
# Candidate Brief
# Otago Regional Council – Senior Scientist Catchment Modelling

July 2020

decipher **the people you need** to succeed

## About the company

At the Otago Regional Council (ORC), their mission is 'for our future'. ORC is here to protect and enhance the environment and enable their communities to do the same. To be sure ORC can deliver on its responsibilities, they are evolving as an organisation, and they're not overstating when they say they have some really big targets to reach. ORC need the right people, in the right roles, to help them get there.

Otago is a pretty special environment and ORC are committed to working with their communities to ensure it stays that way now, and for the future. With a number of challenges on the horizon - freshwater, climate change, biodiversity and urban development – the Science Team at ORC play a critical role in providing scientific expertise to inform decisions particularly with regard to natural resource management.

## About the opportunity

The Senior Scientist – Catchment Modelling leads innovative research and develops new and original research programmes with the Science Leadership team. They are a proven technical specialist in their research area (Catchment Modelling) and demonstrate science impact by disseminating research findings through Council and scientific forums and presents at regional and national events. The Senior Scientist is a nationally recognised scientist and leader in their research field. They are an effective, confident communicator and is a trusted, credible and proven researcher. They have a proven ability to work across disciplines to deliver the best outcomes for the environment and the community.

Reporting to the Team Leader – Water, and working closely with scientists across the Science Team, the Senior Scientist – Catchment Modelling takes overall accountability for:

- Actively contributing to Council's freshwater initiatives, providing practical hydrology advice, issue identification, research, modelling expertise, interpretation and reporting.
- Contributing at a strategic level to the development and management of monitoring strategies, policy planning, research implementation in the form of action plans and management practices, along with technical review.
- Communicating effectively with landowners, managers and rate payers. Actively establishing networks and staying informed on community, regional, national and international freshwater quality issues as well as keeping abreast of relevant legislation and new technologies.

This role needs a proven technical specialist who is willing to adopt a collaborative approach to leading and engaging in innovative applied research with their fellow scientists. Is this you?

## About you

To be successful in this role, you will ideally:

- Have a PhD and more than 5 years proven research experience in their research area and relevant science discipline.
- Possess national experience and networks in catchment modelling and hydrology.

- Be a great communicator that is skilled in talking to groups and individuals; Council meetings, Conference presentations, external stakeholders and industry as well as Scientists, Team Leaders, Managers, General Managers and team members.
- Confidence in research design, analysis and visualisation of data for publication using R, SAS or similar.
- Have specialist knowledge of New Zealand's science system and experience working with stakeholders in the environmental research sector.
- Mentor Scientists.

If you adopt a collaborative approach to research and have experience in leading, mentoring, and decision making in an ethical and trustworthy way, then this could be the role for you.

Not your research area? Otago Regional Council are advertising for Scientists and Senior Scientists in other disciplines. Should you be interested and wish to enquire further, please visit the Decipher Group website or contact the consultant below.

## How to apply

To discover more about Otago Regional Council, visit https://www.orc.govt.nz/

For a confidential discussion about the role; contact Katy Boyle on 027 278 2860 or by email to katy@deciphergroup.co.nz

Applications close: 21 August 2020

# POSITION DESCRIPTION

**Effective from: July 2020**

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| **Position Title** | **Senior Scientist (All Variants)** |
| **Reporting To** | **Team Leader** |
| **Directorate** | **Strategy, Policy and Science** |
| **Location** | **Dunedin** |
| **Supervising** | **None** |

| ORC's Organisational Values and Behaviours | | | | | |
|---|---|---|---|---|---|
| **Caring** *We take great care in all we do* | **Collaborative** *Great relationships enabling great outcomes* | **Accountable** *Deliver on our promises* | **Trustworthy** *We do what we say we'll do* | **Creative** *Seeking better ways of doing things* | **Open & Honest** *Encouraging openness and honesty* |
| ▪ Taking due care<br>▪ Using resources appropriately<br>▪ Kaitiakitanga<br>▪ Responsiveness | ▪ Common vision<br>▪ Sharing knowledge and resources<br>▪ Partnerships with common goals<br>▪ Team work | ▪ Having honest conversations<br>▪ Doing the right thing<br>▪ Trustworthiness<br>▪ Ownership | ▪ Speaking with courage<br>▪ Acting ethically and with mana<br>▪ Following up<br>▪ Enabling great outcomes for all | ▪ Challenging the 'status quo'<br>▪ Continuous improvement<br>▪ Creative problem solving<br>▪ Understanding the 'why' | ▪ Speaking up<br>▪ Being approachable<br>▪ Speaking with integrity<br>▪ Inviting differing points of view |

## Purpose

**The purpose of the Senior Scientist** is to lead innovative research and develop new and original research programmes with the Science Leadership team. The Senior Scientist is a proven technical specialist in their research area and demonstrates science impact by disseminating research findings through Council and scientific forums and presents at regional and national events. The Senior Scientist collaborates within and across research project teams leading to successful outcomes. They create a team culture of high-performance excellence, mentor scientists and are a role model of ORC's values. Senior Scientists have Environment Court expert witness capability.

- **Senior Scientists** are nationally recognised scientists and leaders in their research field. They are effective, confident communicators and are trusted, credible and proven researchers. They have a proven ability to work across disciplines to deliver the best outcomes for the environment and the community.

| Results Area | Activities | Expected Outcome |
|---|---|---|
| **Research Practice: planning, data analysis and interpretation.** | Lead and develop innovative and new research programmes.<br><br>Collaborates with Scientists from | Investigations and analysis are scientifically robust and at a level matching the complexity of the issues investigated and analysed. |

| Results Area | Activities | Expected Outcome |
|---|---|---|
| | other organisations to identify opportunities for leveraging data and technology to underpin scientific integrity.<br><br>Takes full responsibility and accountability for the science aspects of council projects, from initial project planning data collection, preparation, analysis, dissemination and communication of results.<br><br>Keeps abreast of relevant new statistical and scientific tools and methodologies.<br><br>Makes a significant contribution to scientific research through the application of innovative and/or specialised science.<br><br>Demonstrates thought leadership.<br><br>Demonstrates applied science impact on the Otago environment and community through reporting and communicating at community, regional and national events.<br><br>Demonstrates and leads robust scientific processes; investigates, analyses, evaluates and interprets environmental data, providing context specific recommendations and advice.<br><br>Actively contributes to multidisciplinary project teams, providing leadership, oversight and guidance where necessary. | Provides evidence-based recommendations.<br><br>Scientific integrity and credibility of the Council is maintained and enhanced.<br><br>Environmental monitoring and reporting are compliant with legislative requirements and give effect to relevant national legislation/policy, regional policies/plans and environmental standards.<br><br>Pressures, trends, changes and emerging issues are identified, analysed, reported and recommendations provided in a timely manner.<br><br>Supports policy, strategy, plan development and review processes, with robust scientific information and advice provided in a professional and timely manner.<br><br>Clear, concise planning and reporting.<br><br>Reporting is completed to a high standard, within the designated timeframe and peer review sought when needed.<br><br>When providing recommendations, the Senior Scientist considers all available evidence. |
| **Technical Expertise and Advice** | Provide technical specialist advice for regulatory systems and judicial proceedings.<br><br>Investigate and report on specific applications for Resource Consents and advise other council teams as required.<br><br>A subject matter expert, providing advice to clients and stakeholders on relevant matters to ensure best practice is followed, and relevant information is provided. | Advice is accurate, reliable and timely.<br><br>The Senior Scientist is a respected subject matter expert across ORC.<br><br>Presentations are informative and tailored to suit the audience.<br><br>Council is a trusted and credible source of scientific and research information.<br><br>A trusted scientific advisor across ORC. |

| Results Area | Activities | Expected Outcome |
|---|---|---|
| | Keep abreast of current/future trends through continuous learning to ensure advice provided is up-to-date, relevant and correct.<br><br>Produce effective and engaging presentations to various stakeholder groups, ensuring information is accurate, digestible, informative and relevant. | Presentation of Council's viewpoint to various stakeholder groups. |
| **Science relationships** | Initiate and maintain strong, trusted and respected relationships with Scientists and Team Leaders and science members.<br><br>Promote the knowledge of the Science Team and build new collaborations internally and externally.<br><br>Supports the advancement of the research area within the science team and across ORC, including providing specialist guidance and training on science and monitoring tools, methods and analysis software.<br><br>Collaborates internally to ensure information and advice are aligned with organisational needs.<br><br>. | Technical information is easily accessed, interpreted and communicated effectively.<br><br>Presentations are succinct, engaging and tailored to the audience.<br><br>A culture of collaboration and community engagement is always evident.<br><br>Community stakeholders are kept informed of the state of the environment.<br><br>Staff in other teams receive high quality scientific advice in a timely manner.<br><br>Questions arising from presentations/forums are answered or referred as appropriate.<br><br>Scientific integrity and credibility of the Council is maintained.<br><br>Provides scientific, operational and thought leadership.<br><br>A culture of collaboration and knowledge sharing is evident.<br><br>Training provided is engaging and informative, with specific needs and outcomes clearly identified. |
| **Training and mentoring** | Mentor and coach junior scientists and serve as a conduit to other staff, sharing knowledge and helping others develop their skills.<br><br>Train technical staff to undertake monitoring. | Where appropriate, undertake training with ORC team members in other groups to ensure information collected is relevant and collected to meet project design and analysis methods. |

| Results Area | Activities | Expected Outcome |
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| **Other Duties** | If required, be available to participate on the Council's flood warning/emergency response roster.<br><br>Contribute to the flexibility, agility and adaptability of your team and the wider organisation, by undertaking duties from time to time that may be in addition to those outlined above but which fall within your capabilities and experience.<br><br>Act as a role model for the Otago Regional Council in all that you do. | Respond positively to requests for assistance in own and other areas, demonstrating adaptability and willingness.<br><br>Produce work that complies with ORC processes and reflects best practice.<br><br>Where you are unsure, questions are asked to ensure policy and best practice is maintained.<br><br>Enhance the reputation of the ORC in all that we do. |
| **Professional and Career Development** | Identify, in conjunction with your Team Leader and Science Manager, areas for both personal and professional development, in line with your career development plan. | Training and development goals are identified/agreed with your line manager.<br><br>Performance objectives reviewed annually with your line manager.<br><br>Actively seek feedback and accept constructive criticism.<br><br>A minimum of two performance related meetings [outside of the formal review process] annually. |
| **Health & Safety** | Always have the wellbeing of self and others as a priority.<br><br>Champion, support, implement and adhere to H&S policies and procedures.<br><br>Champion a culture that supports and maintains 'Doing Safety Differently', (the well-being of all ORC employees, and all those that we work with) environmental and sustainability practice and management.<br><br>Promote a safe and environmentally sound working environment and a culture of safe and responsible behaviours and attitudes. | H&S policies and practices and other related policy and initiatives are complied with.<br><br>Works in a safe manner at all times to avoid harm to self and others.<br><br>All incidents, accidents and near misses are promptly reported.<br><br>All risks effectively managed and no outstanding compliance issues.<br><br>There are no preventable work-related injuries and/or incidents. |

| Results Area | Activities | Expected Outcome |
|---|---|---|
| | Report all risks identified and contribute to their elimination or minimisation.<br><br>Actively contribute to H&S initiatives. | Appropriate PPE gear is worn as required by ORC/legislative policy. |

| Relationships |
|---|
| ▪ Manager Science<br>▪ Science Team, Team Leaders and General Manager of Strategy, Policy and Science.<br>▪ Crown Research Institutes and tertiary education institutions<br>▪ Industry bodies<br>▪ Territorial Authorities and other Regional Councils<br>▪ Iwi<br>▪ Government organisations<br>▪ Special Interest/Research Groups<br>▪ Community groups<br>▪ Media<br>▪ Community groups<br>▪ Council |

| Person Specification | | |
|---|---|---|
| The expertise and competencies required for a person to reach full competency in the role. | | |
| | **Essential** | **Desirable** |
| **Education and Qualifications (or equivalent level of learning)** | • A PhD or relevant postgraduate research qualification in relevant science discipline. | • Knowledge of the Resource Management Act and Regulatory Framework is beneficial.<br>• Understanding of the principles of the Treaty of Waitangi. |
| **Experience** | • More than 5 years relevant technical and applied research experience.<br>• A proven track record in reporting applied science and research outcomes.<br>• National research networks.<br>• Recognised by peers and collaborators for expertise in research area and in science application.<br>• Has mentored and lead others. | • Preferably 5-10 years relevant technical and post degree research experience |
| **Professional knowledge and accountabilities:** | • Specialist knowledge of research area and relevant science discipline.<br>• Peer recognition of contribution to regional and national sector.<br>• Expert witness capability. | |

| | |
|---|---|
| | • Keeps abreast of the latest scientific research and new technologies/tools.<br>• A great communicator that is skilled in talking to groups and individuals; Council meetings, Conference presentations, external stakeholders and industry as well as Scientists, Team Leaders, Managers, General Managers and team members.<br>• Uses rigorous logic and methods to solve difficult problems providing effective solutions; probes all sources for answers; can see hidden problems; provides honest analysis; acknowledges known and unconscious bias; identifies positive and negative implications and provides trusted thought leadership.<br>• Confidence in research design, analysis and visualisation of data for publication using R, SAS or similar.<br>• Specialist knowledge of New Zealand's science system and experience working with stakeholders in the environmental research sector.<br>• Mentors Scientists.<br>• Generates consistent, accurate and high-quality outputs.<br>• Valued contributor to other research areas and programmes.<br>• Knows personal strengths, weaknesses, opportunities and limits; seeks feedback; gains insights from mistakes; is open to criticism; isn't defensive; and is receptive to talking about shortcomings in research programmes. |
| **Personal Qualities** | • Aligned with ORC values.<br>• Works well in a team.<br>• Inclusive and considerate of others.<br>• Responsible and trustworthy.<br>• Can build effective relationships with all levels of the organisation.<br>• Self-managed, self-motivated and takes the initiative.<br>• A strong customer focus including the ability to develop solutions that provide 'value for money'.<br>• Ability to manage and/or contribute effectively to project teams.<br>• Well-developed communication, presentation and inter-personal skills.<br>• Ability to positively engage, mentor and lead others. |

From time to time it may be necessary to consider changes to the position description in response to the changing nature of our work environment and business needs.

Science: Senior Scientist – Catchment Modelling
ROLE SPECIFIC DESCRIPTION

## Purpose

The Senior Scientist – Catchment Modelling will report to the Team Leader – Water, and work with scientists across the Science Team to assist with effective management of Otago's natural freshwater resources by providing professional scientific expertise and advice on practical hydrology (flow naturalisation) and hydro-ecology (minimum flows) to the Council for monitoring, resource investigation, evaluation, planning and resource consents.

**The purpose of the Senior Scientist** is to lead innovative applied research and develop new and original research programmes with the Science Leadership team. The Senior Scientist is a proven technical specialist in their research area and demonstrates science impact by disseminating research findings through Council and scientific forums and presents at regional and national events. The Senior Scientist collaborates within and across research project teams leading to successful outcomes. They create a team culture of high-performance excellence, collaboration, mentor scientists and are a role model of ORC's values.

## Focus

**Senior Scientists** are nationally recognised scientists and leaders in their research field. They are effective, confident communicators and are trusted, credible and proven researchers.
The Catchment Modeller will:

- Actively contribute to Council's freshwater initiatives, providing practical hydrology advice, issue identification, research, modelling expertise, interpretation and reporting.
- Contribute at a strategic level to the development and management of monitoring strategies, policy planning, research implementation in the form of action plans and management practices, along with technical review.
- Communicate effectively with land owners, managers and rate payers. Actively establish networks and stay informed on community, regional, national and international freshwater quality issues as well as keeping abreast of relevant legislation and new technologies.

**Professional knowledge and accountabilities:**

- A PhD and more than 5 years proven research experience in their research area and relevant science discipline.
- National experience and networks in catchment modelling and hydrology.
- A proven track record in publishing quality science reports and publications.
- Peer recognition of contribution to regional and national sector.
- Keeps abreast of the latest scientific research and new technologies/tools.
- A great communicator that is skilled in talking to groups and individuals; Council meetings, Conference presentations, external stakeholders and industry as well as Scientists, Team Leaders, Managers, General Managers and team members.
- Uses rigorous logic and methods to solve difficult problems providing effective solutions; probes all sources for answers; can see hidden problems; provides honest analysis; acknowledges known and unconscious bias; identifies positive and negative implications and provides trusted thought leadership.
- Confidence in research design, analysis and visualisation of data for publication using R, SAS or similar.
- Well-developed computer skills, including GIS/spatial analysis.

- Specialist knowledge of New Zealand's science system and experience working with stakeholders in the environmental research sector.
- Mentors Scientists.
- Generates consistent, accurate and high-quality outputs.
- Valued contributor to other research areas and programmes.
- Knows personal strengths, weaknesses, opportunities and limits; seeks feedback; gains insights from mistakes; is open to criticism; isn't defensive; and is receptive to talking about shortcomings in research programmes.

Professional skills and behaviours:

- Investigation and inquiry
- Critical thinking
- Research design
- Statistical analysis
- Data management
- Report writing and publication
- Confident presenter
- Expert witness capability
- Builds trusted relationships
- Has courage, shows humility, trustworthy.
- Positively engage, mentor and lead others.
- Represent ORC

## Role Specific Skills & Experience

- Preferably 5-10 years relevant technical and post degree research experience
- Relevant technical and research experience in catchment modelling, hydrology and water management.
- A proven track record in defining information needs, conducting analyses, systems modelling and developing user-oriented reports.
- Understanding of hydrology and rainfall run-off models and their limitations.
- An understanding of resource management issues and practices.
- An understanding and appreciation for Ki uta ki tai (from the mountains to the sea)
- Understanding of Mātauranga Māori, with an emphasis on indigenous research priorities/methodologies.

## Role Specific Responsibilities

Specific tasks and responsibilities in addition to the PD will include:

- Investigating, analysing, evaluating, interpreting and reporting hydrological data and processes in catchment investigations. Model river flows, focusing on low-flow, high-flows (flood), rain run-off and lake level analyses,
- proposing solutions to address negative environmental impacts and to promote environmental enhancement through water management,
- Reporting and presenting on environmental research associated with surface water allocation, environmental flow setting, water quality and freshwater ecology.
- participating in management planning by providing environmental information.

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www.deciphergroup.co.nz

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