SECTION -1
WASTEWATER ENGINEERING
(AN OVERVIEW)

INTRODUCTION

Every community produces both liquid and solid wastes and air emissions. The liquid wastewater is essentially the water supply of the community after it has been used in a variety of applications (see Fig. A-1). Wastewater may be defined as a combination of the liquid or water - carried wastes removed from residence, institutions, and commercial and industrial establishments, together with such ground water, surface water, and storm water as may be present.

DEFINITION OF WASTEWATER ENGINEERING

Wastewater engineering is that branch of environmental engineering in which the basic

principles of science and engineering are applied to solving the issues associated with the treatment and reuse of wastewater. The ultimate goal of wastewater engineering is the protection of public health in a manner commensurate with environmental, economic, social, and political concerns.

SEWERAGE:

Sewerage refers to the collection of wastewater from occupied areas and conveying them to some point of disposal. The liquid waste usually, will require treatment before they can be discharged into a body of water or so as not to endanger the public health or causing offensive conditions. Sewerage (Sewage) works include all the physical

structures required for that collection, treatment and disposal.

SEWAGE

Sewage is the liquid waste conveyed by a sewer and may include domestic and industrial discharges as well as storm sewage, infiltration and inflow.

SEWER

A sewer is a pipe or conduit, generally closed, but normally no flowing full, which carries sewage.

WASTEWATER SOURCES AND FLOW RATES

A fundamental prerequisite to begin the design of wastewater facilities is a determination of the design capacity. This, in turn, is a function of the wastewater flow rates. The determination of wastewater flow rates consists of five parts: (1)

selection of a design period, (2) estimation of the population and commercial and industrial growth, (3) estimation of wastewater flows, (4) estimation of infiltration and inflow, and (5) estimation of the variability of the wastewater flow rates.