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Water Contamination Modeling—A Review of the State of the Science

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ABSTRACT

This paper reports on the current state of surface water and ocean contamination models—based on the needs of US Government agencies, their Information Technology (IT) systems, and business processes. In addition, down-selection and evaluation criteria were applied in a two-step process. In Step 1, sixty five surface water and ocean models were identified and researched. In Step 2, the following criteria were explored for each model: 1) model environment (river, lake estuary, coastal ocean and watershed); 2) degree of analysis (screening model intermediate model, advanced model); 3) availability (public domain, proprietary); 4) temporal variability (steady state or time variable/dynamic); 5) spatial resolution (one, two or three dimensional); 6) processes (flow, transport, both flow and transport in an integrated system); 7) water quality (chemical, biological, radionuclides, sediment); and 8) support (user support/training available, user manuals/documents available).

KEYWORDS

Cite this paper

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