

Nowak O., Lindtner, S. (2003): Investment and operating Costs of small wwtps – compared to larger Plants; Vortrag: 5th International Biennial Conference and Exhibition, Olomouc/Olmütz, Czech Republic

**Abstract:** The costs for wastewater treatment with nitrification and phosphorus removal are not considerably higher than for carbon removal only, neither for larger WWTPs nor for small plants. In Austria, the investment costs of a municipal WWTP for nutrient removal by the activated sludge process of about 50,000 pe are of the order of 230 €/pe. The operating costs of such a plant are about 13 €/(pe.a) related to the actual mean load. The investment costs of small WWTPs with nitrification range from about 300 € per pe design capacity for a 1,500 pe plant to 800 €/pe for a 100 pe plant, while the operating costs range from approximately 30 to 60 €/(pe.a) related to the mean load. The most important cost factor are the personnel costs. Accordingly, a simple and yet reliable process design is of particular importance, especially for small WWTPs.

**Keywords:** Small Waste water treatment plants, Costs, Controlling, Cost efficiency,