

COUNTY OF ORANGE
INTEGRATED WASTE MANAGEMENT DEPARTMENT

Evolution of a Municipal Solid Waste Landfill

Landfills

Landfills are commonly mistakenly called “dumps” by people who work outside of the waste industry. The dictionary definition of a “dump” is an open hole in the ground where refuse is discarded in an unorganized accumulation without means of separating refuse from the environment. In contrast, landfills are carefully designed structures built into or on top of the ground in which trash is laid in a thin layer and then compacted to maximize burying capacity. Trash is isolated from the surrounding environment (earth, air, rain) by a bottom liner and daily cover.

Sanitary Landfill

The concept of a sanitary landfill was introduced in England in 1912 (where it is called controlled tipping) and involves natural fermentation brought about by microorganisms.¹ Refuse is deposited in shallow layers, compacted, and covered at the end of each operating day with soil or other chemically inert material to form an effective seal.

In the United States, the first sanitary landfill was located in Fresno, Calif., in 1935.² For this reason, the Fresno Municipal Sanitary Landfill is listed as a National Historic Landmark.

The first sanitary landfill in Orange County was Olinda Landfill, near the City of Brea, which opened in 1960. The Olinda Landfill was expanded and renamed the Olinda Alpha Landfill in 1981 and is still in operation today.

Municipal Solid Waste Landfill

A “modern” Sanitary landfill is known as a municipal solid waste landfill. The technical classification of a municipal solid waste landfill is:

“...any area of a landfill that meets the requirements of the Code of Federal Regulations, Title 40, Chapter 1, Part 258, Subtitle D...”

Subtitle D provisions took effect October 9, 1993.

¹ Sanitary Landfill, Encyclopedia Britannica. Retrieved August 11, 2003, from Encyclopedia Britannica Premium Service. <http://www.britannica.com/eb/article?eu=67210>

² The Columbia Encyclopedia, Sixth Edition. Copyright © 2002 Columbia University Press

In Orange County, the Olinda Alpha Landfill (opened in 1960) and the Prima Deshecha Landfill (opened in 1976) have both sanitary landfill (those areas where trash was buried prior to Subtitle D) and municipal solid waste landfill (those areas where trash was buried after Subtitle D) areas. The Frank R. Bowerman Landfill opened in 1990, and is entirely a municipal solid waste landfill in compliance with Subtitle D. The Frank R. Bowerman Landfill was planned to meet the requirements of Subtitle D regulations prior to implementation of Subtitle D. Because of this forward-thinking approach to landfill planning, the Frank R. Bowerman Landfill received the Civil Engineer Project Award from the Institute for the Advancement of Engineering. Other awards received by IWMD includes:

- IWMD – Cal/EPA Household Hazardous Waste/Used Oil Collection Program Award, 2003 Best New E-Waste Collection Program
- Olinda Alpha Landfill – Solid Waste Association of North America, 2001 Landfill Management Excellence Bronze Award
- IWMD – Solid Waste Association of North America, 2000 Gold Excellence Award for Planning and Financial Management
- Frank R. Bowerman Landfill – Solid Waste Association of North America, 1991 Landfill Excellence Award
- Frank R. Bowerman Landfill – 1991 American Society of Civil Engineers, Project of the Year Award
- Frank R. Bowerman Landfill – 1990 National Association of Counties, Achievement Award