Conventional Wastewater Treatment Plants as a Discharge and Source Point for Biota Exposure to Micro-pollutants

ABSTRACT

This chapter provides information on conventional wastewater treatment plants (WWTPs) as a discharge point, through which micro-pollutants (MPs) get into aquatic and terrestrial biota from various points of origin and sources. The chapter analyses the role of WWTPs as a source point for the generation of new MPs. It evaluates the effectiveness of WWTPs in the removal of micro-pollutants throughout the various treatment stages of a WWTP and with examples from various classes of MPs. The MPs are briefly evaluated on basis such as biodegradation, adsorption, persistence and toxicity nature that determine their fate through WWTPs, and recommends effective measures to improve MPs' removal from effluent, in order to prevent MPs' transfer to biota via WWTPs effluent. The first part of this report mainly focuses on MPs that are present in various WWTPs influent and effluent to evaluate the effectiveness of the process. The effectiveness of treatment steps of a conventional WWTP is discussed and then evaluated with regard to their efficiency in MPs' removal from influent.

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