

Great Forester River Catchment

WATER MANAGEMENT PROTOCOLS

SEPTEMBER 2020

DRAFT – TO BE FINALISED AFTER ADOPTION OF
GREAT FORESTER RIVER CATCHMENT WATER
MANAGEMENT PLAN

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The Department of Primary Industries, Parks, Water and Environment (DPIPWE)

The Department of Primary Industries, Parks, Water and Environment provides leadership in the sustainable management and development of Tasmania's natural resources. The Mission of the Department is to support Tasmania's development by ensuring effective management of our natural resources.

The Water Resources Group provides a focus for water management and water development in Tasmania through a diverse range of functions, including implementing the *Water Management Act 1999* and the National Water Initiative; design of policy and regulatory frameworks to ensure sustainable use of surface water and groundwater resources; monitoring, assessment and reporting on the condition of the State's freshwater resources; and facilitating water infrastructure development projects.

Summary

This Management Protocols document complements the Great Forester River Catchment Water Management Plan 2020 by providing information on the current water management arrangements that are in place in the Great Forester River catchment.

The Great Forester River Catchment Water Management Plan 2020 (the Plan) is not the only instrument that is used to manage water in the Great Forester River Catchment Water Management Plan area. In addition to the rules of the Plan, a number of other policies and provisions of the *Water Management Act 1999* (the Act) apply to, and support management of, water access in the Plan area.

These management protocols provide current and relevant information for water users in relation to the Act and current Departmental policies and how they are implemented in accordance with the Plan.

This document may be reviewed by the Department from time to time to make improvements to ensure consistency with current policy, the objectives of the Plan and the Act.

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I Water access arrangements

This section provides details of how restrictions are implemented in order of priority before stream flow hits the access thresholds specified in the Great Forester River Catchment Water Management Plan.

The Plan sets a Managed Minimum Flow threshold of 30 ML/day (measured at the Great Forester River 2km upstream of Forester Road Bridge (station ID 19201-1)) for all months during the summer take period (Nov-Apr). For the winter take period monthly access thresholds are provided (Table 5 in the Plan).

When flow falls to or below the 30 ML/day threshold (at the gauging station 2km upstream of the Forester Road Bridge), it is indicative that flows throughout the Plan area are likely to be at or approaching levels that represent an unacceptable risk to the environment (Surety 2) and access to essential water under Surety 1 (town water, and stock and domestic water rights (Rights under Part 5 of the Act)). At this threshold all licensed takes between Surety 3 and 6 will be restricted to protect Surety 1 and 2 water access entitlements.

1.1 Current restrictions in the Great Forester River Catchment Water Management Plan area

Information on current water restriction notices for the Plan area can be accessed online through Farmpoint¹.

Notification of restrictions can be received if you opt into SMS messages on your mobile device. To have your mobile phone number registered on the SMS notification list, contact the Department: Phone: 1300 368 550, Email: water.operations@dpipwe.tas.gov.au.

¹ Current Irrigation Water Restrictions

<https://farmpoint.tas.gov.au/environment/water/latest-restrictions-and-flood-take-advice-for-rivers-and-streams>

1.2 Water Management Zones

The Great Forester River Catchment Water Management Plan has two separate Water Management Zones (refer to Figure 1).

Upper Great Forester River Water Management Zone includes the Great Forester River and all its tributaries that enter the Great Forester River upstream of its confluence with and including Oxberry Creek (Easting: 551296 Northing: 5457228). This zone also includes Hurst Creek, and parts of Coxs Rivulet (upstream of the confluence with Hurst Creek (Easting: 537368 Northing: 5457481)) and Tuckers Creek (upstream of the confluence with Devils Creek (Easting: 542934 Northing: 5456639)).

Lower Great Forester River Water Management Zone includes the Great Forester River and all its tributaries that enter the Great Forester River downstream of its confluence with (but not including) Oxberry Creek (Easting: 551286 Northing 5457228). This zone also includes the lower parts of Coxs Rivulet (downstream of the confluence with Hurst Creek (location Easting: 537368 Northing: 5457481)) and Tuckers Creek (downstream of the confluence with Devils Creek (Easting: 542934 Northing: 5456639)) that flow to the coast.

A map of the Water Management Zones is included in the Central Plan Register and displayed on the LIST (www.thelist.tas.gov.au).

1.3 Summer take period staged restriction protocol

The take period for all summer take allocations is 1 Nov to 30 Apr inclusive.

1.3.1 Upper Great Forester River Water Management Zone

The following staged restriction protocol (Table 1) will be applied during the summer take period to the Upper Great Forester River Water Management Zone.

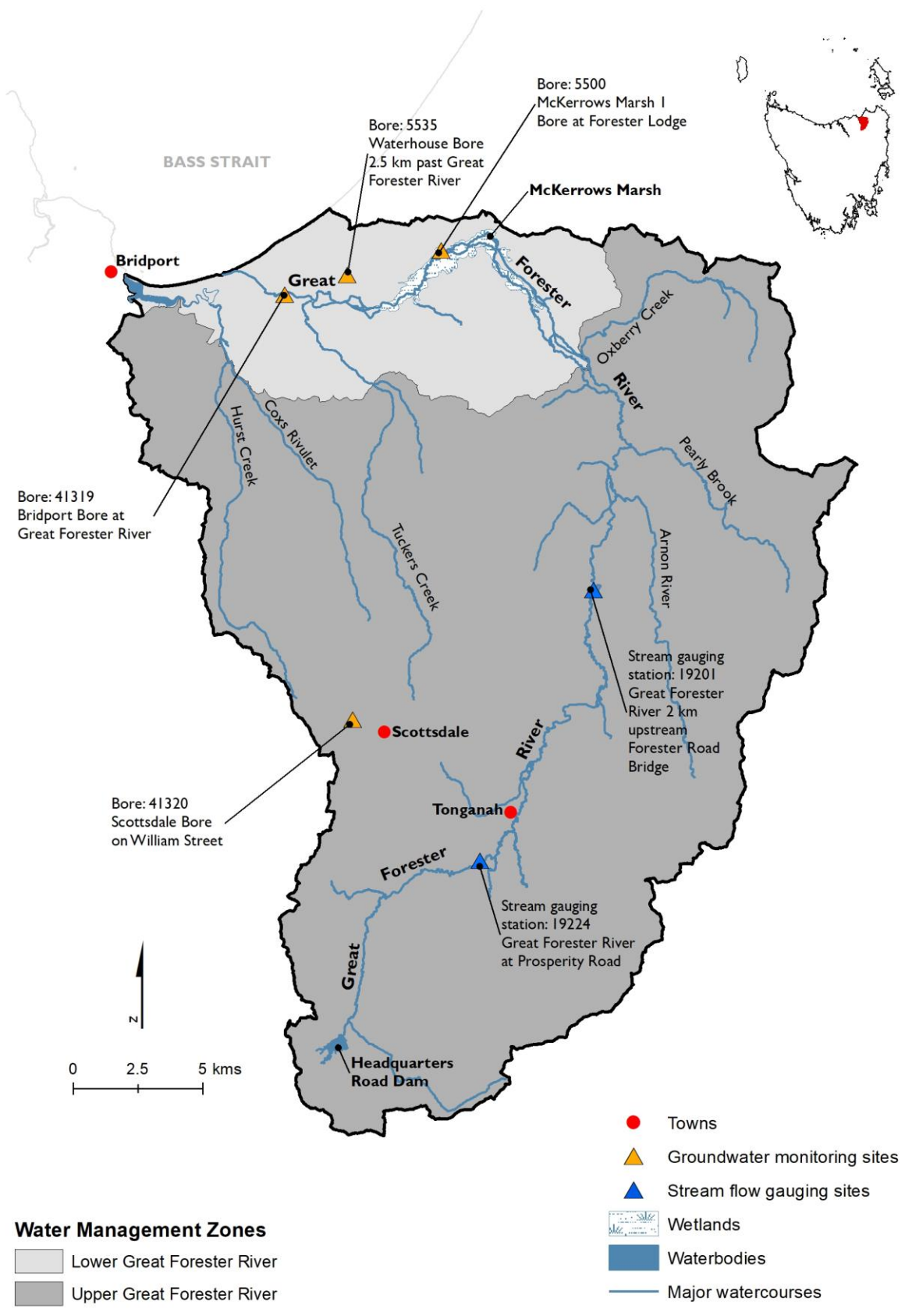


Figure 1. Great Forester River Catchment Water Management Plan area, showing water management zones, stream gauging stations and groundwater monitoring bore sites.

Table 1. Staged restriction management for the Upper Great Forester River Water Management Zone (summer take period only). The flow threshold is measured at Great Forester River 2km upstream of Forester Road Bridge (station ID 19201-1).

RESTRICTION STAGE	FLOW THRESHOLD (ML/DAY)	PERCENT (%) OF TAKE	RESTRICTIONS	COMMENT
Flow warning	45			Flow warning to be issued to water licence holders.
Stage 1	35	100	Ban on Surety 6 takes	Surety 5 entitlement holders will be able to take 100% of their Surety 5 Maximum Daily Take specified against Surety 5 allocations unless the restriction notice specifies differently.
Stage 2	30	100	Ban on all takes Surety Levels 3-6	Managed Minimum Flow Access threshold - in the Great Forester River Catchment Water Management Plan.

1.3.2 Lower Great Forester River Water Management Zone.

The following staged restriction protocol (Table 2) will be applied during the summer take period to the Lower Great Forester River Water Management Zone. This protocol uses the same flow triggers as the Upper Great Forester River Water Management Zone, but restrictions are applied differently in the Lower Great Forester River Water Management Zone. This acknowledges that almost all water is licensed at Surety Level 6 as a result of the historic use allocation process in 2003. This protocol ensures that a proportion of Surety 6 access is available when Stage 2 restrictions are applied catchment-wide.

Table 2. Staged restriction management for the Lower Great Forester River Water Management Zone (summer take period only). The flow threshold is measured at Great Forester River 2km upstream of Forester Road Bridge (station ID 19201).

RESTRICTION STAGE	FLOW THRESHOLD (ML/DAY)	PERCENT (% OF TAKE	RESTRICTIONS	COMMENT
Flow warning	45			Flow warning to be issued to all water licence holders.
Stage 1	35	50	Ban on all takes Surety levels 3-6	Restriction notice will specify takes are limited to 50% of Maximum Daily Take specified against Surety 3-6 allocations unless the restriction notice specifies differently.
Stage 2	30	100	Ban on all takes Surety levels 3-6	Managed Minimum Flow Access threshold - in the Great Forester River Catchment Water Management Plan.

1.4 Winter take period restriction protocol

The take period for all winter take allocations is 1 May to 31 October inclusive.

Monthly winter take access thresholds are specified in the Great Forester River Catchment Water Management Plan for the winter take period (1 May to 31 Oct) and are reproduced herein (Table 3).

When stream flow falls below these thresholds, formal restriction notices will be issued and licensees with Surety 3 to 6 water allocations will be restricted to protect access by Surety 1 and 2 water access entitlements. Those licensees taking water into dams will be required to pass all inflows through their dam (where practical – dependent of the presence and/or size of the outlet structure) until such time as stream flow rises above the access thresholds. Licensees taking water from watercourses using pumps or diversions must cease taking water until the stream flows rise above the access thresholds.

Table 3. Access management in the winter take period for all Water Management Zones in the Great Forester River Catchment Water Management Plan area. The flow threshold is measured at Great Forester River 2km upstream of Forester Road Bridge (station ID 19201-1).

MONTH	FLOW THRESHOLD (ML/day)	RESTRICTIONS
May	58	Restrictions on all takes at Surety levels 3-6. Dams must not hold back flows and all flows into a dam must be passed downstream (where dam outlet structures permit). Cease-to-take applied to all takes at Surety Levels 3-6.
Jun	80	
Jul	130	
Aug	155	
Sep	130	
Oct	90	

1.5 Access to water for development

While some parts of the catchment may be at, or approaching full allocation, this does not necessarily preclude access to water for new development.

There is a range of information about access to water and buying or selling water on the Department's website (<https://dpiwwe.tas.gov.au/water/water-licences>) including:

- [Water Licences and Property](#)
- [Applying for a water licence or allocation](#)
- [Buying or selling water](#)
- [Transferring water licences and allocations](#)

2 Monitoring information

Stream flow and groundwater level data in the Great Forester River catchment are available for a number of sites, in real-time on the Department's Water Information Tasmania Web Portal: portal.wrt.tas.gov.au which can be viewed using a mobile phone or computer.

Note, in the Great Forester River catchment, flows presented by the portal can sometimes be impacted by additional water being delivered down the river (for extraction downstream) using a Watercourse Authority (WCA).

The portal will present the flow at the stream gauge which is the total flow going down the river (the net flow plus any water being delivered down the river). This has implications when restrictions in place. The portal will show the total flow whereas restrictions are applied based on the net flow (see Box 1 for a summer take period example).

Box 1: Example showing summer take period restrictions applied using the net flow.

Total flow shown in portal (ML/day) = net flow + water delivered through Watercourse Authorities

40 ML/day (total flow) = 25 ML/day (net flow) + 15 ML/day (WCA) – restriction will be in place

or

40 ML/day (total flow) = 38 ML/day (net flow) + 7 ML/day (WCA) – no restriction applied

2.1 Monitoring sites

Information on the key surface water flow and groundwater measurement sites for the Plan area are shown in Tables 4 and 5, respectively (see also Figure 1).

The stream flow gauging station on the Great Forester River 2km upstream of Forester Road Bridge (station ID 19201-1) is the main flow management point for the catchment. All access thresholds in the Plan are measured and applied based on flows at this site.

Table 4. Stream flow gauging stations.

WATER RESOURCE	STREAM FLOW GAUGING STATION	STATION NUMBER	EASTING	NORTHING
Great Forester River	Great Forester River at Prosperity Road	19224	547063	5432854
	Great Forester River 2 km upstream of the Forester Road Bridge	19201	551439	5448671

Groundwater level is measured at four groundwater monitoring bores located in the Great Forester River catchment (Table 5; Figure 1).

Table 5. Groundwater monitoring bores.

WATER RESOURCE	GROUNDWATER BORE	BORE NUMBER	EASTING	NORTHING
Great Forester River	Bridport Bore at Forester River	41319	539534	5460065
	Scottsdale Bore on William Street	41320	542156	5443691
	Waterhouse Bore 2.5 km past Great Forester River	5535 MRT Bore ID: 16544	541946	5460823
McKerrows Marsh	McKerrows Marsh 1 Bore at Forester Lodge	5500	545564	5461781

3 Conveyance of water

Water previously taken in accordance with licences and stored may not be subsequently released and conveyed via a watercourse for extraction downstream without approval under a Watercourse Authority.

A Watercourse Authority under Part 6A of the Act, may be subject to specific conditions to protect and secure the water conveyed between the parties involved in the transfer and to manage impacts on other users or the environment. These conditions may include, but are not limited to, consideration of risks related to water quality, risks of flooding on downstream properties, requirements for accountability and accounting for conveyance losses. For further details on Watercourse Authorities and the application process refer to the Watercourse Authorities section on the DPIPWE website².

3.1 Transmission losses in the Great Forester River catchment

The current estimates of the range of cumulative losses that may be applied to a Watercourse Authority (WCA) in the Great Forester River and Hurst Creek are shown in Figure 2 and specified in Tables 6 and 7 below.

Cumulative transmission losses must be fully accounted for in conveying water and are applied as conditions on Watercourse Authorities. Conditions generally require the volumes released and extracted be accounted for and recorded by water meters and the volumes of losses that must be applied. For example, if a 10% loss is applied over the section of river the water is conveyed in, then a person releasing the water must release 100 ML to supply 90 ML to the person receiving the water.

² Watercourse Authorities

<https://dPIPWE.tas.gov.au/water/water-licences/watercourse-authorities>

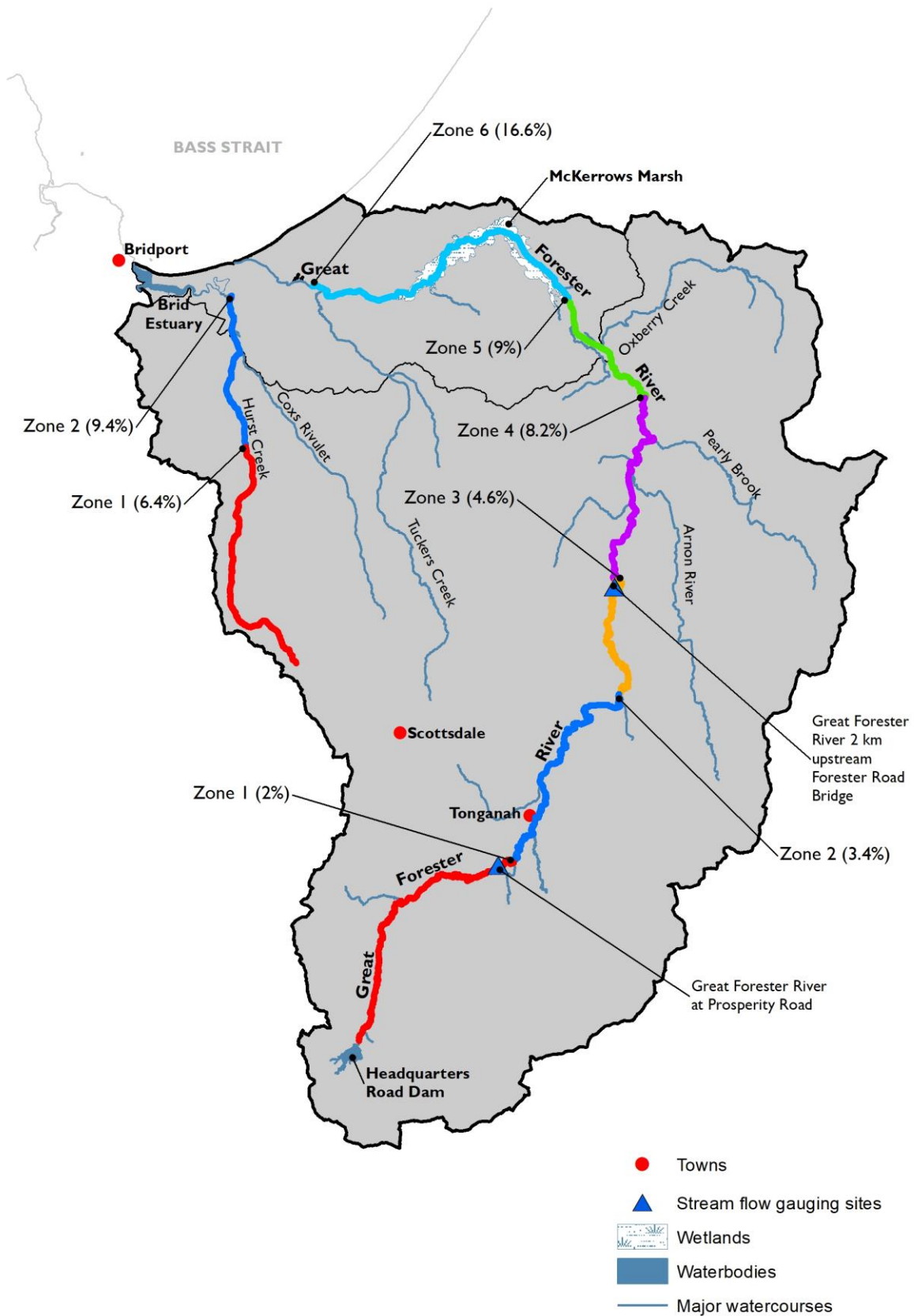


Figure 2. Great Forester River Catchment Water Management Plan area, showing transmission loss zones (from Macquarie Franklin 2016). Note, percentage losses for each zone apply from the headwaters of the river/creek to the end of that zone.

Generally, the upper range of losses (including errors) will apply to water being conveyed during the summer take periods and low flow periods when loss will be at the upper limit of estimates (that is, for delivery down the entire Great Forester River system – e.g. Headquarters Road dam to the tidal limit – the loss would be calculated as $-(16.6\% + 11.4) = -28\%$ - see Zone 6, Table 6). Losses will normally be applied to the mainstem and tributaries within these zones, however, WCAs are assessed on a case-by-case basis to determine what suits each individual situation. WCAs can be reviewed and amended on an annual basis to adjust conditions if losses are not effectively accounted for.

Table 6. Great Forester River transmission losses (from Macquarie Franklin 2016) (see Figure 2 for zone locations). Note, percentage losses for each zone apply from Headquarters Road dam to the end of that zone.

TRANSMISSION LOSS ZONE		ESTIMATED CUMULATIVE % LOSS FROM HEADWATERS TO THE END OF EACH ZONE
1	Headquarters Road to Cuckoo Road	-2.0% +1.3%
2	Cuckoo Road to 1.65 km upstream of Parrs Rivulet	-3.4% +2.4%
3	1.65 km upstream of Parrs Rivulet to GF 12	-4.6% +3.2%
4	GF 12 to Old Waterhouse Road	-8.2% +5.6%
5	Old Waterhouse Road to Backup Marsh	-9.0% +6.1%
6	Backup Marsh to Tidal Limit	-16.6% +11.4%

Table 7. Hurst Creek transmission losses (from Macquarie Franklin 2016) (see Figure 2 for zone locations). Note, percentage losses for each zone apply from upper Hurst Creek to the end of that zone.

TRANSMISSION LOSS ZONE		ESTIMATED CUMULATIVE % LOSS FROM HEADWATERS TO THE END OF EACH ZONE
1	Outlet to 600 m downstream Ockerbys Road	-6.4% +4.1%
2	600 m downstream Ockerbys Road to tidal limit	-9.4% +6.0%

4 Groundwater access and management

4.2 Current regulation of groundwater

The regulation of groundwater is provided for under the provisions of the Act and *Water Management Regulations 2019* and includes the permitting of wells, licensing of well drillers and rights to take groundwater under Part 5. For current information refer to the Groundwater Management section on the DPIPWE website³.

4.2.1 Permitting of wells

Under section 135 of the Act, well works (including installation of bores or excavation of openings (trenches or holes) in the ground below the surface of the earth used for the taking of groundwater) are not permitted to be undertaken without a well works permit. For further information see the following web pages:

- [Wells and Bores⁴](#)
- [Well Works Permits⁵](#)

4.2.2 Record keeping of groundwater takes

Regulations 30(5) to (8) of the *Water Management Regulations 2019*⁶ require those that take groundwater to keep a record of wells and water takes and report groundwater information if requested. See further information below in section 5.1.2.

³ Groundwater management

<https://dPIPWE.tas.gov.au/water/groundwater/groundwater-management>

⁴ Wells and Bores

<https://dPIPWE.tas.gov.au/water/groundwater/wells-and-bores>

⁵ Well Works Permits

<https://dPIPWE.tas.gov.au/water/groundwater/well-works-permits>

⁶ *Water Management Regulations 2019*

<https://www.legislation.tas.gov.au/view/html/inforce/current/sr-2019-037>

4.2.3 Restriction of groundwater takes

Currently there are no specific catchment-wide restriction protocols that apply to taking groundwater. However, under Division 3 of Part 6 of the Act, groundwater access can be restricted under a restriction notice if extraction is having a serious or material impact on the environment or other water users.

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5 Accountability and record keeping

The Accounting for your Water section on the DPIPWE website⁷ contains a range of useful information to support you to understand and comply with your legal obligations and be accountable for the water you take and use.

5.1 Record keeping and reporting requirements

The [Water Management Regulations 2019](#)⁸ require the keeping of records of water taken under a surface water licence and/or from groundwater.

5.1.1 Records – licence takes from surface water

Regulations 30(2) and 30(3) prescribe the requirements for records that must be kept by licensees:

- r. 30(2) *A person who is, or has been, the holder of a licence must keep, until the end of the period of 5 years after taking water under the licence, records of the quantity of water taken under the licence.*
- r. 30(3) *A person, at the request of an authorised officer, must provide to the authorised officer a copy of any records and information that the person is required to keep under subregulation 30(2)..."*

⁷ Accounting for your Water
<https://dpiwwe.tas.gov.au/water/water-licences/accounting-for-your-water>

⁸ Water Management Regulations 2019
<https://www.legislation.tas.gov.au/view/html/inforce/current/sr-2019-037>

5.1.2 Records – groundwater takes

Regulations 30(2) to 30(7) prescribe the requirements for record keeping in relation to the taking of groundwater

- r.30(5) An owner or occupier of land who is, or has been, taking groundwater from the land for a purpose, other than a specified purpose, must keep, until the end of the period of 5 years after taking groundwater from the land, records of the quantity of groundwater taken.*
- r.30(6) An owner or occupier of land who is, or has been, taking groundwater from a well on the land for any purpose must keep, until the end of the period of 5 years after taking the groundwater from the well, records of –*
- (a) the operational status of the well; and*
 - (b) the purpose for which groundwater is, or has been, taken from the well; and*
 - (c) the capacity of any equipment used to take the groundwater from the well; and*
 - (d) the quantity of groundwater taken from the well.*
- r.30(7) An owner or occupier of land referred to in subregulation (5) or (6), at the request of an authorised officer, must provide to the authorised officer a copy of any records that the owner or occupier of the land is required to keep under subregulation (5) or (6).*

5.2 Water meters

In the Great Forester River catchment metering is required on all allocations where water is pumped or diverted from a watercourse.

In all cases where meters are required, it is the responsibility of the licensee to make sure that appropriate meters are purchased and installed. In Tasmania, the standard for specification, installation, validation and maintenance of non-urban water meters is the [Tasmanian Standard for Non-Urban Water Meters](#)⁹.

For further details see the Water Meters section on the DPIPWE website¹⁰.

⁹ Tasmanian Standard for Non-Urban Water Meters
<https://dpiuwe.tas.gov.au/Documents/Tasmanian%20Standard%20for%20Non-Urban%20Water%20Meters.pdf>

¹⁰ Water Meters
<https://dpiuwe.tas.gov.au/water/water-licences/water-meters>

6 Performance information

The Department will provide an [annual report](#)¹¹ on the hydrological conditions, restrictions and access to water within the Great Forester River Catchment Water Management Plan area.

Meaningful evaluations of Plan performance are usually only possible over a 5-10 year timeframe to provide an adequate range of environmental and management conditions and scenarios to meaningfully assess a Plan's overall effectiveness.

At the next Plan review (scheduled for 10 years after the date the Plan is adopted) these annual reports, in addition to specific and more comprehensive resource and risk assessments, will support evaluation of the effectiveness and relevance of the Plan in supporting the Plan's outcomes and objectives.

6.1 Groundwater risk management and evaluation

As at the time of this Plan's adoption the risk to groundwater resources from extraction was considered to be low and existing levels of management that apply to groundwater use is considered to be adequate to manage the current risks.

Notwithstanding the low risk, it has been recognised that groundwater use information is a key knowledge gap and that, in addition, any significant increases in the amount or patterns of current groundwater use could change the risk profile over the life of this Plan.

A process to evaluate and review of groundwater risk will be developed in consultation with water users in the Plan area in accordance with the Tasmanian Groundwater Risk Evaluation Framework.

¹¹ Annual River Reports

<https://dpiwwe.tas.gov.au/water/water-data/annual-river-reports>

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