

# Role Description

## Hydrologist



Department  
of Industry

Cluster	Planning, Industry & Environment
Agency	Department of Planning, Industry & Environment
Division/Branch/Unit	Water/ Planning
Location	Negotiable
Classification/Grade/Band	DPO 2-3
Role Family	Standard/Science & Engineering/Support
ANZSCO Code	234999
PCAT Code	1119192
Date of Approval	September 2019
Agency Website	<a href="http://www.dpie.nsw.gov.au">http://www.dpie.nsw.gov.au</a>

### Agency overview

The Planning, Industry and Environment Cluster was formed in 2019. The Cluster drives greater levels of integration and efficiency across key areas such as long-term planning, precincts, housing, property, infrastructure priorities, open space, the environment, our natural resources – land, water, mining – energy, and growing our industries. There is a strong emphasis on regional NSW.

### Primary purpose of the role

Plan and undertake hydrologic and hydraulic analysis using data analysis, and statistical techniques to calculate the current water availability to inform water allocation and management policy and planning for NSW.

### Key accountabilities

- Plan and undertake hydrology and hydraulics analysis of water movement, rainfall and water yield to inform water allocation, water storage and water usage across the state
- Undertake the analysis of water flow and rainfall data providing insight into predictive water planning, drought management, predicting potential water storage and allocation
- Manage and manipulate large data sets, estimating water yields, taking into account the utilisation of water in a specific natural drainage areas ('catchment's) to inform the development of water policy and plans
- Liaise and work with stakeholders and the community to enhance knowledge and understanding of the application of developments in hydrology and hydraulics to contemporary water resource management issues.
- Research and review guidelines, manuals, courses and other support materials to contribute to technology transfer on hydrology technological development and contribute to the continual improvement of techniques.

- As a member of various sized single and multidisciplinary projects and teams, plan, undertake and deliver projects to which provide evidence for water management planning and policy.

## Key challenges

- Delivering fit for purpose hydrologic and hydraulic datasets within the timelines available given the high level of demand for services for a range of hydrologic investigations relating to water resource management purposes.
- Translating complex scientific and technical concepts into simplified language to enable clear and concise report development and implementation of analysis.
- Working in an area which is complex due to changing technical, policy and scientific developments to process, critically analyse, interpret and report results in a manner that will clearly inform stakeholders.

## Key relationships

Who	Why
<b>Internal</b>	
Lead and Senior Hydrologist	<ul style="list-style-type: none"> <li>• Receive guidance and direction from Project Managers responsible for supervising and reviewing work program.</li> </ul>
Manager, Water Allocations	<ul style="list-style-type: none"> <li>• Direct line manager responsible for setting the work program and priorities.</li> </ul>
Director, Water Planning Implementation	<ul style="list-style-type: none"> <li>• Provide information as Director responsible for all operational management of allocation and implementation activities.</li> </ul>
<b>External</b>	
Water NSW	<ul style="list-style-type: none"> <li>• Provide technical input to water management issues as the agency responsible for operating NSW storages.</li> <li>• Promote effective interagency liaison regarding water management issues.</li> </ul>
Murray Darling Basin Authority	<ul style="list-style-type: none"> <li>• Provide technical input to water management issues as the agency with interest in reviewing and implementation of NSW models.</li> <li>• Promote effective interagency liaison regarding water management modelling issues.</li> </ul>

## Role dimensions

### Decision making

- Independently plans and sets priorities for work to be completed managing the day to day workload independently within agreed work and project plans.
- Recommends changes to work procedures and operating processes and systems.
- Manages the delivery of individual projects under the guidance of the manager
- Drafts reports, briefs and other work for review by the manager; and decides the scope, content and format of information.
- May be required to guide and supervise staff assigned to assist with project activities.

- Decisions are made in the context of best management practice in developing and implementing water management model and analytical techniques.
- All decisions in this regard are made in consultation with the Project Manager and Manager

### Reporting line

Reports to Manager, Water Allocations

### Direct reports

Nil

### Budget/Expenditure

N/A

### Essential requirements

- Degree level qualifications in Engineering, Natural Resources, Environmental Science, or a related discipline.
- Knowledge and experience in one or more of the following hydrologic disciplines: water resources management and water allocation, statistics, computer programming, spatial modelling, open channel hydraulics.
- Awareness of the strengths and limitations of relevant analytical techniques and data management.
- Experience in assessing the suitability of hydrologic and hydraulic datasets, data analysis and outputs for natural resource management requirements.
- Knowledge of the NSW Government's natural resource management agenda.

### Capabilities for the role





The NSW Public Sector Capability Framework applies to all NSW public sector employees. The Capability Framework is available at [www.psc.nsw.gov.au/capabilityframework](http://www.psc.nsw.gov.au/capabilityframework)

This role also utilises an occupation specific capability set which contains information from the Skills Framework for Information Age (SFIA). The capability set is available at [www.psc.nsw.gov.au/capabilityframework/ICT](http://www.psc.nsw.gov.au/capabilityframework/ICT)

### Capability summary

Below is the full list of capabilities and the level required for this role. The capabilities in bold are the focus capabilities for this role. Refer to the next section for further information about the focus capabilities.

## NSW Public Sector Capability Framework

Capability Group	Capability Name	Level
 <b>Personal Attributes</b>	Display Resilience and Courage	Intermediate
	<b>Act with Integrity</b>	<b>Intermediate</b>
	Manage Self	Intermediate
	Value Diversity	Foundational
 <b>Relationships</b>	<b>Communicate Effectively</b>	<b>Intermediate</b>
	<b>Commit to Customer Service</b>	<b>Foundational</b>
	Work Collaboratively	Intermediate
	Influence and Negotiate	Foundational
 <b>Results</b>	Deliver Results	Intermediate
	<b>Plan and Prioritise</b>	<b>Intermediate</b>
	Think and Solve Problems	Intermediate
	<b>Demonstrate Accountability</b>	<b>Foundational</b>
 <b>Business Enablers</b>	Finance	Foundational
	Technology	Intermediate
	Procurement and Contract Management	Foundational
	<b>Project Management</b>	<b>Adept</b>

### Focus capabilities

The focus capabilities for the role are the capabilities in which occupants must demonstrate immediate competence. The behavioural indicators provide examples of the types of behaviours that would be expected at that level and should be reviewed in conjunction with the role's key accountabilities.

## NSW Public Sector Capability Framework

Group and Capability	Level	Behavioural Indicators
<b>Personal Attributes</b> Act with Integrity	Intermediate	<ul style="list-style-type: none"> <li>• Represent the organisation in an honest, ethical and professional way</li> <li>• Support a culture of integrity and professionalism</li> <li>• Understand and follow legislation, rules, policies, guidelines and codes of conduct</li> <li>• Help others to understand their obligations to comply with legislation, rules, policies, guidelines and codes of conduct</li> <li>• Recognise and report misconduct, illegal or inappropriate behaviour</li> <li>• Report and manage apparent conflicts of interest</li> </ul>
<b>Relationships</b> Communicate Effectively	Intermediate	<ul style="list-style-type: none"> <li>• Focus on key points and speak in 'Plain English'</li> <li>• Clearly explain and present ideas and arguments</li> <li>• Listen to others when they are speaking and ask appropriate, respectful questions</li> <li>• Monitor own and others' non-verbal cues and adapt where</li> </ul>

## NSW Public Sector Capability Framework

Group and Capability	Level	Behavioural Indicators
		<ul style="list-style-type: none"> <li>necessary</li> <li>• Prepare written material that is well structured and easy to follow by the intended audience</li> <li>• Communicate routine technical information clearly</li> </ul>
<b>Relationships</b> Commit to Customer Service	Foundational	<ul style="list-style-type: none"> <li>• Understand the importance of customer service</li> <li>• Help customers understand the services that are available</li> <li>• Take responsibility for delivering services which meet customer requirements</li> <li>• Keep customers informed of progress and seek feedback to ensure their needs are met</li> <li>• Show respect, courtesy and fairness when interacting with customers</li> </ul>
<b>Results</b> Plan and Prioritise	Intermediate	<ul style="list-style-type: none"> <li>• Understand the team/unit objectives and align operational activities accordingly</li> <li>• Initiate, and develop team goals and plans and use feedback to inform future planning</li> <li>• Respond proactively to changing circumstances and adjust plans and schedules when necessary</li> <li>• Consider the implications of immediate and longer term organisational issues and how these might impact on the achievement of team/unit goals</li> <li>• Accommodate and respond with initiative to changing priorities and operating environments</li> </ul>
<b>Results</b> Demonstrate Accountability	Foundational	<ul style="list-style-type: none"> <li>• Complete own work tasks under guidance, within set budgets, timeframes and standards</li> <li>• Take the initiative to progress own work Identify resources needed to complete allocated work tasks</li> <li>• Seek clarification when unsure of work tasks</li> </ul>
<b>Business Enablers</b> Project Management	Adept	<ul style="list-style-type: none"> <li>• Prepare clear project proposals and define scope and goals in measurable terms</li> <li>• Establish performance outcomes and measures for key project goals, and define monitoring, reporting and communication requirements</li> <li>• Prepare accurate estimates of costs and resources required for more complex projects</li> <li>• Communicate the project strategy and its expected benefits to others</li> <li>• Monitor the completion of project milestones against goals and initiate amendments where necessary</li> <li>• Evaluate progress and identify improvements to inform future projects</li> </ul>