## Position Description

## Research Scientist/Engineer – CSOF5/CSOF6

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| THE FOLLOWING INFORMATION IS FOR APPLICANTS |
| Advertised Job Title | Senior Groundwater Hydrologist |
| Job Reference | 99588 |
| Tenure and Work Schedule | Indefinite Full-time  |
| Salary Range | Applications would be assessed across two capability levels, and the successful candidate will be appointed at the level commensurate with their skills and experience, as assessed by the Selection Panel.**CSOF5:** AU$114,219 – AU$123,605 per annum (pro-rata for part-time) plus 15.4% superannuation**CSOF6:** AU$ $131,113 – AU$153,639 per annum (pro-rata for part-time) plus 15.4% superannuation |
| Location(s) and Office Arrangements | Waite Campus, Adelaide, SA (Kaurna Country) *Flexible work options available* |
| Relocation Assistance | Will be provided to the successful candidate if required |
| Applications are open to | All Candidates (visa sponsorship may be offered) |
| Position reports to the | Group Leader, Groundwater Management |
| Client Focus – Internal | 10% |
| Client Focus – External | 90% |
| Number of Direct Reports | 0 |
| Enquire about this job | Contact Kate Holland via email at kate.holland@csiro.au or phone +61 8 8303 8736 |
| Support and Workplace Adjustments | We offer a range of reasonable supports and workplace adjustments. Please let us know via email vicki.ferrar@csiro.au (Vicki Ferrar – TA Partner) if we can help you to equitably participate in our recruitment process or the role itself. |
| How to apply | Apply online at <https://jobs.csiro.au/> Internal applicants please apply via **Jobs Central**We encourage you to reach out if you require any support or experience difficulties when applying – please email careers.online@csiro.au  |

### Acknowledgement of Country

CSIRO acknowledges the Traditional Owners of the land, sea and waters, of the areas 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).

### About CSIRO

As Australia's national science agency, CSIRO is solving the greatest challenges through innovative science and technology. Many of our iconic innovations were once considered impossible until someone, just like you, joined us and took on the challenge.

As one of the world’s largest multidisciplinary mission-driven research organisations, we are focused on the issues that matter the most: for our quality of life, for the economy and for our environment. We believe diverse teams are more effective and deliver more innovative outcomes. When we all focus on the big things that really matter, and work in partnership with our communities and [Indigenous Australia](https://www.csiro.au/research/indigenous-science), Australian science and technology can solve seemingly impossible problems and create new value for all Australians. Visit [CSIRO.au](file:///C%3A/Users/lui008/OneDrive%20-%20CSIRO/Desktop/LIFE/LEADERSHIP/Inclusive%20Recruitment/PD%20and%20Job%20Ads/CSIRO.au) for more information.

### Role Overview

The role of Research Scientist/Engineer staff is to conduct innovative research leading to scientific achievements that are aligned with CSIRO’s strategies. They may be engaged in scientific activity ranging from fundamental research to the investigation of specific industry or community problems. The Research Scientist/Engineer 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.

This position sits within the CSIRO Environment Research Unit, within the Water Security Program and the Groundwater Management Group.

The successful candidate will contribute to hydrological research to better understand and manage water security and its impacts on the economy, environment and communities of Australia. The candidate will work independently on new research projects or as part of large multi-disciplinary projects to support the science and impact needs of groundwater characterisation, management, and water security in Australia.

Applications would be assessed across two capability levels, and the successful candidate will be appointed at the level commensurate with their skills and experience, as assessed by the Selection Panel.

To be considered at the higher capability level, the successful candidate will demonstrate the ability to be a leader in groundwater hydrology research, including system characterisation and modelling. The candidate will have established networks and experience developing a portfolio of activities with a national focus on impact. They will work across CSIRO and the broader water science innovation system.

### Duties and Key Result Areas

Key result areas include research to inform decision making for water resource development, changing climatic conditions, enhanced water security through conjunctive use of surface water and groundwater in key areas of the country (e.g., Murray-Darling Basin, Great Artesian Basin, Hydrogen, Northern Australia, Perth Basin, and for safe waste disposal).

* Conduct hydrological, groundwater and connected surface-groundwater modelling research to better understand and manage water security and its impacts on the economy, environment and communities of Australia.
* Provide input and undertake independent work into new research projects or large multi-disciplinary projects to support the science and impact needs of groundwater characterisation, management, and water security in Australia.
* Undertake innovative research related to groundwater hydrology processes, recharge, throughflow, inter-aquifer/aquitard leakage and groundwater-surface water exchanges, including novel methods to integrate hydrological, geophysical and environmental tracer data into hydrogeological models to better understand and manage groundwater resources.
* Contribute to and lead parts of technical scientific reports, scientific writing, and delivery of scientific publications, lead specific tasks or project components, engage with other specialists across CSIRO and external stakeholders to deliver on projects, present project outcomes, have good communication and writing skills.
* Communicate openly, effectively and respectfully with all staff, clients and suppliers in the interests of good business practice, collaboration and enhancement of CSIRO’s reputation.
* Work collaboratively as part of a multi-disciplinary, regionally dispersed research team to carry out tasks in support of CSIRO’s scientific objectives.
* Adhere to the spirit and practice of CSIRO’s Values, Code of Conduct, Health, Safety and Environment procedures and policy and diversity initiatives.
* Other duties as directed.

At the higher CSOF6 level, key result areas and duties also include:

* Conduct hydrological, hydrogeological and groundwater modelling research using uncertainty (conceptual and numerical) to better understand and manage groundwater resources and its impacts on the economy, environment and communities of Australia.
* Lead innovative research related to groundwater hydrology processes, recharge, throughflow, inter-aquifer/aquitard leakage and groundwater-surface water exchanges via combination of hydrological investigations, modelling, geostatistical and uncertainty methods to better understand and manage groundwater resources.
* Develop robust hydrogeological conceptual models incorporating conceptual uncertainty and quantify groundwater flow processes to constrain the framework, input and boundary conditions for groundwater flow models used in regional water resource assessments.
* Foster collaboration across CSIRO to enhance the understanding of groundwater’s role to support productive sectors such as irrigated agriculture, mining, and energy.
* Lead technical scientific reports, scientific writing, and delivery of scientific publications, lead opportunities, projects, specific activities or project components, engage with other specialists across CSIRO and external stakeholders to deliver on projects, present project outcomes, have good communication and writing skills.
* Advise policy makers and inform and transfer knowledge to non-scientific audiences as required.

## **Selection Criteria**

#### Essential

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

*Applications will be assessed against the Selection Criteria outlined below. The successful candidate will be appointed at the capability level that best aligns with their demonstrated skills and experience, as determined by the Selection Panel.*

1. A PhD (or an equivalent combination of qualifications and research experience) in a relevant field such as groundwater hydrology or hydrogeology.
2. Demonstrated ability to undertake original, creative and innovative research by generating and pursuing novel ideas and solutions to scientific research problems in groundwater science, that have an impact.
3. A demonstrated publication history of authorship on scientific papers in peer reviewed journals and/or reports, grant applications or inventorship on patent applications.
4. Established networks in groundwater and more broadly in water science, working with complex settings.
5. Experience in industry and/or applied research, developing, co-designing and delivering projects for water security challenges.
6. A demonstrated commitment to health, safety, and wellbeing of staff, willing to challenge the status quo in pursuit of Zero Harm.

**Desirable**

1. Knowledge of groundwater science to address key water security issues in Australia.
2. Experience in programming and working with large spatial and time series data sets.

## **Not sure if you meet all the criteria?**

While it is CSIRO policy that the successful candidate must meet all the essential criteria, there are many ways to demonstrate this. Don’t let the list discourage you. If you are unsure about applying, please reach out to the contact on page 1 of this document so we can discuss the role further.

## **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 responses 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 change.

## **Required Competencies – 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, goal and priorities.

## **Setting you up for success**

We understand that not everyone works in the same way and sometimes people may require reasonable support and adjustments to perform at their best. Whether related to the recruitment process and or the role itself, this may include options such as providing different methods of communication, flexible hours or physical adjustments to work methods. If you feel comfortable, we encourage you to share any support and adjustments you may need to carry out the inherent requirements of the role. Please let us know via email Vicki.Ferrar@csiro.au (Vicki Ferrar – Talent Acquisition Partner) if we can help you to equitably participate in our recruitment process or the role itself.

## **Life at CSIRO and flexible working arrangements**

We [work flexibly at CSIRO](https://www.csiro.au/en/careers/life-at-csiro/Flexible-work), offering a range of options for how, when and where you work.  We can discuss flexible work arrangements with you during the recruitment process. CSIRO also offers a range of leave entitlements, [benefits](https://www.csiro.au/en/careers/life-at-csiro/Benefits) and [career development](https://www.csiro.au/en/careers/life-at-csiro/Career-development) opportunities. To learn more, visit [Careers at CSIRO](https://www.csiro.au/en/careers).

We celebrate the uniqueness of our workforce and are committed to creating [diverse and inclusive teams](https://www.csiro.au/en/careers/life-at-csiro/Diversity-inclusion-belonging) where everyone feels they belong. CSIRO is an equal employment opportunity organisation dedicated to recruiting people based on merit, and reflecting the diversity of the community we serve. We recognise true diversity encompasses all ages, nationalities, abilities, cultures, genders, sexualities, faiths, levels of education, diversity of thought and many more aspects of identity. By empowering diverse teams, our community is reflected in the solutions we create.

## **CSIRO values**

CSIRO is a values-based organisation committed to values-based leadership.

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| **Value** | **Descriptor** | **Behaviour** |
| **People first** | Our priority is the safety and wellbeing of our people. We believe in, and respect, the power of diverse perspectives. We seek out and learn from our differences.  | * Respectful
* Caring
* Inclusive
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| **Further together** | We achieve more together than we ever could alone. We listen and collaborate, in teams, across disciplines, across boundaries. We embrace ambiguity and use discussion and persistence to generate unique solutions to complex problems. | * Accountable
* Authentic
* Courageous
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| **Making it real** | We do science with real impact. We thrive when taking on the big challenges facing the world. We take educated risks and defy convention. We celebrate successes and failures and leverage them to learn as we strive to be the force for positive change. | * Partnering
* Cooperative
* Humble
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| **Trusted** | We’re driven by purpose but remain objective. We fight misinformation with facts. We earn trust everywhere through everything we do. We trust each other and we hold each other accountable. Together our actions drive Australia’s trust in CSIRO. | * Curious
* Adaptive
* Entrepreneurial
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## **Child safety**

CSIRO is committed to the safety and wellbeing of all children and young people involved in our activities and programs. View our [Child Safe Policy](https://www.csiro.au/en/about/policies/child-safe-policy).

Special Requirements

Appointment to this role is subject to provision of a pre-employment background check and may be subject to other security/medical/character clearance requirements.

* The successful candidate will undertake a pre-employment background check. Please note that individuals with criminal records are not automatically deemed ineligible. Each application will be considered on its merits.
* If the successful candidate is not an Australian Citizen or Permanent Resident, they may be required to undergo additional security clearances, which may include medical examinations and an international standardised test of English language proficiency (i.e. IELTS test) – <https://ielts.com.au/>