

## ABSTRACT

*Groundwater is one source of the fresh water that is often used by the community, especially in the Kaligawan village. This study examines the water quality of the dug wells of Kaligawan residents, examines the sources of pollution such as solid waste disposal and analyzes the relationship between the two. This research was conducted by sampling the well water by purposive sampling methods and mapping the direction of the groundwater flow using ArcMAP with the interpolation and IDW (Inverse Distance Weighting) methods. The results showed that most of well waters in Kaligawan Village are not polluted. However, the contamination of the groundwater occurs in the southern part of studies area. The contaminated groundwater showed high concentration of ammonia (NH<sub>3</sub>), iron (Fe) and total coliform. This shows that there is a relationship between groundwater flow and pollutant sources on groundwater quality.*

**Keywords :** *water quality, water pollution, ground water, flownet*

## **ABSTRAK**

*Air tanah merupakan salah satu sumber mata air yang sering digunakan oleh masyarakat, khususnya di dukuh Kaligawan. Penelitian ini mengkaji kualitas air sumur gali warga dukuh Kaligawan, mengkaji sumber pencemaran seperti timbunan sampah dan menganalisa hubungan antara keduanya. Penelitian ini dilakukan dengan melakukan sampling air sumur secara purposive sampling dan melakukan pemetaan arah aliran air tanah menggunakan ArcMAP dengan metode interpolasi dan IDW (Inverse Distance Methods). Hasil penelitian menunjukkan bahwa kualitas air sumur di Dukuh Kaligawan sebagian besar tidak tercemar akan tetapi terjadi pencemaran air tanah yang terakumulasi pada bagian selatan area penelitian serta teridentifikasi tingginya kandungan ammonia (NH<sub>3</sub>), logam besi (Fe) dan total coliform. Hal ini menunjukkan bahwa terdapat hubungan antara aliran air tanah dan sumber pencemar terhadap kualitas air tanah.*

**Kata Kunci :** *kualitas air, pencemaran air, air tanah, flownet*