

OPA Methodology – Overall Performance Assessment for Northern Ireland

Background to the overall performance assessment

Each year we assess companies' overall delivery of service to customers in the overall performance assessment (OPA). The assessment serves two purposes. Firstly, it enables the Regulator to make comparisons of the quality of the overall service companies provide to customers, and to take this into account at each price review. Secondly, it informs customers (and other interested parties) about the overall performance of their water company.

The OPA reflects the broad range of services provided to customers. The key areas and contributing measures included are:

- water supply (water pressure, interruptions to supply, hosepipe bans and drinking water quality);
- sewerage service (sewer flooding incidents and risk of flooding);
- customer service (written complaints, billing contacts, meter reading, telephone answering, telephone access,); and
- environmental impact (leakage, sewage treatment works, pollution incidents from water and sewerage activities and sludge disposal).

How company performance is turned into an overall performance assessment score

Each performance measure is converted to a score out of 50 points. The better a company's performance, the higher the score.

Why does a performance score need to be converted into an OPA score?

Many of the elements of performance result in scores of different order of magnitudes and also with different units (e.g. some scores are measured in percentages and some as numbers of events). Adding these scores together would mean that some elements, where the scoring methodology results in a large score, would dominate the result. Therefore it would not matter how a company performed in the other elements, where the scoring methodology results in a smaller score, as this would have little impact on the total score.

In order to ensure that all elements of performance are scored on the same scale, each performance score is converted into an OPA score of between 5 and 50. These individual OPA scores are then weighted (to reflect the importance of that element in the total OPA score) and then added together to form the total OPA score.

The following calculation converts the score for each element of performance into an OPA score which feeds into the total OPA score.

$$\frac{(\text{Company score} - \text{range min} \times 45)}{\text{Range max} - \text{range min}} + 5$$

There are three parts to the calculation. Firstly the performance score is converted into a score of between 0 and 1. Then it is factored into a score of between 0 and 45 and finally changed into a score of between 5 and 50. These three calculations are explained in more detail below.

Please note that the range max and min are not necessarily the 'highest and lowest' scores. They could be more accurately described as the best and worst possible scores. This accounts for the measures where a lower score is preferable to a higher score e.g. pollution incidents. In this instance a 'higher' numerical score is actually a bad result therefore becoming the 'range min'. This differs for each measure and so it is essential that at each calculation stage this is taken into consideration.

How does the equation change a performance score into an OPA score?

1. Firstly each performance score is changed so that it is in the range of 0 to 1. Then all scores are on the same scale and when the scores are added together one performance measure does not dominate the score.

- This is calculated, for each element of performance, using the following part of the equation:

$$\frac{\text{Company score} - \text{range min}}{\text{Range max} - \text{range min}}$$

- The bottom part of the equation calculates how big the range is that a company can differentiate itself in. So if the maximum performance score expected is 100 and the minimum is 90 then a company **can** score up to 10 points over the minimum (100-90).
- The top part of the equation calculates how far away from the expected minimum a company **actually** scores. In this example, if a company scores 95 then it scores 5 points above the minimum.
- Dividing the scores gives the proportion of the available points scored by a company (a value between 0 and 1). The company described in this example, will get a score of 5/10 i.e. 0.5. A company achieving the maximum performance score of 100 will have this converted into a score of 10/10 i.e. 1, whilst a company achieving the minimum performance score of 90 would have this converted into a score of 0/10 i.e. 0.
- This is done for each element of the performance assessed and so there are now a range of scores between 0 and 1 for each element.

2. Secondly the score is increased so that it is between 0 and 45. This is calculated by multiplying the above score, which is now between 0 and 1, by 45. This is to avoid scores being below one decimal place which are more difficult to read.

3. Finally the score is changed so that it is between 5 and 50. The OPA score is calculated by adding 5 to the above scores (currently between 0 and 45). This is to set the minimum score for each assessment to be 5 and the maximum to be 50.

What if a company's performance is outside the expected ranges?

The ranges have been chosen based on historic performance. If a company performs better than the maximum expected they will receive the top score of 50. If they perform below the minimum expected then they will receive the lowest score of 5.

EXAMPLE

Below is an example of the calculation applied to data for drinking water quality as assessed by the DWI for a water company (on a scale of 0 to 100).

In this example the company has scored 99.86. The performance range for this assessment is:

Maximum: 100

Minimum: 98.4

The OPA score is calculated by entering the ranges and the company's score into the calculation below:

$$\left[\left(\frac{\text{Company score} - \text{range min}}{\text{Range max} - \text{range min}} \right) * 45 \right] + 5$$

$$\text{Step 1: } \frac{99.86 - 98.4}{100 - 98.4} \times 45 + 5$$

$$\text{Step 2: } \left[\frac{1.46}{1.6} \times 45 \right] + 5$$

$$\text{Step 3: } [0.9125 \times 45] + 5$$

$$\text{Step 4: } 46.0625 \text{ rounded to } 46$$

The first part of the equation provides the company's performance in terms of the range between a value of 0 and 1.

The second part ($\times 45, + 5$) transposes the figure into a base score of 45, and the addition of 5 increases the value based on the premise that no company scores less than 5.

Annex 1

<u>Key area / measure</u>	<u>Weighting for water and sewerage companies</u>
Water Supply	2.5
DG2 – Risk of low Pressure	0.75
DG3 – Unplanned Interruptions	0.75
Drinking Water Quality	1
Sewerage Service	1.5
Sewer Flooding Incidents (Overload)	0.5
Sewer Flooding Incidents (Other causes)	0.75
Sewer Flooding (at risk)	0.25
Security of Supply	1.0
DG4 – Hosepipe Restrictions	0.25
Leakage	0.25
SoSI – Absolute Performance	0.25
SoSI – Performance Against Target	0.25
Customer Service	1.5
Company Contact	0.75
Other Customer Service	0.75
Environmental Performance	2.25
Category High & Medium (1 & 2) pollution incidents (Water)	0.5
Category Low (3) pollution incidents (Sewage)	0.25
Sludge Disposal	0.25
Percentage equivalent population served by STWs in breach of consent	1.0
Category High & Medium (1 & 2) pollution incidents (Water)	0.25
Weightings Total	8.75

Annex 2 – Detailed methodology for all OPA measures

These appendices describe the methodology that will apply for 2010-11.

Appendix 1 – Inadequate pressure (DG2)

Description

An assessment based on the number of properties served at risk of receiving pressure below the reference level, expressed as a percentage of the total properties.

Reference level: 10 metre head at a flow of 9 litres per minute.

Unit of assessment

Number of properties at risk of receiving pressure below the reference level expressed as a percentage of the total connected properties.

Calculation

$$\frac{\text{Properties below reference level}}{\text{Total connected properties}} \times 100$$

Performance range

The performance range against which individual company OPA scores are calculated will be:

Max 0.5

Min 0

Appendix 2 – Supply Interruptions (DG3)**Description**

An assessment based on a measure of properties experiencing unplanned supply interruptions (where the customer has not been warned) in excess of 6, 12 and 24 hours.

Unit of assessment

A measure of the number of properties experiencing unplanned and unwarned interruptions to supply in excess of 6, 12 and 24 hours, normalised against the number of properties served by each company.

Calculation

$(\%>6\text{hours} \times 1) + (\%>12\text{hours} \times 1) + (\%>24\text{hours} \times 2)$

Performance range

The performance range against which individual company OPA scores are calculated will be:

Max 3.00

Min 0.13

Appendix 3 – Drinking water quality

Description

An assessment of drinking water quality based on the DWI's operational performance index (OPI 6), which assesses the presence of iron, manganese, aluminium, turbidity, faecal coliforms and trihalomethanes. Details of companies' OPI 6 performance can be found in the DWI's annual report. Noting that this assessment is by calendar year, i.e. for the 2010-11 OPA we will use the OPI from 2010.

Unit of assessment

The OPI score for drinking water quality, calculated by taking the average of the six compliance measure percentages.

Performance range

The performance range against which individual company OPA scores are calculated will be:

Max 100.0

Min 98.4

Appendix 4 – Sewer flooding – overload (DG5)

Description

An assessment based on the number of properties affected by an incident of internal sewage flooding caused by overload of a sewer (also termed hydraulic incapacity).

Unit of assessment

Number of properties affected by an incident of internal flooding caused by overload of a sewer, excluding those incidents resulting from severe weather. The value is expressed as a percentage of total domestic properties.

Calculation

Total flooding incidents - Flooding incidents due to severe weather
(Overloaded sewers) (Overloaded sewers) x 100
Total domestic properties (Sewerage)

Performance range

The performance range against which individual company OPA scores are calculated will be:

Max 0.036

Min 0.0015

Appendix 5 – Sewer flooding – other causes (DG5)**Description**

An assessment based on the number of properties affected by an incident of internal sewage flooding caused by equipment failure in, blockage or collapse of, a sewer (also termed ‘other causes’).

Unit of assessment

Number of properties affected by an incident of internal flooding caused by equipment failure in, blockage or collapse of, a sewer. The value is expressed as a percentage of total domestic properties.

Calculation

$$\frac{\text{Flooding incidents (equipment failure)} + \text{flooding incidents (blockages)} + \text{flooding incidents (collapses)}}{\text{Total domestic properties (Sewerage)}} \times 100$$

Performance range

The performance range against which individual company OPA scores are calculated will be:

Max 0.029

Min 0.0047

Appendix 6 - Sewer flooding – ‘at-risk’ (DG5)**Description**

An assessment based on the number of properties considered to be at risk of flooding by sewage, caused by overload, more frequently than once in ten years.

Unit of assessment

Number of properties considered to be at risk of flooding by sewage, caused by overload, more frequently than once in ten years. The assessment will be normalised by the number of properties removed as a result of individual companies’ enhanced service level allowances (ESL) to address at risk properties in the reporting year. The value is expressed as a percentage of total domestic properties.

Calculation

$$\frac{((2 \text{ in } 10 \times 1) + (\text{problems solved due to ESL funding}) + (1 \text{ in } 10 \times 0.5))}{\text{Total domestic properties (Sewerage)}} \times 100$$

Performance range

The performance range against which individual company OPA scores are calculated will be:

Max 0.1

Min 0.012

Appendix 7 - Hosepipe restrictions (DG4)**Description**

An assessment based on the average number of person weeks of hosepipe restrictions over the year.

Unit of assessment

A measure of the population weeks of hosepipe restrictions over a one year period.

Calculation

$$\frac{\text{Person Weeks of Hosepipe restrictions}}{\text{Winter population}} \times 100$$

Performance range

The performance range against which individual company OPA scores are calculated will be:

Max 1025

Min 0

Appendix 8 – Leakage

Description

An assessment of leakage performance where actual performance is compared with pre-set leakage targets, as published by NI Water in their monitoring plan.

Method of assessment

Each year we assess leakage performance against target using data from the last three years (i.e. a 36-month rolling average). The annual OPA score is determined against six bands of 'percentage of target not met', based on the last three years' performance.

Percentage of target not met – based on last three years' performance	OPA score
<= 0%	50
0.1% to 5.0%	45
5.1% to 10%	40
10.1% to 15.0%	35
15.1% to 20.0%	30
20.1% to 25.0%	25
>25%	20
No set target (1)	20
Target not robust (2)	Reduce actual score by 5 points
1 The lowest score applies when a company does not have set leakage targets (For example when a company is subject to an investigation to establish a robust water balance). 2 Where company targets are mandatory because a company's ELL analysis is not considered robust, the OPA score is reduced by five points to provide an incentive to improve the analysis.	

Examples of how we calculate OPA scores for leakage

Company A	Year 1	Year 2	Year 3	Year 4
Leakage target (MLD)	100	100	90	90
Actual Leakage (MLD)	100	90	100	90
Three-year assessment - % of target met			$(100+100+90)/(100+90+100) = 100\%$	$(100+90+90)/(90+100+90) = 100\%$
% of target not met			0%	0%
OPA Score			50	50

Company B	Year 1	Year 2	Year 3	Year 4
Leakage target (MLD)	100	100	90	90
Actual Leakage (MLD)	100	100	100	90
Three-year assessment - % of target met			$\frac{(100+100+90)}{(100+100+100)} = 96.6\%$	$\frac{(100+90+90)}{(100+100+90)} = 96.6\%$
% of target not met			3.3%	3.4%
OPA Score			45	45

Appendix 9 - Security of Supply – Absolute Performance

Description

Each company has a duty to maintain the security of its water supplies. The security of supply index (SoSI) helps us to assess each company's compliance with this duty. It also enables us to assess water resource availability and leakage issues within a wider security of supply context, and to track changes in the service offered to customers over time.

When calculating their SoSI, companies make assumptions about the levels of service they expect to provide to their customers including expectations about the frequency and duration of restrictions on use, such as hosepipe bans during dry years.

Unit of assessment

Scoring for absolute performance is based on the banding system of Ofwat's '*Security of supply, leakage and efficiency use of water*' report. The OPA scale is non-linear to reflect the non-linear scale used for the SoSI bands. The rationale for this is that a company that does not have adequate security of supply should not score as highly in the OPA as one that does.

Calculation

SoSI	Description	SoS Index	OPA Score (before weighting)
A	No deficit against target headroom in any resource zone	100	50
B	Marginal deficit against target headroom	90-99	45
C	Significant deficit against target headroom	50-89	30
D	Large deficit against target headroom	Below 50	5

Appendix 10 - Security of Supply –Performance against target

Description

An assessment of how the SoSI performance compares to its target which is set in advance by the company and is calculated to incentivise companies to reach their SoSI targets. This measure also allows for transition when SoSI is reset at future price reviews.

Calculation

'% of target not met' must be calculated

$$= 100 - \left(\frac{\text{SoSI Absolute Performance}}{\text{SoSI Reporting Year Target}} \right) \times 100$$

Percentage of target not met	OPA score (before weighting)
0%	50
0.1 to 5.0%	45
5.1 to 10.0%	40
10.1 to 15.0%	35
15.1 to 20.0%	30
20.1 to 25.0%	25
>25%	20

Appendix 11 – Customer contact (DG6, DG7, DG8 and DG9)

Description

An assessment of four aspects of company performance covering:

- Response to billing contacts (DG6);
- Response to written complaints (DG7);
- Billing of metered customers (DG8); and
- Ease of telephone contact (DG9).

Unit of assessment

An equally weighted measure of the four aspects of company performance based on the following:

- The number of billing contacts answered within five working days as a percentage of billing contacts received (DG6).
- The number of written complaints answered within ten working days as a percentage of written complaints received (DG7).
- The number of bills based on a meter reading as a percentage of metered accounts (DG8).
- The percentage of calls answered within 30 seconds as a percentage of total calls received on customer contact lines (DG9).

Calculation

$$(DG6) \quad \frac{\text{Number of billing contacts dealt within 5 days}}{\text{Total billing contacts}} \times 100$$

$$(DG7) \quad \frac{\text{Written complaints answered in 10 days}}{\text{Total written complaints}} \times 100$$

$$(DG8) \quad \frac{\text{Number of bills based on a meter reading}}{(\text{Total number of metered accounts} - \text{Metered Accounts excluded from indicator})} \times 100$$

(DG9 0.25 of Performance score)

$$\frac{\text{Total number of calls not abandoned}}{\text{Total calls received on customer lines}} \times 100$$

(DG9 0.25 of Performance score)

$$1 - \frac{\text{All lines busy}}{\text{Total calls received on customer lines} + \text{All lines busy}} \times 100$$

(DG9 0.5 of Performance score)

Average score based on response to question 19 of customer satisfaction survey.

Performance range

The performance range against which individual company OPA scores are calculated will be:

	WASCs	
	Min	Max
DG6	90	100
DG7	95	100
DG8	98	100
DG9 (calls NOT abandoned)	91	99
DG9 (calls NOT engaged)	90	100
DG9 (call handling satisfaction)	3	4.75
Combined Score ¹	81	180

¹The combined score is the sum of the OPA scores for the four individual measures. Note that the maximum score of 50 is not required for each individual measure in order to achieve the maximum combined score of 180.

Appendix 12 – Assessed customer service

Description

This aspect of the OPA measures the quality of customer service. It is based on seven equally weighted measures, which are:

- revenue and debt collection;
- complaint handling;
- information to customers;
- telephone contact hours;
- compensation policy;
- supply pipe repair policy; and
- service for disabled and elderly customers.

Each of the seven aspects is assessed against specific criteria. Companies are awarded one of three marks: 1 = good, 2 = average, 3 = poor for each of the seven aspects. These are totalled to determine an overall mark for the company. The best possible performance is 7 marks and the worst is 21 marks, noting that companies need only achieve 10 marks to receive the maximum OPA score.

Details of each of the seven assessments can be found in appendices 12.1 to 12.7.

Performance range

The performance range against which individual company OPA scores are calculated will be:

Max 18

Min 10

Appendix 12.1 – Assessed customer service: revenue and debt collection

Description

An assessment of five aspects of payment collection (revenue) and three aspects covering the provision of facilities provided to customers in debt.

Method of assessment

Individual company practice is assessed against a total of eight aspects of customer service. The extent and nature of customer service is determined using the criteria set out below. We have also detailed where we look for this information to be set out.

Revenue

- Number of standard payment options advertised on bills/accompanying leaflets (1 point for each) (bills and leaflets).
- Whether weekly or fortnightly payments are advertised on bills or leaflets (2pts yes or 1pt no) (bills and leaflets).
- Whether bill payments are free of charge at banks or building societies (3pts free, 2pts subsidised or 1 pt full charge levied) (bills and leaflets).
- Whether bill payments are free of charges at post offices or equivalents payment outlets, e.g. Paypoint (3pts free, 2pts subsidised or 1pt full charge levied) (bills and leaflets).
- Whether there is a “difficulty in paying message” on the bill (2pts yes or 1pt no) (bills and leaflets).

Debt

- Free phone debt line (3pts dedicated 0800 line advertised on initial bill; 2pts debt line available but not necessarily advertised; 1pt no debt line) (bills and leaflets).
- Provision of charitable trust/hardship fund (3pts yes; 2pts planned; 1pt no) (CCNI assessment. See next page for details).
- CCNI assessment of company’s handling of indebted customers (8pts good, 6pts satisfactory; 4pts basic) (CCNI assessments. See next page for details).

Banding

- 1 Top >25 points
- 2 Middle 20-25 points
- 3 Bottom <20 points

CCNI assessments of companies handling of customers in debt

A form is sent each year to CCNI which asks them to assess the company against the five debt guidelines as revised in October 2002, plus gives an overall view of company practices based on the annual audits they carry out.

The five areas are:

- contact with customers;
- payment options;
- information for customers in debt;

- payment arrangements for customers in debt; and
- debt recovery agents.

We also ask them to inform us whether NI Water has a charitable trust in place, are planning to establish one, or do not have a charitable trust and have no plans to set one up.

Appendix 12.2 – Assessed customer service: complaint handling

Description

An assessment of two aspects of complaint handling: CCNI audits of company complaint files, and the number of customer complaints to the company, which are accepted by CCNI for further investigation.

Method of assessment

Individual company activity on both aspects are assessed and awarded a band score. The combined band score for the two assessments determines the total score for the measure.

CCNI audits

CCNI audits/assessments of complaint handling are converted into a numerical score as shown in the following example.

An audit assessed 20 complaints as 'good', three as 'acceptable', and two as 'not acceptable'. These assessments attract 2 points, 1 point and –2 points respectively. In the above example the audit score would be $(20 \times 2) + (3 \times 1) + (2 \times -2) = 39/25 = 1.56$. This audit score is then converted into a banding score.

Band Audit score

1	>1.75
2	1.50-1.75
3	1.00-1.49
4	0.00-0.99
5	<0.00

CCNI investigations

The number of complaints accepted for investigation by CCNI as a percentage of complaints received by the companies. Company performance is converted into a banding score derived.

Banding % investigated

1	<1.00%
2	1.00-2.00%
3	2.01-3.00%
4	3.01-5.00%
5	>5.00%

Overall banding

1	Top 2-4
2	Middle 5-7
3	Bottom 8-10

Appendix 12.3 – Assessed customer service: information to customers

Description

A two-part assessment of information sent unsolicited to customers during the report year: whether it covers a number of essential areas of company activity; and, the clarity of the literature.

Unsolicited information is information that is sent to all customers without request and includes company-produced leaflets sent alongside bills and company magazines/newspapers or information available on the company's website.

Method of assessment

The extent to which company literature sent to customers or available on the website covers essential information. These areas of information are defined below:

- explanation of charges;
- availability of free meter option;
- surface water rebate;
- help for vulnerable customers;
- payment options;
- payment methods;
- services for elderly and disabled customers;
- customer charter/Guaranteed Standards Scheme;
- complaints handling; and
- water efficiency.

Clarity of information will be assessed on the use of plain language and clear presentation.

Banding

Each of the ten topics listed above attracts up to 3 points for the extent of information provided. Clarity of information will attract 2 points per topic broken down into one point for use of plain language and one for presentation (e.g. colour contrast, use of appropriate fonts). The companies can score a maximum of 50 points. This is converted into a percentage score.

Appendix 12.4 – Assessed customer service: telephone contact hours

Description

An assessment of the advertised accessibility of company call centres in handling billing contacts and general operational enquiries. The company is required to provide emergency cover at all times, which does not form part of the assessment.

Method of assessment

The accessibility of company call centre is assessed by reference to the number of hours the service is advertised and provided during weekdays and weekends or bank holidays.

Banding

Opening hours per week (7 days)

- 1 Top: greater than or equal to 55 hours
- 2 Middle: greater than or equal to 50 hours, but less than 55 hours
- 3 Bottom: less than 50 hours

Appendix 12.5 – Assessed customer service: compensation policy**Description**

An assessment of the companies' advertised compensation policies and customer charter.

Method of assessment

Assessment of the companies' advertised compensation policies and customer charter against the requirement of the Guaranteed Standards Scheme (GSS).

Banding

1. Goes significantly beyond the provision of GSS in terms of:
 - (a) value of payments; and
 - (b) extended range of compensation payments.
2. Goes beyond GSS for some standards, e.g. increased value of payments (enhanced GSS).
3. Standard GSS criteria applies.

Appendix 12.6 – Assessed customer service: supply pipe repair policy

Method of assessment

Assessment of the companies' advertised policy for the repair and replacement of supply pipes.

Banding

1. Free locate and repair/replacement service with only minor restrictions.
2. Free locate and repair/replacement service with two or less major restrictions.
3. Does not meet the above criteria.

Minor restrictions

- i. No repair if the pipe passes under a building.
- ii. Available only to domestic customers.
- iii. Charge applies after a certain length of pipe is repaired or replaced.
- iv. If renewal work has not been carried out by the customer, additional repairs will be charged.
- v. Cost limit or subsidy applies if replacement rather than repair is necessary.
- vi. The scheme is available for two leaks per customer only.

Major restrictions

- i. Only one repair available per property/customer.
- ii. Work limit (e.g. two excavations) applies.
- iii. Rented properties are not included.
- iv. Mobile homes/caravan sites are not included.

Appendix 12.7 – Assessed customer service: services for disabled and elderly customers

Description

An assessment of the companies' advertised policy for the provision of service to disabled or elderly customers.

Method of assessment

Using the leaflets produced by companies and a form (which is sent to each company every year) detailing unadvertised services (such as access to their offices for disabled customers) they offer, an assessment of individual company activity is made. A list of guideline criteria considered essential elements of policies and procedures needed to meet the needs of disabled or elderly customers is used for this assessment. The criteria include the following:

- Provision of a register.
- Company activity raising customer awareness of services, including regular circulation of literature and communication with relevant organisations.
- Provision of essential information provided in alternative formats.
- Availability of a password scheme available for any customer who feels vulnerable.
- Meter reading/re-siting service.
- Bill reading/nominee service or provision of bills in Braille or large print.
- Access to company premises for disabled customers.
- Provision of advice on aids and equipment.
- Services for those customers or households vulnerable to drinking water contamination/boil water notice incidents.
- Allowing carers to register a client if necessary.

Banding

- 1 Top provides good service across all areas of guidelines.
- 2 Middle all key areas of guidelines addressed to some degree.
- 3 Bottom some key areas of guidelines not addressed.

Appendix 13 – Sewage treatment works consent compliance

Description

An assessment of sewage treatment works (STWs) with the conditions of their discharge consents.

Unit of assessment

An assessment of the percentage population equivalent (p.e.) served by STWs that do not comply with the conditions of their discharge consents. The measure addresses compliance with conditions covering the following.

- Sanitary determinands of The Water and Sewerage Services (Northern Ireland) Order 2006 numeric consents.
- Bio-chemical oxygen demand and phosphorus determinands of Urban Waste Water Treatment Directive (UWWTD) consents.
- Phosphorus determinands of The Water and Sewerage Services (Northern Ireland) Order 2006 numeric consents.
- Disinfection conditions of The Water and Sewerage Services (Northern Ireland) Order 2006 consents.

Sewage treatment works compliance conditions included in the OPA

Parameter	Legislation	Compliance Condition
Biochemical Oxygen Demand (BOD)	WSSO(NI) ¹ UWWT ²	Compliance with the look up table (LUT) effluent consent condition limits
	UWWT ²	Compliance with LUT consent condition limit requiring percentage removal of BOD across the works, as assessed by influent and effluent BOD concentrations.
Suspended Solids (SS)	WSSO(NI)	Compliance with the look up table (LUT) effluent consent condition limits
Ammonia (NH ₄)	WSSO(NI)	Compliance with the look up table (LUT) effluent consent condition limits
Phosphorus (P)	WSSO(NI) UWWT	Compliance with the look up table (LUT) effluent consent condition limits
	UWWT	Compliance with the consent condition limit requiring percentage removal of P across the works, as assessed by influent and effluent P concentrations
UV Disinfection	WSSO(NI)	Compliance with the required UV dose for 99% of the time (where the period of time is annual or seasonal as specified in the consent conditions ³)
WSSO(NI) ¹ – The Water and Sewerage Services Order (Northern Ireland) 2006 UWWT ² – Urban Waste Water Treatment Regulations The UWWT regulations provide two approaches for BOD and P: A works is considered to have met compliance conditions if it passes either of these conditions.		

³Some works are required to apply UV disinfection year round, others during the bathing season only.

Calculation

p.e. of STWs failing their consent conditions for sanitary
determinands, phosphorus determinands and disinfection conditions x100
Relevant p.e. served (resident) (numeric consents)

Performance range

The performance range against which individual company OPA scores are calculated will be:

Max 4.93

Min 0

Appendix 14 – Sewage sludge disposal**Description**

An assessment of sewage sludge disposed of in an unsatisfactory manner.

Unit of assessment

Percentage of sewage sludge disposed of in an unsatisfactory manner.

Calculation

$$\frac{\text{Sewage sludge unsatisfactory disposed}}{\text{Total sewage sludge disposed}} \times 100$$

Performance range

The performance range against which individual company OPA scores are calculated will be:

Max 4

Min 0

Appendix 15 – Category High & Medium Pollution Incidents (Sewage)

Description

An assessment of the number of high and medium pollution incidents resulting from sewage collection and treatment activities.

Unit of assessment

The number of high and medium pollution incidents resulting from sewage collection and treatment activities per million population equivalent (p.e.) served. See table for details of which pollution incidents are included.

How we use the pollution incidents reported in NI Water's Service Target Report in each annual information return.

Source/Premises	Category High & Medium	Category Low
Sewage Treatment Works	Included in OPA.	Included in OPA.
Combined Sewer Overflow	Category High & Medium pollution incidents (Sewage)	Category Low pollution incidents (Sewage)
Storm Tank		
Rising Main		
Water Treatment Works	Included in OPA.	Not included in the OPA
Water Distribution System	Category High & Medium pollution incidents (Water)	
Surface Water Outfall	Not included in the OPA	
Pumping Station	Included in OPA.	Included in OPA.
Foul Sewers	Category High & Medium pollution incidents (Sewage)	
Other		

Calculation

$$\frac{\text{Category High \& Medium pollution incidents}}{\text{Population equivalent served resident / 1,000}}$$

Performance range

The performance range against which individual company OPA scores are calculated will be:

Max 6.17
Min 1.06

Appendix 16 – Category Low Pollution Incidents (Sewage)

Description

An assessment of the number of low pollution incidents resulting from sewage collection and treatment activities.

Unit of assessment

The number of low pollution incidents resulting from sewage collection and treatment activities per million population equivalent (p.e.) served. See table in appendix 15 for details of which pollution incidents are included.

Calculation

$$\frac{\text{Category 3 pollution incidents}}{\text{Population equivalent served resident} / 1,000}$$

Performance range

The performance range against which individual company OPA scores are calculated will be:

Max 145.07

Min 9.44

Appendix 17 – Category High & Medium Pollution Incidents (Water)

Description

An assessment of the number of high and medium pollution incidents resulting from water treatment and distribution activities.

Unit of assessment

The number of high and medium pollution incidents resulting from water treatment and distribution activities per million winter population served. See table in appendix 1 for details of which pollution incidents are included.

Calculation

Category 1 and 2 pollution incidents

Winter population / 1,000

Performance range

The performance range against which individual company OPA scores are calculated will be:

Max 1.7

Min 0

Annex 3 - GLOSSARY OF TERMS

Combined sewer overflows (CSOs)

CSOs operate in storm conditions to divert excess sewage to a nearby watercourse preventing a build-up of sewage within the wastewater collection system. Their operation avoids the flooding of pumping stations, public or private property.

Descriptive consents

Discharges from small sewage treatment works (STWs) are often regulated by 'descriptive' consents, which prohibit through words, not numbers, the release of poisonous or injurious matter.

Discharge consent

A discharge consent is a permit issued by the Environment Agency which sets out the conditions under which a consent holder may make a discharge of sewage or trade effluent to controlled waters.

Economic level of leakage (ELL)

The level of leakage at which it would cost more to make further reductions in leakage than to produce the water from another source is known as the ELL.

Operating at ELL means the total cost to the customer of supplying water is minimised and companies are operating efficiently. In determining this it is important to include consideration of environmental and social costs as well as other costs.

Enhanced service levels (ESL)

Enhanced service level allowances are funds provided within price limits to provide a significant improvement in customer service.

Equivalent population

Includes both the domestic population served and the non-domestic load on the sewage treatment service.

Final Determination

Outcome of a price review including company price limits which operate for a five-year period and specific outputs which the company must deliver.

Guaranteed Standards Scheme

A scheme that lays down minimum guaranteed standards of service to customers by companies. If the standards are not met customers are entitled to compensation. In many cases this is paid automatically.

Hydraulic overload

The inability of a sewer to pass downstream a flow of sewage due to the incapacity of a particular pipe, or section of the sewerage system.

June returns

Annual data submissions by water companies to Ofwat regarding their activities and performance.

Numeric consents

Discharges from larger STWs are regulated by 'numeric' consents, which prescribe the quality, in numerical and chemical terms, of the discharge.

Operational Performance Index

The DWI's measure of the operational performance of water treatment works and distribution systems, calculated by averaging the compliance of water supply zones for six parameters: iron, manganese, aluminium, turbidity, faecal coliforms and trihalomethanes.

Overall performance assessment

The overall performance assessment (OPA) provides an overview of company performance covering water supply, customer service, sewerage service, and environmental performance (only water and sewerage companies are assessed for the last two areas).

Periodic review

The resetting of all water companies' price limits. Price limits are set every five years.

Pollution incidents

Pollution incidents are categorised according to their impact on the environment, Category 1 being the most severe, Category 4 the least severe.

Price limits

The annual increase in charges companies can make is limited by their licenses. The limit is described as $RPI \pm K + U$. K represents the amount by which average charges can rise in any year, RPI is the Retail Price Index and U is unused K from previous years. A specific K value is set by the Director for each company for each year, usually at a periodic review. The value reflects what a company needs to charge to finance the provision of services to customers.

Resource zone

The largest possible zone in which all water resources, including external transfers, can be shared. It delineates a zone in which all customers will experience the same risk of supply failure from a resource shortfall.

Sanitary determinands

All numeric consents contain so called 'sanitary' conditions which control the quantity of suspended solids, biochemical oxygen demand, and in most cases, ammonia, in discharges from STWs.

Security of supply index (SoSI)

The index used by Ofwat to assess water resource availability and leakage issues within a wider security of supply context and to track changes in the service offered to customers over time.

Sludge

Annual information return reporting requirements and definitions manual 2011
Issue 2.0 – April 2011

The final form of solid matter that is removed during sewage or water treatment.

Target headroom

The minimum buffer a water company should allow between supply and demand to cater for specified uncertainties in the overall supply/demand balance.

Wastewater

A term for sewage, either influent to, or effluent from, a sewage treatment process.