | 946,068       | -            | -            | (1,386,255)                 | -            |
| At 31 December 2002             | 3,139,599        | 2,485,340    | 29,615,856    | 11,411,779   | 3,226,283    | 2,124,080                   | 52,002,937   |
| <b>Accumulated Depreciation</b> |                  |              |               |              |              |                             |              |
| At 31 December 2001             | -                | 127,042      | 5,185,429     | 3,563,529    | 1,717,106    | -                           | 10,593,106   |
| Charge for Year                 | -                | 40,903       | 712,444       | 440,830      | 327,696      | -                           | 1,521,873    |
| Disposals                       | -                | -            | -             | -            | -            | -                           | -            |
| Capitalized during construction | -                | -            | -             | -            | 28,290       | -                           | 28,290       |
| At 31 December 2002             | -                | 167,945      | 5,897,873     | 4,004,359    | 2,073,092    | -                           | 12,143,269   |
| <b>Net Book Value</b>           |                  |              |               |              |              |                             |              |
| At 31 December 2001             | \$3,139,599      | \$ 1,918,111 | \$ 20,834,801 | \$ 7,848,250 | \$ 1,274,607 | \$ 1,272,667                | \$36,288,035 |
| At 31 December 2002             | \$3,139,599      | \$ 2,317,395 | \$ 23,717,983 | \$ 7,407,420 | \$ 1,153,191 | \$ 2,124,080                | \$39,859,668 |

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**a) Sewerage Treatment Works Upgrade**

In August 1998 the Authority invited bids for the provision of general, mechanical and electrical engineering services in connection with a planned upgrade to the West Bay Beach Sewerage Treatment Works. The consultant engineers originally estimated the cost of the upgrade at CI\$ 10.6 million, however after reviewing tenders submitted, the estimate was increased to CI \$ 14.3 million. The Authority successfully negotiated with FirstCaribbean International Bank (Cayman) Limited (formerly known as CIBC) for CI\$ 3.7 million in additional financing. A part of the existing works would be decommissioned in the fourth quarter of 2003. Government gave approval for the Authority to enter into a US\$ 12.8 million loan agreement with FirstCaribbean in September 2000 and an additional US\$ 4.4 million in September 2002 to finance the project. The original loan agreement was signed with FirstCaribbean in December 2000, with the amendment signed in June 2002. Prior to getting the loan, the Authority had financed the cost of the wastewater treatment works project (\$929,100) from revenue. See Note 8(a) for the terms of the loan.

**b) Accelerated Depreciation**

In 2000 there was an assessment of the extent of accelerated depreciation required in future years, to write-down part of the capitalized cost of the existing sewerage system by the prospective 2003 decommissioning date. The total amount of accelerated depreciation to be recognized over the three and half years is to be \$844,709. Accelerated depreciation recognised in 2002 was \$241,345 (2001: \$241,345) and the amount to be recognised for 2003 is \$120,673.

The water supply system and sewerage system includes the cost of mechanical and electrical equipment, and machinery. Other assets include the costs of tools and equipment, office furniture and equipment, and vehicles.

**c) Construction in Progress**

Construction-in-Progress principally relates to expenses incurred in connection with the following:

|                                                                                                                                                                                                                  |                     |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|
| 1. Engineering services, subsoil investigations and site preparation for subsoil investigations relating to the 2.5 Millions of US Gallons per day (MGD) upgrade of the West Bay Beach Sewerage Treatment Works. | 929,100             |
| 2. Contractor services relating to the 2.5 MGD upgrade of the West Bay Sewerage Treatment Works. See also Note 8                                                                                                 | 837,216             |
| 3. East End water supply extension                                                                                                                                                                               | 107,611             |
| 4. Reconstruction of the Lower Valley Site                                                                                                                                                                       | 89,329              |
| 5. Cayman Brac Plant Upgrade                                                                                                                                                                                     | 83,127              |
| 6. Reconstruction of Spotts water supply                                                                                                                                                                         | 62,152              |
| 7. Reconstruction of the Crewe Road By-Pass                                                                                                                                                                      | 10,522              |
| 8. Site investigation for possible Eastern Site                                                                                                                                                                  | 5,023               |
|                                                                                                                                                                                                                  | <u>\$ 2,124,080</u> |

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## 8. Long Term Liabilities

| LONG TERM LIABILITIES        |                                                     | 2002      |           |           |           |                      |                      |
|------------------------------|-----------------------------------------------------|-----------|-----------|-----------|-----------|----------------------|----------------------|
| (Interest Rate)              |                                                     | Current   | 1-2 yrs   | 2-5 yrs   | 5+ yrs    | 2002                 | 2001                 |
| a)                           | First Caribbean International Bank (Cayman) Limited |           |           |           |           |                      |                      |
| (i)                          | Water Supply and Sewerage (4.0%)                    | 2,590,590 | 2,709,741 | -         | -         | 5,300,331            | 7,783,423            |
| (ii)                         | Administration Building Loan (3.6%)                 | 105,660   | 211,321   | 633,960   | 215,298   | 1,166,239            | 1,262,392            |
| (iii)                        | Waste Water Treatment Works Loan                    |           |           |           |           |                      |                      |
|                              | LIBOR note # 105807 (3.4%)                          | -         | 500,000   | -         | -         | 500,000              | 500,000              |
|                              | LIBOR note # 107460 (2.4%)                          | -         | -         | -         | -         | 753,270              | -                    |
| b)                           | Caribbean Development Bank Water Supply (6.0%)      | 154,167   | 308,333   | 228,954   | -         | 691,454              | 846,391              |
| c)                           | Cayman Islands Government                           |           |           |           |           |                      |                      |
| (i)                          | Grand Cayman (0%)                                   | 300,894   | 601,788   | 1,805,364 | 1,021,151 | 3,729,197            | 3,922,091            |
| (ii)                         | Cayman Brac (8.0%)                                  | 70,200    | 140,400   | 210,600   | 70,200    | 491,400              | 561,600              |
| (iii)                        | Medical Expense (0%)                                | 91,632    | -         | -         | -         | 91,632               | 91,632               |
| d)                           | Past Service Pension Liability                      | -         | -         | -         | -         | -                    | 148,463              |
| e)                           | Capital Contribution Loan (0%)                      | 6,400     | 6,400     | -         | -         | 12,800               | 19,200               |
| f)                           | Ocean Conversion (Cayman) Ltd.                      |           |           |           |           |                      |                      |
| (i)                          | Red Gate (5.0%)                                     | 378,960   | 744,894   | 41,289    | -         | 1,165,143            | 1,401,336            |
| (ii)                         | North Sound (0%)                                    | 373,144   | 630,490   | 1,117,476 | 304,382   | 2,425,492            | -                    |
| g)                           | Property Loan                                       | -         | -         | -         | -         | -                    | 245,567              |
| Total Long Term Liabilities: |                                                     |           |           |           |           | 16,326,958           | 16,782,095           |
| Less Current Maturities:     |                                                     |           |           |           |           | (4,071,647)          | (3,766,648)          |
|                              |                                                     |           |           |           |           | <u>\$ 12,255,311</u> | <u>\$ 13,015,447</u> |

- a) (i) The FirstCaribbean loan represents a financing package of US\$ 22,350,000, which includes a US\$ 500,000 overdraft facility. The total package refinanced previous Barclays Bank and Caribbean Development Bank loans, and provided funding for the Bodden Town Water Supply project and Lower Valley Reservoir and Pumping Station project. The loan is provided at an interest rate of 1% over London Interbank Offered Rate (LIBOR) and is repayable, on a monthly basis, over a ten year period, which commenced on the 1<sup>st</sup> of March 1995. Monthly payments are due as follows:
- |                      |              |
|----------------------|--------------|
| 1995 – November 1997 | US\$ 200,000 |
| November 1997 – 2004 | US\$ 275,000 |

The FirstCaribbean loan is held in the name of the Water Authority and is secured by a guarantee by the Cayman Islands Government.

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- (ii) On 17<sup>th</sup> August 1998 FirstCaribbean approved a credit facility of CI\$ 1,600,000 for the new Water Authority Administration Building on 13G Red Gate Road. The loan is provided at an interest rate of 1% over London Interbank Offered Rate (LIBOR) repayable on a monthly basis of US\$ 14,875 over a fifteen-year period that commenced on 14<sup>th</sup> October 1999. FirstCaribbean presently holds a Registered First Charge over the property.
- (iii) In September 2000, Government gave approval for the Authority to enter into the US\$ 12.8 million loan agreement with FirstCaribbean for the financing of the Grand Cayman Wastewater Treatment Works Project. The loan agreement was approved by FirstCaribbean under the terms and conditions of the facility letter dated 15<sup>th</sup> September 1999 and was signed on 29<sup>th</sup> December 2000. In September 2002 this loan agreement was increased by US\$ 4.4 million to a total of US\$ 17.2 million. In addition to the terms and conditions defined in the facility letter dated 15<sup>th</sup> September 1999, FirstCaribbean required a written confirmation from the Cayman Islands Government that they will not guarantee any future obligations of the Water Authority without their written consent.

The loan is provided at an interest rate of 1% over London Interbank Offered Rate (LIBOR) and has a Capital Repayment Holiday Period (CRHP) that represents the period beginning on the date of the drawdown of the first advance and expiring on either the date of completion of construction of the Grand Cayman Wastewater Treatment Works or the date 24 months after the date of the drawdown of the first advance whichever is earlier. Loan repayments commence in January 2004 and on the first business day of each proceeding 36 months at an aggregate monthly amount of US\$ 110,000 including principal and interest, thereafter, on the first business day of each of the immediately succeeding 71 months, an aggregate of US\$ 250,000 per month including principal and interest. On the first business day of the immediately succeeding month (being December 2012), an amount equal to the balance of the Loan then outstanding together with all interest accrued thereon and all other sums due by the Borrower to the Bank.

- b) The Caribbean Development Bank (CDB) water supply loan is to be repaid over 15 years at variable interest rates of 5.5% to 7.5%. Repayment commenced on the water supply loan in quarterly instalments in March 1992. The principal repayments currently being made on this loan are approximately US\$ 46,250 each quarter, plus interest.

The CDB loan is in the name of the Cayman Islands Government and is on lent to the Water Authority. The Water Authority is responsible for all interest and principal repayments on this loan.

- c) (i) The Cayman Islands Government loaned the Authority CI\$ 4,822,349 for the development of the facilities in Grand Cayman. The loan is interest free and is being repaid in quarterly instalments of CI\$ 48,223 over a period of twenty-five years which commenced on the 1<sup>st</sup> of April 1995. This loan was increased in February 1997 by CI\$ 450,000 in exchange for a 1.3-acre parcel of land at Red Gate that was sold to the Authority by the Cayman Islands Government for the purpose of constructing an Administration Building. The increased portion of the loan was formalised on December 27<sup>th</sup> 2001. It is interest free and is being repaid by an initial instalment of CI\$ 90,000, which is still payable as at 31 December 2002 and annual instalments of CI\$ 18,000 over a period of 20 years.
- (ii) The Cayman Islands Government loaned the Authority CI\$ 1,053,000 for the development of the facilities in Cayman Brac. The loan attracts interest at a fixed rate of 8% per annum and is repayable in quarterly instalments of CI\$ 17,550, over a period of 15 years which commenced on the 1<sup>st</sup> of April 1995.
- (iii) The loan payable to the Cayman Islands Government for medical expenses is in respect of injuries incurred by a cyclist in 1991 for which the Water Authority has assumed liability. The loan is interest free and repayable in monthly instalments of CI\$ 2,500 each. No repayments were made from 1995 through 2002.

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- d) Refer to note 11 for explanation of the Public Service Pasts Fund Past Service Pension Liability.
- e) The capital contribution loan represents the cost of certain capital work carried out in 1991 and funded by a customer to facilitate the Water Authority to construct a pipeline through a third party's property to provide the water connection to the customer concerned. The cost of this work was CI\$ 64,000. In 1995 management agreed to repay the loan in ten (10) annual instalments of CI\$ 6,400 each. This loan is interest free and the first instalment was made on the 1<sup>st</sup> of June 1995.
- f) The Water Authority contracted with Ocean Conversion (Cayman) Ltd. ("OCL") on the 17<sup>th</sup> of June 1997 to provide and operate a reverse osmosis seawater desalination plant at Lower Valley, Grand Cayman under a lease purchase and operating agreement. The plant was completed in March 1998 and is financed at a fixed interest rate of 5% per annum. Under the terms of the agreement, the Authority commenced payments to OCL in April 1998, making monthly payments of US\$ 17,325 and CI\$ 6,998 for a duration of seven years.

In 1999 the Lower Valley Reverse Osmosis Plant was expanded to a production capacity of 3,000 cubic meters per day under contract with OCL. The cost of the expansion to the Water Authority was CI\$ 973,833, plus additional monthly operating fees. The expansion of the plant was completed in March 1999 and is financed at a fixed interest rate of 5% per annum. Under the terms of the agreement, the Authority commenced payments to OCL in March 1999, making monthly payments of US\$ 33,028 and CI\$ 7,676 for a duration of seven years.

On 26<sup>th</sup> October 2001 the Authority signed a contract with OCL to expand the Red Gate Reverse Osmosis Plant to a production capacity of 3,000 cubic meters per day. The cost of the expansion to the Authority was CI\$ 2,612,006, plus additional monthly operating fees. There was no movement in cash in respect of this transaction and consequently the Statement of Cash Flows does not reflect the increase in Plant and Loans, which arise there from. The plant expansion was completed in November of 2002. Under the terms of the agreement, the Authority commenced payments to OCL in November of 2002, making monthly payments of US\$ 21,750 and CI\$ 12,917 for a duration of seven years.

- g) In October 1999 the Authority purchased 7.5 acres of land adjacent to the Red Gate Road Water Works for future expansion of the public water supply system in Grand Cayman at a cost of CI\$ 1,750,000. CI\$ 850,000 was paid by cash and a vendor financing arrangement was made for the remaining CI\$ 900,000 repayable in monthly instalments of CI\$ 28,203 over a period of three years which commenced on the 1<sup>st</sup> of October 1999, at a fixed annual interest rate of 8%.

**9. Contributed Capital**

|                              | <u>2002</u>        | <u>2001</u>        |
|------------------------------|--------------------|--------------------|
| Balance at Beginning of year | 1,085,223          | 1,085,223          |
| Add: Received During Year    | 0                  | 0                  |
| Balance at End of Year       | <u>\$1,085,223</u> | <u>\$1,085,223</u> |

Contributed capital represents funds received from private individuals to fund capital work that was completed by the Water Authority. The relevant costs have been capitalised as water and sewerage works (see Note 7).

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**10. Related Party Transactions**

The Cayman Islands Government appoints the Chairman and Members to the Water Authority Board of Directors. The following transactions occurred during the year between the Water Authority and Cayman Islands Government.

1. The Authority made loan repayments to Government during the year of CI\$ 418,031 (2001: CI\$ 417,260)
2. The Authority recognized contributions payable to Government relating to 2002 in the amount of CI\$ 150,000 (2001: CI\$ 150,000).

During the year, the Water Authority provided at no charge to the Cayman Islands Government the availability and use of water for fire fighting, free sewerage service to a number of indigent persons in the Watler's Road area, supervision of water resources, administration of Plumbers Examination Board, consultative services for development control, and water at a reduced Public Authority rate. The Authority also engages the services of other government departments of the Cayman Islands Government. Such services are provided at current prevailing market prices on an arm's length basis.

As detailed in Note 11 the Authority and its eligible employees paid contributions to the Public Service Pensions Fund during the year.

**11. Pensions**

*a) Public Service Pensions Plan*

The pension contributions of eligible Caymanian employees of the Water Authority are paid directly to the Public Service Pensions Fund (the "Fund"). The Fund is administered by the Public Service Pensions Board (the "Pensions Board") and is operated as a multi-employer non-contributory Fund, whereby the employer pays both the employer and employee contributions.

Prior to 1 January 2000 the scheme underlying the Fund was a defined benefit scheme. With effect from 1 January 2000 the Fund had both a defined benefit and a defined contribution element. Participants joining after that date became members of the defined contribution element.

In 1999, an actuarial assessment, using the projected unit credit method of measuring costs and obligations, determined that the Authority's un-funded past service liability for pensions as at 1 January 1997 was \$677,000. A subsequent actuarial valuation as at 1 January 1999, completed in September 2000, re-assessed the un-funded past service liability to be \$179,118, which further assessed the normal annual contribution to be 12.26% of pensionable emoluments, plus a further 1.57% of pensionable emoluments in order to amortize the past service liability over 20 years.

On 4 July 2001, the Authority received a letter from the Pensions Board stating that the re-assessment in September was incorrect. The correct un-funded past service liability amount is \$266,370, which the Board further assessed the normal annual contribution to be 13.00% of pensionable emoluments, plus a further 2.34% of pensionable emoluments in order to amortize the past service liability over 20 years. The Authority and its eligible employees also make contributions in respect of current pensions benefits, at rates prescribed by the Pensions Board. During the current year the Authority and its eligible employees contributed 6.26% and 6% respectively of employees' monthly salary.

A further actuarial assessment effective 1 January 2002 has been completed, but has not been approved by Executive Council as of the date of this report. An updated actuarial assessment for the whole of government is scheduled for 30 June 2003.



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Subsequent Event

In April 2003, the Pensions Fund management advised that it was agreed that the unfunded past service liability would remain a central liability of the entire public sector. Accordingly, there is now no requirement for the Authority to recognise any unfunded past service liability in its financial statements. An adjustment of \$148,463 has been made to the financial statements in 2002 to recognise the past service liability now being the responsibility of Government and not the Water Authority.

Pensions management also confirmed that the contribution rate would be 13.97% effective 1 January 2002 subject to approval of the January 2002 actuarial assessment by Executive Council. The unpaid additional 1.71% retirement contribution expense for 2002 is estimated to be \$20,424. This has not been recognised as an expense in these financial statements and may be adjusted in a subsequent period.

b) *Other Pension Plan*

In accordance with the National Pensions Law of June 1998, all new employees who are not participants in the Public Service Pensions Fund are enrolled in an approved local pension plan (British Caymanian Pension). During 2002 the Authority and its employees paid 6% and 4% respectively of salary contributions.

The total amount recognised as a pension expense in 2002, inclusive of both the Public Service Pensions Fund and British Caymanian, was C\$ 235,750 (2001: C\$ 254,382).

12. **Leases**

The Authority leases a parcel of land in Cayman Brac under an operating lease. Lease payments are currently \$1,027 per month and are subject to a review in January 2004 to reflect open market rental values. The lease was signed in January 2000 and runs for a period of thirty years.

13. **Commitments**

Commitments at December 31, 2002 are as follows:

| Authorised and Contracted                | Cost<br>Incurred to<br>31/12/02 | Estimated<br>Cost to<br>Completion | Total Cost   |
|------------------------------------------|---------------------------------|------------------------------------|--------------|
| Island Builders Co. Ltd                  | 64,125                          | 135,875                            | 200,000      |
| Grand Cayman Waste Water Treatment Plant | 836,966                         | 13,538,794                         | 14,375,760   |
|                                          | \$901,091                       | \$13,674,669                       | \$14,575,760 |

In August 2002 pre-qualified local building contractors were invited to bid on the Tender documents for the construction of a 780 sq. ft Workshop Building and a 2,125 sq. ft Pipe Storage Building at the Lower Valley Water Production and Storage Facility. The contract was awarded to the lowest bidder, Island Builders, in early October 2002. The project was completed in early May 2003.

In November 2002 Water Authority – Cayman started construction on the Sewerage Treatment Plant, see note 8 a) iii).

Water Authority of the Cayman Islands  
Notes to the Financial Statements  
For the Year Ended 31<sup>st</sup> December 2002  
(Stated in Cayman Island Dollars)

14. **Financial Instruments**

Credit risk Credit risk is the risk that one party to a transaction will fail to discharge an obligation and cause the other party to incur a financial loss. Concentrations of credit risk relate to groups of customers or counter-parties that have similar economic or industry characteristics that cause their ability to meet contractual obligations to be similarly affected by changes in economic or other conditions

Financial assets that potentially subject the Authority to credit risk consist principally of, trade receivables, and other receivables. Credit risk with respect to these receivables is limited because the Authority has a policy in place that is monitored by management on a consistent basis to ensure the timely collection of receivables. Accordingly, the Authority has no significant concentrations of credit risk.

Interest rate price risk The Authority has loans with Government and a counterpart with fixed interest rates ranging from 5% to 8%. Details of rates and maturities are presented in note 8.

Interest rate cash flow risk The Authority also has loans with a local financial institution with a floating interest rate that coincides with the market rate.

Fair values The carrying amount of cash deposits, accounts receivable, other receivables and accounts payables approximate their fair value due to their short-term maturities. Fair values are made at specific points in time, based on market conditions and information about the financial instrument. These estimates are subjective in nature and involve uncertainties and matters of significant judgement and therefore cannot be determined with precision. Changes in assumptions, economic conditions and other factors could cause significant changes in fair value estimates.