

Wagga Wagga City Council Smart Sportsground Irrigation

COUNCIL NAME

Wagga Wagga City Council

WEB ADDRESS

wagga.nsw.gov.au

SIZE

4,800 square kilometres

POPULATION

64,000

Overview of the project

Wagga Wagga City Council's Smart Sportsground Irrigation project aims to improve the water efficiency of park irrigation in response to the extreme heat that the city is increasingly experiencing during the summer and autumn months. Council selected the Jubilee Park sportsground complex, the largest greenfield irrigated sports field site and user of mains water in Wagga Wagga for the upgrade. The complex is used year-round for touch football, softball, athletics, hockey, and rugby. Maintaining a consistent standard of playing surface is difficult and expensive in a region like the Riverina, which faces drought on a regular basis. The upgrading of the controller to the Toro sentinel irrigation system greatly increased irrigation efficiency. The use of soil moisture probes allows the irrigation cycles to be based on moisture requirements as opposed to the blanket 'station time cycle' approach which has been the standard practice of Council. The project is saving natural resources and reducing the water bills of Council at this site over the long term.



Jubilee Park Sporting Complex, Wagga Wagga, 2020

How the project was carried out

Following a review of water usage across all council parks, and options available for improving park irrigation systems, quotes were sought on the specified smart irrigation controller for Jubilee Park, Connelly Park and Jubilee Athletics Park. A local irrigation company was successful and were engaged to install the control system. Once the controllers were installed at the site and programmed; the stations were set up standalone as opposed to the previous arrangement where they were doubled up due to limited controller capacity. The installation of the controllers and configuration was completed over a two-week period during the cooler months to avoid impacts to the playing fields.

Monitoring of water usage and estimates of cost saving to assist in measuring the success of the project were undertaken. Council staff also worked with LGNSW to produce a [video](#) to demonstrate the system in operation at Jubilee Park for other interested NSW councils.

Outcomes now and in the future

The outcomes of the smart irrigation control system installation include:

- Greater control over the distribution of irrigation water during the irrigation window of 5pm -10am
- Healthier turf due to greater monitoring capacity of soil moisture levels
- A reduction in water usage at Jubilee sporting complex of 52,297kL in 2019/2020 to 26,475kL in 2020/2021; a reduction of 25,822kL which is the equivalent of a 49% reduction
- A reduction in water usage at Connelly Park Athletics track from 16,755kL in 2019/2020 to 2,418kL in 2020/2021; a reduction of 14,337kL which is the equivalent of an 86% reduction
- Moving into future years with normal rainfall averages Council is estimating a continued average reduction in water use of at least 10-20%.

Due to the cost efficiencies in the original installation, Council chose to install the same system at other major sporting complexes including the Equex Parramore Park complex and the Robertson Oval Bolton Park complex. There is real potential to convert all sportsground irrigation systems across to the smart control system to achieve even greater efficiencies and water savings.

Benefits and lessons learned

The installation of the new smart irrigation control system demonstrates that Councils can find solutions to adapt to climate change and to saving natural resources which will save money at the same time.

Other benefits and lessons learned include:

- The capacity to run individual stations as opposed to double up stations
- Remote monitoring and operation of irrigation controls which is beneficial in the case of things such as a reported break, rain event, changed usage at the sportsgrounds.
- Better monitoring and reporting on irrigation usage at specific sites
- The ability to operate other park systems within range of the main controller using 'slave' units
- Irrigating to actual soil moisture level requirements, resulting in significant reduction in overall water usage.

More information

After the success of the smart irrigation control upgrades at these sites, Council has channelled savings into extending the roll out of the irrigation controller upgrades across several sporting ovals and plans to seek additional funding to retrofit other high water use sites.

This project was funded by the NSW Government in association with Local Government NSW



A video which highlights the features and benefits of this project is available on the Local Government NSW website [here](#).

Contact

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