

Tutorial 2

Problem 1

Sewers are to be installed in a residential area having the following housing types and population densities. Determine the peak wastewater flow rate. Assume that the per-capita wastewater generation rate is 200 Lpcd throughout.

Hosing types	Area (km ²)	Population density (person/ha)
A	0.20	30
B	0.30	35
C	0.15	50
D	0.10	65

Problem 2

A small city of 200,000 people consumes 50,000 m³/day of portable water for municipal purposes. If a steel factory producing 1,500 tons of steel per day is going to be built near the city with water requirement of 40,000 gal/ton of steel, calculate the daily amount of water required by the factory and compare it to the city's requirement.

Problem 3

Determine the required capacity of a water distribution system for a city with population of about 150,000 people and a per capita consumption of 200 Lpcd on the average.
