# Research Projects – CSOF3

Role summary for potential applicants

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| Advertised Job Title**:** | Experimental Groundwater Scientist |
| Reference Number**:** | 57085 |
| Classification**:** | CSOF3 |
| Salary Range: | $61K to $78K plus up to 15.4% superannuation |
| Location**:** | Adelaide (Waite Campus), South Australia |
| Tenure: | Indefinite |
| Relocation assistance**:** | Will be provided to the successful candidate if required. |
| Applications are open to: | Australian/New Zealand Citizens and Australian Permanent Residents Only |
| Functional Area**:** | Research Projects |
| % Client Focus - Internal: | 50% |
| % Client Focus - External: | 50% |
| Reports to the: | Team Leader |
| Number of Direct Reports: | 0 |

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| **Role Overview:** |
| The role of Research Projects staff in CSIRO is to collaborate in scientific activities with other research staff usually by assisting with detailed planning, undertaking or assisting with experimental and observational work, and in carrying out the more practical aspects of the work.  The Experimental Groundwater Scientist will be a part of the Environmental Tracers and Applications team in Adelaide. The team sits within the Water Resources Management Program and operates one of the leading environmental tracer laboratories with advanced noble gas analysis capability for groundwater studies.  This role will contribute to innovative measurement-based groundwater research and deliver to high impact projects on (i) demonstrating seal continuity of deep sedimentary formations overlying unconventional gas reservoirs, (ii) the role of geological faults with regard to inter-aquifer connectivity, and (iii) quantifying groundwater-surface water interactions in dynamic river systems.  The Experimental Groundwater Scientist will contribute to multi-disciplinary projects across CSIRO and its partners, in Australia and overseas. He/she will have the ability to contribute to the measurement and interpretation of rare stable and radioactive noble gas isotopes for improving characterisation of the water cycle. |

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| **Duties and Key Result Areas:** |
| * Assist in undertaking groundwater sampling across Australia for environmental tracer analysis. * Contribute to all groundwater sample preparation steps in the laboratory, including gas extraction and gas separation. * Apply new tools for more efficient field-based groundwater sampling, gas extraction and analysis using the field-based large volume gas extraction for 85Kr, 39Ar, 81Kr and Membrane Inlet Mass Spectrometry System - MIMS). * Contribute to tracer data analysis (updating tracer database, spatial analysis and mapping of tracer and hydrogeological data). * Work closely with CSIRO Land and Water leaders to develop research ideas and business opportunities. * Communicate effectively and respectfully with all staff, clients and suppliers in the interests of good business practice, collaboration and enhancement of CSIRO’s reputation. * Work as part of a multi-disciplinary, often regionally dispersed research team, to carry out tasks under limited direction in support of scientific research. * Work collaboratively with colleagues within your team, the business unit and across CSIRO, to reach objectives. * Provide instruction on activities pertaining to the immediate work area and responsibilities, as required. * Adapt and/or develop original experimental methods/equipment/software/concepts/ ideas in support of existing and further research. * 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. |

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| **Selection Criteria:** |
| *Under CSIRO policy only those who meet all essential criteria can be appointed*  ***Pre-Requisites:***   1. **Education/Qualifications** Bachelors/Masters Degree &/or equivalent experience in Science (e.g. Environmental Science, Hydrology, Physics, Resource Management) or Engineering. 2. **Communication:** Ability to communicate in a fluent and courteous manner, both orally and in writing, offering factual information supported by proven data, and providing appropriate feedback when required. 3. **Behaviours:** A history of professional and respectful behaviours and attitudes in a collaborative environment. 4. **Adaptability:** The ability to effectively manage a number of competing priorities simultaneously, and carry out non-routine tasks under general direction. 5. **Problem Solving:** Proven ability to investigate routine problems by identifying and considering the implications of a range of available alternative solutions**.**   ***Essential Criteria:***   1. Demonstrated expertise in hydrogeological field investigations, including groundwater sampling for environmental tracer analysis. 2. Track record in contributing to the development and/or operation of groundwater tracer analyses. 3. **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.** 4. A record of science innovation and creativity plus the ability & willingness to incorporate novel ideas and approaches into scientific investigations.   **Desirable Criteria:**   1. Expert skills ingroundwater sample preparation steps in the laboratory, including gas extraction and gas separation for tracer analysis. 2. Operation and maintenance of other lab and/or field-based tracer analysis techniques (e.g. laser-based stable isotope techniques). 3. Operation and maintenance of noble gas mass spectrometer.   **As Australia’s Innovation Catalyst, CSIRO has strategic actions underpinned by behaviours aligned to**:   * Excellent science * Inclusion, trust & respect * Health, safety & environment * Delivery on commitments.   **In your application and at interview you will need to demonstrate alignment with these behaviours.** |

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| **Other Information:** |
| **How to Apply**  Please apply for this position online at <https://jobs.csiro.au/> and enter requisition number **57085**. Internal applicants please apply via ‘Jobs Central’ in SAP (click ‘Recruitment’).  Please load your CV (Maximum 2MB). You may also be required to respond to some screening questions.  If you experience difficulties applying online call 1300 984 220 for assistance. Outside Australian business hours please email: [csiro-careers@csiro.au](mailto:csiro-careers@csiro.au).  **Referees**: Please provide contact details of two previous supervisor or academic/professional referees in your resume/CV. We will ask your permission before making contact.  **Contact:** If after reading the position details above you require more information please contact:  **Dr Dirk Mallants**via email: dirk.mallants@csiro.au or phone: +61 8 8303 8595  Please do not email your application directly to Dr Mallants. Applications received via this method may not be considered by the selection panel.  **About CSIRO**  Australia is founding its future on science and innovation. Its national science agency, the Commonwealth Scientific and Industrial Research Organisation (CSIRO) is a powerhouse of ideas, technologies and skills for building prosperity, growth, health and sustainability. It serves governments, industries, business and communities across the nation.  Find out more! [www.csiro.au](http://www.csiro.au).  We work flexibly at CSIRO, offering a range of options for how, when and where you work. Talk to us about how this role could be flexible for you.  Find out more! [CSIRO Balance](https://www.csiro.au/en/Careers/A-great-place-to-work/Work-life-balance)  **CSIRO Land and Water** provide the science to underpin Australia’s economic, social and environmental prosperity through stewardship of land and water resources ecosystems, and urban areas.  Land and Water is delivering the knowledge and innovation needed to underpin the sustainable management of our land, water, and ecosystem biodiversity assets. Through an integrated systems research approach we provide the information and technologies required by government, industry and the Australian and international communities to protect, restore, and manage natural and built environments.  Land and Water is a national and international partnership led by CSIRO and involving leading research providers from the national and global innovation systems. Our expertise addresses Australia’s national challenges and is increasingly supporting developed and developing nations response to complex economic, social, and environmental issues related to water, land, cities, and ecosystems.  Find out more! <https://www.csiro.au/en/Research/LWF> |