



Water supply interruptions

Purpose: This performance commitment is designed to incentivise the company to minimise the number and duration of supply interruptions.

Benefits: Reducing the number and duration of interruption events improves the reliability of supply and reduces the impact on customers of having no water supply.

Version control

Version	Date of issue	Performance commitment changes
0.1	22 December 2022	Published at final methodology, changes to definition from draft methodology identified in red text.
0.2	09 May 2023	Removal of red text. References to "report year" changed to "reporting year" for consistency. Minor grammatical corrections.
1.0		
2.0		

Performance commitment definition and parameters

1.1 Detailed definition of performance measure

This measure is identified as the average number of minutes lost per customer for the whole customer base for interruptions that lasted three hours or more.

Output should be presented as average minutes lost. Calculation of performance is carried out using the following equation:

$$\frac{((\text{Properties with interrupted supply} \geq 180 \text{ mins}) \times \text{Full duration of interruption})}{\text{Total number of properties supplied (year end)}}$$

= average number of minutes lost per customer.

Property counts ¹

Property counts shall use the best available information. This should be from the geographic information system (GIS), but paper records and district meter area (DMA) or similar data can be used where recently connected properties have not yet been input to the GIS. Properties shall count as having lost supply whether or not occupied. Properties permanently disconnected will be excluded from the count.

Attention should be paid to the incremental nature of supply loss. For example, for a burst when supply is lost progressively across an affected area, the time/properties affected relationship should be established. Where the loss is gradual, the supply interruption should be considered incrementally.

Properties affected by more than one interruption during the reporting year

Properties which are affected by more than one interruption during the reporting year² should be reported separately for each interruption. This means, for example, that a property affected by three supply interruptions would be reported three times, once for each interruption.

Short term restoration of supply

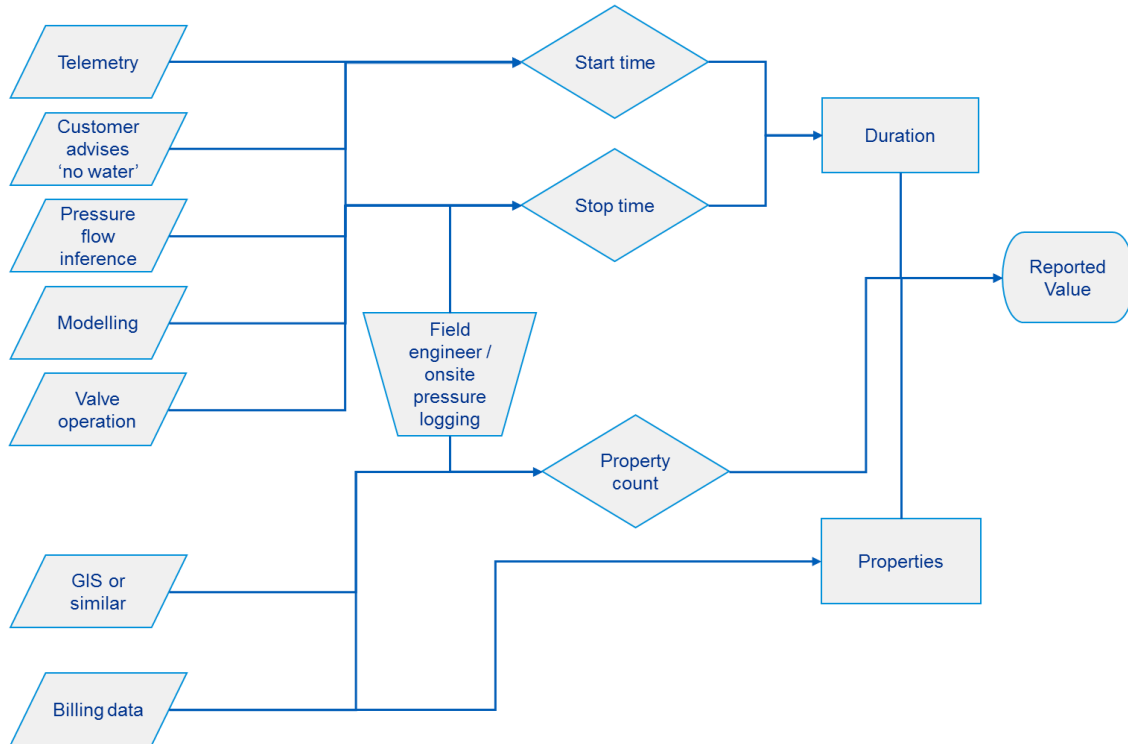
¹ For the purposes of this performance commitment "properties" includes both "household premises" (as defined by section 17C of the Water Industry Act 1991) and non-household premises (premises other than household premises).

² "Reporting year" means the year 1st April to 31st March.

For the cumulative effect of an interruption to be ignored and interruptions to be treated as separate occurrences, properties must have supplies restored for a minimum period of 1 hour. When shorter gaps occur the duration is counted from the start of the first interruption until the last restoration of supply.

1.2 Additional detail on measurement units

Figure 1 Flow diagram



To ensure consistency of reporting, the following regularly used terms are defined below:

Properties

Shall include billed mains pressure fed household and non-household properties connected to the company's water supply system. This includes properties that are connected, but not billed (for example temporarily unoccupied), but should exclude properties which have been permanently disconnected. A group of properties supplied by a single connection shall be considered as several properties. They should only be considered as a single property if a single bill covers the whole property. The total connected properties figure shall be those connected at the end of the reporting year.

Supply interruptions

Are defined as when properties are without a continuous supply of water. The property shall be considered as without a supply when water is lost from the first cold water tap – taken as being operationally equivalent to $\leq 3\text{m}$ pressure at the main (adjusted for any difference in ground or property level). This can be inferred from local logging, network modelling or a customer contact indicating a loss of supply which was caused by the company operation and has not been demonstrably restored. Multiple-storey buildings shall be considered on a case-by-case and floor by floor basis, with properties on a particular floor being considered as receiving the same pressure.

Duration

Is defined as the length of time for which properties are without a continuous supply of water. The duration shall only be considered in the calculation of the metric where the duration is 3 hours or greater.

Start time

Is when water is lost from the first cold water tap at a property – taken as being operationally equivalent to $\leq 3\text{m}$ pressure at the main (adjusted for any difference in ground or property level). In the event of applicable telemetry data or logging being unavailable, the time should be determined from the earliest of:

- as advised by 'no water' contact from customer (where not due to a customer side issue);
- indications from flow or pressure monitoring to infer a change in supply; or
- verified modelled data (calibrated, maintained, reflective of the network at the time of the incident and validated with contemporaneous flow and/or pressure data).

The company shall gain confirmation by consulting complainants (if any) and/or customers at high points on the system.

Stop time

Is when water is restored to the first cold water tap at a property – taken as being operational equivalent to $> 3\text{m}$ head of pressure at the main. In the event of pressure logging being unavailable, the time should be determined from the latest of:

- as advised by notification from customer; or
- indications from flow or pressure monitoring to indicate return to normal supply conditions; or
- verified modelled data (calibrated, maintained, reflective of the network at the time of the incident and validated with contemporaneous flow and/or pressure data).

It is the responsibility of the company to demonstrate that supply conditions have been restored and available to all previously affected customers from the time determined from the above. In the absence of physical evidence, the company shall gain confirmation by consulting complainants (if any) and/or customers at high points on the system.

The company shall apply the precautionary principle, using the start and finish times and the properties affected that will give the highest supply interruption value in the event of uncorroborated or conflicting data.

1.3 Specific exclusions

None.

1.4 Reporting and assurance

It should be possible to correlate and reconcile the company's reported figures for this measure and customer services data relating to reports of and complaints about interruptions to supply. Customer service data should also include social media contact with customers.

Evidence for subsequent challenge shall, as a minimum, be stored where the loss of supply lasted greater than 150 minutes and for split time events, with the purpose of being available for assurance audit. The company shall store supporting evidence for the quantification of the supply interruption metric for a minimum period of 10 years.

The company must maintain records of all reportable incidents of supply interruption in the form of a supply interruptions dataset. The aim of the dataset is to allow verification and audit of the reported information and to enable the identification of the properties affected. It should contain information on the timing, duration, and sufficient information to enable all properties affected by interruptions lasting three hours or more to be identified. The dataset should include:

- properties affected (by name and location or number and street or GIS polygon);
- date and time of interruption(s), including the source of information;
- duration of each interruption and time supply restored, including the source of the information;
- the name of the person responsible for entering records in the system; and
- how start/end times are verified (i.e. by customer contact).

The information in the supply interruptions dataset should be available for verification of incidents and evaluation of ODI underperformance and outperformance payments.

The company shall maintain a methodology statement, which shall be used as a decision support tool for this performance commitment. It should record any changes in approach compared to previous years and will be reviewed as part of the company's assurance process.

The company shall ensure that its outcome delivery incentive payments only relate to real performance changes and not definitional, methodological or data changes in performance commitments.

Compliance checklist

The company is requested to complete the checklist below and report by exception to Ofwat if any element is not green. Where an element is not green, we may intervene to protect customers and ensure that the company does not benefit from insufficient data quality. See Annex 1 for assessment rules for each element.

Alongside its performance, the company shall report on what proportion of its start/stop times has been informed by each data source (customer contact/pressure and flow data/modelled data/valve operation). This could help inform assessments of the validity of comparing different companies.

Table 1 Water supply interruptions compliance checklist

	Component	Component R/A/G	Reason for any non-compliant component	Confidence grade
1	Property Counts			
2	Start Time			
2a	Evidence to support start time			
2b	Treatment of 3m pressure definition			
2c	Treatment of blocks of flats			
3	Stop Time			
3a	Evidence to support stop time			
3b	Treatment of 3m pressure definition			
3c	Treatment of blocks of flats			
4	Short Term Restoration of Supply			

	Component	Component R/A/G	Reason for any non-compliant component	Confidence grade
5	Exclusions			
6	Calculation of Performance			
7	Application of Precautionary Principle			
8	Records			
9	Properties affected >1 interruption in year			

For each component on the checklist, and for the overall performance measure, the company will report a confidence grade.

Table 2 Definition parameters

Parameters	
Measurement unit and decimal places	Hours:minutes:seconds (HH:MM:SS) per property per year, reported to zero decimal places.
Measurement timing	Reporting year
Incentive form	Revenue
Incentive type	Outperformance and underperformance payments
Timing of underperformance and outperformance payments	In-period
Price control allocation	100% water network plus
Frequency of reporting	Annual
Any other relevant information	ODI rate applies on a per minute basis
Links to relevant external documents	N/A

Annex 1 Compliance Checklist

This annex sets out the criteria on which to report checklists where specified in the performance commitment definition.

Compliance for elements is reported against:

R	Not compliant with the guidance and having a material impact on reporting
A	Not compliant with the guidance and having no material impact on reporting
G	Fully compliant with the guidance

An overall RAG to be assigned for each component based on the following rules:

Compliance for overall components is reported against:

R	There are one or more red elements in the component, or the combined effect of amber elements is considered to produce a material impact.
A	Half or more of the elements in the component are amber and the combined effect of the amber elements is considered not to produce a material impact
G	More than half of the elements in the component are green

For each component on the checklist, and for the overall performance measure, companies will report a confidence grade. Confidence grades provide a reasoned basis for companies to qualify the reliability and accuracy of the data.

The company shall employ a quality assured approach in the methodology used to assign confidence grades, particularly if sampling techniques are in place. The confidence grade combines elements of reliability and accuracy, for example:

A2 - Data based on sound records etc. (A, highly reliable) and estimated to be within +/- 5% (accuracy band 2) Reliability and accuracy bands are shown in the tables below.

Reliability Band	Description
A	Sound textual records, procedures, investigations or analysis properly documented and recognised as the best method of assessment.
B	As A, but with minor shortcomings. Examples include old assessment, some missing documentation, some reliance on unconfirmed reports, some use of extrapolation.

C	Extrapolation from limited sample for which Grade A or B data is available.
D	Unconfirmed verbal reports, cursory inspections or analysis.

Accuracy band	Accuracy to or within +/-	But outside +/-
1	1%	-
2	5%	1%
3	10%	5%
4	25%	10%
5	50%	25%
6	100%	50%
X	Accuracy outside +/- 100 %, small numbers or otherwise incompatible (see table below)	

Certain reliability and accuracy band combinations are considered to be incompatible, and these are blocked out in the table below.

Compatible confidence grades				
Accuracy band	Reliability band			
	A	B	C	D
1	A1			
2	A2	B2	C2	
3	A3	B3	C3	D3
4	A4	B4	C4	D4
5			C5	D5
6				D6
X	AX	BX	CX	DX