SCOTTISH WATER

WIC ANNUAL RETURN

OUTPUT MEASURES METHODOLOGY

June 2009

CONTENTS

1.0   Restrictions on the Use of Water
No methodology required.

1.0   Restrictions on the Use of Water

2.0 Pressure of Mains Water

2.1 Methods and Procedures

We are continuing to utilise our corporate system for our low pressure register. This has enabled us to capture information from multiple sources, including customer contacts and field work, to identify the unique address of each property with inadequate pressure. The system has now been operational for two years and is being used to track each report of low pressure and its resolution.

During the financial year 2008/09, we rolled out a new low pressure strategic application to record and report the number of properties at risk of receiving low pressure. The spreadsheet previously used will be phased out by December 2009. We have commissioned work to understand the number of properties on joint service pipes and those at risk of receiving pressure below the reference level. This work will continue during 2009/10.

2.2 Extract from the Low Pressure Register

Information in the database continues to be recorded at Water Supply Zone level. For each entry there is the Water Supply Zone name and asset number, the number of properties estimated to be receiving low pressure within that zone, the source of this information, and a confidence grade for the data relating to that zone.

2.3 Sources of Information

The reported figures in the Annual Return are derived from the Corporate Low Pressure Register and the previously mentioned spreadsheet. Work is ongoing to migrate all the information from the spreadsheet into the new strategic application. The use of the two sources is reflected in the confidence grade for this section of the Annual Return.

2.4 Scope and Coverage

The Corporate Low Pressure Register holds data in a common format for Water Supply Zones across the whole of Scottish Water. Data is held at the individual property level.

2.5 Assumptions and Exclusions

None.

2.6 Other issues

There are currently no issues with the process.

3.0   Supply Interruptions

3.1   Methods and Procedures
Our Code of Practice and additional guaranteed standards scheme booklets highlight our aims in the event of interruptions, to both household and business customers.

The field staff ensure the completion of an Interruption to Supply sheet for every occasion where the water supply to the customer's property may be interrupted. The Interruption to Supply sheets are completed either on paper or through the Integrated Mobile Solution (IMS) device for each job where an interruption to supply occurs.

The following details are recorded on the Interruptions to Supply sheet or IMS device:
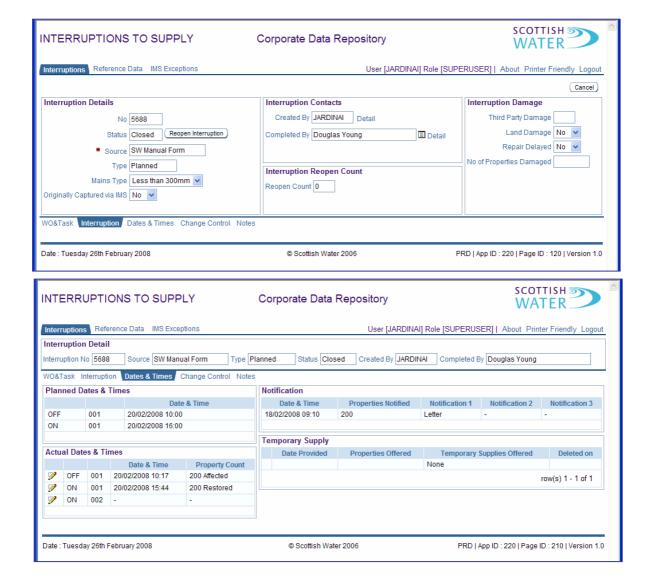
1)   **Local details -** such as Operations Team Leader - Person responsible for dealing with the event and Operations Team - Team allocated with the responsibility for completing the planned or emergency work.

2)   **Type of interruption -** Planned interruption, emergency interruption or no interruption.

3)   **Mains type -** Trunk main or non-trunk main.

4)   **Reason for interruption -** Identifies the reason for the interruption from the following categories: distribution mains burst, service pipe burst, repair / install new apparatus to main, preparation for rehabilitation, mains rehabilitation, interruption caused by third party.

5)   **Location of works -** Accurate information required allowing Scottish Water to define the location of event, including postcode.

6)   **Area affected -** Accurate description of the area affected including street names that may be affected by the interruption other than the location given. Part streets are also listed.

7)   **Number of properties affected -** Number of properties affected by the interruption.

8)   **Proposed start and finish time -** Proposed start and end date and time of the planned interruption.

9)   **Actual start and actual end times –** Actual start and end date and time of the planned interruption.

10)   **Notice -** While planning for a planned interruption, team leaders operate to the Guaranteed Minimum Standard "that where a planned interruption is likely to last more than 4 hours then at least 48 hours notice (to each customer) in advance is required".

11) Duration - A planned interruption starts when the first property loses supply at the cold tap after any valving operations for a planned interruption. The proposed start time and end time is recorded. When the supply is pressurised and restored to the last customer property within the shut off boundary it is recorded whether supply was restored to all customers within the time stated in the notice.

The relevant Networks team leader makes an assessment of when the supply is restored.

12) Properties affected - Staff evaluate the number of properties affected while at the location.

3.2   Extract from Supply Interruptions Register

3.3   Sources of information
We obtain information regarding interruptions to supply by the following methods:

1)   From customers
The majority of unplanned interruptions to supply are informed to us through our customers. This is usually at the time of the incident or retrospectively about an event following its resolution. The majority of communication is by telephone to the Customer Contact Centre, where details are passed to the appropriate asset team. Squads are on 24 hour standby with all information being passed through the control office outwith normal business hours.

2)   From operational staff
This is through staff's involvement in the incident, or their own experience.

3)   From direct measurement
This includes telemetry systems.

4)   From external bodies
This includes the police, fire brigade and local authorities.

3.4   Scottish Water Systems
Customers or Scottish Water staff will call the Contact Centre to record unplanned incidents. Where these are not part of planned works, the Contact Centre will raise a Service Request on the Promise system which will issue an instruction to a Network Services Operator (NSO) via the Integrated Mobile Solution (IMS) to investigate the issue. An NSO visits the site and assesses the situation. Either the NSO will:

1. Complete the job and contact the Contact Centre afterwards to close the service request on Promise; or

2. Contact the Operations Management Centre (OMC), which raises a work order on Ellipse. The OMC will schedule the job to be completed by a burst squad, and send this out by IMS or manually. When the job is complete, a team member will use either an automated or a manual process to record relevant data. Jobs are given to burst squads either manually (printout from Ellipse) or through IMS.

In addition, the OMC can create a work order in Ellipse directly in response to planned improvement/remediation works and this will be carried out by a burst squad.

Where the OMC and Ellipse are involved, the burst squad will update the OMC work order by the following methods:
• Via the Integrated Mobile Solution (IMS) (on a Promise laptop or through the IMS handheld device); or
• Sending paper forms to the local administration support teams.

In addition, Scottish Water Solutions can outsource improvement works. Where there is a planned interruption involved in the works, there is no job creation on Ellipse or Promise, but the external companies send in spreadsheets to local administrators listing the interruption when the work is complete.

3.5   **Scope and Coverage**

This covers all aspects of reporting supply interruptions that are reported both for the Annual Return and OPA reporting

3.6   **Assumptions and Exclusions**

Interruption to supply relates only to actual interruptions from the customers' perspective i.e. if a backfeed is put in place there is no interruption, and likewise if the main is repaired under pressure, there will have been no interruption.

3.7   **Other issues**

None

4.0   Response to Wholesale Contacts

4.1   Methodology and Procedures
Water and waste services are now supplied by Scottish Water on a wholesale basis to all the Licence Providers (LP).

A wholesale service desk has been set up to deal with non-domestic contacts that come through the Scottish Water contact centre. These contacts are redirected, along with all relevant information, to the LP to deal with directly. The main function of the wholesale service desk is to deal with requests from the LPs.

The only exception to the above is where there is an issue that relates to public safety. In these circumstances, Scottish Water can deal with the customer contact directly without involving the LP(s). However, the LP(s) must be informed as soon as possible afterwards.

4.2   Sources of Information

The wholesale service desk utilises our corporate telephone and e-mail contact systems to provide the required service to customers, with any Business Stream related queries being redirected to the relevant LP(s) as required.

4.3   Responses

Scottish Water provides a service to all of the LPs as required by the contracts in place, and continues to respond to any telephone enquiry to provide an efficient service to all of our customers.

4.4   Assumptions and Exclusions
None.

4.5   Other Issues
None

5.0   Response to Complaints

5.1   Methodology and Procedures
A complaint is defined as any communication from a customer or a customer's representative (e.g. Citizens Advice Bureau, Solicitor) expressing dissatisfaction with the service provided or offered, the way it is or is not provided, even if offered in mild and friendly terms. General statements of complaint are counted even though a standard type of reply may be sent. Customers may complain unfairly or unjustifiably. Nevertheless, such a communication is a complaint. Some complaints may be frivolous or vexatious. Nevertheless these are reported.

For a written complaint and a telephone complaint requiring a written response, a full or substantive response is sent within 10 working days, to comply with the Guaranteed Minimum Standard detailing either:

- An explanation of Scottish Water's relevant policy or procedure and indicating why no further action on the customer's complaint is required;
- The action taken to resolve the complaint and when the action occurred;
- When the action to resolve the complaint will be taken if it cannot be taken immediately.

Promise is updated to show a response and resolved date or a response date only if customers are updated immediately.

Telephone and face-to-face complaints should be answered in full at the time of contact if possible. If the response provided for the customer is written then there is a 10 day response deadline to be met to comply with the Guaranteed Minimum Standard.

5.2   Sources of Information
The customer can complain by letter, by e-mail, by fax, by telephone or in person at their nearest Scottish Water office. All details regarding the complaint are forwarded to a centralised customer relations team. Responses to the customer are updated on Promise.

The customer relations team ensure that, on a daily basis, a "Pre-emptive" performance report is produced from the Promise system. The report is created using Business Objects.
The report:

- Identifies outstanding contacts
- Identifies ownership
- Assists in the prioritising of the workload

5.3   Responses
We respond to the majority of complaints by letter. Where contact agents receive a telephone call and the customer has requested a written response, this is logged on our Promise system and a reply must be sent within 10 working days.

5.4   Assumptions and Exclusions
We can exclude from the reported figures those written complaints that are about the activities of other undertakings and not about the services or functions of Scottish Water.

5.5   Other Issues
None

6.0   Ease of Telephone Contact

6.1   Common definitions
The Contact Centre has an automated reporting system linked to the telephone lines, which gives detailed analysis on all calls received. The information is checked regularly.

Calls received/answered
The totals from both our advertised numbers are added together.

Calls abandoned
This figure equates to the total numbers of calls answered subtracted from the total number of calls received.

Recording information
All information is recorded over a 24 hour, 7 day a week timescale.

6.2   Call Receipt
Scottish Water operates a virtual contact centre for all operational calls. All calls are received at our contact centre in Edinburgh.   Once all details are taken from the customer the contact is logged on the Promise system for action. The operational enquiry line (0845 601 8855) is opened 24 hours a day, 7 days a week, with an emergency number (0845 600 8855) available to the public.

6.3   Call Handling
Calls are logged on Promise and handled at the time of customer contact unless the enquiry requires further work. In this situation, the customer is informed once the query has been resolved.

British Telecom Service View (Message Link) results in every customer call receiving either an agent response or a pre-recorded message specific to an event occurring in the customer's area telephone dialling code.

6.4   Messaging
Customers phoning either of Scottish Water's helplines get a message service while they are in the queue.

6.5   Scottish Water Systems
Scottish Water uses an "Intelligent Call Routing System" to provide an automated call analysis. This data can then be sorted as and when required for population of any required report including the Annual Return.

7.0   Flooding Incidents

7.1   Methods and Procedures
We will respond to all internal or external flooding incidents as stated in the Code of Practice, and the additional floodcare scheme booklet.
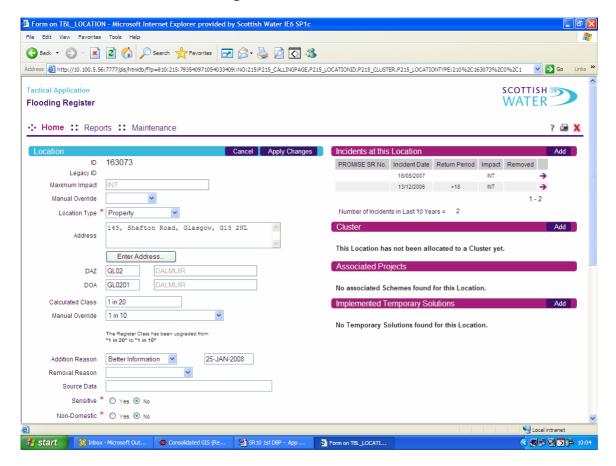
On attendance at the incident, the squad identifies the cause and scale of the problem and will resolve it where internal flooding has occurred. For most cases of external flooding we use specialist firms, who are contracted by Scottish Water to resolve the situation. Squads provide a comprehensive report, containing the following details, for all external and internal incidents attended. A customer contact sheet is used to record:

- The time spent and a summary of any action taken and/or actions outstanding
- Confirmation of all advice provided to the customer about any damage, claims, etc
- Advise if a claim is being made

A Flooding Incident Record Sheet is used to record details about:

- The location of the flooding
- The extent of the flooding
- The cause of the flooding
- The clean-up time on site – for internal flooding only
- Confirmation of action taken

7.2   Extract from the Register

7.3   Sources of Information
We obtain information regarding flooding incidents by the following methods:

1) From customers
The majority of flooding incidents are informed to us through our customers, usually at the time of the incident. Communication is by telephone, or in some cases letter, to the Customer Contact Centre with details being passed to the appropriate operations team. Squads are on 24 hour standby with all information being passed through the control office outwith normal business hours.

2) From operational staff
Staff have knowledge of areas that are at risk of flooding in severe weather. They are proactive and inform customers that their property is at an increased risk. Scottish Water is progressing the installation and fitting of non-return valves, and other flood devices to properties susceptible to flooding from under-capacity sewers. Scottish Water is also supporting local communities by attending regular flood groups which are set up to promote flood prevention.

3) From external bodies
This includes the police, fire brigade and local authorities.

The information used to report the flooding data is collated from the following main corporate sources: the Promise System (the Scottish Water customer

contact management system); and the Sewer Flooding Register Corporate Satellite Application (CSA).

7.4   Scope and Coverage

The flooding from sewers standard operates consistently throughout Scottish Water.

7.5   Assumptions and Exclusions

None.

7.6   Other Issues

None

8.0   Properties at risk of flooding

The source data for these reports comes from Scottish Water staff creating and updating information within the Promise - Customer Contact system. This information can be input by various methods:

- Contact centre staff responding to a customer calling into Scottish Water and reporting an incident

- Scottish Water staff using laptops in the field and submitting the data into the Promise system via a remote connection

- Scottish Water staff accessing the Promise system in the office

The "At Risk" register is an intranet application which is populated manually with information that has been identified as requiring addition to the "At Risk" register. The application keeps a record of which properties are on the "At Risk" register and into which category they fit. (1 in 10, or 2 in 10)
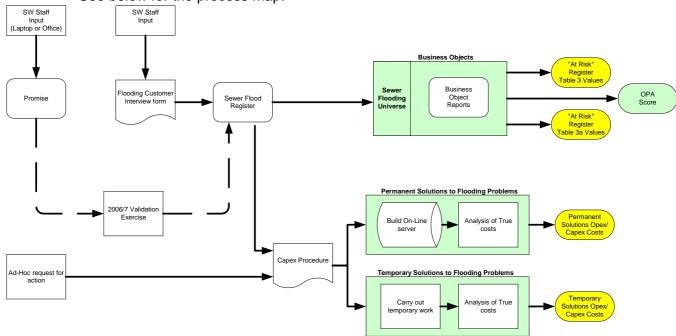
8.1   Methods and Procedures

The sewer flooding "At Risk" register has processes in place so that it can be populated with data from the Promise system where it can be tracked and monitored.

Once the information is in the "At Risk" register it can be used to identify areas where permanent or temporary flood prevention works are required.

From the information held on Promise, a report is produced which identifies all the sewer flooding incidents and this is used by staff in each region to identify where there have been incidents that may require to be added to the "At Risk" register.

These incidents are analysed to determine the level of impact (i.e. internal or external flooding) and the cause of the incident (i.e. overloading sewers or any other causes). This information is required to fill out the form that is used to initiate an entry onto the "At Risk" register.

See below for the process map.

8.2   Sources of Information
The source of the data comes from a corporate risk register database, which has been populated from the Promise system.

8.3   Scope and Coverage
The register has been checked for completeness and accuracy. A process for management of the register has been established and is outlined below.

- The first time a property is flooded, it is put in the 1 in 10 year category (B)
- If a second or greater number of incidents within 10 years occurs, the property is transferred into the 2 in 10 year category (A)
- A property may be assessed as either A or B by investigation of records
- If the property is in A but is not flooded for 8 years it will be transferred to B
- If no further flooding occurs after a further 8 years it is removed from category B onto a historic flooding list
- Any properties removed from either A or B by virtue of capital investment are transferred to a separate list
- Properties that are flooded due to extreme / severe weather are held in the system but not in category A or B where it can be demonstrated that the flooding occurrence was due to exceptional weather.

8.4   Assumptions and Exclusions
The register only includes properties for which operations have knowledge of the flooding or where the customer has confirmed the flooding. As part of the Drainage Area Study, hydraulic network models will identify properties that may flood. Additional properties highlighted as "at risk of flooding" in Drainage Area Studies are recorded on the register as unconfirmed or unreported. Scottish Water is currently confirming if there is good reason for these properties being at risk of flooding and will reclassify these properties accordingly.

8.5   Other Issues
None.

9.0   Table of Inflation Indices

See AR09 Information requirements – Introduction document (page 24) for table

9.0   Table of Inflation Indices

10.0   General Information

10.6   Scottish Water Acronyms

ABM	Activity Based Management
AVD	Actual Volume Discharged
AVSE	Almond Valley, Seafield and Esk (PPP project)
BABE	Burst and Background (methodology)
BCD	Business Critical Data
BCM	Business Customer Management
BOD	Biological Oxygen Demand
CAR	Controlled Activity Regulation
CAS	Corporate Address Server
CCTV	Closed Circuit Television
CEH	Centre for Ecology and Hydrology
CFA	Common Framework Approach
CG	Confidence Grade
CID	Capital Investment Delivery
CIR	Capital Investment Return
CIMS	Capital Investment Management System
CMA	Central Market Agency
COD	Chemical Oxygen Demand
COPA	Control of Pollution Act
COPI	Construction Outputs Price Index
CSA	Corporate Satellite Application
CSO	Combined Sewer Overflow
DAP	Drainage Area Plan
DAS	Drainage Area Study
DI	Distribution Input
DMA	District Meter Area
DOA	Drainage Operational Area
DSEAR	Dangerous Substances & Explosive Atmospheres Regulations
DSOU	Distribution System Operational Use
DWF	Dry Weather Flow
DWQR	Drinking Water Quality Regulator
DZS	Distribution Zone Study
E&M	Electrical and Mechanical
E&W	England & Wales (or English & Welsh)
EARC	Equivalent Asset Replacement Cost
EO	Emergency Overflow
ERDF	European Regional Development Fund
FCA	Field Customer Advisor
FTE	Full Time Equivalents
G&S	General & Support
GEARC	Gross Equivalent Asset Replacement Cost
GIS	Geographical Information System
GMS	Guaranteed Minimum Standards
GROS	General Register Office for Scotland
HNDA	High Natural Dispersion Area
IAS	International Accounting Standards
ICF	Infrastructure Condition Factor
ID	Intermittent Discharge
IDR	Information Data and Reporting
IFOC	Internal Flooding due to Other Causes
IFOS	Internal Flooding due to Overloaded Sewers
IMC	Infrastructure Maintenance Charges

IMS	Integrated Mobile Solution
INMS	Integrated Network Management System
IPPC	Integrated Pollution Prevention and Control
IT	Information Technology
JSP	Joint Supply Point
LBS	Lochs, Burns and Springs
LGPS	Local Government Pension Scheme
LIMS	Laboratory Information Management System
LOS	Levels of Service
LUT	Large User Tariff
LUVA	Large User Volume Agreement
M&E	Mechanical and Electrical
MEAV	Modern Equivalent Asset Value
MSI	Meadowhead, Stevenston, Inverclyde (PPP project)
NDWW	Non Domestic Wastewater Allowance
NRSWA	New Roads & Street Works Act
NRV	Non Return Valve
NSO	Network Service Operator
OFWAT	Office of Water Services
OPA	Overall Performance Assessment
OSAPR	Ordnance Survey Address Point Reference
OU	Operational Use
P3e	Primavera (SWS capital monitoring system)
PCC	Per Capita Consumption
PCV	Prescribed Concentration Value
PE	Population Equivalent
PFI	Private Finance Initiative
PPP	Public Private Partnership
PPRA	Pre and Post Rehabilitation Assessment
PSCE	Public Sector Capital Equivalent
Q&S	Quality and Standards
RA	River Abstraction
RAB	Resource Accounting and Budgeting
RV	Rateable Value
SCOD	Scottish Chemical Oxygen Demand
SEMD	Security & Emergency Measures Directions
SEPA	Scottish Environment Protection Agency
SFID	Sewer Flooding Incident Database
SIIOP	Sewerage Infrastructure Investment and Operational Planning
SME	Small to Medium Enterprises
SNH	Scottish Natural Heritage
SNIFFER	Scotland & Northern Ireland Forum for Environmental Research
SOC	Scheme of Charges
SOSI	Security of Supply Index
SPL	Supply Pipe Leakage
SR	Service Reservoir
SR06	Strategic Review of Charges 2006-2010
SR10	Strategic Review of Charges 2010-2014
SRM	Sewer Rehabilitation Manual
SS	Suspended Solids
SSSI	Sites of Special Scientific Interest
SVCP	Small Value Capital (works) Programme
SW	Scottish Water
SWARM	Scottish Water Asset Risk Management

SWBS	Scottish Water Business Stream
SWD	Surface Water Drainage
SWO	Surface Water Overflow
SWS	Scottish Water Solutions
SWWS	Scottish Water Waste Services
TE	Trade Effluent
THM	Trihalomethanes
TOC	Total Organic Carbon
TP^2	Tactical Planning & Performance
UCSO	Unsatisfactory Combined Sewer Overflow
UDWD	Unmeasured Domestic Water Delivered
UGSP	Underground Supply Pipe
UID	Unsatisfactory Intermittent Discharge
UITS	Unplanned Interruptions to Supply
UKWIR	United Kingdom Water Industry Research
UW	Unmeasured Water
UWWTD	Urban Waste Water Treatment Directives
WAFU	Water Available For Use
WAMS	Works and Assets Management System
WaSC	Water and Sewerage Company
WOA	Water Operational Area
WQZ	Water Quality Zone
WRC	Water Research Centre
WRP	Water Resource Plan
WRZ	Water Resource Zone
WST	Water Supply and Treatment
WSZ	Water Supply Zone
WTIU	Water Taken Illegally Unbilled
WTLU	Water Taken Legally Unbilled
WTW	Water Treatment Works
WWPS	Waste Water Pumping Station
WWT	Waste Water Treatment
WWTW	Waste Water Treatment Works