Numerical simulation of hydrodynamic and pollutant diffusion in coastal waters of Qinhuangdao

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ABSTRACT

In this study, a two-dimensional hydrodynamic modeling and pollutant transport model were firstly established. The experiments verify the feasibility of the models. Through the hydrodynamic and the pollutant diffusion model, the numerical simulation of the pollutant diffusion in Bohai Bay is simulated. The diffusion characteristics of pollutant emission were obtained. At the same time, we analyzed the present situation of shallow water quality from chemical oxygen demand, nitrite nitrogen, total phosphorus content, and heavy metal content.

Keywords: Water quality testing; Hydrodynamic; Pollutant diffusion