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**More than 40 years of  
Continuous experience  
and successful activity  
In the water and  
wastewater industry**



## CEO message



**Mehrdad Hajzavar**

The large family of Zistab Consulting Engineers is proud that in line with the vision of his honorable father, Mr. Mohammad Mehdi Haj Zavar, has been able to play a constructive role in the sustainable management of the country's water resources with nearly half a century of efforts and success. To provide decent services in the water and wastewater industry, nationally and internationally.

Challenges facing the country in the water industry, including lack of water resources, exponential course of water consumption, high amount of virtual water for agricultural production, lack of attention to surface renewable water sources and groundwater resources, the presence of industrial and chemical pollutants And effluents, reservoir deficit and negative balance of groundwater resources, the need to implement inter-basin water transfer projects, the need to supply water to metropolitan areas, the need to manage joint water resources with the country's neighbors and many other cases, the company continues The path of its founder and more determination to play an effective role in sustainable development in the water industry, has become more determined.

Zistab Consulting Engineers Company with a systemic approach and implementation of all new management systems, strategic and interactive management and the formation of strategic committees, development and excellence, specialized technical and comprehensive quality management, provide the grounds for the effectiveness of management processes, operational and operational And strives to improve the level of technical and professional capabilities and increase the level of stakeholder satisfaction.

Zistab large family, in an intimate and healthy environment and with teamwork and a sense of commitment and responsibility, tries to develop human capacity and agility in responding to the needs of projects, protect and safeguard the interests of all stakeholders by observing professional ethics Show

In this direction, with the idea of a better tomorrow and the improvement of human life, with emphasis on safety, health and environmental protection and adherence to the obligations agreed in the contract, for the safe operation of projects, we believe in the greatest asset, which is employers' trust in This company is playing a constructive role in the sustainable development of the country.

We hope that the continuation of providing desirable services will be possible and we will witness the flourishing and increasing development of our dear country.



**Mohammadmehdi Hajzavar**

**The father of the family of Zistab Consulting Engineers**

## Fields of activity

- > Concrete, earth and rockfill dams
- > Hydropower plants
- > Long water transfer tunnels
- > Urban utility tunnels
- > Gravity and pressurized irrigation and drainage networks
- > Water pipelines and pumping stations
- > Water and wastewater treatment plants
- > Water distribution networks
- > Wastewater collection and disposal networks
- > Water transmission lines and pumping stations
- > Environmental studies of the projects
- > Artificial feeding facilities
- > Social and operational systems studies and public participation in the projects
- > Treatment studies of the existing projects
- > Surface water collecting networks
- > Study and monitoring of water resource utilization of catchments and economic, social and environmental impacts of water
- > Comprehensive studies of water resources with an integrated water and wastewater resources management approach
- > Operation, maintenance and safety control of dams
- > Operation and maintenance of irrigation and drainage networks
- > Operation of waste water facilities (Includes production, transmission and distribution of drinking water-drinking water treatment plant-wastewater treatment plant)
- > Management of water and wastewater macro projects
- > Participation in design and construction projects
- > Geographic Information System (GIS)
- > Flood control facilities
- > Participation in BOT and BOO and investment projects (PPP)
- > Desalination plant
- > Finding potential for water and wastewater sector investment projects
- > Documentation and knowledge management of water and wastewater sector projects

## History

Zistab Consulting Engineers, with more than 40 years of experience in the water and wastewater industry, as one of the most influential companies in the field of water and wastewater engineering, provides high quality engineering services to employers. The ideal of the company and its human resources is to play a long lasting role in the country's water industry and create a platform for sustainable development.

At present, these consulting engineers have succeeded in designing, managing and implementing more than 200,000 hectares of irrigation and drainage networks, 20 reservoir dams, approximately 2100 km of transmission lines, more than 130 km of tunnels and more than 1.5 billion cubic meters of regulated water. According to its national and international experiences in conducting study projects, supervision, operation and project management in the fields of dam construction, irrigation and drainage, water and wastewater structures and facilities, agriculture and environment are ready to provide technical management and engineering services in all specialized fields.

**Zola  
Reservoir Dam**



## Memberships

- > Iranian Society of Consulting Engineers
- > International Federation of Consulting Engineers
- > Credit and Banking Investment Advisors Association
- > Iranian Association of Exporters of Technical and Engineering Services
- > Tehran Chamber of Commerce Industries Mines and Agriculture
- > Iran-China Chamber of Commerce and Industries
- > Association of petroleum industry, Engineering and construction companies (Apec)
- > Iranian Concrete Association
- > Iranian Value Engineering Association
- > Project Management Association
- > National Committee for Large Dams
- > Iranian Geotechnical Association
- > Construction Management Association
- > Federation of Consultants from Islamic Countries (FCIC)

## Vision

- > Playing a lasting role in the country's water industry and laying the groundwork for sustainable development

## Mission

- > Activities in water engineering in the national and international region in terms of quality and the highest available engineering standards

## Rankings and Certificates of Competency

- > Dam Construction: Grades A and B
- > Dam Construction Project Management: Grade A
- > Specializing in agriculture, natural resources and husbandr: Grade C
- > Irrigation and Drainage Networks: Grades A and B
- > Water and Wastewater Facilities: Grade A
- > Operating from Wastewater Facilities: Grade D
- > Structures: Grade C
- > Environment: Grade C
- > Certificate of competence for operation, maintenance and safety control of dams
- > Certificate of competence for operation and maintenance of wastewater treatment plants
- > Certificate of competence for operation and maintenance of irrigation and drainage networks
- > Certificate of competence of companies for operation and maintenance of drinking water facilities (drinking water treatment plant)
- > Certificate of competence of companies for operation and maintenance of drinking water facilities (production, transmission and distribution)
- > Certificate of consulting services of the Center for Credit and Banking Investment Advisors
- > Contractors' safety competency certificate
- > Technical and engineering license of the Ministry of Industry, Mines and Trade

## International certifications

By obtaining the following international certifications, Zistab, while improving the quality of services, has succeeded in gaining the trust of employers, and in this regard, has completed or is in the process of several projects in various fields of construction.

- |  |                  |
|--|------------------|
| > Quality management system standards                  | ISO 9001 – 2015  |
| > Environmental management system                      | ISO 14001 – 2015 |
| > Occupational Safety and Health Assessment Collection | ISO 45001 – 2018 |
| > Project management system standards                  | ISO 21500 - 2020 |
| > Health, safety and environmental management system   | HSE - MS         |
| > integrated management system                         | IMS              |



Zistab Consulting Engineers Company is ranked A and B in dam construction. The specialized field of dams and power plants in the company consists of two separate sections of studies and implementation supervision.

The studies department is responsible for potential identification, cognition, phase one and phase two dams and power plants, river engineering, flood control and control, and surface water collection, and consists of specialized groups for basic studies and water resources, geology. Geotechnics, seismicity, hydraulic structures, surface and groundwater, hydromechanical and precision instruments and economic studies of the project.

Among the study projects in this section are Zola Reservoir Dam, Qigaj, Fashl, Varzeqan, Aras, Karamabad, Sirler, Gregak, Sarabduk and Qayeshqorshagh, Zola Hydroelectric Power Plant, pathology studies of dams in Khuzestan province, studies on increasing the level of operation of the dam Shahid Abbaspour, Studies of resources and uses of Urmia Lake catchment area in the outlet of Sib mineral tunnel, studies on implementation of comprehensive surface water management plan and preparation of river and canal improvement plans in areas 1, 11 and 14 of Tehran Municipality, detailed design of collection network Surface water collection in regions 7, 8 and 31, hydropower potential studies of Haraz rivers and related tributaries, studies of unconventional water use of Golestan province and also studies of artificial feeding plans of Mako hill raisin, Khoy and Sharbian plains and projects He pointed to the Shah Dala and Qalachukhe dams in the Iraqi Kurdistan region.

Also, among the executive and supervisory plans of this section, monitoring the construction of Karamabad Reservoir Dam, Aras Reservoir Dam, Qigaj Reservoir Dam and Reservoir Dam and Zola Reservoir Tower and related facilities

# Dam and Power Plant



### Studies on the Construction of the Zola Storage Dam and its Appurtenant Facilities

#### Type of Service

- > 1st and 2nd Phase Studies and supervision (3rd Phase)

#### Location

- > Salmas City, West Azerbaijan, Iran

#### Client

- > West Azerbaijan Regional Water Company

#### Objectives

- > Regulating the Zola River for the irrigation of parts of Salmas–Ghareghagh Plain (85.3 million cu. m);
- > Supplying the drinking water demands of Salmas and Tazehshahr (12 million cu. m);
- > Power production (1.2 MW);

#### Project Components

- > Average annual flow of the river: 151.3 million cu. m;
- > Embankment dam with a clay core and a 323 m long crest, rising to a height of 87 m from foundation and 56 meters from the bed;
- > 40 m wide open-channel spillway with an ogee control section on the right support and a maximum capacity of 925 cu. m/s;
- > Intake system composed of three 3 × 3 sq. m gates, four butterfly valves (1500 mm, 1400 mm (×2), and 700 mm), and three Howell Bungler valves (1200 mm (×2), and 600 mm);
- > Bottom outlet including a 1.5 × 1.2 sq. m service gate and a 1.6 × 1.2 sq. m emergency gate with a total capacity of 50 cu. m/s;
- > 3 × 3 sq. m, slanted (60% slope) concrete intake tower with three intake levels;
- > 6-km-long reservoir with a maximum width of 1000 m, spreading over 303 hectares at normal elevation;
- > Normal elevation: 1510 m above sea level; reservoir capacity at the normal elevation: 72 million cu. m;
- > Cost of implementation: 650 billion IRR equivalent to 650 million USD (2001–2015);

## Selected dam and power plant projects



### Construction of Karamabad Reservoir Dam Water and Soil Resources Development Project on the South Bank of Aras River in West Azerbaijan Province

#### Type of Service

- > 1st and 2nd Phase Studies and supervision (3rd Phase)

#### Location

- > West Azerbaijan / Poldasht and Shoot

#### Client

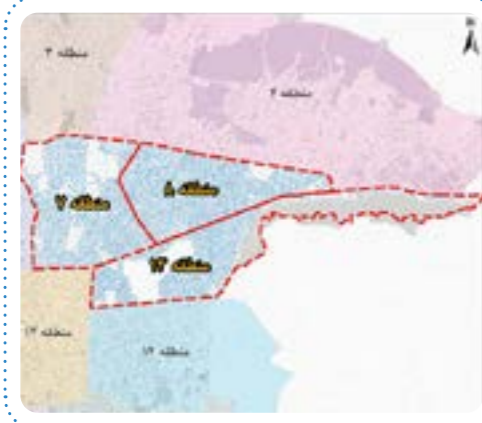
- > West Azerbaijan Regional Water Company

#### Objectives

- > Utilizing Iran's water rights through the reservoir of The Aras Storage Dam;
- > Developing the farmlands along the southern course of The Aras river by storing the surplus pumped water in the reservoir of Karamabad Storage Dam;
- > Supplying the water demands of the 19,250 hectares of downstream farmlands;

#### Project Components

- > Embankment dam with a clay core and a 2400 m long crest comprised of two walls (storage dam was built off-bed) rising to a height of 55.6 m;
- > Broad-crested spillway with 53-m-long stepped chute and a width of 4 m at the bottom;
- > Normal elevation: 1000 m above sea level; reservoir capacity at the normal elevation: 54 million cu. m;
- > Dual-purpose, twin, bottom outlet culvert (3.3 m × 2.8 m). The right cell serves as a bottom outlet (1.2 m diameter steel pipe), whereas the left cell is used as the intake system (1.6 m diameter steel pipe);
- > Pumping rate from The Aras to the reservoir: 5.3 cu. m/s for eight months a year;
- > Cost of implementation: 1750 billion IRR equivalent to 729 million USD (2012–2018);



### Studies of the Implementation of Tehran Stormwater Management Master Plan and Minor Drainage System Improvement in Regions 7, 8 and 13 of Tehran Municipality

**Type of Service** > Detailed Design Studies

**Location** > Municipal Regions 7, 8 and 13, Tehran, Iran

**Client** > Deputy of Technical & Development Affairs - Tehran Municipality

#### Objectives

- > Detailed design studies of the drainage system;
- > Hydraulic improvement of the drainage system model, locating and preparing repair and maintenance plans;
- > Updating the GIS data bank;

#### Project Components

- > Preliminary arrangements and preparing a list of high-priority plans in the region;
- > Detailed design for improvement, renovation, and development of the subnetwork;
- > Detailed design for improving the performance of the subnetwork;
- > Preparing repair and maintenance plans for the subnetwork;
- > Devising repair and maintenance plans for the main network (spot repair and maintenance plans);
- > Preparing the documents and establishing the terms and conditions for tenders;
- > Detailed description of improvement plans for the Sa'di Channel at the Mofatteh St.–Tabarsi St. intersection (Tehran Municipal Region 7);
- > Detailed description of maintenance services for the Piruzi Channel (Tehran Municipal Region 13);



### Studies on the implementation of the comprehensive plan for surface water management and the preparation of plans for the improvement of rivers and canals in areas 1, 11 and 14 of Tehran Municipality

**Type of Service** > Conceptual, basic and 2nd Phase Studies

**Location** > Municipal Regions 1,11,14 Tehran, Iran

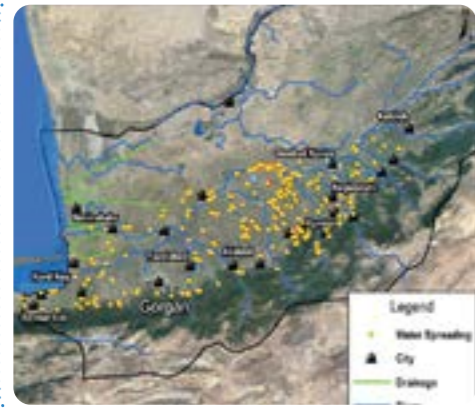
**Client** > Region 1,11,14 Tehran Municipality

#### Objectives

- > 1st and 2nd Phase studies of the drainage system;
- > Hydraulic improvement of the drainage system model, locating and preparing repair and maintenance plans;
- > Updating the GIS data bank;

#### Project Components

- > Total area: about 8100 hectares;
- > Total length of passages in the regions: about 1300 km;
- > Total length of main canals in the regions: about 58 km;
- > Total length of 3rd and 4th degree canals and streams in the regions: about 1200 km;
- > The total length of the desired pattern designs of 3rd and 4th degree canals and streams in the regions: about 116 km;
- > Total length of 3rd and 4th grade canals and canals repair projects in the regions: about 18 km;



### First-Phase Studies of the Utilizing Unconventional Water Resources for the 280,000 Hectares Drainage Area

#### Type of Service

- > 1st Phase Studies

#### Location

- > Golestan, Golestan Province, Iran

#### Client

- > Golestan Regional Water Company

#### Objectives

- > Identifying and investigating unconventional water resources including agricultural drainage water, treatment plant effluent, salt water, and underground brackish water in the province;
- > Capitalizing on unconventional water resources in the agricultural, fishing, and industrial sectors among others;

#### Project Components

- > Collecting desk and field statistics, analyzing the data, and making a conclusion;
- > Establishing the quantity and quality of unconventional water resources in different sectors, including agricultural, salt water, underground brackish water, and treatment plant effluent;
- > Proposing solutions to improve the quality of unconventional water resources to suit particular applications in agriculture, aquaculture, and industry among others;
- > Reviewing environmental considerations of utilizing unconventional water resources;
- > Preparing and completing the GIS data bank;
- > Holding training courses for the employer based on the study results;



### Evaluation of the Potentials of Haraz River and its Tributaries (Nur and Baladeh) for Building a Hydroelectric Power Plant

#### Type of Service

- > Identification and Potential Evaluation Studies

#### Location

- > Haraz River, Mazandaran Province, Iran

#### Client

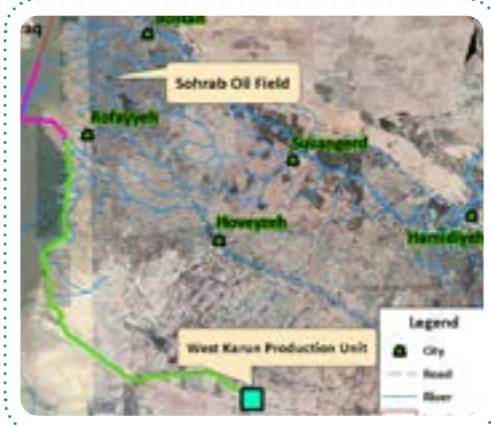
- > Mazandaran Regional Water Company

#### Objectives

- > Evaluating the potential of Haraz River and its tributaries (Noor, Baladeh) for building a hydropower plant, and preparing the tender documents for a B.O.O or B.O.T contracts.

#### Project Components

- > Carrying out meteorological, hydrological, geological, seismic and studies, as well as evaluating access routes and producing a final report;
- > Screening and selecting eligible sites through economic-financial analysis;
- > Based on the study results, around 20 sites were located in the area with an overall potential for generating 56 MW of hydroelectric power;
- > Preparing tender documents for a B.O.O contract.



### Hydrological Studies of Sohrab Oil Field

#### Type of Service

- > Basic studies

#### Location

- > North Azadegan and West of Hamidiyeh, Khuzestan Province, Iran

#### Client

- > Dana Energy Company - Oil Design and Construction Company (ODCC)

#### Objectives

- > Flood control and water supply required for Sohrab oil field, including 11 oil extraction wells, pumping station and about 60 km Oil transfer pipeline from the oil field to the processing and separation unit west of Karun

#### Project Components

- > Hydroclimatology studies
- > Hydrological and flood studies
- > Hydraulic and flood control studies
- > Water supply studies during the construction and operation period
- > Provide flood control plans



### Supplementary Studies on Water Supply to Khoy City (Aland & Ghotour Dam)

#### Type of Service

- > 1st Phase Studies

#### Location

- > Khoy City, West Azerbaijan Province, Iran

#### Client

- > West Azerbaijan Regional Water Company

#### Objectives

- > Studies on the construction of a reservoir dam on the Qotur and Aland rivers to store and regulate the water required
- > Supply of drinking water shortage in Khoy city on the horizon plan from surface and underground water resources

#### Project Components

- > Studies of Reservoir dam and appurtenant structures and water regulation of Qotur and Aland rivers
- > Studies of water intake and related facilities
- > Water transmission line studies from the place of supply to Khoy city
- > Felman well studies for short-term water supply from groundwater sources

Zistab Consulting Engineers Company has been active in the field of activities related to designing and supervising tunnel construction and currently most of its activities in the tunnel sector are focused on designing and supervising long water transfer tunnels and joint tunnels of urban facilities. This company controls the design, high supervision and workshop of the long tunnel for transferring excess water from the Glass River to Lake Urmia, as the largest volumetric tunnel for transferring water for 6.35 km with a volume of water transfer of about 52 cubic meters per second. It can be acknowledged that with the presence of these projects, the name of Zistab Consulting Engineers has been proposed as a pioneer in the industry of long water supply tunnels in the country. The company is also proud to have acted as a contractor consultant for the Kerman Long Water Transfer Tunnel project with a length of 38 km as the longest water transfer tunnel in the country and also in the water transfer tunnel project from Golord Dam with a length of 7.5 km.

This company is one of the few capable and experienced companies in the field of joint tunnels of urban installations, which has the history of completing the comprehensive plan of the network of joint tunnels of Tehran installations and the network of joint installation tunnels of Khavaran town of Tabriz in its record. has it. Among the projects under study in the joint tunnel section of urban facilities, we can mention the joint tunnel network of Shiraz city, the joint tunnel of urban facilities of Besat-Rajaei project and the joint tunnel of Morvaridshahr town facilities.

# Tunnel



### Design and Construction of Water Transmission Tunnel from Safa Dam to Kerman City

#### Type of Service

- > Contractor Partner Consultant in design and construction

#### Location

- > Rabor, South East of Kerman, Iran

#### Client

- > Kerman Regional Water Company

#### Objectives

- > Lowering the city's dependence on underground resources for supplying its drinking water;
- > Water supply from reliable water resources in partial fulfillment of Kerman's drinking water demand;
- > Diverging the surplus water resources in excess of irrigation, drinking, and industrial demands;

#### Project Components

- > Excavating a 19,000 m entrance tunnel by a TBM (Double Shield) at a positive slope from the entrance portal to the cavern where the machine was disassembled;
- > Excavating an 18,857 m exit tunnel by a TBM (Double Shield) at a positive slope from the entrance portal to the cavern where the machine was disassembled;
- > Excavating a 2589 m access tunnel with a negative 11.5% slope by the New Austrian Tunnel Method (NATM);
- > Excavating a cavern by the NATM for disassembling the TBM.

## Selected tunnel projects



### Water Transmission Tunnel Delivering the Surplus of the Gelas River to the Lake Urmia Basin

#### Type of Service

- > Site and Supreme Supervision (3rd Phase) and Design control

#### Location

- > Naghadeh, Piranshahr, Southern West Azerbaijan Province, Iran

#### Client

- > Iran Water and Power Resources Development Co.

#### Objectives

- > Transmission of the surplus water resources in excess of demands (irrigation, drinking, and industrial water) from Gelas River basin to Lake Urmia;
- > Controlling and regulating water outflow from the Gelas River basin leaving the country;
- > Controlling and compensating of a portion of water collected from Lake Urmia;

#### Project Components

- > Excavating a 1354 m access tunnel with a negative 10.2% slope;
- > Excavating a 135-m-long, 15-m-high, and 15-m-wide cavern for disassembling the Tunnel Boring Machine (TBM) inside a granite rock mass;
- > Excavating the first segment—the alluvial part—of the main tunnel with a length of 15 km and a negative slope by a Dual Mode TBM from the entrance portal to the cavern where the TBM was disassembled;
- > Drilling of the second section with a length of 2.20 km using a TBM DS (Double shield) machine with a positive slope towards the dismantling cave and exit of the TBM machine
- > Water transfer capacity of the Gelas Tunnel: 646 million cu. m per year.

Zistab Consulting Engineers, with a first rank in the field of urban facilities and water supply studies, consists of the departments of studies of water and sewage treatment plants, transmission lines, pumping stations and storage tanks.

In this section, a complete set of potential studies, cognition, first, second and third stages and operation of water supply and transmission plans and wastewater collection are performed.

This department has experienced and specialized experts in the fields of structural and architectural studies, transmission lines, process, mechanics, electricity and precision instruments, who are currently working on study and executive projects.

Among the study projects are water transfer and pumping stations from Aras to Lake Urmia, water supply project from Blubin dam, drinking water transfer project from Zayandehrud to Bon to Borujen cities (including reservoirs, transmission lines, pumping stations and reservoirs), Water transfer project to medium industries, water supply project from Blobin dam, Karamabad water transfer project including reservoir, transmission lines of pumping stations and tanks, tar water transfer project, pumping stations and water transmission lines of Shibloo, Yaraoghli, Ghanbarkandi, Zidoon projects, Baneh and Zabol, Tehran Region 1 water distribution network plan, Rey city and Gorgan, Aq Qala and Gomishan water distribution network review plan, Sarcheshmeh copper complex wastewater treatment systems, mentioned.

Among the executive plans of this section are the supervision of Karamabad water transfer plan (reservoir, water transmission lines, pumping stations and related tanks), water transfer plan from Bonn to Borujen (reservoir, water transmission lines, treatment plant, stations Pumping and related tanks), pumping stations of southern Aras projects, Gholi Bigloo pumping stations, Zabol, Zeidun, Tuyserkan drinking water treatment plant, Parsabad Ardabil wastewater treatment plant, Tehran supply and purification company tanks, Fa treatment plant Copper pointed to the source.

## Water and Wastewater and Urban Facilities



**Water transmission pipelines and pump stations in Karamabad**

**Type of Service** > 1st and 2nd phase studies and supervision (3rd Phase)

**Location** > West Azarbaijan Province, Mako, Poldasht

**Client** > West Azarbaijan Regional Water Company

**Objectives** > Supply and transfer of agriculture water from Aras dam to the lands downstream of Karamabad Dam with an approximate area of 22,000 hectares

**Project Components**

- > Intake, pumping and transmission capacity in the main path: 5.5 cubic meters per second
- > Specifications of pumping stations in the main route: Three pumping stations with an elevation of 25, 130 and 130 m, respectively
- > Specifications of the main transmission line: 21 km long steel pipe with a diameter of 2000 mm diameter and an operating pressure of 16 bar
- > Specification of pumping sub-stations:
  - Pumping Station 4 with a capacity of 4.7 m<sup>3</sup>/s and a height of 135 m
  - Pumping Station 5 with a capacity of 1.6 m<sup>3</sup>/s and height of 155 m
  - Pumping Station 6 with a capacity of 0.1 m<sup>3</sup>/s and height of 140 m
  - Pumping Station 7 with a capacity of 1.1 m<sup>3</sup>/s and height of 150 m
  - Pumping Station 8 with a capacity of 0.5 m<sup>3</sup>/s and height of 160 m

## Selected Water and Wastewater and Urban Facilities projects



**Construction, operation and transfer of BOT, executive project of Tuyserkan drinking water treatment plant**

**Type of Service** > BOT

**Location** > Hamedan / Tuyserkan

**Client** > Hamadan Regional Water Company

**Objectives** > Supply of drinking water for Toyserkan

**Project Components**

- > Delivery capacity: 7 million cubic meters per year
- > Design capacity of water treatment plant: 320 liters per second (in two modules)
- > Population of project horizon (2031): 100,000
- > Main components of the treatment plant: DAF sedimentation, filtration, chlorination



### Aras excess water transfer to meet the environmental requirements of the National Park of Lake Urmia

**Type of  
Service** > 1st phase study

**Location** > Northwest of Azarbaijan province, between Aras Dam and Lake Urmia

**Client** > West Azarbaijan Regional Water Company

**Objectives** > Providing part of Lake Urmia environmental demand

**Project  
Components**

- > Transmission system capacity: 348 million cubic meters per year
- > General specifications of pumping station: 7 pumping stages with a total height of 660 m
- Specifications of pipelines: pipe diameter: 3200 mm, length: 48 km
- Water transfer channel: floor width: 5 m, height: 5.4 m, length: 74 km
- > Water transfer tunnel: diameter: 5 m, length: 17 km



### Revision of the water distribution network and related facilities in Region 1 Water and Wastewater Authority of Tehran

**Type of  
Service** > 1st and 2nd Phase Studies

**Location** > Region 1 Water and Wastewater Organization of Tehran (Regions 1, 2, 3, 4 and 6 of Tehran Municipality)

**Client** > Region 1 Water and Wastewater Authority

**Objectives**

- > Modeling the current status of water supply to the region, determining and troubleshooting existing network weaknesses
- > Survey of population growth and urban development, designing a suitable water distribution network for the end of the project period
- > DMA studies in the scope of the plan

**Project  
Components**

- > Total population (2011): 1277901
- > The population of the project horizon (2031): 2237919
- > Area of the project: 12432 hectares
- > Number of water subscribers: 122,000



### Feasibility and conceptual studies for the construction of desalination plant of Persian Gulf Fajr Energy Company

#### Type of Service

- > 1st and 2nd Phase Studies

#### Location

- > Khuzestan Province, Mahshahr City, Petrochemical Special Economic Zone.

#### Client

- > Persian Gulf Fajr Energy Company

#### Objectives

- > Feasibility study and conceptual design of water extraction from the Persian Gulf and wastewater discharge, construction of a desalination plant with a capacity of 500,000 cubic meters per day and a transmission line to the complex

#### Project Components

- > Investigating, conducting studies and collecting existing information from Fajr company and surrounding areas
- > Conceptual design of a water extraction system from the sea with a water extraction capacity of 1,700,000 cubic meters per day. For this purpose, the following activities have been carried out:
- > Basic hydrodynamic studies including wind, wave and flow hydrodynamic studies, sediment and morphology studies
- > Investigating different methods of taking water from the sea and selecting the best option
- > Conceptual design of water intake system, land site and water transmission pipeline
- > Sea water recirculation studies for the selected and final option (seawater recirculation)
- > Conceptual design of desalination facilities and providing their minimum design and functional requirements. Desalination facilities have been developed in 5 phases each with the capacity to produce 100,000 cubic meters of desalinated water per day.
- > Routing and conceptual design of desalinated water transmission line with a diameter of 1800 mm
- > Investigating how to supply 150 megawatts of electricity for water catchment facilities, desalination plants and water transfer pump houses
- > Obtaining legal licenses with the cooperation and cooperation of the employer, including the water allocation license from the Ministry of Energy, the license from the Ports and Maritime Organization, the license from the Environment Organization of the country, the license from the Fisheries Organization, the license from natural resources, the license from the Petrochemical Special Economic Zone Organization, License from regional water, license from regional electricity, license from Ministry of Roads, license from armed forces, etc
- > Economic and financial studies, the estimated investment cost of the project and the total price of water are about 34 thousand billion and 430,000 rials, respectively.



### Consulting services for Industrial and Human Wastewater Treatment Systems of Sarcheshmeh Copper Complex, Quality Improvement of Shoor Riverbed

#### Type of Service

- > 1st and 2nd phase studies and supervision (3rd Phase)

#### Location

- > Sarcheshmeh and Darrehzar Copper Mines, Rafsanjan City, Kerman Province, Iran

#### Client

- > National Iranian Copper Industries Company (NICICO)

#### Objectives

- > Comprehensive management of integrated wastewater treatment and treatment system in Sarcheshmeh and Darrehzar copper complexes and related units
- > Improve the performance and productivity of the organization and the prevention and control of environmental pollutants and environmental protection

#### Project Components

- > Integrated wastewater collection network in Sarcheshmeh and Darrehzar copper complexes
- > Centralized or separate treatment plants for human and industrial wastewater treatment within the project area



### Water Transmission System from the Oman sea to the industries of Isfahan province

#### Type of Service

- > 1st and 2nd phase studies and supervision (3rd Phase)

#### Location

- > Hormozgan, Kerman, Yazd and Isfahan provinces

#### Client

- > Isfahan Water Supply Company (Sofeh)

#### Objectives

- > Transferring water needed by the industries of Isfahan province from the Oman Sea to Isfahan with a length of 1130 km and a capacity of 6.6 cubic meters per second. (annual water supply capacity of 200 million cubic meters and development up to 400 million cubic meters per year)

#### Project Components

- > Water transmission line with a diameter of 2000 mm and a length of 780 km (from the Oman Sea to the border of Isfahan Province)
- > Water transmission line with a diameter of 1600 mm and a length of 350 km (the length of northern line of Isfahan province is 175 km and the southern line is 175 km)
- > 15 pumping stations with a total pumping height of 3900 meters above sea level (each pumping station with a pumping height of about 150 to 280 meters)
- > 7 balance tanks with an approximate volume of 30,000 cubic meters for each tank.
- > Power transmission and distribution lines and high voltage substations
- > Class f combined cycle power plant with a capacity of 500-700 MW
- > Telemetry system and data transmission and remote control



Karamabad Design  
Reservoir



Main Transmission Line  
of Karamabad Project

Zistab Consulting Engineers Company has the 1st and 2nd ranks of irrigation and drainage. The specialized part of the irrigation and drainage network in the company consists of two separate sub-sections of studies and supervision.

The studies department is responsible for potential identification, cognition, stage one and stage two irrigation and drainage projects. This section consists of specialized subsections of agricultural, social, economic, soil science, irrigation and drainage studies and water structures.

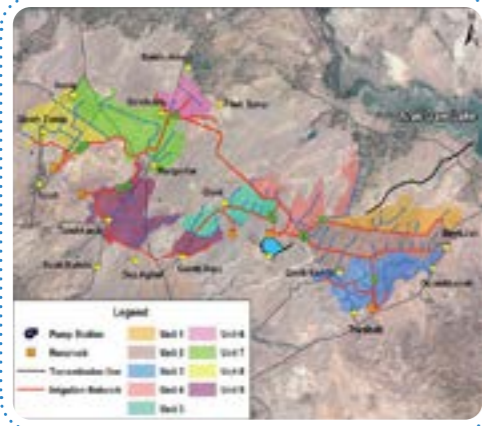
Among the study projects of this section are Aras 1 irrigation and drainage networks (2000 hectares), Karamabad (22300 hectares), Araz 3 (1750 hectares), Baneh (21000 hectares), Aidoghmosh (7500 hectares), marginal lands. Zayandehrud (Ben) (12,500 hectares), Qigaj (2600 hectares), Fashl (2100 hectares), Shiblo (2960 hectares), Yaraghl (2400 hectares), Ghezeldagh (2000 hectares), Qarnaqo (1000 hectares), Gorgak (2760 hectares) Bardeh (2000 hectares), Bidkan (2000 hectares), Salehabad (2760 hectares), Zeidun (2000 hectares), Gholi Biglou (700 hectares), Baba Ahmad (600 hectares).

The monitoring department is responsible for performing all high-level monitoring and workshop services for the construction and operation of irrigation and drainage networks. This section consists of the sub-sections of Surveying, Civil Executive Affairs, Mechanical Executive Affairs, Electrical Executive Affairs, Contract Affairs and Contract Handling, Metering and Estimation, and Project Management and Control.

Among the executive plans of this section, we can mention the supervision of construction and operation of Karamabad irrigation and drainage network and Aidoghmosh irrigation and drainage network in several different development units, Salehabad network, Qighaj network, Yaraoghli network, Araz 3 network.

## Irrigation and Drainage Network

## Selected Irrigation and Drainage Network projects



**Irrigation and drainage network of Karamabad (main network)**

### Type of Service

- > 1st and 2nd Phase Studies and supervision (3rd Phase)

### Location

- > Poldasht and Shut Cities, West Azerbaijan Province, Iran

### Client

- > West Azerbaijan Regional Water Company

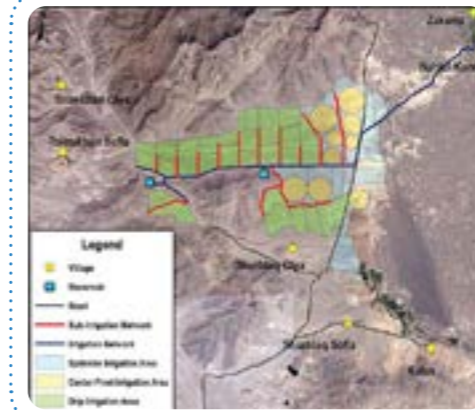
### Objectives

- > Supplying the agricultural water demands of 23 villages in a 22,300 hectare area along the southern course of The Aras;
- > Utilizing Iran's water right (approximately 112 million cu. m);

### Project Components

- > Irrigation method: Semi-portable sprinkler, center-pivot, and localized irrigation (drip tape) systems;
- > Length of the transmission line: 21 km
- > Transmission line diameter: 2000 mm, steel pipe
- > The length of the main line of the distribution network in nine construction units; 260 km
- > Pipe diameter: 450–20000 mm, steel, GRP, and PE pipes
- > Pumping stations in the network: 5
- > Pumping stations on the transmission line: 3
- > Power consumption: 35 MW

## Selected Irrigation and Drainage Network projects



**Restoration of National Lands in the Zeydoon Plain Area**

### Type of Service

- > 1st and 2nd Phase Studies, Supervision (3rd Phase)

### Location

- > Maku County, West Azerbaijan Province, Iran

### Client

- > Land Bank

### Objectives

- > Supplying the water demands of the 2090 hectares of farmlands on the southern shore of The Aras River;

### Project Components

- > Irrigation method: Sprinkler and drip irrigation systems;
- > Length of the transmission line: 12.6 km;
- > Transmission line diameter: 1000 mm fiberglass (GRP)
- > Pumping stations: 2
- > Construction sites: 2
- > Number of Farms: 20

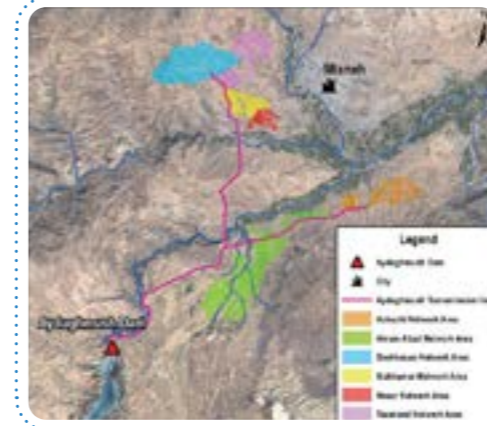


**Yaraghli Irrigation Network**



**Qigaj Irrigation Network**

**Selected Irrigation and Drainage Network projects**



**Aydughmush Irrigation and Drainage Network  
(Akramabad, Dashkasan, Achachi Units)**

**Type of Service**

- > 2nd Phase Studies and Supervision (3rd Phase)

**Location**

- > Mianeh, East Azerbaijan Province, Iran

**Client**

- > East Azerbaijan Regional Water Company

**Objectives**

- > Supplying agricultural water demands and improvement of the lands downstream of Aydughmush Dam (Akramabad, Dashkasan, Achaji Units)

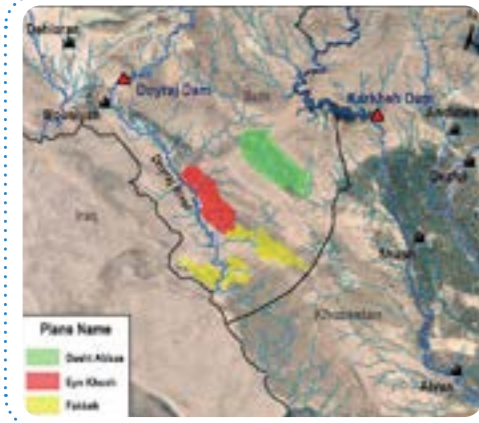
**Project Components**

- > Area covered: 7600 hectares
- > Construction sites: 6
- > Irrigation method: Solid-set sprinkler, drip irrigation systems
- > Length of the main pipeline: 78 km
- > The diameter of the main network pipes: 200–1000 mm
- > Pipe material: PE, steel, GRP
- > Pumping stations: 10
- > Power consumption: 12 MW

# Project management

Zistab Consulting Engineers Co. is qualified by Iran's Planning and Budget Organization as Grade 'A' for project management in dam construction and irrigation and drainage networks. The project management consultant uses the new management methods for macro projects to make a greater coherence and integration between the design, procurement and construction phases and separate managerial duties from technical duties of these stages. The plans in this department includes the project management services in the comprehensive project of irrigation and drainage networks of the rivers of Ilam Province, project management services of irrigation and drainage sub-networks development in Karoun, Dez and Karkheh Basins in Khuzestan and Ilam Provinces as well as project management services for projects of Zanjan Regional Water Company are among the projects in this department.

## Selected Project management projects



**Management Contractor of the Development of Irrigation and Drainage Network for 550,000 Hectares of Farmlands in the Karun-Dez-Karkheh Basin in Khuzestan and Ilam Provinces**

**Type of Service** > Management Contractor

**Location** > Khuzestan and Ilam Provinces, Iran

**Client** > Jihad Nasr Institute

**Objectives**

- > Creating job opportunities and accelerating economic growth in impoverished parts of Iran;
- > Increasing Gross Domestic Product (GDP) and achieving independence from imported goods, as well as creating exporting opportunities in future Phase;
- > Water and underground resource management;
- > Agricultural production planning, control, and management;
- > Encouraging growth in dependent industries;
- > Establishing a core population in the plan area, desert greening, and soil stabilization;

**Project Components**

- > Projects in Fakkeh, Dasht-e Abbas, Halilan, Kanjacham, and Einkhosh in Ilam Province, as well as others in Abadan, Khorramshahr, North of Ahwaz, and farmlands around Karun and Dez Rivers in Khuzestan Province, with a total area of over 140,000 hectares.

## Selected Project management projects



**Management Contractor of the Irrigation and Drainage Subnetworks in Ilam Province**

**Type of Service** > Management Contractor

**Location** > Ilam Province, Iran

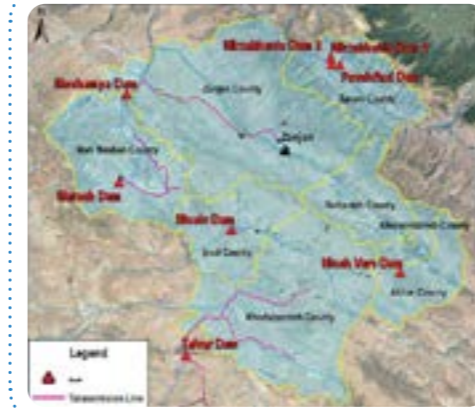
**Client** > West and Northwest of Iran Irrigation and Drainage Subnetwork Plan Administrator

**Objectives**

- > Economic promotion of the agricultural sector;
- > Encouraging population growth in the area through economic incentives;
- > Reducing Iran's economic vulnerability to external political challenges through endogenous growth;
- > Economic growth in the local agricultural sector;

**Project Components**

- > Doiraj project : 7585 hectares;
- > Kangir project : 1850 hectares;
- > Meymeh project : 2700 hectares;
- > Garmsiri project : 17559 hectares;



## Management Contractor of the Zanjan Regional Water Company's Executive Plans

### Type of Service

> Management Contractor

### Location

> Zanjan Province, Iran

### Client

> Zanjan Regional Water Company

### Objectives

- > Water Resources Management of Zanjan Province
- > Economic growth and prosperity of Zanjan province's drinking and industrial sectors
- > Strengthening Resistance Economics Criteria
- > Expanding supply of drinking water and Zanjan industry to project horizon
- > Expanding the supply of drinking water and industry to the city and surrounding villages to the horizon

### Project Components

Includes projects:

- > Moshampa Storage Dam and associated installations
- > Pave Rood irrigation network
- > Bluebin Storage Dam and Related Facilities
- > Transfer of water from Mirzakhlanu Dam and treatment plant to the site of consumption
- > Marash Regulatory Dam and Marash Storage Dam
- > Transfer of water from the Marash Dam to the places of consumption
- > Pave Rood Storage Dam and associated facilities
- > Transmission of water from Moshampa Dam, treatment plant and associated facilities
- > Transfer of water from the Marash Dam to the places of consumption
- > Dewatering and water transfer from Quchem Dam transmission line to Hamedan Province

# Our Clients



Ministry of  
Agriculture and  
Water Resources  
of Iraqi Kurdistan



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