Innovation brief

Ofwat Environmental Innovation Project

Lea Catchment Project:

Chalk stream health assessment

Aim

- Undertake a baseline assessment of the health of a chalk stream within the River Lea operational catchment exploring different approaches to assess how this could be achieved.

Objectives

- Pilot of the 'Chalk Stream Health Metrics' developed by a specialist consultancy in an earlier phase of this EIP. These metrics were not tested at the time, so this project commissioned the consultants to test the approach in the River Beane within the Lea catchment.
- Work in partnership with the Hertfordshire and Middlesex Wildlife Trust (HMWT), who are the Catchment Partnership host for the River Lea, to develop and pilot the chalk river 'BioBank' methodology on the River's Mimram and Ash within the Lea catchment.
- Assess the viability of each option and incorporate the outputs into a future delivery model for Affinity Water baselining chalk stream health with key environmental stakeholders which will be used to inform and target future chalk stream projects for AMP8 and beyond.
- Develop an approach that could also be used by wider partners and environmental stakeholders in the Lea catchment including potentially supporting EA WFD assessments.

Challenge

- Chalk stream health is currently assessed by the Environment Agency (EA) as part of the Water Framework Directive (WFD) to determine whether rivers are meeting the WFD target of Good Ecological Status (GES) or Good Ecological Potential (GEP).
- These assessments provide a consistent process for all rivers but are taken from a fixed point, with limited data, and have become less frequent. The suitability of the determined assessment points are also challenged by environmental stakeholders.
- This process does not account for chalk stream health, reach-by-reach, and the interventions required to support achieving GES/GEP, for which Affinity Water and other stakeholders, could target their investment to achieve the greatest environmental benefits.

Solution

- The testing of the 'Chalk Stream Health Metrics' approach found it cannot be effectively tested without significant additional data and cost. Therefore, this will not be taken forward.
- The 'Chalk River BioBank' approach was successfully piloted and generated a comprehensive reach-by-reach assessment which produced the desired outputs in terms of a chalk stream health assessment, highlighting stretches of the chalk stream where interventions could be focused.
- The 'Chalk River BioBank' approach showed a more collaborative, partnership approach for which the outcomes, findings and recommendations can be utilised by stakeholders including potential for increasing the robustness of EA WFD assessments.

Outcomes and Benefits

- The 'Chalk River BioBank' approach has significantly increased the understanding of the health of two important chalk streams in the River Lea Catchment.
- It will Inform future catchment strategies by providing an understanding of resource requirements for data collection and condition assessment, and successful partnership working approaches.
- Has provided an understanding of requirements for development of a biobank, which has the potential to accelerate environmental investment within catchments.
- Has enabled the Catchment Partnership host for the Lea catchment to test the methodology they developed and make the case for future investment in replicating the assessment for all chalk streams in the Lea catchment and beyond.

Supporting themes: **Supply-side demand | Customer | Environment**

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