

Source Separation and Treatment of Anthropogenic Urine

Anthropogenic urine, although only 1% of domestic wastewater flow, is responsible for 50-80% of the nutrients and a substantial portion of the pharmaceuticals and hormones present in the influent to wastewater treatment plants. Source separation and treatment of urine enables recovery of nitrogen and phosphorus, thus largely minimizing the energy requirements for nutrient removal at wastewater treatment plants, allowing for capture and reuse of nutrients, and creating a more efficient means for removal of pharmaceuticals and hormones. The goal of this research was to investigate the global status of urine source separation and treatment technologies and to advise a path forward for further research.

Results from the literature review validate urine source separation as a means to recover nutrients, conserve water, and decrease overall energy requirements for both nutrient and micropollutant removal as compared to conventional wastewater treatment. Research has matured beyond the laboratory scale to include pilot projects in office buildings, private homes, and schools. Continued research is necessary to create marketable products, to develop life cycle and/or cost-benefit analysis, to determine social acceptance in the U.S. as most surveys and projects have been conducted in Europe, and to assess the most appropriate means and setting for urine treatment.

Available Online Only

Also available as part of your Water Intelligence Online subscription

Publication Date: 15/12/2011

ISBN13: 9781780400051

eISBN: 9781780400051

Pages: 60

Print:

Standard price: £29 / €36 / \$44

Member price: £22 / €27 / \$33

eBook:

Standard price: £29 / €38 / \$50

Member price: £22 / €29 / \$38

