

PRELIMINARY LIMNOLOGICAL CHARACTERISTICS OF RESERVOIRS ON THE
RECLAIMED WASTE HEAP OF SULPHUR MINE “MACHÓW” (SE POLAND)

WOJCIECH PĘCZUŁA¹, RADOSŁAW MENCZFEL², KAMIŁA BARYŁA³

¹University of Agriculture in Lublin, Department of Hydrobiology and Ichtiobiology
ul. Akademicka 13, 20-950 Lublin, Poland

²Catholic University of Lublin, Department of Botany and Hydrobiology
ul. Norwida 4, 20-061 Lublin, Poland

³ul. Staffa 68, 20-454 Lublin, Poland

Keywords: man-made reservoirs, waste heap, reclamation, water chemistry, phytoplankton, macrophytes.

Summary

Four small (surface area: 0.4–2.3 ha), but relatively deep (max. depth: 6.5–7.8 m) man made reservoirs, created between 1979 and 1988 on recultivated waste heap of former sulphur mine in Machów (N 50°31'35"; E 21°37'51"), were studied in summer and autumn 2003. In autumn one lake – Kacze was not mixed down to the bottom, which could point to its meromixis. The other lakes were found to be dimictic. In all the lakes high values of total hardness, conductivity, chlorides, sulphides and low amounts of total phosphorus and nitrogen were found. Both phytoplankton and hydromacrophyte communities were poorly developed. Considerable amounts of green-yellow bacteria were also noted in plankton. The water chemistry as well as quantity and quality of plant communities reflect the chemical composition of loam soils which constitute the waste heap.