THE WATER AUTHORITY OF THE CAYMAN ISLANDS

ANNUAL REPORT 1999–2000

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OF THE CAYMAN ISLANDS

ANNUAL REPORT
1999

The Water Authority of the Cayman Islands

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."

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Chairman's Report

The Year 1999

1999 was another prosperous year for the Authority and I am pleased to have been able to continue my role in its development from a new perspective through my appointment in January 2001 as Chairman of the Board.

This year, the last of the 1900's was a very challenging and demanding year for the Authority. One of the major issues the Authority dealt with was the upgrade of its accounting and utility billing systems to Y2K compliant systems. I am pleased to note that this very complicated process was carried out with minimum inconvenience to the Authority's customers and the changeover at the end of the year was successful.

The Water Authority continued to meet the challenges of the fast pace of growth and development of these islands and the resulting demand for new water and wastewater infrastructure. This year saw the continued expansion of the public water supply system from Frank Sound up to the Blow Holes in East End. With the continued high growth of 16% this year in demand for public water supply, the Authority was required to expand the production capacity of the Lower Valley Reverse Osmosis Plant to 3,000 cubic metres per day. This year the Authority continued its investment in current technology to achieve greater efficiencies by developing and implementing a SCADA system to monitor and control the George Town and Lower Valley Pumping stations. In 2000, the system will be expanded to include Cayman Brac.

The Authority continued to improve its operations in Cayman Brac with the construction of a new reservoir that brings the total water storage capacity in the Brac to 0.75 million gallons. Work on the design to double water production capacity in the Brac is expected to be underway in 2000.

Delays in finalising the engineering design and obtaining financing for the Grand Cayman Wastewater Treatment Works impeded progress on this very important project in 1999. However, it is expected that the financing package from Canadian Imperial Bank of Commerce (CIBC) will be available in February 2000 and construction of the treatment works project will then commence shortly thereafter in earnest.

Recognising that our employees are our most valuable resource, the Authority continues to invest significantly in training and development of personnel. Employees are encouraged to

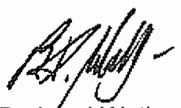
avail themselves of training and learning opportunities through various institutions and organisations.

We are particularly proud of the community-minded spirit of the Authority's employees who give back by contributing and dedicating their time to assisting the less fortunate in our community through Authority supported projects such as Paint Your Heart Out Cayman and Project Angel Tree. In addition, the Authority continued to demonstrate its corporate responsibility to the local community through its support of sports and activities related to young people as well as other charitable organisations.

The Water Authority was deeply saddened by the passing of our dear friend and long serving employee, Calvin Ramoon on 1 May 1999 after a long illness. Mr Ramoon joined the Water Authority in 1988 and was the Authority's first Sewage Treatment Assistant Operator. He took great pride in his work and kept his surroundings immaculate, we were privileged to have known and will greatly miss him.

The Authority continued to carry out its statutory functions with regard to protection of groundwater resources through monitoring of quarry operations, groundwater abstraction, groundwater pollution incidents, development control and effluent disposal.

I look forward to the continued success of the Water Authority in the future, and appreciate the time and effort put in by each and every person whose contributions have made the Authority a model organisation in the corporate community.



Mr Brainard Watler
Chairman

1. GENERAL INFORMATION

The Water Authority of the Cayman Islands is a statutory body, incorporated through the Water Authority Law, 1982 (Law 18 of 1982). The primary mission of the Water Authority is to provide public water and wastewater infrastructure for the Cayman Islands, and to protect and manage the water resources of the country.

Over the past seventeen years, the Water Authority has carried out a number of projects to map and monitor the groundwater resources of the country. In addition, the Authority constructed the country's first public sewerage system in the West Bay Beach resort area, and constructed public water supply systems on both Grand Cayman and Cayman Brac. Expansion of these systems is on-going.

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 generally meets once every two months and four meetings were held in 1999.

1999 Water Authority Board Members

Chairman:	Hon John B McLean OBE MLA JP
Members:	Permanent Secretary, A, C, E, NR Mr Kearney Gomez JP Senior Assistant Secretary A, C, E, NR Mr Timothy Hubbell Deputy Financial Secretary, Mr A Joel Walton JP Hon Truman Bodden OBE MLA JP Mr Harry Chisholm JP Mr Richard Flowers Mr Stanley Gourzong Mr Brainard Watler Mr Otto Watler Mr Jerry Wood
Secretary:	Director of the Water Authority Mr Frederick McTaggart

Y2K Compliance

Y2K compliance and related issues were addressed by the Authority in 1999. All computer networks and hardware were tested and passed for Y2K compliance; a new Y2K compliant customer billing system was identified, installed and tested in the third quarter of 1999; all computer related software and hardware related to water and wastewater operations were upgraded, tested and were all fully compliant by the third quarter of 1999. The Water Authority experienced no Y2K problems.

2. FINANCE

General Observations

The Water Authority maintained a positive financial position in 1999 despite an increase in administrative expenses. Operating revenue increased by 12% from 1998, but the overall revenue (including licensing and other income) decreased by 4.7%. The reduction in agency work and interest earned were the main contributors to the decrease. Operating expenses increased by 1% from 1998 while administrative expenses increased by 30% mainly due to increase in utilities, licences and dues, legal fees, and depreciation expense. The Authority's operating profit increased by 15% from 1998 and the net profit remained the same as 1998 reflecting the higher administrative expenses.

Loans

In 1999, the Lower Valley Reverse Osmosis Plant was expanded to a production capacity of 3,000 cubic metres per day under contract with Ocean Conversion (Cayman) Ltd (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 an 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.

The Authority also purchased 7.5 acres of land adjacent to the Red Gate Water Works for future expansion of the public water supply system in Grand Cayman at a cost of CI$1,750,000. The amount of 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 01 October 1999, at an annual interest rate of 8%.

Government Contribution

The Water Authority and the Cayman Islands Government agreed that Authority would not pay a dividend for 1999.

Water and Sewerage Rates

The rates for water supply and sewerage service remained unchanged from March 1995. Further 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.

1999 Public Water Supply Rates

Group	$ per cubic metre
Groundwater	$2.33
Desalinated water Grand Cayman	
Residential under 12 m^3/month	$4.01
Residential over 12 m^3/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

1999 Public Sewerage Rates

Group	SFU's per ft^2	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 and 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	

3. *HUMAN RESOURCES*

The Authority's staff complement at the end of the year was as follows:

Water Authority Staff Complement 1999

Director	F W McTaggart BSc
Deputy Director	G L Frederick-van Genderen PhD
Financial Controller	G Glidden BA CPA
New Works Engineer	T van Zanten MSc Eur Eng MCIWEM
Water Resources Engineer	H-J van Genderen MSc Eur Eng
Information Systems Manager	J Bodden BA
Operations Manager-WS	T Hill Master Plumber
Operations Manager-WW	J Gadsby
Operations Manager-Cayman Brac	B Banks
Accounts Payable Officer	J Nicholas
Accounts Receivable Officer	B Augero
Administrative Assistant 1	J Powery
Assistant Financial Controller	S Glidden BA
Assistant Operator	D Myles
Assistant Operator	V Grant
Assistant Operator	C Ebanks
Assistant Operator	E Hydes
Assistant Operator	J Cruz
Assistant Operator-*Collection System*	K Connor
Cashier	B Ebanks
Cashier	H Ebanks
Connections Assistant	A Archibold
Connections Supervisor	B Whittaker AAs
Customer Service Representative	Z Bush-Ramos
Customer Service Representative	G Hydes
Customer Service/PR Manager	D Scott BSc
Debt Collection Officer	S Ebanks
Design Engineer	C Garbutt BSc, Eng, M.J.I.E.
Design Engineer	M Tedd BSc, C..Eng., M.I.C.E.
Draughtsman	G Lewis
Engineering Technician-Water Resources	V Rankine
Executive Officer-Cayman Brac	K Pietras
Laboratory Manager	B MacAree BSc MCIWEM
Laboratory Technician	N Powery
Laboratory Technologist	M Martinez-Ebanks BSc
Laboratory Technologist	W Warren BSc
Labourer	H McField
Labourer	K Johnson
Labourer	G Kelly
Labourer	J Moore
Labourer	R Grant
Labourer-Cayman Brac	D Martin
Library/Records Administrator	B Speirs
Messenger	T McField
Meter Reader	C Morgan
Meter Reader	J Parchman
Meter Reader	C Richards
Meter Reader	D Goddard
Operator- Collection System	S Campbell
Operator- Collection System	A Bennett
Operator-Cayman Brac	C Scott
Operator-*Collection System*	G Manning
Operator-Heavy Equipment *New Works*	W Watler
Operator-Heavy Equipment *Operations*	B Watler
Operator-Heavy Equipment *Operations*	M Powery
Operator-Heavy Equipment *Operations*	D Smith
Personnel Administrator	S Carter
Pipe Layer	G Riapira
Pipe Layer	L Ramirez
Procurement Officer	D Manderson
Quality Assurance Inspector	G McLean
Receptionist	D Shaw
Reinstatement Foreman	V Whittaker
Resident Engineer	A Reid BSc
Senior Operator-*Collection System*	L Tivy
Sr Accounting Officer	L Lawrence BA CPA
Sr Customer Service Representative	V Powery
Stores Clerk	G Smith
Superintendent- Construction	L Washburn
Superintendent-Collection System	P Echenique
Superintendent-New Works	J Hunter
Trainee Draughtsman	I Webb
Training Coordinator	W Evans BSc
Vehicle Maintenance Officer	B Ingram
Water Resources Technologist	R Marsden Chem Tech Diploma
Water Supply Distribution Operator	J Smith
Water Supply Gang Leader	T Bodden

The following changes in personnel occurred during the year:-

- J Gadbsy was employed as the Authority's Operation Manager-WW with responsibility of heading up the Wastewater Department.
- M Tedd joined the Authority as a Design Engineer.
- C Garbutt joined the Authority as a Design Engineer.
- L Washburn joined the Authority as Superintendent -Construction.
- D Scott was employed as Customer Service/PR Manager.
- W Evans was employed as Training Coordinator.
- S Carter joined the Authority as Personnel Administrator.
- B Speirs was employed as Library/Records Administrator.
- G Lewis joined the Authority as Draughtsman in the New Works Department.
- G McLean was employed as Quality Assurance Inspector in the Water Supply Department.
- J Smith rejoined the Authority as Water Supply-Distribution Operator.
- B Ingram joined the Authority as Vehicle Maintenance Officer in the Wastewater Department.
- J Cruz-Hernandez joined the Authority as Labourer Water Supply Department.
- J Powery was employed as Administrative Assistant in the Financial Administration Department.
- C Richards joined the Authority as a Meter Reader in the Financial Administration Department.
- G Hydes was employed as a Customer Service Representative.
- D Shaw joined the Authority as Receptionist in the Customer Service Department.
- T McField was employed as Messenger in the Financial Administration Department.
- D Barnes, K Lazzari, J Melville, C Reid, M Smith, G Welcome and L Wood left the Authority to pursue other interests.

During the year, the following employees were promoted:

- B MacAree was promoted to Laboratory Manager with the HR & Quality Control Department.
- W Warren and M Martinez-Ebanks were promoted to Laboratory Technologist.
- N Power was promoted to Laboratory Technician.
- G Smith was promoted to Stores Clerk with the Financial Administration Department.

At the end of the year the total staff complement stood at 77 of which 65% are Caymanian. Thirty-three percent of the non-Caymanian staff are married to Caymanians or have Caymanian family connections.

Awards

In 1999, the Authority recognised employees in the following categories: the prestigious Chairman's Award, the "Employee-of-the-Quarter" and the ten-year service award.

Chairman's Award

The distinguished Chairman's Award for 1999 was awarded to Mr Vernon Whittaker for his outstanding service and dedication to duty.

Ten and Fifteen Years of Service Award

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

15 Years of Service

Mr Tom van Zanten, New Works Engineer.

10 Years of Service

There were no ten-year award recipients.

Employee-of-the-Quarter Awards

January-March

The first quarter award was given to Pedro Echenique, in recognition of his hard work and dedication to duty as he acted as Superintendent-Construction in the Water Supply Department in addition to his duties as Superintendent-Collections Systems in the Wastewater Department.

April-June
The second quarter award was presented to Vernel Rankine, Engineering Technician-WR, for his hard work and dedication to the Water Authority by assisting the Authority's operation in Cayman Brac during a period of limited availability of staff.

July-September
The third quarter award was presented to Curtis Richards, Meter Reader, for his hard work and dedication while carrying out his duties in the Financial Administration Department.

October-December
The fourth quarter award was granted to Sophia Carter, Personnel Administrator, in recognition and appreciation of her initiative and dedication in organising the Authority's "1st Annual Kids Christmas Party", "Paint Your Heart Out Cayman" and "Project Angel Tree".

Training

Training remains an important aspect of the Authority's commitment to the development of its human resources. Employees are encouraged to participate in local and regional seminars, courses, workshops and conferences. Full time education overseas is also encouraged.

The Authority continued its participation in the Caribbean Basin Water Management Programme (CBWMP), a training programme for water utilities in the Caribbean region. Institutional support for the programme continues to be provided by the Caribbean Environmental Health Institute (CEHI), St Lucia.

The Authority participated in the following CBWMP training activity:

- S Carter and W Evans attended the 2nd Annual HR Conference, Grenada 26-31 July 1999.

Several Authority employees enrolled in a variety of courses at the Community College of the Cayman Islands (CCCI):

- One employee enrolled and completed the Basic English Skills course.
- One employee completed the English as 2nd Language course.
- One employee completed the College Composition II course.
- Three employees completed the Introduction to Computers course.
- One employee completed the Introduction to Windows 98 course.
- Seven employees participated in the Excel'97-Introduction course.
- Three employees participated in the Word '97-Introduction course.
- One employee participated in the Word '97-Intermediate course.
- One employee participated in the Access'97 course.
- One employee participated in the Excel Macros course.
- One employee participated in the Typewriting course.

Other training received by Authority employees:

- Nine of the Authority's middle managers and supervisors participated in a Transformation for Supervisors "Trans4mation" Programme facilitated by UK Consultants – Plus Consulting.
- Dr. G Frederick-van Genderen and N Powery attended the CWWA/AIDIS 1999 Conference and Exposition in Jamaica.
- Dr. G Frederick-van Genderen attended the Lab Information Management Systems: From Problem Definition to Systems Evaluations course facilitated by ACS, Short Courses.
- G Glidden attended the Controller's 2-Day Workshop facilitated by the American Management Association.
- B MacAree attended Good Lab Practices & ISO 9000 Standards: Quality Standards for Chemical Labs facilitated by ACS, Short Courses.
- M Martinez-Ebanks successfully completed Basic Supervisory course administered by PTU as well as she

attended the QA/QC with DR/400 Spectrophotometer Workshop at the HACH Training Center, Loveland, Colorado.
- R Marsden completed the AutoCAD Basic Skills course. I Webb completed the AutoCAD-Intermediate and Advanced AutoCAD course. A Reid and M Tedd also completed the Advanced AutoCAD course. The MicroCAD Institute facilitated both courses.
- M Tedd, G Lewis, I Webb and J Melville participated in the Trimble Navigation Training facilitated by Trimble Navigation.
- R Marsden participated in the Hazwoper Training Seminar facilitated by the CI Department of Environmental Health. R Marsden also completed a 40 hour OSHA/RCA Safety Training course at Texas A&M in conjunction with the Texas Department of Environment as well as he also participated in the Petroleum Hydrocarbons Conference and Exposition facilitated by the National Groundwater Association-USA.
- L Washburn attended the Management & Supervision for Water & Wastewater Operations training facilitated by American Water Works Association.
- S Carter and W Evans participated in the Stress Management in a Disaster Workshop facilitated by the Emergency Communication Centre-GCM in conjunction with The Pan American World Health Organization and the World Health Organization.
- S Carter attended the Fundamentals of Human Resource Management Workshop facilitated by American Management Association, in Orlando, Florida.
- S Ebanks participated in the Strategies & Techniques for Effective Debt Collection facilitated by Cohen & Klein, in Fort Lauderdale, Florida.
- M Tedd attended the Practical Concrete Material workshop facilitated by the American Concrete Institute.
- W Warren attended a Time Management Workshop facilitated by PTU.
- Fourteen employees attended a Customer Service training session facilitated by Corinne Glasgow of First Place, Ltd.
- Three employees participated in a Basic First Aid Course facilitated by the CI Health Services.
- Eight employees participated in the Breathing Apparatus Equipment and Breathing Apparatus System Training facilitated by the Central Fire Station.
- Eight employees attended the VAC CON Training course facilitated by VAC CON.
- P Echenique participated in the Sewer Vacuum Truck Training facilitated by Aries Industry as well as he attended the WEFTEC Conference & Exposition.
- J Gadsby and P Echenique attended the Grouting & Video Inspection Sewers Training facilitated by CUES Inc.
- B Ingram attended both the Vermeer Diagnostic Training and Vermeer Training courses facilitated by the Vermeer Manufacturing Company.

In 1999, the Authority commenced a "Lunch and Learn" programme. The Lunch and Learn programme provides an informal learning environment where employees are able to participate in a training session that covers a topic of personal interest while enjoying a lunch provided by the Authority. Two of the many topics covered in 1999 were Facts about AIDS and Hurricane Awareness.

4. QUALITY CONTROL AND RESEARCH

Laboratory

The new laboratory facilities at the Water Authority Headquarters on Red Gate Road continue to enhance the capability of the Authority to meet increased water and wastewater monitoring demands and private analysis 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;
- Research and monitoring of the West Bay Beach sewerage system and sewage treatment works;
- Monitoring of Lower Valley and East End fresh groundwater resources;
- 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.

Monitoring Programmes

Most of work carried out by the laboratory comprises of comprehensive monitoring programmes related to the Authority's operations.

81% of all samples analysed in 1999 related directly to the Authority's operations. Samples analysed for various Government departments accounted for 8%. The remaining 11% were private requests. The total number of samples processed by the laboratory in 1999 was 3,065.

A new Hach online monitoring system for chlorine residuals, pH and electrical conductivity (EC) was purchased in late 1999 to monitor water quality of the water that is pumped from the Lower Valley Water Works into the piped water supply system. This system is expected to be operational in early 2000. The Authority developed and implemented a SCADA system in 1999 to monitoring and control operational and performance data at both the George Town and Lower Valley pumping facilities.

Public Piped Water Supply - Grand Cayman

Monitoring of the distribution system continued 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 Water Works 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 daily during the working week (Mon-Fri). Monitoring of sample taps within the distribution system is carried out in accordance with a set schedule.

Quality of Water entering Distribution System from Red Gate Water Works

Parameters	Mean
Free Chlorine (*mg/l*)	0.54
pH (*units*)	7.62
EC (*µS/cm*)	315
TDS (*mg/l*)	150
Zinc (*mg/l*)	0.24
Orthophosphate (*mg/l*)	0.62
Heterotrophic bacteria (*estimated cfu/ml*)	0

All faecal coliform bacteria results were negative.

Quality of Water entering Distribution System from Lower Valley Water Works

Parameters	Mean
Free Chlorine (*mg/l*)	0.54
pH (*units*)	7.54
EC (*µS/cm*)	338
TDS (*mg/l*)	153
Zinc (*mg/l*)	0.55
Orthophosphate (*mg/l*)	1.37
Heterotrophic bacteria (*estimated cfu/ml*)	0

All faecal coliform bacteria results were negative.

Testing of the feedwater and product water of the Red Gate Water Works and Lower Valley Water Works indicated that the feedwater is free of micropollutants and that product water is free of disinfections by-products. The metal boron continues to be present in the product water at levels that exceed the World Health Organisation (WHO) Drinking Water Guideline Value by a factor 2.

The laboratory collected 44 samples in relation to queries from customers. 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 the 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 analyses are carried out weekly. Three sample taps within the distribution system are monitored monthly.

Quality of Water entering Distribution System from West End Water Works

Parameters	Mean
Free Chlorine (*mg/l*)	0.28
pH (*units*)	7.56
TDS (*mg/l*)	181
Zinc (*mg/l*)	0.47
Heterotrophic bacteria (*estimated cfu/ml*)	0

All faecal coliform bacteria results were negative.

Testing of the feedwater and product water of the West End Water Works indicated that the feedwater is free of micropollutants and that the product water is free of disinfections by-products. Boron is present at a similar level as in the product water from both reverse osmosis plants in Grand Cayman.

East End Observation Wells and Wellfield

The Authority monitored 4 observation wells located in the East End lens during the dry and wet seasons of 1999. Two of the wells are in the brackish water zone.

East End Observation Wells Monitoring Results

	Number of samples with Total coliform bacteria ≥10 cfu/100ml	Number of samples with Faecal coliform bacteria >0 cfu/100ml
Dry Season (May)	4	4
Wet Season (Oct)	4	3

Testing of the feedwater of the East End reservoir indicated no presence of micropollutants or heavy metals. However the levels of trihalomethanes in the product water continue to exceed the WHO drinking water guideline by a factor 2.

Lower Valley Domestic Wells

Selected domestic wells in the Lower Valley area are tested twice yearly for total and faecal coliform bacteria, TDS, EC, and pH. Analyses were carried out during the dry season (31 wells) and the wet season (30 wells).

1999 Lower Valley Domestic Wells Monitoring Results

	Percentage with Total coliform bacteria ≥10 cfu/100ml	Percentage with Faecal coliform bacteria >0 cfu/100ml	Percentage with EC ≥1600µS/cm
Dry Season (May)	22	22	26
Wet Season (Oct)	33	36	13

Wastewater Treatment Works

The performance of the waste stabilisation ponds was monitored on a monthly basis. Twelve pumping stations continued to be monitored weekly for EC that is used as an indicator of groundwater intrusion into the sewerage system.

The overall unfiltered biochemical oxygen demand (BODuf) removal efficiency of the waste stabilisation ponds decreased compared to 1998 and faecal coliform removal efficiency remained at just over 2 logs.

Operational Performance of the Sewage Treatment Works

Year	Average BOD-5 day (mg/l) Raw sewage	Final effluent	%age removal	Average Daily Flow (m^3/day)	Average Raw sewage EC (µS/cm)
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)

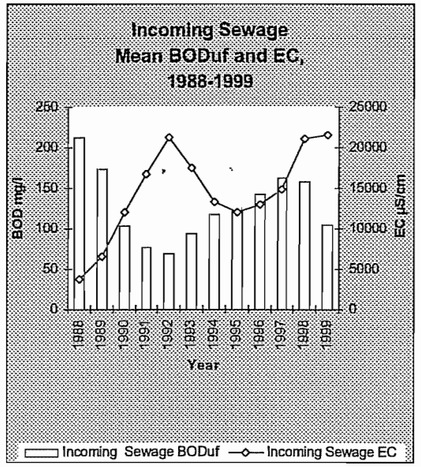
*NOTE: BOD = Biochemical Oxygen Demand; EC electrical conductivity; g = grab sample; c = 24hr composite sample. Average flows are corrected for flow meter errors, *corrected figures from 1998 Annual Report.*

Operational Performance of the Sewage Treatment Works Average FC (cfu/100ml)

Year	Raw sewage (g)	Final effluent (g)	%age reduced
1988	4.39×10^6	1.68×10^3	*99.962*
1989	1.62×10^8	2.87×10^3	*99.998*
1990	3.18×10^8	7.30×10^3	*99.998*
1991	2.77×10^6	1.55×10^4	*99.440*
1992	1.52×10^6	5.84×10^3	*99.616*
1993	3.22×10^8	4.26×10^3	*99.868*
1994	9.29×10^7	2.04×10^4	*99.904*
1995	1.38×10^7	2.53×10^4	*99.817*
1996	6.89×10^6	2.75×10^4	*99.601*
1997	4.36×10^6	2.13×10^4	*99.512*
1998	3.46×10^6	1.53×10^4	*99.558*
1999	4.91×10^6	1.28×10^4	*99.740*

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

The following graph compares the EC and unfiltered BOD since the commissioning of the West Bay Beach Sewerage System in 1988.



There was no significant increase in the average salinity of the incoming sewage over that of 1998. However, incoming salinity is more than 47% above the mean levels in 1997. It is estimated that more than 1/3 of the flow collected and pumped is due to saline groundwater infiltration.

The Authority is aware of several major leaking sewers and will be undertaking a major diagnostic review of the collection system in 2000.

Sludge depth is measured annually as part of the operational performance monitoring of the sewage treatment works. The mean sludge depth in facultative pond 1.1 increased by 15% from that of 1998 while facultative pond 1.2 showed a higher increase of 17%. Both maturation ponds showed increases in mean sludge depth from that measured in 1998. Maturation pond 2.1 increased by 16%, and pond 2.2 increased by 21% over last year's levels.

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

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

George Town Harbour Water Quality Monitoring Programme

The George Town Harbour Water Quality (formerly called, Hog Sty Bay) monitoring programme commenced in 1991 as a joint study between the Water Authority and the Department of the Environment (DoE). The results to date have not identified any significant pollution, however, the programme will continue in order to identify and observe trends.

The programme includes 17 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 in 1999 was 41.3 cfu/100ml at sample point 1-additional. The highest individual faecal coliform result obtained in 1999 was 170 cfu/100ml at sample point 1-surface.

The overall average enterococci bacteria densities in 1999 have increased slightly since 1998. The highest average for enterococci was 6.8 cfu/100ml at sample point 1-additional with the same sample point having the highest individual enterococci result of 81.0 cfu/100ml.

George Town Harbour Water Quality Monitoring Programme Results

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

The physico-chemical parameters of the 17 main sample points are as expected for tropical marine coastal waters. Salinity results for sample point 1-additional are generally lower than that of the other 17 samples. This sample is collected at a fissure in the ironshore of the coast and appears to be influenced by the outflow of brackish groundwater containing hydrogen sulphide. The Authority will continue to include this point in the monitoring programme.

Both bacteriological parameters, faecal coliforms and enterococci, are within the United States Environmental Protection Agency (USEPA) Standards and the European Union Mandatory Standards for bathing water for all samples.

Research

Plans to collaborate with the University of Surrey on further waste stabilisation pond research did not materialise due to the various reasons and is not expected to take place in the near future. The focus of this project entitled "Integrating field monitoring, using biological tracers and a hydraulic model for the optimisation of waste stabilisation pond design for pathogen removal and reuse" will remain directed to Mexico.

Conferences, Papers and Reports

Conferences

Staff of the Water Authority attended the following conferences during the year:

G F-van Genderen attended the IAWQ, 4th International Specialist Conference on Waste Stabilisation Ponds: Technology and the Environment, 20th-23rd April 1999, Marrakech, Morocco. She co-authored a technical paper presented at the conference.

T Hill attended the American Water Works Association (AWWA) Distribution System Symposium in Nevada, USA.

J Bodden attended the AWWA IMTECH Conference held in Illinois, USA.

Papers

Lloyd, JJ & Frederick, GL (1999) Parasite removal by waste stabilisation pond systems and the relationship between concentrations in sewage and prevalence in the community. Presented at the IAWQ, 4th International Specialist Conference on Waste Stabilisation Ponds: Technology and the Environment, 20th-23rd April 1999, Marrakech, Morocco.

Reports

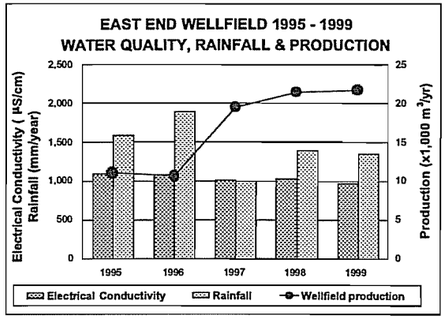
- East End Quarry - Status Report, May 1999.

5. WATER RESOURCES

Groundwater Monitoring

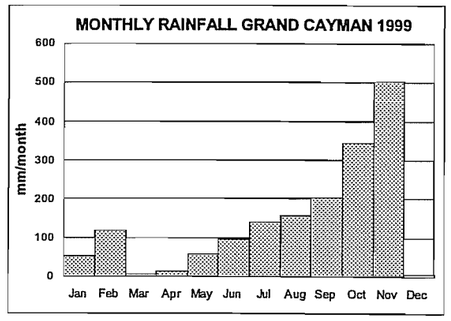
The Authority continued the collection of hydrogeological data from its network of observation wells, piezometers and water level recorders. The Authority purchased several water level dataloggers to carry out continuous water level monitoring in dedicated monitoring wells, this instrumentation provides more flexibility and ease of use than the mechanical water level recorders that are in use since the inception of the Authority.

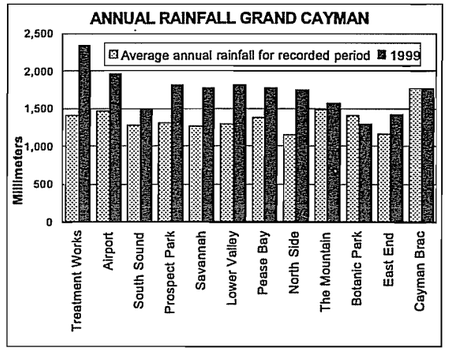
Monitoring of the water quality of the fresh groundwater pumped from the 10 production wells located on the East End lens indicated no significant changes in electrical conductivity.



Rainfall Distribution

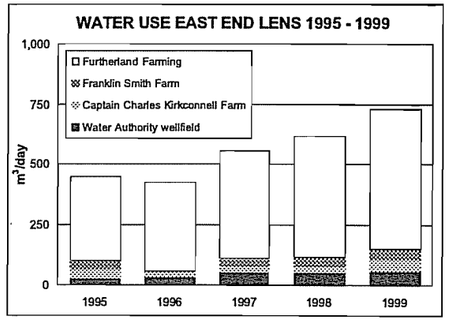
The Authority keeps track of rainfall data in Grand Cayman and Cayman Brac. These data are collected by dedicated volunteers, the Civil Aviation Authority and the Queen Elizabeth II Botanic Park. 1999 was a fairly wet year, mainly caused by heavy rainfall in October and November. The average for Grand Cayman for all stations combined was 1,702 mm (67") compared to 1,403 mm (55") in 1998 and 896 mm (35") in 1997. Rainfall at the West End Water Works in Cayman Brac was 1,775 mm (70").





Groundwater Use - East End Fresh Water Lens

The Authority continues to monitor groundwater use from the East End lens at the three commercial farms and the Authority's wellfield. Total abstraction in 1999 averaged 734 m^3/day (194,000 US gal/day).



Groundwater Remediation of Fuel Spills

The Authority in conjunction with the Department of the Environment and the Department of Environmental Heath continue to monitor the remediation of several cases of groundwater pollution. The companies that are involved in the clean-ups of these spills continued their cooperation with the different government agencies and continued upgrades of their fuel storage equipment. No major spills occurred in 1999.

Caribbean Utilities Company - Groundwater Abstraction and Disposal

Caribbean Utilities Company Ltd. (CUC) approached the Water Authority in 1998 about the possibility of using groundwater as cooling water for its 1999-2008 generator expansion project. The project envisaged the use of two abstraction wells and two disposal wells, each well abstracting 100 l/s (1,630 USgpm) that will be discharged at a temperature of 41 °C (106 °F) with an option to divert the cooling water through the existing 24" ocean outfall into the North Sound. As requested by the Authority, CUC got a consultant to carry out a study to determine the effects of this plan. This project included the drilling of a 122 m (400') pilot well and the creation of a groundwater model to predict the effect of the discharge. The Authority spent significant time on the evaluation of this study. The Authority received 3 objections to this project as several residents and OCL were concerned about the effects of the discharge of cooling water. By the end of 1999 it was expected that the granting of the licences would be considered by the Water Authority Board in 2000.

East End Quarry

In 1999 the Authority continued to pursue its attempts to ensure that Quarry Products Ltd. complied with the condition in the Water Authority Law that quarrying is carried out under a valid quarry permit. As this issue could not be resolved with Quarry Products Ltd., and the company continued to violate the Law, the matter was referred to the Police. The Police initiated their investigation in 1999 with the intention to take the matter to Court.

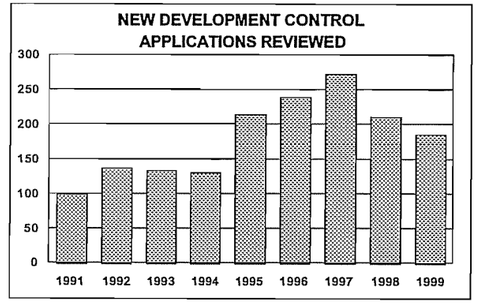
The Authority continued to monitor the extent of the quarry; surveys indicated that the quarry's size was 254.3 acres by October 1999, an increase of 24 acres over April 1999 and 57 acres over April 1998.

Pilot well at Wastewater Treatment Works

The Authority carried out a hydrogeological survey at the Wastewater Treatment Works in order to design a new wellfield to dispose of the effluent of the future Treatment Works. This project was conducted in conjunction with Dr. Jones of the Department of Earth and Atmospheric Sciences of the University of Alberta, Canada. Dr. Jones and his colleagues have studied the geology of the Cayman Islands over the last 20 years and they have cooperated closely with the Authority. This investigation included the drilling of a 146 m (480') deep pilot well, of which chip samples and 25 rock core samples were collected. The samples were donated to Dr. Jones for scientific research and analyses were carried out for porosity and hydraulic conductivity. The results of these tests identified the most suitable depth for the open zone of the disposal wells.

Development Control

The Water Authority continued to review the plans that are submitted through the Planning Department in respect of water supply, wastewater treatment and disposal and impacts on groundwater. The number of developments reviewed in 1999 decreased to 186.



Water Supply Concessions

The Authority monitors the performance of 5 companies that operate under a licence issued by Government under the Water Production and Supply Law. In 2000 Government granted a licence to Royal Reef Resort in East End and to On the Bay Development in North Side.

Performance of Water Supply Concessions

	Production (US gallons)	Royalty
Cayman Water Company	418,798,700	$467,034.06
Little Cayman Beach Resort	2,891,400	$5,059.94
Morritt's Tortuga Club	18,006,330	$16,475.79

Cayman Water Company Operational Performance (US gallons)

	1999	1998	% Change 1998-1999
Water produced	418,798,700	435,284,900	-3.8
Water purchased	37,778	957,198	-96.1
Total Water Sold	401,346,650	400,550,168	0.2
Seven Mile Beach	233,280,730	258,317,950	-9.7
West Bay	108,974,460	95,236,630	14.4
Westin	18,956,850		n.a.
Water Authority	0	6,379,778	n.a.
Trucks	645,600	1,678,200	-61.5
Safe Haven (irrigation use)	39,489,010	38,937,610	1.4
Unaccounted for water	4.18%	8.18%	-49.0
Average fuel adjustment factor per 1,000 US gals	$0.73	$0.70	4.8
Royalty	$467,034.06	$475,332.16	-1.7

6. WATER SUPPLY OPERATIONS

East End Wellfield

Sales of groundwater from the East End wellfield and reservoir increased by 13% in 1999 compared to 1998. The public tap, which provides water free of charge, delivered 547 m^3 (145,000 US gals).

East End Wellfield Performance Data

Year	Hours run	Average Pumping Rate (m^3/hr)	Quantity Produced (m^3)	Loss (%)	Power Consumption (kWhr/m^3)	Quantity Sold (m^3)
1986	603	14.7	8,877	1.0	0.46	4,191
1987	2,712	14.0	37,973	1.4	0.47	29,263
1988	3,134	14.0	43,879	1.4	0.45	33,815
1989	3,440	16.5	56,928	1.1	0.40	57,973
1990	1,310	14.8	19,408	1.0	0.43	19,704
1991	1,816	15.1	27,438	4.6	0.45	26,323
1992	1,182	13.2	15,546	13.9	0.44	11,653
1993	540	16.5	8,916	14.3	0.43	6,489
1994	623	16.0	9,945	9.4	0.43	9,013
1995	672	16.4	11,048	9.9	0.45	9,538
1996	653	16.3	10,633	8.9	0.46	9,319
1997	1,224	15.9	19,503	6.3	0.45	17,847
1998	1,428	15.0	21,458	11.8	0.45	18,563
1999	1,576	13.8	21,718	0.6	0.40	21,032

Public Water Supply-Cayman Brac

In 1999, annual water sales for the Authority's Cayman Brac (CYB) operation increased by 20%. Pipeline sales showed an increase of 23% while trucked sales increased by approximately 14%. The number of active pipeline accounts slightly increased from 83 in 1998 to 86.

Public Water Supply-CYB Summary of Operational Data

	1999	1998	1997	Unit
Total Water Produced	66,288	63,932	45,622	m^3
Total Water Sold	65,458	54,621	46,145	m^3
Total Storage Losses	1,420	9,085	399	m^3
Total Pipeline Losses	-1,431	-107	-405	m^3
Water Loss as % of Production	-0.02	14.04	-0.12	%
Approx. Cost of Sales (operational expenses)	$4.54	$4.96	$5.50	CI$/$m^3$
Pipeline Sales	45,507	37,072	32,411	m^3
Trucked Sales	19,950	17,549	13,734	m^3
Number of Pipeline Connections	86	83	80	No.
Daily Water Sales (% of Nominal Plant Capacity 227m^3/day)	79.0	65.9	55.7	%
Avg. Plant Production Capacity	225	226	233	m^3/day
Electricity Consumed	309,512	285,920	192,792	KWh
RO Plant Efficiency	4.669	4.472	4,226	kWh/m^3

The existing 500,000 US gallon reservoir in Cayman Brac was temporarily repaired in March 1999 with permanent repairs planned for early 2000. A new 250,000 US gallon glass-fused-to-steel reservoir was completed in Cayman Brac in December 1999 at a cost of $150,000.

In preparation for the year 2000, the electrical and control system of the Cayman Brac RO plant was upgraded in 1999. It is planned to upgrade the production capacity of the plant in 2000 to 530 m^3 per day in order to meet the increased demand for water in the Brac.

Average Usage per Consumer Group-CYB (m^3/Connection)

Month	Single Resident	Commercial	Public Authority	Trucked
Dec-98	13.68	103.32	16.80	13.18
Jan-99	16.72	122.15	16.24	10.69
Feb-99	12.49	115.01	15.32	9.26
Mar-99	17.26	126.58	19.94	11.20
Apr-99	17.75	110.93	23.70	13.91
May-99	15.12	113.01	24.90	12.83
Jun-99	13.23	105.68	18.46	11.41
Jul-99	14.57	119.04	10.42	12.17
Aug-99	10.96	121.47	15.86	12.26
Sep-99	11.42	134.16	8.74	11.49
Oct-99	10.02	107.34	12.32	10.00
Nov-99	12.05	169.49	17.06	6.62
Dec-99	13.39	134.48	19.68	6.53
Averages	**13.75**	**123.28**	**16.89**	**10.70**

Public Water Supply-Grand Cayman (GCM)

In March 1999 the production capacity at the OCL, Lower Valley plant was increased from 1,500 m^3 per day to 3,000 m^3 per day in order to meet dry season demand.

The upgrade of the water pumping station at the Lower Valley Water Works was completed in March 1999. This was necessary to accommodate the increased production from the new RO plant, and meet pipeline demands.

In February 1999, the Authority commissioned a 2 million US gallon glass-fused-to-steel water reservoir in Lower Valley. This additional storage provides for a total of 3 million US gallons storage capacity at the site. With the additional tank, the Authority has close to 4 days of full storage capacity.

Total desalinated water sales increased by 13% in 1999. Pipeline connections increased to 7,651 by the end of December 1999, representing growth of 6%.

The average daily water sale was 5,263 cubic meters per day representing 77% of the contracted capacity.

Public Water Supply-GCM Summary of Operations

	1999	1998	1997	Unit
Total Desalinated Water Purchased	2,095,880	1,900,488	1,633,080	m^3
Total Desalinated Water Sold	1,920,996	1,702,349	1,549,850	m^3
Pipeline Sales	1,898,778	1,664,911	1,501,073	m^3
Trucked Sales	22,075	33,815*	49,980*	m^3
Unaccounted for Water	8.18	10.1	5.30	%
# of Pipeline Connections	7,651	7,192	6,288	No.
Average Daily Water Sales	5,263	4,664	4,235	m^3
Daily Sales as % of Contracted Capacity	77	82	85	%
Water purchased from CWC	0	24,150	3,349	m^3
Water Sold to CWC	143	3,623	5	m^3
Electricity Consumed	472,980	468,700	405,000	kWh
Pump Station Efficiency	0.231	0.259	0.222	kWh/m^3

*NB: * corrected figures from previous Annual Reports.*

The percentage of unaccounted for water showed little change from previous year. The losses have been attributed to the age of consumer meters, un-metered fire hydrants, ruptured water mains, and 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.

The Authority continued its planned replacement of the 250mm water main in Spotts area. During 1999, the section replaced was from the junction of Prospect Drive and Shamrock Road, to Old Prospect Road and Shamrock Road. In 2000, this replacement programme will continue to the Spotts Landing.

Public Water Supply-GCM Water Sales by Consumer Group (m^3)

	1999	1998	1997
Single Residential	1,247,855	1,082,563	971,890
Multi-Residential	97,494	99,226	95,628
Commercial & Industrial	426,425	365,651	321,652
Truckers	22,077	33,815	49,980
Public Authorities	125,103	117,472	106,708
CWC	143	3,623	5

Public Water Supply-GCM Connections per Customer Type for 1999

Month	Single Resid	Multi-Residential	Commer	Public Auth	Truck	Total
Dec-98	*6,232*	*60*	*800*	*100*	*4*	*7,196*
Jan-99	6,285	60	796	100	4	7,241
Feb-99	6,321	60	802	100	4	7,283
Mar-99	6,391	60	805	102	4	7,358
Apr-99	6,495	60	792	102	4	7,449
May-99	6,619	60	797	102	4	7,578
Jun-99	6,659	60	803	103	4	7,625
Jul-99	6,775	59	808	103	4	7,745
Aug-99	6,805	59	812	103	4	7,779
Sep-99	6,389	57	789	103	4	7,338
Oct-99	6,456	57	797	105	4	7,415
Nov-99	6,292	53	754	96	4	7,195
Dec-99	6,662	58	802	106	4	7,628

Public Water Supply-GCM Average Usage per Consumer Group (m^3/Connection)

Month	Single Resident	Multi-Residential	Commer	Public Auth
Dec-98	*13.57*	*124.17*	*37.43*	*92.43*
Jan-99	17.15	146.22	45.86	109.55
Feb-99	14.37	126.77	38.63	92.17
Mar-99	16.71	141.46	48.33	114.95
Apr-99	18.14	154.10	48.26	143.38
May-99	16.40	145.84	43.11	116.82
Jun-99	16.21	136.72	43.32	123.89
Jul-99	15.62	143.01	43.08	103.78
Aug-99	13.93	129.71	37.90	80.23
Sep-99	18.51	145.21	48.99	94.09
Oct-99	16.99	143.30	45.95	83.52
Nov-99	13.78	121.71	41.59	73.49
Dec-99	13.94	128.29	52.49	89.00
1999 Averages	**15.98**	**138.53**	**44.79**	**102.07**

From the tables above, water sales to the Authority's single residential customers increased by 15% while the number of customers in this category increased by 7% from the previous year. Water sales to multi-

residential customers decreased by 2%, while the number of customers in this category decreased slightly by 3%. Water sales to the Authority's commercial and industrial customers showed an increase of 17% over 1999 sales to commercial customers.

7. WASTEWATER OPERATIONS

Public Sewerage-GCM

Customers connected to the public sewer system increased from 258 to 268 at the end of 1999. Revenue generated from sewerage charges increased by 3% and revenue from the six septage truckers providing service on Grand Cayman increased in 1999 by 14%.

During the first half of 1999, the Authority contracted with Performance Pipelining, Inc. of Ottawa, IL. USA, to conduct a video inspection of the main sewer line in the area of West Bay Road and the Harquail Bypass intersection. This inspection revealed several large breaks in the clay sewer pipe and a large amount of salt water flowing into the system. In August, a visual inspection of all manholes in the sewer collection system was conducted. The results of this inspection showed a number of saltwater inflow leaks throughout the entire collection system.

Based on the need for regular, detailed inspections and maintenance of the collection system, the Authority made a decision to purchase two major pieces of equipment. The first was a Closed Circuit TV (CCTC) sewer inspection unit that provides the capability to conduct in-house video inspection of the sewer system and to make repairs (under certain conditions) using a chemical grout. The second major equipment purchased was a specialized Jet-Vac truck from Vac-Con Corporation of Florida. This truck has equipment that is able to pressure clean and vacuum sewer lines. The Water Authority's staff was trained on the proper operation of both pieces of equipment as part of the purchase agreement.

From the operational data, the average daily flow to the treatment works increased by over 30% with the number of customers increasing slightly by 4%. There was no significant increase in the average salinity of the incoming sewage over that of 1998.

Public Sewerage System-GCM
Summary of Operations

	1999	1998	1997	Unit
Total Sewage Treated	1,997,280	1,494,164	1,182,588	m^3
Average Daily Flow	5,472	4,094	3,231	m^3
Average Daily Septage	37	46	35	m^3
Pump Station Elec.	347,748	306,495	222,277	kWh
Pump Station Effic.	0.17	0.21	0.19	kWh/m^3
Treatment Works Elec.	210,968	206,040	152,680	kWh
Treatment Works Effic.	0.11	0.14	0.13	kWh/m^3
Total Electricity Effic.*	0.28	0.56	0.57	kWh/m^3
Total # of Connections	268	258	253	
Total Sewerage Fees	$2.15	$2.12	$2.09	Mil CI$
# of Septage Customers	6	6	6	
Total Septage Fees	$60,040	$52,476	$53,996	

*NB: *mechanical aerators turned off July 1999.*

Wastewater Treatment Works

Mechanical aeration of the facultative waste stabilisation ponds (Ponds 1.1 and 1.2) was discontinued during the year. The annual survey of sludge depth (reported in Section 4 of this report) in the ponds indicated significant increases in sludge accumulation compared to increases over the last few years. The increase in sludge accumulation may be attributed to the age of the ponds (>10 years) as well as the aerators being used for part of the year. These factors signify that the treatment efficiency of the ponds is decreasing due to the decrease in pond volume available for treatment of the wastewater.

8. NEW WORKS

New Works Crew

In 1999 the New Works crew installed in excess of 6,300 meters of pipework. The majority of the work (almost 75% of the total length of pipe installed) involved the continuation of the extension of the piped water distribution into the district of East End.

The following areas were provided with piped water during the year:

- Various new sub-divisions in Savannah and Bodden Town
- Halifax Road (off Crewe Road)

The installation of pipes in the Savannah Meadows subdivision (Phase 3) was completed in 1999.

The New Works crew also installed the remainder of pipelines at the Lower Valley site to connect the second storage tank and the new Reverse Osmosis plant that was commissioned in early 1998.

The New Works pipelaying crew also installed a 200mm (8") sewer pressure main in the Galleria Loop, just north of the Galleria shopping center. This main will serve the proposed development, east of the Bypass and just south of the Hyatt hotel. This work will ensure that the road will not have to be trenched at a later date.

In its fifth year of operation, the New Works crew continued to perform very well. A detailed cost analysis indicates that the pipeline extensions carried out by the New Works crew in 1999 were significantly more economical than if an outside contractor had carried them out. It was determined that the work carried out by the New Works crew resulted in an overall cost savings of approximately 33% based on the average overall cost on the Bodden Town Project (1991-1994), or nearly 42% when allowing for inflation.

Due to the concentration of activities on the pipeline extension to East End, no significant work was carried out in private roads and new subdivisions, and as a result only 10% of all costs incurred in 1999 by the New Works Crew (labour, plant and materials) were reimbursed by contributions from the various developers/clients.

Lower Valley Site

As a result of the continued growth of the water distribution system and the associated increase in demand, the production capacity of the existing water production plants at Red Gate Road and Lower Valley would have become insufficient in early 1999.

The production capacity of the reverse osmosis plant at the Lower Valley facility, commissioned in March 1998, was doubled in March 1999 to 3,000 cubic meters per day (800,000 US gallons per day). The production capacity of the two water production plants (Red Gate and Lower Valley) now totals 8,000 cubic meters per day (2.1 million US gallons per day). It is anticipated, based on the historical growth rate, that this capacity will be adequate until early 2003.

In mid-February 1999, Florida Aquastore from Boca Raton, FL completed the construction of a 2 million US gallon capacity glass-fused to steel storage tank at the Lower Valley site, bringing the total storage capacity at this site to 3 million US gallons.

North Side Facility

An engineering analysis of the water distribution system completed in early 1999 revealed that additional water production capacity would be required in George Town, as more than 65% of the total system demand originates in this area. However, from the point of system reliability, it is imperative that an additional water production and storage facility will be situated in the eastern districts.

Throughout 1999 the Water Authority looked at various sites in the Frank Sound area for suitability for future expansion of its water production and storage facilities. Unfortunately by the end of the year no suitable site was found. Several sites were found to be unsuitable (too low or too small), while the owners of other, more suitable, properties could not be persuaded to sell.

The Authority will continue its search for a suitable site in 2000. It is anticipated that, based on the historical growth and hydraulic analysis of the water distribution system, a site will be required around 2005.

Global Positioning System (GPS) System

During 1999, the Water Authority collected data on the existing water distribution and wastewater collection systems using its GPS equipment. Once all data is collected and all records have been transferred in a digitised form, pipelines, valves, meter boxes etc. can be retrieved with a high level of accuracy in the field using handheld units.

In addition, this data can be combined with other information available within the Water Authority (e.g., customer information, operational data) in a GIS (Graphical Information System) database, allowing a graphical representation of many types of information.

Sewage Treatment Works

Throughout 1999 the Water Authority's engineers worked diligently, together with their consultants (Globaltech, Inc. from Boca Raton, FL and Polytron, Inc. from Atlanta, GA), on the design for the new wastewater treatment works using the Sequencing Batch Reactor (SBR) process.

By the end of 1999, the layout of the first phase was nearly completed. Hydraulic analyses of the treatment plant had been carried out, confirming the sizes of the pipes required. Additionally, calculations for blower and pump capacities have been completed.

The revised cost estimate for the first phase, that is, a treatment plant with a design capacity of 2.5 mgd, was CI$ 10 million (or approximately US$ 11.9 million).

9. *WATER AND SEWERAGE STATUTORY LICENCING*

Water Resource Licencing

In 1999 the Authority issued the following licences and permits:

- Groundwater Abstraction Licence 3
- Discharge Permits 1
- Quarry Permit 4
- Canal Work Permit 1
- Well Drillers Licences 6
- Cesspool Emptier's Licence 7

Plumbers Licencing

The Plumber's Examination Board met on four occasions in 1999 to review applications. Theoretical examinations were held on five occasions during the year to assess applicant's ability. The following licences were approved:

Category	1999	Total at 31-Dec-99
Apprentice	17	161
Journeyman	9	127
Master	2	39

Members of the Plumbers Examination Board for 1999 were:

Chairman: Mr Thomas Hill
Operations Manager WAC

Members: Mr Arthur Arch
Plumbing Inspector, BCU
Mr Delano Hislop
Master Plumber
Mr James Merren
Master Plumber

Secretary: Mrs Lisa Wood
Administrative Assistant, WAC

THE WATER AUTHORITY
OF THE CAYMAN ISLANDS

FINANCIAL STATEMENTS
1999

THE WATER AUTHORITY
OF THE CAYMAN ISLANDS

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1999

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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 1999 as set out on pages 3 to 17 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 1999, and the results of its operations and its cash flows for the year then ended in accordance with International Accounting Standards and the Water Authority Law (1996 Revision).

N K Esdaile
Auditor General

30 March 2001

Water Authority of the Cayman Islands
Balance Sheet
As At 31st December 1999
(Stated in Cayman Islands Dollars)

	Notes	1999	1998
CURRENT ASSETS			
Cash On Hand		1,650	1,550
Cash At Bank		449,070	291,439
Cash On Fixed Deposit		-	563,802
Total Cash & Cash Equivalents		**450,720**	**856,791**
Accounts Receivable	3	1,307,166	1,242,714
Inventory	4	530,475	427,430
Prepaid Expenses		59,056	40,701
Accrued Interest		-	712
Total Current Assets		**2,347,417**	**2,568,348**
CURRENT LIABILITIES			
Bank Overdraft	5	232,189	-
Accounts Payable		1,007,291	992,598
Contract Retention Payable		100,113	105,000
Interest Payable	6	32,912	32,912
Customer Deposits		721,177	642,403
Customer Deposit on Construction Contract		25,909	45,312
Customer Project Loans	8	66,866	68,423
Current Maturities On Long Term Liabilities	9	3,132,035	2,628,886
Total Current Liabilities		**5,318,492**	**4,515,534**
NET CURRENT LIABILITIES		**(2,971,075)**	**(1,947,186)**
FIXED ASSETS			
Land-Freehold		3,136,106	1,248,353
Buildings		1,973,358	1,947,866
Water Supply System		20,538,043	18,535,389
Sewerage System		8,655,198	8,819,823
Other Assets		1,410,072	1,099,644
Construction in Progress		567,479	904,534
Total Fixed Assets	7	**36,280,256**	**32,555,609**
TOTAL NET ASSETS		**33,309,181**	**30,608,423**
LONG TERM LIABILITIES	9	**(18,869,482)**	**(19,886,278)**
NET ASSETS		**$ 14,439,699**	**$ 10,722,145**
EQUITY REPRESENTED BY:			
Contributed Capital	10	1,078,621	1,006,859
Retained Earnings		13,361,078	9,715,286
Total Equity		**$ 14,439,699**	**$ 10,722,145**

On behalf of the Board on the 21st March 2001:

Mr. Brainard Watler
Chairman

Dr. Gelia Frederick van Genderen
Director

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

Water Authority of the Cayman Islands
Statement of Income and Expenses
For the Year Ended 31st December 1999
(Stated in Cayman Islands Dollars)

	Notes	1999	1998
INCOME			
Gross operating revenue		12,461,008	11,771,652
Less: Operating expenses		(7,769,528)	(7,680,324)
Gross operating surplus for year		**4,691,480**	**4,091,328**
Sundry income		606,745	708,624
Operating surplus for year		**5,298,225**	**4,799,952**
OTHER EXPENSES			
Administrative expenses		2,150,315	(1,645,053)
Net surplus before extraordinary item		**3,147,910**	**3,154,899**
Extraordinary Item:			
Change in accounting estimate for the Public Service Pensions Fund Past Service Liability	14	**497,882**	-
Net Surplus for year after extraordinary item		**3,645,792**	**3,154,899**
Retained Earnings at the Beginning of the Year		9,715,286	
Balance as previously reported		-	7,808,899
Less: Prior year adjustment	15	-	(548,512)
Restated balance		**9,715,286**	**7,260,387**
Retained Earnings before Contribution to Government		13,361,078	10,415,286
Contribution to Government		-	(700,000)
Retained Earnings at End of Year		**$ 13,361,078**	**$ 9,715,286**

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

Water Authority of the Cayman Islands
Statement of Income
For the Year Ended 31st December 1999
(Stated in Cayman Islands Dollars)

	1999	1998
OPERATING REVENUE		
Water Sales	9,970,570	8,905,402
Sewerage Fees	2,150,607	2,114,161
Septage Disposal	59,005	51,692
Agency Work	18,312	446,357
Connection and Miscellaneous Fees	262,514	254,040
Total Operating Revenue	**12,461,008**	**11,771,652**
SUNDRY INCOME		
Royalties	486,537	492,713
Statutory Licencing Fees	20,559	17,318
Interest Earned	47,328	125,932
Other	52,321	72,661
Total Sundry Income	**606,745**	**708,624**
TOTAL REVENUE	**$ 13,067,753**	**$ 12,480,276**

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

Water Authority of the Cayman Islands
Statement of Expenses
For the Year Ended 31st December 1999
(Stated in Cayman Islands Dollars)

	1999	1998
OPERATING EXPENSES		
Water Purchase	3,266,036	3,221,899
Loan Interest	1,119,570	1,248,428
Salaries	1,099,420	1,111,135
Depreciation Expense	981,510	899,051
Wages	393,669	261,543
Repairs and Maintenance	390,188	435,370
Electricity	276,965	286,785
Supplies	171,826	158,934
Miscellaneous	62,827	57,179
Obsolete Inventory Expense	7,517	-
Total Operating Expenses	**7,769,528**	**7,680,324**
ADMINISTRATIVE EXPENSES		
Salaries	879,450	687,218
Staff Training and Benefits	551,241	475,799
Depreciation Expense	125,466	56,228
Insurance	112,330	103,557
Office and Lab Supplies	77,854	64,610
Telephone and Utilities	122,516	59,134
Miscellaneous	81,551	57,991
Licenses and Dues	53,872	26,875
Legal Fees	40,723	27,058
Bad Debt Expense	50,000	44,014
Repairs and Maintenance	22,431	2,452
Loan interest	12,061	-
Audit Fees	12,000	12,000
Office Rental	8,820	28,117
Total Administrative Expenses	**2,150,315**	**1,645,053**
TOTAL OPERATING AND ADMINISTRATIVE EXPENSES	**$ 9,919,843**	**$ 9,325,377**

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 31st December 1999
(Stated in Cayman Islands Dollars)

	1999	1998
CASH FLOWS FROM OPERATING ACTIVITIES		
Net surplus before extraordinary item	3,147,910	3,154,899
Adjustments to reconcile net surplus to net cash provided by operating activities:		
Depreciation	1,106,976	955,279
Gain on Sale of Fixed Assets	(3,645)	(14,950)
Interest Earned	(47,328)	(125,932)
Interest Expense	1,131,631	1,248,428
	5,335,544	5,217,724
Net Change in Working Capital		
Interest Paid	(1,131,631)	(1,248,428)
Accounts Receivable	(64,452)	(76,356)
Inventory	(103,045)	12,055
Prepaid Expenses	(18,355)	(23,543)
Accounts Payable	14,693	654,485
Contract Retention Payable	(4,887)	105,000
Customer Deposits	78,774	90,728
Customer Deposits on Construction Contract	(19,403)	4,662
Customer Project Loans	(1,557)	(1,649)
Net Cash Provided By Operating Activities	4,085,681	4,734,678
CASH FLOWS FROM INVESTING ACTIVITIES		
Interest Received	48,040	144,313
Cost of Fixed Assets Purchased	(3,301,299)	(2,756,086)
Proceeds From Sale of Fixed Assets	10,100	14,950
Construction in Progress	337,055	(832,543)
Contributed Capital	71,762	176,919
Net Cash Used by Investing Activities	(2,834,342)	(3,252,447)
CASH FLOWS FROM FINANCING ACTIVITIES		
Proceeds of Long Term Debt	856,695	-
Repayment of Long Term Debt	(2,746,294)	(2,344,285)
Overdraft Facilities	232,189	(774,568)
Contribution to Government	-	(700,000)
Net Cash Used by Financing Activities	(1,657,410)	(3,818,853)
Net Increase In Cash & Cash Equivalents During the Year	(406,071)	(2,336,622)
Cash & Cash Equivalents at the Beginning of the Year	856,791	3,193,413
Cash & Cash Equivalents at End of Year	**$ 450,720**	**$ 856,791**

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

Water Authority of the Cayman Islands
Notes to the Financial Statements
For the Year Ended 31st December 1999
(Stated in Cayman Islands 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.

2. Significant Accounting Policies

The significant accounting policies adopted by the Water Authority in these financial statements are as follows:

(a) Basis of accounting

The financial statements of the Water Authority are prepared on the accrual basis under the historical cost convention and are in accordance with International Accounting Standards.

(b) Depreciation

Fixed assets are recorded at acquisition cost and with the exception of freehold land, are depreciated on the straight-line basis sufficient to write off the cost of each asset over its useful life 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 exchange are included in the Statement of Income and Expenses.

(d) Allowance for bad debts

Management of the Authority establishes an allowance for bad debts when it believes that accounts receivable balances 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.

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

(e) Inventory and Allowance for Obsolete Inventory

Inventory is accounted for on the first-in, first-out basis, and is stated at the lower of cost and net realizable value.

No account is taken of water inventory held in storage tanks and pipelines at 31 December 1999 due to its immateriality.

Management of the Authority establishes an allowance for obsolescence of inventory items when it believes 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.

Water Authority of the Cayman Islands
Notes to the Financial Statements
For the Year Ended 31st December 1999
(Stated in Cayman Islands Dollars)

2. Significant Accounting Policies (continued)

(f) 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.

(g) 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.

3. Accounts Receivable

	1999	1998
Accounts Receivable	1,511,166	1,396,714
Provision for Bad Debts	(204,000)	(154,000)
	$1,307,166	$1,242,714

4. Inventories

	1999	1998
Water Supply and Sewerage Materials	534,846	434,076
Office Supplies	13,229	3,437
Provision for Obsolete Inventory	(17,600)	(10,083)
	$530,475	$427,430

5. Bank Overdraft
The Cayman Islands Government provides a guarantee for an overdraft facility at one of the Authority's local bankers in the amount of US$500,000 (see also Note 9(a)).

6. Interest Payable

	1999	1998
On Customer Deposits	$32,912	$32,912

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 8th of February 1994. Interest payable on customer deposits has been calculated only on deposits which were taken before the 8th of February 1994 and which were held by the Authority on the date of these financial statements. Interest has been accrued up until the date on which the Regulation was revoked.

Water Authority of the Cayman Islands
Notes to the Financial Statements
For the Year Ended 31st December 1999
(Stated in Cayman Islands Dollars)

7. Fixed Assets

Cost	Freehold Land	Buildings	Water Supply	Sewerage	Other Assets	Construction In Progress	Total
At 31 December 1998	1,248,353	1,953,217	21,755,408	11,219,215	2,126,398	904,534	39,207,125
Additions	1,887,753	65,634	1,353,829	47,265	573,368	941,751	4,869,600
Disposals					(86,255)		(86,255)
Transfers between fixed assets			1,265,863	12,943		(1,278,806)	-
At 31 December 1999	3,136,106	2,018,851	24,375,100	11,279,423	2,613,511	567,479	43,990,470
Accumulated Depreciation							
At 31 December 1998	-	5,351	3,220,019	2,399,392	1,026,754	-	6,651,516
Charge for Year	-	40,142	617,038	224,833	226,920	-	1,108,933
Disposals	-				(81,757)	-	(81,757)
Capitalized during construction	-				31,522	-	31,522
At 31 December 1999	-	45,493	3,837,057	2,624,225	1,203,439	-	7,710,214
Net Book Value							
At 31 December 1998	$ 1,248,353	$ 1,947,866	$ 18,535,389	$ 8,819,823	$ 1,099,644	$ 904,534	$ 32,555,609
At 31 December 1999	$ 3,136,106	$ 1,973,358	$ 20,538,043	$ 8,655,198	$ 1,410,072	$ 567,479	$ 36,280,256

In October 1999, an additional 7.5 acres of land was purchased at the Red Gate Road location using a vendor financing arrangement. See also Note 9(g).

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 have estimated the cost of the upgrade at CI$11.25 million. If the project proceeds, a part of the existing works would be decommissioned by the end of 2002. Although the Authority's Board of Directors has approved the project there were further delays in obtaining Government permission for the financing of the project. Government did not give approval for the Authority to enter into the US$12.8 million loan agreement with CIBC Bank and Trust Company (Cayman) Ltd. for the financing of this project until September 2000, further delaying the project. The loan agreement was signed with CIBC in December 2000. See Note 9(a) for the terms of the loan. At the end of 1999, the Authority had financed the cost of the wastewater treatment works project ($393,133) from revenue.

In 2000 there will be an assessment of the extent of accelerated depreciation required, in future years, to write-down part of the existing sewerage system by the possible 2002 decommissioning date. Accelerated depreciation has not been charged in the 1999 financial statements as financing was not secured until the end of 2000 and up to that date it was not certain that the proposed upgrade would occur.

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.

Water Authority of the Cayman Islands
Notes to the Financial Statements
For the Year Ended 31st December 1999
(Stated in Cayman Islands Dollars)

7. Fixed Assets (continued)

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

1. Extension of the public water supply system to East End, in progress at December 1999.	$100,916
2. Engineering services, subsoil investigations and site preparation for subsoil investigations relating to the 2.5 MGD upgrade of the West Bay Beach Sewerage Treatment Works. See also Note 13.	$393,133
3. Incomplete installation of sewer system in Crystal Harbour.	$ 73,430
	$567,479

8. Customer Project Loans

Customer project loans represent balances outstanding at the year-end 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.

9. Long Term Liabilities

Long Term Liabilities	1999	1998
a) CIBC Bank and Trust Co. Cayman Ltd.		
Water Supply and Sewerage	11,908,232	13,806,902
Administration Building Loan	851,120	-
b) Caribbean Development Bank		
Water Supply	1,156,267	1,311,204
c) Cayman Islands Government		
Grand Cayman	4,307,879	4,500,773
Cayman Brac	702,000	772,200
Medical Expenses	91,632	91,632
d) Public Service Pensions Fund		
Past Service Pension Liability	58,937	615,789
e) Capital Contribution Loan	32,000	38,400
f) Ocean Conversion (Cayman) Ltd.	2,060,503	1,378,264
g) Property Loan	832,947	-
Total long term liabilites	22,001,517	22,515,164
Less current maturities	(3,132,035)	(2,628,886)
	$ 18,869,482	$ 19,886,278

Water Authority of the Cayman Islands
Notes to the Financial Statements
For the Year Ended 31st December 1999
(Stated in Cayman Islands Dollars)

9. Long Term Liabilities (continued)

a) The CIBC Bank and Trust Co. Cayman Ltd. (CIBC) 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 1st of March 1995. Monthly payments are due as follows:

1995-November 1997	US$200,000
November 1997-2004	US$275,000

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

On 17th August 1998 CIBC 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 over a fifteen-year period that commenced on 14th October 1999. At the end of 1999, CI$743,305 of the total facility remained unused. CIBC presently holds a Registered First Charge over the property.

b) The Caribbean Development Bank (CDB) water supply loan is to be repaid over 15 years at variable interest rates. 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) The Cayman Islands Government loan for Grand Cayman 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 1st of April 1995. This loan was increased by CI$450,000 in February 1997 in exchange for a 1.3-acre parcel of land that was sold to the Authority by the CI Government. As at year-end the terms of repayment relating to this additional loan have not been agreed upon.

The Cayman Islands Government loan for Cayman Brac attracts interest at a fixed rate of 8% per annum. This loan is repaid in quarterly instalments of CI$17,550, over a period of 15 years which commenced on the 1st of April 1995.

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 1999.

d) Refer to Note 12 for explanation of the Public Service Pensions 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 $64,000. In 1995

Water Authority of the Cayman Islands
Notes to the Financial Statements
For the Year Ended 31st December 1999
(Stated in Cayman Islands Dollars)

9. Long Term Liabilities (continued)

management agreed to repay the loan in ten (10) annual instalments of $6,400 each. This loan is interest free and the first instalment was made on the 1st of June 1995.

f) The Water Authority contracted with Ocean Conversion (Cayman) Ltd. ("OCL") on the 17th 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. 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 therefrom. The plant was completed in March 1998 and is financed at an 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 an 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.

g) 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 1st of October 1999, at an annual interest rate of 8%.

10. Contributed Capital

	1999	1998
Balance at beginning of year	1,006,859	829,940
Add: Received during year	71,762	176,919
Balance at end of year	$1,078,621	$1,006,859

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).

11. 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 $263,094.
2. The Auditor General has statutory responsibility for the audit of the Authority's financial statements. The Authority is required to pay an annual fee of $12,000 to Government for audit services.
3. The Authority recognized contributions payable to Government relating to 1998 in the amount of $700,000. This amount was fully paid in December 2000.

Water Authority of the Cayman Islands
Notes to the Financial Statements
For the Year Ended 31st December 1999
(Stated in Cayman Islands Dollars)

11. Related Party Transactions (continued)

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.

As detailed in Note 12 the Authority and its eligible employees paid contributions to the Public Service Pensions Fund during the year.

12. Pensions

In August 1993, the Governor approved the inclusion of the Water Authority's staff as being in employment under the term "Public Service" for the provision of the Pensions Law. At that time all employees who had been "seconded" from the Public Service Commission resigned and were employed directly by the Water Authority. The pension contributions for those employees and subsequent eligible Caymanian employees hired by 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'). The Fund has both an underlying defined benefit and defined contribution element. Before 14 April 1999 the scheme underlying the Fund is a defined benefit scheme. Participants joining the Fund after 14 April 1999 have their benefits defined by a defined contribution scheme.

An actuarial assessment, using the projected unit credit method of measuring costs and obligations, determined that the Authority's had an un-funded past service liability for pensions. Notwithstanding that some of these benefits have accrued whilst some of the Authority's present employees were employed by the Cayman Islands Government, the Authority has decided to recognise the entire amount of the un-funded past service liability in its financial statements. The Authority has started funding the past service liability by paying monthly contributions at the rate of 5% of eligible employees' monthly salaries to the Fund; a rate that was pronounced by the Pensions Board.

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 each contributed 6%, the same as in 1998, of employees' monthly salary.

In accordance with the National Pensions Law of June 1998, employees who are not qualified to join the Public Service Pensions Fund are enrolled in an approved local pension plan. During 1999 the Authority and its employees paid 5% and 5% respectively of salary contributions.

The total amount recognised as a pension expense during 1999 was $238,018 (1998: $224,279).

Based on *International Accounting Standards (IAS) 2000*, "if an enterprise applies *IAS19 Revised 1998*, to retirement benefit cost for financial statements covering periods beginning before 1st January 1999, the enterprise should disclose the fact that it has applied this Standard instead of *IAS 19*, Retirement Benefit Cost, approved in 1993. The Authority has adhered to this standard.

Water Authority of the Cayman Islands
Notes to the Financial Statements
For the Year Ended 31st December 1999
(Stated in Cayman Islands Dollars)

13. Commitments

Commitments at December 31,1999 are as follows:

Authorised and Contracted	**Cost Incurred to 31/12/99**	**Estimated Cost to Completion**	**Total Cost**
	$	$	$
a) Engineering and Consultancy Fees:			
Globaltech Inc.	75,966	41,882	117,848
Polytron Inc.	32,596	48,895	81,491
b) Engineering Services and Equipment:			
Ocean Conversion (Cayman) Ltd.		55,000	55,000
	108,562	145,777	254,339

a) In August 1998 consulting engineers were invited to bid on the Tender Documents of the Sewage Treatment Works Upgrade for the "Provision of General and Mechanical Engineering Services" and for the "Provision of Electrical Engineering Services." These contracts were awarded in late September 1998 to Globaltech Inc. and Polytron Inc. respectively.

b) In October 1999 the Authority entered into a revised agreement with Ocean Conversion (Cayman) Ltd. to provide the Water Authority with engineering services and some equipment to proceed with the retrofitting and expanding of the reverse osmosis plant in Cayman Brac at a cost of CI$55,000.00. The engineering services will provide the Water Authority with sufficient information to purchase all equipment described in their scope and retrofit the plant.

In September 2000, Government gave approval for the Authority to enter into the US$12.8 million loan agreement with CIBC Bank and Trust Company (Cayman) Ltd. for the financing of the Grand Cayman Wastewater Treatment Works Project. The loan agreement was approved by CIBC under the terms and conditions of the facility letter dated 15th September 1999 and was signed on 29th December 2000. 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. The loan is repayable on the first business day of the month following the date of expiry of the CRHP and on each business day immediately succeeding 47 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 48 months, an aggregate of US$250,000 per month including principal and interest.

14. Extraordinary Item

In June 1997 an actuarial assessment of the Authority's unfunded past service liability for pensions was completed. The liability was assessed at $677,000 as of 1st January 1997. The matter was not accounted for in the Authority's 1997 financial statements because, in 1997, the Pensions Law did not contain any provisions relating to unfunded past service liability for pensions.

Water Authority of the Cayman Islands
Notes to the Financial Statements
For the Year Ended 31st December 1999
(Stated in Cayman Islands Dollars)

14. Extraordinary Item (continued)

On 8th December 1998 the Pensions (Contribution Rate) Regulations, 1998 was passed. Those Regulations allowed the Authority to recognise the unfunded past service liability within its financial statements. The Authority reduced its Retained Earnings as of 1st January 1997 by $677,000 and accordingly, the 1997 financial statements were restated. This liability was also accounted for in the Authority's 1998 financial statements.

The 1st January 1997 actuarial assessment of the Authority also determined the required contribution rates to adequately fund pension benefits accruing to its employees. The assessment identified that if the past service liability of $677,000 was not immediately paid, total contributions (employees' and employer's contributions) would have to be at 22% of employees' emoluments to adequately fund pension benefits. The Authority and its employees pay contributions at the rate specified by the Pensions Board: 6% each for employee and employer plus, an additional 5% in respect of the un-funded past service liability, a total contribution rate of 17%.

In September 2000, the Pensions Board reassessed the unfunded past service liability as at 1st January 1999 and stated that the Authority's unfunded past service liability now was reduced to $179,118. Therefore, the Authority has increased its Retained Earnings by $497,882 as of 1st January 1999 to recognize this change in accounting estimate.

Based on *International Accounting Standards (IAS) 8, Changes in Accounting Estimates,* "the effect of a change in an accounting estimate should be included in the determination of net profit or loss in: (a) the period of the change, if the change affects the period only; or (b) the period of the change and future periods, if the change affects both." The Authority has adhered to this standard.

15. Prior Year Adjustment and Reclassification

Prior to 1998 the Authority did not have a fixed asset register. A fixed asset register was established during 1998. It was found that fixed assets had been over depreciated by $128,488. Of this amount $44,482 occurred in 1997 and the remaining $84,006 related to 1996 and prior years.

This matter was corrected in the preparation of the 1998 financial statements and accordingly, the 1997 results have been restated.

The overall effect of recognising the unfounded past service liability for pensions and the write-back of over-depreciation of fixed assets is to reduce Net Assets and Retained Earnings by $548,512 at 31st December 1997 (1996: $592,994).

16. Fair Value Disclosure of Financial Instruments

International Accounting Standards require all entities to disclose the fair value of financial instruments, both assets and liabilities that are recognised and not recognised in the balance sheets for which it is practicable to estimate their fair value. At December 31, 1999 the following methods and assumptions were used by management to estimate the fair value of each of the financial instruments:

(a) *Bank Balances*
The carrying amount approximates fair value.

(b) *Accounts receivable/other receivables/accounts payable and other liabilities*
The carrying amount approximates fair value.

Water Authority of the Cayman Islands
Notes to the Financial Statements
For the Year Ended 31st December 1999
(Stated in Cayman Islands Dollars)

16. Fair Value Disclosure of Financial Instruments (continued)

(c) Current and long term debt

Included in these balances are certain fixed rate and non-interest bearing loans. The carrying value of these loans represents the principal balance owing. The anticipated future principal repayments have not been discounted, as it would not provide any additional relevant information.

All other loans are floating rate and therefore bear interest at the market rate. The carrying value of these loans approximates fair market value.

Fair value estimates are made at a specific point 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 could significantly affect the estimates.

THE WATER AUTHORITY
OF THE CAYMAN ISLANDS

ANNUAL REPORT
2000

The Water Authority of the Cayman Islands

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 Gender Affairs

THE WATER AUTHORITY
OF THE CAYMAN ISLANDS

ANNUAL REPORT
2000

Contents

Chairman's Report

The Year 2000

The year 2000 was a year of many exciting developments for the Water Authority. This year, with the hype of being the beginning of the new millennium was challenging and demanding year for the Authority. The Authority was fully Y2K compliant by the end of the 1999 with the change over being a non-event with no disruptions to service.

Yet again, the Authority experienced substantial growth in the demand for public water supply, seeing a 16% increase over the demand in 1999. With this type of remarkable growth, the Authority is continually challenged to keep pace with the water and wastewater infrastructure required to meet the Islands' needs. Moreover, forecasts indicate growth in water demand averaging about 11-12% per annum over the next five years. 2000 remained a good year for the Authority financially and developmentally.

The Water Authority successfully met the challenge to provide vital water and wastewater infrastructure necessary to support the growth and development of these islands. Good progress was made on the East End Pipeline Extension project, from the Blowholes into the middle of East End. Due to the growing demand for drinking water in the eastern districts, the Authority will be required to ensure that additional water storage and pumping capacity are in place by early 2004. Unfortunately, the Authority was unable to secure planning permission for a North Side property in 2000 and was not able to find another suitable site in the Frank Sound area. This setback has delayed the plans for the North Side expansion, however the Authority will continue to review its options.

Following successful negotiations with Ocean Conversion (Cayman) Ltd (OCL) on the terms of the water production licence for the Red Gate Reverse Osmosis Plant, the Authority was able to secure a savings of up to $800,000 per year on water purchases that will be effective 1 December 2001 after refurbishing of the plant. Another significant development was the completion of the master plan for the Red Gate Site to include the additional 7.5 acres of adjacent property purchased in 1999. The investment in this property was timely and allows the Authority to plan water production and storage facilities for the long-term.

The Authority continued to develop its operations in Cayman Brac with the construction planned for a storage building and the successful completion of repairs on the 500,000 US gallon reservoir. Work on the electrical design for the new Reverse Osmosis (RO) plant, that will double the water production capacity, in the Brac commenced in 2000.

Work continued on the detailed engineering design and obtaining financing for the Grand Cayman Wastewater Treatment Works in 2000, in addition, the Authority carried out preliminary site work. Although there were some delays during the year, the financing package for the project from Canadian Imperial Bank of Commerce (CIBC) of US$12.8 Million was approved by Executive Council in late 2000 and it is expected that this important project will go to tender in early 2001.

Of great significance this year is that the Authority after several years of discussions with Government was able to reach an agreement on the matter of contributions to Government revenue. The Executive Council and the Authority's Board have approved a formula that sets out the amount the Authority will be required to contribute. Because this will impact the availability of retained earnings for capital projects, the Authority and Government have entered into discussions on a set amount of contributions for the next 2 years.

In October 2000, the Authority underwent a change in top management when the previous Director, Mr Frederick McTaggart resigned to take up a position with Consolidated Water Company. Mr McTaggart had been with the Authority for over thirteen years and had served in the capacity of Operations Engineer, then Deputy Director with promotion to Director in 1994. We wish Mr McTaggart well in his new position and thank him for his years of service to the Authority and his contribution to the development of water and wastewater infrastructure in the Cayman Islands. The Board was very pleased to promote the then Deputy Director, Dr Gelia Frederick-van Genderen to Director. Dr Frederick-van Genderen is another long-serving Water Authority employee who the Board feels confident is ready to take the helm and continue to lead the Authority into the next stage of its development. As part of this process several changes were made in the departmental structure of the Authority.

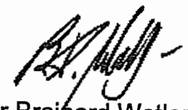
The Authority continues to invest significantly in training and development of personnel as we recognise that our employees are our most important resource. Employees are encouraged to take advantage of training and learning opportunities offered through various local and overseas institutions and organisations.

The Authority continued to support various sports and activities related to young people as well as other charitable organisations within the local community. Additionally, our employees are encouraged to give back to the community by contributing and dedicating time to assisting those less fortunate through Water Authority supported activities and projects such as Paint Your Heart Out Cayman and Project Angel Tree.

Again, this year, we were deeply saddened by the sudden passing of another Water Authority employee. Our dear friend and hard-working employee, Herbert McField died suddenly on 26 October 2000. Mr McField joined the Water Authority in 1995 and worked with the Authority's New Works crew. He was not afraid of hard work and took great pride in his contribution to the progress of the pipeline extensions, we were privileged to have known him and will greatly miss him.

The Authority continued to carry out its statutory functions with regard to protection of groundwater resources through monitoring of quarry operations, groundwater abstraction, groundwater pollution incidents, development control and effluent disposal.

The Board and I look forward to the continued success of the Water Authority in the future, and appreciate the time and effort put in by each and every person whose contributions have made the Authority a model organization in the corporate community.



Mr Brainard Watler
Chairman

1. GENERAL INFORMATION

The Water Authority of the Cayman Islands is a statutory body, incorporated through the Water Authority Law, 1982 (Law 18 of 1982). The primary mission of the Water Authority is to provide public water and wastewater infrastructure for the Cayman Islands, and to protect and manage the water resources of the country.

Over the past eighteen years, the Water Authority has carried out a number of projects to map and monitor the groundwater resources of the country. In addition, the Authority constructed the country's first public sewerage system in the West Bay Beach resort area, and constructed public water supply systems on both Grand Cayman and Cayman Brac. Expansion of these systems is on-going.

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 generally meets once every two months and five meetings were held in 2000.

2000 Water Authority Board Members

Chairman:	Hon John B McLean OBE MLA JP
Members:	Permanent Secretary, A, C, E, NR Mr Kearney Gomez JP Senior Assistant Secretary A, C, E, NR Mr Timothy Hubbell Deputy Financial Secretary, Mr A Joel Walton JP Hon Truman Bodden OBE MLA JP Mr Harry Chisholm JP Mr Richard Flowers Mr Stanley Gourzong Mr Brainard Watler Mr Otto Watler Mr Jerry Wood
Secretary:	Director of the Water Authority Dr Gelia Frederick-van Genderen

In October 2000, the Authority underwent change in top management when the previous Director resigned and the then Deputy Director was promoted to Director. As part of this process several other senior management promotions and changes were made in the departmental structure of the Authority.

New Customer Connection Policy

In May 2000, the Authority changed its customer application for services procedures in so that all accounts are now opened only in the name of the owner of the premises.

2. FINANCE

General Observations

The Water Authority maintained a positive financial position in 2000. Operating revenue and overall revenue increased by 13% from 1999. The largest part of the increase was due in part to increase in Water Sales. Operating expenses increased by 20% from 1999. The largest part of the increase was due in part to the acceleration of depreciation for the Sewage Treatment Works. Administrative expenses increased by 11% from 1999. The Authority's operating profit increased by 2% from 1999 and the net profit decreased by 4% from 1999 (which reflects the higher expenses as explained above).

Loans

In September 2000, Government gave approval for the Authority to enter into the US$12.8 million loan agreement with CIBC Bank and Trust Company (Cayman) Ltd. for the financing of the Grand Cayman Wastewater Treatment Works Project. The loan agreement was approved by CIBC under the terms and conditions of the facility letter dated 15 September 1999 and was signed on 29 December 2000.

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. The loan is repayable on the first business day of the month following the date of expiry of the CRHP and on each business day immediately succeeding 47 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 48 months, an aggregate of US$250,000 per month including principal and interest.

Government Contribution

The Water Authority and the Cayman Islands Government agreed that Authority would pay a dividend $150,000.

Water and Sewerage 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.

2000 Public Water Supply Rates

Group	$ per cubic metre
Groundwater	$2.33
Desalinated water Grand Cayman	
Residential under 12 m^3/month	$4.01
Residential over 12 m^3/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

2000 Public Sewerage Rates

Group	SFU's per ft^2	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 and 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	

3. HUMAN RESOURCES

The Authority's staff complement at the end of the year was as follows:

Water Authority Staff Complement 2000

Director	G L Frederick-van Genderen PhD
Deputy Director	G Glidden BA CPA
Financial Controller (Designate)	S Glidden BA
New Works Engineer	T van Zanten MSc Eur Eng MCIWEM
Water Resources Engineer	H-J van Genderen MSc Eur Eng
Information Systems Manager	J Bodden BA
Operations Manager-WS	T Hill Master Plumber
Operations Manager-WW	J Gadsby
Customer Service Manager	M Ebanks MBA
Operations Manager-Cayman Brac	B Banks
Accountant	R Scott
Accounts Receivable Officer	C Schrock
Administrative Assistant-HR	J Dixon
Assistant Operator –WS	G Bush
Assistant Operator –WS	J Cruz
Assistant Operator-Collection System	K Connor
Assistant Operator-Collection System	J Groves
Assistant Operator-Collection System	D Myles
Assistant Operator-Collection System	E Hydes
Assistant Operator-CYB	C Scott
Assistant Operator-WS	V Grant
Assistant Operator-WS	R Grant
Assistant Operator-WW	C Ebanks
Assistant Utility Services Supervisor	G Hydes
Cashier	B Ebanks
Cashier	H Ebanks
Connections Foreman-WS	H Myles
Connections Foreman-WS	T Bodden
Customer Service Representative	S Bodden
Customer Service Representative	D Ebanks
Debt Collection Officer	S Ebanks
Design Engineer	C Garbutt BSc, Eng, M.J.I.E.
Design Engineer	M Tedd BSc, C..Eng., M.I.C.E.
Development Control Technologist	C Crabb BSc
Draughtsman	G Lewis
Engineering Technician-Water Resources	V Rankine
Executive Officer-Cayman Brac	K Pietras
Executive Secretary	D Shaw
Foreman-NW	L Ramirez
Laboratory Manager	B MacAree BSc MCIWEM
Laboratory Technician	N Powery
Laboratory Technologist	M Martinez-Ebanks BSc
Laboratory Technologist	W Warren BSc
Labourer-CYB	D Martin
Labourer-WS	L Rodriguez
Labourer-WS	J Parchman
Library/Records Administrator	B Speirs
Messenger	T McField
Meter Reader	C Morgan
Meter Reader	N Welds
Meter Reader	C Richards

Water Authority Staff Complement 2000 *cont'd*

Meter Reader	M Bodden
Meter Reader	H Ebanks
Operator- Collection System	S Campbell
Operator- Collection System	A Bennett
Operator-Cayman Brac	C Scott
Operator-Collection System	G Manning
Operator-Heavy Equipment New Works	W Watler
Operator-Heavy Equipment Operations	B Watler
Operator-Heavy Equipment Operations	M Powery
Operator-Heavy Equipment Operations	D Smith
Personnel Administrator	S Carter
Pipe Layer-NW	K Johnson
Procurement Officer	D Manderson
Quality Assurance Inspector	G McLean
Receptionist	L Stephenson
Reinstatement Foreman-WS	V Whittaker
Senior Accountant	T Hew
Senior Operator-Collection System	L Tivy
Senior Pipe Layer-NW	G Riapira
Skilled Labourer-NW	G Kelly
Skilled Labourer-NW	J Moore
Sr Customer Service Representative	Z Bush-Ramos
Stores Clerk	G Smith
Superintendent- Construction	L Washburn
Superintendent-Collection System	P Echenique
Superintendent-New Works	J Hunter
Trainee Draughtsman	A Echenique
Treatment & Distribution Operator-WS	L Sanchez
Utility Billing Officer	V Fallas
Utility Services Supervisor	A Archibold
Vehicle Maintenance Officer	B Ingram
Water Resources Technologist	R Marsden Chem Tech Diploma

The following changes in personnel occurred during the year:

F W McTaggart resigned as Director on 13 October after thirteen years of service.

H McField passed away on 26 October after five years of service.

During the year, the following employees were promoted:

- G Frederick-van Genderen was promoted to Director.
- G Glidden was promoted to Deputy Director.
- S Glidden was promoted to Financial Controller.
- A Archibold was promoted to Utility Services Supervisor.
- G Hydes was promoted Assistant Utility Services Supervisor.
- V Fallas was promoted to Utility Billing Officer.
- Z Bush-Ramos was promoted to Senior Customer Service Representative.
- D Shaw was promoted Executive Secretary.
- G Riapira was promoted to Senior Pipelayer-NW.
- L Ramirez was promoted to Foreman-NW.
- K Johnson was promoted to Pipelayer-NW.
- G Kelly was promoted to Skilled Labourer-NW.
- J Moore was promoted to Skilled Labourer-NW.
- A Bennett was promoted to Operator-Collection System.
- G Manning was promoted to Operator-Collection System.

At the end of the year the total staff complement stood at 83 of which 65% are Caymanian. Twenty-seven percent of the non-Caymanian staff are married to Caymanians or have Caymanian family connections.

Awards
In 2000, the Authority recognised employees in the following categories: the prestigious Chairman's Award, the "Employee-of-the-Quarter" and the ten-year service award.

Chairman's Award
The distinguished Chairman's Award for 2000 was awarded to Brenda MacAree for her outstanding service and dedication to duty.

Ten and Fifteen Years of Service Award
At the annual Christmas dinner, several employees were recognised for their ten or more years of continuous service to the Authority. These were:

15 Years of Service
Thomas Hill, Operations Manager-Water Supply.

10 Years of Service
Burnstein Banks, Operations Manager-Cayman Brac.

Employee-of-the-Quarter Awards
January-March
The first quarter award was presented to Vincent Grant in recognition of his hard work and leadership in re-routing and extending the water main in Vienna Circle.

April-June
The second quarter award was presented to Anthony Archibold, George Hydes, Clydeton Morgan, and Curtis Richards, for their outstanding performance in the Metering Section and continuous commitment to the Authority.

July-September
The third quarter award was presented to George Bush for the interest, efforts, hard work, and dedication he displayed in his performance and his continuous commitment to the Authority.

October-December
The fourth quarter awards were presented to Barrington Ingram, Reyna Scott, and Carol Schrock.

- Barrington Ingram, for his exemplary performance and dedication as Vehicle Maintenance Officer.
- Reyna Scott, for her hard work and dedication in reorganizing and improving the efficiency of the accounts payable systems.
- Carol Schrock, for her hard work and dedication in improving the Plumbers Licence System.

Training
Training and personal development strategies are used to ensure that employees have the necessary knowledge, skills and experience required to meet the continually changing demands of the Authority. Employees are encouraged to take advantage of training opportunities for their own personal development as well as that of the Authority.

The Authority continued its participation in the Caribbean Basin Water Management Programme (CBWMP), a training programme for water utilities in the Caribbean region.

The following training events occurred in 2000:

Community College of the Cayman Islands
- One employee completed the Introduction to Computers course.
- Two employees completed the Introduction to Excel 2000 course.
- Three employees completed the Intermediate Excel 2000 course.
- One employee attended the Introduction to Word 2000 course.
- One employee completed the Intermediate Word 2000 course.
- Three employees completed the Advanced Word 2000 course.
- One employee enrolled in the Publisher 2000 course.
- Two employees completed the Introduction to Access 2000 course.
- Five employees enrolled in the English as a Second Language course.
- On employee attended the Bookkeeping and Accounts Level 1 course.
- One employee enrolled in Pre-calculus with Trigonometry college course.

Training activities through CBWMP:
K Connor completed an operator certification course in Water Works and Sewage Plant Operation and Maintenance at the University of Technology in Kingston, JA through CBWMP.

Miscellaneous Short-term Training
- Two employees attended the Grammar and Writing Workshops Level I & II at the Professional Training Centre of the Chamber of Commerce.
- All staff participated in mandatory training in the use of fire extinguishers facilitated by the CI Fire Service.
- Six supervisors from various departments participated in the Transformation Course facilitated by Plus Consulting Inc. of London, UK.
- All senior managers participated in a team building exercise facilitated by Ros Taylor of Plus Consulting Inc.
- Several members of staff participated in First Aid Refresher courses facilitated by the Emergency Medical Service Department of CI Health Services.
- J Smith was enrolled in a correspondence course in Water Treatment at the University of Florida in Gainesville, FL.
- Five Lunch and Learn sessions were organized for all staff on such topics as

HIV/AIDS, Parenting Techniques, Domestic Violence, Writing a Will and Aetna Health Insurance.

Workshops and Conferences Overseas

- S Ebanks attended a workshop entitled, "How to Legally Collect Accounts Payable" in Tampa, FL.
- S Glidden attended the Diamond Software User Group Conference in Canada.
- W Warren and N Diaz-Powery attended the Introduction to DR/4000 Spectrophotometer Lab Management and Quality Control course in Loveland, CO.
- J Gadsby and P Echenique attended the Advanced Municipal Sewer and Water Trenchless Rehabilitation workshop in Chicago, IL.
- R Marsden and V Rankine attended the Complete Groundwater Monitoring Field Course in Orlando, FL.

Professional Qualifications and Degree Programmes

- S Carter is pursuing an on-line degree in Business Administration through Saint Leo College, FL.
- B Whittaker commenced a 4-year BSc in Civil Engineering at Florida Institute of Technology (FIT), Melbourne, FL.
- B MacAree commenced a self-funded MSc Degree programme with University of Bath, UK.

The Authority continues to assist school groups and other organisations with educational tours of the laboratory and operation facilities.

4. QUALITY CONTROL AND RESEARCH

Laboratory

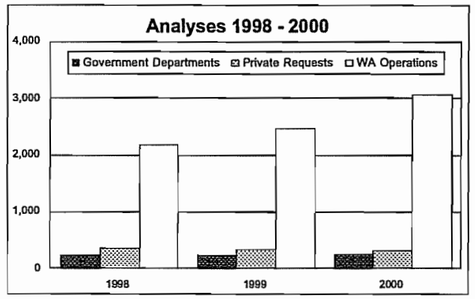
The laboratory carries out the chemical and biological analyses for the Authority's operations, monitoring programmes and private requests. The major monitoring programmes of the laboratory are:

- 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;
- Compliance monitoring of private wastewater treatment works.

The laboratory continued to strive towards A2LA accreditation (American Association for Laboratory Accreditation) this year. In June 2000 the laboratory commenced participation in the Aquacheck (WRc, UK) Proficiency Testing Programme for Microbiology and Chemistry. A Quality Assurance Programme Plan for the laboratory was developed, documented and put in to operation in August 2000. By the end of the year the laboratory had documented over twenty standard operating procedures (SOPs) relating to the Authority's monitoring programmes. It is anticipated that a pre-audit of the laboratory will be carried out in early 2001 in order to determine the strengths and weaknesses of the laboratory in terms of meeting its accreditation goals.

Monitoring Programmes

The majority of the laboratory's activities relate to comprehensive monitoring programmes of the Authority's operations. The number of samples analysed in 2000 increased by 20% to 3,675 compared to 1999.



The new Hach online monitoring system for chlorine residuals, pH and electrical conductivity (EC) was installed at the Lower Valley Water Works in August 2000. This system in addition to the new Supervisory Control and Data Acquisition (SCADA) system, that was installed in June 2000, has enabled the Authority to continue to effectively monitor and control operational and performance data at the George Town, Lower Valley and Cayman Brac pumping facilities.

Public Piped Water Supply-Grand Cayman

Monitoring of the distribution system continued 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 Water Works and the Lower Valley Water Works, is tested twice daily for the 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 each working day. Monitoring of sample taps within the distribution system is carried out in accordance with a set schedule.

Quality of Water entering Distribution System from Red Gate Water Works

Parameters	Mean
Free Chlorine (*mg/l*)	0.46
pH (*units*)	7.50
EC (*µS/cm*)	331
TDS (*mg/l*)	158
Zinc (*mg/l*)	0.27
Orthophosphate (*mg/l*)	0.74
Heterotrophic bacteria (*estimated cfu/ml*)	0

All faecal coliform bacteria results were negative.

Quality of Water entering Distribution System from Lower Valley Water Works

Parameters	Mean
Free Chlorine (*mg/l*)	0.54
pH (*units*)	7.52
EC (*µS/cm*)	355
TDS (*mg/l*)	169
Zinc (*mg/l*)	0.47
Orthophosphate (*mg/l*)	1.34
Heterotrophic bacteria (*estimated cfu/ml*)	0

All faecal coliform bacteria results were negative.

Testing of the feedwater and product water of the Red Gate Water Works and Lower Valley Water Works indicated that the feedwater is free of micropollutants and that the levels of disinfection by-products in the product water is well below the World Health Organisation (WHO) Drinking Water Guideline Values. The metal boron is present in the product water at levels exceeding the WHO Drinking Water Guideline Value.

The laboratory collected 105 samples in relation to queries from customers. 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 the 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 analyses are carried out weekly. Three sample taps within the distribution system are monitored monthly.

Quality of Water entering Distribution System from West End Water Works

Parameters	Mean
Free Chlorine *(mg/l)*	0.25
pH *(units)*	7.58
TDS *(mg/l)*	148
Zinc *(mg/l)*	0.43
Heterotrophic bacteria *(estimated cfu/ml)*	0

All faecal coliform bacteria results were negative.

Testing of the feedwater and product water of the West End Water Works indicated that the feedwater is free of micropollutants and that the level of disinfection by-products in the product water is well below the WHO Drinking Water Guideline Values.

East End Observation Wells and Wellfield

The Authority monitored 4 observation wells located in the East End lens during the dry season of 2000. Two of the wells are in the brackish water zone.

East End Observation Wells Monitoring Results

	Number of samples with Total coliform bacteria ≥10 cfu/100ml	Number of samples with Faecal coliform bacteria >0 cfu/100ml
Dry Season (May)	2	3

Testing of the feedwater of the East End reservoir indicated no presence of micropollutants or pesticides. However the levels of trihalomethanes in the product water continued to exceed the WHO Drinking Water Guideline Values.

Lower Valley Domestic Wells

Selected domestic wells in the Lower Valley area are tested usually twice yearly for total and faecal coliform bacteria, TDS, EC, and pH. Analyses were carried out this year only during the dry season (27 wells) due to the participation of the laboratory in the Aquacheck (UK) Proficiency Testing Programme.

2000 Lower Valley Domestic Wells Monitoring Results

	Percentage with Total coliform bacteria ≥10 cfu/100ml	Percentage with Faecal coliform bacteria >0 cfu/100ml	Percentage with EC ≥1600µS/cm
Dry Season (May)	41	36	30

Wastewater Treatment Works

The performance of the waste stabilisation ponds was monitored every two months. Twelve pumping stations continued to be monitored weekly for EC that is used as an indicator of groundwater intrusion into the sewerage system.

The overall unfiltered biochemical oxygen demand (BODuf) removal efficiency of the waste stabilisation ponds decreased compared to 1999 and faecal coliform removal efficiency remained at just over 2 logs.

Operational Performance of the Sewage Treatment Works

Year	Average BOD-5 day (mg/l) Raw sewage	Final effluent	%age removal	Average Daily Flow (m³/day)	Average Raw sewage EC (µS/cm)
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)

*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 Sewage Treatment Works

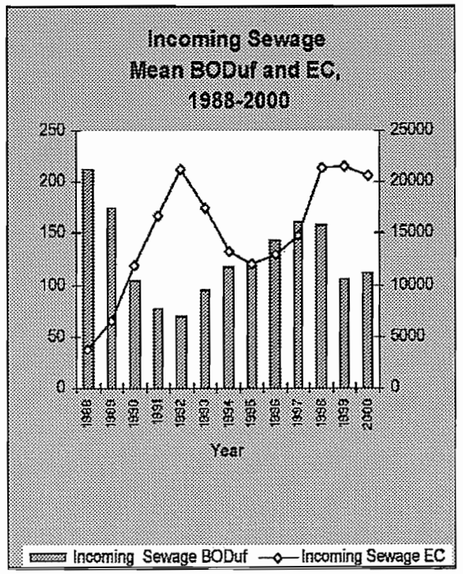
Year	Average FC (cfu/100ml) Raw sewage (g)	Final effluent (g)	%age reduced
1988	4.39×10^6	1.68×10^3	*99.962*
1989	1.62×10^8	2.87×10^3	*99.998*
1990	3.18×10^8	7.30×10^3	*99.998*
1991	2.77×10^6	1.55×10^4	*99.440*
1992	1.52×10^6	5.84×10^3	*99.616*
1993	3.22×10^6	4.26×10^3	*99.868*
1994	9.29×10^7	2.04×10^4	*99.904*
1995	1.38×10^7	2.53×10^4	*99.817*
1996	6.89×10^6	2.75×10^4	*99.601*
1997	4.36×10^6	2.13×10^4	*99.512*
1998	3.46×10^6	1.53×10^4	*99.558*
1999	4.91×10^6	1.28×10^4	*99.740*
2000	7.21×10^6	4.36×10^4	*99.396*

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

The salinity of the sewage remains significantly higher than the mean levels in 1997. It is estimated that more than 1/3 of the flow collected and pumped is due to saline groundwater infiltration. The Authority

commenced a major diagnostic review of the collection system in 2000.

The following graph compares the EC and unfiltered BOD since the commissioning of the West Bay Beach Sewerage System in 1988. The average salinity of the incoming sewage was slightly lower compared to 1999.



Sludge depth is measured annually as part of the operational performance monitoring of the sewage treatment works. There were no significant changes in mean sludge depth in the facultative ponds; mean sludge depth in facultative pond 1.1 decreased by 4% from that of 1999 while facultative pond 1.2 showed a slight increase of 4%. Both maturation ponds showed increases in mean sludge depth from that measured in 1999. However, the increases were minor with maturation pond 2.1 increasing by 7%, and pond 2.2 increased by 6% over last year's levels.

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

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

George Town Harbour Water Quality Monitoring Programme

The George Town Harbour Water Quality (formerly called, Hog Sty Bay) monitoring programme commenced in 1991 as a joint study between the Water Authority and the Department of the Environment (DoE). The results to date have not identified any significant pollution, however, the programme will continue in order to identify and observe trends.

The programme includes 17 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 17.2 cfu/100ml at sample point 1-additional. The highest individual faecal coliform result obtained in 2000 was >200 cfu/100ml at sample point 1-additional.

The overall average enterococci bacteria densities in 2000 have decreased slightly since 1999. The highest average for enterococci was 2.8 cfu/100ml at sample point 1-surface with the same sample point having the highest individual enterococci result of 37 cfu/100ml.

George Town Harbour Water Quality Monitoring Programme Results		
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

The physico-chemical parameters of the 17 main sample points are as expected for tropical marine coastal waters. Salinity results for sample point 1-additional are generally lower than that of the other 17 samples. This sample is collected at a fissure in the ironshore of the coast and appears to be influenced by the outflow of brackish groundwater containing hydrogen sulphide. The Authority will continue to include this point in the monitoring programme.

Both bacteriological parameters, faecal coliforms and enterococci, are within the United States Environmental Protection Agency (USEPA) Standards and the European Union Mandatory Standards for bathing water for all samples.

Papers and Reports

Reports

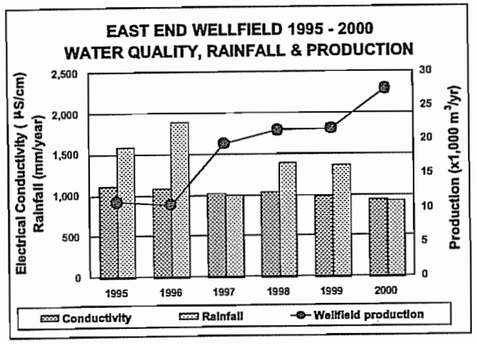
- Caribbean Utilities Company Ltd. application for permits to abstract and dispose cooling water for 2000 general expansion.
- Grand Cayman Water Distribution System –Long Term Water Production Options.
- Final Report on Feasibility of Extending the Cayman Brac Water Distribution System from West End to Spot Bay.

5. WATER RESOURCES

Groundwater Monitoring

The Authority's groundwater monitoring programme consists of collection of data from a network of observation wells, piezometers raingauges and water level recorders. In 2000 a trial with a datalogging raingauge was started at the Wastewater Treatment Works. As this instrument provided detailed and reliable data on rainfall it was decided to purchase more datalogging raingauges in the coming years to replace the manual gauges in use at various locations. By mid 2000 a datalogging water level recorder was installed in South Sound to record tidal levels.

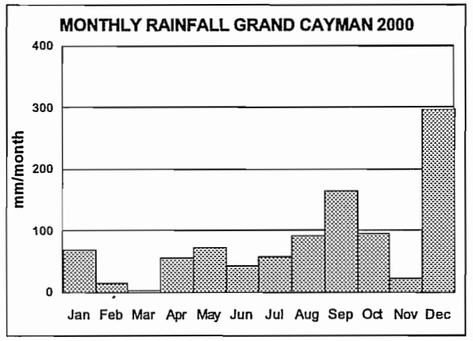
Monitoring of the water quality of the fresh groundwater pumped from the production wells located on the East End lens indicated no significant changes in Electrical Conductivity since the inception of the wellfield in 1986.

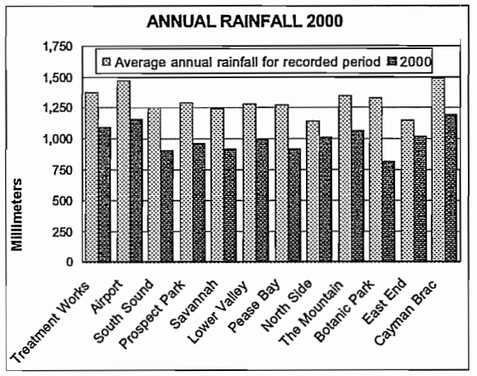


Rainfall Distribution

Daily records of rainfall data are collected by dedicated volunteers in various locations in Grand Cayman. These data are supplemented with records that the Authority collects at the Wastewater Treatment Works, the Lower Valley Water Works and the West End Water Works in Cayman Brac. In addition the National Weather Service provides rainfall data from Owen Roberts Airport and the Queen Elizabeth II Botanic Park provides data from

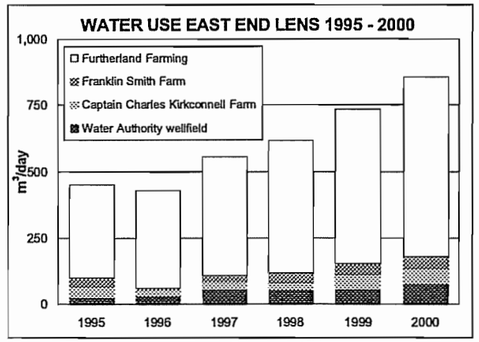
their raingauge at the Botanic Park. The year 2000 was a dry year; only the month December produced an unusual high amount of rain. The average for Grand Cayman for all stations combined was 992 mm (39") compared to 1,702 mm (67") in 1999 and 1,403 mm (55") in 1998. Rainfall at the West End Water Works in Cayman Brac was 1,205 mm (47").





Groundwater Use - East End Fresh Water Lens

The Authority continues to monitor groundwater use from the East End lens at the three commercial farms and the Authority's wellfield. Total abstraction in 2000 averaged 858 m^3/day (225,000 US gal/day).



Groundwater Remediation of Fuel Spills

The Authority in conjunction with the Department of the Environment and the Department of Environmental Heath continue to monitor the remediation of several cases of groundwater pollution. The companies that are involved in the clean-ups of these spills continued their cooperation with the different government agencies and continued upgrades of their fuel storage equipment. No major spills occurred in 2000.

Caribbean Utilities Company - Groundwater Abstraction and Disposal

After a process that commenced in 1998 the Authority granted Caribbean Utilities Company Ltd. 2 groundwater abstraction licences and 3 disposal permits to use groundwater to cool their 2 new 12MW generators at CUC's plant on North Sound Road. The abstraction takes place from 2 wells at 100 l/s (1,630 USgpm) each and the cooling water is discharged in 2 wells at a temperature of 41 °C (106 °F), with an option to discharge into the North Sound via CUC's ocean outfall.

As part of the conditions of the licences the Authority required CUC to carry out a groundwater monitoring programme to ensure that there are no undesired effects of this discharge on the groundwater in the vicinity of the plant. The licences include particular limits to avoid adverse temperature effects, especially to avoid negative impacts on OCL's reverse osmosis plant located at the Red Gate Water Works. Also the discharge into the North Sound is closely

monitored and has specific requirements to avoid negative effects on the marine environment.

The Authority decided to issue the licences for a one year period in order to have an opportunity to review the data and effects after the first year of operation. Later in 2000 the connection to the discharge pipeline into the Sound was completed so that CUC has the option to discharge the cooling water in the Sound or in the ground. The monitoring data indicated that CUC has complied with the conditions for temperature effects of the licences.

East End Quarry

In 1999 the Authority referred the matter of Quarry Products Ltd quarrying without a permit as required under the Water Authority Law to the Police. In December 2000 this matter was resolved in Court and the company was convicted and fined $8,000 for quarrying without a permit from the Authority. The Cayman Islands Government reached a settlement with the company over outstanding royalty payment for quarrying on Crown property. Since December 2000 Quarry Products Ltd. has ceased further excavations of the quarry located over the East End fresh water lens without a valid quarry permit.

The Authority continued to monitor the extent of the quarry; surveys indicated that the quarry's size was 293.3 acres by December 2000, an increase of 63.2 acres over April 1999 and 96.2 acres over April 1998.

Aggregate and Fill Consultancy

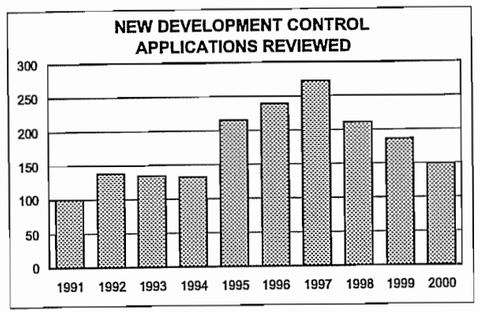
In early 2000 the Government commissioned the "*Study on the Provision of Construction Aggregate and Fill Materials for the Cayman Islands*". As the Authority is charged with the responsibility to issue permits for quarry and canal excavations, it participated in various meetings and workshops with the consultants, the steering committee and other stakeholders. This project aims to provide the country with demand projections for aggregate and fill for the next 10-20 years, to assess local supplies, to review environmental impacts and to review procedural guidelines. By the end of 2000 the consultants had completed the fieldwork and commenced the preparation of the final report, which is expected to be finalized in 2001.

Petroleum Storage and Handling Study

In 1999 the Government initiated a consultancy on petroleum handling and storage. This consultancy included a technical appraisal of all physical equipment, an assessment of current administrative and licencing procedures and recommendations to standards, regulations and legislation, as well as a monitoring and implementation plan. In 2000 the Authority participated in the steering committee that reviewed and discussed the reports of the consultancy reports. As a result of this consultancy it was recommended to recruit a Chief Petroleum Inspector, to amend the Petroleum Handling and Storage Law and to carry out a quantitative risk assessment of the liquid petroleum gas and marine terminals and offloading operations in Grand Cayman.

Development Control

The Water Authority continued to review the plans that are submitted through the Planning Department in respect of water supply, wastewater treatment and disposal and impacts on groundwater. In 2000 the Authority employed a development control technologist who consolidated all the Authority's functions relating to development control. The number of developments reviewed in 2000 decreased to 149.



Water Supply Concessions

The Authority monitors the performance of 5 companies that operate under a licence issued by Government under the Water Production and Supply Law. In 2000, Government granted a licence to Royal Reef Resort in East End and to On-the-Bay Development in North Side.

Performance of Water Supply Concessions

	Production (US gallons)	Royalty
Cayman Water Company	476,474,150	$ 534,515.65
Little Cayman Beach Resort	2,969,418	$ 5,603.39
Morritt's Tortuga Club	15,314,900	$ 15,475.49
Royal Reef Resort	2,751,430	$ 3,213.15
On the Bay Development	287,330	$ 965.25

Cayman Water Company Operational Performance (US gallons)

	2000	1999	% Change 1999-2000
Water produced	476,474,150	418,798,700	13.8
Water purchased	2,168,009	37,778	5,500
Total Water Sold	451,501,369	401,346,650	12.5
Seven Mile Beach	259,851,900	233,280,730	11.4
West Bay	120,470,292	108,974,460	10.5
Westin	21,212,720	18,956,850	11.9
Water Authority	623,977	0	
Trucks	640,100	645,600	-0.9
Safe Haven (irrigation use)	48,702,380	39,489,010	23.3
Unaccounted for water	5.67%	4.18%	35.8
Average fuel adjustment factor per 1,000 US gals	$1.11	$0.73	51.7
Royalty	$534,515.65	$467,034.06	14.4

6. WATER SUPPLY OPERATIONS

East End Wellfield

The East End wellfield completed its 14th year of operation, since 1996 the water sales have increased. The increase in 2000 was 25% compared to 1999. The public tap, which provides water free of charge, delivered 725 m^3 (190,000 US gals).

East End Wellfield Performance Data

Year	Hours run	Average Pumping Rate (m^3/hr)	Quantity Produced (m^3)	Loss (%)	Power Consumption (kWhr/m^3)	Quantity Sold (m^3)
1986	603	14.7	8,877	1.0	0.46	4,191
1987	2,712	14.0	37,973	1.4	0.47	29,263
1988	3,134	14.0	43,879	1.4	0.45	33,815
1989	3,440	16.5	56,928	1.1	0.40	57,973
1990	1,310	14.8	19,408	1.0	0.43	19,704
1991	1,816	15.1	27,438	4.6	0.45	26,323
1992	1,182	13.2	15,546	13.9	0.44	11,653
1993	540	16.5	8,916	14.3	0.43	6,489
1994	623	16.0	9,945	9.4	0.43	9,013
1995	672	16.4	11,048	9.9	0.45	9,538
1996	653	16.3	10,633	8.9	0.46	9,319
1997	1,224	15.9	19,503	6.3	0.45	17,847
1998	1,428	15.0	21,458	11.8	0.45	18,563
1999	1,576	13.8	21,718	0.6	0.40	21,032
2000	1,976	13.9	27,502	2.0	0.42	26,232

Public Water Supply-Cayman Brac

In 2000, annual water sales for the Authority's Cayman Brac (CYB) operation increased by just over 1%. Although there was an increase in customer connections compared to 1999, pipeline sales showed a decrease. Pipeline sales decreased by almost 9% while trucked sales increased by approximately 22.4%. The number of active pipeline accounts slightly increased from 86 in 1999 to 92.

Public Water Supply-CYB Summary of Operational Data

	2000	1999	1998	Unit
Total Water Produced	67,316	66,288	63,932	m^3
Total Water Sold	64,580	65,458	54,621	m^3
Total Storage Losses	2,416	1,420	9,085	m^3
Total Pipeline Losses	559	-1,431	-107	m^3
Water Loss as % of Production	4.41	-0.02	14.04	%
Approx. Cost of Sales (operational expenses)	$6.09	$4.54	$4.96	CI$/$m^3$
Pipeline Sales	40,158	45,507	37,072	m^3
Trucked Sales	24,422	19,950	17,549	m^3
Number of Pipeline Connections	92	86	83	No.
Daily Water Sales (% of Nominal Plant Capacity 227m^3/day)	77.9	79.0	65.9	%
Avg. Plant Production Capacity	226	225	226	m^3/day
Electricity Consumed	302,208	309,512	285,920	KWh
RO Plant Efficiency	4.489	4.669	4.472	kWh/m^3

There was a significant increase of 34% in the operational cost of sales for the Brac operation. This increase is attributed to the

hiring of two additional staff to assist with the increased need for trucking, repairs and maintenance, electricity costs as well as the cost of the land lease arrangement with the Civil Aviation Authority.

Work continued on the electrical design for the upgrade of the Cayman Brac RO plant's production capacity to 530 m^3 per day, with construction expected to commence in 2001.

Average Usage per Consumer Group-CYB (m^3/Connection)

Month	Single Resident	Commercial	Public Authority	Trucked
Dec-99	*13.39*	*134.48*	*19.68*	*6.53*
Jan-00	16.68	109.70	14.66	7.15
Feb-00	14.12	96.93	15.34	6.41
Mar-00	13.71	98.11	24.92	7.25
Apr-00	13.46	93.34	12.32	7.19
May-00	14.86	86.62	13.40	7.13
Jun-00	11.91	117.09	16.06	6.98
Jul-00	12.17	124.56	15.86	7.62
Aug-00	13.08	100.82	11.84	7.23
Sep-00	12.02	65.38	6.16	6.97
Oct-00	12.41	96.00	13.86	7.64
Nov-00	12.73	94.96	24.38	7.58
Dec-00	10.98	93.83	9.78	6.49
Averages	**13.18**	**98.11**	**14.88**	**7.14**

Repairs were completed on the 500,000 US gallon bolted steel tank in Cayman Brac. The repairs were successful as the unaccounted for water for the entire reservoir site reduced to quantities observed prior to the leaks.

Public Water Supply-Grand Cayman (GCM)

In 2000, the demand for public water supply increased significantly, by 14% over 1999. Pipeline connections increased to 8,335 by the end of December 2000, representing growth of 9%.

Due to the forecasted growth in the eastern districts of East End, and North Side, the Authority made application for planning permission to construct additional production, treatment, storage, and pumping facilities in North Side/Frank Sound area. However, the application was unsuccessful and the Authority was required to make alternate provisions in order to meet the expected growth in demand. Subsequently, the Authority decided to negotiate a contract to construct additional facilities on the Red Gate site to increase production for the very near future.

Additionally, the Authority renegotiated the terms of Ocean Conversion (Cayman) Ltd's (OCL) water production licence for the Red Gate RO Plant and secured significant savings on water purchases that will be effective after the plant is refurbished.

The average daily water sales was 5,992 cubic meters per day representing 83% of the contracted capacity.

Public Water Supply-GCM Summary of Operations

	2000	1999	1998	Unit
Total Desalinated Water Purchased	2,443,745	2,095,880	1,900,488	m^3
Total Desalinated Water Sold	2,193,074	1,920,996	1,702,349	m^3
Pipeline Sales	2,131,226	1,898,778	1,664,911	m^3
Trucked Sales	53,192	22,075	37,438	m^3
Unaccounted for Water	10.03	8.18	10.1	%
# of Pipeline Connections	8,335	7,651	7,192	No.
Average Daily Water Sales	5,992	5,263	4,664	m^3
Daily Sales as % of Contracted Capacity	83	77	82	%
Water purchased from CWC	2,362	0	24,150	m^3
Water Sold to CWC	8,297	143	0	m^3
Electricity Consumed	556,120	472,980	468,700	kWh
Pump Station Efficiency	0.240	0.231	0.259	kWh/ m^3

The percentage of unaccounted for water increased by just less than 2% from the previous year. The losses have been attributed to the age of consumer meters, un-metered fire hydrants, ruptured water mains, and 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.

In 2000, the Authority continued its planned replacement/upgrading of sections of the 250mm water main on Shamrock Road from the junction of Old Prospect Road to Ocean Club. This replacement/upgrade programme will continue along Shamrock Road to the Spotts Newlands Road junction.

Public Water Supply-GCM Water Sales by Consumer Group (m^3)

	2000	1999	1998
Single Residential	1,414,123	1,247,855	1,082,563
Multi-Residential	91,008	97,494	99,226
Commercial & Industrial	478,912	426,425	365,651
Truckers	53,551	22,077	33,815
Public Authorities	147,183	125,103	117,472
CWC	8,297	143	3,623

Public Water Supply-GCM Connections per Customer Type

Month	Single Resident	Multi-Residential	Commer.	Publi c Auth	Total
Dec-99	*6,685*	*58*	*802*	*106*	*7,651*
Jan-00	6,897	62	817	106	7,882
Feb-00	6,957	62	828	107	7,954
Mar-00	6,967	61	814	108	7,950
Apr-00	7,047	59	808	107	8,021
May-00	7,085	59	808	112	8,064
Jun-00	7,210	60	810	115	8,195
Jul-00	7,281	60	825	116	8,282
Aug-00	7,289	59	831	119	8,298
Sep-00	7,318	60	842	115	8,335
Oct-00	7,441	61	844	117	8,463
Nov-00	7,419	61	885	117	8,482
Dec-00	7,516	60	917	118	8,611

Public Water Supply-GCM Average Usage per Consumer Group (m^3/Connection)

Month	Single Resident	Multi-Residential	Commer	Public Auth
Dec-99	*13.96*	*128.29*	*52.37*	*89.00*
Jan-00	20.71	165.94	54.83	95.87
Feb-00	15.85	122.49	46.57	116.07
Mar-00	18.13	144.71	53.30	311.46
Apr-00	16.36	116.91	45.69	112.42
May-00	19.20	149.81	65.68	121.49
Jun-00	17.86	120.10	46.07	105.04
Jul-00	16.38	107.42	48.49	82.89
Aug-00	18.46	141.87	55.51	94.16
Sep-00	13.68	105.33	38.25	79.60
Oct-00	15.73	115.01	46.58	76.04
Nov-00	18.11	143.80	50.74	90.91
Dec-00	11.13	84.97	35.38	67.65
Averages	**16.80**	**126.53**	**48.93**	**112.80**

From the tables above, water sales to the Authority's single residential customers increased by 13% while the number of customers in this category increased by 11% from the previous year. Water sales to multi-residential customers decreased by 7%, while the number of customers in this category increased slightly by 3%. Water sales to the Authority's commercial and industrial customers showed an increase of 12% over 1999 sales and sales to Public Authority customers increased by 18%. The volume of water sold to truckers showed a dramatic increase of 143%, from 22,077 m^3 in 1999 to 53,551 m^3 in 2000.

7. WASTEWATER OPERATIONS

Public Sewerage-GCM

The number of customers connected to the public sewer system at the end of 2000 decreased to 261 from 268 at the end of 1999, a decrease of 2.6%. Revenue generated from sewage increased by 7.8% over that of 1999. Revenue from six septage truckers providing service on Grand Cayman decreased in 2000 by 13%.

The Authority extended the public wastewater collection system to provide services to the new Holiday Inn on West Bay Road.

Due to major repaving of the West Bay Road by the Public Works Department, the Authority was required to raise the level of 25 existing manhole covers to the new pavement level.

A previously identified crack in the 16" sewer main located at the Harquail Bypass and West Bay Road was repaired using a stainless steel sleeve and chemical grout. After the repairs, the groundwater infiltration at that sewer was reduced by 80%. It is important to note that the Authority is using current technology to make repairs without digging and thus avoiding disrupting traffic in key areas.

Closed circuit video inspection of the entire sewer collection system began during the third quarter of the year using the CCTV grouting unit purchased the previous year. Approximately 50% of the system was inspected. Almost 1,000 feet of damaged clay pipe was excavated and replaced with PVC pipe, and an additional 200 feet of the clay sewers were successfully grouted.

Public Sewerage System-GCM Summary of Operations

	2000	1999	1998	Unit
Total Sewage Treated	1,692,018	1,997,280	1,494,164	m^3
Average Daily Flow	4,623	5,472	4,094	m^3
Average Daily Septage	38	37	46	m^3
Pump Station Elec.	361,827	347,748	306,495	kWh
Pump Station Effic.	0.21	0.17	0.21	kWh/m^3
Treatment Works Elec.	225,800	210,968	206,040	kWh
Treatment Works Effic.	0.13	0.11	0.14	kWh/m^3
Total Electricity Effic.*	0.35	0.28	0.56	kWh/m^3
Total # of Connections	261	268	258	
Total Sewerage Fees	$2.32	$2.15	$2.12	Mil CI$
# of Septage Customers	6	6	6	
Total Septage Fees	$52,063	$60,040	$52,476	

*NB: *mechanical aerators turned off July 1999.*

Wastewater Treatment Works
At the Wastewater Treatment Works, the existing pumps in the septage receiving station were replaced with new and larger pumps. This upgrade greatly reduced maintenance needs and also reduced downtime due to pump failure.

The average daily flow to the treatment works in 2000 decreased by approximately 16%. This reduction may be attributed to the 7% reduction in customers and repairs to reduce groundwater infiltration into the sewers. However there was no corresponding reduction in the average salinity of the incoming sewage.

The annual survey of sludge depth (reported in Section 4 of this report) in the ponds indicated slight increases in sludge accumulation compared to increases over the last few years. Nevertheless, the treatment efficiency of the ponds is decreasing due to the decrease in pond volume available for treatment of the wastewater.

8. NEW WORKS

New Works Crew
In 2000 the New Works crew installed in excess of 6,600 meters of pipework. The following three major projects made up 88% of the total length of pipelines installed:

- Nearly half of the work involved the continuation of the extension of the piped water distribution into the district of East End: Main road (Seaview Road, Church Avenue) from Oracle Drive into East End proper (up to Skipwidth Road), including side roads (e.g., Welcome Way, Fiddler's Way) and Pisces Way.
- The installation of a 300mm nominal diameter water main in the Crewe Road By-Pass (between the Lion's Club on Crewe Road and Lyndhurst Avenue), and
- The installation of a sewer pressure main in West Bay Road to connect the new Holiday Inn to the public sewerage system.

The following areas were also provided with piped water during the year:

- Poindexter Road (opposite Mariner's Cove)
- Fairbanks Road
- Colby Drive (Off Village of Newlands)

In its sixth year of operation the New Works crew continued to perform very well. A detailed cost analysis indicates that the pipeline extensions carried out by the New Works crew in 2000 were significantly more economical than if they had been carried out by an outside contractor (An overall cost savings of approximately 28% based on the average overall cost on the Bodden Town Project (1991-1994), or nearly 41% when allowing for inflation).

The work carried out in private roads and new subdivisions was very limited, and as a result less than 0.75% of all costs incurred in 2000 by the New Works Crew (labour, plant and materials) were reimbursed by contributions from the various developers/clients.

George Town Site (Red Gate Site)
In late 1999 the Water Authority purchased a large parcel of land (approximately 7.5 acres) adjacent to its present site. This site will be used to (i) accommodate the Operations-Water department (in an extension to the existing office building), (ii) to construct additional water production and storage capacity, and (iii) to construct a new post-treatment building.

In 2000, a Master Plan for the development of this site was prepared. In early 2001 the adjacent landowners will be polled in order to obtain Outline Planning Approval for this Master Plan.

It is anticipated that, based on the historical growth of the overall water demand, the potable water production capacity of the existing plants in Red Gate and Lower Valley facilities will become inadequate by early 2002.

In September 2000, the Water Authority invited several companies to pre-qualify for the supply of a second reverse osmosis plant at the Red Gate Site and to submit detailed documentation demonstrating that they had built and operated seawater desalination plants with capacities in excess of 3,000 cubic meters (800,000 US gallons per day).

By the end of the year three companies had been pre-qualified all of which had the necessary experience with the construction of similar works: Ionics Inc.- Aqua Design Ltd, Ocean Conversion (Cayman) Ltd., and HOH Carib Ltd. from Georgia, U.S.A.

By early 2001, tender documents will be ready to send out to these pre-qualified contractors, as present growth in demand requires that the new water production plant be commissioned by April 2002.

North Side Facility
An engineering analysis of the water distribution system in early 1999 showed that additional water production capacity would be required in George Town, as more than 65% of the total system demand originates in this area. However, from the point of system reliability, an additional water production and storage facility must be situated in the eastern districts. It is anticipated that, based on the historical growth and hydraulic analysis of the water distribution system, a site will be required around 2005.

Throughout 1999 the Water Authority had been unable to identify a suitable site in the North Side/Frank Sound area, with an owner willing to sell. However, in January 2000, a suitable site was identified, with a willing owner, and subsequently a Master Plan was prepared for this 13-acre site.

In early March, the adjacent landowners were notified by registered letter of the proposed development. The Planning Regulations require polling as the development is considered light industrial. Additional information on the proposed development was sent to the adjacent landowners in mid-April. In July the required responses had been received and an application for permission to construct a water production and storage facility on this parcel was submitted to the Central Planning Authority. In September 2000 the Water Authority was notified that the application was deferred as the CPA felt that the proposed site was unsuitable for the proposed use.

A decision was made to investigate the possibility of situating the additional water production and storage facility at the Water Authority's East End facility. This 6.1-acre site will be of adequate size, and a similar development is already present on this site, with a very limited number of developed properties in the vicinity. Unfortunately the area is also zoned agricultural/low-density residential, potentially resulting in similar problems experienced with the polling for the North Side/Frank Sound properties. A site located in the North Side/Frank Sound area would offer better operational flexibility therefore the Authority will continue to seek another suitable site.

Cayman Brac Water Supply
In January 2000 the contract for the construction of a steel framed storage building and walkway at the Cayman Brac West End Water Works was awarded following a competitive tendering procedure. This contract was to be completed by mid-April 2000, but in spite of numerous admonitions by telephone or in writing, no work was carried out and in September 2000 the Water Authority terminated the contract.

A down payment for the structural frame had been made in January 2000, but by the end of the year no shipment had been received.

By year-end the Water Authority had asked several contractors to provide a bid on the construction of the storage building and associated work. It is anticipated that a contract can be awarded in early 2001 for completion by mid-year.

In May, Agora Services Ltd. from U.K. carried out repairs on the 500,000 US gallon capacity bolted steel tank in Cayman Brac, as this 10-year old tank had developed some leaks. The repairs were successful as the unaccounted for water for the entire reservoir site reduced to quantities observed prior to the leaks (i.e., a reduction of more than 85%).

In early 2000 various equipment for the reverse osmosis plant expansion was ordered and received, (e.g., energy recovery vessels, control panel equipment, well pumps, first pass pressure vessels etc.) and temporarily stored at the Water Authority's Lower Valley facility.

Global Positioning System (GPS)
During 2000 the Water Authority continued to collect data on the existing water distribution and wastewater collection systems using its GPS equipment, and transfer it onto digitised maps. Once all data is collected and all records have been transferred in a digitised form, pipelines, valves, meter boxes, etc. can be retrieved with a high level of accuracy in the field using handheld units.

In addition, this data may be combined with other information available within the Water Authority (e.g., customer information, operational data) in a GIS (Geographical Information System) database, allowing a graphical representation of many types of information.

Grand Cayman Wastewater Treatment Works Project
Throughout 2000 the Water Authority engineers, together with their consultants (Globaltech, Inc. from Boca Raton, FL and Polytron, Inc. from Atlanta, GA), continued the design for the new wastewater treatment works using the Sequencing Batch Reactor (SBR) process. By the end of 2000 the design of the project was virtually complete, and a detailed review of construction drawings was underway. The revised cost estimate for the first phase, that is, a wastewater treatment plant with a design capacity of 2.5 mgd, was nearly CI$10 million (or approximately US$11.7 million).

Initially the Water Authority had intended to act as the project's General Contractor and issue individual sub-contracts for the various portions of the work. However due to the delay of the design stage and resource constraints the Water Authority reconsidered this position and decided to tender the entire project as an all-inclusive contract: The successful contractor will be the General Contractor for the entire works and will sub-contract portions of the work to specialized sub-contractors, with the general contractor remaining solely responsible for the performance of the contract.

It is anticipated that the tender documents will be ready by mid-2001 for actual construction to commence by the end of that year.

9. WATER AND SEWERAGE STATUTORY LICENCING

Water Resource Licencing
In 2000 the Authority issued the following licences and permits:

- Groundwater Abstraction Licence 3
- Discharge Permits 4
- Quarry Permit 7
- Canal Work Permit 5
- Well Drillers Licences 5
- Cesspool Emptier's Licence 6

Plumbers Licencing
The Plumber's Examination Board met on three occasions in 2000 to review applications. Theoretical examinations were held on four occasions during the year to assess applicant's ability.

The following licences were approved:

Category	2000	Total at 31-Dec-00
Apprentice	11	172
Journeyman	6	133
Master	2	41

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

Chairman: Mr Thomas Hill
Operations Manager WAC
Members: Mr Arthur Arch
Plumbing Inspector, BCU
Mr Delano Hislop
Master Plumber
Mr James Merren
Master Plumber

Secretary: Mrs Carol Shrock
Accounts Receivable Officer, WAC

10. INFORMATION SYSTEMS

The Water Authority entered the year 2000 with a robust computer network as all the computer systems had been subjected to thorough testing in 1999, and any hardware or software that was not Y2K compliant had been replaced.

In 2000 the Authority utilised its 64kbps link to deploy SCADA (Supervisory Control and Data Acquisition) software to Cayman Brac. This allowed certain users in Grand Cayman to have a real-time view of the plant operations in Cayman Brac.

Later in the year, another 64kbps link was established to the Pump Station and Production Facilities in Lower Valley and the SCADA software extended there as well. The primary purpose of the link between Lower Valley and the Main Office on the Red Gate compound was user access into the computer network. This allowed staff to be stationed in Lower Valley but still have access to internal email and all other systems and data on the local network.

The ISDN dial-up Internet service link was replaced with a 128kbps direct connect link in anticipation of hosting a locally developed Water Authority web site in 2001.

THE WATER AUTHORITY
OF THE CAYMAN ISLANDS

FINANCIAL STATEMENTS
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The Ministry of Community Services, Youth, Sports & Gender Affairs

THE WATER AUTHORITY
OF THE CAYMAN ISLANDS

FINANCIAL STATEMENTS
2000

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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 2000 as set out on pages 3 to 17 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 2000, and the results of its operations and its cash flows for the year then ended in accordance with International Accounting Standards and the Water Authority Law (1996 Revision).

N K Esdaile
Auditor General

6th September 2001

Water Authority of the Cayman Islands
Balance Sheet
As At 31st December 2000
(Stated in Cayman Islands Dollars)

	Notes	2000	1999
CURRENT ASSETS			
Cash On Hand		1,650	1,650
Cash At Bank		747,856	449,070
Total Cash & Cash Equivalents		**749,506**	**450,720**
Accounts Receivable	3	1,669,567	1,307,166
Inventory	4	422,786	530,475
Prepaid Expenses		34,096	59,056
Total Current Assets		**2,875,955**	**2,347,417**
CURRENT LIABILITIES			
Bank Overdraft	5	244,542	232,189
Accounts Payable		707,573	1,007,291
Contract Retention Payable		2,859	100,113
Interest Payable	6	32,912	32,912
Customer Deposits		695,724	721,177
Customer Deposit on Construction Contract		25,909	25,909
Customer Project Loans	8	38,266	66,866
Current Maturities On Long Term Liabilities	9	3,268,324	3,132,035
Total Current Liabilities		**5,016,109**	**5,318,492**
NET CURRENT LIABILITIES		**(2,140,154)**	**(2,971,075)**
FIXED ASSETS			
Land-Freehold		3,139,599	3,136,106
Buildings		1,959,013	1,973,358
Water Supply System		20,688,650	20,538,043
Sewerage System		8,317,363	8,655,198
Other Assets		1,404,997	1,410,072
Construction in Progress		648,926	567,479
Total Fixed Assets	7	**36,158,548**	**36,280,256**
TOTAL NET ASSETS		**34,018,394**	**33,309,181**
LONG TERM LIABILITIES	9	**(16,825,066)**	**(19,017,945)**
NET ASSETS		**$ 17,193,328**	**$ 14,291,236**
EQUITY REPRESENTED BY:			
Contributed Capital	10	1,085,223	1,078,621
Retained Earnings		16,108,105	13,212,615
Total Equity		**$ 17,193,328**	**$ 14,291,236**

On behalf of the Board on the 6th of September 2001:

Mr. Brainard Watler
Chairman

Dr. Gelia Frederick van Genderen
Director

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

Water Authority of the Cayman Islands
Statement of Net Surplus and Retained Earnings
For the Year Ended 31st December 2000
(Stated in Cayman Islands Dollars)

	Notes	2000	1999
INCOME			
Gross operating revenue		14,174,837	12,461,008
Less: Operating expenses		(9,395,856)	(7,769,528)
Gross operating surplus for year		**4,778,981**	**4,691,480**
Sundry income		665,762	606,745
Operating surplus for year		**5,444,743**	**5,298,225**
OTHER EXPENSES			
Administrative expenses		(2,399,253)	(2,150,315)
Net surplus before extraordinary item		**3,045,490**	**3,147,910**
Extraordinary Item:			
Change in accounting estimate for the Public Service Pensions Fund Past Service Liability	14	-	349,419
Net Surplus for year		**3,045,490**	**3,497,329**
Retained Earnings at the Beginning of the Year		**13,212,615**	**9,715,286**
Retained Earnings before Contribution to Government		16,258,105	13,212,615
Contribution to Government		(150,000)	-
Retained Earnings at End of Year		**$ 16,108,105**	**$ 13,212,615**

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

Water Authority of the Cayman Islands
Statement of Income
For the Year Ended 31st December 2000
(Stated in Cayman Islands Dollars)

	2000	1999
OPERATING REVENUE		
Water Sales	11,454,670	9,970,570
Sewerage Fees	2,317,604	2,150,607
Septage Disposal	52,712	59,005
Agency Work	18,014	18,312
Connection and Miscellaneous Fees	331,837	262,514
Total Operating Revenue	**14,174,837**	**12,461,008**
SUNDRY INCOME		
Royalties	560,763	486,537
Statutory Licencing Fees	23,636	20,559
Interest Earned	33,860	47,328
Other	47,503	52,321
Total Sundry Income	**665,762**	**606,745**
TOTAL REVENUE	**$ 14,840,599**	**$ 13,067,753**

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

Water Authority of the Cayman Islands
Statement of Expenses
For the Year Ended 31st December 2000
(Stated in Cayman Islands Dollars)

	Notes	2000	1999
OPERATING EXPENSES			
Land Lease Expense		11,307	-
Water Purchase		4,090,951	3,266,036
Loan Interest		1,100,895	1,119,570
Salaries		1,255,803	1,099,420
Depreciation Expense	7(b)	1,337,504	981,510
Wages		755,356	393,669
Repairs and Maintenance		326,087	390,188
Electricity		266,695	276,965
Supplies		186,393	171,826
Miscellaneous		62,358	62,827
Obsolete Inventory Expense		2,507	7,517
Total Operating Expenses		**9,395,856**	**7,769,528**
ADMINISTRATIVE EXPENSES			
Salaries		925,531	879,450
Staff Training and Benefits		656,525	551,241
Depreciation Expense		144,658	125,466
Insurance		109,583	112,330
Office and Lab Supplies		77,516	77,854
Telephone and Utilities		142,093	122,516
Miscellaneous		103,764	81,551
Licenses and Dues		56,785	53,872
Legal Fees		12,292	40,723
Bad Debt Expense		27,386	50,000
Repairs and Maintenance		26,361	22,431
Loan interest		99,055	12,061
Audit Fees		12,000	12,000
Office Rental		5,704	8,820
Total Administrative Expenses		**2,399,253**	**2,150,315**
TOTAL OPERATING AND ADMINISTRATIVE EXPENSES		**$ 11,795,109**	**$ 9,919,843**

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 31st December 2000
(Stated in Cayman Islands Dollars)

2. Significant Accounting Policies (continued)

(f) 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.

(g) 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.

3. Accounts Receivable

	2000	1999
Accounts Receivable	1,900,283	1,511,166
Provision for Bad Debts	(230,716)	(204,000)
	$1,669,567	$1,307,166

4. Inventories

	2000	1999
Water Supply and Sewerage Materials	419,822	534,846
Office Supplies	20,564	13,229
Provision for Obsolete Inventory	(17,600)	(17,600)
	$422,786	$530,475

5. Bank Overdraft

The Cayman Islands Government provides a guarantee for an overdraft facility at one of the Authority's local bankers in the amount of US$500,000 (see also Note 9(a)).

6. Interest Payable

	2000	1999
On Customer Deposits	$32,912	$32,912

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 8th of February 1994. Interest payable on customer deposits has been calculated only on deposits which were taken before the 8th of February 1994 and which were held by the Authority on the date of these financial statements. Interest has been accrued up until the date on which the Regulation was revoked.

Water Authority of the Cayman Islands
Notes to the Financial Statements
For the Year Ended 31st December 2000
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Cost	Freehold Land	Buildings	Water Supply	Sewerage	Other Assets	Construction In Progress	Total
At 31 December 1999	3,136,106	2,018,851	24,375,100	11,279,423	2,613,511	567,479	43,990,470
Additions	3,493	26,302	58,645	3,738	331,163	970,120	1,393,461
Disposals	-	-	-	(903)	(65,789)	-	(66,692)
Transfers between fixed assets	-	-	760,165	128,508	-	(888,673)	-
At 31 December 2000	3,139,599	2,045,153	25,193,910	11,410,766	2,878,885	648,926	45,317,239
Accumulated Depreciation							
At 31 December 1999	-	45,493	3,837,057	2,624,225	1,203,439	-	7,710,214
Charge for Year	-	40,647	668,203	469,253	304,059	-	1,482,162
Disposals	-	-	-	(75)	(63,623)	-	(63,698)
Capitalized during construction	-	-	-	-	30,013	-	30,013
At 31 December 2000	-	86,140	4,505,260	3,093,403	1,473,888	-	9,158,691
Net Book Value							
At 31 December 1999	$ 3,136,106	$ 1,973,358	$ 20,538,043	$ 8,655,198	$ 1,410,072	$ 567,479	$ 36,280,256
At 31 December 2000	$ 3,139,599	$ 1,959,013	$ 20,688,650	$ 8,317,363	$ 1,404,997	$ 648,926	$ 36,158,548

7. Fixed Assets

a) 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 have estimated the cost of the upgrade at CI$11.25 million. A part of the existing works would be decommissioned in 2003. Although the Authority's Board of Directors has approved the project there were further delays in obtaining Government permission for the financing of the project. Government did not give approval for the Authority to enter into the US$12.8 million loan agreement with CIBC Bank and Trust Company (Cayman) Ltd. for the financing of this project until September 2000, further delaying the project. The loan agreement was signed with CIBC in December 2000. See Note 9(a) for the terms of the loan. Prior to getting the loan at the end of 2000, the Authority had financed the cost of the wastewater treatment works project ($496,036) from revenue.

b) In 2000 there was an assessment of the extent of accelerated depreciation required, in future years, to write-down part of the existing sewerage system by the prospective 2003 decommissioning date. Accelerated depreciation in the amount of $241,345 has been charged in the 2000 financial statements, because financing was secured at the end of 2000. The accelerated depreciation will continue over the next two and half years in the amount of $241,345 for 2001 and 2002, and $120,673 in 2003. The total amount of accelerated depreciation over the three and half years will be $844,709.

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.

Water Authority of the Cayman Islands
Notes to the Financial Statements
For the Year Ended 31st December 2000
(Stated in Cayman Islands Dollars)

7. Fixed Assets (continued)

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

1.	Extension of the public water supply system to Crewe Rd. Bypass, in progress at December 2000.	92,868
2.	Engineering services, subsoil investigations and site preparation for subsoil investigations relating to the 2.5 MGD upgrade of the West Bay Beach Sewerage Treatment Works. See also Note 13.	496,035
3.	Site investigation for possible Eastern Site.	5,023
4.	Cayman Brac Plant Upgrade	55,000
		$648,926

8. Customer Project Loans

Customer project loans represent balances outstanding at the year-end 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.

9. Long Term Liabilities

Long Term Liabilities	2000	1999
a) CIBC Bank and Trust Co. Cayman Ltd.		
Water Supply and Sewerage	9,971,178	11,908,232
Administration Building Loan	1,323,732	851,120
Waste Water Treatment Works Loan	500,000	-
b) Caribbean Development Bank		
Water Supply	1,001,329	1,156,267
c) Cayman Islands Government		
Grand Cayman	4,114,985	4,307,879
Cayman Brac	631,800	702,000
Medical Expenses	91,632	91,632
d) Public Service Pensions Fund		
Past Service Pension Liability	148,463	207,400
e) Capital Contribution Loan	25,600	32,000
f) Ocean Conversion (Cayman) Ltd.	1,733,712	2,060,503
g) Property Loan	550,959	832,947
Total long term liabilites	20,093,390	22,149,980
Less current maturities	(3,268,324)	(3,132,035)
	$ 16,825,066	$ 19,017,945

Water Authority of the Cayman Islands
Notes to the Financial Statements
For the Year Ended 31st December 2000
(Stated in Cayman Islands Dollars)

9. Long Term Liabilities (continued)

a) The CIBC Bank and Trust Co. Cayman Ltd. (CIBC) 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 1st of March 1995. Monthly payments are due as follows:

1995-November 1997	US$200,000
November 1997-2004	US$275,000

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

On 17th August 1998 CIBC 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 over a fifteen-year period that commenced on 14th October 1999. CIBC presently holds a Registered First Charge over the property.

In September 2000, Government gave approval for the Authority to enter into the US$12.8 million loan agreement with CIBC Bank and Trust Company (Cayman) Ltd. for the financing of the Grand Cayman Wastewater Treatment Works Project. The loan agreement was approved by CIBC under the terms and conditions of the facility letter dated 15th September 1999 and was signed on 29th December 2000. 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. The loan is repayable on the first business day of the month following the date of expiry of the CRHP and on each business day immediately succeeding 47 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 48 months, an aggregate of US$250,000 per month including principal and interest.

b) The Caribbean Development Bank (CDB) water supply loan is to be repaid over 15 years at variable interest rates of 6 to 7%. 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) The Cayman Islands Government loan for Grand Cayman 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 1st of April 1995. This loan was increased by CI$450,000 in February 1997 in exchange for a 1.3-acre parcel of land that was sold to the Authority by the CI Government. As at year-end the terms of repayment relating to this additional loan have not been agreed upon.

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9. Long Term Liabilities (continued)

The Cayman Islands Government loan for Cayman Brac attracts interest at a fixed rate of 8% per annum. This loan is repaid in quarterly instalments of CI$17,550, over a period of 15 years which commenced on the 1st of April 1995.

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 2000.

d) Refer to Note 12 for explanation of the Public Service Pensions 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 $64,000. In 1995 management agreed to repay the loan in ten (10) annual instalments of $6,400 each. This loan is interest free and the first instalment was made on the 1st of June 1995.

f) The Water Authority contracted with Ocean Conversion (Cayman) Ltd. ("OCL") on the 17th 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. 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 therefrom. The plant was completed in March 1998 and is financed at an 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 an 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.

g) 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 1st of October 1999, at an annual interest rate of 8%.

10. Contributed Capital

	2000	1999
Balance at beginning of year	1,078,621	1,006,859
Add: Received during year	6,602	71,762
Balance at end of year	$1,085,223	$1,078,621

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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11. 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 $263,094.
2. The Auditor General has statutory responsibility for the audit of the Authority's financial statements. The Authority is required to pay an annual fee of $12,000 to Government for audit services.
3. The Authority recognized contributions payable to Government relating to 1998 in the amount of $700,000. This amount was fully paid in December 2000.

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.

As detailed in Note 12 the Authority and its eligible employees paid contributions to the Public Service Pensions Fund during the year.

12. Pensions

I) Public Service Pensions Plan
In August 1993, the Governor approved the inclusion of the Water Authority's staff as being in employment under the term "Public Service" for the provision of the Pensions Law. At that time all employees who had been "seconded" from the Public Service Commission resigned and were employed directly by the Water Authority. The pension contributions for those employees and subsequent eligible Caymanian employees hired by 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'). The Fund has both an underlying defined benefit and defined contribution element. Prior to 14 April 1999 the scheme underlying the Fund is a defined benefit scheme. With effect from 14 April 1999 the Fund had both a defined benefits and a defined contribution element. Participants joining the Fund after 14 April 1999 have their benefits defined by a defined contribution scheme. Participation in this scheme was subsequently extended to 31 December 1999 by virtue of The Public Service Pensions (Amendment and Validation) Law, 2000, which was passed by the Legislative Assembly on the 13th April 2000.

In 1999, an actuarial assessment, using the projected unit credit method of measuring costs and obligations, determined that the Authority's had an un-funded past service liability for pensions as at 1 January 1997 of $677,000. Notwithstanding that some of these benefits have accrued whilst some of the Authority's present employees were employed by the Cayman Islands Government, the Authority has decided to recognise the entire amount of the un-funded past service liability in its financial statements. The Authority has started funding the past service liability by paying monthly contributions at the rate of 5% of eligible employees' monthly salaries to the Fund; a rate that was pronounced by the Pensions Board.

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 (also see note 14). It 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. This assessment was used in the 1999 Financial Statements, which were completed in March 2001. 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 (also see note 14). It 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. In 1999 and 2000 the Authority made no adjustment for the rate changes and

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12. Pensions (continued)

continued making contributions to the fund at 6% employer, 6% employee and 5% for past service liability contribution. This effectively resulted in advance payments towards the past service liability of approximately $39,145 in the past two 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 each contributed 6%, the same as in 1998, of employees' monthly salary.

The Authority has disclosed the following information about its defined benefit plan in accordance with *IAS 19 (Revised 2000) paragraph 120*:

a) Policy for recognising actuarial gains and losses:
An actuarial valuation is conducted every three years and any gains or losses arising are adjusted against the Retained Earnings.

b) A general description of the type of plan:
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.

c) A reconciliation of assets and liabilities recognised in the balance sheet:
Present value of the defined benefit obligations that are partly funded - $1,193,000
The fair value of the plan assets at the 1 January 1999 - $861,882

d) The amount included in the fair value of the plan assets: Nil

e) The reconciliation showing movement of past service liability during the period:

As per 1999 Financial Statements	58,937
Plus: Reconciliation of 1998 PSL Contribution	61,211
Plus: Understatement of PSL advised in error by PSPB	87,252
Less: PSL contribution paid in the fiscal year 2000	(58,937)
Balance at 31 December 2000	$148,463

f) The total expenses recognised in the income statement:

Current service cost in the fiscal year 2000	$174,477
PSL cost in the fiscal year 2000	$ 58,937

g) Return on plan assets: Not known

h) Principal actuarial assumptions:
Discount Rate – 8%
Expected rate of return on plan assets – 8%
Excepted rate of salary and pension increase – 5% and 3% respectively
Retirement age – 55 years

II) Other Pension Plan
In accordance with the National Pensions Law of June 1998, employees who are not qualified to join the Public Service Pensions Fund are enrolled in an approved local pension plan. During 2000 the Authority and its employees paid 5% and 5% respectively of salary contributions.

The total amount recognised as a pension expense during 2000 was $174,477.89 (1999: $238,018).

Based on *International Accounting Standards (IAS) 2001*, "if an enterprise applies *IAS19 (Revised 2000)*, to retirement benefit cost for financial statements covering periods beginning before 1st January 2000, the enterprise should disclose the fact that it has applied this Standard instead of *IAS 19*, Retirement Benefit Cost, approved in 1993". The Authority has adhered to this standard.

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13. Commitments

Commitments at December 31, 2000 are as follows:

Authorised and Contracted	Cost Incurred to 31/12/00	Estimated Cost to Completion	Total Cost
Engineering and Consultancy Fees:			
Globaltech Inc.	117,848	24,238	142,086
Polytron Inc.	52,969	36,545	89,514
	$170,817	$60,783	$231,600

In August 1998 consulting engineers were invited to bid on the Tender Documents of the Sewage Treatment Works Upgrade for the "Provision of General and Mechanical Engineering Services" and for the "Provision of Electrical Engineering Services." These contracts were awarded in late September 1998 to Globaltech Inc. and Polytron Inc. respectively. In late 2000, there was a change in the design, which increase the engineering and consultancy fees. The increase to Globaltech Inc. was $24,238 and Polytron Inc. was $8,024.

14. Extraordinary Item

In June 1997 an actuarial assessment of the Authority's unfunded past service liability for pensions was completed. The liability was assessed at $677,000 as of 1st January 1997. The matter was not accounted for in the Authority's 1997 financial statements because, in 1997, the Pensions Law did not contain any provisions relating to unfunded past service liability for pensions.

On 8th December 1998 the Pensions (Contribution Rate) Regulations, 1998 was passed. Those Regulations allowed the Authority to recognise the unfunded past service liability within its financial statements. The Authority reduced its Retained Earnings as of 1st January 1997 by $677,000 and accordingly, the 1997 financial statements were restated. This liability was also accounted for in the Authority's 1998 financial statements.

The 1st January 1997 actuarial assessment of the Authority also determined the required contribution rates to adequately fund pension benefits accruing to its employees. The assessment identified that if the past service liability of $677,000 was not immediately paid, total contributions (employees' and employer's contributions) would have to be at 22% of employees' emoluments to adequately fund pension benefits. The Authority and its employees pay contributions at the rate specified by the Pensions Board: 6% each for employee and employer plus, an additional 5% in respect of the un-funded past service liability, a total contribution rate of 17%.

In September 2000, the Pensions Board reassessed the unfunded past service liability as at 1st January 1999 and stated that the Authority's unfunded past service liability now was reduced to $179,118. Therefore, the Authority increased its Retained Earnings by $497,882 as of 1st January 1999 to recognize this change in accounting estimate.

On 4th July 2001, the Pensions Board informed the Authority that the above reassessment was incorrect. In February 2001, the Authority had expressed concerns regarding the accuracy of the assessment on the Past Service Liability (PSL) as of 1 January 1999 and received a memorandum from Pensions Board clarifying our concerns. The Authority utilized that assessment to increase the Retained Earnings in the 1999 Financial Statements, which were finalized in March 2001. Based on the corrected reassessment, given to the Authority in July 2001, the Authority decreased the Retained Earnings by $148,463 as of 1st January 2000 to recognize this change in accounting estimate (also see note 12).

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14. Extraordinary Item (continued)

Based on *International Accounting Standards (IAS) 8, Changes in Accounting Estimates,* "the effect of a change in an accounting estimate should be included in the determination of net profit or loss in: (a) the period of the change, if the change affects the period only; or (b) the period of the change and future periods, if the change affects both." The Authority has adhered to this standard.

15. Fair Value Disclosure of Financial Instruments

International Accounting Standards require all entities to disclose the fair value of financial instruments, both assets and liabilities that are recognised and not recognised in the balance sheets for which it is practicable to estimate their fair value. At December 31, 2000 the following methods and assumptions were used by management to estimate the fair value of each of the financial instruments:

(a) *Bank Balances*
The carrying amount approximates fair value.

(b) *Accounts receivable/other receivables/accounts payable and other liabilities*
The carrying amount approximates fair value.

(c) *Current and long term debt*
Included in these balances are certain fixed rate and non-interest bearing loans. The carrying value of these loans represents the principal balance owing. The anticipated future principal repayments have not been discounted, as it would not provide any additional relevant information.

All other loans are floating rate and therefore bear interest at the market rate. The carrying value of these loans approximates fair market value.

Fair value estimates are made at a specific point 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 could significantly affect the estimates.