National Institute of Environmental Health Sciences

Endocrine disruptors and pharmaceuticals: Implications for water sustainability

Author(s): Snyder SA, Benotti MJ
Year: 2010
Journal: Water Science and Technology : A Journal of The International Association on Water Pollution Research. 61 (1): 145-154

Abstract:

The presence of pharmaceuticals and endocrine disrupting compounds (EDCs) in the environment raises many questions about risk to the environment and risk to human health. Researchers have attributed adverse ecological effect effects to the presence of these compounds, particularly EDCs, though there is no consensus on what risk, if any, these compounds pose to human health. The scientific community is in the process of developing a better understanding of the occurrence, fate, and transport of pharmaceuticals and EDCs in the environment, including a better characterization of human exposure via drinking water. This paper provides a brief review of pharmaceuticals and EDCs in drinking water, as well as uses examples from Lake Mead, Nevada, USA, to highlight the issues associated with their fate and transport. Lastly, the effects of natural or anthropogenically driven processes, like natural seasonal flow or climate-change/prolonged drought are discussed as they are factors which can drastically alter environmental concentrations of these compounds. Without question, the propensity for the contamination of fresh water will rise as (1) human population continues to grow or (2) patterns of natural surface water slow and wastewater becomes a larger fraction of flow further highlighting the need for a more comprehensive understanding of their environmental behavior.

Source: http://dx.doi.org/10.2166/wst.2010.791

Resource Description

Communication:

resource focus on research or methods on how to communicate or frame issues on climate change; surveys of attitudes, knowledge, beliefs about climate change

A focus of content

Communication Audience:

audience to whom the resource is directed

Researcher

Exposure :

weather or climate related pathway by which climate change affects health

Extreme Weather Event, Food/Water Quality

Extreme Weather Event: Drought

Food/Water Quality: Chemical

Geographic Feature: ☒

resource focuses on specific type of geography

Freshwater

Geographic Location: ☒

resource focuses on specific location

United States

Health Impact: ☒

specification of health effect or disease related to climate change exposure

Health Outcome Unspecified

Mitigation/Adaptation: ☒

mitigation or adaptation strategy is a focus of resource

Adaptation

Resource Type: ☒

format or standard characteristic of resource

Review

Timescale: ☒

time period studied

Time Scale Unspecified

Vulnerability/Impact Assessment: ☒

resource focus on process of identifying, quantifying, and prioritizing vulnerabilities in a system

A focus of content