



## **KENNETH L. KEIL, P.E.**

PROJECT ENGINEER



### **EDUCATION**

**B.S./M.S., Civil Engineering**  
University of Toledo

### **PROFESSIONAL REGISTRATION**

**Registered Professional Engineer:** Colorado, California

### **PROFESSIONAL EXPERIENCE**

Mr. Keil has 43 years of experience in civil engineering and is an expert in water and wastewater engineering. He offers proven success in designing, constructing, and operating environmentally compliant water/wastewater systems and facilities and excels in working with government agencies and community stakeholders alike to plan and implement strategies that address environmental concerns. Ken is involved with the Water Environment Association and served on the joint RMWEA/RMAWWA water reuse committee that developed the State of Colorado's water reuse regulations.

- *Pump Station Design, Paintbrush Hills Metropolitan District.* Designed a pump station for pumping water to the distribution system for Paint Brush Hills Metropolitan District. Facilities included pumps, sodium hypochlorite disinfection, granulated activated carbon, and adding a new outlet to the water storage tanks.
- *Kiowa Water and Sewer Capacity Analysis, Town of Kiowa.* Provided on-call engineering services to the Town of Kiowa, performed a water and sewer capacity analysis, and prepared a utility plan for the town's ability to serve the Womboldt Annexation, a 400-unit development.
- *Water Master Plan, Town of Del Norte.* Assisted with an update to the Town of Del Norte Water Master Plan.
- *Wellhouse 3 & 4 Designs, Paint Brush Hills Metropolitan District.* Senior project engineer for the design of a wellhouse for wells #3 and #4 and developing a site plan to submit for review to El Paso County.
- *Anti-degradation Analysis, Town of Naturita.* Performed process calculations to determine if a modified lagoon system could achieve proposed ammonia-nitrogen winter limits at a reasonable cost.
- *Resident Engineer, Cities of Ventura, CA and Loveland, Co.* Inspected construction, start up, provided troubleshooting services, and trained operators on anaerobic digesters.

- *Brewery Wastewater.* Advised distributor on necessary chemicals and dosages for adjusting brewery wastewater pH before recommending bacteria dosages.
- *City of Houston, TX.* Developed and managed a pilot study for treating a 3' thick scum blanket in a lift station with bacteria.
- *Project Engineer, City of Placerville, CA.* Part of a team that designed the expansion of the Hangtown Creek WWTF which including screening, primary and secondary clarification, biological nutrient removal facilities, anaerobic digestion, filtration, wastewater cooling and ultraviolet disinfection. The plant after construction won nine awards.
- *Project Manager III.* Acted as Town Engineer for a small Northern Colorado community, completing development reviews, advising on wastewater treatment and water distribution system issues, and providing engineering services on an as needed basis; secured \$30K per year in annual revenue as a result of this project.
- *Senior Project Manager.* Marketed water and wastewater engineering services to communities and districts in Colorado through cold calling, contacting past clients, and preparing proposals. Served as Project Engineer for municipal wastewater treatment plant design projects ranging from \$1M to \$38M; proved instrumental to a \$38M wastewater treatment plant expansion that won an ASCE award. As a project engineer, wrote the bulk of a 2.3 mgd wastewater treatment plant O&M manual. Worked as Town Engineer for a small Northern Colorado community, performing development reviews, troubleshooting wastewater treatment problems, managing a detention pond preliminary design, and obtaining grant money for a drainage project; generated \$30K in annual revenue for more than three years.
- *Consultant.* Worked as a sub-consultant for designing a large diameter DIP water line in California; provided a design that helped the prime consultant develop a presence in southern California for municipal water engineering. Consulted a water/wastewater operations company on facility planning procedures for a ski resort's wastewater treatment plant.
- *Project Manager II.* Served as Project Manager for the development of municipal water/wastewater business; marketed water/wastewater services through cold calling, contacted past clients, and prepared proposals. Functioned as Project Manager for a service plan for a private firm who wanted to develop a gambling casino resort in Cripple Creek, Colorado; provided accurate cost estimate that led client to put the project on hold.

## **PUBLICATIONS**

- *Keil, K., et al, "Evaluation Plan and Protocol for the Verification of Wastewater Nutrient Reduction Technologies," The Environmental Technology Evaluation Center (EvTec) and National Science Foundation, Jan. 2000*
- *Co-authored "Treatment Plant Modifications- A Resident Engineer's Perspective," Rocky Mountain Water Pollution Control Association Operator's Conference, Sept. 1986*
- *Authored "A Comprehensive Approach for the Start-up and Transition of the Hyperion Energy Recovery System," ASCE Environmental Conference, June 1984*