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Analysis of Land Applied Biosolids in New York State

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Biosolids are defined as the solid organic matter left over after the sewage treatment process. A recent study in New York State, determined that there are 584 waste water treatment centers that generate approximately 1,000 tons of biosolids (sludge) each day. Biosolids are beneficially used through methods like heat drying, alkaline stabilization, composting, and land application. After treatment, biosolids often contain heavy metals, nitrate, phosphorous, fecal coliform, and certain organic pollutants. Biosolids that are heat dried and composted must meet Class A pathogen and vector attraction requirements. Most of New York City's biosolids are turned into pellets and sold nationwide or shipped to other states for land application or composting. Biosolids that are used for land application must meet Class B requirements, which are less strict than Class A requirements. There are not regulations that limit organic pollutants for both Class A and Class B biosolids.

I studied New York State and Environmental Protection Agency's regulations surrounding land applied biosolids. I wanted to determine if permitted facilities were in compliance and if there was a potential for ground water contamination along the New York City watershed. I also wanted to determine if current state and federal regulations have adequate pollutant limits for protecting human health and are not eliminating major pollutants that could cause harm.