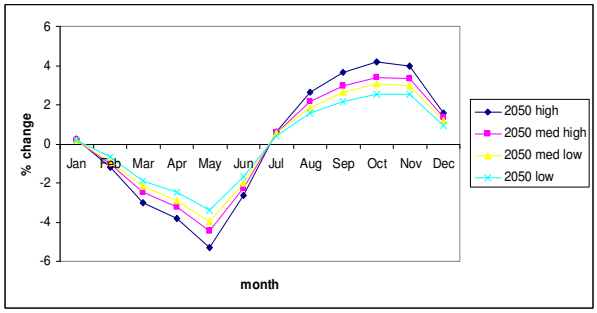
Water Resource Associates

A network of consultants in hydraulics, hydrology, groundwater & environmental issues

Project title: Potential Impact of Climate Change on Water Quality.

Summary: The impacts of climate change on water quality has been assessed using the INCA suite of Models to simulate flow, phosphorus, nitrogen, ammonia, sediments, macrophytes and epiphytes in 6 UK rivers for all the UKCIP scenarios.

Client: Environment Agency	**Financed by:** Environment Agency
Period of assignment: 2007-08	**Location**: United Kingdom
Project Value: £22,050	**WRA services:** £22,050



⇪ Changes in mean monthly orthophosphate by the 2050s for the UKCIP02 scenarios for the River Lambourn

Background

Versions of INCA for phosphorus, sediment and nitrogen has been used to asses the potential impacts of climate change on flow and water quality in the Rivers, Lambourn, Kennet, Tamar, Tame, Tweed and Lugg (Wye). The UKCIP02 scenarios have been used to drive the models and the outputs have been analyzed for the 2010s, 2020s and the 2050s. Results show relatively small changes in water quality except where there are significant discharges which are affected by decreased dilution. However, the models have been run using the long term HadCM3 model for the period to 2100 and here significant changes occur due to the ramping up on climate change into the future.

Scope of work by Water Resource Associates Ltd

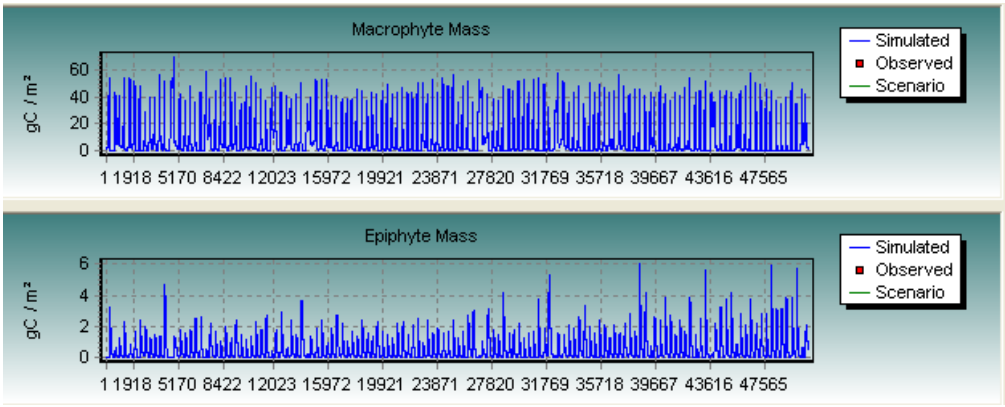
Applications of the INCA Model to assess potential impacts of climate change on water quality in 6 UK rivers.

Results

Report to EA

Potential Impacts of Climate Change on Water Quality

Contact Paul Whitehead for further information.



⇪ Changes in Macrophyte and Epiphyte dynamics over the period 1061-2100 driven by the Hadley Centre GCM A2 Scenario.

Project Number 000226

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