



CASE STUDY

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Mazzei Venturi Wastewater Aeration System Solves Odor And Nutrient Problems For California Carrot Packing Plant

Large Lagoon Odor Control & Stabilization for Land Application at Grimmway Farms Carrot Packing Plant
Kern County, CA

The Problem: A carrot packing plant was having severe odor problems due to septic conditions in their truck washout water holding lagoon. In addition, nutrient and nitrogen levels were becoming an issue for land application of the wastewater for crop production.

The Solution: The plant manager selected a Mazzei venturi wastewater aeration system as the most cost effective method of lagoon aeration. The aeration system consisted of a common, pressurized water line, with drop legs of model 4091 injectors, spaced around the lagoon's perimeter. Each injector discharged into a drop leg that terminated in a tee with 45 degree elbows and a set of N45 nozzles.

The Results: The venturi wastewater aeration system was placed in operation in mid-September, 2001. The angular placement of the gas mixing nozzles at the end of each injector created a counterclockwise movement within the lagoon. After 2 weeks of operation, the septic lagoon became aerobic, turning black sludge to brown and eliminating objectionable odors. BOD and total nitrogen fell, putting the wastewater lagoon into regulatory compliance for land applications. The success of the pilot led to a permanent installation that remains in operation today.



To get a better understanding about how a [Mazzei venturi wastewater aeration system works](#), take a look at [this animation](#).

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