

Glossary of Terms

Term	Definition
Anaerobic Digestion	A process that stabilizes raw sludge and waste activated sludge from wastewater by allowing microorganisms to decompose over a period of at least 15 days in the absence of oxygen. This results in a significant reduction in pathogens within the sludge. The major products of anaerobic digestion are biosolids, carbon dioxide, ammonia and methane. Methane gas is recovered as a fuel source.
Alkaline Stabilization	A process that stabilizes biosolids by raising the pH level to make conditions unfavourable for pathogen growth. The biosolids are mixed with an alkaline material, such as lime, cement kiln dust, or fly ash to raise and maintain the pH level for at least 3 days. The stabilized biosolids product can be registered and sold as a fertilizer, to be used as a lime substitute, source of organic matter, or specialty fertilizer for acidic soils.
Ash	An inert material generated from incineration of dewatered cake. Ash generally contains the inorganic and non-combustible materials that were present in the dewatered cake.
Biosolids	A nutrient-rich organic material resulting from the treatment of wastewater sludge. Unprocessed wastewater treatment sludge must at least undergo digestion before being referred to as biosolids. Biosolids contain nitrogen and phosphorous, as well as other supplementary nutrients in smaller doses including potassium, sulphur, magnesium, calcium, copper and zinc.
Composting	A process that stabilizes biosolids through biological decomposition of organic matter under controlled, aerobic conditions to produce a humus-like stable product. The process results in a significant reduction in pathogens, odour, and vector attraction potential (i.e., attractiveness to flies, rodents, and insects). The resulting compost is marketable and can be used as a soil conditioner and fertilizer for agricultural land, gardens, and rangelands.
Dewatering	A process that removes excess water from thickened biosolids, producing a dewatered cake. Typically, dewatered cake contains greater than 20 percent solids.
Incineration	A process that involves combustion of substances in the dewatered cake. The dewatered cake is heated to high temperatures to remove water and combust the volatile components of the cake. Incineration converts the dewatered cake into ash, flue gas, and heat.
Master Plan	A comprehensive plan to guide long-term development and future growth in a particular area that is broad in scope. It focuses on the analysis of a system for the purpose of outlining a framework for use in future individual projects and infrastructure needs.
Raw Sludge	The solid materials collected from primary treatment (i.e., sludge and scum from primary clarifiers).

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Sludge Thickening (Thickening)	A process that removes excess water from sludge, increasing the solids content. Thickened sludge typically contains 2.5 to 8 percent solids.
Thermal Drying	A process that uses heat to evaporate water from biosolids, increasing the solids content to at least 90 percent. The high temperatures used in the process result in a significant reduction in pathogens. The stabilized biosolids product can be registered and sold as a fertilizer.
Waste Activated Sludge	The solid materials collected from secondary treatment (i.e., sludge from secondary clarifiers).