

GES Biotek Supports Award-Winning Project

Secondary Odor Control Rehabilitation Project, Vallejo Flood & Wastewater District, California

GES Biotek is proud to have played a key role in the award winning **Secondary Odor Control Rehabilitation Project** at the **Vallejo Flood & Wastewater District (VFWD)**, providing advanced engineered biofilter media and technical expertise to support the successful rehabilitation of the system. The project received an **Engineering Achievement Award** from the **California Water Environmental Association (CWEA), Redwood Empire Section** recognizing excellence in engineering innovation, performance, and positive community impact.

Project Background

Prior to rehabilitation, the district's secondary odor control biofilter relied on organic media consisting of lava rock and wood chips. Over time, this media compacted and degraded, restricting airflow and reducing biological treatment efficiency. Hydrogen sulfide (H₂S) concentrations reached approximately 1.1 ppm, contributing to increasing odor concerns throughout the secondary treatment facilities.

Engineered Media Solution

To resolve these challenges, the project team selected **GES Biotek's Cell Max™** and **Enhanced Cell Max™ Plus** engineered inorganic bio oxidation media. Manufactured from post consumer recycled glass, these substrates are acid resistant, non degradable, and designed to support dense microbial growth populations.

Key performance advantages include:

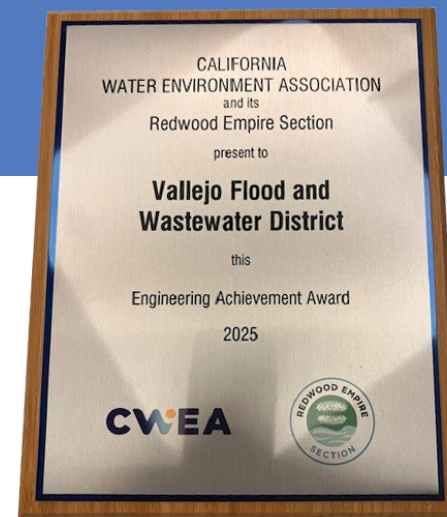
- **Efficient removal** of hydrogen sulfide (H₂S) and volatile organic compounds (VOCs)
- **Consistent airflow** through the biofilter due to rigid open cell structure
- **Long term durability** without compaction or decomposition
- **Sustainable composition** using recycled materials

GES Biotek worked closely with district personnel during media selection to **optimize performance**



The Vallejo project's design team.

Left to right: Jacqueline (Jackie) Mares, Communications Intern, VFWD; Tracy Rideout, Director of Technical Services, VFWD; Rachelle Canones, Community Outreach Specialist, VFWD; Anthony Mohn, Senior Heavy Civil Estimator, GSW Construction, Inc.; Bill Slenter, P.E., HydroScience Engineers, Inc.; Steve McCance, Vice President of Operations, GES Biotek; Jeff Tucker, Business Services Director, VFWD; Eddy Castillo Gomez, Management Analyst/Clerk of the Board, VFWD; Bill Ash, PE, Associate Engineer, VFWD.



and ensure the upgraded system would meet site-specific odor loading conditions.

System Rehabilitation Improvements

In addition to media replacement, the project included **rehabilitation of ductwork** and **blower performance improvements** to restore proper airflow throughout the odor control system. Following installation, operators immediately observed improved air movement through the biofilter and elimination of noticeable odors near the Biotowers.

The upgraded system now treats foul air from the Biotowers, secondary clarifiers, and aeration basins, providing **comprehensive odor control** across the secondary treatment process.

GES Biotek's Contribution to Award Winning Performance

GES Biotek's role extended beyond supplying media. Technical guidance was provided on **media selection, bed depth, and performance expectations** tailored to the facility's odor loading conditions. The transition to engineered inorganic substrates allowed the district to replace traditional organic materials that are prone to compaction, decomposition, and frequent replacement.

By integrating **GES Biotek's** nutrient enriched, open cell media into the biofilter system, the project achieved **improved airflow, long term durability, and sustained biological activity** — key factors contributing to its engineering recognition.

Project Impact

This project demonstrates how advanced materials technology combined with strong



Tony Drady presents the Environmental Achievement Award to the project team.

Left to right: Bill Slenter, P.E., HydroScience Engineers, Inc.; Felipe Briseno, GSW Construction, Inc.; Anthony Mohn, GSW Construction, Inc.; Steve McCance, Vice President of Operations, GES Biotek; Bill Ash, P.E., Associate Engineer, VFWD; Tony Drady, Redwood Empire Section President for 2025, CWEA.

collaboration can deliver measurable results. The combination of innovative engineering, strategic execution, and **GES Biotek's** high performance media produced a system that:

- **Improves** community air quality
- **Enhances** working conditions for plant personnel
- **Reduces** long-term maintenance requirements
- **Provides** durable, sustainable infrastructure performance

The **Engineering Achievement Award** recognizes not only the district's leadership and project team, but also the importance of partnerships with specialized technology providers such as **GES Biotek** in delivering **reliable and sustainable odor control solutions**.

GES BIOTEK, LLC — Engineered Solutions for Advanced Biological Odor Control