

What are biosolids?

Biosolids are the mostly organic solid material resulting from the treatment of wastewater at municipal water resource recovery facilities (WRRFs). Biosolids are rich in nutrients such as nitrogen and phosphorus and contain other supplementary nutrients such as sulfur, magnesium, calcium, copper, and zinc. These nutrients are essential for plant growth, making biosolids a recyclable product for agriculture and horticulture. Landowners who receive biosolids benefit from improved soil productivity while saving money on expensive chemical fertilizers.



Federal and state regulations set standards for biosolids production and use. The federal standards were first enacted in 1993, founded on public health and environmental science. These are the federal “Part 503” regulations, called for by the Clean Water Act.

They identify approved treatment processes to reduce pathogens that come with the sewage (microscopic organisms that can cause disease in humans), and they make solids less odorous and attractive to “vectors,” like flies. When treatment and testing procedures are complete, “sludges” are qualified as “biosolids” and can be used as fertilizers and soil amendments.



The components of biosolids reflect our daily lives. Elements and compounds present in food, as well as those in consumable or wearable products that are sent down the drain, may create a possible risk for contamination. Through monitoring and controlling pollutant sources, WRRFs reduce these risks. Over the past 30 years, regulators have drawn on ongoing science research to ensure up to date standards that are protective of public health and the environment.

Those of your neighbors employed in wastewater treatment and biosolids production are environmentalists and public servants who use multiple processes to recycle your wastewater back into a resource. The nutrients and solids undergo physical and biological processes, often with some combination of digestion (aerobic or anaerobic), heat treatment, lime addition, or composting. Most often, biosolids are “dewatered” to remove excess water, using centrifuges, filters, drying beds, or presses that make them easily handleable. Some public agencies put biosolids through a drying process that can make them into a fertilizer-like product, like the well-known Milorganite.



You can trust your environmental workers to keep you and the environment safe. The national organization, the Water Environment Federation (WEF), with some 30,000 members across the country, and its allied state associations, are committed to training on good practices, regulatory compliance and new technologies.

The Mid-Atlantic Biosolids Association (MABA), founded in 1997, is a non-profit organization devoted to ensuring that biosolids are recognized everywhere as a valuable community resource through the communication of the benefits of biosolids resources within the wastewater community and the communities we serve.