

What Is Solid Waste Management

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Received date: May 10, 2021; **Accepted date:** May 21, 2021; **Published date:** May 29, 2021

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Solid Waste

Solid waste management is defined because the discipline related to control of generation, storage, collection, transport or transfer, processing and disposal of solid waste materials during a way that best addresses the range of public health, conservation, economic, aesthetic, engineering, and other environmental considerations.

In its scope, solid waste management includes planning, administrative, financial, engineering, and legal functions. Solutions might include complex inter-disciplinary relations among fields like public health, city and regional planning, politics, geography, sociology, economics, communication and conservation, demography, engineering, and material sciences.

Solid waste management practices can differ for residential and industrial producers, for urban and rural areas, and for developed and developing nations. The administration of non-hazardous waste in metropolitan areas is that the job of government authorities. On the opposite hand, the management of hazardous waste materials is usually the responsibility of those who generate it, as subject to local, national, and even international authorities.

Objectives of Waste Management

The primary goal of solid waste management is reducing and eliminating adverse impacts of waste materials on human health and therefore the environment to support economic development and superior quality of life. This is often to be wiped out the foremost efficient manner possible, to stay costs low and stop waste buildup.

6 Functional Elements of the Waste Management System

There are six functional components of the waste management system, as outlined below:

Waste generation: This encompasses any activities involved in identifying materials that are not any longer usable and are either gathered for systematic disposal or thrown away.

Onsite handling, storage, and processing: This relates to activities at the purpose of waste generation, which facilitate easier collection. For instance, waste bins are placed at sites that generate sufficient waste.

Waste collection: an important phase of waste management, this includes activities like placing waste collection bins, collecting waste from those bins, and accumulating trash within the location where the gathering vehicles are emptied. Although the gathering phase involves transportation, this is often typically not the most stage of waste transportation.

Waste transfer and transport: These are the activities involved in moving waste from the local waste collection locations to the regional waste disposal site in large waste transport vehicles.

Waste processing and recovery: This refers to the facilities, equipment, and techniques employed to recover reusable or recyclable materials from the waste stream and to enhance the effectiveness of other functional elements of waste management.

Disposal: the ultimate stage of waste management. It involves the activities aimed toward the systematic disposal of waste materials in locations like landfills or waste-to-energy facilities.

Integrated Solid Waste Management (ISWM)

As the field of solid waste management advances, solutions are being looked at more systematically and holistically. ISWM, for example, is an increasingly important term in the field of waste management. It refers to the selection and use of appropriate management programs, technologies, and techniques to achieve particular waste management goals and objectives. The U.S. Environmental Protection Agency (EPA) states that ISWM is composed of waste source reduction, recycling, waste combustion, and landfills.² These activities can be done in either an interactive or hierarchical way.

In closing, it is important to stress that better solid waste management programs are urgently needed in some countries. Only about half of the waste generated in cities and one-quarter of what is produced in rural areas is collected. Internationally, the World Bank warns that global waste could increase from 2016 to 2050 by 70% in a business-as-usual scenario.³ Ongoing efforts to improve the waste management system are an important part of preserving a healthy human and ecological future.