

<b>Position Title</b>	Research Associate
<b>Classification</b>	Level B
<b>School/Division</b>	UWA School of Agriculture and Environment
<b>Centre/Section</b>	Centre for Water and Spatial Science
<b>Supervisor Title</b>	Associate Professor
Supervisor Position Number	101129
Position Number	NEW

## **Your work area**

---

WaterSmart Dams is a flagship project for Centre for Water and Spatial Science (CWSS) with a multidisciplinary team of researchers, project staff and industry collaborators to address the challenge of supplying water for agriculture in southwestern Australia's changing and drying climate. CWSS sits within the UWA School for Agriculture and Environment at The University of Western Australia (UWA), unifies 12 leading water and geospatial science researchers from schools across UWA. CWSS provides research leadership in water and spatial science in Western Australia and is a preferred research partner for national and international projects.

## **Reporting structure**

---

Reports to: Associate Professor Nik Callow

Dotted line reports to: Head of School, UWA School of Agriculture and Environment

## **Your role**

---

You will join the UWA-CWSS WaterSmart Dams team, working on water security for agriculture and SmartDam runoff technologies, plus water storage options to address farm water security challenges in southwestern Australia. You will lead work on understanding how the changing climate is impacting on-farm water security, through changes to surface water resources and runoff production in agricultural landscapes. A focus of this role will be leading research with industry partners, growers and producers to understand how farm water technologies and dam storage can be improved to enhance water security, along with new options to enhance runoff and reduce storage (dam) water loss. This role will develop and lead new work on how climate change and farming systems and management impact runoff at on-farm and regional scales.

## **Your key responsibilities**

---

Contribute to the successful delivery of the WaterSmart Dams project

Undertake high-quality and peer-reviewed science to underpin new knowledge discovery about water in a drying climate, in agricultural landscapes of southwestern Australia

Lead field and modelling science work to identify how climate change and farming systems are changing water runoff in agricultural catchments

Summarize datasets and published literature in summaries accessible to end-users to support them adopting new practices

Assess water storage options and make recommendations applicable to the project region based on synthesis of new and emerging technologies and current knowledge

Develop and execute field science research plans and instrumentation to generate activity materials (new knowledge datasets) required to understand agricultural landscape hydrology

Provide summary data and knowledge as inputs to web-app water planning and drought resilience tools

Participate and lead components of WaterSmart Dams' extension, outreach and field-day activities to enhance end-user adoption

Liaise with project partners from across government, industry and grower groups to build effective teams to deliver the WaterSmart Dams project

Other duties as directed

## **Your specific work capabilities (selection criteria)**

---

A PhD in physical geography, hydrology, environmental engineering, environmental science, catchment science or a related discipline

An established or emerging track record of excellence in research evidenced by high-quality and high-impact scholarly research

Experience and skills in field experimentation, including experimental design and planning, and the application of measurement tools, data loggers, surveying, water depth and quality measurement, use of rainfall simulators, soil moisture and operation of meteorological and weather stations

Ability to undertake complex analyses and data modeling using programming languages such as Python, R and/or hydrological modelling packages.

Adherence to FAIR data principles (Findable, Accessible, Interoperable and Reusable) when undertaking analyses to generate reproducible and accessible data products and figures

Excellent oral communication skills, including with non-science audiences

Outstanding written communication skills across a range of formats, including scientific papers, reports, science communication and non-science documents

Experience in coordinating and undertaking field research (including in rural and regional locations), including adherence to safe working practices and meeting work health and safety obligations

Skills in building effective professional networks across academia, industry and with project partners and end-users

Ability to work as part of a team and being a proactive contributor to building a positive, inclusive and collaborative workplace culture

## **Special requirements (selection criteria)**

---

Intrastate travel will be required

Current "C" class driver's licence

4WD training and experience operating 4WD vehicles, off-road driving and recovery (desirable)

7kg multirotor Remotely Piloted Aircraft Pilots Licence (RePL) (desirable)

## **Compliance**

---

Ensure you are aware of and comply with legislation and University policy relevant to the duties undertaken, including:

The University's Code of Conduct [hr.uwa.edu.au/policies/policies/conduct/code/conduct](http://hr.uwa.edu.au/policies/policies/conduct/code/conduct)

Inclusion and Diversity [web.uwa.edu.au/inclusion-diversity](http://web.uwa.edu.au/inclusion-diversity)

Safety, health and wellbeing [safety.uwa.edu.au/](http://safety.uwa.edu.au/)