Teknik Konservasi Mata Air Untuk Kebutuhan Air Bersih Di Padukuhan Kajor Wetan, Kalurahan Selopamioro, Kapanewon Imogiri, Kabupaten Bantul, Daerah Istimewa Yogyakarta

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INTISARI

Padukuhan Kajor Wetan memiliki mata air bernama Sendang Ayu yang terletak di ujung padukuhan dan masyarakat menggunakannya sebagai kebutuhan air bersih. Permasalahan mata air yakni debit berkurang saat musim kemarau. Selain itu, air tersebut keruh ketika sehabis hujan dan terdapat endapan pada penampungan. Belum adanya pengelolaan berpengaruh terhadap potensi mata air. Tujuan penelitian yaitu menganalisis karakteristik mata air dan daerah imbuhan, menganalisis potensi mata air (kualitas dan kuantitas) untuk kebutuhan air bersih, dan merancang arahan pengelolaan mata air berdasarkan karakteristik daerah imbuhan serta potensi mata air.

Metode penelitian menggunakan metode survei dan pemetaan, volumetrik, uji laboratorium, matematis, dan analisis deskriptif. Karakteristik mata air dikaji berdasarkan tipe mata air. Daerah imbuhan dikaji berdasarkan Permen PU No.2 Tahun 2013. Pengujian kualitas air berupa parameter bau, rasa, TDS, kekeruhan, pH, dan DHL. Kuantitas mata air dikaji berupa debit mata air.

Hasil dari penelitian diketahui bahwa mata air Sendang Ayu berdasarkan tipe mata air berdasarkan kontinuitas berupa mata air parenial, secara debit mata air berada pada kelas IV, tipe mata air berdasarkan tenaga gravitasi berupa mata air depresi. Daerah imbuhan memiliki klasifikasi kurang sesuai. Kualitas mata air terdapat beberapa parameter yang yang tidak sesuai. Seperti parameter TDS dengan nilai 333 mg/L, 314 mg/L, 316 mg/L, 338 mg/L, 340 mg/L, 346 mg/L dan kekeruhan dengan nilai 9,15 NTU dan 22,22 NTU yang menyebabkan kualitas mata air menurun karena air mengandung zat terlarut dan partikel tersuspensi yang berlebihan, yang dapat membahayakan kesehatan manusia jika dikonsumsi. Arahan pengelolaan yang dilakukan pada daerah imbuhan adalah dengan membuat guludan dan tutupan mulsa organik, pembuatan bangunan penampung mata air dan filtrasi, pendekatan sosial dan pendekatan instansi.

Kata Kunci: Mata air, Karakteristik mata air, Daerah Imbuhan, Kebutuhan air, Konservasi mata air.

Spring Conservation Techniques for Clean Water Needs in Kajor Wetan Hamlet, Selopamioro Village, Imogiri Subdistrict, Bantul Regency, Special Region of Yogyakarta

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ABSTRACT

Kajor Wetan Hamlet has a spring called Sendang Ayu, located at the edge of the hamlet, which the community uses to meet their clean water needs. The spring faces issues such as reduced discharge during the dry season. In addition, the water becomes turbid after rainfall and sediment accumulates in the reservoir. The absence of proper management affects the potential of the spring. The aim of this study is to analyze the characteristics of the spring and its recharge area, assess the potential of the spring (in terms of quality and quantity) for clean water needs, and design management recommendations based on the characteristics of the recharge area and the spring's potential.

Research methods used include survey and mapping methods, volumetric measurements, laboratory testing, mathematical analysis, and descriptive analysis. The characteristics of the spring are studied based on the spring type. The recharge area is analyzed according to Permen PU No. 2 of 2013. Water quality testing includes parameters such as odor, taste, TDS, turbidity, pH, and electrical conductivity (DHL).

The characteristic analysis based on the spring type continuity shows perennial springs, with spring discharge classified as class IV. The spring type based on gravitational force is classified as a depression spring. The recharge area is classified as less suitable. Some water quality parameters do not meet the quality standards, namely TDS and turbidity, which exceed the quality limits causing a decline in spring water quality due to excessive dissolved solids and suspended particles that may endanger human health if consumed. DHL parameter is below the quality standard limit, indicating low dissolved solids and salinity content, making the water safe and suitable for various uses. Conservation efforts in the recharge area include creating ridges and organic mulch cover, constructing spring water catchment structures, and filtration to address high TDS and turbidity levels.

Keywords: Springs, Spring characteristics, Recharge areas, Water needs, Spring conservation.