

How we can help you

KJ has the tools and expertise to guide you through your water, air, and soil challenges related to various aspects of food processing. From feasibility studies and pilot testing to planning, permitting, and design, our staff has the breadth and depth of experience to deliver tailored and cost-sensitive solutions.



More Information

For more information please contact:

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FOOD & BEVERAGE

A COMMITMENT TO EXCELLENCE

OVERVIEW OF SERVICES

Kennedy Jenks (KJ) specializes in the full range of process engineering and compliance support services necessary to the strategic challenges of the food industry. Food processing requires large volumes of water for operations such as rinsing, canning, cleaning, and sanitation. For years, water was relatively plentiful and the accepted practices for process water management were application to land or discharge to ponds for infiltration and evaporation.

Now demand for water supplies is rising and many processors must compete with developers for limited water rights. Regulatory agencies are imposing restrictive and costly conditions on their renewals for wastewater discharge permits.

As a result, processors must plan carefully for successful ongoing operations, considering all aspects of water use, treatment, and reuse/disposal, as well as the likely impact of regulatory precedents and trends.

WATER SUPPLY

Planning, development, and treatment systems

PROCESS WASTEWATER MANAGEMENT

Characterization, source reduction, reuse, treatment, and discharge

LAND APPLICATION

Optimum storage, water balance evaluation, and irrigation design

STORMWATER

Pollution prevention plans, drainage designs, and disposal

GROUNDWATER

Monitoring well design, sampling, modeling, and quality evaluation

AIR QUALITY

Permitting, emissions monitoring, and odor control

REGULATORY COMPLIANCE

Planning, permitting, negotiation, and health and safety

FACILITY DESIGN

Civil, mechanical, structural, architectural, and electrical controls

ENVIRONMENTAL RISK MANAGEMENT

Evaluation and planning

SALT & NUTRIENT MANAGEMENT PLANS

Water quality criteria review and regulatory review

REMEDIATION

Feasibility studies, pilot studies, and bench scale testing

ENVIRONMENTAL AUDITS

PHASE I ESAS

Clients Served

- AM General LLC
- Alaska Harvest Seafoods
- Cal Dairies
- California League of Food Processors
- Conagra
- Craft Brew Alliance
- Food Express
- General Mills
- Hilmar Cheese
- Mariani Co.
- Morningstar
- Musco Family Olives
- Pacific Coast Producers
- Perdue Farms



PROJECT EXPERIENCE

Planning, Preliminary Design, & Construction Support for Wastewater Pretreatment, Fruit Processor, Northern CA

A fruit drying and packaging processor previously discharged up to 1 mgd of wastewater to a publicly owned treatment works (POTW) slated to close. The cost of discharging raw wastewater to another POTW was expected to be significantly higher, so the owners wanted to explore treatment options and associated costs. KJ investigated a range of pretreatment and treatment alternatives to reduce long-term environmental liability. Technical, economical, and compliance feasibility were assessed for two options: onsite treatment with discharge to land and pretreatment with discharge to POTW. Ultimately, the owner selected pretreatment to POTW by way of an upflow anaerobic sludge bed reactor followed by an activated sludge system. KJ performed preliminary and final design and provided construction support services. This system has been fully operational since 2006.

Manual of Good Practice for Land Application, California League of Food Producers, Sacramento, CA

KJ coauthored the Manual of Good Practice for Land Application for the California League of Food Producers (formerly known as California League of Food Processors). The manual provides food processors advice in designing and managing land application systems. Chapter topics include the characterization of process/rinse water, evaluation of site characteristics, crop selection, determination of nutrient loading capacity, and irrigation system design. The manual also provided an overview of the applicable regulatory programs and permitting and monitoring requirements. KJ later coauthored a revised edition of the Manual of Good Practice for Land Application of Process/Rinse Water, which has been used as a resource by the food processing industry, as well as regulatory agency staff involved in permitting, designing and monitoring land treatment systems for reuse or disposal of wastewater generated during processing operations. The manual provided expanded discussion of relevant regulatory policies, such as the California Regional Water Quality Control Board's Anti-Degradation Policy and Best Practicable Treatment and Control (BPTC) methods and source control techniques.

Site Remediation, Confidential Food Company, Moonachie, NJ

KJ has been working since 2007 to remediate a former textile site impacted with chlorinated hydrocarbons that were released from underground storage tanks. The site is divided into two areas, Area A and Area B. In Area A, several innovative options were evaluated and over 37,000 cubic yards of impacted soil were successfully remediated using in-situ electrical resistance heating - vapor extraction from 2008 through 2011. The total budget for the in-situ remediation method was approximately \$9M, a savings of \$7M over more conventional ex-situ alternatives. A Response Action Outcome was received for Area A in 2015 and the existing buildings have been restored and are currently in use for office and warehousing. In Area B, KJ remediated the soil and contained the deeper impacts with a sealed joint sheet piling system to prevent further release of the contaminants. In-situ groundwater remediation is ongoing. In Area B, the remediation for turnkey design-build was estimated to cost \$18M. KJ has already saved the client \$2M for the tasks completed and the remediation process has closely followed the planned schedule. KJ has prepared plans and specifications, obtained all permits, and coordinated with various agencies and adjacent residents.