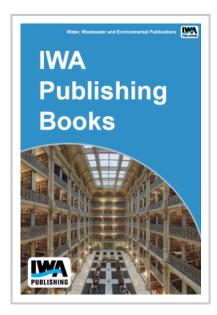


## Fats, Roots, Oils, and Grease (FROG) in Centralized and Decentralized Systems

Fat, oil, and grease (FOG) is generated everyday by food preparation and cleaning activities conducted at commercial establishments and, on a smaller scale, by residential sewer usage. Another common problem, known to all plumbing and utility maintenance personnel, is the process of increasingly dense mats of root hair. FOG or root accumulations in the sanitary sewer collection system result in reduced capacity that may lead to sanitary sewer overflows (SSO) if not periodically cleaned. As the mat or accumulation commence, the effect of slowed wastewater flow exacerbates the rate of accumulation and deposit of FOG materials onto the pipe walls, thereby reducing capacity. The primary means of controlling FOG blockages is to capture and retain FOG materials through passive grease interception devices.

Limited scientific studies have been done evaluating these devices, and many claims of enhanced performance made in marketing strategies by manufacturers of grease and oil



interception devices need to be verified by objective and unbiased research protocols. This report performed an evaluation of field grease interceptors through their separation and cleaning cycles, performed controlled laboratory scale grease interceptor tests and numerical simulations to assess their removal efficiency at different residence times and under different geometric configurations.

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