

Analisis Variabilitas Musim pada Kualitas Air Tanah di Kota Bekasi dan Metro = Seasonal Variability Analysis on Groundwater Quality in Bekasi City and Metro

Amrina Rasyada, author

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Abstrak

Air tanah Kota Bekasi dan Metro mayoritas digunakan sebagai bahan baku air bersih dan minum. Terdapat beberapa permasalahan air tanah kota penelitian, yaitu kandungan bakteri, besi, dan asam organik tinggi. Penelitian WFW pada tahun 2020-2022 berupa data kualitas air tanah WFW berupa TDS, kekeruhan, *TC*, *Escherichia Coli*, *pH*, dan temperatur diuji dengan hasil kuesioner, yaitu faktor ekonomi (pengeluaran masyarakat per bulan dan kepemilikan hewan ternak), sosial (pendidikan, kepemilikan rumah, dan jumlah penghuni rumah), dan lingkungan (kepemilikan toilet, metode penyediaan air tanah, dan pengosongan tangki septik), dan persepsi dan tingkat kepuasan. Penelitian menggunakan analisis statistik (analisis deskriptif, *t-test paired sample*, *crosstabs*, Spearman Rank, dan regresi biner) dan studi literatur. Analisis deskriptif menghasilkan parameter di musim berbeda memiliki nilai berbeda. *T-test paired sample* Kota Bekasi (*E. Coli*, *TC*, dan *pH*) menghasilkan nilai *Sig*. (2 *tailed*) < 0,05 atau terdapat perbedaan parameter di beda musim. Uji *crosstabs* dilaksanakan untuk mengetahui variansi data faktor penelitian. Uji *Spearman* dan regresi biner menghasilkan hanya faktor metode pengambilan air tanah berkorelasi dengan parameter *pH*, temperatur, dan *TC* dengan nilai *Sig*. (2 *tailed*) < 0,05. Rekomendasi metode penyediaan air tanah berupa *borehole* dan *protected well*.

.....The majority of Bekasi City and Metro ground water is used as a raw material for clean and drinking water. There are several problems with the research city groundwater, namely the high content of bacteria, iron, and organic acids. WFW research in 2020-2022 in the form of WFW groundwater quality data in the form of TDS, turbidity, TC, *Escherichia Coli*, *pH*, and temperature were tested with the results of a questionnaire, namely economic factors (monthly community spending and livestock ownership), social (education, house ownership, and number of occupants), and environment (toilet ownership, methods of groundwater supply, and emptying of septic tanks), and perceptions and levels of satisfaction. The study used statistical analysis (descriptive analysis, paired sample t-test, crosstabs, Spearman Rank, and binary regression) and literature studies. Descriptive analysis produces parameters in different seasons have different values. T-test paired samples of Bekasi City (*E. Coli*, *TC*, and *pH*) yielded *Sig*. (2 *tailed*) < 0.05 or there are different parameters in different seasons. The crosstabs test was carried out to determine the variance of the research factor data. Spearman's test and binary regression yielded only groundwater abstraction method factors correlated with *pH*, temperature, and *TC* parameters with *Sig* values. (2 *tailed*) < 0.05. Recommendations for groundwater supply methods are in the form of boreholes and protected wells.