

ABSTRACT

Title: METHOD AND APPARATUS FOR RECOVERING WATER
FROM A SEWER MAIN

A process and apparatus (1) for recovering water from raw sewage extracted directly from the sewer including screening means (2) operable to obtain from raw sewage a screened effluent having a maximum particle size of no more than approximately 900 microns. The apparatus also comprises first membrane separation means, preferably in the form of a continuous microfiltration unit (5), which is operable to filter the suspended solids from some or all of the screened effluent.

In the preferred form, the process also includes second membrane separation means, preferably in the form of reverse osmosis filter (8), which operates to filter selected soluble substances from some or all of the effluent from the first membrane separation means (5). Optional additional process stages include chemical dosing means (6) and a trickle bed suspended growth filter (9) or other short residence time biological treatment process.

In the preferred form, the screen mesh size is selected to result in a screened effluent having a maximum particle size of around 200 to 250 microns. Desirably, the screen (2) also includes means to inject air to deodorise the sewage and/or assist in cleaning the screen.

