

ABSTRACT

Opak River is one of the rivers surrounded by dense settlements in Yogyakarta. But Opak River is also one of the rivers in Yogyakarta which is a river with a polluted status. Pollution caused by human activities that produce waste that give a negative impact to the quality of the water of the Opak River. Beside of human activity factors, river pollution can also be caused by the season. It is necessary to research to determine the influence of the location of the and season on the water quality of the Opak River, Yogyakarta. This study will use the method of Water Quality Index (WQI) or Indeks Kualitas Air (IKA) with the STORET method and the Pollution Index. Parameters to be tested include Biological Oxygen Demand (BOD), Chemical Oxygen Demand (COD) and Ammonia (NH₃). The value of Water Quality Index (WQI) using the STORET method shows the quality of the Opak River water based on the influence of the season and the location included in the status of water quality in Class B, Slightly Polluted. Whereas using the Pollution Index method shows the quality of the Opak River based on the season in the April 1st period is included in the status of Moderately Polluted, while for the other 6 periods is included in the status of Slightly Polluted. Whereas based on location influences, Site 2 is included in the status of Moderately Polluted, and the 7 other sites included in the status of Slightly Polluted.

Keywords: opak river, ANOVA, STORET, pollution index

ABSTRAK

Sungai Opak merupakan salah satu sungai yang dikelilingi pemukiman padat di Yogyakarta. Tetapi Sungai Opak juga menjadi salah satu sungai di Yogyakarta yang merupakan sungai dengan status tercemar. Pencemaran yang diakibatkan oleh aktivitas manusia yang menghasilkan limbah memberi dampak negatif pada kualitas air Sungai Opak. Selain faktor aktivitas manusia, pencemaran sungai juga dapat diakibatkan oleh musim. Berdasarkan uraian tersebut, maka perlunya dilakukan penelitian untuk mengetahui pengaruh lokasi dan musim pada kualitas air Sungai Opak, Yogyakarta. Penelitian ini akan menggunakan metode Water Quality Index (WQI) atau Indeks Kualitas Air (IKA) dengan metode STORET dan Indeks Pencemaran. Parameter yang akan diuji antara lain Biological Oxygen Demand (BOD), Chemical Oxygen Demand (COD) dan Amoniak (NH_3). Nilai Water Quality Index (WQI) menggunakan metode STORET menunjukkan kualitas air Sungai Opak berdasarkan pengaruh musim dan lokasi masuk dalam status mutu air Kelas B, Cemar Ringan. Sedangkan menggunakan metode Indeks Pencemaran menunjukkan kualitas Sungai Opak berdasarkan musim pada periode April ke 1 masuk dalam status mutu air Cemar Sedang, sedangkan untuk ke 6 periode lainnya termasuk dalam status mutu air Cemar Ringan. Sedangkan berdasarkan pengaruh lokasi, Site 2 termasuk dalam status mutu air Cemar Sedang, dan ke 7 site lainnya masuk dalam status mutu air Cemar Ringan.

Kata kunci: *sungai opak, ANOVA, STORET, indeks pencemaran*