

Department for Environment, Food and Rural Affairs

Water abstraction reform and discharges

Supporting information for digital dialogue on discharges

September 2014

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Introduction

This document provides some key facts and information about discharges to facilitate participating in the discharge digital dialogue.

Background

Managing our available water resources is likely to become more of a challenge in the future with an increasingly varied climate and increased demand for water from a growing population.

Managing the volume of water returned to rivers (discharges) so their significance is recognised in the future is an important part of this because discharges increase river flows and can therefore benefit the environment and abstractors downstream. In some rivers over 60% of flows can be from discharges during the drier weeks of a typical summer.

Discharges are regulated to ensure the water quality of the water body into which they are being released and Environmental Permits are needed from the Environment Agency / Natural Resources Wales. This regulation is important because, as well as increasing river flows, discharges can also be a source of contaminants and lead to pollution.

Types of discharges

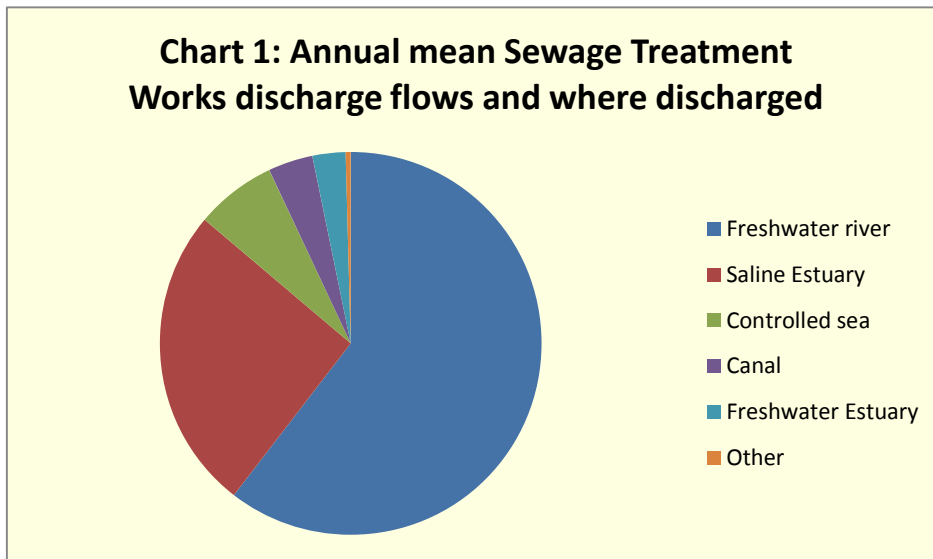
In the abstraction reform consultation in December 2013, we separated discharges into two main types:

- A discharge can be made close to the point where it was abstracted so it is clearly connected with particular abstractions as happens generally with industrial abstractions; or
- A discharge can be from a waste water treatment works and come from a number of distant abstraction points via the public water supply and also includes substantial rain water run-off.

With the first type of discharge, we proposed to require abstractors who discharge water close to where they take it from to continue to discharge a proportion in line with their current pattern. This proposal was broadly accepted.

The second type of discharge is more complex so we asked an open question rather than making a proposal. We asked how best to regulate water company discharges to provide reliable water for downstream abstraction without impacting on water quality objectives or constraining flexibility in water management. Water company discharges account for over half of all discharges made in England. This question provided a wide range of responses so this online discussion focusses on exploring this issue further.

Chart 1 below shows the main types of water environments into which discharges from sewage treatment works are made in England.



The possibility of changing discharges in the future

While any discharge could potentially change in the future, impacting on the water available in a river, there are a number of reasons why water company discharges might change:

Water re-use schemes

Water company reuse schemes allow water that would previously have been discharged to be re-used, for example to be treated and returned to supply.

So this could reduce discharges and therefore reduce the water reaching abstractors downstream. Where downstream abstractors have a 'Hands off Flow' condition on their licence this could mean that it is triggered more frequently, reducing their water reliability.

Total operational and planned reuse schemes in England and Wales is approximately 240MI/d.

Consolidation of small sewage treatment works

The closure of some sewage treatment works has taken place in favour of consolidating these into larger works that can treat water more efficiently to a higher quality. Some of these larger works are now sited in coastal locations where the treated effluent is

discharged to sea. This has resulted in changes to discharge patterns in some rivers. This could also happen in the future as environmental quality standards increase.

Data from the Northwest of England on historic revocations of water company discharge consents show that there were approximately 40 closures since 1989. These were predominantly small rural schemes with very small volumes. The data for other parts of the country is inconclusive with Thames reporting fewer closures but of bigger plants.

Sales of discharges

An incumbent water company could have a large volume of discharge being returned into a river while another water company in another area does not have enough water. The two parties could make an arrangement for a bulk supply of water through a specially constructed pipe connecting the two areas or in some other way. The discharge is therefore no longer available for any downstream abstractors.

For example, Thames Water has investigated options for other water companies providing bulk supply of raw or treated water to them. Severn Trent suggested a water transfer option changing a discharge location from the Trent to the Severn, and then pumping an equivalent flow from the Severn to the upper Thames.

Upstream reform

The Water Act 2014 enables more competition in the water industry and more efficient use of water resources. It paves the way for making it easier for new players or licensees to gain access to an incumbent water company's network to input and sell water services. It also opens up competition for sewerage services whereby a licensee could withdraw and treat waste water.

The first retail reforms in the Act will be introduced in 2017 with further upstream reforms being in place 2019 and beyond, overlapping with Abstraction Reform. These reforms will open up the market to new players involved in supplying water and treating effluent.

The Welsh Government took the decision not to implement upstream reform for Wales at this time. However, the Welsh Government took a power in the Water Act 2014 to implement upstream reform in the future if evidence suggests that it will provide benefits for the environment, the economy and citizens in Wales. The Welsh Government intends to monitor the situation in England whilst at the same time considering in the context of wider Welsh Government policy what role an upstream market may have in the future.

Conclusion

As this information illustrates, because water company discharges can change, this water cannot currently be relied upon to always be there for downstream abstractors. This is why we are undertaking this work to:

- investigate the current and future scope for changing water company discharge patterns and the drivers for future change; and
- consider options to maximise the economic value of water company discharges in a fair and proportionate manner.



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