

KAJIAN KUALITAS AIR SUNGAI CODE YANG TERCEMAR BERBAGAI MACAM LIMBAH UNTUK IRIGASI DENGAN METODE STORET

Oleh : Muhammad Luthfi Purwito
Dibimbing Oleh : Eko Amiadji Julianto

ABSTRAK

Sungai Code merupakan salah satu sungai yang melintasi tiga kabupaten dan kota yakni Kabupaten Sleman, Kota Yogyakarta, dan Kabupaten Bantul. Sungai Code sering dimanfaatkan untuk mengairi sawah, sebagai sumber air minum, MCK, perikanan, dan lain sebagainya. Dalam rangka pengelolaan kualitas air dan pengendalian pencemaran air, perlu dilakukan penentuan status mutu air sungai secara berkala. Penelitian ini bertujuan untuk mengetahui kualitas dan status mutu air Sungai Code berdasarkan parameter Suhu, *Total Disolved Solid* (TDS), *Biological Oxygen Demand* (BOD), *Chemical Oxygen Demand* (COD), pH, Total Fosfat, Total Nitrat, SAR, dan DHL. Parameter dipilih melihat banyaknya kegiatan pertanian, peternakan, industri, perikanan dan kawasan pemukiman penduduk di sepanjang aliran sungai. Penentuan status mutu dilakukan menggunakan Metode Storet. Penurunan kualitas air disebabkan oleh limbah domestik, saluran drainase, limbah perikanan, dan limbah pertanian baik dari sumber point maupun non-point. Pengambilan sampel yang diambil berjumlah 9 sampel yang mewakili berbagai macam limbah pencemar. Metode penelitian ini menggunakan metode survei, teknik pengambilan sampel dilakukan dengan metode purposive sampling. Hasil penelitian menunjukkan parameter temperatur dan SAR melebihi ambang batas baku mutu kualitas air kelas IV Peraturan Pemerintah No. 22 tahun 2021. Penilaian status mutu air berdasarkan metode STORET tergolong pada kelas B dengan nilai -3 dengan kategori cemar ringan.

Kata Kunci : Kualitas Air, Irigasi, Tingkat Pencemaran, Metode STORET

STUDY OF THE WATER QUALITY OF THE CODE RIVER POLLUTED BY VARIOUS TYPES of WASTE FOR IRRIGATION USING THE STORET METHOD

By : Muhammad Luthfi Purwito
Supervised By : Eko Amiadji

ABSTRACT

The Code River is one of the rivers that flows through three administrative regions: Sleman Regency, Yogyakarta City, and Bantul Regency. The Code River is surrounded by densely populated areas within Yogyakarta City. The Code River is often utilized for irrigating rice fields, as a source of drinking water, for bathing, washing, and sanitation (MCK), fisheries, and other purposes. In order to manage water quality and control water pollution, it is necessary to periodically determine the river's water quality status. This study aims to determine the quality and status of the Code River's water based on the parameters of Temperature, Total Dissolved Solids (TDS), Biological Oxygen Demand (BOD), Chemical Oxygen Demand (COD), pH, Total Phosphate, Total Nitrate, Sodium Adsorption Ratio (SAR), and Electrical Conductivity (EC). These parameters were selected considering the presence of agricultural, livestock, Industry, fisheries and residential activities along the river. The water quality status was determined using the STORET method. The decline in water quality is caused by domestic waste, drainage channels, fishery waste, and agricultural waste from both point and non-point sources. The sampling consisted of 9 samples representing various types of pollutant wastes. The research employed a survey method, and sampling was conducted using the purposive sampling technique. The results of the study showed that the parameters of temperature and SAR exceeded the quality standard threshold for Class IV water quality based on Government Regulation No. 22 of 2021. The assessment of water quality status using the STORET method indicated that the Code River falls under Class B with a score of -3, categorized as lightly polluted.

Keywords: Water Quality, Irrigation, Pollution Level, STORET Method