Bergel, T., Kudlik, K. Physical, Chemical and Bacteriological Efficiency of DynaSand Filters in the Water Treatment Plant Supplying Municipal Water to Nowy Sacz. *Ochrona Srodowiska* 2011, Vol. 33, No. 4, pp. 57–61.

Abstract: The aim of the study was to assess the removal efficiencies obtained with self-cleaning contact filters of DynaSand type for some physicochemical and bacteriological water pollutants. The filters are operated in the Water Treatment Plant Swiniarsko, which supplies municipal water to the city of Nowy Sacz. The water being subjected to filtration is a mixture of surface and infiltrative waters. The values of the water quality parameters obtained with the DynaSand filters were compared to those achieved with the rapid pressure filters that were in use before the modernization of the water treatment plant. Analysis of the results makes it clear that since the substitution of the self-cleaning DynaSand filters for the rapid pressure filters, both physicochemical and biological pollutants have been removed with the efficiency required. This means that the users have been supplied with water of desired quality. Although the period under study was characterized by the occurrence of extreme meteorological conditions (floods), the modernized filtration system not only guaranteed a reduction in water turbidity to the average value of 0.3 NTU, a decrease in color intensity to at least 5 gPt/m^3, and the removal of iron compounds to the average value of 0.01 gFe/m^3, but also provided simultaneous retention of more than 97% of coliform bacteria, and more than 99% of fecal streptococci *Enterococcus faecalis* or anaerobic sporeforming bacteria of the species *Clostridium perfringens*.

Keywords: Water treatment, filtration, DynaSand filter.