Facts About Biosolids

What are biosolids?

Biosolids are nutrient-rich organic materials removed during wastewater treatment. Solids settled out by gravity during primary treatment are combined with excess microorganisms that eat waste during secondary treatment. The combined primary and secondary solids are then sent to the anaerobic digesters for stabilization and treatment. The final stabilized biosolids product is METROGRO® Cake, a fertilizer registered with Colorado Department of Agriculture and distributed by Metro Water Recovery.

Where are Metro's biosolids land applied?

To achieve the goal of recycling 100 percent of the biosolids produced, Metro typically land applies nearly 35 percent of the fertilizer at the 52,000-acre METROGRO Farm in Deer Trail, Colorado, which Metro owns and operates. The staff manages the entire agricultural cycle, including planting, growing, harvesting, marketing, and crop sales. The other 65 percent of the fertilizer is sold and applied at private agricultural sites in five counties in eastern Colorado.

What are the benefits of biosolids?

- **Improved crop yields** because the fertilizer is naturally rich in nutrients, including plant available phosphorus and nitrogen. The fertilizer also contains micronutrients, including zinc, iron, magnesium, and copper.
- **Improved soil aeration and tilth** which improves water-holding capacity in sandy soils and reduces compaction in clay soils.
- **Reduced carbon footprint** because application of biosolids helps restore organic carbon content to the soil which is a viable form of CO_2 sequestration.
- **Alternative to chemical fertilizers** that require fossil fuel energy to produce and are more likely to impact groundwater and surface runoff.
- **Renewable phosphorus resource** that is recovered and beneficially used as a sustainable and circular alternative to nonrenewable mined phosphate rock.

How are biosolids monitored?

- METROGRO® Cake is regularly tested to ensure compliance with all state and federal regulations.
- Extensive research shows that biosolids recycling has overall positive effects on crops and the environment.
- Metro partners with the US Geological Survey to measure the effects of biosolids application in soils, groundwater, surface water, and crops.

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How do PFAS impact biosolids?

One emerging topic relating to biosolids is per-and polyfluoroalkyl substances (PFAS). A common term to collectively describe a family of human-made chemicals, PFAS are found in numerous products used in everyday life, such as paper food packaging, non-stick coating materials, and stain resistant fabrics.

Wastewater utilities do not use PFAS as part of the treatment process, but these compounds are present in wastewater generated from homes and businesses that is then conveyed to treatment facilities. As a leader in the clean water industry, Metro is engaged in stakeholder and other local, state, and national opportunities to develop solutions.

Your Role in Cleaner Biosolids

By making thoughtful choices about what enters our water system, you become an essential partner. Avoid flushing medications, dispose of household chemicals at designated collection sites, and choose PFAS-free personal care products when possible.

Your decisions at the sink, washing machine, and toilet make a meaningful difference in the health of our environment.