



Hydro Tasmania

and

Inland Fisheries Service

**Memorandum of Understanding -
Water Level Arrangements 2018 – 2022**



Details

Parties	Hydro Tasmania and Inland Fisheries Service
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Hydro Tasmania	Name	Hydro-Electric Corporation
	ABN	48 072 377 158
	Address	4 Elizabeth Street, Hobart Tasmania, Australia, 7000
	Email	Corporation.secretary@hydro.com.au
	Attention	Company Secretary

Inland Fisheries Service	Name	Inland Fisheries Service
	ABN	33294552909
	Address	17 Back River Road, New Norfolk, Tasmania, Australia, 7140
	Email	infish@ifs.tas.gov.au
	Attention	Director of Inland Fisheries

Recitals

- A. Inland Fisheries Service (IFS) and Hydro Tasmania (HT) have for a considerable period of time negotiated and implemented a number of water level arrangements for several key lakes and lagoons in the State. Informal arrangements were initiated in the 1990's and the first formal arrangements were signed in 2004. There have been successive iterations of the arrangements since this time.
- B. The current arrangements set out in this Memorandum of Understanding (MOU) document the IFS' and HT's shared understanding of considerations relevant to the management of water levels and address either single or multiple issues which may differ for each body of water. The issues are generally: (i) maintenance or improvements to recreational fishery, (ii) native fish values and (iii) water quality.
- C. The parties desire that this MOU will further enhance the spirit of co-operation that exists between them.

It is agreed

1. Object of this MOU

1.1 The parties agree that this MOU sets out, in separate Annexures, the shared understandings of the parties in relation to the management of water levels at the following water bodies:

- (1) Bronte Lagoon
- (2) Laughing Jack Lagoon
- (3) Penstock Lagoon
- (4) Arthurs Lake
- (5) Woods Lake
- (6) Little Pine Lagoon
- (7) Shannon Lagoon
- (8) Lake Augusta

1.2 The Inland Fisheries Service acknowledges and agrees that the commitments of Hydro Tasmania contained in this MOU are subject to:

- (a) circumstances where, Hydro Tasmania, acting reasonably determines that it is not practical to meet a commitment due to: generation operations (including but not limited to 'Prescribed Events' as defined in Hydro Tasmania's Special Water Licence under the *Water Management Act 1999*); equipment failure; operational constraints; or regulatory or electricity market constraints);
- (b) Workplace health and safety and environmental requirements and any unforeseen circumstance that requires Hydro Tasmania to implement an emergency procedure; and
- (c) In the case of Lake Augusta, catchment inflow variability,

and that if Hydro Tasmania is unable to maintain a target water level or draw down rate for any reason, the provisions of clause 4 apply.



2. Contact officers

The following are the relevant contacts for the daily administration of this MOU:

(d) Hydro Tasmania

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Senior Aquatic Scientist

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(e) Inland Fisheries Service

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3. Variation

Any variation to this MOU is not effective unless it is in writing and signed by the parties.

4. Liability

4.1 In no event will a party be liable for any direct, indirect, special, incidental or consequential damages, loss of revenue, loss of profits or loss of business opportunity resulting from or arising out of this MOU, even if informed of the possibility of such damages.

4.2 To the extent permitted by law, the limitations of liability in this clause 4 will apply regardless of how the loss or damage may have occurred and regardless of the theory of liability which shall be taken to include liability under contract, in tort, in equity, in restitution, under statute or otherwise.

4.3 In this clause 4, consequential loss shall be taken to include liability for:

- (1) business interruption loss;
- (2) loss which does not arise naturally or in the usual course of things;

- (3) loss of actual or anticipated profit, revenue, production, opportunity or anticipated savings; or
- (4) loss of use.

4.4 The parties acknowledge that this MOU is not a legally enforceable agreement, and is not intended to be an agreement enforceable in a court of law.

5. Term of this MOU



5.1 This MOU shall commence upon its execution and, subject to clause 5.2, this MOU shall terminate upon the earliest of the following events occurring:


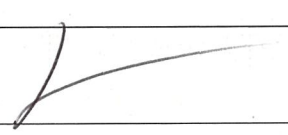
- (1) unless the parties otherwise agree in writing, 30 June 2022; or
- (2) a party notifies the other Party in writing of termination.

(Term).

5.2 Clause 4 (Liability) survives the expiry or termination of this MOU.



SIGNED for and on behalf of the HYDRO-ELECTRIC CORPORATION	 J. Clark.
In the presence of	 ERN GRIGGS
Date 18.09.2019	

SIGNED for and on behalf of the INLAND FISHERIES SERVICE	 JEN CRAMER
In the presence of	 ERIC LUTHER
Date 12-8-19	

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ANNEX 1

BRONTE LAGOON

Overview

- (A) Bronte Lagoon is an artificial reservoir constructed and managed by Hydro Tasmania for purposes associated with hydro-electric generation.
- (B) Bronte Lagoon is a highly popular recreational trout fishery and remains an important fishery from a regional and State perspective. The lagoon offers highly valued shore-based fly-fishing experiences for tailing trout because of the extensive shallows along most of the shorelines.
- (C) Hydro Tasmania operating levels for Bronte Lagoon:
- Full storage level 665.988
 - Normal minimum operating level 662.330
- (D) As a multiple use lake Hydro Tasmania has a desire to accommodate most users and will therefore make compromises between requirements from time to time. For example, to provide water for white water kayaking events it is necessary to vary water level for short durations.
- (E) The purpose of this MOU is to document certain measures to assist to minimise adverse impacts on the trout fishery, maintain the high quality recreational trout fishing experience, and to sustain ecosystem processes at Bronte Lagoon into the future.

Understanding

1. Hydro Tasmania will use reasonable endeavours to maintain the water level in Bronte Lagoon around a level of between 664.50 mASL to 665.5 mASL with a target level of 665.0 mASL for the period 1 October to 30 April inclusive (Agreed Period). Hydro Tasmania will undertake regular monitoring of water levels and, where prudent, adjust the gate to maintain the target water level. If the water level is drawn below 663.90 mASL then the draw-down should proceed as slowly as practicable. Recovery will be dependent on inflows and generation requirements.
2. Where possible, Hydro Tasmania will aim to maintain steady or increasing water levels during the opening weekend of the angling season (first weekend in August).
3. Hydro Tasmania will notify the Director of the Inland Fisheries Service if water levels exceed 665.5 mASL or fall below 664.5 mASL for a period in excess of one day during the Agreed Period (Clause 1). The notification will include the expected duration of the low water level and the measures Hydro Tasmania proposes to take to address the low water level. The Director is to be notified via email (InFish@ifs.tas.gov.au).
4. If the water level of Bronte Lagoon drops below the agreed water management level of 663.9 mASL outside of the Agreed Period (Clause 1), Hydro Tasmania will, at the earliest opportunity, notify the Director of the Inland Fisheries Service of the expected duration of the low water level and any measures Hydro Tasmania proposes to take to address the low water level. Hydro Tasmania may notify the public via appropriate websites, in advance of significant planned water level draw-downs (i.e. infrastructure maintenance) that may impact negatively on the fishing experience of anglers.



5. Inland Fisheries Service undertakes to assess the trout fishery performance in Bronte Lagoon, through surveys or other appropriate fishery evaluation techniques, to assess the effectiveness of this Memorandum of Understanding. The Inland Fisheries will provide Hydro Tasmania with a report summarising the outcomes of the assessment prior to the expiry of this agreement.

ANNEX 2

LAUGHING JACK LAGOON

Overview

- (A) Laughing Jack Lagoon is an artificial reservoir constructed and managed by Hydro Tasmania for the purposes associated with hydro-electric generation. Water from this storage is released into the Clarence River, which is then diverted to Bronte Lagoon via the Clarence Weir and pipeline.
- (B) Laughing Jack Lagoon supports a recreational trout fishery that is important for local anglers. In the past, operational draw-downs of water have left trout stranded in the lagoon, in downstream dam infrastructure and in Powers Creek. Since 1995 an agreed minimum operating level of 753.0 mASL has been in place to reduce the likelihood of this situation occurring.
- (C) Hydro Tasmania operating levels for Laughing Jack Lagoon:
- Full storage level 761.991
 - Agreed minimum operating level 753.000
- (D) The purpose of this MOU is to document certain measures to; (i) minimise adverse impacts on the trout fishery, (ii) to minimise strandings of trout, and (iii) mitigate against outputs of turbid water which would enter Bronte Lagoon during peak fishing times.

Understanding

1. Hydro Tasmania will use reasonable endeavours to maintain a minimum water level in Laughing Jack Lagoon at or above 753.90 mASL.
2. Hydro Tasmania will manage water outflows to limit the transfer of turbid water into Bronte Lagoon and minimise the risk of fish strandings.
3. Hydro Tasmania will notify the Director of the Inland Fisheries Service if the discharge is closed off when the water level at Laughing Jack Lagoon is below 753.9m, so that fish trapped in Powers Rivulet can be rescued. The Director is to be notified via email (InFish@ifs.tas.gov.au).
4. If Hydro Tasmania is unable to maintain the water levels in accordance with Clause 1, Hydro Tasmania will notify the Director of the Inland Fisheries Service in advance of the expected duration of the low water level and any measures Hydro Tasmania proposes to take to address the low water level. The Director is to be notified via email (InFish@ifs.tas.gov.au).

ANNEX 3

PENSTOCK LAGOON

Overview

- (A) Penstock Lagoon is an artificial reservoir originally constructed and managed by Hydro Tasmania for the purpose of hydro-electric generation at Waddamana A & B power stations. Since decommissioning of the power stations the lagoon has been managed mainly as a fishing water. Before water is released to the lagoon from upstream storages Hydro Tasmania has to consider priorities relating to energy demand at the time, water demand downstream in the Ouse River as well as fishery and water quality issues. During times of critical shortage, priority will always be given to the supply of energy and water demand downstream.
- (B) Penstock Lagoon is recognised as one of Tasmania's premier trout-fishing waters. Water clarity has been a significant long-term issue with anglers, although the previous water level arrangement has reduced wind induced turbidity to a significant extent. The long-term maintenance of low water turbidity remains a critical management objective for the lagoon.
- (C) Hydro Tasmania is a major sponsor of the 2019 World Fly Fishing Championships, which will be held in Tasmania from 30 November to 8 December 2019. Penstock Lagoon is a competition venue. Hydro Tasmania will work with the event organisers to identify and, where possible, deliver a suitable water level regime for the competition period.
- (D) Hydro Tasmania operating levels for Penstock Lagoon:
- Full storage level 919.840
 - Normal minimum operating level 919.300
- (E) The purpose of this MOU is to document certain water level management measures to minimise adverse impacts on the trout fishery and sustain ecosystem processes at Penstock Lagoon into the future.

Understanding

1. Hydro Tasmania will use reasonable endeavours to maintain a minimum water level in Penstock Lagoon at or above 919.50 mASL to prevent periodic deterioration in water quality, enhance recreational trout fishing and protect important ecological features and processes.
2. If Hydro Tasmania is unable to maintain the water levels in accordance with Clause 1, Hydro Tasmania will notify the Director of the Inland Fisheries Service of the expected duration of the low water level and any measures Hydro Tasmania proposes to take to address the low water level. The Director is to be notified via email (InFish@ifs.tas.gov.au).
3. Inland Fisheries Service undertakes to assess the trout fishery performance in Penstock Lagoon, through surveys or other appropriate fishery evaluation techniques. The Inland Fisheries will



provide Hydro Tasmania with a report summarising the outcomes of the assessment prior to the expiry of this agreement.

ANNEX 4

Arthurs Lake

Overview

- (A) Arthurs Lake is an artificial reservoir constructed and managed by Hydro Tasmania for the purposes associated with hydro-electric generation and irrigation. Water retained by Arthurs Dam is pumped into Great Lake, via the Arthurs Flume and Tods Corner Power Station. Water from Arthurs Lake supplies the Midlands Water Scheme via pipeline and the Lake River irrigation district via the Upper Lake River.
- (B) Arthurs Lake is the most important recreational trout fishery in Tasmania, supporting a large, self-sustaining population of brown trout.
- (C) The purpose of this MOU is to document certain measures to maintain the high quality recreational trout fishing experience and to maximise boating access at Arthurs Lake.
- (D) Hydro Tasmania operating levels for Arthurs Lake:
- Full supply level 952.82.
 - Normal minimum operating level 943.050

Understanding

1. Hydro Tasmania will use reasonable endeavours to operate Arthurs Lake so the water level is at or above 950.00 mASL on 1st November each year and at or above 949.00 mASL on 1st June each year¹ subject to the water level in Great Lake being above its Medium Risk Level of 1023.0 mASL² and the Midlands Irrigation Scheme being in operation. This will ensure Arthurs Lake is at or above 949.00 mASL during the general brown trout angling season (1 August to 30 April in the following year).
2. If Great Lake is below its Medium Risk Level of 1023.0 mASL or if the Midlands Irrigation Scheme is not operating then Hydro Tasmania will use reasonable endeavours to operate Arthurs Lake so the water level is at or above 949.00 mASL on 1st November each year and at or above 948.00 mASL on 1st June each year, both levels being one metre lower than Clause 1. This will ensure that Arthurs Lake is at or above 948.00 mASL during the general brown trout angling season (1 August to 30 April in the following year).
3. If Hydro Tasmania is unable to maintain the water levels in accordance with Clauses 1 or 2, Hydro Tasmania will notify the Director of Inland Fisheries Service of the expected duration of the low water level and any measures Hydro Tasmania proposes to take to address the low water level. The Director is to be notified via email (infish@ifs.tas.gov.au).

¹ The storage 'tracks' between the two water levels will not necessarily be straight lines to allow some flexibility in operating and maintaining the pump.

² At the medium risk level of 1023.00 mASL Great Lake is approximately 18.4% full.



4. Inland Fisheries Service undertakes to assess the trout fishery performance in Arthurs Lake, through surveys or other appropriate fishery evaluation techniques, to assess the effectiveness of this Memorandum of Understanding. The Inland Fisheries will provide Hydro Tasmania with a report summarising the outcomes of the assessment prior to the expiry of this agreement.

ANNEX 5

Woods Lake

Overview

- (A) Woods Lake is an artificial impoundment that inundates a smaller natural lake, originally constructed to assist in powering the Duck Reach Power Station near Launceston. The dam enables water to be used for irrigation in downstream reaches of the Lake and Macquarie rivers. Water that passes the irrigation areas also contributes to power generation at the Trevallyn Power Station.
- (B) Woods Lake is a broad and shallow lake surrounded by relatively high ridges, which tend to funnel the prevailing winds. The morphology of the lake, combined with a muddy substrate produced by the effects of impoundment, means that wind-generated sediment re-suspension is the primary cause of high turbidity levels.
- (C) The purpose of this MOU is to document certain water level management measures to reduce the likelihood of poor water quality occurring in Woods Lake to benefit the trout fishery, native fish conservation and downstream riparian consumers.
- (D) Hydro Tasmania operating levels for Woods Lake:
- Full supply level 737.77.
 - Normal minimum operating level 733.960
- (E) Hydro Tasmania is a major sponsor of the 2019 World Fly Fishing Championships, which will be held in Tasmania from 30 November to 8 December 2019. Woods Lake is a competition venue. Hydro Tasmania will work with the event organisers to identify and, where possible, deliver a suitable water level regime for the competition period.

Understanding

1. Hydro Tasmania will use reasonable endeavours to maintain the water level in Woods Lake at or above 736.20 mASL. This includes releasing water from Arthurs Lake and these release commitments will be taken into account in the operation of Arthurs Lake.
2. If Hydro Tasmania is unable to maintain the water levels in accordance with Clause 1, Hydro Tasmania will notify the Director of Inland Fisheries Service. The Director is to be notified via email (InFish@ifs.tas.gov.au).
3. If it appears that the water level of Woods Lake will drop below 735.70 mASL, Hydro Tasmania will notify the Director of Inland Fisheries Service of the expected duration of the low water level, expected minimum low water level and any measures Hydro Tasmania proposes to take to address the low water level.
4. Inland Fisheries Service undertakes to assess the trout and native fishery performance in Woods Lake, through surveys or other appropriate fishery evaluation techniques. The Inland Fisheries will



provide Hydro Tasmania with a report summarising the outcomes of the assessment prior to the expiry of this agreement.

ANNEX 6

LITTLE PINE LAGOON

Overview

- (A) Little Pine Lagoon is an artificial reservoir constructed and managed by Hydro Tasmania for the purposes associated with hydro-electric generation.
- (B) Ever since the completion of the dam, Little Pine Lagoon has been an extremely popular and highly valued recreational trout fishery. The fishery is recognised as one of Australia's premier fly-fishing waters.
- (C) The purpose of this MOU is to document certain measures to minimise adverse impacts on the trout fishery, support the performance of the fishery and fishing experiences, and sustain existing bio-diversity and ecosystem processes at Little Pine Lagoon.
- (D) Hydro Tasmania operating levels for Little Pine Lagoon:
- Full storage level 1007.36
 - Normal minimum operating level 1005.84
- (E) Hydro Tasmania is a major sponsor of the 2019 World Fly Fishing Championships, which will be held in Tasmania from 30 November to 8 December 2019. Little Pine Lagoon is a competition venue. Hydro Tasmania will work with the event organisers to identify and, where possible, deliver a suitable water level management regime for the competition period.

Understanding

1. Hydro Tasmania will use reasonable endeavours to maintain a minimum water level in Little Pine Lagoon of 1006.33 mASL for the period 1 August to 30 April in the following year and will endeavour to maintain water levels to protect the aquatic ecosystem outside this period.
2. If Hydro Tasmania is unable to maintain the water levels in accordance with Clause 1, Hydro Tasmania will notify the Director of the Inland Fisheries Service of the expected duration of the low water level and the measures Hydro Tasmania proposes to take to address the issue. The Director is to be notified via email (InFish@ifs.tas.gov.au).
3. Inland Fisheries Service undertakes to assess the trout fishery performance in Little Pine Lagoon, through surveys or other appropriate fishery evaluation techniques, to assess the effectiveness of this Memorandum of Understanding. The Inland Fisheries will provide Hydro Tasmania with a report summarising the outcomes of the assessment prior to the expiry of this agreement.

ANNEX 7

SHANNON LAGOON

Overview

- (A) Shannon Lagoon is an artificial reservoir constructed and managed by Hydro Tasmania for the purposes associated with hydro-electric generation and the supply of water for downstream riparian and irrigation users in the Shannon River.
- (B) Shannon Lagoon is a shallow impoundment located immediately adjacent to Great Lake. In the past, low levels during the winter exposed extensive lake shoreline which led to a loss of aquatic plants. Shannon Lagoon also contains substantial amounts of silt and westerly/northerly winds regularly cause high turbidity in the lagoon. Water level in the lagoon is managed to reduce the severity of high turbidity events.
- (C) Hydro Tasmania operating levels for Shannon Lagoon:
- Full storage level 1017.66
 - Normal minimum operating level 1016.97
- (D) The purpose of this MOU is to document certain water level management measures to minimise adverse impacts on the trout fishery and mitigate water quality issues at Shannon Lagoon.

Understanding

1. Hydro Tasmania will use reasonable endeavours to maintain a water level at Shannon Lagoon at 1017.50 mASL through to 1017.60 mASL throughout the fishing season (1 Aug to 31 May); and between 1017.30m to 1017.55 mASL during the off-season (1 June to 31 July).
2. If it appears that the water level of Shannon Lagoon will drop below the water level bands as defined in Clause 1, for a period in excess of one week, then Hydro Tasmania will notify the Director of the Inland Fisheries Service of the expected duration of the low water level and any measures Hydro Tasmania proposes to take to address the low water level. The Director is to be notified via email (infish@ifs.tas.gov.au).
3. Inland Fisheries Service undertakes to assess the trout fishery performance in Shannon Lagoon, through surveys or other appropriate fishery evaluation techniques.

ANNEX 8

Lake Augusta

Overview

- (A) Lake Augusta is a semi-artificial reservoir constructed and managed by Hydro Tasmania for the purposes associated with hydro-electric generation. The capacity of the natural Lake Augusta was increased by construction of a dam on the Ouse River at Bernacchi. Water from Lake Augusta is released into the Ouse River, which is diverted to Great Lake via Liawenee canal.
- (B) Lake Augusta supports a recreational trout fishery that is important for the western lakes region.
- (C) The Inland Fisheries Service have established fisheries management infrastructure in the lower reaches of the Liawenee canal which relies upon water released from Lake Augusta, and its operation is pivotal to the Services operations.
- (D) The Pillans-Julian Lakes fishery is situated to the north of Lake Augusta. Access is a four wheel drive track traversing the exposed bed of Lake Augusta. Access is only possible when lake levels are below 1148 mASL.
- (E) Hydro Tasmania operating levels for Lake Augusta:
- Hydro Tasmania operating levels for Lake Augusta. Full storage level 1150.62
 - Normal minimum operating level 1141.63
- (F) The purpose of this MOU is to document certain measures to; (i) make reasonable endeavours to ensure sufficient flow is available in Liawenee Canal to support the annual brown and rainbow trout spawning runs and (ii) where possible and practical, maintain water levels at suitable level to facilitate vehicular access to Julian and Pillans Lakes.

Understanding

1. Hydro Tasmania will use reasonable endeavours to maintain a spawning flow in Liawenee Canal between April and June (brown trout) and September and October (rainbow trout). The minimum flow required to support the spawning run is 0.5 cumecs. If conditions allow, this flow should extend to 31 December to facilitate hatching and downstream migration of fry. Where possible, the IFS have requested that, during four days prior to and the two days of the Liawenee Trout Weekend (3rd weekend in May), the minimum flow be increased to 2 cumecs.
2. Where possible, Hydro Tasmania will endeavour to keep water levels below 1148 mASL during the months December to February (inclusive) in order to facilitate access to Julian and Pillans Lakes.
3. Hydro Tasmania will use reasonable endeavours to maintain a minimum water level in Lake Augusta at or above 1146.63 mASL.
4. If Hydro Tasmania is unable to maintain the water levels in accordance with Clauses 1, 2 or 3, Hydro Tasmania will notify the Director of Inland Fisheries Service of the expected duration of the low/high water level or low flow and any measures Hydro Tasmania proposes to take to address the non-conformance. The Director is to be notified via email (infish@ifs.tas.gov.au).