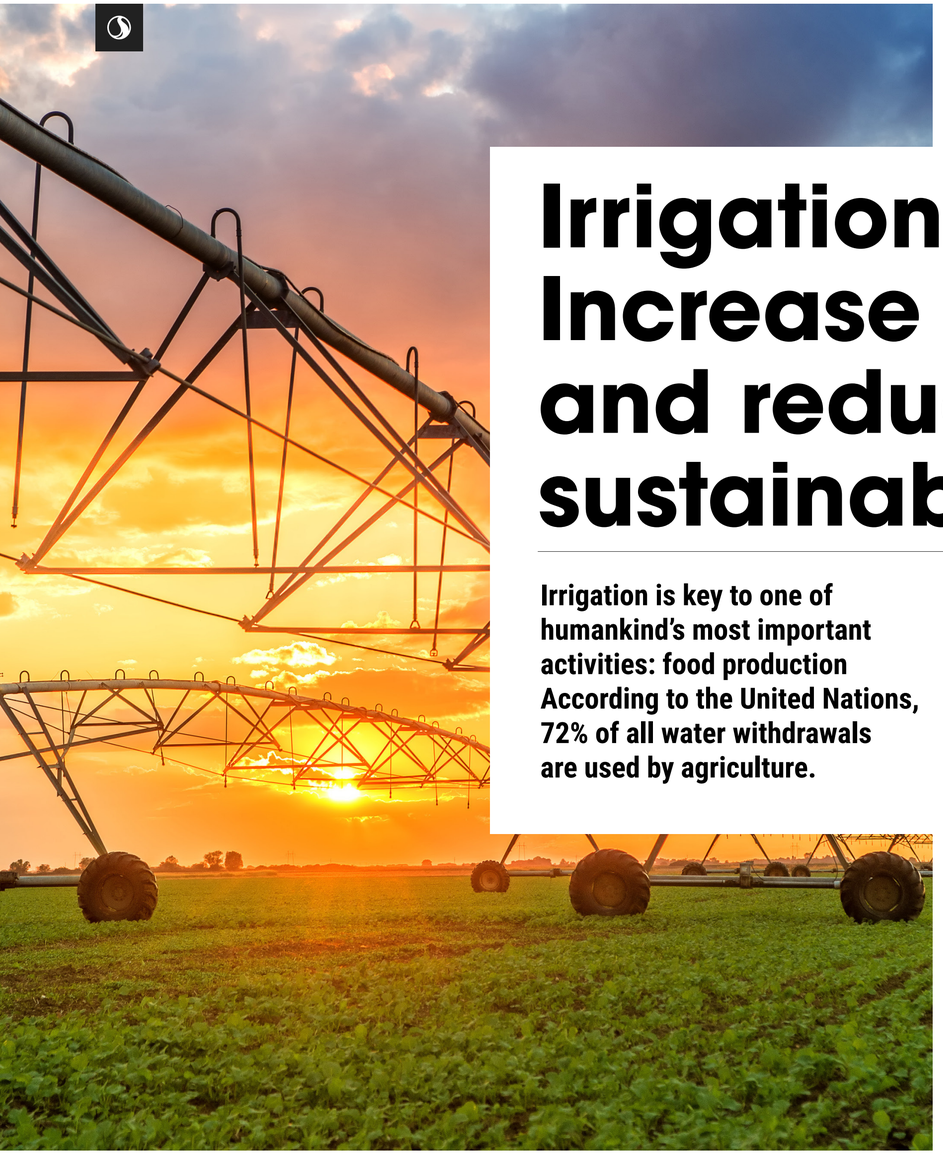


Irrigation Systems – Increase Production and reduce cost, more sustainably

Irrigation is key to one of humankind's most important activities: food production According to the United Nations, 72% of all water withdrawals are used by agriculture.

By 2050, food production will need to increase by 50% to feed the more than 9 billion people projected to live on our planet. Water harvesting and conservation, could boost production by up to 24%, and if combined with irrigation expansion, by more than 40%.

Stantec Irrigation services are central to a sustainable and resilient regional development. We focus on the relationship between water, food and energy, all of which are commodities that are increasingly in demand.

Our Services

Irrigation Districts

- Irrigation Planning (feasibility, layout, cost opinions and funding requirements)
- Irrigation Infrastructure (Planning and design of canals and pipelines, water control structures, water measurement structures, conveyance infrastructure)
- On-farm delivery systems design (laterals, turnouts, checks, drops, road crossings)
- On-farm delivery scheduling
- Water rights (transfer and revision of points of diversion, points of use, and types of use)
- Electrical, Communications and Control (Automation)

Water Resources Planning and Management

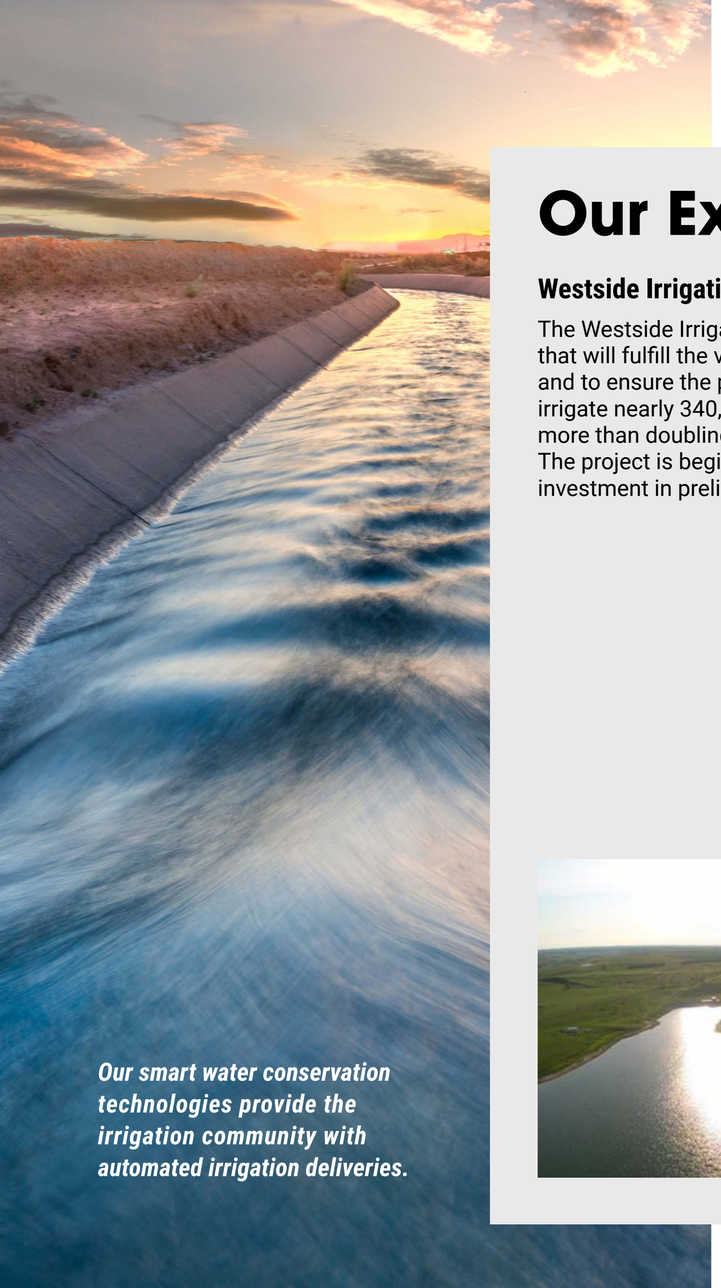
- Water Supply and Source Water Protection
- Environmental Instream Flow Needs
- Intake Siting and Design
- Water Control and Diversion Structures
- Natural Channels and Fish Habitat
- Canal Spillways, By-pass and Outfalls

Farming Operations

- Irrigation facilities relocation/ rehabilitation
- Land development
- Water conservation
- Energy requirements efficiency
- Precision agriculture

Linear Infrastructure and Conveyance

- Gravity and Pressure Main Design
- Storage Facility/Reservoir Design
- Intake and Outfall Design
- Pump Station Design
- Trenchless Technology
- Water Management Planning
- Water Network Modeling
- Computational Fluid Dynamics (CFD) Modeling



Our smart water conservation technologies provide the irrigation community with automated irrigation deliveries.

Our Experience

Westside Irrigation Project, Saskatchewan

The Westside Irrigation Project (WIP) is a generational project that will fulfill the vision to double the amount of irrigation and to ensure the prosperity of Saskatchewan people and irrigate nearly 340,000 acres of land from Lake Diefenbaker, more than doubling the irrigable land in Saskatchewan. The project is beginning with an immediate $22.5 million investment in preliminary engineering and initial construction.

South San Joaquin Irrigation District - Division 9 Irrigation Enhancement Project, California

Until 2012, water was delivered to South San Joaquin Irrigation District Division 9 customers through miles of gravity-based canals and pipelines. The district and Stantec partnered to develop a first-of-its-kind program in California that increases delivery efficiency and improves service.

The $14 million system consists of a 19-mile network of pipelines with flexible pressurization, 56 acre foot water storage basin, a pumping station capable of pumping 23,500 gallons per minute, and 55 solar-powered field telemetry units.

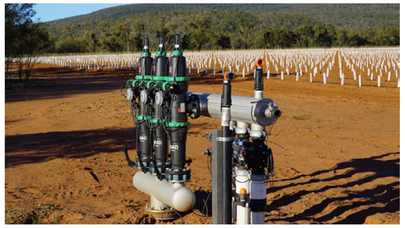
Farmers schedule deliveries, receive forecasts, track water usage, and access historical evapotranspiration rates using an online system, with moisture sensors tracking optimal ordering times. It has virtually eliminated water waste and provides area growers with individualized, automated irrigation access through mobile technology.

Roosevelt Irrigation District On-Call Engineering Services, Arizona

From major rehabilitations of primary conveyance facilities to relocations of open-channel delivery system into pipeline to accommodate urbanization, our team has completed more than 200 individual projects for the Roosevelt Irrigation District (RID) in the last 10 years that include planning, design, review, and construction management. We have also assisted in developing and implementing uniform standards for engineering design, drawings, and specifications.

Gila River Indian Community Pima-Maricopa Irrigation Project, Arizona

For more than 44 years, Stantec has helped the Gila River Indian Community with agricultural and water resources development. The Pima-Maricopa Irrigation Project (P-MIP) required multiple engineering disciplines and task order projects including planning, design, and construction for expanded development of the reservation's irrigation delivery system. The Community valued the contributions of one of our team members so much they asked him to become their Drainage District general manager.



Vineyard Irrigation Project, Austrailia

When an Australian Vineyard wanted to develop 1,000 hectares of greenfield into vineyards, their focus on environmental stewardship and a desire to use solar energy meant the solution needed to incorporate superior design alongside sensitive environmental planning.

Our job was to design the new irrigation system and pump station, with three stages of work serviced from the same dam at different elevations. The system also needed the potential to operate on solar energy, which meant that one of our key design features was the lowest possible operating pressure to minimize energy usage. It also needed to be able to automatically back flush to clear any blockages from the secondary filters.

The team was so pleased with the results of Stage 1 that they engaged us to carry on with future development and planning.

Central Plains Water Enhancement Scheme, Christchurch, New Zealand

This design and build irrigation project converts the water source from groundwater pumping to a gravity fed pipeline distribution network using more environmentally sustainable alpine water.

Our team managed the key risks and developed a feasible solution to irrigate a further 20,000 hectares (49,421 acres) of farmland. This project helps enhance ecological and recreational values while providing opportunity for agricultural and horticultural diversity via water security.

SWITCHING IRRIGATION WATER SOURCES TO PROVIDE A MORE ENVIRONMENTALLY SUSTAINABLE SOLUTION FOR CANTERBURY'S AGRICULTURE

Farmers Dam and Water Impoundment, St. Andrew, Barbados

Barbados was classified as a "water scarce" country by the UN Water Commission in the 1990s. Due to being at a premium in the region, the development of the Apes Hill Golf Resort required a non-potable source of water for the irrigation of the golf course.

This project demonstrated the effective use of rain water harvesting to provide a non-potable source of water that afforded the re-development of this former sugar cane farmland to offer an alternative, highly economical usage that is compatible with furthering to enhance tourism in Barbados. This solution continues to successfully fulfill the golf course's irrigation needs.

Stantec

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