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Characteristics of effluents from small municipal wastewater treatment facilities in 2000

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ABSTRACT

Nineteen publicly owned treatment plants (POTWs) discharge treated wastewater directly to the coastal ocean within the SCB. Fifteen of these, the small POTWs, are characterized by discharges of less than 25 million gallons per day (mgd). This study characterized the effluents of small POTWs for the year 2000 and evaluated the historical trends in small POTW discharges since 1971, paying particular attention to the changes in effluent quality and volume since 1995. Additionally, the relative significance of small POTWs to pollutant loading in the SCB was determined by comparison to annual discharges from large POTWs. The total effluent flow from small POTWs in 2000 was 140 mgd (194 x 10⁹ L), a 2% decrease from flows recorded in 1995. Mass emissions from small POTWs decreased for the majority of the constituents evaluated, many by more than 50%. Only two pollutants showed an increase in cumulative small POTW mass emissions from 1995 levels including BOD (46%) and oil/grease (22%). In 2000, small POTWs contributed approximately 12% of the combined wastewater discharge generated by the large and small POTWs, and an average of 8% of the pollutant load among the constituents evaluated. Small POTWs represent a minor source of pollutants to the SCB when compared to large POTWs; however, they nevertheless necessitate intermittent assessments of this type so that environmental managers may continue to monitor the status of this point source.

Full Text

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