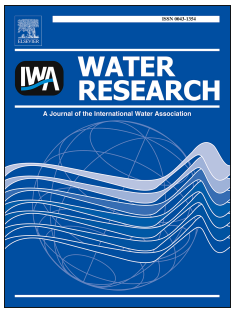
Accepted Manuscript



On the implementation of reliable early warning systems at European bathing waters using multivariate Bayesian regression modelling

Wolfgang Seis, Malte Zamzow, Nicolas Caradot, Pascale Rouault

PII: S0043-1354(18)30517-7

DOI: 10.1016/j.watres.2018.06.057

Reference: WR 13884

To appear in: *Water Research*

Received Date: 14 February 2018

Revised Date: 13 June 2018

Accepted Date: 24 June 2018

Please cite this article as: Seis, W., Zamzow, M., Caradot, N., Rouault, P., On the implementation of reliable early warning systems at European bathing waters using multivariate Bayesian regression modelling, *Water Research* (2018), doi: 10.1016/j.watres.2018.06.057.

On the implementation of reliable early warning systems at European bathing waters using multivariate Bayesian regression modelling

Wolfgang Seis*, **, Malte Zamzow*, Nicolas Caradot*, Pascale Rouault*

* *Kompetenzzentrum Wasser Berlin gGmbH*

Cicerostraße 24

10709 Berlin

** *Delft University of Technology*

Email: wolfgang.seis@kompetenz-wasser.de

Abbreviations

WWTP: wastewater treatment plant

LOO-IC: Approximate leave-one-out information criterion

PPD: Posterior predictive distribution

Q: Flow in [m³/s]

MLE: Maximum likelihood estimate

MPN: most probable number

FIB: Fecal indicator bacteria

P: Precipitation in [mm/d]

BWD: Bathing water directive