A river flow model based on queueing theory

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A model is considered for the flow of a river when it is high. The model is based on queueing theory. An application to the Hudson River, located in the United States, is presented. It is shown that an M/M/1 queue model is realistic when the flow exceeds a certain threshold. Using this model, one can forecast what would happen if the rate at which events occur increases. The results can be extended by considering more general birth-and-death stochastic processes.