

Role Description

(Non-Manager)



Our purpose – Helping South Australians Conserve, Sustain and Prosper.

Role Title: Senior Environmental Data Modeller	Division: Biodiversity & Nature Economy
Classification Level: ASO6	Branch/Unit: Biodiversity Science, Coasts & Information Branch / Geospatial Environmental Data & Information Unit
CHRIS Position Number: P59423	Reports to (Title): Team Leader, Environmental Database Management

About the Agency – [Department for Environment and Water](#)

About the Role

The Senior Environmental Data Modeller provides high-level specialist expertise in the design, development and maintenance of complex environmental data models and associated data assets that support DEW's statutory, regulatory, science and policy functions. The role works closely with subject matter experts, geospatial specialists, developers and business stakeholders to ensure environmental data is structured, governed and fit-for-purpose across on-premises and cloud-based platforms.

A significant focus of the role is the design and implementation of advanced data models, including graph information models and graph database solutions, to support complex biological and biodiversity datasets.

The role has an initial strategic focus on delivering data models and information products required to support the implementation of South Australia's *Biodiversity Act 2025* (the Act) and the delivery of BioData SA, with a contribution to other high-value environmental data products across the department.

Key Role Outcomes

- Lead the analysis, design and implementation of conceptual, logical and physical data models for complex environmental and biodiversity datasets, including graph information models and graph database structures.
- Develop and maintain enterprise-grade database schemas, data standards and metadata aligned with DEW and whole-of-government frameworks.
- Provide advice on data architecture, modelling approaches and best practice for environmental, biological and geospatial information systems, including graph-based approaches.
- Support the delivery of data products and reporting required under the Act, ensuring data integrity, traceability and auditability.
- Collaborate with business areas to translate legislative, policy and scientific requirements into robust and scalable data structures.

- Design and optimise data models across mixed hosting environments, including on-premises infrastructure and AWS cloud platforms.
 - Develop and maintain complex database queries.
 - Ensure data quality, performance, security and governance considerations are embedded in all modelling activities.
 - Mentor and provide technical guidance to other team members, contributing to capability uplift across the unit.
 - Contribute to continuous improvement of data management practices, tools and documentation.
 - Prepare high-quality technical documentation, briefs and advice for management and stakeholders.
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Essential Criteria (including qualifications)

[Must be addressed by candidates in written application letter (max 3 pages) in addition to CV unless advertisement advises otherwise]

- Demonstrated experience designing and implementing complex data models for large, structured environmental or scientific datasets.
 - Demonstrated expertise in data modelling, engineering and database design, including knowledge of graph databases and graph information models for complex environmental or scientific datasets.
 - Experience with the software development lifecycle and proven full stack development with at least one low level C-based language plus additional skills in a language such as Python or R.
 - High-level analytical and problem-solving skills, with the ability to interpret complex business requirements.
 - Experience working collaboratively with multidisciplinary teams and non-technical stakeholders.
 - Well-developed written and verbal communication skills, including the ability to produce clear technical documentation.
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Desirable Criteria

- Experience working with biodiversity, biological, environmental, geospatial or natural resource data.
 - Knowledge of data governance, metadata standards and information management frameworks within government.
 - A relevant tertiary qualification in information technology, data science, environmental science, geospatial science or a related discipline is highly desirable.
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Key Relationships/Interactions

- Works as part of the Geospatial, Environmental Data and Information Team.
 - Works collaboratively with the Directors, senior managers and staff in the BSCI branch and ICT.
 - Works closely BioData SA program team, including senior managers and staff of DEW.
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Special Conditions

- May be required to participate in responses to state emergencies or associated duties.
- You must be an Australian citizen, permanent resident, or provide evidence that you hold a valid working visa that allows you to work in Australia without restrictions.

- Prior to being employed, the successful candidate will be required to provide a valid Nationally Coordinated Criminal History Check (NCCHC), which is required to be renewed every three years. DEW will cover the cost of renewal.
- May be required to undertake intra or interstate travel, occasional overnight absences, and work outside of the normal hours of work.

Core Competencies	Elements	Behavioural Indicators
Shapes Strategic Thinking and changes	• Clear Vision and Direction • Thinking and Acting Strategically	• Ensures own work is aligned with the Agency's strategic priorities. • Develops business and/or operational plans to take account of the Agency's strategic directions. • Makes strategic judgments and presents options based on implications of analytical thinking.
Achieves Results	• Delivering effective outcomes • Assuming Accountability	• Sets priorities for self and proactively manages workflow to ensure that deadlines and set timeframes are met. • Deals assertively in overcoming barriers to action. • Establishes own credibility by demonstrating competence, sound judgement, knowledge, and professionalism.
Drives Business Excellence	• Optimising performance • Facilitating Quality and Continuous Improvement	• Identifies areas of work that may no longer be required and can 'let go' whilst managing customer expectations • Benchmarks current services against 'best practice'. • Recognises problems as opportunities for improvement and facilitates discussion and/or development of processes to address these.
Forges Relationships and Engages Others	• Communicating & Managing Conflict • Influencing and Negotiating	• Appreciates differences in opinion and shows consideration and diplomacy in responding • Respects others' views and incorporates these into communication and decision making • Understands wider business objectives and integrates these into recommendations to gain greater buy in and commitment from others Uses business and subject matter knowledge to influence engagement in outcomes
Exemplifies Personal Drive and Professionalism	• Integrating Diversity in the Workplace	• Seeks to strengthen decision making by incorporating different views into service delivery and programs.

Work Health and Safety

Participate in workplace safety procedures and programs

- Leads and/or participates in health and safety discussions in the workplace.
 - Identifies hazards, assesses risks and implements procedures for controlling risks.
 - Provides workplace safety information and advice where relevant.
 - Applies procedures for dealing with incidents and emergency events as required.
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Corporate Responsibilities

- Demonstrate appropriate and professional workplace behaviours that are in line with the Code of Ethics and the South Australian Public Sector Values.
- Maintain a commitment to EEO, Diversity, Ethical Conduct, and record keeping within legislative requirements, according to the principles of the Public Sector Act 2009.
- Exhibit and promote the behaviours in line with The way we work outlined in the DEW Corporate Plan.
- Actively participate in the Department's Performance Review and Development Program.
- Demonstrate appropriate and professional workplace behaviours that align closely with the White Ribbon message.

Date Delegate approved original classification:	28/5/2026	Original Class method:	Comparison
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