Key words: bacteriological and sanitary pollution, the Besko reservoir, water quality

Summary

The assessment of potential hazards to human health connected with the presence of pathogenic bacteria in the protected Besko water reservoir, located at 172.8 km of the Wisłok River, in Sieniawa village, in the Podkarpackie province, was conducted in the paper. The reservoir area is situated in the closed zone and its recreational use is forbidden. Despite the fact, so called wild beaches occur in the areas distant from the dam and their use may lead to bacteriological contamination of water in the reservoir. Bacteriological analysis covered the ten-year period (2004–2014) during which water samples were collected from a single point located in the middle of the reservoir in place of water extraction for the water supply for Krosno city citizens. On the basis of the results obtained from the Voivodship Inspectorate of Environmental Protection in Rzeszów, analyses were conducted for the bacteria from coli group, Escherichia coli, Enterococcus and Salmonella bacteria. Water bacteriological quality was assessed in compliance with the current regulations of the Minister of Health and Minister of Environment. The time trend for changeability of the bacteria count was determined for the analyzed period. Only in one month (October 2008) water in the reservoir did not meet the requirements posed for waters in watering places and sites used for bathing. Over the whole period of the research the water was suitable for potable water supply to people, however in different years it required various treatment processes, adequate for water quality categories A1 and A2. For safety reasons, the monitoring procedures for the Besko reservoir should be upgraded, because during the analyzed period, the studied series of mean contents of the analyzed water contamination indices in the reservoir water revealed an upward trend for the bacteria from coli group and a significant upward trend for the Enterococci. On the other hand, Escherichia coli bacteria count revealed a downward trend. No presence of Salmonella bacteria was spotted in the Besko reservoir water.