Drinking Water Quality Regulator for Scotland

Incident Summary

Killin WTW
Manganese and Turbidity Exceedances
9th August 2022
Significant

DWQR Inspector:
Colette Robertson-Kellie

Event No. 12780

At approximately 16:30 on the 9th August 2022, a low level alarm for Killin Clear Water Tank (CWT) was received by the Intelligent Control Centre (ICC), and the tank was added to the ICC Risk Register so that it could be checked regularly. This alarm was not considered an unusual occurrence, as Killin is a popular tourist destination and high outlet flows are a common occurrence which usually recover through the night. The tank was checked again at 19:00, and the level was found to have dropped slightly. At 19:30, a burst in Killin village caused the outlet flow from the treatment works to significantly increase. There was no alarm setpoint for flow from the CWT, so the CWT began to empty without Scottish Water being aware of it. At 20:22, a Low Low CWT level alarm was received by the ICC but contrary to ICC procedures, was not escalated for investigation.

At 03:00 on the 10th August, the CWT level trend was reviewed by the ICC and the elevated outlet flows were observed. The Standby Network NSO was called out to investigate, and the Treatment Team Leader and the Emergency Planning Team were also notified. Tankers were organised and sent to the site.

The Final Water turbidity Prescribed Concentration or Value (PCV) was breached at 03:30, so the Public Health Team was alerted, and sampling was organised. Online turbidity readings peaked at 5 NTU at 04:45 and 07:20, but the readings became less reliable as the tank emptied and the instrument was starved of flow.

The burst in the network was located at 06:45 and was isolated for repairs. Tankering to the CWT commenced around 07:00 and continued throughout the day, and the burst main was repaired at 14:17. By 10:00, the Final Water Turbidity readings were consistently below 1.0 NTU. Four tankers were discharged directly into the CWT using a diffuser, and by 17:00 the CWT level came out of alarm, thanks to the combined feed from the treatment works and the tankers.

Two samples exceeded the standard for manganese in the distribution system. There were five consumer contacts reporting a loss of supply, two for low pressure or intermittent supply, and one requesting bottled water.

The event has been categorised as significant. Scottish Water has identified eight 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.