

Glenfarg WTW Algal bloom September 2018

DWQR Inspector:
William Byers

Event No. 9682

Event Category: Significant

Scottish Water notified DWQR of seven water quality events occurring between 16 August and 25 September 2018, two, separately, concerning failures of regulatory standards for manganese and turbidity at the Glenfarg water treatment works and five of failures of taste and odour tests, stimulated by consumer complaints. These notifications identified significant challenges to the treatment process due to an algal bloom in the raw water supply, rising consumer concern around taste and odour and of discoloured water. Due to the extent of consumer concern, the issues required investigation as an incident.

Scottish Water received their first consumer contact about a musty/earthy taste in the water in one of the supply zones on 3 July. Due to the need to augment other supply areas which had higher demand because of the hot weather, the higher production rate through the filters started to cause increases in turbidity on 3 August and Powdered Activated Carbon dosing to combat the risk of taste and odour due to the presence of algae in the source water was commenced. This was less effective than in previous years requiring a continual rebalancing of production flows, PAC dosing and adjustments to coagulation. A breakthrough of algae cells through the filters on 7 and 16 August coincided with a failure of the manganese standard in the final water and necessitated the removal of one filter from service.

A number of measures were deployed in the catchment reservoir to attempt to minimise the level of algae in the raw water drawn off to feed the treatment works but ultimately, these provided only a short term, unsustainable benefit, with the failure of the turbidity standard occurring on 13 September. Over the course of the event, which abated by the end of October, some 48 contacts were received from consumers concerned about the taste or smell of their water, associated with algae.

It is clear the consumer taste issues and the failure of standards were caused by the inability of the treatment works to satisfactorily deal with the changing quality of the raw water supply.

The event has been categorised as Significant. Scottish Water has identified five actions which DWQR accepts are appropriate and will monitor to ensure they are completed prior to signing off the incident. DWQR made one additional recommendation.

