SCOTTISH WATER

WIC ANNUAL RETURN

OUTPUTS MEASURES METHODOLOGY

JUNE 2004

Contents

1.0 Restrictions on the Use of Water

No methodology required.

2.0 Pressure of Mains Water

2.1 Methods and Procedures To be updated - Assets

Integrated Network Management Systems (INMS) Low Pressure Studies were carried out by the three previous authorities, the results of which have now been amalgamated into one common database. These studies were carried out at the zonal level, and estimated, using the heights of properties and supply tanks, and where available logged pressures, the number of properties inferred to be receiving low pressure.

Where more accurate information has become available over the report year through more detailed studies, this has been used to improve the information for that zone. More accurate information has come from detailed logging that has been carried out (early in 2004) in 9 water supply zones to confirm the status of inferred properties. Zones selected were those that contained large numbers of inferred properties in Scottish Water's South West operational area.

2.2 Extract from the Poor Pressure Register

Information in the database is 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. Work in 2003 has managed to collate address point data, where available, for inferred properties. The corporate low pressure register once fully established will hold details on individual properties receiving low pressure.

2.3 Sources of Information

More detailed information has been generated during the report year for a number of zones, the source of this information being;

- Detailed logging carried out within 9 zones inferred to be receiving low pressure from previous level 1 District Meter Area (DMA) reports.

Historic data was collated from the following sources;

- Calibrated all mains hydraulic network models, which calculate the pressure at all points throughout the zone.
- Level 1 DMA reports, where the number of properties subject to low pressure is inferred from the logged pressure at the DMA Critical Monitoring Point.
- Preliminary Zonal Reports, which collate information from on site investigations and consultations with operations staff.

2.4 Scope and Coverage

The Low Pressure Database holds data in a common format for Water Supply Zones across the whole of Scottish Water. Data is however held at the zonal level. Individual property details are available for some zones.

2.5 Assumptions and Exclusions

At present there is no continuous monitoring of zone pressure. The number of properties estimated to be receiving low pressure is therefore based only on the data available through the studies described above, and is therefore restricted in its accuracy.

2.6 Other issues

A process for updating and maintaining this database on a continuous basis is currently under development and will be implemented in 2005. This is outlined in the WIC Action Plan.

3.0 Supply Interruptions

3.1 Methods and Procedures

The aim of Scottish Water is to provide a continuous supply of mains water without interruptions, but some events will inevitably interrupt the flow. These include planned maintenance, bursts on mains or service pipes and failures of pumps or their electricity supply. Included in our Code of Practice for Customers are the following guaranteed standards of service to cover interruptions to water supply:

Planned Interruptions

If we are planning to carry out maintenance or repair work that will mean shutting off our customers' water supply, we will give warning of the interruption, usually in writing. We will state when the water supply will be off and when it will be restored. The only exception is when we are carrying out leakage detection work overnight when supplies may be affected from time to time. If the work is planned to last more than four hours we will give forty eight hours notice of the intended interruption to supply. If we fail to warn customers before the interruption to supply or fail to restore the water supply by the advertised time customers are entitled to claim £20 from us and a further £20 for each 12 hour period that their supply is not restored.

If a planned interruption to the water supply is likely to last more than 8 hours we will make alternative supplies of water available for household purposes until normal supplies are restored.

Major planned renovation of water mains can result in interruptions to supplies for up to 48 hours. Alternative temporary supplies of water will be made available to affected customers throughout the period of interruption. Before these works start, a leaflet will be distributed to all affected premises describing the works and the temporary arrangements.

We recommend in all cases that our commercial customers install sufficient storage capacity to meet any demand in any period of 24 hours. The capacity of any storage cistern is generally determined by the customer. However, in the following instances, this will be a direct requirement:

- In medical and care establishments where loss of supply could cause risk to life, health or, where water is required for treatment of illness or any other medical need.

- Where loss of supply to high intensity animal farming installations would cause suffering to livestock.

- Where loss of supply could lead to a process failure, the implications of which involve a danger to employees or the general public.

Emergency Interruptions (Unplanned)

Unplanned work is obviously reactive but is managed by ensuring that our customers are notified and kept informed where possible and provided with alternative supplies if necessary.

In an emergency we cannot warn customers that their water supply will be interrupted, but we will do our best to provide the reason for the interruption and to provide temporary water supplies where possible and appropriate. We will also state when we hope to restore the water supply. We aim to attend to emergency interruptions as soon as possible, normally within 4 hours of finding out about the problem.

If the water goes off because of emergency work we will restore the water supply within 12 hours from the time we found out about the interruption. If the problem affects a strategic main we will restore the water supply within 48 hours of finding out about the problem.

If we do not restore the supply within these periods customers are entitled to claim £20. They may also be entitled to claim a further £20 for every full 12 hour period the water is not restored. These guarantees can be affected by conditions outwith our control such as extreme weather conditions.

For both planned and emergency interruptions we will endeavour to meet the special needs of hospitals, residential care homes, home dialysis patients and other customers with conditions that would be adversely affected by a loss of water supply.

The Asset Team contractor shall 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 for each job where an interruption to supply occurs.

The following details are recorded on the Interruptions to Supply sheet:

1) **Local details -** such as Asset Team Leader – Person responsible for dealing with the event and Asset Team - Team allocated with the responsibility for completing the planned / 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** - Identify 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 area affected including street names that may be affected by the shut other than the location given. Also part streets should be listed.

7) **Number of Properties affected**

8) **Proposed start and finish time** – Proposed date and time of the planned shut.

9) **Actual Start and Actual End times**

10) **Notice**
Whilst 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 warned shut. 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 team leader makes an assessment of when all properties are back on supply, although in most instances restoration is immediate. Where pipelines do take some time to re-charge, stage restoration times are given to the properties affected.

12) **Properties Affected** – Staff evaluate the number of properties affected while at the location.

3.2 Sources of information

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

1) From Customers

The majority of 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 with details being 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 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.

3.3 Scottish Water Systems

Each asset contractor forwards the completed Interruptions to Supply sheets to a Support Team member who transfers the information from the Interruption to Supply sheet to the interruptions work management system. Reports are run on Guaranteed Minimum Standards and a list of all failed records. Data is then used to report performance on a quarterly and annual basis.

3.4 Scope and Coverage

The interruption standards operate consistently throughout Scottish Water.

3.5 Assumptions and Exclusions

Each interruption can affect differing numbers of properties e.g. a meter installation can affect one property whilst a valve replacement can affect 1,000 properties.

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

3.6 Other issues

None

4.0 Response to Billing Contacts

4.1 Methodology and Procedures

A billing enquiry is defined as any communication received from a customer regarding a bill, which requires a response or an action by Scottish Water and does not constitute a written complaint or a change of payment request.

Scottish Water's policy is as follows: -

Charges for unmetered households connected to our water and wastewater networks are billed and collected by councils along with the Council Tax.

Enquiries about these bills should be made using the local council address or the telephone number shown on the bill.

All other charges are billed and collected directly by Scottish Water. Options for unmeasured commercial customers to pay include payments by cash or cheque, BACS or direct debit in 9 instalments beginning in July and ending in March. Measured commercial customers can pay quarterly or monthly by cash or cheque, and by BACS. The option for direct debit payments is also available. Customers who are in debt have special instalment agreements with us or with a debt agency.

If the customer enquires about a bill, which we bill directly, we will make sure the matter is dealt with or give the customer a reply, as appropriate, within 10 working days. If the customer asks for a change in payment method we will deal with this within 5 working days.

If we fail to do either of these, the customer will be entitled to compensation of £20 under our Guaranteed Standards scheme. However, if the customer has an outstanding account with us, this compensation amount may be offset against the outstanding balance. Payment will normally be made to the person responsible for paying water or wastewater charges.

4.2 Sources of Information

The following corporate systems are used:

- Hi-Affinity
  The Business Contact Team log all contacts on the corporate billing system Hi-Affinity. This ensures that all billing enquiries received have been categorised correctly.

4.3 Responses

Generally, responses to billing queries are by letter. We tend to contact the customer by telephone when further information has been requested by the customer. Standard letters are used for initial responses in different situations. Customers often visit their nearest Scottish Water office in person and we aim to resolve the query at this time.

Key Account Management offers our largest industrial customers a tailored customer service package to suit their needs. We currently have 391 key account customers.

We offer a separate business helpline for our non-domestic customers (0845 602 8855) however through Key Account Management, customers have a Key Account Manager who has knowledge of their business and offers a personal service. Key Account Managers can be contacted directly rather than the customer telephoning our main customer number.

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. Citizen's Advice Bureau, Solicitor) expressing dissatisfaction with the service provided or offered, the way it is/is not provided and the charges/charge methodologies applied, 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 indicates 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

The Promise system is updated to show a response and resolved date or a respond date only.

Telephone and face-to-face complaints should be resolved 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 Promise. The reports are created using Business Objects for each relevant Guaranteed Standard contact category.
The reports:

- Identify outstanding contacts
- Identify ownership
- Assist 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 Promise and a reply must be forwarded within 10 working days.

5.4 Assumptions and Exclusions

We 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 Customer Management Centre located in the Fairmilehead office in Edinburgh 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 Answered within Timebands
The skill-based routing system (Symposium) reports number of calls answered within 2 second time bands.

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 operate a centralised Customer Management Centre for all operational and business related calls. Once all details are taken from the customer the contact is logged on either of the two corporate systems. These are Promise for operational calls and Hi-Affinity for business calls. The operational enquiry line (0845 601 8855) is open 24 hours a day, 7 days a week, with an emergency number (0845 600 8855) available to the public. This emergency number is quoted on our vans, depots, signs, etc and is intended to inform us of an emergency. All telephone directories in Scottish Water's area carry the customer helpline number and the emergency contact number.

The business calls for Scottish Water have a dedicated contact line (0845 602 8855). The Business line is open from 0800 to 1800 hours, Monday to Friday.

6.3 Call Handling

Calls are logged on Hi-Affinity and Promise and resolved at the time of contact unless the enquiry requires further work. In this situation, the customer is advised of the actions to be taken.

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 the business line receive a message service while they are in the queue.

6.5 Scottish Water Systems

Symposium is a skill-based routing system from Nortel which distributes our calls between agents and also produces the data required for the telephone handling sections of the WIC 5 report.

7.0 Flooding Incidents

7.1 Methods and Procedures

We respond to all internal or external flooding incidents as stated in the Code of Practice.

If an overflow of wastewater enters a permanent building or the space beneath a suspended floor, customers should notify us as soon as possible.

If this occurs due to problems with the public wastewater network and is not due to general surface flooding of the area, a defect in the customer's private sewers, or the result of the customer's own actions, we will clear up any mess directly caused by the overflow of waste water from the public sewer. We aim to respond to the incident as soon as possible, normally within 4 hours, and to begin repairs within 12 hours unless otherwise agreed with customers. When we are informed that a problem with a sewer is causing an overflow elsewhere, we aim to respond to the incident within 6 hours and to begin repairs within 24 hours unless otherwise agreed with customers.

On each occasion of flooding meeting the above criteria, the following guaranteed payment is made:

- For a household, the full annual waste water charge per incident
- For a non-household property, the annual waste water charge, excluding any trade effluent charges, up to a maximum of £1,000 per incident. If any mutually owned area such as a basement is affected, any payment will be apportioned between all premises sharing that area.
- Where it is clearly evident that the cause of flooding is privately owned drains or apparatus, the customer shall be advised accordingly.

On attendance at the incident, the squad identifies the cause and scale of the problem and will resolve it where internal flooding has occurred. We also handle some external flooding depending on the resources available and the severity of the flooding. 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 for all external and internal incidents attended. A Promise 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 – this will only apply for external incidents
- Advise if a claim is being made – this will only apply for internal incidents

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

At 31st March 2004 the Scottish Water Flooding Register recorded the following unresolved flooding (a property is only recorded in one category):

Register Status	No. of Properties
DG5 (2in10 Years)	620
DG5 (1in10 Years)	485
Garden	1731
Highway	466
Other Flooded Areas	57

The 'At Risk' Flooding Register only records flooding due to overloaded sewers.
DG5 is Properties at risk of flooding from sewers

7.3 Sources of Information

We obtain information regarding flooding incidents by the following methods:

1) From Customers

The majority of flooding incidents are reported to us through our customers, usually at the time of the incident. Communication is by telephone or letter to the Customer Management Centre with details being passed to the appropriate Asset Management team. Asset Operations staff 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 are progressing the installation of flood prevention devices to properties susceptible to flooding from under-capacity sewers. Scottish Water are 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.

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

In 2002 Scottish Water compiled a Flooding Register as part of its asset management process.

On completion, this exercise provided initial knowledge of flooding due to overloaded sewers across the whole of Scotland. The register excludes flooding relating to causes other than sewer overloading.

In the year 2003/04 updates to the Flooding Register were managed and reported monthly as a Business Key Performance Indicator (KPI). The information which resulted in updates to the register was sourced from Operations, Capital Investment Team and Strategy & Planning.

Operations maintain the Sewer Flooding Incident Database (SFID), which records sewer flooding events across Scotland and through the use of a standard form (which is completed by the squad in attendance at the incident) the cause of flooding and the activities undertaken are recorded.

The Capital Investment Team monitor the flooding projects and report beneficial use date and the final delivery costs.

Strategy & Planning who manage the Flooding Register are responsible for the movement of properties on to and out of the register. This is achieved by analysis and validation of information provided by Operations and the Capital Investment Team and through investigation of incidents affecting flooding locations (flooding clusters). Drainage Area Study information is used where available. In addition Met Office rainfall data is used to identify severe weather events. Continuous liaison with Operations and Customer Services staff ensure that the Flooding Register is maintained and up to date at all times.

8.1 Methods and Procedures

A process to audit the data on the Sewer Flooding Incident Database prior to records being added to the Flooding Register has been introduced to enhance the accuracy of the Register. Data is collected on Sewer Flooding Incident Record Sheets linked to the customer contact process, collated and reported to Strategy and Planning for appraisal.

8.2 Sources of Information

The Sewer Flooding Incident Database captures all wastewater flooding events across Scotland and records location, cause, attendance times and measures taken. Sewer Flooding Incident Records are completed by the Scottish Water staff in attendance on site and these records are used to populate the SFID. As this database records all sewer flooding incidents it is used to both support the records in the Flooding Register and in providing information on sewer flooding due to causes other than overloaded sewers (e.g. chokes, collapses, plant failure).

8.3 Scope and Coverage

The Flooding Register, as summarised in section 7.2 above, has been checked for completeness and accuracy. A process to manage the register has been established and is outlined below.

The Flooding Register records all types of flooding attributed to the incapacity of the Sewer Network. The extent and severity of each flood is determined either at the time of the event or afterwards by customer interview. There are four categories by which a flood event is classified: Internal, External (Garden), Highway and Other Flooded Areas.

An 'At Risk' Register (the reportable section of the Flooding Register) only contains the properties recorded as having flooded internally. Flooded properties within the 'At Risk' Register are categorised into two sections: DG5 1 in 10 year return - this is the default category for properties being recorded for the first time and DG5 2 in 10 year return - properties with more than one occurrence of flooding within the ten year period. Properties can be removed from the register where Scottish Water has invested in the sewer network. These properties are removed through Authority Action. Where improved knowledge of an incident can prove the flooding was not due to the incapacity of the sewer network or that the storm event which caused the flooding can be attributed to severe weather the property can be removed due to Better Information.

Properties flooded due to severe weather are held in the system and tagged as such. A rainfall event can only be considered to be severe when it is backed up with a weather report from the Met Office. A storm is classed as severe when the event is outside the 1 in 10 year return period criteria set out by the WIC.

8.4 Assumptions and Exclusions

The number of properties reported in this year's Return is based on those properties which have been reported or confirmed using historical information and investigated as part of the continuous data improvement of the Flooding Register. As part of the Drainage Area Studies, hydraulic network models identify properties that may flood. Additional properties highlighted as 'at risk' of flooding in the studies are recorded on the Register as ”unconfirmed” or “unreported” flooding.

Scottish Water are currently confirming whether these properties are at risk of flooding and will reclassify accordingly in due course. As the Drainage Area Studies programme is not yet complete the number of properties classed as unconfirmed or unreported is expected to increase.

8.5 Other Issues

In General Scottish Water does not have 10 years of flooding data, although some historical dates are known. This makes it difficult to assess trends or identify the true number of properties that have not flooded for the past 10 years.

9.0 General Information

9.1 Scottish Water Acronyms

ABC	Activity Based Costing
ACD	Automatic Call Distribution
ACIP	Allocated Capital Investment Programme
AVS&E	Almond Valley, Seafield and Esk (PFI project)
AZNP	Average Zonal Night Pressure
BABE	Burst And Background methodology
BCD	Business Critical Data
BCM	Business Customer Management
BOD	Biological Oxygen Demand
CCTV	Closed Circuit Television
CEH	Centre for Ecology and Hydrology
CG	Confidence Grade
CIR	Capital Investment Return
CIT	Capital Investment Team
CIMS	Capital Investment Management System
COD	Chemical Oxygen Demand
COPA	Control of Pollution Act
COPI	Construction Outputs Price Index
COPM	Change of Payment Method
CRM	Customer Relationship Management
CSO	Combined Sewer Overflow
CU	Customer Use
DAP	Drainage Area Plan
DAF	Dissolved Air Filtration
DAS	Drainage Area Study
DI	Distribution Input
DIRs	Dams and Impounding Reservoirs
DMA	District Meter Area
DO	Deployable Output
DOA	Drainage Operational Area
DSOU	Distribution System Operational Use
DWF	Dry Weather Flow
DWQR	Drinking Water Quality Regulator
DZS	Distribution Zone Studies
EARC	Equivalent Asset Replacement Cost
EJG	Engineering Judgement Grade
EMPAC	Enterprise Maintenance Planning and Controls Asset Management System
EoSW	East Of Scotland Water
EO	Emergency Overflow
ERDF	European Regional Development Fund
FTE	Full Time Equivalents
GEARC	Gross Equivalent Asset Replacement Cost
GIS	Geographical Information System
GMS	Guaranteed Minimum Standards
GRO	General Register Office for Scotland
GRVs	Gross Rateable Values
GWS	Ground Water Source
HDF	Hour-Day Factor
Hi Affinity	Corporate Billing System
HNDA	High Natural Dispersion Area
ICF	Infrastructure Condition Factor
IFM	Integrated Flow Method

INMS	Integrated Network Management System
IT	Information Technology
IPPC	Integrated Pollution Prevention and Control
JANE	Joint Arrangement Non Entity
KPI	Key Performance Indicator
LBS	Lochs, Burns and Springs
LFS	Low Flow Studies
LUT	Large User Tariff
LUVA	Large User Volume Agreement
LOS	Levels of Service
LIMS	Laboratory Information Management System
M&E	Mechanical and Electrical
MEA	Modern Equivalent Asset
MLE	Maximum Likelihood Estimation
MSI	Meadowhead, Stevenston, Inverclyde (PFI project)
NoSW	North of Scotland Water
NRSWA	New Roads and Streetworks Act
NRV	Non Return Valve
OFWAT	Office of Water Services
OU	Operational Use
PCC	Per Capita Consumption
PCF	Pressure Correction Factor
PCV	Prescribed Concentration Value
PE	Population Equivalent
PFI	Private Finance Initiative
PL	Plumbing Losses
Plav	Average Plumbing Losses
POP	Population
PPP	Public Private Partnership
PPRA	Pre and Post Rehabilitation Assessment
Primavera	SWS project management system
Promise	Customer Contact System
Q&S	Quality and Standards
R&S	Regulation and Strategy Group
RA	River Abstraction
RAB	Resource Accounting and Budgeting
RGF	Rapid Gravity Filter
RPI	Retail Price Index
RV	Rateable Value
SBP	Strategic Business Plan
SCADA	Supervisory Control and Data Acquisition
SCOD	Scottish Chemical Oxygen Demand
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 and Northern Ireland Forum For Environmental Research
SOC	Scheme of Charges
SP	Supply Pipe
SR	Service Reservoir
SSSI	Sites of Special Scientific Interest
ST	Sewerage Treatment
SW	Scottish Water
SWD	Surface Water Drainage
SWS	Scottish Water Solutions
SWS ACIP	Scottish Water Solutions Allocated Capital Investment Programme

SWWS	Scottish Water Waste Services
TOC	Total Organic Carbon
THM	Trihalomethanes
UCSO	Unsatisfactory Combined Sewer Overflow
UDWD	Unmeasured Domestic Water Delivered
UGSP	Underground Supply Pipe
UID	Unsatisfactory Intermittent Discharge
UKWIR	United Kingdom Water Industry Research
USPL	Underground Supply Pipe Leakage
UWWTD	Urban Waste Water Treatment Directives
UWWTR	Urban Waste Water Treatment Regulations
VR	Voluntary Release
WAFU	Water Available For Use
WAMS	Works and Assets Management System
WaSC	Water and Sewerage Company
WIC	Water Industry Commissioner
WoSW	West of Scotland Water
WOA	Water Operational Area
WQZ	Water Quality Zone
WRA	Water Resource Area
WRC	Water Research Centre
WRP	Water Resource Plan
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