**REUSE OF SPENT FILTER BACKWASH**

**WATER**

**Hanan A. Fouad**

Associate Prof. of Sanitary & Environmental Engineering,

Faculty of Engineering at Shoubra,

Benha University, Egypt

**Rehab M. El-Hefny**

Assistant Prof. of Sanitary & Environmental Engineering,

Faculty of Engineering at Shoubra,

Benha University, Egypt

**Mahetab Ali Mohamed**

Demonestrator at Civil Engineering Department,

Elgazeera Higher Institute for Engineering and Technology, Egypt

**ABSTRACT**

*In this study several tests were conducted to investigate the possibility of*

*re-use the filter backwash water (FBWW) by re-introducing it with raw water*

*(RW) for treatment. FBWW in water purification plants is being thrown into*

*sewage plants without any benefit. The amount of wash water generated*

*estimated at a rate of (10-15%) of the amount of purified water in the plant.*

*The treatment of Backwash water depends on the need for re-use, either for*

*drinking or for irrigation purposes, depending on the compliance with the*

*standards in the water quality specifications*. *The FBWW resulting from Giza*

*water plant have been analyzed scientifically and mixed with RW at different*

*ratios (from 10% to 50%). The results of experiments showed that the best*

*mixing ratio was 40% FBWW to 60% RW, also the economic feasibility of*

*water reuse have been discussed.*

**Key words:** Backwash, Filtration, Reuse, Treatment, Water.

**Cite this Article:** Hanan A. Fouad, Rehab M. El-Hefny and Mahetab Ali

Mohamed, Reuse of Spent Filter Backwash Water. *International Journal of*

*Civil Engineering and Technology*, 7(4), 2016, pp.176–187.