

BACTERIOLOGICAL FAILURES AT SERVICE RESERVOIRS ARE INFREQUENT EVENTS BUT CAN HAVE SERIOUS CONSEQUENCES FOR WATER COMPANIES AND THEIR CUSTOMERS. THIS PROJECT AIMS TO MAKE BEST USE OF FAILURE DATA TO IMPROVE BACTERIOLOGICAL COMPLIANCE AND THEREBY REDUCE THE RISK OF FINES, PENALTIES AND REPUTATIONAL DAMAGE.

THE NEED

Infringement investigations are often unable to conclusively identify the cause of failure as demonstrated in a recent UKWIR study conducted by WRc in which no cause had been attributed to 113 out of 172 bacteriological incidents (66%). Inconclusive investigations hamper efforts to reduce the risk of future non-compliance which could potentially lead to fines and/or ODI (Outcome Delivery Incentive) penalties as well as reputational damage.

PROPOSED SOLUTION

This project aims to derive maximum value from failure data by analysing 'inconclusive' investigations to identify and quantify the impact of contributory risk factors. These include reservoir design factors (e.g. aspect ratio, siting of inlets relative to outlets and baffles), sampling practices and operating regime, as well as additional data on asset condition from routine inspections.

We propose a collaborative project drawing on the combined datasets of a number of companies in order to accurately quantify the impact of contributory risk factors. From this analysis a tool set will be produced to allow companies to prioritise sampling, maintenance or investment, and to thereby reduce the risk of future failure.

We will then work with water companies to assist in the practical implementation of the tools, providing an opportunity to share experiences and improve the tools from this operational experience.

BUSINESS BENEFITS TO CLIENTS

- Reputational and financial benefits (avoided fines and ODI penalties) from improving future coliform compliance
- Demonstrate due diligence to DWI over the robustness of incident investigations
- Reduce costs and improve effectiveness of maintenance and inspection schedules by prioritising spend on those reservoirs most vulnerable to coliform non-compliance

WHY WRc

- WRc has a substantial body of experience working with UKWIR and DWI to improve coliform compliance. The proposed project builds upon a previous UKWIR study conducted by WRc (15/DW/03/23).
- Collaborative approach is cost effective and will deliver better accuracy of results through larger datasets.

Duration: 12 Months (+12 months implementation) WRc Contact: Robert Pitcher
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