# Position Details

## Research Scientist/Engineer- CSOF5/6

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| The following information is for applicants | |
| Advertised Job Title | Hydrological/Hydrodynamic Modeller |
| Job Reference | 83103 |
| Tenure | Indefinite  Full-time |
| Salary Range | CSOF5: AU$102,724 to AU$111,165 pa (pro-rata for part-time) + up to 15.4% superannuation  CSOF6: AU$117,917 to AU$138,176 pa (pro-rata for part-time) + up to 15.4% superannuation  \*NB: This position is offered across two levels, the appointment level will be determined by the qualifications, skills and relevant experience of the successful candidate |
| Location(s) | Black Mountain, ACT |
| Relocation Assistance | Will be provided to the successful candidate if required |
| Applications are open to | * All Candidates |
| Position reports to the | Team Leader |
| Client Focus – Internal | 60% |
| Client Focus – External | 40% |
| Number of Direct Reports | 0 |
| Enquire about this job | Contact Jai Vaze via email at jai.vaze@csiro.au or phone +61-2-6246 5871 |
| How to apply | Apply online at <https://jobs.csiro.au/>  Internal applicants please apply via **Jobs Central**  If you experience difficulties when applying, please email [careers.online@csiro.au](mailto:careers.online@csiro.au) or call 1300 984 220. |

### Acknowledgement of Country

### CSIRO acknowledges the Traditional Owners of the land, sea and waters, of the area that we live and work on across Australia. We acknowledge their continuing connection to their culture and pay our respects to their Elders past and present. View [our vision towards reconciliation](https://www.csiro.au/en/about/Indigenous-engagement/Reconciliation-Action-Plan).

### Role Overview

Through an integrated systems research approach CSIRO Land & Water provides the information and technologies required by government, industry and the Australian and international communities to protect, restore, and manage natural and built environments. In this role, you will also have opportunity to work with and support other projects across CSIRO’s Land and Water Business Unit portfolio of activity.

The role of Research Scientist Staff in CSIRO is to conduct innovative research leading to scientific achievements that are aligned with CSIRO’s strategies. You may be engaged in scientific activity ranging from fundamental research to the investigation of specific industry or community problems. You will have the opportunity to build and maintain networks, play a lead role in securing project funds, provide scientific leadership and pursue new ideas and approaches that create new concepts.

### The research scientist will be part of a strong hydrological science and modelling capability in the Water Security Program of the Land and Water Business unit. The hydrological and hydraulic modeller will contribute to innovative research and delivery to high impact external projects on water resources assessment and floodplain inundation modelling. The position will also contribute to the wider inter-disciplinary efforts of the Land and Water Business unit in integrated water resource management and development impacts on water and environment.

This position is offered across two levels, the appointment level will be determined by the qualifications, skills and relevant experience of the successful candidate.

### Duties and Key Result Areas:

* Incorporate novel approaches to scientific investigations by adapting and/or developing original concepts and ideas for new, existing and further research.
* Conduct original research in hydrological science, hydrological and hydrodynamic modelling.
* Strong delivery to high impact external projects.
* Contribute to inter-disciplinary research in CSIRO and Land and Water Business Unit, particularly in the areas of floodplain inundation modelling, integrated water resource management and development impacts and.
* Communicate effectively and respectfully in the interests of good business practice, collaboration and enhancement of CSIRO’s reputation.
* Produce high quality scientific and/or engineering papers suitable for publication in quality journals and for presentation at national and international conferences.
* Work effectively as part of a multi-disciplinary, often regionally dispersed research team, to undertake independent scientific investigations and carry out associated tasks under the guidance of more senior Research Scientists/Engineers.
* Under the guidance of Senior Research Scientists/ Engineers, work collaboratively and honestly with internal and external colleagues, clients and partners to help define and satisfy objectives for small to medium research projects.
* Assist in leading small research projects, including the negotiation of resource requirements.
* Adhere to the spirit and practice of CSIRO’s Values, Health, Safety and Environment plans and policies, Diversity initiatives and Zero Harm goals.
* Other duties as directed.

**For appointment at the higher salary level (CSOF6), duties will also include:**

* Along with more senior researchers, plan and prepare research proposals and manage research investigations, requiring originality, creativity and innovation.
* Lead and supervise staff to ensure that experiments are established in accordance with the research design and are completed within the agree timeframes and budget.
* Work closely with industry clients to ensure delivery of research outcomes and transferring technologies and/or guidelines for adoption.
* Other duties as directed.

## **Required Competencies**

**CSOF5**

* **Teamwork and Collaboration:** Cooperates with others to achieve organisational objectives and may share team resources in order to do this. Collaborates with other teams as well as industry colleagues.
* **Influence and Communication:** Uses knowledge of other party's priorities and adapts presentations or discussions to appeal to the interests and level of the audience. Anticipates and prepares for others reactions.
* **Resource Management/Leadership:** Allocates activities, directs tasks and manages resources to meet objectives. Provides coaching and on the job training, recognises and supports staff achievements and fosters open communication in the team.
* **Judgement and Problem Solving:** Investigates underlying issues of complex and ill-defined problems and develops appropriate response by adapting/creating and testing alternative solutions.
* **Independence:** Plans, sets and works to meet challenging standards and goals for self and/or others. Recognises where endeavours will make the most impact or difference, decides on desired outcome and sets realistic goals to reach this target.
* **Adaptability:**Copes with ambiguity or situations that lack clarity. Adapts readily to changing circumstances and new responsibilities (which may include activities outside own preferences) in the interests of achieving team objectives. Recognises the need for and undertakes personal development as a result of changes.

**CSOF6**

* **Teamwork and Collaboration:** Cooperates with others to achieve organisational objectives and may share team resources in order to do this. Collaborates with other teams as well as industry colleagues.
* **Influence and Communication:** Identifies critical stakeholders and influences them via an influential third party, for example through an established network, to gain support for sometimes contentious proposals/ideas.
* **Resource Management/Leadership:** Sets up and maintains effective and efficient work teams and manages performance and resources, to achieve objectives. Chooses appropriate management strategies and communication styles to maintain high levels of motivation and productivity. Gives feedback for development purposes and provides support and direction for improvement.
* **Judgement and Problem Solving:** Anticipates and manages problems in ambiguous situations. Develops and selects an appropriate course of action and provides for contingencies. Evaluates, interprets and integrates complex bodies of information and draws logical conclusions, synthesises proposals and defends options with reasoned arguments.
* **Independence:** Assesses the risk and opportunity of identified strategies, options and actions. Overcomes problems and setbacks in achieving goals. Invariably includes consideration of value-added future impact on bottom line when determining the optimal and efficient use of resources.
* **Adaptability:**Demonstrates flexibility in thinking and adapts to, and manages, the increasing rate of organisational change by adjusting strategies, goals and priorities.

## **Selection Criteria**

#### Essential

*Under CSIRO policy only those who meet all essential criteria can be appointed.*

1. Doctorate or equivalent research experience in a relevant discipline area, such as hydrology
2. Demonstrated experience in hydraulic and hydrodynamic modelling.
3. Demonstrated experience in landscape hydrological modelling and complex spatial analysis.
4. Demonstrated experience in programming and working with large datasets that cover large spatial and temporal scales.
5. The ability to work effectively as part of a multi-disciplinary, regionally dispersed research team, and carry out independent individual research, to achieve organisational goals.
6. A record of science innovation and creativity plus the ability & willingness to incorporate novel ideas and approaches into scientific investigations.
7. Strong written and oral communication skills including the ability to publish research results, prepare reports and present the results of scientific investigations at national and international conferences and stakeholder meetings.
8. A growing recordof publication in quality, peer reviewed journals.
9. A history of professional and respectful behaviours and attitudes in a collaborative environment.

## **Desirable:**

1. Experience with python and ArcGIS programming and use of 1-D and 2-D hydrodynamic models.

**For appointment at the higher salary level (CSOF6), essential criteria will also include:**

#### Essential

1. Demonstrated expertise and hands-on experience in hydraulic and hydrodynamic modelling (MIKE FLOOD, etc).
2. Demonstrated expertise in understanding complex hydrological processes and experience in landscape and river modelling.
3. Demonstrated ability to lead medium to large projects, work effectively as part of a multi-disciplinary, regionally dispersed research team, and deliver high impact projects within the timelines and budget, to achieve organisational goals**.**

## **Desirable:**

1. Experience with and understanding of widely used hydrodynamic/hydraulic, landscape and river system models.
2. Experience working in Australian catchments.

Special Requirements

Appointment to this role may be subject to conditions including provision of a national police check as well as other security/medical/character clearance requirements.

* The successful candidate will be asked to obtain and provide evidence of a National Police Check or equivalent. Please note that people with criminal records are not automatically deemed ineligible. Each application will be considered on its merits.

## **About CSIRO:**

We solve the greatest challenges through innovative science and technology. To find out more visit us [online](http://www.csiro.au/)!

Find out more about CSIRO [Land and Water](https://www.csiro.au/en/Research/LWF)