

KAJIAN KUALITAS AIR SUNGAI WINONGO SEGMENT KOTA YOGYAKARTA

INTISARI

Sungai Winongo merupakan salah satu sungai di Kota Yogyakarta yang berada di tengah perkotaan. Letaknya yang berada di tengah perkotaan menyebabkan sungai ini memiliki potensi terjadi pencemaran sangat tinggi. Tingginya tingkat aktivitas masyarakat, terutama di daerah perkotaan akan menyebabkan limbah yang dihasilkan semakin besar. Limbah yang dibuang ke badan sungai tanpa adanya pengolahan terlebih dahulu akan mempengaruhi kualitas air sungai. Adapun tujuan dalam penelitian ini, yaitu mengetahui kondisi kualitas air di Sungai Winongo, menentukan status mutu air di Sungai Winongo, dan mengidentifikasi sumber pencemar di Sungai Winongo segmen Kota Yogyakarta.

Status mutu air ditentukan menggunakan metode *Canadian Council of Minister of the Environment* (CCME) dengan 9 parameter, yaitu suhu, TSS, pH, DO, BOD, COD, nitrat, nitrit, dan *Fecal Coliform*. Data kualitas air diperoleh dari hasil pemantauan kualitas air Dinas Lingkungan Hidup Kota Yogyakarta pada bulan Juli hingga Oktober 2021 yang dilakukan di 5 titik. Penyebab pencemaran air diidentifikasi berdasarkan observasi lapangan. Hasil penelitian dianalisis dengan metode deskriptif kuantitatif dan komparatif.

Hasil penelitian menunjukkan bahwa sumber pencemar sebagian besar berasal dari limbah domestik yang dibuang secara langsung tanpa adanya pengolahan terlebih dahulu. Selain itu, pencemaran juga berasal dari aktivitas lain yang dilakukan oleh masyarakat di sekitar sungai, seperti perikanan dan peternakan. Parameter DO, BOD, nitrat, nitrit, dan *Fecal Coliform* di sebagian stasiun memiliki kadar yang tidak sesuai dengan baku mutu air yang berlaku. Parameter kualitas air cenderung lebih banyak yang tidak sesuai dengan baku mutu yang ditetapkan pada saat musim kemarau. Hasil perhitungan menunjukkan nilai indeks CCME terus mengalami penurunan dari stasiun 1 yang bernilai 38,6 menjadi 30,3 di stasiun 4. Kemudian nilai indeks CCME mengalami kenaikan menjadi 33,7. Berdasarkan nilai indeks CCME tersebut menunjukkan bahwa di seluruh stasiun tergolong sangat buruk.

Kata Kunci : Sungai Winongo, Kualitas Air, Status Mutu Air, Pencemaran

Study of Water Quality of the Winongo River Segment of Yogyakarta City

ABSTRACT

The Winongo River is a river located in the middle of Yogyakarta city. Its location in the middle of an urban area causes this river to have a very high potential for pollution. The high of human activity, especially in urban areas, will cause more significant waste to be generated. Waste discharged into rivers without treatment will affect the quality of river water. The purpose of this study is to determine the water quality of Winongo River, assess the status of the level of water pollution in the Winongo River, and identify pollutant sources in the Winongo River.

Water quality status was determined using the Canadian Council of Ministers of the Environment (CCME) method with 9 parameters, that is temperature, TSS, pH, DO, BOD, COD, nitrate, nitrite, and Fecal Coliform. Water quality data was obtained from Dinas Lingkungan Hidup Kota Yogyakarta from July to October 2021 which was carried out at 5 points. The causes of water pollution were identified based on field observations. The results of the study were analyzed by the descriptive method of quantitative and comparative.

The results showed that, Sources of pollution mostly from domestic waste which is disposed of directly without any treatment. Sources of pollution are mostly from domestic waste which is disposed of directly without any treatment. Pollution also comes from other activities, such as fishing and livestock. DO, BOD, nitrate, nitrite, and Fecal Coliform at some stations had levels that were not according to water quality standards. Water quality parameters tend to not follow the established quality standards during the dry season. The CCME index value continued to decrease from station 1, worth 38.6 to 30.3 at station 4. Then the CCME index value increased to 33.7 at station 5. The status of water quality based on the CCME index shows that at all stations classified as poor.

Keywords: *Winongo River, Water Quality, Water Quality Status, Pollution*