

# **WORSHIPFUL COMPANY OF WATER CONSERVATORS**

## **RESPONSE TO THE ENVIRONMENT AGENCY CONSULTATION ON CHARGES FOR WATER DISCHARGES**

**5<sup>th</sup> MARCH 2024**

**The Worshipful Company of Water Conservators welcomes the increase of resources for the Environment Agency to inspect sewage effluents and suggests a reformed quality assurance system funded by the proposed changes to the Environment Agency's charging scheme.**

### **PROLOGUE**

1 The Worshipful Company of Water Conservators ('WCWC') is a City of London Livery Company focussed on the long-term health of our water resources and the broader environment. Our members include senior professionals from water, environmental and related industries and regulators, along with others who share our concern for water and the environment. Our experience and knowledge ranges from the complexities of environmental sciences, through the application of engineering to deliver the goals identified by those sciences, and the subsequent management of the assets created. The WCWC's purpose is *promoting a diverse and sustainable environment*.

2 The WCWC is responding to the consultation by the Environment Agency (EA) because of its professional roles in water and climate change policy, mitigation and adaptation. It is a member of the City of London Livery Climate Action Group. Its principal interest is in contributing on the effectiveness of regulators in impacting on the water and environment sector.

The WCWC is pleased to have had the opportunity to respond to the consultation and looks forward to being able to make further inputs as requested in the future. The focus of the response is mainly on the relevance to the proposals to the management of discharges of sewage effluents and their impact on the environment.

### **SUMMARY**

3 The submission to the consultation was complicated by the announcement on February 20<sup>th</sup> 2024 by Defra on the additional resources planned for the EA financed in part by additional income to the EA from the extended charges scheme. It also left a rather uncertain way forward in terms of the deployment of the additional resources and the future of Operator Self-Monitoring (OSM) in relation to the way that sewage effluents are regulated (see Appendices 2 and 3). The submission by the WCWC to the consultation takes account of the Defra announcement.

4 The WCWC supports the increase in resources for the EA to discharge its functions. It has already suggested this in its responses to the Department of Business and Trade (DBT) (which can be found on its website) and supports the allocations announced.

5 The WCWC observes that this whole topic of monitoring has significant implications, because the judgments of performance which emerge are crucial not only for conservation of the environment, per se, but determine where and what investment is needed, form the basis of any legal action, and play a major role in trust through presentation in the media. Greater legal rigour will need greater information rigour.

6 The WCWC observes that in all of the current debate that there is a need to refresh memories on the origins of sewage effluent standards in the early 20<sup>th</sup> century and then the origins of the statistical concepts in sewage effluent monitoring and associated self-monitoring (which underpins the consultation). It charts the evolution from the introduction of the original look up tables in the mid- 1980s through their adoption by the European Union (EU) in the Urban Waste-Water Treatment Directive in 1991, the step to strengthen quality assurance of what was to become known as Operator Self-Monitoring in 2009, but demonstrates the complexity of guidance since 2018. It also distinguishes between self-monitoring and self-reporting. So, the WCWC suggests that the current focus on 2009 is wrong.

7 It was agreed originally in the mid-1980s that the concept of compliance for 95% of the time for a prescribed standard in a consent was right in terms of increasing focus on compliance. Adherence to this performance ensured that a receiving river was protected. But that it would be necessary to put a cap on the 5% exceedance. Further it was agreed that the bigger the works the greater would be the need for confidence of the assessment of percentile compliance, the asymptotic value being 95%. These were principles from quality assurance in production management and toxicology for example. These principles were later set out in general by the United Kingdom Technical Advisory Group on the Water Framework Directive 2000 (UKTAG) (*A 95<sup>th</sup> percentile is routinely used in compliance assessment in UKTAG guidance, even though the standard is referred to as an 'Absolute Limit'. This is because the use of 95<sup>th</sup> percentile allows confidence of failure to be calculated*) as defined by the government in 2019.

8 From this emerged the look up table as a simple way of expressing these concepts in consents which were based on 24-hour composite samples for suspended solids (SS) and biochemical oxygen demand (BOD), which were chosen in preference to spot samples as it was recognised that there could be very short-term variations during a 24-hour period, in themselves of no consequence and it was the overall daily variation which needed to be controlled. An upper tier value was also set to avoid extraordinary events within the envelope of the look up table. Assessments were made for each determinand separately. These were then applied universally to all consents for treatment works serving populations more than 250 people. Most works had the Royal Commission on Sewage Disposal quality standards from the turn of the 20<sup>th</sup> century, but some were more stringent and some less stringent in coastal areas. There was a move to include ammonia limits which were becoming more important and subject to the same process variability as BOD and SS. There was a more flexible attitude towards other determinands as these are perceived as less critical terms of investment and prosecution and these were set as absolute limits with assessments on a sample, by, sample basis. This approach was formalised in January 1985 with the implementation of Part Two of the Control of Pollution Act 1974. This then formed a basis for privatisation. This is set out very nicely in the prospectus and remains at the very heart of what is practiced now, surviving the creation of the EA in 1995. The WCWC has access to numerous references not available on the internet which it is willing to share.

9 In this submission the WCWC suggested some changes, but in truth the whole system is complicated and in urgent need of review, consolidation and to be expressed in the terms of smart regulation. The current complexity aids the ‘mediafication’ and ‘weaponisation’ of data. What is needed is robust performance assessment to underpin actions on the accountability of water companies and for investment. The WCWC recognises that even this submission is overly technical and so subsequently, it will be working in partnership to provide some simpler explanations.

10 The WCWC very much supports the proposition that inspections should be increased and recognises that there may have been problems with self-reporting which need to be addressed. Any future quality assurance of effluent quality must be based on the 95-percentile concept with confidence limits and based on a time series of flow proportional sampling i.e., the look-up table. Any move from this premise would have very severe and unforeseen consequences in terms of compliance assessment. There are only two options to retain the integrity: the first is that the monitoring is conducted by the EA, which would have huge resources demands and would parallel the necessary monitoring, by water companies, as part of responsible process management; or leave the focus with water companies with a much more rigorously controlled Quality Assurance (QA) system, including more inspections by the EA. The latter is more practical.

**11 In responding to the focus of the current debate but retaining the fundamental principles of Quality Assurance Management, the WCWC suggests that the strengthened system should be branded more accurately to give the more accurate and informative description of Effluent Quality Assurance.**

12 The WCWC also points out that a balanced scorecard approach will be needed, otherwise the expected benefits may not occur. There needs to be a connection to long term benefits. For example, none of these changes are likely to do much for the chemical status of rivers and this could have serious implications for trust by the wider community in the regulation system. It has been confronted already in the Water Plan but ignored in the current debate.

13 Once more the WCWC argues that there is a multitude of monitoring initiatives, which need to be brought together into an integrated monitoring strategy which needs to be part of an overall National Water Strategy advocated by the WCWC (see most recent the responses by the WCWC to the DBT on its website).

14 More needs to be done about how data being created by ever expanding monitoring programmes needs to collated and published in wiser ways. It suggested that exploring a partnership with the Office of National Statistics could be a specific additional task in 2024-25, which could part of a wider more intensive programme of collaboration.

15 The WCWC is not in a position to answer the detailed questions on the proposed changes to activity descriptions and of the charges. The WCWC offers a few thoughts:

- There does not seem to be any sensitivity in the activity category charging. The WCWC suggests that there could be a division between higher risk discharges and lower risk discharges, this would allow the focus of resources where this is most effective. A very good example would be the distinction of allocation of resources for very small treatment works between those regulated by General Binding Rules (GBR) and those with numerical consents. Another distinction

could be between discharges to protected areas and those to non -protected areas, the latter requiring greater attention.

- A vast majority of small works are regulated by GBR and although the per works annual charge is small, there are a lot of such works, so the very substantial increase of 527% will incur a substantial increase in costs. The WCWC is not aware of the reasoning behind this, particularly as they are exempt from S82 Environment Act 2021 monitoring, or possibly because of it?
- The consultation lacks any reference to the efforts needed to find more resource efficient ways of monitoring.

## THE KEY ELEMENTS OF THE CONSULTATION

16 To aid understanding of its response to the consultation

<https://www.gov.uk/government/consultations/charge-proposals-for-water-quality-permits>

the WCWC sets out the key points in Appendix 1. The essence of this is:

*“We seek to recover the full cost of our services through charges. We have reviewed our charges to address changes in the cost of delivering our services, inflationary pressures and incorporating the cost of new services that will improve the way we regulate the water industry. For water quality permits we propose to:*

- *increase permit application charges, including additional charges for habitats assessment*
- *increase most annual subsistence charges*
- *introduce new annual subsistence charges for permits held by sewerage undertakers operating the public sewerage system and treatment activities*
- *introduce new duties and charges following Environmental Permitting (England and Wales) (Amendment) (England) Regulations 2023 groundwater amendments*
- *introduce supplementary charges for specific substances assessments and amend circumstances when they are payable*

*The proposed introduction of new subsistence charges for “discharges of sewage effluent by sewerage undertakers” will have the greatest impact on the water industry. These charges will help to fund an improved approach to regulation of the water industry.*

*There will be a small increase in annual subsistence charges made for most of the other water discharge activities. In some cases, there will be a small decrease. There will be increases to permit application charges in most cases, although there will be no change to small sewage discharge applications from a domestic household or an organisation that operates for charitable purposes. Having reviewed our permitting and regulatory activity for water quality activities alongside the water industry transformation programme (see Glossary), we are asking you to share your views on the proposed changes to our charges.”*

## **SOME OPENING REMARKS**

17 In its response to the recent DBT consultations, the WCWC suggested that in order to secure enough resources to for the EA to discharge its roles on regulation of water there was a case for a review of monitoring charges (see WCWC website). The EA charges were last set in 2022 <https://www.gov.uk/government/publications/environmental-permitting-charges-guidance/environmental-permitting-charges-guidance>.

18 Hence the WCWC supports the general principles behind this consultation. Implementation is already planned by Defra in its February 20<sup>th</sup> 2024 announcement (Appendix 3). The problem is that a very complex topic is not addressed and explained properly in public. The WCWC suggests that this needs to be addressed urgently. The submission to the consultation will respond taking into account the announcement.

19 It also suggests that, once more, in the absence of an overall national water strategy, or even an integrated monitoring strategy, this consultation is another element of current practice which does not sit quite so comfortably alongside all the other initiatives, which the WCWC addresses later. There needs to be a more holistic approach.

## **WHY MONITOR?**

20 Why monitor? The WCWC has opined before that the statistical basis for monitoring programmes must be the same as that used to set standards defined in permits. Sometimes there can be a mismatch between these two demands. It is necessary to understand the management process underlying the proposals.

21 First, identify the need/purpose, sustaining the safe uses of environmental waters including healthy water ecologies, and safe sanitation. The WCWC has long advocated an overarching river use strategy based on quality objectives, met already in part by the notion of protected areas within catchments <https://www.gov.uk/guidance/river-basin-management-plans-updated-2022-summary-programmes-of-measures-mechanisms/2-cross-cutting-legislation-for-protecting-water>. The WCWC provides an in-depth analysis of this in a think-piece on catchments (see its website: <https://www.waterconservators.org/consultation-responses-2/>). Clearly, a current purpose is to inform a more stringent approach to accountability for water companies.

22 Second, identify the most effective activities to deliver and that must include innovation using modern technology, such as hand- held monitoring systems, use of drones and effective and transparent data sharing with dischargers. It includes accessible data storage and the collation of data into performance knowledge.

23 Third, provide the appropriate resources for the most effective activities; and it must be remembered that any increases in costs to water companies would be eligible for cost pass-through. Although the increases reflect public demands, the issue of affordability is also the subject of focus: as this response is being drafted, the headline news is that water charges are going up in 2024-25 by more than the rate of inflation.

24 Data produced must have a purpose, as set out by the EA. Data on sewage effluents has to sit alongside environmental water monitoring; it has to determine the performance of the

discharger, any environmental impact, and provide a basis for future planning. But increasingly there is a driver to produce data to satisfy external visibility. To use a tautological word, the 'mediatisation' of data. There have already been warnings about the 'weaponisation' of data. This is becoming increasingly evident in the debate about OSM, and categorisation of pollution incidents for the purpose of reporting to Defra. And with all the data being produced (and the WCWC returns to this later) there is an increasing challenge of 'big data' management. That must be included in how that data are communicated to external parties.

<https://utilityweek.co.uk/digital-weekly/digital-weekly-southern-ceo-locational-pricing-consumer-debt>

## **REGULATORY BACKGROUND**

25 To fulfil its purpose of providing a background to the current debates on sampling, monitoring and compliance assessment, the WCWC has mobilised the experience of its members to do so.

### **The origins of the look up table and operator monitoring**

26 The core principle of dealing with the sanitary content of used water was established at the turn of the 19<sup>th</sup> and 20<sup>th</sup> centuries by the reports of the Royal Commission on Sewage Disposal.

<https://www.icevirtuallibrary.com/doi/abs/10.1680/se3ev2.52048.0009>.

27 This established the Royal Commission standards of 30 mg/l SS and 20 mg/l BOD. These were the norm with the classic four stage of treatment, screening, sedimentation, biological treatment and final settlement. These were incorporated later into discharge consents. In some cases, tighter standards were needed to protect receiving waters and additional treatment was provided.

28 For many decades these were treated as norms and that was the basis of treatment plant design. Indeed, government guidance was based on this notion (Ministry of Housing and Local Government Technical Guidance HMSO 1966). Persistent exceedance was used as a basis for investment and planning embargoes by government departments, local authorities and, after 1974 by Regional Water Authorities (RWAs). It was always understood that the sewage treatment processes being biological, however well managed, would have performance variations reflecting such factors as fluctuations in flow and temperature.

29 In the late 1970s and early 1980s, however, there was an increasing demand for more precision and accuracy on what was actually meant by non-compliance. This arose from concerns by the RWAs on government restrictions on investment, the increasing threat of private prosecutions and the need for better data to serve the increasing use of computer models of river water quality management. The current situation has echoes of those times.

30 It was agreed that the concept of compliance for 95% of the time for a prescribed standard in a consent was right for the challenges being faced. Adherence to this performance ensured that a receiving river was protected but that it would be necessary to put a cap on the 5% exceedance. Further it was agreed that the bigger the works the greater would be the need for

confidence of the assessment of percentile compliance, the asymptotic value being 95%. These were principles from quality assurance in production management and toxicology for example. These principles were later set out in general by UKTAG (UK Technical Advisory Group on the Water Framework Directive 2000 (*A 95<sup>th</sup> percentile is routinely used in compliance assessment in UKTAG guidance, even though the standard is referred to as an 'Absolute Limit'*). This is because the use of 95<sup>th</sup> percentile allows confidence of failure to be calculated). And defined in guidance by government in 2019.

31 And from this emerged the look up table in the mid-1980s as a simple way of expressing these concepts in consents which were based on 24-hour composite samples for SS and BOD, which were chosen in preference to spot samples as it was recognised that there could be very short-term variations during a 24 hour period, in themselves of no consequence, and it was the overall daily variation which needed to be controlled. An upper tier value was also set to avoid extraordinary events within the envelope of the look up table. Assessments were made for each determinand separately. These were then then applied universally to all consents for treatment works serving populations more than 250 people. Most works had the Royal Commission limits, but some were more stringent and some less stringent in coastal areas. There was a move to include ammonia limits which were becoming more important and subject to the same process variability as BOD and SS. There was a more flexible attitude towards other determinands, as these were perceived as less critical terms of investment and prosecution and these were set as absolute limits with assessments on a sample, by, sample basis. This approach was formalised in January 1985 with the implementation of Part Two of the Control of Pollution Act 1974.

<https://hansard.parliament.uk/commons/1985-01-29/debates/2c400041-cfc1-4f39-b358-48977c9cc2d5/ControlOfPollutionAct1974>

The WCWC has access to numerous references not available on the internet which it is willing to share. Some information can be found in an Ofwat report.

[https://www.ofwat.gov.uk/wp-content/uploads/2015/11/rpt\\_com\\_devwatindust270106.pdf](https://www.ofwat.gov.uk/wp-content/uploads/2015/11/rpt_com_devwatindust270106.pdf)

One key reference included here was a Water Research Centre report published in 1985.

32 At that time the RWAs were self- regulating and monitoring and it made sense that the monitoring of quality for production management should also be available for external bodies to take action and the monitoring data was made available on registers. These are the deep roots of what we do now.

33 There was understandable pressure to separate environmental regulation and this was one of the elements which drove privatisation with the establishment of the National Rivers Authority (NRA) in 1989. But the model described above was a basis for privatisation and is set out very nicely in the prospectus and remains at the very heart of what is practiced now, surviving the creation of the EA in 1995.

34 The next step was the Urban Waste Water Treatment Directive (UWWTD) in 1991, which in principle adopted the thinking of the UK with some tweaks. The WCWC does not delve into the detail of the differences, which on the whole were less demanding than the UK limits, but did introduce nitrogen (N) and phosphate (P) limits in nutrient sensitive areas and although these were subject to the same process variability as the sanitary determinands were

not covered by the look up table. The biggest change was of course the extension of the need for full treatment for larger populations in coastal areas, and the consequent demise of long sea outfalls and sedimentation only treatment. So, operator monitoring was assumed, but not specified within the Directive. The EA guidance in 2018 describes it as self-monitoring.

<https://www.legislation.gov.uk/eudr/1991/271/annex/I>

35 The Directive was enacted in 1994 (with the omission of SS) still with the look up table and flow proportional sampling. Thus, the existing UK approach was more demanding than the 1994 Regulations apart from the addition of total nitrogen and phosphate limits in nutrient sensitive areas (and the extension of treatment to coastal works). Even though the removal of N and P was to be effected by biological processes, the look-up table was not applied. These Regulations are extant.

<https://www.legislation.gov.uk/ukxi/1994/2841/contents/made>

36 Nitrate in itself became more important in relation to discharge made in Nitrate Sensitive Areas designated under the 1980 Drinking Water Directive and then later Nitrate Vulnerable Zones, but this is a complex area outside the purpose of this submission and there are useful summaries, but show the emerging complexity of requirements for what is required in the effluent monitoring programmes. And, of course the creation of nitrate and its removal is also a biological process.

[https://en.wikipedia.org/wiki/Nitrate\\_vulnerable\\_zone](https://en.wikipedia.org/wiki/Nitrate_vulnerable_zone).

37 The whole topic of sampling and compliance continued to be debated; the focus on the relationship between regulator and regulated for monitoring has a long history, for example the then chair of the NRA expressed his views during debates about the Bill which eventually became the Environment Act 1995. The whole approach survived the creation of the EA.

[Lords Hansard text for 14 Feb 1995 \(150214-21\) \(parliament.uk\)](#)

### **The emergence of the formal concept of Operator Self -Monitoring**

38 Quite rightly, there were demands that the system was made more rigorous and to apply the principles of quality assurance management more robustly. So, in 2009 the formal concept OSM emerged. In 2023 following challenges to these concepts, Defra issued a statement which best describes the intentions at that time.

<https://deframedia.blog.gov.uk/2023/03/08/coverage-of-operator-self-monitoring/>:

*There has been coverage in i News on Operator Self-Monitoring - the process introduced in 2009 by which water and sewerage companies must notify the Environment Agency if they are in breach of their permit conditions.*

*It incorrectly implies Operator Self-Monitoring is the only way EA checks that water companies are complying with their permits – this is not the case. EA also does its own monitoring and on-site inspections, both announced and unannounced.*



*Operator Self-Monitoring was introduced in 2009 alongside guidance on Environment Agency inspections. The use of operator self-monitoring brings water and sewerage companies in line with other industries which have been monitored in this way for many years e.g. waste and chemical sectors. Under the polluter pays principle, they should also be the ones paying for it.*

*In 2019 the EA increased, not decreased, its regulatory scrutiny of sewage treatment works to include auditing, data analysis and other interventions as well as inspections. This removed the outdated inspection guidance and replaced it with action to use a wider range of regulatory tools. This increases the level of scrutiny, rather than reduces it.*

39 This was supplemented by a stream of guidance setting out what was required. The system has evolved in several steps and the WCWC does not summarise these in this note but in the context of the current debate and media interest there would value in doing this. The WCWC provides some information and highlights but does not claim that this is comprehensive but does wish to show how the system has evolved since 2009.

39.1 In May 2018 there was a shift forward in complexity

[Water companies: operator self monitoring \(OSM\) environmental permits - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/684111/water-companies-operator-self-monitoring-osm-environmental-permits-2018.pdf)

Numeric compliance included:

- look-up table (LUT) compliance limits
- maximum and minimum compliance limits, such as upper tier, lower tier and absolute limits
- mean compliance limits
- percentile compliance limits
- comparative compliance limits
- Urban Waste Water Treatment Regulations (UWWTR) numeric compliance limits

There was provision for EA inspections.

39.2 This was followed by more guidance by the EA in December 2018. This addressed the concepts of quality assurance management set out by the Government in the MCERTS (the brand name of the monitoring certification scheme of the environment agencies of England and Wales) in April 2014 and amended in January 2019

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/957797/Sampling\\_and\\_Chemical\\_Testing\\_of\\_Water\\_Part\\_1.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/957797/Sampling_and_Chemical_Testing_of_Water_Part_1.pdf)

<https://www.gov.uk/government/publications/mcerts-performance-standard-for-organisations-undertaking-sampling-and-chemical-testing-of-water>

39.3 In January 2019, updated guidance was issued:

<https://www.gov.uk/government/publications/site-specific-quality-numeric-permit-limits-discharges-to-surface-water-and-groundwater/site-specific-quality-numeric-permit-limits-discharges-to-surface-water-and-groundwater>

This stated that ‘we normally only use the percentile limit for routine sampling of water company treated sewage discharges. It’s used for limits on these sanitary parameters:

- biochemical oxygen demand (BOD)
- suspended solids
- ammoniacal nitrogen
- colour
- chemical oxygen demand

It may also be used for limits of hazardous pollutants in water discharge activity permits.’

39.4 Also in January 2019 <https://www.gov.uk/government/publications/waste-water-treatment-works-treatment-monitoring-and-compliance-limits/waste-water-treatment-works-treatment-monitoring-and-compliance-limits>.

39.5 In June 2020 [Monitoring discharges to water: environmental permits - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/publications/monitoring-discharges-to-water-environmental-permits)

This contained useful guidance.

39.6 In June 2020, (updated May 2021) [Monitoring discharges to water: guidance on selecting a monitoring approach - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/publications/monitoring-discharges-to-water-guidance-on-selecting-a-monitoring-approach)

This provided for samples to be flow composite or spot, but made it clear that the EA would be inspecting and sampling where necessary. The system covered the look up table type of requirements for sanitary determinands which could only operate in accordance with the consent requiring composite samples, but it also provided for spot sampling presumably for other kinds of discharge. The results collected by the operator were to be submitted regularly to the EA and exceedances be they of look up tables for sewage effluent or other failures were to be reported straight away particularly for category 1 and 2 pollution incidents and are recorded as ‘self- reported’. It is plain that there is scope for site visits by EA staff although there does not appear to be a specific document on inspections per se which might be helpful if only to map out resources planning.

<https://www.data.gov.uk/dataset/c8625e18-c329-4032-b4c7-444b33af6780/environmental-pollution-incidents-category-1-and-2>

39.7 There was further elaboration of self- reporting as an obligation to report any breach of consent conditions potentially causing pollution for any other kind of discharge. And it is this which has been the topic of intense media interest, particularly in the process for the categorisation of the impact of discharges. Self- reporting is a different matter to self - monitoring but both are key elements of OSM.

[Water and sewerage companies in England: EPA metric guide for 2021 - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/publications/water-and-sewerage-companies-in-england-eqa-metric-guide-for-2021)

39.8 More detailed guidance is given on specific points. Updated guidance in January 2023

[Monitoring discharges to water: CEN and ISO monitoring methods - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/publications/monitoring-discharges-to-water-cen-and-iso-monitoring-methods)

And in June 2020 [Monitoring discharges to water: analytical quality control charts - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/collections/monitoring-discharges-to-water-analytical-quality-control-charts)

39.9 MCERTS (the performance standard for organisations undertaking sampling and chemical testing of water) guidance was updated in April 2023

[Monitoring emissions to air, land and water \(MCERTS\) - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/collections/monitoring-emissions-to-air-land-and-water-mcerts)  
[https://www.gov.uk/government/collections/monitoring-emissions-to-air-land-and-water-mcerts.](https://www.gov.uk/government/collections/monitoring-emissions-to-air-land-and-water-mcerts)

39.10 The guidance referred to Operator Monitoring Assessment (OMA). This assesses the management and performance of an operator's monitoring arrangements to identify any improvements needed and guidance was issued in March 2020.

[Operator monitoring assessment: environmental permits - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/collections/operator-monitoring-assessment-environmental-permits)

40 The WCWC concedes that it may have missed some relevant guidance document or that it may have collated documents incorrectly, but it wishes to demonstrate the complexity of the systems around the monitoring of sewage effluents and it is not correct to focus on the decision taken in 2009 which from a historical perspective was an important, but just one, step in a long journey. The current focus should be on the guidance since 2018 et. seq. (and maybe even 2014). In fact, it may well be that the complexity of the documents is an impediment to understanding and the WCWC suggests that there is an urgent need to pull all the documents together in a review for holistic understanding and couched in terms of Smarter Regulation as envisaged by the DBT.

### **Other monitoring dynamics affecting the scheme for monitoring of sewage discharges**

41 It is not possible to cover all the dynamics in this response but to give a flavour of what is in the mix the WCWC refers as examples to:

- the requirements of the Water Framework Directive of 2000 and the consequent Regulations, the current set being made in 2017
- increasing designations of inland bathing waters
- the requirements for consents for storm and emergency overflows were updated in September in 2018. <https://www.gov.uk/government/publications/water-companies-environmental-permits-for-storm-overflows-and-emergency-overflows/water-companies-environmental-permits-for-storm-overflows-and-emergency-overflows>
- The implementation of S82 of the Environment Act 2021 for water companies to monitor upstream and downstream of discharges and to report results to the EA for works without GBR consent
- [https://assets.publishing.service.gov.uk/media/6436dc0dcc9980000cb89426/CWQM\\_programme\\_provisional\\_technical\\_guidance\\_for\\_sewerage\\_undertakers\\_April\\_2023\\_1.pdf](https://assets.publishing.service.gov.uk/media/6436dc0dcc9980000cb89426/CWQM_programme_provisional_technical_guidance_for_sewerage_undertakers_April_2023_1.pdf)

So, the water companies will take on responsibility for some river quality monitoring (the WCWC suggested in its response to the consultation on this that the water company responsibilities could be outsourced to the EA and integrated with other environmental water monitoring programmes).

- The regulation of very small treatment works with no significant impact under the GBR (the so-called descriptive consent works) was set in 2015 (formerly known as descriptive works). This is very much a form of regulation by inspection and is covered by guidance; the latest version being issued in October 2023.

Small sewage discharges in England: the general binding rules - GOV.UK ([www.gov.uk](http://www.gov.uk))

### **THE IMPACT OF DEFRA ANNOUNCEMENTS ON THE CONSULTATION**

42 The WCWC considers that it cannot make a helpful contribution to the consultation without addressing the issues raised by the announcement on 20 February (Appendix 3) which was preceded by media reports of prior meetings in late January (Appendix 2). But before doing so the WCWC wishes to emphasise that it very much welcomes the increase in resource implied by the changes in the charging scheme and announced on February 20<sup>th</sup>. This is consistent with its submission to the DBT. The WCWC suggests that in circumstances where financial resources are going to be constrained that there must be value for money and a focus on ultimate outcome (more of this later).

43 The WCWC has studied the announcements and does not wish to comment on the opinions expressed. It does wish to set out relevant facts.

44 The reference to the 300,000 sewage spills needs rethinking. The statement recognises that most are legal, yet that leaves the impression that this is legalised pollution. The WCWC interprets that as being the total number of sewage effluent samples outside the prescribed limits. Almost all are permitted as part of the look up table, and representing the fluctuating performance of a well-run works are not sewage spills. Of course, an effluent sample outside the look up table reflects unacceptable performance. The WCWC does not know how many of the illegal samples arise from other discharges. The paradox is that they all arise from self-reporting as part of the OSM.

45 The OSM system had its origins in the mid-1980s and must be judged by a multitude of guidance issued since 2018, and not the step in 2009, as set out earlier in this submission.

46 The WCWC shares the dismay of many that the lack of resources has prevented the EA from doing more inspections and is pleased that the surge will enable more to be done. But the failure to inspect was a not failure of OSM, per se, but a failure of its application. So, the statements that there will be less reliance on OSM and more on inspections seems inconsistent; rather the approach should be that the OSM system must be made more robust by increased bite of inspections. The WCWC very much supports the proposition that inspections should be increased and recognises that there may have been problems with self-reporting which need to be addressed. And the WCWC is suggesting below that a new quality assurance system is implemented.

47 Reference is made to more spot checks. But any sample of routine sewage effluent (i.e., in pursuance of the look-up table) has to be a 24-hour flow composite and assessed in a time series and this might be a challenge for an EA monitoring programme. Individual spot samples could give a very biased assessment of performance and the WCWC suggests that a counterintuitive long-term effect might be worsening performance assessment without worsening performance. There needs to be more resources in a greater focus on MCERTS and OMA. Changing the monitoring regime is not likely to have the benefits planned, but changes in operational management and investment will. Robust reliable data are needed to underpin the legal liabilities of the water companies and to ensure that investments are well placed. So, the planned spot checks need to be focussed on activities other than the rigorously controlled quality assurance of sewage effluents and to ensure that self-reporting is working well.

48 If there is any intention to reduce OSM, as perceived, this must not have consequences for the future of the look up table, the demise of which would return the system to the uncertainties of 50 years ago, skew compliance assessment and investments. What would the alternative be? It would gainsay the government's commitments to 95 percentiles, of quality planning, it would still require diligent monitoring by water companies as part of responsible management. It would gainsay the notion that this was following well established QA procedures, as, indeed, Defra itself has set out. The WCWC reminds everyone that the principles of OSM have worked well with drinking water and the Drinking Water Inspectorate since 1989. Changing the monitoring regime is not likely to have the benefits planned, but changes in operational management and investment will. Robust reliable data are needed to underpin the legal liabilities of the water companies and to ensure that investments are well placed. So, the planned spot checks need to be focussed on activities other than the rigorously controlled quality assurance of sewage effluents and to ensure that self-reporting is working well.

49 Any future quality assurance of effluent quality must be based on the 95-percentile concept with confidence limits and based on a time series of flow proportional sampling i.e., the look-up table. Any move from this premise would have very severe and unforeseen consequences in terms of compliance assessment, explained above. There are only two options to retain the integrity; the first is that the monitoring is conducted by the EA, which would have huge resources demands and would parallel the necessary monitoring, by water companies, as part of responsible process management; or leave the focus with water companies with a much more rigorously controlled QA system including more inspections. The latter is more practical.

50 In responding to the focus of the current debate but retaining the fundamental principles of Quality Assurance Management, the WCWC suggests that the strengthened system should be branded more accurately to give the more accurate and informative description of Effluent Quality Assurance.

### **Resources deployment**

51 The WCWC welcomes the 500 'boots on the ground' at a cost of £55m per year added over the next three years, but from the Defra announcement the WCWC very much supports the proposition that inspections should be increased. If more sampling and analysis is required, how many of the extra staff will be laboratory technicians; and, if so, do the costs include additional laboratory facilities? The WCWC has analysed the overall cost allocation

on the basis of a typical salary for inspectors and technicians and there do seem fairly high overheads.

52 The WCWC welcomes the concept of rapid response teams within the EA but suggests that the criteria for deployment will need careful development.

53 The WCWC suggests that it would be helpful to clarify which elements will be funded by grant and which by charges income so that it is clear if the income accrued from the extended charges scheme will be enough to finance the extended inspections or whether there will be further consultation on further charges increases. All extra costs will be candidates for inclusion in Price Reviews by Ofwat.

54 The WCWC also suggests that there needs to be a greater connection between process and outcome, in a 'balanced scorecard approach', behind the consultation and Defra announcements and warns that, as sewage effluents are not the only cause of poor ecological and chemical status of rivers, there is a risk that the surge will not produce the environmental improvements if the current systems remain unreformed. Even the Water Plan accepted that the majority of the failure of chemical status was due to the presence of chemicals in the water environment outside of the water companies' control. Compliance was not going to be achieved until 2063. So, what additional resources will be provided for this? This could be a big public relations problem.

55 And there are other sources of pollution which might influence outcomes. For example, pollution from agriculture and highway drainage.

<https://publications.parliament.uk/pa/cm5802/cmselect/cmenvaud/74/report.html#heading-2>  
<https://www.ciwem.org/news/highway-pollution>

Will the surge in inspections of agriculture be aligned with the surge for water companies?

<https://environmentagency.blog.gov.uk/2023/07/20/improving-environmental-performance-through-our-farming-inspections/>

56 That suggests that a 'balanced score card approach' must bring longer term benefits than just improving the accountability of water companies.

<https://publications.parliament.uk/pa/cm5802/cmselect/cmenvaud/74/report.html#heading-2>  
<https://www.ciwem.org/news/highway-pollution>

57 Some specific points on the consultation

- There does not seem to be any sensitivity in the activity category charging. The WCWC suggests that there could be a division between higher risk discharges and lower risk discharges, this would allow the focus of resources where this is most effective. A very good example would be the distinction of allocation of resources for very small treatment works between those regulated by GBR and those with numerical consents. Another distinction could be between discharges to protected areas and those to non-protected areas, the latter requiring greater attention.

- A vast majority of small works are regulated by GBR and although the per works annual charge is small, there are a lot of such works, so the very substantial increase of 527% will incur a substantial increase in costs. The WCWC is not aware of the reasoning behind this, particularly as they are exempt from S82 monitoring, or possibly because of it?
- The consultation lacks any reference to the efforts needed to find more resource efficient ways of monitoring.
- More needs to be done about how data being created by ever expanding monitoring programmes need to collated and published in wiser ways. It is suggested that exploring a partnership with the Office of National Statistics could be a specific additional task in 2024-25, and this could part of a wider more intensive programme of collaboration.

## APPENDIX 1 OUTLINING THE CONSULTATION

### ***Introduction***

*Healthy water quality is essential to life. People, plants, and animals all rely on it for survival. Beyond that, clean water contributes to a better environment for everyone to enjoy whether that be the stream at the end of a garden, lakes in our national parks, coastal waters, or rivers running through our towns and cities.*

*Part of the Environment Agency's role is to effectively regulate permit holders discharging into these waters and ensure they do it in an environmentally responsible way. We issue permits for these discharges and levy charges to fund our regulatory service. We are transforming our approach to regulating the water industry to ensure we have a safe, reliable, resilient supply of clean and plentiful water.*

*This consultation sets out our charges proposals for water discharges (including groundwater activities) and invites you to share your views.*

### ***Purpose of an environmental permit***

*Discharges to water in England are covered by the Environmental Permitting (England and Wales) Regulations 2016 (Environmental Permitting Regulations). We issue permits for water discharge activities and groundwater activities (collectively referred to as water quality permits) to manage the risk of certain activities. The permits outline where and how the activities can take place, this includes strict operational standards and limits for polluting or harmful substances. The limits are set against environmental quality standard of the receiving environment. Permit holders must follow these requirements to comply with the law and avoid causing harm to people or the environment. The permits contain standards or conditions which we use to measure performance. These standards or conditions allow us to take action to address any problems.*

*We place requirements and restrictions on permits to prevent or mitigate any harm caused by the activity. Examples include:*

- *statutory requirements, such as the Urban Waste Water Treatment Regulations*

- non-statutory requirements, such as the Storm Overflow Reduction Plan

Permits are reviewed periodically in response to new environmental standards and drivers. As part of the Storm Overflow Reduction Plan, we are seeking to further tighten conditions of permits to significantly restrict and reduce the number of spills from storm overflows to the environment. We may refuse to issue a permit if we believe the applicant will not meet the requirements of the permit.

Water quality permits ensure we carefully regulate and manage our water environment. This is critical to protecting natural assets and the ecosystem.

### **Water quality permits**

There are 2 types of charges for water quality permits:

- annual subsistence fees, which cover the costs of regulating an activity, such as making sure an operator is complying with the conditions in their permit
- one-off application fees, which fund the determination of permit applications

### **What we are consulting on**

We seek to recover the full cost of our services through charges. We have reviewed our charges to address changes in the cost of delivering our services, inflationary pressures and incorporating the cost of new services that will improve the way we regulate the water industry.

For water quality permits we propose to:

- increase permit application charges, including additional charges for habitats assessment
- increase most annual subsistence charges
- introduce new annual subsistence charges for permits held by sewerage undertakers operating the public sewerage system and treatment activities
- introduce new duties and charges following Environmental Permitting (England and Wales) (Amendment) (England) Regulations 2023 groundwater amendments
- introduce supplementary charges for specific substances assessments and amend circumstances when they are payable

The proposed introduction of new subsistence charges for “discharges of sewage effluent by sewerage undertakers” will have the greatest impact on the water industry. These charges will help to fund an improved approach to regulation of the water industry.

There will be a small increase in annual subsistence charges made for most of the other water discharge activities. In some cases, there will be a small decrease. There will be increases to permit application charges in most cases, although there will be no change to small sewage discharge applications from a domestic household or an organisation that operates for charitable purposes. Having reviewed our permitting and regulatory activity for water quality activities alongside the water industry transformation programme (see Glossary), we are asking you to share your views on the proposed changes to our charges.

### **About this consultation**



*We would like your views on the proposed updates to our charges for water quality permits. The consultation is made up of this consultation document that lays out the proposals for updates to our charging scheme and supporting documentation including our:*

- *economic impact assessment that considers these proposed changes*
- *draft charging scheme for water discharges that includes tables of application and annual subsistence charges*
- *guide explaining how we calculate our charges*

*The supporting documents are available on the Environment Agency's consultation web site, Citizen Space.*

### ***What we aim to achieve***

*We have considered our charges against the need to fulfil our regulatory duties. We know our charges can affect those we regulate so we have considered our proposals carefully. We are always interested to hear how you think we can regulate more fairly, while safeguarding the environment more effectively.*

*Our aim is to achieve a consistent and transparent approach in how we charge for regulating water discharges.*

### ***Inflationary increase to charges***

*We propose to update our charges annually in line with inflation so that we maintain full cost recovery. All charges and fees for water discharges under the environmental permitting and abstraction charging scheme will be updated annually on 1 April. The Office for National Statistics measure of Consumer Price Index (CPI) inflation as of 30 September in the immediately preceding year will be used. Any increase to water discharge charges will be equal to or less than this measure. Increases will be less if we believe our increased costs do not equate to the CPI measure. We would round the charge to the nearest pound.*

*We have chosen the CPI measure as this is widely recognised, understood, and accepted as a measure of cost inflation. It is used by:*

- *economic regulators to set regulated charges*
- *government to set taxes and benefits*
- *employers in wage bargaining*
- *private sector companies to set payment amounts in business contracts*

*We therefore believe it is the most appropriate measure of the increases in our own costs. If we believe our charges need to increase by more than the CPI, we will commence another review, seek HM Treasury approval, and carry out a public consultation.*

### ***Why we are proposing changes to water quality permits***

*We have a duty to recover the costs associated with regulating and managing England's water environment including discharges to water. We fund this work through environmental permitting charges, which we will refer to as water quality charges within this document. These charges cover discharges to surface water and discharges to groundwater.*

*Our water quality charges were last updated in 2018, since then:*

- *the activities we carry out to monitor compliance and determine applications have evolved*
- *the cost of our staff and providing our services has changed*
- *inflation rises have put added pressure on our funding through increasing costs of equipment and technology and third-party supporting services costs and activities have changed*

*Where possible, we have made efficiencies to sustain our regulatory service. However, the cost to undertake the necessary water quality permitting and regulatory activities is greater than the fees we are currently charging. As a result, we are unable to:*

- *inspect and audit assets as frequently as we should*
- *make best use of the data available to target our interventions*
- *drive innovation and performance*
- *carry out sufficient monitoring to understand and assess environmental impacts and risks*

*The government and the Environment Agency have also come under increased scrutiny about deterioration in water quality.*

*We have increased regulatory duties under the Environment Act 2021 which has additional implications for how we regulate water companies, including:*

- *supporting the development and implementation of continuous water quality environmental monitoring and responding to regulatory needs highlighted by the data*
- *implementing and delivering the statutory Storm overflows discharge reduction plan to reduce discharges and adverse impacts*
- *requiring the Environment Agency and water companies to publish data on storm overflow operation on an annual basis*
- *supporting development of near real-time reporting of storm overflow performance and responding to operational needs highlighted by the data*
- *driving the delivery of the drainage and wastewater management plans*
- *increase funding to support asset management plans*

*We are transforming and modernising our approach to regulating the water industry to tackle and address new challenges associated with the industry. This is needed to:*

- *reduce the water industry's impact on the environment*
- *build trust and confidence with the public*
- *contribute to key policy goals*

*Our proposed new water quality charges are essential to allow us to deliver these priorities, alongside addressing cost pressures in our current service. They will allow us to:*

- *build capacity and capability*
- *regulate more effectively and efficiently*
- *build resilience*
- *make use of smarter digital and data driven technology*

- *make permitting quicker and easier*

## APPENDIX 2

### PRESS RELEASE LATE JANUARY 2024

Using a Times report Water bosses told they can no longer monitor themselves on sewage ([thetimes.co.uk](https://www.thetimes.co.uk))

*An extract of that report is given. Water bosses have been told by ministers they will no longer “mark their own homework” on whether they are illegally polluting rivers, in a shift in how the sector is regulated.*

*Private water companies have to run checks to ensure they are meeting permits issued by the Environment Agency about how they run sewage works, including taking samples of the effluent they discharge into rivers and their releases of raw sewage. There were more than 300,000 sewage spills into rivers and seas in 2022, which are legally allowed under permits. However, concern is growing that some of those discharges were illegal.*

*An investigation by the Environment Agency and Ofwat into the possibility of systematic permit breaches is expected to report this year, and the Office for Environmental Protection, England’s green watchdog, said last year that Defra and its regulators may have broken the law by allowing sewage spills to become too routine. Steve Barclay, the environment secretary, has now told the chief executives of England’s main wastewater firms that the era of self-monitoring is over.*

*The move at a meeting on Tuesday is a victory for The Times’ Clean it Up campaign, which has called for water companies to be stripped of self-monitoring and the job handed to the Environment Agency. Operator self-monitoring, as the regime is called, was introduced in 2009 when Labour was last in power and has continued under successive Tory governments. Companies’ reports are meant to be audited annually by the Environment Agency but several companies have gone several years without such inspections, freedom of information requests by the campaign group Windrush Against Sewage Pollution revealed last year.*

*Barclay told the heads of ten water firms that the system of self-reporting, which he called “marking their own homework”, had to end. He is reported to have pledged a 470 per cent increase in water company inspections by officials. The fundamental change in monitoring water pollution is expected to happen within the next year, but details of whether the Environment Agency will receive extra funding to take on the task are currently unclear. The agency received a rise in funding last year but its financial support is still at historically low levels after it was gutted by austerity cuts during the past 14 years.*

*Barclay told the heads of ten water firms that the system of self-reporting, which he called “marking their own homework”, had to end. He is reported to have pledged a 470 per cent increase in water company inspections by officials.*

*Labour said that it had long demanded the end of self-monitoring. “It’s astonishing it’s taken the government so long to act,” said Steve Reed, the shadow environment secretary. The Lib Dems said it was a step in the right direction but too “weak and feeble”, and ministers should go further by banning water bosses’ bonuses.*

*Water UK, the trade association for the water industry, said: “We’re pleased the government has signified its intention to move monitoring of water company permit compliance back to the Environment Agency — something the sector suggested previously.”*

*Defra said: “The environment secretary has been clear that he wants to reduce the levels of self-monitoring that were introduced in 2009 by bringing in significantly more EA inspections and spot checks of water company asset, including through forced entry to sites. This is part of the government’s wider determination to hold companies to account — driving more investment, stronger regulation and tougher enforcement.”*

The Guardian added that Rebecca Pow, the former water minister, promised to end operator self-monitoring three years ago

<https://www.theguardian.com/environment/2024/jan/24/minister-vows-to-end-uk-water-firms-pollution-self-monitoring>.

### **APPENDIX 3**

#### **DEFRA ANNOUNCEMENT FEBRUARY 20<sup>TH</sup> 2024**

Inspection surge to crack down on water sector pollution - GOV.UK (www.gov.uk)

*Water company inspections will more than quadruple as the Government cracks down on poor performing companies.*

*Fourfold increase in water company inspections to hold companies to account. Includes up to 500 additional staff for inspections, enforcement and stronger regulation over the next three years, with recruitment already underway.*

*Part of a tougher regime fully funded by government and water company permits.*

*Water company inspections will more than quadruple as the Government cracks down on poor performing companies, under plans announced today (20 February). In recent months, robust steps have been made under the Plan for Water with all 15,000 storm overflows now monitored and the cap on civil penalties for pollution removed. Last week, Defra went further in announcing that water bosses are set to be banned from receiving bonuses if a company has committed serious criminal breaches.*

*The Environment Agency (EA) is already ramping up inspections on water company assets, with over 930 completed this financial year. Today’s announcement goes further as water company inspections carried out by the EA will rise to 4000 a year by the end of March 2025, and then to 10,000 from April 2026. This will include an increase in unannounced inspections – strengthening oversight of water companies and reducing the reliance on water company self-monitoring, which was established in 2009.*

*Increased inspections and enforcement will be backed by around £55 million each year. This will be fully funded through increased grant-in-aid from Defra to the Environment Agency and additional funding from water quality permit charges levied on water companies, subject to a public consultation closing in March 2024.*

*Environment Secretary Steve Barclay said:*

*We are clear that we need to get much tougher with unannounced inspections to bring an end to the routine lawbreaking we have seen from water companies, which is what this announcement will deliver.*

*We are going further to quadruple the Environment Agency's regulatory capacity – allowing them to carry out 4,000 water company inspections by the end of the next financial year.*

*Environment Agency Chair Alan Lovell said:*

*Last year we set out measures to transform the way we regulate the water industry to uncover non-compliance and drive better performance. Today's announcement builds on that. Campaign groups and the public want to see the Environment Agency better resourced to do what it does best, regulate for a better environment.*

*Proposals to get extra boots on the ground to increase inspection visits will help further strengthen our regulation of the industry."*

*With 100% of storm overflows now monitored, data-driven analytics will also help the Environment Agency map discharges against rainfall more effectively so they can quickly direct new specialist officers to any sites at risk, identify any non-compliance and take action.*

*The EA is already conducting the largest ever criminal investigation into potential widespread non-compliance by water and sewerage companies at thousands of sewage treatment works. Since 2015, the EA has concluded 59 prosecutions against water and sewerage companies securing fines of over £150 million.*

*Today's announcement builds on the recent improvements the government has delivered to the water environment, including:*

*100% of storm overflows in England are now monitored - providing a complete picture of when and where sewage spills happen.*

*Removing the cap on civil penalties for water companies and broadening their scope so swifter action can be taken against those who pollute our waterways.*

*Increased protections for coastal and estuarine waters by expanding the Storm Overflow Discharge Reduction Plan, prioritising bathing waters, sites of special scientific interest and shellfish waters.*

*Requiring the largest infrastructure programme in water company history - £60 billion over 25 years – to revamp aging assets and reduce the number of sewage spills by hundreds of thousands every year.*

*Providing £10 million in support for farmers to store more water on their land through the Water Management Grants to support food production and improve water security.*

*Speeding up the process of building key water supply infrastructure, including more reservoirs and water transfer schemes.*