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Characteristics of effluents from large municipal wastewater treatment facilities between 1998 and 2000

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ABSTRACT

Nineteen publicly owned treatment works (POTWs) discharge treated wastewater directly to the coastal ocean within the SCB. Four of these facilities (large POTWs) are characterized by discharges greater than 100 million gallons per day (mgd). The large POTWs have historically been the leading point source of contaminants to the SCB. This study characterized the effluents from the large POTWs for the years 1998 through 2000, and compared annual discharges among the individual facilities. In addition, ongoing trends in large POTW discharges were evaluated using annual estimates dating back to 1971. From 1998 to 2000, mass emissions for the majority of constituents decreased 7% or more, and over half of these showed decreases of greater than 25%. The most significant reductions in constituent mass emissions occurred in effluent from the Hyperion Treatment Plant (HTP), which converted to full secondary treatment in December 1998. From 1998 to 2000, general constituent mass emissions at HTP decreased by an average of 63%, and combined metal mass emissions decreased by approximately 30%. Since 1971, despite increases in cumulative effluent flows from large POTWs, the majority of constituent emissions have declined significantly. For most constituents, declines in mass emissions occurred gradually until the late 1980s, and did not change dramatically following 1990. In 1999- 2000, however, this plateau seems to have ended, with notable decreases from 1998 values of several constituent emissions such as BOD (28%) and suspended solids (14%). These changes in historical trends are attributable, in large part, to changes in emissions from HTP.

Full Text

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