

**ELVIANA IMANIAR : Water Potential for Secondary Irrigation Canal Pengasih Timur in Irrigation Area Kalibawang Kulon Progo Regency Yogyakarta. Under The Guidance Of Ir. Lanjar Sudarto, MT dan Ir. AZ. Purwono Budi Santoso, MP**

**ABSTRACT**

This research aims to determine the the quantity and quality of water in the Region pengasih timur potential irrigation for agriculture include crop water requirements, efficiency and quality of the water of the secondary channel pengasih timur include physical and chemical properties. the research located in pengasih timur Kalibawang, Kulon Progo Regency. Methods of research with survey method, the method used for sampling is using purposive method. The quality of irrigation water analyzed by the laboratory The observed parameters consisted of temperature, color, turbidity, total suspended residues, water discharge, TDS, DHL, SAR, RSC. Availability of water on potential the research Irrigation Area pengasih timur Kalibawang classified into be fulfilled water for the plant, have an average water enter in the form of rainfall amounted to 19,85 mm/15days and irrigation water input to the discharge of 19.582 mm / 15 days. Water requirements for rice, sugar cane and other crops are still in deficit in the same month of July to September. The quality of irrigation water loving channel east including both agriculture according to the water quality standard agricultural grade or class D (classified good for agriculture).

**Keywords : quantity of water, irrigation, water quality**