



City West Water Determination

1 July 2018 – 30 June 2023

19 June 2018



An appropriate citation for this paper is:

Essential Services Commission 2018, City West Water Determination: 1 July 2018 – 30 June 2023, 19 June

Copyright notice

© Essential Services Commission, 2018



This work, City West Water Determination, is licensed under a Creative Commons Attribution 4.0 licence [creativecommons.org/licenses/by/4.0/]. You are free to re-use the work under that licence, on the condition that you credit the Essential Services Commission as author, indicate if changes were made and comply with the other licence terms.

The licence does not apply to any brand logo, images or photographs within the publication.

Contents

1. General	1
1.1. Introduction	1
1.2. Application	1
1.3. Effective period	2
1.4. Modification of time periods	2
1.5. Summary and structure	2
1.6. Definitions and interpretation	2
1.7. Annexure	3
2. Price control	4
2.1. General principles	4
2.2. Ancillary matters	4
2.3. Annual adjustment of prices	5
2.4. Price changes during a billing period	7
2.5. Reporting requirements	7
3. Amendment of Schedule 2	9
4. Uncertain or unforeseen events	12
4.1. General principle	12
4.2. Consideration by the commission	12
4.3. Procedure	13
5. Material error and unintended consequences	15
Schedule 1 – Definitions and interpretation	16
A Definitions	16
B Interpretation	17
Schedule 2 – Prices	18
Schedule 3 – Application of prices	21
3.1 Water usage fees	21
3.2 Residential property	21
3.3 Non-residential property	21
3.4 Private extension fees	21
3.5 Calculating the volume of sewage — residential customers	22
3.6 Calculating the volume of sewage — non-residential customers	24
3.7 Assignment of trade waste risk rank	25
3.8 Food waste charges	25
3.9 Miscellaneous fees and charges	26

Schedule 4 – Pricing principles	29
4.1 Recycled water pricing principles	29
4.2 Pricing principles where scheduled prices do not apply	29
4.3 Pricing principles for New Customer Contributions (NCC)	30
Core pricing principles	30
NCC application	30
Incremental financing costs	31
Gifted Assets	31
4.4 Pricing principles for miscellaneous services not included in Schedule 2	31
4.5 Guidelines	31
Schedule 5 – Adjustment for costs associated with annual updates to the trailing average cost of debt	32
Schedule 5A – Adjustments to prices	32
Schedule 5B – Prices	33
Formula 1: Determining the nominal cost of debt	33
Formula 2: Determining the real cost of debt	33
Formula 3: Determining the real regulatory rate of return	34
Formula 4: Trailing average cost of debt adjustment	34
Formula 5: Water service tariff	36
Annexure A	41

1. General

1.1. Introduction

- (a) Clause 14 of the **WIRO** requires the commission to either:
- (i) approve the maximum prices the **regulated entity** may charge for **prescribed services** or the manner in which the **regulated entity's** prices are to be calculated, determined or otherwise regulated, as proposed by the **regulated entity** in its **price submission**; or
 - (ii) specify the maximum prices the **regulated entity** may charge for **prescribed services** or the manner in which the **regulated entity's** prices are to be calculated, determined or otherwise regulated.
- (b) On 13 June 2018, the commission made its decision under the **WIRO** in respect of:
- (i) the prices which City West Water Corporation (trading as City West Water) (ABN 70 066 902 467) (**City West Water**) may charge for **prescribed services** during the **regulatory period**; and
 - (ii) the standards and conditions of service and supply which **City West Water** has included in its **price submission**.
- (c) This Determination is made by the commission under section 33 of the **ESC Act**, pursuant to clauses 10 and 14 of the **WIRO**.
- (d) The purpose and reasons for the making of this Determination are to:
- (i) give effect to the decision of the commission referred to in clause 1.1(b)(i);
 - (ii) specify the maximum prices which **City West Water** may charge for **prescribed services** during the **regulatory period** or the manner in which such prices are to be calculated, determined or otherwise regulated;
 - (iii) facilitate the achievement of the commission's objectives in the **ESC Act** and the **WI Act**; and
 - (iv) reflect the requirements in the **WIRO**.
- (e) The reasons for the making of this Determination are as set out in the decision published by the commission on 19 June 2018.

1.2. Application

This Determination applies to **City West Water** and its successors and assigns in respect of the business carried on by **City West Water** at the date of this Determination.

1.3. Effective period

(a) **Term**

This Determination takes effect on the later of the date on which notice of its making is published in the Government Gazette or 1 July 2018, subject to clause 1.3(b), has effect until the earlier of the date on which it is amended or revoked by a later determination or 30 June 2023.

(b) **Next regulatory period**

Subject to clause 2.3(b)(ii), if the commission has not made a determination in respect of the prices to apply in the **next regulatory period** on or before 30 June 2023, the prices or the manner in which such prices are to be calculated or otherwise determined as set out in this Determination will continue to apply in respect of **prescribed services** provided by **City West Water** between 1 July 2023 and the date on which the determination for the **next regulatory period** comes into effect.

1.4. Modification of time periods

The commission may, by notice to **City West Water**, extend or reduce the time by which, or the period within which, **City West Water** or the commission must comply with an obligation under this Determination.

1.5. Summary and structure

Clause 2 of this Determination specifies the prices which will apply to **prescribed services** during the **regulatory period** and sets out the procedure and formula according to which prices may be adjusted during the **regulatory period** on an annual basis. Clauses 3, 4 and 5 provide for the circumstances in which prices may be adjusted during the **regulatory period** otherwise than in accordance with clause 2.

1.6. Definitions and interpretation

In this Determination, unless the contrary intention appears:

- (a) words and phrases in bold italics have the meanings given to them in part A of Schedule 1; and
- (b) the rules of interpretation in part B of Schedule 1 will apply.

1.7. Annexure

- (a) For convenience, Annexure A to this Determination summarises:
 - (i) the assumptions underpinning the prices to apply to **City West Water** during the **regulatory period** or the manner in which such prices are to be calculated, determined or otherwise regulated; and
 - (ii) the standards and conditions of services and supply additional to those specified in the **Code** which will be provided by **City West Water** pursuant to the decision referred to in clause 1.1(b)(ii).
- (b) For the avoidance of doubt, Annexure A does not form part of this Determination.

2. Price control

2.1. General principles

Subject to this Determination:

(a) Scheduled prices

City West Water must not charge more than:

- (i) the scheduled prices in Schedule 2, during the first **regulatory year**, and
- (ii) the amounts determined in accordance with clause 2.3, during each subsequent **regulatory year**,

in respect of those prescribed services to which the scheduled prices in Schedule 2 relate.

(b) Application principles

The application principles in Schedule 3 will apply to the prices charged by **City West Water** in respect of **prescribed services** during the **regulatory period**.

(c) Pricing principles

During the **regulatory period**, **City West Water** must apply the pricing principles in Schedule 4 when determining the prices to apply to the **prescribed services** to which the pricing principles in Schedule 4 relate.

2.2. Ancillary matters

(a) Contracts

Where **City West Water** has entered into a contract (a **relevant contract**) which relates to the provision of **prescribed services** prior to 1 July 2018, **City West Water** may charge the prices for **prescribed services** which are set out in that **relevant contract** until its expiration, termination or a periodic review of the prices set out in the contract. Once a **relevant contract** has expired or been terminated or the prices in a **relevant contract** have been subject to a periodic review, the scheduled prices in Schedule 2 (as adjusted in accordance with this Determination) or the prices determined in accordance with the pricing principles in Schedule 4 will apply for the remainder of the **regulatory period**.

(b) Dispute Resolution

Any question as to whether a price has been set in accordance with this Determination will be determined by the commission on the basis of the commission's interpretation of this Determination.

(c) **Publication**

City West Water must publish a list of its current prices and pricing principles for **prescribed services**, and all relevant supporting information that is relied upon to apply the prices or pricing principles, on its website at all times during the **regulatory period** and must provide a written copy of the list to its customers on request. The list must clearly indicate in respect of each price, the amount determined in accordance with this Determination, the amount of GST payable and the total price (in a manner consistent with the requirements of the *Competition and Consumer Act 2010* (Cth)).

(d) **GST**

City West Water will not be considered to be in contravention of this Determination if a price charged by it for a **prescribed service** exceeds the amount determined in accordance with clause 2 only by reason of the levying of a charge on account of **GST**.

2.3. Annual adjustment of prices

(a) **Adjustment**

- (i) Subject to Schedule 2 and Schedule 5, the scheduled prices in Schedule 2 will be adjusted in each subsequent **regulatory year** in the **regulatory period** in accordance with the formula in clause 2.3(b)(i) and the procedure in clause 2.3(c), and will apply to the **prescribed services** to which the scheduled prices in Schedule 2 relate in that **regulatory year**.

(b) **Formula**

- (i) Subject to Schedule 2 and Schedule 5, each price for the **prescribed services** referred to in clause 2.3(a) will be adjusted in accordance with the following formula with effect from the beginning of each subsequent **regulatory year** in the **regulatory period**:

$$p_t = p_{t-1} \times \frac{CPI_t}{CPI_{t-1}} \times (1 + PPM_t)$$

where:

p_t is the price component for **regulatory year** 't'

p_{t-1} is the price component for **regulatory year** 't-1'

$\frac{CPI_t}{CPI_{t-1}}$ for the particular **regulatory year** is:
the Consumer Price Index: All Groups Index for the Eight Capital Cities as published by the Australian Bureau of Statistics for the March quarter immediately preceding the start of the relevant **regulatory year**

divided by

the Consumer Price Index: All Groups Index for the Eight Capital Cities as published by the Australian Bureau of Statistics for the March quarter immediately preceding the March quarter referred to above

PPM_t is the prescribed price movement for the price component for **regulatory year** t determined in accordance with Schedule 2.

- (ii) If the commission has not made a determination in respect of the prices to apply in the **next regulatory period** on or before 30 June 2023, PPM_t will be set equal to zero for the purpose of adjusting prices in accordance with the formula in clause 2.3(b)(i) for **regulatory years** commencing on or after 1 July 2023 until the date on which this determination is amended or revoked by a later determination.

(c) Adjustment procedure

- (i) At least 30 **business days** prior to the commencement of each subsequent **regulatory year** in the **regulatory period**, **City West Water** must submit its proposed prices for the **prescribed services** referred to in clause 2.3(a) to apply in that subsequent **regulatory year** (the **revised scheduled prices**) to the commission for approval, together with sufficient information to enable the commission to assess whether the proposed prices comply with this Determination.
- (ii) The commission will approve the **revised scheduled prices** if it considers that they have been calculated in accordance with the formula set out in clause 2.3(b)(i).
- (iii) The commission will be deemed to have approved the **revised scheduled prices** if it has not provided notice under clause 2.3(c)(iv) to **City West Water** within 20 **business days** from the date of its receipt of the **revised scheduled prices**.
- (iv) If the commission does not approve the **revised scheduled prices**, the commission:

- (A) will provide notice to **City West Water** (including a statement of its reasons);
- (B) may request **City West Water** to provide any additional information specified by the commission;
- (C) will take any additional information provided by **City West Water** into account; and
- (D) will determine the **revised scheduled prices**.

2.4. Price changes during a billing period

(a) Application of this clause

This clause 2.4 applies where **City West Water** issues an invoice in respect of a billing period during which a change to any price for a **prescribed service** comes into effect in accordance with this Determination.

(b) Method of charging

City West Water must not charge the prices determined in accordance with this Determination in respect of any part of a billing period prior to the effective date of the change, but may charge for **prescribed services** in respect of the periods before and after the effective date of the change at the prices applicable for each of those periods on a pro-rata basis.

2.5. Reporting requirements

- (a) **City West Water** must make available to the commission all information reasonably requested by the commission from time to time for the purpose of enabling it to confirm that **City West Water** is complying with this Determination.
- (b) Without limiting clause 2.5(a), if, during the **regulatory period**, **City West Water** enters into a **new contract** which relates to the provision of a **prescribed service** to which the pricing principles in Schedule 4 relate, **City West Water** must, within 30 **business days** of the date of the **new contract**, on request provide the commission with a notice specifying:
 - (i) details of the **new contract**; and
 - (ii) information which demonstrates the way in which the prices in the **new contract** reflect the relevant pricing principles.

- (c) Without limiting clause 2.5(a), if **City West Water** proposes to stop providing a **prescribed service** or refuses to provide a **prescribed service** to a customer, or potential customer, during the **regulatory period**, it must:
- (i) in the case of a proposal to stop providing a **prescribed service**, provide a notice to the commission stating the nature of the **prescribed service** which it proposes to stop providing and the reason why it proposes to stop providing the **prescribed service**. This notice must be provided at least 30 **business days** prior to the date upon which **City West Water** proposes to stop providing the **prescribed service**; and
 - (ii) in the case of a refusal to provide a **prescribed service** to a customer, or potential customer, **City West Water** must provide a notice to the commission within 5 **business days** of the refusal, stating the nature of the **prescribed service** and the reason for the refusal.

3. Amendment of Schedule 2

(a) Amendment

- (i) **City West Water** may apply to the commission in accordance with this clause 3 and Schedule 5 for the amendment of the prescribed price movements and/or price components included in Schedule 2 for the following **regulatory year** (the **relevant regulatory year**) and all subsequent **regulatory years** remaining in the **regulatory period** (the **revised tariff schedule**).
- (ii) The average price movement for the **relevant regulatory year** and for each subsequent **regulatory year** in the **regulatory period** determined in accordance with the **revised tariff schedule** must not exceed the weighted average price movement that would otherwise have applied under this Determination as calculated in accordance with the following formula.

$$\frac{\sum_{i=1}^n \sum_{j=1}^m p_t^{ij} q_{t-2}^{ij}}{\sum_{i=1}^n \sum_{j=1}^m p_{t-1}^{ij} q_{t-2}^{ij}} \geq \frac{\sum_{i=1}^n \sum_{j=1}^m ap_t^{ij} q_{t-2}^{ij}}{\sum_{i=1}^n \sum_{j=1}^m p_{t-1}^{ij} q_{t-2}^{ij}}, i = 1, \dots, n; j = 1 \dots m$$

where **City West Water** has n tariff categories, which each have up to m tariff components, and where, for each **regulatory year** t for which the calculation is undertaken:

p_{t-1}^{ij} is the tariff charged in **regulatory year** $t-1$ for component j of tariff i

p_t^{ij} is the proposed tariff for component j of tariff i determined in accordance with Schedule 2 where the **revised tariff schedule** is not applied

ap_t^{ij} is the proposed tariff for component j of tariff i determined in accordance with Schedule 2 where the **revised tariff schedule** is applied

q_{t-2}^{ij} is the quantity of component j of tariff i that was sold in **regulatory year** $t-2$, or, if an actual quantity is not available, either an estimate of the quantity of component j of tariff i that would have been sold in **regulatory year** $t-2$ or a forecast of the quantity of component j of tariff i that is expected to be sold in **regulatory year** $t-2$

(b) Amendment procedure

- (i) An application by **City West Water** under this clause 3 must be received by the commission at least 80 **business days** prior to the commencement of the **relevant regulatory year** and must be accompanied by the following information:
- (A) (1) a clearly articulated new tariff strategy that is consistent with clause 11 of the **WIRO** (the **revised tariff strategy**); or
 - (2) an explanation of how the **revised tariff schedule** is consistent with the tariff strategy for **City West Water** approved by the commission in connection with this Determination, (**the relevant tariff strategy**);
 - (B) a **revised tariff schedule** that specifies proposed prices for the **relevant regulatory year** and prescribed price movements for each subsequent **regulatory year** in the **regulatory period** that is consistent with the **relevant tariff strategy**;
 - (C) a statement setting out evidence demonstrating that **City West Water** has provided information to its customers explaining the **revised tariff schedule** and how it relates to the **relevant tariff strategy** and has consulted effectively with its customers on the **revised tariff strategy** (if clause 3(b)(i)(A)(1) applies) and the **revised tariff schedule**;
 - (D) a statement setting out the customer impacts resulting from the **revised tariff schedule** and actions proposed by **City West Water** to address these customer impacts; and
 - (E) an explanation of the calculation of the relevant quantities " q_{t-2}^{ij} ".
- (ii) The commission may approve the **revised tariff schedule** submitted by **City West Water** under this clause 3 if it is satisfied that:
- (A) **City West Water** has complied with clause 3(b)(i)(A);
 - (B) the price movements calculated in accordance with the **revised tariff schedule** comply with clause 3(a)(ii);
 - (C) the **revised tariff schedule** is consistent with the **relevant tariff strategy**;
 - (D) **City West Water** has consulted effectively with its customers on the **revised tariff strategy** (if clause 3(b)(i)(A)(1) applies) and the **revised tariff schedule**;
 - (E) **City West Water** has effectively addressed customer impacts resulting from the **revised tariff schedule**; and
 - (F) the basis for calculating the relevant quantities " q_{t-2}^{ij} " is reasonable.

- (iii) In determining whether it will approve the **revised tariff schedule**, the commission may request **City West Water** to provide any additional information specified by the commission and/or to resubmit any of the matters in clause 3(b)(i)(A)-(E).
- (iv) The commission will be deemed to have not approved a **revised tariff schedule** if it has not provided notice to **City West Water** within 40 **business days** from the date of its receipt of **City West Water's** application under this clause 3.
- (v) An approved **revised tariff schedule** will be taken to amend Schedule 2 to the extent of any inconsistency.

4. Uncertain or unforeseen events

4.1. General principle

- (a) **City West Water** may apply to the commission for the amendment of this Determination and/or the adjustment of the scheduled prices in Schedule 2 to reflect increased or decreased costs incurred by **City West Water** and/or increased or decreased revenue received by **City West Water** as a result of events which were uncertain or unforeseen at the time this Determination was made (an **uncertain events application**).
- (b) Whether or not **City West Water** makes an application under clause 4.1(a), **City West Water** must promptly notify the commission upon becoming aware of an event which could form part or all of the basis of an application.
- (c) The commission may take action under clause 4.3(b) in respect of an **uncertain events application** where the commission is satisfied that such action is necessary or desirable to take account of events that were uncertain or unforeseen at the time of making this Determination provided that the commission is satisfied that such action takes into account the interests of customers. Generally the matters taken into account will include positive and negative influences on revenue and expenditure. The Commission may limit an adjustment to only some events or a single event.

4.2. Consideration by the commission

(a) Examples of uncertain and unforeseen events

The matters that may, at the discretion of the commission, be taken into account by the commission under this clause 4 include:

- (i) actual licence fees or contributions payable by **City West Water** during a particular **regulatory year** during the **regulatory period** under section 51 of the *Safe Drinking Water Act 2003* (Vic), section 24 of the *Environment Protection Act 1970* (Vic) and section 4H(2) of the **WI Act** which differ from the forecast licence fees or contributions set out in Annexure A for that **regulatory year**;
- (ii) changes in the timing or scope of expenditure by **City West Water** on major capital projects;
- (iii) instances where the commission is satisfied that there is a material difference between the forecast demand levels set out in Annexure A and

actual demand levels for **City West Water** in one or more **regulatory years** during the **regulatory period**; and

- (iv) a change in or to any of the following:
 - (A) the **WI Act**, the *Water Act 1989* (Vic), the *Safe Drinking Water Act 2003* (Vic), the *State Owned Enterprises Act 1992* (Vic) and the *Environment Protection Act 1970* (Vic);
 - (B) any licence issued pursuant to any of the Acts referred to in clause 4.2(a)(iv)(A);
 - (C) a **relevant tax**; or
 - (D) the Statement of Obligations; or
 - (E) the introduction or cessation of a statutory carbon price or tax or a national emissions trading scheme or other scheme relating to the reduction of greenhouse gas emissions.

(b) Exclusions

In considering an **uncertain events application**, the commission will not take into account matters that:

- (i) are or should be within **City West Water's** control;
- (ii) were or should have been known by **City West Water** at the time the Determination was made;
- (iii) could reasonably have been foreseen by **City West Water**;
- (iv) should be or should have been planned for or managed by **City West Water**, and/or
- (v) reflect inefficient expenditure by **City West Water**.

(c) Dispute resolution

Any question as to whether a matter should be taken into account by the commission under this clause 4 will be determined by the commission in its absolute discretion.

4.3. Procedure

(a) Application process

- (i) An **uncertain events application** must be accompanied by a statement setting out:
 - (A) the details of each relevant uncertain or unforeseen event;
 - (B) the amount and timing of any increase or decrease in operating and/or capital expenditure associated with the relevant event during

the **regulatory period** and/or the amount and timing of any increase or decrease in revenue associated with the relevant event during the **regulatory period**;

- (C) the basis for calculating the increase or decrease in operating and/or capital expenditure and/or revenue referred to in clause 4.3(a)(i)(B); and
 - (D) details of the proposed action to be taken by the commission under clause 4.3(b).
- (ii) The commission may identify an event or events which it considers has had or may have a material impact on **City West Water's** operating and/or capital expenditure and/or revenue and may decide to take action under clause 4.3(b) in the absence of an **uncertain events application** by **City West Water**.
 - (iii) The commission may request **City West Water** to provide any additional information specified by the commission in connection with an **uncertain events application**.

(b) Action by the commission

If the commission is satisfied of the matters set out in clause 4.1(c) in respect of an **uncertain events application** or an event identified by the commission under clause 4.3(a)(ii), the commission may, in its absolute discretion:

- (i) amend this Determination or adjust the scheduled prices in Schedule 2 and/or the revenue requirements in Annexure A with effect from a date and in a manner decided by the commission (in respect of one or more events) at a time decided by the commission; or
- (ii) take the **uncertain events application** into account in making its determination in respect of the prices which **City West Water** may charge for **prescribed services** in the **next regulatory period**.

5. Material error and unintended consequences

Where the commission is satisfied that in any material respect:

- (a) this Determination or any information relied upon in the making of this Determination contains an error, deficiency or miscalculation;
- (b) any information on which this Determination was based was false or misleading in a material respect; or
- (c) such amendment or adjustment is necessary or desirable to avoid an unintended consequence of this Determination,

the commission may decide to amend this Determination and/or specify a price adjustment, provided that it is satisfied that such amendment and/or price adjustment takes into account the interests of customers.

In most cases, an amendment will be undertaken in accordance with the commission's standard consultation process for price determinations, including the issue of a draft decision and an invitation for interested parties to make submissions to the commission in relation to the draft decision, as set out in clause 16(a) and (b) of the WIRO.

In some limited circumstances, the commission may amend this Determination without further consultation, or with only limited consultation. This will be the case where an amendment is not sufficiently material to warrant a full consultation process, or where there is urgency that justifies the commission moving quickly, as set out in clause 16(c) of the WIRO. In these circumstances, the commission will provide its reasons for proceeding with the amendment without consultation (or with a modified consultation process).

Schedule 1 – Definitions and interpretation

A Definitions

business day means a day on which banks are open for general banking business in Melbourne, not being a Saturday or a Sunday.

Code means the applicable *Customer Service Code* made under the **WI Act**.

ESC Act means the *Essential Services Commission Act 2001* (Vic).

GST has the meaning given in section 195-1 of the *A New Tax System (Goods and Services) Tax Act 1999* (Cth).

miscellaneous services means services that are provided in direct connection with **prescribed services**, prices in respect of which are either included in Schedule 2 or determined in accordance with the relevant pricing principles in Schedule 4.

new contract means any contract for **prescribed services** which is renewed, renegotiated or entered into during the **regulatory period**.

next regulatory period means the period commencing on 1 July 2023 and ending on a date specified by the commission.

prescribed services has the meaning given in the **WIRO** and includes **miscellaneous services**.

price submission has the meaning given in the **WIRO**.

regulated entity has the meaning given in the **WIRO**.

regulatory period means the period commencing on 1 July 2018 and ending on 30 June 2023.

regulatory year means each period of twelve months commencing on 1 July and ending on 30 June.

relevant contract means a contract which relates to the provision of **prescribed services**.

relevant tax means any tax imposed by or payable directly or indirectly to any government or public authority in the Commonwealth of Australia (including **GST**) but excluding:

- (a) the licence fees referred to in clause 4.2 of this Determination;
- (b) penalties and interest for late payment of any tax; or
- (c) any tax that replaces any of the taxes referred to in (a) and (b), where tax includes any rate, duty, charge or other like or analogous impost.

WI Act means the *Water Industry Act 1994* (Vic).

WIRO means the Water Industry Regulatory Order 2014 as at the date of this Determination.

B Interpretation

Headings are for convenience only and do not affect interpretation. The following rules apply unless the context requires otherwise.

- (a) The singular includes the plural, and the converse also applies.
- (b) If a word or phrase is defined, its other grammatical forms have a corresponding meaning.
- (c) A reference to a person includes a corporation, trust, partnership, unincorporated body or other entity, whether or not it comprises a separate legal entity.
- (d) A reference to a clause or schedule is a reference to a clause of or schedule to this document.
- (e) A reference to a determination, agreement or document (including a reference to this document) is to the agreement or document as amended, supplemented, novated or replaced, except to the extent prohibited by this document or that other agreement or document.
- (f) A reference to an Act, ordinance, code or other law includes regulations and other instruments under it and consolidations, amendments, re-enactments or replacements of any of them.
- (g) If a period of time is specified and commences on a given day or on a day of an act or event, the period of time is to be calculated inclusive of that day.
- (h) Any “notice” to be given or matter to be “notified” must be in writing.
- (i) The symbol ‘ Σ ’ requires a summation to be performed over the range of variables specified in respect of the algebraic terms specified.
- (j) All data which is utilised in calculations made under this Determination will be utilised to the accuracy, in terms of the number of decimal places, to which it is given.
- (k) A fixed price, charge or fee determined in accordance with this Determination is to be rounded down and specified to two decimal places.
- (l) A volumetric price, charge or fee determined in accordance with this Determination is to be rounded down and specified to four decimal places.
- (m) When a calculation is required under this document:
 - (i) **regulatory year** ‘t’ is the **regulatory year** in respect of which the calculation is being made;
 - (ii) **regulatory year** ‘t-1’ is the **regulatory year** immediately preceding **regulatory year** ‘t’;
 - (iii) **regulatory year** ‘t-2’ is the **regulatory year** immediately preceding **regulatory year** ‘t-1’.

Schedule 2 – Prices

This schedule should be read in conjunction with Schedule 3, Schedule 4 and Schedule 5. Variable water, wastewater, and trade waste charges are rounded down to 4 decimal places. All other charges are rounded down to 2 decimal places.

Tariff and Price Component	Price (1 July 2018)	PPM Year 2	PPM Year 3	PPM Year 4	PPM Year 5
1.1 Scheduled fixed potable water prices					
Residential water tariff					
Water network fee (per annum)	231.18	0.0%	0.0%	0.0%	0.0%
Non-residential water tariff					
Water network fee (per annum)	336.74	0.0%	0.0%	0.0%	0.0%
1.2 Scheduled volumetric potable water prices					
Residential water tariff					
Water usage fee (per kL)					
Price step 1 (0-440 litres/day)	2.4904	0.0%	0.0%	0.0%	0.0%
Price step 2 (>440 litres/day)	2.9312	0.0%	0.0%	0.0%	0.0%
Non-residential water tariff					
Water usage fee (per kL)	2.5970	0.0%	0.0%	0.0%	0.0%
1.3 All other scheduled prices					
Recycled water					
Residential – network fee (per annum)	30.53	0.0%	0.0%	0.0%	0.0%
Residential - usage fee (per kL)	2.4904	0.0%	0.0%	0.0%	0.0%
Non-residential - usage fee (per kL)	2.2074	0.0%	0.0%	0.0%	0.0%
Residential sewerage tariff					
Sewerage network fee (per annum)	256.54	0.0%	0.0%	0.0%	0.0%
Sewage disposal fee (per kL)	0.8348	0.0%	0.0%	0.0%	0.0%
Non-residential sewerage tariff					
Sewerage network fee (per annum)	453.05	0.0%	0.0%	0.0%	0.0%

Tariff and Price Component	Price (1 July 2018)	PPM Year 2	PPM Year 3	PPM Year 4	PPM Year 5
Sewage disposal fee (per kL)	1.7068	0.0%	0.0%	0.0%	0.0%
Fire services					
Private fire service connection fee (per connection)*	101.90	0.0%	0.0%	0.0%	0.0%
Non-residential trade waste tariff					
Volume (per kL)	0.8152	0.0%	0.0%	0.0%	0.0%
Biochemical Oxygen Demand (per kg)	0.9953	0.0%	0.0%	0.0%	0.0%
Suspended Solids (per kg)	0.5392	0.0%	0.0%	0.0%	0.0%
Total Kjeldahl Nitrogen (per kg)	1.9154	0.0%	0.0%	0.0%	0.0%
Inorganic Total Dissolved Solids (per kg)	0.0194	0.0%	0.0%	0.0%	0.0%
Trade waste – application fees (per application)					
Risk Rank 1	2160.21	0.0%	0.0%	0.0%	0.0%
Risk Rank 2	2160.21	0.0%	0.0%	0.0%	0.0%
Risk Rank 3	2160.21	0.0%	0.0%	0.0%	0.0%
Risk Rank 4	594.48	0.0%	0.0%	0.0%	0.0%
Risk Rank 5 General	309.59	0.0%	0.0%	0.0%	0.0%
Risk Rank 5 Commercial Food Business	78.15	0.0%	0.0%	0.0%	0.0%
Trade waste – agreement fees (per annum)					
Risk Rank 1	18796.19	0.0%	0.0%	0.0%	0.0%
Risk Rank 2	15590.84	0.0%	0.0%	0.0%	0.0%
Risk Rank 3	7827.36	0.0%	0.0%	0.0%	0.0%
Risk Rank 4	1709.53	0.0%	0.0%	0.0%	0.0%
Risk Rank 5	324.58	0.0%	0.0%	0.0%	0.0%
Trade waste – food waste service					
Food waste service (per requisitered bed per annum)	52.55	0.0%	0.0%	0.0%	0.0%
New customer contributions					
Water (standard charge, all zones, per lot)					
All Lot sizes	704.42	0.0%	0.0%	0.0%	0.0%

Tariff and Price Component	Price (1 July 2018)	PPM Year 2	PPM Year 3	PPM Year 4	PPM Year 5
Sewerage (standard charge, all zones, per lot)					
All Lot sizes	704.42	0.0%	0.0%	0.0%	0.0%
Recycled water (West Werribee and Greek Hill zone, per lot)	2547.51	0.0%	0.0%	0.0%	0.0%
Core miscellaneous fees and charges (per application)					
Development works application > 10 lots	2356.34	0.0%	0.0%	0.0%	0.0%
Development works acceptance > 10 lots	4492.84	0.0%	0.0%	0.0%	0.0%
Potable water meter installation (20mm) – new connection	75.62	0.0%	0.0%	0.0%	0.0%
Potable water meter assembly & installation (20mm) – new connection	273.15	0.0%	0.0%	0.0%	0.0%
Plumbing application	85.13	0.0%	0.0%	0.0%	0.0%
Recycled water connection inspection	236.30	0.0%	0.0%	0.0%	0.0%
Sewer details	65.60	0.0%	0.0%	0.0%	0.0%
Build over easement application	269.37	0.0%	0.0%	0.0%	0.0%
Property service short side installations (20mm)	1761.11	0.0%	0.0%	0.0%	0.0%
Property service long side installations (20mm)	2141.20	0.0%	0.0%	0.0%	0.0%
Information statement – self-service	17.71	0.0%	0.0%	0.0%	0.0%
Information statement – standard	27.84	0.0%	0.0%	0.0%	0.0%
Information statement – express	51.33	0.0%	0.0%	0.0%	0.0%
Non-core miscellaneous services	Actual cost				

* New fee introduced in 2019-20, price is in \$2018-19.

As set out in clause 1.1(d) of this Determination, the role of the commission in making this Determination is limited to specifying the maximum prices that **City West Water** may charge for **prescribed services** during the **regulatory period**, or the manner in which such prices are to be calculated, determined or otherwise regulated.

It is the role of **City West Water** to apply a tariff in accordance with the **Water Act 1989 (Vic)**. The commission does not have a role in hearing disputes about individual billing issues that users may have.

Schedule 3 – Application of prices

3.1 Water usage fees

- (a) It is the role of **City West Water** to apply a water usage charge in accordance with the **Water Act**.
- (b) A water usage fee shall be calculated by reference to the volume, expressed in kilolitres, or part thereof, of water supplied during a meter reading period to a property, properties or separate occupancies.
- (c) For inclining block tariffs, where multiple properties and/or occupancies are being supplied by a single meter, block allowances will be applied on a pro-rata basis.

3.2 Residential property

For the purpose of Schedule 2, a 'residential' property means

- (a) a property used or intended to be used primarily as a residence or residences; and
- (b) in the case of vacant land, land zoned for residential purposes.

but does not include a property used or intended to be used as:

- (i) a guest house, motel, hotel or caravan park;
- (ii) a farming enterprise; and
- (iii) a residence attached to a shop or professional suites.

3.3 Non-residential property

For the purpose of Schedule 2, a non-residential property is a property which is not a residential property.

3.4 Private extension fees

City West Water may, as a term of any agreement with the owner of a property for the supply of water from its works made under section 124(7) of the **Water Act**, require that owner to pay:

- (a) an annual private extension supply fee equivalent to the Service charge (per annum); and
- (b) a private extension usage fee equivalent to the Usage charge (per kL), specified in item 2.1 of Schedule 2.

3.5 Calculating the volume of sewage — residential customers

Default method

The volume of sewage discharged from a residential property or premises during a meter reading period shall, by default, be calculated according to the formula:

$$\text{Volume of Sewage} = VW \times SF \times DF$$

Where:

VW is the volume of water supplied to the property or premises, being the volume determined for the purpose of calculating a water usage charge for the same meter reading period or that volume rounded to the nearest kilolitre;

SF is the seasonal factor, which is derived from dividing:

- (a) the total number of days in the meter reading period by the sum of
- (b) the number of days which fall within each particular month within the meter reading period multiplied by the relevant seasonal index shown in Table 2 for that month for a House or a Unit

Where:

‘House’ means a building, excluding a Unit, which is used or intended to be used as a residence.

Unit’ means a unit within the meaning of the *Valuation of Land Act 1960*¹, a group of units within that meaning, a building used or intended to be used for more than one residence and a part of a building used or intended to be used as one residence.

¹ Under the *Valuation of Land Act 1960* a ‘unit’ is defined as ‘a unit on a registered plan within the meaning of the *Strata Titles Act 1967*; a stratum estate within the meaning of the *Transfer of Land Act 1958*; and a building or part of a building in the exclusive occupation of a person who is entitled to occupation by virtue of being a shareholder in a company which owns the building or a tenant of such a shareholder; and a residential unit in respect of which a residence right in a retirement village under the *Retirement Villages Act 1986* is in force’.

Table 1 Seasonal indices

Month	House	Unit
January	1.45	1.30
February	1.45	1.30
March	1.30	1.20
April	1.30	1.10
May	1.20	1.00
June	1.00	1.00
July	1.00	1.00
August	1.00	1.00
September	1.10	1.00
October	1.10	1.10
November	1.40	1.10
December	1.40	1.20

DF is the discharge factor shown in Table 3 in respect of the ‘quarterly equivalent volume of water’. The quarterly equivalent volume of water is the volume of water calculated by multiplying the volume of water supplied to or apportioned to the property or premises by 91.25 and dividing the result by the number of days in the meter reading period, except in the case of water supplied to:

- (a)** a separately metered property used or intended to be used for more than one residence where those residences are not separately metered; or
- (b)** to a property which is not separately metered and to which a volume of water has not been apportioned,

In which case, the quarterly equivalent volume of water is the volume of water calculated by dividing the volume of water supplied to all residences or properties sharing the meter by the number of residences or properties supplied and multiplying the result by 91.25 and dividing that result by the number of days in the meter reading period.

Table 2 Discharge factors

Quarterly equivalent volume of water	Discharge factor
Less than or equal to 125 kl	0.9
More than 125 kl and less than or equal to 250 kl	0.9 less 0.0036 per kl in excess of 125 kl
More than 250 kl	0.45

Notes: For third pipe recycled water customers, volume of water is the sum of metered potable water and metered recycled water. The formula used for calculating the volume of sewage discharges is subject to alternative methods.

Alternative methods

Where **City West Water** is satisfied that the default method is likely to ‘systematically and substantially overestimate the volume of sewage discharged’:

- (a) a customer can seek a customised discharge factor using the consumption history at the property to determine the percentage of water disposed to the sewer annually. In the majority of cases, the formula used to calculate the volume of sewerage differs to that applied in the default method with the seasonal factor and discharge factor replaced by the customised discharge factor
- (b) extra water meters may be installed (at the customer’s own cost) to more effectively isolate the water use which is discharged to the sewerage system; or
- (c) **City West Water** may apply ‘property specific’ sewage disposal factors to customers that are served by a third pipe recycled water supply, or any other form of alternative water supply (eg: rainwater tanks).

The decision on whether to use an alternative method rests with the customer and **City West Water** does not guarantee a particular outcome.

3.6 Calculating the volume of sewage — non-residential customers

Default method

The volume of sewage discharged from a non-residential property or premises during a meter reading period shall, by default, be calculated according to the formula:

$$\text{Volume of Sewage} = VW \times DF$$

Where:

VW is the volume of water supplied to the property or premises, being the volume determined for the purpose of calculating a water usage charge for the same meter reading period or that volume rounded to the nearest kilolitre; and

DF is the discharge factor, which is 0.9 or another figure determined by **City West Water** to result in a more accurate estimate of the volume of sewage discharged.

For most non-residential customers, the default method coupled with a discharge factor of 0.9 is used. Exceptions include Category A trade waste customers who typically use water in industrial processes. In these cases a customised discharge factor will be calculated by **City West Water** to account for the volumes of water incorporated into product, lost in steam etc. This will be undertaken as part of the pricing assessment for trade waste customers.

Customers who do not discharge trade waste use water which does not go to sewer, may request a customised discharge factor to be calculated by **City West Water**.

- Notes: For third pipe recycled water customers, the volume of water is the sum of metered potable water and metered recycled water. The formula used for calculating the volume of sewage discharged is subject to alternative methods (see alternative methods under clause 3.6).

3.7 Assignment of trade waste risk rank

City West Water assigns all its trade waste customers a risk rank according to a risk rank algorithm.

The algorithm takes into account specific customer information and discharge characteristics including:

- customer location relative to treatment plant
- the volume of trade waste discharged
- the nature of the customer's business activity
- the nature and quality of the customer's trade waste
- the customer's compliance history, where available

City West Water may change a trade waste customer's risk rank due to the customer's changed circumstances or updated information.

3.8 Food waste charges

Food waste charges do not apply to residential premises. For hospitals and institutions the charge applies to food waste that is discharged to sewer via a macerating food waste disposal unit. The charge is applied against the number of registered beds for which the unit(s) serve.

3.9 Miscellaneous fees and charges

The following table sets out the definitions of the miscellaneous charges contained in Schedule 2.

Miscellaneous service	Definition
Development works application > 10 lots	<p>A development works application applies when an extension of City West Water's reticulated water, recycled water or sewerage mains is required to service a property. Application and acceptance fees cover the costs of City West Water employees to process development works application.</p> <p><u>Application</u> fees cover costs associated with processing an application and generating development deed/conditions of offer.</p>
Development works acceptance > 10 lots	<p>A development works application applies when an extension of City West Water's reticulated water, recycled water or sewerage mains is required to service a property. Application and acceptance fees cover the costs of City West Water employees to process development works application.</p> <p><u>Acceptance</u> fees apply when the applicant accepts the development deed/conditions and cover employee costs associated with the subsequent developments works.</p>
Potable water meter installation (20mm) – connection	<p>Under the Water Act 1989, City West Water must permit a property to be connected to the water supply or sewerage systems once an owner or occupier requests connection by notice. However, the owner (or their authorised agent) must agree to meet the cost of making that connection.</p> <p>Connection costs for water supply differ by connection (meter) size. The meter size can range from 20mm to 250mm. The 20mm connection cost relates to connection of a 20mm water meter.</p>
Potable water meter assembly & installation (20mm) – connection	<p>In the case of a dry tapping installation (tapping installed by developer at time of water main installation), City West Water will provide both the associated pipework and the meter assembly, including property hose tap and dual check valve. The 20mm connection cost relates to connection of a 20mm water meter.</p>
Plumbing application	<p>Before undertaking any plumbing works, a property owner (or their authorised agent) must obtain City West Water's consent to connect. Building plans must be submitted with the application (e.g. new building or extension) if requested by City West Water.</p> <p>An application fee is required for all plumbing applications made to City West Water. The fee covers employee costs for assessing and processing the plumbing application.</p>

Miscellaneous service	Definition
Recycled water connection inspection	City West Water requires that the internal plumbing of all residential recycled water properties is inspected by its nominated contractor. This inspection ensures that, at time of development, there is no cross connection between potable water pipes and recycled water pipes.
Sewer details	Developers, consultants and property owners often request a plot showing the location of City West Water's assets relative to a particular parcel of land. This is known as an 'asset plot' and can be provided for sewer and water. Asset information referred to as 'sewer details' provides size, depth and offset details (where available) for sewerage assets.
Build over easement application	Under the Water Act 1989 , a person must seek City West Water's consent before causing or permitting any of the following: any structure to be built or any filling to be placed on land over which City West Water has an easement or an easement exists for water supply, sewerage or drainage purposes any structure to be built or any filling to be placed within one metre laterally of any of City West Water's works, including structures above or below ground any soil, rock or other matter that supports, protects or covers any of City West Water's works to be removed. A fee is charged for the administrative time spent in assessing whether an approval will be granted, and under what conditions.
Property service short side installations (20mm)	Providing the connection is not inclusive of a private fire service connection (PFSC), City West Water's nominated meter services contractor is responsible for the installation of the main to meter pipework up to and including five metres from the water main to the property boundary (short side). This also includes all excavation and reinstatement. This is to standardise the installation of all related works for water service connections.
Property service long side installations (20mm)	Providing the connection is not inclusive of a private fire service connection (PFSC), City West Water's nominated meter services contractor is responsible for the installation of the main to meter pipework exceeding five metres and up to 15 metres from the water main to the property boundary (long side). This also includes all excavation and reinstatement. This is to standardise the installation of all related works for water service connections.

Miscellaneous service	Definition
Information statement – self-service, standard or express	<p>Under s32 (2)(b) of the <i>Sale of Land Act 1962</i>, vendors of property in CWW’s service area are required to provide potential purchasers with an information statement from City West Water prior to contract signing. All property-based fees billed by City West Water are included on the information statement. The statement details any encumbrance affecting the land (excluding those shown on land titles), works required to be carried out, matters outstanding and any relevant price or fee.</p> <p>This information is provided in the form of a rates and encumbrance certificate.</p>

Schedule 4 – Pricing principles

4.1 Recycled water pricing principles

Recycled water prices should be set so as to:

- have regard to the price of any substitutes and customers' willingness to pay;
- cover the full cost of providing the service (with the exception of services related to specified obligations or maintaining balance of supply and demand); and
- include a variable component.

Where **City West Water** does not propose to fully recover the costs associated with recycled water, it must demonstrate to the commission that:

- it has assessed the costs and benefits of pursuing the recycled water project;
- it has clearly identified the basis on which any revenue shortfall is to be recovered; and
- if the revenue shortfall is to be recovered from non-recycled water customers, either the project is required under the Statement of Obligations which applies to **City West Water** or pursuant to other government policies that apply to **City West Water** or there has been consultation with the affected customers about their willingness to pay for the benefits of increased recycling.

4.2 Pricing principles where scheduled prices do not apply

Where the prices set out in Schedule 2 do not apply because the nature of the service provided to a particular customer (including, in the case of trade waste customers, the volume or load of waste treated) is unique, prices must be set as follows:

- variable prices (including, in the case of trade waste customers, load-based charges) should reflect the long run marginal cost of providing services (including, in the case of trade waste customers, trade waste transfer, treatment and disposal);
- the total revenue received from each customer should be greater than the cost that would be avoided from ceasing to serve that customer, and (subject to meeting avoidable cost) less than the stand alone cost of providing the service to the customer in the most efficient manner;
- the methodology used to allocate common and fixed costs to that customer should be clearly articulated and be consistent with any guidance provided by the commission;
- prices should reflect reasonable assumptions regarding the customer's demand for services (including, in the case of trade waste customers, the volume and strength of trade waste anticipated to be produced by that customer);
- depreciation rates and rates of return used to determine prices should be consistent with those adopted by the commission for the purposes of making this Determination;

- customers should be provided with full details of the manner in which prices have been calculated and any new, renewed or renegotiated contractual agreements with customers should indicate that the prices to apply are subject to any Determination made by the commission;
- where applying these principles results in significant changes to prices or tariff structures, arrangements for phasing in the changes may be considered and any transitional arrangements should be clearly articulated.

4.3 Pricing principles for New Customer Contributions (NCC)

Core pricing principles

NCC, including standard or negotiated NCC, will be calculated by applying the following core NCC pricing principles.

Standard and negotiated NCC will:

- have regard to the incremental infrastructure and associated costs in one or more of the statutory cost categories attributable to a given connection;
- have regard to the incremental future revenues that will be earned from customers at that connection;
- be greater than the avoidable cost of that connection and less than the standalone cost of that connection.

Notes:

1. Given that NCC are to be based on the net incremental cost of connection (ie incremental costs net of incremental benefits), in this context, the costs referred to in the efficient pricing bound are the net costs, specifically the avoidable net cost of connection and standalone net cost of connection.
2. Where the connection arrangement requires assets to be gifted, the value of gifted assets will be excluded for the purpose of calculating net costs.
3. Incremental costs may include financing costs associated with constructing an asset sooner than planned.

NCC application

NCC are applied on a per lot basis, and may be levied on any connection of a new customer that is separately titled or is, or can be, individually metered.

Incremental financing costs

Incremental financing costs (IFC) should be calculated using this formula:

$$\text{IFC} = \left(1 - \left[\frac{1}{(1+r)^n}\right]\right) \times \text{cost of capital being provided sooner than planned}$$

where:

r estimated pre-tax regulatory rate of return

n the number of years the asset is required sooner than planned.

Gifted Assets

City West Water can require developers to provide and gift to **City West Water** specified assets as a condition of connection, provided that **City West Water**:

- makes clear to potential developers which assets a developer will be responsible for providing and gifting, and which will be provided by **City West Water**,
- confirms that negotiation of any non-standard connection and associated charges will be undertaken in accordance with **City West Water's** published negotiating framework; and
- the value of gifted assets will be excluded for the purposes of calculating net costs.

4.4 Pricing principles for miscellaneous services not included in Schedule 2

Prices for miscellaneous services must be set according to actual cost calculated on the basis of the aggregate of:

- direct third party or contractor invoice cost;
- direct marginal internal costs, including labour, materials and transport costs; and
- a fair contribution to overheads.

For bank dishonour, debt collection and legal fees, the third party costs must be charged directly to the customer with no contribution for internal costs or a contribution to overheads.

4.5 Guidelines

City West Water must comply with any guidelines issued by the commission from time to time which relate to the setting of prices for **prescribed services** to which Schedule 4 relates.

Schedule 5 – Adjustment for costs associated with annual updates to the trailing average cost of debt

If in any **regulatory year** Condition A and/or Condition B and/or Condition C and/or Condition D apply, the formula set out in clause 2.3(b) is not applicable to the extent it relates to the prices outlined in Schedule 5A. These prices are set out in items 1.1 to 1.3 of Schedule 2.

Instead the prices above will be adjusted in accordance with the formulas (as applicable) provided below, with effect from the beginning of each subsequent **regulatory year** in the **regulatory period**.

City West Water must comply with any guidance issued by the Commission from time to time which relate to the setting of prices for **prescribed services** to which Schedule 2 and 4 relates.

Schedule 5A – Adjustments to prices

	Condition A (Annual cost of debt update)	Condition B (Melbourne Water bulk water headworks cost change)	Condition C (Melbourne Water bulk sewerage cost change)	Condition D (Melbourne Water desalination water order)
1.1 Scheduled fixed potable water prices	X	X		
1.2 Scheduled volumetric potable water prices				X
1.3 Residential sewer service charge	X		X	
1.3 Non-residential sewer service charge			X	

Schedule 5 – Adjustment for costs associated with annual updates to the trailing average cost of debt

Schedule 5B – Prices

Condition A – Annual cost of debt update

Condition A will apply when the trailing average cost of debt in any **regulatory year** 't' changes in that year. The adjustment is calculated as per formula 4.

The difference in the forecast and actual regulatory rate of return in any **regulatory year** 't' is multiplied by the average of the regulatory asset base (RAB) to determine the change in **City West Water's** total expected return. The RAB is set out in Table 5 of Annexure A.

The trailing average cost of debt adjustment will be apportioned across the tariffs listed in Schedule 5A.

Formula 1: Determining the nominal cost of debt

$$CoD_t^{nominal} = \sum_{i=t-10}^{t-1} \frac{CoD_i^{nominal}}{10}$$

$CoD_t^{nominal}$	Is equal to the simple average of the 10 years up to (but not inclusive of) regulatory year 't' of: <ul style="list-style-type: none">- The data series outlined in Table 1 of Annexure A and <ul style="list-style-type: none">- RBA Table F3 – Non-financial corporate BBB-rated bonds – Yield – 10 year target tenor [Series ID FNFYBBB10M] from 1 April to 31 March before the start of regulatory year 't' (e.g. 1 April 2017 to 31 March 2018 in relation to 2018-19)
-------------------	---

Formula 2: Determining the real cost of debt

$$CoD_t^{real} = \frac{(1 + CoD_t^{nominal})}{(1 + \pi^{det})} - 1$$

π^{det}	Is the inflation factor which is equal to 2.3% for all regulatory years
-------------	--

Formula 2 outlines the process for converting the trailing average cost of debt from nominal to real using the Fisher equation.

Schedule 5 – Adjustment for costs associated with annual updates to the trailing average cost of debt

Formula 3: Determining the real regulatory rate of return

$$RRR_t^{real} = 0.4 \times CoE_t^{real} + 0.6 \times CoD_t^{real}$$

RRR_t^{real}	Is the post-tax ‘vanilla’ regulatory rate of return in real terms for regulatory year ‘t’ rounded to two decimal places, i.e. 4.347% is rounded to 4.35%
CoE_t^{real}	Is the real cost of equity determined through City West Water ’s PREMO rating, which is equal to 4.9% for 2018-19 to 2022-23

Formula 4: Trailing average cost of debt adjustment

$$CODA_t^j = (RRR_t^{act} - RRR_t^{det}) \times \left(\frac{RAB_{opening,t}^{det} + RAB_{closing,t}^{det}}{2} \right) \times \frac{CPI_t}{CPI_{base}} \times \frac{p_t^j \times q_{j,t}^{det}}{\sum_{j=1,n}^{t=t} (p_t^j \times q_{j,t}^{det})} \times \frac{1}{q_{j,t}^{det}}$$

$CODA_t^j$	Is the trailing average cost of debt adjustment applied proportionally to tariff j, based on tariff j’s relative share of total revenues. Total revenues refer to the sum of all revenue received across the tariffs listed in Schedule 5A to which the cost of debt adjustment will apply.
RRR_t^{act}	Is the actual calculated real post tax ‘vanilla’ regulatory rate of return in regulatory year ‘t’
RRR_t^{det}	Is the determination real post tax ‘vanilla’ regulatory rate of return in regulatory year ‘t’
$RAB_{opening,t}^{det}$	Is the determination opening regulatory asset base in regulatory year ‘t’
$RAB_{closing,t}^{det}$	Is the determination closing regulatory asset base in regulatory year ‘t’
CPI_t	Is the Consumer Price Index: All Groups Index for the Eight Capital Cities as published by the Australian Bureau of Statistics (6401.0 - Table 8) for the March Quarter immediately preceding the start of the relevant regulatory year
CPI_{base}	Is the Consumer Price Index: All Groups Index for the Eight Capital Cities as published by the Australian Bureau of Statistics (6401.0 - Table 8) for the March Quarter in year 2017 equal to 110.5
p_t^j	Is the price for tariff j at regulatory year ‘t’ before the cost of debt adjustment where: $p_t^j = p_{t-1}^j \times \frac{CPI_t}{CPI_{t-1}} \times (1 + PPM_t^j)$

Schedule 5 – Adjustment for costs associated with annual updates to the trailing average cost of debt

p_{t-1}^j Is the price for tariff j in **regulatory year** 't-1'

$q_{j,t}^{det}$ Is the determination quantity for tariff j in **regulatory year** 't'

$\sum_{j=1,n}^{t=t} (p_t^j \times q_{j,t}^{det})$ Is the sum of all revenue received across the tariffs listed in Schedule 5A to which the cost of debt adjustment will apply

Formula 4 outlines the process for calculating the adjustment to prices outlined in Schedule 5A to reflect the new cost of debt. This is done in two steps. The first step is to calculate the change in the revenue requirement by multiplying the adjustment to the rate of return, to reflect the updated cost of debt, by the average regulatory asset base.

The second step is to apply the change in the revenue requirement proportionally to tariff j, based on tariff j's relative share of total revenues. Total revenues are defined as the sum of all revenues received across the tariffs listed in Schedule 5A to which the cost of debt adjustment will apply.

Condition B – Bulk water headworks costs adjustment

Condition B will apply when **Melbourne Water's** bulk water headworks costs in any **regulatory year** 't' differ from forecast in that year. The changes in costs will be calculated in accordance with formula 6 and apply to the tariffs listed in Schedule 5A.

Condition C – Bulk sewerage costs adjustment

Condition C will apply when **Melbourne Water's** bulk sewerage costs in any **regulatory year** 't' differ from forecast in that year. The changes in costs will be calculated in accordance with formula 8 and apply to the tariffs listed in Schedule 5A.

Condition D – Water order – Desalination plant

Condition D will apply when the water order volume in any **regulatory year** differs from a water order of 0 GL and where the costs are passed on to customers. The changes in costs incurred for desalinated water orders will be calculated in accordance with formula 10 and apply to the tariffs listed in Schedule 5A.

Schedule 5 – Adjustment for costs associated with annual updates to the trailing average cost of debt

Formula 5: Water service tariff

$$p_{WS,t}^j = p_{WS,t-1}^j \times \frac{CPI_t}{CPI_{t-1}} \times (1 + PPM_t^j) + BWA_{t,j}^{WS} + CDA_t^j$$

$p_{WS,t}^j$	The water service charge for tariff j in regulatory year 't' as a result of changes in City West Water's trailing average cost of debt and Melbourne Water's bulk water headworks costs.
$p_{WS,t-1}^j$	Is the water service charge for tariff j in regulatory year 't-1'
CPI_t	Is the Consumer Price Index: All Groups Index for the Eight Capital Cities as published by the Australian Bureau of Statistics (6401.0 - Table 8) for the March Quarter immediately preceding the start of the relevant regulatory year .
PPM_t^j	The prescribed price movement for the price component for tariff j in regulatory year 't' as per the determination
$BWA_{t,j}^{WS}$	Is the bulk water cost adjustment applied to City West Water's water service tariff j in regulatory year 't' to account for changes in Melbourne Water's trailing average cost of debt and desalination contract cost changes as outlined in formula 6.

Formula 6: Bulk water cost adjustment

$$BWA_{t,j}^{WS} = PT_t^{WS} \times \frac{\alpha_{WS,t}^j \times q_{WS,t}^{j,det}}{\sum_j^n (\alpha_{WS,t}^j \times q_{WS,t}^{j,det})} \times \frac{1}{q_{WS,t}^{j,det}}$$

$BWA_{t,j}^{WS}$	is the adjustment to the water service charge for tariff j ($p_{WS,t}^j$) from changes to Melbourne Water's bulk headworks costs (PT_t^{WS}) as a proportion of the total water service revenue $\sum_j^n (\alpha_{WS,t}^j \times q_{WS,t}^{j,det})$.
PT_t^{WS}	Is the total amount of expenditure to be passed through (either positive or negative) in regulatory year 't' on the water fixed service charges to account for changes in Melbourne Water's bulk headworks costs.
$\alpha_{WF,t}^j$	The water fixed service charge for tariff j in regulatory year 't' before the bulk headworks cost and cost of debt adjustments where: $\alpha_{WF,t}^j = p_{WF,t-1}^j \times \frac{CPI_t}{CPI_{t-1}} \times (1 + PPM_t^j)$
$q_{WF,t}^{j,det}$	Is the determination quantity for tariff j in regulatory year 't'

Schedule 5 – Adjustment for costs associated with annual updates to the trailing average cost of debt

$\sum_j^n (\alpha_{WF,t}^j \times q_{WF,t}^{j,det})$ Is the sum of all revenue received across water fixed service charges in **regulatory year** 't'

Formula 7: Sewerage service tariff

$$p_{SS,t}^j = p_{SS,t-1}^j \times \frac{CPI_t}{CPI_{t-1}} \times (1 + PPM_t^j) + BSA_{t,j}^{SS} + CODA_t^j$$

$p_{SS,t}^j$	The sewerage service charge for tariff j in regulatory year 't' as a result of changes in City West Water's trailing average cost of debt and Melbourne Water's bulk sewerage fixed costs.
$p_{SS,t-1}^j$	Is the sewerage service charge for tariff j in regulatory year 't-1'
CPI_t	Is the Consumer Price Index: All Groups Index for the Eight Capital Cities as published by the Australian Bureau of Statistics (6401.0 - Table 8) for the March Quarter immediately preceding the start of the relevant regulatory year
PPM_t^j	The prescribed price movement for the price component for tariff j in regulatory year 't' as per the determination.
$BSA_{t,j}^{SS}$	Is the bulk sewerage cost adjustment applied to City West Water's sewerage service tariff j in regulatory year 't' to account for changes in Melbourne Water's trailing average cost of debt as outlined in formula 8.
$CODA_t^j$	Is the trailing average cost of debt adjustment applied proportionally to tariff j, based on tariff j's relative share of total revenues. Total revenues refer to the sum of all revenue received across the tariffs listed in Schedule 5A to which the cost of debt adjustment will apply.

Formula 8: Bulk sewerage cost adjustment

$$BSA_{t,j}^{SS} = PT_t^{SS} \times \frac{\alpha_{SS,t}^j \times q_{SS,t}^{j,det}}{\sum_j^n (\alpha_{SS,t}^j \times q_{SS,t}^{j,det})} \times \frac{1}{q_{SS,t}^{j,det}}$$

$BSA_{t,j}^{SS}$	Is the adjustment to the sewerage service charge for tariff j ($p_{SS,t}^j$) from changes to Melbourne Water's bulk sewerage costs (PT_t^{SS}) as a proportion of the total sewerage service revenue $\sum_j^n (\alpha_{SS,t}^j \times q_{SS,t}^{j,det})$.
PT_t^{SS}	Is the total amount of expenditure to be passed through (either positive or negative) in regulatory year 't' on the sewerage fixed service charges to account for changes in Melbourne Water's bulk sewerage costs.

Schedule 5 – Adjustment for costs associated with annual updates to the trailing average cost of debt

$\alpha_{SS,t}^j$	The sewerage fixed service charge for tariff j in regulatory year 't' before the bulk sewerage cost and cost of debt adjustments where: $\alpha_{SS,t}^j = p_{SS,t-1}^j \times \frac{CPI_t}{CPI_{t-1}} \times (1 + PPM_t^j)$
$q_{SS,t}^{j,det}$	Is the determination quantity for tariff j in regulatory year 't'
$\sum_j^n (\alpha_{SS,t}^j \times q_{SS,t}^{j,det})$	Is the sum of all revenue received across sewerage fixed service charges in regulatory year 't'

Formula 9: Water variable tariff

$$p_{WV,t}^j = p_{WV,t-1}^j \times (1 + PPM_t^j) + DWOA_t^j$$

$p_{WV,t}^j$	The water variable charge for tariff j in regulatory year 't' as a result of costs associated with a desalination plant water order.
$p_{WV,t-1}^j$	Is the water variable charge for tariff j in regulatory year 't-1'
CPI_t	Is the Consumer Price Index: All Groups Index for the Eight Capital Cities as published by the Australian Bureau of Statistics (6401.0 - Table 8) for the March Quarter immediately preceding the start of the relevant regulatory year .
PPM_t^j	The prescribed price movement for the price component for tariff j in regulatory year 't' as per the determination.
$DWOA_t^j$	Is the desalinated water order cost adjustment applied to the water variable charge for tariff j in regulatory year 't' as outlined in formula 10.

Formula 10: Desalination water order cost adjustment

$$DWOA_t^j = \frac{BDWOC_t^{act} - BDWOC_t^{det} \times \frac{CPI_t}{CPI_{base}}}{\sum_{j=1}^n q_{WV,t}^{j,det}}$$

$DWOA_t^j$	Is the desalinated water order cost adjustment applied to the water variable charge for tariff j in regulatory year 't'
CPI_t	Is the Consumer Price Index: All Groups Index for the Eight Capital Cities as published by the Australian Bureau of Statistics (6401.0 - Table 8) for the March Quarter immediately preceding the start of the relevant regulatory year .
CPI_{base}	Is the Consumer Price Index: All Groups Index for the Eight Capital Cities as published by the Australian Bureau of Statistics (6401.0 - Table

Schedule 5 – Adjustment for costs associated with annual updates to the trailing average cost of debt

	8) for the March Quarter in year 2017 equal to 110.5.
$q_{WV,t}^{j,det}$	Is the determination quantity for each water variable tariff j in regulatory year 't'
$BDWOC_t^{act}$	Is the actual bulk desalinated water order costs incurred by City West Water in regulatory year 't'
$BDWOC_t^{det}$	Is the determination bulk desalination water order costs for regulatory year 't'

Schedule 5 – Adjustment for costs associated with annual updates to the trailing average cost of debt

The Common Seal of the
Essential Services
Commission was affixed to
this Determination with the
authority of the commission.



Date: 19 June, 2018

A handwritten signature in black ink, consisting of a series of loops and a long horizontal stroke that ends in a hook.

Dr Ron Ben-David

Chairperson

Annexure A

Table 1 Historical cost of debt (nominal)

Per cent

	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Cost of debt	6.92%	7.36%	7.05%	6.31%	5.27%	7.05%	5.36%	5.27%	4.91%	4.53%

Table 2 Forecast real regulatory rate of return

Per cent

	2018-19	2019-20	2020-21	2021-22	2022-23
Regulatory rate of return	4.13%	4.13%	4.13%	4.13%	4.13%

Table 3 Benchmark revenue requirement

\$m 2017-18

	2018-19	2019-20	2020-21	2021-22	2022-23
Operating expenditure	478.6	474.6	466.5	467.1	467.7
Return on assets	77.8	78.7	79.1	78.9	78.6
Regulatory depreciation	76.8	75.6	76.2	78.6	65.1
Adjustments from last period	0.0	0.0	0.0	0.0	0.0
Non-prescribed revenue offset of revenue requirement	0.0	0.0	0.0	0.0	0.0
Tax allowance	16.3	15.3	14.6	14.2	10.8
Total	649.5	644.2	636.4	638.8	622.3

Table 4 Updated regulatory asset base
\$m 2017-18

	2012-13	2013-14	2014-15	2015-16	2016-17
Opening RAB at 1 July	1,648.6	1,796.2	1,865.2	1,868.8	1,846.1
<i>Plus</i> Gross capital expenditure	201.5	130.1	80.9	79.3	92.5
<i>Less</i> Government contributions	0.6	1.2	5.0	2.5	1.3
<i>Less</i> Customer contributions	17.6	17.0	21.5	27.9	33.1
<i>Less</i> Proceeds from disposals	0.4	0.8	0.8	16.6	0.9
<i>Less</i> Regulatory depreciation	35.4	42.0	50.1	55.0	57.2
Closing RAB at 30 June	1,796.2	1,865.2	1,868.8	1,846.1	1,846.1

Table 5 Rolled forward regulatory asset base
\$m 2017-18

	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Opening RAB at 1 July	1,846.1	1,874.3	1,893.6	1,915.8	1,916.3	1,903.5
<i>Plus</i> Gross capital expenditure	109.5	120.9	122.8	101.4	90.6	90.1
<i>Less</i> Government contributions	0.0	0.0	0.0	0.0	0.0	0.0
<i>Less</i> Customer contributions	21.2	24.3	24.5	24.2	24.2	23.8
<i>Less</i> Proceeds from disposals	0.5	0.5	0.5	0.5	0.5	0.5
<i>Less</i> Regulatory depreciation	59.6	76.8	75.6	76.2	78.6	65.1
Closing RAB at 30 June	1,874.3	1,893.6	1,915.8	1,916.3	1,903.5	1,904.2

Table 6 **Approved licence fee and environmental contribution assumptions**
 \$m 2017-18

	2018-19	2019-20	2020-21	2021-22	2022-23
Essential Services Commission licence fee	0.39	0.39	0.39	0.39	0.58
Department of Health and Human Services licence fee	0.14	0.14	0.14	0.14	0.14
Environment Protection Authority licence fee	0.12	0.12	0.12	0.12	0.12
Environmental contribution	25.96	25.38	24.81	24.25	23.71

Table 7 **Bulk water and sewerage costs**
 \$m 2017-18

	2018-19	2019-20	2020-21	2021-22	2022-23
Bulk water and sewerage costs	346.9	342.7	334.7	335.3	335.9

Table 8 Demand forecast

	2018-19	2019-20	2020-21	2021-22	2022-23
Water assessments (no.)					
Residential	443,207	454,807	465,907	476,807	487,557
Non-residential	36,125	36,719	37,288	37,847	38,398
Total	479,331	491,526	503,195	514,654	525,955
Sewerage assessments (no.)					
Residential	442,062	453,662	464,762	475,662	486,412
Non-residential	34,849	35,443	36,012	36,571	37,122
Total	476,911	489,105	500,774	512,233	523,534
Billable water consumption (ML)					
Residential	63,401	64,481	65,514	66,460	67,093
Non-residential	42,296	42,377	42,460	42,468	42,146
Total	105,697	106,859	107,975	108,928	109,239

Table 9 Major capital projects

Projects	Expected start date	Expected completion date
CBD sewerage strategy stage 1 (Spencer Street)	In progress	2018-19
Nicholson Street (Carlton/Carlton North) water main renewal	In progress	2019-20
Greek Hill water supply (Dohertys Rd, Derrimut Rd & Davis Rd mains and Melbourne-Geelong pipeline interconnection)	2018-19	2019-20
West Werribee sewage pump station upgrade	In progress	2019-20
Greek Hill recycled water supply (Dohertys Rd, Derrimut Rd & Davis Rd mains)	2018-19	2019-20
CBD sewerage strategy stage 2 (Lonsdale Street)	2018-19	2020-21
Mt Atkinson outlet sewer	2019-20	2020-21
Billing and collection system replacement	2020-21	2022-23
Ravenhall outlet sewer	2020-21	2022-23
Tarneit West outlet sewer (section 1)	2020-21	2022-23