



## Detailed paper D - Principles

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Submission to IPART for prices from 1 July 2021 for water management services provided by the Department of Planning Industry and Environment - Water and the Natural Resources Access Regulator on behalf of the Water Administration Ministerial Corporation

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### **More information**

Department of Planning, Industry and Environment—Water, and the Natural Resources Access Regulator

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## Detailed paper D – Principles

Our submission reflects IPART's stated aim to replicate the effects of a competitive market so that customers receive services at the lowest prices. In other words, prices reflect the prudent and efficient costs of providing the monopoly services and customer preferences and willingness to pay.

We are conscious of the importance of transparency and comparisons of prices between price reviews, especially in the context of the proposed significant increases in expenditures. We have therefore focussed our proposal on explaining the rationale for cost increases and for capped prices.

For this review, we have not proposed changes to simplify price structures or to reduce the complexity of the methodologies used to allocate costs between valleys and water sources. We consider that these changes need to be considered by IPART. However, we acknowledge that essential reforms to simplify the complexity of the pricing system are best considered in the 2025 price review which will also enable IPART to consider these matters in the context of universal metering.

While our proposed pricing principles are aligned to IPART's past determinations and reviews, we propose changes to the ways in which activity expenditures are allocated across valleys for ten activity codes. We consider that these changes will improve cost reflectivity, relative to the methodology applied in IPART's 2016 Determination. As summarised in Table 2, these ten activities include W08-03 Compliance management. As metering policies are being rolled out, we consider it more cost reflective to allocate the compliance and enforcement costs of NRAR between valleys based on the number of licences, rather than the past somewhat subjective assessments of past compliance risk.

### Form of regulation

We propose a price determination period of four years from 1 July 2021 to 30 June 2025. We believe this provides the right balance between providing a period of price stability for water access licence holders and other considerations including the level of confidence in our forecasts and the risk of structural changes in the industry.

In May 2019, IPART agreed to a request from our predecessor, DPI Water, to defer its next review of WAMC's water management charges by 12 months, meaning that IPART's next review of WAMC prices will now commence in July 2020 for the new determination to apply from 1 July 2021. WAMC's prices under IPART's 2016-2020 determination will remain constant in nominal terms (with no adjustment for inflation) beyond 2019-20, until IPART makes its new price determination.

### What remains the same

In line with the National Water Initiative requirements that costs should be allocated between water users and the NSW Government (on behalf of other users and the broader community), we have adopted the cost allocation principles set out in IPART's February 2019 Rural Water Cost Shares Final Report.<sup>1</sup> These principles set out how future operating and capital expenditure is shared between customers (via regulated prices) and the NSW Government.

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<sup>1</sup> Available at <https://www.ipart.nsw.gov.au/Home/Industries/Water/Reviews/Rural-Water/Rural-Water-Cost-Shares/05-Feb-2019-Final-Report/Final-Report-Rural-Water-Cost-Shares-February-2019>

The principles are that:

- efficient costs of rural bulk water services are allocated between water customers and the NSW Government based on the impactor pays principle
- forward-looking legacy costs are borne by the NSW Government, and
- an activity-based framework is used.

Over multiple reviews IPART used those principles to derive customer cost shares for each of the WAMC activity codes. IPART estimated that the effect of its February 2019 decision on cost allocations would result in the customers' share of the efficient costs of water management activities rising from 76% to 84% in aggregate across all valleys, from the time the next determination is implemented in 2021.<sup>2</sup>

We have applied IPART's 2019 findings to allocate costs between water users and the NSW Government (on behalf of other users and the broader community). The actual effect is that customer share of the efficient costs of water management activities is 85% assuming prices are set for full cost recovery.

Our proposed user shares, which are as determined by IPART, are outlined in the following table. IPART's reasons for setting customer shares at these levels are set out in its final report.

**Table 1. User shares for monopoly service activities**

W-code	Activity group name	Summary of Activity/Service	User Share
W01	Surface water monitoring	The collection and provision of quantity, quality, algal and ecological information for monitoring, use, assessment and management of surface water.	
W01-01	Surface water quantity monitoring	The provision of a surface water quantity monitoring system; including design, station calibration, data collection, processing, encoding, quality assurance and archiving from the networks of water monitoring stations; the delivery of near real time height and/or flow data from all telemetered sites to the corporate database; and the maintenance and operation of surface water monitoring stations.	100%
W01-02	Surface water data management and reporting	The data management and reporting of surface water quantity, quality and biological information; including compilation, secure storage, management and publishing of data to customers, stakeholders and the general public.	50%
W01-03	Surface water quality monitoring	The provision of a surface water quality monitoring program; including design, sample collection, laboratory testing and analysis, test result quality assurance to accepted standards, and test result encoding to make it available for data management and reporting.	60%

<sup>2</sup> Available at <https://www.ipart.nsw.gov.au/Home/Industries/Water/Reviews/Rural-Water/Rural-Water-Cost-Shares/05-Feb-2019-Final-Report/Final-Report-Rural-Water-Cost-Shares-February-2019>, page 3.

W-code	Activity group name	Summary of Activity/Service	User Share
W01-04	Surface water algal monitoring	The provision of a surface water algal monitoring program; including design, sample collection, laboratory analysis, algal identification and enumeration to accepted standards, and result encoding for provision to regional coordinating committees.	40%
W01-05	Surface water ecological condition monitoring	The provision of a surface water ecological condition monitoring system to assess the health of water sources; including design and application based on the River Condition Index for rivers, flood plains and wetlands.	50%
W02	Groundwater monitoring	The collection and provision of water level, pressure, flow and quality information for monitoring, use, assessment and management of groundwater.	
W02-01	Groundwater quantity monitoring	The provision of a groundwater level, pressure and flow monitoring system; including design, site calibration, data collection, entry, audit, quality assurance, archiving, and information provision; and the maintenance and operation of groundwater monitoring bores.	100%
W02-02	Groundwater quality monitoring	The provision of a groundwater quality monitoring program; including design, sample collection, laboratory testing and analysis, test result quality assurance to accepted standards, and test result encoding to make it available for data management and reporting.	100%
W02-03	Groundwater data management and reporting	The data management and reporting of groundwater quantity and quality information; including compilation, secure storage, management and publishing of data to customers, stakeholders and the general public.	100%
W03	Water take monitoring	The provision of metering services, the collection of water take data and its recording on water allocation accounts for unregulated and groundwater licence holders.	
W03-01	Water take data collection	The electronic and manual collection, transmission and initial recording of water take data from licence holders for unregulated and groundwater sources; and the operation and maintenance of government owned meter and telemetry facilities.	100%

W-code	Activity group name	Summary of Activity/Service	User Share
W03-02	Water take data management and reporting	The data management and reporting of water take for unregulated and groundwater sources including compilation, secure storage, management and publishing of data to authorised parties.	100%
W04	Water modelling and impact assessment	The development and use of water system models for water sharing and water management applications, resource impact and water balance assessments, and annual general purpose water resource accounts for NSW water sources.	
W04-01	Surface water modelling	The development, upgrade and application of surface water resource management models for use in water planning and to assess performance in terms of statutory requirements, interstate agreements, regional water supply optimisation and third party impacts on NSW stakeholders.	80%
W04-02	Groundwater modelling	The development, upgrade and use of groundwater resource management models for water sharing and management applications, and for resource impact and balance assessments.	100%
W04-03	Water resource accounting	The development and update of water resource accounts and information on NSW water sources, for use by external stakeholders, and for internal water planning, management and evaluation processes.	100%
W05	Water management implementation	The preparation and implementation of the procedures and systems required to deliver the provisions of Water Sharing Plans; and operational oversight to ensure plan compliance, the available water determinations and the assessment of compliance with long term extraction limits.	
W05-01	Systems operation and water availability management	The preparation and implementation of the procedures and systems required to deliver the provisions of water management plans; and operational oversight to ensure plan compliance, the available water determinations and the assessment of compliance with long term extraction limits.	100%
W05-02	Blue-green algae management	The provision of an algal risk management system; including oversight, coordination and training, the issue of algal alerts and the development of algal risk management plans.	40%

W-code	Activity group name	Summary of Activity/Service	User Share
W05-03	Environmental water management	The development and collaborative governance of environmental flow strategies and assessments; and the use of environmental water to achieve environmental outcomes.	80%
W05-04	Water plan performance assessment and evaluation	The assessment, audit and evaluation of the water management plans' appropriateness, efficiency and effectiveness in achieving economic, social and environmental objectives.	50%
W06	Water management planning	The development, review, amendment, and extension or replacement of water management plans, regional planning and management strategies, and development of the water planning and regulatory framework.	
W06-01	Water plan development (coastal)	The development, review, amendment, and extension or replacement of water management plans, and the consultation activities associated with developing these plans for coastal water sources.	70%
W06-02	Water plan development (inland)	The development, review, amendment, and extension or replacement of water management plans; the development of additional planning instruments to comply with the Commonwealth Water Act; and the consultation activities associated with developing these plans for inland water sources.	70%
W06-03	Floodplain management plan development	The development, review, amendment, and extension or replacement of Floodplain Management Plans, in collaboration with the Office of Environment and Heritage.	0%
W06-04	Drainage management plan development	The development, review, amendment, and extension or replacement of Drainage Management Plans, to address water quality problems associated with drainage systems.	0%
W06-05	Regional planning and management strategies	The development, evaluation and review of regional water strategies, metropolitan water plans and other planning instruments, including the associated stakeholder engagement.	70%
W06-06	Development of water planning and regulatory framework	The development of the operational and regulatory requirements and rules for water access.	80%



W-code	Activity group name	Summary of Activity/Service	User Share
W06-07	Cross border and national commitments	The development of interstate water sharing arrangements and the implementation of operational programs to meet national and interstate commitments.	50%
W07	Water management works	The undertaking of water management works to reduce the impacts arising from water use or remediate water courses.	
W07-01	Water management works	The undertaking of water management works to reduce the impacts arising from water use or remediate water courses.	80%
W08	Water regulation management	The development, operation and management of the administration of licences, approvals, their associated transactions and compliance management and enforcement.	
W08-01	Regulation systems management	The management, operation, development and maintenance of the register for access licences, approvals, trading and environmental water.	100%
W08-02	Consents management and licence conversion	The transcribing of water sharing provisions into licence conditions and the conversion of licences to the Water Management Act.	100%
W08-03	Compliance management	The on-ground and remote monitoring activities (including investigations and taking statutory actions) to ensure compliance with legislation, including licence and approval conditions.	100%
W09	Water consent transactions	The technical requirements for, and administration of, water consents transactions.	
W9-01	Water consents transactions	Transactions undertaken on a fee for service basis; including dealings, assessments, changes to conditions and new applications for water licences and approvals.	100%
W10	Business and customer services	The customer, business and revenue collection services supporting the operation of DPI Water.	
W10-01	Customer management	All customer liaison activities; including responding to calls to licensing and compliance information lines; and producing communication and education materials such as website content and participation in customer forums.	100%

W-code	Activity group name	Summary of Activity/Service	User Share
W10-02	Business governance and support	The business systems and processes that support organisation-wide activities; including asset management, annual reporting and pricing submissions to IPART.	80%
W10-03	Billing management	The management of billing requirements and subcontracted billing, revenue collection and debtor management service delivery, and responding to queries on billing activities.	100%

Source: IPART, Rural Water Cost Shares Final Report, February 2019 pp 47-48.

## Pricing principles we propose IPART changes

### Allocation of user share across valleys

To inform IPART's determination of how to allocate our prudent and efficient activity expenditures across valleys we assessed the WAMC activity cost drivers that were used for IPART's 2016 Determination against the principles of:

- cost reflectivity,
- transparency, and
- practicality.

We engaged a consultant (the CIE) to review the cost drivers for each activity code<sup>3</sup>; we tested the recommendations with the experience and knowledge of activity managers and conducted sensitivity analyses using different cost drivers to evaluate the effect of using alternative cost drivers.

Generally, we consider that cost drivers should only be proposed to be changed where the existing driver no longer reflects the source of activity costs by water source and valley.

For seven activity codes, the use of volume of entitlements was found to be more cost reflective than the existing driver, or other alternatives considered. Volume of entitlements is relatively consistent across pricing regions and licence types. It is also more constant over multiple time periods and less skewed by external shocks, like drought.

For three additional codes, we find the number of licences as the driver to allocate common function costs to be more cost reflective. These include W06-05 Regional planning and management strategies and W08-03 Compliance management. As metering policies are being rolled out, we consider it more cost reflective to allocate the compliance and enforcement costs between valleys based on the number of licences, rather than subjective assessments of past compliance risk.

A more detailed discussion around the proposed changes is included below and Table 2 outlines the cost drivers proposed for the 2021 Determination.

<sup>3</sup>. WAMC activity cost allocation, Review of WAMC activity cost drivers, Prepared for Department of Industry – Water, The Centre For International Economics, 15 May 2019

## **W04 Water modelling and impact assessment**

For the 2016 regulatory period, costs for water modelling and impact assessment were allocated on the number of models or the total water take.

A review of price impacts using the 2016 cost driver found that this cost driver was no longer representative of the underlying activity costs. A sensitivity analysis comparing alternative cost drivers found that volume of entitlements was more reflective of the activity costs by water source and region.

## **W06 Water management planning**

### **W06-01/02 Water plan development**

For the 2016 regulatory period, water plan development, coastal and inland, costs were allocated on the basis of total water take.

A review of price impacts using the 2016 cost driver found that the cost driver was no longer representative of the underlying activity costs. A sensitivity analysis comparing alternative cost drivers found that volume of entitlements was more reflective of the activity costs by water source and region.

For the respective activity codes, the volume of entitlements has been weighted to only include the relevant water sources.

### **W06-05 Regional planning and management strategies**

For the 2016 regulatory period, costs of regional planning and management strategies were allocated on the basis of water entitlement held by utilities and industry, due to the coastal focus of the Sydney metro plan and other coastal water sharing plans dominance in this activity code.

For the 2021 regulatory period the focus of this activity will broaden to the whole state. As such we are proposing to change the cost driver from entitlements held by utilities and industry to number of licences. The number of licences best reflects the system-wide focus and the state-wide coverage of regional water strategies. Subsequent sensitivity analysis comparing the cost drivers confirmed that changing the cost driver to number of licences results in a more cost reflective distribution of costs across the valleys

### **W06-06 Development of water planning and regulatory framework**

For the 2016 regulatory period, development of water planning and regulatory framework costs were allocated on the basis of total water take.

A review of price impacts using the 2016 cost driver found that the cost driver was no longer representative of the underlying activity costs. A sensitivity analysis comparing alternative cost drivers found that volume of entitlements was more reflective of the activity costs by water source and region.

### **W06-07 Cross border and national commitments**

For the 2016 regulatory period, costs of cross border and national commitments were allocated to total water take (with double the weighting of allocation on activities in inland pricing water sources).

Our consultant (the CIE) recommended that number of licences (retaining the double weighting of allocation on activities in inland pricing water sources) is a more reflective cost allocator than water take. Subsequent sensitivity analysis comparing the cost drivers confirmed this.

### W08-03 Compliance management

For the 2016 regulatory period, costs of compliance and enforcement were allocated on a risk basis. That is, valleys with high non-compliance rates paid proportionately higher shares of the costs.

A review of price impacts using the 2016 cost driver found that the cost driver was no longer representative of the underlying activity costs. Since metering policies have been introduced we consider it may be more cost reflective to allocate the compliance and enforcement costs between valleys based on the number of licences. This reflects the higher proportion of metered water take and the emphasis on proactive compliance activities. This change also addresses stakeholder feedback we have received. A sensitivity analysis comparing alternative cost drivers found that this is the case and licence numbers are more reflective of the activity costs by water source and region.

### W10-01 Customer management

For the 2016 regulatory period, costs of customer management were allocated by number of customers.

To ensure consistency with the cost drivers used by all three agencies in the delivery of WAMC services we propose to use the number of licences to allocate the costs for this activity.

**Table 2: Proposed cost drivers for allocating costs geographically**

W-code	Activity	Cost driver 2016	Proposed cost driver 2021	Water type
<b>W01 Surface Water Monitoring</b>				
W01-05	Surface water ecological condition monitoring	River length	<b>No change</b> - River length	R/U
<b>W04 Water modelling and impact assessment</b>				
W04-01	Surface water modelling	Surface water modelling	Volume of entitlements (surface water only)	R/U
W04-02	Groundwater modelling	Groundwater models	Volume of entitlements (groundwater only)	G
W04-03	Water resource accounting	Total water take	Volume of entitlements	R/U/G
<b>W05 Water management implementations</b>				
W05-01	Systems operation and water availability management	Water operations complexity	<b>No change</b> - Water operations complexity	R/U/G
W05-03	Environmental water management	Environmental entitlement	<b>No change</b> - Environmental entitlement	R/U

W-code	Activity	Cost driver 2016	Proposed cost driver 2021	Water type
W05-04	Water plan performance assessment and evaluation	Total water take	<b>No change</b> - Environmental entitlement	R/U/G

**W06 Water management planning**

W06-01	Water plan development (coastal)	Total water take	Volume of entitlements (weighted to only include coastal sources)	R/U/G
W06-02	Water plan development (inland)	Total water take	Volume of entitlements (weighted to only include inland sources)	R/U/G
W06-03	Floodplain management plan development	Floodplain management plans	<b>No change</b> - user share is zero	R/U
W06-04	Drainage management plan development	Drainage plans	<b>No change</b> - user share is zero	R/U
W06-05	Regional planning and management strategies	Water entitlement held by utilities and industry	Number of licences	R/U/G
W06-06	Development of water planning and regulatory framework	Total water take	Volume of entitlements	R/U/G
W06-07	Cross border and national commitments	Total water take with double the weighting of allocation on activities in inland pricing water sources.	Volume of entitlements (double the weighting of allocation on activities in inland pricing water sources)	R/U/G

**W07 Water management works**

W07-01	Water management works	Water management works project dollar cost	<b>No change</b> - Water management works project dollar cost	R/U/G
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**W08 Water regulation management**

W08-03	Compliance management	Compliance risk profile	Number of licences	R/U/G
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**W09 Water consent transactions**

W-code	Activity	Cost driver 2016	Proposed cost driver 2021	Water type
W09-01	Water consents transactions	Consent transactions	<b>No change</b> - Consent transactions	R/U/G

**W10 Business and customer services**

W10-01	Customer management	Number of customers	Number of licences	R/U/G
W10-02	Business governance and support	Total water take	Transferred to overheads	R/U/G