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CARWASH WASTEWATERS: CHARACTERISTICS, VOLUMES, AND TREATABILITY BY GRAVITY OIL SEPARATION

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Abstract

The aim of this research was to determine the characteristics, volumes and treatability of Full-service carwash wastewaters in Toluca (Mexico State). The average water use for Exterior-only wash was 50 L per small-size car and 170 L per medium-size vehicle (pick up, van or light truck). The Full-service wash (exterior, engine and chassis) required 170 L per small-size car and 300 L per light truck. Wastewaters were generally emulsified and contained high contaminant loads (in average, 1100 mg/L oil and grease, 4500 mg/L COD and 3500 mg/L Total Suspended Solids). Gravity oil separators used in the car washing facilities were able to reduce the pollutant loads (showing a 80 % efficiency) but usually not enough to meet the sewer discharge standards or reuse requirements. The data provided by the study are useful for screening the applicable technologies and setting the design capacity of the reclaim systems that are needed in the Mexican car washing sector.

Keywords

vehicle; wastewaters; washing; water use; oil-water separator.

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