Dŵr Cymru
Welsh Water

Pentwyn Road
Nelson
Treharris
Mid Glamorgan
CF46 6LY

Tel: +44 (0)1443 452 300
Fax: +44 (0)1443 452 323
Web site: www.dwrcymru.com

FinanceAndGovernance@ofwat.gsi.gov.uk

Regulatory Reporting Consultation Response
Ofwat
Centre City Tower
Birmingham
B5 4UA

22 February 2019

Dear Sir / Madam

Re Annual Performance Report Consultation 2018-19.

Thank you for the opportunity to comment on the proposed changes to the reporting requirements for the 2018-19 Annual Performance Report (APR) and the potential new requirements for 2019-20 onwards.

Our response includes comments on the specific questions raised within the consultation document including a few specific table issues (see Appendix 1) where we would welcome clarification within the finalised Regulatory Accounting Guidelines.

In addition, we include our comments on the detailed guidance for three of the common performance measures (sewer collapses, risk of sewer flooding in a storm and unplanned outages). During the last few weeks, Water UK have held workshops on these three measures, where company experts discussed and worked on the guidance to improve consistency of these common performance measures. The full detailed feedback for these three areas is included in Appendix 2.

Following the consultation, we welcome the finalised Regulatory Accounting Guidelines being published by 22 March as stated, to ensure we report 2018-19 APR data in line with the latest guidance. We would be happy to discuss any of our comments further if required.

Yours faithfully

[redacted]

Mike Davis
Director of Strategy and Regulation

Specific question responses

The following are our responses to the specific questions asked in the consultation.

Q1. Transparency of financial flows

a. Do you agree with the scope of the proposed information items in the new table?

We are comfortable with the overall scope of the proposed table and agree that there is merit in companies providing supporting narrative to fully explain and highlight the key features of the analysis.

We assume that the inclusion of Table 1F in section 1 of the APR will bring it in scope of the audit requirement for sections 1 and 2, in line with the other tables in these sections (simply a point of clarity, as our external auditors performed a set of agreed-upon procedures on the financial flows tables included in our 2017-18 APR).

b. Is there any information missing from this table which you think should be included in order to achieve transparency and consistency for financial flows reporting?

We have not identified any specific omissions, but would note that the notion of dividends is not particularly meaningful for DCWW, since the Glas Cymru group is wholly owned by a company limited by guarantee: for example, while our 2017-18 reporting showed dividends paid by the appointee to its holding company, these were not for shareholder benefit. We recognise that our position is unique, however, and do consider that the table overall is meaningful in facilitating a comparison of companies' returns against Ofwat's determinations and across the sector.

Do any of the line item definitions require further explanation?

We are pleased to see that Ofwat proposes more prescriptive guidance for the 2018-19 reporting year, setting out clearly the sources of the data required to be used in populating the table; this helps to give transparency of the required mechanisms of the calculations in order to ensure consistency of companies' reporting. We intend to provide narrative which seeks to explain the elements of the table while clearly setting out the calculation of each row; however it would be useful to understand if Ofwat would rather companies not publish their full line item calculations (purely in the interest of concise reporting, and following clearer guidance in the updated RAGs).

The only significant area where the guidance is vague in terms of the mechanics of the calculation is row 1F.9, "Hedging instruments", defined as the impact of hedging instruments on the actual cost of debt. The proposed guidance states, as for the 2017-18 reporting year, "this figure is calculated by the company." We would find it helpful if Ofwat were to clarify whether this is intended to be the **income statement** impact of hedging instruments on the actual costs of debt or another measure, e.g. cash. Our 2017-18 reporting was prepared on the basis of an income statement measure.

Row 1F.8, "Cost of debt (adjusted for hedging instruments)", includes a definition of net actual interest paid as "interest paid on loans, borrowings, finance leases and adjustments associated with indexation for inflation." Unless instructed otherwise, we intend to prepare the calculation on this basis, using the accompanying narrative to demonstrate how this definition of net actual interest reconciles to net interest per the income statement (the sum of Table 1A lines 6 and 7) – differences will include the impact of hedging instruments, shown separately in 1F.9, as well as other items not within the scope of the definition, e.g. facility and commitment fees.

Q2. New connections – Appendix 1 contains our new table 2K;

a. Do you agree with the scope of the proposed information items in the new table?
b. Is there any information missing from this table which you think should be included in order to achieve transparency and consistency for new connections reporting?

Do any of the line item definitions require further explanation?

As you state, the new table 2K relates to information underlying charging rules applicable to English companies so we have no comment on the definitions. However, It would be useful if it could be made clear whether Welsh Companies are expected to complete the table or not.

Q3. What are your views on the proposed changes to the existing tables in Appendix 1?

We have noticed a small anomaly within RAG 3.11 in relation to the Statement of Directors' pay and standards of performance that we would welcome clarified within the final RAGs. Ofwat make it clear in RAG 3.11 that the Annual Performance Report should contain this Statement. This requirement is reinforced in Section 3.2 headed "Statement of directors' remuneration and standards of performance".

However, Section 3.1 provides a list of Notes and Statements that have to be provided in the Annual Performance Report and this states a Note should be provided rather than a Statement. Section 35A of the Water Industry Act specifically mentions the requirement for a "Statement".

Within our Appendix 1 we have inserted a few specific table issues that we would welcome are clarified in the final RAGs.

Q4. What are your views on the issues highlighted in section 3 'Future developments in performance reporting'? Are there any other issues which we should consider? We are particularly interested in your views on the impact of additional price control units (section 3.2).

3.1 New accounting standard; IFRS 16-Leasing

- We are comfortable with Ofwat's proposal that companies explain and quantify the operating costs that would have been recorded as expenditure in the income statement had IFRS 16 not been introduced.

3.2 Table 2A impact of additional price controls

- For splitting revenue between price controls for 2019/20 onwards we suggest that the output from the tariff modelling could be used.
- For the recharging of costs between business units for the joint use of assets the recharges will depend on the nature and type of assets and each one will be considered individually. However for M&G assets, such as IT and offices, we would suggest splitting the recharges based on FTE.

3.3 Bioresources trading

- We support the proposal to expand the analysis to include costs and profits for bioresources and would request that clear guidance is made available to ensure transparency and consistency of reporting costs in this area.

3.4 Impact of Retail non household

- We support your proposal to revisit this area in time for the 2020-21 reporting requirements when Ofwat will be updating the reporting requirements for the expanded number of price control units.

3.5 Income from diversion activity

- We support the proposal to align RAG 4 Appendix 1 (Income categorisation) to the PR19 confirmed approach of treating diversions income as part of the price control.

Q5. What are your views on our preference to require all costs associated with the 'Traffic management act' to be reported (sections 6)?

Our suggestion is that for consistency of reporting across the companies it would be best if only the direct costs of the permits were included which would be the cost of the permit and the administration cost of the team responsible for applying for these permits.

Q6. What are your views on our additional asset type descriptions for Water resources which recognises 'desalination' and 'effluent reuse' abstraction assets (section 7)?

As we have no desalination and effluent abstraction assets we have no comments on this.

Appendix 1 - Specific table issues

Table	Line	Issue
4Q	24-25	The proposed table guidance requires "fleet transport" to be reported within energy consumption values. We would be grateful for clarification of the nature of the "imported or self-generated" energy consumption to be included within fleet transport, e.g. should this include items such as company car fuel and business mileage claimed on expenses? In addition and in the interest of consistency, when reporting the financial cost associated with energy consumption (e.g. table 2B line 1), which costs should be classified as "fleet transport"? Again, should this include items such as company car fuel expenditure and the cost of business mileage claimed on expenses? For the 2017-18 reporting year we included such costs within "other" as opposed to energy consumption.
4U	13-14	
4R	8 to 10	For clarity, if there is an overflow at a pumping station and the permit has 2 schedules, 1 for Storm Sewage and 1 for Sewage in an Emergency, we are reporting these in line 8 based on the definitions provided. If our interpretation is incorrect, please could the guidance be clarified.

Appendix 2

Sewer collapses common performance commitment

All companies have come together, facilitated by Water UK, to share experiences of shadow reporting for 2017-18 of the new sewer collapse measure, and have identified opportunities to improve the consistency of reporting through clarifying and in some cases expanding the reporting guidance.

As a result, we – in agreement with all other companies - propose a limited number of revisions to the reporting guidance aimed at providing clarity in reporting. The rationale for these revisions is provided below, and the specific proposed changes are provided in the annex (in track changes).

Rationale for proposed revisions to reporting guidance

The proposed changes relate to clarifications in five areas: the scope of the measure; the definition of customer and environmental impact; which assets that should be included; report timing and, exclusions covering proactive status and impact of root ingress.

- **Clarification of the scope of the measure**

  Making clearer that the measure is for sewer collapses that have not been identified proactively by the company and cause an impact on service to customers or the environment.

- **Clarification of the definition of customer and environmental impact**

  Making clearer that 'impact' covers any contact with the company (i.e. an impact on service has caused someone to contact the company), or any unplanned escape of wastewater, that results in the need to replace or repair the pipe to reinstate normal service; this revision aims at providing clarity that an impact to customer and environment should not be limited to a flooding or pollution event.

- **Clarification of assets that should be included**

  Making clearer that a reportable sewer collapse also applies to pipe bridges, and failures on the infrastructure network, including inputs into the inlet of treatment works and terminal pumping station rising mains (in accordance with RAG guidance 4.07).

- **Clarification of the report timing**

  Making clearer that a sewer collapse should be reported in the reporting year when the service incident was reported to the company and not when the repair was completed**.**

- **Clarification of exclusions covering proactive status, impact of root ingress**

  Making clearer, via an updated flow diagram, the distinction between the proactive and reactive sewer collapse. Additionally, removing two exclusions (fractured assets and minor pipe breaks), providing clarity on how root ingress and patch repairs should be treated, and making the wording on exclusions less ambiguous.

We, and other companies, would be happy to expand further on the rationale for these changes if that would be helpful.

If the approach set out in this note was supported by Ofwat, and confirmation of this was provided by 22 March 2019 in line with the timeline set out in the consultation, we confirm that we would be able to report on this basis in the early APR submission by 15 May 2019, and resubmit business plan forecasts for 2019-20 to 2024-25 on this basis at the same time.

Annex: Proposed revisions

This annex sets out, in track changes from the published guidance, the proposed changes.

Reporting guidance – Sewer collapses per 1,000km

Objective

This guidance seeks to enable all companies to report on sewer collapses for the defined year with confidence and at a reasonable level of accuracy and with a common approach. Companies shall apply consistent and robust methods and common assumptions. This will facilitate the comparison of performance across companies by customers, regulators and other companies with reasonable confidence.

Key Principles

There are several key assumptions made in the compilation of the guidance:

- Reporting on number of sewer collapses shall be subject to each company's assurance process which is applied to all measures reported annually.
- Companies have a methodology or procedure in place for reporting on sewer collapses
- There is an assumption that there will be continued improvement by all companies in the short and medium term through innovation, new technology, data quality improvements and staff training:
- The measure assumes a clear and simple approach that can be understood by customers and regulators;
- The essential reporting requirements for reporting on sewer collapses are set out in the guidance;
- The focus of the guidance is on annual reporting of number of sewer collapses. It is not intended as a definitive guide to managing the risk of sewer collapses;
- Exclusions are to be kept to a minimum and shall be consistent with the reasonable expectations of an affected customer.

Applying this guidance is likely to mean that comparisons of historical performance between companies, and of individual companies' previous performance, may not necessarily be valid. However, it is anticipated that future individual company year on year trends in performance will be possible.

Measure Definition

Number of sewer collapses per thousand kilometres of all sewers that have not been identified proactively by the company and causing an impact on service to customers or the environment.

This measure seeks to reflect failures in the asset, causing any impact on service to customers or the environment that requires replacement or repair to reinstate service, while maintaining incentives for companies to proactively investigate asset quality.

A reportable sewer collapse is considered to be where a failure has occurred to the pipe that results in either any contact with the company (i.e. an impact on service has caused someone to contact the company) or any unplanned escape of wastewater and results in the need to replace or repair the pipe to reinstate normal service (as set out in the flow diagram below). The measure intentionally does not refer to the magnitude of the collapse.

This measure includes rising mains, pipe bridges, and failures on the infrastructure network, including inputs into the inlet of treatment works and terminal pumping station rising mains (in accordance with RAG guidance 4.07).

Note this measure should include all public sewer and lateral collapses recorded by the company inclusive of those incidents that have been reported as flooding or pollution failures, if the primary cause of the flooding or pollution was a sewer collapse.

Note multiple incidents on the same length of sewer (manhole to manhole/ valve to valve) will count as a single incident if all work is carried out as part of the same remedial job. This assumes that the locations are in close proximity. This would not be the case if separate locations were more than 25m apart.

For clarity if jetting enables restoration of flow without the need for pipe replacement or repair then the incident is not to be reported as a sewer collapse.

However, if pipe replacement or repair is needed to resolve an issue that has been identified as a result of either a contact with a company or any unplanned escape of wastewater, then it is to be reported as a sewer collapse in the reporting year in which the service impact was reported to the company, not when the replacement or repair took place.

Reporting Process

The process for deriving the number of sewer collapses is given in the diagram below:

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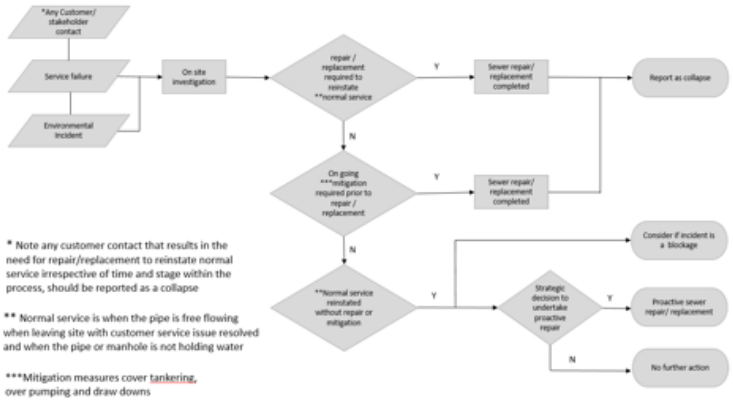

A sewer collapse should be reported in the reporting year when the service incident was reported to the company, not when the replacement or repair took place.

A company is required to report against this definition and:

- Disclose where its methodology does not comply with this guidance using the checklist in Annex A;
- Explain the reasons for any non-compliance;
- Set out its plans and programme to comply with the guidance; and
- Disclose any other factors which have an impact on the methodology for reporting outage.

Components

Sewer Length

Companies should separately record the length of sewer that was transferred to their responsibility under the Transfer of Public Sewers Regs 2011.

Exclusions

The following exclusions apply to the sewer collapse measure definition:

- Proactively identified collapses – Should the need to replace or repair a pipe be found as a result of proactive activity (survey or proactive sewer maintenance work) on the network then it should be excluded (see flow diagram above).
- Third party damage – Third party structural damage (including water utility damage) of the sewer is not an indicator of asset health and hence should be excluded.
- Manhole damage and internal backdrops should be excluded
- Displaced joints, cracked pipes, open joints, intruding connections, and hard blockages, patch repairs and sewer lining do not reflect sufficiently significant structural failure hence should be excluded from the measure.
- Root ingress is excluded unless it has resulted in a need for pipe replacement

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Wastewater resilience common performance commitment

All companies have come together, facilitated by Water UK, to share experiences of shadow reporting for 2017-18 of the new wastewater resilience measure (risk of sewer flooding in a 1 in 50 storm), and have identified opportunities to improve the consistency of reporting primarily through greater transparency.

Context

This measure is new and relatively complex, with a number of stages, some of which involve the use of judgement (for example in assigning grading the vulnerability of catchments or whether to use 'buffer' or '2D' approaches to modelling). As would be expected for a newly introduced measure of this nature, there is some variability in the detailed approaches taken by companies; greater transparency would improve visibility of this and over time result in improved consistency through the identification of best practice.

Enhancing commentaries to improve transparency

To improve transparency to stakeholders, we propose that as a matter of routine, all companies provide in a commentary all the information set out in section 3.6 of Developing and Trialling Wastewater Resilience Metrics, Atkins, and specifically Tables 6-9.

In addition, all companies should:

- Set out the parameters they have used in applying the catchment vulnerability assessment (Appendix A of Developing and Trialling Wastewater Resilience Metrics, Atkins)
- Reporting the extent to which they use '2D' modelling approaches or the simpler modelling approach of applying a buffer zone
- Confirm whether they currently use FEH13 in their assessment, and if not, when they expect to do so

While we commit to providing this information, we suggest that it would be helpful for Ofwat to explicitly include a requirement to do so in the APR reporting requirements.

Technical aspects where companies will improve consistency

At a more technical level, we have identified more consistent approaches to applying some aspects of the methodology, set out below:

- Modelling properties at risk of flooding on the basis:
    - For the 'buffer' approach, including any residential property where flood water reaches the property address point centroid
    - For the '2D' approach, including any residential property where flood water reaches the house boundary

Future development

We recognise that over the next few years, there is further work to be done to improve understanding of this metric, for example more standardised parameters for the catchment vulnerability assessment and better understanding of the relative merits of using the two approaches to modelling ('buffer' or '2D'). We will continue to work with other companies on this to improve the robustness and comparability of this measure.

Unplanned outage common performance commitment

All companies have come together, facilitated by Water UK, to share experiences of shadow reporting for 2017-18 of the new unplanned outage measure, and have identified opportunities to improve the consistency of reporting through clarifying and in some cases expanding the reporting guidance.

As a result, we – in agreement with all other companies - propose a limited number of revisions to the reporting guidance. The rationale for these revisions is provided below, and the specific proposed changes are provided in the annex (in track changes).

Rationale for proposed revisions to reporting guidance

The proposed changes relate to two areas, the definitions of 'Peak Week Production Capacity' (PWPC) and of the duration of an outage.

Peak Week Production Capacity

- Making clearer (through reordering the first sentence, removing some unnecessary text and adding an additional sentence) that this measure is different from PWPC as defined in Water Resource Management Plans
- To improve consistency, clarifying that PWPC should be at least the highest historic performance that has been sustained for any seven-day period in the last five years (unless a change to assets or processes can be evidenced), but could be higher
- Expanding the section on how companies could evidence PWPC, including that the duration of any tests need not extend to seven days, to avoid unnecessary wastage of water and operational disruption

Duration

- Where an asset has been fixed and is ready to be put back into service, but there is not an immediate operational requirement for them to actually be put back into service, companies propose that to promote operational and water efficiency, the end time of the reportable unplanned outage should be when the asset is repaired, rather than when it is recommissioned, to avoid an unnecessary temporary recommissioning process
- To maintain incentives for companies to ensure that the asset is genuinely ready to be put back into service when it is needed, in line with the spirit of this measure, companies propose that in this situation, if the asset failed when subsequently being recommissioned to put back into service, then the start time for the reported unplanned outage should be the start of the original outage
- A minor amendment is also proposed to remove one sentence that could cause confusion between planned and unplanned outages

We, and other companies, would be happy to expand further on the rationale for these changes if that would be helpful. If the approach set out in this note was supported by Ofwat, and confirmation of this was provided by 22 March 2019 in line with the timeline set out in the consultation, we confirm that we would be able to report on this basis in the early APR submission by 15 May 2019, and resubmit business plan forecasts for 2019-20 to 2024-25 on this basis at the same time.

Annex: Proposed revisions

This annex sets out, in track changes from the published guidance, the proposed changes.

Reporting guidance – Unplanned outage

Objective

The guidance seeks to enable all companies to report on outages for the defined year with confidence and at a reasonable level of accuracy and with a common approach. Companies shall apply consistent and robust methods and common assumptions. This will facilitate the comparison of performance across companies by customers, regulators and other companies with reasonable confidence.

Key Principles

There are several key principles applied in the compilation of the guidance:

- Reporting of annual outage forms part of each company's assurance process applied to all measures reported annually by companies;
- A company needs to have a written methodology or procedure in place for reporting outage. This procedure is reviewed annually and updated as required;
- The reporting guidance for annual outage reporting is set out as a consistent good practice baseline for the industry which companies should achieve now or in the short and medium term; and
- Where a company is not able to meet any part of the good practice methods then it is required to explain any shortfalls and its plans to address this.

Measure Definition

This measure is to be used as a means of assessing asset health (primarily for non-infrastructure – above ground assets), for water abstraction and water treatment activities. It is defined as the annualised unavailable flow, based on the peak week production capacity. or PWPC), for each company. This measure is proportionate to both the frequency of asset failure as well as the criticality and scale of the assets that are causing an outage.

It is important to understand planned and unplanned outage as they both reflect on asset health. The actual unplanned outage should be reported as the temporary loss of peak week production capacity in the reporting year weighted by the duration of the loss

(in days). Outages arising from planned works should be recorded separately to outages arising from unplanned causes, such as asset failure.

The proposed calculation for both figures is

$$\frac{\text{Reduction in peak week production capacity} \times \text{Duration in days}}{365}$$

Unplanned outage for each water production site is calculated separately and then summed over the reporting year to give a total actual unplanned outage for the water resource zone.

The company water resource zone weighted outage can then be summed (Ml/d) and normalised based on overall company peak week production capacity to be reported as a percentage.

A calculation example is as follows:

For a single source works:

A source works has a peak week production capacity of 30 Ml/d
For 15 days the maximum production capacity is reduced to 15Ml/d due to a temporary unplanned outage (pump failure). This is a loss of peak week production capacity of 15 Ml/d for 15 days.

The weighted unplanned outage for this source works = 15 x (15 / 365) = 0.62 Ml/d
Each weighted unplanned outage is then summed over the reporting year to give a total unplanned outage for the water resource zone.

For a water resource zone:

First source works in zone –weighted unplanned outage = 0.62 Ml/d
Second source works in zone –weighted unplanned outage = 2.58 Ml/d
Third source works in zone –weighted unplanned outage = 3.67 Ml/d
Zonal weighted outage = 6.87 Ml/d

The company water resource zone weighted unplanned outage can then be summed and normalised based on overall company peak week production capacity.

Company normalising:

Zone 1 weighted unplanned outage = 6.87 Ml/d
Zone 2 weighted unplanned outage = 7.95 Ml/d
Company weighted unplanned outage = 14.82 Ml/d
Company peak week production capacity = 120 Ml/d
Unplanned outage proportion = 12.4%

Exclusions for managing raw water quality and other matters are permitted and described in Section 5.6. Exclusions should be reported alongside the planned and unplanned outage figures.

Reporting Process

The guidance is structured in the way that outage is normally estimated and components of outage are described in Section 5.

The process for deriving planned and unplanned outage is shown in the following diagram.

A company is required to report against this definition and:

- Disclose where its methodology does not comply with this guidance using the checklist in Annex A;
- Explain the reasons for any non-compliance;
- Set out its plans and programme to comply with the guidance; and
- Disclose any other factors which have an impact on the methodology for reporting outage.

Components of Unplanned Outage Calculation

Peak Week Production Capacity

A company should define its peak week production capacity (PWPC) for each water production site or source works included in its water resources management plan (WRMP). PWPC for this measure is not expected to be the same number as reported for dry year peak week production capacity (although it is possible that it may be the same).

For this measure, PWPC is equivalent to the maximum volume of water which can be put into supply and sustained over a period of one week measured in Ml/d. This should be at least as great as the highest historic performance that has been sustained for any seven-day period in the last five years (unless a change to assets or process can be evidenced) but could be higher. This should be supported by physical tests to demonstrate capability undertaken at least once every five years. It is expected that this value should be reviewed annually and as modifications to assets and processes are completed which impact capacity.

It is expected that PWPC would be a fixed value for each production site each year unless a change to assets or process can be evidenced.

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Peak week production capacity does not account for seasonal changes in yield (most commonly observed at groundwater sources) and allowed abstraction volumes (most commonly observed at river sources) which are weather dependent and not an indicator of asset health.

A company is expected to:

- Define PWPC for each water production site.
- Review PWPC annually.
- Support PWPC with evidence of actual output or of capacity tests undertaken on a rolling programme each five years. This should be based on a risk-based approach for each works and the duration of testing does not need to extend to seven days.
- Support revisions to PWPC with evidence of changes to assets or processes.

Asset Failure / Unplanned Outage

The failure or deterioration of any asset which impacts on the ability to produce the peak week production capacity should be recorded as an unplanned outage. This may be a failure which impacts part or all of the production plant which contributes to peak week production capacity.

This can include:

- source abstraction assets (e.g. abstraction pumps, screens, boreholes);
- raw water transport assets (e.g. pumping plant and mains);
- raw water storage assets (e.g. balancing reservoirs);
- water treatment assets;
- treated water storage assets (e.g. contact tanks, pre-distribution storage); and
- treated water distribution assets before distribution input meter (e.g. treated water pumping).

In some circumstances the failure of assets upstream of the treated water distribution assets may not impact on the peak week production capacity. For example, where a river abstraction is pumped to bankside storage and then stored water is pumped onto treatment works, the failure of an abstraction pump may not impact peak week production capacity as water onto the treatment works can be maintained from the raw water storage. The length of time that this asset is unavailable will determine whether the peak week production capacity is reduced and therefore contributes to unplanned outage.

Where asset failures occur at water production sites with standby assets this may also not impact peak week production capacity. For example, a groundwater site with a peak week production capacity of 10Ml/d may have three boreholes on site, all with capacity

of 5Ml/d. Under normal circumstances boreholes 1 and 2 may be operated to provide the site output of 10Ml/d. If the pump in borehole 1 fails then borehole 3 is switched on to replace the lost capacity. Providing borehole 3 is switched on within 24 hours to replace the failed asset in borehole 1 there would be no unplanned outage recorded. There may need to be an outage at a later stage to repair or replace the failed pump. Whilst this can be scheduled and planned for a convenient time the reason for the need to make the repair is an unforeseen failure of an asset and therefore the outage for the scheduled repair or replacement should also be classified as unplanned.

Planned Outages

Where assets are taken out of supply or made unavailable for supply to enable planned maintenance or capital works to be completed then these should be recorded as planned outages. The same principles for work on standby assets apply here as for unplanned outages.

It is expected that a company will have a process whereby planned works on production assets are approved and scheduled. This may be the basis of evidence to demonstrate that the outage is planned.

Where planned work results from an asset failure any resulting outage should also be recorded as unplanned.

Duration

Only outage events which exceed 24 hours in duration should be included in this measure. Outage duration should be recorded to the nearest whole day with normal rounding rules applied. For the avoidance of doubt, all outages below 24 hours are excluded and rounding does not apply. The duration may span a calendar day

By way of an example of rounding, an unplanned outage of 79 hours would be 3 days whereas an unplanned outage of 115 hours would be 5 days.

A company should identify the start of an outage period using telemetry data wherever possible. If a company uses another source of data to indicate the start of an outage period it should specify the data source and demonstrate auditable record keeping.

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The end of the unplanned outage period should be recorded as the time when the asset was returned to a state meaning the availability of peak week production capacity is restored. For the avoidance of doubt this should not be when the individual asset is repaired or planned work completed but when the recommissioning process is completed, except when there is no immediate requirement to put an asset back into service.

In this case the repair time is taken as the end of the unplanned outage period. If when the asset is next required to be put into service, it operates in a way that would count as

an unplanned outage, the start time for the reported unplanned outage should be that of the original outage.

For example, if a borehole pump is replaced due to an unexpected failure or planned works the end of the unplanned outage is not when the pump replacement is completed but when any subsequent pumping to waste and water quality testing is finished and full peak week production capacity is restored, if the pump is required in service immediately.

If the pump is not required in service immediately, then repair or replacement time is taken as the end of the unplanned outage. When the pump is next required to be put into service, should it operate in a way that would count as an unplanned outage, the start time for the reported unplanned outage should be that of the original outage.

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Where planned work exceeds the duration of the scheduled outage any extension is to be included within the planned outage figure.

Where a company chooses not to respond immediately to an unplanned outage such as a failure at the weekend for which alternative water can be deployed the duration may be longer than it might otherwise have been. A company should make no adjustment for this in the measurement of the duration of the unplanned outage. This may result in reporting higher unplanned outage figures but given that alternative sources are available it is unlikely that the unplanned outage in this example would be contributing a large amount to the overall company peak week production capacity and so would therefore have a relatively small impact on the overall measure. This is something that could be reviewed as the definition of this measure is further developed.

Repeated unplanned outages at the same water production site should be treated as separate events with independent start and finish times unless the initial outage repair and recommissioning was not concluded and there was not full restoration of available peak week production capacity.

A company is expected to:

- Record unplanned outages over 24 hours in duration.
- Record unplanned outages as unplanned even if they result in a programmed outage later.
- Measure duration to the nearest whole day.
- Record the start and end time of an outage using telemetry data.
- Record the end of an unplanned outage as when recommissioning is completed and peak week production capacity is fully restored except when there is no immediate requirement to put an asset back into supply. In this instance the repair time is taken as the end of the unplanned outage and when the asset is next required to be put into service, if it operates in a way that would count as an unplanned outage, the start time for the reported unplanned outage should be that of the original outage.
- Make no adjustment for over-running planned outages.

- Make no adjustment for unplanned outages which are not responded to immediately.
- Justify use of data sources other than telemetry.

Reduction in Peak Week Production Capacity

For each unplanned outage the impact of the outage is recorded as the reduction in peak week production capacity. For asset failures or programmed work resulting in the total loss of water production from the site then the impact of the outage is recorded as the total peak week production capacity for the site. Some asset failures or programmed work may result in a reduction of peak week production capacity. For example, a groundwater source with a peak week production capacity of 10Ml/d may have three boreholes on site, all with capacity of 5Ml/d. Under normal circumstances boreholes 1 and 2 may be operated to provide the site output of 10Ml/d. If the pumps in boreholes 1 and 2 fail then borehole 3 is switched on but can only replace half the lost capacity. The lost peak week production capacity in this instance would be 5Ml/d. The replacement of the failed pumps may require the whole output to cease for the period of the works. From the point at which the output is zero the lost capacity would increase to 10Ml/d and would have a separate duration to the initial partial reduction in capacity.

Exclusions

Unplanned outage arising from changes in raw water quality beyond the normal water quality operating band shall be excluded as this is not a measure of asset health. Exclusions must be evidence based including evidence to show what the normal water quality operating band for that production site is. This exclusion applies to transient changes to raw water quality such as turbidity, algae, pollution, spikes in nitrate and pesticide. If a company chooses to manage variable raw water quality by proactively temporarily restricting water production then this should also be classed as an exclusion.

Long-term trend based changes in raw water quality which result in unplanned outages are not permitted as exclusions as a company should have the data to recognise a rising trend and foresee the need to plan for treatment etc.

Extreme weather can result in raw water quality events as described above. In addition to this they may present constraints on ability to resolve the unplanned outage e.g. a storm event may increase turbidity and cause a site failure and flooding of the immediate area. It may be difficult for operational staff to attend site to rectify the problem. In an example such as this the health and safety constraint on access should be allowed as a further exclusion, but would need to be well justified and assured. Extreme weather may also include heavy snowfall when access to remote sites can be difficult.

A company is expected to:

- Demonstrate based on evidence normal water quality operating bands for each water production site.
- Record raw water quality events outside of these bands and provide evidence of the exceedance.
- Provide evidence of extreme weather events such as storms and snowfalls which have presented hazards preventing access to sites.

Glossary

PWPC	Peak week production capacity
WRMP	Water resources management plan
Ml/d	Mega litres per day