

Department of
Water and Environmental
Regulation



Position Description

Position Title: Senior Geospatial Applications Engineer

Classification Level: Level 6

Position Number: 101565

Reports to: Manager Data Engineering

Portfolio: Strategy and Performance

Supervises: Nil

Our Purpose

As Western Australia’s primary water and environmental regulator, the Department of Water and Environmental Regulation has a responsibility to be an influential and future-focused organisation.

Our Vision

Our vision is for a low-carbon Western Australia with a healthy environment and secure water resources for future generations.

Our Missions

Waste: We act to reduce the harmful impact of waste and create a low waste circular economy.

Climate: We act to reduce emissions, mitigate climate change impacts, and build greater environmental and community resilience.

Water: We act to ensure our water resources meet the needs of the community, ecosystems, and economic development.

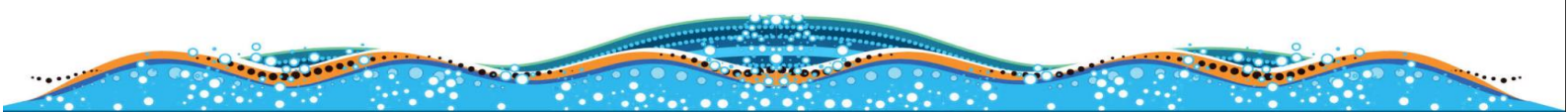
Environment: We act to make sure that environmental values are protected, and that development is sustainable.

Our Values



We serve to make a difference | We build trust | We care | Open minds | Better together

Our values underpin everything we do, they guide the way we conduct our work, how we engage with each other and deliver services to our customers. The ability to demonstrate how you will apply our values is important to us.



Role Summary

The Senior Geospatial Analyst contributes and assists the manager of the Data Engineering team in supporting exploration and transfer of database assets, data analytics to innovative modern practices / technologies. In addition, the position contributes to the Department's development of GIS frameworks, spatial standards, process documentation, improvement initiatives, and maintenance and development of GIS applications.

Leadership Context

We believe all our employees are leaders irrespective of their role. We consider this as critical to our success and, to support this, we have adopted [Leadership Expectations](#) which sets out the expected behaviours and associated mindsets for every leadership context to support staff to be successful and agency to be high performing.

The leadership contexts which outline how and where we add value through our work include *Personal Leadership, Leading Others, Leading Leaders, Multiple Area Leader, Executive Leader, Agency Leader, and Statewide Leader*.

The Leadership Context for this role is [Personal Leadership](#).

Your Responsibilities

Data Management (DATM)

- Ongoing administration and maintenance of corporate spatial database layers, including the management of data integrity and security, as well as system availability and performance.
- Management of corporate spatial data resources, including maintenance of storage structures and archives.
- Management of corporate spatial metadata.
- Assistance in the coordination of spatial data transactions between the internal and external stakeholders.
- Liaison with data custodians, Information Systems staff and application developers that ensures spatial datasets are effectively modelled and comply with corporate standards. Experience in the use of spatial data in developing applications and using relational databases.
- Provision of advice on interfacing with the corporate spatial database that ensures effective systems and data integration in accordance with the Corporate Data Model.
- Provide best-practice GIS and Information management support to GIS and business application development projects.
- Contribute to ongoing development of GIS processes and provide innovative solution to align GIS with business outcomes including development and the implementation and improvement of quality control processes for spatial data management.
- Advise on security, upgrades, backups, and disaster recovery requirements for GIS systems and applications.

Data and Analytics (DATS)

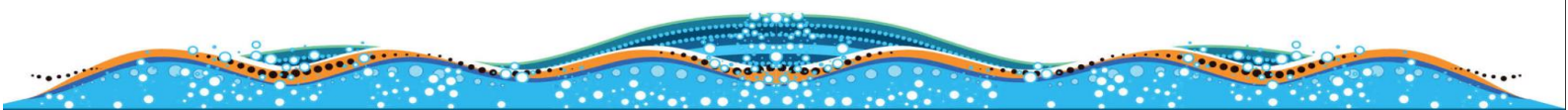
- Investigates the described problem and dataset to assess the usefulness of data science and analytics solutions.
- Applies a range of data science techniques and uses specialised programming languages. Understands and applies rules and guidelines specific to the industry and anticipates risks and other implications of modelling.
- Selects, acquires and integrates data for analysis. Develops data hypotheses and methods and evaluates analytics models. Advises on the effectiveness of specific techniques based on project findings and comprehensive research.
- Contributes to the development, evaluation, monitoring and deployment of data science solutions.

Technology Service Management (ITMG)

- Provision of accurate and timely advice and support on the modelling and design of spatial datasets.
- Assistance with the administration and maintenance of the corporate GIS infrastructure.
- Contribution to the development of documentation, procedures and guidelines supporting corporate GIS standards and software usage.
- Development, implementation and support of the web mapping services required by the department and the Departments corporate GIS environment.

System Software (SYSP)

- Assistance with the evaluation, planning, implementation and review of GIS technologies within the Department.
- Assistance with the development of the Department's GIS Strategic Plan, Implementation Plan and Corporate



Data Model

Relationship Management (RLMT)

- Builds long-term, strategic relationships with senior stakeholders (internal and external).
- Negotiates to ensure that stakeholders understand and agree what will meet their needs, and that appropriate agreements are defined.
- Promote methods and technologies for acquiring, managing, sharing and exploiting data within DWER

Quality Management (QUMG)

- Initiates improvements to processes by changing approaches and working practices, using recognised models.
- Achieves and maintains compliance against national and international standards and best practises, as appropriate.
- Identifies and plans systematic corrective action to reduce errors and improve the quality and performance of the database systems and services, by examination of the root causes of problems.

Other

- Applying the guidelines and principles of the Western Australian Public Sector Code of Ethics and the Department's Code of Conduct within a framework of high ethical standards and behaviour.
- Performing duties in accordance with departmental policies, procedures, and relevant public sector legislation.
- Applying relevant safety procedures/guidelines and equal opportunity principles to work performance.
- Additional duties as required within the skill and scope of position capabilities and departmental needs.

Capabilities

This position operates in accordance with the WA Public Sector Capability Profile: **Level 6**

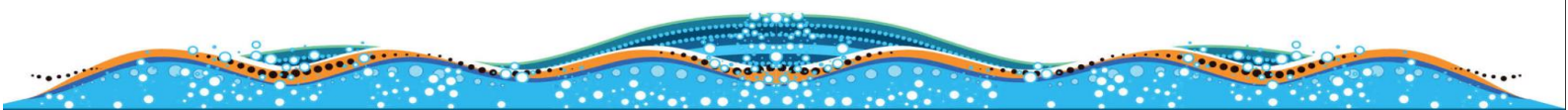
The Skills Framework for the Information Age (SFIA) skills which apply to this position are outlined below.

Employees are required to demonstrate competence and development toward these, which along with the work related requirements form the required capabilities of this position. Further information about the SFIA skills can be found at <https://sfia-online.org/en/sfia-8/all-skills-a-z>

SFIA 8 Skill Code	SFIA 8 Skill	SFIA Level
Core Skills		
DATM	Data Management	6
DATS	Data and Analytics	4
SYSP	System Software	5
RLMT	Relationship Management	5
ITMG	Technology Service Management	5
Contributing Skills		
QUMG	Quality Management	5
Awareness Skills		

Work related requirements

The following is to be read in the context of the preceding sections of this document.



Essential

1. Demonstrated well written and spoken communication skills, including experience in negotiating with internal and external parties.
2. Organisational and planning skills, including the ability to coordinate resources, prioritise and meet deadlines.
3. Experience in GIS data management, ideally including the modelling, design and manipulation of spatial datasets.
4. Experience in the use of ESRI GIS software based on:
 - Experience in the use of ArcGIS server Manager, ARCSDE and ArcGIS desktop applications
 - Experience managing ArcGIS online and ArcGIS portal
 - Experience in the use and management of Geocortex software including
 - Essential Manger, Workflow designer, Report designer
5. Knowledge of contemporary spatial data models, GIS analysis techniques and related theory.
6. Knowledge of relational databases, including Oracle, Microsoft SQL Server and distributed systems.
7. Scripting language experience including PYTHON, and Java script.

Desirable

8. Tertiary qualification in geographic information science or a related discipline.
9. Knowledge of QGIS, FME, Silverlight and HTML5 Viewer, Workflow Designer and Report Designer.

Special Requirements

10. Nil

Position Certification

The details contained in this document are an accurate statement of the position's responsibilities and requirements as of 30/06/24.

