

**BY EMAIL ONLY**

Direct line  
Email:

Date: 25<sup>th</sup> February 2020

Dear

**Environmental Information Regulations Request – Combined Sewer Overflows**

I refer to your request for information received by us on the 30<sup>th</sup> January 2020 for the following information:

1. *How many combined sewer overflows (CSOs) in your region discharge or could discharge into rivers?*
2. *How many of these CSOs are monitored?*
3. *How many times a year - in 2019 - did these CSOs discharge?*

*If you are unable to provide details for 2019 could I have figures for the most up to date period monitored.*

I can confirm that Wessex Water does hold information of the type you have requested. Under the Regulations, Wessex Water has a duty to individuals requesting information to make that information available on request, unless one of the exceptions contained within the Regulations applies. This letter provides the response to your request.

**Sources of bacteria in river water**

There has recently been a focus on the role of CSOs and their influence on local river water bathing quality. However, there are of course a number of sources of bacteria entering rivers, ranging from continuous discharges from Water Recycling Centres (WRCs, previously known as Sewage Treatment Works) and intermittent discharges during some rainfall events from CSOs, but also from diffuse pollution sources including:

- Agricultural and urban run-off
- Manure and slurry applications to land
- Faeces from farm animals, rodents, wildlife and pets
- Discharges from private septic tanks
- Runoff from highways and surface water drains, and misconnections (foul drainage from properties incorrectly connected into the surface water system by the homeowner)

All of these sources would need to be addressed before a river could meet a standard that's deemed 'safe' for swimming.

The current focus on CSOs, even if spills are reduced or eliminated, will not tackle the issue that is trying to be addressed – namely reducing the risk of public health consequences of swimming in rivers. Bacteria source apportionment is required in order to ensure any changes have the desired outcome.

The influence from continuous discharges from WRCs are more likely to be the most significant bacteriological contributors, especially during hot weather when members of the public are likely to be using rivers for bathing.

Our WRCs discharge fully treated sewage and wastewater that is relatively high in bacteriological content 24 hours a day, 7 days a week. The bacteriological load discharged will, in many cases, cause river water quality to fall short of bathing water standards.

Wessex Water has 285 sewage treatment works discharging to inland waters, and in dry weather, they treat and discharge approximately 630,000 m<sup>3</sup> per day of sewage. All are fully permitted by the Environment Agency and levels of compliance are close to 100%. However, the purpose of treatment processes and Environmental Permits for inland WRCs is about achieving standards that protect the environment rather than public health.

To achieve bathing water compliance around the UK's coasts, additional disinfection treatment (using ultraviolet light) has been installed at many of our WRCs to meet the increased sanitary standards. This comes at significant cost to the environment in terms of tonnes of CO<sub>2</sub> emitted from increased energy use.

Taking a similar approach at inland WRCs to kill bacteria at such sites to meet bathing water standards would cost many hundreds of millions of pounds to build suitable treatment processes and millions of pounds to operate each year.

In addition, the environmental impact would be thousands of tonnes of additional CO<sub>2</sub>e emitted each year. We haven't really heard this side of the discussion raised in the media, which is disappointing. Often the proponents of river water swimming consider themselves as 'environmentally conscious', yet their 'ask' is not contextualised with the actual environmental impact.

Disinfecting continuous effluent discharges to reduce the public health risk for swimmers would need support from customers, the Environment Agency and Ofwat. It is not just a water company decision. It must be stressed that the driver for coastal disinfection systems has been to allow people to swim in the sea, not to achieve any improvement in ecology or biodiversity. In terms of environmental impact, coastal disinfection systems have had a massive carbon footprint.

Rural diffuse pollution (particularly from agriculture) also contributes very significant bacteriological loads to rivers that will reduce water quality further and is outside the control of water companies. As an example, recent Environment Agency reports for a river catchment outside our own region concluded that 49% of farms were polluting the river. Quantifying and reducing both our continuous discharges and rural diffuse pollution as the

two major sources of bacteria would be necessary to attain bathing water standards in our rivers.

### **The role of CSOs**

Our CSOs play an important and essential role in our sewerage system as our combined sewers transport sewage from homes and industry as well as carrying surface water run-off from gutters, drains and some highways.

Heavy or prolonged rainfall can rapidly increase the flow in a combined sewer until the amount of water exceeds sewer capacity. CSOs act as relief valves allowing excess stormwater to be released to rivers or the sea. This protects properties from flooding and prevents sewage backing up into streets and homes during heavy storm events.

As CSOs should only operate during periods of intense rainfall, any foul water released from them will be very dilute because of the large volumes of rainwater within the system. Rarely is a pollution incident attributed to a CSO operating correctly as there is no significant environmental impact in terms of ammonia, suspended solids and biochemical oxygen demand.

Flows are further diluted by the receiving watercourses that will also be swollen by the same heavy rain. Many CSOs are fitted with screens or scumboards that prevent debris entering the watercourse or have attenuation tanks which also improve water quality.

### **CSO Monitoring**

We are progressing a programme of installing Event Duration Monitoring (EDM) at all our 1,300 CSOs, both coastal and inland. This work will be complete in 2023. After this, more accurate information about when CSOs are in use will be known.

We already provide information on our website that shows when CSOs that are currently monitored have been in use. This information is available through:

- Our Coastwatch page (for CSOs affecting coastal bathing waters) [www.wessexwater.co.uk/coastwatch](http://www.wessexwater.co.uk/coastwatch). This is near-real time data.
- Our Drainage and Wastewater Management Plan page (for all CSOs with monitoring, including inland CSOs) – this includes our overall strategy (<https://www.wessexwater.co.uk/environment/drainage-and-wastewater-management-plan>) and a specific online mapping system which shows the location and historical frequency of operation of CSOs (<https://wessexwater.maps.arcgis.com/apps/MapSeries/index.html?appid=e371301c24ca4228b36db3a3a6ba8560>).

### **CSO Operation**

To answer your specific questions, we have used data from the most recent available year (2018). We are currently collating the EDM data return to the Environment Agency for calendar year 2019 and this data will be available on 1st March 2020.



1. **How many combined sewer overflows (CSOs) in your region discharge or could discharge into rivers?** We have 1202 storm overflows discharging to inland waters. This consists of 184 settled storm overflows (which are largely located at our Water Recycling Centres, WRCs) and 1018 storm overflows (our 'normal' CSOs).
2. **How many of these CSOs are monitored?** For the calendar year 2018, 334 inland CSOs were monitored. This number has increased to 525 by the end of 2019.
3. **How many times a year - in 2019 - did these CSOs discharge?** For 2018, the total count of spills from our CSOs discharging to rivers, using the Environment Agency's counting method, is 7446. Note that multiple overflows will operate on days with heavy rainfall.

### **Improving CSOs**

We recognise the growing importance of inland waters to groups and organisations and are keen to work together with the relevant parties and communities, including land managers, the Rivers Trusts, Environment Agency and catchment partnerships, to better understand the current water quality and influences within our catchments.

To this end, we are also proactively using the data from EDM to determine where CSOs are not operating as we would expect and investigating them through the Storm Overflow Assessment Framework<sup>1</sup>. This provides a framework in which to identify CSOs which spill frequently and address the issues they cause through improvements.

As part of our Business Plan for 2020-2025, the Environment Agency has included 13 CSO improvements as part of the Water Industry National Environment Programme (WINEP). In addition, we have agreed a bespoke Performance Commitment for this period which will provide a mechanism for us to deliver more CSO improvements than the schemes included in the WINEP. Our aim over this period is to further reduce the number of CSOs that frequently spill into rivers and the sea beyond the 13 included on the WINEP.

### **Further Information**

I do hope that this information answers your enquiry, but if I can be of any further assistance, please do not hesitate to contact me at the address below.

If you are dissatisfied with the handling of your request for environmental information, you may request an internal review. Internal review requests should be submitted within 40 working days of the date of this response and should be addressed to the undersigned or to [env.info@wessexwater.co.uk](mailto:env.info@wessexwater.co.uk).

If you are dissatisfied with the outcome of the internal review, you may apply without charge to the Information Commissioner, who will consider whether we have complied with our obligations under the Environmental Information Regulations and who will require us to remedy any problems. You can find out more about how to do this and about the EIRs in general on the Information Commissioner's website at [www.ico.org.uk](http://www.ico.org.uk). Complaints to the

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<sup>1</sup> <http://www.water.org.uk/wp-content/uploads/2018/12/SOAF.pdf>

Information Commissioner may be made via the “report a concern” section of the Information Commissioner’s website.

Yours sincerely

Environment & Catchment Strategy Team