Scottish Water

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SCOTTISH WATER

WIC ANNUAL RETURN

COMMENTARIES

September 2010

A Tables Base Information

Table A1 Connected and Billed Properties

General Comments

Property numbers are for the report year as at 30 September 2009.

In general, a confidence grade of A2 has been applied to the figures reported in Table A1 for household properties in the report year, and B2 for non-household properties. Our confidence grade for the number of unmeasured household numbers (which is sourced directly from the WIC4 return) remains at A2. Measured household figures have a confidence grade of A2 as they continue to be sourced directly from corporate systems which are subject to review throughout the report year.

Data Sources

The Non-Household figures have been sourced from settlement reports supplied by the Central Market Agency (CMA), consistent with last year's Annual Return and there has been no change to the confidence grade applied.

Since the retail market opened to competition in April 2008, the CMA has calculated all wholesale primary charges due to Scottish Water from Licensed Providers via a series of monthly settlement runs. For each settlement run, the CMA provides an aggregated settlement report which is used by Scottish Water for billing purposes and a disaggregated settlement report to enable reconciliation of wholesale charges by market participants. These disaggregated settlement reports have been used to populate the Annual Return A Tables, consistent with the approach in 2008/09.

There are four reconciliation runs undertaken for each month, P1, R1, R2 and R3. The required frequency of runs is set out in the market documents, and these are undertaken according to a timetable published by the CMA. The September 2009 2nd Reconciliation (R2), the latest available for the month at the end of March 2010, was used to populate the A Tables.

The A Tables are populated based on reports from Scottish Water's Reconciliation datamart which contains the disaggregated settlement reports issued by the CMA. During 2009 a Scottish Water IT issue causes the loading of the settlement reports into the datamart to fail for a small number of lines for each month resulting in incomplete data e.g. missing meters. The issue resulted in the omission of 36 Supply Points from the datamart for the September 2009 2nd Reconciliation. These Supply Points were manually added to the A Tables to ensure the completeness of the reported data. The IT issue will be resolved over the summer and updated tables will be submitted after the query process.

Forecast data for 2010/11

Forecast non-household data for the 2010/11 financial year has been derived using the growth factors from the Final Determination applied to the actual data for 2009/10. The Business Units growth factor of 0.7% has been applied to all property numbers. It should be noted that, as a result, the 2010/11 forecast will differ from the data in the Final Determination as the 2009/10 figures now reflect actual data.

Non-household connected properties

The number of connected non-household properties reported as taking water services has decreased by 5,601 to 166,527.

This is primarily due to the removal from the market of 5,908 assessed meters, which had been erroneously created as charge attributes of field trough services at Supply Points at market opening. This issue was described in the response to query AR27 on last year's Annual Return. Prior to migration into the market, these troughs had been established in Business Stream's Hi-Affinity system with their own Property References, i.e. the troughs in question were established as stand-alone Property References with no association to any other Property Reference such as a farm. At migration, as this group had its own property references, separate Supply Points were created for the troughs. Where the Supply Points were unmetered, they were set up at the CMA with unmetered water service attributes as well as the trough charge attributes.

The presence of unmetered water service attributes led to their inclusion in line A1.8 of the 2008/09 Annual Return. Changes have now been made at the Supply Points concerned such as to remove the unmetered water services at the CMA Central System, resulting in a corresponding reduction in properties in 2009/10.

Resolution of this issue resulted in the removal of 5,908 unmeasured Supply Points, of which 4,961 were occupied and therefore billed and 947 were vacant. The 4,961 occupied Supply Points relate to the 4,989 assessed meters quoted in the P Table commentary in association with this issue. While the A Tables value is based on Supply Points in September 2009, the P Tables reflect assessed meters which have been in charge at any point in the financial year and the value is therefore slightly higher. Further details on the difference between values reported in the A Tables and P Tables including a reconciliation table are included in the P Tables commentary.

This issue did not affect sewerage Supply Points and therefore has no impact on reported figures for properties taking sewerage services.

Non-household void properties

The number of void non-household properties taking water services in the table below has been derived by subtracting the billed properties from the connected. The number of void properties taking water services has risen by 3,373 in the report year due to changes to the occupancy status of 4,320 Supply Points to 'vacant' by the registered Licensed Provider, offset by the exclusion of the 947 Supply Points outlined in the previous section. There has been a corresponding increase in void properties with sewerage services over the period of 3,792 due to changes in occupancy status by the registered Licensed Provider.

Void properties	2008/09	2009/10	Change
Void unmeasured properties – water	25,925	27,239	1,314
Void measured properties - water	14,434	16,493	2,059
Total void properties - water	**40,359**	**43,732**	**3,373**
Void unmeasured properties - sewerage	22,316	24,522	2,206
Void measured properties - sewerage	11,488	13,074	1,586
Total void properties - sewerage	**33,804**	**37,596**	**3,792**

As set out in the commentary to last year's Annual Return, the reported void properties include a number that were not billed and not previously flagged as void in Business Stream's Hi-Affinity billing system which were migrated to both the CMA and Scottish Water at market opening.

A project has now been established to review any Supply Points flagged as vacant at the CMA at the end of November 2009. The project is being undertaken by a third party contractor and includes a comparison with other data sources and an extensive programme of field visits to confirm the current status.

The project began in November 2009 and the initial review phase is expected to conclude at the end of July 2010 followed by completion of the remaining data correction activities. The findings of the project based on the 28,616 properties reviewed to date are shown in the table below

SPID category	Total %
Occupied-Non-Household	23.28%
Vacant-Non-Household	17.44%
Demolished	5.64%
Derelict	0.61%
Domestic	7.78%
Split	0.23%
Merged	0.54%
Duplicate	26.19%
Invalid Address	9.43%
Premises Not Found	8.62%
Tourism	0.25%

Following confirmation of the status, the necessary changes are being made to data at the CMA. Where a property is found to be occupied, the occupancy status will be updated by the Licensed Provider; where the property should not be in the market, for example because it is a duplicate, the necessary data changes are made by Scottish Water to deregister the Supply Point at the CMA.

Non-household unmeasured properties

The unmeasured properties reported in lines A1.3, A1.8, A1.14, A1.19, A1.25 and A1.32 reflect those properties which remain on partial or fully unmeasured charges. This will include those properties which have been metered under the Full Business Metering programme, in addition to those which remain unmetered. Where a meter has been installed under the Full Business Metering programme, wholesale charges at the property are currently subject to transitional phasing from unmeasured to measured charges as set out in section 4.1 of the Wholesale Charges Scheme. These properties are therefore still subject to partially unmeasured wholesale charges.

Non-household properties (connected and billed)

The recorded number of billed non-household properties taking water services has decreased by 8,974 to 122,795. The majority of the decrease occurred in the unmeasured properties (A1.3) where there was a reduction of 6,963 properties (see explanation above). The number of billed non-household properties at 30 September 2009 was calculated using data provided by the Central Market Agency (CMA).

Line ref.	Water services - (connected and billed)	2008/09	2009/10	Change
A1.3	Unmeasured non-household billed properties – potable water (including exempt)	53,920	46,957	-6,963
A1.4	Measured non-household billed properties - potable water	77,849	75,838	-2,011
	Total Non-household properties taking services	**131,769**	**122,795**	**-8,974**
	Void unmeasured properties and exempt	25,925	27,239	1,314
	Void measured properties and exempt	14,434	16,493	2.059
A1.8+A1.9	Total Non-household connected properties	**172,128**	**166,527**	**-5,601**

Household properties (connected and billed)

The data for these lines has been sourced directly from the WIC4 reports of September 2009 for the report year. Report year +1 household growth is obtained directly from the Final Determination.

Outturn Growth

However, the actual growth in billed properties (including exempt) was 19,607. The growth in connected properties is different to the growth in billed properties as we are now billing properties which were, in the past, connected but not billed.

Line ref.		2008/09	2009/10	Change
A1.1	Unmeasured household billed properties - potable water (including exempt)	2,335,284	2,354,891	19,607
	Number of void properties	53,637	48,896	-4,741
A1.6	Unmeasured household connected properties	2,388,921	2,403,787	14,866

A1.1-5 Billed Properties - Water

A1.1 Unmeasured Household Billed Properties

The number of billed and exempt unmeasured household properties is sourced from the WIC4 and has increased by 19,607 as shown below:

Line ref.	Annual return (households)	Report Yr -1	Report Yr	Growth	Report Yr +1	Growth
P3.37	Total number of billed properties	2,274,747	2,295,503	20,756	2,307,527	12,024
P3.48	Number of exempt properties	60,537	59,388	-1,149	59,388	0
A1.1	Total billed unmeasured households	2,335,284	2,354,891	19,607	2,366,915	12,024

From the above table, the total number of billed properties has increased by 19,607 which is higher than forecasted in AR09. Last year's forecast was based on our modelling assumptions of the downturn in the housing market utilising information from the National House Building Council (NHBC) and the Scottish Government demolition statistics. There has also been a decrease in the number of exempt properties by 1,149 and there has also been a reduction in the number of void properties by 4,741 which partially accounts for this higher than expected increase in billed properties. The number of exempt properties is expected to remain the same going forward.

As this information is sourced directly from the WIC4 reports, it has a confidence grade of A2 which reflects the quality of this external data.

A1.2 Measured household billed properties

The number of measured households decreased by 31 compared with the previous year. The reduction is principally as a result of closer interaction with this group of customers since business separation. This has allowed customers to make better economic comparisons of the benefits of measured charging versus Council Tax based charging. The confidence grade of A2 is consistent with previous year.

A1.3-4 Unmeasured and Measured non-household billed properties

The recorded number of billed non-household properties has decreased by 8,974 to 122,795 compared with the 2008/09 Annual Return. Of the 5,908 properties included in last year's Annual Return due to the association of unmeasured water service attributes with field troughs as described above, 4,961 were occupied and therefore billed.

The remaining movement of 4,013 was caused by changes in occupancy status at Supply Points to 'vacant' (as seen by a corresponding increase of 4,320 in void properties) offset by new connections, gap sites and disconnections.

Line ref.	Billed Properties	2008/09	2009/10	Change
A1.3	Unmeasured non-household billed properties – potable water (including exempt)	53,920	46,957	-6,963
A1.4	Measured non-household billed properties - potable water	77,849	75,838	-2,011
	Total billed Non-household properties	**131,769**	**122,795**	**-8,974**

A1.6-11 Connected Properties – Water

A1.6 Unmeasured Household Connected Properties

This figure is the cumulative total of billed properties, exempt properties and void properties which is sourced directly from the WIC4 reports and therefore given a confidence grade of A2. For the current report year, the void property total is 48,896.

A1.7 Measured household connected properties

The number of measured household connected properties is described in the commentary to line A1.2.

A1.8-9 Unmeasured and Measured non-household connected properties

The issue explained above, relating to the association of unmeasured water service attributes with field troughs at market opening accounts for a reduction of 5,908 connected properties compared with 2008/09, offset by new connections, gap sites and disconnections.

Line ref.	Connected Properties	2008/09	2009/10	Change
A1.8	Unmeasured non-household connected properties	79,845	74,196	-5,649
A1.9	Measured non-household connected properties	92,283	92,331	48
	Total connected Non-household properties	**172,128**	**166,527**	**-5,601**

A1.11 Number of properties connected during the report year

The number of properties connected in the report year of 13,455, although greater than forecasted in 2008/09, is less than connected during 2008/09 and is reflective of the change in the economy over the last year. The confidence grade of A2 reflects the same systems and processes in place as the previous report year.

A1.12-16 Billed Properties – Foul Sewerage

A1.12 Unmeasured household billed properties

There has been growth of 16,733 unmeasured household billed properties for sewerage in the Report year. The confidence grade remains unchanged at A2.

A1.13 Measured household billed properties

A decrease of 13 measured household properties is directly linked to the reduction in Measured Household properties having a measured water service. The confidence grade of A2 has not altered.

A1.14-15 Unmeasured and Measured non-household billed properties

The recorded number of billed non-household properties has decreased by 3,017 to 97,974 compared with the 2008/09 Annual Return. This movement was caused by the changes in occupancy status at Supply Points to 'vacant' by the registered Licensed Provider, as previously explained.

Line ref.	Billed Properties	2008/09	2009/10	Change
A1.14	Unmeasured non-household billed properties – sewerage	43,787	42,124	-1,663
A1.15	Measured non-household billed properties - sewerage	57,204	55,850	-1,354
	Total billed Non-household properties	**100,991**	**97,974**	**-3,017**

A1.17-22 Connected Properties – Foul Sewerage

A1.17 Unmeasured Household Connected Properties

Please refer to the commentary for line A1.6. For the current report year, the void property total is 47,004. The number of voids is calculated by subtracting A1.12 from line A1.17.

A1.18 Measured Household Connected Properties

Please refer to the commentary for line A1.13. The confidence grade of A2 has not altered.

A1.20 Measured Non-household connected properties

Please refer to the commentary for line A1.14-15.

A1.22 Number of properties connected during the report year

New properties connected have decreased from 18,307 in 2008/09 to 11,706; a description is provided in the commentary to A1.11.

A1.23-29 Billed Properties – Surface Drainage

A1.23 Unmeasured Household Billed Properties (including exempts) not billed for Property Drainage

Due to our tariff structure, there are zero unmeasured billed properties not billed for property drainage.

A1.24-26 Measured and Unmeasured Billed Properties not billed for Property Drainage

There has been a small increase in properties not billed for Property Drainage since 2008/09. Under the Market Code, the application of property drainage is controlled by the Licensed Provider in the Central Systems for non-household properties.

Line ref.	Properties not billed for Property Drainage	2008/09	2009/10	Change
A1.24	Measured household billed properties not billed for property drainage	9	20	11
A1.25	Unmeasured non-household billed properties not billed for property drainage	78	85	7
A1.26	Measured non-household billed properties not billed for property drainage	1,297	1,298	1

The confidence grade for A1.24 remains at A2. The confidence grade remains B2 for both A1.25 and A1.26, reflecting that the source data comes from the CMA.

A1.27 Household Billed Properties billed for Surface Drainage only

Due to our tariff structure, there are zero unmeasured billed properties not billed for surface drainage.

A1.28 Non-household properties billed for surface drainage only

The number of non-household properties billed for surface drainage only has decreased by 671 to 11,521 since 2008/09. This movement was caused by changes in occupancy status at Supply Points to ‘vacant’ by the registered Licensed Provider and more accurate measurement due to improved understanding of the CMA Systems.

A1.30-35 Connected Properties – Surface Drainage

A slight change in line A1.31 highlights a decrease from 754 to 729 properties. This is largely due to a number of properties being identified as domestic surface water only properties which were billed as part of the non-domestic billing process. These

properties have been segregated from the non-domestic properties as part of the CMA migration and are now included in line A1.31.

A1.32-33

The confidence grade for the connected non-domestic properties has remained at B2, as the data is sourced from the CMA.

A1.32-33 Non-household Connected Properties – Surface Drainage

The development of the reports to populate this year's Annual Return highlighted an issue with the values reported in A1.32 and A1.33 for 2008/09 which had resulted in incorrect categorisation between unmeasured and measured. AR09 was populated using a temporary datamart developed for the purpose. This datamart has been subsequently superceded with a permanent solution which has been used to populate AR10 and will support future years. During the development and testing of reports from the new datamart for AR10 reporting, the issue was identified with the AR09 report from the temporary datamart which had resulted in a mis-categorisation of some connected properties. The table below shows the previously reported AR09 figures and the corrected 2008/09 figures using the new report and datamart along with the reported figures for 2009/10. When compared on a like-for-like basis, there has been an increase of 662 properties over the year which is comparable with the movements observed in other categories of connected properties.

Line ref.	Properties connected for Surface Drainage	2008/09 Annual Return	2008/09 on consistent basis with AR10	2009/10 Annual Return	Variance 2009/10 vs 2008/09 reported	Variance 2009/10 vs 2008/09 restated
A1.32	Unmeasured non-household connected properties	61,786	59,660	60,108	-1,678	448
A1.33	Measured non-household connected properties	81,405	82,871	83,085	1,680	214
	Total billed Non-household properties	**143,191**	142,531	**143,193**	**2**	**662**

A1.35 Number of properties connected during the report year

The number of properties connected during the year is 11,706. This line matches line A1.22 and the new properties connected are described in the commentary to A1.11. The confidence grade remains at A2.

A1.36-39 Trade Effluent

A1.36 Billed Properties

The number of billed properties has risen, slightly from 1,493 in 2008/09 to 1,526 in the 2009/10 report year. This upward movement is due to a combination of:

- Businesses being charged Trade Effluent for the first time as a result of being metered under the full business metering programme.
- The number of new applications exceeding the number of closures.
- The number of small/low risk discharge points being moved off TE billing.

There were 7 known discharge point closures in the report period, therefore the forecast for next year is 1,519.

A1.37 Connected Properties

The number of connected properties has decreased from 3,386 to 2,575. This is due to Scottish Water terminating approximately 800 consents which were marked as being "live", but investigations revealed these were no longer required. Whilst this is at odds with the rise noted in A1.36, it was noted in last year's commentary that SW had identified a number of sites which no longer required consent, and stated an intention to close these during the reporting period.

A1.38 Trade Effluent load receiving secondary treatment (BOD/y)

The total BOD load receiving secondary treatment has decreased from 27,116t to 20,268t. Whilst this is at variance with the rise in the number of billed properties, line A1.36, there has been a marked reduction in the volume being discharged from 105Ml/d to 93Ml/d.

The confidence grade remains at B2 and B4 for the current and forecast years respectively, as the data is sourced from the CMA.

A1.39 Trade Effluent load receiving secondary treatment (COD/y)

The total COD load receiving secondary treatment has reduced from 60,308 tonnes/yr to 47,663 tonnes/yr. This broadly agrees with the reduction reported for total BOD load.

The confidence grade remains at B2 and B4 for the current and forecast years respectively, as the data is sourced from the CMA.

Table A2 Population, Volumes and Loads

A2.1-9 Summary – Population

A2.1 & A2.6 Population Water & Waste – Winter

Population data is based on General Register Office for Scotland (GROS) population projections for this year. There is an increase in winter population of 33,402 compared against the 2009 Annual Return reported position. This is an increase of 16,615 on last year's forecasted position which was based solely on a full 2006 based dataset from GROS.

For this year's submission, populations are derived from recently published GROS 2008 based population projections and existing 2006 based private household population projections. The 2006 based projection has been aggregated up to a 2008 based projection level to obtain the number of people in households and the number of people not in households. Connection rates from the WIC4 2009 report were applied to determine the population with water and wastewater services.

A2.2 Population Water – Summer

To determine the increment of the summer population (above the winter population), a data set from Yell.com was used to identify properties which offer accommodation to visitors and to which was applied the average bed space supplied by Visit Scotland. In this way, a derived number for summer visitors of 224,706 was reached.

No change in the confidence grade has occurred in the year.

A2.3 Population of unmeasured household properties

The population of unmeasured household properties connected to our networks has increased by 32,307 for water, reflecting an increase in the total population and a proportion of households with water. The confidence grade remains the same at A2.

A2.4 - The population of measured household properties taking water services has decreased by 82, reflecting the decrease by 31 in the number of measured household properties reported in line A1.2. The confidence grade remains the same at A2

A2.7 Population Waste – Summer

To determine the increment of the summer population (above the winter population), a data set from Yell.com was used to identify properties which offer accommodation to visitors and to which was applied the average bed space supplied by Visit Scotland. A total of 135,761 of the 224,706 water population also appeared in the sewer area. The confidence grade remains the same at A2

A2.8 Household Population connected to the wastewater service

The population of unmeasured household properties connected to our networks has increased by 26,760 for wastewater.

A2.10-19 Water Balance

A2.10 - 11 Water treated at own works to own customers & Distribution input treated water

Lines A2.10 and A2.11 report 'water treated at own works to own customers' and 'distribution input treated water'. These are both reported identically because Scottish Water does not supply treated water to any party other than direct customers of Scottish Water through the water distribution networks.

Distribution Input (DI) has reduced from 2,144 Ml/d to 2,044 Ml/d principally due to reduced total leakage.

Following DI measurement and reporting enhancements in AR09, Scottish Water has continued to improve the provision and accuracy of DI related information through project completion/continuation. Projects undertaken include:

- Continuous development of our data warehouse (Z-One), for reporting and data management functionality through a number of enhancements including reporting DI at asset level on a daily basis, verification & confidence level dashboards and other minor enhancements to the reporting structure.
- Bulk Telemetry Signal download project to streamline telemetry signals from corporate sources.
- 2010-15 Investment Programme for DI improvement including identification of meters for replacement, chamber installations, new metering opportunities
- Continued DI site surveys.
- Continued independent flow verification and calibration of Scottish Water DI metering estate.
- Daily, weekly, monthly and annual validation/reporting of DI Information
- Continuous development of automated reporting utilising logger, telemetry, manual or estimated data.
- The number of users of Corporate DI data continues to increase across Scottish Water Business functions.

Recorded DI data is passed from our loggers, improved telemetry and manual collection process to a data warehouse (Z-one) which stores flow data and asset information in conjunction with maintenance, verification and survey reports. This enables visibility of detailed flow information and thus confidence in the data provided.

DI is being reported with a B3 confidence grade, consistent with last year. The availability of the measured flow data has increased from 94% in AR09 to 98% during the AR10 reporting year.

A2.12 Unmeasured household volume of water delivered

Unmeasured household volume of water delivered has decreased from 882.3 Ml/d to 843.8 Ml/d. The principal influence has been from movement in underground supply pipe losses (UGSPL) which have decreased to 35.60 litres/prop/day from last year's reported figure of 56.04 litres/prop/day (reported in lines A2.31 to A2.36). The confidence grade for this line remains B2 reflecting the confidence associated with the unmeasured household PCC, which is now exclusively reported from Scottish Water's Continuous Area PCC Monitor (line A2.25).

A2.13 Measured household volume of water delivered

Measured household volume of water delivered has fallen slightly compared to the previous year. The percentage meter under-registration has decreased from 4.1% to 4.0%. The meter under-registration is taken from the 2008/09 supporting information documents for the OFWAT Service and Delivery report. The confidence grade reported for this line remains at B2.

A2.14-15 Non-household volume of water delivered

There has been a change in approach to calculation of non-household consumption compared with the 2008/09 Annual Return. This year, consumption data calculated by the Central Market Agency (CMA) has been used to populate lines A2.14 and A2.15. This means that the same data mart has been used as the basis to calculate

consumption as used to calculate revenue. This is an improvement on last year when a separate data mart was used as a basis for consumption calculations.

When the retail market opened to competition in April 2008, responsibility for reading the meters of non-household customers transferred from Scottish Water to Licensed Providers. Meter readings are supplied by Licensed Providers to the CMA to enable the derivation of consumption at each Supply Point. The algorithms used to calculate consumption, along with the requirements for meter reading frequency, are defined in the Market Code and Code Subsidiary Documents (CSDs). The consumption is used in the calculation of wholesale primary charges due to Scottish Water from Licensed Providers via a series of settlement runs in respect of each month.

For each settlement run, the CMA provides an aggregated settlement report which is used by Scottish Water for billing purposes and a disaggregated settlement report to enable reconciliation of wholesale charges by market participants. The data reported in lines A2.14 and A2.15 has been derived from these disaggregated settlement reports. The specific settlement runs used are the same as have been used to populate the P Tables.

Unmeasured Non-Household Consumption

The reported unmeasured non-household volume of water delivered has reduced from 35.26 Ml/d in 2008/09 to 17.42 Ml/d in the report year.

The consumption in line A2.14 relates to Supply Points which remain on fully or partially unmeasured charges. This includes those properties which have been metered under the Full Business Metering programme in addition to those which remain unmetered. Where a meter has been installed under the Full Business Metering programme, wholesale charges at the property are currently subject to transitional phasing from unmeasured to measured charges as set out in section 4.1 of the Wholesale Charges Scheme. These properties are therefore still subject to partially unmeasured wholesale charges.

Consumption at unmeasured Supply Points reflects actual metered consumption where a meter has been installed under the Full Business Metering programme and assessed consumption (derived from Rateable Value) where the Supply Point remains unmetered.

	AR09	**AR10**
Occupied and exempt properties	*53,920*	*46,957*
Underground supply pipe leakage	*48.43 l/prop/d*	*34.39l/prop/d*
Underground supply pipe leakage	2.61 Ml/d	1.61Ml/d
Water delivered	**33.61 Ml/d**	**16.03 Ml/d**
Void properties (vacant)	*25,925*	*27,239*
Internal plumbing losses (voids)	*11.93 l/prop/d*	*11.40l/prop/d*
Underground supply pipe leakage (voids)	*51.83 l/prop/d*	*39.72l/prop/d*
Internal plumbing losses (voids)	0.31 Ml/d	0.31 Ml/d
Underground supply pipe leakage (voids)	1.34 Ml/d	1.08 Ml/d
Water delivered to void (vacant) properties	**1.65 Ml/d**	**1.39 Ml/d**
Total line A2.14 unmeasured non-household volume	**35.26 Ml/d**	**17.42 Ml/d**

We acknowledge that the reported unmeasured non-household volume remains uncertain until more valid meter readings are processed by the CMA for these properties.

We have reflected this uncertainty in the C5 confidence grade we have assigned to this data for the report year.

Measured Non-Household Consumption

The consumption in line A2.15 reflects the actual consumption recorded at meters which are currently subject to fully measured charges.

Derivation of Consumption from CMA Settlement Reports

The consumption reported in lines A2.14 and A2.15 differs slightly from the billed consumption reported in the P Tables.

Volumetric wholesale charges are applied at the CMA via the calculation of an Estimated Weighted Average (EWA) unit rate for each Supply Point at each settlement run. This is replaced with an Actual Weighted Average unit rate at Final Reconciliation.

In certain circumstances, generally as a result of issues with a meter reading or technical data, negative consumption can be calculated at meters. A related issue is the calculation of a EWA value of zero in certain circumstances relating to large negative historical consumption.

Consumption has been included in the A Tables wherever it is a positive value at a Supply Point which is occupied. Where the calculated consumption is negative, this is substituted with an estimated consumption using the same methodology as is applied by the CMA in the absence of meter readings at a Supply Point. In the first instance, the Licensed Provider's Yearly Volume Estimate (YVE) is used if available. In the absence of an YVE value, the industry standard consumption for that meter size is used.

Where lines A2.14 and A2.15 have been calculated in order to reflect as closely as possible the actual volume of water delivered, the P Tables reflect the volume that has been billed at a given point in time. The consumption in the P Tables comes from the same settlement reports but is derived using a slightly different methodology. Consumption has been included in the P Tables where the EWA for a given supply point in a given month is not equal to zero (and therefore a charge applies to the consumption). This ensures that the P Tables reconcile as closely as possible to the General Ledger.

The billed consumption reported in the P Tables will therefore be lower than that in the A Tables due to the inclusion of some negative volumes in the former. The billed consumption in a given settlement year would be expected to converge towards the water delivered in subsequent settlement runs as issues causing the calculation of negative consumption are resolved.

Both the A Tables and the P Tables report consumption at occupied properties only with the exception of the adjustment described below which is applied in the A Tables in relation to estimated consumption at properties wrongly flagged as vacant at the CMA.

Other Adjustments to Billed Consumption

A number of additional adjustments are also applied to convert billed consumption into delivered potable water.

There are 9 non-household customers receiving non-potable supplies. Consumption at these Supply Points is reported separately in line A2.20 and is therefore excluded from line A2.15.

The supply of shipping water at Queen's Dock in Aberdeen is not supplied via Licensed Providers and not included in the CMA's settlement reports. The water supplied is potable and is therefore included in line A2.15.

Finally, an adjustment is made for consumption at non-household properties which are thought to be wrongly flagged as vacant at the CMA.

The occupancy status of a Supply Point at the CMA is maintained by the registered Licensed Provider. As set out in the commentary to table A1, a project was established, at the end of November 2009, to review any Supply Points flagged as vacant at the CMA, undertaking comparison with other data sources and an extensive programme of field visits to confirm the current status.

The results to date based on a large sample, show that 23% of Supply Points flagged as 'vacant' at the CMA have been found to be occupied. The CMA continues to estimate consumption at a Supply Point since the last meter reading regardless of its occupancy status. An adjustment has therefore been made to lines A2.15 and A2.14 to add 23% of the estimated consumption at vacant Supply Points.

A2.16 Total volume (potable water)

Total volume of potable water is being reported with a confidence grade of B3 as in the previous reporting year.

A2.17 Water taken unbilled

Water taken unbilled is the sum of:

A2.27	Water taken unbilled legally
A2.28	Water taken unbilled illegally and
A2.29	Distribution system operational use

The confidence grade remains at C4 as they are based on estimated volumes.

A2.18 Leakage – Distribution losses (incl trunk mains and service reservoirs)

Distribution losses have decreased from 727.9 Ml/d to 692.7 Ml/d due to continuing leakage reduction activity. This figure is being reported with confidence grade B3. This is based on DMA reportability of >80% (actual 86%).

A2.19 Overall water balance

The confidence grade for the overall water balance remains at B3 as there have been no significant changes in methodology compared to the previous year.

A2.20 Volume of Non-Potable Water Delivered

Nine non-household customers receive non-potable water supplies. Most of these Supply Points are subject to Schedule 3 charging arrangements.

The volume reported in line A2.20 reflects the consumption calculated by the CMA for the following Supply Points which receive non-potable supplies; some of these supply points have multiple meters.

Supply Point ID	Meter Serial Number
101119750150	98W00006
101122290109	90M000404
101122290109	97W021741
101143770105	V20752/7/1
101797540101	06W302847
101797540101	94W024603
101797540101	K99A816211
200003570104	V/20784/8/7
101202540150	K02A246800
101202540150	K03W022848
101653530150	03M362847
101653530150	04H000160
200000400101	08AQUAMASTG/16297/2/5
101199770101	05H300704
101199770101	05M120383

A2.21-28 Water delivered – components

A2.21 & A2.22 Bulk supply imports/exports

There are no bulk supply imports or bulk supply exports so these are again reported as 0 Ml/d at confidence grade N.

A2.23 and A2.24 Estimates water delivered per unmeasured and measured non-household.

The significant reduction in line A2.23 from 654 l/prop/d to 371 l/prop/d is driven by a reduction in line A2.14 as detailed above.

The slight increase in line A2.24 from 5,534 l/prop/d to 5,643 l/prop/d is driven by a reduction in line A1.4 and a reduction in line A2.15 as detailed above.

A2.25 Per capita consumption (unmeasured household – excl supply pipe leakage)

As for last year, the Unmeasured Household Per Capita Consumption has been derived using data gathered exclusively from Scottish Water's Continuous Area PCC Monitor. The Monitor provides an accurate assessment of household demand in accordance with UKWIR best practice for unmeasured per capita consumption monitors. The Monitor was established during 2007/08 & 2008/09 providing national coverage on a representative basis.

The PCC reported using the Monitor for AR10 is 153.76 litres/head/day (l/hd/d) which is marginally higher than the AR09 reported figure of 153.02 l/hd/d. This year on average

94 PCC Zones reported each month for AR10, in comparison to last year when, in the early months, only circa 50 PCC Zones reported.

During Q&S3b it is planned to continually review and implement PCC best practice as appropriate to SW.

A2.26 Per capita consumption (measured household – excl s/pipe leakage)

The calculation remains unchanged from the previous reporting year. The confidence grade remains at B3.

A2.27 Water taken unbilled – legally

The volume reported as water taken legally unbilled (WTLU) has decreased from 60.2 Ml/d in 2008/09 to 55.7 Ml/d in this report year. The confidence grading remains at C4 due to the nature and estimation of the volume reported. The methodology has remained the same for the majority of components. The main reasons for the changes in volumes are as follows:

- Increase in fire service use (from 13.2 Ml/d to 14.5 Ml/d); the same methodology has been used as the previous year, the change is due to changes in the number of fires, fire crews and fire service vehicles reported by the Fire Service.

- Decrease in licensed standpipe use (from 14.0 Ml/d to 12.4 Ml/d); although the total number of standpipe licences issued has increased very slightly there has been a reduction in the number of licences issued for building work which has reduced the total volume associated with this component.

- Decrease in WWTW use (from 16.6 Ml/d to 14.6 Ml/d); readings taken at 72 WWTW's during the report year have been used in the calculation; these works are representative of the various types and sizes of WWTW and account for 31% of PE throughout the reporting year. The methodology to which the meter reads are applied is the same as the previous year.

- A slight decrease in Scottish Water Offices and Depots use (0.18 Ml/d to 0.16 Ml/d); the same methodology has been used as last year. The decrease in volume is due to the number of staff at Scottish Water offices reducing; the usage volumes per member of staff have remained the same.

- Decrease in unbilled field trough usage (from 13.0 Ml/d to 11.7 Ml/d); the number of fixed charge field troughs has reduced from 13,599 in AR09 to 11,616 in AR10. This has resulted in a reduction in the overall volume of water used by unbilled field troughs.

- Decrease in building water use (from 2.2 Ml/d to 1.3 Ml/d); the methodology has changed slightly since the previous reporting year. In AR09 the volume of water used by building water licences was estimated by multiplying the total number of properties associated with building water licences issued during the year by the estimated volume of water used to build a house. This year, in AR10, the number of properties associated with building water licences was assumed to be the number of properties connected to the network. The methodology for estimating the volume of water used to build each property has remained the same. The decrease in volume is due to a reduction in the number of new

domestic properties built. The figure is included as WTLU because developers are billed for a construction licence rather than for a volume of water.

A2.28 Water taken unbilled – Illegally

The volume of water reported as water taken illegally unbilled (WTIU) has fallen from 3.5 Ml/d in 2008/09 to 2.9 Ml/d in the reporting year.

The confidence grade has remained at C4 due to the nature and estimation of the volume reported. This is due to the data sources and methodology used to calculate this component remaining the same.

- Void property use – the volume has decreased very slightly from 0.83 Ml/d to 0.76 Ml/d.

- Hydrant misuse - the number of events was slightly higher in AR10 compared to AR09 which has resulted in a 0.8 Ml/d increase in volume to 1.3 Ml/d. The volume per hydrant misuse event has been revised using a sample of events from AR10 which has also contributed to this increase in volume.

- Illegal standpipes - the volume has decreased from 2.2 Ml/d to 0.9 Ml/d due to a reduction in the number of illegal standpipes reported. The campaign initiated in AR08 aimed at minimising unlicensed standpipe use has continued.

A2.29 Water taken unbilled – Distribution system operational use

The volume of water reported as Distribution system operational use (DSOU) has increased from 3.58 Ml/d in 2008/09 to 3.81 Ml/d in this reporting year. The confidence grade remains at C3 due to the nature and estimation of the volume reported. The changes in volumes can be explained as follows:

- Reservoir Cleaning – the volume has increased slightly from 0.3 Ml/d to 0.4 Ml/d. The methodology has changed slightly in that the list of service reservoirs cleaned and the volume of water discharged is provided by the regional Leakage Delivery teams.

- Mains Rehabilitation & New Mains - the volume used has increased slightly from 1.1 Ml/d to 1.2 Ml/d; this is due to an increase in the length of mains rehabilitation compared to the previous reporting year.

- Programmed Flushing & Swabbing - the volume of water has decreased from 0.7 Ml/d to 0.5 Ml/d in this reporting year; the methodology is the same as the previous year.

- Burst Repairs / Other Network Interruptions – the methodology applied is the same as the previous year; the volume has remained constant at 0.5 Ml/d.

- Reactive Water Quality Incidents – there has been a rise in the number of incidents resulting in an increase from 0.8 Ml/d to 1.2 Ml/d; the methodology applied is the same as the previous year.

- Planned Water Quality Sampling – the volume reported remains constant at 0.1 Ml/d; there has been no change in methodology.

A2.30 Top Down total leakage – total losses

Using the Integrated Flow Method, Top Down Total leakage has reduced from 868.1 Ml/d in 2008/09 to 783.4 Ml/d in the report year which is a reduction of 84.7 Ml/d. The confidence grade associated with this line remains B3.

In recent years the trend in total leakage reduction (reported using the integrated flow method) is:

Report year	Leakage (Ml/d)
2004/05	1,139
2005/06	1,104
2006/07	1,004
2007/08	924
2008/09	868
2009/10	783

The overall leakage reduction is primarily due to:

- Continuing ALC activity.
- Pressure management programme.
- Maintained DMA operability & reportability.
- Programmed reservoir assessment and remedial action.
- Continued awareness within the business including; short interval control through a weekly Leakage Campaign Meeting, instigation of a leakage hotline and visible poster campaign.
- Ongoing data improvements within water balance reporting, enabling improved leakage targeting.

As per 2008/09 OPA 'like for like' Total Leakage reporting, the 2009/10 OPA reported leakage value of 703.6 Ml/d has been calculated baselined on 2007/08 methodologies and data, with 2009/10 data updates where appropriate e.g. household population (real data movement but same 2007/08 methodology).

For AR11 & 2010/11 OPA Leakage reporting, and for future years' reporting, it has been agreed between SW and WICS, to report MLE Leakage and move away from the 'like for like' methodology adopted in recent years.

Where the water balance reconciliation error between top down and bottom up leakage is < 5% of DI, this is accepted as an indicator of a robust water balance. In such circumstances an MLE statistical calculation is then undertaken to determine the leakage figure to be reported. If the reconciliation error is > 5% of DI, then the top down leakage figure will be reported.

A2.31 – A2.36 Leakage – supply pipe losses

The volume of supply pipe losses has reduced from 141.2 Ml/d reported last year to 90.8 Ml/d in this period. The main reasons for this reduction are a reduction in the number of

supply pipes needing repaired and a lower leakage rate for those supply pipes that were repaired and included within the calculation.

The confidence grade for the average rate of loss through supply pipes remains at C3 and applies the same methodology, to data from Scotland wide, as the previous year.

The calculation of lines A2.32 – A2.36 has again been completed based on the breakdown of supply pipe leakage by OFWAT reporting companies

A2.37 Meter under-registration (measured households) (included in water delivered)

Scottish Water has derived meter under-registration from the average reported in the 2008/09 OFWAT 'Security and Delivery' supporting information document. Meter under-registration has decreased slightly from 4.1% to 4.0%. When applied to the domestic metered volume the total measured household meter under-registration is 0.009 Ml/d.

A2.38 Meter under-registration (measured non-households) (included in water delivered)

The 2008/09 OFWAT 'Security and Delivery' supporting information document has been used to derive a figure for non-household meter under-registration. Meter error has reduced from 4.8% to 4.6%. The decrease in the meter under-registration volume from 19.7 Ml/d to 18.8 Ml/d is due to the reduced % under-registration and a decrease in the volume of water delivered to measured non-households.

Scottish Water does not undertake routine meter calibration and therefore does not have company specific meter under-registration figures. The current approach is that meters are only changed or replaced when customer contacts indicate that bills are incorrect or problems with meters have caused disruption to water supplies.

A2.39-45 Bottom-Up Leakage

MLE leakage was reported for the first time by SW in AR09 but only within the commentary. This is the first year that it has been included within Table A2. The overall AR10 MLE calculation is associated with the appropriate MLE confidence grades (mid point of WICS CGs), being assigned to water balance components in line with WICS own CGs and is consistent with AR09 methodology.

A2.39 DMA Leakage (pre-MLE Adjustment)

The coverage of reportable DMAs has increased this year from 84% to 86% by property coverage. DMA leakage volume has reduced from 733.6 ml/d to 664.4 Ml/d this year and is reported with confidence grade B4.

A2.40 Trunk Mains Leakage (pre-MLE Adjustment)

Trunk mains leakage is 31.46 Ml/d and is reported with confidence grade C4.

A2.41 Service Reservoir Leakage (pre-MLE Adjustment)

Service reservoir leakage is 9.29 Ml/d for this reporting year. The confidence grade for this line is C4.

A2.42 Bottom-Up Leakage (pre-MLE Adjustment)

The total bottom-up leakage is 705.1 Ml/d. The volume is reported with confidence grade B4.

A2.43 Reconciliation Adjustment

The reconciliation adjustment is 33.08 Ml/d. The confidence grade for this line is B3.

A2.44 Maximum Likelihood Estimation (MLE)

The maximum likelihood estimation (MLE) of leakage is 738.2 Ml/d and is reported with confidence grade B3. The MLE leakage reported in the AR09 commentary was 816.4 Ml/d, this is a reduction of 78.2 Ml/d.

A2.45 Reconciliation Error (Percentage of DI)

The reconciliation error between the top-down and bottom-up leakage estimates is 3.8 % of the total distribution input. The confidence grade for this line is B3.

A2.46-52 Sewage Volumes

A2.46 Unmeasured household volume (including exempt)

The unmeasured household volume has increased from 687.10 Ml/d to 694.30 Ml/d. The slight increase in the waste volume is a result of the increase in population reported in the year. The confidence grade has remained at B3.

A2.47 Measured household volume

The measured household volume has reduced to 0.032 Ml/d in the report year; the confidence grade remains at A2.

A2.48 Unmeasured non-household foul volume (including exempt)

The reduction of 11.6 Ml/d in the foul volume reported is a consequence of analysis carried out as part of the impact of the full business metering (FBM) project. It has identified, as expected, that the remaining unmeasured customers will draw less water than was previously estimated. This estimate is now based on use of actual data from the installed FBM meters to establish the volumes. For this reason the confidence grade remains at B3.

A2.49 Measured non-household foul volume

The total volume of foul waste from measured non-households has increased from 133.21 Ml/d to 155.35 Ml/d compared with the prior year, reflecting the introduction of the FBM meters as detailed above. The trend in the increase in volume of metered waste is expected to rise as more of the FBM meters acquire meter reads. The confidence grade remains at B3.

A2.50 Trade Effluent Volume

The volume of trade effluent discharge has reduced from 105.043 Ml/d to 92.472 Ml/d. Scottish Water is no longer in control of the calculation of volumes as this is done by

Licensed Providers and passed to SW by the CMA. Volumes reported this year are taken from the latest available reconciliation run from the CMA for the reporting period.

A2.51 Total Volume

The confidence grade remains at B3.

A2.52 Volume septic tank waste

The volume of septic tank waste decreased from 39.57Ml to 30.64Ml over the reporting period. Demand for private septic tank emptying was lower this year which, taken together with the severe winter weather has led to the reduction in septic tank waste.

As there has been no change to the methodology used the A3 confidence grade is unchanged from last year.

A2.53-67 Sewage Load (BOD/yr)

A2.53-54 Unmeasured and measured household load

The household load reported is based on household occupancy multiplied by 60g per head per day. No significant change has occurred from the prior year and the confidence grade remains the same.

A2.55-56 Unmeasured and measured non-household load

The non-household load is derived as 300g/m^3 applied to the volumes of sewage reported in lines A2.41 and A2.42. The change in the volumes reflects the water delivered in A2.14 and A2.15. No significant change in the process has occurred and the confidence grades remain the same as the prior year.

A2.57 Trade effluent load

The total BOD load discharged to the network has reduced from 28,889t to 24,911t. This is broadly in agreement with the reductions seen for volume and BOD load. When comparing this with A1.38, some 4,643t was discharged to WWTW which did not provide secondary treatment.

A2.59-62 Septic tank loads

A decrease from 178.84t to 133.20t is reported in line A2.59 this reflects a decrease in the overall number of private septic tanks emptied during 2009/10. This was largely due to the demand profile being lower this year coupled with the winter weather conditions. A higher volume of septic tank waste is being discharged to works inlets as an alternative to sludge treatment centres when compared to 2008/09.

The reported septic tank loads (lines A2.59 and A2.60) are derived by applying an assumed load of 6,543g/m^3 to the volumes removed from private and public septic tanks respectively. No significant change has occurred from the prior year and the confidence grade remains at B3.

A2.63 Average COD concentration

The average settled COD concentration used to calculate Trade Effluent charges continues to be 350mg/l. No significant change has occurred and the confidence grade remains the same as the prior year.

A2.64 Average suspended solids concentration

The average suspended solids concentration used to calculate Trade Effluent charges continues to be 250mg/l. No significant change has occurred and the confidence grade remains the same as the prior year.

A2.65 Equivalent population served (resident)

The figure in A2.65 is the total load divided by 60g, which equates to the equivalent population and has not significantly changed from the prior year. Any change in volume reflects the change in population. No significant change has occurred and the confidence grade remains the same as the prior year.

A2.66 Equivalent population served (resident) (numerical consents)

During the report year a number of studies have been undertaken to align sewered areas spatially. These updates reflect the changes in allocation to PPP sites.

The figure in A2.66 is the total load divided by 60g which equates to the equivalent population (representing works that have a numerical consent). No significant change has occurred and the confidence grade remains the same as the prior year.

A2.67 Total load receiving treatment through PPP treatment works

In the report year a slight reduction from 70,657t to 67,659t has occurred due to the reduction in load from Trade Effluent. The Trade Effluent data comes directly from the CMA and changes will be commented on in the P tables.

No significant change has occurred and the confidence grade remains the same as the prior year.

A2.68-69 Sewage Sludge Disposal

The reported mass of sewage sludge recycled was 115.686ttds in the report year, of which the majority came from the PPP/PFI works (95.273 ttds). As with AR09 all the figures reported were taken direct from the Gemini system. No significant change has occurred and the confidence grade remains the same as the prior year.

A decrease in the volume of enhanced treated sludge was noted as 0.457ttds, largely attributable to an increased volume of Cupar sludge being treated at Levenmouth and a reduction at Kinneil Kerse. A reduction in enhanced treated sludge was recorded at Kirkcaldy as some was recycled to land restoration. SW sludge production was reduced by 1.008ttds from the previous period. This reflects the overall picture of sludge production at Scottish Water sites regardless of sludge type for 2009/10. The largest reduction in conventional sludge volume was recorded at Galashiels (0.623ttds) and reductions in tankered imports to Galashiels have been noted.

The mass of sludge recycled to land restoration in the reporting period was 0.596ttds mainly from Cupar, Kirkcaldy and St Andrews. This may reduce in 2010/11 as an enhanced treated option is now being utilised for the above Sludge Centres.

A small reduction in sludge taken to landfill was noted of 0.099 ttds.

B Tables – Outputs to Customers

Table B1 Restrictions on Water Use

B1.1-1.3 Restrictions on Water Use

This year we continued to provide unconstrained services with 0% of the population affected by hosepipe bans.

Table B2 Pressure and Interruptions

General Comments

The overall number of low pressure properties has reduced from 2,974 to 2,496. Targeted investment and operational changes have improved pressure to 1,062 properties during 2009/10. All remaining properties, with unclear/incomplete address details, have been investigated. As a result of the investigation work and through customer complaints, 1,772 properties were added due to better information. This further investigation work has also resulted in 1,188 properties being removed through better information. No properties were added as a result of asset deterioration or operational changes.

For interruptions, we report from our Corporate Data Repository (CDR) where all the information relating to interruptions is stored. Information is input to this system in two ways; direct from our hand-held devices or manually by contractors or Scottish Water staff using interruptions paper forms. Standard corporate reports, using Business Objects, are used for both corporate and regulatory reporting of interruptions figures. The CDR is the one source of data on interruptions and all reporting is derived directly from here with no extrapolation of data. As a result, a confidence grade of A is applied to the data.

A summary of the major incidents in the year i.e. those affecting more than 1,000 properties is given below:

		Interruption Banding				
Address	Date	3 to 6 hrs	6 to 12 hrs	12 to 24 hrs	> 24 hrs	total
Garnie Crescent, Erskine	22/04/2009		6890			6890
Laburnum Road, Cumbernauld	05/07/2009		4026	4705		8731
Sheriffs Common, Millport, Isle Of Cumbrae	20/09/2009	1110				1110
Cornerstone Cottage, Preston Road, Duns	05/10/2009	5000				5000
Beech Place, Bishopbriggs, Glasgow	16/12/2009		3967			3967
		6110	14883	4705	0	25698

B2.1-10 Properties receiving pressure/flow below reference level

During the reporting year 2009/10 the remaining 322 properties with unknown property addresses were fully investigated, resulting in the increase in confidence grades on line B2.6 to B2.9 rising from B3 to A2. There are currently 782 properties within 10.5m head of service reservoirs where the required service level cannot be met. The low pressure spreadsheet is in the process of being decommissioned.

B2.1 The number of connected properties is taken from line A1.10.

B2.10 1,860 low pressure properties are excluded from line B2.9 as they fall into categories deemed to be an allowable exclusion. This total consists of 747 properties

(low pressure not resolved – private issue) and 1,113 properties (low pressure one-off incident) as mentioned below.

1,420 properties were reported with low pressure but we determined that the problem was caused by apparatus within the customers' properties.

- 673 properties - low pressure private - resolved
- 747 properties - low pressure private issue - not resolved

1,489 properties were reported with low pressure and we determined that the cause was a short-term operational action. These reports therefore did not lead to the properties being added to our low pressure register.

- 376 properties – low pressure Planned Maintenance
- 1113 properties - low pressure one-off incident

B2.11-B2.25 Properties affected by planned and unplanned interruptions

B2.11-B2.14 Properties affected by planned interruptions

We continue to improve the planning of our work on the water network to minimise the disturbance to our customers. As a result, there has been a substantial decrease in the number of properties affected by planned interruptions.

In our efforts to reduce overruns of planned interruptions, we have improved our working procedures. This has reduced the number of properties that are affected by isolations of sections of our network. We have continued to challenge the need for interruptions, performing work on live mains, wherever available, and provided network backfeeds where possible when we do isolate a main.

B2.15-B2.18 Properties affected by unplanned interruptions

Although the number of properties affected by unplanned interruptions longer than 3 hours has shown a significant decrease this year, the number longer than 6 hours has shown an increase of just under 5,000 properties.

In this reporting year a large proportion of the properties affected for longer than 6 hours were due to a small number of incidents.

In April 2009, 6,890 properties were affected by an incident in Erskine with supply being restored to 4,294 in 7 hours 15 minutes and the remainder in 9 hours 30 minutes.

In July 2009 a burst on a 30 inch main in Cumbernauld resulted in 8,731 properties suffering a loss of supply. 4,026 properties were restored in 8 hours 45 minutes and the remaining 4,705 were restored in 14 hours 30 minutes.

In December 2009, 3,967 properties in Bishopbriggs suffered a loss of supply with 1,574 restored in 8 hours 15 minutes and the remainder restored in just over 11 hours 30 minutes.

B2.19-B2.22 Interruptions caused by third parties

We recorded six interruptions caused by third parties that lasted longer than three hours with two of these incidents making up the majority of the number of properties affected. These two incidents affected 100 and 329 properties respectively.

B2.23-B2.25 Unplanned interruptions (overrun of planned interruptions)

Five incidents of planned interruptions became unplanned interruptions, for OPA reporting purposes, due to overrunning their stated interruption time or because required notification of the interruption was not given. These affected 122 properties which is an increase on the 2008/09 figure of 51 properties.

Table B3 and B3a Sewage – Internal Flooding and External Flooding

General Comments

Our commitment to improve our service to customers, has led to further reductions in our sewer flooding incidents and improvements in the corporate reporting of our performance compared with the previous year.

Although there has been a small increase in the number of incidents due to overloaded sewers, the reduction in incidents due to other causes has resulted in the total number of incidents decreasing from 231 to 214. Of the 58 incidents attributed to overloaded sewers, 8 were as a result of severe weather. Details of these are covered in the commentary for line B3.4.

As per 2008/09, a regional network analyst fully investigates each internal flooding incident and, on completion of an investigation form, reports to confirm if an internal flooding incident has taken place. There has been further emphasis placed on the completion of resolution forms this year.

The GIV Operational Reporting team continues to publish a series of corporate sewer flooding reports based on records in our Promise system. These reports are published on a scheduled date every month and are available to the whole business including being used for internal OPA reporting and regulatory reporting.

The commonly used water industry abbreviations (below) are used within the commentary for these tables:

- ARR “At Risk Register”
- EFOC “External flooding due to other causes”
- EFOS “External flooding due to overloaded sewers”
- FEH “Flood Estimation Handbook”
- IFOC “Internal flooding due to other causes”
- IFOS “Internal flooding due to overloaded sewers”
- RP “Return Period”

B3.1 Annual Flooding Summary

The number of connected properties is taken from line A1.21.

B3.2-B3.12 Annual Flooding – Overloaded Sewers and Other Causes

B3.4 - We predominantly used Met Office rainfall reports to assess the severity of storm events during previous report years. It had been noted, however, that these reports were expensive to purchase, that the turnaround time in receiving them was slow and that, in our experience, they may have underestimated the magnitude of events.

During the 2008/09 report year we sought other methods of analysing storm events. This led to our establishing an ongoing contract with the Met Office for the purchase of continuous rainfall radar data and employing a consultant, of requisite experience, to undertake detailed storm assessments for those incidents where it was suspected that severe weather had contributed to the occurrence of sewer flooding.

We have improved and expanded our use of the rainfall radar data and assessment of storm events during this report year by bringing this work in-house. This was facilitated by the purchase of (i) licences for the software programme HYRAD, an advanced weather radar display system that can be used to produce rainfall depth-duration-frequency data and (ii) copies of the Flood Estimation Handbook ("FEH") CD-ROM, which enables the calculation of the rarity (i.e. return period) of storm events using the HYRAD produced rainfall data. Training in the use of HYRAD and the FEH CD-ROM was provided by representatives of their developer (the Centre of Ecology and Hydrology), to key staff during January 2010.

The severity of every storm event associated with an incident of internal flooding due to sewer overloading (IFOS) during this report year has been assessed, either through the use of HYRAD and the FEH CD-ROM or, in one instance, local rain gauge data. Though this is viewed as a considerable step forward on previous report years, it is recognised that the use of HYRAD/FEH CD-ROM is not an infallible solution (e.g. various factors such as unusual meteorological conditions and/or local topography can lead to significant underestimation of rainfall by radar stations) and that other supporting methods of assessment should be employed where and when it is practicable to do so. Nonetheless, it is considered that the steps taken this year have resulted in a notable improvement in the reporting of this line.

We define severe weather as a storm event with a return period greater than 1 in 10 years. 8 of the 58 IFOS incidents reported in Line B3.3 have been attributed to severe weather; these are summarised in the below table and discussed in more detail further below.

Incident Date	Location	Return Period [1 in Years]	Rainfall Data Source	IFOS Properties
14 June	Blackburn (EH47)	230	Radar	3
15 June	Glasgow (G32)	48	Gauge	2
16 July	Edinburgh (EH14)	57	Radar	2
	Edinburgh (EH13)	14	Radar	2
23 July	Aberchirder (AB54)	11	Radar	2
3 September	Dunbar (EH42)	574	Radar	1
4 September	Keith (AB55)	45	Radar	2
	Wellbank (DD5)	90	Radar	3
			TOTAL	**17**

14 June
An extreme storm event over West Lothian led to IFOS incidents in the adjacent towns of Bathgate and Blackburn; the incident locations were situated approximately 4km NNE-SSW of each other.

Analysis of radar data showed that the Bathgate property was located towards the periphery of the storm; a Return Period (RP) of less than 10 years was calculated at this location so this incident has not been included in the reporting of this line.

The Blackburn properties were found to have been situated near the most intense part of the storm; the RP at this location was calculated as 1 in 230 years, though the assessment revealed that adjacent 1km grid boxes experienced RPs as high as 1 in 487 years.

15 June
Parts of the east end of Glasgow experienced a notable storm event and this led to an IFOS incident locally. We had a rain gauge installed at a nearby high school (situated approximately 1km NNE of the incident location) at the time of the incident; this had been installed for hydraulic model verification purposes associated with a flood alleviation project close by (Shettleston Road), which was subsequently progressed to scheme construction during the report year. Analysis of the gauge data using the FEH method revealed a RP of 1 in 48 years.

16 July
The south-west of Edinburgh suffered a significant storm event and this led to IFOS incidents at two locations situated approximately 1.6 km apart, almost directly north-south of each other.

Analysis of radar data demonstrated that the northern location was situated near the most intense part of the storm; the RP at this location was calculated as 1 in 57 years, though the assessment revealed that adjoining 1km grid boxes experienced RPs as high as 1 in 83 years.

The southern location was found to have been situated towards the periphery of the storm; assessment of the radar data here indicated a RP of 1 in 14 years, though adjacent 1km grid boxes were found to have experienced RPs as high as 1 in 67 years.

23 July
A notable storm event over Aberdeenshire resulted in an IFOS incident in the village of Aberchirder. Analysis of radar data showed that the storm had skirted the incident location; the RP at the incident location was calculated as 1 in 11 years, however adjoining 1km grid boxes were revealed to have been subjected to RPs as high as 1 in 58 years.

3 September
East Lothian suffered an extreme storm event and this led to an IFOS incident in Dunbar. Analysis of radar data indicated that the incident location was situated at the most intense part of the storm; the RP here was found to be 1 in 574 years.

The Met Office and SEPA both issued severe weather/flooding warnings for East Lothian, with SEPA stating that an unprecedented 27mm of rainfall over two hours had been recorded at a rain gauge north of Gifford, which is located approximately 18km south west of Dunbar. Transport links were severely disrupted in the vicinity of Dunbar with the East Coast main railway line and a 30 mile stretch of the A1 trunk road both being closed due to flooding. The impact of the storm event was widely covered in national and local media.

4 September
A major storm event over north east Scotland caused widespread river and surface water flooding in many towns and villages and rural parts of the region, with many roads and bridges being severely damaged or washed away and residents being evacuated from several hundred homes. IFOS incidents occurred in Keith, Moray and the village of Wellbank in Angus.

Fochabers

Elgin

Analysis of radar data for the Keith properties revealed a RP of 1 in 45 years with the eight adjacent 1km grid boxes experiencing RPs ranging from 1 in 33 years to 1 in 57 years.

The Wellbank properties were found to have been subjected to a RP of 1 in 90 years; all of the adjoining 1km grid boxes also experienced severe weather with five of them

suffering higher RPs than the incident location, ranging from 1 in 115 years to 1 in 646 years.

Some areas across the region experienced 24 hour rainfall totals in excess of their monthly average totals and SEPA issued many severe flooding warnings. The impact of the storm event was widely covered in national and local media with the Wellbank IFOS incident being mentioned in some coverage.

B3.6-12 Annual Flooding – Other Causes

As in previous years, the figures reported here relate to flooding caused by blockages or failure of main sewers only. They do not include flooding caused by blockages or failure of lateral sewers.

Our systems and processes for capturing information about internal flooding due to other causes (IFOC) are identical to that for flooding from overloaded sewers (IFOS).

B3.7 – The figure of 29 reported in this line is taken from only three year's worth of data rather than ten as our corporate reports were not published prior to this. The data is also based only on the first point of contact and therefore does not capture repeat floods against the same incident at other addresses. The incidents in this total that apply to the report year 2007/08 were also those reported prior to the uplift factor as covered in a previous year's commentary.

In line with 2008/09, and for the above reasons, a confidence grade of C5 has been applied to this line.

B3.13- B3.23 Properties on the "At Risk" register

Lines B3.13-23 (& B3a.11-21)

The information used to report these lines is extracted from our Sewer Flooding Register corporate satellite application (CSA). No changes have been made to the process or methodology used to report these figures since the previous report year.

1 in 20 register category

In accordance with WICS guidance, upon a first time incident of IFOS or EFOS, we add affected properties to the 1 in 20 register category of the appropriate ARR unless available information (e.g. rainfall data; hydraulic modelling results; etc) supports addition to a different register category.

Increased Demand

We do not consider that it is practicable to identify flooding due to increased demand. For this reason, lines B3.23 and B3a.20 are reported as zero. All additions to our At Risk Registers (ARRs) are due to better information.

Problems as yet undiscovered

No allowance has been made in our ARRs in respect of problems as yet undiscovered/unverified. We use hydraulic models to identify properties/areas that are potentially at risk of IFOS or EFOS, however such properties/areas are only added to our ARRs if there is verifiable supporting evidence of their having suffered IFOS or EFOS.

Ongoing review

We have continued our review of properties/areas on our ARRs, which we initiated during the 2006/07 report year As internal flooding has a bigger impact on our customers, the review has largely been concentrated on improving our Internal ARR. The review utilises any, and all, sources of relevant information, such as customer interviews, site investigations, drainage area studies, customer contact records, rainfall information, etc. Over the first three years (i.e. 2006-2009) the review resulted in a significant net reduction in the number of properties on our Internal ARR, however during this report year, only relatively minor changes are attributable to the review. We believe this is indicative of having reached a stage where the Internal ARR has been improved to the extent that any changes arising through the review will be relatively minor during future report years.

Although the Internal ARR review will continue, we intend to assign more time and resources to improvement of the External ARR.

Internal ARR: Report Year Changes

The changes to our Internal ARR during the report year are summarised in the table below:

Register Category	AR09	Removals Authority Action [B3.20]	Removals Better Information [B3.21]		Additions Better Information [B3.22]		AR10	Change
2 in 10 [B3.13]	203	94 [(a)]	5	4 [(b)]	60	8 [(b)]	168	-35
1 in 10 [B3.14]	180	48	2 [(c)]	8 [(b)]	34	4 [(b)]	160	-20
Sub-total [B3.15]	**383**	**142**	**7**		**94**		**328**	**-55**
1 in 20 [B3.16]	2	0	0		41 [(a) (c)]		43	+41
TOTAL	**385**	**142**	**7**		**135**		**371**	**-14**

[(a)] These figures include 21 Campbeltown properties that had their register categorisation downgraded due to hydraulic improvements delivered through the ongoing construction of a sewerage upgrading scheme; upon completion, the scheme will provide flood protection up to our 1 in 30 year RP design standard

[(b)] These figures reflect movements between the 2 in 10 and 1 in 10 register categories; these are not included in the reporting of lines B3.21 & B3.22 or the above sub-total / total figures

[(c)] This figure includes 1 property that had its register category downgraded from 1 in 10 to 1 in 20 as a result of our ongoing ARR review

Internal ARR: Report Year Removals

Removals from our Internal ARR during the report year are broken down in the table below. The majority (142) arose due to authority action; a small proportion (19) arose due to better information.

Register Category	Authority Action Removals			Better Information Removals			Total
	Removal	Move within Internal ARR	Move to External ARR	Removal	Move within Internal ARR	Move to External ARR	
2 in 10	72	21 [(a)]	1	3	4	2	103
1 in 10	48	0	0	1	9	0	58
Sub-total	**120**	**21**	**1**	**4**	**13**	**2**	**161**
1 in 20	0	0	0	0	0	0	0
TOTAL	**120**	**21**	**1**	**4**	**13**	**2**	**161**

[(a)] This figure reflects Campbeltown properties that had their register categorisation downgraded to 1 in 20 due to hydraulic improvements delivered through the ongoing construction of a sewerage upgrading scheme; upon completion, the scheme will provide flood protection up to our 1 in 30 year RP design standard

Internal ARR: Report Year Additions

Additions to our Internal ARR during the report year are broken down in the table below. 69 are attributable to IFOS incidents that occurred during the report year; 78 are attributable to our ongoing ARR review, particularly in respect of investigations for flood alleviation projects.

Register Category	IFOS Incident Additions			ARR Review Additions			Total
	New	Move within Internal ARR	Move from External ARR	New	Move within Internal ARR	Move from External ARR	
2 in 10	32	1	3	20	7	5	68
1 in 10	12	0	3	15	4	4	38
Sub-total	**44**	**1**	**6**	**35**	**11**	**9**	**106**
1 in 20	17	0	1	1	22 [(a)]	0	41
TOTAL	**61**	**1**	**7**	**36**	**33**	**9**	**147**

[(a)] This figure includes 21 Campbeltown properties that had their register categorisation downgraded from 2 in 10 due to hydraulic improvements delivered through the ongoing construction of a sewerage upgrading scheme; upon completion, the scheme will provide flood protection up to our 1 in 30 year RP design standard

Internal ARR: Properties Added & Removed During Report Year

The number of properties that were added to, and subsequently removed from, our Internal ARR during the report year are summarised in the table below. The majority of these properties were identified for addition as a result of investigations for flood alleviation projects that were later progressed to scheme construction.

Location	Addition Reason		Removal Reason	
	IFOS Incident	ARR Review	Authority Action	Better Information
Beith (KA15)		1	1	
Cumnock (KA18)		5	5	
Dundee (DD2)		2	2	
Edinburgh (EH13)		7	7	
Giffnock (G46)		1	1	
Kelso (TD5)		3	3	
		2		2
Oldmeldrum (AB51)	1		1	
Paisley (PA1)	1		1	
Patna (KA6)		2	2	
Total	**2**	**23**	**23**	**2**

Internal ARR: Better Information Removals and Additions Trends

The table below shows the number of better information removals from our Internal ARR over the last four report years. Over this period, we averaged 171 removals per year, however these removals were heavily influenced by our ARR review with the majority of them occurring over the 2006/07, 2007/08 and 2008/09 report years; of the 684 removals over the four years, only 1% occurred during this report year. We expect that the number of better information removals will be relatively low over the next five report years.

[B3.21] Better Information Removals from Internal ARR				
2006/07	2007/08	2008/09	2009/10	Average
132	468	77	7	171

The table below shows the number of additions to our Internal ARR (excluding additions to the 1 in 20 register category) over the last four report years. Over this period, we averaged 72 additions per year. We expect that this trend will continue over the next five report years.

[B3.22] Better Information Additions to Internal ARR				
2006/07	**2007/08**	**2008/09**	**2009/10**	**Average**
60	96	36	94	72

B3.24-27 Problem solving costs

These figures are derived by totalling the costs of flood alleviation projects undertaken during the report year and dividing this by the number of Internal ARR properties that benefited from these projects. Cost information is extracted from our Capital Investment Management System (CIMS).

B3.24-25 Average cost of permanent problem solved (capex and opex)

The average capex cost associated with flood alleviation projects in each of the last four report years is shown in the table below:

[B3.24] Average cost of permanent problem solved (capex)			
2006/07	**2007/08**	**2008/09**	**2009/10**
£122,977	£80,482	£85,534	£77,035

Opex costs associated with flood alleviation projects were minimal over the three previous report years and that trend continued into this report year.

During this report year, we completed flood alleviation projects at 48 clusters, resulting in the removal of 121 properties from our Internal ARR. The ongoing Campbeltown sewerage upgrading scheme resulted in a further 21 properties having their register categorisation downgraded from 2 in 10 to 1 in 20. Upon completion, the scheme will provide flood protection up to our 1 in 30 year RP design standard.

B3.26-27 Average cost of temporary problem solving measures (capex and opex)

The average capex cost associated with flood mitigation measures in each of the last four report years is shown in the table below. As predicted in our AR09 commentary, the costs have reduced during the Report year.

[B3.26] Average cost of temporary problem solving measures (capex)			
2006/07	**2007/08**	**2008/09**	**2009/10**
£2,702	£2,650	£6,323	£3,570

Opex costs associated with flood mitigation measures are negligible and therefore not quantified or recorded. For this reason, line B3.27 is reported as zero.

During this report year we installed flood mitigation measures at 24 Internal ARR properties. In addition, 8 previously mitigated properties had further and/or improved measures fitted. Of the 328 properties reported in line B3.15, 158 have been provided with mitigation measures.

Over recent years we have endeavoured to assess the feasibility of providing flood mitigation measures to every Internal ARR property. In some cases it has proven impractical to provide mitigation measures for reasons such as prohibitive cost, likelihood of flood transfer to neighbouring properties, lack of knowledge on the mechanisms of flooding or customer refusal of measures. In those instances where assessment has shown that measures are viable, we have undertaken installation at the earliest opportunity.

It is our intention to regularly review the provision of flood mitigation measures at Internal ARR properties that do not currently benefit from them. We also plan to assess the feasibility of providing mitigation measures at every property that is added to our Internal ARR and undertake installation where it is viable to do so.

B3.28 ESL Funding

This figure is obtained directly from our Delivery Plan May 2006, Table 3.1.

The table below shows the number of properties removed from our Internal ARR due to authority action (line B3.20) over the last four report years and the number of properties forecast, as per our delivery plan, to be removed from the Internal ARR due to authority action (line B3.28) over the same period.

	2006/07	2007/08	2008/09	2009/10	Total
B3.20	116 [(a)]	107	139	142	**504 [(a)]**
B3.28	3	100	100	253	**456**

[(a)] These figures include 83 properties removed through our Q&SII delivery programme

Table B3a Sewage – External Flooding

The validation process for internal flooding that is described in the general comments for Table B3 is not presently carried out for external flooding. This is reflected in the confidence grade of B4 for the data in this table.

There is, however, a greater emphasis on ensuring that forms are completed correctly and a greater number of completed forms have been submitted than has been the case in previous years. This has resulted in the uplift factor for the base data in this table decreasing to 1.46 compared to 1.77 for the previous year. This has resulted in the lower final numbers reported in this table compared to last year.

Movements in the At Risk property numbers are covered in the commentary for Table B3.

During this report year we installed flood mitigation measures at 9 External ARR properties. Of the 2,100 properties/areas reported in line B3a.14, 23 have been provided with mitigation measures.

We consider the provision of flood mitigation measures to properties/areas on the External ARR upon receiving a request from an affected customer.

B3a.1 – We have assumed that each incident affects one area so this is the same as the total in line B3a.5.

B3a.6 – This is the number of instances where the field "severe weather" has been recorded on the choke form. As explained above, these do not go through the same validation process as instances of internal flooding, hence a lower confidence grade is applied.

B3a.11-25 Areas on the 2:10, 1:10, 1:20 "At Risk" Register

B3a.11-21 At risk summary; Problem status; Annual changes

External ARR: Report Year Changes

The changes to our External ARR during the report year are summarised in the table below.

Register Category	AR09	Removals Authority Action [B3a.17]	Removals Better Information [B3a.18]		Additions Better Information [B3a.19]		Moved to Internal ARR [B3a.21]	AR10	Change
2 in 10 [B3a.11]	900	55	6	2 [(a)]	33	21 [(a)]	4	887	-13
1 in 10 [B3a.12]	1236	23	2	21 [(a)]	27	1 [(a)]	12	1206	-30
1 in 20 [B3a.13]	0	0	0	0 [(a)]	6	1 [(a)]	0	7	+7
Total [B3a.14]	**2136**	**78**	**8**		**66**		**16**	**2100**	**-36**

[(a)] These figures reflect movements within the External ARR; these are not included in the reporting of lines B3a.18 & B3a.19 or the above total figures

External ARR: Report Year Removals

Removals from our External ARR during the report year are broken down in the table below. A majority arose due to authority action; a minority arose due to better information.

Register Category	Authority Action Removals	Better Information Removals			Total
		Removal	Move to Internal ARR	Move within External ARR	
2 in 10	55	6	4	2	67
1 in 10	23	2	12	21	58
1 in 20	0	0	0	0	0
Total	**78**	**8**	**16**	**23**	**125**

External ARR: Report Year Additions

Additions to our External ARR during the report year are broken down in the table below. One was attributable to authority action; 32 were attributable to IFOS incidents that occurred during the report year and 56 were attributable to our ongoing ARR review, particularly in respect of investigations for flood alleviation projects.

Register Category	Authority Action Additions	IFOS Incident Additions		ARR Review Additions			Total
		New	Move within External ARR	New	Move from Internal ARR	Move within External ARR	
2 in 10	1 [(a)]	18	0	14	0	21	54
1 in 10	0	6	1	19	2	0	28
1 in 20	0	6	1	0	0	0	7
Total	**1**	**30**	**2**	**33**	**2**	**21**	**89**

[(a)] This figure reflects 1 Perth property where a flood alleviation project was undertaken that removed the risk of internal flooding but not the risk of external flooding

External ARR: Areas Added & Removed During Report Year

A total of 9 areas, at four locations, were added to, and subsequently removed from, our External ARR during the report year. Each of these was identified for addition as a result of investigations for flood alleviation projects that were later progressed to scheme construction.

B3a.22-25 Problem solving costs

B3a.22-23 Average cost of permanent solutions to problems (capex and opex)

Costs associated with flood alleviation projects are wholly assigned to internal flooding reported in lines B3.24-25 in Table B3. Figures reported in these lines are therefore reported as zero and non-applicable.

B3a.24-25 Average cost of temporary problem solving measures (capex and opex)

The average capex cost associated with flood mitigation measures was substantial this year. The reported figure was largely influenced by significant mitigation works undertaken to reduce the risk of flooding at a communal backcourt area (i.e. single area) pertaining to a block of flats. We had received repeated complaints from residents that flooding was regularly causing access/egress difficulties at the flats. Due to the frequency of flooding and the nature of the difficulties it was causing, we decided that it was necessary to provide a robust mitigation measure.

Opex costs associated with flood mitigation measures are negligible and therefore not quantified or recorded. For this reason, line B3a.25 is reported as zero.

Table B4 Customer Service

General comments

Scottish Water has recently completed a business reorganisation; the main changes relating to B4 and B7 tables are the following:-

Firstly, our Sundry Billing activity moved from the Customer Service Delivery Directorate to the Finance & Regulation Directorate in December 2009. In addition, the location of this activity moved from Balmore Road, Glasgow to Henderson Drive, Inverness. This was a seamless transfer and resulted in no interruption to the service provided to our customers.

Secondly, was the creation of a Complaints Management Unit (CMU). This unit is responsible for dealing with all written complaints. It was created to support our continuous and concerted effort to ensure that all written complaints are dealt with by one dedicated team within Scottish Water. This unit was designed and established with the engagement of Waterwatch Scotland.

It should also be noted that the severe winter weather experienced, during the period December 2009 and January 2010, impacted on our call-handling performance due to the volume of calls received.

Scottish Water received 150,068 calls during this period compared to 81,910 for the same period in 2008/09. In December alone, we received 56,647 telephone contacts compared with 40,619 last December and in January we received 93,421 compared to 41,291 in January 2009.

This has had an impact on our service level performance. In 2009/10 our performance level was 96.19% compared to 97.41% in 2008/09.

B4.1-7 Billing/Charging/Metering (BCM) enquiries

The performance reported in this section is based entirely on figures sourced from our corporate system, Peoplesoft. There has been a c10% increase in the number of enquiries recorded compared to previous year. Scottish Water has noted the Reporter's comments from previous years regarding logging of customer contacts.

In total there were 7,819 contacts logged and this is broken down as follows:-

Credit Card Payments	3,221
Outbound Recovery \ Actions	724
Customer Enquiries	3,874

B4.8-14 Change of Payment Method (CoPM) enquiries

Scottish Water offers its customers the facility to change their payment method and this facility being used by 33 customers.

B4.15-21 New Written Complaints

The new Complaints Management Unit (CMU) has been established during this reporting year to support Scottish Water's vision of reducing the number of written complaints received. During the year there has been a concerted effort to ensure that all written complaints are captured and dealt with by both our former Customer Relations Team and by our new Complaints Management Unit. The performance reported in this section is for the written complaints that were dealt with by both the teams.

There has been a c11% decrease in the number of written complaints dealt with by Scottish Water in 2009/10 compared to the previous year.

The confidence grade for written complaints has been improved to A2. This year a corporate report has been used that extracts the data straight from our corporate system with no manual intervention. This report is published monthly and has been run for all 12 months of the reporting year.

B4.15a/b Total number of written complaint correspondence

The number of correspondence/complaints has been taken as the number of new complaints plus the number of follow up letters recorded. A follow up complaint is taken as when a customer has had to contact SW for an update or provided some additional information needed to resolve the case. Where new issues are raised, including the submitting of a claim form as a result of complaint, this is regarded as a new complaint.

B4.22-29 Telephone Contacts

This year there has been a 4.96% increase in the number of telephone calls received compared to previous year, however, this can be explained by the impact of the severe winter weather. As a result of heightened calls during December 2009 and January 2010, an additional 26,569 customer contacts were taken compared to previous year.

However, for the period December and January of this reporting year there was a 83.21% increase in call volumes compared to the same period in the previous report year.

The impact of the severe winter weather has also resulted in a drop in the number of calls answered within 30 seconds to 96.19% compared to previous year 97.41%

We have also seen our abandoned calls increase from 1.01% in 2008/09 to 1.79% in 2009/10. This can also be largely attributed to the severe winter weather experienced, for example in January 2009 we recorded 375 abandoned calls compared to 3,715 in January 2010.

B4.22, B4.25 and B4.28: These lines are reported from our Contact Centre Six system, via Crystal Reports; this is combined with daily data from the BT Messagelink service.

B4.26 Due to the severe winter weather experienced over December and January and the resultant volume of calls received by Scottish Water, the average time to answer a call increased to 7.6 seconds compared to a consistent 5 seconds for previous years.

B4.27 Once again, due to the severe winter weather experienced and the resultant volume of calls received by Scottish Water, for the first time we are reporting 13 customers who experienced an engaged tone, in January 2010.

B4.29 The total telephone complaints reported are sourced from our corporate customer system Promise via a Business Objects report. The total number of complaints recorded this year compared with previous year shows a 7.12% increase which we believe has resulted from the impact of the severe winter weather experienced by our customers.

B4.30-40 Private Septic Tank Emptying

The administration of the septic tank service has seen further changes since August 2009. Septic tank planners have now been incorporated into the Waste Management team giving full end to end control of the service to one Manager. Performance reporting has also been improved and daily records are kept to each vehicle employed in the emptying of septic tanks to ensure performance levels are accurately monitored.

Further improvements in customer service has seen the removal (internally) of the 28 day ad-hoc emptying target. This target has now been reduced to a five day internal target which will be added to the relevant literature for the service for next financial year. Any complaints to the service are also being recorded and an escalation process to a relevant team leader has been installed to improve customer satisfaction.

Table B7 Customer Care – GMS Performance

General comments

Since 1st April 2007, a Guaranteed Service Standard (GSS) centralised team has been in operation with the express purpose of monitoring compliance with our Code of Practice in relation to Guaranteed Service Standards.

Within our Code of Practice, the Guaranteed Service Standards scheme covers the most important services to our customers. It is also a key driver in customer service improvements as a main target for Scottish Water.

If Scottish Water fails to comply with Guaranteed Service Standards set out in our Code of Practice, the customer is entitled to a payment. Most of the payments are automatically paid when Scottish Water identifies non-compliance although a small number require our customers to make a claim for payment.

Processes and procedures are in place which allow the GSS team to monitor performance on all of Scottish Water's Guaranteed Service Standards. Information is accurately captured and reports are produced that identify potential non-compliance with our standards. Each notified failure is fully investigated with the assistance of the relevant parties in the regional areas and, if established that a failure has occurred, a payment will duly be issued to the customer.

In relation to low pressure, there has been a change to the process. The introduction of the Low Pressure Register allows the process for the low pressure complaint to be followed through from Network Service Operator to Strategic Planner then to the Leakage Analyst who will confirm if the customer is due a GSS payment. Where it is confirmed that the customer is receiving less than 1 bar and it is caused by our system or by any work we are doing on the system, this improved process ensures that customers are entitled to a Guaranteed Standard payment.

Where there were no failures against a standard we have applied N (non-applicable) as the confidence grade to the lines relating to payments against that standard.

Confidence grades relating to payments made are A1 as per last year.

A centralised team, with the responsibility of processing all ex-gratia claims received via a public liability claim against Scottish Water, was also formed on the 1st April 2007. On receipt of a claim, Scottish Water fully investigates the details of the claim with the assistance of the relevant parties in the regional areas and, if established that a failure has occurred, an offer of ex-gratia payment will be given to the customer. This payment should not be considered as an admission of liability by Scottish Water and this does not affect the claimant's legal rights.

B7.1 – B7.17 – Interruptions to supply

Planned Interruptions –

1 relates to an incident within 2008/09
4 relate to incidents within 2009/10

Unplanned Interruptions –

Scottish Water and its customers were badly affected by the severe winter weather conditions from 20 December 2009 to 19 January 2010 whereby we experienced unprecedented call volumes and our network was severely affected. (e.g. frozen water supplies and access issues to our assets.)

103 relate to incidents within 2009/10

B7.18 – B7.22 Sewer Flooding

Payments to non-household customers are now made to Licensed Providers rather than directly to the customer involved.

This report year has seen a decrease in the number of domestic properties being affected by internal sewer flooding. This is due to the introduction of the Flood Investigations Team, their main objective being to reduce the number of properties on the register and, subsequently, the disruption to customers. There was also work carried out by the Network Analysts via the F-Map process which would have also contributed to the reduction of internal sewer flooding incidents.

Internal Sewer Flooding –

1 relates to Domestic Customers (Incidents within 2004/05)
6 relate to Domestic Customers (Incidents within 2006/07)
1 relates to Domestic Customers (Incidents within 2007/08)
30 relate to Domestic Customers (Incidents within 2008/09)
299 relate to Domestic Customers (incidents within 2009/10)

B7.23-27 Request to change method of payment enquiries

There were no failures reported against this standard.

B7.28-32 Other Billing/Charging/Metering enquiries

There have been 3 payments made against this standard.

B7.33-37 Written Complaints

There are 2 failures recorded against this standard. One failure refers to our internal standard of a 5 working day response when a payment was made to a customer. The other failure was for a greater than 10 working day response as covered in table B4.

B7.38-42 Telephone Complaints where written response is requested

There were no failures reported against this standard.

B7.43-50 Keeping Appointments

The increase in the number of appointments reported on line B7.43 can be attributed to one of our key drivers in our ongoing customer service improvement programme.

There have been 12 payments made against this standard.

2 relate to Domestic Customers (Incidents within 2008/09)
10 relate to Domestic Customers (Incidents within 2009/10)

B7.51-52 Ex Gratia Payments Made

There have been various incidents throughout the year with the majority relating to vehicle incidents. The majority of these are due to the condition of the roadway before or after we have carried out excavation work i.e. either potholes or sunken reinstatement.

B7.55-B7.57 Water Ingress to Gas Mains

There were no failures reported against this standard.

B7.59-B7.62 - Meter Applications

There have been 11 payments made against this standard.

Meter Applications –

1 relates to Domestic Customers (Incidents within 2008/09)
10 relate to Domestic Customers (Incidents within 2009/10)

B7.63-B7.67 Pressure - (Investigation)

There were no failures reported against this standard.

B7.68-B7.72 - Pressure (Instance)

There have been 23 payments made against this standard with 6 of them being of a claimed nature.

6 relate to Domestic Customers (Incidents within 2008/09)
17 relate to Domestic Customers (Incidents within 2009/10)

B7.73-B7.77 - Major Incident (Information)

There were no failures reported against this standard.

B7.78-B7.82 - Major Incident (Alternative Supply)

There were no failures reported against this standard.

B7.83-B7.87 GMS Failure to make payments within 10 working days

There were no failures reported against this standard.

Table B8 Other Service Indicators – Water and Sewerage Service

B8.1 Water Service – Distribution

The number of mains bursts per 1,000km is reported this year as 217. This is an increase on last year's number (204) and is above the ministerial target of 204 Bursts per 1,000km.

The severe winter weather this year, lasting a number of weeks, significantly increased the number of bursts. During the winter period, particularly December and January, there was a sustained period of cold weather and significant snowfall. The Met Office reported this as the coldest UK winter for over 30 years.

The mains burst total for the year is 10,279 up 650 on last year's figure. Mains length has increased by 88km to 47,301km for the year. The overall trend of bursts for the majority of the report year was showing a decline but the severe winter weather has resulted in the trend increasing during the last 5 months.

During January, burst rates were up 76% on the previous January and during the peak week in January 2010, 516 burst work orders were raised which was an increase of 162% on the average weekly repair rate (197 bursts) for the year. The adverse weather, over a sustained period, was the major factor for this trend and for the target being missed.

Last year the split of mains bursts was 23% unreported / 77% reported; this year the split is 19% unreported / 81% reported.

2009/10 has seen a reduced level of investment in water mains as the Q&S3a investment programme has gradually reached completion.

B8.2-9 Water Service – Water Treatment Works (Turbidity)

The figures reported in lines B8.2 to B8.9 cover the 2009 calendar year and any Water Treatment Works that was operational at any time during that reporting period, (January 2009 to December 2009).

Two data sources are used in the compilation of these lines:

1. Table 2 of the DWQR Information Return for 2009. Analytical data for Turbidity monitored for regulatory purposes at water treatment works originates from the Scottish Water Laboratory Information Management System (LIMS). Regulatory data is extracted from LIMS using processes established to enable compliance with the requirements of the DWQR Information Direction. Compilation of these lines requires extraction of the appropriate information i.e. turbidity monitoring at treatment works from the defined regulatory dataset.

2. Distribution Input (DI) data from corporate spreadsheet. This details the volumes of water into supply from water treatment works.

The LIMS (analytical) data component of these lines is of high quality, originating from a robust set of processes and systems which are subject to extensive quality control and audit procedures. However, lines B8.3, B8.5, B8.7 are compiled using a combination of the LIMS data and Distribution Input data, so confidence grades for these lines are set

on the basis of both sources. For the other lines in this section the confidence grade remains at A2.

A large amount of data is excluded due to the criteria set. Of the 282 Scottish Water assets reported, only 57 qualify for inclusion. This is because regulatory monitoring for turbidity at treatment works is based on the volume of water supplied. The higher the volume supplied by the works, the higher the sampling frequency. The 95% data in lines B8.2 to B8.5 therefore only relates to the larger volume treatment works.

B8.10-8.19 Sewerage Service

B8.10 – 11, 18 Sewer collapses

The method used for calculating the sewer collapse figures this year is the same as previous years. Essentially, a selection of Work Order Standard Job numbers from the Ellipse data are used to select a number of jobs done which are assumed to be for the purposes of repairing collapsed sewers. A query is run which groups together jobs by postcode and a time span of 21 days. If a number of jobs occur in the same postcode and are within 21 days then they are counted as one job.

A breakdown of the individual Work Orders in the report produced for these lines, shows an increase in the number of repairs to lateral sewers of approximately 2,000 which accounts for the increase in the total number of collapses compared to 2008/09.

B8.12-14 Intermittent discharges

The UID studies completed during 2009/10 provided a more complete understanding of sewage overflows and improved the information in the intermittent discharge asset inventory. As with the Annual Return 2008/09, Surface Water Outfalls (SWOs), dual manholes (DMs) and final effluent discharges (FE) were not included in the reported numbers for B8.12 and B8.13. However, as they are in Scottish Water's Delivery Plan and will be included in line G8.12 (number of UIDs improved) and G9.10 (number of UIDs), they are included in the table below. CSO & Combined CSO & EO structure types are also detailed separately in the table below, as specified in the line definitions for B8.12 & B8.13.

2009/10	**UIDs B8.12**	**IDs B8.13**	**% UID B8.14**
CSO & Combined CSO & EO	612	3247	18.8%
CSO at WWTW, EO etc.	67	593	11.3%
SWO	39	Not reported	Not reported
Dual Manhole	33	Not reported	Not reported
FE	3	Not reported	Not reported
2009/10 Total including SWO & DMs	**754**	**-**	**-**
2009/10 Total excluding SWO & DMs	**679**	**3840**	**17.7%**

The Number of UIDs reported in line B8.12 has decreased by 59 this year. Two UCSOs in the Q&SII UCSO completion programme and 92 UIDs in the 2006-10 UID programme were resolved. There were 73 additions (new needs) identified in SR06 and SR10 UID

studies. There were 38 removals due to better data identifying assets that were not intermittent discharges, or had been abandoned.

The difference in B8.13 - Number of IDs between the Annual Return 2008/09 and 2009/10 (204 IDs) is due to investment e.g. assets being abandoned or new ones built, or better information e.g. unrecorded assets being discovered or assets being shown to have never existed, or been previously abandoned.

The Scottish Water Combined Sewer Outfall (CSO) Corporate Satellite Application (CSA) was used as the source for the data on intermittent discharges for the 2009/10 Annual Return. This corporate application holds the most up-to-date and comprehensive data available. The system links to the corporate asset inventory held in Ellipse (our Work and Asset Management system). Intermittent discharge types not incorporated in Ellipse (dual manholes, surface water outfalls and recently discovered CSOs or EOs) were appended to the core data to provide the complete number of IDs for inclusion in the tables and commentary. The quality and quantity of the data is continually being improved by Drainage Area Studies (DAS), UID Studies, and Operations/Area Strategic Planner knowledge.

B8.15-16 Sewer blockages

The methodology for this year's report is unchanged from last year in that resolution codes relating to sewer flooding are also included. These codes are assigned by our field staff and may differ from the original diagnosis of the call agent. The report identifies any Service Request (an event) that has been confirmed as a blockage within a set of resolution codes. It must also have a completed Choke Information form detailing the cause as a Blockage/Defect.

B8.19 Equipment failures

We have recorded a 14.5% increase in instances of equipment failures (repaired) against SW sewerage equipment in our Works and Asset Management System during the reporting year compared with last year.

The improved reporting process put in place two years ago has continued to be used for consistency. Further improvements in our proactive maintenance at our assets has been realised as a result of the APAM (Achieving Planned Asset Maintenance) project which will have contributed to the rise in recorded incidents as we have seen a significant rise in the investigating and reporting of alarms.

Data covers all reactive work orders in the appropriate category. Not all of these may have resulted in a physical repair or replacement of equipment. A few work orders may have instigated an investigation and report only, whilst some may have resulted in a choke clearing or equipment re-setting rather than a repair.

B8.20 – 37 Sewage Treatment Works performance

It should be noted that these lines can be impacted by a number of factors out with Scottish Water's control. These include changes to the regulatory monitoring plan (i.e. inclusion/exclusion from the annual sampling programme or an increase/decrease in the frequency of sampling) and revisions/variations to the discharge licenses.

There has been a recognised improvement in serviceability performance. This can be attributed to improvements in operational practices and procedures, investment in assets

through the capital programme (i.e. EC01 and WQ01 programmes) and capital maintenance.

The confidence grade for the data has remained at A3. The SEPA extract is from their corporate system and is available as a public register of information. All the supporting Scottish Water data is corporately sourced.

Table B9 Security of Supply index (SOSI)

This is the fourth year of production of this table for Scottish Water. The SOSI is a standard UK methodology to provide an indication of the extent to which a water company is able to guarantee the provision of a planned level of service. From 2010 this indicator will be used as part of our Overall Performance Assessment (OPA) calculation.

The SOSI measure is used in England and Wales to assess a company's security of supply to its customers but also to track changes in the service offered to customers over time.

We made a number of changes to our methodology for determining the supply demand balance for our Water Resource Plan 2008 (WRP08) (and hence Annual Return 2007/08) where we standardised our target level of service at 1 in 40 years for all zones.

There have been no further major changes to methodology for 2009/10, but data has continued to be updated and improved. The updates are:

- Yield data has been re-assessed for selected WRZs.

Our critical period SOSI score for the Annual Return 2009/10 is +19, implying that we have insufficient supply to meet full demand in all of our WRZs (SOSI score +100). Our analysis shows that 75% of the population is in surplus and therefore the implication is that 25% of the population is at risk of supply shortage.

Ongoing investment for leakage reduction, growth, water quality schemes and specific Supply Demand Improvement schemes is predicted to increase both our critical period and average period SOSI scores. This journey of improved average period SOSI scores used for OPA reporting is detailed fully in our WRP09 and 2010-15 Delivery Plan.

Table B9a (planned level of service) and Table B9c (critical period level of service) have been completed as for previous years.

For 2009/10, the Average Period Score (Table B9a) is 1 point less than for 2008/09.
The Critical Period Score (Table B9c) has improved by 2 points from 2008/09.

Although there has not been the significant improvement reported in previous years, progress continues to be made and we remain confident that our Delivery Plan targets will be met.

The main reasons for the limited improvement in 2009/10 are:

- Lower Yields in specific WRZs arising from hydrology investigations to support the Capital Programme.
- Delays in specific projects now delivering in 2010/11
- Impact of the closure of Ashgrove WTW due to the severe algal contamination of the raw water compromising the ability of the works treatment capability.

- Impact of the severe winter weather resulting in increased demand and leakage.

Table B9a Security of Supply index - Planned level of service

In this Table, the overall SOSI score has been calculated at dry year annual average against a target drought resilience level of service of 1 in 40 years. Due to a combination of leakage reduction activities, data improvement activities, and capital projects the SOSI score has improved from -28 in the first reporting year (2006/07) to +26 last year (2008/09). This year it is virtually unchanged at 25 points.

Table B9b Security of Supply index - Reference level of service

Table B9b (reference level of service) has not been completed. A common reference Level of Service was adopted in England & Wales based on Ofwat Report: 1997 Reassessment of Water Company Yield. Whilst we have remodelled all our yield estimates over the last 2 years to reflect our standardised 1 in 40 year target level of service for drought resilience (the basis of the Table B9a), we have some reservations that this does not fully reflect the original definitions of the ”Reference Level of Service” which includes modelling of hosepipe bans at a 1 in 10 yr frequency. We do not specifically model hosepipe bans in our yield models and our level of service statement for hosepipe bans is that “***Hosepipe Bans will be imposed in a water resource zone once the process to apply for a Drought Order has been initiated***” This is not the same as the Reference level of service definition.

We believe that the Table B9a results provide a reasonable comparison with the reference level of service as they both use the 1 in 40 yr drought return period as the predominant factor in the calculation of Deployable Output.

Table B9c Security of Supply index - Critical period level of service

In this table, the overall SOSI score has been calculated at dry year critical period. Due to a combination of leakage reduction activities, data improvement activities and capital projects, the SOSI score has improved from -51 in the first reporting year (2006/07) to +17 last year (2008/09) and +19 this year (2009/10).

We have carried out limited evaluation of the 2009/10 peak D.I data to take account of adjustments – bursts for example. This has resulted in changes to peak factors in a small number of WRZs with the remainder unchanged. Limited sensitivity analysis carried out last year has been repeated and again demonstrates that a +/- 10% adjustment to the peak factor results in a maximum +/- 1 point change in the SOSI score.

D Tables – Asset Information

Table D1 – D3 Workload Commissioned Assets

General comments

Tables D1-D3 record assets replaced or refurbished and new and enhanced assets commissioned in the Report Year 2009/10. These are based on Scottish Water's approved investment programme to meet requirements of legislative driven quality improvements, enhanced levels of service, ministerial outputs and capital maintenance to ensure that the necessary level of service is maintained. The assets commissioned relate to projects from the Q&SII Conclusion and Q&SIII Programmes.

The asset data reported in D1 to D3 is directly input to the tables from aggregation of the project level data to the appropriate asset type, size band and financial fields.

Commissioned assets have been analysed and allocated to either 'asset replacement' or 'new and enhanced', as appropriate. Asset data on completed projects was obtained from Project Managers in Scottish Water Solutions and Capital Investment Delivery (CID). They provided details of the assets commissioned through an Asset Data Capture Form for Tables D1-D2. Support Services data was obtained on individual proforma appropriate to the asset type. Financial information on project capital expenditure has been reconciled with the corporate financial management system.

New mains and sewers adopted, through Customer Connections projects, are reported at the value advised by Customer Connections for each development site. Data was provided at development site level on the new mains and sewers.

Mains and sewer rehabilitation lengths and size band diameters were provided with the associated financial costs in rehabiliation proforma by CID. The lengths reported are the lengths in the year, although the projects may be continuing in 2010/11, and the financial investment associated relates to the lengths delivered in 2009/10.

Data on changes to assets, resulting from reactive work undertaken by Customer Service Delivery, was provided by Finance. A report on capitalisation of reactive work drawn from our Works and Asset Management System (WAMS) and Peoplesoft has enabled a consistent approach to be taken across the eight operational regions. There are capitalised costs associated with mains and sewer replacement which were not attached to specific lengths. Going forward we will be able to capture the lengths on a scheme by scheme basis. As financial cost centres were captured, it was possible to attach Ellipse codes to the majority of water and wastewater treatment plants and to identify assets where there were a limited number attached to each cost centre or the narrative associated with the work order named the site.

Progress has been made to enable the work undertaken by Customer Service Delivery, as part of the Quick Hits programme, to be captured through the asset data proforma used by SWS and CID.

Further work is required to ensure that health and safety work, progressed by all parties, will be recorded consistently, in the manner currently demonstrated by our CID team.

Work to meet the requirements of the Security and Emergency Measures Direction has been reported as enhancement of the assets in Table D1.

Confidence grades remain unchanged from 2008/09 unless noted below.

Table D1: Workload Commissioned Assets – Water Service

D1.1-D1.21 Asset Replacement

D1.18 Water Mains – Mains (other)

Any other valves are included with manholes and chambers reported against D1.18 in size band 2. Investment in street furniture is reported in D1.18 in size band 3.

D1.31-D1.51 New and Enhanced Assets

D1.33 Water Resources – Raw Water Aqueducts

D1.33 reports A1 compared to B2 in 2008/09 as there was no investment in new and enhanced aqueducts reported.

D1.48 –D1.50 Water Mains – Mains (other) and Communication pipes

As there has been no new or enhancement works undertaken on these assets during the report year, the confidence grade has been reported as A1.

Table D2: Workload Commissioned Assets – Wastewater Service

D2.1-D2.20 Asset Replacement

D2.15, D2.17-D2.20 Sludge Treatment Facilities

These lines are reported as AX as Scottish Water does not have any assets of these types.

D2.20 - Investment in manholes and chambers which were not associated with the sewer rehabilitation programme is reported in line D2.20 in size band 0 and street furniture is reported in size band 1.

D2.31-D2.50 New and Enhanced Assets

D2.45-D2.50 Sludge Treatment Facilities

Lines, D2.46 – D2.49 are reported as AX as Scottish Water does not have any assets of these types.

Table D3: Workload Commissioned Assets – Support Services

General comments

D3.9 and D3.29 report on the telemetry outstations which have been commissioned through the telemetry programme and outstations specifically identified in the asset data returns from project managers. The total number of refurbished/replaced outstations has been assigned a confidence grade of B2 against the associated investment, which reflects the inclusion of the telemetry investment element within refurbishment of assets which have been included in Tables D1 and D2. A number of upgraded telemetry outstations will have been included within the upgrading of assets which have been included in Tables D1 and D2.

D3.1-D3.16 Asset Replacement

D3.13- D3.16 Other Non-Operational Assets

D3.13 – D3.16 have been reported as AX as no capital investment is being progressed against these asset types.

D3.21-D3.36 New and Enhanced Assets

D3.27 – D3.28 have been reported as AX as no capital investment is being progressed against these asset types

D3.33- D3.36 Other Non-Operational Assets

D3.33 includes laboratory equipment and investment undertaken at tenanted houses, including upgrades to the private water supplies. D3.33 also includes work undertaken at a number of landfill sites to enable these to be de-commissioned.

D3.34 – D3.36 have been reported as AX as no capital investment is being progressed against these asset types.

Table D5: Activities – Water Service

D5.1-11 Mains – Asset Balance

Lines D5.1-D5.11 report the water mains asset balance at March 2010 and the number of communication pipes replaced in the Report Year.

The closing balance for water mains on line D5.8 is 85.67km higher than the opening value reported on line D5.1, which is consistent with the 47,301km reported in line H3.4 in 2009/10.

D5.2 and D5.3 Mains renewed and mains relined

Lines D5.2 & D5.3 report mains replaced as part of the Capital Investment Delivery Q&SIII Mains Rehabilitation Programme in 2009/10, lengths replaced by reactive operations capital maintenance lines and lengths from named projects.

Confidence grades have improved to A2 from B2 in 2008/09 as a result of improvements to the CID data collection process.

D5.4 Mains cleaned (total)

The 633.08km length reported has been derived from the length of flushing specified in 'cleansed' WAMS work orders of 380.16km plus 252.92km through the capital programme. The increased lengths from the capital programme are due to work progressing to improve the level of iron and manganese as part of an agreed programme of work with DWQR. The confidence grade remains at B3, as in 2008/09.

D5.5 Distribution mains cleaned for quality

The length reported of 579.08km has been derived from the length of 326.16km reported against routine flushing and swabbing codes, as these works are carried out for water

quality reasons, plus the 252.92km reported against capital programme work packages in D5.4 above. The confidence grade remains at B3, as in 2008/09.

D5.6 New mains

Line D5.6 is a combination of the lengths adopted by Developer Services for new developments and lengths delivered as part of Q&SII and Q&SIII projects. The confidence grade remains B2, as in 2008/09.

D5.7 Mains abandoned

The length of mains abandoned reported equals the length of mains renewed taken from D5.2 above less reduction in total length reported from the mains rehabilitation programme. It does not include any impact of improved information which we have included in D5.7a.

D5.7a Other changes

The length reported is the balancing value to bring the total changes in the year in line with the closing balance reported in D5.8. This balancing includes a large change in length of abandoned main reported from GIS in 2009/10 of 294km with over 100km relating to previous years. This is offset by the update of "as built" water mains from Customer Connections and the capital programme entered into GIS in the report year, together with backlog data from better information from the business. The confidence grade remains B2, as in 2008/09.

D5.8 Total length of mains (closing balance)

The total length reported is consistent with line H3.4. The confidence grade remains B2 as in 2008/09.

D5.9 Lead communication pipes replaced – quality

There is currently no programme of lead pipe replacement agreed with the Regulator for water quality improvements.

D5.10 Lead communication pipes replaced - maintenance or other

A further 22 lead communication pipes have been reported as replaced or refurbished through the Reactive Operations capital maintenance lines and CID Mains Rehabilitation Programme

D5.11 Communication pipes replaced – other

4,454 communication pipes, of materials other than lead, have been replaced as part of the mains rehabilitation programme being progressed by Capital Investment Delivery and through work undertaken as part of the Reactive Operations capital maintenance lines. This includes 2,260 pipes replaced at customers' requests during 2009/10. The confidence grade is unchanged at B2.

D5.12-18 Water Resource Planning

The figures for the report year have been obtained from corporate reporting systems, principally Perform Spatial Plus. The confidence grades remain unchanged for lines

D5.12, D5.13, D5.17 and D5.18. The confidence grades for lines D5.14, D5.15 and D5.16 have improved from A3 to A2 due to greater confidence in the DMA base data and the DMA management processes.

22 Additional district metered areas were created during the report year, bringing the total to 2,795. Any changes to the DMA stock in 2010/11 will be minor. There is no proposal to build further DMAs, although some existing DMAs may be altered to address changes to the water network or to improve DMA operability.

The number of district metered areas with valid DMAs, Category 1, at the year end has increased to 2,281.

D5.17 Percentage of total connections covered by valid DMAs

The method used to report the percentage of total connections covered by valid district metered areas has changed this year. This line was previously calculated as a sub-set of the reported total number of communication pipes (lead) and communication pipes (other), because the numbers of connections shown within each DMA in PSP were only estimates. While the high number of connections shown in each DMA did not affect the reported leakage value, it did impair Active Leakage Control (ALC) targeting. We improved the quality of DMA connections values in 2009, and are now able to utilise the actual PSP DMA values to measure this reporting line. Using GIS, we calculate the number of address points across Scotland which have a unique x,y coordinate. Each of these unique address points is counted as having a separate communication pipe. Where these are located within a DMA polygon, they are now bulk uploaded into PSP at six monthly intervals. The total number of connections covered by the DMA stock is obtained from PSP, and the total number of connections in Scotland is obtained from GIS.

D5.18 Percentage of total network covered by valid DMAs

The total percentage of mains covered by valid district metered areas decreased by 0.6% to 76.9% in the report year. This was due to an improved measurement of the mains length within each DMA.

Table D6 Activities – Waste water Service

D6.1-13 Critical/Non-Critical Sewers

The total reported length of critical sewer has decreased by 29.54km. This has arisen through better information from CCTV surveys and drainage model maintenance; the net length of non-critical sewers recorded has increased by 20.46km when compared to the 2008/09 inventory but after reducing 50km from the off-inventory critical sewer lengths the overall effect is a decrease.

D6.1 Total length of sewers - opening balance

The opening balance is taken from the Annual Return 2008/09 line E7.8. The confidence grade reported on this line of C4 is consistent with line E7.8 for our 2008/09 submission.

D6.2 Total length of critical sewer - opening balance

The opening balance is taken directly from both Annual Return 2008/09 line E7.13 and Line D6.8 which reflects the closing balance from the previous reporting year. The confidence grade reported on this line of B2 is consistent our Annual Return 2008/09 submission.

D6.3 New critical sewers added during the year

78.71km of new sewers were added this reporting year This comprises new sewers from Q&SIII wastewater, UID quality, and first time provision projects, Q&SIII flooding projects and Q&SIII Developer Services projects. The confidence grade is unchanged from 2008/09.

D6.4 Critical sewers inspected by CCTV or man entry during the year

33.29km of inspections were recorded in the report year. These are made up from 0.327km of man entry reported through WAMS, and 32.962km from CCTV sewer survey data. The robust data sources utilised (IFOC CCTV project and the update from other project-driven CCTV databases) enables the confidence grade to be maintained.

D6.5 Critical sewers – renovated

No sewer renovations were reported as part of the Capital Investment Delivery sewer rehabilitation programme in this report year.

D6.6 Critical sewers – replaced

0.4km of sewer replacement is reported from the CID Q&SIII infrastructure programme.

D6.7 Abandoned "critical" sewers

The total value of 12.65km is reported from GIS teams due to operational activities.

D6.7a Other changes to "critical" sewers

This line reports the balance between the changes reported through the lines above to bring the total in line with the closing balance reported in D6.8 and in line with E6.8. These include the off-inventory reduction of 300km and a decrease of 59km of lateral sewers, update of GIS with “as-built drawings”. The confidence grade remains unchanged.

D6.9 New "non-critical" sewers

Line D6.9 reports 335.94km of new sewers. These are principally new sewers through the Q&SIII Developer Services programme, WIC 16 and Q&SIII FTP projects and Q&SII and III wastewater quality and UID projects. The total figure of 335.94km reported on this line includes 12.066km of new pumping mains to comply with WIC guidance requirements.

D6.10 "Non-critical" sewers – renovated

8.6km of sewer renovations are reported as part of the Capital Investment Delivery sewer rehabilitation programme in the report year.

D6.11 "Non-critical" sewers – replaced

The 15.50km of sewer replacement reported for this line has been delivered through the CID sewer rehabilitation programme, Reactive Operations sewer rehabilitation projects, and through wastewater quality projects. The confidence grade remains unchanged.

D6.12 Abandoned "non-critical" sewers

The 8.81km of abandoned sewer is reported from GIS.

D6.12a Other changes to "non-critical" sewers

This line reports the balance between the changes reported through the lines above with the closing balance reported in D6.13 and E7.8. This includes re-classification to critical sewers, lateral sewers, update of GIS with “as-built” drawings for lengths adopted through Customer Connections and new sewers and pumping mains built through the capital programme. The confidence grade remains unchanged.

D6.14-19 Studies

D6.14 Number of sewage drainage areas

There is a large increase in the number of drainage areas, 805 to 1,958, reflecting the change in study management from DAS Zones to Sewered Catchment Areas. Whereas, previously a DAS Zone could contain a number of operational works, the sewered catchment areas cover only one operational works. This one to one relationship of study area to operational works allows for better management of the study data. The number of sewage drainage areas now matches the number of operational works (Table E3 & E8 Data). Sewered catchment areas are also now available and kept updated in our corporate GIS.

The confidence grade reported reflects the grade of the base data used, from table E3 and E8 data, as grade B3.

D6.15 Total Drainage area studies identified for study in the current programme.

The number of drainage areas identified for study within the Q&SIIIa programme has reduced from the previously reported 51 to 48. This is due to the switch from DAS Zones to sewered catchment areas. The following Sewered Catchment Areas have multiple DAS Zones where studies were being carried out, these now count as one study:

DAS Reference	DAS Name	WWTW Ref	WWTW Name
ED03	EASTERN EDINBURGH	STW001986	AVSE PFI - EDINBURGH WWTW
ED08	EASTFIELD PS		
LO38	PENICUIK		
FV15	STIRLING	STW002268	Stirling WWTW
FV47	CAMBUSBARRON		

As reported in 2008/09, 12 studies were deferred to the next investment period, all previous spend was moved to the 2010-15 early start budget and as such they will not be counted in this year’s total. This reduces the number of studies to 36. An additional

study, STW000582 Plains, was scoped and has subsequently been added to bring the 2009/10 figure to 37 Studies.

For this report year, this line has been taken as the number of sewage drainage areas where a new study is being created or updated.

D6.16 Drainage area studies ongoing in the current programme

Of the 37 studies reported in D6.15, 12 are currently still ongoing.

D6.17 Drainage area studies complete

23 of the 37 studies are now considered complete. 2 studies have been deferred to 2010-15 (Oban and Stirling).

D6.18 Percentage drainage area studies completed in current programme

The 23 studies currently complete amount to 62% of the 37 studies set for delivery in this investment period.

D6.19 Percentage properties covered by completed studies

The 23 studies cover 18.5% of the connected domestic & non domestic properties in Scotland.

Table D7 and D8 Capital Maintenance Expenditure

General comments

D7 reports capital maintenance investment on wastewater assets and D8 reports capital maintenance investment on water assets in the Report Year. With the exception of Management and General, the investment is reported against operational regions.

Each project is assigned to one of the eight operational regions and to a Unitary Authority in the Capital Investment Monitoring System. The Unitary Authorities map to the revised operational regions and each Unitary Authority is wholly contained within an operational region. Where projects are flagged as Scottish Water Wide as they span more than one operational area, they are reported proportionally according to the amount of work carried out in each relevant area. For projects where the detail is unavailable or would require a disproportionate amount of time and effort to ascertain, the cost of the project is spread evenly across the eight regions.

The financial values reported in D7 and D8 are based on the percentage of capital maintenance allocated to projects. The templates which were developed in 2008/09 were collated and used to allocate the capital maintenance projects to the correct areas and maintenance categories.

D7.37 and D8.28 – Wastewater/Water Management and General

These lines include all support services. The non-operational assets have been allocated to either water or wastewater. The investment in fleet, IT, and offices/depots/control centres have been split 50/50 for reporting in D7.37 and D8.28.

The confidence grades reported remain as B3 as the majority of the information used is recorded at project level in CIMS and was confirmed by Project Managers, where possible.

D8.28 – Water Management and general expenditure

This line shows a negative value because it includes a contractual adjustment to reflect our contract with SW Solutions. In the report year, we have accounted for all such adjustments over the four year period from 2006. Efficiencies were harder to achieve in the water capital maintenance programme and this has resulted in a disproportionate negative adjustment in this line.

E Tables – Operating Costs and Efficiency

General Comments

OUT-PERFORMANCE

2006-10 OUT-PERFORMANCE ASSESSMENT FOR SCOTTISH WATER (INCLUDING BUSINESS STREAM GROUP)

Overview

Financial out-performance has been calculated in accordance with the methodology set out by the Commission on 16 November 2007, applied to the combined business of Scottish Water, SWBS Holdings and Business Stream - to align with the approach adopted at the Strategic Review of Charges 2005. On this basis, Scottish Water has generated £162.5m financial out-performance in the 2006-10 period as set out below.

Financial assessment

		£m
Final determination expectation		
Allowed gross debt at 31 March 2010 from 2005 final determination		3,236.4
Forecast cash at 31 March 2010 from 2005 final determination		-2.0
Allowed net debt at 31 March 2010 from 2005 final determination		3,234.4
Actual performance		
Actual debt at 31 March 2010		3,071.8
less:	actual cash balance at 31 March 2010 - Scottish Water	-153.5
less:	actual cash balance at 31 March 2010 - Business Stream	-20.8
less:	actual cash balance at 31 March 2010 - SWBSH	-38.6
Actual net debt at 31 March 2010		2,858.9
add:	borrowing to complete Q&S2/3a – based on maximum forecast of completion costs of investment to be undertaken post 31/3/10	256.5
less:	costs of Q&S3b enhancement only - undertaken pre 31 March 2010 but not financed in 2005 final determination	-44.2
add:	infrastructure charge income received but not yet applied as at 31 March 2010	0.5
add:	excess of 2009/10 PFI capital upgrade allowance above actual Seafield odour investment costs in 2009/10	0.2
Adjusted forecast net debt on completion of Q&S3a (incl Q&S2)		3,071.9
Forecast out-performance		162.5

Explanation of approach

1. The assessment has been undertaken for the combination of Scottish Water (excluding SW Horizons) and the Business Stream companies to ensure consistency with the basis on which the final determination target was set in 2005. All references in

this section to Scottish Water therefore apply to the combination of Scottish Water and the Business Stream companies.

2. In the 2005 final determination, the Commission expected that, on completion of the delivery of the 2006-10 ministerial objectives (Q&S3a), Scottish Water would have net debt of £3,234.4m.

3. The actual debt at 31 March 2010 of £3,071.8m is as reported in table M28 and the Scottish Water group annual accounts (notes 17 and 18) and comprises £3,064.7m of Government debt and £7.1m of non-Government debt.

4. The actual cash balance in table M28 and the Scottish Water group annual accounts (note 13) of £218.5m includes £5.6m cash relating to the Horizons non-regulated businesses. Excluding this cash balance, the cash balance that should be included in the above assessment is £212.9m which represents £153.5m cash in Scottish Water, £38.6m cash in SWBS Holdings, and £20.8m in Business Stream.

5. To calculate Scottish Water's forecast debt on completion of the Q&S3a programme, two key adjustments are required – firstly to add to the actual 31 March 2010 debt position the forecast costs of completing the Q&S2/3a programme; secondly to subtract from the 31 March 2010 debt position the actual cost incurred in delivering Q&S3b enhancement investment before 31 March 2010, which was not financed as part of the 2005 final determination. Two other minor adjustments are required. Details of these are all set out below.

    a. The forecast cost of completing the Q&S2/3a investment programme is £226m - £256m, with a best estimate forecast of £236m. For the purpose of this out-performance assessment, we have adopted the most prudent approach of using the upper end estimate of investment completion costs, £256m. This estimate of £256m includes £180m of forecast project costs, £35m of project risk reserves, and £41m of programme risk allowances.

    b. The cost incurred on the Q&S3b early start investment programme prior to 31 March 2010 was £65.2m (£27.7m in 2008/09 and £37.5m in 2009/10). £21m of this cost related to capital maintenance and £44.2m related to enhancement investment. We have therefore adjusted for the enhancement element only of £44.2m.

    c. Two other minor adjustments have been made to recognise cash received for which no expenditure has yet been incurred - £0.5m greater infrastructure income than applied to relevant infrastructure growth expenditure, and £0.2m greater PFI capital allowance than applied to the Seafield odour upgrade in 2009/10.

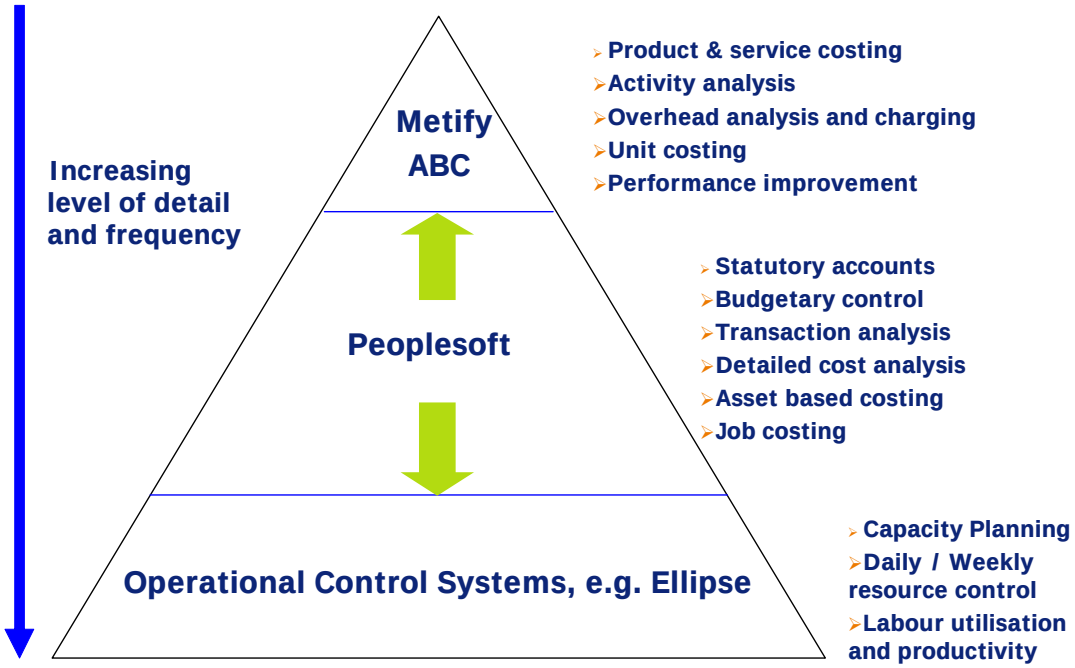
Methodology & Cost Allocation

Cost analysis in E Tables (E1, 2, 4, 6, 8-10) was prepared using reports from Scottish Water's Activity Based Management (ABM) systems.

ABM provides analysis of the costs of key activities and processes, and links these to the factors that cause or drive our level of cost. This allows us to develop an understanding of the full cost of providing services, either internally within Scottish Water, or to our external customers.

Scottish Water has built an ABM toolkit founded upon consistent principles which apply across some key core systems and processes.

Activity Based Management data (financial and non financial) is captured in various corporate systems. The key systems which provide ABM analysis for E Tables are:



System	ABM Process Overview
Ellipse Works & Asset Management System	Ellipse is used to hold Scottish Water's Asset Inventory and to manage operational activity by individual job (work order), activity and asset. Time spent working on work orders is captured in Ellipse via timesheets, integrated mobile devices or laptops. Material issued to jobs from Stock is also captured by work order. Time and materials are then costed and interfaced to the

Peoplesoft Financial System on a daily basis.

See Overview diagram below.

Peoplesoft Financial & Procurement System

Peoplesoft is Scottish Water's primary financial and procurement system. The key modules utilised by Scottish Water are Procurement, Accounts payable, Projects, Timesheets, Billing, Accounts Receivable, General Ledger & Fixed Assets.

Accounting separation within the Scottish Water Group has been enabled within Peoplesoft.

Business Units are the highest level entity in Peoplesoft and are used to securely separate data and access to data and processes. Separate Business Units have been used to separate Scottish Water Horizons from Scottish Water, and in turn from Scottish Water Solutions. Cross-business unit transactions can only be made via inter-company invoicing.

Within Scottish Water capture of activity based information within Peoplesoft has been maximised through the set up of our coding structure, systems and processes.

Cost codes have been set up within Peoplesoft to capture and sub-analyse costs by:

- Individual work order
- Individual asset
- Each capital or non regulated project
- Each support department
- Expense subjective (account)

All costs are held in Peoplesoft, and costed either directly through Peoplesoft Procurement or operational costing through the Ellipse-Peoplesoft interface.

Peoplesoft, therefore, provides comprehensive costing analysis, on a monthly basis, of the costs directly attributable (including some key support activity recharges) to each team, asset, zone, project, service and job.

Metify Activity Based Costing (ABC) System

Metify is an ABC system structured around Scottish Water's key (c.300) activities. ABC is run periodically (typically half-yearly) to cover all profit and loss expenditure.

Peoplesoft feeds total expenditure directly into Metify.

Where activity splits have already been captured, e.g. Ellipse effort by activity / asset, these are also fed directly into Metify.

Costs are analysed by activity, and for each activity a non financial driver is captured. The non financial driver is the measurable factor which drives activity cost, or the level of resource consumption. In Metify these drivers are used to allocate costs to services.

Output from Metify provides analysis of the full cost of services. These services have been structured to match E & M Table activity classifications, and therefore Metify output directly feeds these tables.

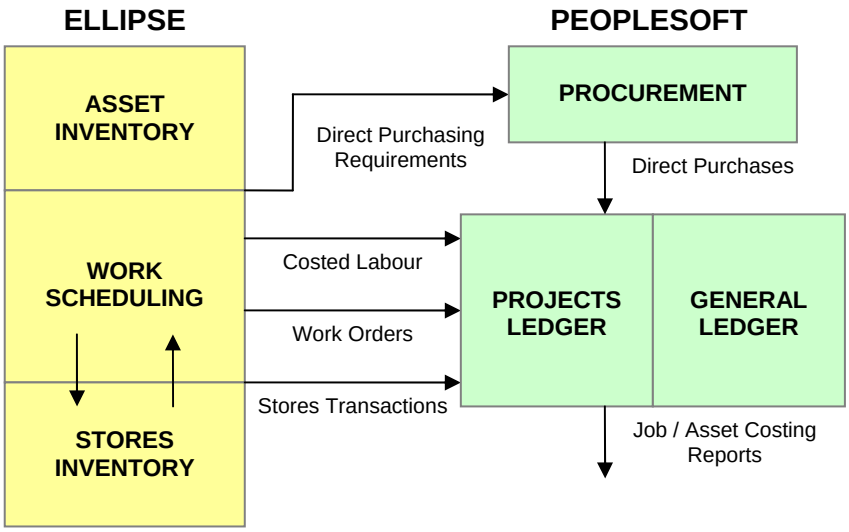
Non financial driver data is collected from a variety of corporate systems and input to Metify.

Driver Data Systems

Examples of systems and drivers are:

- LIMS – Lab tests processed and Samples taken
- Oracle CRM – Customer calls and written contacts
- Gemini – Waste movements
- Ellipse – Number of jobs, man hours, stores issues, etc.
- Peoplesoft – Number of invoices, purchase orders, customer bills, man hours

Ellipse / Peoplesoft Integration



Cost Allocation

Costs are captured or allocated in line with Regulatory Accounting Rules.

Transfers between Separate Entity Associates

Transfers between our separate legal entities are invoiced in accordance with specified Service Agreement prices or Contracts. The prices in these agreements are in accordance with Regulatory Accounting Rules on Transfer Pricing, and prices reflect the full cost of providing the service to the entity. Activity Based Management output has been used extensively in determining the costs which should be included in transfer prices.

Transfers to Non Regulated Activities

Scottish Water Horizons Limited (SWH) is responsible for the majority of the Scottish Water Group's Non Regulated activities. Transfers to Non Regulated activities are undertaken as described in the section above "Transfers between Separate Entity Associates".

A residual number of Non Regulated activities were not taken over by Scottish Water Horizons, and remain within Scottish Water. These are activities which are incidental or integral to the regulated business activities. For example, rechargeable works on core assets, and use of laboratory services for third party sampling and analysis.

Within Scottish Water, Non Regulated activity is separately reported in a Non Regulated ledger tree. Non regulated costs are either directly captured and reported in the Non Regulated ledger tree, or are charged to Non Regulated through cost recharges.

Operational Staff working on Non Regulated activities, e.g. rechargeable works, charge costs to Non Regulated through Ellipse work orders as described in the methodology section.

Support Cost recharges for Fleet, IT and Property are transferred on a regular basis, to reflect actual consumption of support costs. A further cost recharge is made on top of this, to cover areas, which are not regularly recharged. These recharges are made on the basis of half-yearly ABC analysis.

Capitalisation Policy

Scottish Water has applied a consistent policy to capitalisation and ensures compliance with UK Generally Accepted Accounting Practices (UKGAAP). The main points of the policy are:

- Fixed assets are tangible items for the delivery of services and the provision of support activities. Assets are utilised by Scottish Water for a number of years and are not for resale.
- Tangible fixed assets have physical substance and are held for use in the production or supply of goods and services. Capital assets are expected to generate future revenue for the company or are used in the business and are not for resale.

- Tangible fixed assets, whether purchased or constructed, are recorded at cost. Cost comprises all directly attributable costs, including internal costs, such as the cost of time spent on the construction of the asset by project engineers/ planners, which are incremental to the delivery of the Scottish Water capital expenditure programme. Cost does not include any allocation of administrative or general overheads and specifically excludes abnormal costs relating to, for example, inefficiencies, wastage and costs associated with operational problems encountered after asset commissioning.

- Costs associated with a start-up or commissioning period are capitalised but only where the asset is available for use but incapable of operating at normal levels without such a period of commissioning. Costs associated with operating assets which are running at below normal operating levels after start-up/ commissioning are not capitalised.

The capitalisation policy provides guidance notes and examples on distinguishing between operational and capital expenditure. With specific reference to expenditure relating to reactive and leakage activities, specific definitions and examples are included in the capitalisation policy. In addition, specific controls are in place to review expenditure relating to reactive and leakage activities.

Reactive Capital Expenditure

In general terms, infrastructure reactive activities can be capitalised where there is replacement of discrete lengths of mains or sewers, usually no less than 3 metres. The work must represent a permanent solution to a fault or deficiency in the network. Costs associated with clearing blockages or the use of a collar on a burst main are not capitalised but are charged to opex.

Reactive non infrastructure capital expenditure includes the replacement of an asset at the end of its useful life such as pumps, filters, screen. In addition, costs associated with a complete asset overhaul, the results of which extend the asset life for a number of years can be capitalised under either reactive or planned capital expenditure. Expenditure relating to the repair or replacement of a component of an asset, e.g. the replacement of a bearing, are not capitalised but charged to opex.

Expenditure on Leakage

Expenditure on leakage is predominantly allocated to operational expenditure since much of the activity relates to either operational intervention or investigative work. However, the replacement of discrete lengths of mains, usually no less than 3 metres, installation of valves and meters are capitalised.

Wholesale Cost Allocation by WICS Activity

Scottish Water's coding structure follows Regulatory Activity classifications, i.e. Water Treatment, Water Distribution, etc. by individual asset.

The majority of operational costs are directly captured against the individual assets, either by direct charging, e.g. Power, Chemicals, or through Ellipse work orders as described in the Methodology section, e.g. labour costs. In 2009/10 85% of costs directly attributable to wholesale assets were charged to assets. The shortfall against 100% was

due to some gaps in labour costing. These gaps are addressed, for the purposes of regulatory reporting, via activity analysis undertaken with team leaders.

Fleet costs are recharged to teams on a regular basis, and ABC then calculates the fully allocated costs of wholesale activities, including all support activity costs based on actual activity costs and driver volumes.

Trading Results & Reconciliation

Scottish Water Business Stream Limited (Business Stream) is a fully owned subsidiary of Scottish Water. Scottish Water produces consolidated accounts incorporating the results of Business Stream. However E & M18 table financials are produced for Scottish Water Regulated and Non Regulated activity, excluding Business Stream.

To aid comparison, the table below summarises Scottish Water consolidated results, Scottish Water company and Scottish Water Horizons results.

SW Group Statutory Accounts		£m	£m
Cost of Sales		674.3	
Admin Expenses		104.5	
SW Group Expenditure			**778.8**
Less	Business Stream		(20.7)
	IFRS adjustment		3.1
	IAS 19 pension cost		(3.1)
Total Expenditure (excluding Business Stream and IAS 19)			**758.1**
Represented by			
SW Regulated			736.9
SW Non Regulated			4.4
Horizons			16.8

E Tables include the costs of Scottish Water (Regulated) activities only.

To aid year-on-year comparison M18 W & M18 WW tables include the costs of Scottish Water (Regulated & Non Regulated) and Scottish Water Horizons activities.

Scottish Water company and Scottish Water Horizons combined results are summarised and reconciled below, to E tables and the regulatory account tables M18 (W & WW).

(£m)	SW & SWH*	Diff Board - M18	M18W/WW Tables Total	Diff M18 - E1/2/3a	E Tables Total	E1	E2	E3a
Employment	**145.3**		**321.5**		**301.3**	171.9	129.4	0.0
Other	**177.6**							
Opex	**322.8**	**1.4**	**321.5**	**20.1**	**301.3**	**171.9**	**129.4**	**0.0**
PFI	**135.1**	**(3.4)**	**138.5**	**0.0**	**138.5**	0.0	0.0	138.5
IMC	**106.2**	**0.2**	**106.0**	**0.1**	**105.9**	69.9	36.1	0.0
Depreciation	**194.9**		**195.3**		**194.1**	85.4	108.7	0.0
Grant Amortisation	**(1.1)**	**(0.3)**	**(1.1)**	**1.0**	**(0.9)**	(0.7)	(0.2)	0.0
Amort PFI	**1.6**		**0.0**		**0.0**			
Gain on assets	**(1.6)**		**0.0**		**0.0**			
Expenditure	**758.1**	**(2.1)**	**760.2**	**21.2**	**739.0**	**326.5**	**274.0**	**138.5**
Explained by								
Charges to SWBS for support		2.1						

***** Excludes Business Stream, IFRS & FRS 17

The line differences are table presentation differences explained as follows:

- £3.4m difference between our Board report and M18 Tables re PFI costs, is due to transfer of costs from Customer Operations for Intersite Sludge Tankering from Scottish Water wastewater treatment works to PFI works (£2.7m), terminal pumping station costs pumping to PFI works (£0.5m) and support costs for the PFI team (£0.2m).

- £2.1m of Scottish Water expenditure has been charged to Business Stream under Service Agreements. This cost has been netted off Scottish Water's expenditure in line with group inter-company transaction reporting. However, for the purposes of regulatory reporting this expenditure has been added back to report the full costs of providing these third party services.

- £21.2m Non Regulated expenditure is included in M18 Tables but now excluded from E Tables.

E Table Commentary

Total Operating Costs

Total operating expenditure (E1.20+E2.19-E1.17-E2.16), increased by £12.4m to £301.3m (as detailed below).

	2009/10 £m	2008/09 £m	Variance £m
Total operating costs – Water E1.20	171.890	168.855	(3.035)
Total operating costs – Waste E2.19	129.448	120.056	(9.392)
Exceptional costs – Water E1.17	0.000	0.000	+0.000
Exceptional costs – Waste E2.16	0.000	0.000	+0.000
	301.338	**288.911**	**(12.427)**

Scottish Water's reported regulated operating costs of £301.9m reconcile to the E Table total operating costs of £301.3m as detailed below:

Operating Expenditure	per Tables E1 & E2	**301.3**
Add	SW Opex allocated to PFI (Table E3a)	3.4
Less	SWBS Support charges	(2.1)
Less	Depreciation in Service Charges to Horizons	(0.7)
Regulated SW Operating Expenditure		**301.9**

The £12.4m increase in operating costs includes three significant atypical items:

- £3.1m extra costs of dealing with the severe winter weather, including overtime and additional contractors to handle extraordinary customer call volumes and bursts, and dealing with frozen or inaccessible works;
- £10.4m costs of voluntary redundancy and restructuring, compared to £3.5m in 2008/09 – an increase of £6.9m; and
- £6.4m atypical bad debt credit, compared to a credit of £8.1m in 2008/09 – a cost increase of £1.7m.

Excluding atypical costs, the impact of inflation (0.46%; £1.2m) and new operating costs resulting from capital investment (£0.9m); like-for-like operating costs have decreased by £1.4m (0.5%). However, a number of above-inflation cost increases have been absorbed in 2009/10:

- £5.7m (17%) energy price increases;
- £1.6m (5%) local authority rates increases; and
- £0.9m (9%) chemical price increases.

The underlying, nominal controllable costs have therefore reduced by £9.6m reflecting reduced headcount, improved leakage reduction, more efficient operations, and improved contractor management.

Functional Expenditure

Total functional expenditure (lines E1.10 & E2.09) increased by £8.1m (4.2%) from 2008/09 (as detailed below).

Analysis of functional expenditure –

	2009/10	2008/09	Variance
	£m	£m	£m
Total functional costs – Water E1.10	110.879	109.506	(1.373)
Total functional costs – Waste E2.09	90.108	83.345	(6.763)
	200.987	**192.851**	**(8.136)**

Direct employment costs (E1.1 & E2.1) increased by £3.6m (5.8%) from 2008/09 to £66.0m. Increases have been generated by inflationary and performance pay increases of £2.3m; pension contribution increases of £0.5m; additional overtime due to extreme weather of £0.8m; and new operating costs of £0.2m, partly offset by efficiencies. The average headcount employed during the year was 3,534, compared to 3,583 in 2008/09. The number of employees in total at March 2010 was 3,472, a reduction of 100 full time equivalents from the March 2009 figure (3,572).

Direct power costs (E1.2 & E2.2) increased by £2.8m (8.7%) to £35.3m. Scottish Water would have been exposed to wholesale energy price increases of 33%. However, Scottish Water was protected from the highest peaks in the market by its progressive hedging strategy. The energy price impact was limited to 17%, generating a £5.7m increase in power costs. This price was partly offset by reduced consumption from 470 GWh in 2008/09 to 452 GWh, saving £0.7m in power costs. The main operational reason for the consumption reduction was leakage reduction and more efficient operations (£2.1m), but this was partly offset by new operating costs resulting from capital investment (£1.0m) and extreme weather costs (£0.4m). Increased automated reading and consumption reductions of £1.9m and an increase in renewable energy credits (£0.2m), further countered the effect of the energy price increases.

Hired and contracted costs (E1.3 & E2.3) have decreased by £7.3m (21.2%) to £27.3m. Water Service costs decreased by £6.2m due, in the main, to lower levels of leakage reduction and network maintenance than 2008/09 (£6.4m), partly offset by additional operating costs as a result of capital investment of £0.2m and extreme weather costs of £1.1m. Sewerage service costs have decreased by £1.1m due to more efficient network maintenance and contractor management activity (£1.5m), partly offset by additional operating costs as a result of capital investment of £0.4m.

Materials and consumables expenditure (E1.4 & E2.4) increased by £1.3m (9.4%) to £14.9m. This was due to significant chemical price increases and increased operating costs resulting from new investment, partly offset by leakage volume reductions.

SEPA costs (E1.5 & E2.5) increased by £0.1m (0.8%) to £10.4m due mainly to inflationary increases.

Other direct costs (E1.7 & E2.6) increased by £1.3m (32.8%) to £5.4m mainly due to increased insurance claim costs.

General and Support costs (E1.9 & E2.8) increased by £6.3m (17.7%) to £41.7m. The main increases were inflationary and performance pay increases of £0.5m; increased VR

and restructuring costs of £5.8m; and additional fleet hire costs due to extreme weather of £0.5m; partly offset by support efficiencies.

Business activities

Total business activities expenditure (E1.14 & E2.13) has decreased by £0.6m from 2008/09 (as detailed below).

	2009/10	2008/09	Variance
	£m	£m	£m
Customer services (E1.11 & E2.10)	18.015	17.331	(0.684)
Scientific services (E1.12 & E2.11)	11.709	11.560	(0.149)
Other business activities (E1.13 & E2.12)	6.425	7.847	+1.422
Total business activities (E1.14 & E2.13)	**36.149**	**36.738**	**+0.589**

Customer services costs have increased by £0.7m due mainly to increases in council billing and collection service costs.

Scientific services regulated operating expenditure has increased by £0.1m due to an increase in direct costs £0.3m driven by inflation, partly offset by efficiencies resulting from restructuring and closure of the Dundee laboratory.

Other Business Activities costs have decreased by £1.4m due to a decrease in WICS fees (£0.7m); and internal regulatory activity (£0.9m); partly offset by increased CMA costs (£0.2m).

Rates

Local authority rates (E1.15 & E2.14) increased by £1.6m (5.0%) to £33.3m from 2008/09, due to the 5% increase in uniform business rates.

Doubtful debts

Total doubtful debt costs increased by £4.7m to £25.9m (22.0%), as detailed below.

	2009/10	2008/09	Variance
	£m	£m	
	Charge	Charge	
Regulated	25.899	21.222	(4.677)
Non Regulated	0.759	0.595	(0.164)
	26.658	21.817	(4.841)

The regulated household bad debt charge has increased by £4.7m to reflect the anticipated pressure on collection rates, as a result of the recession.

The Non Regulated bad debt charge includes the write-off on a rechargeable job following liquidation of a contractor.

Third party costs

Third party costs (E1.19 & E2.18) have been allocated between core and non core in accordance with Regulatory Accounting definitions. Core Third Party services costs have

decreased by £1.4m as detailed below, mainly due to reduced mains diversion activities from developers (£0.7m), and a reduced bad debt provision.

	2009/10	2008/09	Variance
	£m	£m	£m
Core third party services	5.006	6.395	+1.389
	5.006	**6.395**	**+1.389**

Capital maintenance

Capital maintenance costs (E1.30 & E2.29) increased by £34.8m to £299.2m; due to the Non-infrastructure Depreciation impact of increased capital investment (£32m).

Water/Wastewater Split of Costs

The proportion of functional expenditure to water activities has decreased to 55% in 2009/10 from 57% in 2008/09, as detailed in the table below. This was primarily due to the decrease in leakage detection activity from a peak in 2008/09.

	2009/10	2009/10	2008/09	2008/09
	£m	%	£m	%
Water E1.10	110.879	55.2%	109.506	56.8%
Wastewater E2.09	90.108	44.8%	83.345	43.2%
	200.987	100.0%	192.851	100.0%

Water functional expenditure increased by £1.4m (1.3%) from 2008/09 to £110.9m. These increases occurred as detailed below:-

- £2.6m (7.3%) increase in employment costs from 2008/09 reflecting inflationary and performance pay and pension increases of £1.8m; extreme weather impact of £0.7m; and new operating costs of £0.1m;
- £0.7m (4.6%) increase in power costs is primarily due to energy price increases of £2.7m, extreme weather related costs of £0.4m and additional costs resulting from capital investment of £0.3m. These increases were partly offset by reductions in consumption enabled by improved efficiency and leakage reduction of £2.1m, increased automated reading and consumption reductions of (£0.4m) and increased renewable credits of £0.2m;
- £6.2m (28.2%) decrease in hired and contracted costs is due, in the main, to lower levels of leakage reduction activity compared to 2008/09 of £7.3m; this decrease was partly offset by additional operating costs as a result of capital investment of £0.2m and extreme weather costs of £0.9m;
- £0.5m (4.2%) increase in materials and consumables is due to: chemical cost increases of £0.7m and new operating costs of £0.2m; partly offset by leakage reduction impact of £0.4m;
- £0.7m (29.2%) increase in other direct costs is primarily due to an increase in insurance claims; and
- £3.2m (16.0%) increase in general and support costs was due to: inflationary and performance pay increases of £0.3m; increased VR and restructuring costs of £3.0m; and extreme weather related costs of £0.3m; partly offset by efficiencies.

Wastewater functional expenditure increased by £6.8m from 2008/09 to £90.1m. Increases occurred in wastewater are detailed below:-

- £1.1m (4.0%) increase in employment costs from 2008/09 due to inflationary and performance pay and pension increases of £1.0m; and extreme weather related costs of £0.1m;
- £2.1m (12.3%) increase in power costs, primarily due to energy price increases of £3.0m, and new operating costs of £0.6m, partly offset by prior year credits of £1.5m;
- £1.1m (8.9%) decrease in hired & contracted costs, primarily due to more efficient network maintenance activity and use of internal staff of £1.5m, partly offset by additional operating costs as a result of capital investment of £0.4m;
- £0.8m (31.8%) increase in materials and consumables mainly due to new operating costs of £0.2m; and increased mechanical breakdowns and repair costs of £0.6m;
- £0.2m (3.1%) increase in SEPA Charges;
- £0.6m (38.5%) increase in other direct costs due to an increase in insurance claim costs; and
- £3.1m (20.0%) increase in general and support costs was due to: inflationary and performance pay increases of £0.2m; increased VR and restructuring costs of £2.8m; and extreme weather related costs of £0.2m; partly offset by efficiencies.

Table E1 Activity Based Costing - Water Service

E1.0-10 Service Analysis - Water: Direct Costs

Table 1a

Water Resources & Treatment E1.10

	Total
Functional expenditure:	£m
2009/10	47.679
2008/09	45.035
	(2.644)

Water resources and treatment costs increased by £2.6m in 2009/10 compared with 2008/09. This increase occurred as follows:-

- £0.6m (5.0%) increase in employment costs from 2008/09 due in the main to inflationary and performance pay and pension increases;
- £0.2m (1.7%) increase in power costs is primarily due to new operating costs of £0.3m and energy price increases of £1.5m, partly offset by improved supply management and leakage reduction costs of £1.6m;
- £0.2m (9.3%) increase in hired and contracted costs is mainly due to new operating costs of £0.2m;
- £0.9m (9.4%) increase in materials and consumables is mainly due to: chemical price increases of £0.7m, and new operating costs of £0.2m;
- £0.1m (4.7%) decrease in SEPA charges mainly due to a refund for Turret WTW;
- £0.1m (7.0%) increase in other direct costs due to extreme weather related costs; and

- £0.8m (10.6%) increase in general and support costs and increased VR and restructuring costs.

Water Distribution E1.10

	Total
Functional expenditure:	£m
2009/10	63.200
2008/09	64.471
	+1.271

Water distribution costs decreased by £1.3m (2.0%), from 2008/09. This is analysed as follows:-

- £2.0m (8.5%) increase in employment costs due to: inflation and performance pay and pension increases of £1.3m; and extreme weather related costs of £0.7m;
- £0.6m (8.7%) increase in power costs mainly due to energy price increases of £1.1m, partly offset by improved supply management and leakage reduction costs of £0.5m;
- £6.4m (32.9%) decrease in hired and contracted services due, in the main, to lower levels of leakage reduction activity compared to 2008/09 of £7.3m; partly offset by extreme weather related costs of £0.9m;
- £0.4m (21.5%) decrease in materials and consumables due mainly to reduced leakage detection and repair activity compared to 2008/09;
- £0.6m (55.6%) increase in other direct costs due to increased insurance claims; and
- £2.4m (19.4%) increase in general and support costs was due to inflationary and performance pay increases of £0.2m; increased VR and restructuring costs of £1.9m; and extreme weather related costs of £0.3m; partly offset by efficiencies.

It should be noted that the 'missing' confidence grade on line E1.10 is due to the cells being locked and should read as A2.

E1.11-20 Operating Expenditure

E1.11 - Customer Service costs allocated to water have remained stable at £8.9m absorbing additional council billing and collection costs of £0.3m.

E1.12 - Scientific Services regulated operating expenditure allocated to water has remained relatively stable at £10.2m. The split of samples and tests has remained stable at around 89% water / 11% wastewater. Overall there has been an increase in Scientific Services direct costs influenced by a shift in the mix of samples and tests from Capex to Opex, but this has been offset by the efficiencies gained through restructuring and the Dundee laboratory closure.

E1.13 - Other business activities allocated to water have reduced by £1.0m from 2008/09 to £3.4m with WICS fees reducing by £0.5m and internal regulation activity reducing by £0.6m; partly offset by a CMA fee increase of £0.1M

E1.15 - Local Authority Rates for water increased by £1.0m (4.5%) to £23.2m compared to 2008/09, due to the increase in the uniform business rates.

E1.16 - Doubtful debts allocated to water increased by £2.3m (22.4%) to £12.5m reflecting the increased economic uncertainty.

E1.19 - Third party opex (Regulated) allocated to water decreased by £0.7m to £2.8m, mainly due to reduced mains diversion activities from developers.

E1.21-22 Reactive and Planned Maintenance (included in Opex)

Water Reactive and Planned Maintenance (included in Opex) has reduced by £4.5m (12.2%) to £32.0m on infrastructure due mainly to the reduction in leakage detection and repair activity from the 2008/09 level. Expenditure on non-infrastructure assets increased by £1.0m (20.8%) to £2.8m due, in the main, to increased WTW maintenance activity.

E1.23-30 Capital Maintenance

E1.23-30 - Depreciation is allocated between water and wastewater based on the asset information held in the fixed asset register. For other assets including IT, plant, machinery, vehicles and property, the total depreciation from the fixed asset register is allocated across all business activities (including other business activities) using ABM cost driver data, such as IT application users.

There has been an increase in the infrastructure maintenance charge (IMC) of £2.0m (1.9%) overall. The increase in the charge to £105.9m in 2009/10 reflects the long term asset plan forecasts which have been updated for the 2010 Strategic Review showing an increasing cost associated with maintaining the infrastructure asset base. The IMC charge to water was £69.9m, 66% of the overall charge, reflecting the historic base maintenance levels in the water network.

There has been an increase in Non-Infrastructure depreciation charged to water of £10.9m to £79.0m reflecting the impact of newly commissioned assets.

There has been an increase in Business Activities depreciation (£0.2m), due mainly to wholesale / retail interface assets.

There has been an increase in Third Party services depreciation chargeable to water due to the increase in charges to Business Stream reflecting the one-off activity to move Business Stream out of Scottish Water offices.

Confidence Grades – Confidence grades on Table E1 remain consistent with 2008/09.

Direct costs are, in the main, captured in the core corporate financial system, with labour costing feeds from the core corporate works management system. A high proportion of direct costs are captured by asset, hence the A2 confidence grade.

In order to achieve A1 accuracy, Scottish Water will need to increase the level of direct cost capture further, and build in more accurate and tested allocations of cost where direct cost capture does not provide splits by regulatory classification, e.g. single power meter at a dual function asset.

General & Support costs and Operating expenditure are generally allocated to regulatory activities on the basis of underlying activity and cost driver analysis. Accuracy depends primarily on the quality of cost driver data. Most key drivers are of good quality from reliable system sources and therefore A2 confidence grade is appropriate.

The Reactive and Planned Maintenance analysis remains at A3 reflecting the use of ABM, fed directly from Works Management analysis, for this activity analysis.

Capital Maintenance costs are generated directly from the Fixed Asset Register. Confidence grades remain at A2 reflecting the significant proportion of depreciation captured directly by asset. The only element of capital maintenance which requires significant cost allocation is support asset depreciation, e.g. IT, Fleet, Property. Support asset depreciation is allocated to regulatory activities on the basis of underlying activities and cost driver data. IT depreciation forms the majority of support asset depreciation. Further improvements in IT cost driver data have been made but not sufficient to enable an upgrading from A2 to A1.

Table E2 Activity Based Costing - Waste Water Service

E2.0-9 Service Analysis - Waste Water : Direct Costs

Table 2a

Sewerage E2.9

	Total
Functional expenditure:	£m
2009/10	37.009
2008/09	35.520
	(1.489)

Sewerage costs increased by £1.5m as outlined below:-

- £0.2m (1.4%) increase in employment costs from 2008/09 due, in the main, to inflationary and performance pay and pension increases, new operating costs, partly offset by improved operational efficiency and contractor management;
- £0.3m (4.3%) increase in power costs was primarily due new operating costs of £0.1m and energy price increases of £1.1m, partly offset by increased automated reading and consumption reductions of £0.9m;
- £1.0m (15.8%) decrease in hired & contracted costs due to more effective and efficient management of network maintenance activities (sewer repairs £0.4m, wastewater pump stations £0.7m), partly offset by extreme weather related costs of £0.1m;
- £0.2m (26.2%) increase in materials and consumables on network maintenance activity;
- £0.1m (8.3%) increase in SEPA charges;
- £0.4m (52.4%) increase in other direct costs mainly due to reduced insurance claims costs; and
- £1.4m (18.8%) increase in general and support costs due to: inflationary and performance pay increases of £0.1m; increased VR and restructuring costs of £1.4m; and extreme weather related costs of £0.1m; partly offset by efficiencies.

Sewage Treatment E2.9

	Total
Functional expenditure:	£m
2009/10	40.732
2008/09	36.304
	(4.428)

Sewage treatment costs increased by £4.4m from 2008/09 as outlined below:-

- £0.5m (4.3%) increase in employment costs from 2008/09 due to inflationary and performance pay and pension increases of £30.4m, and extreme weather related costs of £0.1m;
- £1.7m (17.9%) increase in power costs from 2008/09 due to energy price increases of £1.7m and new operating costs of £0.5m, partly offset by Increased automated reading and consumption reductions of £0.5m;
- Hired & contracted costs remained stable at £1.7m;
- £0.6m (50%) increase in materials and consumables mainly due to new operating costs of £0.1m and increased mechanical breakdowns and repair costs of £0.5m;
- £0.1m (2.4%) increase in SEPA costs mainly due to inflationary increases;
- £0.2m (23.4%) increase in other direct costs due to increased insurance claims; and
- £1.3m (21.4%) increase in general and support costs mainly due to inflationary performance pay increases of £0.1m; increased VR and restructuring costs of £1.1m; and extreme weather related costs of £0.1m; partly offset by efficiencies.

Sludge Treatment E2.9

	Total
Functional expenditure:	£m
2009/10	12.367
2008/09	11.521
	(0.846)

Sludge treatment costs have increased by £0.8m from 2008/09 as outlined below:-

- £0.4m (15.1%) increase in employment costs due to inflationary and pension cost increases of £0.1m and increased inter-site tankering of £0.3m as a result of Daldowie PFI sludge route closure for 4 months, and tankering to Scottish Water sites;
- £0.1m (9.0%) increase in power mainly due to energy price increases and new operating costs;
- £0.1m (3%) decrease in hired & contracted costs due to a slight reduction in sludge treatment works maintenance costs compared to 2008/09;
- no change in SEPA costs at £0.1m; and
- £0.4m (20.4%) increase in general and support costs mainly due to increased VR and restructuring costs of £0.3m.

E2.10-19 Operating Expenditure

E2.10 - Customer Service costs allocated to wastewater have increased by £0.7m (7.7%) to £9.1m mainly due to increased council billing and collection costs of £0.5m and a higher allocation from water to wastewater of £0.1m.

E2.11 - Scientific services regulated operating expenditure allocated to wastewater increased slightly by £0.1m (7.9%) to £1.5m mainly due to a reduction in capital samples increasing the allocation to core opex. These increases were partly offset by efficiencies gained from the closure of the Dundee laboratory.

E2.12 - Other business activities allocated to wastewater have decreased by £0.5m (13.3%) to £3.0m compared to 2008/09 due to a decrease in WICS fees of £0.2m. internal regulation activity reducing by £0.4m; partly offset by a CMA fee increase of £0.1m.

E2.14 - Local Authority rates for wastewater operational assets were captured directly at asset level in the general ledger. Costs charged to wastewater increased by £0.6m (6.3%) to £10.1m due primarily to increases in the uniform business rates.

E2.15 - Doubtful debts allocated to wastewater increased by £2.4m (21.7%) to £13.4m reflecting the increased economic uncertainty.

E2.18 - Third party opex (Regulated) allocated to wastewater reduced by £0.7m (22.8%) to £2.2m due, in the main, to reduced doubtful debt charges.

E2.20-21 Reactive and Planned Maintenance (included in Opex)

Wastewater Reactive and Planned Maintenance (included in Opex) on Infrastructure has increased by £0.7m (5.8%) to £13m, mainly due to higher insurance claims.

Wastewater Reactive and Planned Maintenance (included in Opex) on Non Infrastructure assets has increased by £0.3m (4.4%) to £7.6m, due to increased reactive maintenance activity on wastewater treatment works.

E2.22-29 Capital Maintenance

E2.22-29 - Depreciation is allocated between water and wastewater based on the asset information held in the fixed asset register. For other assets including IT, plant, machinery, vehicles and property, the total depreciation from the fixed asset register is allocated across all business activities (including other business activities) using ABM cost driver data, e.g. IT application cost split by users and their activities.

There has been an increase in the infrastructure maintenance charge (IMC) of £2.0m (1.9%) overall. The increase in the charge to £105.9m in 2009/10 reflects the long term asset plan forecasts which have been updated for the 2010 Strategic Review showing an increasing cost associated with maintaining the infrastructure asset base. The IMC charge to wastewater was £36.1m, 34% of the overall charge, reflecting the historic base maintenance levels in the wastewater network.

There has been an increase in Non-Infrastructure depreciation charged to wastewater of £21.1m to £105.5m reflecting the impact of newly commissioned assets.

There has been an increase in Business Activities depreciation (£0.1m), due mainly to wholesale / retail interface assets.

There has been an increase in Third Party services depreciation chargeable to wastewater due to the increase in charges to Business Stream reflecting the one-off activity to move Business Stream out of Scottish Water offices.

Confidence Grades – Confidence grades on Table E2 remain consistent with 2008/09.

Direct costs are, in the main, captured in the core corporate financial system, with labour costing feeds from the core corporate works management system. A high proportion of direct costs are captured by asset, hence the A2 confidence grade.

In order to achieve A1 accuracy, Scottish Water will need to increase the level of direct cost capture further, and build in more accurate and tested allocations of cost where direct cost capture does not provide splits by regulatory classification, e.g. single power meter at a dual function asset.

General & Support costs and Operating expenditure are generally allocated to regulatory activities on the basis of underlying activity and cost driver analysis. Accuracy depends primarily on the quality of cost driver data. Most key drivers are of good quality from reliable system sources and therefore A2 confidence grade is appropriate.

The Reactive and Planned Maintenance analysis remains at A3 reflecting the use of ABM, fed directly from Works Management analysis, for this activity analysis.

Capital Maintenance costs are generated directly from the Fixed Asset Register. Confidence grades remain at A2 reflecting the significant proportion of depreciation captured directly by asset. The only element of capital maintenance which requires significant cost allocation is support asset depreciation, e.g. IT, Fleet, Property. Support asset depreciation is allocated to regulatory activities on the basis of underlying activities and cost driver data. IT depreciation forms the majority of support asset depreciation.

Table E3 and E3a PPP project analysis

Table Overview

Table E3 provides details of the 21 PPP wastewater treatment works that are managed under 9 separate PPP Concession agreements.

The following works form part of each scheme:

PPP Scheme	**Wastewater Treatment Works** *
Highland	Fort William, Inverness
Tay	Hatton
Aberdeen	Fraserburgh, Peterhead, Nigg, Persley
Moray Coast	Lossiemouth, Buckie, Banff/Macduff
AVSE	Seafield, Newbridge, East Calder, Blackburn, Whitburn
Levenmouth	Levenmouth
Dalmuir	Dalmuir
Daldowie *	Daldowie sludge treatment centre
MSI	Meadowhead, Stevenston, Inverclyde

* Daldowie is a sludge treatment centre only.

Table E3 - PPP Project Analysis

E3.0-6 Project data

Due to rounding of the individual cells in the table the totals given in the commentary may not match exactly the values in the total column in the table.

E3.1 Annual average resident connected population

The annual average resident connected population increased by 6,411 to 2,098,868.

Two factors contributed to this increase:

- The general increase in the population of the country
- The improved coverage of sewered areas across the country

The work to improve the sewered area coverage has meant that 95% of all sewage treatment works (WWTW) have an associated spatial object (100% of the PFI works). This has obviated the need to make an assessment of population for a large number of WWTWs, leading to more accurate figures being derived.

The confidence grade remains at B3.

E3.2 Annual average non-resident connected population

The annual average non-resident connected population decreased by 5,421 to 29,534.

This is due to the change in the tourist data available from VisitScotland.

The confidence grade remains at B3 which is unchanged from the Annual Return 2008/09.

E3.3 Population equivalent of total load received

The population equivalent of total load received decreased by 107,360 to 3,118,993.

This drop is due to a reduction in the trade effluent load reported as being received at these WWTW.

The population equivalent of total load received consists of the following constituents:

- Population
- Tourist
- Non-domestic load
- Trade effluent
- Imported private septic tanks
- Imported public septic tanks
- Imported other loads
- Imported WWTW sludge
- Imported WTW sludge
- Sludge return liquors

Population (67.29% of total load)
The population load increased by 6,411 p.e. The reasons for the change in this figure are discussed in the commentary for E3.1.

Tourist (0.95% of total load)
The tourist load decreased by 5,421 p.e. The reasons for the change in this figure are discussed in the commentary for E3.2.

Non-domestic load (14.06% of total load)
The non-domestic load increased by 9,859 p.e.

Trade effluent (17.35% of total load)
The trade effluent load decreased by 113,297 p.e. Due to the opening of the retail market to competition in April 2008, the source of this data is now the Central Market Agency. The changes in trade effluent are covered in more detail in the P Tables commentary.

Imported private septic tanks (0.02% of total load)
The imported private septic tanks load decreased by 467 p.e. The was a reduced demand for septic tank emptying.

Imported public septic tanks (<0.01% of total load)
The imported public septic tanks load decreased by 50 p.e. The was a reduced demand for septic tank emptying.

Imported other
No imported other loads were treated at PPP treatment works.

Imported WWTW sludge (0.27% of total load)
The imported WWTW sludge load decreased by 3,923 p.e. More sludge was taken to Scottish Water treatment plants this year leading to a reduction in the load calculated at PPP works.

Imported WTW sludge (0.01% of total load)
The imported WTW sludge load decreased by 213 p.e. More sludge was taken to Scottish Water treatment plants this year leading to a reduction in the load calculated at PPP works.

Sludge return liquors (0.05% of total load)
The sludge return liquor load decreased by 258 p.e. This reduction is in line with the reduction in sludge imports to PPP works.

The confidence grade remains at B3 which is unchanged from 2008/09.

E3.4-8 Scope of works

E3.4 Sewerage

Fort William	includes incoming sewer and four pumping stations.
Inverness	includes a major pumping station and associated pumping mains/gravity sewer.
Hatton	includes extensive pumping mains and pumping stations.
Nigg	includes incoming sewer and 14 pumping stations.
Persley	includes short section of incoming sewer.
Peterhead	includes short section of incoming sewer.
Fraserburgh	includes short section of incoming sewer and one terminal pumping station.
Moray Coast	includes extensive pumping mains and pumping stations.
Seafield	includes the Esk valley trunk sewerage network, a number of storm water works with overflow and seven sewage pumping stations.
Newbridge	includes short section of incoming sewer, a storm water works with overflow and two pumping stations.
Whitburn	includes one terminal pumping station.
Levenmouth	includes eight pumping stations and associated rising mains and sewers.
Daldowie	Includes one pumping station and pumping main.
Inverclyde	Includes one outfall.

E3.5 Sewage Treatment - Only Daldowie does not include sewage treatment – it is exclusively a sludge treatment centre.

E3.6 Sludge Treatment

Permanent sludge treatment facilities

Inverness	Indigenous sludge, imports from Fort William, plus Scottish Water imports.
Hatton	Indigenous sludge plus Scottish Water imports.
Nigg	Indigenous sludge, imports from Persley, Peterhead, Fraserburgh, plus Scottish Water imports.
Lossiemouth	Indigenous sludge, imports from Buckie, Banff MacDuff, plus Scottish Water imports.
Seafield	Indigenous sludge, occasional imports from Newbridge, East Calder, Blackburn, Whitburn, plus Scottish Water imports.
Newbridge	Indigenous sludge, imports from East Calder, Blackburn, Whitburn, plus Scottish Water imports.
Daldowie	receives sludge from Dalmuir and Scottish Water wastewater treatment works (Shieldhall, Paisley, Dalmarnock and Erskine) by sludge pipeline, and from SW tankered imports.
Meadowhead	Indigenous sludge, plus imports from Stevenston and Inverclyde.
Levenmouth	Indigenous sludge, plus Scottish Water imports.

Temporary sludge treatment facilities

The following sites do not have a permanent sludge treatment centre but temporary sludge treatment facilities were deployed on site for a limited period.

East Calder	Sludge dewatering, exported as cake. The East Calder sludge goes to Newbridge and/or Seafield for digestion treatment. April '09 was the last of a temporary treatment and disposal solution whilst works were ongoing at Newbridge.

E3.7 Terminal Pumping Station - means a pumping station that is the final point on the forward flow path from a sewerage network into a wastewater treatment works and may include both pumping of all/partial 'FFT' flows or stormwater flows to storm tanks and/or storm outfalls. The Terminal Pumping Station may form part of the sewerage network (i.e. be remote from the WTP) or may be associated with a wastewater treatment works depending on actual location and power supply source. It is not a Combined Pumping Station or a Stormwater Pumping Station.

The following works include incoming terminal pumping stations as part of the PPP scheme. Maximum capacity (l/s) of terminal pumping station, excluding standby capacity, is given in brackets:

Fort William	Caol Transfer (118 l/s), Fort William WwTW(590 l/s).
Inverness	Allanfearn WwTW(50 l/s).
Hatton	South Balmossie (1,406 l/s), West Haven (110 l/s), Inchcape Park (241 l/s).
Fraserburgh	Fraserburgh Inlet (195 l/s).
Lossiemouth	Duffus Junction (33 l/s), Moycroft (300 l/s).
Buckie	Nook (84 l/s), Shipyard (70l/s), Buckie WwTW (13 l/s).
Banff MacDuff	Craigfauld (552l/s), Banff MacDuff WwTW (222 l/s).
Seafield	A proportion of total flow is delivered via Marine Esplanade Terminal PS (1420 l/s).
Newbridge	A proportion of total flow is delivered via the Ratho Sewer Terminal PS (196 l/s).
Whitburn	A proportion of total flow is delivered via the Harrison Sewer Terminal PS (45 l/s).
Levenmouth	All flow delivered via terminal pumping stations; Methil M2 (125 l/s), Leven (212 l/s), Buckhaven (133 l/s), Levenmouth WwTW inlet FFT flows (1,650 l/s), Levenmouth WwTW inlet storm flows (2,347 l/s).

E3.8 Other - No plants in this category.

E3.9-14 Sewage treatment - effluent consent standard

E3.9-13 Effluent consent standards - Data obtained from the current SEPA consents.

Where effluent consent standard includes both CAR and UWWTD elements the tighter standard is given in the return.

E3.9 Suspended solids consent – all CAR

At Seafield CAR licence was issued Jul 2009. Table E3 was updated accordingly. AR09 was based on COPA

E3.10 BOD consent – all UWWTD except Newbridge, East Calder, Blackburn and Whitburn

E3.11 COD consent – all CAR

E3.12 Ammonia consent – all CAR

E3.13 Phosphate consent – all CAR, consent is expressed as; 'Mean concentration of total phosphorous of any series of composite samples taken at regular but randomised intervals in any period of 12 months.

E3.14 Compliance with effluent consent standards – Compliance for BOD, COD, SS, Ammonia, and Phosphate is reported for each works, based on the total number of sample results and exceedances (upper and lower tier) for sanitary determinands (to the exclusion of other parameters that may be included in the SEPA consent). Where effluent consent standard includes both CAR and UWWTD standards both sets of samples are used for the calculation of compliance.

Percentage compliance is calculated as:

(1-(total number of failures/total number of samples)) x 100

The SEPA Annual Compliance Report for period ending 31 December 2009 has been taken as the definitive data source, provided by our Regulator, and as such a Confidence Grade of A1 has been assigned.

Compliance calculated under this methodology may cause conflicts with Table C4 (C4.19) “Number of discharges confirmed as failing”, which considers all SEPA consent parameters.

Failures

Site	Parameter	Date of Failure	Comment
Nigg	COD	26/3/09 E	Failure was due to a combination of high influent loadings & problems with the operation of the Lamella's and BAFF processes at this time.
Persley	P	3/8/09 E	Reduced level of Alum dosing over a period of time, due to partial failure of the dosing system, led to phosphorus failure.
Peterhead	BOD/COD	26/2/09 E	Problems with the removal of sludge from the wastewater treatment stream led to a carryover of sludge into the final effluent.
East Calder	Ammonia	26/2/09 E	Failure coincided with flushing of nitrifying trickling filters by operator. The operation had been notified to SEPA in advance. Result was challenged but remained on record.
Whitburn	BOD	19/11/09 E	Failure coincided with fluvial flooding of the WWTW site and the final effluent sample was considered contaminated. The flooding had been notified to SEPA, the result has been challenged and SEPA have confirmed by email that the result will be removed from the compliance assessment for the site.
Dalmuir	BOD	6/1/09 E, 4/2/09 E, 25/2/09 E	Samples were taken during trials to introduce upgrade of WWTW by PFI Co and during period of SEPA Enforcement Notice
	Ammonia	24/6/09 E	Failure occurred during a prolonged period of dry weather when influent ammonia level increased
Meadowhead	BOD COD	27/4/09 E 28/10/09 E	Increased levels of sludge in SST which washed out over weir

E3.15-21 Treatment works category

Information contained in these lines is extracted from the project agreements and is given a confidence grade of A1.

E3.15 Primary.
E3.16 Secondary activated sludge - Includes all plants except Blackburn.
E3.17 Secondary biological - Blackburn.
E3.18 Tertiary A1

East Calder	Nitrifying filters.
Whitburn	Nitrifying filters.

E3.19 Tertiary A2

Inverness	UV disinfection.
Persley	UV disinfection.
Fraserburgh	UV disinfection.
Banff MacDuff	UV disinfection.
Seafield	UV disinfection, plus chemical (peracetic acid) contact tank used on an intermittent basis depending on flow.
Levenmouth	Chemically enhanced settlement process plus UV disinfection.
Newbridge	Low head loss sand filters
East Calder	Low head loss sand filters
Whitburn	Low head loss sand filters
Meadowhead	Biofors tertiary filter

E3.20 Tertiary B1 - No plants in this category.

E3.21 Tertiary B2

Blackburn	Low head loss sand filters

E3.22-32 Sewerage Data

Includes all sewerage (sewers, pumping stations, rising mans, outfalls and long sea outfalls)

Data sources: Concessions Agreements, Operators O&M manuals, Operators asset inventories, SW GIS system, as built drawings, SEPA consents.

Pump capacity (kW) obtained from motor drive rating, not the pump duty point.

SW GIS will be updated to include as built records of new sewer constructed by PFI Co.

E3.22 Total length of sewer – Length of outfalls is included in the data unless noted otherwise in commentary. Where terminal pumping stations are located remote from a wastewater treatment works, the length of rising main connecting the terminal pumping station and wastewater treatment works is included.

At Moray Coast GIS data was checked and lengths recalculated in March 2010. This includes existing outfalls, transferred to the PFI Company in Oct 2009.

E3.23 Total length of critical sewer – Unless stated otherwise, all PPP sewers (including relief sewers, rising mains and CSO outfalls) are deemed to be critical.

Leven PS rising main to storm tank and return drain are not deemed to be a 'critical sewer'.

At Moray Coast GIS data was checked and lengths recalculated in March 2010. This includes existing outfalls, transferred to the PFI Company in Oct 2009.

E3.24 Number of pumping stations – includes stormwater, combined and terminal pumping stations. Interstage and final effluent pumping stations forming part of a wastewater treatment plant are not included.

E3.25 Capacity of pumping stations (m^3/d) - includes stormwater, combined and terminal pumping stations. Maximum flow pumped forward per day. This excludes capacity of standby pumps.

E3.26 Capacity of pumping stations (kw) - includes stormwater and combined pumping stations, but not terminal pumping stations. Includes capacity of standby pumps.

E3.27 Number of combined pumping stations - Combined pumping station means a network wastewater pumping station containing a pump or pumps transferring wastewater forward within the downstream sewerage network. The transferred wastewater flow rate from the combined pumping station is the "FFT" rate, the generally accepted term used in design and SEPA consents. For the sake of clarity, where stormwater storage tank returns are pumped back into the sewerage system for onward flow, this shall be classed as a combined pumping station (as such flows become part of 'FFT'). Terminal pumping stations are not included.

The following combined pumping stations are included:

Fort William	Blar Mhor, Caol No1
Inverness	Longman
Hatton	Riverside, KGV, Stannergate, West Ferry, Broughty Castle, Fort Street, Gray Street
Nigg	Downies, Portlethen Village, Newtonhill Clifftop, Portlethen South, Backies, Cowie (3), Slughead, Bridge of Muchalls, Cammachmore, Portlethen North
Lossiemouth	Burghead, Cummingston, Hopeman, Moycroft
Buckie	Portgordon West, Portgordon East, Seatown, Cluny, Cullen East, Portknockie, Findochty, Portessie
Banff/MacDuff	Whitehills, Whitehills Harbour, Inverboyndie, Scotstown, Castlehill Park, Union Road, Bankhead
Seafield	Wallyford Transfer, Wallyford SWW, Portobello SWW, Harelaw SWW, Dalkeith SWW, Mayshade SWW,
Newbridge	Broxburn SWW.
Levenmouth	Methil M1.

Mayshade: pumping station comprises a separate duty/standby pump set in two separate storm tanks. As only one duty pump operates at any one time (i.e. storm tank 1 emptied before commencing emptying of storm tank 2) these four pumps have been entered as a single combined pumping station on a 1 duty/3 standby basis.

E3.28 Capacity of combined pumping stations (m^3/d) - Maximum flow pumped forward per day. This excludes capacity of standby pumps.

E3.29 Number of stormwater pumping stations - stormwater pumping station means a network wastewater pumping station containing a pump or pumps transferring wastewater, containing stormwater, to a stormwater storage tank or storm overflow. The stormwater pumping station transfers wastewater in excess of "FFT", the generally accepted term used in design and SEPA consents. For the sake of clarity, the function of the stormwater pumping station is to prevent and/or limit surcharging of the upstream sewerage system

The following stormwater pumping stations are included:

Inverness	Longman (2)
Hatton	Riverside, KGV, Stannergate, Westhaven, Broughty Castle, Inchcape Park
Nigg	Backies (2)
Lossiemouth	Moycroft
Buckie	Portessie
Banff MacDuff	Bankhead
Levenmouth	Leven, Roundall

E3.30 Capacity of stormwater pumping stations (m^3/d) – Maximum flow pumped forward per day. This excludes capacity of standby pumps.

E3.31 Number of combined sewer overflows & E3.32 Number of combined sewer overflows (screened) - CSOs that overflow within the sewerage system rather than to an outfall discharging direct to the environment are not included.

The following CSOs are included:

Fort William	Caol No1, Caol Transfer
Inverness	Longman
Hatton	Riverside, KGV, Stannergate, South Balmossie, Westhaven, Broughty Castle, Inchcape Park, Panmurefield/Balmossie Mill (2)
Nigg	Downies, Portlethen Village, Newtonhill Clifftop, Backies (2), Cowie, Portlethen North, Nigg
Fraserburgh	Fraserburgh Inlet
Lossiemouth	Burghead, Cummingston, Hopeman, Moycroft
Buckie	Portgordon West, Portgordon East, Seatown, Cluny, Nook, Cullen East, Portknockie, Findochty, Portessie, Shipyard
Banff MacDuff	Whitehills, Whitehills Harbour, Inverboyndie, Scotstown, Castlehill Park, Union Road, Bankhead, Craigfauld
Seafield	Wallyford, Dalkeith, Hardengreen, Harelaw, Haveral Wood, Middlemills, Newbattle, Newtongrange, Suttieslea
Newbridge	Broxburn
Levenmouth	Buckhaven, Methil M2 CSO2, Methil CSO1, Leven, Roundall

Seafield - Dalkeith SWW consists of two separate screen overflows on two separate legs of the sewer which combine at the SWW. As each screened overflow is located on the same site and feeds one common storm water tank and outfall, this overflow has been recorded as a single CSO. Suttieslea: 'Copa Sac', (equivalent to 6 mm screen), provided on outfall from storm tank.

Levenmouth - Methil CSO1 and Methil M2 CSO2 discharge into a common outfall.

E3.33-40 Sludge Treatment and Disposal Data - The quantities reported are the total sludge treated at the sludge treatment facilities (both from permanent and

temporary) including the sludge destroyed through the treatment process. This is in accordance with the methodology used in England & Wales.

The information is based on PPP Company records of sludge disposed to the appropriate route.

Allanfearn sludge quantities disposed and the corresponding costs are included in Table E3 (costs in E3a) to be consistent with the rest of the PPP works.

Table E3a - PPP Project Cost

This table provides operating costs for each scheme. As actual data is not available, cost allocations have been extracted from the financial model. Where the financial model does not split costs the following has been assumed:

- Works with a Sludge Centre: 72 % Treatment Costs, 28% Sludge Costs
- All other works: 80% Treatment, 20% Sludge Costs. These sludge costs have been taken forward to the appropriate sludge centre, e.g. Fort William sludge costs appear against Inverness sludge centre.

E3a.1, 8, 16 Estimated Direct Operating Cost

Estimated annual direct operating costs are based on the Concessionaire's financial model adjusted for actual inflation.

Where the model identified Rates and SEPA charges these have been deducted otherwise actual charges were deducted.

No adjustments were made at Daldowie (Rates only), MSI and AVSE as charges are paid by Scottish Water and are not included in the financial model. At Dalmuir Scottish Water pays the charges but amounts are also included in the model, therefore an adjustment to the model costs was made (rates and SEPA charges included in the model are refunded to Scottish Water).

Actual costs are not known and could vary considerably from the financial model. A confidence grade of D6 has therefore been used.

E3a.2, 9, 17 Rates paid by the PPP Contractor

These are based on the rateable value and poundage published on the government website (www.saa.gov.uk). Rates paid by Scottish Water are also included and are based on actual charges for the year (Dalmuir, Daldowie, MSI, AVSE).

Confidence grade for total rates paid for each site is A2, but because rates have to be split to take account of the sewerage, treatment and sludge elements a lower confidence grade has been applied.

	E3a.2	E3a.9	E3a.17	
Site	**N**	**T**	**S**	**Comment**
Fort William	N	B3	N	No sludge centre at works, sludge cost moved to Inverness
Inverness	N	B3	B3	Cost distribution is estimated
Hatton	N	B3	B3	Cost distribution is estimated, based on the Financial Model
Nigg	N	B3	B3	Cost distribution is estimated, based on the Financial Model
Persley	N	B3	N	No sludge centre at works, sludge cost moved to Nigg
Peterhead	N	B3	N	No sludge centre at works, sludge cost moved to Nigg
Fraserburgh	N	B3	N	No sludge centre at works, sludge cost moved to Nigg
Lossiemouth	N	B3	B3	Cost distribution is estimated, based on the Financial Model
Buckie	N	B3	N	No sludge centre at works, sludge cost moved to Lossiemouth
Banff MacDuff	N	B3	N	No sludge centre at works, sludge cost moved to Lossiemouth
Seafield	N	B3	B3	Cost distribution is estimated, based on the Financial Model
Newbridge	N	B3	B3	Cost distribution is estimated, based on the Financial Model
East Calder	N	B3	N	No sewerage and no sludge centre at works, sludge cost moved to Newbridge
Blackburn	N	B3	N	No sewerage and no sludge centre at works, sludge cost moved to Newbridge
Whitburn	N	B3	N	No sludge centre at works, sludge cost moved to Newbridge
Levenmouth	N	B3	B3	Cost distribution is estimated,
Dalmuir	N	B3	N	No sewerage and no sludge centre at works
Daldowie	N	N	A2	No sewage treatment at works
Meadowhead	N	B3	B3	Cost distribution is estimated
Stevenston	N	B3	N	No sewerage and no sludge centre at works, sludge cost moved to Meadowhead
Inverclyde	N	B3	N	No sludge centre at works, sludge cost moved to Meadowhead

E3a.3, 10, 18 SEPA charges paid by the PPP Contractor

These are based on SEPA charges for 09/10 as invoiced by SEPA and provided by the PFI Companies.

The following confidence grades have been assigned:

	E3a.3	E3a.10	E3a.18	
Site	**N**	**T**	**S**	**Comment**
Fort William	A2	A2	N	Split provided by PFI Co, no sludge centre at works
Inverness	A3	A2	A2	Split provided by PFI Co
Hatton	A2	A2	A2	Split provided by PFI Co
Nigg	A3	A2	B2	Split provided by PFI Co, no IPPC costs provided, based on last year's costs
Persley	N	A2	N	Split provided by PFI Co, no sludge centre at works
Peterhead	N	A2	N	Split provided by PFI Co, no sludge centre at works
Fraserburgh	A3	A2	N	Split provided by PFI Co, no sludge centre at works
Lossiemouth	A2	A2	A2	Split provided by PFI Co
Buckie	A2	A2	N	Split provided by PFI Co, no sludge centre at works
Banff MacDuff	A2	A2	N	Split provided by PFI Co, no sludge centre at works
Seafield	A2	A2	A2	Split provided by PFI Co
Newbridge	A2	A2	A2	Split provided by PFI Co
East Calder	N	A2	N	No sewerage and no sludge centre at works
Blackburn	N	A2	N	No sewerage and no sludge centre at works
Whitburn	N	A2	N	No sewerage and no sludge centre at works
Levenmouth	A2	A2	A2	Split provided by PFI Co
Dalmuir	N	N	N	SEPA fees paid by SW
Daldowie	N	N	A2	Sludge treatment only
Meadowhead	N	N	A2	Only PPC fees paid by the PFI Co
Stevenston	N	N	N	SEPA fees paid by SW
Inverclyde	N	N	N	SEPA fees paid by SW

At Nigg, Fraserburgh and Inverness the change of the SEPA charging structure from Oct 2009 has affected the allocation of costs between Network and Treatment. From Oct 2009 network costs are included with the treatment costs. This is reflected in a lower confidence grade for network costs. The full impact will be addressed in next year's return.

E3a.4, 11, 19, 23 Total Direct Cost

Total of E3a.1-3, 8-11 and 16-18. The confidence grade for Total direct cost is D6 as per E3a.1, 8 and 16 (Estimated direct operating cost) as this is the most significant element of Total direct cost.

E3a.5, 12, 20 Scottish Water General and Support Expenditure

This includes advisors and legal costs, power, rent and insurance etc. and the cost of the Scottish Water PPP department that deals with PPP schemes which have been allocated to projects based on opex. Costs are as per the P&L. In addition, Scottish Water costs of inter-site tankering and terminal pumping costs, have been included where tankering or pumping has taken place between a Scottish Water works and a PFI site.

Confidence grade for total charges is A1, but because Scottish Water PPP department costs have to be split across all sites and all charges have to be split to take account of the sewerage, treatment and sludge elements the following confidence grades have been assigned:

	E3a.5	E3a.12	E3a.20	Comment
Site	**N**	**T**	**S**	
Fort William	CX	C4	N	Network cost very small, no sludge centre at works
Inverness	C4	C4	C4	
Hatton	C4	C4	C4	
Nigg	C4	C4	C4	
Persley	CX	C4	N	Network cost very small, no sludge centre at works
Peterhead	CX	C4	N	Network cost very small, no sludge centre at works
Fraserburgh	CX	C4	N	Network cost very small, no cost against sludge as no sludge centre
Lossiemouth	C4	C4	C4	
Buckie	C4	C4	N	No sludge centre at works
Banff MacDuff	C4	C4	N	No sludge centre at works
Seafield	C4	C4	C4	
Newbridge	CX	C4	C4	Network cost very small
East Calder	N	C4	N	No sewerage and no sludge centre at works
Blackburn	N	C4	N	No sewerage and no sludge centre at works
Whitburn	CX	C4	N	Network cost very small, no sludge centre at works
Levenmouth	C4	C4	C4	
Dalmuir	N	C4	N	No sewerage and no sludge centre at works
Daldowie	C4	N	C4	No sewage treatment at works
Meadowhead	N	C4	C4	No sewerage
Stevenston	N	C4	N	No sewerage and no sludge centre at works
Inverclyde	CX	C4	N	Network cost very small, no sludge centre at works

E3a.6, 13, 21 Scottish Water SEPA Charges

With the exception of Dalmuir and MSI, all standard SEPA charges are met by the Concessionaire and are included in the tariff rates. At Nigg Scottish Water meet the additional SEPA charges associated with 2 parameters as detailed in the contract. Costs are as per the P&L and reflect charges as invoiced by SEPA.

	E3a.6	E3a.13	E3a.21	
Site	**N**	**T**	**S**	**Comment**
Fort William	N	N	N	SEPA charges paid by PFI Co
Inverness	N	N	N	SEPA charges paid by PFI Co
Hatton	N	N	N	SEPA charges paid by PFI Co
Nigg	N	A2	N	Treatment cost only (exotics)
Persley	N	N	N	SEPA charges paid by PFI Co
Peterhead	N	N	N	SEPA charges paid by PFI Co
Fraserburgh	N	N	N	SEPA charges paid by PFI Co
Lossiemouth	N	N	N	SEPA charges paid by PFI Co
Buckie	N	N	N	SEPA charges paid by PFI Co
Banff MacDuff	N	N	N	SEPA charges paid by PFI Co
Seafield	N	N	N	SEPA charges paid by PFI Co
Newbridge	N	N	N	SEPA charges paid by PFI Co
East Calder	N	N	N	SEPA charges paid by PFI Co
Blackburn	N	N	N	SEPA charges paid by PFI Co
Whitburn	N	N	N	SEPA charges paid by PFI Co
Levenmouth	N	N	N	SEPA charges paid by PFI Co
Dalmuir	N	A2	N	No sewerage and no sludge centre at works
Daldowie	N	N	N	SEPA charges paid by PFI Co
Meadowhead	N	A2	N	Treatment cost only, sludge costs are paid by the PFI Co
Stevenston	N	A2	N	No sewerage and no sludge centre at works
Inverclyde	BX	A2	N	No sludge centre at works

E3a.7, 14, 22 Total sewerage cost, total sewage treatment cost, total sludge treatment costs and disposal cost – The confidence grade is D6 as per E3a.1, 8 and 16 (estimated direct operating Cost) as this is the most significant element of the cost.

E3a.15 Estimated terminal pumping cost – Reported costs are as per the costs incurred for the SW operated terminal pumping stations.

Where the terminal pumping station is part of the PPP scheme the costs are met by the Concessionaire and are included in the tariff rates and not reported as part of E3a.15.

E3a.24 Total Scottish Water cost - Total of Scottish Water General and Support Expenditure, and Scottish Water SEPA Charges (E3a.5-6, 12-13 and 20-21).

The confidence grade for total charges is A1, but because Scottish Water PPP department costs and internal recharges have to be split across all sites a confidence grade of C4 has been allocated.

Site	09/10 £m	08/09 £m	Variance £m	Comment
Ft William	0.014	0.034	-0.020	08/09 includes legal/consultants costs -£0.02m
Inverness	0.577	0.554	0.023	09/10 includes higher sludge tankering and disposal costs +£0.03m, and ABM support costs +£0.02m and lower terminal pumping costs -£0.01m, 08/09 includes legal/consultants costs -£0.02m,
Hatton	0.332	0.384	-0.052	09/10 includes lower legal/consultants cost -£0.01m; lower sludge costs -£0.07m and higher terminal pumping costs +£0.01m and ABM support costs +£0.02m
Nigg	1.032	1.041	-0.009	09/10 includes legal fees -£0.01m, higher SEPA fees +£0.02m, and other Scottish Water operating costs -£0.12m, increased sludge tankering costs +£0.09m and ABM support costs +£0.02m
Persley	0.017	0.014	0.003	
Peterhead	0.006	0.07	-0.064	09/10 includes lower terminal pumping costs -£0.05m, 08/09 includes Scottish Water operating costs recharged to the PFI Company in 09/10 -£0.01m
Fraserburgh	0.011	0.009	0.002	
Lossiemouth	0.071	0.266	-0.195	09/10 includes lower Scottish Water operating costs -£0.14m, lower terminal pumping costs -£0.02m and ABM support costs -£0.02m, 08/09 includes legal/consultants costs -£0.02m
Buckie	0.012	0.026	-0.014	08/09 includes legal/consultants costs -£0.01m
Banff/Macduff	0.018	0.032	-0.014	08/09 includes legal/consultants costs -£0.01m
Seafield	0.025	0.399	-0.374	09/10 includes lower ABM support costs -£0.04m, 08/09 includes legal/consultants costs -£0.23m and other Scottish Water operating costs -£0.1m
Newbridge	0.027	0.023	0.004	
East Calder	0.011	0.009	0.002	
Blackburn	0.006	0.005	0.001	
Whitburn	0.007	0.006	0.001	
Levenmouth	0.197	0.076	0.121	09/10 includes higher legal fees +£0.07m, and higher ABM support costs +£0.05m
Dalmuir	0.475	0.443	0.032	09/10 includes lower legal/consultants -£0.03m, increased SEPA fees +£0.03m and other Scottish Water operating costs

Site	09/10 £m	08/09 £m	Variance £m	Comment
				+£0.01m, and higher ABM support costs +£0.02m
Daldowie	1.485	1.678	-0.193	09/10 includes higher legal/consultants fees +£0.05m, lower management costs -£0.01m, and other Scottish Water operating costs -£0.01m, and lower sludge tankering costs -£0.23m and higher ABM support costs +£0.01m
Meadowhead	0.829	0.738	0.091	09/10 includes lower legal/consultants fees -£0.015m and higher SEPA fees +£0.03m, and increased terminal pumping costs +£0.07m and ABM costs +£0.01m
Stevenston	0.138	0.222	-0.084	09/10 includes lower legal/consultants fees -£0.08m and higher SEPA fees +£0.02m, and lower ABM costs -£0.02m
Inverclyde	0.107	0.122	-0.015	09/10 includes lower terminal pumping costs -£0.03m and higher ABM costs +£0.01m
TOTAL	**5.397**	**6.151**	**-0.754**	

E3a.25 Total operating cost – The confidence grade for Total operating cost is D6 as per E3a.23 Total direct cost, as this is the most significant element of Total operating cost.

Following a series of operating and process improvements during late 2008 and early 2009 the PFI operated Dalmuir WWTW has performed in a compliant state throughout the 2009-10 financial year.

However, this compliant state was achieved and can only be maintained by dosing the influent with significant amounts of ferric salts on a daily basis. However, since the inception of this practice in early 2009 it has caused significant problems in both the treatment and drying phases at Daldowie STC (operated under a separate PFI contract) being the place where Dalmuir's sludge is treated.

As a result, and in order to protect the processes at Daldowie STC, only around half of the sludge produced at Dalmuir WWTW can be safely treated at Daldowie STC without giving rise to operational and process problems. The remainder has had to be centrifuged at the Scottish Water operated Shieldhall WWTW and the resultant cake disposed of.

In 2009/10 Scottish Water incurred a net cost of £5.2m, principally linked to the centrifuging activities but also as a result of having to compensate the Daldowie PFI company for the problems which affected their works.

At Dalmuir WWTW following a substantial set of operational and process upgrades by the PFI Company in late 2008 and early 2009 we have agreed to pay the Dalmuir PFI Company an additional annual sum from April 2009 in relation to operating costs of £2m and a one-off sum of £1m in respect of additional items of capital expenditure.

The other major deviation was in relation to the Levenmouth project where the settlement of a long running claim resulted in the release of a provision totalling £4.45m. In addition a significant fall in a gas index upon which part of the overall indexation

formula is based coupled with lower flows in the current year resulted in a decrease of £2.0m compared with the previous year accounting for the overall decrease of £6.5m.

E3a.26 Annual charge - The Annual charge is based on the service fees for the year, provisions and business rates (including rebates). Expenditure is taken from the P&L.

Confidence grades for each of the AVSE schemes is B3 as the charges are based on the total AVSE flows as there is no separate tariff for each scheme.

Site	09/10 £m	08/09 £m	Variance £m	Comment
Ft William	3.291	3.047	0.244	09/10 higher flows/loads, plus inflation +£0.24m
Inverness	5.971	5.935	0.036	09/10 slightly lower flows/loads, plus inflation +£0.04m
Hatton	19.963	19.704	0.259	09/10 inflation +£0.17m, Authority Variation +£0.136m, lower costs during the pea processing season -£0.05m
Nigg	13.625	12.208	1.417	09/10 higher flows/loads, plus inflation +£1.45m, plus Stonehaven Availability Payment from Jul 08 +£0.66m, lower business rates rebate +£0.02m, accrual reversals +£0.06m, 08/09 included Stonehaven claims and variations -£0.78m
Persley	2.245	2.206	0.039	09/10 slightly higher flows/loads, plus inflation +£0.06m, 08/09 included additional works -£0.02m
Peterhead	1.643	1.878	-0.235	09/10 slightly lower flows/loads, plus inflation -£0.03m, higher business rates rebate -£0.01m, accrual reversals +£0.01m, 08/09 included fishing season cost -£0.2m
Fraserburgh	1.868	1.854	0.014	09/10 higher flows/loads, plus inflation +£0.06m, rebate due to change in UV sampling from Feb 09 -£0.02m, reduced costs: chemical dosing -£0.005m, UV refurbishment -£0.01m, 08/09 included TFM cost -£0.01m
Lossiemouth	4.533	3.952	0.581	09/10 higher flows, plus inflation +£0.56m, recharge of electricity costs to operating company -£0.06m, pump damage +£0.02m, accrual reversals +£0.06m
Buckie	3.003	2.903	0.100	09/10 higher flows, plus inflation +£0.1m
Banff/Macduff	3.405	3.114	0.291	09/10 higher flows, plus inflation +£0.29m
Seafield	16.486	16.513	-0.027	09/10 decreased compliance with the contract -£0.13m, lower inflation -£0.055m and impact of flow bands and increased sludge imports +£0.05m, higher sludge rebate -£0.15m, higher business rates +£0.06m, release of accruals +£0.21m (AVSE total)
Newbridge	2.345	2.321	0.024	
East Calder	1.350	1.346	0.004	
Blackburn	0.683	0.687	-0.004	
Whitburn	0.863	0.871	-0.008	
Levenmouth	5.374	11.880	-6.506	09/10 lower flows and much lower inflation (gas price) -£1.99m, reduced sludge tankering -£0.02m, reversal of claims

Site	09/10 £m	08/09 £m	Variance £m	Comment
				provision -£4.45m, further release of accruals -£0.04m
Dalmuir	10.389	7.932	2.457	09/10 service fee inflation £0.11m, business rates +£0.03m, costs associated with compliance improvement +£3m, additional works -£0.58m, accrual reversals -£0.1m
Daldowie	22.223	16.588	5.635	09/10 lower sludge volumes -£1.09m, necessary change costs +£1.45m, Daldowie incident costs (impact of Dalmuir ferric dosing) £6.24m, lower business rates -£0.02m, accrual reversals -£0.64m, 08/09 included claims -£0.27m and additional works -£0.03m,
Meadowhead	7.213	7.939	-0.726	09/10 service fee inflation +£0.08m, Landfill Tax & Gas cost -£0.364m, trader necessary change +£0.11m, manhole repairs £0.05m, screenings removal program -£0.3m, higher rates £0.02m, accrual reversals -£0.14m, 08/09 included Oxygen dosing cost -£0.18m
Stevenston	3.355	3.867	-0.512	09/10 lower flows, plus inflation -£0.01m, trader necessary change -£0.15m, higher business rates +£0.01m, accrual reversals -£0.37m
Inverclyde	3.234	3.169	0.065	09/10 inflation +£0.04m, accrual reversals +£0.03m
TOTAL	**133.062**	**129.914**	**3.148**	

E3a.27 Public sector capital equivalent values – values were derived from the base model incorporated in a report to the Transport and Environment Committee on 21 June 2001 adjusted for inflation. At Daldowie the PPP cost was used in the absence of a PSCE value, similarly for Levenmouth and AVSE the values have been taken from the 01/02 WIC return.

E3a.28 Contract period - The period quoted is the Contract Period as defined in the Contract.

E3a.29 Contract end date - Contract end date is as defined in the Contract.

We have reviewed contract end dates and made the following corrections:

Site	Contract End Date	
Hatton	16/12/29	30 years from contract start date
Dalmuir	15/06/26	25 years from target discharge compliance

Table E4 Water Explanatory Factors - Resources and Treatment

E4.1-12 Source Types

E4.1-5

The number of sources decreased by 40 to 318. This reduction has arisen principally because a number of previously reported sources supplied water treatment works (WTW) that were closed during 2008/09, as detailed in the below table:

	2008/09 No. of sources	*358*
Reductions	WTW closures	-23
	Re-classification	-25
Additions	New sources (at existing WTWs)	+2
	Re-classification	+6
	2009/10 No. of sources	**318**

Distribution input (DI) reduced by 99.3 Ml/d to 2,044.4 Ml/d. The cause of this reduction is explained in the Table A2 commentary.

Changes to DI this year are detailed in the table below:

Source Type	**2008/09**	**2009/10**	**Net Change**
	Ml/d		
Impounding reservoirs	1,534.6	1,496.6	-38.0
Lochs	38.4	31.9	-6.5
River and burn abstractions	501.4	449.7	-51.7
Boreholes	69.3	66.2	-3.1
Total	**2,143.7**	**2,044.4**	**-99.3**

As in previous years, we have completed columns 110–180 by assuming that, where multiple sources feed a WTW, the total average daily output comes only from the primary source, where DI is consistent with that reported in Table A2. The primary source is therefore allocated 100% of the DI and all other sources are allocated 0%.

The confidence grade for the number of sources is B2. While the number is extracted from our asset inventory, it requires adjustment based on additional information that is not currently held in the asset inventory, namely which sources feed to a particular WTW and whether they are a direct or indirect supply. The confidence grade for columns 110-180 (the average daily output of these sources) remains at B3.

E4.6-7 Bulk water exports and imports

We do not have any raw water exports or imports. Accordingly, a confidence grade of A1 has been entered for these lines.

E4.8-12 Proportion of own source output

There were only minor changes to the source type proportions of total distribution input (DI) this year.

E4.13-14 Peak Demand and Pumping Head

E4.13 Peak demand - peak to average ratio

This line reports the ratio A:B where –

A = the average daily volume into supply in the peak seven day period in the peak year of the preceding five years

B = the average daily volume into supply in the peak year of the preceding five years

The peak year of the last five years was 2005/06. In that year, A was 2,421.6 Ml/d and B was 2,332.3 Ml/d. The peak to average ratio is therefore 1.038.

No changes were made to the process or methodology used to report this line. As the figure is based on weekly reported distribution input (DI), the confidence grade assigned to it is based on the confidence grade of the DI in the peak year. The confidence grade therefore remains at C4.

E4.14 Average pumping head – resources and treatment

The reported Average Pumping head this year is 26.4m, an increase of 1.1m from the previous year.

The increase since last year is a reflection of the improved data in our corporate systems which have reduced the level of extrapolation required. The general reduction in distribution input has also had an additional small impact on pumping head as we have not made any notable changes to operating practice. 12 new pumping stations were brought into operational status this year, which is reflected in the change reported.

We acknowledge the clarity, provided in the Commission's definition, for the inclusion into the overall pumping head calculation, of pumping undertaken as part of the treatment process and the pumping of process water. As per last year, we are unable to account for this element of pumping due to insufficient data.

The confidence grade is driven principally by the confidence grade of the distribution input, which is an inherent part of the calculation of pumping head, and therefore remains at C3.

E4.15-19 Functional costs by operational area

Overall movements are explained in Water Resources and Treatment E1.10 earlier in this commentary.

Water resources and treatment costs are analysed by region:-

	Ness	Don	Forth	Tay	Ayr	Clyde	Nith	Tweed	TOTAL
Total treatment works	£m	£m	£m	£m	£m	£m	£m	£m	£m
2009/10	7.497	7.514	6.800	4.440	5.909	5.340	5.145	5.034	**47.679**
2008/09	7.080	7.153	7.044	4.003	5.715	4.729	4.480	4.831	**45.035**
	(0.417)	**(0.361)**	**+0.244**	**(0.437)**	**(0.194)**	**(0.611)**	**(0.665)**	**(0.203)**	**(2.644)**

Movement in individual works explains the increases and decreases by region. Some of the larger movements, which do not follow the profile of overall movements, are explained as follows:

- Changes in the allocation to Distribution Pumping costs following reviews, based on pump ratings and run times, give decreases in Don of £0.15m and Tay of £0.2m, and an increase in Ness of £0.1m;
- Decrease due to additional renewable energy credits for power generation received for Turret WTW (Forth, 50-100 Ml/d, W3) by £0.3m and a prior year SEPA credit received for £0.15m.
- Increase in raw water charge for Belmore WTW (Forth, 10-25 Ml/d, W3) of £(0.1m); and
- Changes in the usage of the Lomond Scheme (Balmore WTW, Blairlinnans WTW) to compensate for filter problems at Milngavie WTW led to a decrease of £0.1m in Clyde raw water pumping costs and an increase in distribution costs of £0.2m.

Analysis of water treatment works costs process type:-

	2009/10	**2008/09**	
Process Type	£m	£m	£m
SD : Simple Disinfection	2.398	2.378	(0.020)
W1 : SD plus simple physical or chemical treatment	0.249	0.733	+0.484
W2 : Single stage complex physical or chemical treatment	8.121	10.061	+1.940
W3 : Multiple stage complex treatment, excluding W4	30.103	25.786	(4.317)
W4 : Very high cost treatment Process	6.808	6.077	(0.731)
	47.679	**45.035**	**(2.644)**

Changes to the numbers of WTW by process type have arisen as a result of operational changes and process re-classifications in WTW in 2009/10. Re-stating 2008/09 figures on like-for-like basis shows the following variations:-

Process Type	2009/10 £m	2008/09 £m	£m
SD : Simple Disinfection	2.398	2.281	(0.117)
W1 : SD plus simple physical or chemical treatment	0.249	0.427	+0.178
W2 : Single stage complex physical or chemical treatment	8.121	7.798	(0.323)
W3 : Multiple stage complex treatment, excluding W4	30.103	28.145	(1.958)
W4 : Very high cost treatment Process	6.808	6.384	(0.424)
	47.679	**45.035**	**(2.644)**

Movements in individual works explain the increases and decreases by category. Some of the larger movements, which do not follow the profile of overall movements, are explained as follows:

- Upgrades at Mannofield Source and WTW (Don, 50-100 Ml/d, W3) leading to new opex in power and chemicals of £0.2m.

Analysis of water treatment works costs by size band:-

Size band	2009/10 £m	2008/09 £m	£m
<=1 Ml/d	6.466	6.430	(0.036)
>1 to <=2.5 Ml/d	2.467	2.216	(0.251)
>2.5 to <=5 Ml/d	4.783	4.243	(0.540)
>5 to <=10 Ml/d	4.433	3.991	(0.442)
>10 to <=25 Ml/d	8.863	8.302	(0.561)
>25 to <=50 Ml/d	6.711	7.015	+0.304
>50 to <=100 Ml/d	5.644	5.203	(0.441)
>100 to <=175 Ml/d	4.346	4.003	(0.343)
>175 Ml/d	3.966	3.632	(0.334)
	47.679	**45.035**	**(2.644)**

Movements in individual works explain the increases and decreases by size band. Some of the larger movements, which do not follow the profile of overall movements, are explained as follows:

- Mannofield WTW (£0.7m) and Marchbank WTW (£0.4m) have moved from 25-50 Ml/d band to the 50-100 Ml/d band, and Invercannie WTW (£0.7m) has moved from 50-100 Ml/d band to the 25-50 Ml/d band.

Costs which are directly attributable to abstraction and treatment are charged to the specific asset cost code in Peoplesoft, either via direct charging, Ellipse timesheets or work orders. Of the £47.7m (E1.10) total resource and treatment costs, £39.4m of costs or 82.7% (£43.1m less £3.7m distribution costs) have been directly charged to assets in our corporate costing system.

Other costs have been allocated to Water Resources and Treatment through ABM support activity allocation, e.g. stores based on number of issues, IT applications based on number of users, etc. Therefore, support costs are allocated on a resource consumed basis. However, many of these costs are not specific to an asset; they are generally attributable to an employee. It follows that the majority of these support costs should be allocated to the activities the employees have been doing.

Confidence Grades – Confidence grades on Table E4 are consistent with grades in E1 and related commentary.

Direct costs are, in the main, captured in the core corporate financial system, with labour costing feeds from the core corporate works management system. A high proportion of direct costs are captured by asset, hence the A2 confidence grade. A smaller proportion of costs – mainly general and support costs – remains to be allocated to works by means other than direct capture.

E4.20-26 Water Treatment Works by Process Type

The number of water treatment works (WTW) reduced by 19 to 280; the total distribution input (DI) reduced by 99.3 Ml/d to 2,044.4 Ml/d.

Table E guidance has been adopted for completing Table H (and allocated all W4 assets into category SW3 or GW3 for Table H). Changes to the numbers of WTW by process type have arisen as a result of operational changes this year.

Note: Table H reports operational status as at 31st March 2010, whereas Table E reports all WTW that provided water into supply at any time during the year.

The confidence grade for the number of WTW remains at B2. The confidence grade for total DI remains at B3.

E4.28-39 Water Treatment Works by Size Band

Changes to the number of water treatment works (WTW) in use and proportions (%) of total distribution input (DI) this year are broken down by WTW size band in the table below:

Size Band	2008/09		2009/10		Net Change	
	No.	*% (1)*	*No.*	*% (1)*	*No.*	*% (2)*
<= 1 Ml/d	174	1.2	159	1.1	-15	-0.1
>1, <= 2.5 Ml/d	25	1.3	25	1.2	0	-0.1
>2.5, <= 5 Ml/d	30	3.3	31	3.6	+1	+0.3
>5, <= 10 Ml/d	19	4.1	16	3.9	-3	-0.2
>10, <= 25 Ml/d	23	11.4	21	11.4	-2	0
>25, <= 50 Ml/d	13	16.1	12	13.9	-1	-2.2
>50, <= 100 Ml/d	9	22.1	10	24.2	+1	+2.1
>100, <= 175 Ml/d	4	17.1	4	17.7	0	+0.6
>175 Ml/d	2	23.3	2	22.8	0	-0.5
Total	**299**		**280**		**-19**	

Notes: (1) Does not tally to 100% due to rounding; (2) Does not balance due to aforementioned rounding.

The confidence grade in the number of WTW remains at B2. The confidence grade for proportion of total DI remains at C3.

Table E6 Water Distribution

E6.1-6 Area Data

E6.1 Annual average resident connected population

The annual average resident connected population increased by 33,404 to 5,035,060. This figure is consistent with the figure reported in A2.1.

Our methodology for allocating the population to the eight operational regions is the same as last year. We used population figures provided by the unitary authorities (UA) and projected GROS population estimates. Most UA are contained wholly within a single operational region. Three UA areas (Argyll & Bute, Falkirk and Moray), however, are covered by more than one operational region. For these UA areas, we overlaid Ordnance Survey address points located within the UA boundaries on our operational region boundaries to assign address points to an operational region. Populations were then assigned to operational regions based on the split of address points.

The confidence grade remains at A2, reflecting the quality of data supplied for the WIC4 report.

E6.2 Total connected properties

The total number of connected properties increased by 9,224 to 2,570,877. This figure is consistent with the figure reported in A1.10.

Please refer to the commentary for A1.9 for details of the changes to the number of connected properties.

For unmeasured household properties, we used the methodology described in the commentary for E6.1 to allocate households from unitary authorities to the eight operational regions. For all other property types, data from the corporate system (Wholesale datamart), which lists all supply points related to the retail market, was allocated a spatial reference and then assigned to operational regions.

The confidence grade remains at B2 in line with A1.10.

E6.3 Volume of water delivered to households

The volume of water delivered to households decreased by 38.4 Ml/d to 844.1 Ml/d. This figure is consistent with the sum of the figures reported in A2.12 and A2.13.

The confidence grade remains at B2.

E6.4 Volume of water delivered to non-households

The volume of water reported as delivered to non-households decreased by 20.8 Ml/d to 445.3 Ml/d. This figure is consistent with the sum of the figures reported in A2.14 and A2.15.

As the measured non-household data has been sourced from our Wholesale system, the data has been spatially referenced to postcode level by mapping the corporate address point file to the addresses held. Postcode boundaries together with water operational area boundaries taken from the corporate GIS enabled the derivation of the number and associated water volumes delivered to non-household properties.

The volume of water delivered to unmeasured non-household properties was allocated to the eight operational regions by taking the volume reported in Table A2 line 15 and assigning that volume in the same proportions as last year's unmeasured volumes.

The confidence grade remains unchanged at B4.

E6.5 Area

The area remains the same at 79,761km^2.

The confidence grade remains at A1, reflecting the fact that the operational region boundaries are taken directly from the corporate GIS.

E6.6 Number of supply zones

The number of supply zones decreased by 6 to 323.

This year, a process of review led to adjustments of the water supply arrangements, which brought about a rationalisation of the Water Quality Regulation Zones. This drop in the number of zones continues the reducing trend, which started in 2003/04 when 394 zones were reported.

Although the rationalisation exercise continues to cover all the operational regions, the key impact, this year, was in our Ness and Forth regions.

Changes in zones topology are tracked and recorded by the Water Quality Regulation Zone procedure and have a full audit trail.

The confidence grade remains at A1.

E6.7-11 Functional Cost

Overall movements are explained in table Water Distribution E1.10 earlier in this commentary.

Water distribution costs are analysed by region:-

Water Distribution	Ness	Don	Forth	Tay	Ayr	Clyde	Nith	Tweed	TOTAL
Functional Cost	£m	£m	£m	£m	£m	£m	£m	£m	£m
2009/10	7.229	9.041	6.272	8.466	6.018	7.249	11.261	7.664	**63.200**
2008/09	6.777	8.781	7.006	7.681	6.561	7.369	10.877	9.419	**64.471**
	(0.452)	**(0.260)**	**+0.734**	**(0.785)**	**+0.543**	**+0.120**	**(0.384)**	**+1.755**	**+1.271**

Some of the larger (power) movements are:

- Changes in the allocation to Distribution Pumping costs following reviews, based on pump ratings and run times, give increases in Don of £0.15m and Tay of £0.2m, and a decrease in Ness £0.1m; and
- Increased pumping costs in Clyde from Balmore to supplement Milngavie which is having filter problems of £0.2m;

Confidence Grades – Confidence grades on Table E6 are consistent with grades in E1 and related commentary.

Direct costs are, in the main, captured in the core corporate financial system, with labour costing feeds from the core corporate works management system. A high proportion of direct costs are captured by asset or zone, hence the A2 confidence grade.

Scottish Water has slightly lower confidence levels on Network cost analysis than treatment cost analysis. This is due to lower levels of direct labour capture on Networks.

E6.12-21 Water Main Data

E6.12-16 Potable mains

There were no significant changes in the figures of Bands 1-4 or total length of mains.

The assessment is based on our GIS inventory, which is derived H3.4. The inventory is reported from our corporate GIS, where the diameter field is populated to 99.4% leaving only 337km of mains not populated with diameter. The default value used to infill is DN150, falling into Band 1, which is the largest band.

Bands coincide with nominal size bands for newer materials, which are based on external diameter and coincide with Table H3 size bands.

The confidence grades remains at B2.

E6.17 Total length of unlined iron mains

The total length of unlined iron mains decreased by 429.7km to 13,475.5km.

The report relies on population of the material and lining attributes in the inventory.

430km of GIS potable main was populated by the Infill material model and is defaulted to unlined spun iron, constituting less than 3.2% of reported value. Off-inventory adjustment is less than 1%.

The information available for pipe lining is not fully complete, with 41% of ferrous inventory having null or unknown lining attribute. GIS lining attribute signified as bitumen and unknown for cast, grey and spun iron is included as unlined iron main. Ductile iron is assumed to be cement lined where the lining material is unknown and totals 1,853km.

The confidence grade remains at B2.

E6.18 Total length of mains >300mm diameter

The total length of mains greater than 300mm diameter decreased by 23.3km to 3,798.4km.

The assessment is based on our GIS inventory, which is derived H3.4. The inventory is reported from our corporate GIS, where the diameter field is populated to 99.4% leaving only 337km of mains not populated with diameter. As the default value used to infill is DN150, with no adjustment for statistical spread, the length of mains greater than 300mm diameter may be marginally under-reported, but still safely remains inside the reported confidence grade banding.

The confidence grade remains at B2.

E6.19 Water mains bursts

The number of water mains bursts increased by 650 to 10,279.

There was a sustained period of severe winter weather and considerable snowfall during this report year, largely over the months of December and January, and this resulted in a significant increase in the number of bursts. The Met Office reported that this winter was the coldest in the UK for over 30 years.

An overall declining trend in the number of bursts was evident in the first half of the report year, however the severe winter weather caused this trend to be reversed, with an overall increase over the last five months of the year. Burst rates during January were up 76% on January 2009: 516 “burst” work orders were raised during the peak week in January, which was an increase of 162% on the average weekly number (197) over the report year.

The trend over previous years had generally been of a decline in the number of reported bursts, however this was reversed by a 7% increase during 2008/09 and a further 12.3% increase during this report year. An increasing trend in the number of unreported bursts had been experienced over recent years, however this report year saw an 11.8% decrease.

This report year saw a reduced level of investment in water mains as our Q&SIIIa investment programme gradually reached completion.

The confidence grade remains at B3.

E6.20 Leakage level

The reported top-down leakage level decreased by 85.6 Ml/d to 783.5 Ml/d.

The confidence grade remains at B3.

E6.21 Properties reported for low pressure

The number of properties reported for low pressure decreased by 478 to 2,496.

This reduction has primarily been achieved through operational and asset improvements that were introduced throughout the year.

We carried out a large degree of data cleansing, which covered off all the previously identified low-pressure areas, during the last year. This has further developed our understanding of how many properties are actually at risk of low pressure and has improved our confidence in the reported figure.

Please refer to the commentary for Table B2 for further detail.

The confidence grade has increased from B3 to B2, which is a reflection of the data improvement undertaken this year.

E6.22-25 Pumping Stations

E6.22 Total number of pumping stations

The total number of pumping stations increased by 24 to 556. The table below shows the change in the number of stations recorded in the corporate asset inventory as being operational during this year:

2008/09 No. of pumping stations	*532*
Stations removed	0
Stations added	24
2009/10 No. of pumping stations	**556**

The confidence grade remains at B2.

E6.23 Total capacity of pumping stations

The total capacity of pumping stations decreased by 7,570 m^3/d to 894,241 m^3/d.

This decrease in reported capacity is due to improvements in corporate data. 24 new stations were included in the data as noted above.

The confidence grade has remained at C4, reflecting the level of extrapolation used to derive the reported figures.

E6.24 Total capacity of booster pumping stations

The total capacity of booster pumping stations increased by 11,884.9 kW to 41,720.2 kW.

Our methodology for determining the design capacity (in kW) of stations remains unchanged. The increase is partly as a result of Critical Site surveys and the inclusion of large capacity sites, e.g. Balmore TWP and Perth TWP, for which we now have improved asset data.

The confidence grade remains at C3.

E6.25 Average pumping head

Average pumping head is reported as 29.84m this year. This reflects an increase of 0.12m on the previous year.

The reduction in distribution input reported elsewhere has had a minimal impact on the reported number as we have not made any notable changes to operating practices. Despite the addition of 24 new pumping stations that were brought into operation this year the increase is minor as improvements in asset data have allowed a reduction in extrapolation of previous data resulting in the more robust reported value.

The confidence grade however remains at C3, reflecting the confidence grade of the distribution input values, and the overall level of estimation.

E6.26-27 Service Reservoirs

The total number of service reservoirs decreased by 16 to 1,429. 12 new service reservoirs were commissioned during the year. The changes are generally the result of operational revisions across the network.

The total capacity of service reservoirs increased by 42.5 Ml to 3,840.4 Ml.

The confidence grades remain at B2.

E6.28-29 Water Towers

The total number of water towers decreased by 3 to 21.

This reduction was due to the closure of three towers. This resulted in a reduction in the total capacity of water towers, which decreased by 0.75 Ml to 38.81 Ml.

The confidence grades remain at B2.

Table E7 Wastewater Explanatory Factors – Sewerage & Sewage Treatment by Area

E7.1-7 Area Data

E7.1 Annual average resident connected population

The annual average resident connected population increased by 26,760 to 4,753,510.

The confidence grade remains at B2.

E7.2 Annual average non-resident connected population

The annual average non-resident connected population decreased by 18,054 to 86,170.

Tourist population this year has been determined on the basis of average bed spaces multiplied by an average occupancy factor, which is a change from 2008/09. Monthly average occupancy rates are no longer available from VisitScotland. This year we used the 2009 average occupancy rate from VisitScotland for eleven months of the year and the peak monthly occupancy rate recommended by WICS for one month of the year.

The confidence grade remains at C4.

E7.3 Volume of sewage collected (daily average)

The daily average volume of sewage collected decreased by 388.6 Ml/d to 3,020.8 Ml/d. This reduction was as a result of the following:

- Ongoing review of the boundaries held within our corporate GIS, to determine the storm flow component of the volume of sewage generated
- Less rainfall during the year

The average daily volume collected has been calculated as the flow which arrives in a public sewer (of any type) from any source e.g. rainfall, infiltration, domestic use, industrial use, tidal flows and connected watercourses. The approach used is the same

as that in previous years and has been applied consistently across the country. It uses data sets for rainfall, connected properties and sewered areas consistent with the wastewater element of the Annual Return.

The flow has been calculated in two parts; the dry weather flow and the storm flow.

Dry Weather Flow: A factor has been established that relates the number of connected properties to the amount of sewer flow in periods without rainfall. To establish this figure a number of recordings of flows with a known connected population were analysed to establish a range of flow per connected population. These factors were averaged and applied to all sewered areas to establish a total dry weather flow contribution per sewered area.

Storm Flow: The storm flow element was calculated by using existing sewer models to establish a relationship between rainfall depth, area of the sewered area and the amount of run-off generated. A selection of models was used and an average value of run-off per millimetre rainfall per hectare of sewered area was established. This was then applied to each sewered area to establish a total storm flow contribution per sewered area.

The total sewage collected was calculated (dry weather plus storm flows) for each sewered area and a total for each operational region calculated.

This figure includes all flows that are collected by the wastewater network but does not necessarily relate to the flows that arrive at treatment sites as a proportion of flows will be discharged via overflows and other flows collected by storm sewers will be discharged without treatment.

The confidence grade remains at C4.

E7.4 Total connected properties

The total number of connected properties figure increased by 12,812 to 2,446,944.

This rise reflects the increase in properties connected to the wastewater network as reported in A1.21.

The confidence grade remains at B2.

E7.5 Area of sewerage district

The area of sewerage district remains the same at 79,761km^2.

The confidence grade remains at A1, reflecting the fact that the operational region boundaries are taken directly from the corporate GIS.

E7.6 Drained area

The drained area decreased by 121km^2 to 1,896km^2. This fall is as a result of a reassessment of the sewered areas. An ongoing project has meant that approximately 99%, by population, of the sewered areas are now recorded on our corporate GIS.

The confidence grade remains at B2.

E7.7 Annual precipitation

Precipitation decreased by 306mm to 1,170mm.

In addition to experiencing less rainfall, this report year we used radar rainfall data from the Met Office as the source data for this line. This gives rainfall intensities at five minute intervals using a 1km grid spacing.

The confidence grade has improved to A2, which is a reflection of the sound data source used.

E7.8-14 Sewerage Data

E7.8 Total length of sewer

The total length of sewer decreased by 53km to 50,086km. This fall is comprised of: a decrease of 130km of main sewer; an increase of 77km of rising main.

New data from our corporate GIS, on properties having sewers within 3 metres, has refined the lateral sewer calculation, reducing the rise in inventory from the increase in number of properties connected to the wastewater network.

The information comes from Table H4. It comprises our GIS inventory (33,092km), an off-inventory addition of missing sewers (650km) and a statistical calculation of lateral sewer length from unit length connections by dwelling (16,344km).

This figure is carried to Table B8 for sewer and choke incidence and Table D6 as part of the sewer asset balance.

The confidence grade remains at C4, which is consistent with line H1.6.

E7.9 Total length of lateral sewer

The total length of lateral sewer has decreased by 59km to 16,344km. The calculation used is based on the number of properties connected to the wastewater network (connected properties). These are supported by a proximity calculation which allocates the Ordnance Survey Address Point References (OSAPRs) located within 70m of the wastewater network. This is the same methodology as used in previous returns. CACI house type proportions in each operational region are also used as part of this calculation.

The number of connected properties reported has increased by 0.5%. New data from our corporate GIS, on properties having sewers within 3 metres, has refined the lateral sewer calculation, reducing the rise in inventory from the increase in number of properties connected to the wastewater network

Unit lengths of lateral sewer are derived from a 2004 survey and checked for validity in 2006 by a GIS desktop study. The figures use dwellings/premises numbers rather than Ordnance Survey property seed points. The statistical sample size is not, however, large enough for the allocation of a high confidence grade.

The confidence grade remains at C4.

E7.10 Length of combined sewer

The length of combined sewer increased by 36km to 17,427km.

As modern sewerage systems are constructed with separate foul and storm sewers for new builds, any rise in length of combined sewer results from legacy record data being added to the corporate system and any outfall pipe construction.

The figure is derived from a record inventory with known gaps in asset stock, however sewer usage is populated to high levels. No off-inventory allowance is made for combined sewers.

The confidence grade remains at B2.

E7.11 Length of separate stormwater sewer

The length of separate storm sewer decreased by 83km to 8,135km. This fall is mainly due to a reduction in off-inventory adjustment this year.

The figure is derived from a record inventory with known gaps in asset stock, however sewer usage is populated to high levels. A 325km off-inventory adjustment is included in the reported figure.

The confidence grade remains at B2.

E7.12 Length of sewer >1000mm diameter

The length of sewer greater than 1000mm diameter increased by 15km to 845km. Continuing asset recording activity from our capital investment programme is resulting in a consistent rise in this figure.

The figure is derived from a record inventory with known gaps in asset size attribute. Infill rule bases or missing inventory adjustments do not influence this size band.

The confidence grade remains at B2.

E7.13 Length of critical sewer

The length of critical sewer decreased by 30km to 11,472km. This fall is mainly due to the removal of off-inventory adjustment this year.

The figure is derived from Table H4 analysis of a record inventory with known gaps in asset stock.

The classification of critical sewers uses the WRc methodology for asset size, material, depth and proximity to particular features.

The confidence grade remains at B3.

E7.14 Sewer collapses

The number of sewer collapses increased by 1,240 to 4,452.

The number of collapses that occurred in the period from 2006 to 2008 was in the region of 2,400 to 2,700, however 2008/09 and 2009/10 both saw significant rises in the

reported figure. The use of electronic capture devices by the operational staff has improved the compliance of reporting in this area. An increase in the number of repairs undertaken may also account for a proportion of the rise.

The methodology used to report this line is consistent with that used to report line B8.10.

The confidence grade now aligns with B8.10 and has decreased from A2 to B3 accordingly.

E7.15-23 Pumping Stations

E7.15 Total number of pumping stations

The total number of pumping stations increased by 43 to 2,011.

A pumping station is defined as an individual site (i.e. not an individual pump). It includes foul, combined and stormwater pumping stations situated at treatment works but excludes inter-stage pumping.

The confidence grade remains at B3.

E7.16 Total capacity of pumping stations (m^3/d)

The total capacity of pumping stations increased by 37,914 m^3/d to 12,126,949 m^3/d.

This figure is based on extrapolated corporate data as not all stations have a design capacity in m^3/d recorded in the corporate asset inventory.

The confidence grade remains at C4, reflecting the level of extrapolation used to derive the figure.

E7.16a Total capacity of pumping stations (kW)

The total capacity of pumping stations decreased by 58 kW to 74,363 kW.

Our methodology for determining the design capacity (in kW) of stations is the same as last year, therefore the reduction is due to revisions to the assets.

The confidence grade remains at C4.

E7.17 Average pumping head

The average pumping head is reported at 29.8m this year an increase of 2.5m compared with the previous year.

The small change in the reported value is due to revisions to the assets reflecting an improvement in the data held in our corporate systems for the pumps involved.

The confidence grade remains at C4, based on the denominator in the formula being the volume of sewage collected, which itself has a confidence grade of C4.

E7.18 Total number of combined pumping stations

The total number of combined pumping stations decreased by 1 to 1,064 in the reporting year as it was decommissioned.

The confidence grade remains at B3.

E7.19 Total capacity of combined pumping stations

The total capacity of combined pumping stations is 8,413,367 m^3/d.

Our methodology for determining the design capacity of stations is the same as last year.

The confidence grade remains unchanged at C4.

E7.20 Total number of stormwater pumping stations

The total number of stormwater pumping stations remains at 38.

Our methodology for determining the number of stations is the same as last year. The figure is based on the number of stations recorded in the corporate asset inventory (Ellipse) as being operational during the year. Ellipse shows there was no change in these stations.

The confidence grade remains at B3 which is unchanged from 2008/09.

E7.21 Total capacity of stormwater pumping stations

The total capacity of stormwater pumping stations is unchanged at 547,907 m^3/d.

Our methodology for determining the design capacity of stations is the same as last year and the confidence grade remains at C4 which is unchanged from 2008/09.

E7.22 Number of combined sewer overflows

The number of combined sewer overflows (CSOs) decreased by 102 to 3,241.

Work on unsatisfactory intermittent discharge initiatives continued this year, leading to assets, which had previously been incorrectly recorded as CSOs, being reclassified as bifurcation chambers (i.e. sewer to sewer overflows). This has led to a drop in the inventory reported.

This is a consistently improving inventory record, though the confidence grade remains at A3.

E7.23 Number of combined sewer overflows (screened)

The reported number of combined sewer overflows (CSOs) with screening in place increased by 58 to 764. Screened CSOs constitute 23.6% of the total number of CSOs reported in E7.22.

The confidence grade remains at A3.

E7.24-25 Sewage Treatment Works

E7.24 Number of sewage treatment works

The number of sewage treatment works (WWTW) increased by 3 to 1,938.

There is a continuing decreasing trend in the number of WWTW (from 1,963 reported in 2006/07), which is a reflection of the investment in WWTW rationalisation during our current investment period.

Due to Ellipse data improvements, 38 WWTW that were mistakenly attributed to the Don region last year have now been correctly allocated to the Tay region.

The confidence grade remains at B3.

E7.25 Total load

The total load decreased by 2,255 kg BOD/day to 228,615 kg BOD/day. This reduction reflects the net change in the constituent components of the works loads.

The load consists of the following constituents:

- Population
- Tourist
- Non-domestic load
- Trade effluent
- Imported private septic tanks
- Imported public septic tanks
- Imported other loads
- Imported WWTW sludge
- Imported WTW sludge
- Sludge return liquors

Population (69.66% of total load)
The population load increased by 1,199 kg BOD/day. Some of the changes to individual WWTW are down to the ongoing work to improve the sewered areas, which will have more of an effect on the smaller WWTW. In the past these WWTW would be more likely to not have had a sewered area and an assessment of the population would have been undertaken. We now have sewered areas for all of the WWTW (around 95% from our corporate GIS and the rest created as part of the Annual Return process), which has led to an improvement in the population attribution this year. The increase in population load is a reflection of the increase in population reported in line E7.1.

Tourist (1.49% of total load)
The tourist load decreased by 758 kg BOD/day. This reduction is connected to the change in the source data as described in the commentary for line E7.2.

Non-domestic load (10.08% of total load)
The non-domestic load increased by 1,203 kg BOD/day. Due to the opening of the water industry retail market to competition in April 2008, the source of this data is now the Central Market Agency.

Trade effluent (15.65% of total load)
The trade effluent load decreased by 4,101 kg BOD/day. Due to the opening of the water industry retail market to competition in April 2008, the source of this data is now the Central Market Agency. The changes to trade effluent are more fully covered in the commentary for the P Tables.

Imported private septic tanks (0.14% of total load)
The imported private septic tanks load decreased by 99 kg BOD/day.

Imported public septic tanks (0.08% of total load)
The imported public septic tanks load decreased by 33 kg BOD/day. This reduction is attributable to a combination of decreasing de-sludge frequencies, an effort to reduce tankered sludge volumes and greater volumes being discharged direct to sludge treatment centres.

Imported other loads (0.17% of total load)
The imported other load increased by 71 kg BOD/day. There was a significant increase in the amount of Waste Recycling Sludge being introduced to works inlets.

Imported WWTW sludge (1.85% of total load)
The imported WWTW sludge load increased by 351 kg BOD/day. As we continue to track all sludge movements electronically in our Gemini system, this has led to a more accurate figure being used again this year.

Imported WTW sludge (0.82% of total load)
The imported WTW sludge load increased by 94 kg BOD/day.

Sludge return liquors (0.07% of total load)
The sludge return liquor load decreased by 183 kg BOD/day. This is consistent with the decrease in volume being discharged to sludge treatment centres.

The confidence grade remains at B3.

Table E8 Waste water Explanatory Factors - Sewage Treatment Works

E8.1-10 Numbers

E8.1-8 Sewage treatment works size bands

The total number of sewage treatment works (WWTW) increased by 3 to 1,938. Changes to the number of WWTW this year are broken down by size band and treatment category in the tables below:

Size Band	2008/09	2009/10	Net Change
0	1,165	1,168	+3
1	239	236	-3
2	157	161	+4
3	191	186	-5
4	126	130	+4
5	33	36	+3
6	24	21	-3

Treatment Category	2008/09	2009/10	Net Change
Septic Tanks	1,206	1,209	+3
Primary	64	54	-10
Sec Activated Sludge	183	175	-8
Sec Biological	292	284	-8
Tertiary A1	21	29	+8
Tertiary A2	8	15	+7
Tertiary B1	49	61	+12
Tertiary B2	14	15	+1
Sea Preliminary	10	13	+3
Sea Screened	8	2	-6
Sea Unscreened	80	81	+1

The spread of WWTW in different size bands has changed, reflecting the ongoing work to create sewered areas for all WWTW, leading to more accurate load estimates being prepared.

The confidence grade remains at B3.

E8.9 Small sewage treatment works with ammonia consent 5-10 mg/l

The number of small sewage treatment works with ammonia consent 5-10 mg/l has decreased by 1 to 55. The confidence grade remains at A1.

E8.10 Small sewage treatment works with ammonia consent <= 5 mg/l

The number of small sewage treatment works with ammonia consent <= 5 mg/l has increased by 1 to 49. The confidence grade remains at A1.

E8.11-20 Loading (Average Daily Load)

E8.11-18

The total average daily load, excluding septic tanks, decreased by 2,256 kg BOD/day to 222,847 kg BOD/day.

Changes to the total average daily load received this year are broken down by size band and treatment category in the below tables:

Size Band	2008/09	2009/10	Net Change
	Excluding septic tanks		
0	579	521	-58
1	1,268	1,187	-81
2	2,367	2,371	+4
3	11,374	10,876	-498
4	37,245	37,403	+158
5	28,794	33,304	+4,510
6	143,476	137,185	-6,291

Treatment Category	2008/09	2009/10	Net Change
Septic Tanks	5,771	5,769	-2
Primary	6,377	4,438	-1,939
Sec Activated Sludge	154,712	145,006	-9,706
Sec Biological	25,941	21,984	-3,957
Tertiary A1	20,735	24,002	+3,267
Tertiary A2	1,676	4,332	+2,656
Tertiary B1	5,876	8,509	+2,633
Tertiary B2	1,011	1,625	+614
Sea Preliminary	1,351	2,472	+1,121
Sea Screened	1,719	474	-1,245
Sea Unscreened	5,705	10,005	+4,300

These changes are primarily a result of the ongoing work to create sewered areas for all WWTW, leading to more accurate load estimates being prepared.

The confidence grade remains at B3.

E8.19 Small sewage treatment works with ammonia consent 5-10 mg/l

The total average daily load at small sewage treatment works with ammonia consent 5-10 mg/l decreased by 601 kg BOD/day to 8,302 kg BOD/day.

In general, the ongoing work to create sewered areas for all WWTW has had a greater effect on the smaller WWTW. These WWTW were previously less likely to have defined sewered areas, which led to the total average daily load being less accurate for these WWTW.

The confidence grade remains at B3.

E8.20 Small sewage treatment works with ammonia consent <= 5 mg/l

The total average daily load at small sewage treatment works with ammonia consent <= 5 mg/l increased by 1,114 kg BOD/day to 11,783 kg BOD/day

In general, the ongoing work to create sewered areas for all WWTW has had a greater effect on the smaller WWTW. These WWTW were previously less likely to have defined sewered areas, which led to the total average daily load being underestimated for some of these WWTW.

The confidence grade remains at B3.

E8.21-30 Compliance

The percentage compliance has been calculated on the basis of SEPA results. Our methodology for calculating compliance is the same as last year and, in the case of two-tier consents, all failures have been counted, not just upper-tier failures. WWTW that are not sampled are not included in the averaging process for individual treatment categories and size bands. The sampling period is the financial year 2009/10.

Where the cells in this section are listed as 0 and AX confidence grade, this means that no WWTW in that treatment category and size band have been sampled.

E8.21-28

The average compliance has been maintained or improved at all WWTW treatment categories with the exception of Tertiary A1, Tertiary B2 and Sea Unscreened.

The confidence grade remains at B2.

E8.29 Small sewage treatment works with ammonia consent 5-10 mg/l

The compliance at small sewage treatment works with ammonia consent 5-10 mg/l has been maintained or improved at all treatment categories that underwent sampling this year.

The confidence grade remains at B2.

E8.30 Small sewage treatment works with ammonia consent <= 5 mg/l

The compliance at small sewage treatment works with ammonia consent <= 5 mg/l has been maintained or improved at all treatment categories that underwent sampling this year with the exception of Secondary Biological, Tertiary B1 and Tertiary B2.

The confidence grade remains at B2.

E8.31-42 Costs

Overall movements are explained in table Sewage Treatment E2.9 earlier in this commentary.

The costs of treating and disposing of sludge are contained within Table E10 Sludge Treatment and Disposal.

Analysis of sewage treatment costs by size band:-

Total treatment works	Septic tanks	Primary	Secondary	Tertiary	Sea Outfalls	Total
	£m	£m	£m	£m	£m	£m
2009/10	3.188	1.227	27.367	8.482	0.468	40.732
2008/09	2.269	1.548	27.112	4.832	0.543	**36.304**
	(0.919)	**+0.321**	**(0.255)**	**(3.650)**	**+0.075**	**(4.428)**

In this commentary 2008/09 costs have been restated below to correct a mis-allocation of General and Support costs which understated septic tanks by £0.7m and thus overstated the other treatment categories by the same amount.

Changes to the numbers of WWTW by process type have arisen as a result of operational changes and process re-classifications in WWTW in 2009/10. Re-stating 2008/09 figures on like-for-like basis shows the following variations:-

Total treatment works	Septic tanks	Primary	Secondary	Tertiary	Sea Outfalls	Total
	£m	£m	£m	£m	£m	£m
2009/10	3.188	1.227	27.367	8.482	0.468	**40.732**
2008/09	2.975	1.106	24.713	7.032	0.478	**36.304**
	(0.213)	**(0.121)**	**(2.654)**	**(1.450)**	**+0.010**	**(4.428)**

Movements in individual works and switches between process types explain the increases and decreases by category. Some of the larger movements, which do not follow the profile of overall movements, are explained as follows:

- Dunbar WWTW (Tweed, Band 5, Tertiary A2) has moved from large secondary to small tertiary (£0.2m), and costs reflect full year operation of the new works adding £0.1m;
- Galashiels WWTW (Tweed, Band 5, Tertiary B1) has moved from large tertiary to small tertiary (£0.2m);
- Iron Mill Bay WWTW (Tay, Band 5, Secondary Activated Sludge) has moved from large secondary to small secondary (£0.1m);
- Increase at Girvan WWTW of £0.15m (Ayr, Band 5, Secondary Activated Sludge); and
- Increase at St Andrews WWTW of £0.1m (Tay, Band 5, Tertiary A1) following operational problems.

Costs which are directly attributable to treatment are charged to the specific asset cost code in Peoplesoft, either via direct charging, Ellipse timesheets or work orders. Of the £40.7m (E2.9) total wastewater treatment costs, £36.0m of costs or 88.5% (£40.1m less £5.3m sludge costs plus £1.3m terminal pumping) have been directly charged to assets in our corporate costing system.

Other costs have been allocated to wastewater Treatment through ABM support activity allocation, e.g. stores based on number of issues, IT applications based on number of users, etc. Therefore, support costs are allocated on a resource consumed basis. However, many of these costs are not specific to an asset; they are generally attributable to an employee. It follows that the majority of these support costs should be allocated to the activities the employees have been doing.

Confidence Grades – Confidence grades on Table E8 are consistent with grades in E2 and related commentary.

Direct costs are, in the main, captured in the core corporate financial system, with labour costing feeds from the core corporate works management system. A high proportion of direct costs are captured by asset, hence the A2 confidence grade. A smaller proportion of costs – mainly general and support costs – remains to be allocated to works by means other than direct capture.

Table E9 Large Sewage Treatment Works Information Database

E9.0-1 Works Size

E9.0a Name of operational area

The number of large non-PPP WWTW has decreased by 3 to 20

This number has changed primarily due to the ongoing work to create sewered areas for all WWTW and changes to the load components. Dunbar, Galashiels and Iron Mill Bay no longer meet the large WWTW classification.

Large WWTW are defined as those that receive an average loading in excess of 1,500 kg BOD/day and is approximately equivalent to a population of 25,000.

E9.1 Population equivalent of total load received

The overall population equivalent of the total load received decreased by 178,165 to 2,144,074, though this reduction accounts for the omission of Dunbar, Galashiels and Iron Mill Bay WWTW. Excluding the changes resulting from the omission of these WWTW, the figure decreased by 82,262.

Changes to the population equivalent of each large WWTW are detailed in the below table:

WWTW	2008/09	2009/10	Net Change
Allers	49,376	47,158	-2,218
Alloa	41,031	42,340	+1,309
Ardoch	71,262	68,997	-2,265
Bo'ness	27,443	28,630	+1,187
Carbarns	47,012	47,377	+365
Dalderse	91,922	97,568	+5,646
Daldowie	278,596	271,979	-6,617
Dalmarnock	296,162	263,178	-32,984
Dunfermline	37,163	78,013	+40,850
Dunnswood	30,723	31,702	+979
Erskine	75,285	78,556	+3,271
Hamilton	62,109	63,972	+1,863
Kinneil Kerse	48,528	49,471	+943
Kirkcaldy	62,019	62,153	+134
Laighpark (Paisley)	214,347	136,596	-77,751
Perth	98,371	101,370	+2,999
Philipshill	60,490	56,932	-3,558
Shieldhall	513,949	498,898	-15,051
Stirling	72,222	68,786	-3,436
Troqueer	48,326	47,209	-1,117
Total	**2,226,336**	**2,144,074**	**-82,262**

The calculated load at Dalmarnock has dropped due to a decrease in the trade effluent loading.

The large change at Dunfermline WWTW is due to the ongoing changes in the sewered areas.

The large change at Laighpark (Paisley) WWTW is due to a large decrease in the trade effluent arriving at this WWTW.

As was stated earlier in the commentary, we now receive trade effluent data from the Central Market Agency.

The confidence grade remains at B3.

E9.2-7 Compliance

Consent data was taken from our corporate consents database. The most onerous of CAR or UWWT parameter was reported.

Confidence grades remain at A1, reflecting the fact that the data is obtained directly from our corporate consents database.

E9.2 Suspended solids content

All consents standards remained the same.

E9.3 BOD consent

There have been no changes to the BOD consent standards.

E9.4 COD consent

There have been no changes to the COD consent standards.

E9.5 Ammonia consent

There have been no changes to the ammonia consent standards.

E9.6 Phosphate consent

No phosphate consent standards have been set for any of the WWTWs.

E9.7 Compliance with effluent consent standard

We have used SEPA data from March 2009 to February 2010 for this line. For WWTW with a two tier consent we have taken exceeding the lower tier as being a non-compliant sample.

Carbarns, Philipshill and Stirling WWTWs marginally increased their compliance.

Compliance at Ardoch, Daldowie, Hamilton, Laighpark (Paisley) and Shieldhall WWTWs show a marginal decrease. The compliance at Erskine shows a decrease from 100% to 93%.

E9.8-14 Treatment Works Category

This information is held in the corporate asset inventory. We are reporting 20 large WWTWs in Table E9, though 21 large WWTW are reported in E8.7. The WWTW that is reported in E8.7, but not in Table E9, is the Meadowhead outfall, which takes a trade effluent flow from a pharmaceuticals factory.

E9.15-19 Works cost

Analysis of functional costs for large sewage treatment works:-

	2009/10	2008/09	Variance
	£m	£m	£m
Daldowie	1.006	0.739	(0.267)
Galashiels	n/a	0.150	+0.150
Tertiary treatment	**1.006**	**0.889**	**(0.117)**
Allers	0.295	0.258	(0.037)
Alloa	0.318	0.292	(0.026)
Ardoch	0.507	0.482	(0.025)
Bo'ness	0.228	0.198	(0.030)
Carbarns	0.349	0.300	(0.049)
Dalderse	0.487	0.401	(0.086)
Dalmarnock	1.045	0.881	(0.164)
Dunbar	n/a	0.229	+0.229
Dunfermline	0.195	0.164	(0.031)
Dunnswood	0.325	0.331	+0.006
Erskine	0.415	0.355	(0.060)
Hamilton	0.422	0.476	+0.054
Iron Mill Bay	n/a	0.135	+0.135
Kinneil Kerse	0.366	0.319	(0.047)
Kirkcaldy	0.541	0.381	(0.160)
Laighpark (Paisley)	0.818	0.727	(0.091)
Perth	0.236	0.200	(0.036)
Philipshill	0.439	0.360	(0.079)
Shieldhall	2.232	1.891	(0.341)
Stirling	0.409	0.394	(0.015)
Troqueer	0.106	0.191	+0.085
Secondary treatment	**9.733**	**8.965**	**(0.768)**
Total large treatment works	**10.739**	**9.854**	**(0.885)**

The number of treatment plants classified as large works has decreased from 2008/09, with Dunbar, Galashiels and Iron Mill Bay all being classified from large back to small.

- Increase at Shieldhall WWTW of £0.2m was mainly due to power price rise (Clyde, Band 6, Secondary Activated Sludge);
- Increase at Dalmarnock WWTW of £0.1m was mainly due to power price rise (Clyde, Band 6, Secondary Activated Sludge) of £0.1m;
- Upgrade to odour control at Kirkcaldy WWTW (Tay, Band 6, Secondary Biological) leading to new opex in power of £0.2m;
- Increase at Daldowie WWTW of £0.3m (Nith, Band 6, Tertiary A1) was mainly due to blowers being switched off in 2008/09; and
- Decrease at Troqueer WWTW of £0.1m (Nith, Band 6, Secondary Activated Sludge) due to allocation of power costs to Sludge Treatment process of £0.1m.

Confidence Grades – Confidence grades on Table E9 are consistent with grades in E2 & E8 and related commentary.

Direct costs are, in the main, captured in the core corporate financial system, with labour costing feeds from the core corporate works management system. A high proportion of direct costs are captured by asset, hence the A2 confidence grade. A smaller proportion of costs – mainly general and support costs – remains to be allocated to works by means other than direct capture. Following analysis of these residual general and support costs, Scottish Water feels that it now has a more appropriate allocation basis to asset.

Estimated terminal pumping station costs are graded slightly lower in confidence than treatment costs, as terminal pumps (as defined) sit in networks or are costed as part of the treatment works.

Table E10 Wastewater Explanatory Factors - Sludge Treatment and Disposal

Scottish Water incurs costs associated with the transportation of sludge from its own sewage treatment works to PPP sludge treatment centres (£2.7m). These costs have been reported within E3a.20 with the corresponding sludge loads in reported in E3.

E10.1-2 Sludge Volumes

E10.1 Resident population served

The total resident population served decreased by 82,731 to 2,599,147. This change is consistent with the rise in population reported elsewhere in this submission.

We again report the population treated at Scottish Water operated WWTW that have their sludge treated at PPP sludge treatment centres. This accounts for the anomaly in reporting a population reported against the 'incineration' and 'other' routes but no Scottish Water sludge volumes being recycled through these routes. As in previous years the recycling route for the population shown as going to 'other' is industrial crop for biodiesel.

The confidence grade remains at C3.

E10.2 Amount of sewage sludge

The total amount of sewage sludge decreased by 1.0 ttds to 20.4 ttds.

Gemini was used again this year as the source of all the sludge data. Land reclamation was used as a recycling route for some of the sludge from Cupar, Kirkcaldy and St Andrews. This may reduce in future years as an enhanced treatment option is being utilised for these Sludge Treatment Centres.

A decrease in the volume of enhanced treated sludge was largely attributable to an increased volume of Cupar sludge being treated at Levenmouth and a reduction at Kinneil Kerse.

The confidence grade remains at B3.

E10.3-11 Sludge Treatment and Disposal Costs

The allocation of sludge treatment and disposal costs by disposal route relies on robust sludge movement data linked to financial data. Scottish Water links sludge movement data from the Gemini waste management system to ABM costs to produce E10 cost analysis.

Analysis of sludge treatment costs by disposal route:-

	2009/10 £m	2008/09 £m	Variance £m
Farmland:			
Untreated	0.000	0.000	+0.000
Conventional	3.319	3.216	(0.103)
Advanced	6.373	6.197	(0.176)
Incineration	0.000	0.000	+0.000
Landfill	0.752	0.927	+0.175
Composted	1.559	1.181	(0.378)
Land reclamation	0.364	0.000	(0.364)
Other	0.000	0.000	+0.000
Total	**12.367**	**11.521**	**(0.846)**

Sludge treatment costs increased by £0.9m from 2008/09 of which £0.5m relates to General and Support costs. The change in costs by disposal route has been affected by the following main factors:

- Fife sites (Cupar, Kirkcaldy and St Andrews) have had some land reclamation outlets available for disposal during this year which replaced some volumes to farmland advanced, increasing costs by £0.3m;
- Increase in Composted route due to increase in power allocated to Troqueer Sludge process of £0.1m; and
- Decrease in sludge volume at Stirling due to the installation of a drum thickener, resulting in a 67% increase in unit costs to 763 £/tds and at Galashiels due to cleaning of Sludge Digesters, resulting in a 62% increase in unit costs to 751 £/tds.

Confidence Grades – Sludge cost analysis by ultimate disposal route requires analysis of all sludge treatment, tankering and disposal costs by works, linked to intermediate works (where applicable) and ultimate disposal route. Certain costs are clearly captured by works with identified disposal route. However, certain costs are not fully captured directly against sludge. The main areas of difficulty are inter-site sludge tankering and sludge treatment / conditioning at dual function works (sludge / wastewater treatment). Table E10 is completed on the basis of a combination of: ABM analysis, direct cost capture by asset, and Scottish Water sludge model analysis. Confidence grades on Table E10 are lower (B2) than other E Table cost analysis due to these reasons.

Table E11 Management and General

E11.1-4 Employee Numbers

The employee numbers reported in E11 exclude FTEs associated with capital work, third party services and PFI. This ensures consistency with the costs reported in tables E1 and E2.

The following reconciles E11 staff numbers to the annual accounts for 2009/10 and 2008/09:

	2009/10 FTE's	2008/09 FTE's	Variance FTE's
Direct operations	1,060	1,086	(26)
Indirect operations (General and support)	671	617	+53
Other (incl hired and contracted)	581	636	(55)
Total employee numbers per E11	**2,312**	**2,340**	**(28)**
Staff involved in capital & transformation projects	966	937	+29
Staff associated with PFI	9	9	0
Statutory waste and wastewater services	**3,287**	**3,286**	**+1**
Staff associated with third party activities	189	206	(17)
Staff seconded to Scottish Water Solutions	58	92	(33)
Total FTE's per Statutory Accounts ex SWBS	**3,534**	**3,583**	**(49)**

The average total number of employees during the year decreased by 49 from 3,583 to 3,534. However, the number of employees in total at March 2010 (3,472), reduced by 100 from the March 2009 figure (3,572).

Confidence Grades – Employee numbers are taken directly from the payroll system. Confidence grade for absolute employee numbers is A1. However, in Table E11, employee numbers must be split by activity and direct / indirect. These classifications are not held in the payroll system. Employee numbers are split against these classifications on the basis of ABM employment cost analysis. Confidence grades are assessed as B2, consistent with 2008/09.

E11.5-20 Management and General Assets

Our methodology for categorising assets into water and wastewater is the same as last year. Please refer to the commentary for Table H6 for further details on these lines.

The confidence grades are consistent with those reported in Table H6.

Miscellaneous E1&2 Commentary

Pension Contributions

E table guidance requests commentary on pension contributions. Scottish Water is a participating employer in three Local Government Pension Schemes (LGPS) - Strathclyde Pension Fund, the Aberdeen Pension Fund and the Lothian Pension Fund. These funds are administered by Glasgow City Council, Aberdeen City Council and City of Edinburgh Council respectively.

The administering authority for each scheme is required to conduct a triennial valuation of the assets and liabilities of each scheme in line with LGPS regulations. The purpose of the valuation is to review the financial position of the fund and specify the employer contribution rates for the next 3 years. A valuation was carried out as at 31 March 2008 and Scottish Water has been advised of the contribution rate for the three years from financial year 2009/10.

The contribution rate for each fund is based on the current service cost and the funding position of each fund at the valuation date. The average funding level of the 3 schemes at 31/3/08 was 92%. Therefore, the Employer contribution rates shown below include an element to reduce the deficit on each fund.

	2007/08	**2008/09**	**2009/10**
Contribution %			
Aberdeen	16.93	17.85	19.10
Edinburgh	20.63	21.50	22.30
Glasgow	16.52	18.20	18.50
Average Number of Members			
Aberdeen	960	949	931
Edinburgh	1,034	1,094	1,076
Glasgow	1,358	1,312	1,313

The average contribution rate has increased from 19.18% in 2008/09 to 19.9% in 2009/10. In Tables E1 & 2, the increase in contributions has caused a £0.8m increase in pension costs, excluding the effect of salary inflation.

G Tables – Capital Expenditure

Tables G1 – 6: General comments

Tables G1 – 6 present Scottish Water's Q&SII and Q&SIII investment programmes showing the prior years' expenditure, the actual expenditure in the report year and forecasts for Post March 2010. Scottish Water successfully delivered £611.3 million of investment in 2009/10. This comprised £48.5m of investment in the Q&SII programme, and £562.7m in the Q&SIIIa programme.

Total programme investment to March 2010 for Q&SIIIa, including the Q&SII completion value of £311.1m, was £2,360.1m. Total forecast investment for Q&SIIIa is £2,596.6m including the Q&SII completion forecast of £357.4m.

Investment in 2009/10 delivered a number of water and wastewater quality projects and over 91% of the programme is now under construction or beyond. There has been considerable progress on the UID and Water Resources strategic studies, and progression to construction and commissioning on water and wastewater quality projects. Capital maintenance investment accounts for 20% of the investment in 2009/10.

The Q&SII Completion Programme is based on Version 3.6.3 of the WIC 18 Baseline Programme submitted to the Commission in September 2006 and is reported at project level in Table G5. The main focus of investment in 2009/10 has been legislative-driven quality improvements. All Q&SIII development costs and the Q&SIII funded element of the Q&SII Completion projects are reported in G6 in line with WIC requirements and the quarterly Capital Investment Returns.

The Q&SIIIa Programme is based on the Table K submission (Annual Return 2005/06) with disaggregation of projects from programme funding lines for capital maintenance and enhanced level of service.

All Q&SII projects are reported in G5 and all Q&SIII projects reported in G6. Changes to the percentage allocation of drivers for Q&SIII and output codes for Q&SII have resulted in changes to the summary level data feeding through in 2006/07 and 2007/08 and 2008/09 columns in this Annual Return 2009/10 by comparison with previous Annual Returns.

Changes to the approved value for Opex impact will also result in changes to the Opex impact reported in the years 2006 - 2009.

The total annual gross investment in 2009/10 was £14.6m below Scottish Water's forecast in its Feb 2009 Delivery Plan Update. Some of this shortfall arose due to the severe winter weather in late December 2009 and early January 2010 which restricted access to many of the construction sites delaying progress and reducing total investment in 2009/10.

The Q&SII Completion Programme forecast post March 2010 has increased by £8.2m since March 2009, to £46.3m, largely due to increased investment at Dunoon. The Q&SIII Programme investment post March 2010 has increased to £190.2 from £149.3m in the Annual Return 2008/09. This relates to increased completion forecasts for the Water Quality programme, UID programme and Water Resources programme.

Within Table G6, WSI, WSNI, WWI and WWNI have been used as drivers for support services for vehicles, plant, offices, depots, laboratories, estates (non-operational sites), telemetry (non-operational sites projects), Q&SIIIa and Q&SIIIb development, Health & Safety and property maintenance, network modelling and IT investment.

Opex impact is calculated from the date of beneficial use (Q&SII) or acceptance (Q&SIII) with a proportion within the first year and the balance in the second year. Any Opex impact takes the actual Opex released by Finance or the latest Capex approved Opex impact. Where projects have still to achieve Capex 2 approval, the baseline Table K value is used.

Allocation of costs to Capital Maintenance

The investment costs reported in these Tables G1 – G6 reflect the allocations adopted within Scottish Water's internal systems as reported to the Commission in the quarterly Capital Investment Returns (CIR). The capital maintenance costs included in these tables differ from the total capital maintenance costs in two respects concerning our contractual arrangements with our capital delivery partner, Scottish Water Solutions:

- Our contractual arrangements include fixed contract prices agreed for each project or group of projects. The capital maintenance costs reported in these tables reflect our total contractual payments, not the total cost incurred by our partner in delivering the maintenance. In 2009/10, we incurred contractual costs for capital maintenance of £68.9m less than the cost that had been incurred by SW Solutions in delivering the maintenance. (Overall, SW Solutions achieved a net contractual gain of £51m through efficiencies in other programme areas that more than offset this loss in capital maintenance.)
- Our contract with SW Solutions required it to perform some maintenance work that was inherent within quality enhancement projects. This was different from the mixed projects that are identified within the CIR and Annual Returns and which show explicitly different drivers for quality enhancement and capital maintenance and allocate costs to each driver. There has been £39.7m of maintenance investment performed on quality enhancement projects that was recognised by SW Solutions at the inception of the programme as necessary to enable the quality outputs to be realised. However, this investment was not allocated to a separate driver.

Therefore, the total value of the capital maintenance that has been invested is shown in the table below, which exceeds the value reported in the G tables with this return.

	2006/07	2007/08	2008/09	2009/10	TOTAL
Capital maintenance reported here (G1 and G2) (Net cost to SW recorded as maintenance driver)	£151.9m	£282.0m	£255.3m	£115.7m	**£804.9m**
Contractual recovery from SW Solutions (i.e. additional cost incurred by SW Solutions)(ACIP)	£0.0m	£0.0m	£0.0m	£68.9m	**£68.9m**
Investment under quality driver to maintain existing equipment	£2.4m	£11.5m	£25.8m	£0.0m	**£39.7m**
TOTAL	**£154.3m**	**£293.5m**	**£281.1m**	**£184.6m**	**£913.5m**

Table G1 Summary Water Service

Where no line comment is given, the data is derived from Tables G3a and G4a or calculated from the drivers in G5 and G6.

As there was less than £100 allocated to CS2 projects in the Q&SII programme, no detail is provided at project level.

G1.1-1.6 Base Service Provision/Capital Maintenance

G1.1 – Base operating expenditure

This is calculated from the total operating expenditure (Table E1.20 water Opex for the Annual Return 2009/10) by deducting new Opex resulting from capital investment to reflect the total Opex, had the investment not progressed. We have stated all operational expenditure against Q&SIII and have entered a confidence grade of B2 as a result. Future years' base operating expenditure is not yet known and is reported as DX.

G1.2 - Infrastructure Renewals expenditure (net)

This line is reporting the gross investment as contributions which had been credited to projects have been removed in earlier years and are reported against the Grants and Capital Contributions in G1.15 – G1.19.

G1.3 - Maintenance non-infrastructure (gross of grants and contributions)

This is the gross value calculated from G5 and G6.

G1.4 - Maintenance non-infrastructure - grants and contributions.

No grants or contributions to Q&SII or Q&SIII capital maintenance projects were received in the Report Year. No forecasts are shown for future years as there are no confirmed grants or contributions.

G1.5 - Maintenance non-infrastructure (net of grants and contributions)

This is calculated from G1.3 and G1.4 and equals the gross value for both Q&SII and Q&SIII as contributions are not credited to projects.

G1.7-1.8 Quality Enhancements

G1.8 – Quality Additional Operating Expenditure

Additional operating expenditure is calculated through the analysis of the proportion of capital spend allocated to quality, enhanced level of service or growth. The value in the report year and future years is calculated from the acceptance (beneficial use) date resulting in expenditure being split proportionately across two years depending on where the acceptance date falls. Where there have been changes to the driver allocation, the Opex impact value reported against quality is amended in prior years.

G1.9-1.10 Enhanced Service Levels

G1.10 - Enhanced service additional operating expenditure

Additional operating expenditure is calculated through the analysis of the proportion of capital spend allocated to quality, enhanced level of service or growth. The value in the report year and future years is calculated from the actual or forecast acceptance (beneficial use) date resulting in a split at project level across two years. For Q&SII, Opex impact from the SEMD projects is reported against Enhanced Level of Service, although the projects are reported with capital maintenance drivers, as there is no place to report Opex from capital maintenance projects. For Q&SIII, any Opex impact from capital maintenance projects is also reported against Enhanced Level of Service. Where there have been changes to the driver allocation, the Opex impact value reported against quality is amended in prior years.

G1.11-1.12 Growth (Supply/Demand Expenditure)

G1.12 Growth additional operating expenditure

Additional operating expenditure is calculated through analysis of the proportion of capital spend allocated to quality, enhanced level of service or growth. The value in the report year and future years is calculated from the acceptance (beneficial use) date resulting in expenditure being split proportionately across two years depending on where the acceptance date falls. Where there have been changes to the driver allocation, the Opex impact value reported against quality is amended in prior years.

G1.13-1.14 New outputs/obligations since the final determination

Three water quality projects are considered as new obligations and are included against these lines. Two projects, relating to reservoirs which were subject to flood studies, and one Competition project have been added in 2008/09. Confirmation of the value of these projects has been determined at Capex 3. The Opex impact is calculated and split proportionately across two years depending on where the acceptance date falls. The 6 projects included in the New Obligations are:

- 37306 Langholm WTW – Upgrade,
- 31595 Ullapool WTW – Upgrade,
- 36453 Blairnmarrow WTW - Quality Enhancement,
- 36653 Tighnabruich No1 Reservoir-Freeboard Improvements,
- 37427 DIR. FEH Flood Studies - Resultant Design Work, and
- 37673 Wholesale Development to secure expected Scottish Water Revenue and meet Code Compliance.

Project number 31094 Torrin WTW – Upgrade has been removed from this line in the Annual Return 2008/09.

G1.15-1.19 Grants and Capital Contributions

The infrastructure charge income is reported as contribution against the Q&SIII programme. No future grants or contributions are reported as these are not confirmed and future year forecasts are determined as DX.

G1.20 Adopted Assets, Nil Cost Assets

No water assets were adopted in 2009/10. The confidence grade against Q&SIIIa for the report year is shown as C3, because the estimated asset value of the water mains adopted after deducting the reasonable cost contributions payable to the developer is not available for 2009/10. There is no cost against Q&SII which is shown as A1. The overall confidence grade for the report year is therefore shown as B2. Confidence grades for Q&SIII for future years are given a confidence of grade of DX as there is no information available on any future adopted or nil cost assets. It is not expected that there will be any future adopted or nil costs assets from the Q&SII programme.

Table G2 Summary – Wastewater Service

Where no line comment is given, the data is derived from Tables G3b and G4b or calculated from the drivers in G5 and G6. DX confidence grades have been applied as per G1.

G2.1-2.6 Base Service Provision/Capital Maintenance

G2.1 – Base operating expenditure

This is calculated from the total operating expenditure (Table E2.19 wastewater Opex for AR10) by deducting new opex resulting from capital investment to reflect the total Opex had the investment not progressed. We have stated all operational expenditure against Q&SIII.

G2.2 – Infrastructure Renewals Expenditure (net)

Infrastructure Renewals expenditure (net) is reporting the gross investment, as contributions which had been credited to projects have been removed in 2009/10, and are reported against the Grants and Capital Contributions in G2.15 – G2.19.

G2.3 - Maintenance non-infrastructure (gross of grants and contributions)

This is calculated from G5 and G6 as any contributions received have not been credited to the projects.

G2.4 - Maintenance non-infrastructure – grants and contributions

No contributions were received for maintenance projects in Q&SII or Q&SIII in the report year. No forecasts are shown for future years as there are no confirmed grants or contributions.

G2.5 - Maintenance non-infrastructure (net of grants and contributions)

This is the gross value as there were no grants or contributions.

G2.7–2.8 Quality Enhancements

G2.8 – Quality Additional Operating Expenditure

Additional operating expenditure is calculated through the analysis of the proportion of capital spend allocated to quality, enhanced level of service or growth. The value in the report year and future years is calculated from the acceptance (beneficial use) date

resulting in expenditure being split proportionately across two years depending on where the beneficial use date falls. Where there have been changes to the driver allocation, the Opex impact value reported against quality is amended in prior years.

G2.9-2.10 Enhanced Service Levels

G2.10 - Enhanced service additional operating expenditure

Additional operating expenditure is calculated through the analysis of the proportion of capital spend allocated to quality, enhanced level of service or growth. The value in the report year and future years is calculated from the actual or forecast acceptance (beneficial use) date resulting in expenditure being split at project level across two years. For Q&SII, the Opex impact from the DSEAR Programme is reported against Enhanced Level of Service although the Capex investment is reported against capital maintenance drivers as there is no place to report Opex from capital maintenance projects. Opex impact from Q&SIII capital maintenance projects is also reported against Enhanced Service Levels. Where there have been changes to the driver allocation, the Opex impact value reported against quality is amended in prior years.

G2.11-2.12 Growth (Supply/Demand Expenditure)

Additional operating expenditure is calculated through the analysis of the proportion of capital spend allocated to quality, enhanced level of service or growth. The value in the report year and future years is calculated from the actual or forecast acceptance (beneficial use) date resulting in expenditure being split at project level across two years. Where there have been changes to the driver allocation, the Opex impact value reported against quality is amended in prior years.

G2.13-2.14 New Outputs/Obligations since the final determination

A total of 8 projects are reported against line G2.13. Five additional EC11 landfill projects were added to the programme in 2008/09:

- 36388 Upperside Quarry, Rosebery,
- 36389 Elfhill Quarry
- 36390 Loch Craigs Quarry
- 36391 Killiecrankie WTW
- 36392 Craggans Hill
- 36023 SR10 Flow & Load Investigation at WWTWs with SR10 Quality Enhancement
- 30240 Dunnswood acceleration of Q&S3b upgrade
- 34970 Customer Charging – Area Based Drainage Banding (Phase 1) Investigation (carried forward from the Annual Return 2007/08).

The two first-time provision projects reported in 2007/08 have been removed. Opex impact reported relates to Dunnswood WWTW Upgrade.

G2.15-2.19 Grants and Capital Contributions

The infrastructure charge income is reported as contribution against the Q&SIII programme. No future grants or contributions are reported as these are not confirmed.

G2.20 Adopted Assets, Nil Cost Assets

No assets were adopted in 2009/10. The confidence grade against Q&SIIIa for the report year is reported as C3 because the estimated asset value of the sewers adopted, after deducting the reasonable cost contributions payable to the developer, is not available for 2009/10. Q&SII confidence grade is shown as A1 with the confidence grade against total for the report year shown as C3. Confidence grades for Q&SIII for future years are given a confidence grade of DX as there is no information available on any future adopted or nil cost assets. It is not expected that there will be any future adopted or nil costs assets from the Q&SII programme.

Table G3a Q & S II Delivery – Water Service

General comments

All cells are calculated from the outputs reported in G5. There is a negative value reported against G3a.5 due to provision for claims liability and reinstatement remedial works having been reduced in the report year. The negative value reported against G3a.7 is due to the negative value against WM3 output which relates to the reallocation of overheads to live projects.

Table G3b Q & S II Delivery – Wastewater Service

General comments

All cells are calculated from the outputs reported in G5. The negative total is reported against G3b.4 is due to the negative value against WM3 output which relates to the reallocation of overheads to live projects.

Table G4a Q & S III Drivers – Water Service

G4a.1 Base operating expenditure

This is calculated from Water Opex reported in Table E1.20 with the value reported in G1.1. DX confidence grades have been added to the forecasts as explained in G1.

G4a.2 – G4a.42 These lines are all calculated from the drivers against the projects reported in table G6.

G4a.28 Reservoirs operate with agreed best practice [WR2]

The studies relating to reservoirs operated with agreed best practice [WR2] includes any work required for WR3 and WR4.

G4a.39b Introduction to Competition [CS13]

The investment against this line has been to enable the development and implementation of business separation between Scottish Water and Business Stream, to support full market opening, including interfacing with the CMA, and to continue to support the wholesale function.

G4a.45 – G4a.46 New outputs/obligations since the final determination

Three water quality projects, Ullapool, Blairnamarrow and Langholm are considered as new obligations and are included against these lines. Torrin was reported against this

line in the Annual Return 2007/08 but has now been removed from the new obligations list. Two reservoir projects were added in 2008/09:

- Tighnabruich No1 Reservoir-Freeboard Improvements and
- DIR. FEH Flood Studies - Resultant Design Work

This followed a DWQR requirement to progress remedial work identified through the flood studies at 7 sites.

One further project, Wholesale Development to secure expected Scottish Water Revenue and meet Code Compliance, was added in the Annual Return 2008/09.

Confirmation of the value of these projects was determined at Capex 3. The Opex impact is calculated and split proportionately across two years depending on when the acceptance date falls.

Table G4b Q & S III Drivers – Wastewater Service

G4b.1 Base operating expenditure

This is calculated from Wastewater Opex reported in Table E2.19 with the value reported in G2.1. DX confidence grades have been added to the forecasts as explained in G2.

G4b.2 – G4b.48 are calculated from the drivers against projects in G6.

G4b.49 – G4b.50 New outputs/obligations since the final determination

The Customer Charging - Area Based Drainage Banding, requested by the Scottish Government, was reported in 2007/08 and is included in this return together with the 5 additional EC11 landfill projects added to the programme, as described in G2.13-2.14 commentary, plus Dunnswood WWTW – Upgrade and SR10-Flow & Load Investigation at WWTWs with SR10 Quality Enhancement are reported against these lines. Opex impact is reported against Dunnswood WWTW Upgrade.

Table G5 Project Analysis Q & S II – Actuals & Forecast – Water & Wastewater

Commentary on G5 is Column by Column.

Column 1 - Project Number
This is the unique number which identifies the project within the capital investment programme and CIMS.

Column 2 – Project Name
This is the title defined by Scottish Water and is taken directly from the capital investment programme and CIMS. The only exceptions are the projects which have been rolled to programme groups for reporting and begin with '400' numbers.

Column 3 – Water/Wastewater
All projects are shown as water or wastewater except ten which are classed as general. These include the Solution Share Account and Scottish Water Overheads.

Columns 4 & 5 – Quality and Regulatory Output Sign-off Required
All projects identified as having quality drivers and requiring DWQR or SEPA sign-off for quality outputs are shown in these columns.

Column 6 – Accountability
All projects are identified as being delivered by Scottish Water, Scottish Water Solutions as part of the Allocated programme or by Scottish Water Solutions as part of the Managed programme.

Columns 7 & 8 – Programme Group and Funding Category
These are reported as held in CIMS.

Column 9 – Q&SI Project
This column reports projects which were part of the Q&SI planned carry-over to Q&SII and excludes projects which were not included in the original WIC 18 programme.

Columns 10 – 14 and 16 – 18 Actual Expenditure
The actual expenditure by year is held in CIMS and is reconciled with the corporate financial system. There are a number of projects reporting negative investment for the following reasons:

- Scottish Water overheads transferred to the Q&SIII programme to better reflect the allocation of overheads across the programmes
- reduced provision for claims and NRSWA reinstatement liability
- settlement of final accounts
- correction of over-accruals in 2008/09

Column 15 – Q&SII Period Expenditure
This is the sum of the expenditure from 2002-06 from Columns 11 – 14.

Column 19 – 09-10 Forecast expenditure
Future forecasts for 2009/10 are held within CIMS and shown here.

Column 20 – Post 05-06 Expenditure Total
This is the sum of the actual expenditure in the four years to 2009/10 plus the forecast expenditure for Post 2010 calculated in WIC Reporting Database.

Column 20a – Post 09-10 Expenditure (£m)
This reports the forecast spend beyond March 2010 to complete investment on Q&SII projects. The majority of the forecasted spend relates to Campbeltown and Dunoon which have been delayed due to land, planning and consents issues.

Column 21 – Q&SII Project Total
This is the sum of the pre 2002/03 investment, the 2002-06 investment, post 2005/06 investment and the forecast for the investment continuing beyond March 2010. Although the definitions indicate that this should report investment since commencement of the Q&SII period (April 2002), the fields indicated for calculation include pre-2002/03 investment. The total investment forecast from April 2002 until completion for the Q&S2 programme is £2,246.96m

Projects, excluding the Share Account and Q&S2 Reservoir Security Contract Adjustment, that are reporting negative total investment are being reviewed.

Columns 22 – 24 – WIC 18 Data
This data is held within the WIC Reporting Database and is as reported in the Q4 Capital Investment Return.

Columns 25 and 26 – Grants and Contributions Infrastructure and Non-Infrastructure
This reports the actual or forecast values of grants and contributions received in the Q&SII programme. These reconcile with the grants and contributions recorded as received in Peoplesoft. No further grants or contributions are expected in future years.

Column 27 – Total Changes in Operating Costs
The information on changes in operating costs has been derived from a number of sources. These include Opex costs of existing assets, operational experience and use of manufacturers' data where Scottish Water has limited or no experience of operating certain treatment processes. The impact of new investment takes account of changes in staffing levels, rent and rates, power costs, chemicals and other consumables, monitoring and sampling costs. A number of projects are reporting the actual Opex which has been released and others are based on the most recent Capex approved value from Capex 4, Capex 3 or Capex 2 approvals. Where the project Opex had been revised as part of the Business Planning process in 2005/06, it has retained that value unless there has been subsequent Capex approval or further review as part of the development of the 2nd Draft Business Plan.

Column 28 – CIMS Status Code
The project status code is taken from the pre-determined set of codes which reflect the current stage of the project. Progress on projects is updated monthly through CIMS and status codes are adjusted to indicate the milestones which have been achieved. S12 is used where SEPA or DWQR regulatory sign-off of outputs on quality projects has been received but the project has not yet achieved Capex 5. As agreed, S4 has been used to identify projects which were stopped prior to construction or were not able to progress to beneficial use. Projects which had a regulatory output in Version 3.6.3 of the WIC 18 Baseline Programme which are now being delivered through a different project are not shown as S4 but as S10, S12 or S13. A number of projects have been confirmed as having received Capex 5 or 6 approval but were not reported as S13 in Q4 CIR. These are included with their actual dates in Column 32 and the status code has updated to S13.

Columns 29 – 32 – Capex Stages
A number of projects did not receive Capex 2 approval as they went straight from Capex 1 to Capex 3. Where projects pre-date the introduction of Capex 5 and have a handover date, the handover date has been reported against Capex 5 dates. A number of projects have received Capex 6 approval without Capex 5 and these are reported with the Capex 6 approval date. Planning approval is only shown where a project has, or requires to obtain, planning approval.

Columns 33 – 52 - Drivers and Driver % Allocation
The Q&SII Purpose codes from Appendix A of the Table G Guidance documentation are reported against these columns. The proportional allocation between purpose codes is in line with the methodology used in previous years. The output measures were considered first and a percentage split allocated on the basis of the number of outputs. However, where better information was available on the split between outputs, this has been reflected in G5. Investment to meet SEMD and DSEAR requirements are reported against WM2 and SM2 respectively.

Columns 53 – 72 - Output and Output % Allocation
The Q&SII output codes from Appendix A of the Table G Guidance documentation are reported against these columns. Each output has received a % allocation in line with the total number of outputs. Where better information was available on the split between outputs, this has been reflected in G5, for example, a small proportion has been applied to recognise sewer or mains rehabilitation and growth within projects

Table G6 Project Analysis Q & S III – Actuals & Forecast – Water & Wastewater

Commentary on G6 is column by column.

Column 1 - Project Number
This is the unique number which identifies the project within the capital investment programme and CIMS. Programme holding lines and Programme Risk lines start with "400".

Column 2 – Project Name
This is the title defined by Scottish Water and is taken directly from the capital investment programme and CIMS. Programme holding lines and Programme Risk lines have been added to CIMS during the Report Year.

Column 3 – Water/Wastewater
All projects which can be identified as water or wastewater are shown in this column. A number of Management and General projects are reported as General and show the split between water and wastewater in the driver columns.

Column 4 – Technical Expression
Projects which form part of the DWQR, SEPA, Scottish Government or WIC technical expressions are flagged in this column.

Column 5 – Accountability
All projects are identified as being delivered by Scottish Water or Scottish Water Solutions. Projects which form part of the Design and Manage Programme are reported against SWS – Managed with the projects delivered as part of the Solutions contract reported as SWS-Allocated.

Column 6 – Programme Group
Each project reports the group held in CIMS.

Columns 7 & 8 – Project Classification
The first column reports the primary classification as quality, growth, enhanced or base. The second column reports Non Infra, Non IRE or Infra IRE for projects where the total project forecast is less than £100k. Projects reporting zero investment have been left blank.

Columns 9 – 11 – Infra IRE, Non-IRE and Non-Infra Proportions of Projects
The forecast reported against Infra IRE is the proportion of the project based on the allocation to infrastructure maintenance drivers. The forecast against Non-IRE is the proportion of the project allocated to infrastructure, excluding capital maintenance. The forecast against Non-Infra is the proportion of the project allocated to Non-infrastructure drivers. Projects with investment less than £100k are blank in line with Table G Definitions.

Column 12 – Current Project Status Code
The project status code is taken from the predetermined set of codes which reflect the current stage of the project. Progress on projects is updated monthly through CIMS and status codes are adjusted to indicate the milestones which have been achieved. S12 is used where SEPA or DWQR regulatory sign-off of outputs on quality projects has been received on Q&SII Completion Projects and Q&SIII projects. S10 has been used where acceptance has been achieved. Where there is a regulatory output, acceptance will trigger preparation and submission of the output to the Quality Regulators for sign-off. Projects which have achieved Capex 5 are reported as S13. Projects requiring

regulatory sign-off will not receive Capex 5 approval until confirmation of the output(s) sign-off has been obtained. As agreed, S4 has been used to identify projects which were stopped prior to construction or were not able to progress to beneficial use. Status code S5 has been used where projects have been deferred from the Q&SIIIa programme. A number of projects are reporting a different status code from the Q4 CIR. The majority relate to correction of S13 to S12 where projects have regulator sign-off but have still to achieve Capex 5 approval, update to S13 where projects have Capex 6 approval but are not recording a Capex 5 date, and a number of approvals relating to 2009/10 which were updated in CIMS in early April.

Columns 13 – 16 – Milestone Dates
These are reported from CIMS from March 2010 monitoring. Until the UID development and water body studies are complete, the requirement for planning approval cannot be assessed and forecast dates will be added, where applicable, once the individual projects are promoted. As projects requiring sign-off from the Quality Regulators will not be approved at Capex 5 until confirmation of sign-off has been received, the actual or forecast date will normally be after the sign-off, actual or forecast, reported in Q4 CIR. A number of projects have not allowed 3 months for sign-off and have Capex 5 forecasts prior to the sign-off forecasts.

Column 17 – Local Authority
These are reported from CIMS. Projects covering more than one local authority area are reported as Scottish Water Wide. Projects which are included in G6 as they have a Table K budget, but have not been promoted for delivery, are not reporting a local authority.

Columns 18 – 25 – Financial Profiles
The actual expenditure pre 2006/07 and in 2006-10 is held in CIMS and has been reconciled with the corporate financial system. Forecast expenditure on individual projects is held in CIMS. There are adjustment lines for capital maintenance and growth (SG1, SG1i, WG1 and WG1i), These are to show investment that is to be funded from the SR10 programme. .

Column 26 –Table K Budget Allocation
This data is held within the WIC Reporting Database and is as reported in the Q4 Capital Investment Return. Table K budgets are updated from Capex 3, Capex 4 and Capex 5 approvals.

Columns 27 – 30 – Grants and Contributions Infrastructure and Non-infrastructure
The Infrastructure Charge income received is reported against Infrastructure contributions in the report year. No future infrastructure charge income is reported as the values are not yet known. Contributions received in 2006-10 are reported against the individual projects.

Columns 31 – 32 - Impact of Project on Scottish Water Gross MEAV
The values reported in the current return are based on the original Table K (Annual Return 2005/06)methodology of including the investment on quality, enhancement and growth and in line with the methodology used for our 2nd Draft Business Plan. The application has been based on methodology applied in Table K pending the MEAV project being applied to capital projects in future years. Projects which have been stopped or deferred are reporting zero impact.

Column 32 - Impact of Project on Opex
The reported Opex is the actual Opex released by Finance or the latest Capex 3/4 approved values, Capex 2 approved values or the baseline Opex identified in Table K

where projects have still to achieve Capex 2 approval, incorporating the business review undertaken during preparation of the 2nd Draft Business Plan. Projects which are not progressing have been reduced to zero.

Column 33 – 36 – Proportion of Capital Maintenance Element
The values reported are based on the percentage allocation against capital maintenance for all projects.

Column 37 – Population/population Equivalent Released from Development Constraints
Values are only reported against projects where the strategic capacity outputs population has been claimed or are forecast at project level. The balance for Water and Wastewater strategic capacity is reported against 30202 and 30203 respectively.

Column 38 - Regulatory Sign-off Required
Projects identified within the Q&SIII Database as requiring sign-off are shown in these columns. The total number is different from the numbers reported in G8.50 and Q4 CIR as the rolling programme of quarterly or monthly outputs sub-projects are not included.

Columns 39 – 58 - Drivers and Driver % Allocation
The Q&SIII Driver codes from Appendix B of the Table G Guidance documentation are reported against these columns. The proportional allocation between driver codes is in line with the methodology used in Table K, updated with better information available on the split between drivers as projects have progressed through the Capex approvals process.

Columns 59 – 88 - Output and Output % Allocation
The Q&SIII output codes from Appendix B of the Table G Guidance documentation are reported against these columns. The Drinking Water Quality outputs are reported as population equivalent and EC11 is reported as number of sites made compliant with standards, as per Table K submission.

Table G7 Q&SII Output Delivery

G7.1-7.9 Progress with Q&S II Outputs

The Scottish Water target for March 2010 was to deliver 99.89% of the Q&SII programme and a delivery of 99.88% was achieved.

The delivery of the outputs is summarised in the table below.

Outputs	Output Description	Unit	Delivered at March 2010	Revised Targets as at March 2010	% Delivered
DW-FT	Properties receiving first time provision of water	Nr	408	408	100%
DW-P	Removal of Properties from the Poor Pressure Register	Nr	1391	1391	100%
DW-WQ	Drinking water drivers addressed	Nr	589	591	99.7%
WM-R	Mains Rehabilitated	Km	3051	3051	100%
WW-C	Continuous Discharges Removed	Nr	578	581	99.5%
WW-FR	Removal of Properties from 'at risk' Flooding Register	Nr	829	829	100%
WW-FT	Properties receiving First Time Provision of Sewerage	Nr	667	667	100%
WW-R	Sewers Rehabilitated	Km	409	409	100%
WW-UCSO	Unsatisfactory Combined Sewer Overflow	Nr	427	428	99.8%
					99.88%

- The target for DW_WQ has been adjusted to account for the removal of the output associated with Ullapool where the lead output is to be logged down.
- The target for WW_C has been reduced from 582 to 581 to account for the deferral of Newhall to the SR10 programme.
- Scottish Water has still to deliver the outstanding flooding projects at Campbeltown, from the original flooding programme, which will deliver a further 22 outputs. However, as reported in the Annual Return 2008/09, two projects with 24 outputs were accelerated to deliver in 2006/07 to ensure the target was achieved with a total of 830 properties removed from the Flooding Register against the target of 829.

A total of 5 outputs remain to be delivered (excluding WIC 16), 4 of which are forecast to deliver in 2010/11 and the remaining 1 in 2011/12.

G7.10-7.12 WIC 16 in progress

Of the 53 WIC 16 projects, 2 remain to be delivered and are forecast for delivery in 2010/11. The confidence grade for the number of projects at beneficial use has been upgraded to A1 as the programme is not expected to change.

G7.13-7.17 Progress with Quality and Standards II sign-off

Of the 1,161 projects with quality outputs requiring regulatory sign-off a total of 1,155 projects have been completed. Of these, 1,140 have been submitted and 1,101 signed off. These figures do not include WIC16 projects.

At March 2010 98.2% of the programme was submitted to Regulators for regulatory sign-off and 94.8% has already been signed-off. Submission for sign-off of the completed projects will continue to be promoted.

The submission of the delivered projects is assumed to be 3 months after the Beneficial Use date. Regardless of submission of regulatory sign-off forms, final approval remains dependent on SEPA and DWQR agreeing the outputs have been delivered and the regulatory approval profile can only be estimated. The confidence grade of A1 for this year reflects this.

Table G8: Q&S 3 Ministerial Objectives and other outputs - Quality

G8.1 Customer Service

G8.1 Number of works where odour problem is addressed

Scottish Water delivered 11 outputs to March 2010 against a revised target of 13. Troqueer slipped into 2010/11 due to the emergence of the need to refurbish the sludge tanks. Castle Douglas is predominantly a project to deliver Growth outputs with the odour output being delivered at the same time in 2010/11. Perth was already forecast to be delivered in 2010/11 due to a necessary re-design of the odour control system in the sludge storage building.

G8.2-8.11 Water Quality

G8.2-8.3 Improve drinking water quality for 1.5m people and Improve disinfection control for 4m people

The outputs relating to the Drinking Water Quality and Disinfection projects are based on the revised methodology agreed with DWQR to reflect the population benefiting from work being undertaken to improve disinfection control or drinking water quality. The Actual Target for 2009/10 was 3.00m (3.57m delivered) for Water Quality and 3.80m (3.62m delivered) for Improved Disinfection Control. The target for Disinfection for 2009/10 of 3.8m and the total programme target of 4.31m took account of the expectation that Glencorse, Blackpark and Killylour will be completed after March 2010.

G8.4 Number of lead pipes removed as a result of customer requests

No annual targets were set as this is a reactive programme of work dependent on customer requests. We have reported the actual number of outputs delivered during 2009/10.

G8.5 Number of water resource zones with reduced abstraction

We delivered 65 cumulative outputs to 2009/10 (20 in-year), outperforming the target of 64 cumulative outputs and we have already received 52 signatures from SEPA, slightly behind the 2009/10 target.

A revised output profile for the 78 outputs was approved by the Scottish Water Board prior to the last Annual Return which, for reporting purposes, we have estimated that the output profile should be 72 for March 2011 and 78 for March 2012. This is a controlled programme from the Strategic Studies undertaken which has been discussed with the Commission.

G8.6 – Number of water sources provided with flow monitoring and recording

During 2008/09, installation of the necessary flow monitoring and recording equipment was completed representing full coverage of our sources, as agreed with SEPA, and marked the end of this programme. By March 2009, all outputs had been submitted to SEPA and we had received sign-off for 451 outputs. We subsequently received Regulatory Sign-off for all outputs (i.e. the remaining 70 claims) during the course of 2009/10.

G8.7 Number of flood studies undertaken

23 flood studies were signed off last year. Remedial works have been completed at a further 6 reservoirs and arrangements are being made for these to be signed-off before the end of June 2010. This will bring the completed number of flood studies to 29.
The number of flood studies identified at the end of last year was 30, but it was established this year that one of the reservoirs was no longer owned by Scottish Water which reduced the target total to 29.

G8.8 Number of backflow preventions devices installed

A total of 235 backflow prevention devices were installed by the end of March 2009 achieving the target within the first 3 years of the investment programme. All outputs have now been signed off by DWQR.

G8.9 Number of cross-connections made redundant

The total target included for cross connections is 5,500. The target of 5,500 connections made redundant was completed by the end of March 2010. All outputs have now been signed off by DWQR.

G8.10 Number of sites with increased security

The target of 1016 sites by March 2010 has been achieved with an actual number of 1019 sites delivered. Output sign-off is slightly behind target with 970 outputs achieving sign-off by March 2010. Of the remaining 49 outputs delivered, 36 were signed off in April and the remaining 13 will be submitted to the DWQR for sign-off in June.

G8.11 % of population covered with water safety plans

52.4% of the population has been covered by Water Safety Plans against a target of 50%. The methodology is defined within the Drinking Water Safety Plan Guidance Manual. As the plans have been developed, there have been minor modifications made to this manual and to the format of the plans.

Most of the data contained within the plan has come from corporate data sources, expanded with assessment of specific risks which are identified through audits and workshops.

G8.12-8.17 Waste-water Quality

G8.12 Number of unsatisfactory intermittent discharges improved

The in year target set in Scottish Water's 2009/10 Action Plan of 102 UIDs being improved has been achieved. In line with previous years, several of the actual UID outputs delivered differ from those identified in the original SR06 Technical Expression. This change has been managed and recorded utilising the various methodologies, processes and reporting templates previously agreed with SEPA and the Commission. Scottish Water has also continued to support the WICS' Reporter Stage 4 Cost Audits, part of the 7-Stage Process governance for the Strategic UID Studies. In addition, and although the Non–Strategic UID catchment studies are not subject to the 7-Stage process, they have generally been managed utilising identical principles and processes.

It has been acknowledged by all key stakeholders that the UID Programme outputs were subject to change in both the Strategic and Non-Strategic UID catchment studies. To March 2010, a total of 50 removals and 80 additions, (net change of +30 from SR06 Technical Expression number of 277), have been identified as formally requiring agreement by SEPA and OMGWG prior to being included in the SR06 UID programme. Of these changes, 49 removals and all 80 additions have been formally approved. The final remaining removal is associated with Scottish Water's ongoing capital works in Campbeltown, and SEPA has indicated that this UID removal will be approved when that capital works is satisfactorily completed. Unexpected complexity and technical design requirements encountered in both the Strategic and Non Strategic programmes have had an impact on the overall completion position, and we are now reporting that 43 UID outputs will be delivered in the completion period to October 2012. The majority of this remaining work involves the major strategic work package of Meadowhead WP6, and the non strategic catchments of Hamilton and Johnstone.

Taking these factors into account, our forecasts for future years now indicate that the overall cumulative number of UIDs improved under the entire SR06 UID programme will be 307.

G8.13 Number of waste water treatment works' discharges improved to meet new consent requirements

Scottish Water delivered 24 outputs to March 2010 against a target of 27; 6 outputs were delivered in this report year. Projects at Ballachulish (2 outputs) and Phillipshill have been delayed to 2010/11. Ballachulish was delayed due to ongoing planning issues and the severe winter weather at the end of 2009 delayed the final construction work required to complete Phillipshill.

G8.14 Number of First Time Provision projects to meet environmental objectives in the Directions

Scottish Water delivered 7 outputs to March 2010; 2 outputs being delivered this report year. The OMG has agreed the removal of 1 project from the target (Cairndow), bringing the target back to 9 outputs. The target for 2009/10 was 8 with slippage of Kishorn to 2010/11 due to planning and land issues. Bonawe failed to deliver in 2009/10 due to commissioning difficulties.

G8.15 Number of waste water treatment works upgraded to meet existing consent requirements

Scottish Water delivered 18 outputs to March 2009; 4 outputs were delivered this report year, in line with the revised target approved by the OMG. The target for 2009/10 was 17.

G8.16 Number of management and monitoring systems at works to meet IPPC Regulations

As reported in the Annual Return 2007/08, the OMG approved the reduction in target from 61 sites to 1 site which has been delivered and achieved sign-off during 2007/08.

G8.17 Number of landfill sites contained, monitored and decommissioned

Scottish Water has delivered 17 outputs to March 2010, in line with the revised target approved by the OMG.

G8.18 – 8.23 Development Constraints

G8.18 Provide strategic capacity at waste water treatment works

Scottish Water's Delivery Plan target for Strategic Wastewater capacity is 42,094 p.e. By March 2010, we had outperformed this target with 59,340 p.e. being achieved.

G8.19 Provide strategic capacity at water treatment works

The Water Strategic capacity outputs delivered to March 2010 are a combination of upgrades at specific sites, sustainable leakage reduction within a number of DMAs, and enabled development ahead of future investment.

A total of 144,919 p.e. was delivered against a Delivery Plan forecast of 151,000 p.e. This has outperformed the Ministerial Objective of 16,500 p.e. A number of projects are currently undergoing performance testing. These are Ness WTW - Upgrade, Assynt WTW and West Lewis WTW - Upgrade and together with Glencoe WTW - Upgrade and Bressay WTW Upgrade (which are main outs) are worth 7,652 p.e. Glencoe (195 p.e.) achieved acceptance on 09/04/10.

G8.20 Total New Connections (including regeneration)

2009/10 actual new connections are higher than we forecast but they are still significantly lower than previous years due to the downturn in the housing market. The data for Total New Connections is taken from the corporate systems, Ellipse and Optimum. Regeneration is calculated by taking the Total Properties Added to the Billing File (WIC 4 non corporate system) less Total New Connections.

G8.21 Implied regeneration, growth/shrinkage in customer base

The numbers are a calculated field from G8.20 and G8.22. The shrinkage in the customer base was higher than forecast but confidence grades have been lowered to B3/B4 to reflect uncertainties in housing market projections.

G8.22 Net increase/(decrease) in billed properties

To reflect the change in responsibility for non-domestic growth forecasts being that of the Licensed Providers from 2008/09 the table below outlines an updated profile, although this is not shown in line G8.22 on the submitted table.

	2006/07	2007/08	2008/09	2009/10	2006-10 Total
2006-10 Original					
Household	15,408	15,519	22,813	22,892	76,632
Non-Household	500	500	2,250	2,250	5,500
Total	**15,908**	**16,019**	**25,063**	**25,142**	**82,132**
Re-profile					
Household	15,408	15,519	22,813	22,892	76,632
Non-Household	500	500	0	0	1000
Total	**15,908**	**16,019**	**22,813**	**22,892**	**77,632**

2009/10 actual increases in billed properties are higher than forecast but are still significantly down on previous years due to the economic downturn. The data has been sourced directly from Local Authorities' WIC4 returns.

G8.23 Properties relieved from development constraint

The figures for properties relieved from development constraint are calculated from the Population Equivalent growth provided at both water and wastewater treatment works divided by the average household occupancy rates. The Scottish average household occupancy rate used is 2.11.

G8.24 Number of non-domestic meters installed

At total of 40,730 meters have been installed, outperforming the programme target of 40,000.

G8.25 SEPA priorities for capital maintenance expenditure (£20m)

Investment in SEPA priorities at March 2010 was £20.7m.

G8.26 DWQR priorities for capital maintenance expenditure (£10m)

The DWQR Exceptional Item funding was used to promote additional schemes in the networks to address Iron and Manganese levels which may cause failures for which a programme of work was agreed with DWQR.

G8.27-8.29 Leakage

G8.27 First pass Economic level of leakage estimated and presented to Commission

The milestone to present the Commission with the first pass ELL by 31 December 2007 was achieved.

G8.28 DMA coverage to include 92% of connected properties in Scotland

The target for DMA coverage was revised to 92% of connected properties with agreement of WICS.

G8.29 Revised ELL presented to the Commission

The milestone to present the Commission with the LRELL assessment by 31 December 2008 was achieved.

G8.30-8.40 Water Resource Studies

G8.40 Costs quantified for the remaining (complex) zones and presented to the Commission

The target for quantifying the costs for the remaining (complex) zones and presentation to the Commission was achieved by submission of the report (WRSS SR06 Complex Zones V1 Issued.pdf) on 31 October 08.

G8.41- G8.49 UID Strategic Studies

Strategic UID Studies are required in four catchment areas (Portobello, Glasgow, Meadowhead and Stevenston) to determine the optimum technical and cost effective integrated catchment solutions.

Determining the UID solutions was reliant on complex catchment and river/coastal water quality modelling. The creation of new models has been necessary and this has delayed the programme. To facilitate milestone completion, a "parallel process" was adopted to mitigate the risk to timely completion of the catchment studies, while allowing the technical models to be progressed and UID options refined as the quality of base data is improved.

Following review of the 11 outputs associated with Airdrie and Coatbridge WP1, it has been agreed that this work package will form part of the 2010-15 delivery programme. The strategic studies of Meadowhead WP6, Glasgow, Stevenston and Portobello have all received approval from the Commission at Stage 4 of the 7-stage process, while for Meadowhead, (excluding WP6), Stage 4 submission is planned for July 2010.

UID Strategic Studies		Feb 2009 Delivery Plan Date	Actual/Forecast Date
G8.41	Technical Studies completed for Portobello and Glasgow catchments	31/12/2006	31/12/2006
G8.42	Technical Studies completed for Meadowhead and Stevenston catchments	31/03/2007	31/03/2007
G8.43	Identify and Agree with SEPA the optimum solutions for Portobello and Glasgow catchments	31/05/2007	31/05/2007
G8.44	Complete detailed design and receive tenders for works required in Portobello and Glasgow catchments.	31/11/2007	30/11/2008
G8.45	Identify and agree with SEPA the optimum solutions for Meadowhead and Stevenston catchments	30/09/2007	30/09/2007
G8.46	Complete detailed design and receive tenders for works required in Meadowhead and Stevenston catchments (excluding WP6).	31/03/2009	31/03/2009
	Complete detailed design and receive competitive tenders for the works required in Meadowhead and Stevenston WP6	30/08/2009	30/08/2009
G8.47	Construction complete at all UIDs in the Portobello catchment.	31/12/2009	31/07/2008
G8.48	Construction complete at all UIDs in the Glasgow catchment (excluding Dalmarnock WP2).	31/03/2010	31/03/2010
	Construction complete at Dalmarnock WP2	31/03/2010	11/02/2011
G8.49	Construction complete at all UIDs in the Meadowhead and Stevenston catchments (excluding WP6).	31/03/2010	31/03/2010
	Construction complete for Meadowhead and Stevenston WP6	31/12/2011	31/08/2012

There are 154 UID outputs associated with the 4 strategic catchments. At March 2010, 140 of these 154 strategic outputs have achieved Acceptance, with 131 confirmed by SEPA. Of the remaining 14 strategic UIDs, 13 are strategic projects in the Meadowhead catchment, and 1 is in the Glasgow (Dalmarnock) catchment. Contractual issues which

delayed the start on site of Meadowhead WP6, have been resolved, and this milestone is now expected to be August 2010, with a forecast Acceptance date of August 2012. The solitary Glasgow output that did not meet the March 2010 milestone is UID "37292_208 Hunter Street, off Duke St", where complex land purchase and contaminated land issues caused this project to be significantly delayed until the best value for money solution could be agreed. It is now forecast to deliver in February 2011. The table above separates out Meadowhead and Stevenston WP6 and Dalmarnock WP2 providing a more detailed breakdown of delivery dates than are shown in Table G8. The table above also shows the February 2009 Delivery Plan date whereas Table G8 shows the Ministerial Target for 2006-10.

G8.50 – 8.54 Progress with Quality and Standards Sign-off

The process for sign-off for water quality and environmental quality was agreed with DWQR and SEPA in 2006/07. The acceptance dates for all projects are held within the Capital Investment Management System and acceptance paperwork is submitted for each project which is used as the trigger for preparing the output sign-off proformas for submission to the Regulators. Trackers are maintained for these areas and record the acceptance date, date of submission and date of sign-off. The actual sign-off date is recorded in CIMS with a copy of the scanned document being linked to the project.

Odour outputs are signed-off by the Scottish Odour Steering Group and actual sign-off dates are recorded in CIMS.

Wastewater Quality, Flow monitoring and Abstraction outputs are signed-off by SEPA. The sign-off date for named projects is recorded in CIMS.

Water Quality, Security and Flood Studies outputs are signed off by DWQR.

It was agreed that Strategic Water Capacity and Strategic Wastewater Capacity outputs should be validated by the Reporter to allow Scottish Government sign-off. These projects are not included in the number reported as requiring sign-off.

There has been an increase in the number of projects reported as requiring sign-off as these are now aligned with the reporting for the OMG graphs with rolling programmes of work reporting in quarterly or monthly blocks of outputs.

The forecast for submission is based on allowing one month from the acceptance date for verification and preparation of paperwork and a further two months for sign-off by the Regulator. Where accepted outputs have not been submitted or received sign-off from the appropriate Regulator within this time-frame, future dates have been used.

75% of projects have received sign-off by March 2010 with a further 4.7% submitted to the Regulators.

Table G9 - Q&S 3 Ministerial Objectives – Serviceability

The figures entered in column 120 (Post 2009-10 total target) are aligned with column 100e (2009-10 total forecast) as there are no serviceability outputs being delivered post March 2010.

G9.1 – 9.6 Water Serviceability Indicators (Annual Measure)

G9.1 – 9.2 % of compliant zones for Iron & manganese

Performance for compliant zones for Iron was 90.3% against an annual target of 87.5%. Performance for compliant zones for manganese was 93.62% against the annual target of 94%.

We improved the exclusion of manganese from drinking water such that we were compliant for the whole of 2009 in 93.6% of water supply zones. Our major infrastructure investment led to disturbance in some parts of the network which prevented us reaching the challenging target in 2009.

Achievement of these targets was heavily reliant upon delivery of investment to ensure compliance. We completed all WQ investigations in the zones and developed a detailed design of interventions that reduced the risk of iron and manganese failure as measured at the customers' taps. The DWQR 'Exceptional Public Health Items' funding was used to promote additional schemes in the networks and a programme of work was agreed with the DWQR. Those schemes augmented the work already in progress.

G9.3 Number of microbiological failures at water treatment works:

The target for 2010 was to achieve fewer than 60 microbiological failures at water treatment works. The number of microbiological failures at WTW outturned at 30, well within target.

G9.4 Number of Properties on the Low Pressure Register

The overall number of low pressure properties has reduced from 2,974 in March 2009 to 2,496 in March 2010 predominantly through operational and asset improvements delivered through our Capital Programme. 1,188 properties were removed from the register through data improvement work associated with field logging and 1,772 properties were added as a result of logging work. No properties were added as a result of asset deterioration or operational changes. Targeted investment has improved pressure to 1,062 properties during 2009/10.

G9.5 Number of Properties with Unplanned Interruptions > 12 hours

The overall figure for 2009/10 was 5,624 properties which is a decrease over 2008/09 figures for this parameter (5,819 properties). 90% of the 09/10 figure is associated with two interruptions to supply. The beginning of July saw a 30" Cast Iron main fail in the Cumbernauld area. A large number of properties were restored within 6-12 hours. However, 4,705 properties were without water for 14.5 hours. During November a failure occurred on a rural 6" distribution main supplying Nethybridge in the Ness area. Due to difficulties in locating the failure this resulted in a lack of supply to 478 properties for 13.25 hours.

G9.6 Number of Bursts per 1,000km of mains

There were 217 mains bursts/1000km/yr during 2009/10, which exceeded the target of 204. The target has not been achieved due to the large number of mains bursts (+80% on the long term average for this period) experienced between December 2009 and March 2010 as a result of the exceptionally low temperatures. Throughout 2006-10, with the exception of the last quarter of 09/10 the mains burst figure has always been below the 204 target.

G9.7 – 9.11 Waste water Serviceability Indicators (Annual Measure)

G9.7 Number of Properties at Risk of Internal Flooding

The number of properties at risk of internal flooding at March 2010 was 328. This outperformed against the Delivery Plan target of 341 and was also an improvement against the figure of 383 achieved at March 2009. Improved information and the flood alleviation schemes in the capital programme have contributed to the results.

G9.8 Number of Properties internally Flooded due to other Causes

The number of properties internally flooded due to other causes was 931 (this figure refers to all sewers) against a Delivery Plan target of 1,270. It should be noted that the figures used in G9.8 refer to all sewers (including laterals)

G9.9 Number of Failing Wastewater treatment works

The number of Failing Wastewater treatment works for 2009/10 was 12 against a target of 30. This shows continual improvement since the 2008/09 figure of 24

G9.10 Number of unsatisfactory intermittent discharges

During the report year, we have continued to complete the delivery of both the Q&SII uCSO completion outputs and the Q&SIII UID outputs.

We are now reporting a final March 2010 baseline position of 827.

G9.11 Number of Pollution Incidents

The submission of the 2007/08 Table 1 Return to the Commission by SEPA, reporting 939 pollution incidents, provided the basis for setting the baseline of Scottish Water's 'wastewater' pollution incident performance on which to reset the 'no deterioration' serviceability indicator target. Prior to this they were as set out in the Ministerial Directions as [555].

Scottish Water and SEPA have agreed the number of Pollution Incidents for the report year 2009/10 as 788.

We are working continuously with SEPA to agree new and/or improved processes to aid more robust reporting of pollution incidents arising from Scottish Water assets.

H Tables – Asset Inventory

General comments

Modern Equivalent Asset Valuation (MEAV)

In comparison with the previous reporting year (Annual Return 2008/09), we have used the same methodology to derive data for completion of the MEAV.

There are 4 key elements that can impact on the valuation. These are:

- Updated asset information from the inventories
- Revised cost curves
- Revised on-costs
- Changes in cost index value (COPI)

In AR10 while we have updated our asset information and applied COPI for the reporting, but our cost curves and on-costs have been applied on the same basis as in AR09 and our 2nd Draft Business Plan.

Assets

For clarity we note that the net movement recorded in our MEAV over the year is a combination of movements in our asset stock and not simply the addition/removal of assets and their net impact on the valuation. Where we have obtained newer and/or more up to date information on our assets, primarily as a result of Achieving Planned Asset Maintenance (APAM) surveys and our ongoing asset improvements, we have incorporated this information into our asset inventory.

There has been no change to the methodology in reporting asset data for completion of the H tables. The main source of asset data used has been Scottish Water's asset inventory systems, primarily Ellipse and GIS. This has been supplemented by gap filling procedures where additional data is required.

Reporting only operational assets (excluding redundant assets)

As in previous years the methodology for this year excludes all decommissioned and redundant assets from the reported inventory and valuations and no value is reported in the relevant columns.

Size banding and Summary of Asset Stock

Scottish Water has continued to apply the size banding of the asset stock as per the WIC tables, H7, H8, and H9.

Condition and Performance

There is no requirement to report Condition and Performance of asset stock for this year's return.

COPI

Consistent with previous Annual Returns the COPI used for 2009/10 is 159.0, which is the latest available confirmed figure.

Financial Rounding

Some figures within this commentary may be subject to rounding which accounts for minor variances.

Table H1: Summary

Summary of gross MEAV

Scottish Water's reported Annual Return 2009/10 gross asset inventory valuation is £43.04 billion. The gross valuation is dominated by the infrastructure valuation of £35.50 billion, comprising 82.5% of the total. The non-infrastructure total valuation is £7.37 billion, which is 17.1% of the total valuation. Support services valuation is approximately £170.80 million representing 0.4% of the gross asset inventory valuation.

Asset Type	AR09 Gross MEAV (£m)	% of total	AR10 Gross MEAV (£m)	% of total	% change
Water Infrastructure	12,116.56	27.64%	11,802.00	27.42%	-2.60%
Water Non - Infrastructure	3,970.21	9.06%	3,952.45	9.18%	-0.45%
Wastewater Infrastructure	24,150.96	55.10%	23.695.13	55.05%	-1.89%
Wastewater Non-Infrastructure	3,408.40	7.78%	3,420.22	7.95%	0.35%
Support Services	183.19	0.42%	170.80	0.40%	-6.76%
Total	**43,829.32**	**100%**	**43,040.60**	**100%**	**-1.80%**

The combined gross valuation of water and wastewater infrastructure assets has decreased by £770.39 million and there has been a decrease in the gross valuation for non-infrastructure assets of £5.94 million.

The total valuation of the asset stock has decreased by £788.72 million since 2008/09.

Detailed summary of gross MEAV

Line Ref.	Asset Type	AR09 Gross MEAV (£m)	AR09 % of total	AR10 Gross MEAV (£m)	AR10 % of total	Change (£m)	% change
H1.1	Water treatment works	2,256.36	5.15%	2,199.80	5.11%	-56.57	-2.51%
H1.2	Water storage	1,309.21	2.99%	1,287.09	2.99%	-22.12	-1.69%
H1.3	Water pumping stations	404.64	0.92%	465.56	1.08%	60.92	15.06%
H1.4	Water resources	2,603.34	5.94%	2,493.67	5.79%	-109.67	-4.21%
H1.5	Water mains	9,513.22	21.71%	9,308.32	21.63%	-204.90	-2.15%
H1.6	Sewers	23,238.10	53.02%	22,737.59	52.83%	-500.51	-2.15%
H1.7	Sewer structures	336.54	0.77%	381.22	0.89%	44.69	13.28%
H1.8	Sea outfalls	576.32	1.31%	576.31	1.34%	0.01	0.00%
H1.9	Sewage pumping stations	798.90	1.82%	794.64	1.85%	-4.26	-0.53%
H1.10	Sewage treatment works	2,504.41	5.71%	2,510.13	5.83%	5.72	0.23%
H1.11	Sludge treatment facilities	105.09	0.24%	115.44	0.27%	10.35	9.85%
H1.12	Support services	183.19	0.42%	170.80	0.40%	-12.39	-6.76%
	Total	**43,829.32**	**100%**	**43,040.60**	**100%**	**-788.72**	**-1.80%**

The table above shows the decrease in the total gross asset valuation of Scottish Water's assets from 2008/09 to 2009/10 by asset category.

Summary of material movement in gross valuations from 2008/09 to 2009/10

The table below summarises the changes which incorporate a variance greater than +/- £200m or +/- 30% in any one asset category.

Asset Category	Change (£m)	Change (%)
Water mains	-204.90	-2.15%
Sewers	-500.51	-2.15%
Total	**-85.65**	

Summary and comparison of net valuations from 2008/09 to 2009/10

The total net depreciated value of Scottish Water's non-infrastructure asset inventory (including support services depreciable assets) is £3.33 billion.

Line Ref.	Asset Type	AR09 Net MEAV (£m)	% of total	AR10 Net MEAV (£m)	% of total	Change (£m)	% change
H1.1	Water treatment works [101]	1,243.89	32.33%	983.77	29.57%	-260.11	-20.91%
H1.2	Water storage [102]	662.62	17.22%	613.55	18.44%	-49.07	-7.41%
H1.3	Water pumping stations [103]	167.93	4.37%	136.11	4.09%	-31.82	-18.95%
H1.9	Sewage pumping stations [109]	399.02	10.37%	338.46	10.17%	-60.56	-15.18%
H1.10	Sewage treatment works [110]	1,201.77	31.24%	1,089.26	32.74%	-112.51	-9.36%
H1.11	Sludge treatment facilities by disposal type [111]	64.03	1.66%	66.98	2.01%	2.95	4.60%
H1.12	Support services [112]	107.72	2.80%	98.426	2.96%	-9.29	-8.63%
	Total	**3,846.98**	**100%**	3,326.55	100%	-520.42	-13.53%

The table above shows the changes to the net valuation by asset category.

Summary of Confidence grades (MEAV)

There has been no movement in the confidence grade for MEAV from AR09 to AR10.

The MEAV confidence grade is dominated by the absence of data at certain levels within the asset inventories resulting in C4 grades for non-infrastructure assets and B4 or C4 for infrastructure.

Summary of Confidence grades (Asset Stock)

The majority of confidence grades for the asset stock have not changed since 2008/09. Where a change has occurred, it is detailed in the following section.

The confidence grades applied to the asset stock is a reflection of the asset inventories.

General Comment - Asset Valuation

Over the year work has continued to better understand our assets and in some cases these values have been adjusted. Changes in asset valuations are the only reason for movements in MEAV in AR10, when adjusted for COPI, and this may not directly align with the increase/decrease in the number of assets.

Table H2: Water Non Infrastructure

Where the Overview of Change in the following tables is categorised as “Other”, these assets have been subject to ongoing maintenance or movement in operational status. The figure reported here is the net difference of sites.

H2.1-2.8: Water Treatment Works

Asset Stock

The total number of Water Treatment Works in this reporting year is 278. This is a reduction of 3 from the 281 reported in the Annual Return 2008/09.

WTW Sites	Number
AR09 Sites Reported	281
Sites Non-Operational AR09-10	-6
Sites Non-SW Owned AR09-10	0
Newly Reported AR09-10	+3
AR10 Sites Reported	**278**

Overview of Change	Number
Sites Closed	-6
Change of Owner	0
New Sites	+1
Other	+2
Total	**-3**

Six works have been closed at Berneray, Sconser, Braemar, Ashgrove, Waternish and Touch. The new Waternish works has been commissioned and added to the inventory. We have corrected the status from last year of the two works at Craignure and Barclye to show them as operational and emergency stand-by respectively (and hence they are now included in the asset stock).

Asset valuation

The asset valuation for water treatment works for the reporting year has decreased from £2,256.36 million to £2,199.80 million. The decrease reflects the movement in asset stock.

H2.9 and 2.10: Water Storage

Asset Stock

The total number of Water Storage assets in this reporting year is 1,420. This is an overall reduction of 18 from 2008/09.

WS Sites	Number
AR09 Sites Reported	1,438
Sites Non-Operational AR09-10	-29
Sites Non-SW Owned AR09-10	0
Newly Reported AR09-10	+11
AR10 Sites Reported	**1,420**

Overview of Change	Number
Sites Closed	-28
Change of Owner	0
New Sites	+8
Other	+2
Total	**-18**

The net change in the number of reported Water Storage sites is summarised in the tables above.

Asset valuation

The asset valuation for Water Storage for the reporting year has decreased from £1,309.21 million to £1,287.09 million. The decrease reflects the movement in asset stock.

H2.11-2.13: Water Pumping Stations

Asset Stock

The total number of Water Pumping Stations (WPS) in this reporting year is 702. This is an overall increase of 19 from 2008/09.

WPS Sites	Number
AR09 Sites Reported	683
Sites Non-Operational AR09-10	-13
Sites Non-SW Owned AR09-10	0
Newly Reported AR09-10	+32
AR10 Sites Reported	**702**

Overview of Change	Number
Sites Closed	-9
Change of Owner	0
New Sites	+24
Other	+4
Total	**+19**

Nine WPS were closed in the year and 24 new ones were commissioned. In addition, as part of ongoing reviews, we corrected our inventory to remove four WPS and add eight to the inventory. The net change in the number of reported WPS sites is summarised in the tables above.

Asset valuation

The asset valuation for the reporting year has increased from £404.64 million to £465.56 million from the previous year. The increase in value reflects the movement in asset stock.

Table H3: Water Infrastructure

Where the Overview of Change in the following tables is categorised as “Other”, these assets have been subject to ongoing maintenance or movement in operational status. The figure reported here is the net difference of sites.

H3.1: Water Resources - Dams & Impounding Reservoirs

Asset Stock

The total number of Dams & Impounding Reservoirs in this reporting year is 239. This is an overall increase of one from 2008/09.

DIR Sites	Number
AR09 Sites Reported	238
Sites Non-Operational AR09-10	-1
Sites Non-SW Owned AR09-10	0
Newly Reported AR09-10	+2
AR10 Sites Reported	**239**

Overview of Change	Number
Sites Closed	0
Change of Owner	0
New Sites	+1
Other	0
Total	**+1**

The new Ullapool raw water tank was commissioned during the year. Our corrections to the inventory removed one asset and added another resulting in a net change of zero.

Asset valuation

The asset valuation for the reporting year has decreased from £1,441 million in 2008/09 to £1,341.81 million in 2009/10.

H3.2: Water Resources – Raw Water Intakes

Asset Stock

The total number of raw water intakes in this reporting year is 344. This is an overall reduction of 7 from 2008/09.

RWI Sites	Number
AR09 Sites Reported	351
Sites Non-Operational AR09-10	-11
Sites Non-SW Owned AR09-10	0
Newly Reported AR09-10	+4
AR10 Sites Reported	**344**

Overview of Change	Number
Sites Closed	-11
Change of Owner	0
New Sites	+3
Other	+1
Total	**-7**

Asset valuation

The asset valuation for the reporting year has increased from £23.2 million (2008/09) to £36.85 million (2009/10) as a result of movements in our asset stock.

For the MEAV methodology, costs have been determined for a representative set of modern equivalent assets. The costs were developed by Berkeley Consultants who estimated the structure cost on the basis of labour, plant and materials only. Included in the cost of the intake are concrete costs of the weir and the intake chamber, as well as all screens and valves and contractors preliminaries.

H3.3: Water Resources – Raw Water Aqueducts

Asset Stock

The total length of Raw Water Aqueducts (RWA) in this report year is 1,750km. This is a decrease of 44km from 2008/09. The decrease arises principally from a net balance of 85km removed and 41km added as part of the consolidation of smaller water treatment plants with larger treatment plants.

RWA length (km)	AR09	AR10	Change
Reported in AR09	**1,794**		
AR09 Still Operational		1,709	-85
Added in AR10		41	41
Total	**1,794**	**1,750**	**-44**

Asset valuation

The asset valuation for the report year has decreased from £1,139.6 million to £1,115.01 million as a result of the movement in our asset stock.

H3.4: Water Mains – Mains Potable

Asset Stock

The total length of potable mains in the report year is 47,301km. This is an increase of 86km from 2008/09. The slight increase is principally due to new mains being added to the register.

Water Mains length (km)	AR09	AR10	Change
Reported in AR09	**47,215**		
AR09 Still Operational		46,394	-820
Added in AR10		906	+906
Total	**47,215**	**47,301**	**86**

Asset valuation

The asset valuation for the report year has decreased from £8,737.8 million to £8,549.61 million. Please refer to our general asset valuation comment.

H3.5: Mains Other

Asset Stock

The total length of other mains in the report year is 158km. This is a net increase of 4km from 154km in 2008/09 and 3km has been removed during the year.

Mains other length (km)	AR09	AR10	Change
Reported in AR09	**154**		
AR09 Still Operational		152	-2
Added in AR10		6	+6
Total	**154**	**158**	**+4**

Asset valuation

The asset valuation for the report year has decreased from £25.3 million to £24.71 million. Please refer to our general asset valuation comment.

H3.6: Communication Pipes (Lead)

Asset Stock

The total number of lead communication pipes in the report year is 774,396. This is a decrease of 7,218 from the Annual Return 2008/09. This drop is due to:

- Lead renewal and communication pipe replacements
- Updating of the communication pipe inventory from recent lead surveys (i.e. water quality monitoring) which have also reduced the inventory
- Scottish Water's Lead replacement scheme, which replaced customers' lead communication pipes at their request.

Comm Pipes Lead (No)	AR09	AR10	Change
Reported in AR09	**781,614**		
AR09 Still Operational		774,396	-7,218
Added in AR10			
Total	**781,614**	**774,396**	**-7,218**

Asset valuation

The asset valuation for the report year has decreased from £292.0 million to £285.67 million. This decreased valuation is a result of the movement in asset stock.

H3.7: Communication Pipes (other)

Asset Stock

The total number of other communication pipes (i.e. not lead) in the report year is 1,119,308. This is an increase of 15,957 from the previous reporting year.

Comm pipes other (No)	AR09	AR10	Change
Reported in AR09	**1,103,351**		
AR09 Still Operational		1,103,351	Nil
Added in AR10		15,957	+15,957
Total	**1,103,351**	**1,119,308**	**+15,957**

Asset valuation

The asset valuation for the report year has decreased from £412.2 million to £403.32 million. Please refer to our general asset valuation comment.

H3.8: Water Meters

Asset Stock

The total number of water meters in this reporting year is 135,156. This is an increase of 5,012 from the previous reporting year. This increase is mainly due to the meter installation programme for non-household properties.

Water Meters (No)	AR09	AR10	Change
Reported in AR09	**130,144**		
AR09 Still Operational		125,028	-5,116
Added in AR10		10,128	+10,128
Total	**130,144**	**135,156**	**+5,012**

Asset valuation

The asset valuation for the report year has decreased from £46.0 million to £45.01 million.

Table H4: Wastewater Infrastructure

H4.1: Sewers – Critical Sewers

Asset Stock

The total length of Critical Sewers in the report year is 11,472km, a net decrease of 30km from 2008/09. The net decrease in length is mainly attributable to the reduction of 50km from the off-inventory lengths.

Critical Sewer length (km)	AR09	AR10	Change
Reported in AR09	**11,502**		
AR09 Still Operational		11,393	-109
Added in AR10		79	79
Total	**11,502**	**11,472**	**-30**

Asset valuation

The asset valuation for the report year has decreased from £9,320.2 million to £9,119.41 million as a result of the movement in the asset stock.

H4.2: Sewers – Non Critical Sewers

Asset Stock

The total length of Non Critical Sewers in the report year is 37,541km, a decrease of 102km from 2008/09. This decrease is mainly due to the reduction of 300km from the off-inventory sewer lengths.

Non Critical Sewer length (km)	AR09	AR10	Change
Reported in AR09	**37,643**		
AR09 Still Operational	-	37,207	-436
Added in AR10	-	334	334
Total	**37,643**	**37,541**	**-102**

Asset valuation

The asset valuation for the report year has decreased from £13,680 million to £13,385 million as a result of the movement in the asset stock.

H4.3: Sewers – Sewage and sludge pumping mains

Asset Stock

The total length of sewage and sludge pumping mains in the report year is 1,071km, an increase of 77km 2008/09. This increase results from 90km of sewage and sludge pumping mains being added during 2009/10, while 13km was removed because it was no longer operational.

Sewage and sludge pumping mains length (km)	AR09	AR10	Change
Reported in AR09	**994**		
AR09 Still Operational		981	-13
Added in AR10		90	+90
Total	**994**	**1,071**	**+77**

Asset valuation

The asset valuation for the report year has decreased from £238.0 million to £232.83 million. Please refer to our general asset valuation comment.

H4.4 and 4.5: Sewer Structures: CSO's and Other Sewer Structures

Asset Stock

The number of combined sewer and emergency overflows in the report year is 4,152, a total reduction of 12 from the Annual Return for 2008/09. This reduction is due to the abandonment of failing CSOs, the construction of new CSOs to replace them, survey work showing CSOs to be abandoned and, discovering previously unrecorded CSOs.

CSO's (No)	AR09	AR10	Change
Reported in AR09	4,164		
AR09 Still Operational	-	3,860	-304
Added in AR10	-	292	292
Total	**4,164**	**4,152**	**-12**

The number of Other Sewer Structures is 312, the same as reported in 2008/09. Bifurcation chambers are not considered large enough assets for reporting within sewer structures.

Asset valuation

The asset valuation for the reporting year has increased from £336.5 million to £381.23 million. Please refer to our general asset valuation comment.

H4.6 and 4.7: Sea Outfalls: Short and Long Sea Outfalls

Asset Stock

The number of Sea Outfalls in the report year is 1,597, a net decrease of 24 from 2008/09. The number of Long Sea Outfalls is 32, the same as reported in 2008/09.

Total Sea Outfalls (No)	AR09	AR10	Change
Reported in AR09	**1,621**		
AR09 Still Operational	-	1,597	-24
Added in AR10	-	0	0
Total	**1,621**	**1,597**	**-24**

Asset valuation

The asset valuation for the reporting year has marginally decreased from £576.318 million to £576.317 million. Please refer to our general asset valuation comment.

Table H5: Wastewater Non-Infrastructure

Where the Overview of Change in the following tables is categorised as “Other”, these assets have been subject to ongoing maintenance or movement in operational status. The figure reported here is the net difference of sites.

H5.1 and H5.2: Sewage Pumping Stations

Asset Stock

The total number of Sewage Pumping Stations (SPS) in this reporting year is 2,001. This is an increase of 30 from the Annual Return 2008/09.

SPS Sites	Number
AR09 Sites Reported	**1,971**
Sites Non-Operational AR09-10	-10
Sites Non-SW Owned AR09-10	-2
Newly Reported AR09-10	+42
AR10 Sites Reported	**2,001**

Overview of Change	Number
Sites Closed	-5
Change of Owner	-2
New Sites	+38
Other	-1
Total	**+30**

The net change in the number of reported SPS Sites is summarised in the tables above.

Asset valuation

The asset valuation for the report year has decreased from £798.9 million to £794.64 million. Please refer to our general asset valuation comment.

H5.3 to 5.7: Sewage Treatment Works

Asset Stock

The total number of Sewage Treatment Works in this reporting year is 1,874. There is no change from the figure reported in the Annual Return 2008/09.

WWTW Sites	Number
AR09 Sites Reported	1,874
Sites Non-Operational AR09-10	-17
Sites Non-SW Owned AR09-10	0
Newly Reported AR09-10	+17
AR10 Sites Reported	**1,874**

Overview of Change	Number
Sites Closed	-17
Change of Owner	0
New Sites	+12
Other	+5
Total	**0**

The net change in the number of reported WWTW Sites is summarised in the tables above.

Asset valuation

The asset valuation for the report year has increased from £2,504.4 million to £2,510.13 million. Please refer to our general asset valuation comment.

H5.8 and 5.9: Sludge Treatment Facilities

Asset Stock

The total number of sludge treatment facilities in the reporting year is 24, an increase of 2 from the Annual Return 2008/09.

STC Sites	Number
AR09 Sites Reported	**22**
Sites Non-Operational AR09-10	0
Sites Non-SW Owned AR09-10	0
Newly Reported AR09-10	+2
AR10 Sites Reported	**24**

Asset valuation

The asset valuation for the report year has increased from £105.1 million to £115.44 million. The increase in valuation results from the movement in asset stock.

Table H6: Support Services

H6.1- H6.3: Support Services

Asset Stock

There are 4 fewer depots in 2009/10 due to closures and termination of leases. The number of Control Centres and Offices remain unchanged whereas there is 1 less laboratory.

Building Type	AR09	AR10
Control Centre	1	1
Depot	52	48
Laboratory	4	3
Offices	10	10

Asset valuation

The asset valuation for the report year has decreased from £101.6 million to £89.8 million.

As for the previous reporting year, condition grade has been used to calculate the remaining life of non-operational buildings, which all have an asset design life of 60 years. The remaining asset life was used to calculate the Net MEAV which has reduced by £5.8m due to closures.

Leased assets are not specifically excluded in the H6.1 to H6.3 line definitions (unlike H6.7) therefore, to be consistent with the Annual Return 2008/09, they have been included. As some of the individual buildings have a high value, the following table provides details.

Leased assets (included in Table H6)			
Building Name	**Asset Type**	**Gross MEAV (£m)**	**Net MEAV (£m)**
Enterprise House	Depot	0.572	0.231
Dornoch Area Office & Depot	Depot	0.572	0.498
Kilmory Depot	Depot	0.572	0.231
Orkney Area Office	Depot	0.572	0.231
Gremista Depot	Depot	0.572	0.231
Orkney (Kirkwall) Laboratory	Lab	8.266	5.335
Juniper House Laboratory	Lab	8.266	7.200
Riverside House Office	Office	6.683	4.313
Watermark Office	Office	5.722	4.984
Torridon House Office	Office	8.583	3.465

H6.4 - Vehicles & plant

Asset Stock

The total number of vehicles in this reporting year is 1,695. This is the same number as was reported in 2008/09, however the split between vehicles and plant is different.

Asset valuation

The gross valuation has marginally decreased from £35.7 million to £35.6 million.

Net values were calculated based on the age and design life of each vehicle or plant using the same method as the Annual Return 2008/09.

H6.5 Telemetry systems

Asset Stock

The 4,221 telemetry sites reported show an increase from 4,031 as reported in 2008/09. This now equates to having 38.1% coverage of Scottish Water's operational sites. In addition it shows a 2.4% increase in telemetry coverage as a result of new equipment installed during the year.

Asset valuation

The asset valuation for the report year has increased from £18.4 million to £18.8 million, based on the same standard unit valuation as used in 2008/09.

Net MEAV is based on remaining asset life calculated from the condition grade matrix. The process is unchanged from that explained in AR09 Commentary, Annex 1. All telemetry outstations were assigned a short (6-15 year) design life, as recommended in the WIC guidance notes. This is consistent with 2008/09.

H6.6 - Information systems

Asset Stock

Workstations reflect a net decrease of 900 and laptops reflect a net decrease of 345 from 2008/09. This is due to retirement of assets.

Asset valuation

The asset valuation for the report year has decreased from £9.8 million to £9.2 million.

The total Net MEAV has increased by £0.35 million due to the purchase of new laptops and workstations. Many of the replaced assets had exceeded their normal expected life and therefore had a Net MEAV of zero.

H6.7 - Other Non-Operational Assets

Asset Stock

There are 56 properties reported as being owned by Scottish Water in 2009/10, 3 fewer houses than in 2008/09. Details of the remaining asset categories are contained in the following table.

Type of property	AR09 Count	AR10 Count	Gross MEAV AR09 (£m)	Gross MEAV AR10 (£m)	Net MEAV AR09 (£m)	Net MEAV AR10 (£m)
Houses	49	46	£5.096	£4.784	£1.953	£1.834
Farms and Grazing land	10	10	£12.590	£12.590	£12.590	£12.590
Total	**59**	**56**	**£17.686**	**£17.374**	**£14.543**	**£14.424**

Asset valuation

The asset valuation for the report year has decreased from £17.7 million to £17.4 million. The decrease in valuation is due to 3 fewer properties being owned by Scottish Water.

Farm and grazing land values were based on new valuations carried out in 2008/09.

K Tables – Investment Plan

Introduction

Table K has been prepared as a forward looking plan based on forecasts at December 2009. Table K is consistent with the finance allowed in the Final Determination of Charges 2010-15 and is the baseline to the March 2010 approved Delivery Plan for the 2010-15 period.

The Table G submission within the Annual Return sets out the updated position based on the end of March 2010 forecast.

Basis of Costs

All tables are based on Gross project costs in 2007/08 prices, with grants and contributions identified against projects, to allow the net financed cost to be identified.

All expenditure set out in Table K for Q&SII and Q&SIIIa projects is based on the 2009/10 Quarter 3 CIR forecast. One adjustment has been made, a transfer of £2m from SW Q&S3 Risk Management Fund Holding Code to Autocode 230 Kenmore WWTW in the Q&SII programme to reflect the planned delivery.

The total expenditure set out in Table K for Q&SIIIb is set out in 2007/08 prices and is consistent with the Final Determination with individual project forecasts reflecting Scottish Water's view of how to meet the challenge of the Final Determination.

Price Base Adjustment

The values entered into Table K are 2007/08 prices. The inflation assumptions used to convert forecast out-turn costs to 2007/08 prices (for Q&SII, Q&SIIIa and Q&SIIIb early start expenditure) and to convert 2007/08 prices to out-turn costs in the Delivery Plan are set out in Table 1. The total out-turn expenditure set out in Table K is also shown in Table 1.

	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16
Out-turn Investment £m	**0**	**14.9**	**34.2**	**489.0**	**518.0**	**534.8**	**489.0**	**484.9**	**0.1**
Inflation Assumption	-2.2%	-7.3%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%
COPI Financial Year Average	162.5	159	147.5	151.2	154.9	158.8	162.8	166.9	171.0
COPI Indexation value	1	1.02197	1.10186	1.07498	1.04876	1.02318	0.99823	0.97388	0.95013
2007/08 Price Investment £m	**0**	**15.3**	**37.7**	**525.7**	**543.3**	**547.2**	**488.1**	**472.3**	**0.1**

Table 1 – Indexation values used to adjust to 2007/08 prices

Technical Expressions

All Q&SIIIb enhancement projects included in Table K deliver the outputs contained in the baseline Technical Expression to Q&SIIIb, Technical Expression 7.1(Final), as agreed and issued on the 3 February 2010.

All Q&SIIIa enhancement projects included are those forecast to require regulatory sign off beyond March 2010 against the agreed Technical Expression v11 (October 2009), updated to reflect recent changes in relation to two UID projects (38128 and 31852) which are additions to the Technical Expression, and three quality projects (38100, 38005, and 37478) which are contributing to the delivery of TE outputs and reported in the Quarter 3 CIR.

One output against Q&SIIIa Project 31755 in the Flood Studies programme has been excluded from Table K as this has received approval for removal; post Q&SIIIa Technical Expression V11.

All Q&SII enhancement projects included are those forecast to require Regulatory sign-off post March 2010.

Table K1 – Investment

Expenditure Totals

The summaries of Table K1 reflect the Scottish Water Delivery Plan and are equal to the total of the final determination allowance.

The investment set out in K1 covers the time period 2010/11 to 2015/16 with the pre 2010 investment for Q&SIIIb enhancement outputs also included to reconcile to the final determination.

Capital Maintenance Funding Principle

All capital maintenance investment incurred on Q&SII, Q&SIIIa & Q&SIIIb projects is funded from the SR06 allocation up until March 2010 and then from the SR10 allocation post March 2010 in accordance with the regulatory principles set out in the Draft and Final Determinations.

Growth Funding Principle

All growth investment incurred on Q&SII, Q&SIIIa & Q&SIIIb projects is funded from the SR06 allocation up until March 2010 and then from the SR10 allocation post March 2010 as agreed with the Commissions staff at our meeting on the 8 February 2010. The overall level of growth investment is set out in K1.7 and K1.13.

DOMS Investigations for Q&SIV

Technical Expression V7.1 (Final) includes the requirement to complete 143 DOMS investigations under driver DW5A. In the Final Determination the requirement to deliver these outputs was maintained but the funding was set out as Capital Maintenance. In line with the determination, investment has been allocated 100% to driver WSI while all outputs have been allocated to driver DW5A. This is reflected in Table K1 where no investment is shown in line K1.17 as it is included in line K1.1. Table K4 shows the expenditure against each line and the 100% allocation of costs to WSI and 0% to DW5A.

Environmental Studies

The investment of £366k in 2008-10 relating to Water Resources progressed as part of the Start Early programme, which were not funded in the Final Determination, has been included in K1.38. As a result the Environmental Programme is £0.4m higher and the Water Quality reduced by £0.4m than reported in Table 5.5 of the Delivery Plan.

Grants and Contributions

Within our investment plan we have assumed grants and contributions will be applicable only to service diversions.

We have assumed the grants and contributions we will receive as set out in Table 2 both in 2007/08 and out-turn costs. These assumptions are consistent with the assumptions set out in our Delivery Plan.

	2010/11	2011/12	2012/13	2013/14	2014/15
45680 - Service Relocations - Water	0.881	0.859	0.838	0.818	1.595
45729 - Service Relocations - Sewers	0.194	0.190	0.185	0.181	0.352
SW Total 2007/08 Prices	1.075	1.049	1.023	0.998	1.948
SW Total Out-turn Prices	1.0	1.0	1.0	1.0	2.0

Table 2 – Grants and Contributions Assumptions

Within Table K we have set out the gross investment for the unallocated service diversion lines. The levels of investment and associated grants and contributions received have been based on historical trends. The net investment is calculable by deducting the grants and contributions set out in Table 3 above from the gross investment levels set out in Table K4.

For the Edinburgh Trams Project we have set out the net investment we anticipate making for the diversion of assets associated with this project. We have not used the gross costs as the diversion works are being undertaken by TIE and we are therefore making a contribution to TIE to cover the costs we are liable for under statute. As a result we will not receive grants or contributions from TIE and therefore have no gross costs.

All service diversions are classified as capital maintenance under the WSI and WWSI drivers and therefore have no impact on the asset additions value.

Infrastructure Charge Income

In row K1.109 -“Infrastructure charge" contributions for infrastructure assets, we have set out our forecast levels of Infrastructure Charge investment in Strategic Part 3 Assets of £25m and not our anticipated levels of income from Infrastructure Charge (which is set out as £55m in our Delivery Plan).

If the forecast income was entered in this line it would reduce line K1.118 Net Capital Investment below the level planned creating an inconsistency with our Delivery Plan.

Table K2 – Outputs

Growth Outputs – Part 4 Assets

All growth outputs associated with Q&SII, Q&SIIIa or Q&SIIIb projects delivering post March 2010 are recorded as outputs in the 2010-15 period and are included in lines K2.1 to K2.4 as agreed at our meeting with the Commission's staff on 8 February 2010.

The growth outputs shown in Table K2 are those outputs associated with planned Q&SIIIb quality projects or growth projects which have past Capex 3 / Milestone 2 (commitment). This profile is consistent with that set out in Table 10.7 of our Delivery Plan.

The balance of funds provided in the Final Determination has been allocated to rolled up lines 47633 Strategic Part 4 Wastewater Capacity and 47632 Strategic Part 4 Water Capacity which have no outputs forecast, consistent with the approved Technical Expression. The funding held in these rolled up lines will be allocated to named projects with confirmed outputs once developers meet the five criteria and the delivery project achieves Capex 3 /Milestone 2. The changes to the output profile over time will be reflected in our Delivery Plan updates.

Growth Outputs – Part 3 Assets

In line with the Final Determination we have set out £25m of investment in Strategic Part 3 assets, funded from infrastructure charges. All investment has been allocated within the 2010-15 period in line with the approach to funding Part 4 growth assets.

The investment has been allocated to three Q&SIIIa projects completing post March 2010, and delivering 6953 outputs as set out below. The outputs are included in line K2.3 and our Delivery Plan.

34350 – Storr Forest WTW Supply Zone – Growth, (1090 PE)
37730 – Gretna Water Supply – Phase 1 intervention (105 PE)
38132 – Forth Ports Trunk Main (5758 PE)

We have assumed the remaining profile of investment and have set out the funding in two rolled up and one named Q&SIIIb line as set out below:

47635 - Infrastructure Charge Investment for Network Reinforcement – Water,
47636 - Infrastructure Charge Investment for Network Reinforcement – Wastewater,
46384 - Dunfermline Eastern Expansion (DEX) – SR10.

No outputs have been associated with these lines as they will be confirmed once the defined projects reach Capex 3 / Milestone 2 consistent with the approach to Part 4 growth assets.

Lead communications pipe survey completed

The lead communications pipe survey is reported in K2.17 within the Drinking Water Quality OMD programme. However, the investment associated with the survey is reported as part of the investment for DW1B driver in K1.53 Opportunistic lead pipe replacement (DW1B) under Drinking Water Quality - Non OMD. It is included in the OMD related enhancement expenditure in K3.39.

Models to support Flooding Bill

The models to support the Flooding Bill are reporting in K2.37 within the Customer Service – OMD programme. However, the investment associated with the models is reported in K1.58 under Customer Service – Non OMD. It is included in the OMD related enhancement expenditure in K3.39.

Table K3 – OMD Inputs

OMD Baseline

The output profiles set out in K3 are the baseline for outputs reaching milestone dates on a quarterly basis to allow the calculation of the baseline OMD profile.

K3.35 Water strategic capacity (PE) committed to deliver, sets out the outputs to be reported as against driver WG1. We have entered the outputs including both Part 4 Strategic Capacity (WG1) outputs and Part 3 Strategic Capacity (WG5) outputs in this line to ensure consistency with the Delivery Plan. The annual profiles for each type of output are reported in lines K2.1 and K2.3, and at project level in K4.

OMD Baseline 7 Stage Projects

The projects covered by the 7 stage process have been included in Table K3 up to milestone M2 for both outputs and expenditure. The outputs, remaining milestone dates and forecast expenditure for delivery of these projects will be confirmed at milestone 2 and the OMD baseline updated to reflect this accordingly.

Basis of Data

The data set out in Table K3 has been calculated directly from Scottish Water's investment planning systems. Table K3 cannot be fully calculated from Table K4 as Table K4 is a project level plan containing some projects which deliver multiple outputs over many assets over a period of time. The projects which cannot be directly calculated from K4 are:

- Number of zones with reduced lead levels
- Number of DMAs subject to investigations
- Number of sites with increased security
- Number of backflow prevention devices installed
- Number of sites covered by drinking water safety plans
- Number of raw water sample points installed
- Number of dual manhole systems upgraded
- Number of WWTW brought into compliance with licence non-sanitary requirements
- Number of wastewater network assets made compliant with licence requirements
- Number of flooding asset risk assessments
- Number of properties removed from low pressure register
- Number of properties removed from low pressure register (Exclusions under Water (Scotland) Act 1980)
- Number of climate change studies
- Number of models to support the Flooding Bill

Each of the OMD Programme Groups has been allocated a letter as shown in Table 3 below and the projects delivering the outputs report the appropriate letter(s) in K4 Column 7 OMD.

OMD Reference	OMD monitoring	Output Value
A	Km of mains rehabilitated (including flushing and swabbing) to improve drinking water quality.	4,532
B	Number WTW receiving improved disinfection control	34
C	Number of treatment works improved to meet drinking water quality standards	6
D	Number of sites with reduced risk from cryptosporidium	45
E	Number of zones with reduced lead levels	64
F	Number of DMA subject to investigations	143
G	Type A Raw water supplies provided with treatment	5
H	Number of raw water sample points installed	230
I	Number of backflow prevention devices installed	275
J	Number of sites covered by drinking water safety plans	174
K	Number of tanker fill points installed	14
L	Number of sites with increased security	590
M	Number of water resource zones receiving company standard for security of supply (under 7 stage)	14
N	Number of water resource zones receiving company standard for security of supply	1
O	Improvements to the Wastewater Network (properties)	32
P	Number of properties alleviated from external sewer flooding (Commonwealth Games)	92
Q	Number of UID improved (under 7 stage)	197
R	Number of UID improved (excluding 7 stage)	26
S	Number of dual manhole systems upgraded	10
T	Number of WwTW discharges improved to meet new licence requirements	74
U	Number of WwTW upgraded to meet existing licence requirements	25
V	Number of WWPS upgraded to comply with existing licence requirements	23
W	Number of WwTW brought into compliance with licence non-sanitary requirements	83
X	Number of wastewater network assets made compliant with licence requirements	230
Y	Number of surface water systems upgraded	6
Z	Number of sludge treatment facilities improved to comply with safe sludge matrix	2
AA	Number of environmental studies undertaken	110
AB	Number of sites where malodour is reduced	4
AC	Number of properties removed from low pressure register	2,309
AD	Number of properties removed from low pressure register (Exclusions under Water (Scotland) Act 1980)	128
AE	Number of studies	12
AF	Renewable generation capacity (GWh)	25
AG	Number of assets protected from flood risk	26
AH	Number of Models to support the Flooding Bill	5
AI	Number of flooding asset risk assessments	294
AJ	Water strategic capacity (PE)	29,618
AK	Wastewater strategic capacity (PE)	22,555
AL	Lead Communication Pipe Survey	1

Table 3 – OMD Programme Groups

Table K4 – Investment Programme

Capital Maintenance Allocations

All Q&SII, Q&SIIIa & Q&SIIIb projects containing a capital maintenance element are funded from the SR06 allocation up until March 2010 and then from the SR10 allocation post March 2010 in accordance with the regulatory principles set out in the Final Determination. The total project expenditures set out in Table K4 for Q&SIIIb projects includes the capital maintenance investment funded from SR06 in 2008/09 and 2009/10 (column 17) and the SR10 allocation in 2010-15 (columns 18 to 22). The value of the maintenance investment is calculated using the driver allocation.

Q&SII & Q&SIIIa Capital Maintenance Projects Which Have Achieved Acceptance (M4)

All Q&SII and IIIa maintenance projects which have, or are forecast to achieve acceptance by 31 March 2010 have been rolled up to block lines that aggregate the residual spend until project closure. The projects have been rolled up by primary investment driver as set out in Table 4.

Rolled Up line	Driver
Water Infrastructure	WSI
Water Non Infrastructure	WSNI
Wastewater infrastructure	WWI
Wastewater non infrastructure	WWNI
Management & General	SS

Table 4 – Q&SII and Q&SIIIa rolled up lines for residual expenditure on capital maintenance projects

Uncommitted Capital Maintenance Projects

Capital maintenance projects which are not forecast to achieve Capex 3 approval (M2) by 31 March 2010 have been rolled up to show forecast spend against drivers and have not been named, as the final scope and timing of the investment has not been committed.

Growth Allocations

All Q&SII, Q&SIIIa & Q&SIIIb projects containing a growth element are funded from the SR06 allocation up until March 2010 and then from the SR10 allocation post March 2010. The total project expenditures set out in Table K4 for Q&SIIIb projects include the growth investment funded from SR06 in 2008/09 and 2009/10 (column 17) and the SR10 allocation in 2010-15 (columns 18 to 22). The value of the growth investment is calculated using the driver allocation.

Q&SII & Q&SIIIa Growth Projects Which Have Achieved Acceptance (M4)

All Q&SII and Q&SIIIa growth projects which have, or are forecast to achieve acceptance by 31 March 2010 have been rolled up to show the residual spend until project closure. The projects have been rolled up by driver as set out in Table 5.

Rolled Up Line	Driver	Driver
13002 Q&SII Water Growth	WG1	
13009 Q&SII Wastewater Growth	SG1	SG2
39015 Q&SIIIA Wastewater Growth	SG1	SG5
39016 Q&SIIIA Water Growth	WG1	WG5

Table 5 – Q&SII and Q&SIIIa rolled up lines for residual expenditure on growth projects

Q&SII & Q&SIIIa Enhancement Projects Which Have Achieved Sign-Off (M5)

All Q&SII and IIIa enhancement projects which have, or are forecast to achieve Regulatory Sign-Off by 31 March 2010 have been rolled up to show the residual spend until project closure. The projects have been rolled up by driver and investment in groups of up to 5 drivers to allow the driver allocations to be shown in Table K4. The rolled up driver blocks are set out in Table 6.

Rolled Up Line	Driver	Driver	Driver	Driver	Driver
13000 Q&SII WQ Projects	DW1	DW2	DW3	DW4	-
13003 Q&SII Environmental UCSO	EC1/1	EC3/1	EC1/4	WQ2/1	-
13004 Q&SII Environmental Batch 1	EC1/4	EC2/2	EC3/2	WQ2/1	-
13005 Q&SII Environmental Batch 2	EC1/2	EC3/2	WQ2/1	WQ3/3	-
13008 Q&SII WIC16 Ww11	Ww11	-	-	-	-
39001 Q&SIIIA FTP Projects	SG3	EC01	EC02	EC03	-
39002 Q&SIIIA UIDs Batch 1	EC01	EC02	EC04	EC08	EC10
39003 Q&SIIIA UIDs Batch 2	EC01	EC04	EC07	EC10	NH01
39004 Q&SIIIA Odour	CS2	-	-	-	-
39005 Q&SIIIA Abstraction/Flow Monitoring	WR1	WR5	-	-	-
39006 Q&SIIIA Security	DW9	-	-	-	-
39007 Q&SIIIA DWQ Batch 1	DW2	DW4	DW4A	DW11	DW13
39008 Q&SIIIA DWQ Batch 2	DW3	DW3A	DW3B	DW3C	DW3D
39009 Q&SIIIA DWQ Batch 3	DW3F	DW3G	DW3H	DW3J	DW3K
39010 Q&SIIIA Environmental Batch 1	EC01	EC08	NH01	WQ01	-
39011 Q&SIIIA Environmental Batch 1	EC01	EC03	EC04	EC09	EC10
39012 Q&SIIIA Waste Management	EC11	-	-	-	-
39013 Q&SIIIA Interruptions to Supply	CS12	-	-	-	-
39014 Q&SIIIA Sewer Flooding	CS11	-	-	-	-
39017 Q&SIIIA Pressure	CS1	-	-	-	-

Table 6 – Q&SII and Q&SIIIa rolled up lines for residual expenditure on enhancement projects

Enhancement Programme Q&SIIIb removals

Project funding for projects which were financed in the Final Determination where the outputs have been removed in Technical Expression V 7.1 (Final) has been included in

Table K4. The drivers remain as set out in the Technical Expression but the outputs have been removed allowing reconciliation of the finances to the Final Determination and outputs to the Delivery Plan. The Technical Expression Autocode has been set as 'Removed' for these projects.

The projects covered by this are:

- 30130 Carloway WWTW upgrade,
- 30399 Keith WWTW upgrade; and
- 45055 Ellon WWTW upgrade

Actual early start investment incurred on enhancement projects which were originally essential but were subsequently removed from the final programme by the quality regulators is set out under the enhancement programme with no outputs and the Technical Expression Autocode has been set as 'Aborted' to allow reconciliation of the finances.

Enhancement Programme Unallocated & 7 Stage Funding

OMG Unallocated Funding

The £180m funding allocation set out in the Final Determination for the other OMG priorities has been profiled based on Scottish Water's view of how this may be invested and the potential size of schemes. Until the outputs to be funded are confirmed and Scottish Water has a clear view of the size and complexity of the projects to deliver them, the profile will remain notional. Our plan assumes the full utilization of the funds set out, and that there may be projects initiated using this funding but completed using funding from the next period supporting continuity of investment. No costs are shown post March 2015.

7 Stage Process

The UID programme in Glasgow and Security of Supply improvements in 14 water resource zones are included in the 7 stage process. We have profiled these projects based on our understanding of how the outputs may be delivered and have assumed the funding allocated is fully utilized. We have confirmed dates up to Milestone 2 and then estimated an investment profile thereafter. Until Milestone 2 is reached and the funding and outputs are agreed the remaining Milestone dates cannot be set out with any certainty.

Seafield WWTW (PFI) Malodour Control Investment

The investment at Seafield WWTW (PFI) is included within Table K in Autocode '46417 – Seafield WWTW – Odour Improvement' with a driver code CS2.

Dalmuir WWTW (PFI) Compliance Improvement Investment

In line with our Delivery Plan we have included £17m of the £30m allowance set out by the Commission in the Final Determination as capital investment for improving compliance at Dalmuir WWTW with the other £13m assumed as operating costs consistent with the Delivery Plan. The split of the funding and investment profile is based on our current view of how improved compliance may be achieved and will be reviewed once the final approach has been agreed with the Commission. The investment is set out in Autocode '30189 – Dalmuir PFI WWTW Upgrade' with a driver code EC01A.

Final Determination Additions

Within Table K4 we have included a single line for each of the following additional requirements included in the Final Determination. No outputs have been entered as these remain to be agreed with the stakeholders at OMG as set out in our Delivery Plan. The details of each project line are set out in Table 7.

Autocode	Name	Driver Code	Regulatory Sign Off
47639	Household Metering Trial	CS19	OMG
47640	Incentivising Developers to Adopt Water Efficiency Measures	CS18W	OMG
47638	Strengthening the Regulatory Framework	CS20	WICS
47641	Developing Section 29E Opportunities	CS18S	WICS
47637	Sustainable solutions to Cryptosporidium Crypto Studies	DW23A	DWQR

Table 7 Final Determination Additions

Project Disaggregation

Within the enhancement programme there are a number of block programme lines, as we plan to deliver these areas as single projects (sub-programmes) or we cannot disaggregate the investment at this time as it is driven by customer demand. The most sizeable areas are:

- Strategic Part 4 capacity water and wastewater; this will be scheduled out as development rates and asset needs achieve the five criteria set out in the Ministerial objectives. The outputs for delivery will only be agreed once Capex 3, project commitment is achieved.
- Reasonable cost contributions; this cannot be disaggregated as it is driven by developer demand.
- Internal sewer flooding; this cannot be disaggregated as we have still to confirm the priority properties to be removed from the register.
- Q&SIV Early start; this cannot be disaggregated as we do not yet know the list of enhancement projects to be delivered. We have estimated a profile of investment that should support continuity of investment.
- Enhancement of water security; this has been left rolled up for security purposes, however the list of sites included has been agreed in a list shared with the regulator.
- Customer requested and opportunistic lead communications pipe replacement; this will be delivered in line with customer demand and the delivery of the quality and service driven mains rehabilitation programmes.

Milestone Dates on Study Projects

There are a number of study projects within Table K which will inform Q&SIV investment priorities. As these projects do not deliver a change in operational practice or an asset change project, the following assumptions have been applied to the milestone dates.

The stages of study will be:

1. Milestone 1 – Scope, data improvement requirements, boundaries and methodology of study agreed with Quality Regulators (Capex 2 agreed).
2. Milestone 2 - Cost of study confirmed and approval to commit expenditure to deliver full study (Capex 3).
3. Milestone 3 – Not applicable, no start on site, Milestone 2 will allow study work to begin, Milestone 3 recorded as N/A in tables.
4. Milestone 4 – Not applicable, acceptance and sign-off of study will be a combined activity as SW and Regulator will work together to deliver the agreed study output.
5. Milestone 5 – Date at which the study is completed and signed off by Regulator, including time for review of final reports (Regulatory Sign-Off Form).

In Table K4 we have shown the dates for M3 and M4 as N/A as they are not appropriate. The programme areas covered by these assumptions are set out in Table 8.

Programme Area
Number of DMAs subject to water quality investigations.
Number of environmental studies undertaken
Number of climate change studies
Number of models to support flooding bill
Number of flooding asset risk assessments
Number of Drinking Water Safety Plans

Table 8 Programme areas covered by study assumptions

Bathing Water Studies LBU Date

In the Technical Expression v7.1(Final) the 2015 bathing water studies are set out with a Latest Beneficial Use date of 31 December 2011, however the completion date for all the 2015 studies is set out as 30 September 2012 in our agreed Delivery Plan. We expect to complete 14 of the studies by December 2011 and the remaining 13 (set out in Table 9) by September 2012. Table K4 is consistent with the Delivery Plan but not the LBU dates in Technical Expression v7.1 (Final). SEPA have confirmed that they are content with the dates in the Delivery Plan and Table K.

Autocode	Name	Delivery Plan Regulatory Sign Off Date	Technical Expression V7.1 (Final) LBU Date
45462	Maidens Bathing Water Study	30-Sep-12	31-Dec-11
45464	Lossiemouth East Bathing Water Study	30-Sep-12	31-Dec-11
45465	Kinghorn Harbour Bathing Water Study	30-Sep-12	31-Dec-11
45468	Southerness Bathing Water Study	30-Sep-12	31-Dec-11
45473	Irvine Bathing Water Study	30-Sep-12	31-Dec-11
45474	Saltcoats/Ardrossan Bathing Water Study	30-Sep-12	31-Dec-11
45476	Aberdeen Bathing Water Study	30-Sep-12	31-Dec-11
45477	Stonehaven Bathing Water Study	30-Sep-12	31-Dec-11
45481	Portobello (West) Bathing Water Study	30-Sep-12	31-Dec-11
45739	Lunderston Bay Bathing Water Study	30-Sep-12	31-Dec-11
45741	Rosemarkie Bathing Water Study	30-Sep-12	31-Dec-11
45746	Kirkcaldy Seafield Bathing Water Study	30-Sep-12	31-Dec-11
45751	Rosehearty Bathing Water Study	30-Sep-12	31-Dec-11

Table 9 Bathing Water Studies with conflicting Delivery Plan and Technical Expression LBU Dates.

Flooding Bill Models LBU Dates

In the Technical Expression v7.1 the five Flooding Bill Models have a Latest Beneficial Use Date of the 31 March 2014, however in the Delivery Plan we have profiled the completion of four of the models by 31 March 2014 and the final model by 31 March 2015. Table K4 is consistent with the Delivery Plan but not the LBU dates in Technical Expression v7.1 (Final).

This inconsistency has arisen as a result of the move to a five year delivery period. We assumed that the studies would be spread over five years to allow the learning gained from early studies to be used in the later studies. In addition we were concerned that the level of consultation SEPA were required to undertake to implement this new legislation would slow the confirmation of the five model areas, preventing delivery of all models by 31 March 2014.

We are actively working with SEPA to confirm the model areas as quickly as possible and once they have been confirmed will make any necessary adjustments to the Technical Expression (through the OMG) or to the Delivery Plan (through annual updates) once the scopes and timescales are agreed.

Cryptosporidium Solution Innovative Approach

Scottish Water's Delivery Plan is based on delivering some of the high risk Cryptosporidium sites (DW23) through innovative solutions. The use of innovative solutions may not be successful at all sites, and as such, we have set aside a contingency of £2.285m (2007/08 prices) to cover the risks associated with this approach for the entire DW23 programme in 'Autocode 476676 – DW23 Innovative Solutions Approach Contingency'. There are no outputs associated with this line as it is simply an investment holding line from which DW23 projects will draw 'contingency' if the innovative approach is not successful.

Opex Impact

The opex impact resulting from the projects has been reported in '£k' rather than '£' as indicated in the Guidance documentation.

Q&SIIIa - Improve drinking water for 1.5m people

The Q&SIIIa Ministerial Directions specified an output measure of 'Improved drinking water for 1.5m people', with an objectives output value of 3.00m PE agreed with the DWQR, as set out in our Delivery Plan.

The Q&SIIIa Technical Expression v11, however, set out a population equivalent of 4.26m PE people at an asset level and this was reported in the OMG graphs. Through the projects delivered to date the agreed objectives output of 3.00m has been delivered. The delivery of the water quality projects which are forecast to achieve regulatory sign-off post March 2010 will result in the delivery of the remaining technical expression (and OMG measured) outputs (1.25m PE) as set out in Column 90 of Table K4.

Changes to Local Authority Data

The Local Authority Data for three projects has been updated in Table K4 from those set out in the Technical Expression v7.1 (Final). The details of these changes are set out in Table 10.

Project ID	Project Name	TE - Unitary Local Authority	Table K - Unitary Local Authority
45222	Distribution Water Quality Rehab - Rhenigidale WI RSZ	Highland	Western Isles
47607	Stromness UWWT Improvements Phase 3	Highland	Orkney Islands
45744	Broadsands Bathing Water Study	Scottish Water Wide	East Lothian

Table 10 Updates to Local Authority from Technical Expression

P Tables – Tariff Basket Information

Wholesale Non-household: Revenue and tariffs

General comments and background

For wholesale primary revenues, settlement charges due from Licensed Providers to Scottish Water are calculated by the Central Market Agency (CMA). The data to support the calculations is the market data set of eligible Supply Points registered at the CMA. The data is maintained, amended and updated following the processes and other requirements set out in the Market Code and the Code Subsidiary Documents.

Following the opening of the market, a number of issues affecting settlement were identified. Since the last Annual Return, there has been considerable progress in resolving these matters. A number of issues remain and these are explained below at the relevant section of the report.

Data Sources

The CMA calculates wholesale primary charges by undertaking a series of settlement runs in respect of each month. For each settlement run, the CMA provides an aggregated settlement report which is used by Scottish Water for billing purposes and thereby is reflected in the General Ledger. Additionally for each settlement run, to enable reconciliation of wholesale charges by market participants, the CMA also provides a disaggregated settlement report. These disaggregated settlement reports have been used to populate the Annual Return P Tables and A Tables, consistent with last year.

One provisional settlement run, P1, and three reconciliation runs are undertaken for each month, R1, R2 and R3. The required frequency of runs is set out in the market documents and these are undertaken according to a timetable published by the CMA. Broadly, R1 is run just after the month end; R2 is undertaken two months after that, while R3 is run six months after the month end. Additionally, a Final Reconciliation run is undertaken for the relevant tariff year. In line with the Market Code and Code Subsidiary Documents as recently amended to cater for the Final Reconciliation, all settlement runs for 2009/10 are expected to complete in February 2011. Therefore the P Tables show the billed revenue at the end of March 2010 and not the final settlement position for 2009/10. The latest settlement reports available at the end of March 2010 and which have been used to populate the P Tables are as follows:

- April 2009, May 2009, June 2009: **3rd Reconciliation (R3)**
- July 2009, August 2009, September 2009, October 2009, November 2009, December 2009: **2nd Reconciliation (R2)**
- January 2010, February 2010: **1st Reconciliation (R1)**
- March 2010**: Provisional (P1).**

Tariffs

The tariffs reported or forecast in the P Tables are all taken from the 2009/10 and 2010/11 Wholesale Charges Schemes as approved by the Water Industry Commission for Scotland and published by Scottish Water.

Revenues

Revenue in the P Tables is derived by the application of tariffs from the Wholesale Charges Scheme to tranches of consumption, counts of meters and Supply Points. (Supply Points are as defined in the Market Code.) Revenue for 2009/10 has been reconciled to wholesale billed revenue in the General Ledger, prior to accruals and provisions, to less than 0.16% overall when taking account of negative charges.

In certain circumstances, negative charges are calculated by the CMA for a Supply Point. This is usually due to issues with meter readings and incorrect treatment of meter rollovers by CMA systems and, in most cases, the negative charges will be replaced with positive values following resolution of the issue using established processes at the CMA. At the end of March 2010, negative volumetric charges of £461K applied to water Supply Points and £240K to sewerage Supply Points over the 2009/10 financial year. This sum represents a substantial reduction on the position compared to last year (when negative charges for water were £2.9m and £2.7m for waste water) and reflects the continued stabilisation of the market. A Metering Working Group has been established by the Market Participants Forum to review metering related issues and this working group is considering appropriate measures further to reduce the problem.

Because the P Tables do not allow for the application of negative volumetric charges, these amounts are not currently included in the scope of the tables which are therefore overstated by £700K compared with the equivalent actual revenue recorded in the General Ledger.

The P Tables and A Tables are populated based on reports from Scottish Water's Reconciliation datamart which contains the disaggregated settlement reports issued by the CMA. A known Scottish Water IT issue causes the loading of the settlement reports into the datamart to fail for a small number of lines for each month resulting in incomplete data e.g. missing meters. The revenue associated with these missing lines is £64K in 2009/10. The values in the P Tables are therefore understated by this amount. Following resolution of the technical issue, the P Tables will be restated for our final submission after the query process.
P Table revenue has been reconciled to the General Ledger after adjusting for these negative charges and missing meters as shown in the table below:

2009/10 Wholesale Primary Revenue	£m
Total Billed Revenue from GL at 31 March 2010	322.06
Total Billed Trade Effluent Revenue	23.41
Total Billed Revenue from GL at 31 March 2010 excluding TE	298.65
Total Primary Water & Waste Water Revenue for 2009/10 from P Tables	299.83
Negative Primary Water charges included in Billed Revenue but not in P Tables	-0.24
Negative Primary Waste Water charges included in Billed Revenue but not in P Tables	-0.46
Revenue associated missing lines from Reconciliation datamart due to technical issue	0.064
Total P Tables revenue after adjusting for negative charges and missing meters	299.189
Overall Variance	0.54
% Variance	0.18%

Counts of meters and supply points

The approach taken to derive counts of meters and Supply Points is consistent with last year's Annual Return. In order to reconcile P Table revenue as closely as possible to billed revenue in the General Ledger the average number of meters over the entire year, weighted by days in charge, has been used rather than a snapshot taken in September.

This average number of meters over the year has been calculated using the number of days in which wholesale charges apply per meter from the CMA settlement reports, as shown in the examples below:

	Meter 1 Days	Meter 2 Days	Meter 3 Days
April 2009	30	30	0
May 2009	31	31	0
June 2009	30	30	0
July 2009	31	31	0
August 2009	31	31	0
September 2009	30	30	0
October 2009	31	0	0
November 2009	30	0	0
December 2009	31	0	31
January 2010	31	0	31
February 2010	28	0	28
March 2010	31	0	31
Total days	365	183	121
Value included in P Tables = (Total days/365)	1.0	0.50	0.33

The above approach has been used to populate all meter and Supply Point counts for 2009/10 and has enabled revenue to be reconciled closely to the General Ledger.

Counts in the P Tables and A Tables

Both the P Tables and the A Tables contain counts relating to non-household properties. These counts can be related to one another but are not directly comparable. A reconciliation between billed measured and unmeasured water meters and Supply Points in the two Tables is set out below for illustrative purposes.

There are a number of differences to take account of when reconciling between the Tables.

Firstly, the P Tables include counts of meters and assessed meters at non-household Supply Points. As described in the previous section, these counts are based upon the average number of meters across the entire year, weighted by days in charge. The A Tables include counts of non-household Supply Points based on a snapshot at September 2009, the mid-point of the year.

Secondly, the P Tables are based on meters whilst the A Tables are based on Supply Points. There is a small group of Supply Points at which multiple meters are installed. The number of meters is therefore higher than the equivalent number of Supply Points.

Thirdly, in the A Tables exempt Supply Points are included in the billed property counts whereas in the P Tables they are reported separately.

The table below summarises the steps to follow to reconcile the two.

		Method of Measurement	Unmeasured	Measured
1	P Tables: Actual & Assessed Meters	Weighted Average across entire year	44,482	77,928
2	Erroneous Assessed Meters associated with Field Troughs	Weighted Average across entire year	1,229	0
3	Actual & Assessed Meters excluding erroneous excluding line 2 above	Weighted Average across entire year	43,253	77,928
4	Actual & Assessed Meters	Distinct meters in charge at any point in entire year	45,746	81,946
5	Supply Points	Distinct Supply Points in charge at any point in entire year	43,998	77,275
6	Exempt Supply Pojnts	Distinct Supply Points in charge at any point in entire year	4,630	1,148
7	Total Supply Points including Exempts	Distinct Supply Points in charge at any point in entire year	48,628	78,423
8	A Tables: Supply Points (inc. Exempt)	Count of Supply Points in charge in September 2009	46,957	75,831

For the purposes of the table above, ‘Measured’ indicates meters and Supply Points which are subject to fully measured charges i.e. it excludes those which are subject to transitional phasing from unmeasured to measured charges under the Business Metering Programme.

The erroneous meters associated with Field Troughs relate to an issue identified during the 2008-09 Annual Return and referenced in the response to query AR27. These are explained further in the commentary to P9.1-5 below. The incorrect data was removed from the CMA systems during 2009/10. The mechanism and timing of the corrective actions implemented meant that the erroneous assessed meters were still partially included in the P Tables but that the associated erroneous properties were fully excluded from the A Tables.

The difference in Supply Points in charge at any point in the year (line 7) and those in charge in September 2009 (line 8) will be the net effect of new connections, gap sites and disconnections.

Consumption

The Wholesale Charges Scheme includes a number of consumption bands, each of which is charged at a different unit rate, in addition to a capacity charge which applies to all consumption up to a threshold determined by meter size.

The P Tables calculate wholesale volumetric charges by applying consumption over the full year to the relevant consumption bands and unit rates in the Wholesale Charges Scheme. The CMA's systems also use the Wholesale Charges Scheme as the basis for all calculations but, as charges are estimated in advance on a monthly basis, including for reconciliation settlement runs, a different method is used to derive the charges. In each settlement run total annual consumption is estimated and a single Estimated Weighted Average (EWA) unit rate is derived for each Supply Point to take account of all consumption in all charge bands over the year. The final position is not calculated until the Final Reconciliation.

In certain circumstances, generally as a result of issues with a meter reading or technical data, negative consumption can be calculated at meters and, at some of those meters, negative volumetric charges are applied. A related issue is the calculation of an EWA value of zero in certain circumstances relating to large negative consumption. Both issues have been significantly reduced compared with last year's Annual Return as the result of process changes at the CMA and improved quality of meter reading data.

Consumption has been included in the P Tables where the EWA for a given Supply Point in a given month is not equal to zero (and therefore a charge applies to the consumption). This ensures that the P Tables reconcile as closely as possible to the General Ledger.

Apparent Discrepancies between Meter Counts and Consumption

In many of the tables containing consumption, apparent discrepancies can be observed between counts of meters for a given meter size and the corresponding allocated tranche and capacity volume at that meter size. This is demonstrated by the following extract from the table:

Line Number	Description	Meter Size	Units	2009/10
P25.8	Tariff multipliers: Licensed Provider: tariff meters	200mm	nr	2
P25.19	Tariff multipliers: Licensed Provider: allocated tranche	100mm	m3	30

In this example, as the Allocated Tranche is up to the first $20m^3$ consumed per meter and these are large meters, it might reasonably be assumed that the Allocated Tranche would be the number of meters multiplied by 20 i.e. $40m^3$. However, the number of meters (calculated on a weighted average days in charge basis as set out above) is 1.52, rounded up to 2 in line P25.8. This reflects the fact that one of the two 200mm meters in this category was only in charge for a little over half of the year.

Where a meter is in charge for only part of the year, the Allocated Tranche and capacity volume are pro-rated accordingly by the CMA. Therefore in this case, the allocated tranche is $20m^3$ multiplied by 1.52 full-year-equivalent meters, which equals the $30m^3$ shown in line P25.19.

Forecast data for 2010/11

Forecast data for the 2010/11 financial year has been derived using the growth factors from the Final Determination applied to the actual data for 2009/10. The Business Units growth factor of 0.7% has been applied to counts of meters and Supply Points and the Water Demand growth factor of 0.3% has been applied to consumption. Tariff rates have been taken from the 2010/11 Wholesale Charges Schemes as approved by the Water Industry Commission for Scotland and published by Scottish Water. It should be noted that, as a result, the 2010/11 forecast will differ from the data in the Final Determination as the 2009/10 figures now reflect actual data.

Final reconciliation position 2009/10

As noted above, a number of reconciliations have still to be undertaken in respect of 2009/10 with Final Reconciliation expected in February 2011. The P Tables represent the billed position at the end of March 2010 but there will be further movements before the final position is known. Experience in 2008/09 has shown that further movements in revenue are likely as there are a number of factors which will affect tariff multipliers, consumption and revenue, both upwards and downwards, many of which are not within the control of Scottish Water. These factors include the impact of new meter readings; changes by Licensed Providers to vacancy status or Rateable Value at Supply Points using the retrospective amendment facility; data verification by all market participants; the actual impact of the correction of meter rollovers; and any adjustment of Schedule 3 discounts to take account of actual rather than forecast consumption over the year, to be consistent with the terms of the Agreement.

Confidence Grades

The following confidence grades have been applied to data in the P Tables:

- All tariff data has been assigned a confidence grade of A1 given that it has been sourced directly from the Charges Scheme.

- For non-household Supply Points, all 2009/10 primary charge revenue and tariff multipliers have been assigned a confidence grade of B2. Although the revenue has been reconciled closely to revenue in the General Ledger, the underlying data is, in the case of some data items, maintained by Licensed Providers. Scottish Water has no visibility of the internal data management processes undertaken by Licensed Providers. This confidence grade is consistent with the 2008/09 Annual Return with the exception of volumetric charges and consumption data which were given a confidence grade of B3 last year. The improved confidence grade reflects the reduction in negative charges from £5.6m to £0.7m as a result of improved corrective processes at the CMA.

- All non-household 2010/11 primary values have been assigned a confidence grade of B3 which reflects the uncertainty associated with forward looking projections.

- All non-household non-primary values have been assigned a confidence grade of B3. This is an improvement on the grade of B4 used last year and reflects the move from manual to automated billing processes for all non-primary charges except some Building Water applications.

- Table P1 and P2 are automatically calculated, and the confidence grades assigned reflect the grades reported in the other tables.

Changes in Occupancy Status

In accordance with section 3.1.1 of the Wholesale Charges Scheme, the CMA does not apply wholesale primary charges at vacant Supply Points. The occupancy status of a Supply Point is a Licensed Provider-owned data item, which cannot be changed by Scottish Water.

In the last year, the occupancy status of a significant number of Supply Points has been changed from occupied to vacant by the registered Licensed Provider, causing wholesale charges to be suspended. In some cases, the date of vacancy has been backdated at the CMA. The P Tables show meters and Supply Points which attract wholesale charges and therefore exclude any which are flagged as vacant at the CMA.

This change in occupancy status has resulted in a significant drop in counts of meters and Supply Points across all of the P Tables compared with last year. The table below provides a summary of the increase in counts of meters at vacant Supply Points compared with the 2008/09 Annual Return, calculated on the same 'weighted average' basis as the counts of meters in charge:

Meter Size	Water Actual Meters	Water Assessed Meters	Sewerage Actual Meters	Sewerage Assessed Meters
20	2,072	1,673	1,782	1,466
25	149	31	129	29
40	45	10	12	9
50	51	2	16	2
80	-19	1	-14	1
100	-5		-3	
150	-3		-3	
200	0			
300				
Total	**2,289**	**1,718**	**1,920**	**1,508**

Scottish Water has initiated a project to review the status of all Supply Points flagged as vacant at the CMA, undertaking a comparison with other data sources and an extensive programme of field visits to confirm the current status. Where the Supply Point is found to be occupied, the details are passed to the relevant Licensed Provider to update the occupancy status at the CMA.

Table P3 Water Service - Unmeasured Household

The following commentary also applies to Table P5 - Waste Service - billed unmeasured household properties. Both tables are reported with a confidence grade of A2 which reflects the continued use of WIC4 data.

P3.1- P3.50 & P5.1 - P5.50 Household Properties - billed unmeasured Connected and billed household properties

The derivation of the household property numbers is explained in the commentary to line A1.1.

P3.38 - P3.46, P5.38 - P5.46

As with last year the number of households with a new discount of up to 25% is sourced directly from WIC4. The resulting Band D equivalents are reported in lines P3.38 - P3.46 and P5.38 - P5.46.

P3.47, P5.47

The number of billed households (including exempts) is sourced from the complete WIC4 report for 2009/10.

The number of Band D equivalent water billed unmeasured properties has increased by 20,259 to 1,950,040. This is higher than the forecasted position on last year's Annual Return of 1,941,691. This is mainly due to a decrease in the number of exempt and void properties by 5,890 which represents properties that were, in the past, connected but not billed.

The same logic can be applied to the number of Band D equivalent wastewater unmeasured households which increased by 17,268 properties. Again, this is higher than forecast due to approx 6,010 existing properties being brought into charge.

P3.50, P5.50

Total Revenue has increased by £16.42m for water and £17.82m which is higher than last year's forecast due to the movement of existing properties being brought into charge.

Table P4 Water Service - Measured Household

P4.1 - 4.5 Household Properties - billed on measured basis: tariff meters

There has been a decrease of 31 properties since last year's return with a further forecasted drop in households served by a metered supply of 29 in 2010/11. The confidence grade remains A2.

P4.6 - 4.9 Volumes - Measured Household Properties

The decrease in billed volume is consistent with the decrease in billed households. The confidence grade remains A2.

Table P5 Waste Service - Unmeasured Domestic

The movements in table P5 have been outlined in the commentary to table P3. Again the actual increase was more than expected mainly due to properties being brought into charge.

Table P6 Wastewater Service - Measured Household

P6.1 - 6.5 Measured household connected properties

The number of households has decreased by 13 to 168 due to an overall reduction in the number of households served by a meter. The confidence grade remains at A2

P6.6 - 6.9 Volumes - Measured household Properties

No significant change has occurred in the year and the confidence grade remains at A2

Table P7 Wastewater Service - Property Drainage

P7.1 - 7.50 Property Drainage for Household Properties Billed Measured

No significant change has occurred in the year and the confidence grade remains at A2

Table P8 Wastewater Service - Roads Drainage

P8.1 - P8.50 Roads Drainage for Household Properties Billed Measured

No significant change has occurred in the year and the confidence grade remains at A2.

Table P9 Water - wholesale - primary revenue: wholesale water charges (assessed) to licensed providers through charges scheme

P9.1- P9.5 Tariff multipliers: Licensed Provider: assessed meter sizes

Assessed meter charges are based on the Rateable Value at the property. An assessed meter size is assigned to the Supply Point based on Rateable Value. Across all meter sizes, the number of assessed meters has dropped by 5,532 since last year.

This is primarily due to the removal from the market of 4,989 assessed meters compared with 2008/09. These had been erroneously created as charge attributes of field trough services at Supply Points at market opening. This issue was described in the response to query AR27 relating to last year's Annual Return. Prior to migration into the market, these troughs had been established in Business Stream's Hi-Affinity system with their own Property References i.e. the troughs in question were established as stand-alone Property References with no association to any other Property Reference such as a farm. At migration, as this group had its own property references, separate Supply Points were created for the troughs. Where the Supply Points were unmetered, they were set up at the CMA with unmetered fixed water service attributes as well as the trough charge attributes.

Data changes were made at the Supply Points concerned in order to remove the unmetered fixed water charges at the CMA Central System. The changes were implemented between 27 November and 2 December 2009 and the assessed meters were therefore excluded from all settlement runs used in the Annual Return except the July, August and September R2 runs which were run prior to the data changes. Charges for these months will be corrected at the next settlement run. As the assessed meters are still present in these three months and meter counts in the P Tables are calculated

on a weighted average ‘days in charge’ basis, the reduction in meters resulting from this change is 3,727 compared with 2008/09.

Charges for field troughs at these Supply Points have not been affected by the changes.

In addition to the removal of these erroneous assessed meters, there has been a further reduction of 1,718 assessed meters due to changes in occupancy status by the Licensed Provider, namely from occupied to vacant, thus removing the Supply Point from charge.

The total reduction in assessed meters due to these two factors is 5,445.

P9.25-9.29 Tariff multipliers: Licensed Provider: actual meter sizes

The counts of meters in lines 25-29 reflect those actual meters installed at Supply Points which are subject to transitional phasing arrangements from unmeasured to measured charges, as specified in section 4.1 of the 2009/10 Wholesale Charges Scheme. In addition, those assessed meters at Supply Points which remain unmetered are included in lines 25-29 as specified in page 6 of the P Tables definitions.

The number of actual meters in lines 25-29 is slightly higher than the assessed meters in lines 1-5 for the reasons set out below.

There are a number of Supply Points where multiple meters have been installed under the Business Metering Programme, for example due to the presence of more than one supply into the premises. In these instances, there will be one assessed meter but multiple actual meters.

The vast majority of the actual meters reported are those which had been installed under the Business Metering Programme and notified to the CMA. There are a small number of additional meters which are included in lines 25-29, consistent with the 2008/09 Annual Return. These additional meters are either existing meters at multi-meter Supply Points where an FBM meter has been installed or because they are erroneously subject to transitional phasing arrangements due to a known issue affecting market processes, namely gap sites and routine meter installations (outside the scope of the FBM programme). This issue accounts for a significant proportion of the 80mm and 50mm meters shown, a meter size which would not typically be installed under the FBM programme. This issue is due to be resolved in the CMA’s software release in September 2010. In the meantime, manual work-arounds are in place to minimise further occurrences. A data cleanse exercise to correct all such wrongly flagged Supply Points will follow the implementation of the software release.

As a new regulatory period starts in 2010/11, Scottish Water suggests this would be an appropriate time to amend the P Tables to enable the remaining fully unmeasured Supply Points to be separately reported. This would allow reporting only of actual meters in lines 25-29 and provide greater transparency on the actual installed meter base.

P9.49 Tariff multipliers: exempt Supply Points

The number of exempt water Supply Points has increased by 25 since last year. This is the result of new applications from Licensed Providers on behalf of Supply Points which have always been eligible for exemption but have not previously applied, consistent with section 3.1.5 of the Wholesale Charges Scheme. Exemptions were granted at 51 new water Supply Points during 2009/10. These were granted throughout the year; the resulting increase in the weighted average ‘days-in-charge’ count of Supply Points was 25.

Tables P10, P11, P12 and P13 – Water – wholesale – primary revenue: wholesale water charges (measured) to licensed providers through charges scheme

General comments

Meters at measured Supply Points have been allocated between tables P10, P11, P12 and P13 according to total consumption at the Supply Point over the year. This is a slight refinement on the 2008/09 Annual Return where meters were reported according to total consumption at the individual meter over the year. As a result of this change, the Allocated Tranche (lines 12-21) in sheets P11, P12 and P13 does not always equal the number of meters multiplied by the allocated tranche of $20m^3$. This is due to the inclusion of multi-meter Supply Points where the overall consumption at the Supply Point is such that it requires inclusion in the appropriate sheet, but where some individual meters may still have consumed less than the allocated tranche of $20m^3$ in the year.

The table below shows total measured meters, excluding Supply Points subject to Schedule 3 agreements, (i.e. the sum of tables P10, P11, P12 and P13).

Meter Size	2008/09 actual	2009/10 actual
20mm	67,505	65,987
25mm	9,267	8,874
40mm	1,397	1,346
50mm	1,190	1,172
80mm	409	395
100mm	91	88
150mm	25	18
200mm	7	6
250mm	3	3
300mm	4	2
Total	79,898	77,890

Overall meter counts across the four tables are 2,008 lower for 2009/10 than in 2008/09. This is primarily due to a reduction of 2,289 meters due to changes in occupancy status, namely to be flagged as 'Vacant' by the registered Licensed Provider over the last year removing them from charge, offset by gap sites and new connections.

Table P14 Wastewater - wholesale - primary revenue: foul sewerage charges (assessed) to licensed providers through charges scheme

P14.1-14.5 Tariff multipliers: Licensed Provider: assessed meter sizes

Assessed meter charges are based on the Rateable Value at the property. An assessed meter size is assigned to the Supply Point based on Rateable Value. Across all meter sizes, the number of assessed meters has dropped by 1,841 since last year.

This is primarily due to a reduction of 1,508 assessed meters caused by changes in occupancy status, namely to be flagged as 'Vacant' by the Licensed Provider, thus removing the Supply Point from charge.

P14.20-14.24 Tariff multipliers: Licensed Provider: actual tariff meters

The counts of meters in lines 20-24 reflect those actual meters installed at Supply Points which are subject to transitional phasing arrangements from unmeasured to measured charges as specified in section 4.1 of the 2009/10 Wholesale Charges Scheme. In addition, those assessed meters at Supply Points which remain unmetered are included in lines 20-24 as specified in page 6 of the P Tables definitions.

The number of actual meters in lines 20-24 is slightly higher than the assessed meters in lines 1-5 for the same reasons set out above in relation to lines 25-29 of Table P9.

P14.39 Tariff multipliers: exempt supply points

The number of exempt water Supply Points has increased by 29 since last year for the same reasons set out above in relation to P9.49.

Table P15 Wastewater - wholesale - primary revenue: foul sewerage charges (measured) to licensed providers through charges scheme

P15.1-15.7 Tariff Multipliers: Licensed Provider: tariff meters

The counts of meters in lines 1-7 have dropped by 1,394 since the 2008/09 Annual Return. This is primarily due to a reduction of 1,920 meters caused by changes in occupancy status by the Licensed Provider, removing the Supply Point from charge.

In addition, there has been a movement of meters from larger to smaller sizes since last year. This is the result of a data cleanse exercise undertaken in July and August 2009 at Supply Points with associated Trade Effluent Discharge Points. In accordance with section 5.3.1 of the Wholesale Charges Scheme, the sewerage chargeable size of meters at such Supply Points is reduced according to the non-industrial water use. These reduced sewerage chargeable sizes had been applied prior to market opening but had not been correctly migrated into the market from Business Stream's Hi-Affinity system, necessitating a one-off data cleanse exercise.

P15.25 Tariff Multipliers: Licensed Provider: standard volume

In the 2008/09 Annual Return a significant increase in sewerage volumes of circa 3,000Ml per annum was observed when compared with 2007/08. This was addressed further in query AR27. Subsequent analysis has identified that the increase was caused by issues at large Trade Effluent sites. These issues related firstly to the unexpected behaviour of the Central Systems in dealing with the Non-Domestic Allowance in certain

circumstances; and secondly to the complexity of certain sites where meters on one Supply Point were associated with a Discharge Point on a different Supply Point at the same site. In both cases, the result was that for significant waste volumes, both sewerage and Trade Effluent charges were applied instead of one or the other. Most of these issues were resolved in March 2010 and the remaining sites are currently under review. As such, the additional volume is still present in the settlement reports used in the 2009/10 Annual Return and results in the overstatement of measured sewerage volumes by around 3,400Ml per annum.

Table P16 Wastewater - wholesale - primary revenue: surface water drainage charges to licensed providers through charges

See general comments.

Table P17 Wastewater-wholesale-primary revenue: trade effluent charges to licensed providers through charges scheme

Confidence Grades:

Unless otherwise stated the confidence grades reported in P17 are unchanged from AR09.

P17.1 The number of customers paying published tariffs has increased from 713 to 808. This is attributed to the fact that closures have been split evenly between those paying published tariffs and those that don't, but all new dischargers pay published tariffs. In addition, there have been a number of dischargers put onto trade effluent charging for the first time due to the full business metering programme. Previously these discharges would not have paid TE Charges, as there was no way of calculating a volume. The forecast increase to 1,415 is due to the phasing out of the historic capping arrangements. There is a corresponding decrease in the value reported at P29.1.

The confidence grade has increased from B2 to A2 for the current year due to improvements made in data flows and reconciliation between SW and the CMA.

P17.2 & P17.3 Os and Ss remain at 350mg/l and 250mg/l respectively.

P17.4 The chargeable daily volume has remained almost constant at 42,972m³/d compared to 43,178m³/d in AR09. Changes in P17.4 and P17.5 and P17.6 are attributable to changes in consented parameters.

P17.5 The sBOD load charged has increased by almost 11% from 12,865kg/d reported in AR09 to 14,257kg/d.

P17.6 The TSS load has risen from 9,135kg/d in AR09 to 10,155kg/d, an increase of around 11%.

P17.7 The actual volume discharged has fallen by 11% to 10Mm³ from just under 11.2Mm³.

P17.8 Similarly, the strength adjusted volume (SAV) for sCOD has decreased by 14% from 23.1Mm³ to 20Mm³.

P17.9 The SAV for TSS has fallen by 3% from 9.7Mm³ in AR09 to 9.4Mm³.

P17.10 – P17.17 These lines show the published wholesale rates for 2009/10. Those for the report year +1 are those published for 2010/11.

P17.18 Availability income has risen from £3.424m in AR09 to £3.648m in the report period. Note the discrepancy between the £3.648m availability stated above, and the £3.681m shown at P17.18 is due to the fact that not all discharge points exist for 365 days, but the formula in P17.4 assumes that they do. This leads to an overstatement of availability income of some £0.033m. This feeds through to P17.20 – Total Revenue.

P17.19 Operating revenue has fallen by around 8% from £5.412m in the previous report period to £4.945m in the current year. This reflects the fall in the values reported at P17.7-P17.9.

P17.20 Total Revenue. The total revenue from calculated by the CMA for trade effluent to LPs through scheme of charges is £8.592m. For the reasons explained at P17.18, the total shown at P17.20 is £0.033m greater than this at £8.625m.

Table P18 Water - wholesale - primary revenue: wholesale charges for miscellaneous services

P18.1-18.5 Tariff multipliers

There are no unmeasured caravan sites where the caravans do not have a council tax classification. This is consistent with the 2008/09 Annual Return.

Table P19 Wastewater - wholesale - primary revenue: wholesale charges for miscellaneous services to licensed providers through charges scheme

P19.1 Tariff multipliers

There are no unmeasured caravan sites where the caravans do not have a council tax classification. This is consistent with the 2008/09 Annual Return.

Table P20 Water-retail-non-primary revenue: retail revenue from charges to household premises through charges.

Revenue generated from water charges to household premises was £10.24m for the report year, primarily as a result of revenue from development services. The confidence grade remains unchanged at A2.

Table P21 Wastewater-retail-non-primary revenue: retail revenue from charges to household premises through charges scheme

Revenue generated from wastewater charges to household premises was £5.70m for the report year, primarily as a result of revenue from development services. The confidence grade remains unchanged at A2.

Tables P22, P23, P24 and P25 Water - wholesale - primary revenue: wholesale water charges to licensed providers through Schedule 3 Agreements

General Comments

Charges for Schedule 3 agreements are implemented as a simple percentage discount at the CMA. For the year 2009/10, the value of the discount was forecast at the start of the financial year. Because each agreement has a different price structure, the correct percentage discount for the year will be dependent on the out-turn consumption. Each agreement will therefore be reviewed prior to the 2009/10 Final Reconciliation to identify whether the outturn position is as forecast or to amend the percentage discount as necessary to align with the terms of the relevant agreement and the Scheme of Charges. The P Tables show the billed position at 31 March 2010, which is based on the percentage discount set at the start of the financial year.

The settlement reports used to populate the P Tables have been run at various times through the Financial Year and are based on a combination of actual and estimated consumption depending on meter reading cycles at individual Supply Points. In addition, consumption at some Supply Points is skewed, in some cases substantially, by the presence of meter rollovers and other meter reading issues as mentioned in the 'Consumption' section above. These were awaiting resolution at the time of the settlement run.

Table P26 – Wastewater - wholesale - primary revenue: foul sewerage charges to licensed providers through Schedule 3

See general comments.

Table P27 Wastewater - wholesale - primary revenue: surface drainage charges to licensed providers through Schedule 3

See general comments.

Table P28 – Wastewater-wholesale-primary revenue: Trade effluent charges to licensed providers through Schedule 3 (excluding former caps)

Confidence Grades:

Unless otherwise stated the confidence grades reported in P28 & P29 are unchanged from AR09.

P28.1 Details the number of dischargers which receive a Schedule 3 discount by virtue of the fact that they have signed an "agreement" regarding charges. The number has fallen from 50 in the prior reporting period to 38. This is due to the closure of a number of fish processors that were part of the Aberdeen Water Users Group (AWUG) agreement.
The confidence grade has increased from B2 to A2 for the current year due to improvements made in data flows and reconciliation between SW and the CMA.

P28.2 and P28.3 These lines reflect the standard Scottish Average Sewage Strength figures, as per the Scheme of Charges.

P28.4 The chargeable daily volume paid for by "agreement" customers. This has fallen to 91,883m³/d from 109,168m³/d. This represents a fall of approximately 16%.

P28.5 The settled BOD load paid for by "agreement" customers. Like P28.4, this has fallen from 66,424kg/d to 48,783kg/d, which is a fall of 27%.

P28.6 The suspended solids load paid for by "agreement" customers. This has increased from 50,508kg/d to 53,252kg/d, which is an increase of around 5%. This is at variance with the falls seen in volume and sBOD loads.

P28.7 The actual volume discharged has decreased by 11% from 16.3Mm³ to 14.5Mm³. This is a similar percentage change to that reported at P17.7

P28.8 The Ot SAV for "agreement" customers reported in AR09 was 58.5Mm³/yr. This has fallen to 55.8Mm³, a 4% decrease.

P28.9 The St SAV for "agreement" customers is has increased from 11.8Mm³/yr to 23.7Mm³/yr.

P28.10 This agreement runs from 01/04/2003 to 31/03/2018. The terms are a fixed payment (adjusted for changes in Bank of England base rate (Mar-Mar)), subject to the discharger meeting an influent quality standard plus a rate per tonne of sCOD (or TSS if more favourable), which is adjusted according to changes in RPIX - Feb to Feb.

P28.11 This agreement runs from 01/07/2005 to 31/12/2012. The customer is charged at Scheme of Charges rates for volumes up to 28,314m³. Volumes above this will be charged at an agreed rate which changes according to the change in RPI (October-October). Base RPI is Oct 2001 (174.3).

P28.12 This agreement runs from 01/01/2001 to 31/12/2011. The discharger is charged on both strength and volume, with the rate varying according to the change in RPI between Oct 2000 (171.6) and previous year. RPI figures from RP02 table.

P28.13 This agreement runs from 01/01/2002 to 31/12/2011. The discharger is charged on both strength and volume, with the rate varying according to the change in RPI between Oct 2001 (174.3) and previous year. RPI figures from RP02 table.

P28.14 This agreement runs from 01/04/2005-31/03/2015 and comprises a fixed monthly payment plus volumetric element. Both elements are subject to increases based on increase in RPIX. RPIX base value is February 2005 from RP05 table.

P28.15 This agreement runs from 01/04/2005-31/03/2015 and comprises a fixed charge which is not subject to increase and a volumetric rate which changes according to the change in RPIX between by Dec-Dec each year. This customer served notice on Scottish Water that it wished to end the Agreement at 31/03/2010, so there is no forecast for 2010/11.

P28.16 This agreement runs from 01/04/2005-31/03/2015 and comprises both fixed and variable quarterly charges. The fixed charge is split into finance, not subject to RPIX increases, and Operating charges - which are subject to RPIX increases. The quarterly variable charges increase by RPIX. Base RPI is December 2004.

P28.17 This agreement runs from 01/04/2005-31/03/2015 and comprise both fixed monthly payment plus a volumetric element. The volumetric element is subject to

increases based on 75% of increase in RPIX. RPIX base value is December 2004 from RP05 table.

P28.18 This agreement runs from 01/04/2005-31/03/2015 and comprises a fixed charge which varies by 75% of the change in RPIX (Dec to Dec).

P28.19 This agreement runs from 01/04/2005-31/03/2015 and comprises of monthly "capital" and volumetric payments, both of which change according to the change in RPIX (Dec to Dec each year).

P28.20 This agreement runs to 31/03/2018. This is a complex deal involving Primary and Secondary capital amounts which are increased by the change in RPI since January 1994, and a Tertiary amount which changes by the change in RPI since April 2000. There is no volumetric element to this agreement.

P28.21 This agreement runs to 31/12/2010. The deal covers multiple sites in Aberdeen. The AWUG agreed a combined rate for water and TE, which increases by the change in RPIX each year (Based October to October). They always pay the published tariff for water, and the TE rate varies accordingly. Whilst this deal expires at 31/12/2010, the 2010/11 Scheme of Charges approved by WICS allows the dischargers involved to pay the deal rates for the remainder of the fiscal year, with a phased transition to published tariffs by April 2013.

P28.22 This agreement runs from 01/04/2004-31/03/2014 and is a fixed monthly charge which varies according to the change in RPIX each year. RPIX based on Dec-Dec change. There are no volumetric charges associated with this discharge.

Table P29 – Wastewater-wholesale-primary revenue: Trade effluent charges to licensed providers through Schedule 3 (former caps)

P29.1 The number of customers whose charges are reduced due to them formerly receiving a harmonisation cap or where the level of treatment is less than secondary is 680 (down from 730 in the previous reporting period). There are 68 companies whose charges are reduced because they discharge to a WWTP which provides less than full treatment.

The confidence grade has increased from B2 to A2 for the current year due to improvements made in data flows and reconciliation between SW and the CMA.

P29.2 and 29.3 These lines reflect the standard Scottish Average Sewage Strength figures, as per the Scheme of Charges.

P29.4 The chargeable daily volume discharged by customers receiving a capping or treatment type adjustment discount has fallen from 48,167m³/d in AR09 to 46,515kg/d.

P29.5 The charged settled BOD load has decreased from 25,252kg/d in AR09 to 22,934kg/d.

P29.6 The billed suspended solids load in AR09 was 13,948kg/d. This has fallen to 11,592kg/d.

P29.7 The volume discharged by customers who had caps placed upon their charges by WICS has fallen from 10.5Mm³ in AR09 to 9.3Mm³.

P29.8 There has been a comparable reduction in the SAV for Ot discharged from 31.2Mm³ to 26.8Mm³.

P29.9 The St SAV for AR10 has also reduced, falling from 11.9Mm³ to 9.3Mm³.

P29.10 The income from "capped" customers has remained largely unchanged, £8.64m compared to £8.77m in AR09. There is a significant decrease between the current year and the forecast due to the ending of the discount given to those dischargers who were formerly capped because of the harmonisation of charges. These customers have moved to table P17. The discharge from the 68 discharge points which remain on P29 is treated at wastewater treatment plants which do not provide secondary treatment.

Table P30 Water - wholesale – non-primary revenue: wholesale revenue from charges to licensed providers through charges scheme

General Comments

Non-primary revenues have increased in 2009/10 compared with 2008/09 at an overall level and across most charge categories. This reflects a combination of changes in volumes, the change in payment terms for Development Services charges in 2007/08, continued stabilisation of processes and, in particular, a full year of automated billing following the launch of the wholesale billing system mid-way through 2008/09. The only remaining manual bills relate to some building water requests which cannot be passed through from the new connections IT system in certain circumstances.

P30.1 Verification of service provision

Revenue from verification of services has risen from £60K in 2008/09 to £107K in 2009/10. This reflects continued high volumes of requests received from Licensed Providers. This figure includes verification of sewerage service provision as activities relating to both water and sewerage services are invoiced on the same charge code and therefore cannot be reported separately.

P30.3 Temporary Disconnection

Revenue from temporary disconnections has risen from £127K in 2008/09 to £184K in 2009/10. This reflects continued high volumes of requests received from Licensed Providers.

P30.4 Permanent Disconnection

Organisational changes meant that responsibility for permanent disconnection was transferred to a different team. This transfer resulted in a temporary drop in billing run-rate, thus creating a backlog. The backlog of unbilled work is now being cleared and the billing run-rate has risen significantly in the final months of the year. The budget for 2010/11 reflects the expectation that revenues will return to historical levels.

P30.9 Metering services

Metering Services revenue has decreased in 2009/10 compared with 2008/09. This is primarily due to a decrease in rechargeable Meter Fault & Repair requests received from Licensed Providers and a drop in rechargeable Meter Installations following completion of the Business Metering Programme.

P30.11 – 30.14, 30.18 & 30.19 Development services

Across all Development Services charge categories, revenues in 2009/10 are significantly higher than in 2008/09. This is partly due to deflated revenues in 2008/09 as a result of the change in payment terms from payment in advance to payment in arrears in January 2008 upon termination of the previous Service Agreement with Business Stream. It is also the result of various improvements to billing processes in this area in addition to a back-billing exercise to recover unbilled historical revenue. As such, the 2009/10 value includes a proportion of revenue relating to services delivered in 2008/09. The 2010/11 forecast is based on the underlying run-rate expected to continue into this financial year.

Table P31 Wastewater - wholesale – non-primary revenue: wholesale revenue from charges to licensed providers through charges scheme

P31.1 Verification of service provision

As mentioned above, verification of sewerage service provision is included in line P30.1 as it is not currently possible to distinguish between revenue from water and sewerage related requests.

P 31.9 Any other Goods and Services

Revenue reported in line P31.9 relates to temporary Trade Effluent consents. This was a new charge in the 2009/10 Wholesale Charges Scheme and had therefore not been reported in previous years.