WAMC Output Measures for 2016-17

Activity	Outputs	Measures and Indicators	Information reported by WaterNSW and DoI Water in November 2017	Information reported by WaterNSW and DoI Water in March 2018
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.	A maintained monitoring network of hydrometric stations providing the necessary data for surface water management. Provision of validated water data from the network of surface water hydrometric stations.	Output measure (OM1) Number of stations for water management charges. • Current: • Dol Water: 430 • BRC: 29 • Forecast: • Dol Water: 430 • BRC: 29 Performance indicator No of visits per year per station: • Current: average 4.8 • Forecast: average 5	WaterNSW Output measure Number of Dol Water sites – 430 Number of BRC sites – 30 Performance indicator Actual average: • Dol Water: 5.3 • BRC: 6.0 • Combined: 5.4 Note: The approach used by WaterNSW for determining the number of sites is consistent with the previously used by Dol Water i.e. using gaugings as a surrogate.	N/A
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	Surface water quantity and quality information compiled, securely stored, managed and published to stakeholders and general public.	Output measure (OM2) Number of surface water sites subject to data management meeting specific criteria: • Current: 1,245 • Forecast: 1,245	WaterNSW Output measure Number of surface water sites subject to data management meeting specific criteria: • Current: 1,245 • Forecast: 1,245	N/A

Activity	Outputs	Measures and Indicators	Information reported by WaterNSW and DoI Water in November 2017	Information reported by WaterNSW and DoI Water in March 2018
and publishing of data to customers, stakeholders and the general public.		Performance indicator Percentage telemetered sites with data available on internet 9am each day: • Current: 95% • Forecast: 95% Percentage of DoI Water funded sites telemetered • Current: 90% • Forecast: 90%	 Performance indicator Percentage telemetered sites with data available on internet 9am each day: Current 98% (based on all telemetered sites, not just IPART funded) Percentage of DoI Water funded sites telemetered: Current 92% (restricted to the 430 sites under review with DoI). 	
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.	Provision of validated water quality test information.	Output measure (OM3) Number of tests per year: • Current: • DoI Water: 30,120 per year • MDBA: 5,144 per year • BRC: 4,800 per year • Forecast: as above Performance indicator Tests meeting quality standards (percentage acceptable tests/total tests): • Current: 90% • Forecast: as above	WaterNSW/DoI Water Output measure • Current: • DoI Water: 27,384 • MDBA: 4,390 • BRC: 4,525 The proposed number of MDBA samples can only be met if the Menindee Lakes are full for a substantial part of the year. The number of test reported is lower due to limited staff capacity and reduced resourcing in the north of state. Performance indicator Tests meeting quality standards (percentage acceptable tests/total tests).	DoI Water Performance indicator 83.3% of lab results reported into KiWQM in less than 90 days. Only a small proportion have been quality coded, but WaterNSW aiming to have this addressed by June 2018. WaterNSW Performance indicator 95.11% Completed 77 of 1575 samplings do not have the complete laboratory results
		 (percentage of tests taken,) processed, quality assurance approved and coded for publication within 90 days): Current: 90% Forecast: as above 	 Current: 91% (some tests that do not meet quality standards are due to samples being received by the laboratory outside of the holding period) 	required for data processing and coding. We will continue to investigate with DoI Water on anomalous/missing results.

Activity	Outputs	Measures and Indicators	Information reported by WaterNSW and DoI Water in November 2017	Information reported by WaterNSW and DoI Water in March 2018
			 Speed of reporting ofresults (percentage of tests taken, processed, quality assurance approved and coded for publication within 90days): Current – Metrics currently being developed following structural transformation Laboratory analyses, processing and quality assurance of results is the responsibility of DoI Water. Coding the laboratory data is the responsibility of WaterNSW. Field data unable to be uploaded to KiWQM database from September 2016 to January 2017 as some changes were made to the database. This issue is currently being rectified. 	
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.	Provision of algal data on the presence and extent of potentially toxic algal blooms	 Output measure (OM4) Number of sites monitored and tested for blue green algae: Current: average 73 sites per month (DoI Water and MDBA). Increased frequency when conditions require. Forecast: as above Performance indicator Percentage of samples collected and analysed according to current standards and within agreed timeframe: Current: 95% Forecast: 95% 	 WaterNSW/DoI Water Output measure Number of sites monitored and tested for blue green. Current: average 83 sites per month (DoI Water and MDBA) Increased frequency when conditions require. Performance indicator Percentage of samples collected and analysed according to current standards and within agreed timeframe. Measurable by exception - 100% of samples collected and analysed according to current standards and within agreed timeframes.	N/A

Activity	Outputs	Measures and Indicators	Information reported by WaterNSW and DoI Water in November 2017	Information reported by WaterNSW and DoI Water in March 2018
W01-05 Surface water	Provision of the	Output measure (OM5)	 Samples were collected by WaterNSW using standard procedures and analysed by NATA accredited laboratories. Algal counts were carried out by DoI Water between July 2016 and February 2017 and by the WaterNSW contracted laboratory between March and June. All results were reported to the relevant RACC coordinator with the agreed time frame. This activity has now been fully transferred to WaterNSW. 	Del Water
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.	Provision of the information for the six components of the River Condition Index: • Hydrology • Geomorphology • Riparian • Biota • Disturbance • Water quality	 Output measure (OM5) River condition index updated: Current: an updated report completed each year, outlining the attributes updated and the proportion of the state/water sources covered. Forecast: As above. Performance indicator Percentage of the state for which the River Condition Index (RCI) is completed in current year: Forecast: 100% of all RCI completed for the stateby the end of 10 years. 	DoI Water Output measure An update report is currently being prepared for 2016/17 and will be posted on the DoI Water website by June 2018. Performance indicator 10% has been completed, with updates undertaken for Riverstyles (which captures geomorphic condition) in the Hunter, Lower North Coast, and Namoi Valleys A value-add product is being developed from the RCI. The River Condition Index Impact Assessment Tool has been developed and will soon be live on the web. It allows proponents of CSG and mining activities to test the impacts of their proposed activities on river health, as a requirement of the Aquifer Interference Policy. Although the project was funded by other sources, it may be rolled out	DoI Water Output measure All data was updated for 2 valleys (Namoi and Hunter) to meet the 10% update target per year. Performance indicator The River Condition Index model was updated and the outputs reported. The website updates of reports will be completed by June 2018

Activity	Outputs	Measures and Indicators	Information reported by WaterNSW and DoI Water in November 2017	Information reported by WaterNSW and DoI Water in March 2018
			more broadly for use by irrigators and others.	
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.	A maintained network of monitoring bores providing the data necessary for groundwater management. Provision of validated quantity and other physical resource data from groundwater monitoring bores.	Output measure (OM6) The number of pipes from which data are collected (in the last 2 years): • Current: 4,736 • Forecast: 4,800 Performance indicator Percentage of pipes monitored according to their scheduled frequency: 90%	 WaterNSW Output measure Number of pipes: 4498 Performance indicator The percentage of pipes monitored was 87%. Differences are due to access issues such as cropping, wet weather and floods. And in some cases staff capacity and the completion of small projects (including pipes) within the last reporting period. 	N/A
W02-02 Groundwater quality monitoring The provision of validated 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.	The provision of validated groundwater quality information	Output measure (OM7) The number of pipes from which water quality data are collected (in the last 2 years) • Current: 495 • Forecast: 495 Performance indicator Percentage of pipes monitored according to their scheduled frequency: • Current: 90% • Forecast: 90%	WaterNSW Output measure Number of pipes= 671 from KQWMN Performance indicator Updated response provided by WaterNSW in March 2018.	WaterNSW Performance indicator 100% complete An increase in samples collected is related to normal maintenance of the pipes - When a pipe has been "blown" to clear screens a water sample is collected. We will isolate these in future reporting.
W02-03 Groundwater data management and reporting The data management and reporting of groundwater quantity and quality	Groundwater quantity and quality information compiled, securely stored, managed and published to stakeholders and	Output measure (OM8) Number of active pipes subject to data management: • Current: 4,736 • Forecast: 5,000	WaterNSW Output measure - Number of active pipes subject to data management including SWL, the GAB and	N/A

Activity	Outputs	Measures and Indicators	Information reported by WaterNSW and DoI Water in November 2017	Information reported by WaterNSW and DoI Water in March 2018
information; including compilation, secure storage, management and publishing of data to customers, stakeholders and the general public. 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.	general public. Government owned meters operated and maintained. Volume of water take is collected.	Performance indicator Percentage of active sites subject todata management: • Current: 98% • Forecast: 98% Output measure (OM9) Number of government owned andmaintained meters: • Current: 1,230 • Unregulated river: 605 • Groundwater: 625 • Forecast: 1,200 • Unregulated river: 600 • Unregulated river: 600 Number of sites with agency water take reading/ assessments charged: • Current: 3,002 • Unregulated river: 58 • Groundwater: 2,944 • Forecast: 3,300 • Unregulated river: 200 • Groundwater: 3,100 Performance indicator Percentage government owned meters operational: • Current: 89% • Forecast 95%	telemetered sites = 4866 Performance indicator Percentage of active sites subject to data management: • Current: 97.32% • Forecast: 98% WaterNSW Output measure Updated response provided by WaterNSW in March 2018. Performance indicator Percentage government owned meters operational: • Current: 70% • Forecast 99%	WaterNSW Output measure The number of government owned and maintained meters (ex NOW combined with ex State Water Fleet) is as follows: Current: 1,536 Groundwater: 612 Unregulated: 924 Noting that WaterNSW is still undertaking a full verification process on the number of meters to be completed by 30 June 2018, and therefore these numbers may change in future. WaterNSW has not been able to reconcile the number of sites with agency water take reading/ assessments charged with the output measure and are therefore unable to report on this metric at this time. We will provide IPART with an update on this metric following further investigation.
W03-02 Water take data	Water take measurement	Output measure (OM10)	Water NSW	WaterNSW

Activity	Outputs	Measures and Indicators	Information reported by WaterNSW and DoI Water in November 2017	Information reported by WaterNSW and DoI Water in March 2018
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.	information quality assured, compiled, managed and made available to stakeholders	 Issued entitlement metered: Current: 3,486,000 Unregulated river: 2,010,000 shares Groundwater: 1,476,000 shares Forecast: 3,495.000 Unregulated river: 2,017,000 shares Groundwater: 1,478,000 shares Groundwater: 1,478,000 shares Performance indicator Percentage of issued entitlement metered: Current: 70% Unregulated river: 65% Groundwater: 78% 	Output measure Updated response provided by WaterNSW in March 2018. Performance indicator Updated response provided by WaterNSW in March 2018.	Output measure Current: Unregulated: 3,208,329 shares Groundwater: 1,836,227 shares Performance indicator Unregulated: 60% Groundwater: 57%
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	 Models developed for NSW River basins for: Reporting on model conceptualisation and structure, processes, calibration, datasources for stakeholder information. Long-term extraction limits. Reliability and 	Output measure (OM11) Number of models/analyses annually: • Current: 22/2,000 • Forecast: 26/2,800 Performance indicator The percentage of surface water share component in NSW covered by models subject to annual assessments:	 Dol Water Output measure Additional 4 models developed, Gwydir FPH, Border Rivers Source, Extended Hunter, Murrumbidgee Source. Additional 4 models under development. Upgraded 8 models for Water Resource Plan support Approximately 3000 model runs undertaken for scenarios in Hunter and 	DoI Water Output measure 4 additional models were developed since 2015. 3 of which were completed in 2016/2017 (Murrumbidgee is still being worked on). The 8 upgraded models are part of the existing 22.

Activity	Outputs	Measures and Indicators	Information reported by WaterNSW and DoI Water in November 2017	Information reported by WaterNSW and DoI Water in March 2018
optimisation and third party impacts on NSW stakeholders.	 sequencing of water take. Reliability and sequencing of water availability for entitlement types. Time series and statistical analysis of river flows and floodplain/wetland watering. On-farm water management. Daily stream salinity. Modelling to support water planning at a regional scale, including hydrologic/economic optimisation models for regional water strategies and metro water planning. 	 Current: 80% Regulated river: 90% Unregulated: 35% Forecast: 95% Regulated river: 100% Unregulated river: 50% 	all MDB valleys, including regional water strategies, - FPH entitlement determination in Gwydir and Border Rivers, and scenarios. Performance indicator 100% of regulated rivers in NSW covered by models. 50% unregulated coverage principally Barwon Darling and Hawkesbury-Nepean, with additional as part of FPH in Gwydir and Border Rivers.	Current indicator is 25/3000. 25 models and 3000 analyses.
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.	 Regional groundwater models for groundwater sources covered by water management plans that are capable of providing: Long-term sustainable extraction limits. Details of aquifer interference. Local water table details. Water balance details. 	Output measure (OM12) Number of models/major aquifer analyses annually: • Current: 21/2,100 • Forecast: 22/2,200 Performance indicator Percentage of volume of groundwater share component subject to modelling assessment annually: • Current: 48%	 Dol Water Output measure 13 models being updated and run with 2 scenarios each for WRP modelling (26/26 analyses on track for completion) 13 models on track to be updated with 2017 data 9 models updates delayed pending completion of WRP modelling scenarios Between 6-8 water accounting analyses were performed for 2016 	DoI Water Output measure The work in 2016-17 was reviewed and the modelling work planning overhauled. We have exceeded the target in no. of models and analyses performed annually as per measure (13 models run, there are two scenarios for each model run therefore 26

Activity	Outputs	Measures and Indicators	Information reported by WaterNSW and DoI Water in November 2017	Information reported by WaterNSW and DoI Water in March 2018
	 Technical assessment of development proposals. 	• Forecast: 50%	 Between 6 water accounting runs to be performed for 2017 Performance indicator Completion of all scenario runs, calibrations and reports provided to planning Use of updated tools for calibration across cluster of machines Update of 22 models into latest codes has commenced Review and audit of all models planned for 2018 Models to be migrated onto version control system in 2018 	model runs in total). The figures 21 and 22 used historically was probably due to the fact that in the past we had less models completed (probably 11). Now we have more models completed (13 models) and so we have more analyses to report on. Indicator 26/2,200 Performance indicator Although the current cannot be evaluated at this time, the forecast is likely to be accurate. We are undertaking all necessary steps to ensure that in the future year an evaluation will be performed.
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.	 General purpose water accounting reports. Reporting and analysis of water resource accountingobligations. Miscellaneous analysis and reporting. 	Output measure (OM13) Number of outputs for water accounting reports, reporting obligations and required ad hoc: • Current: • 10 valleys • 9 analysis reports • 14 miscellaneous studies • Forecast: • 17 valleys • 17 analysis reports • 20 miscellaneous studies Performance indicator Percentage of entitlement by	WaterNSW Output measure Number of outputs for water accounting reports, reporting obligations and required ad hoc: Regulated /Metro Current: 52 Metro Weekly reports 13 Regulated water balance reports 7 Regulated Water availability reports Forecast: 52 Metro reports 13 Regulated water balance reports 52 Regulated water availability reports 52 Regulated water availability reports 52 Regulated water availability reports Unregulated/GW	N/A

Activity	Outputs	Measures and Indicators	Information reported by WaterNSW and DoI Water in November 2017	Information reported by WaterNSW and DoI Water in March 2018
		water typecovered by the	• Current:	
		water accounting reports:	- 10 valleys	
		• Current:	 9 analysis reports 	
		 Regulated river: 95% 	 14 miscellaneous studies 	
		 Unregulated river: 15% 	• Forecast:	
		- Groundwater: 90%	- 17 valleys	
		• Forecast:	 17 analysis reports 	
		 Regulated river: 100% 	 20 miscellaneous studies 	
		 Unregulated river: 60% 		
		- Groundwater: 95%	Performance indicator	
			Percentage of entitlement by water type covered	
			by the water accounting reports:	
			Current:	
			- Regulated river: 100%	
			- Unregulated river: 15%	
			- Groundwater: 90%	
			Forecast:	
			- Regulated river: 100%	
			- Unregulated river: 60%	
			- Groundwater: 95%	
W05-01 Systems operation	 Implementation 	Output measure (OM14)	WaterNSW	
and water availability	procedures and	Annual compliance review on		
management	systems.	WaterNSW work approval	Output measure	
The preparation and	Water availability	conditions.	Annual compliance review on WaterNSW	
implementation of the	determinations.	Available Water	work approval conditions.	
procedures and systems	 WaterNSW operations 	Determinations (AWD) issued:	Available Water Determinations (AWD)	
required to deliver the	compliancemonitoring	Current:	issued:	DT / A
provisions of water	and annual reporting.	- Regulated river: at least	• Current	N/A
management plans; and	 Audit of Water Sharing 	monthly AWD for all licence	- Regulated river: at least monthly AWD for	
operational oversight to	Plan operations.	categories for all water sources	all licence categories for all water sources -	
ensure plan compliance, the		- Unregulated river and	228	
available water		groundwater: annual AWD	- Unregulated river - Annual AWD for each	
determinations and the		for each water source	water source - 1537	
assessment of compliance		Forecast:	- Groundwater: Annual AWD for each water	

Activity	Outputs	Measures and Indicators	Information reported by WaterNSW and DoI Water in November 2017	Information reported by WaterNSW and DoI Water in March 2018
with long term extraction limits.		 As above Performance indicator Annual compliance review on WaterNSW submitted within 3 months of receiving input data from DolWater. Timeliness of AWDs: Current: 100% Forecast: as above 	source - 1111 • Forecast: - As above. Performance indicator Annual compliance review on WaterNSW submitted within 3 months of receiving input data from DoI Water. Timeliness of AWDs: • Current: • Regulated Current: 98% • GW Current: 53% • Unregulated current: 65% • Forecast • 100% all AWDS The process for entering 16/17 AWDs for Unregulated and GW AWDs was a very manual time consuming process with a Large number of water sources converted to the WMA2000 as atthe 01-07-2016.Improved process has been implemented for 17/18 AWDs to achieve 100% AWDS being implemented within 3 months.	
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.	 Algal risk management framework for fresh and marine waters managed appropriately. Issue of algal alerts as required, provision of regular updates to stakeholders and maintenance of the 	 Output measure (OM15) Algal risk management plans for each region are implemented: Current: Nine regional risk management plans in operation Forecast: All risk management plans reviewed and updated as required 	DoI Water Output measure Contingency plans have been reviewed and are in operation. This function has now been transferred to WaterNSW. Performance indicator - 100% Reports to RACC stakeholders have been issued according to weekly or	N/A

Activity	Outputs	Measures and Indicators	Information reported by WaterNSW and DoI Water in November 2017	Information reported by WaterNSW and DoI Water in March 2018
	algal website and information line.	Performance indicator Percentage of reports meeting weeklytimeframe to regional algal coordinating committees and state algal coordinator of alert levels based on algal data: • Current: 100% • Forecast: 100% Actions implemented in accordance with algal risk management plan and guidelines: • Current: 100% • Forecast: 100%	 agreed protocols. 100% Actions have been implemented in response to algal alerts in accordance with the algal risk management plans and guidelines. Regional Algal Coordinating Committees (RACCs) algal alerts and communications were supported by DoI from July 2016 to the end of February 2017 when this function was transferred to WaterNSW. DoI retains strategic oversight and supports the State algal advisory and technical groups while WaterNSW supports the RACCs and manages issuing of alerts and communications. 	
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.	 Collaborative management of planned environmental water in regulated and unregulated rivers. Collaborative management of adaptive and held environmental water in regulated rivers. Measurement of the outcomes of environmental water delivery (in selected valley(s). Snowy River and Murray River increased 	 Output measure (OM16) Delivery of Snowy and Snowy Mountain River increased flows. Conditions on major dam work approvals to implement environmental watering plans and to mitigate cold water pollution impacts on receiving waters. Monitor and evaluate water resource plans to determine environmental outcomes. Performance indicator Percentage of occasions that Snowy and Snowy Mountain 	 Output measure Snowy and Snowy Mountain River increased flows were released Conditions are on works approvals to mitigate the impacts of Cold Water Pollution, however the implementation of any required major Capital works is subject to funding availability A new framework for setting environmental objectives and evaluating water sharing plans was developed. Evaluation reports were drafted for all inland regulated rivers, and unregulated rivers (where an evaluation was required). NB. This measure overlaps with those in W05-04 Collaborative management of planned 	N/A

Activity	Outputs	Measures and Indicators	Information reported by WaterNSW and DoI Water in November 2017	Information reported by WaterNSW and DoI Water in March 2018
	flows. • Cold Water Pollution (CWP) management and science development.	River daily flow target achieved: 98% of occasions.	 environmental water in regulated and unregulated rivers. Joint development of a NSW Framework for Basin Plan Monitoring, evaluation and reporting (MER) activities (with OEH and DPI Fisheries) Guidelines document for WSP objective setting Representation on SAPs Review of OEH annual report: Use of water for the environment in NSW EOM Working Group meetings chaired by CL&W Collaboration with OEH and DPI Fisheries on WSP/WRP objective setting Collaboration with OEH on LTWP development Collaboration with DPI Fisheries on the Fisheries approach to State-wide MER for Basin Plan reporting Joint JVSC submissions (with OEH and DPI Fisheries) for research funding Performance indicator In 2016/17, the flows achieved a 99.5% compliance rate against the daily flows for the Snowy Increased Flows (only 2 days non-compliant out of 365). 	
W05-04 Water plan performance assessment and evaluation The assessment, audit and evaluation of the water	 Performance and assessment strategy document. Identification of key knowledge gaps related 	Output measure (OM17) Number of valleys being assessed under the performance and assessment strategy:	DoI Water Output measure <i>Number of valleys being assessed under the</i> <i>performance and assessment strategy.</i>	N/A

Activity	Outputs	Measures and Indicators	Information reported by WaterNSW and DoI Water in November 2017	Information reported by WaterNSW and DoI Water in March 2018
management plans'	to assessment of plan	• Current: 7	- 11 valleys are currently being assessed. This	
appropriateness, efficiency	management rules,	• Forecast: 24	includes all Basin valleys, and the Hunter	
and effectiveness in	followed by an integrated		and Central Coast valleys on the coast.	
achieving economic, social	research program to	Number of plan audits	- The performance and assessment strategy is	
and environmental	resolve the knowledge	completed (5 yearly):	being refined to include an MER plan for	
objectives.	gap.	• Current: 10	each valley.	
	 Publication of ecosystem 	 Forecast: 32 	• Current: 11	
	response conceptual		• Forecast: 24	
	models and preliminary	Number of plan evaluations		
	reports that describe	completed:	Number of plan audits completed (5 yearly):	
	ecology/flow	• Current: 0	 19 plan audits from the previous 	
	management outcomes	• Forecast: 17	determination period have been completed	
	and provide adequate		and are pending approval.	
	advice.		- The 10 plan audits scheduled for 2016/17	
	 Assessment of water plan 		have not yet been undertaken.	
	amendment provisions.		• Current: 0	
	 Outputs – evaluation 		 Forecast: 40* 	
	 Assessment of level of 			
	plan achievement of:		Number of plan evaluations completed:	
	- Economic objectives		 11 plan evaluations from the previous 	
	- Environmental		determination period were completed in	
	objectives		2016/17 and are pending approval.	
	- Social/cultural		 Not all plan evaluations scheduled for 	
	objectives		2016/17 have been undertaken.	
	 Audit and assessment of 		• Current: 2	
	the level of		 Forecast: 20* 	
	implementation of			
	provisions in plans.	Performance indicator	*Please note original forecasts have been	
	 Each WSP audited every 	Percentage of plans	altered to reflect improved reporting	
	5 years to determine if its	incorporated into ecological	information. These forecast numbers are	
	provisions are being	performance and assessment	correct at time of writing but may change	
	actioned.	programs:	after review to align NSW and Basin Plan	
	 Completion of evaluation 	• Current: 30%	reporting requirements.	
	reports for the WSPs as	• Forecast: 100%		

Activity	Outputs	Measures and Indicators	Information reported by WaterNSW and DoI Water in November 2017	Information reported by WaterNSW and DoI Water in March 2018
	they expire.	Percentage of plans audited within statutory requirement: • Current: 30% • Forecast: 100% Percentage plans evaluated that have come to term: • Current: 0% • Forecast: 100%	 Performance indicator Percentage of plans incorporated into ecological performance and assessment programs Current for 2016/17: 46% Forecast for period 2016/17-2019/20:100% Percentage of plans audited within statutory requirement: Current for 2016/17: 0% Forecast for period 2016/17-2019/20:100% Percentage plans evaluated that have come to term: Current for 2016/17: 10% Forecast for period 2016/17-2019/20:100% 	
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 the coastal water sources.	 WSPs completed for all non-MDB water sources. Implementation of the WSP ecosystem performance and assessment strategy. Review and remake or extension of each WSP as it expires. 	 Output measure (OM18) 5 WSPs will be reviewed and replaced/extended. 7 WSPs will be reviewed. 1 WSP will be reviewed and merged into an existing WSP. Performance indicator Cumulative percentage of forecast WSPs reviewed, replaced/extended or merged: Forecast: 100% 	 Dol Water Output measure 1 new WSP in force (Nambucca) 1 WSP approved by minister, awaiting concurrence from Minister for the Environment (Hastings) 1 formal WSP review underway (Bellinger) (Review of a number of plans in relation to amendment provisions underway). Performance indicator All plans reviewed / Replaced as required, except for Paterson WSP, which has been extended for up to two years to allow alignment with Hunter Priority Catchments Program to be included in the revised plan. Forecast by 2020 – 100% 	N/A

Activity	Outputs	Measures and Indicators	Information reported by WaterNSW and DoI Water in November 2017	Information reported by WaterNSW and DoI Water in March 2018
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 the inland water sources.	 Water Resource Plans development for MDB water sources. Implementation of the WSP Ecosystem Performance and Assessment Strategy. Each WSP audited every 5 years to determine its provisions are being actioned. Completion of evaluation reports for the WSPs as they expire. Remake or extension of each WSP as it expires. WRP assessment tasks 	 Output measure (OM19) 8 WSPs will be reviewed and replaced/extended. 2 WSPs will be reviewed. 3 WSPs will be reviewed and merged into an existing WSP. 22 WRPs will be completed. Performance indicator Cumulative percentage of forecast WSPs reviewed, replaced/extended or merged: Forecast: 100% Cumulative percentage of forecast WRPs completed: Forecast 100% 	 Dol Water Output measure 7 WSPs replaced/extended 2 WSPs reviewed 8 WSPs were reviewed and merged into existing WSPs 1 WRP completed Performance indicator 130% percentage of forecast WSPs reviewed, replaced/extended or merged WRPs completed 	N/A
W06-03 Floodplain management plan development The development, review, amendment and extension or replacement of Floodplain Management Plans in collaboration with OEH.	 Floodplain Management Plan (FMP) development. Remake of each FMP as it expires. 	 Output measure (OM20) Number of FMP completed or remade: 5 new FMPs will be developed Performance indicator Cumulative percentage of forecast FMPs completed: Forecast 100% 	Dol Water Output measure Dol Water Regulated - Gwydir - 1 plan (Gwydir Valley FMP commenced 10 August 2016) Unregulated - Far West - 1 plan (Barwon-Darling Valley FMP commenced 29 June 2017) Performance indicator 40% cumulative percentage. Details as it follows	N/A

Activity	Outputs	Measures and Indicators	Information reported by WaterNSW and DoI Water in November 2017	Information reported by WaterNSW and DoI Water in March 2018
			Gwydir Barwon Darling Upper Namoi Lower Namoi Border Rivers Macquarie Has been to Consultation 30% 30% 30% 30% Has IRP approval to go to PE 60% 60% 60% 60%	
			Has IRP approval to Commence Commenced 100% 100%	
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.	 Drainage Management Plan (DMP) development Remake of each DMP as it expires 	Output measure (OM21) Number of DMPs completed or remade: • 0 new DMPs will be developed. Performance indicator • N/A	At this stage there are no commitments for the development of any drainage management plans. There are currently none under development on the coast, and none have been made.	N/A
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.	 Development of regional water strategies, which integrate and set priorities for related special-purpose plans (for example water sharing plans). Evaluation and ongoing adaptive management of the metropolitan water plans for greater Sydney and the lower Hunter. 	 Output measure (OM22) 2 regional water strategies (metropolitan water plans) will be reviewed. 6 new regional water strategies will be completed. Performance indicator Cumulative percentage of forecast metropolitan water plans being reviewed: Forecast: 100% Cumulative percentage of forecast regional water 	Dol Water Output measure Development of regional water strategy for the Hunter Region is in the final stages and will be completed in 2018. Development of regional water strategy for the Lachlan, Macquarie and Gwydir has commenced. North Coast and South Coast to commence early 2018 and will be completed by end of funding cycle. The regional water strategies team has been diverted into other regions ie Namoi and Border Rivers as a result of the National Water Infrastructure Fund.	N/A

				Information (11)
Activity	Outputs	Measures and Indicators	Information reported by WaterNSW and DoI Water in November 2017	Information reported by WaterNSW and DoI Water in March 2018
	 Development, assessment and review of planning instruments. 	strategies completed: • Forecast: 100%	Performance indicator • Current: • Hunter 85% complete • Macquarie 25% • Gwydir 25% • Lachlan 50% • North and South Coast 10% The review of the Metropolitan Water Plan for Greater Sydney was completed in 2016/17. Recommendations from the review were approved by Government in August 2016 and the final plan was publicly released by the Minister for Energy and Utilities in March 2017. The Plan is available at www.metrowater.nsw.gov.au An Implementation and Evaluation Plan (I&E Plan) has been drafted for the 2017 Metropolitan Water Plan. Parts of this activity are now with Planning and Environment.	
W06-06 Development of water planning and regulatory framework The development of the operational and regulatory requirements and rules for water access.	 Developed, amended and refined regulatory instruments and policies putting in place an improved regulatory framework for water management planning. Requirements for issuing new water licences clearly defined and understood by users. 	Output measure (OM23) Number of regulatory instruments and policies developed or amended according to anannual forecast: • Forecast on an annual basis. Performance indicator Percentage of annual forecast frameworks and regulatory instruments delivered according to schedule: • Forecast: 100%.	 Dol Water Output measure Commenced statutory review of the Water Management (General) Regulation 2011 Published "Strategy for the controlled allocation of groundwater" Amendments to Regulation to commence various regulatory amendments in the Water Management Amendment Act 2014 Statute law revision amendments to streamline approval extension process 	DoI Water Performance indicator No annual forecast was available upon which to measure performance against. Potential need to refine output measure and performance indicator to better reflect the dynamic nature of policy, planning and regulatory development. Currently, the establishment of the

Activity	Outputs	Measures and Indicators	Information reported by WaterNSW and DoI Water in November 2017	Information reported by WaterNSW and DoI Water in March 2018
	 Requirements for equitable water take defined and improved. 			NRAR has resulted in the complete overhaul of the regulatory framework. New policies are under development and being published on the NRAR website as completed. Discussion papers on transparency and water metering are going on exhibition seeking detailed feedback. A new board has been established to oversee NRAR regulation.
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	 Development and implementation of operational programs to meet NWI commitments. Biennial assessments on progress with implementing NWI agreements on water reform agenda. Participation in relevant interstate committees progressing NWI and COAG water reform initiatives. Development of interstate water sharing arrangements through MDB and Border Rivers agreements, and Snowy and ACT arrangements. 	Output measure (OM24) Full participation in interstate processes to manage water. Performance indicator Compliance with key interstate agreements: • Current: 100% • Forecast: 100%	DoI Water DoI Water recently coordinated the NSW submission to the Productivity Commissions draft report on National Water Reform (i.e. progress made in implementing the NWI). NSW actively participates in many interjurisdictional committees to progress interstate water sharing arrangements and reform initiatives such as BOC, the Border Rivers Commission and is currently leading the Snowy Licence Review. Water resource plans are currently under development which will further address interstate water sharing arrangements.	Dol Water Performance indicator Dol Water is compliant with all (100%) key interstate agreements for 2016/17.
W07-01 Water management works	Water management works tomitigate resource	Output measure (OM25) High priority areas of erosion	DoI Water	DoI Water
The undertaking of water	impacts:	identified and remediated:	Output measure	

Activity	Outputs	Measures and Indicators	Information reported by WaterNSW and DoI Water in November 2017	Information reported by WaterNSW and DoI Water in March 2018
management works to reduce the impacts arising from water use or remediate water courses.	 Riverbank protection Salt interception schemes 	 Current: 90% Forecast: 90% Maintain salinity (EC) credits for NSW Performance indicator Channel output capacity at Tumut maintained at 9,200ML/day. 	 Tumut River bank rock work – 660 metres, 110m of which was rock repair of pre-existing work Upper Murray River bank rock work – 1860 metres, 1500m of which was rock repair of pre-existing work Tumut River bank re: vegetation – 1300 metres Upper Murray River bank re: vegetation – 5,052 metres Willow Management Snag management Solve anabranch issues Tumut River has a recurrent erosion rate of approximately 1,000 m per year in high priority areas. This year 66% of recurrence completed Operated and maintained Salt Interception Schemes in NSW on behalf of Basin States, to contribute to the Basin Salinity Target (of 800 EC at Morgan, 95% of the time) This function has now been moved to Soil Conservation Services. Performance indicator Waterways maintained for planned water flows – chocking willows managed – spraying and removal to 35% of the entire waterway both rivers, both banks approximately 96km in length. The aim is to provide a stable main channel capable of carrying sufficient capacity to suit 	Output measure Current is 66%. The reason for the lower than predicted result of 66% was related to large flood event on in October 2016. The general works schedule for Tumut is from September to December each Financial Year. The flooding in October had a significant impact on the team's ability to undertake the forecast works for the year. For 16/17 the Basin salinity target of '800 EC or below at Morgan, 95% of the time', was met. NSW operated and maintained three SIS to contribute to the achievement of this goal. Performance indicator Channel output capacity at Tumut maintained at 9,200 ML/day.

Activity	Outputs	Measures and Indicators	Information reported by WaterNSW and DoI Water in November 2017	Information reported by WaterNSW and DoI Water in March 2018
			the needs of irrigation demand and power generation and reducing Landowner complaints.	
W08-01 Regulation systems management The management, operation, development and maintenance of the register for access licences, approvals, trading and environmental water.	Management and operation of public register for access licence approvals, trading and environmental water. Systems development: • Online tools • Online applications • Online payments • Smart phone tracking of applications	Output measure (OM26) Number of applications received online: • Current; 2,000 • Forecast: 2,500 Performance indicator Percentage of allapplications received online: • Current: 33% • Forecast: 42%	WaterNSW Output measure WaterNSW Number of applications received online: 3430 Performance indicator - Domestic & Stock approvals: 328 (10%) - Approval Extensions: 2956 (86%) - Dealings and new WALs: 146 (4%)	N/A
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.	 Licences cleansed for conversion to WMA. Volumetric licence conversions. Water sharing provisions transcribed into licence conditions. Development of discretionary conditions. 	 Output measure (OM27) Annual number of licences recorded on the public register plus number of access licence and approvals with updated conditions: Current: All licences recorded on public register. Forecast: All licences recorded on public register – the number varies from year to year. Performance indicators Percentage of access licences and changes to licence details recorded on the public register within two months of implementation or update of 	 WaterNSW Output measure All licences recorded on public register - the number varies from year to year - 41351 Number of licenses conditions converted from WA1912 to WMA2000 as at 01-07-2016 Regulated - All Licenses converted GW - 1477 Unregulated - 1558 Note: During the 2016/17 Water year there were still 396 licenses to be converted for the Hastings WSP Performance indicator Current 95% Forecast 90% 	N/A

Activity	Outputs	Measures and Indicators	Information reported by WaterNSW and DoI Water in November 2017	Information reported by WaterNSW and DoI Water in March 2018
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.	Compliance education, monitoring and breach management/ enforcement/ investigation.	 sharing plan: Current 90% Forecast 90% Output measure (OM28) Number of breach reports received: Current: 600 Forecast: 600 Performance indicator Percentage of non-basic landholder rights approvals audited each year: 2% Percentage of properties audited that are in compliance with licence and approval conditions (excluding those audited as part of investigating an alleged breach): 90% Percentage of breach reports risk assessed within 14 days of receipt: 90% Percentage of all cases finalised within 6 months: 70% 	Dol Water has been undertaking minor parts of this activity. WaterNSW Output measure Number of breach reports received: • Current: 396 • Forecast: 600 Performance indicator Updated response provided by WaterNSW in March 2018.	 WaterNSW Performance indicator Percentage of non-basic landholder rights approvals audited each year: 0% Percentage of properties audited that are in compliance with licence and approval conditions (excluding those audited as part of investigating an alleged breach): 0% During the reporting period, the priority was ensuring that customer service levels were maintained during a period of significant agency reform and ensuring higher priority licensing activities were the focus. Percentage of breach reports risk assessed within 14 days of receipt: 90% Percentage of all cases finalised within 6 months: 72%
W08-99 Water consents overhead The administrative overhead costs associated with water	Overhead support and facilities for consent transactions.	(OM29) – Overhead charge associated with consent transactions.	WaterNSW Updated response provided by WaterNSW in March 2018.	WaterNSW has applied its own methodology in apportioning

Activity	Outputs	Measures and Indicators	Information reported by WaterNSW and DoI Water in November 2017	Information reported by WaterNSW and DoI Water in March 2018
consent transactions, which are passed on to customers in the water management tariff.				corporate wide and WAMC specific overhead to the WAMC cost codes, which does not require the creation of a specific cost code for water consents overhead.
W09-01 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.	 Water consents transactions processed. Licences in compliance with regulatory requirements. 	 Output measure (OM30) Number of applications processed: Current: 6,000 Forecast: Process all applications received Performance indicator Percentage of applications for licence dealings assignment of shares (71Q) processed within 20 days: 90% Percentage of applications for new access licences processed within 40 days: 80% Percentage of applications for water management work and use approvals processed within 60 days: 80% Percentage of applications to extend a water management work approval processed within 20 days: 90% Percentage of applications for an approval for a bore for domestic and stock rights processed within 10 days: 90% 	 WaterNSW Output measure Number of applications processed: 6,746 Performance indicator Percentage of applications licence dealings assignment of shares (71Q) processed within 20 days: 98% Percentage of applications for new access licences processed within 40 days: 88% Percentage of applications for water management work and use approvals processed within 60 days: 82% Percentage of applications to extend a water management work approval processes within 20 days: 96% Percentage of applications for an approval for a bore for domestic and stock rights processed within 10 days: 94% Percentage of legal searches completed within the preferred processing time frame: 100% 	N/A

Activity	Outputs	Measures and Indicators	Information reported by WaterNSW and DoI Water in November 2017	Information reported by WaterNSW and DoI Water in March 2018
W10.01 Customor	Timely removes to	Percentage of legal searches completed within the preferred processing time frame: 95%	Water NICW	
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.	Timely responses to customer enquiries.	Output measure (OM31) Number of enquiries: • Current: 10,000 • Forecast: 10,000 Performance indicator Percentage of enquiries directly responded toat the time of the call/email: • Current: 90% • Forecast: Maintain or improve current status	WaterNSW Output measure Number of enquiries: 35,000 approx. (total calls & emails received) Large spike in enquires due to the extension of expired Work and Combined Approvals after 10 year period. Performance indicator Updated response provided by WaterNSW in March 2018.	WaterNSW Performance indicator For calls, during the 16/17 year w omitted to measure and report against this KPI due to focussing on priorities associated with the transfer of functions from DoI Water in addition to inheriting telephony and systems which did not provide the capability to recor and report against this particular KPI. We have since introduced a new telephony platform this calendar year which will allow us to better manage first call resolution through the review an management of wrap up codes ar tickets raised within the business At the same time we have been conducting end of call surveys which have indicated a very high score (9/10) in terms of customer satisfaction. These surveys are being automated which will give us a more independent review of our performance. All of these activities support our commitment

Activity	Outputs	Measures and Indicators	Information reported by WaterNSW and DoI Water in November 2017	Information reported by WaterNSW and DoI Water in March 2018
				towards a more robust and reliable measure of first call resolution. For Email interactions, approximately 80% of emails received were responded to within 3 days and 89% were responded to within 5 days. More complex matters may require further consultation with the customer and therefore may take longer to resolve. This figure is slightly lower than expected due to reduced staffing during Dec 16 to Jun 17 and the increasingly complex nature of enquiries requiring referral to local Water Regulation Officers who have specialised knowledge needed to finalise the customer enquiries. We are working towards improving these metrics and as a result of an investment in new technologies and increased staffing levels are confident our performance has been improving.
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.	Business systems, processes and administration for commercial operation of government monopoly water services.	 Output measure (OM32) Annual reporting to IPART and ACCC. Annual performance reporting tocustomers. Performance indicator Annual reporting within 	 WaterNSW Output measure Reporting to IPART and ACCC completed in 2016-17 for 2015-16 by DoI Water Performance indicator 	N/A

Activity	Outputs	Measures and Indicators	Information reported by WaterNSW and DoI Water in November 2017	Information reported by WaterNSW and DoI Water in March 2018
V10-03 Billing management The management of billing equirements and ubcontracted billing, evenue collection and lebtor management service lelivery, and responding to pueries on billing activities.	Water billing and payment processing.	agreed timeline from end of financial year: • Reporting to IPART and ACCC: 4 months. • Reporting to customers: 6 months. Output measure (OM33) Number of bills issued: • Current: 65,000 • Forecast: 65,000 Performance indicator Percentage of billing revenue collectedwithin 3 months of the bills being issued: • Current: 93% • Forecast: 95%	In 2016-17, Dol Water has reported to IPART and ACCC within the timeframes agreed – 30 November and 8 December 2016. Reporting to customer on the annual performance is now within WaterNSW. WaterNSW Updated response provided by WaterNSW in March 2018.	 WaterNSW Output Measure Number of invoices issued: Regulated: 45,192 Ground Water: 10,364 Unregulated: 15,016 Total: 70,572 Forecast 65,000 Performance Indicator Current: 95% (based on WAMC revenue issued since transfer of function) Forecast: 95% We do not anticipate the number of bills issued to change significantly as new water licenses were not issued and very few are surrendered. Current debtor days for WAMC are at 94 days, due to pre-existing WAMC debt WaterNSW acquired when it took over this function. WaterNSW anticipates that for 17/18 the output of 95% within 90