

**Zimoch, I. Purposefulness of Recycling Rapid Filter Backwash Water in Surface Water Treatment Systems. *Ochrona Srodowiska* 2013, Vol. 35, No. 4, pp. 17–22.**

**Abstract:** In recent years an increasing interest of public water system operators has been observed regarding possible reuse of filter backwash effluent in water treatment systems. This is done by returning backwash waste stream to the head of the treatment system, which is aimed at reducing the operating costs. Filter backwash recycling allows reducing water intake costs (pumping, environment taxes) and costs of water discharge into drains or environment. The paper presents analysis of standard backwash water treatment technological solutions and evaluation of benefits and risks related to filter backwash recycling. Technological analysis including *Clostridium perfringens* occurrence risk assessment and economic analysis of backwash water treatment operation system at Goczalkowice water treatment plant, carried out based on the operating data and laboratory test results, constitutes an integral part of the paper.

**Keywords:** Water quality, filtration, filter backwash, recirculation, *Clostridium perfringens*, pathogens.