

# Role Description

## Water Modeller



Department of  
Primary Industries

Cluster	Industry, Skills & Regional Development
Agency	Department of Industry, Skills and Regional Development
Division/Branch/Unit	Department of Primary Industry/ Water/ Water Information & Insights
Location	Parramatta / Queanbeyan
Classification/Grade/Band	DPO Grade 2-3
Role Number	TBA
ANZSCO Code	234999
PCAT Code	1119192
Date of Approval	2016
Agency Website	<a href="http://www.water.nsw.gov.au">www.water.nsw.gov.au</a>

### Agency overview

The NSW Department of Industry Skills and Regional Development (known as the NSW Department of Industry) leads the state government's contribution to making NSW:

- A fertile place to invest and to produce goods and services, and thereby
- Create jobs and opportunities for our citizens

We support all areas of economic activity where NSW has competitive strengths. We also have responsibilities for:

- Skill formation and development to match industry demand
- Partnering with stakeholders in stewardship and sustainable use of the state's natural resources; and
- Supporting economic growth in the regions.

Our strategies are built on close relationships to understand industry's needs. We deliver a wide range of training and specialist advisory services; and we help to secure efficient and dependable government decision-making that contributes to business confidence. We measure our success by the:

- Growth in quantity of employment and the value of output; and the
- Competitiveness and sustainability of industries in NSW.

NSW Primary Industries, as Department of Primary Industries (DPI), supports the development of profitable primary industries that create a more prosperous NSW and contribute to a better environment through sustainable use of natural resources.

DPI Water is responsible for policy, planning, regulation, monitoring and evaluation related to the state's surface water and groundwater resources. The division leads NSW Government water management representation interstate and nationally.

## Primary purpose of the role

Plan and undertake hydrologic and hydraulic analysis using statistical and model simulation techniques, for the purpose of informing water management policy and planning in NSW.

## Key accountabilities

- Plan and undertake investigation and analysis in the area of hydrology and hydraulics to provide data and information to inform water management outcomes.
- Critically analyse, interpret, and communicate results from hydrologic and/or hydraulic models and/or other hydrologic analysis techniques to provide reliable and accurate information on which policy can be developed.
- 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.
- Provide input to the development and implementation of hydrologic and/or hydraulic models and/or other hydrologic analysis techniques to contribute to the continual improvement of techniques.
- Research and review guidelines, manuals, courses and other support materials to contribute to technology transfer on hydrology technological development.
- 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 models 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>	
Project lead	<ul style="list-style-type: none"><li>• Receive guidance and direction from project lead responsible for supervising and reviewing work program</li></ul>
Manager / Principal / Lead Water Modeller	<ul style="list-style-type: none"><li>• Direct line manager responsible for setting the work program and priorities.</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>

Who	Why
Murray Darling Basin Authority, other government agencies	<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

- Plans and sets own 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.
- Refers to the Manager. on matters to agree on a suitable way forward

### Reporting line

Manager Water Modelling

### Direct reports

Nil

### Budget/Expenditure

Nil

## 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 modelling, catchment process modelling, statistics, computer programming, application of spatial modelling, open channel hydraulics.
- Awareness of the strengths and limitations of relevant analytical techniques, such as models, and data.
- Experience in assessing the suitability of hydrologic and hydraulic model 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)

### 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
<b>Relationships</b> Commit to Customer Service	Foundational	<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>
		<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>