During the past century, a vast number of organic chemicals have been manufactured and used in industrial, agricultural, public health, consumer products and other applications. The organohalogens, including chlorinated, brominated and fluorinated compounds, are ubiquitous in the environmental landscape and biota; with human exposures occurring through multiple pathways such as direct skin contact, inhalation, drinking water, and food. Exposure to chlorinated compounds is known to cause reproductive, neurotoxic, immunotoxic, endocrine, behavioral, and carcinogenic effects in both wildlife and humans. Polybrominated diphenyl ethers (PBDEs), the perfluorinated chemicals (PFCs), triclosan, triclocarban, tetrabromobisphenol A (TBBPA) and hexabromocyclododecane (HBCD), are considered as emerging new environmental pollutants. Based on their current and probable future use and their persistent chemical properties, it can be predicted that human exposure to these compounds will continue to increase. The health effects of these emerging chemical pollutants are of concern for the twenty-first century and beyond.