

# **Biological Wastewater Treatment Market Size, Share & Trends Analysis Report By Process (Aerobic, Anaerobic, Anoxic), By End-use (Municipal, Industrial), By Region (North America, Europe, Asia Pacific), And Segment Forecasts, 2025 - 2030**

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## **Abstracts**

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### **Biological Wastewater Treatment Market Growth & Trends**

The global biological wastewater treatment market size is anticipated to reach USD 14,480.5 million by 2030 and is expected to grow at a CAGR of 6.1% from 2025 to 2030, according to a new report by Grand View Research, Inc. The market is experiencing rapid growth, driven by stringent regulatory requirements for efficient wastewater management, a surging global population, and industrial expansion that exacerbates water pollution. Governments worldwide are intensifying efforts to protect water resources through strict enforcement of environmental regulations, creating a strong demand for effective treatment solutions. Additionally, increasing awareness of environmental sustainability among businesses and consumers is encouraging significant investments in innovative biological treatment technologies.

Opportunities within the market are abundant, particularly in emerging economies where urbanization is accelerating and creating a higher demand for water management solutions. Innovations in biotechnology and bioremediation present avenues for growth, as more industries seek efficient and cost-effective methods to treat wastewater. There is also an increasing trend towards integrating smart technologies with traditional treatment processes, enabling better monitoring and optimization of wastewater treatment facilities.

Moreover, government intervention plays a crucial role in shaping the market dynamics, as policies and regulations continuously evolve to promote sustainable wastewater treatment practices. This includes incentives for adopting green technologies and driving initiatives to upgrade existing wastewater infrastructure. As environmental concerns intensify, government agencies are likely to push for more comprehensive policies supporting the biological treatment of wastewater, further catalyzing market growth.

The market concentration showcases a mix of large multinational corporations and smaller regional players. Major companies are focusing on strategic partnerships, acquisitions, and collaborations to enhance their technological capabilities and expand their geographical reach. For instance, In May 2023, Lummus Technology acquired water and wastewater treatment technologies from Siemens Energy to enhance its sustainable solutions portfolio for the petrochemical industry. This acquisition includes Siemens' Zimpro wet air oxidation technology and PACT system, along with associated intellectual property and lab equipment. These technologies aim to improve energy efficiency, sustainability, and compliance with environmental regulations by effectively treating industrial wastewater and reducing waste generation.

### Biological Wastewater Treatment Market Report Highlights

Based on process, the aerobic segment dominated the market and accounted for 50.8% revenue share in 2024, driven by the increasing regulatory pressure to meet stringent water quality standards and the rising need for wastewater recycling. Moreover, innovations in aeration technologies, such as fine-bubble aerators, are improving energy efficiency and operational costs, further boosting adoption.

Based on end use, the municipal segment led the market in 2024, driven by increasing urbanization and population growth, which are driving the demand for efficient wastewater treatment solutions to manage rising wastewater volumes. Stricter government regulations on water quality and wastewater reuse are also pushing municipalities to adopt advanced biological treatment technologies.

Based on region, the Asia Pacific dominated the market in 2024. The demand for advanced wastewater treatment technologies, including biological systems for both municipal and industrial use, is growing as countries address the rising environmental concerns and comply with stricter regulations.

In September 2024, Uniwater signed an agreement to acquire Biowater Technology, aiming to enhance its geographical presence and expertise in wastewater treatment. This acquisition is expected to enable Uniwater to leverage Biowater Technology's innovative solutions and expand its offerings in the market, improving its ability to address environmental challenges in water management.

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