

Understenshojden

Understenshojden ecological village, within the city of Stockholm, has 44 apartments with 160 inhabitants. All urine was separated at source and piped to two large collection tanks. Quantities of the collected urine was close to that expected. 4.9 g N/pe.d, 0.42g P/pe.d and 1.34 g K/pe.d were measured, which implies that around 50% of the minerals in urine were not collected. It was expected that the remaining 50% would be excreted away from the village, at offices or public places. Local organic farmers collected the separately collected urine to spray it on their fields. Around 50% of toilet flush water was saved with separation toilets. Urea rapidly dissociated to ammonia and carbon dioxide and the pH increased to nine (measured in storage tank). This would have been an ideal environment for phosphate crystallisation, of which no mention was made. It is uncertain why this did not happen (in which case the measurements might have been different). It should be noted that at high pH, ammonia evaporates, which means that much of the nitrogen would be lost when sprayed on fields. Contamination of separated urine by faecal material was very small. (Jönsson, Stenström, Svensson and Sundin, 1997)