



Using maintenance records to forecast failures in water networks Yves Le Gat, Patrick Eisenbeis *

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Abstract

For 10 years, Cemagref has been establishing a method to support technical decision for network maintenance based on statistical survival analysis. This paper presents results from applying the model to water systems with short and long maintenance records. Failures are influenced by pipe-specific factors, e.g., diameter and length, and also by factors specific to the networks. Comparison between forecasted and observed failures shows that short maintenance records (5±10 years) give as good results as long maintenance records, to detect the pipes for rehabilitation and predict the global number of future failures. Published by Elsevier Science Ltd.

Keywords: Drinking water networks; Probabilistic forecasting; Rehabilitation; Statistical model
