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DESCRIPTION

The *Journal of Contaminant Hydrology* is an international journal publishing scientific articles contributing to a broad understanding of contamination of water resources. Emphasis is placed on investigations of the physical, chemical, and biological processes influencing the behaviour and fate of organic and inorganic contaminants in the aqueous environment including ecological impacts. Water-based science, technology and management approaches that monitor, assess, control and mitigate contamination and its eco-environmental impacts at multiple scales are invited. Broad latitude is allowed in identifying contaminants of interest, and includes legacy and emerging pollutants, nutrients, nanoparticles, microorganisms (e.g., bacteria, viruses, and protozoa), microplastics, and various constituents associated with energy production (e.g., methane, carbon dioxide, and hydrogen sulfide).

The journal's scope embraces a wide range of topics that include: surface and subsurface hydrology as it relates to contamination; experimental and computational investigations of contaminant sorption, diffusion, biological and chemical transformation, volatilization and transport in the surface and subsurface; characterization of soil and sediment properties only as they influence contaminant behaviour; development and testing of mathematical models of contaminant behaviour; innovative techniques for restoration of contaminated sites; development of new tools or techniques for monitoring the extent of soil, sediment, and water contamination; development of mathematical models and system analysis techniques for understanding and managing surface and subsurface water resources systems including hyporheic zone processes; analyses of interactions between water-use activities and the environment; carbon sequestration and turnover; and water contamination issues associated with energy production.

Types of paper

There are some types of papers that are *not suitable* for publication in the journal, namely: Environmental monitoring. We are pleased to see field data, but we do not publish reports of, for example, unusual observations in the field unless they are interpreted at a process level. Similarly, we do not act as a public repository for datasets unless they are interpreted.

Case studies. We will not publish case studies unless they provide insight into processes relevant to other sites or conditions. Thus, a paper based on a particular site must draw out principles, prove a conceptual model, or develop and test a method; these principles, models, or methods must have broader applicability than to a site of study.

Methods. We are keen to see new methods of analysis, experimentation, field investigation, or interpretation developed and published. However the journal will not publish papers that present only method development, nor methods that have no major advance over existing approaches. Manuscripts

that demonstrate how new or existing methods lead to new insights, or that extend the scope or demonstrate the practical use of existing methods will be welcome. Normally, measured data or observations will be used to validate the method. The last comments on Methods apply particularly to the development of new analytical and numerical solutions to flow, transport and reaction equations. A new mathematical solution must be a significant and useful advance over present methods. The new solution should also lead to new understanding of contaminant behavior. When possible, new analytical or numerical solutions should be compared with existing methods and/or with real data/observations.

The inverse of these comments on new models applies to papers that focus on experimental and field investigations. **It is not sufficient to present data**, no matter how elegant the experiment or interesting the field site! **Data must be interpreted with a conceptual model of processes so that the results are potentially valuable to other sites and experiments.**

Despite these comments, the editors are not trying to set up a rigid or bureaucratic system. If you believe your paper should be an exception, explain this simply in your cover letter at submission. We are all active researchers, and we do not want to discourage our peers from submitting any manuscript that they feel is significant and important for the journal. Rather, we hope you will join us in our wish to ensure that all the papers in the journal have real value to the community.

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INTRODUCTION

The Journal of Contaminant Hydrology is an international journal publishing scientific articles pertaining to the contamination of subsurface water resources. Emphasis is placed on investigations of the physical, chemical, and biological processes influencing the behavior and fate of organic and inorganic contaminants in the unsaturated (vadose) and saturated (groundwater) zones, as well as at groundwater-surface water interfaces. The ecological impacts of contaminants transported both from and to aquifers are of interest. Articles on contamination of surface water only, without a link to groundwater, are out of the scope. Broad latitude is allowed in identifying contaminants of interest, and include legacy and emerging pollutants, nutrients, nanoparticles, pathogenic microorganisms (e.g., bacteria, viruses, protozoa), microplastics, and various constituents associated with energy production (e.g., methane, carbon dioxide, hydrogen sulfide).

The journal's scope embraces a wide range of topics including: experimental investigations of contaminant sorption, diffusion, transformation, volatilization and transport in the subsurface; characterization of soil and aquifer properties only as they influence contaminant behavior; development and testing of mathematical models of contaminant behaviour; innovative techniques for restoration of contaminated sites; development of new tools or techniques for monitoring the extent of soil and groundwater contamination; transformation of contaminants in the hyporheic zone; effects of contaminants traversing the hyporheic zone on surface water and groundwater ecosystems; subsurface carbon sequestration and/or turnover, and migration of fluids associated with energy production into groundwater.

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