

## CASE STUDY

# WESTERN WATER MODEL DATASET DERIVATION

## Collaboration the Key to Problem Solving

Water Modelling Solutions (WMS) is a specialist water engineering team with offices in Brisbane and Melbourne. They engage in both private and public sector work and their latest project has them collaborating with Western Water.

### CLIENT BACKGROUND

Western Water Corporation (Western Water) is a water authority based in the outer suburbs of Melbourne. It serves both those outer suburbs and rural communities. It is in the process of merging with City West Water to form Greater Western Water, and hence will service more urban areas in the coming years.

Part of Western Water's obligation is to periodically produce an urban water strategy. This involves deriving input data that can be fed into water resource models.

WMS was chosen to undertake this data derivation. Basically, WMS was tasked with collecting data about climate, rainfall and evaporation, streamflow and farm dam impact inputs in order to update Western Water's water resource models.



Werribee River at Exford

### KHALIF JUSUF

Khalif Jusuf is a Project Manager and Senior Engineer with WMS. He previously worked with the Department of Environment Land Water and Planning (DELWP), and in private consulting prior to that.

Khalif brings a knowledge and skill set to the project that has allowed WMS to take on more projects of this nature. As he explains it, he is familiar *"with those industry standard modelling platforms that do this type of analysis. This includes the SOURCE modelling platform that is the current up and coming modelling platform and the REALM modelling platform that is being phased out."* Khalif's experience working in the public sector also means he is confident dealing with the policy and stakeholder engagement surrounding such projects.

**In this project, stakeholder engagement is very important as data for the models comes from a number of sources. The stakeholders for the Western Water project include Melbourne Water, City West Water, and the Victorian Department of Environment Land Water and Planning (DELWP).**



Maribyrnong River at Essendon West lying within the area serviced by Greater Western Water

## CHALLENGE

Khalif explains that besides coordinating data inputs from a number of stakeholders, the biggest challenge faced in the Western Water project is that *“the data records being derived are more than a hundred years long. It requires extending a much shorter historical data set than what Western Water currently has, which is about 20 years long”*.

*“It’s a journey of gathering raw data from different agencies, processing it, looking at the assumptions, and then applying a method in deriving the model inputs and validating it against previous works.”*

## CONTACT

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## TRANSPARENCY AND COMMUNICATION

While Khalif believes that WMS’ competitive cost for the project along with their skills and capabilities probably won them the job, he feels that client interaction also plays a major part.

Transparency and communication are values that WMS displayed from the outset and continued throughout the project.

*“I deliver the information in a way that is fully transparent. We don’t hold anything back. I share my screen to show them how we’re going, to see how the model is set up. I involve them in the methodology and we have weekly conversations.”*

**Khalif Jusuf, Project Manager and Senior Engineer at WMS**

This open communication between WMS and Western Water allows for greater collaboration and problem solving. Khalif says, *“We’re able to come up with innovative solutions collectively, to derive the data even with limited information.”* It also ensures the assumptions made are understood by all involved parties and that whoever will be using the models has a clear understanding of what they are based on.

This project highlights WMS’ commitment to focusing on the needs of their client, and working collaboratively to arrive at innovative solutions.