Case Example

Kraft Foods, Inc.: Reducing Impacts on Surface and Groundwater at the World's Largest Cheese Plant

The impact that process wastewater has on surface and groundwater is an important global issue. Kraft Foods demonstrates how a local approach to this global problem—through wastewater treatment methods at a California manufacturing facility.

Kraft Foods Inc.'s Tulare, California facility, the largest cheese plant in the U.S., manufactures most of the Parmesan that is sold by Kraft at supermarkets and club stores in the U.S. and abroad. The plant is located in the southern portion of the San Joaquin Valley. This end of the valley has no drainage outlet to the Pacific Ocean as it is constrained by the Sierra Nevada Mountains to the east and the Coast Range on the west.

Industries operating in the City of Tulare send process wastewater to the city treatment system. The treated wastewater is then land applied to various crops as irrigation water. Wastewater constituents that cannot be removed by the city treatment system eventually go to groundwater. One of the more sensitive stakeholder issues is the impact of dissolved solids (salts), measured as electrical conductivity, on the groundwater quality.

Salts from the Kraft operation primarily come from the chemicals used to sanitize the manufacturing process equipment. By converting single-pass sanitation lines into loop systems with caustic and acid reclaim capabilities, Kraft has reduced chemical usage at the Tulare plant by 50 percent. More important, the plant now discharges on average an effluent that has electrical conductivity levels 10 percent less than the level required by Regional Water Quality Control Board.