

## **ABSTRACT**

*Water is the source of life for living things. Water is used for various needs of humans, animals and plants. There are various kinds of water sources, one of which comes from rain water. Rainwater that falls to the ground will hit the rocks and will produce small pieces of rock that can block the pores of the soil. Thus the more water that flows on the surface of the land and eventually will form a river. However, as the population grows in various parts of the world, rivers begin to become polluted. This can lead to the risk of getting more susceptible diseases. Some diseases that can arise such as cholera, diarrhea, dysentery, hepatitis a, malaria and polio. Not only can humans cause disease, water pollution can also cause fish populations in river water to become extinct, but water pollution can damage plants if the water used to water plants is polluted water.*

*In this research, a tool design that is able to provide information to cleaning staff about river water quality is created. This project uses a pH sensor to measure acidity and turbidity sensors that are capable of measuring water turbidity levels and are supported by an arduino platform as a microcontroller that is connected to GPS that will be able to provide Internet services and latitude and longitude position of river locations through telegraph applications. The method used in this study is an experimental method.*

*From the results of this study the results obtained from measurements that the river water tested through telegram applications get an average delay of 8.84 to 10.81 seconds. In addition, the pH parameters obtained on average from 4.81 to 6.43 and the turbidity parameters obtained on average from 3.2 to 10.3. It is hoped that this research can be developed to be able to make it easier for janitors and the government in dealing with environmental problems.*

**Keywords:** *Water pollution, Internet of things, Arduino, GPS, Telegram*