

Our services include:

*Water Supply, Development, and Storage
System Development and Rehabilitation
Water Quality Management
Soil, Water, and Energy Conservation
Field Instrumentation and Automation
Pump System Planning and Design
Water Rights and Interbasin Transfers
Soil Classification, Testing, and Analysis
Inventory and Condition Assessments
Operations and Maintenance Programs
Water Use and Supply Analysis
Drainage and Soil Salinity Management
Master Planning*

General support services include:

- Basin planning and reservoir silting studies, in support of irrigation water supply.
- Inventory, assessment and design of structures and systems for rehabilitation of irrigation project canals and hydraulic structures.
- Design of telemetry control systems to operate irrigation project facilities.
- Resident engineering services for construction of rehabilitation structures.
- Institutional and economic studies in support of engineering services, given GENTEK's broad understanding of Reclamation Law.



Kaman irrigation project: Rehabilitation and modeling of flow structures.

This study involved the development of conceptual designs for rehabilitation of severely eroded irrigation ditches. Design features included pipe drop structures, measurement structures, diversion structures, and canal stabilization measures.



Adana sol sahil irrigation Project: Rehabilitation and conceptual design.

This project consisted of the rehabilitation of canal facilities for both the Gercun and Kapakli Canal for the Adana west Irrigation Project. Gentek was responsible for the inventory of existing facilities, identification of proposed improvements, and conceptual design and cost estimates for the improvements.

In Turkey and Europe, GENTEK is one of the largest water resources, irrigation, and drainage consultants. GENTEK's national and international experience in irrigation and water resources development includes projects in nearly every continent of the world. Specific international experience includes large irrigation and drainage development projects in Turkey and Middle East of 84,000 and 28,000 hectares respectively.

The heart of any irrigation system is its pumping system. Proper planning and design of a state-of-the art irrigation pump station is crucial to the outcome of the entire irrigation project. GENTEK professionals are well versed in the engineering requirements of pump systems.

Irrigation Water Management

Sharp population growth trends dictate the necessity of conserving natural resources. As non-agricultural uses of water increase their demand for a share of the limited fresh water supplies, it is important for irrigated agriculture to improve efficiency of use and conserve its share of the available water.

Design

Gentek has extensive experience in the development of conceptual, preliminary, and final detailed designs. For the Hydraulic State Agency, we have prepared design analysis reports, design memorandums, feature design memorandums, as well as detailed design, plans, and specifications. This experience includes new design, as well as demolition, remediation, rehabilitation, and repair projects.

GENTEK's irrigation experts understand the important interrelationships that exist between district- and farm level irrigation operations that influence water use efficiency. They also understand the economic, environmental, institutional, and cultural factors affecting water availability and use. GENTEK irrigation engineers understand the influence of soil salinity on crop production and the importance of good irrigation management. In addition, GENTEK staff offer specialized experience in the development and evaluation of water conservation improvements such as:

- Irrigation Canal Lining
- On-farm Efficiency Improvements
- Modifications to Flow Control Structures
- Regulating Reservoirs Operational Improvements
- Tail water Recovery Systems
- System Automation

Augmenting the firm's irrigation management qualifications, GENTEK professionals have expertise and experience in crop-soil-water relationships, soil salinity management, irrigation district operations, and irrigation scheduling.

Innovative Technologies

GENTEK has specialized expertise in computer modeling to optimize water resources development, operate drainage and flood control systems, upgrade and improve irrigation system efficiency, increase project cost-effectiveness, and conserve water and soil resources.

