

The objective is to reduce a given waste material to a condition that is acceptable for discharge to a watercourse without harm to health, esthetics, and the uses for which the particular watercourse is intended. The waste reduction process may include mechanical, biological, and chemical means.

The common references to primary and secondary treatment are not precise distinctions in either process or structure. Usually primary treatment involves the removal of settleable, suspended, and floatable solids. Secondary treatment generally goes beyond this stage to remove or reduce dissolved and colloidal materials not amenable to separation through mechanical means.

Facilities are designed for the particular needs of the community. That is, its scale, treatment process, and management reflect the size of the community, its expected growth rate, the composition and volume of its wastes, and the water quality requirements established for the watercourse into which the wastes are to be discharged. As the result of public insistence now manifested in the administration of the Federal Water Pollution Control Act and in the State programs, more stringent water quality requirements are being established. These requirements will have a subsequent effect both on the design and operation of municipal waste treatment facilities.

2. EXISTING CAPITAL PLANT IN THE UNITED STATES

(a) The latest data on the number of municipal waste treatment facilities (also commonly referred to as sewage treatment plants) in existence in the United States is as of January 1, 1962. These data are published in the "Statistical Summary of Municipal Waste Facilities in United States," Public Health Service Publication No. 1165, 1964. The number of treatment plants as of that date was 9,378.

(b) The distribution of these treatment plants by States is shown in the table below:

State	Number	State	Number
Alabama.....	112	Montana.....	106
Alaska.....	1	Nebraska.....	221
Arizona.....	60	Nevada.....	32
Arkansas.....	125	New Hampshire.....	15
California.....	519	New Jersey.....	281
Colorado.....	144	New Mexico.....	65
Connecticut.....	62	New York.....	356
Delaware.....	20	North Carolina.....	194
District of Columbia.....	1	North Dakota.....	170
Florida.....	253	Ohio.....	403
Georgia.....	156	Oklahoma.....	259
Hawaii.....	9	Oregon.....	132
Idaho.....	63	Pennsylvania.....	554
Illinois.....	519	Puerto Rico.....	60
Indiana.....	167	Rhode Island.....	20
Iowa.....	357	South Carolina.....	120
Kansas.....	310	South Dakota.....	159
Kentucky.....	115	Tennessee.....	110
Louisiana.....	95	Texas.....	659
Maine.....	12	Utah.....	69
Maryland.....	98	Vermont.....	10
Massachusetts.....	120	Virginia.....	150
Michigan.....	265	Washington.....	173
Minnesota.....	371	West Virginia.....	44
Mississippi.....	89	Wisconsin.....	414
Missouri.....	291	Wyoming.....	61