



GuernseyWater

A DIVISION OF THE PUBLIC SERVICES DEPARTMENT



Annual Report 2005

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Key Achievements in 2005

- ◆ **All water quality compliance targets were achieved for both water treatment works and service reservoirs.**
- ◆ **Public water supply continued throughout the year without any demand restrictions (e.g. hose pipe bans).**
- ◆ **Installation of reed beds at St Saviours Reservoir to improve water quality and bring about an enhanced aquatic environment.**
- ◆ **Commenced design work for new Water Treatment Works at Longue Hougue.**

Statement from the Minister

Public Services Department

As Public Services Minister, it is my privilege to present Guernsey Water's third Annual Report. It has been another year of substantial progress both in maintaining water supplies, without the need for a hose pipe ban and further improvements to the quality of water supplied. Water that is fed to the customer's tap now reaches every water quality parameter set by the EU and UK.

Up until now, water quality has achieved an acceptable standard but the introduction of new membrane technology at St Saviours Water Treatment Works, coupled with the tightening of operational procedures has brought about even better water quality results.

Despite the dry summer, there were no water shortages experienced in 2005 although demand for water is continuing to increase. Guernsey Water's policy of encouraging customers to go on meters will assist in helping people to conserve water. The number of customers on a metered supply now stands at 11,806 compared with un-metered customers which total 12,275.

The markedly improved quality of water and the completion of the water mains rehabilitation programme has resulted in a lower level of complaints than earlier years.

I was saddened to lose a valuable member of the Board half way through the year. The late Deputy Michael Burbridge had served as President of the Water Board and subsequently as my Deputy Minister. His loyalty and dedication was outstanding. He is greatly missed.

The Public Services Department Board approved a revision of the Business Plan, which effectively retained the same operational objectives but removed the St Andrews head office development as an immediate priority. The Board wishes to re-develop the St Andrew's site as an operational depot. The existing buildings, which have reached the end of their useful life, will be replaced. The Board also proposes to utilise part of the site with a series of small business units for development and use by the private sector.

Looking to the future, the Board has now begun work on the design of the new Water Treatment Works at Longue Hogue using membrane technology similar to that installed at St Saviours Water Treatment Works. This project, at an estimated cost of £2.5 Million, will ensure that the standard of water quality in the central and northern areas of the island, reaches the same high standards as that fed by St Saviours Water Treatment Works. This work will be funded out of Guernsey Water's funds and not general States revenue.

The success that has been achieved during the last year can only have been brought about by the dedication and support of the entire staff of Guernsey Water. On behalf of the Public Services Department Board and the whole community, I thank them all.

William M Bell

Minister for Public Services Department

Statement from the Director of Water Services

This year's Annual Report is based on a revision to the Business Plan, which was approved by the Public Services Department Board in September 2005. The main changes to the originally published objectives, has been the removal of the head office development at the St Andrews Reservoir site. This has not been the only significant change in 2005, and Guernsey Water has undergone a number of modifications as it finds its niche within Public Services Department.

As always the Annual Report sets out the achievements of Guernsey Water over the past challenging year and describes the progress Guernsey Water has achieved in delivering the objectives set out in the Business Plan and the previous year's Annual Report. The Report endeavours to be as transparent as possible, so that all stakeholders (including staff, customers, the States of Guernsey) may be informed of the organisation's performance.

There are 97 objectives described in this Report which include new objectives and medium term objectives brought forward from the original Business Plan 2003 – 2013. The Business Plan is designed to be dynamic and the Annual Report forms part of this evolution so that the organisation continuously evaluates itself and strives to achieve even greater demands. Of these 97 objectives, 16 are new objectives, which have been developed throughout the year using such means as the annual staff appraisal process and customer feedback.

In summary:

56 objectives were achieved.

19 objectives were close to completion.

6 objectives have failed.

16 new objectives.

(Further details of each objective can be found on page 11).

Guernsey Water's mission statement continues to be fundamental to Guernsey Water's operation:-

“to deliver to its customers a reliable supply of high quality drinking water in sufficient quantity that satisfies normal daily demand at lowest cost consistent with meeting a high level of customer service and confidence.

Environmental catchment protection will be monitored, storage will be maintained at maximum possible levels, treatment techniques and delivery systems will be the most appropriate to meet international standards.”

The following projects have sought to support this vision statement.

1. **Water supply** – Guernsey Water was able to maintain a continuous supply of water throughout the year to all its customers. We were fortunate in being able to avoid the severe water shortages experienced by water companies in southern Britain and Europe, many of which had to resort to hose pipe bans. The dedication of water production staff ensured that enough water was collected during times of rainfall to ensure adequate supply during the drier months. The additional one month of storage at St Andrews reservoir helped bolster Guernsey Water's ability to supply water. The demand for water however continues to increase year on year, as standards of living rise and the effects of global warming are experienced.
2. **Leakage monitoring** – technological developments in the field of leakage monitoring have meant that Guernsey Water has continuously strived to keep abreast of new techniques for monitoring and controlling leaks, thereby reducing wastage to a minimum.



3. **Asset management** - Guernsey Water's asset management team has recorded all 500 kilometres of water network pipeline onto a computer database helping to create a virtual water network. This information can then be used to predict how the water network is behaving and will help in planning programmes of refurbishment and renewal.

Guernsey Water assets being recorded

4. **Benchmarking exercise** - liaison with Jersey Water provided a valuable opportunity to share expertise and experience on water issues, enriching staff knowledge that ultimately benefits the business unit and its customers.
5. **The second Student Bursary was awarded** – to Laura Brogan who is undertaking a degree at Cambridge in Land Economy. The Bursary (£2,250 spread over 3 years) aims to encourage students to study in the UK and return to Guernsey. Hopefully the Island’s water industry might benefit from her skills and experience.

Corporate Agenda

Guernsey Water continues to work towards the objectives set out in the revision to its Business Plan but these objectives must align with the Key Themes set out in the States of Guernsey Corporate Agenda. Of the nine Key Themes, five are of particular relevance to the Public Services Department and were described within the Public Services Department Business Plan:

- Business Environment
- Community/Social Inclusion
- Natural and Built Environments
- Public Finances
- Public Sector Services

These Key Themes support the over-arching statement of purpose:

“Guernsey prospers as a self-determining, distinct and independent community that is a good place to live and bring up children because it is safe, attractive and forward-looking and attempts to meet the aspirations of its citizens”.

In 2005, Guernsey Water has endeavoured to work towards these aims, whilst simultaneously taking account of the need to cut back spending. Our Capital Development Programme process, which was initiated in 2002 to scrutinise capital projects, continues to help senior managers prioritise the programme of works. In light of the changing economic climate and the looming “black hole” in 2008 this process is seen to endorse the new culture within the States. Guernsey Water’s commitment to keeping costs to an absolute minimum ensures that every effort is made to reduce expenditure, wherever possible. Procurement routes that minimise costs are thoroughly investigated. Collaboration with others in the water industry ensures that ‘best buy’ and ‘best value’ solutions are obtained. Efficiency measures continue to be developed including the scrutiny of vacant posts to see whether they need to be filled, deleted, outsourced or traded off to support greater opportunities.

Water Charges

Water charges for 2005 were increased by annual increase in RPI, plus 10% of the 2003 charge in line with water charges agreed by the States of Deliberation in 2002. The last of the three elevated increases came into effect on 1st January 2006.

Whilst run along commercial lines Guernsey Water is not seeking to make a large 'profit'. Any surplus income is ploughed into the business, in the form of capital works. The Board of the Public Services Department is keen to see Guernsey Water return to a cash positive position as soon as possible and not to rely upon borrowing.

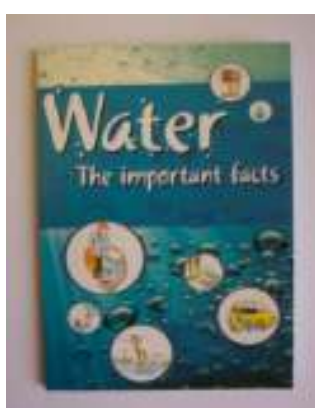
Sustainable Guernsey

Guernsey Water once again provided information on water quality and water resources for the 2005 Sustainable Guernsey report, helping to build up a better understanding of the changing nature of the Island's economic, environmental and social well being.

Environmental policy

Guernsey Water has a responsibility, as custodians of the island's freshwater aquatic environment, to ensure that it conserves and enhances the natural environment within the Water Catchment Area.

Guernsey Water continues to operate in accordance with its environmental policy by educating the public in the importance of careful water use. A booklet designed to help educate everyone has been produced and a copy is being delivered to each household early in 2006.



Water booklet

In addition, sites such as the Millennium Walk at St Saviours Reservoir provide a unique opportunity for the public to enjoy the Island's natural heritage, with an estimated 15,000 to 20,000 people using the site each year.

The installation of reed beds at St Saviours Reservoir provided an environmentally friendly solution to combat water quality pollution. The reed bed roots provide the first stage of cleansing the water as it enters the Reservoir before being processed at the St Saviours Water Treatment Works, thereby reducing the need to rely on chemicals.

Other Water Companies

Guernsey Water's success in operating the membrane technology at the St Saviours Water Treatment Works has attracted attention from several of the major UK water companies. Wessex, United Utilities, Thames and Bristol Water have all sent representatives to Guernsey to witness at first hand the operation of the membrane plant.

Guernsey Water Staff

I am once again indebted to the loyalty and dedication shown by members of staff who have continued to provide a high standard of service, including responding to emergencies, often during unsociable hours. It has been a pleasure to work with you all and I look forward with anticipation to the year ahead and the challenges that it offers.







Andrew Redhead
Director of Water Services





Achievement of Business Plan Objectives

The following pages provide an account of which objectives from the Business Plan have been achieved, which are being progressed at a slower rate and which objectives have failed to meet their target. Some objectives have been supplemented with a brief description, explaining progress made with the objective. New objectives are included and old objectives, achieved in 2004 and before, have been removed from the list.


Reference numbers refer to those used in the revision to the Business Plan.

Key

-  = Objective achieved or working to schedule.
-  = Objective has not meet deadline but is close to completion.
-  = Objective failed.
-  = New objective or amended objective in Revision to Business Plan

-  = 56 objectives achieved.
-  = 19 objectives were not met by deadline.
-  = 6 objectives failed.
-  = 16 new or amended objectives.

Water Resources

-  Introduce a programme of stream flow monitoring that will assist water resource planning by end of 2005. (1.1)

This has replaced soil moisture deficit data as a surrogate parameter to help judge the level of available water resources.

Water Catchment Protection

-  Using stream flow monitoring data determine nutrient loadings of island streams. (2.1)

The original objective has been developed. Stream flow monitoring data is collected from Talbot Valley and Vale Pond. Guernsey Water intends to install data collection equipment at Marais Stream and Les Arquets before the end of 2005 to supplement this information. Further monitors will be installed in 2006 to records flows and help build up a picture of nutrient stream loadings of island streams.

- ★ Carry out a survey to monitor fresh water invertebrates in a range of streams within the water catchment area. (2.2)

Invertebrate monitoring is being undertaken to determine the comparative water quality within Island streams. Invertebrate monitoring helps Guernsey Water understand the effects of pollution on the water environment in addition to other methods of analysis.



Stream monitored for invertebrates

- ☹ Revise catchment area on Digimap by 2004. (2.3)

The water catchment area boundary line has been reviewed and placed as a layer on Digimap. Legal adoption will follow in 2006.

- ☹ Carry out market garden and poultry farm inspections by Dec 2005. (2.4)
- 😊 Visit all vinery sites using rockwool on an annual basis and inform growers of any problems. (2.5)
- 😊 Continue to have old, redundant or defective oil installations upgraded or emptied. (2.6)
- 😊 Review of drainage systems and cesspools in the water catchment area. (2.7)
- 😊 Identification of inadequate private sewers and pumping stations. (2.8)
- 😊 Promote the safe use of pesticides. (2.9)
- 😊 Visit all sites as scheduled according to risk assessment (catchment assessment audits). (2.10)
- ★ Monitor effect on water quality as a result of reed bed installation at St Saviours Reservoir and report to the Board at end of 2006. (2.11)

Water Treatment



Achieve 99% compliance for MAC for water treatment works (WTW). (3.1)

Total = 99.77%

St Saviours WTW = 99.83% (rolling compliance)

Juas WTW = 99.82% (rolling compliance)

Kings Mills = 99.26% (operating in July, August, September only)

This is the first year that Guernsey Water has achieved both its compliance for water treatment works and service reservoirs and reflects the increased resources and efforts on the part of staff to ensure that these targets are reached.



Achieve 98% compliance for MAC for service reservoirs. (3.2)

Total = 99.62%

Forest Road West Reservoir = 100%

Forest Road East Reservoir = 99.77%

Water Tower = 99.33% (new pipework configuration to this service reservoir has made it possible to monitoring this service reservoir)

Frie Plaidy Reservoir = 99.30%



Forest Road Service Reservoirs East, West and Tower



Produce water quality report. (3.3)



Maintain treatment works output capability of 5,200MI per year and a peak of 23MI/d per day. (3.4)



Keep raw water storage reservoirs as full as possible (over 95% by 1 April) (3.5)



A full feasibility analysis of the various options available for a strategic raw water link main will be undertaken in 2005. (3.6)

This analysis will be undertaken in 2006 due higher priority work being undertaken in 2005.

☺ Continue with scientific investigations into the cause of the taste at Juas Water Treatment Works. (3.7)

☺ Build a new 5 megalitres per day Water Treatment Works at Longue Hougue by end of 2006. (3.8)

Detailed design has commenced and work is on schedule to be completed by end of 2006.



Longue Hougue site

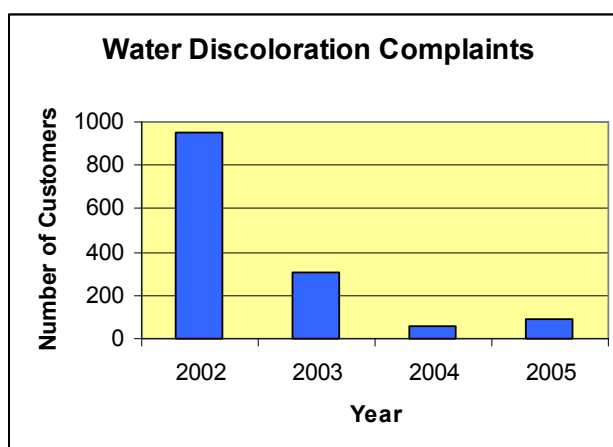
☺ Optimise St Saviours Water Treatment Works. (3.9)

☺ Carry out an energy efficiency audit of Water Production by end of 2006. (3.10)

This objective has been brought forward from 2008 to 2006 and will commence in early 2006.

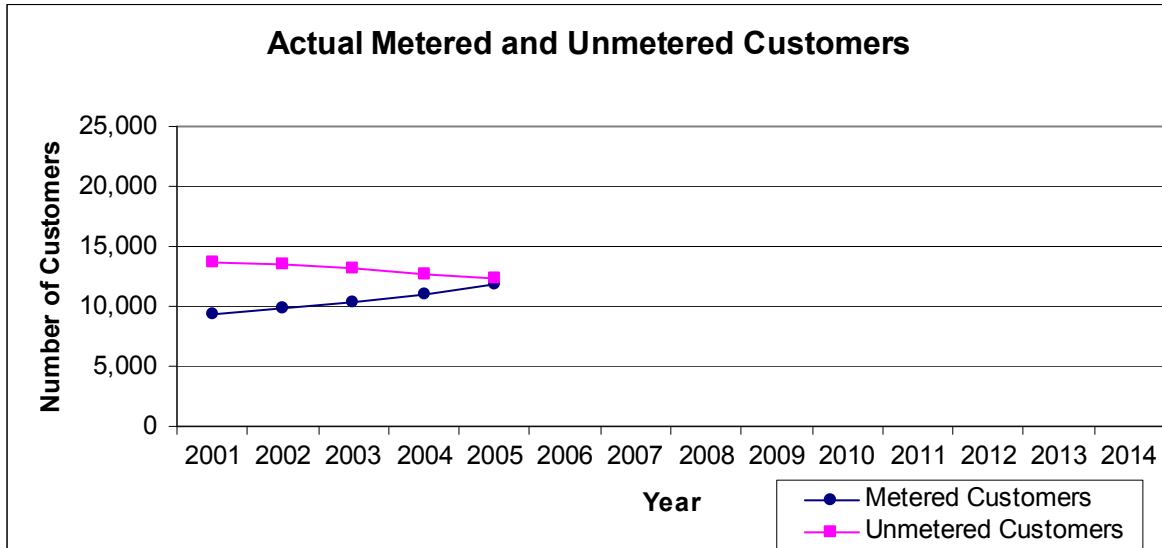
Water Distribution (& leakage)

☺ To monitor and reduce the number of discolouration complaints. (4.1)



Excellent progress has been made in the last two years in reducing discolouration complaints due to the completion of the mains rehabilitation works and the introduction of a new mains flushing programme. Guernsey Water is now working closely with the fire brigade to avoid discolouration problems resulting from routine hydrant checks.

- 😊 To continue to expand the distribution network. (4.2)
- 😞 Evaluate process for cleansing the distribution system commensurate with achieving water quality standards at customer taps. (4.3)
- 😊 Ensure that rechargeable works breakeven. (4.4)
- 😊 Complete zoned metering by end of 2005. (4.5)



- 😞 Take water quality samples from customer taps each year in line with UK regulations. (4.6)

The water supply zones, that effect the sampling regime, are being re-defined so as to conform with UK regulations.

- 😊 Proactively monitor leakage reducing unaccounted for water to below 700 megalitres in 2005. (4.7)
- 😊 Replace and upgrade Guernsey Water's northern ring main, which has become life-expired causing operational problems by 2007. (4.8)
- 😊 Replace failing raw water transfer mains over the next 15 – 25 years. (4.9)
- 😊 Replace 55km of failing asbestos cement mains over the next 15 – 25 years. (4.10)
- 😊 Install pressure reduction valves in 2006, to reduce network leakage (only when the network has been completely renovated). (4.11)

This will be carried out in 2006 once network modelling is complete in 2005



Develop asset management system in an integrated fashion by 2005. (4.12)

The initial phase of this project is complete but data will be continuously added to it. Operational staff from Guernsey Water demonstrated how they used the Digimap in the overall asset management philosophy at the annual Digimap conference in November 2005.



Reduce level of stock holding by 5% by end of 2005. (4.13)

Support Services



Achieve 90% compliance with Water Byelaw inspections schedule. (5.1)



Introduce project management 'rigour' to all projects. (5.2)

Customer Services

Due to the re-evaluation by the Public Services Department of Guernsey Water's priorities following the effects of the implementation of the Machinery of Government, many of the customer services objectives have been postponed. Resources which have been released from other parts of the business to help fulfil these objectives are now no longer available in the "belt tightening culture" that is developing in the States of Guernsey prior to the impending black hole in 2008. Whilst Customer Services is important, as supported by the Scrutiny Committee, it is not progressing with the urgency that it was first envisaged it would be given. Thus whilst the objectives are retained, many of the time frames have been adjusted to take into consideration the relative importance given to them by the Public Services Department. However, re-structuring of the finance section will undoubtedly result in a better integration of staff and create opportunities for developing a better standard of customer service.



New customer contact system by March 2005. (6.1)

This objective has been revised from a target date of March 2005 to September 2006 due to the re-assessment of priorities.




Develop a customer charter by end of 2006. (6.2)


Work is in progress to achieve this objective but the deadline has been revised from a target date of end of 2004 to end of 2006 due to the re-evaluation.





Carry out a customer survey ahead of charge review in 2005. (6.3)


This survey was not felt to be essential in the current economic climate and will be removed.


 To efficiently and consistently deliver high quality customer service procedures and introduce IT systems to ensure information is utilized throughout the business. (6.4)


 Enabling easy access will mean that contact can be made 365 days a year, 24 hours a day. Telephone and written correspondence including fax, post and e-mail will all be available. (6.5)

 Outside normal working hours, telephone calls will be received at the Operational Control room from where appropriate actions are directed. (6.6)

 The 'customer service' ethos will be developed in all staff and specialist training given to support where appropriate. (6.7)

 A manager with responsibility for customer service will ensure performance compliance is monitored and any remedial actions expedited. (6.8)

 95% of customer queries where a visit to the site is not necessary will be responded to within 5 working days. (6.9)


 90% of customer queries where a visit to the site is necessary will be responded to within 10 working days. (6.10)

The above two objectives are not currently measured but managers are confident that a similar standard is achieved but cannot validate that belief. Methods to measure these objectives will be developed in 2006 as part of the customer contact system.


People

The Public Services Department is currently reviewing the personnel functions within its Business Units. The outcome of the review will determine how Guernsey Water discharges its responsibilities in this area.

 Revise the current staff structure. (7.1)

 To re-evaluate any post which falls vacant to determine whether or not it needs to be re-filled. (7.2)

 Develop the formal system of staff appraisal for all Established Staff. (7.3)

 Provide comprehensive training and development programmes for all staff. (7.4)



To ensure that Health and Safety training is provided for all staff. (7.5)

The above two objectives are now effectively out-sourced to the Public Services Department Central Services and will no longer be the immediate responsibility of Guernsey Water to deliver.



Achieve Investors in People by end of 2005. (7.6)

The resources to achieve this objective have not been available in 2005.



Develop a rolling strategy to identify vacancies/replacement for staff leaving two years ahead and provide a succession plan by early 2005. (7.7)



To have extended the formal appraisal system to include all Public Service Employees on a voluntary basis. (7.8)

A pilot voluntary PSE appraisal scheme has been agreed by the Transport and General Workers Union and will be launched in 2006 once staff have received the necessary training.



To update the formal induction programme by end of 2005 for all new staff joining the department which puts particular emphasis on Guernsey Water's customer service and IT systems. (7.9)



To introduce an apprenticeship scheme working in conjunction with other States Departments where appropriate. (7.10)



Review the functions of the finance section commensurate with advantages now offered through the Navision System. (7.11)

This process is underway and will be completed in 2006.



Maintain the business continuity plans for Guernsey Water. (7.12)



Develop business continuity plans for key operational sites. (7.13)


The above two objectives were new in 2004. Business continuity plans are maintained but a training session has been postponed whilst staff resources are reviewed. Exercises can cost in the region of £2,000 to £3,000 and cannot be justified at this time.




Measure sickness levels within Guernsey Water and use as an indicator of morale. (7.14)





Measure accident statistics in accordance with industry standard criterion. (7.15)


 To encourage and promote the use of secondments with other organisations to develop and enhance the knowledge, experience and skills of staff. (7.16)


No progress made to date but this remains a medium term objective.

 A number of staff are already members of professional bodies according to their particular area of expertise within the organisation. Staff will be encouraged to obtain and or maintain this status through Continued Professional Development (CPD) ensuring that requirements of appropriate Institutions/Associations are met. (7.17)


 To promote staff attendance at appropriate trade exhibitions and conferences to keep abreast of the latest industry technology, aid professional development and provide networking opportunities. (7.18)

 To communicate information within the organisation to all staff in the most efficient and effective manner e.g. the production of a newsletter, staff meetings, and regular management and senior management meetings. (7.19)


 To have developed a proactive role to attract high calibre staff by promoting the opportunities and careers available at GW through positive PR - attending open days, career conventions, press articles. (7.20)

 To decrease staff turnover by enhancing the overall employee package e.g. a high standard of working conditions, good communication, planned training, opportunities for progression, utilisation of appropriate technology and equipment. (7.21)


Guernsey Water turnover has risen significantly during 2005 but every effort is being made within Guernsey Water to ensure that wherever practical and within our powers the overall employee package is enhanced and improved

 To have provided a safe working environment for all staff, with appropriate facilities. (7.22)



Information Technology

 Maintain IT systems sufficiently to support the standard of business service required. (8.1)



 Extend SCADA (Supervisory Control and Data Acquisition) (8.2)

-  Develop use of Guernsey Geographical Information System (GGIS) to map water catchment areas and streams. (8.3)


Property

-  Construct infrastructure works at St Andrews by end of 2005. (9.1)
-  Review use of a disaster recovery/training/meeting room at St Saviours. (9.2)


Progress will be made with this objective in 2006.

-  Sell or rent on a commercial basis surplus non-operational sites. (9.3)
-  Review the tree management plan for the Millennium Walk. (9.5)







Legislation

-  A detailed review will be undertaken in 2005/06 of the Water Act legislation and changes will be introduced commensurate with the relative urgency of such aspects. (10.1)

Discussions on water cycle and the possible inclusion of sewage within water legislation has resulted in a postponement of Guernsey Water's review of legislation, as this would significantly alter the whole project

-  Revise "The States Water Supply (Prevention of Pollution) Ordinance, and accompanying guidelines. (10.2)

Finance

-  Ensure cash flow forecasts are managed and achieved. (11.1)
-  Minimise bad debts. (11.2)
-  Water charges will be equitable and demonstrable with a single unit cost per cubic metre for all properties metered. (11.3)
-  Carry out a 2006 price/cost review in 2005. (11.4)
-  Review the debtor payment days in 2005 and set targets for 2006 and beyond. (11.5)
-  Review the number of creditor payment days and set targets for 2006 and beyond. (11.6)



Review and where possible reduce the number of disconnections made and set targets for 2006 and beyond. (11.7)



Review the efficiency of Guernsey Water and carry out any cost savings which are suitable.

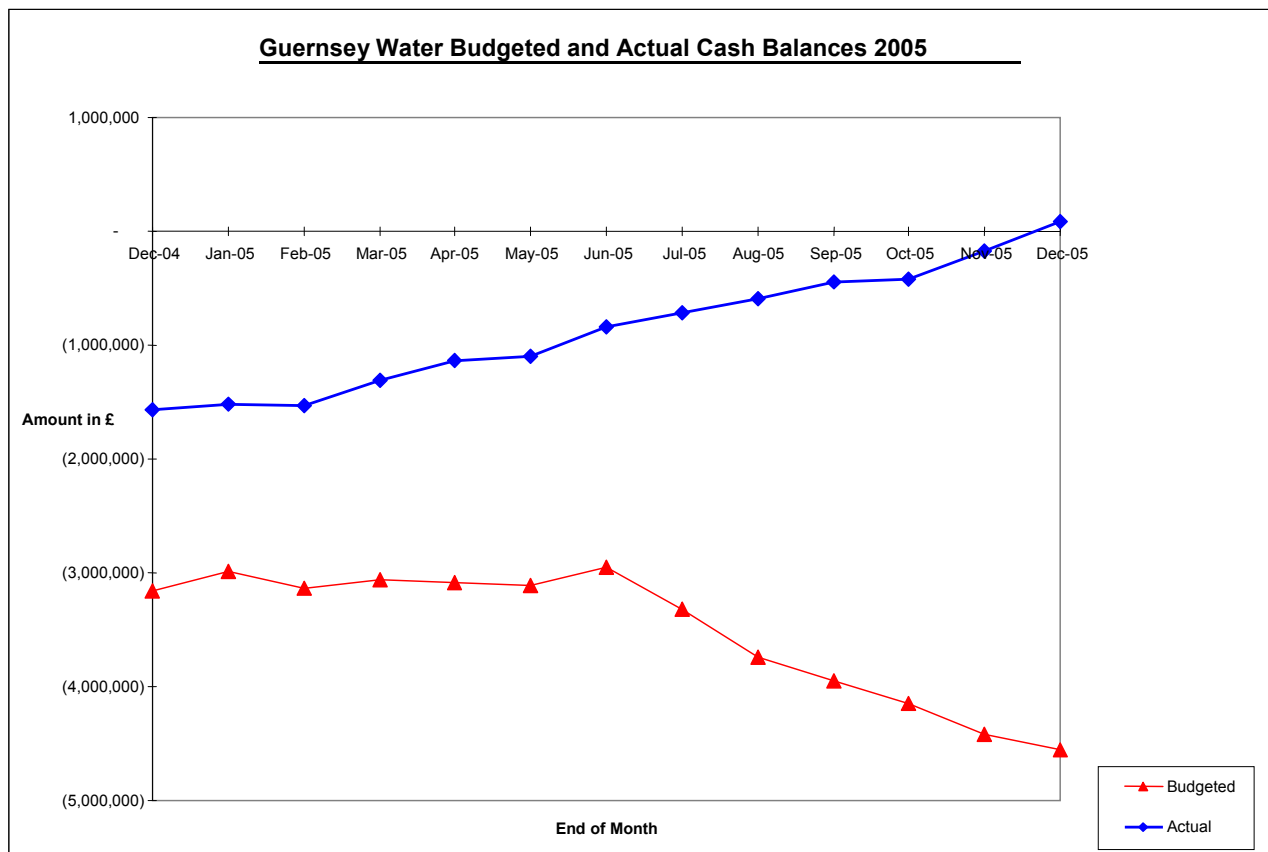
A staff level review has been carried out of various options available to cut costs within Guernsey Water. Changes that will reduce cost without impairing service to customers have been enacted.



Consider the introduction of a surcharge for late payers.



Eliminate the need to borrow as soon as practical.



Provision of alternative methods of payment.




Automation of States corporate property data from Treasury and Resources Department including Rateable Value (RV) charge system updates.



Prepare for changes to the Taxable Rateable Value (RV) system.







Inclusion of sewage billing.

-  Transfer the payment of wages and salaries from Guernsey Water to the central States of Guernsey system at Treasury and Resources Department.

As part of the States of Guernsey's search to find savings and increase efficiencies, the payment of Guernsey Water wages and salaries will be undertaken by the Treasury and Resources Department in 2006.

Monitoring and reporting

-  Produce Annual Report. (12.1)
-  Review Business Plan. (7.14.1)
-  Review Capital Development Programme on an annual basis. (12.3)
-  Continue to review the benchmarks with other island jurisdictions and where applicable, the UK and Europe. (12.4)

Summary of water quality report

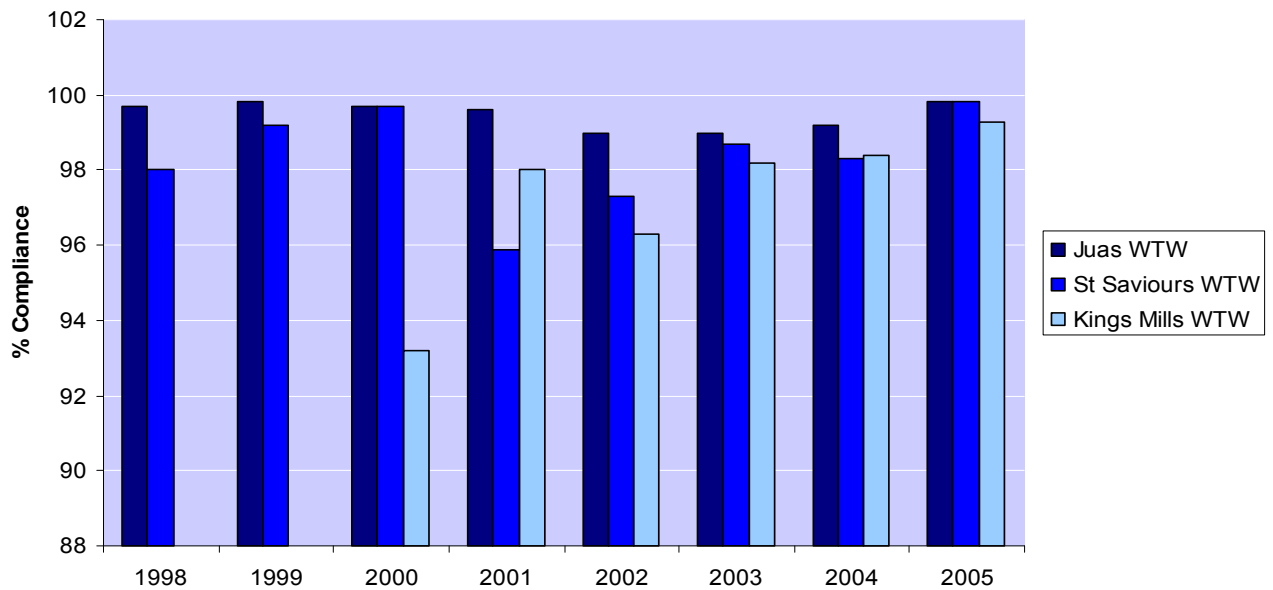


Treated Water Quality Monitoring Results

A total of 9,660 water quality analyses were undertaken during 2005, of which 9,605 were compliant. This gives an overall compliance level of 99.43%.

The following graph illustrates the individual Water Treatment Works (WTW's) compliance levels for the years 1998 to 2005.

Individual WTW Compliance



The following tables (Tables A to G) show the results of the monitoring programme from the Island's WTW Service Reservoirs and customer supply points together with the percentage compliance for the individual parameters monitored.

Table A

Supply point: St Saviours WTW

Substances & Parameters	Maximum level detected	Concentration, range or maximum value	% Compliance
E.Coli	0	0	100
Coliform Bacteria	0	0	100
Colony Counts	No abnormal change	No abnormal change (cfu / ml)	100
Residual Disinfectant	0.65	Company specified mg/l	100
Turbidity	2.2	1 NTU	98.8
Conductivity	677	1500 µs/cm	100
Colour	8.72	20	100
pH	6.53 - 8.72	6.5 – 9.5 pH	100
Cryptosporidium	0	0 /100 litres	100
Giardia	0	0 /100 litres	100

Table B

Supply point: Juas WTW

Substances & Parameters	Maximum level detected	Concentration, range or maximum value	% Compliance
E.Coli	0	0	100
Coliform Bacteria	0	0	100
Colony Counts	No abnormal change	No abnormal change (cfu / ml)	100
Residual Disinfectant	0.65	Company specified mg/l	100
Turbidity	6.4	1 NTU	99.6
Conductivity	709	1500 µs/cm	100
Colour	30	20	99.6
pH	6.85 – 7.75	6.5 – 9.5 pH	100
Cryptosporidium	0	0 /100 litres	100
Giardia	0	0 /100 litres	100

Table C**Supply point: Kings Mills WTW**

Substances & Parameters	Maximum level detected	Concentration, range or maximum value	% Compliance
E.Coli	0	0	100
Coliform Bacteria	0	0	100
Colony Counts	No abnormal change	No abnormal change (cfu / ml)	100
Residual Disinfectant	0.5	Company specified mg/l	100
Turbidity	5	1 NTU	97.9
Conductivity	590	1500 µs/cm	100
Colour	40	20	97.9
pH	6.00 – 7.00	6.5 – 9.5 pH	98.0
Cryptosporidium	0	0 /100 litres	100
Giardia	0	0 /100 litres	100

Table D**Supply point: No.2 Service Reservoir (East Compartment)**

Substances & Parameters	Maximum level detected	Concentration, range or maximum value	% Compliance
E.Coli	0	0	100
Coliform Bacteria	2	0	98.0
Colony Counts	No abnormal change	No abnormal change (cfu / ml)	100
Residual Disinfectant	0.3	Company specified mg/l	100
Turbidity	0.72	4 NTU	100
Conductivity	580	1500 µs/cm	100
Colour	5	20	100
pH	7.06 - 8.32	6.5 – 9.5 pH	100

Table E**Supply point: No.2 Service Reservoir (West Compartment)**

Substances & Parameters	Maximum level detected	Concentration, range or maximum value	% Compliance
E.Coli	0	0	100
Coliform Bacteria	0	0	100
Colony Counts	No abnormal change	No abnormal change (cfu / ml)	100
Residual Disinfectant	0.3	Company specified mg/l	100
Turbidity	0.35	4 NTU	100
Conductivity	574	1500 µs/cm	100
Colour	5	20	100
pH	7.09 - 8.36	6.5 – 9.5 pH	100

Table F**Supply point: No.2 Water Tower**

Substances & Parameters	Maximum level detected	Concentration, range or maximum value	% Compliance
E.Coli	0	0	100
Coliform Bacteria	14	0	96.1
Colony Counts	No abnormal change	No abnormal change (cfu / ml)	100
Residual Disinfectant	0.3	Company specified mg/l	100
Turbidity	0.34	4 NTU	100
Conductivity	574	1500 µs/cm	100
Colour	5	20	100
pH	7.03 - 8.35	6.5 – 9.5 pH	100

Table G**Supply point: Frie Plaidy Service Reservoir**

Substances & Parameters	Maximum level detected	Concentration, range or maximum value	% Compliance
E.Coli	0	0	100
Coliform Bacteria	22	0	95.2
Colony Counts	No abnormal change	No abnormal change (cfu / ml)	100
Residual Disinfectant	0.3	Company specified mg/l	100
Turbidity	0.18	4 NTU	100
Conductivity	681	1500 µs/cm	100
Colour	5	20	100
pH	6.89 – 7.90	6.5 – 9.5 pH	100

Water Quality in the Distribution System

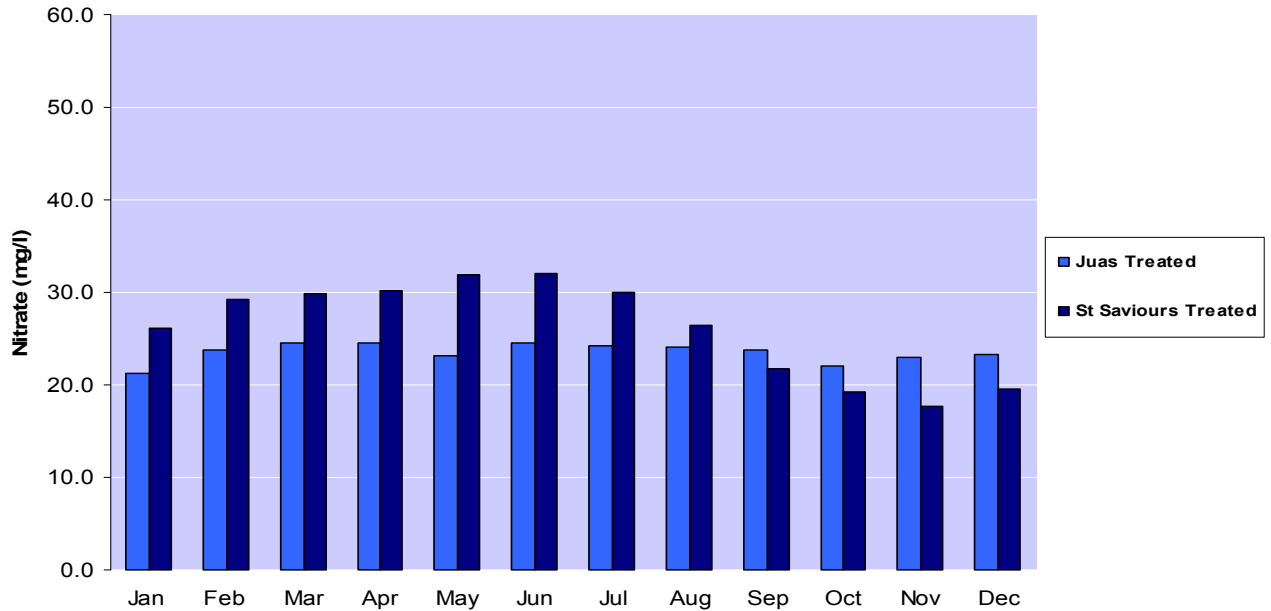
In 2005 some 2,293 tests were carried out on water samples which were taken from customer taps throughout the distribution system. The samples were analysed for physical, bacteriological and chemical parameters. The following table (Table H) shows the results of the check and audit monitoring programmes and the percentage compliance.

Table H
Supply Zone

Substances & Parameters	Concentration, range or maximum value	Min	Mean	Max	Nº of Samples	% Compliance
E.coli	0 / 100 ml	0	0	0	177	100
Coliform bacteria	0 / 100 ml	0	0.05	2	177	95.5
Colony counts	No abnormal change (cfu / ml)	No abnormal change			353	100
Residual disinfectant	Company specified mg/L	0.05	0.09	0.30	69	100
Turbidity	4 NTU	0.02	0.12	4.50	173	99.4
Conductivity	1500 µs/cm	538	602	715	173	100
Colour	20 mg/l Pt/Co	5	5.14	30	173	99.4
pH	6.5 – 9.5 pH	6.84	7.36	8.33	173	100
Ammonium	0.5 mg NH ₄ /l	0.01	0.01	0.04	68	100
Total oxidised nitrogen	50 mg NO ₃ /l	17.6	24.9	33.0	68	100
Aluminium	200 µg Al/l	15	67	178	115	100
Potassium	Company specified mg K/l	4.6	6.5	9.6	68	100
Iron	200 µg Fe/l	10	27.49	911	75	98.7
Copper	2000 µg Cu/l	10	59.01	345	74	100
Zinc	Company specified µg Zn/l	10	26.76	105	74	100
Lead	25 µg Pb/l	10	10.65	20	74	100
Manganese	50 µg Mn/l	10	10	10	6	100
Trihalomethanes	100 µg/l	12	87.06	127	63	65.1
Viruses	Company specified 0 / 10 l	0	0	0	12	100

Nitrates

Nitrate levels in water remain unchanged through the treatment processes that operate in Guernsey, as such careful monitoring of stream and stored water is undertaken to ensure compliance of treated water values with regard to the 50 mg/l maximum allowable concentration. The results below show complete compliance with regard to this particular parameter.



Water Quality Queries

During 2005, Guernsey Water received 91 queries from customers relating to the quality of their water supply. The following tables show the break-down of these queries.

Samples taken as a result of customer queries undergo the necessary physical, bacteriological and chemical analyses and a detailed report is sent to the customer. In 100% of cases, action is successfully implemented within a minimum time period. In the 4 cases where illness has been reported none of the sample results indicated that the water supply had in any way been to blame.

Type of query	Number
Iron discolouration	62
Other discolouration	1
Air	3
Sediment / bits	3
Taste / Odour	18
Illness	4
Total	91

Summary of financial statements

The following pages provide an overview of the capital expenditure and income and expenditure budget of Guernsey Water for 2005 and the corresponding accounts outturn for 2004. For a more detailed breakdown of the finances of Guernsey Water, please refer to the published audited report in the July 2005 Billet d'Etat.

As means of further explanation, the income and expenditure budget shows:

- An increased income from water supplies due to the 10% plus RPI rise in water charges brought into effect on 1st January 2005.
- Interest charges for the States overdraft meant that Guernsey Water paid in the region of £46,000 in charges.

Income and Expenditure Account

	Probable Outturn 2005		Accounts 2004	
	£	£	£	£
INCOME				
Water Supplies -				
Unmeasured	3,419,600		3,005,781	
Measured	<u>3,834,200</u>		<u>3,298,838</u>	
		7,253,800		6,304,619
Surplus on Other Trading Activities before Management Expenses and Depreciation		<u>102,920</u>		<u>337,010</u>
Operating Income		7,356,720		6,641,629
EXPENDITURE				
Operating Expenses -				
Water Production	1,536,930		1,446,129	
Water Distribution	846,570		741,810	
Property Maintenance	<u>146,250</u>		<u>93,326</u>	
		2,529,750		2,281,265
Management Expenses -				
General and Financial Management	478,090		394,253	
Income Collection	345,530		299,245	
Technical Services	193,100		193,940	
Support Services	737,220		669,680	
		<u>1,753,940</u>		<u>1,557,118</u>
Total Expenditure		4,283,690		3,838,383
OPERATING SURPLUS BEFORE DEPRECIATION		3,073,030		2,803,246
Depreciation		(1,075,000)		(1,049,922)
OPERATING SURPLUS FOR THE YEAR		1,998,030		1,753,324
Net Interest Payable		(53,500)		45,814
Surplus on Sale of Fixed Assets		<u>25,800</u>		<u>397,649</u>
SURPLUS FOR THE YEAR		1,970,330		2,105,159
Transfer to Reserve for Renewal of Assets		(430,000)		(451,507)
RETAINED SURPLUS FOR THE YEAR, TRANSFERRED TO REVENUE		<u>1,540,330</u>		<u>1,653,652</u>
ACCOUNT RESERVE		1,540,330		1,653,652

Capital Development Programme

Guernsey Water's Capital Development Programme in 2005 included investment in the asbestos cement replacement programme, infrastructure works at St Andrews reservoir site and completion of the membrane project at St Saviours water treatment works.

	Probable Outturn 2005		Accounts 2004	
	£	£	£	£
Water Resources		183,000		267,393
Water Treatment		783,200		2,239,374
Water Distribution		558,000		2,150,373
General		917,800		349,562
		<hr/>		<hr/>
GROSS CAPITAL INVESTMENT		2,442,100		5,006,702
Customer Contributions and Asset Sales		(55,000)		(559,944)
		<hr/>		<hr/>
NET CAPITAL INVESTMENT		2,387,100		4,446,758
		<hr/> <hr/>		<hr/> <hr/>

Key Statistics

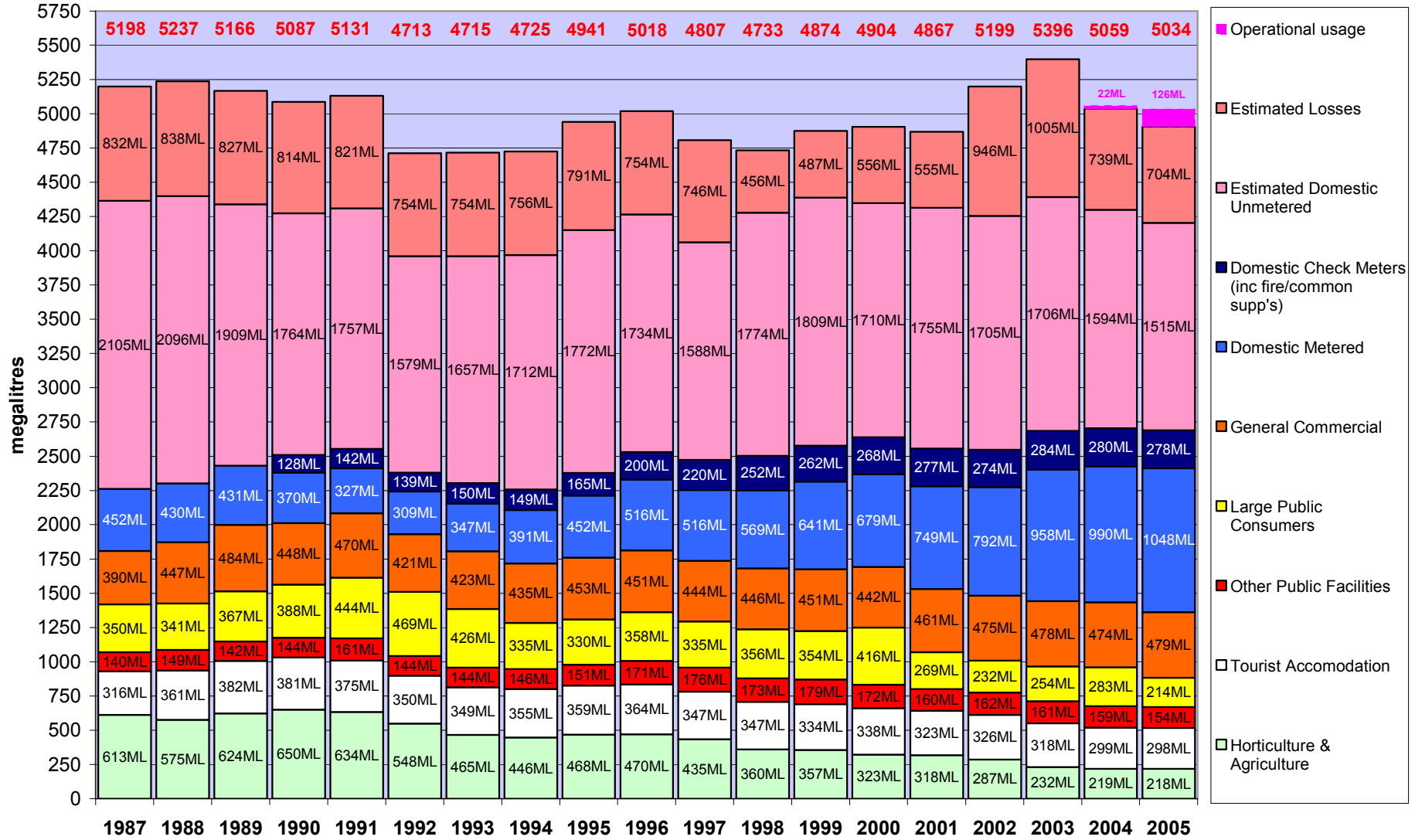
<u>Water Supply</u>	2005	2004	2003
catchment area	43.07km ²	43.07km ²	43.07km ²
population supplied	59,710*	59,710*	59,710*
number of connections	24,081	23,762	23,417
metered	11,806	11,013	10,372
unmetered	12,275	12,749	13,089
sources of supply (stream catchments)	23	23	23
sources of supply (wells)	5	5	5
storage towers & reservoirs (potable)	4	4	4
storage reservoirs / quarries	15	15	15
water treatment works	3	3	3
raw water pumping stations	15	15	15
<u>Mains Distribution</u>			
potable water mains including transfer main	440–450km	440–450km	440–450km
raw water pipelines (approximately)	60km	60km	60km
mains replaced	3.7km	2.97km	1.86km
burst mains per square / km (based on 62.94 square Km)	1.25	1.24	1.52
burst mains repaired	79	78	96
communication pipes repaired	59	257	74
unaccounted for water (leakage)	14%	14.6%	18.6%
<u>Water Quality</u>			
total samples taken at WTW	4871	5170	5545
total samples passed for WTW	4860	5104	5438
<u>Finance</u>			
income	£7,356,720**	£6,641,629	£6,118,571
operating expenditure	£4,283,690**	£3,948,234	£3,553,293
capital expenditure	£2,387,100**	£5,942,000	£3,361,591
<u>Personnel</u>			
established staff	38.5	43.5	42
non established staff	38	38	38
staff vacancies	8.5	4.5	6

* taken from 2001 Census

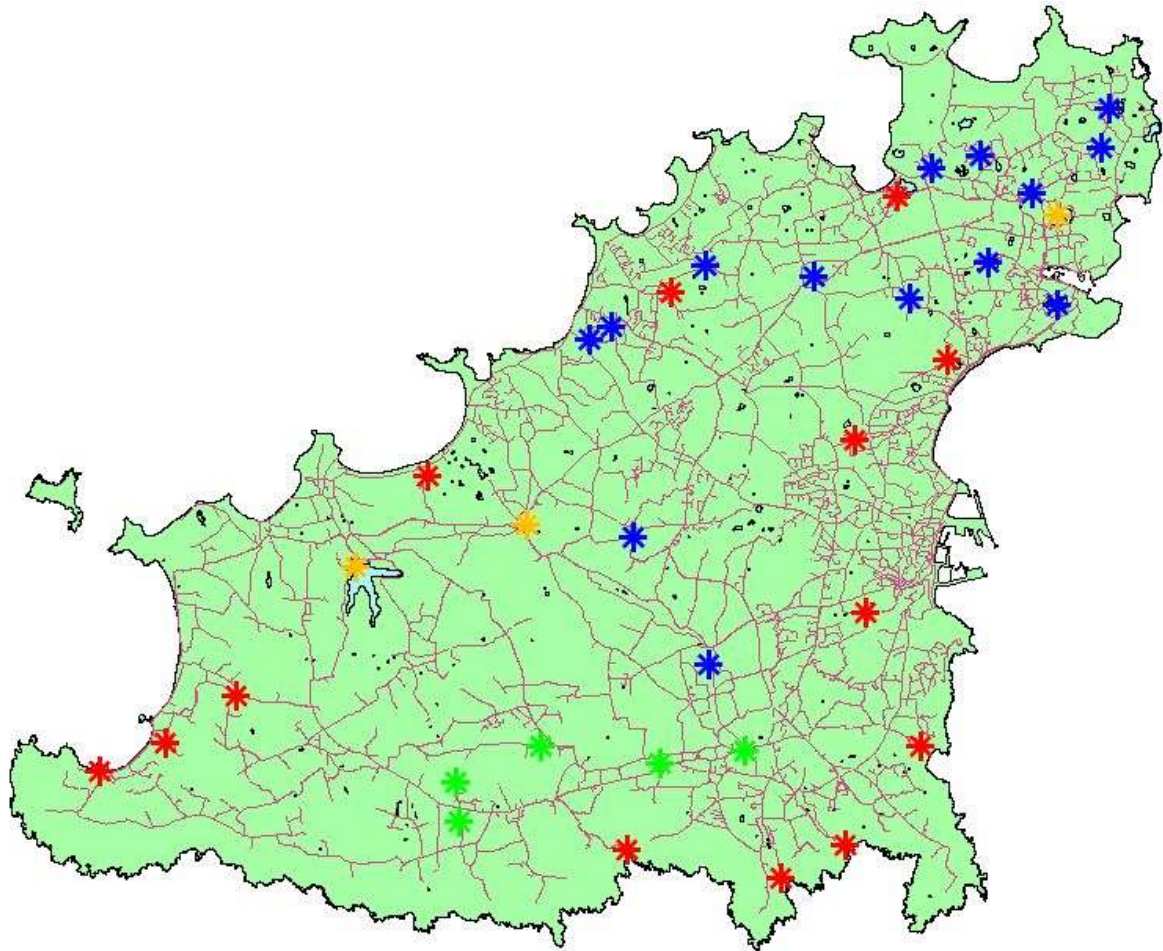
** Un-audited

Water Consumption from Public Supply

TOTAL PUT INTO SUPPLY IN MEGALITRES (ML)



Guernsey Water Operational Sites



- * Reservoirs
- * Pumping Stations
- * Emergency Boreholes
- * Water Treatment Works
- Water Mains