

throughout London in the mid-1840's and early 1850's this problem of stream pollution was recognized, and remedial steps taken through the construction of interceptor sewers to concentrate all of the drains at a few points so that their discharge might be treated rather than pollute the streams. At the same time efforts were made to provide treatment of raw water supplies.

The first American city to follow London's example was Boston, Mass., which legalized the discharge of human wastes into its drainage system in 1833. It was not until 1857, however, that a sewer system in the United States was designed for the specific purpose of collecting waterborne excreta. In that year, both the city of Chicago, Ill. and the (then) city of Brooklyn, N.Y., undertook the construction of comprehensive consolidated sewer collecting systems. These systems were the forerunners of the modern sanitary sewer collecting systems which are currently providing service in over 12,000 communities in the United States.

(a) *Physical Characteristics*

In order that a distinction may be made between the public works categories of sanitary sewer collecting systems, storm sewer collecting systems, and sanitary sewage treatment systems, the following definitions have been employed:

Sanitary sewage treatment systems include all the various devices used in the treatment or stabilization of sewage or industrial wastes of a liquid nature, including the necessary intercepting sewers, outfall sewers, pumping, power, and other equipment and their appurtenances, and includes any extensions, improvements, remodeling, additions, and alterations thereof.

Storm sewer collecting systems include all the various devices used in the carrying off of, or removal of storm and surface water, street washings and other wash water or drainage, and include any extensions, improvements, remodeling, additions or alterations thereof, but exclude any device used in the carrying off of, or removal of liquids, wastes or drainage of an industrial, commercial or domestic origin.

Sanitary sewers include all the various devices used in the carrying off of, or removal of liquid wastes or drainage of an industrial, commercial, or domestic origin through a pipe or conduit arrangement, either separately (separate sewers), or in combination with storm and surface water, street washings and other wash waters or drainage (combined sewers), including any extensions, improvements, remodeling, additions, or alterations thereof, but excluding all devices included as part of a sanitary sewage treatment systems, and all local buildings and household connections.

The modern sanitary sewer collecting system which evolved from the experience gained in the mid-1800's is a complex arrangement of pipes and conduits strategically located—throughout a community, in such a fashion—as to provide all improved property with a safe and sanitary method of disposal of the waterborne wastes that might originate thereon. The system provides service to not only households, but also to business and commercial establishments and industrial complexes.