

# A new surface water sharing plan for the Greater Metropolitan Region

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A summary of proposed changes included in the draft *Water Sharing Plan for the Greater Metropolitan Region Unregulated River Water Sources 2023*.

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Water sharing plans in NSW are the primary legal framework for managing water access and sharing in NSW. The plans are valid for 10 years from their start date.

Near the end of the 10-year term, the Natural Resources Commission (NRC) conducts a formal review to identify any changes necessary to deliver better outcomes for all water users, including the environment.

Under the *Water Management Act 2000*, the Minister may, on the recommendation of the NRC, extend a water sharing plan for another 10 years or replace it with a new plan.

In 2021, the NRC completed its review of the *Water Sharing Plan for the Greater Metropolitan Region Unregulated River Water Sources 2011* and recommended its replacement. This replacement is due by 1 July 2023. A copy of the NRC report is available from the [Publications pages of the NRC website](#).

The proposed changes to the plan range from administrative amendments to additional rules. This factsheet provides a summary of the proposed changes.

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## Scope of the water sharing plan

A new water sharing plan – the *Water Sharing Plan for the Greater Metropolitan Region Unregulated River Water Sources 2023* – has been drafted. When finalised, this plan will replace the current *Water Sharing Plan for the Greater Metropolitan Region Unregulated River Water Sources 2011*.

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## Water source name changes

The *Water Sharing Plan for the Greater Metropolitan Region Unregulated River Water Sources 2011* defined water sources at a large scale. Management zones have been used to define a catchment area usually represented as a water source. As a result, the 2011 Plan has 6 water sources and 88 management zones.

In remaking the plan DPE Water has applied the standard criteria to define a water source. This has resulted for example in the Nerrimunga Creek management zone becoming the Nerrimunga Creek water source. Several management zone boundaries have been redrawn and multiple management zones amalgamated into a single water source.

These changes will impact the extraction component of water access licences and water supply works approvals.

The following list of changes has been proposed in the draft replacement water sharing plan. These changes can be seen on the draft [plan map](#).

Current	New water source	New water management zone
<b>Upper Nepean and Upstream Warragamba Extraction Management Unit</b>		
Mulwaree River Management Zone	Mulwaree River Water Source	-
Upper Wollondilly River Management Zone	Upper Wollondilly River Water Source	-
Lower Wollondilly River Management Zone	Lower Wollondilly River Water Source	-
Nattai River Management Zone	Nattai River Water Source	-
Little River Management Zone	Little River Water Source	-
Lake Burragorang Management Zone	Lake Burragorang Water Source	-
Werriberri Creek Management Zone	Werriberri Creek Water Source	-
Maldon Weir Management Zone	Maldon Weir Water Source	-
Maguires Crossing Management Zone	Maguires Crossing Water Source	-
Stonequarry Creek Management Zone	Stonequarry Creek Water Source	-
Wywandy Management Zone	Wywandy Water Source	-
Dharabuladh Management Zone	Dharabuladh Water Source	-
Jenolan River Management Zone	Jenolan River Water Source	-
Kowmung River Management Zone	Kowmung River Water Source	-
Kedumba River Management Zone	Kedumba River Water Source	-
Lower Wingecarribee Management Zone	Wingecarribee River Water Source	Lower Wingecarribee River Management Zone
Upper Wingecarribee Management Zone		Upper Wingecarribee River Management Zone

Current	New water source	New water management zone
Medway Rivulet Management Zone		Medway Rivulet Management Zone
Lower Cataract Management Zone	Upper Nepean Rivers Water Source	Upper Nepean River Management Zone-
Mid Cataract Management Zone		Pheasants Nest Weir to Nepean Dam Management Zone -
Cordeaux Management Zone		
Avon Management Zone		
Pheasants Nest Weir to Nepean Dam Management Zone		
Upper Nepean Tributaries Management Zone		
<b>Hawkesbury and Lower Nepean Extraction Management Unit</b>		
Warragamba River Management Zone	Warragamba River Water Source	-
Lower Nepean River Management Zone	Lower Nepean River Water Source	-
Erskine Creek and Glenbrook Creek Management Zone	Erskine Creek and Glenbrook Creek Water Source	-
Grose River Management Zone	Grose River Water Source	-
Capertee River Management Zone	Capertee River Water Source	-
Colo River Management Zone	Colo River Water Source	-
Lower Hawkesbury River Management Zone	Lower Hawkesbury River Water Source	-
Macdonald River Management Zone	Macdonald River Water Source	-
Cattai Creek Management Zone	Cattai Creek Water Source	-
Berowra Creek and Cowan Creek Management Zone	Berowra Creek and Cowan Creek Water Source	-

Current	New water source	New water management zone
South Creek to Cattai Creek Management Zone	Upper Hawkesbury River Water Source	-
Grose River to South Creek Management Zone		-
Cattai Creek to Colo River Management Zone		-
Menangle Weir Management Zone	Mid Nepean River Weirs Water Source	Menangle Weir Management Zone
Camden Weir Management Zone		Camden Weir Management Zone
Sharpes Weir Management Zone		Sharpes Weir Management Zone
Cobbity Weir Management Zone		Cobbity Weir Management Zone
Mount Hunter Rivulet Weir Management Zone		Mount Hunter Rivulet Weir Management Zone
Brownlow Hill Weir Management Zone		Brownlow Hill Weir Management Zone
Theresa Park Weir Management Zone		Theresa Park Weir Management Zone
Wallacia Weir Management Zone		Wallacia Weir Management Zone
Mid Nepean River Catchment Management Zone		Mid Nepean River Catchment Management Zone
Upper South Creek Management Zone		Wianamatta-South Creek Water Source
Lower South Creek Management Zone	Lower Wianamatta- South Creek Management Zone	
	Eastern Creek Management Zone (New management zone)	
<b>Shoalhaven River Extraction Management Unit</b>		
Corang and Endrick Rivers Management Zone	Corang and Endrick Rivers Water Source	-

Current	New water source	New water management zone
Nerrimunga Creek Management Zone	Nerrimunga Creek Water Source	-
Bungonia Creek Management Zone	Bungonia Creek Water Source	-
Shoalhaven River Gorge Management Zone	Shoalhaven River Gorge Water Source	-
Barbers Creek Management Zone	Barbers Creek Water Source	-
Fitzroy Falls Management Zone	Fitzroy Falls Water Source	-
Yarrunga Creek Management Zone	Yarrunga Creek Water Source	-
Lower Kangaroo River Management Zone	Lower Kangaroo River Water Source	-
Bundanoon Creek Management Zone	Bundanoon Creek Water Source	-
Lower Shoalhaven River Management Zone	Lower Shoalhaven River Water Source	-
Bomaderry Creek Management Zone	Bomaderry Creek Water Source	-
Lower Shoalhaven River Catchment Management Zone	Lower Shoalhaven River Catchment Water Source	-
Jaspers Brush Creek and Tributaries Management Zone	Jaspers Brush Creek and Tributaries Water Source	-
Kangaroo River Management Zone	Kangaroo River Water Source	-
Boughton Creek Management Zone	Broughton Creek Water Source	-
Broughton Mill Management Zone		
Upper Shoalhaven River Management Zone	Upper Shoalhaven River Water Source	Upper Shoalhaven River Management Zone
Mid Shoalhaven River Management Zone		Mid Shoalhaven River Management Zone

Current	New water source	New water management zone
Boro Creek Management Zone	Upper Shoalhaven Tributaries Water Source	Boro Creek Management Zone
Mongarlowe River Management Zone		Mongarlowe River Management Zone
Reedy Creek Management Zone		Reedy Creek Management Zone
<b>Illawarra Rivers Extraction Management Unit</b>		
Minnamurra River Management Zone	Minnamurra River Water Source	-
Minnamurra Coastal Management Zone	Minnamurra Coastal Water Source	-
Lake Illawarra Management Zone	Lake Illawarra Water Source	-
Macquarie Rivulet Management Zone	Macquarie Rivulet Water Source	
Wollongong Coastal Management Zone	Wollongong Coastal Water Source	
<b>Northern Sydney Rivers Extraction Management Unit</b>		
Upper Parramatta River Management Zone	Parramatta River Water Source	Upper Parramatta River Management Zone
Lower Parramatta River Management Zone		Lower Parramatta River Management Zone
Lane Cove River Management Zone	Lane Cove River Water Source	-
Middle Harbour Management Zone	Middle Harbour Water Source	-
Northern Sydney Coastal Management Zone	Northern Sydney Coastal Water Source	-
<b>Southern Sydney Rivers Extraction Management Unit</b>		
Upper Woronora River Management Zone	Woronora River Water Source	Upper Woronora River Management Zone
Lower Woronora River Management Zone		Lower Woronora River Management Zone

Current	New water source	New water management zone
Hacking River Management Zone	Hacking River Water Source	-
Lower Georges River and Bunbury Curran Creek Management Zone	Lower Georges River and Bunbury Curran Creek Water Source	-
Cabramatta Creek Management Zone	Cabramatta Creek Water Source	-
Prospect Creek Management Zone	Prospect Creek Water Source	-
Georges River Catchment Management Zone	Georges River Catchment Water Source	-
Cooks River and Botany Bay Management Zone	Cooks River and Botany Bay Water Source	-
Southern Sydney Coastal Management Zone	Southern Sydney Coastal Water Source	-

## New definition for long-term average annual extraction limits

The long-term average annual extraction limit (LTAAEL) determines the maximum amount of water that can be extracted from a water source over the long term.

The 2011 plan established 2 types of LTAAEL in each extraction management unit:

1. for water taken by WaterNSW under a Major Utility licence
2. for water taken under an access licence or in the exercise of a domestic and stock or native title right ('other' LTAAEL).

The two LTAAEL approach has been used as the water taken by WaterNSW to supply Sydney's drinking water is a significant proportion of the total annual volume available. This large volume needs to be managed separately to other forms of take. If the LTAAEL is exceeded, we also need to be able to correctly attribute any LTAAEL compliance action to the appropriate area.

### 1. WaterNSW Major Utilities LTAAEL

The draft replacement plan does not propose any changes to the WaterNSW Major Utilities LTAAEL. LTAAEL compliance will be assessed more regularly to enable response to Sydney's growing population and drinking water requirements.

The WaterNSW Major Utilities LTAAEL is expressed volumetrically in the plan based on the historical average of supply of water from WaterNSW to Sydney Water and modelling of system yield.

Extraction by WaterNSW in an EMU may exceed the LTAAEL for the EMU for one or more years. However, the average of extractions over a ten-year period should not exceed the limit. Extraction shall not exceed the licence share component in any one year.

Figure 1. WaterNSW Major Utilities LTAAEL

Extraction management unit	Share Component (ML/year)	LTAAEL (ML/year)	Notes
Shoalhaven River	329,000	36,000	Share component based on maximum historical extraction from 2000-2010. Annual extraction limit is based on long term average annual modelled transfers to the Upper Nepean River and Upstream Warragamba Water Source.
Illawarra Rivers	0	0	No WaterNSW Major Utilities licences.
Upper Nepean and Upstream Warragamba	620,000	581,000	Share component based on maximum historical extraction from 2000-2010. Annual extraction limit is based on average historical transfers to Sydney Water and system yield modelling.
Hawkesbury and Lower Nepean Rivers	6,000	6,000	6000 ML equals dams on headwater creeks of Grose River. Annual extraction limit is based on average historical transfers to Sydney Water and system yield modelling.
Southern Sydney Rivers	32,000	13,000	Annual extraction limit based on average historical transfers to Sydney Water and system yield modelling.
Northern Sydney Rivers	0	0	No WaterNSW Major Utilities licences.

## 2. Other' LTAAEL

A revised definition of LTAAELs has been developed in response to recommendations from the NRC and is now being applied across all coastal water sharing plans at their remake. This revised definition splits the LTAAEL into 2 components:

1. Standard LTAAEL - to capture extraction that can impact all flows, and
2. High flow LTAAEL - to capture water take that specifically impacts high flows.



### Standard LTAAEL

The standard LTAAEL applies to take from all flows and includes all basic landholder rights extraction including harvestable rights. The standard LTAAEL includes:

- sum of entitlements at commencement of the replacement water sharing plan (except in the Upper Nepean and Upstream Warragamba and Hawkesbury and Lower Nepean extraction management units where it will be the annual extraction of water averaged over the period from July 1993 to June 1999),
- a reduction for entitlement cancelled specifically for an environmental purpose,
- domestic and stock and native title basic landholder rights estimated at commencement of the 2011 plan, and
- an estimate of the maximum harvestable rights at the commencement of the 2011 plan.

This LTAAEL will be a fixed volume that is expressed numerically in the final water sharing plan.

By including harvestable rights in the standard LTAAEL and establishing this as a fixed volume it enables the management of any growth in water extraction whether from licenced users or from water taken under a basic right.

If extraction increases to more than 5% above the standard LTAAEL then a reduced available water determination will be announced to bring extractions back down to the extraction limit. The reduced determination can only be applied to licenced water users.

### Standard LTAAEL - Upper Nepean and Upstream Warragamba and Hawkesbury and Lower Nepean

In the 2011 Plan, the other LTAAEL was defined differently in water sources that are used to meet Sydney's water supply requirements. These water sources moved away from using the standard 'sum of entitlement' LTAAEL definition as it was felt that the true level of use within the system was thought to be lower than the volume of entitlement. Growth in take up to the full volume of entitlements could affect the reliability of Sydney's drinking water supply.

To mitigate this risk the other LTAAEL in the Upper Nepean and Upstream Warragamba and Hawkesbury and Lower Nepean extraction management units has been designed to reflect usage more closely. The LTAAEL in water sources that are used to meet Sydney's water supply requirements is defined as "the annual extraction of water averaged over the period from July 1993 to June 1999". The replacement plan will continue to use the 1993-99 average extraction figures instead of the sum of entitlements.

### Higher flow LTAAEL

The higher flow LTAAEL applies to extraction that can only occur from high flows. This volume can vary as licences are granted or converted to higher flows. By establishing a variable higher flow LTAAEL we can manage extraction whilst encouraging users to shift their extraction away from stressed low flow periods into wetter times when there is an abundance of water in system.

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## Water supply work approvals

Since the commencement of the original water sharing plan, new information has been identified:

- The Greater Metropolitan Region has coastal wetlands listed under the State Environmental Planning Policy (Resilience and Hazards) 2021. The Plan prohibits the granting or amending of water supply work approvals where it will cause more than a minimal impact on wetlands listed under the [State Environmental Planning Policy \(Resilience and Hazards\) 2021](#).
- We have completed a risk assessment for the water sources in the water sharing plan area. It looks at the ecological values in the area and the likelihood that extraction of water will impact on these ecological values. The combination of ecological value and likelihood results in a risk rating for each water source. We have identified water sources with high ecological value. These are Hacking River, Minnamurra River, Minnamurra Coastal, Maguires Crossing, Upper Hawkesbury River (South Creek to Cattai Creek), Macdonald River, Cattai Creek, Werriberri Creek, Little River, Nattai River, Lower Wollondilly River, Yarrunga Creek, Upper Nepean Water Source and Lower Nepean River water sources.
- The *Marine Estate Management Act 2014* began operating since the last water sharing plan was developed. This Act requires the Minister for Lands and Water to have regard to the NSW Marine Estate Management Strategy.

As a result, the draft replacement water sharing plan proposes the following changes to rules that apply to water supply works approvals:

- prohibiting construction or amendment of in-river dams in water sources identified as having high ecological value and that currently have the prohibition in place

prohibiting the granting or amending water supply work approvals where there will be more than minimal impact on Coastal SEPP wetlands in water sources where they exist.

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## Estimated water requirements for basic landholder rights and licensed take

We propose to update the estimated water requirements of basic landholder rights to take into consideration recent data sets for urban areas, number of dwellings and land use. We also propose to update the total volumes or unit shares specified in the share components of all access licences to reflect current information.

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## Access rules and flow reference points

### Shoalhaven River Extraction Management Unit

If you take water from the Jaspers Brush Creek and Tributaries Water Source, a new flow reference point and access rules are being proposed. New access rules will be referenced to 215019 Jaspers Brush Creek at Jaspers Brush gauge with a cease to pump of 0.5 ML/day.

If you take water from the Fitzroy Falls Water Source, new access rules will be referenced to 215233 Yarrunga Creek at Wildes Meadow gauge with a cease to pump of 1.3 ML/day.

If you take water from the Lower Shoalhaven River Water Source, new access rules will be referenced to 215216 Shoalhaven River at Grassy Gully No 2 gauge with a cease to pump of 69 ML/day with no pumping 24 hours after a cease to pump event.

If you take water from the Bomaderry Creek Water Source, new access rules will be referenced to 215016 Bomaderry Creek at Bomaderry gauge with a cease to pump of 0.7 ML/day and a commence to pump at 1.3 ML/day.

### **Illawarra Rivers Extraction Management Unit**

If you take water from the Minnamurra River Water Source, new access rules will be referenced to 214010 Minnamurra River at Browns Lane gauge, with a cease to pump of 3.6 ML/day.

### **Upper Nepean Upstream Warragamba Extraction Management Unit**

If you take water from the Jenolan River Water Source, a new flow reference point and access rules are being proposed. New access rules will be referenced 212250 Coxs River at Kelpie Point gauge with a cease to pump of 6 ML/day.

If you take water from the Kowmung River Water Source, a new flow reference point and access rules are being proposed. New access rules will be referenced 212260 Kowmung River at Cedor Ford gauge with a cease to pump of 0.8 ML/day.

If you take water from the Kedumba River Water Source, a new flow reference point and access rules are being proposed. New access rules will be referenced 212016 Kedumba River at Kedumba Crossing gauge with a cease to pump of 5 ML/day.

If you take water from the Lower Wollondilly River Water Source, new access rules will be referenced to 212271 Wollondilly River at Golden Valley gauge with a cease to pump of 4 ML/day and a commence to pump at 7 ML/day.

If you take water from the Lower Wingecarribee River Management Zone, new access rules will be referenced to 2122009 Wingecarribee River at Greenstead gauge with a cease to pump of 13.9 ML/day with no pumping 24 hours after a cease to pump event.

If you take water from the Nattai River Water Source, new access rules will be referenced to 2122801 Nattai River at the Craggs gauge with a cease to pump of 2.7 ML/day with no pumping 24 hours after a cease to pump event.

If you take water from the Maldon Weir Water Source, new access rules apply. These are a simplified version of the current rules in the plan. Access rules provide for the protection of environmental flows. For area with complex access rules the department is working to develop an online system to announce the daily flow class and let licence holders know when access is permitted.

If you take water from the Stonequarry Creek Water Source, new access rules will be referenced to 212053 Stonequarry Creek at Picton gauge with a cease to pump of 0.8 ML/day and a commence to pump at 1 ML/day.

Due to the poor quality of data produced by the local gauge, Little River Water Source will move to a cease to pump of no visible flow at the pump site.

### Southern Sydney Rivers Extraction Management Unit

No changes are proposed for water sources in the Southern Sydney Rivers Extraction Management Unit.

### Northern Sydney Rivers Extraction Management Unit

No changes are proposed for water sources in the Northern Sydney Rivers Extraction Management Unit.

### Hawkesbury and Lower Nepean Rivers Extraction Management Unit

In the Mid Nepean River Weirs Water Source, if you take water from Sharpes Weir, new access rules will be referenced to 212216 Nepean River at Camden Weir. Camden Weir Management Zone will continue to reference this gauge. If you take water from Cobbity Weir, Brownlow Hill Weir, Theresa Park Weir, Mount Hunter Rivulet Weir or Wallacia Weir Management Zones, new access rules will be referenced to 212202 Nepean River at Wallacia Weir. Menangle Weir Management Zone will continue to reference existing gauge (212238 Nepean River at Menangle Weir). New access rule will provide access to water above the sum of environmental flow releases from the Upper Nepean dams.

If you take water from the Cattai Creek Water Source, new access rules will be referenced to 2122951 Cattai Creek at Cattai Ridge Road gauge at Picton gauge with a cease to pump of 5 ML/day with no pumping 24 hours after a cease to pump event.

If you take water from the current Lower South Creek Management Zone:

- Name changes are proposed for South Creek. These include:
  - Establishing a Wianamatta-South Creek water source with 3 management zones in the Hawkesbury and Lower Nepean River extraction management zone:
    - Upper Wianamatta-South Creek Management Zone;
    - Lower Wianamatta-South Creek Management Zone
    - Eastern Creek Management Zone
- Those upstream of the confluence South Creek and Ropes Creek and Eastern Creek and Breakfast Creek, will have new access rules referenced to 212048 South Creek at Great Western Highway, with a cease to pump of 0.3 ML/day. This will also include Werrington Creek, Claremont Creek, Ropes Creek, Angus Creek and Reedy Creek. These areas will now be part of the Upper Wianamatta- South Creek Management Zone.
- Those that take from Eastern Creek below the confluence of Eastern Creek and Breakfast Creek and above the confluence of Eastern Creek and South Creek, will have new access rules and will reference Eastern Creek at Riverstone gauge (212296), with a cease to pump of 10ML/day. This will also include users on Bells Creek and will become part of the Eastern Creek Management Zone.
- Those licence holders that take from South Creek below the confluence of South Creek and Ropes Creek and users in McKenzies Creek, Killarney Chain of Ponds and First Ponds Creek

will continue to reference 212297 South Creek at Richmond Road with a cease to pump of 7.7ML/day and form the Lower Wianamatta-South Creek Management Zone.

If you take water from the Lower Nepean River Water Source, new access rules provide for the protection of environmental flows and drinking water supply. For area with complex access rules the department is working to develop an online system to announce the daily flow class and let licence holders know when access is permitted.

If you take water from the Upper Hawkesbury River Water Source, new access rules apply. These have been simplified and include the amalgamation of the previous 3 Management Zones into one water source. Access rules provide for the protection of environmental flows and very low flows from tributaries. For area with complex access rules the department is working to develop an online system to announce the daily flow class and let licence holders know when access is permitted.

If you take water from the Lower Hawkesbury Water Source, new access rules apply. These are a simplified version of the current rules in the plan. Access rules provide for the protection of environmental flows and very low flows from tributaries. For area with complex access rules the department is working to develop an online system to announce the daily flow class and let licence holders know when access is permitted.

The proposed access rules aim to reach a balance between ecological, social, economic and cultural needs. Further information for each water source can be found in the [report cards](#) for each water source.

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## Exemptions to access rules

Access rules are put in place to protect low flows and reserve water for the environment. Exemptions to access rules allow licence holders to extract water during these low flow conditions albeit for specific circumstances, usually relate to meeting critical human water needs.

The current Greater Metropolitan unregulated water sharing plan contains several unique exemptions put in place for local industries in the Hawkesbury and Lower Nepean. These exemptions provide access to low flows for cropping purposes (new plantings, turf washing, watering turf in leadup to harvest etc.) and after consecutive days low flows when temperatures are  $<4^{\circ}\text{C}$  or  $\geq 31^{\circ}\text{C}$  (survival watering).

The draft replacement plan proposes to remove these exemptions, providing greater protection to low flows and environmental water in line with recommendations from the Natural Resources Commission. To date, targeted consultation on this matter indicates significant concerns with the impact that the proposed removal of these unique exemptions may have on some local industries.

The department is specifically seeking feedback on this proposal, its impacts and other possible options to mitigate these impacts. We want to continue to work with effected stakeholders to review the decisions around inclusion of these exemptions in the final replacement plan to ensure impacts on both industry and the environment are minimised.

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## Aboriginal community development licences

The current plan provides for applications for Aboriginal community development licences (ACDLs). Aboriginal people may apply for a water licence to support community development in the following water sources to specified limits:

- Upper Shoalhaven River Water Source up to 218 ML
- Jenolan River Water Source Lower up to 40 ML
- Kowmung River Water Source up to 40 ML

The draft replacement plan proposes to also permit ACDLs in the Boro Creek Water Source up to 268 ML.

ACDLs can only take in B class flows equivalent to the 50<sup>th</sup> percentile flow.

ACDLs are no longer permitted in Capertee River, Lower Wianamatta-South Creek, Kedumba River, Wywandy and Cattai Creek water sources as the volume of high flows are too low.

ACDLs would no longer be allowed in Colo River Water Source due to the presence of flow dependant fish species in the water source.

Peak daily demand in Upper Wianamatta-South Creek Water Source is larger than high flows, as such ACDLs are no longer allowed.

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## High flow conversions

Water can be granted for extraction at high flows only in the form of a high flow access licence in some water sources. To obtain water under a high flow access licence, shares of an unregulated access licence need to be surrendered. To encourage high flow conversions, 1 unit share of unregulated river access licence can be converted to 2.5 unit shares of high flow access licence. High flow conversions would be allowed in the following water sources, to the specified limits:

- Lower Kangaroo River Water Source up to 1,782 shares
- Lower Wollondilly River Water Source up to 418 shares
- Minnamurra River Water Source Lower up to 220 shares
- Upper Shoalhaven River Water Source up to 392 shares.

Unregulated (high flow) access licences can only take from B class flows in Upper Shoalhaven River, Lower Kangaroo River and Lower Wollondilly River water sources. Unregulated (high flow) access licences can only take in C class flows in Minnamurra River water source. These flow classes are equivalent to 50<sup>th</sup> percentile flow.

High flow conversions would be prohibited in Broughton Creek, Lower Hawkesbury River, Macdonald River, Lower Wianamatta-South Creek, Upper Wianamatta-South Creek, Maldon Weir and Cattai Creek water sources as there are no gauges or the volume of high flows are too low.

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## Total and individual daily extraction limits

Total daily extraction limits (TDELs) and individual daily extraction limits (IDELs) cannot be implemented due to the lack of metering and flow gauging so will be removed from the plan.

We believe TDELs and IDELs are an appropriate management tool and will consider introducing them in the future if there is enough infrastructure and metering to do so. As such an amendment provision has been included.

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## Trade rules

The risk assessment for the Greater Metropolitan Unregulated water sharing plan shows widespread reduction in risk across the plan area. This reduction in risk justifies change to the current trade framework in line with the NRC recommendation to “review trade limitations with a view to manage trade across broader areas provided environmental outcomes can be maintained”.

The draft replacement plan proposes an increase in trade opportunities where permitted by risk assessment data. The proposed rules have been designed to achieve positive environmental outcomes through promoting the downstream movement of extraction and the shift away from areas identified as high value or as being highly stressed.

### Upper Nepean and Upstream Warragamba Extraction Management Unit (EMU)

Risk assessment data for the Upper Nepean and Upstream Warragamba EMU is showing an overall decrease in risk across the catchment. Where risk is reduced it may be appropriate to increase trade opportunities. Water sources where trade rules have been relaxed based on risk assessment data include:

- Wywandy
- Dharabuladh
- Jenolan River
- Kedumba River
- Mulwaree River
- Upper Wollondilly River
- Lower Wollondilly River
- Upper Wingecarribee River
- Lower Wingecarribee River
- Lake Burragorang

Water sources that have been newly identified as having high or very high environmental values and now prohibit trade include:

- Werriberri Creek
- Little River
- Nattai River

Trade rules have also been put in place to ensure there is not growth in use within the catchment of Warragamba Dam.

### Illawarra Rivers EMU

Trade is currently prohibited between water sources in the Illawarra Rivers EMU due to the lack of connectivity between catchments. The draft replacement plan proposed to maintain the current prohibitions on trade in the Illawarra Rivers EMU.

### Shoalhaven Rivers EMU

Risk assessment data for the Shoalhaven Rivers EMU is showing large scale decreases in risk across the catchment. Risk was predominantly high in the previous assessment with trade prohibited in 15 of 21 water sources. Eight water management zones in the south western part of the EMU are now low risk. These management units encompass the Shoalhaven River and its tributary streams upstream of the Shoalhaven River Gorge.

Water sources where trade rules have been relaxed based on risk assessment data include:

- Kangaroo River
- Lower Kangaroo River
- Broughton Creek
- Broughton Mill Creek
- Upper Shoalhaven River
- Mid Shoalhaven River
- Reedy Creek
- Boro Creek
- Bungonia Creek
- Shoalhaven River Gorge
- Nerrimunga Creek

Consideration has been given to the reliability of the town water supply accessed at Burrier.

### Hawkesbury and Lower Nepean Rivers EMU

Risk assessment data for the Hawkesbury and Lower Nepean Rivers EMU is showing an overall decrease in risk across the catchment. Risk was predominantly high in the previous assessment. Where risk is reduced it may be appropriate to increase trade opportunities. In particular trade has been expanded throughout the Mid Nepean River Weirs and in a downstream direction through the Lower Nepean and Hawkesbury Rivers. Water sources where trade rules have been relaxed based on risk assessment data include:

- Menangle Weir
- Camden Weir
- Sharpes Weir
- Cobbity Weir
- Mount Hunter Rivulet Weir
- Brownlow Hill Weir
- Upper Wianamatta-South Creek
- Lower Wianamatta-South Creek and Eastern Creek.

Water sources such as the Lower Nepean River and Upper Hawkesbury River have been newly identified as having very high environmental values or high levels of stress. These water sources can only be traded into from upstream.

In developing trade rules consideration has been given to Wild Rivers in the Grose River and Colo River water sources.



### Northern Sydney Rivers EMU

There is limited hydrological connectivity between the five water sources in the Northern Sydney Rivers EMU. The proposed trade rules only allow downstream trade from Upper Parramatta and Lane Cove water sources to connected rivers in the Lower Parramatta River water source.

### Southern Sydney Rivers EMU

Risk assessment data for the Southern Sydney Rivers EMU show a slight increase in risk in an area where risk is already high. With risk being high the proposed trade rules intend to shift water in a downstream direction, away from headwater catchments for environmental benefits.

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## Impacts of increased harvestable rights

An increase in the uptake of harvestable rights has the potential to reduce flows that reach rivers. To protect instream and downstream ecological values and other water users who rely on river flows, an amendment provision is proposed in the plans to enable the plan to be changed if there is significant uptake of additional harvestable rights.

The proposed amendment provision requires the department to monitor the uptake of harvestable rights by year 3 of the plan. If uptake has grown to above 10% of rainfall runoff, access and trade rules for the water sharing plan may be reviewed.

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## System operation rules for the release of environmental flows from major storages

The draft replacement plan proposes new environmental flow release rules for Tallowa Dam, Nepean Dam, Avon Dam, Cataract Dam, Cordeaux Dam and Warragamba Dam.

The current rules are based on inflows into the storages up to the 80<sup>th</sup> percentile with translucency releases of 20% above that. The new rules will be scaled based on the total storage level of Sydney's dams combined. This proposed rule change supports proposals in the Draft Greater Sydney Water Strategy.

The inflow percentiles for the major storages have been updated to reflect additional years of data. These are also included in the draft replacement plan and describe the volume of water to be released.

The proposed new rules balance the needs of the environment and Sydney's drinking water supply. A banked environmental flow clause is also proposed for WaterNSW to make good any release that was required but unable to be released on any given day.

An environmental contingency allowance account is also proposed to be established to the volume of 9,000ML/year across the Avon Dam, Cataract Dam, Nepean Dam or Cordeaux Dam to be used as required due to an event downstream including pool destratification, fish passage and poor water quality and floating weed proliferations.

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## More information

The draft water sharing plan and other fact sheets are available from [the Water sharing plan pages of the department's website](#).