BLAKE DAWSON WALDRON

L A W Y E R S

Bulk Water Supply Agreement

Melbourne Water Corporation

Yarra Valley Water Limited

Blake Dawson Waldron
Lawyers
Level 39
101 Collins Street
Melbourne Vic 3000
Telephone: 9679 3000
Fax: 9679 3111

Ref: RWJ:955181

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BULK WATER SUPPLY AGREEMENT

DATE

PARTIES

Melbourne Water Corporation ("**MW**")

Yarra Valley Water Limited ACN 066 902 501 ("**YVW**")

RECITALS

A. Under the *Melbourne & Metropolitan Board of Works Act* 1958, MW has power to conserve, treat and supply water for consumption within the metropolis.

B. YVW, as a water and sewerage licensee under the *Water Industry Act* 1994, has the function of providing, managing, operating and protecting water supply systems within the area of its Licence.

C. MW has previously agreed to supply water to YVW, under an agreement dated 30 December 1994.

D. The parties wish to enter into a new agreement, in place of the former agreement, in the terms set out in this document.

OPERATIVE PROVISIONS

1. INTERPRETATION

1.1 Definitions

The following definitions apply in this agreement.

"**Billing Meter**" means a Billing Meter identified in a Table in Schedule 6.

"**Customer Report**" means the report referred to in paragraph 3(b).

"**Emergency Response Plan**" means an Emergency Response Plan referred to in paragraph 14.2(a).

"**Entry Point**" means a point identified as an Entry Point in the Site Codes set out in Schedule 2.

"**Flow Allocation Point**" means a Flow Allocation Point described in Schedule 1.

"**former agreement**" means the agreement referred to in Recital C.

"**Interface Point**" means a point specified as an Interface Point between MW and YVW assets in the Water Supply Asset Interface Register held by the Office of the Regulator-General.

"**Licence**" means a water and sewerage licence granted under the *Water Industry Act* 1994, with respect to part of the metropolis as determined under section 3(1) of the *Melbourne & Metropolitan Board of Works Act* 1958.

"**Licensee**" means a person who holds a Licence.

"**Pressure Monitoring Point**" means a Pressure Monitoring Point described in Schedule 1.

"**Water Quality Monitoring Point**" means a point identified as a WQ Monitoring Point in the Site Codes set out in Schedule 2.

"**Water Quality Zone**" means a Water Quality Zone identified as a WQ Zone by number in Schedule 2.

"**Water Supply Superzone**" means a Water Supply Superzone described in Schedule 1.

"**Water Supply Service**" means an obligation imposed upon MW by clause 3.

1.2 **Rules for interpreting this document**

Headings are for convenience only, and do not affect interpretation. The following rules also apply in interpreting this document, except where the context makes it clear that a rule is not intended to apply.

(a) A reference to:

(i) legislation (including subordinate legislation) is to that legislation as amended, re-enacted or replaced, and includes any subordinate legislation issued under it;

(ii) a document or agreement, or a provision of a document or agreement, is to that document, agreement or provision as amended, supplemented, replaced or novated;

(iii) a party to this document or to any other document or agreement includes a permitted substitute or a permitted assign of that party;

(iv) a person includes any type of entity or body of persons, whether or not it is incorporated or has a separate legal identity, and any executor, administrator or successor in law of the person; and

(v) anything (including a right, obligation or concept) includes each part of it.

(b) A singular word includes the plural, and vice versa.

(c) A word which suggests one gender includes the other genders.

(d) If a word is defined, another part of speech has a corresponding meaning.

(e) If an example is given of anything (including a right, obligation or concept), such as by saying it includes something else, the example does not limit the scope of that thing.

(f) The word "**agreement**" includes an undertaking or other binding arrangement or understanding, whether or not in writing.

(g) A party may give a notice or report under this agreement in written or electronic form.

2. TERM OF AGREEMENT

2.1 This agreement commences on the date of this agreement.

2.2 This agreement may be terminated in accordance with clause 33.

2.3 The parties agree to terminate the agreement referred to in Recital C in accordance with paragraph 23.8(a) of that agreement, on the date determined under sub-clause 2.1.

RIGHTS AND OBLIGATIONS OF MELBOURNE WATER

3. TO SUPPLY WATER

MW must:

(a) in accordance with and subject to, this agreement, supply water to YVW sufficient to meet YVW's obligations to supply water suitable for human consumption under its Licence:

(i) at the pressure and rate of flow determined under sub-clause 9.1; and

(ii) at the quality determined under sub-clause 10.1; and

(iii) from the sources determined under clause 11; and

(iv) with the security of supply determined under clause 12; and

(b) give YVW a Customer Report in each month, promptly after its Board meeting in that month, on MW's performance of its obligations under this agreement in the preceding month.

4. TO RECOVER CHARGES

MW may recover from YVW any charges or interest due to MW under clauses 21-25.

RIGHTS AND OBLIGATIONS OF YVW

5. TO RECEIVE WATER

YVW may, in accordance with this agreement, receive water supplied by MW including for the purpose of supplying that water to customers pursuant to YVW's Licence.

6. TO PAY CHARGES

YVW must pay to MW charges and interest determined, calculated and invoiced in accordance with clauses 21 - 25.

JOINT OBLIGATIONS

7. TO CO-OPERATE AND LIAISE

7.1 General Obligation

Each party must co-operate and liaise fully with the other to ensure that this agreement is implemented effectively.

7.2 Examples of Obligation

For example, the parties must co-operate and liaise fully:

(a) to agree upon and adopt any protocol referred to in sub-clause 8.2; and

(b) to resolve any difficulties which may arise in implementing this agreement because of any legal or regulatory right or obligation of a party which may conflict with a provision of this agreement; and

(c) to allow each party to comply with its statutory and contractual rights and obligations to other persons; and

(d) to minimise any risks to persons, equipment or the environment which may arise in supplying water under this agreement; and

(e) to review and to amend the Drought Response Plan in accordance with sub-clause 14.6; and

(f) to undertake co-operative planning as required by clause 18; and

(g) to adopt the Capital Works Program referred to in sub-clause 19.1; and

(h) to review and, if necessary to amend, this agreement in accordance with clause 32.

7.3 Proposed Variations to Licence

(a) If, in any year, YVW becomes aware of any proposal to amend YVW's Licence (including any provision of the Customer Contract referred to in section 19 of the *Water Industry Act* 1994), YVW must consult MW about any proposed variation which YVW considers will, or is likely to affect MW, before YVW agrees with the variation under section 14(1)(b) of that Act.

(b) If MW reasonably concludes that the proposed variation would:

(i) substantially and materially alter MW's rights and obligations under this agreement; or

(ii) create a substantial risk that MW will be unable to supply water under sub-clauses 9.1 or 10.1 which enables YVW to comply with the Customer Contract,

YVW must:

(iii) advise the Office of the Regulator-General of MW's concerns; and

(iv) include any written report by MW setting out its conclusions under paragraph (b) in any representation which YVW is given an opportunity to make under section 14(2)(b) of that Act; and

(v) take every other reasonable step in the circumstances to assist MW to resolve its concerns.

8. TO COMPLY WITH LAWS AND AGREED PROTOCOLS

8.1 Each party must comply with all laws relevant to the subject matter of this agreement.

8.2 The parties may, from time to time, through their Principal Representatives, agree upon and adopt a written protocol for the performance by either or both parties of any obligation under this agreement.

8.3 A protocol adopted under sub-clause 8.2:

(a) may be amended or terminated in writing signed by the parties; and

(b) takes effect as if it were part of this agreement; and

(c) may include, as a party, any other Licensee; and

(d) must be included in this agreement as part of Schedule 8 - Protocols.

8.4 This agreement prevails over any protocol adopted under sub-clause 8.2 to the extent of any inconsistency between them.

IMPLEMENTATION

9. PERFORMANCE STANDARDS FOR PRESSURE AND FLOW

9.1 Supply Standards

At any time when YVW uses water in a Water Supply Superzone in a way which does not exceed the flow allocation limits set out in Schedule 1 at a Flow Allocation Point for that Water Supply Superzone, MW must provide water to that Water Supply Superzone which maintains the pressure set out in Schedule 1 at each Pressure Monitoring Point for that Water Supply Superzone.

9.2 Determining Compliance

(a) MW must install, maintain and operate each Pressure Monitoring Point.

(b) MW may install, maintain and operate a measuring device at any Flow Allocation Point.

(c) MW may, with the written consent of YVW, install and have access to, a point referred to in paragraph (a) or (b) on assets belonging to YVW, where the point will measure the pressure or flow of water supplied to YVW or another Licensee.

(d) MW must provide YVW:

(i) with instantaneous access to data recorded by MW; and

(ii) access to all accumulated data concerning measurements taken,

at each Pressure Monitoring Point and Flow Allocation Point, through MW's SCADA system, to the extent that such data is available to MW.

(e) YVW may, with the written consent of MW and at YVW's expense, install and have access to, measuring devices on assets belonging to MW.

(f) YVW must not unreasonably withhold permission for MW to have:

(i) instantaneous access to data recorded by YVW's SCADA system; and

(ii) access to all accumulated data concerning measurements taken at YVW's monitoring points,

when MW requests such access.

9.3 **Failure to meet performance standards**

(a) On each occasion when either MW or YVW declares a failure by MW to comply with sub-clause 9.1 to be an "incident" within the meaning of an Emergency Response Plan MW must:

(i) take all action necessary to comply with sub-clause 9.1 as soon as possible; and

(ii) give YVW notice in accordance with sub-paragraphs 14.3(a)(v) and (vi); and

(iii) otherwise comply with sub-clause 14.3 and MW's Emergency Response Plan.

(b) On each occasion when a failure by MW to comply with sub-clause 9.1 is not declared to be an "incident" under paragraph (a), MW must:

(i) take all action necessary to comply with sub-clause 9.1 as soon as possible; and

(ii) set out the matters referred to in sub-paragraph 14.3(a)(vi) in the Customer Report for that month.

9.4 **Power to revise standards**

The parties may (through their Principal Representatives) from time to time, agree in writing to alter any requirement about pressure and flow set out in Schedule 1 and the Schedule must be taken to have been altered accordingly.

9.5 **Power to meet temporary additional demand**

(a) YVW may ask MW to exceed the requirements set out in sub-clause 9.1, in order to meet a temporary additional demand in any Water Supply Superzone.

(b) MW must comply with any request made under paragraph (a) if MW is able to meet the request without causing any adverse effect to:

(i) water supply services provided to another Licensee by MW; or

(ii) any part of MW's water supply system.

(c) If meeting a request made under paragraph (a) would result in MW not being able to comply with the requirements of either sub-clause 9.1 or 10.1 with respect to any Water Supply Superzone or Water Quality Zone, MW must only meet the request to the extent that it will allow MW still to comply with sub-clause 9.1 and 10.1, unless YVW agrees in writing to waive MW's obligation to comply with those sub-clauses.

10. PERFORMANCE STANDARDS FOR WATER QUALITY

10.1 **Water Quality Standards**

(a) In accordance with, and subject to the terms of this agreement, MW must:

(i) supply water at each Entry Point and Water Quality Monitoring Point described in Schedule 2, which complies with such parameters or standards for indicators of water quality as are specified for that Entry Point or Water Quality Monitoring Point in Parts B and C of Schedule 3; or

(ii) for water quality indicators not specified in Parts B and C of Schedule 3, supply water at each Entry Point and Water Quality Monitoring Point fit for human consumption.

(b) Whenever MW supplies water which has been treated by a process of chlorination or chloramination at a primary disinfection plant:

(i) MW must:

(A) within 7 days after the commencement of this agreement give YVW a report setting out the dose of chlorine administered at each primary disinfection plant in milligrams per litre at the date on which the agreement commences; and

(B) not reduce any dose set out in the report during the term of this agreement without YVW's prior written consent; and

(ii) MW must ensure that the process complies with the Chlorine Contact Time formula set out in Part A of Schedule 3; and

(iii) the presence of levels of total or free chlorine residual at a Water Quality Monitoring Point which cause customers to complain about the taste or odour of water supplied to customers by YVW, will not constitute a breach of sub-clause 10.1, if YVW has previously agreed in writing to those levels; and

(iv) MW may, at the request of YVW and after consulting all affected parties, increase the dose of chlorine administered at a disinfection plant to take account of variations in water quality.

(c) MW must adjust any invoice given to YVW whenever chlorine is not added to water at a primary disinfection plant, in accordance with sub-clause 25.2.

(d) MW must not mix water treated by a process of chloramination with water which has been treated either:

(i) by a chlorination process; or

(ii) with sodium hypochlorite.

(e) Whenever MW supplies water which has been treated with fluoride, MW must comply with the *Health (Fluoridation) Act* 1973 and any requirements of the Secretary to the Department of Human Services under that Act.

10.2 **Determining Compliance**

(a) MW must undertake a water quality monitoring program of water supplied at each Water Quality Monitoring Point and Entry Point described in Schedule 2.

(b) MW's water quality monitoring program for any year commencing on 1 July must:

(i) be developed in consultation with YVW by 30 May in the preceding year; and

(ii) be given to the Secretary of the Department of Human Services by 30 September in every year; and

(iii) require at least weekly sampling and analysis of E.Coli and total coliforms; and

(iv) require sufficient sampling and analysis of turbidity, apparent colour, pH, iron, manganese, aluminium, chloroacetic acids and THMs to present a statistically significant representation of those parameters in water supplied to YVW; and

(v) require MW to monitor the operation of each of MW's primary disinfection plants to ensure that MW complies with Part A of Schedule 3.

(c) MW must provide YVW:

(i) with instantaneous access to data recorded by MW; and

(ii) access to all accumulated data concerning samples and analyses undertaken,

at each Water Quality Monitoring Point and Entry Point through MW's SCADA System, to the extent that such data is available to MW, in relation to the following indicators of water quality:

Flow
Turbidity
pH
Chlorine residual.

(d) YVW must provide MW:

(i) with instantaneous access to data recorded by YVW; and

(ii) access to all accumulated data concerning samples and analysis undertaken,

of water quality, to the extent that such data is available to YVW.

(e) MW must, as soon as practicable but within 9 days after the end of each month, give YVW, in electronic form, preliminary:

(i) results of sampling and analysis at each Water Quality Monitoring Point and Entry Point; and

(ii) data concerning MW's performance of its disinfection obligations under paragraph 10.1(b).

(f) MW must set out in each Customer Report, and in any other report which YVW reasonably requests:

(i) the information referred to in sub-paragraph (e)(i) and (ii); and

(ii) the results of analysis at each Water Quality Monitoring Point in each of the preceding 12 months, for each of the water quality indicators referred to in Part B of Schedule 3.

10.3 **Failure to meet performance standards**

(a) Without detracting from any other obligation under this agreement, on each occasion when either MW or YVW declares a failure by MW to comply with sub-clause 10.1 to be an "incident" within the meaning of an Emergency Response Plan MW must:

(i) take all action necessary to comply with sub-clause 10.1 as soon as possible; and

(ii) give YVW notice in accordance with sub-paragraphs 14.3(a)(v); and (vi); and

(iii) otherwise comply with sub-clause 14.3 and MW's Emergency Response Plan.

(b) On each occasion when a failure by MW to comply with sub-clause 10.1 is not declared to be an "incident" under paragraph (a), MW must:

(i) take all action necessary to comply with sub-clause 10.1 as soon as possible; and

(ii) set out the matters referred to in sub-paragraph 14.3(a)(vi)) in the Customer Report for that month.

10.4 **Power to revise standards**

The parties may (through their Principal Representatives) from time to time, agree in writing to alter any requirements about water quality set out in Schedule 2 or 3 and the Schedule must be taken to have been altered accordingly.

11. PERFORMANCE STANDARDS FOR SOURCES OF SUPPLY

(a) Within 7 days after the date on which this agreement commences, MW must give YVW notice of the storages from which MW supplied water to YVW at the commencement date and of the typical chemical characteristics of water supplied from each source of supply.

(b) MW must give YVW 14 days' notice of its intention to make any major change to the storages from which YVW is supplied as a result of seasonal changes.

12. PERFORMANCE STANDARDS FOR SECURITY FROM DROUGHT

(a) MW must aim to operate its water supply system to ensure that:

(i) the probability of water restrictions being imposed in the area of YVW's Licence is never greater than 5%; and

(ii) water restrictions are never imposed for more than 12 continuous months; and

(iii) water restrictions never exceed Level 3 restrictions, as defined in the Drought Response Plan referred to in sub-clause 14.6(c).

(b) In making calculations necessary to comply with paragraph (a), MW must:

(i) use the demands, restrictable demands and restriction rules established under the Drought Response Plan referred to in paragraph 14.6(c); and

(ii) establish minimum operating levels to maintain the pressure and flow and water quality requirements set out in clauses 9 and 10; and

(iii) use forecasts provided by the Bureau of Meteorology and other relevant indicators of the need to impose restrictions.

(c) The parties must, at intervals of not more than five years commencing June 2001, appoint an independent auditor to review and report upon MW's practices and procedures for complying with paragraphs (a) and (b).

(d) The parties must agree on the terms of reference for and the person to undertake, an audit under paragraph (c).

(e) MW must co-operate in all respects with that audit and auditor.

(f) The parties must meet the costs of an audit in equal shares.

(g) MW must, within 30 days of receiving an auditor's report, determine whether to accept any or all of the findings and recommendations in the report and when and how it will act on those findings or implement those recommendations.

(h) MW must:

(i) as soon as practicable and within 30 days of receiving the auditor's report, report to YVW on each matter determined under sub-paragraph (g)(i); and

(ii) if it determines not to accept any finding or recommendation in the report, set out in the report referred to in sub-paragraph (i) that finding or recommendation and MW's reasons for not accepting it.

13. PERFORMANCE STANDARDS FOR YVW

13.1 YVW's Water Quality Monitoring Program

(a) YVW must undertake a water quality monitoring program to sample and analyse water supplied to its consumers.

(b) YVW must give MW a report in electronic form within 9 days after the end of every month, or whenever MW requests, setting out, for each Water Quality Zone:

(i) the results of sampling and analysis conducted by YVW; and

(ii) details of customer complaints about water supplied,

in the previous month.

13.2 **Operation of YVW System**

(a) YVW must maintain and operate its water supply system in a manner which does not diminish MW's ability to supply water which complies with sub-clauses 9.1 and 10.1.

(b) If MW fails to comply with sub-clause 9.1 or 10.1 as a result of YVW's failure to comply with paragraph (a), MW's failure to comply is not a breach of this agreement.

14. SYSTEM OPERATION PERFORMANCE STANDARDS

14.1 **Obligations in relation to adverse effects**

(a) Subject to paragraph (c):

(i) a party which operates its water supply system in a way which causes an adverse effect to the water supply system of the other party must, if the other party so requires, pay to that party any additional reasonable costs directly incurred by that party in discharging its obligations under this agreement, or any law and, in the case of YVW, the Licence and any contract with a customer, as a result of the adverse effect; and

(ii) any failure by MW to comply with sub-clause 9.1 or 10.1 which is directly attributable to an adverse effect caused by YVW is not a breach of this agreement.

(b) Sub-clause (a) does not apply if a party (through its Principal Representative) gives consent to an adverse effect caused by the other party:

(i) in writing; and

(ii) before the adverse effect is caused; or

(iii) after the adverse effect is caused, if the other party advises the first party of the event which caused the adverse effect and of its anticipated consequences.

(c) For the purpose of this sub-clause, "**adverse effect**" means;

(i) damage to any part of a water supply system; or

(ii) any act or omission which interferes with the normal operating conditions of any part of a water supply system; or

(iii) in the case of MW, any act or omission by YVW which directly causes MW to fail to comply with sub-clause 9.1 or 10.1.

(d) A party may only require the other party to pay such additional reasonable costs under paragraph (a) as have, on the balance of probabilities, been caused by the other party.

(e) The amount of additional reasonable costs referred to in paragraph (d) must be agreed between the parties or, if the parties cannot agree, determined under clause 30.

14.2 **Emergency Response and Co-ordinated Crisis Management Plans**

(a) Within 4 months after the date on which this agreement commences, each party must develop and adopt an Emergency Response Plan which includes:

(i) a statement of the party's policy and intent; and

(ii) incident management plans; and

(iii) generic contingency plans; and

(iv) contingency plans for particular sites; and

(v) standard operating and notification procedures; and

(vi) provision for the parties to jointly review each emergency after it has occurred and to identify and agree upon works or measures to prevent, or minimise the likelihood of, such an emergency recurring.

(b) Within 4 months after the date on which this agreement commences, the parties must jointly develop and adopt a protocol under sub-clause 8.2, to which any other Licensee may be a party, setting out a Co-ordinated Crisis Management Plan to be followed by the parties when any event dealt with by the Plan occurs.

(c) The parties and any other Licensee referred to in paragraph (b) must review, and if, necessary, agree to revise the Co-ordinated Crisis Management Plan referred to in paragraph (b) before 30 September in every year.

(d) Each party must implement the party's Emergency Response Plan and the Co-ordinated Crisis Management Plan, as revised from time to time, for the duration of this agreement.

14.3 **Emergency Response Plan Incidents**

(a) Whenever:

(i) an incident is declared under an Emergency Response Plan of a party; or

(ii) that party believes that an event,

with respect to the water supply system of the party may:

(iii) affect the security of that system; or

(iv) prevent the party from performing any obligation under this agreement,

the party must:

(v) notify the other party promptly; and

(vi) explain to the other party the nature of the event and the effect it has had or is likely to have; and

(vii) if the other party so requests, after each incident provide the other party with an interim verbal report on:

(A) the reason for the incident occurring; and

(B) what action the party needs to take to deal with the incident; and

(C) the party's estimate of how long it will take the party to deal with the incident; and

(D) options proposed by the party for any additional works or measures which the party needs to undertake to prevent any similar incident occurring; and

(viii) as soon as practicable, but within 21 days after each incident, provide the other party with a written report on each of the matters referred to in sub-paragraph (vii); and

(ix) immediately deploy a team of people experienced in the operation of the system and capable of dealing with the incident, until any problem is rectified; and

(x) establish and maintain a 24 hour-a-day contact point for liaison between the parties, until any problem is rectified.

(b) If an incident referred to in paragraph (a) is declared with respect to MW's water supply system, MW must:

(i) continue to supply Water Supply Services under this agreement, to the extent that MW's water supply system is capable of doing so; and

(ii) use all reasonable endeavours to reinstate its water supply system and resume fully supplying Water Supply Services, as soon as possible; and

(iii) consult with YVW to determine whether MW can provide Water Supply Services under this agreement by alternative means, without affecting MW's ability to provide such services to another Licensee; and

(iv) provide Water Supply Services by such alternate means as are agreed by the parties under sub-paragraph (iii); and

(v) if MW cannot supply Water Supply Services by alternate means, liaise with YVW to assist it to obtain supplies from the best available alternative source.

(c) If an incident referred to in paragraph (a) occurs which may:

(i) cause harm to the environment; or

(ii) cause a risk to the health or safety of any person; or

(iii) interrupt or diminish the provision of Water Supply Services to any customer of YVW,

a party may undertake emergency work or measures in relation to the water supply assets of the other party, but it must advise the other party that it has done so as soon as possible (and no later than 3 hours) after commencing the work or measure.

(d) A party which undertakes a work or measure under paragraph (c) with reasonable care and diligence may recover its reasonable costs of so doing from the other party.

14.4 **Use of YVW assets in an emergency**

(a) If, in the course of MW providing water supply services to another Licensee solely for the purpose of supplying water within the area of that Licence, an emergency occurs in MW's water supply system which affects that Licensee, YVW must allow MW access to YVW's water supply system for the purpose of providing emergency alternative water supply services to that Licensee, whenever allowing MW access would not interfere with YVW's ability to supply its own customers.

(b) MW must pay YVW a fee for access to its works under paragraph (a) for every day or part of a day upon which MW has had access to YVW's works, during an emergency.

(c) The fee referred to in paragraph (b) must be agreed between the parties or, if the parties cannot agree, determined under clause 30.

14.5 **Planned disruptions to supply**

(a) A party may require a temporary alteration or interruption to the Water Supply Services to a Water Supply Superzone where the alteration or interruption is required:

(i) to construct, repair, maintain or commission any part of that party's water supply system; and

(ii) in the case of MW, to carry out flow tests; and

(iii) in the case of YVW to provide a temporary additional demand referred to in sub-clause 9.5.

(b) Unless the parties agree otherwise, a party must give the other party at least 7 days' written notice of its intention to require a temporary alteration or interruption under paragraph (a).

(c) On receiving notice from MW under sub-clause (b), YVW may ask MW to postpone any temporary alteration or interruption if a particular customer of YVW may be adversely affected by the proposed temporary alteration or interruption.

(d) MW must endeavour to comply with any request made under paragraph (c).

(e) Where MW requires a temporary alteration or interruption under paragraph (a) which is likely to:

(i) affect the quantity or quality of water supplied to YVW's customers, YVW will advise and manage relations with those customers, unless the parties agree otherwise;

(ii) cause other public inconvenience, MW will advise and manage relations with the public,

with respect to the temporary alteration or interruption.

14.6 **Drought**

(a) If MW is unable to meet any of its obligations under this agreement because of drought, MW must:

(i) give YVW notice under paragraph 28.2(a); and

(ii) act in accordance with clause 28.

(b) For the purpose of sub-clause (a), "**drought**" means either:

(i) a period during which there is insufficient water in MW's storages to meet the anticipated unrestricted demand of all Licensees, because of either:

(A) extreme meteorological conditions; or

(B) unexpected reduction to inflows to those storages.

(c) The parties must:

(i) together with other Licensees, review and, if necessary, amend the Drought Response Plan prepared under sub-clause 13.3 of the former agreement, at intervals no greater than 3 years; and

(ii) implement the Drought Response Plan, as amended from time to time, for the duration of this agreement.

14.7 **Maximum Peak Demands**

If MW fails to comply with sub-clause 9.1 or 10.1 on any day upon which the total requirements of all Licensees for water supplied by MW exceeds 3100 ML:

(a) that failure to comply is not a breach of this agreement; and

(b) MW must comply with paragraph 14.3(b).

15. YVW'S CUSTOMERS

15.1 General Provisions

(a) MW must refer to YVW any enquiry from a YVW customer about water supplied by YVW.

(b) MW must take all reasonable action to ensure that any planned or emergency work or measures undertaken by MW cause minimum disruption to services supplied to YVW's customers.

15.2 Customers directly connected to MW assets

(a) Where the premises of an YVW customer are directly connected to MW's water supply system:

(i) Schedule 4 applies; and

(ii) MW must take all reasonable action to provide water supplies to the customer to the standards required by the provisions of Schedule 4 relevant to the type of water available to the customer from MW's water supply system; and

(iii) except in an emergency, MW must give YVW 7 days' written notice whenever it proposes to undertake work which may disrupt water supplies to the customer.

(b) A party must not allow:

(i) any connection referred to in paragraph (a) to be altered; or

(ii) any YVW customer to make a direct connection to MW's water supply system,

without first obtaining the written consent of the other party.

(c) YVW must not give its consent under paragraph (b) unless the customer and YVW have entered into a contract containing terms of comparable effect to the terms set out in Part B of Schedule 4 relevant to the type of water available to the customer from MW's water supply system.

(d) YVW must use its best endeavours to enter into an agreement with every customer of YVW whose premises are directly connected to MW's water supply system at the date on which this agreement commences, containing terms of comparable effect to the terms set out in Part B of Schedule 4 relevant to the type of water available to the customer from MW's water supply system.

(e) YVW must not enter into an agreement with a customer referred to in paragraph (d) on terms which omit terms of comparable effect to the terms set out in Part B of Schedule 4, without the prior written consent of MW.

(f) YVW must use its best endeavours to advise each customer referred to in paragraph (d) at least once in every year and whenever it discovers that the ownership or occupation of the relevant premises has changed:

(i) whether the water supplied is fit for human consumption; and

(ii) that the water supply may:

(A) be interrupted, from time to time; or

(B) cease, after MW has given YVW 12 months' notice of its intention to terminate the supply, if such notice is consistent with YVW's agreement with the customer; and

(iii) that if MW gives YVW notice in accordance with sub-paragraph (f)(ii)(B), MW is not required to provide a customer referred to in the notice with a supply of water, after the period of notice expires.

(g) YVW may decide to include in any information statement issued under section 75 of the *Water Industry Act* 1994 in respect of premises referred to in paragraph (a), a statement to the effect that:

(i) the premises are directly connected to MW's water supply system; and

(ii) YVW has entered into a contract under section 21 of the *Water Industry Act* 1994 with the owner or occupier of the premises.

(h) YVW must install, maintain, operate and read a meter for determining the flow of water supplied to each customer referred to in paragraph (a).

(i) YVW must, at intervals no greater than 3 months, give MW a report setting out:

(i) the number of premises referred to in paragraph (a); and

(ii) the total volume of water, calculated by reference to the meters referred to in paragraph (g), supplied to premises upstream of a MW Billing Meter since the last report.

(j) YVW must each year, by a date specified by MW, give MW a report setting out:

(i) the location of each premises referred to in paragraph (a); and

(ii) the total volume of water supplied to those premises in the preceding 12 months.

PLANNING IMPROVEMENTS AND FUTURE SERVICES

16. PRINCIPLE OF CO-OPERATIVE PLANNING

16.1 The parties must co-operate with each other as set out in clause 18 and 19 to undertake studies and analyses and to exchange data and information relevant to determining what Water Supply Services will be required by YVW in future years.

16.2 The parties may adopt a protocol under sub-clause 8.2 to which any other Licensee may be a party, for mutual co-operation between each party to the protocol for the purposes referred to in sub-clause 16.1.

16.3 Without detracting from sub-clause 7.3, each party must give prompt written notice to the other whenever it:

(a) wishes to initiate any change; or

(b) becomes aware of any change or pending change,

to its rights or obligations under any law, which is or may be relevant to the rights or obligations of either party under this agreement.

16.4 (a) Subject to paragraph (b), each party agrees, on the written request of the other party, to join in requesting the Minister, Department or authority named in the written request not to make, or to review, make, suspend, alter or revoke, any pending change or change referred to in sub-clause 16.3.

(b) Paragraph (a) does not apply if a party reasonably considers that it would not be in the best interests of that party to act on the written request of the other party.

17. IMPROVEMENTS TO AND WORK UPON MW'S WATER SUPPLY SYSTEM

17.1 **Improvements to Pressure and Flow**

(a) By 30 September in each year, YVW must give MW its estimate of the maximum peak day demand at each Pressure Monitoring Point and Flow Allocation Point for:

(i) the current year; and

(ii) the fifth, tenth and twentieth year after the current year; and

(iii) any other year during which YVW estimates that there will be a significant fluctuation in the demand for water within the area of its Licence.

(b) MW must provide YVW with access to all historical data accumulated or held by MW relevant to making estimates required by paragraph (a).

(c) MW must, in relation to each year for which an estimate is provided under paragraph (a), determine the hydraulic demand which will be placed on MW's water supply system by the maximum peak day demand.

(d) If a determination under paragraph (c) indicates that, in any year, the hydraulic load will be greater than the hydraulic capacity, MW must take timely action to ensure that the system capacity will be greater than the hydraulic load in that year.

17.2 **Work concerning Water Quality**

Whenever water quality fails to comply with sub-clause 10.1:

(a) the parties must promptly jointly prepare a program of actions, works or measures to ensure that the relevant indicators of water quality comply with the requirements of Schedule 3; and

(b) MW must promptly implement the program referred to in paragraph (a).

17.3 **Work concerning Billing Meters**

MW must install and commission each Billing Meter in accordance with the manufacturer's specifications.

18. PLANNING AND MAKING CAPITAL INVESTMENTS

18.1 (a) Whenever a party is required under this agreement:

(i) to improve a performance standard referred to in either sub-clause 9.1, or paragraph 12(a); or

(ii) to augment the hydraulic capacity of water supply works for such a purpose,

the parties must, together with any other Licensee which will benefit from the proposed improvement or augmentation, establish a working group to agree on the terms of reference for, and to undertake, an initial study to:

(iii) identify, assess and estimate the cost of feasible options to make the relevant improvement or augmentation; and

(iv) identify and recommend:

(A) the least-cost community solution for any relevant works or measures; and

(B) when such works and measures must be undertaken; and

(v) estimate the capital and operating costs of such works and measures; and

(vi) determine how such costs must be met; and

(vii) determine the location of any interface point which may be required as a result of the works or measures.

(b) If the parties and any other Licensee represented on the working group do not all accept the recommendations of the working group, they must:

(i) jointly select and commission a consultant to consider and make recommendations upon such of the matters referred to in paragraph (a) as they determine; and

(ii) meet the cost of the study in equal shares.

(c) The parties and any other Licensee represented on the working group must either:

(i) adopt and implement the least-cost community solution recommended by the consultant; or

(ii) promptly adopt and implement some other least-cost community solution agreed between them; or

(iii) implement the solution determined in accordance with clause 30.

(d) Subject to paragraphs (e) and (f):

(i) MW must undertake, at its cost, any relevant works or measures upstream of an Interface Point; and

(ii) YVW must undertake, at its cost, any relevant works or measures downstream of an Interface Point.

(e) Where the recommended least-cost community solution requires the creation of a new interface point, it must be located either:

(i) no further downstream than will allow MW effectively and efficiently to discharge all of its obligations under this agreement and any comparable agreement with another Licensee; or

(ii) no further downstream than will prevent any Licensee from:

(A) adversely affecting MW's ability simultaneously to provide water supply services to another Licensee; or

(B) adversely affecting MW's ability to operate its water supply system; or

(C) exercising unreasonable control over any part of the new works to the detriment of another Licensee; or

(iii) in the case of a new water treatment plant located on a new pipeline constructed by MW for the purpose of providing water supply services, no further upstream than is required for MW to comply with Schedule 3.; or

(iv) no further downstream of an existing Interface Point than any new works undertaken by MW, if the new works either:

(A) are exclusively required by MW to discharge all of its obligations under this agreement and any comparable agreement with another Licensee; or

(B) require the particular expertise of MW in its capacity as a provider of Water Supply Services, to operate or maintain them (for example, a dam, major service reservoir, large water main, major water treatment plant or primary disinfection plant); or

(C) are similar to, and more conveniently maintained and operated in conjunction with, immediately contiguous water supply assets of MW.

(f) Where the recommended least-cost community solution requires the construction by MW of a new water treatment plant on or adjacent to an existing pipeline belonging to YVW:

(i) the interface point must be located at the outlet from the water treatment plant; and

(ii) a new Water Quality Monitoring Point must be located by MW no further upstream than is required for MW to comply with Schedule 3.

(g) An interface point determined under paragraph (e) or (f):

(i) is an Interface Point for the purpose of paragraph (d); and

(ii) must be entered as an Interface Point in the Water Supply Asset Interface Register held by the Office of the Regulator-General by 30th September in each year.

(h) A Water Quality Monitoring Point determined under sub-paragraph (f)(ii) is a Water Quality Monitoring Point for the purpose of clause 10 and Schedule 2 is deemed to be amended accordingly.

(i) A party which undertakes work pursuant to paragraph (d) becomes the owner of the resulting asset and must maintain and operate that asset, at its cost, for the purposes of this agreement.

(j) Any matter concerning the respective obligations of the parties, with respect to the undertaking, ownership, maintenance or operation of works or measures under this clause which is not provided for by this clause, must be determined under clause 30.

(k) Before MW undertakes any works or measures which may:

(i) have an effect on a performance standard referred to in paragraph (a); or

(ii) increase the capacity of MW's water supply system, but which are not works or measures referred to in paragraph (a),

MW must seek and obtain confirmation from YVW that the proposed works or measures will meet YVW's needs.

18.2 **Other MW Works or Measures**

(a) Unless the parties expressly agree to the contrary, sub-clause 18.1 does not apply to works or measures proposed by MW which:

(i) are not referred to in sub-paragraphs 18.1(a)(i) or (ii); or

(ii) are undertaken pursuant to MW's general program for maintaining, repairing, renewing or improving the efficiency and effectiveness of its water supply system; or

(iii) are undertaken for the purpose of complying with its statutory obligations.

(b) Before executing any works or measures referred to in paragraph (a), which may have a direct or indirect effect on YVW, MW must consult with YVW and invite and take into consideration any comments made by YVW, about:

(i) the reasons for undertaking the works or measures; and

(ii) the proposed effects of the works or measures; and

(iii) feasible options, other than the proposed works or measures, for achieving those proposed effects; and

(iv) the methods of estimating and the estimate of the cost of the works or measures.

19. SCHEDULING AND CO-OPERATIVE PLANNING FOR NEW WORKS AND RENEWALS

19.1 **Obligation to adopt a Three Year Capital Works Program**

Within 2 months after the date on which this agreement commences, and thereafter by 15 May in every year, the parties must adopt a Three Year Capital Works Program for the ensuing three years, commencing on 1 July in that year.

19.2 **Contents of a Three Year Capital Works Program**

A Three Year Capital Works Program must:

(a) identify each project or significant capital works to be undertaken by MW or YVW for the purposes of this agreement; and

(b) identify which party must undertake the relevant project or works; and

(c) set out the anticipated benefits from each project or works, including any benefits concerning:

(i) the capacity of the system; and

(ii) the ability of the parties to meet their respective legal obligations; and

(iii) the achievements of relevant performance standards; and

(d) set out details of any particular works and anticipated benefits (including works referred to in paragraph 18.1(a)) which have been agreed upon by the parties including:

(i) when such works must be undertaken; and

(ii) the estimated cost of those works; and

(e) for other projects or works referred to in paragraph (a), set out:

(i) the indicative dates upon which it is proposed to commence and complete the project or works; and

(ii) indicative costs of the project or works.

19.3 **Duties of parties to comply**

(a) Subject to paragraph (b) and sub-clause 19.4, each party must comply with every aspect of the details referred to in sub-clause 19.2 excluding sub-paragraph 19.2(d)(ii).

(b) A party which is required to undertake works referred to in paragraph 19.2(d):

(i) must meet the actual cost of the works, whether they are less than, or greater than, the estimated costs; and

(ii) may retain the benefit of any saving, if the actual costs of the works is less than the estimated cost.

19.4 **Power to vary Three Year Capital Works Program**

The parties may (through their Principal Representatives) agree in writing to vary any aspect of, or postpone any obligation under, a Three Year Capital Works Program.

19.5 **Reporting obligations**

Each party must give a written report to the other party by 31 January and 31 July in every year unless the parties agree otherwise (and at such other times which the other party reasonably requests) on:

(a) its progress in implementing its obligations under the Three Year Capital Works Program since its last report; and

(b) the degree to which a project or works undertaken by the party under the Three Year Capital Works Program has provided the anticipated benefits referred to in paragraph 19.2(c) since its last report.

19.6 **Protocol for co-operation and responsibility in executing works**

The parties may adopt a protocol under sub-clause 8.2 concerning their respective obligations in planning, deciding upon, implementing and managing risks associated with projects, works or measures to be undertaken by either or both of them for the purposes of this agreement.

20. TECHNICAL AUDIT OF MW'S ASSET MANAGEMENT PRACTICES

(a) The parties must, as required by this clause, agree upon:

(i) terms of reference for an independent audit of works undertaken by MW for the purposes of this agreement (including MW's design standards, risk profiles, inspection programs and models for, and methods of, making decisions); and

(ii) an independent auditor to undertake that audit.

(b) If the parties are unable to agree on any matter to be agreed from time to time under paragraph (a), the matter must be determined in accordance with clause 30.

(c) An audit referred to in paragraph (a) must be undertaken:

(i) within 12 months of the date of this agreement; and

(ii) thereafter, before the expiration of each period of three years.

(d) MW must:

(i) at its cost, engage the independent auditor to undertake the audit agreed under paragraph (a); and

(ii) co-operate in all respects with that audit and auditor; and

(iii) on receiving the auditor's report:

(A) promptly give YVW a copy of all outcomes of the audit; and

(B) within 60 days, determine whether to accept any or all of the findings and recommendations in the report and when and how it will act on those findings or implement those recommendations; and

(C) as soon as practicable, and within 60 days of receiving the auditor's report, report to YVW on each matter determined under sub-paragraph (B); and

(D) if it determines not to accept any finding or recommendation in the report, set out in the report referred to in sub-paragraph (C) that finding or recommendation and MW's reasons for not accepting it.

CHARGES FOR WATER SUPPLY SERVICES

21. YVW'S OBLIGATION TO PAY

Charges and interest payable by YVW to MW under clause 6 must be determined, calculated, invoiced and paid in accordance with clauses 22 to 25.

22. CHARGES

The charges are as set out in Schedule 5.

23. INVOICING AND PAYMENT OF CHARGES

23.1 When invoicing will occur

(a) MW must invoice YVW:

(i) in advance for the fixed availability charge, on the first of each month, or if that is not a Business Day on the next Business Day; and

(ii) in arrears for the usage charge, each Wednesday, or if that is not a Business Day, on the next Business Day.

(b) For the purpose of this clause, "**Business Day**" means a day (other than a Saturday, Sunday or Public Holiday) on which banks are open for general banking business in Melbourne.

23.2 What an invoice must contain

Each invoice for the usage charge must set out:

(a) the measured volume of water delivered to YVW at each Billing Meter since the last invoice; and

(b) details of any malfunctioning or out-of-service Billing Meter; and

(c) the period for which any such Billing Meter malfunctioned or was out of service; and

(d) any volume of water estimated, rather than measured, by MW and the method of making that estimate; and

(e) any volume of water used by MW to clean, flush or scour any part of its water supply system; and

(f) any adjustment required as a result of any inaccuracy in a previous invoice; and

(g) any adjustment made under clause 25; and

(h) the amount payable by YVW.

23.3 **When an invoice must be paid**

(a) YVW must pay any invoice given in accordance with sub-clauses 23.1 and 23.2:

(i) for the availability charge, by electronic transfer on or before the 15th day of the month (or, if that day is not a Business Day then the next Business Day) in which the invoice is given; and

(ii) for the usage charge, by electronic transfer on or before the Wednesday after the invoice is given.

(b) An electronic transfer under paragraph (a) must be made to such bank account as MW may, from time to time, advise YVW in writing.

23.4 **Interest payable**

(a) YVW must pay interest at the interest rate on any amount not paid in accordance with sub-clause 23.3, calculated from the date upon which the amount is due until the amount is paid in full.

(b) For the purposes of paragraph (a), the interest rate is the Bank Bill Reference Swap Rate on the date upon which the amount is due.

(c) MW must invoice YVW separately for any interest payable under this sub-clause. YVW must pay any such invoice within seven days of the date of the invoice.

23.5 **Disputes about amounts payable**

(a) YVW may give MW written notice if it disputes any invoice given under this clause.

(b) If YVW so requests, MW must promptly give YVW further information about the volume of water referred to in the invoice and how any estimate of volume was made.

(c) Notwithstanding any dispute, YVW must, on the relevant date referred to in paragraph 23.3(a), pay:

(i) the availability charge; and

(ii) the greater of:

(A) the amount of the usage charge not in dispute; and

(B) the average usage charge for the preceding three weeks.

(d) Any dispute under this sub-clause must be determined in accordance with clause 30.

(e) A party required to make a payment by a determination made under paragraph (d) must do so within seven days of the date of the determination.

23.6 **Deductions or set-offs not allowed**

A party must not set-off or deduct moneys payable to the other party under this agreement:

(a) against or from any other moneys payable by the other party; or

(b) to make good any breach of this agreement by the other party; or

(c) if there is a dispute about whether an unmetered boundary valve between YVW and another Licensee has been operated correctly; or

(d) for any reason not referred to in paragraph (b) or (c),

without first obtaining the written consent of the other party.

24. C ALCULATING USAGE CHARGES

24.1 The usage charge referred to in Schedule 5 must be calculated by reference to volumes determined in accordance with this clause.

24.2 MW must:

(a) install, maintain, operate and read Billing Meters at:

(i) the locations referred to in a Table in Schedule 6; and

(ii) such other locations as are agreed between the parties,

for determining the flow of water delivered to YVW by MW; and

(b) provide YVW with instantaneous access to data relevant to YVW, recorded by any Billing Meter linked to MW's SCADA system.

24.3 MW must apply the formulae in Schedule 6 to determine the volume of flow referable to YVW.

24.4 The parties, together with other Licensees:

(a) may, at any time, agree to review and, if appropriate, to revise a formula in Schedule 6; and

(b) must review and, if necessary, revise the formulae whenever MW installs a new meter pursuant to sub-clause 17.3.

24.5 (a) MW must use its best endeavours to ensure that the rate of leakage of water from its water supply system does not increase during the term of this agreement.

(b) MW must demonstrate to the satisfaction of YVW that it continues to comply with paragraph (a) by:

(i) undertaking in each year a review of leakage in MW's water supply system; and

(ii) giving YVW a copy of the report of each review by 31 December in the relevant year; and

(iii) undertaking such action as may, from time to time, be necessary to comply with paragraph (a).

24.6 Within 6 months after the date on which this agreement commences, the parties must agree on, adopt and implement a protocol under sub-clause 8.2 for:

(a) installing, maintaining, operating and reading any Billing Meter; and

(b) regularly testing for and correcting any electronic malfunction of a Billing Meter, at MW's expense; and

(c) testing the volumetric accuracy of each Billing Meter; and

(d) providing YVW with access to all data resulting from that testing program; and

(e) re-calibrating, repairing or replacing any Billing Meter found to be registering incorrectly.

24.7 (a) MW must arrange for a test referred to in paragraph 24.6(c) upon the written request and at the expense of, YVW.

(b) If a test under paragraph (a) reveals that the device was inaccurate by more than 1%, MW must reimburse YVW the cost of testing the device.

24.8 If:

(a) a Billing Meter is, for any part of a billing period out of service; or:

(b) the data obtained from the Billing Meter is inaccurate, corrupt or cannot be corrected,

MW must calculate the volume of water delivered to YVW for the relevant period by one of the following methods agreed to by the parties on each occasion:

(c) by comparison with the volume of water supplied under similar conditions during some other period;

(d) by comparison with the quantity of water supplied after the Billing Meter has been restored to proper order;

(e) by comparison with other meters installed at Pressure and Flow Allocation Points which are not Billing Meters;

(f) by making a calculation based on available pumping station data;

(g) some other method agreed between the parties.

24.9 If a Billing Meter is found to be registering incorrectly by an error greater than 1%, MW must:

(a) re-calibrate the device; and

(b) adjust the invoice in accordance with sub-clause 25.

25. ADJUSTMENTS TO CHARGES

25.1 Adjustment for Leakage or Incorrect Registration

(a) Adjustments to billing volumes will be calculated when one party notifies the other party in writing of a suspected leakage or incorrect billing meter registration.

(b) If a third party is also affected by the adjustment then Melbourne Water must immediately notify that other party.

(c) Adjustments will be calculated back to a date, agreed between all parties affected, on which the leak or billing meter error started. This applies in cases where it is possible to determine such a date (such as events caused by recorded operational activities or distinct flow changes evident in SCADA).

(d) Adjustments made in accordance with paragraph (c) will not be back-dated further than 1 July of the financial year that notification was given.

(e) If it is not possible to determine an agreed starting date for the leakage or billing meter error (such as pipeline leaks that do not produce a significant change to recorded SCADA flows or a gradual shift to billing meter accuracy), then the billing adjustment shall be made back to the date of written notification.

(f) Adjustments made in accordance with Clause 25.1 must be resolved between the affected parties:

(i) within four weeks of the date of written notification, and

(ii) by the 30 June of the financial year in which the written notification was given.

(g) In the event that agreement can not be reached on an adjustment to the billing then the dispute must be determined in accordance with Clause 30.

25.2 Adjustment for Failure to Chlorinate

(a) Subject to paragraph (b), MW must adjust any invoice given under clause 23 by deducting an amount of $500 for every megalitre of water supplied to YVW through a primary disinfection plant during any event when no chlorine is added to the water, since the previous invoice.

(b) MW is not obliged to deduct more than $50,000 with respect to any one event referred to in paragraph (a).

25.3 **Adjustment for Wastage**

MW must adjust any invoice given under clause 23 by deducting the volume of water wasted by YVW in the circumstances described in paragraph 25.2(a).

ADMINISTRATIVE PROVISIONS

26. APPOINTMENT AND AUTHORITY OF PRINCIPAL REPRESENTATIVES

26.1 Each party must appoint and must, for the duration of this agreement, keep appointed, a Principal Representative for the purpose of this agreement.

26.2 The person named in the address of a party set out in clause 34 is deemed to be the Principal Representative of that party.

26.3 Each party must, from time to time, give the other party notice of any change to the name, postal address, e-mail address, telephone number, facsimile number and after-hours contact details of its Principal Representative.

26.4 Each party must confer upon its Principal Representative, and hereby warrants to the other party that it has so conferred, all necessary power to give or receive any notice, to give any approval, undertaking or assurance, to enter any agreement, to adopt any protocol or to do any other thing which a party may do under this agreement, on behalf of the party appointing that Principal Representative.

26.5 Each party must ensure that the Principal Representatives of the parties:

(a) meet regularly to discuss and to resolve any issues arising in the performance of this agreement; and

(b) liaise with each other for the duration of this agreement to ensure that it is implemented effectively.

27. APPOINTMENT OF OPERATING REPRESENTATIVES

27.1 Each party (through its Principal Representative) must appoint, and must for the duration of this agreement keep appointed, one or more Operating Representatives for the purpose of this agreement.

27.2 Each party must, from time to time, give the other party notice of:

(a) the name, postal address, e-mail address, facsimile and telephone number of each Operating Representative appointed from time to time; and

(b) the particular obligations of the appointing party under this agreement for which that Operating Representative is responsible.

27.3 Each party must confer on each Operating Representative and warrants to the other party that it will so confer, all necessary power to be responsible for the day-to-day administration of those obligations of the appointing party notified under paragraph 27.2(b) in relation to that Operating Representative.

27.4 Each party must ensure that the Operating Representatives of the parties for particular obligations of that party,

(a) meet regularly to discuss and resolve any issues arising under the agreement in relation to those obligations; and

(b) liaise with each other for the duration of this agreement to ensure that the agreement is implemented effectively with respect to those obligations.

28. OVERRIDING EVENTS

28.1 If either party is unable, because of an overriding event, to perform any obligation, either in whole or in part, under this agreement (other than an obligation to pay money) the obligation is suspended, as far as it is affected by the overriding event and while that event continues.

28.2 The party affected will:

(a) give the other party prompt written notice of the overriding event (and, in any case, within 7 days of learning of it) with reasonably full particulars and, as far as it knows, the probable ways in which it will be unable to perform or be delayed in performing any obligations; and

(b) use all possible diligence to remove and mitigate either or both of the overriding event and its effect, as quickly as possible (including expending reasonable funds, deploying other resources and re-scheduling other commitments); and

(c) keep the other party informed at regular intervals, or promptly upon the request of the other party, of:

(i) any change in the party's estimate of the duration or effect of the overriding events; and

(ii) action taken or proposed by the party under paragraph (b); and

(iii) whether the overriding event has ceased and whether its effects have been successfully mitigated or minimised; and

(iv) any other matter in connection with the overriding event or its effects as the other party reasonably requires.

28.3 Paragraph 28.2(b) does not require a party to:

(a) settle any dispute on terms; or

(b) meet any claims or demands of any person or public authority,

contrary to the reasonable wishes of the party affected, or its reasonably perceived best interests.

28.4 In any dispute concerning the occurrence, duration or effect of an overriding event, the party affected has the onus of proving that it has complied with paragraph 28.2(b).

28.5 "Overriding event" means any event or circumstance or combination of them which is:

(a) beyond the reasonable control of the party affected; and

(b) could not have been prevented or remedied by the party affected taking reasonably prudent steps, including, but not limited to, the expenditure of reasonable sums of money.

28.6 For example, an overriding event might be:

(a) an act of God;

(b) war, declared or undeclared, blockade revolution, riot, insurrection, civil commotion, sabotage, explosion;

(c) a strike, lock out, or other labor dispute;

(d) lightning, fire, earthquake or epidemic;

(e) a drought, storm, flood or other natural disaster;

(f) restraint, expropriation, intervention, direction or embargo imposed by any Parliament or Government or Government agency;

(g) inability to obtain, or delay in obtaining any necessary approval or other authority from any Parliament or Government or Government agency;

(h) change of law.

29. CONFIDENTIALITY

29.1 Except as provided in sub-clauses 29.2 and 29.6, a party must:

(a) not disclose any confidential information of the other party, without the prior written approval of the other party; and

(b) not require, assist or permit any person to have access to, or use, disclose or reproduce any confidential information of the other party; and

(c) take reasonable steps to enforce obligations imposed under this clause.

29.2 Despite sub-clause 29.1, a party may disclose confidential information of the other party:

(a) to any employee, contractor or consultant of the party who reasonably needs to know the confidential information for that party to exercise its rights or perform its obligations under this agreement; and

(b) if it is:

(i) required by any Act; or

(ii) compelled by law or a court order,

to disclose it; or

(iii) demanded by the Relevant Minister.

(c) In this sub-clause "**Relevant Minister**" means a Minister responsible for administering an Act which confers functions or powers or imposes duties upon a party that are necessary for that party to enter into and perform this agreement.

29.3 A party may only disclose confidential information under paragraph (a) if it imposes upon the person to whom the confidential information is disclosed, an obligation:

(a) only to use the confidential information; and

(b) not to disclose that confidential information to any other person, except,

for the sole purpose for which the confidential information is disclosed.

29.4 If a party is required or compelled to disclose confidential information of the other party under paragraph 29.2(b), it must:

(a) immediately give written notice of that fact to the other party; and

(b) use its best efforts only to disclose that confidential information of the other party on terms which preserve the strictest confidentiality.

29.5 The parties agree and acknowledge that:

(a) a party may bring proceedings to restrain any breach of threatened breach by the other party of this clause; and

(b) the unauthorised use, disclosure or divulgence of, or dealing with, the confidential information of a party by the other party will cause irreparable harm to that party, for which damages will not be an adequate remedy.

29.6 The parties do not intend this clause to prevent MW disclosing to a Licensee other than YVW information about MW's operation and management of, and plans for improving, MW's water supply system, for the purposes of any bulk water supply agreement between MW and that Licensee.

29.7 This clause survives the termination of this agreement.

29.8 For the purposes of this clause, "confidential information" means:

(a) any knowledge, information or know-how relating to a party's business, systems, customers, property, assets or affairs which:

(i) has been or is disclosed, communicated or delivered to the other party under or in connection with this or the former agreement; and

(ii) has come or comes to the knowledge, or into the possession, of the other party under or in connection with this or the former agreement; and

(b) in the case of YVW, any knowledge, information or know-how relating to YVW's business, systems, customers, property, assets or affairs, concerning YVW's activities under its Licence, which were known to MW before 1 January 1995 because of its activities as a supplier of water and sewerage services in the area of YVW's Licence,

but does not include the provisions of this agreement other than Schedule 5.

30. DISPUTE RESOLUTION

30.1 When a dispute arises

(a) If any difference or dispute arises between the parties under or in relation to this agreement or its subject matter, they agree to seek, in good faith, to resolve the matter by negotiations between the Principal Representatives.

(b) A difference or dispute arises at the time when one party notifies the other party in writing that there is a difference or dispute about a matter specified in the notice.

(c) If the Principal Representatives do not resolve the dispute within 7 days of it arising, either party may give written notice to the other party, requiring the matter to be:

(i) resolved by the panel under sub-clause 30.2; or

(ii) referred to mediation under sub-clause 30.3; or

(iii) referred to an expert referee under sub-clause 30.4.

(d) A party may only commence legal proceedings in respect of a difference or dispute referred to in paragraph (a) after an expert referee referred to in sub-clause 30.4 has had a reasonable opportunity to decide or to make a determination in respect of the difference or dispute.

(e) If a difference or dispute is referred for resolution under any or all of sub-clauses 30.2, 30.3 and 30.4, neither party may oppose an application for a stay of legal proceedings in respect of the dispute, pending the conclusion of proceedings or the making of a decision or determination, as the case requires, under any or all of those sub-clauses.

30.2 Reference to the panel

(a) The panel consists of:

(i) the Managing Director of MW; and

(ii) the Managing Director of YVW.

(b) The panel must meet to consider any difference or dispute within 7 days of it being referred to the panel.

(c) A decision of the panel may only be made by the unanimous agreement of the members of the panel.

(d) If the panel is unable to reach an agreement on a decision within 14 days of the meeting referred to in paragraph (b), the parties must either refer the matter to:

(i) mediation under sub-clause 30.3; or

(ii) an expert referee under sub-clause 30.4.

30.3 **Mediation**

(a) The mediator is a person:

(i) nominated jointly by the party; or

(ii) if the parties cannot agree,

(A) nominated by the chair of Lawyers Engaged in Alternative Dispute Resolution (or that person's nominee); or

(B) determined by some other process agreed between the parties at the time.

(b) Mediation must occur within 30 days of the appointment of a mediator.

(c) The parties must meet the mediator's costs in equal shares.

(d) Mediation must occur in accordance with the Law Institute of Victoria Code of Practice for Mediation, or an equivalent code agreed to by the parties.

(e) If the parties fail to resolve the difference or dispute within 14 days after mediation has concluded, the difference or dispute must be determined by an expert referee under sub-clause 30.4.

30.4 **Reference to expert referee**

(a) The expert referee is a person or persons:

(i) nominated jointly by the parties; or

(ii) if the parties cannot agree:

(A) nominated by the President of the Institution of Engineers Australia (Victorian Division) (or that person's nominee); or

(B) determined by some other process agreed between the parties at the time,

who must decide the matter within 30 days of the expert referee's appointment.

(b) If the expert referee is more than one person, any decision must either be unanimous or made by a majority.

(c) The expert referee is not an arbitrator.

(d) An expert referee must give written reasons for a determination, if either party so requests.

(e) Unless the expert referee otherwise determines, each party must:

(i) bear its own costs of proceedings before the expert referee; and

(ii) meet the costs of the expert referee in equal shares.

30.5 **Dispute deposit**

(a) Within 7 days of the appointment of an expert referee, each party must lodge with the expert referee a dispute deposit of $50,000 as security against costs and the expert referee's determination.

(b) Failure by a party to lodge a dispute deposit does not invalidate the appointment of an expert referee or prevent the referee from making a determination.

(c) An expert referee, as part of its determination, must make an award for some or all of the dispute deposit lodged by a party either to be applied to:

(i) the costs of the other party; or

(ii) to any amount awarded to the other party as part of the determination,

or to be returned to that party.

30.6 **Consequences of a dispute**

(a) Any decision of the panel or the expert referee is binding on the parties for all purposes, providing that the panel or expert referee has not made a manifest error of fact or law, or failed to observe natural justice.

(b) Subject to paragraph (a), this clause does not prejudice or affect any right of a party to take any other action under this agreement.

31. **REMEDIES**

(a) If a party breaches any provision of this agreement and that breach is not excused either by this agreement or by written notice from the other party, the party in breach must pay to the other party any costs or expenses directly incurred by the other party as a result of that breach, without prejudicing any other right which the other party has under this agreement.

(b) Costs or expenses referred to in paragraph (a), in the case of YVW, include:

(i) any amount which YVW is required to pay in relation to loss or damage suffered by a customer of YVW or a consumer of water supplied by YVW as direct result of MW's breach; and

(ii) the difference between:

(A) the revenue lost by YVW as a result of MW's breach; and

(B) all direct and indirect costs that YVW would have incurred in performing this agreement if the breach had not occurred,

but do not include:

(iii) any amount paid under sub-paragraph (i) which is attributable to indirect, rather than direct, loss or damage; and

(iv) any amount calculated under sub-paragraph (ii) which is less than $10,000; and

(v) any amount paid by YVW to a customer or a consumer of YVW with respect to a breach by MW, after MW has paid an amount to that customer or consumer with respect to the same breach.

(c) A party must do everything it reasonably can to mitigate any loss resulting from a breach referred to in paragraph (a).

(d) YVW must:

(i) take all proper and reasonable action to avoid, resist, compromise and defend any claim by a customer of YVW or a consumer of water supplied by YVW with respect to loss or damage referred to in sub-paragraph (b)(i); and

(ii) must not compromise or make any payment with respect to such a claim, without the prior written consent of MW.

(e) MW must do anything which YVW reasonably requests to assist YVW to avoid, resist, compromise and defend a claim referred to in sub-paragraph (b)(i), at YVW's cost.

32. AMENDMENTS

(a) This agreement may be amended in writing signed by both parties or the Principal Representatives of both parties.

(b) If a party wishes to negotiate a change or addition to this agreement, including any matter not expressly dealt with in this agreement, it may give the other party written notice of the facts, with full details of any changed circumstance and any proposed change or addition.

(c) Within 7 days of a party receiving a notice under paragraph (b) or such longer period as is agreed between the parties, the parties must enter into good faith negotiations, having regard to all factors relevant to the proposed change or addition.

(d) The parties must jointly review this agreement and agree on any appropriate amendments at intervals no greater than 3 years.

33. TERMINATION

This agreement will terminate if:

(a) the parties so agree in writing; or

(b) YVW ceases to hold a Licence; or

(c) MW ceases to have the statutory power to provide Water Supply Services.

34. NOTICES

34.1 A notice, consent or other communication under this agreement is only effective if it is in writing, signed and either left at the addressee's address or sent to the addressee by mail, fax or e-mail. If it is sent by mail, it is taken to have been received 3 working days after it is posted. If it is sent by fax, it is taken to have been received when the addressee actually receives it in full and in legible form. If it is sent by e-mail, it is taken to have been received when the sender receives an e-mail acknowledgment that the message has been received.

34.2 A party's address and fax number are those set out below, or as the party notifies the other party:

Melbourne Water

Postal address:
PO Box 512
Altona North
3025 Vic

Principal Representative: Tony Antoniou
General Manager – Operations and Maintenance

Fax No: 9235 2692

E-mail address: tony.antoniou@melbwater.com.au

Telephone: 9235 2659

Yarra Valley Water Limited

Lucknow Street
Mitcham Vic 3132

Postal Address: Private Bag 1, PO Mitcham, Vic 3132

Principal Representative: David Snadden
General Manager - Infrastructure Services

Fax No: 9872 1353

E-mail address: dsnadden@yvw.com.au

Telephone: 9872 2423

35. **GST**

35.1 For the purpose of this clause "**GST**" means any consumption tax imposed by a Commonwealth Act, whether at the point of sale or upon some other specified occurrence, by whatever name, which operates during the term of this agreement and includes a goods-and-services tax, a broad-based consumption or indirect tax and a value-added tax.

35.2 Each amount, of whatever description, specified as being payable by one party to the other party under this agreement is expressed net of GST.

35.3 If GST is payable in relation to the Water Supply Services:

(a) the amount payable is the amount determined in accordance with clauses 22, 24 and 25;

PLUS

(b) an amount which will put MW in the same position as if the Water Supply Services were "GST-free", within the meaning of *A New Tax System (Goods and Services Tax)* Act 1999.

35.4 Where payment under this agreement is calculated by reference to a liability incurred by a party, the amount of the liability, for the purpose of that payment is:

(a) the amount of that liability;

LESS

(b) the amount of any GST input tax credit which the payee is entitled to claim with respect to that liability;

PLUS

(c) an amount which will put the payee in the same position as if the payment were "GST-free", within the meaning of *A New Tax System (Goods and Services Tax)* Act 1999.

35.5 For the purpose of sub-clause 35.4, "liability" means a payment required under:

(a) sub-paragraph 14.1(a)(i); or

(b) paragraph 14.3(d); or

(c) clause 31; or

(d) item 3.8 of Schedule 4.

35.6 An amount referred to in paragraph 35.3(b) or 35.4(c) does not include any incidental administrative or overhead costs incurred by a party in the course of complying with the relevant Commonwealth Act.

35.7 The parties must, in good faith and before 30 June 2001, decide when a "tax invoice" with the meaning of *A New Tax System (Goods and Services Tax) Act* 1999 will be provided for a payment referred to in sub-clause 35.2 or 35.4 and amend this agreement accordingly.

35.8 The parties must, in good faith, review the operation of, and, if necessary, amend this clause before 30 June 2001.

36. GENERAL

36.1 Governing Law

This document is governed by the law in force in Victoria.

36.2 Liability for Expenses

Each party must pay its own expenses incurred in negotiating and executing this agreement.

36.3 Giving effect to this agreement

Each party must do anything (including execute any document) and must ensure that its employees and agents do anything (including execute any document) that the other party may reasonably require to give full effect to this agreement.

36.4 Waiver of rights

A right may only be waived in writing, signed by the party giving the waiver (through its Principal Representative) and:

(a) no other conduct of a party (including a failure to exercise, or delay in exercising, the right) operates as a waiver of the right or otherwise prevents the exercise of the right; and

(b) a waiver of a right on one or more occasion does not operate as a waiver of that right if it arises again; and

(c) the exercise of a right does not prevent any further exercise of that right or of any other right.

36.5 **Operation of agreement**

(a) Except as provided in sub-clause 8.2, this agreement contains the entire agreement between the parties about its subject matter. Any previous understanding, agreement, representation or warranty related to that subject matter is replaced by this agreement and has no further effect.

(b) Any right that a person may have under this agreement is in addition to, and does not replace or limit, any other right that the person may have.

36.6 **Consents**

Where this document contemplates that a party may agree, consider or consent to something (however it is described) the party may:

(a) agree, consider or consent, or not agree, consider or consent; and

(b) agree, consider or consent, subject to conditions,

but must do so reasonably, unless this document expressly contemplates otherwise.

36.7 **Publicity**

A party must not make any public statement relating to this agreement unless:

(a) the other party has previously agreed to the form and content of the statement; or

(b) the statement is required to be made by law or a stock exchange.

36.8 **Relationship between parties**

Nothing in this agreement creates a relationship of partnership, principal and agent or trustee and beneficiary between MW and YVW.

36.9 **Operation of Indemnities**

(a) Each indemnity in this document survives the expiry or termination of this document.

(b) A party may recover a payment under an indemnity in this document before it makes any payment in respect of which the indemnity is given.

36.10 **Survival**

The termination of this agreement does not release a party from any obligation relating to this agreement that, by its nature, survives completion of the agreement, including any obligation of indemnity or confidentiality.

36.11 **Counterparts**

This document may be executed in counterparts.

EXECUTED as an agreement

THE OFFICIAL SEAL of **MELBOURNE WATER CORPORATION** was fixed in the presence of and the sealing is attested by:

Signature of authorised person	Signature of authorised person
Office held	Office held
Name of authorised person	Name of authorised person

THE COMMON SEAL of **YARRA VALLEY WATER (ACN 066 902 501)** was affixed in accordance with its articles of association in the presence of:

Signature of authorised person	Signature of authorised person
Office held	Office held
Name of authorised person	Name of authorised person

SCHEDULE 1

PERFORMANCE STANDARDS FOR PRESSURE AND FLOW

INDEX OF WATER SUPPLY SUPERZONES *

Zone No.	Supply Superzone Name	Licensee	Locality Plans	Zone Plans
1	Greenvale / Broadmeadows / East Keilor	CWW/YVW	YVW-105	YVW-135
2	Somerton High Level	YVW	YVW-120	YVW-150
6	Preston / North Essendon	CWW/SEW/YVW	YVW-115	YVW-145
8	Whittlesea	YVW	YVW-123	YVW-153
9	Yarrambat	YVW	YVW-125	YVW-155
10	Morang	YVW	YVW-110	YVW-140
11	Quarry Hill	YVW	YVW-116	YVW-146
12	Plenty	YVW	YVW-114	YVW-144
13	Eltham / Diamond Creek	YVW	YVW-124	YVW-154
14	Lower Yarra Valley Townships	YVW	YVW-106	YVW-136
15	Upper Yarra Valley Townships	YVW	YVW-122	YVW-152
16	Silvan Area (Monbulk / Mt.Dandenong Ridge / Silvan Tship)	YVW	YVW-119	YVW-149
17	Emerald System Townships	YVW	YVW-103	YVW-133
18	Silvan-Preston Reticulation Systems	YVW	YVW-118	YVW-148
19	Templestowe (Doncaster High Level)	YVW	YVW-121	YVW-151
20	Lower Plenty	YVW	YVW-107	YVW-137
21	Olinda-Mitcham Pipe Track	YVW	YVW-113	YVW-143
22	Mitcham	YVW	YVW-108	YVW-138
23	Surrey Hills / Heidelberg / Kew	CWW/YVW	YVW-117	YVW-147
24	Mitcham-Morang / Gaffney Street	CWW/YVW	YVW-104	YVW-134
25	Montrose	SEW/YVW	YVW-109	YVW-139
28	Mt. View	SEW/YVW	YVW-111	YVW-141
29	Mt. Waverley	SEW/YVW	YVW-112	YVW-142
34	Cardinia Sub-Zone	SEW/YVW	YVW-102	YVW-132

** A Superzone is a group of geographically adjacent water supply pressure zones. Each Locality Plan and Zone Plan referred to in this Index is an exhibit to this agreement.*

MW – Pressure Provisions

Zone 1: *Greenvale / Broadmeadows / East Keilor Supply Superzone*

Pressure Monitoring Point	Location	Absolute Pressure Provisions	
		Minimum HGL (metres AHD)	Maximum HGL (metres AHD)
Greenvale Reservoir (WH70)	water level in the reservoir	160.00	170.00
Broadmeadows Reservoir (WR1)	water level in the reservoir	141.00	148.00
Greenvale-St. Albans Main (M280) Sharp Road Valve Complex (WG304)	at the offtake	134.00	-
Somerton-St. Albans Main (M193) Broadmeadows Reservoir (WR1) Inlet	at the reservoir inlet	153.00	-

Special Operational Requirements: None

YVW - Flow Allocation Limits

Zone 1: *Greenvale / Broadmeadows / East Keilor Supply Superzone*

Flow Allocation Point		Flow Allocation Limits *						
		Peak Hour Flow Rate (ML/day)	Max Day (ML)	Winter (ML)	Spring (ML)	Summer (ML)	Autumn (ML)	Annual (ML)
(a)	Greenvale Reservoir (WH70)	100	45	1,300	1,700	2,000	1,600	6,600
(b)	Broadmeadows Reservoir (WR1)	90	40	1,200	1,500	1,900	1,650	6,250
Maximum Combined Allocation		190	85	2,500	3,200	3,900	3,250	12,850
Transferred to Other Zones		-	-	-	-	-	-	-
Superzone Totals		190	85	2,500	3,200	3,900	3,250	12,850

Flow Allocations will be measured using the following expressions and monitoring devices:

(a) FE62F – FE62R - FE336F + FE336R– FE367 - (Estimated Tullamarine Flow)
(b) FE17

Flow Element	Description	Asset No. Monitored
FE62F	Greenvale Reservoir Outflow	MW-M280
FE62R	Greenvale Reservoir Outflow - Reverse	MW-M280
FE336F	Greenvale-St. Albans at Sharps Rd - Forward	MW-M193
FE336R	Greenvale-St. Albans at Sharps Rd - Reverse	MW-M193
FE367	Broadmeadows Reservoir Inflow	MW-M193
FE17	Broadmeadows Reservoir Outflow	R-M147

* *The flow allocations in this table have been calculated in part using estimations. Meters have been recently installed at the Licence boundary but readings from these meters have not been used to calculate the flow allocation. After data has been collected from these meters for a suitable period of time, the flow allocations will be recalculated.*

MW – Pressure Provisions

Zone 2: *Somerton High Level Supply Superzone*

Pressure Monitoring Point	Location	Absolute Pressure Provisions	
		Minimum HGL (metres AHD)	Maximum HGL (metres AHD)
Somerton High Level Reservoir (WR45)	water level in the reservoir	196.00	205.00
Epping-Greenvale Main (M192) Somerton Pumping Station (WP91)	at the pump station delivery	200.00 with pump running peak period only *	-
Somerton High Level Outlet Main (M198) Craigieburn Pump Station Offtake (WP51)	at the offtake	193.00	-

Special Operational Requirements:

* Not applicable when water restrictions level 2 or greater.

Reservoir Nominal Operating Level:

During summer, MW will aim to maintain **Somerton Reservoir** above a level of **198.50 m** AHD which represents a level equivalent to one third of the operating volume of the reservoir.

YVW - Flow Allocation Limits

Zone 2: *Somerton High Level Supply Superzone*

Flow Allocation Point	Flow Allocation Limits						
	Peak Hour Flow Rate (ML/day)	Max.Day (ML)	Winter (ML)	Spring (ML)	Summer (ML)	Autumn (ML)	Annual (ML)
Somerton High Level Reservoir (WR45)	107 *	53	1,920	2,220	2,640	2,420	9,200
Maximum Combined Allocation	107	53	1,920	2,220	2,640	2,420	9,200
Transferred to Other Zones	-	-	-	-	-	-	-
Superzone Totals	107	53	1,920	2,220	2,640	2,420	9,200

* Peak Hour is made up of 83 ML/day from pump + 24 ML/day from reservoir.

Flow Allocations will be measured using the following expression and monitoring devices:

FE493 – FE287F + FE287R

Flow Element	Description	Asset No. Monitored
FE493	Somerton High Level PS Flow	MW-WP191
FE287F	Somerton High Level Reservoir Inflow	MW-M198
FE287R	Somerton High Level Reservoir Outflow	MW-M198

MW – Pressure Provisions

Zone 3: *Yuroke Superzone*

Pressure Monitoring Point	Location	Absolute Pressure Provisions	
		Minimum HGL (metres AHD)	Maximum HGL (metres AHD)
Yuroke Reservoir (WR067)	water level in the reservoir	195.00	204.00

YVW - Flow Allocation Limits

Zone 3: *Yuroke Superzone*

Flow Allocation Point	Flow Allocation Limits						
	Peak Hour Flow Rate (ML/day)	Max.Day (ML)	Winter (ML)	Spring (ML)	Summer (ML)	Autumn (ML)	Annual (ML)
Yuroke Reservoir (WR067)	82	75	2,100	2,400	2,900	2,600	10,000
Maximum Combined Allocation	82	75	2,100	2,400	2,900	2,600	10,000
Transferred to Other Zones	-	-	-	-	-	-	-
Superzone Totals	82	75	2,100	2,400	2,900	2,600	10,000

Flow Allocations will be measured using the following expression and monitoring devices:

FX9002 or FE6286 – FE6286R + FE6316 + FE6318

Flow Element	Description	Asset No. Monitored
FX9002	Yuroke Reservoir Outlet	?
FE6286	Yuroke Pumping Station North Flow	WPS616.A2
FE6286R	Yuroke Pumping Station South Flow	WPS616.A1
FE6313	Yuroke PRV Flow	WBS694.A3
FE6318	Yuroke No.2 PRV Flow	WBS705.A3

MW – Pressure Provisions

Zone 6: *Preston / North Essendon Supply Superzone*

Pressure Monitoring Point		Location	Absolute Pressure Provisions	
			Minimum HGL (metres AHD)	Maximum HGL (metres AHD)
	Preston Reservoir (WR21/WR22)	Water level in the reservoir	96.00	100.00
P1	Preston-North Essendon Main (M9/70/102a) Carnarvon Road Offtake	at the offtake	84.00	-
P2	Preston-Footscray Main (M160) St.Georges Rd at Merri Creek	at the offtake	84.00	-

Special Operational Requirements: None

YVW - Flow Allocation Limits

Zone 6: *Preston / North Essendon Supply Superzone*

Flow Allocation Point	Flow Allocation Limits *						
	Peak Hour Flow Rate (ML/day)	Max.Day (ML)	Winter (ML)	Spring (ML)	Summer (ML)	Autumn (ML)	Annual (ML)
Preston Reservoir (WR21 & WR22)	70	50	2,900	3,300	3,400	2,800	12,400
Maximum Combined Allocation	70	50	2,900	3,300	3,400	2,800	12,400
Transferred to Other Zones	-	-	-	-	-	-	-
Superzone Total	70	50	2,900	3,300	3,400	2,800	12,400

Flow Allocations are estimated.

* *The flow allocations in this table have been calculated in part using estimations. Meters have been recently installed at the Licence boundary but readings from these meters have not been used to calculate the flow allocation. After data has been collected from these meters for a suitable period of time, the flow allocations will be recalculated.*

MW – Pressure Provisions

Zone 8: *Whittlesea Supply Superzone*

Pressure Monitoring Point	Location	Absolute Pressure Provisions	
		Minimum HGL (metres AHD)	Maximum HGL (metres AHD)
Yan Yean-Epping Main (M190) Yan Yean Pump Offtake (WP151)	water level in Yan Yean clearwater reservoir (WR185)	177.00	187.00

This pressure monitoring point also used as the monitoring point for Zone 9 Yarrambat.

Special Operational Requirements: None

YVW - Flow Allocation Limits

Zone 8: *Whittlesea Supply Superzone*

Flow Allocation Point	Flow Allocation Limits						
	Peak Hour Flow Rate (ML/day)	Max.Day (ML)	Winter (ML)	Spring (ML)	Summer (ML)	Autumn (ML)	Annual (ML)
Yan Yean Pump Station Offtake (WP151)	8	3	65	115	150	95	425
Maximum Combined Allocation	8	3	65	115	150	95	425
Transferred to Other Zones	-	-	-	-	-	-	-
Superzone Total	8	3	65	115	150	95	425

Flow Allocations will be measured using the following expression and monitoring device:

FE412

Flow Element	Description	Asset No. Monitored
FE412	Yan Yean Pump Station Flow	R-WP151

YVW - Flow Allocation Limits

Zone 9: *Yarrambat Supply Superzone*

Flow Allocation Point		Flow Allocation Limits						
		Peak Hour Flow Rate (ML/day)	Max Day (ML)	Winter (ML)	Spring (ML)	Summer (ML)	Autumn (ML)	Annual (ML)
(a)	Mernda No.2 Pump Station (WP129) *	27	13	330	420	585	435	1770
(b)	Pumped from Diamond Creek Reservoir (WP113)	5	2	-	-	20	-	20
Maximum Combined Allocation		32	15	330	420	605	435	1,790
Transferred to Other Zones		-	-	-	-	-	-	-
Superzone Total		32	15	330	420	605	435	1,790

* Peak Hour is made up of 18 ML/day from pump + 9 ML/day from reservoir.

Flow Allocations will be measured using the following expressions and monitoring devices:

(a) **FE272 - FE290F + FE290R + FE291**
(b) **FE339**

Flow Element	Description	Asset No. Monitored
FE272	Mernda No. 2 Pumping Station Flow	MW-WP129
FE290F	Yarrambat Reservoir Inflow	MW-WR73
FE290R	Yarrambat Reservoir Inflow Reversed	MW-WR73
FE291	Yarrambat Reservoir Outlet	MW-WR73
FE339	Diamond Creek East Pumping Station	R-WP113

Pressure compliance is provided by Zone 8 Whittlesea, monitoring point Yan Yean clearwater reservoir (WR185)

MW – Pressure Provisions

Zone 10: *Morang Supply Superzone*

Pressure Monitoring Point	Location	Absolute Pressure Provisions	
		Minimum HGL (metres AHD)	Maximum HGL (metres AHD)
Morang Reservoir (WR33)	water level in the reservoir	158.00	165.00
Watsonia PRV Outlet (WB53)	at the outlet	153.00	174.00
Epping Preston Main (M194) at Epping Pump Station	Upstream side of valve C (WP58)	168.00	-
Epping Preston Main (M194) At Preston Reservoir	Downstream side of valve DT (WR20)	168.00	-

Special Operational Requirements: None

Reservoir Nominal Operating Level:

During summer, MW will aim to maintain **Morang Reservoir** above a level of **160.00** m AHD which represents a level equivalent to one third of the operating volume of the reservoir.

YVW - Flow Allocation Limits

Zone 10: *Morang Supply Superzone*

Flow Allocation Point		Flow Allocation Limits						
		Peak Hour Flow Rate (ML/day)	Max Day (ML)	Winter (ML)	Spring (ML)	Summer (ML)	Autumn (ML)	Annual (ML)
(a)	Morang Reservoir (WR33)	190	80	570	1,590	3,230	3,160	8,520
(b)	Watsonia PRS (WB53)	60	45	3,440	3,370	3,150	2,270	12,230
(c)	Transferred from Epping - Preston Main via WB41, WB46 and WB54	50	25	710	670	1,200	900	3,480
Maximum Combined Allocation		300	150	4,720	5,630	7,580	6,330	30,800
Transferred to Other Zones		-	-	-	-	-	-	-
Superzone Total		300	150	4,720	5,630	7,580	6,330	30,800

Flow Allocations will be measured using the following expressions and monitoring devices:

(a) **FE53 - FE254R - FE209**
(b) **FE171**
(c) **FE399 + FE400 + FE143 + FE142 + FE187**

Flow Element	Description	Asset No. Monitored
FE53	Morang Reservoir Outlet (Total)	MW-WR33
FE254R	Morang - Plenty	MW-M348
FE171	Watsonia PRV Flow	MW-WB53
FE209	Preston Reservoir SZ Valve	MW-M332
FE399	Lalor PRV East Flow	R-WB41
FE400	Lalor PRV West Flow	R-WB41
FE143	Thomastown PRV West Flow	R-WB46
FE142	Thomastown PRV East Flow	R-WB46
FE187	Keon Park PRV Flow	R-WB54

MW – Pressure Provisions

Zone 11: *Quarry Hill Supply Superzone*

Pressure Monitoring Point		Location	Absolute Pressure Provisions	
			Minimum HGL (metres AHD)	Maximum HGL (metres AHD)
	Quarry Hill Reservoir (WR63)	water level in the reservoir	194.5	203.00
	Yan Yean - Epping Main (M190) at Epping Pump Station	Upstream of Valve A (WP58)	168.00	201.00

Special Operational Requirements: None

Reservoir Nominal Operating Level:

During summer, MW will aim to maintain **Quarry Hill Reservoir** above a level of **194.20 m** AHD which represents a level equivalent to one third of the operating volume of the reservoir.

YVW - Flow Allocation Limits

Zone 11: *Quarry Hill Supply Superzone*

Flow Allocation Point		Flow Allocation Limits						
		Peak Hour Flow Rate (ML/day)	Max Day (ML)	Winter (ML)	Spring (ML)	Summer (ML)	Autumn (ML)	Annual (ML)
(a)	Quarry Hill Reservoir (WR63) *	80	27	1,210	1,300	1,450	1,270	5,230
(b)	Yan Yean - Epping Main (M190) via Epping High Level Pump Station (WP66) & Yan Yean Sub Zone	8	3	100	150	200	150	600
Maximum Combined Allocation		88	30	1,310	1,450	1,650	1,420	5,830
Transferred to Other Zones		-	-	-	-	-	-	-
Superzone Total		88	30	1,310	1,450	1,650	1,420	5,830

* Peak Hour is made up of 37 ML/day from pump + 43 ML/day from reservoir.

Flow Allocations will be measured using the following expressions and monitoring devices:

(a) **FE182 - FE178F + FE178R**
(b) **FE126 + FE127 + FE650**

Flow Element	Description	Asset No. Monitored
FE182	South Morang Pumping Station Flow	MW-WP99
FE178F	Quarry Hill Reservoir Inflow	MW-M319
FE178R	Quarry Hill Reservoir Outflow	MW-M319
FE126	Epping High Level Pumping Station Flow West	R-WP66
FE127	Epping High Level Pumping Station Flow South	R-WP66
FE650	Epping Sub-Zone Flow Cooper St at Davisson St	MW-M190

MW – Pressure Provisions

Zone 12: *Plenty Supply Superzone*

Pressure Monitoring Point	Location	Absolute Pressure Provisions	
		Minimum HGL (metres AHD)	Maximum HGL (metres AHD)
Plenty Reservoir (WR86)	water level in the reservoir	150.00	163.00
Winneke - Preston Main (M332/258) Plenty Pump Offtake (WP118)	at suction side of pump	145.00 *	201.00

Special Operational Requirements:

* Plenty PS Offtake < 149 m for up to 3 hours on a peak day.

Reservoir Nominal Operating Level:

During summer, MW will aim to maintain **Plenty Reservoir** above a level of **153.80 m** AHD which represents a level equivalent to one third of the operating volume of the reservoir.

YVW - Flow Allocation Limits

Zone 12: *Plenty Supply Superzone*

Flow Allocation Point		Flow Allocation Limits						
		Peak Hour Flow Rate (ML/day)	Max Day (ML)	Winter (ML)	Spring (ML)	Summer (ML)	Autumn (ML)	Annual (ML)
(a)	Plenty Reservoir (WR86)	70	22	610	760	1,040	690	3,100
(b)	Apollo Parkway Pump Offtake (WP92)	9	3	0	70	280	210	560
(c)	Greensborough Pump Offtake (WP65)	7	1	0	15	30	5	50
Maximum Combined Allocation		86	26	610	845	1,350	905	3,710
Transferred to Other Zones		-	-	-	-	-	-	-
Superzone Total		86	26	610	845	1,350	905	3,710

Flow Allocations will be measured using the following expressions and monitoring devices:

(a) **FE264**
(b) **FE157**
(c) **FE119**

Flow Element	Description	Asset No. Monitored
FE264	Plenty Reservoir Outflow	R-M345
FE157	Apollo Parkways Pumping Station Flow	R-WP92
FE119	Greensborough Pumping Station Flow	R-WP65

MW – Pressure Provisions

Zone 13: *Eltham / Diamond Creek Supply Superzone*

Pressure Monitoring Point		Location	Absolute Pressure Provisions	
			Minimum HGL (metres AHD)	Maximum HGL (metres AHD)
P1	Winneke-Preston Main (M332/258) Eltham Offtake (450mm) (M238)	at the offtake	152.00 *	201.00

Special Operational Requirements:

* Eltham off take < 155m for up to 3 hours on a peak day.

YVW - Flow Allocation Limits

Zone 13: *Eltham / Diamond Creek Supply Superzone*

Flow Allocation Point		Flow Allocation Limits						
		Peak Hour Flow Rate (ML/day)	Max Day (ML)	Winter (ML)	Spring (ML)	Summer (ML)	Autumn (ML)	Annual (ML)
(a)	Winneke-Preston Main Eltham Offtake	30	16	370	590	740	460	2,160
(b)	Winneke-Preston Main Diamond Creek No. 2 Pumping Station (WP124) Offtake	15	6	120	130	220	140	610
(c)	Diamond Creek East Pumping Station (WP113)	-5	-2	0	0	-17	0	-17
Maximum Combined Allocation		45	22	490	720	960	600	2,770
Transferred to Other Zones		-5	-2	0	0	-17	0	-17
Superzone Total		40	20	490	720	943	600	2,753

Flow Allocations will be measured using the following expressions and monitoring devices:

(a) **FE656**
(b) **FE276**
(c) **FE339**

Flow Element	Description	Asset No. Monitored
FE656	Winneke-Preston Main - Eltham Offtake Flow	R-M238
FE276	Diamond Creek No. 2 Pumping Station	R-WP124
FE339	Diamond Creek East Pumping Station	R-WP113

MW – Pressure Provisions

Zone 14: *Lower Yarra Valley Townships Supply Superzone*

Pressure Monitoring Point	Location	Absolute Pressure Provisions	
		Minimum HGL (metres AHD)	Maximum HGL (metres AHD)
Cresswell Reservoir (WR99)	water level in the reservoir	201.00	207.00
Frogley Reservoir (WR102)	water level in the reservoir	275.50	282.00
Yarra Glen Reservoir (WR98)	water level in the reservoir	171.00	175.00

Special Operational Requirements: None

Reservoir Nominal Operating Levels:

During summer, MW will aim to maintain:
(a) **Cresswell Reservoir** above a level of **202.70** m AHD,
(b) **Frogley Reservoir** above a level of **276.90** m AHD, and
(c) **Yarra Glen Reservoir** above a level of **172.20** m AHD,
which represents a level equivalent to one third of the operating volume of these reservoirs.

YVW - Flow Allocation Limits

Zone 14: *Lower Yarra Valley Townships Supply Superzone*

Flow Allocation Point		Flow Allocation Limits						
		Peak Hour Flow Rate (ML/day)	Max Day (ML)	Winter (ML)	Spring (ML)	Summer (ML)	Autumn (ML)	Annual (ML)
(a)	Cresswell Reservoir (WR99)	8	6	130	140	160	140	570
(b)	Frogley Reservoir (WR102)	8	6	130	140	280	130	680
(c)	Yarra Glen Reservoir (WR98)	3.9	2.6	40	50	90	70	250
Maximum Combined Allocation		19.9	14.6	300	330	530	340	1,500
Transferred to Other Zones		-	-	-	-	-	-	-
Superzone Total		19.9	14.6	300	330	530	340	1,500

Flow Allocations will be measured using the following expressions and monitoring devices:

(a) **FE458**
(b) **FE444**
(c) **FE434**

Flow Element	Description	Asset No. Monitored
FE458	Cresswell Reservoir Outflow	R-Retic
FE444	Frogley Reservoir Outflow	MW-W102
FE434	Yarra Glen Reservoir Outflow	R-Retic

MW – Pressure Provisions

Zone 15: *Upper Yarra Valley Townships Supply Superzone*

Pressure Monitoring Point	Location	Absolute Pressure Provisions	
		Minimum HGL (metres AHD)	Maximum HGL (metres AHD)
Seville Reservoir (WR89) (Lewis Hill)	water level in the reservoir	303.00	311.00
Woori Yallock (Lusatia Park) PRV Outlet (WB71)	at the downstream side of the PRV	234.00	-
Yarra Junction PRV Outlet (WB82)	at the downstream side of the PRV	226.00	-
Warburton (Martyr Rd) PRV Outlet (WB89)	at the downstream side of the PRV	260.00 Dec-Feb 272.00 *	-
East Warburton No 1 (Lyrebird Ave) PRV (WB84)	at the downstream side of the PRV	275.00	285.00
East Warburton No 2 (Brahams Rd) PRV Outlet (WB188)	at the downstream side of the PRV	244.00	265.00

Special Operational Requirements:

1. Warburton (Martyr Rd) PRV

   *Not applicable when stage 2 or greater restrictions are in place.

   During flow changes on the Yarra Valley Conduit, HGL may reduce to approx. 257.00 metres for up to 12 hours if the surge tower at Silvan is offline.

2. Emergency Supply from Yarra - Silvan Conduits

   From time to time, especially during emergency or storm events, this zone may need to be supplied from the Yarra Silvan Conduits rather than the Yarra Valley Conduit. MW will use its best endeavours to provide and chlorinate the best quality water available at the time from the Yarra Silvan Conduit, but cannot guarantee that such a supply would satisfy the requirements of clause 10.1. A failure by MW to meet the requirements of clause 10.1 when supplying water from the Yarra Silvan Conduits does not constitute a breach of this agreement.

Reservoir Nominal Operating Level:

* During summer, MW will aim to maintain **Lewis Hill Tank** above a level of **306.00 m** AHD. Not applicable when stage 2 or greater restrictions are in place.

YVW - Flow Allocation Limits

Zone 15: Upper Yarra Valley Townships Supply Superzone

Flow Allocation Point		Flow Allocation Limits						
		Peak Hour Flow Rate (ML/day)	Max Day (ML)	Winter (ML)	Spring (ML)	Summer (ML)	Autumn (ML)	Annual (ML)
(a)	Seville Reservoir (WR89)	7	5	140	190	300	240	870
(b)	Yarra-Silvan Conduits (M231) Yellingbo PRV Outlet (WB61)	<1	<1	3	4	9	4	20
(c)	Yarra Valley Conduit (M283) Woori Yallock (Lusatia Park) PRV Offtake (WB71)	12	5	160	200	260	220	840
(d)	Yarra Valley Conduit (M283) Yarra Junction PRV Outlet (WB82)	4	2	70	90	100	80	340
(e)	Yarra Valley Conduit (M283) Warburton (Martyr Rd) PRV Outlet (WB89)	10	5	120	200	280	230	830
(f)	Yarra Valley Conduit (M283) East Warburton No 1 (Lyrebird Ave) PRV (WB84)	2	1	15	20	30	20	85
(g)	Yarra Valley Conduit (M283) East Warburton No 2 (Brahams Rd) PRV Outlet (WB188)	1	<1	3	4	9	4	20
Maximum Combined Allocation		37	20	511	708	988	798	3,005
Transferred to Other Zones		-	-	-	-	-	-	-
Superzone Total		37	20	511	708	988	798	3,005

(continued)

YVW - Flow Allocation Limits

Zone 15: Upper Yarra Valley Townships Supply Superzone

Flow Allocations will be measured using the following expressions and monitoring devices:

(a) **FE3023**
(b) **Proposed**
(c) **FE3018**
(d) **FE3016**
(e) **FE3015**
(f) **FE443**
(g) **FE521**

Flow Element	Description	Asset No. Monitored
FE3023	Seville Reservoir Outflow	R-Retic
Proposed	Yarra Silvan Conduit Yellingbo PRV Offtake	R-Retic
FE3018	Yarra Valley Conduit Lusatia Park PRV Offtake	R-M370
FE3016	Yarra Valley Conduit Yarra Junction PRV Offtake	MW-WB82
FE3015	Yarra Valley Conduit Martyr Rd PRV Offtake	R-Retic
FE443	Yarra Valley Conduit - East Warburton No. 1 (Lyrebird Ave) PRV	R-Retic
FE521	Yarra Valley Conduit - East Warburton No. 2 (Brahams Rd) PRV	MW-WB188

MW – Pressure Provisions

Zone 16: *Silvan Area (Monbulk/Mt.Dandenong Ridge/Silvan Township) Supply Superzone*

Pressure Monitoring Point	Location	Absolute Pressure Provisions	
		Minimum HGL (metres AHD)	Maximum HGL (metres AHD)
Monbulk Reservoir (WR49)	water level in the reservoir	293.00	302.00

Special Operational Requirements:

1. Yarra Valley Water is not to revalve the direct supply consumers in McCarthy Rd from the 300 to 375mm mains without written authority from the Operating Representative.

Reservoir Nominal Operating Level:

During summer periods, particularly for days of >30°C, MW will aim to maintain **Monbulk Reservoir** above a level of **295.60** m AHD which represents a level equivalent to one third of the operating volume of the reservoir.

YVW - Flow Allocation Limits

Zone 16: *Silvan Area (Monbulk/Mt.Dandenong Ridge/Silvan Township) Supply Superzone*

Flow Allocation Point	Flow Allocation Limits						
	Peak Hour Flow Rate (ML/day)	Max.Day (ML)	Winter (ML)	Spring (ML)	Summer (ML)	Autumn (ML)	Annual (ML)
Monbulk Reservoir (WR49) and Monbulk No.1 & No.2 Pump Stations (WP49 &WP75)	22	16	360	450	700	490	2,000
Maximum Combined Allocation	22	16	360	450	700	490	2,000
Transferred to Other Zones	-	-	-	-	-	-	-
Superzone Total	22	16	360	450	700	490	2,000

Flow Allocations will be measured using the following expression and monitoring devices:

FE34 - FE263F + FE263R+ FE91

Flow Element	Description	Asset No. Monitored
FE34	Monbulk No. 1 Pump Station Flow	R-WP49
FE263F	Monbulk Reservoir 300mm Inlet Main Flow	MW-M293
FE263R	Monbulk Reservoir 300mm Outlet Main Flow	R-M293
FE91	Monbulk No.2 Pump Station Flow	MW-WP75

MW – Pressure Provisions

Zone 17: *Emerald System Townships Supply Superzone*

Pressure Monitoring Point	Location	Absolute Pressure Provisions	
		Minimum HGL (metres AHD)	Maximum HGL (metres AHD)
Silvan-Cardinia Main (M273) Johns Hill Reservoir (WR139) from Kallista Pump Station (WP245)	water level in the reservoir	385.00	392.00

Special Operational Requirements: None

YVW - Flow Allocation Limits

Zone 17: *Emerald System Townships Supply Superzone*

Flow Allocation Point	Flow Allocation Limits						
	Peak Hour Flow Rate (ML/day)	Max.Day (ML)	Winter (ML)	Spring (ML)	Summer (ML)	Autumn (ML)	Annual (ML)
Kallista Pump Station (WP245) via Johns Hill Reservoir (WR139)	10	10	340	380	590	420	1,730
Maximum Combined Allocation	10	10	340	380	590	420	1,730
Transferred to Other Zones	-	-	-	-	-	-	-
Superzone Total	10	10	340	380	590	420	1,730

Flow Allocations will be measured using the following expression and monitoring devices:

FE3024

Flow Element	Description	Asset No. Monitored
FE3024	Kallista Pump Station Flow	MW-WP245

MW – Pressure Provisions

Zone 18: *Silvan-Preston Reticulation Systems Supply Superzone*

Pressure Monitoring Point	Location	Absolute Pressure Provisions	
		Minimum HGL (metres AHD)	Maximum HGL (metres AHD)
Silvan-Preston Main (M197) Faulds Valve Complex (WG270) (Edinburgh Road)	at the valve complex	221.00	246.00
Silvan-Preston Main (M197) Olinda PRS (Edinburgh Road)	at the downstream side of the PRV	202.00	-
Silvan-Preston Main (M197) Wonga Park PRV Offtake (WB14)	at the upstream side of the PRV	207.00 *	-
Silvan-Preston Main (M197) Park Orchards (Knees Rd) PRV Offtake (WB16)	at the upstream side of the PRV	203.00 *	-
# Silvan-Preston Main (M197) Watsonia PRV Offtake (WB53)	at the upstream side of the PRV	173.00	-
Harris Gully Branch Main (M232) Mitcham Reservoir Inlet (WR10)	at the upstream side of valve AJ	182.00	246.00

This pressure monitoring point also used as the monitoring point for Zone 19 Templestowe (Doncaster High Level) and Zone 20 Lower Plenty.

* Summer (December-February) only

Special Operational Requirements: None

YVW - Flow Allocation Limits

Zone 18: *Silvan-Preston Reticulation Systems Supply Superzone*

	Flow Allocation Point	Flow Allocation Limits						
		Peak Hour Flow Rate (ML/day)	Max Day (ML)	Winter (ML)	Spring (ML)	Summer (ML)	Autumn (ML)	Annual (ML)
(a)	Silvan-Preston Main (M197) Mt Evelyn Pump Station (WP172) Offtake	28	17	300	400	560	340	1,600
(b)	Silvan-Preston Main (M197) Mooroolbark Gravity Sub-Zone (M229)	25	10	210	270	450	270	1,200
(c)	Lilydale (Plantes Hill) Reservoir (WR35)	40	15	500	600	1,000	600	2,700
(d)	Silvan-Preston Main (M197) Birts Hill Reservoir (WR36) Offtake	18	12	400	560	710	450	2,120
(e)	Silvan-Preston Main (M197) Brysons Road PRV Offtake (WB13)	10	2	40	70	80	50	240
(f)	Transferred from Olinda-Mitcham Main via Croydon (Wicklow Ave) PS (WP24)	3	2	30	40	60	40	170
(g)	Silvan-Preston Main (M197) Wonga Park PRV Offtake (WB14)	24	7	110	180	290	150	730
(h)	Silvan-Preston Main (M197) Park Orchards (Knees Rd) PRV Offtake (WB16)	29	14	320	630	800	540	2,290
(i)	Silvan-Preston Main (M197) Tindals Road PRV Offtake (WB52)	5	2	15	25	40	20	100
(j)	Harris Gully Rd Main (M232) Stintons Road PRV Offtake (WB34)	5	2	15	25	40	20	100
(k)	Harris Gully Rd Main (M232) Ringwood Pump Offtake (WP95)	29	10	250	280	480	390	1,400
Maximum Combined Allocation		216	93	2,190	3,080	4,510	2,870	12,650
Transferred to Other Zones		-	-	-	-	-	-	-
Superzone Total		216	93	2,190	3,080	4,510	2,870	12,650

(continued)

YVW - Flow Allocation Limits

Zone 18: *Silvan-Preston Reticulation Systems Supply Superzone*

Flow Allocations will be measured using the following expressions and monitoring devices:

(a) FE48
(b) Estimated
(c) FE419
(d) FE32
(e) FE476
(f) FE225
(g) FE457 + FE491
(h) FE59 + FE55
(i) FE488
(j) FE487
(k) FE145

Flow Element	Description	Asset No. Monitored
FE48	Mt Evelyn Pumping Station Flow	R-WP172
Estimated	Silvan Subzones (Mooroolbark Gravity)	
FE419	Lilydale Reservoir Outflow	MW-WR35
FE32	Birts Hill Reservoir Inflow	R-WR36
FE476	Brysons Rd PRV	R-WB13
FE225	Wicklow Avenue Pump Station Flow	R-WP24
FE457	Wonga Park PRV	R-WB14
FE491	Wonga Park PRV	R-WB14
FE59	Knees Rd PRV	R-WB16
FE55	Knees Rd PRV	R-WB16
FE488	Tindals Rd PRV	R-WB52
FE487	Stintons Rd PRV	R-WB34
FE145	Ringwood Reservoir inflow	R-WP95

YVW - Flow Allocation Limits

Zone 19: *Templestowe (Doncaster High Level) Supply Superzone*

Flow Allocation Point	Flow Allocation Limits						
	Peak Hour Flow Rate (ML/day)	Max.Day (ML)	Winter (ML)	Spring (ML)	Summer (ML)	Autumn (ML)	Annual (ML)
Doncaster H/L PRV Outlet (WB37)	100	34	700	1,000	2,100	1,400	5,200
Maximum Combined Allocation	100	34	700	1,000	2,100	1,400	5,200
Transferred to Other Zones	-	-	-	-	-	-	-
Superzone Total	100	34	700	1,000	2,100	1,400	5,200

Flow Allocations will be measured using the following expression and monitoring devices:

FE75

Flow Element	Description	Asset No. Monitored
FE75	Templestowe PRV Flow	R-M249

Pressure compliance is provided by Zone 18 Silvan-Preston Reticulation Systems, monitoring point Watsonia PRS offtake (WB53))

Special Operational Requirements:

The Olinda - Mitcham Pipe Track Zone and the Templestowe (Doncaster High Level) Zone are interconnected. If the 825/600 mm distribution mains between the Templestowe Zone and the Olinda Mitcham Pipe Track Zone are shut or taken out of service Water Operations Control Centre is to be notified.

YVW - Flow Allocation Limits

Zone 20: *Lower Plenty Supply Superzone*

Flow Allocation Point	Flow Allocation Limits						
	Peak Hour Flow Rate (ML/day)	Max.Day (ML)	Winter (ML)	Spring (ML)	Summer (ML)	Autumn (ML)	Annual (ML)
Silvan-Preston Main (M197) Lower Plenty PRV Offtake (WB56)	30	12	200	300	450	300	1,250
Maximum Combined Allocation	30	12	200	300	450	300	1,250
Transferred to Other Zones	-	-	-	-	-	-	-
Superzone Total	30	12	200	300	450	300	1,250

Flow Allocations will be measured using the following expression and monitoring devices:

FE195 + FE199 + FE169

Flow Element	Description	Asset No. Monitored
FE195	Lower Plenty Reservoir Outflow North	R-M149
FE199	Lower Plenty Reservoir Outflow South	R-M149
FE169	Lower Plenty High Level Outflow	R-WT14

Pressure compliance is provided by Zone 18 Silvan-Preston Reticulation Systems, monitoring point Watsonia PRV offtake (WB53)

Special Operational Requirements: None

MW – Pressure Provisions

Zone 21: *Olinda - Mitcham Pipe Track Supply Superzone*

Pressure Monitoring Point		Location	Absolute Pressure Provisions	
			Minimum HGL (metres AHD)	Maximum HGL (metres AHD)
	Olinda Reservoir (WR19)	water level in the reservoir	203.00	205.00
	Olinda - Mitcham No. 1 & 2 Main (M54/56) Mitcham Reservoir Inlet (WR10)	at the upstream side of valve W	182.00	190.00

Special Operational Requirements:

The Olinda - Mitcham Pipe Track Zone and the Templestowe (Doncaster High Level) Zone are interconnected. If the 825/600 mm distribution mains between the Templestowe Zone and the Olinda Mitcham Pipe Track Zone are shut or taken out of service Water Operations Control Centre is to be notified.

YVW - Flow Allocation Limits

Zone 21: *Olinda-Mitcham Supply Superzone*

Flow Allocation Point		Flow Allocation Limits						
		Peak Hour Flow Rate (ML/day)	Max Day (ML)	Winter (ML)	Spring (ML)	Summer (ML)	Autumn (ML)	Annual (ML)
(a)	Olinda Reservoir (WR19)	300	150	5,000	6,500	7,500	6,000	25,000
(b)	Transfer from Mitcham Zone via WP72	8	5	0	20	90	20	130
(c)	Silvan-Preston Main(M197) Exeter Rd PRV (WB4)	5	2	15	25	40	20	100
Maximum Combined Allocation		313	157	5,015	6,545	7,630	6,040	25,230
Transferred to Other Zones		-	-	-	-	-	-	-
Superzone Total		313	157	5,015	6,545	7,630	6,040	25,230

Flow Allocations will be measured using the following expressions and monitoring devices:

(a) FE313 + FE314 + Proposed - FE243F - FE244 +FE244R + FE243R

(b) FE73

(c) FE486

Flow Element	Description	Asset No. Monitored
FE313	Olinda-Mitcham No.1 Main Flow from Olinda Reservoir	MW-M55
FE314	Olinda-Mitcham No.2 Main Flow from Olinda Reservoir	MW-M54/56
Proposed	Edinburgh Road 300mm Main Flow North	R-Retic
FE243F	Olinda-Mitcham No.1 Main Flow at Mitcham West	MW-M55
FE244	Olinda-Mitcham No.2 Main at Mitcham	MW-M54/56
FE244R	Olinda-Mitcham No.2 Main at Mitcham - Reverse	MW-M54/56
FE243R	Olinda-Mitcham No.1 Main Flow at Mitcham East	MW-M55
FE486	Exeter Road PRV Flow	R-WB4
FE73	South Vermont Pump Station Flow	R-WP72

MW – Pressure Provisions

Zone 22: *Mitcham Supply Superzone*

Pressure Monitoring Point		Location	Absolute Pressure Provisions	
			Minimum HGL (metres AHD)	Maximum HGL (metres AHD)
-	Mitcham Reservoir (WR10)	water level in the reservoir	154.00	157.00
-	Silvan - Waverley Main (M132) Syndal PRV Offtake (WB70)	at the upstream side of the PRV	159.00	246.00
-	Mitcham-Notting Hill Main (M22) East Burwood Pump Station Offtake (WP52)	at the pump suction	145.00	160.00
-	900mm Mitcham-Surrey Hills Main (M46) (Surrey Hill Res. No 2 Inlet) At Surrey Park Offtake	at the offtake	136.00	160.00
-	Mitcham-Surrey Hills Main (M113/46) Surrey Hills No 1 Reservoir site (WR25)	downstream of valve AE	129.00	160.00
-	Mitcham-Surrey Hills Rosanna Main Mont Albert Park Pump Station Offtake (WP28)	at the offtake	127.00	160.00

Special Operational Requirements: None

YVW – Flow Allocation Limits

Zone 22: *Mitcham Supply Superzone*

Flow Allocation Point		Flow Allocation Limits						
		Peak Hour Flow Rate (ML/day)	Max Day (ML)	Winter (ML)	Spring (ML)	Summer (ML)	Autumn (ML)	Annual (ML)
(a)	Mitcham Reservoir (WR10)	320	160	7,600	7,800	10,800	9,000	35,200
(b)	Silvan-Waverley Main (M132) via Syndal PRV (WB70) & control connections	50	40	450	900	1,150	800	3,300
(c)	Transferred to Surrey Hills Zone via N. Camberwell PRV (WB19)	-2	-2	-100	-100	-100	-100	-400
(d)	Transferred to Olinda-Mitcham via South Vermont PS (WP72)	-8	-5	0	-20	-90	-20	-130
Maximum Combined Allocation		370	200	8,050	8,700	11,950	9,800	38,500
Transferred to Other Zones		-10	-7	-100	-120	-190	-120	-530
Superzone Total		360	193	7,950	8,580	11,760	9,680	37,970

(continued)

YVW – Flow Allocation Limits

Zone 22: *Mitcham Supply Superzone*

Flow Allocations will be measured using the following expressions and monitoring devices:

(a) FE247 + FE246 + FE248 - FE239F + FE239R - FE303 + FE312R - FE360 - FE38 + FE240F - FE240R - FE324F + FE324R + FE360 + FE446

(b) FE311 + FE485

(c) FE350

(d) FE73

Flow Element	Description	Asset No. Monitored
FE247	900mm Mitcham - Surrey Hills Main at Mitcham	MW-M46
FE246	1150mm Mitcham - Notting Hill Main at Mitcham	MW-M22
FE248	1150mm Mitcham - Surrey Hills Main at Mitcham	MW-M113
FE239F	1150mm Mitcham - Surrey Hills Main U/S Surrey Hills	MW-M113
FE239R	1150mm Mitcham - Surrey Hills Main U/S Reversed	MW-M113
FE303	Surrey Hills Reservoir No. 2 - 900/1150mm Inflow	MW-WR26
FE312R	Syndal - Notting Hill towards Mitcham	MW-M22
FE360	Surrey Hills High Level Outflow	R-WP27
FE38	Mt Waverley Reservoir Old Inlet Flow	MW-WR16
FE240F	Mitcham - Preston Main Flow north from Surrey Hills	MW-M158
FE240R	Mitcham - Preston Main Reverse Flow south	MW-M158
FE324F	Mitcham - Preston Main Flow north to 134 zone	MW-M158
FE324R	Mitcham - Preston Main Flow north to 134 reversed	MW-M158
FE360	Surrey Hills Elevated Tank Flow	R-WT6
FE446	Surrey Hills Pump Station Flow	R-WP158
FE311	Syndal Control Flow	MW-WG311
FE485	Syndal / East Burwood PRV Flow	R-WB70
FE350	North Camberwell PRV Flow	R-WB19
FE73	South Vermont Pump Station Flow	R-WP72

MW – Pressure Provisions

Zone 23: *Surrey Hills / Heidelberg / Kew Supply Superzone*

Pressure Monitoring Point	Location	Absolute Pressure Provisions	
		Minimum HGL (metres AHD)	Maximum HGL (metres AHD)
Surrey Hills No.1 Reservoir (WR25)	water level in the reservoir	127.00	131.00
Surrey Hills No.2 Reservoir (WR26)	water level in the reservoir	127.00	131.00
Mitcham-Preston Main (M113/158/78) De Winton Park off take to Yarra Valley Water	at the inlet to the PRV	124.00 Peak summer - 130.00 * (>30◦C - 1500 to 2130 hrs)	145.00

Special Operational Requirements:

* Not applicable when stage 2 or greater restrictions in place.

YVW – Flow Allocation Limits

Zone 23: *Surrey Hills / Heidelberg / Kew Supply Superzone*

Flow Allocation Point		Flow Allocation Limits *						
		Peak Hour Flow Rate (ML/day)	Max Day (ML)	Winter (ML)	Spring (ML)	Summer (ML)	Autumn (ML)	Annual (ML)
(a)	Surrey Hills No 1 & 2 Reservoirs (WR25 & 26)	260	120	3,850	4,950	7,200	4,550	19,550
(b)	Station Road Rosanna Valve (WG366)	100	50	450	850	2,200	500	4,000
(c)	Camberwell North (Belmore Rd) PRV (WB19) Outlet	15	10	100	100	100	100	400
Maximum Combined Allocation		375	180	4,400	5,900	9,500	5,150	23,950
Transferred to Other Zones		-	-	-	-	-	-	-
Superzone Total		375	180	4,400	5,900	9,500	5,150	23,950

Flow Allocations will be measured using the following expressions and monitoring devices:

~~(a)~~(e) FE347 + FE346 + FE345 + FE242 - FE242R - (Estimated CWW Component)

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~~(b)~~(f) FE366

~~(c)~~(g) FE350

Flow Element	Description	Asset No. Monitored
FE347	Surrey Hills No.1 Res. 600mm Outlet - west	R-M43
FE346	Surrey Hills No.1 Res. 600mm Outlet - dupl. west	R-M71
FE345	Surrey Hills No.1 Res. 900mm Outlet - west	R-M14
FE242	Surrey Hills No.1 Res. 820mm Outlet - north	R-104C
FE242R	Surrey Hills No.1 Res. 820mm Outlet - north Reversed	R-104C
FE366	Station Road Rosanna Control Flow	MW-M78
FE350	North Camberwell PRV Flow	R-WB19

* *The flow allocations in this table have been calculated in part using estimations. Meters have been recently installed at the Licence boundary but readings from these meters have not been used to calculate the flow allocation. After data has been collected from these meters for a suitable period of time, the flow allocations will be recalculated.*

MW – Pressure Provisions

Zone 24: *Mitcham - Morang / Gaffney St Supply Superzone*

Pressure Monitoring Point	Location	Absolute Pressure Provisions	
		Minimum HGL (metres AHD)	Maximum HGL (metres AHD)
Preston Reservoir Valve (US/UT) Winneke Outlet (WB62)	at the downstream side of the PRV	124.00 Peak summer - 132.00 * (>30°C - 1500 to 2130 hrs)	140.00
West Heidelberg PRV Outlet (WB51)	at the downstream side of the PRV	124.00 Peak summer - 132.00 * (>30°C - 1500 to 2130 hrs)	140.00

Special Operational Requirements:

* Not applicable when stage 2 or greater restrictions in place.

YVW – Flow Allocation Limits

Zone 24: *Mitcham - Morang / Gaffney St. Supply Superzone*

Flow Allocation Point		Flow Allocation Limits *						
		Peak Hour Flow Rate (ML/day)	Max Day (ML)	Winter (ML)	Spring (ML)	Summer (ML)	Autumn (ML)	Annual (ML)
(a)	Preston Res. Regulating Valves (WB20/21/22/23/24), West Heidelberg PRV (WB51), and Mitcham source	150	70	3,000	4,200	5,000	3,800	16,000
(b)	Western Suburbs (Gaffney St) PRV (WB24)	65	30	1,565	1,835	2,025	1,575	7,000
Maximum Combined Allocation		215	100	4,565	6,035	7,025	5,375	23,000
Transferred to Other Zones		-	-	-	-	-	-	-
Superzone Total		215	100	4,565	6,035	7,025	5,375	23,000

Flow Allocations will be measured using the following expressions and monitoring devices:

(a) **FE306 + FE9 + FE210 + FE152 - FE366 + FE324F - FE324R - FE645**
(b) **FE232 - (Estimated CWW Component)**

Flow Element	Description	Asset No. Monitored
FE306	Winneke - Preston Main US/UT Valves	MW-M332
FE9	Silvan - Preston Main DO Valve	MW-M197
FE210	Morang - Preston No. 3 Main SZ Valve	MW-M57
FE152	West Heidelberg PRV Flow	MW-WB51
FE366	Station Road Rosanna Flow Control	MW-M78
FE324F	Mitcham-Preston Main Flow West across Yarra River	MW-M158
FE324R	Mitcham-Preston Main Flow East Across Yarra River	MW-M158
FE645	134 Zone to Preston Res. Bleed (Valve EE)	MW-WR21
FE232	Gaffney St PRV Flow	MW-WB24

* *The flow allocations in this table have been calculated in part using estimations. Meters have been recently installed at the Licence boundary but readings from these meters have not been used to calculate the flow allocation. After data has been collected from these meters for a suitable period of time, the flow allocations will be recalculated.*

MW – Pressure Provisions

Zone 25: *Montrose Systems Supply Superzone*

Pressure Monitoring Point	Location	Absolute Pressure Provisions	
		Minimum HGL (metres AHD)	Maximum HGL (metres AHD)
Montrose Reservoir (WR11)	water level in the reservoir	213.00	215.00

Special Operational Requirements: None

YVW – Flow Allocation Limits

Zone 25: *Montrose Supply Superzone*

Flow Allocation Point	Flow Allocation Limits *						
	Peak Hour Flow Rate (ML/day)	Max.Day (ML)	Winter (ML)	Spring (ML)	Summer (ML)	Autumn (ML)	Annual (ML)
Montrose Reservoir (WR11)	35	15	560	610	740	580	2,490
Maximum Combined Allocation	35	15	560	610	740	580	2,490
Transferred to Other Zones	-	-	-	-	-	-	-
Superzone Total	35	15	560	610	740	580	2,490

Flow Allocations will be measured using the following expression and monitoring devices:

FE342 - FE3057

Flow Element	Description	Asset No. Monitored
FE342	Montrose Reservoir Outlet Main (U/S of WP88)	MW-M128
FE3057	Colchester Rd at Dandenong Creek Flow	R-Retic

* *The flow allocations in this table have been calculated in part using estimations. Meters have been recently installed at the Licence boundary but readings from these meters have not been used to calculate the flow allocation. After data has been collected from these meters for a suitable period of time, the flow allocations will be recalculated.*

YVW – Flow Allocation Limits

Zone 26: *Boronia / Knox Supply Superzone*

Flow Allocation Point	Flow Allocation Limits *						
	Peak Hour Flow Rate (ML/day)	Max.Day (ML)	Winter (ML)	Spring (ML)	Summer (ML)	Autumn (ML)	Annual (ML)
Boronia Reservoir (WR37) Outlet Main Transfers from South East Water at Dandenong Creek	15	5	100	130	150	120	500
Maximum Combined Allocation	15	5	100	130	150	120	500
Transferred to Other Zones	-	-	-	-	-	-	-
Zone Consumption	15	5	100	130	150	120	500

Flow Allocations will be measured using the following expression and monitoring devices:

FE3055 + FE3056

Flow Element	Description	Asset No. Monitored
FE3055	Bayswater Rd at Dandenong Creek Flow	R-Retic
FE3056	Dorset Rd at Dandenong Creek Flow	R-Retic

Special Operational Requirements: None

* *The flow allocations in this table have been calculated in part using estimations. Meters have been recently installed at the Licence boundary but readings from these meters have not been used to calculate the flow allocation. After data has been collected from these meters for a suitable period of time, the flow allocations will be recalculated.*

MW – Pressure Provisions

Zone 28: *Mt.View Supply Superzone*

Pressure Monitoring Point		Location	Absolute Pressure Provisions	
			Minimum HGL (metres AHD)	Maximum HGL (metres AHD)
	Mt View Reservoir (WR15)	water level in the reservoir	149.00	153.00
P1	Mt View-Dandenong Main (M131) Mulgrave PRS offtake	at the inlet to the PRS	146.00	155.00

Special Operational Requirements:

In order to maintain 146m H.G.L. at Wellington Road:

- the duplicate 900mm Yarra Valley Water main in Watsons Road (M338) must be operational and interconnected to the 825mm Mt View - Dandenong transfer main (M131).

- Zone 34 Cardinia Subzone must be supplied from Cardinia via the Bakers Rd cross-connection.
If this zone is to be supplied from Mt.View, the alteration to supply must be made in consultation with Yarra Valley Water.

YVW – Flow Allocation Limits

Zone 28: *Mt. View Supply Superzone*

Flow Allocation Point		Flow Allocation Limits *						
		Peak Hour Flow Rate (ML/day)	Max Day (ML)	Winter (ML)	Spring (ML)	Summer (ML)	Autumn (ML)	Annual (ML)
(a)	Mt View Reservoir (WR15)	260	120	3,850	4,400	6,700	5,250	20,200
(b)	Transfer to Mt Waverley Res Zone via WB3 #, WB7 # and WB55 *	-25	-15	-780	-850	-790	-880	-3,300
(c)	Transfer to Mt Waverley Res zone via Mt Waverley-Notting Hill Main (M159)	-17	-17	-1,550	-1,550	-1,550	-1,550	-6,200
Maximum Combined Allocation		260	120	3,850	4,400	6,700	5,250	20,200
Transferred to Other Zones		-42	-32	-2,330	-2,400	-2,340	-2,430	-9,500
Superzone Total		218	88	1,520	2,000	4,360	2,820	10,700

\# Yarra Valley Water asset
* South East Water asset

Flow Allocations will be measured using the following expressions and monitoring devices:

(a) **FE113 + FE130 + FE431 + FE114 + FE216 - FE312R - FE3047 - FE3048 - FE3049**
(b) **FE410 + FE411 + FE186**
(c) **FX955 (a calculated flow)**

Flow Element	Description	Asset No. Monitored
FE113	Mt View-Dandenong Main at Waverley Rd-825mm	MW-M131
FE130	Mt View Outlet Main west 1150mm	MW-M268
FE431	Mt View - Dandenong Main Duplication 900mm	R-M388
FE114	Mt View Outlet Main east 450mm	R-M266
FE216	Mt View High Level Pumping Station	R-WP21
FE312R	Syndal - Notting Hill towards Mitcham	MW-M22
	Computed Mt. View-Notting Hill Flow (FX955)	MW-M159
FE3047	North Rd at Princes Highway Flow	R-Retic
FE3048	McNaughtons Rd at Princes Highway Flow	R-Retic
FE3049	Princes Highway at Springvale Rd Flow	R-Retic
FE410	Huntingdale Rd, Clayton PRV Flow	R-WB3
FE411	Macrina St, Clayton PRV Flow	R-WB7
FE186	Clayton Rd, Clayton PRV Flow	R-WB55

* *The flow allocations in this table have been calculated in part using estimations. Meters have been recently installed at the Licence boundary but readings from these meters have not been used to calculate the flow allocation. After data has been collected from these meters for a suitable period of time, the flow allocations will be recalculated.*

MW – Pressure Provisions

Zone 29: *Mt. Waverley Supply Superzone*

Pressure Monitoring Point	Location	Absolute Supply Provisions	
		Minimum HGL (metres AHD)	Maximum HGL (metres AHD)
Mt Waverley Reservoir (WR16)	water level in the reservoir	126.00	132.00
Caulfield Park PRV (WB1)	at the upstream side of the PRV	97.00	132.00

Special Operational Requirements: None

YVW – Flow Allocation Limits

Zone 29: *Mt. Waverley Supply Superzone*

Flow Allocation Point		Flow Allocation Limits *						
		Peak Hour Flow Rate (ML/day)	Max Day (ML)	Winter (ML)	Spring (ML)	Summer (ML)	Autumn (ML)	Annual (ML)
(a)	Mt Waverley Reservoir (WR16)	115	53	1,750	1,970	2,600	2,010	8,330
(b)	Transfers in from Mt View Zone Via WB3 #, WB7 # and WB55 *	13	8	245	265	250	275	1,035
(c)	Transfer in from Preston Zone Via WB8 *	3	1	2	3	7	3	15
	Transfer in from Mt View Zone via Waverley-Notting Hill Main	Included in Mt. Waverley Reservoir Outflow						
Maximum Combined Allocation		131	62	1,997	2,238	2,857	2,288	9,380
Transferred to Other Zones		-	-	-	-	-	-	-
Superzone Total		131	62	1,997	2,238	2,857	2,288	9,380

\# Yarra Valley Water asset

* South East Water asset

Flow Allocations will be measured using the following expression and monitoring devices:

(a) **(FE349 + FE348 - FE19) x 0.37**
(b) **(FE410 + FE411 + FE186) x 0.37**
(c) **(FE334) x 0.37**

Flow Element	Description	Asset No. Monitored
FE349	Mt Waverley (High St) Outlet Main Flow	R-M76
FE348	Mt Waverley Outlet Main Flow	MW-M195
FE19	Mt Waverley Outlet Main Orange Gve Control Flow	MW-M195
FE334	St Kilda (Greeves St) PRV Flow	R-WB8
FE410	Huntingdale Rd, Clayton PRV Flow	R-Retic
FE411	Macrina St, Clayton PRV Flow	R-Retic
FE186	Clayton Rd, Clayton PRV Flow	R-Retic

* *The flow allocations in this table have been calculated in part using estimations. Meters have been recently installed at the Licence boundary but readings from these meters have not been used to calculate the flow allocation. After data has been collected from these meters for a suitable period of time, the flow allocations will be recalculated.*

MW – Pressure Provisions

Zone 34: *Cardinia Supply Super Sub-Zone*

Pressure Monitoring Point		Location	Absolute Pressure Provisions	
			Minimum HGL (metres AHD)	Maximum HGL (metres AHD)
P1	Mt View - Dandenong Main (M131) Bakers Road Offtake	at the offtake	126.00	167.00

Special Operational Requirements:

Any re-valving of the distribution main offtakes at the normally shut divide valve in the Mt View - Dandenong Main (M131) at Wellington Rd is to be notified to the Operating Representative and Water Operations Control Centre.

If this zone is to be supplied from Mt.View, the alteration to supply must be made in consultation with Yarra Valley Water.

YVW – Flow Allocation Limits

Zone 34: *Cardinia Supply Super Sub-Zone*

Flow Allocation Point	Flow Allocation Limits *						
	Peak Hour Flow Rate (ML/day)	Max.Day (ML)	Winter (ML)	Spring (ML)	Summer (ML)	Autumn (ML)	Annual (ML)
Cardinia Sub Zone Retail Boundary Flow Meters	33	13	320	330	440	360	1,450
Maximum Combined Allocation	33	13	320	330	440	360	1,450
Transferred to Other Zones	-	-	-	-	-	-	-
Superzone Total	33	13	320	330	440	360	1,450

Flow Allocations will be measured using the following expression and monitoring devices:

FE418F + FE3051R - (FE418R + FE3050 + FE3051F + FE3052 + FE3053)

Flow Element	Description	Asset No. Monitored
FE418R	Bakers Rd, Dandenong East Flow	R-Retic
FE3050	Wanda St, Dandenong Flow	R-Retic
FE3051F	Hansworth Rd, Dandenong Flow - Forward	R-Retic
FE3052	Jacksons Rd, Dandenong (at Police Rd) Flow	R-Retic
FE3053	Barron Court, Dandenong Flow	R-Retic
FE418F	Bakers Rd, Dandenong West Flow	R-Retic
FE3051R	Hansworth Rd, Dandenong Flow - Reverse	R-Retic

* *The flow allocations in this table have been calculated in part using estimations. Meters have been recently installed at the Licence boundary but readings from these meters have not been used to calculate the flow allocation. After data has been collected from these meters for a suitable period of time, the flow allocations will be recalculated.*

SCHEDULE 2

ENTRY POINTS AND WATER QUALITY MONITORING POINTS

A Plan designating Entry Points, Water Quality Monitoring Points and Water Quality Zones described in this Schedule is an exhibit to this agreement.

Site code	Site description	WQ Zone No.	Melways Ref.
Entry Points			
ECARHLMN	CARDINIA O/L MAIN (M281/M375)	630-700, 60	91 J4
ECRESET1	CRESWELL RES - TAP ON O/L	22	270 K 6
EFROGET1	FROGLEY TANK - TAP ON OUTLET	22	278 K 9
EGVLKENY	GREENVALE OUTLET MAIN	7A, 7	6 C 6
EJOHNET1	JOHNS HILL TANK OUTLET MAIN	46	125 A12
RLEWSET1	LEWIS HILL TANK O/L	24	121 B7
ELUSPDTP	LUSATIA PARK DETENTION POINT	26	287 B12
EMB2RT01	MONBULK RESERVOIR NO.2	47	122 G 9
ESILOLI1	SILVAN OLINDA MAIN DET. PT.	48, 56, 60, 570-590,610,620	120 B4
ESILPRE1	SILVAN PRESTON MAIN DET. PT.	48,56,60	120 B 4
ESILWAV1	SILVAN WAVERLEY MAIN DET. PT.	48,56,60,570-590, 610, 620	120 B 4
EWARBRAH	BRAHAMS RD DET PT	74	292 A 4
EWINSLRM	WINNEKE CWS O/L MAIN AT SPS	18, 25, 620	273 A 8
EWRBLYRB	LYREBIRD AVE DET. PT	73	291 F 7
EWRBMTYR	MARTYR RD DET. PT	21	290 A3
EYANYDTP	YAN YEAN T.P. DETENTION POINT	17, 19, 20	ES 647 E1
EYGLNET1	YARRA GLEN RES OUTLET MAIN	23	266 H 9
EYRRJUNC	YARRA JUNCTION DET. PT	72	288 F7
Monitoring Points			

MEASTPRS	EASTFIELD PRS	51	50 D7
MMERPUMP	YAN YEAN MAIN AT MERNDA P.S.	19	244 K 10
MSMRTDTP	SOMERTON DETENTION POINT	12, 71	180 D3
MWDTKNEE	SILVAN PRESTON MAIN	12, 14, 16, 17, 48, 49, 50	35 E 6
MWPMRSCH	WINNEKE PRESTON MAIN RESEARCH	18, 25	22 H1
MYYPSDTP	YAN YEAN P.S.	20	ES 647 E1
RBRDMET1	BROADMEADOWS O/L MAIN NEW TANK	7	6 K 5
RMON1ET1	MONTROSE RES NO.1 - TAP ON O/L	56, 580, 581	52 A 6
RMRG2RT1	MORANG RES NO. 2 - TAP ON TANK	14,15	183 F10
RMRG3RT1	MORANG RES NO. 3 - TAP ON TANK	14,15	183 F10
RMRNGET1	MORANG RES - COMBINED O/L	14	183 G 10
RMTCHET1	MITCHAM RES TAP ON 900 O/L	52, 53, 55	48 H 11
RMTCHET2	MITCHAM RES TAP ON 1150 O/L	52, 53, 55	48 J 10
RMTVWET1	MOUNT VIEW RES - O/L	60, 660	71 E 5
ROLNDET1	OLINDA RES O/L	50, 51	52 F 1
RPLENRT1	PLENTY RES - TAP ON RES	18	10 J 5
RPRESET1	PRESTON RES COMBINED O/L	9B, 11, 9, 10, 610, 620	18 G 7
RPRESIT4	PRESTON I/L FROM WINNEKE	9B, 11, 9, 14	18 G 7
RPRESIT6	PRESTON I/L FROM MITCHAM	9B, 11, 9, 53	18 G 7
RQRYHRT1	QUARRY HILL RES - TAP ON TANK	17	182 G 7
RSMT1RT1	SOMERTON H.L. NO.1 TAP ON TNK	0	179 J4
RSMT2RT1	SOMERTON H.L. NO.2 TAP ON TNK	0	179 J4
RSYR1ET1	SURREY HILLS NO.1 - TAP ON RES	53, 54, 55	46 K 11
RSYR2ET1	SURREY HILLS NO.2 - TAP ON RES	53, 54, 55	47 A 12
RWAVYET1	MT WAVERLEY RES - 900MM O/L	610, 61	61 G 12
RWAVYET2	MT WAVERLEY RES - 900MM O/L	610, 61	61 G 12

SCHEDULE 3

WATER QUALITY STANDARDS

1. OPERATING PRACTICES

1 GENERAL PRINCIPLES

1.1 MW must ensure that its systems and processes are compliant with the Safe Drinking Water Regulations 2015 (Vic).

1.2 In order to comply with the Safe Drinking Water Regulations 2015 (Vic), MW must take a risk based approach to safeguarding product quality.

1.3 Any changes to the rationale used in controlling risk must be reviewed by YVW prior to implementation.

1.4 MW must ensure that any system changes with potential quality impacts are to be communicated and approved by YVW via the OCCP process.

2 PRIMARY TREATMENT

2.1 MW must ensure that effective disinfection of drinking water is achieved before it reaches the first consumer offtake. The basis of effective disinfection is to be detailed in the Drinking Water Quality Management Plan.

2.2 For systems reliant on chlorination for primary disinfection, a general adjustment factor of 0.7 is to be used to calculate Ct to allow for the decay characteristics of chlorine, unless an alternative factor has been agreed to by both parties:

Ct = C x 0.7 x T

C = the free chlorine residual (mg/L) measured at a chlorination plant.

T = the time taken for water to travel from the primary chlorinator to the first consumer (minutes).

2.3 The parties will collaborate in developing, in accordance with sub-clause 8.2 (b), a protocol for chlorine residual management. The developed protocol will give consideration of other system operating constraints, such as hydraulic requirements and the needs of other Licensees and their customers, and will address:

2.3.1 Methodologies to optimise chlorine residuals and set chlorine residual targets across the entire Melbourne water system;

2.3.2 Monitoring and data acquisition requirements regarding measurement of chlorine residuals and associated parameters; and

2.3.3 Operational triggers and corrective actions to improve chlorine residual management.

2. PART B WATER QUALITY MONITORING

1 INTERPRETATION

In this Part:

"**Monitoring Point**" includes Water Quality Monitoring Point and Entry Point.

"**year**" means a rolling 12 month period.

"**action**" means as per agreed procedures or in consultation with YVW.

"standard" means the standards detailed for the relevant Monitoring Points in Part C.

"regulated standard" means the standards prescribed in the *Safe Drinking Water Regulations 2015* (Vic).

2 REPORTING

MW must set out in the monthly Customer Report to YVW:

- Results for the preceding 12 months at each Monitoring Point for compliance with the BWSA standards in Part C of this schedule

- Corrective actions and investigations taken within the relevant month

3 HEALTH-RELATED PARAMETERS

3.1 MW will implement a sampling and laboratory analysis program that complies with the requirements of the *Safe Drinking Water Regulations 2015* (Vic).

3.2 Measured water quality at any Monitoring Point is to comply with the specification in the *Safe Drinking Water Regulations 2015* (Vic).

3.3 Upon any *E. coli* detection for a Monitoring Point, MW must declare an incident in accordance with Clause 14.3 and take immediate action to identify and rectify any cause of the *E. coli* detection.

3.4 Each party must notify the other immediately if any routine sample exceeds the *Safe Drinking Water Regulations 2015* (Vic) standards for THMs. MW must take action if any sample at a Monitoring Point exceeds the regulated standards for THMs.

4 AESTHETIC PARAMETERS

4.1 GENERAL

4.1.1 During extreme operating periods (including drought recovery or emergencies) MW and YVW can, by mutual agreement, vary the aesthetic standards and action limits for specific Monitoring Points to optimise the operation of the water supply system (including harvesting of water sources).

4.1.2 If the trend for any aesthetic parameter is leading toward an exceedance of any aesthetic standards and action limits, MW must consult with YVW and undertake agreed actions.

4.2 TURBIDITY

4.2.1 Of samples taken at any Monitoring Point, the 95%ile in any year must be less than or equal to the standard in Part C for each source water

4.3 APPARENT COLOUR

4.3.1 Of samples taken at any Monitoring Point in any year, the 95%ile in any year must be less than or equal to the standards in Part C for each source water

4.3.2 Apparent colour is used for this standard rather than true colour because apparent colour is a more direct indicator of what customers will observe of the water. It is also a conservative measure being greater than the true colour. Melbourne Water must test for true colour when values of apparent colour exceed 15 Pt/Co units.

4.4 pH

4.4.1 Of samples of water taken at any Monitoring Point in any year, the 5%ile and 95%ile data must lie within the standards in Part C.

4.5 IRON

4.5.1 Of samples of water taken at any Monitoring Point, , the 95% ile of samples of water collected in any year must not be greater than 0.15 mg/L.

4.6 MANGANESE

4.6.1 Of samples of water taken at any Monitoring Point, the 95% ile of samples of water collected in any year must not be greater than 0.05 mg/L.

4.7 ALUMINIUM (ACID SOLUBLE)

4.7.1 Of samples of water taken at any Monitoring Point where aluminium-based treatment chemicals have been used, the 95% ile at any site for any year must not be greater than 0.10 mg/L.

4.7.2 Of samples of water taken at any Monitoring Point where aluminium-based chemicals have not been used, the 95% ile at any of these sites for any year must not be greater than 0.15 mg/L

4.7.3 MW must take immediate action if aluminium (acid soluble) in any sample exceeds:

a. 0.10 mg/L at any Monitoring Point that aluminium based chemicals have been used in the treatment process

b. 0.15 mg/L at any Monitoring Point supplied from a source that has not been treated with an aluminium based chemical in the treatment process.

4.8 BORON

4.8.1 Of samples of water taken at any Monitoring Point, the maximum for any year must not be greater than 1 mg/L.

4.9 TOTAL DISSOLVED SOLIDS

4.9.1 Of samples of water taken at any Monitoring Point, the maximum for any year must not be greater than 140 mg/L.

4.10 BROMIDE

4.10.1 Of samples of water taken at any Monitoring Point, the maximum for any year must not be greater than 0.1 mg/L.

5 ADDITIONAL PARAMETERS

5.1 COLIFORMS

5.1.1 Melbourne Water must monitor coliforms at every Monitoring Point and take immediate action upon:

a. any coliform detection at an Entry Point, or
b. any coliform detection >100 org/100ml or three coliform detections within a four week period >10 org/100ml at a Water Quality Monitoring Point.

5.2 ALGAE

5.2.1 Melbourne Water must take action and notify YVW of any increase in algal numbers that may impact on the quality of drinking water supplied, and undertake agreed actions

3. PART C WATER QUALITY STANDARDS

The following standards apply only to those Monitoring Points where the parameter is monitored in accordance with the water quality monitoring program described in Clause 10.2

6 Fixed Standards That Apply to All Monitoring Points

Parameter	Monitoring Points	Standard (mg/l)
Iron[a]	All	<0.15
Manganese[a]	All	<0.05
THMs[a]	All	<0.15
Boron[a]	All	<1
Total Dissolved Solids[d]	All	<140
Bromide[e]	All	<0.1
pH[f]	All	6.5-8.5

a) Based on 50% of ADWG limit
b) THMs – SDWR limit 0.25mg/L. Limit set to 0.15mg/L to allow for additional THMs that may be generated downstream of MW interface.
c) Boron – risk of elevated concentration from desalinated seawater supply
d) TDS - risk of elevated concentration from desalinated seawater supply
e) Bromide – risk of elevated concentration from desalinated seawater supply
f) Based on ADWG recommendations for protection of pipe condition

7 Standards that Vary Based on Monitoring Point

Standard Category[a]	Turbidity (NTU)[b]	Apparent Colour (Pt/Co)[c]	Aluminium (Acid Soluble) (mg/L)[d]
Cardinia Entry Point	< 2	< 10	< 0.15
Greenvale Entry Point	< 2	< 10	< 0.15
Healesville Entry Points	< 0.5	< 5	< 0.10
Johns Hill / Monbulk	< 2	< 15	< 0.15
Silvan Entry Points	< 2	< 10	< 0.15
Sugarloaf Entry Point	< 0.5	< 5	< 0.10
Upper Yarra Entry Points	< 3	< 15	< 0.15

Yarra Glen Entry point	< 0.5	< 5	< 0.10
Yan Yean Entry Point (online)	< 0.5	< 5	< 0.10
Silvan Monitoring Points	< 2	< 10	< 0.15
Silvan/Sugarloaf Monitoring Points	< 2	< 10	< 0.15
Silvan/Sugarloaf/Cardinia Monitoring Points	< 2	< 10	< 0.15
Silvan/Sugarloaf/Greenvale Monitoring Points	< 2	< 10	< 0.15
Sugarloaf Monitoring Points	< 1	< 5	< 0.10
Sugarloaf/Yan Yean Monitoring Points	< 1	< 5	< 0.10

a) All standards are consistent with data for the 2012/13 – 2014/15 period.

b) For filtered supplies, entry point standards are <0.5 NTU, and monitoring point standards are <1NTU (to allow for sediment mobilisation). For unfiltered and belnded supplies all entry and monitoring point standards are <2NTU, with the exception of Upper Yarra entry points, where the standard is <3NTU.

c) For filtered supplies, all entry and monitoring point standards are <5NTU. For unfiltered and blended supplies the standard is <10NTU, with the exception of Upper Yarra entry points where the standard is <15NTU.

d) For plants with aluminium based chemical dosing, the standard is <0.10 mg/L. For sites without aluminium based chemical addition the standard is <0.15 mg/L.

8 Source Water Categories

BWSA source water category	Site code	WQ Zone No.
Cardinia	ECARHLMN	630-700, 60
Cardinia/Silvan	RMTVWET1	60, 660
Greenvale	EGVLKENY	7A, 7
Healesville	ECRESET1	22
Healesville	EFROGET1	22
Johns Hill / Monbulk	EJOHNET1	46
Johns Hill / Monbulk	EMB2RT01	47
Silvan Entry Point	RLEWSET1	24
Silvan Entry Point	ESILPRE1	48,56,60
Silvan Entry Point	ESILOLI1	48, 56, 60, 570-590,610,620
Silvan Entry Point	ESILWAV1	48,56,60,570-590, 610, 620
Silvan Monitoring Point	RSYR1ET1	53, 54, 55
Silvan Monitoring Point	RSYR2ET1	53, 54, 55
Silvan Monitoring Point	RMON1ET1	56, 580, 581
Silvan Monitoring Point	RMTCHET1	52, 53, 55
Silvan Monitoring Point	RMTCHET2	52, 53, 55
Silvan Monitoring Point	ROLNDET1	50, 51
Silvan/Cardinia	RWAVYET1	610, 61
Silvan/Cardinia	RWAVYET2	610, 61
Silvan/Sugarloaf	MEASTPRS	51
Silvan/Sugarloaf	MSMRTDTP	12, 71
Silvan/Sugarloaf	MWDTKNEE	12, 14, 16, 17, 48, 49, 50

Silvan/Sugarloaf	RPRESIT4	9B, 11, 9, 14
Silvan/Sugarloaf	RPRESIT6	9B, 11, 9, 53
Silvan/Sugarloaf	RPRESET1	9B, 11, 9, 10, 610, 620
Silvan/Sugarloaf/Greenvale	RBRDMET1	7
Silvan/Sugarloaf/Greenvale	RMRG2RT1	14,15
Silvan/Sugarloaf/Greenvale	RMRG3RT1	14,15
Silvan/Sugarloaf/Greenvale	RSMT1RT1	0
Silvan/Sugarloaf/Greenvale	RSMT2RT1	0
Sugarloaf Monitoring Point	MWPMRSCH	18, 25
Sugarloaf Entry Point	EWINSLRM	18, 25, 620
Sugarloaf/Yan Yean	MMERPUMP	19
Sugarloaf/Yan Yean	MYYPSDTP	20
Sugarloaf/Yan Yean	RMRNGET1	14
Upper Yarra Entry Point	ELUSPDTP	26
Upper Yarra Entry Point	EWARBRAH	74
Upper Yarra Entry Point	EWRBLYRB	73
Upper Yarra Entry Point	EWRBMTYR	21
Upper Yarra Entry Point	EYRRJUNC	72
Sugarloaf Monitoring Point	RPLENRT1	18
Sugarloaf Monitoring Point	RQRYHRT1	17
Yan Yean Entry Point	EYANYDTP	17, 19, 20
Yarra Glen Entry Point	EYGLNET1	23

AMENDMENTS TO PART C

DATE	SITECODE	CHANGED TO / REPLACED BY	PARAMETER	REASON FOR CHANGE
1 Jul 1999	EGEMBRK1	Removed	-	Supply to Gembrook is from Silvan via Johns Hill with the Gembrook Reservoir being replaced with a tank.
7 Dec 2001	EJOHNTEM	EJOHNET1	Values for EJOHNTEM to apply, except Ct changed from 3 to 710.	This is a new sampling point at the outlet of the new Johns Hill tank. Disinfection at the new chloramination plant upstream of the tank began on 12 Feb 2002.
1 Jul 1999	ELUSPARK	ELUSPDTP	Values for ELUSPARK to apply	This site is now located at the 30 min detention point from the chlorination point.
1 Jul 1999	EYANYDTP	New site added	Values for EMERPUMP to apply, but with turbidity of 1.0 NTU.	This is the "Entry Point" for the Yan Yean WTP supply. Changed turbidity standard reflects filtered supply.
1 Aug 1999	EMERPUMP	MMERPUMP	-	New entry point installed (see above) with the monitoring point at Mernda changing to a "M" site. The source water to this location can come from either Yan Yean or Silvan Reservoirs and it is not located at the entry to the distribution immediately downstream of primary disinfection.
1 Aug 1999	MMERPUMP	-	Value for MHR Annual Standard and Adjusted Pre 95 Standard for total coliforms changed from 95% <1 to 90% <10 and 95% <1 respect.	Changed to the compliance requirements for this location.
1 Aug 1999	MMERPUMP	-	Value for THM's changed from 150 to NM	This parameter is now monitored at EYANYDTP
1 Aug 1999	EWINSLRM		Value for pH changed from 7.5 to 8	This parameter is measured prior to the addition of fluoride and is not indicative of the finished water entering the distribution system, but rather the lime addition process. All other parameters still apply.
1 Aug 1999	ESILWAV1	Duplicates removed	-	The duplicate site codes have been removed with the lowest value used for pH and turbidity compliance requirement.
1 Aug 1999	MWDTKNEE	Duplicates removed		The duplicate site codes have been removed.

DATE	SITECODE	CHANGED TO / REPLACED BY	PARAMETER	REASON FOR CHANGE
	MWPMRSCH RMRNGET1 RMTCHET1 RMTCHET2 ROLNDET1 RPRESIT5 RPRESIT6 RSYR1ET1			
1 Oct 1999	MEASTPRS	New site added	Values for ROLNDET1 micro and phys-chem. to apply	New sampling location added to meet guideline sampling requirements
1 Oct 1999	EYANYNPS	MYYPSDTP	Values for EYANYNPS micro to apply	New location at the detention point for the secondary disinfection plant at Yan Yean.
1 Oct 1999	RSMT1RT1 RSMT2RT1	MSMRTDTP	Values for RSMT2RT1 to apply	New chlorination plant installed at Somerton with monitoring at the detention point after chlorination.
1 Jul 1999	RDNDGIT1 RDNDGIT2	-	All phys / chem values changed to NM	Correction of table as these parameters are not monitored at these locations with chemical characteristics being monitored at ECARHLMN.
1 Jul 1999	RYGLNET1	Remove from table	-	Already exists in table as EYGLNET1
1 July 1999	-	-	THM heading in Table – change the units from mg/L to µg/L	Correction of units to match the values reported in table
1 July 2000	RBRDMRT1	RBRDMET1	Values for RBRDMRT1 apply	New tank installed with monitoring at the outlet main from the tank
1 Jul 1999	RPRESET1	-	Value for THM's changed from NM to 150	Correction of table as this parameter is monitored at this location

DATE	SITECODE	CHANGED TO / REPLACED BY	PARAMETER	REASON FOR CHANGE
30 Aug 2004			THM heading in Table – change the units from µg/L to mg/L	Correction of units to match the reporting requirements for DHS and ESC
30 Aug 2004	All		Value for THM changed from "150" to "0.150"	Correction of values to match the reporting requirements for DHS and ESC
30 Aug 2004	All		Addition of a minimum pH value column	The requirement of having a minimum pH level in the BWSA
30 Aug 2004	-	-	Addition of chloroacetic acid standards to the table	Chloroacetic acids are proposed to be a compliance parameter in the draft new Safe Drinking Water Regulations (SDWR) and are added to BWSA to complement Retail Companies compliance
30 Aug 2004	-	-	Addition of aluminium standard to the table	Aluminium is proposed to be a compliance parameter in the new Safe Drinking Water Regulations and is added to BWSA to complement Retail Companies compliance and show compliance at Entry Points where aluminium salts are used for treatment.
30 Aug 2004	-	-	Ct requirement figure changed from 3 to 15	To comply with requirements of the ADWG as outlined in Part A above.
30 Aug 2004	-	-	Turbidity standards changed for some sites	New turbidity standards based on the 95 % UCL of the mean for the last three years with the worst performing year's figure chosen
30 Aug 2004	-	-	Colour standards changed for some sites	New colour standards based on the 95 % UCL of the mean for the last three years with the worst performing year's figure chosen
30 Aug 2004	All	-	Compliance for *E.coli* changed from 95% <1 to 99% <1	To reflect proposed requirements of new Drinking Water Regulations and performance over the last three years.
30 Aug 2004	All	-	Total coliform compliance removed	No longer a compliance parameter in the draft ADWG nor proposed in the draft SDWR and will be retained as an operational parameter
30 Aug 2004	All	-	Columns for comparisons against previous year of pre 95 compliance removed and minimum health requirement	No longer considered relevant
30 May 2006	All		Chloroacetic standard changed from 0.15 to 0.12 mg/L	Revised standard after release of the Safe Drinking Water Regulations

DATE	SITECODE	CHANGED TO / REPLACED BY	PARAMETER	REASON FOR CHANGE
30 May 2006	All		Dichloroacetic standard changed from 0.10 to 0.08 mg/L	Revised standard after release of the Safe Drinking Water Regulations
30 May 2006	All		Trichloroacetic standard changed from 0.10 to 0.08 mg/L	Revised standard after release of the Safe Drinking Water Regulations
01 Feb 2007	ECARHLMN EGVLKENY ESILWAV1 ESILOLI1 ESILPRE1 ELEWSET1 EJOHNET1	-	Aluminium standard changed from 0.1 mg/L to **0.15** mg/L	These sites are not from sources where water is treated with aluminium-based chemicals
01 Feb 2007	EWINSLRM		Fluoride standards changed to 0.7 – 1.2 from NM	The Fluoride addition now occurs at Winneke rather than Research and fluoride is monitored at this point
01 Feb 2007	EWINSLRM		Value of maximum pH changed from 7.9 to 7.7	The value is changed to that previously measured at Research and represents the water after pH correction and the addition of fluoride
5-Aug-2008	RBRNART1 RDNDGIT1 RDNDGIT2 RWAN1RT1 RWAN2RT1		All	Sitecodes removed due to revised YVW zones and monitoring points
5-Aug-2008	All		Zones supplied	Modified zone numbers in table to reflect Schedule 2
	RLLDLRT1	Site Removed	Site Removed	Site removed as a result of the transfer of assets between Melbourne Water and Yarra Valley

DATE	SITECODE	CHANGED TO / REPLACED BY	PARAMETER	REASON FOR CHANGE
29-Apr-2009				Water
29-Apr-2009	RYRMBRT1	Site Removed	Site Removed	Site removed as a result of the transfer of assets between Melbourne Water and Yarra Valley Water
17-May-2016	ELEWSET1	RLEWSET1		Site renamed as water supplied to Lewis Hill tank receives primary treatment via the Silvan Waverley TP. Sample site is therefore reflective of a storage reservoir.
17-May-2016	EMB1RT01	EMB2RT01		Monbulk tanks are in series. Monitoring at downstream tank outlet to provide WQ relevant to water entering supply.
17-May-2016	RPRESIT5	Site removed		New program measures on reservoir outlets rather than inlets, unless site needed for zone water quality. Indicative water quality measured at MWDTKNEE.
17-May-2016	RMTVWIT1	Sites removed		New program measures on reservoir outlets rather than inlets, unless site needed for zone water quality. Zone covered by RMTCHET1 and RMTCHET2.
17-May-2016				Added 'General Principles' section to operating practices
17-May-2016				Replaced specific detail around requirements for primary disinfection with requirements to comply with SDWR (2015) and risk management plan.
17-May-2016				Updated E. coli requirements to reference SDWR (2015) ie no *E. coli* detection
17-May-2016				Removed requirements for chloroacetic acids due to change in regulations

DATE	SITECODE	CHANGED TO / REPLACED BY	PARAMETER	REASON FOR CHANGE
17-May-2016				Removed fluoride dosing requirements as they are specified in Section 10 of the BWSA
17-May-20162016				Added a general section to the aesthetic parameters section that describes the general approach to the limits
17-May-2016				Changed aesthetic limits to 95%ile (rather than 95% UCL of the mean) to be consistent with the change in statistical calculation in the SDWR (2015)
17-May-2016				Added boron, TDS and bromide parameters due to potential for introduction of desalination plant.
17-May-2016				Introduced two new summary tables with limits that vary for monitoring points and limits that are fixed for all monitoring points
17-May-2016				Removed table with previous limits based on specific entry points and monitoring points.
17-May-2016				Revised colour and turbidity limits based on 95%ile data from 2012/13 -2014/15

SCHEDULE 4

DIRECT CONNECTIONS

PART A – ARRANGEMENTS BETWEEN MW AND YVW

1. INTERPRETATION

The following definitions apply in this Schedule.

"**customer**" means a customer of YVW supplied from a direct connection point.

"**direct connection point**" means:

(a) in relation to any part of a MW pipeline, the downstream flange of the first valve on the offtake from that pipeline, to which a temporary trunk service is connected; or

(b) in relation to a MW aqueduct:

(i) the downstream flange of the first valve on the temporary trunk service downstream of the exterior of the wall or embankment of the aqueduct; or

(ii) the aqueduct property boundary if there is no valve between the aqueduct and that boundary; or

(c) in any other case, a point determined by MW.

"**temporary trunk service** " means the pipe from MW's pipeline, aqueduct or other source of water to YVW's meter assembly or, where no meter is fitted, the stop-tap near the boundary of YVW's customer's premises, and any fixtures attached to that pipe.

2. APPLICATION OF SCHEDULE

This Schedule applies, in addition to the provisions of sub-clause 15.2, to all premises and YVW customers referred to in paragraph 15.2(a).

3. MW'S RIGHTS AND OBLIGATIONS

3.1 **To maintain supply**

(a) MW must take all reasonable action to maintain a rate of flow at each direct connection point sufficient to provide an adequate supply to YVW's customer, under normal operating conditions.

(b) Item (a) does not require MW to supply water of any particular volume, or at any particular pressure.

3.2 **Water Quality Obligations**

(a) Paragraph 10.1(a) applies to water supplied by MW under this Schedule only if the parties have agreed that MW can meet the requirements of that paragraph without incurring additional costs.

(b) Paragraph 10.1(a) does not apply to water supplied by MW under this Schedule if:

(i) although the water has been disinfected, MW would be required to incur additional costs to meet the requirements of that paragraph; or

(ii) the water has not been disinfected, or is supplied from an open aqueduct or open storage

3.3 **Maintenance obligation**

MW is not required to maintain any temporary trunk service.

3.4 **Inspection obligations**

MW must regularly inspect, and advise YVW in writing of any faults in, a temporary trunk service supplying water from an aqueduct upstream of a direct connection point.

3.5 **Unplanned interruptions**

MW must restore any unplanned alteration or interruption to a supply of water at a direct connection point, as soon as is practicable after the alteration or interruption occurs.

3.6 **Emergency entry on land**

Before MW exercises its power under section 96 of the *Melbourne and Metropolitan Board of Works Act* 1958 to enter the land of an YVW customer supplied under sub-clause 15.2 in an emergency, MW must, wherever possible, inform both YVW and the customer.

3.7 **Power to terminate supply**

(a) MW may terminate a supply of water to a direct connection point after giving YVW 12 months' notice to YVW and YVW's customer of its intention to do so.

(b) If MW terminates a supply of water without complying with item (a), MW must supply the relevant YVW customer with an alternative supply of water of comparable pressure, volume and quality to the terminated supply:

(i) if no notice has been given before the supply is terminated, for 12 months after the supply is terminated; or

(ii) if notice has been given, but the supply is terminated before 12 months has expired, for the balance of that period.

(c) Item (a) only applies in respect of an existing customer if YVW's agreement with the customer allows YVW to terminate the supply of water to the customer after giving the customer 12 months' notice or less.

3.8 **Indemnities**

(a) Subject to item (b), if MW fails to provide an alternative supply in accordance with item 3.7(b), it must indemnify YVW and the relevant customer or consumer of water (each an "**indemnified person**") against, and must pay the amount of, all reasonable losses, liabilities and expenses incurred by the indemnified person directly or indirectly resulting from any failure of MW to give notice in accordance with item 3.7(b), except to the extent that the loss, liability or expense was incurred through an act or omission of the indemnified person.

(b) Item (a) only applies in respect of an existing customer if YVW's agreement with the customer allows YVW to terminate the supply of water to the customer after giving the customer 12 months' notice or less.

(c) Subject to item (d), MW will indemnify YVW and the relevant customer or consumer of water (each an "**indemnified person**") against, and must pay the amount of one half of all reasonable losses, liabilities and expenses incurred by the indemnified person directly or indirectly resulting from the quality of water supplied by MW at a direct connection point, except to the extent that the loss, liability or expense was incurred through the act or omission of the indemnified person.

(d) Item (b) only applies if:

(i) YVW has entered into an agreement with the relevant customer containing terms of comparable effect to the terms set out in Part B; and

(ii) YVW has included in every bill sent to the relevant customer a reminder that the quality and supply of water supplied is subject to the terms of the agreement referred to in item (i); and

(iii) YVW has complied with paragraph 15.2(f) in respect of the relevant customer and premises.

(e) Whenever YVW has failed to comply with any requirement of paragraph (d) YVW will indemnify MW and the relevant customer or consumer of water (each an "indemnified person") against, and must pay the amount of one half of all reasonable losses, liabilities and expenses incurred by the indemnified person directly or indirectly resulting from the quality of water supplied by MW at a direct connection point, except to the extent that the loss, liability or expense was incurred through the act or omission of the indemnified person.

4. YVW'S RIGHTS AND OBLIGATIONS

4.1 **To enter into agreement with new owners**

Whenever YVW discovers that the ownership of any premises referred to in item 2 has changed, YVW must enter into an agreement with the new owner of the premises containing terms of comparable effect to the terms set out in Part B.

4.2 **To require customers to repair**

Whenever MW notifies YVW of a fault in a temporary trunk service under item 3.4, YVW must require the relevant customer to repair the fault.

4.3 **To operate MW's valves**

YVW may operate the first valve at or adjacent to a direct connection point:

(a) when it is required to do so for the purposes of an agreement with a customer, after giving MW at least 7 days' notice of its intention to do so; and

(b) in an emergency, but must advise MW that it has done so as soon as reasonably possible after operating the valve.

4.4 **To calculate volumes**

If, for any reason, YVW has failed to install or read a meter in accordance with paragraph 15.2(h), or a meter is out of service or registering incorrectly for any part of a billing period, YVW must:

(a) estimate the volume of water supplied to the relevant customer in one of the ways prescribed by Regulation 317 of the Water Industry Regulations 1995; and

(b) include that estimate in the next report given by YVW to MW under paragraph 15.2(j)(i).

4.5 **To notify MW of disconnection**

YVW must notify MW within 3 months after the supply to any premises referred to in item 2 is disconnected.

4.6 **To disconnect supply**

(a) Whenever YVW receives a notice from MW under item 3.8(a), YVW must disconnect the relevant temporary trunk service at the direct connection point before the expiration of 12 months after the date of the notice.

(b) MW may, by written notice to YVW, require YVW to disconnect a temporary trunk service connected at a direct connection point whenever MW reasonably considers that the direct connection point or related works have caused damage to MW's water supply works.

(c) YVW must promptly comply with any notice given under item (b).

4.7 **To manage certain contact with Customers**

YVW must manage all necessary contacts with relevant customers with respect to interruptions of supply referred to in Part B, item 2.

5. CHARGES

5.1 What an invoice must contain

On receiving a report from YVW under paragraph 15.2(j)(i), MW must invoice YVW for such amount of the total volume of water set out in that report as has not been, or will not be, included in an invoice given under clause 22, at the usage charge from time to time set out in Schedule 5.

5.2 When an invoice must be paid to MW

YVW must pay the full amount of any invoice given in accordance with item 5.1 within 7 days of receiving the invoice.

5.3 Interest payable

Sub-clause 23.4applies to any amount not paid in accordance with item 5.2.

5.4 Disputes about amounts payable

Paragraphs 23.5(a), (d) and (e) apply to any dispute about an invoice given under item 5.2.

5.5 Deductions and Set-offs not allowed

Sub-clause 23.6 applies to any amount payable under items 5.2 or 5.3.

PART B – STANDARD CONDITIONS OF SUPPLY TO CUSTOMERS

1. SUPPLY OF WATER

(a) YVW will endeavour to ensure that MW takes all reasonable action to maintain a rate of flow at the direct connection point to provide an adequate supply to the Customer under normal operating conditions.

(b) Item (a) does not require YVW or MW to supply water:

(i) of any particular volume; or

(ii) of any particular quality; or

(iii) continuously.

[Insert the following clause in a customer's agreement whenever item 3.2(b) of Part A applies to the supply]

(c) Water supplied under this agreement:

(i) has not been disinfected; and

(ii) is not either fit for the purpose of, or of a quality suitable for, human consumption (including for drinking or for handling or preparing food).

2. **INTERRUPTIONS TO SUPPLY**

(a) The supply of water under this agreement may be altered or interrupted from time to time.

(b) Whenever an alteration or interruption to supply is required by MW to construct, repair, maintain, commission or carry out flow tests on any part of MW's water supply system:

(i) YVW must promptly notify the Customer upon receiving notice from MW of its intention to alter or interrupt the supply; and

(ii) MW will restore the supply at the direct connection point as soon as practicable.

(c) Whenever an unplanned alteration or interruption to the supply of water by MW occurs, MW will restore the supply at the direct connection point as soon as practicable.

3. **MAINTENANCE OBLIGATIONS**

(a) Subject to paragraph (c), the Customer must maintain:

(i) the temporary trunk service ; and

(ii) all plumbing works on the Customer's premises.

(b) All maintenance work required under paragraph (a) must be undertaken by a registered plumber.

(b) The Customer must obtain the written consent of MW before carrying out any maintenance under this clause on land belonging to MW.

(d) YVW may, by written notice to the Customer, require the Customer to repair, or carry out maintenance on, any works referred to in paragraph (a), within the time specified in the notice or any longer time allowed by YVW.

(e) If the Customer does not comply with the notice given under paragraph (d) within the time specified in the notice, or any longer time allowed by YVW, YVW may carry out the required repairs and recover its reasonable costs from the Customer.

4. **TERMINATION OF SUPPLY**

(a) YVW may terminate this agreement and any supply of water pursuant to this agreement:

(i) at any time, if MW gives YVW notice that MW considers that the direct connection point or related works have caused damage to MW's water supply works; or

(ii) at or near the expiration of a period of 12 months' notice given to the Customer by YVW of MW's intention to terminate the supply of water to the direct connection point.

(b) YVW's obligation to supply water under this agreement terminates if MW terminates the supply of water to the direct connection point:

(i) without giving notice to YVW under sub-paragraph (a)(ii); or

(ii) before the expiration of the period of any notice given under sub-paragraph (a)(ii).

(c) If MW terminates the supply of water in the manner described in paragraph (b), MW has agreed with YVW that MW will supply the customer with an alterative supply of water of comparable pressure, volume and quality to the terminated supply:

(i) if no notice has been given before the supply is terminated, for 12 months after the supply is terminated; or

(ii) if notice has been given, but the supply is terminated before 12 months has expired, for the balance of that period.

(d) If MW fails to provide an alternative supply in accordance with paragraph (c), MW has agreed with YVW that MW will indemnify the Customer against, and will pay the amount of, all reasonable losses, liabilities and expenses incurred by the Customer directly or indirectly resulting from any failure of MW to give notice in accordance with sub-paragraph (a)(ii), except to the extent that the loss, liability or expenses incurred through an act or omission of YVW or the Customer.

5. ACKNOWLEDGMENTS BY CUSTOMER

The Customer acknowledges that:

(a) a supply of water will only be available at the direct connection point when there is water available at sufficient pressure to provide a supply; and

(b) a supply of water may not be available during peak demand periods or periods of restriction; and

(c) if the Customer requires a continuous supply of water, the Customer must provide a storage on the Customer's premises of sufficient capacity to ensure a continuous supply for the Customer's requirements;

(d) neither YVW nor MW has made any representation to the Customer in relation to the volume, pressure, quality or continuity of any water supplied under this agreement; and

(e) the Customer has not relied on any such representation in entering to this agreement and will not rely on any such representation during the course of this agreement.

SCHEDULE 5

CHARGES

The *Bulk Water Charges* as set out in the Melbourne Metropolitan Water, Wastewater and Drainage Services Pricing Order that is in effect from time to time.

SCHEDULE 6

FORMULAE FOR DETERMINING WATER SUPPLIED TO YVW

1. The volume of water supplied by MW to YVW in any period is determined by the formula:

$$V = I - D$$

Where:

V is the volume supplied for that period.

I is the sum of the metered inflows for that period at each Billing Point described in Table A.

D is the sum of the metered outflows for that period at each Billing Period described in Table B.

2. For the purpose of item 1, metered inflows and metered outflows are determined by reference to readings from each Billing Meter which are recorded by MW's SCADA System.

3. For one billing period in every three months the Volume calculated under item 1 will include the total volume of water supplied through meters in the preceding three months at:

   (a) the Yellingbo offtake (inflow); and

   (b) the inlet to the Silvan Inlet channel from the Seville Reservoir (outflow).

4. Despite item 3(b), in any period when the Silvan Inlet Channel is supplied from the Seville Reservoir, MW:

   (a) may include an estimate of the volume so supplied in the preceding week in each invoice given under sub-paragraph 22.1(a)(ii); and, if so

   (b) must make a corresponding adjustment to allow for every such estimate, when making an adjustment under item 3(b).

TABLE A

METERED INFLOWS

Flow Element	ITN Call Up	Description
Inflows		
FE172	WQD10.A1	Silvan – Waverley Outlet
FE173	WQD12.A1	Silvan - Preston Outlet
FE174	WQD11.A1	Silvan - Olinda Outlet
FE184	WR133.A3	Winneke Reservoir Outlet
FE62 F	WQD8.A1	Greenvale 1350mm Outlet
FE5016F or FE98F	WQS2.A16 or WQS2.A18*	Yan Yean Outlet
FE321F	WR17.A12	Notting Hill - Waverley Reservoir
FE3086R (North Flow)	WG3086.A2	St Albans – Greenvale (North Flow)
FE34	WC39.A2	Monbulk No 1 Pump Station WP49
FE91	WP75.A1	Monbulk No 2 Pump Station WP75
FE478	WP135.A1	Yarra Glen Pump Station
FE458	WR99.A1	Cresswell Reservoir Outlet
FE3015	WB89.A5	Martyr Rd PRS – Station Flow, WB89
FE3016	WB82.A3	Yarra Junction PRS, WB82
FE3018	WC35.A2	Lusatia Park PRS, WB71
FE443	WB84.A3	East Warburton (Lyrebird Avenue), WB84
FE521	WB188.A1	Brahams Road, WB188
Bulk Meter	Bulk meter to be read every 3 months	Yellingbo PRS, WB61
FE444	WR102.A1	Frogley Reservoir Outlet
FE523	WQD9.A1	Greenvale Pump Station Flow
FE3024	WR139.A2	Kallista P/Stn, WP245 – Johns Hill Reservoir Inlet
FE418F	WG129.A3	Cardinia to Mt View (Bakers Rd) Flow
FE3051R (North Flow)	WG3051.A2	Police Road at Hansworth Street
FE3055	WG3055.A1	Bayswater Road at Dandenong Creek
FE3056	WG3056.A1	Dorset Road at Dandenong Creek
FE342	WR11.A3	Montrose Reservoir Outlet
FE3029R (North Flow)	WG3029.A2	Melrose Dr at Catherine Ave
FE3030R (North Flow)	WG3030.A2	Mickleham Rd at Melrose Dr
FE3031R (North Flow)	WG3031.A2	Coventry St at Mascoma St
FE3032R (East Flow)	WG3032.A2	Reynard St at Moonee Ponds Ck
FE3044R (North Flow)	WG3044.A2	Dandenong Rd at Glenferrie Rd
FE3058R (East Flow)	WG3058.A2	Sharpes Rd east of Broadmeadows Rd
FE3065	WG3065.A1	Silvan - Waverley at Gallaghers Rd PS
FE653	WG653.A1	Merri Creek – Westgarth Mains
FE3037	WG3037.A1	St Georges Rd north of Clark St
FE3034R (North Flow)	WG3034.A2	Park St at The Avenue

FE3035R (North flow)	WG3035.A2	Royal Pde 200m south of Park St
FE3036R (North Flow)	WG3036.A2	Park St at Bowen Crescent
FE3038R (East Flow)	WG3038.A2	Heidelberg Rd at Merri Creek
FE3039R (East Flow)	WG3039.A2	Moreland Rd at Moonee Ponds Creek
FE3063R (East Flow)	WG3063.A2	900 (M9) Gaffney St at Moonee Ponds Creek
FE3064R (East Flow)	WG3064.A2	900 (M70) Gaffney St at Moonee Ponds Creek
FE3079R (North Flow)	WG3079.A2	Park St West of Lygon St

TABLE B

METERED OUTFLOWS

Outflows		
FE270	WG270.A1	Silvan – Waverley Main No. 1 d/s faulds
FE271	WG270.A2	Silvan – Waverley Main No 2 d/s faulds
FE3086F (South Flow)	WG3086.A1	Greenvale - St Albans (South Flow)
FE5016R or FE98R	WQS2.A20 or WQS2.A19*	Yan Yean Inflow
FE62R	WQD8.A44	Greenvale Reservoir 1350mm Outflow Reversed
FE358	WG358.A1	Greenvale Reservoir Inlet
FE321R	WR17.A11	Waverley Reservoir - Notting Hill
	Bulk meter to be read every 3 months	Seville to Silvan Inlet Channel
FE3049	WG3049.A1	Princes Hwy at Springvale Road
FE3050	WG3050.A1	Police Road at Wanda Street
FE3051F	WG3051.A1	Police Road at Hansworth Street
FE3052	WG3052.A1	Jacksons Road at Police Road
FE3053	WG3053.A1	Police Road at Baron Court
FE418R	WG129.A2	Mt View to Cardinia Sub Zone
FE3057	WG3057.A1	Colchester Rd at Dandenong Ck
FE410	WG410.A1	Huntingdale Road PRV
FE411	WG411.A1	Macrina Street PRV
FE3046	WG3046.A1	North Rd east of Clayton Road and PRV WB55
FE3027	WG3027.A1	Melrose Dr at Springbank Rd
FE3028	WG3028.A1	Melrose Dr at Trade Park Dr
FE3029F (South Flow)	WG3029.A1	Melrose Dr at Catherine Cr
FE3030F (South Flow)	WG3030.A1	Mickleham Rd at Melrose Dr
FE3031F (South Flow)	WG3031.A1	Coventry St at Mascoma St
FE3032F (West Flow)	WG3032.A1	Reynard St at Moonee Ponds Ck
FE3041	WG3041.A1	Bridge Rd at Yarra River
FE3042	WG3042.A1	Toorak Rd at Kooyong Rd
FE3043	WG3043.A1	Malvern Rd at Kooyong Rd
FE3044F (South Flow)	WG3044.A1	Dandenong Rd at Glenferrie Rd
FE3045	WG3045.A1	Dandenong Rd at Warrigal Rd
FE3047	WG3047.A1	North Rd at Princess Hwy
FE3048	WG3048.A1	Princess Hwy at McNaughton Rd
FE3058F (West Flow)	WG3058.A1	Western Transfer Main – Sharpes Rd east of Broadmeadows Rd
FE3062	WG3062.A1	Gaffney St at Moonee Ponds Ck
FE3081	WG3081.A1	Inkerman Rd at Park Cres
FE3082	WG3082.A1	Queens Ave at Princess Hwy
FE3033	WG3033.A1	Park St at Fleming St
FE3034F (South Flow)	WG3034.A1	Park St at The Avenue

FE3035F (South Flow)	WG3035.A1	Royal Pde 200m south of Park St
FE3036F (South Flow)	WG3036.A1	Park St at Bowen Crescent
FE3038F (West Flow)	WG3038.A1	Heidelberg Rd at Merri Creek

FE3039F (West Flow)	WG3039.A1	Moreland Rd at Moonee Ponds Creek
FE3063F (West Flow)	WG3063.A1	900 (M9) Gaffney St at Moonee Ponds Creek
FE3064F (West Flow)	WG3064.A1	900 (M70) Gaffney St at Moonee Ponds Creek
FE3079F (South Flow)	WG3079.A1	Park St West of Lygon St
FE3006	WG653.A2	M474 St Georges Rd at Clark St
FE3007	WG653.A3	M160 St Georges Rd at Clark St
FE3080	WG3080.A1	Victoria St at Yarra River
FE3013	WG3013.A1	Sunbury Rd

Adjustments		
LE33	WR33.A1	Change in Morang Zone Storage
LE 21& LE22	WR21.A1, WR22.A1	Change in Preston Zone Storage
LE10, LE19, LE25, LE26	WR10.A7, WR19.A1, WR25.A5, WR26.A2	Change in Mitcham Zone Storage
LE15, LE16	WR15.A2, WR16.A2	Change in Waverley Zone Storage
LE67	WR67.A1	Change in Yuroke Storage
	WXYVW	Waste by Melbourne Water within Yarra Valley Water.

* WQS2.A19 - Only to be used if Yan Yean inflow by-passes the Yan Yean Water Treatment Plant.

SCHEDULE 7

MW'S QUALITY MANAGEMENT SYSTEM FOR DRINKING WATER QUALITY

1. ACCREDITED STANDARDS AND LEGISLATION

(a) MW must:

(i) manage all public health and environmental risks associated with providing the Water Supply Services in accordance with AS/NZ ISO 31000; and

(ii) maintain an Environmental Management System certified to ISO 14001; and

(iii) maintain a Quality Management System for Drinking Water Quality certified to AS/NZ ISO 9001; and

(iv) maintain compliance with the *Safe Drinking Water Act*.

(b) The Quality Management System for Drinking Water Quality must:

(i) have procedures and systems for managing any risk that water harvested, stored, transported or treated by MW under this agreement may cause either party not to comply with either:

(A) any performance standard concerning water quality under this agreement; or

(B) any obligation imposed by or under any Act; and

(ii) be certified by an independent auditor accredited by JAS/ANZ.

2. RISK ASSESSMENT

36.12 2.1 **MW Risks**

MW must assess all relevant risks associated with providing the Water Supply Services arising in all parts of MW's water supply system by employing methods comparable to a Hazard Analysis and Critical Control Point evaluation.

2.2 **YVW's Risks**

YVW must assess all relevant risks arising in YVW's water supply system from an Interface Point to the point at which water is supplied to customers, by employing methods referred to in item 2.1.

2.3 **Obligation to co-ordinate activities**

To ensure that any risk to the quality of drinking water is effectively managed in the water supply system of both parties, each party must co-operate with the other to ensure that:

(a) the assessments referred to in items 2.1 and 2.2; and

(b) the plans and activities of each of them to manage all risks,

are complementary and co-ordinated.

3. MW'S QUALITY MANAGEMENT SYSTEM FOR DRINKING WATER QUALITY

(a) MW must effectively manage the risks referred to in items 2.1 and 2.2 through its Quality Management System for Drinking Water Quality.

(b) MW's Quality Management System for Drinking Water Quality must also set out practices, procedures and rules to be followed by MW, with respect to:

(i) catchment management;

(ii) operations affecting water quality (including operating and maintaining open channels, aqueducts and other open water sources, controlling reservoir levels, determining flow rates, reversing flows and changing sources from which Licensees are supplied);

(iii) ensuring the accuracy and reliability of monitoring and measuring water quality;

(iv) maintaining the transfer network including cleaning of water mains and tanks;

(v) filtering water;

(vi) disinfecting water;

(vii) real time monitoring and reporting of water quality;

(viii) testing water for microbiological and other indicators of water quality;

(ix) reporting the results of water quality monitoring against guidelines and standards agreed by the parties;

(x) water quality, incorporated in MW's Emergency Response Plan;

(xi) water quality, as set out in the Co-ordinated Crisis Management Plan referred to in paragraph 14.2(b);

(xii) monitoring and reporting on pressures and flows, as they affect water quality;

(xiii) other matters determined by MW.

4. **AUDIT OF MW'S QUALITY MANAGEMENT SYSTEM FOR DRINKING WATER QUALITY**

(a) MW may, from time to time, audit MW's compliance with its Quality Management System for Drinking Water Quality

~~(b)~~(a) MW must promptly give YVW a management summary report of any audit referred to in paragraph (a). Formatted: Bullets and Numbering

~~(c)~~(b) The parties must, at intervals of not more than two years, commission an independent audit of MW's compliance with MW's Quality Management System for Drinking Water Quality.

~~(d)~~(c) The parties must:

(i) agree on the terms of reference for and the person to undertake, an audit under paragraph (c); and

(ii) meet the costs of the audit in equal shares.

~~(e)~~(d) MW must co-operate with, and give all reasonable assistance to, an independent auditor appointed under paragraph (c). Formatted: Bullets and Numbering

~~(f)~~(e) MW must, within 60 days of receiving the auditor's report, determine whether to accept any or all of the findings and recommendations in the report and when and how it will act on those findings or implement those recommendations.

~~(g)~~(f) MW must:

(i) as soon as practicable and within 60 days of receiving the auditor's report, report to YVW on each matter determined under paragraph (f); and

(ii) if it determines not to accept any finding or recommendation in the report, set out in the report referred to in sub-paragraph (i) that finding or recommendation and MW's reasons for not accepting it.

5. **REVIEW OF MW's QUALITY MANAGEMENT SYSTEM FOR DRINKING WATER QUALITY AND RISK ASSESSMENT**

(a) MW may, from time to time, after consulting YVW, alter its Quality Management System for Drinking Water Quality to improve the method of managing, or reduce the cost to the community of managing, risks associated with the management of water quality from the harvesting process to the asset interface Point.

(b) The parties must review, and, if appropriate, amend MW's Quality Management System for Drinking Water Quality in accordance with this clause.

(c) Within 24 months after the commencement of this agreement the parties must jointly review MW's Quality Management System for Drinking Water Quality to ensure that the risk assessment procedures referred to in item 2.1 are properly included in that System.

(d) Thereafter, the parties must:

(i) conduct a review at intervals of not more than two years; and

(ii) prepare mutually acceptable terms of reference for a review; and

(iii) appoint either:

(A) an independent reviewer; or

(B) a team with members nominated by each party and each other Licensee,

to conduct the review.

(e) Unless the parties agree otherwise, terms of reference referred to in sub-paragraph (d)(ii) must require the reviewer to:

(i) review MW's assessment of all relevant risks associated with the production of safe water from the catchment to Asset Interface Point, by employing methods comparable to a Hazard Analysis Critical Control point evaluation; and

(ii) review the extent to which MW has identified critical control points within the meaning of the evaluation method referred to in sub-paragraph (i); and

(iii) determine what actions, works or measures have been or should be undertaken by MW to manage the relevant risk at each critical control point; and

(iv) the method for ranking relevant risks to be applied by MW; and

(v) recommend such changes to MW's Quality Management System for Water Quality as the auditor considers appropriate; and

(vi) examine and report upon such other matters as the parties determine; and

(vii) report to MW and YVW upon those matters and recommendations.

(f) MW must meet the cost of each review.

(g) Each party must co-operate with, and give all reasonable assistance to, an independent reviewer or review team appointed under sub-paragraph (c)(ii).

(h) MW must, within 60 days of receiving the report of a review, determine whether to accept any or all of the findings and recommendations in the report and when and how it will act on those findings or implement those recommendations.

(i) MW must:

(i) as soon as practicable and within 60 days of receiving the reviewer's report, report to YVW on each matter determined under paragraph (g); and

(ii) if it determines not to accept any finding or recommendation in the report, set out in the report referred to in sub-paragraph (i) that finding or recommendation and MW's reasons for not accepting it.

6. DOCUMENTS

MW must promptly give YVW a copy of its Water Quality Management System for Drinking Water Quality when it has been prepared and thereafter whenever it is amended.

SCHEDULE 8 PROTOCOLS

8.1 Protocol for Notification of changes to Disinfection Setpoints between Yarra Valley Water and Melbourne Water

1. Principles

Melbourne Water is responsible for the Disinfection of bulk water supplied to the retail water companies.

As the operator of all Primary Disinfection Plants and some Secondary Disinfection Plants, Melbourne Water is required to adjust disinfection setpoints from time to time.

The Bulk Water Supply Agreement (BWSA 1999) sets out Melbourne Water's obligations relating to Primary Disinfection setpoint changes. Melbourne Water acknowledges that any changes to disinfection setpoints whether they be Primary or Secondary plants can potentially impact on Yarra Valley Water's customers and compliance with Yarra Valley Water's licence requirements.

Melbourne Water and Yarra Valley Water also acknowledge that there is a need to optimise setpoints to achieve a balance between customer satisfaction and microbiological compliance. The primary considerations in changing setpoints will be the health of retail water company customers and maintaining compliance with operating licence requirements and water quality guidelines.

2. Purpose

The purpose of this protocol is to clarify notification procedures for disinfection setpoint changes in consideration of the above and to achieve a consistent approach across the Melbourne Water system.

3. Minimum Setpoints for Primary Disinfection Plants supplying YVW Customers.

In accordance with Clause 10.1 (b) of the BWSA 1999, Melbourne Water will not drop below the following minimum setpoints without prior written consent from Yarra Valley Water's Operating Representative. Current setpoints are shown in the monthly customer report.

Primary Disinfection Plant	Min. Setpoint
Winneke	0.55
Yan Yean Treatment Plant	0.50

Silvan Waverley	1.00
Silvan Olinda	1.00
Silvan Preston	1.00
Monbulk (chloramination)	1.10
Greenvale St. Albans	0.80
Yarra Junction	0.40
Lusatia Park	0.50
Martyr Rd.	0.40
Silvan Seville (chloramination)	1.20
Kallista (chloramination)	1.20
Cardinia 1700 main	0.65
Creswell	1.60
Frogley	1.10
Yarra Glen	1.80

4. Notification of Setpoint Changes for Primary and Secondary Disinfection Plants supplying YVW Customers.

- No notification required.
  Disinfection Setpoints which will be increased or decreased from time to time by Melbourne Water without notification to Yarra Valley Water in endeavouring to achieve a target chlorine residual at the entry point to Yarra Valley Water's system.

	Target Residual
Creswell	0.60
Frogley	0.60
Yarra Glen	0.60
Yan Yean Pumping Station (Secondary Disinfection)	0.70

- Notification to and approval from Yarra Valley Water.
  Disinfection Setpoints which will be increased or decreased from time to time by Melbourne Water only after a notification of works form has been forwarded and countersigned. Yarra Valley Water or Melbourne Water shall indicate on the notification of works form the proposed duration of the new setpoint.

Silvan Olinda
Monbulk (chloramination)
Yarra Junction
Lusatia Park
Martyr Rd.
Silvan Seville (chloramination)
Kallista (chloramination)
Somerton (Secondary Disinfection)

- Notification and approval from Yarra Valley Water and other affected Retailers.

Disinfection Setpoints which will be increased or decreased from time to time by Melbourne Water only after a notification of works form has been forwarded and countersigned by all affected retail water companies. The requesting retail water company or Melbourne Water shall indicate on the notification of works form the proposed duration of the new setpoint. In addition, the requesting (or countersigning) retail water company shall state the basis on which the requested change (or countersignature) to set point is made, in terms of its health related, operating licence or drinking water quality guideline requirements or targets. In each case the health of retail water company customers will be the primary consideration (followed by maintaining compliance with operating licence requirements and water quality guidelines) in changing the setpoint. In the event that a countersigned notification of works form is not returned to Melbourne Water within 3 working days of having been received and acknowledged by the retail water company, it will be assumed that the retail water company agrees with the intent of the notification of works form unless they advise otherwise.

Winneke (YVW, CWW)
Yan Yean Treatment Plant (YVW, CWW*)
Silvan Waverley (YVW, SEW)
Silvan Preston (YVW, CWW,SEW)
Greenvale St. Albans (YVW, CWW)
Cardinia 1700 main (YVW, SEW)

* Notification and approval from CWW is required only when Yan Yean water is supplied directly to CWW zones (emergency supply scenarios).

8.2 Protocol for Installing, Maintaining, Operating, Reading and Testing Bulk Water Billing meters between Yarra Valley Water and Melbourne Water

1. Principles

Melbourne Water Corporation (MWC) is responsible for the measurement of Bulk Water supplied to Yarra Valley Water Limited (YVW) and is the owner and manager of all Bulk Water Billing meters.

The Bulk Water Supply Agreement (BWSA 1999) sets out MWC's obligations relating to Bulk Water Billing meters. Under Clause 24.6, MWC and YVW must adopt and implement a protocol for installing, maintaining, operating, reading and testing of Billing meters.

The parties acknowledge the high degree of importance of accurately measuring the volume of bulk water and that there is a transparent and auditable management system for the billing meters.

2. Purpose

The purpose of this protocol is to outline the objectives and key elements of MWC's management system for bulk water billing meters to ensure a high degree of accuracy associated with the bulk water volumes purchased by YVW.

3. Installation.

The location of new billing meters will be agreed between the Principal Representatives.

New billing meters will be installed to the manufacturers specification to achieve a volumetric accuracy of $\pm$ 1% or better at the meter and will be the following types unless agreed otherwise:

- For pipe diameters 750mm and above, meters will be dual track transit time ultrasonics installed under dry main conditions.
- For pipe diameters 600mm and below, meters will be full bore electromagnetic meters.

New billing meters are to have a minimum clearance of 10 pipe diameters upstream and 5 pipe diameters downstream.

As constructed drawings of the new meters and associated works will be forwarded to YVW at the completion of the installation project.

New billing meters will be included in the Formulae for Determining Water Supplied to YVW (Ref. Schedule 6 BWSA 1999) from a date agreed between the Principal Representatives, in a variation to the BWSA 1999.

Information relating to all Billing meters will be included in MWC's asset management database (Hansen).

Meters will be self diagnostic with respect to electronic malfunctions. Any drift outside the manufacturers tolerances will be detectable on routine checking of the meter.

4. Routine Checks

Billing meters will be managed under MWC's Asset Management System (Hansen). Checking and maintenance will be carried out by MWC. Work procedures relating to billing meters will be documented and auditable and all equipment used to check the billing meters shall be tested by equipment with a traceability certificate to a NATA certified laboratory. The following checks will be undertaken as part of a routine program:

- **Electronic Calibration/Simulation**
  The electronic signal from the billing meter will undergo routine checks (termed electronic calibration/simulations). An auditable record of each check will be kept by MWC and provided on request to YVW. Routine calibration/simulations will be undertaken at the following frequencies:

  For meters measuring an average flow of 3 Ml/d or less - 12monthly
  For meters measuring an average flow of 3 to 50 Ml/d - 6monthly
  For meters measuring an average flow of more than 50 Ml/d - 3monthly

  A rolling 12 month summary of results from electronic calibration/simulation will be included in the monthly customer report to YVW. Where an electronic signal has drifted resulting in a volumetric difference outside of a $\pm$ 1% tolerance, it shall be reported separately in the monthly Customer Report.

- **Self Diagnosis Checks**
  The self diagnostic output from the meter will be checked (where the facility for testing exists) during each routine visit. Any parameters outside tolerance will be reported to the manufacturer for advice.

- **Telemetry Performance Checks**
  During the routine electronic simulation a telemetry check will be made on the electronic signal transmitted on site with the electronic signal received by the telemetry system at the Water Operations Control Centre at Preston. An auditable record of each telemetry check will be kept by MWC and provided on request to YVW. Where a telemetry check indicates a discrepancy resulting in a volumetric

difference outside of a ± 1% tolerance it shall be reported separately in the monthly Customer Report.

- **Volumetric/Velocity Checks**
  MWC, in conjunction with YVW, will identify and trial viable volumetric/velocity test methods where appropriate. Where a conclusive, sufficiently accurate and viable volumetric/velocity test method has been established, MWC will include this method in its Asset Management Plan for Bulk Water Metering.

  Where practicable MWC will facilitate any volumetric/velocity checks required by YVW in accordance with the obligations under the BWSA.

5. Operation, Adjustment & Repair.

Where the electronic output of a billing meter is outside a ± 1% tolerance, the electronic signal will be calibrated by MWC.

Where the volumetric accuracy determined under an agreed and conclusive volumetric/velocity test, is outside a ± 1% tolerance, the discrepancy will be referred to the manufacturer for advice on meter adjustment.

Where a meter is faulty a works order will be immediately issued with the following priority:

Level 1 (Investigate & Report within 1 day)
For meters measuring > 50 ML/d
For meters measuring > 10 ML/d and there is no reliable means of estimating volumes.

Level 2 (Investigate & Report within 2 days)
For meters measuring less than 50 ML/d

MWC will endeavour to have a billing meter repaired within 7 days of the error being detected.

6. Re-Calibrating and Replacing.

Faults which cannot be rectified by MWC', will be referred to the meter manufacturer for advice on further testing, re-calibration or replacement. Where a fault investigation report indicates that repairs are to take longer than 7 days, MWC will discuss the proposed method of estimating the volumes with YVW and agree on interim arrangements.

7. Reading Measurements.

Measurements from each Billing Meter will be read remotely and recorded within MWC's SCADA system.

Daily volumes will be calculated in accordance with MWC's Asset Management Plan for Bulk Water Metering and forwarded daily to YVW as provisional totals

Weekly volumes for calculating YVW's usage charge will be calculated in accordance with MWC's Asset Management Plan for Bulk Water Metering.

- **Use of Totalised Values**

  MWC will undertake a review of its current methods of meter reading and telemetry systems in order to determine and implement the most appropriate use of the on-site totaliser values in the billing process.

8. Auditing

Melbourne Water will carry out an annual internal audit, using the principles of ISO9001, to ensure compliance with this protocol.

8.3 Protocol for responding to high turbidity from Upper Yarra Reservoir supplying the Yarra Valley Townships.

1. Principles

With respect to the Upper Yarra Valley townships (i.e. those supplied from the Brahmas Rd, Lyrebird Ave, Martyr Rd, Yarra Junction, and Lusatia Park offtakes) the turbidity is normally about 2 NTU and Schedule 3 of the BWSA stipulates that MWC must take immediate action if the turbidity exceeds 3.5 NTU.

2. Purpose

The purpose of this protocol is to ensure that an alternative supply from Silvan Reservoir is available to the Yarra Valley townships to maintain safe and aesthetically acceptable drinking water as required.

3. Background.

Following a major storm event in June 2007, the turbidity of the water released from the Upper Yarra Reservoir rose to unprecedented levels. Due to concerns about the effectiveness of the processes used at the five small disinfection plants serving the Yarra Valley townships, as a precautionary measure 'Boil Water' notices were issued from the 16 July 2007 and these remained in force until lifted on 14 August 2007.

In order to prevent 'Boil Water' notices in the future, MWC installed filtration plants at the five offtakes to the townships. The purpose of these plants was to lower the turbidity

of the incoming water during these events so that adequate disinfection by the primary treatment plants could be maintained.

Subsequent to the filtration plants being constructed, MWC has prepared a means of alternative supply from Silvan Reservoir to the townships via the Yarra Valley Conduit (YVC). The alternative supply involves pumping water from Silvan Reservoir into the surge tank at the Silvan inlet mini-hydro site. This surge tank provides a controlled pressure of supply into the YVC. Further pumping is required along the YVC to deliver water from Warburton to East Warburton.

The alternative supply from Silvan means that the filtration plants are no longer required for the Yarra Valley Townships and these have been removed from service.

Note that the O'Shannassy Reservoir source can also be used to supply the YVC but this would be limited by the variation in water quality from this source.

4. Operation of alternative supply to the Yarra Valley Townships

MWC will consult immediately with YVW to determine whether to implement the alternative supply to the Yarra Valley Townships when:

a) The water supplied to the townships from the Yarra Valley Conduit exceeds the BWSA action limit of 3.5 NTU for more than 24 hours as measured at the Yarra Junction Offtake; or

b) MWC has identified a perceived risk from a pathogen contamination of the Upper Yarra Reservoir; or

c) MWC has identified a pending dramatic change in the aesthetic quality of water in the Upper Yarra Dam due to the poor quality of storage inflows associated with a high rainfall event in the catchment; or

d) YVW is experiencing abnormal levels of customer water quality complaints across one or more of the Yarra Town systems which is considered associated with the quality of water supplied from the Upper Yarra Dam.

MWC will ensure that it can implement the alternative supply from Silvan Reservoir within a time period of 2 days. (This is well within the travel time of water from Upper Yarra Reservoir to the first offtake at Brahams Road, East Warburton when the YVC is reduced to low flow).

When the alternative supply from Silvan Reservoir and/or O'Shannassy Reservoir has been implemented to manage a water quality event, MWC will reinstate supply from the Upper Yarra Reservoir:

a) Upon demonstrating that turbidity has been at a maximum of 3.0 NTU for a period of 7 days, at the respective off takes from the Yarra Valley Conduit; or

b) The perceived risks to the possible deterioration of water quality has passed; or

c) By agreement with YVW.

8.4 Protocol for Joint Management of Leaks in the water supply pipeline system

5. Background

Yarra Valley Water and Melbourne Water have developed this protocol to clarify principles by which the companies would respond to water leaks in cases where it is initially uncertain whose asset is responsible for the leak. The need for this protocol is acknowledged following leaks on both Melbourne Water and Yarra Valley Water assets being notified to and investigated by each other.

6. Purpose

The purpose of this protocol is to clarify the procedures for locating and repairing leaks on either company's pipeline assets, to achieve a consistent and lowest cost approach to pipeline repair across the Melbourne Water system.

7. Principles

For cases where the source of the leakage, and the owner of the asset cannot be easily identified, the following principles will be applied:

1) Where the matter is deemed by the notified Company to be urgent (eg causing major damage, significant loss of water or adverse public attention) the notified Company shall immediately commence investigation with an objective of prompt repair.
2) Where the matter is not urgent there is to be joint agreement on who undertakes the investigation to identify the source of the leak.
3) Where agreement cannot be reached on the most likely owner of the leaking asset, the first notified company shall undertake investigations to identify the leaking asset.
4) Once the owner of the leaking asset is identified the owner shall be promptly informed and arrangements made for smooth hand over of the site to the owner or owners representative
5) The Company responsible for the leaking asset shall be responsible for all costs associated with the leak. This includes but is not limited to damages, investigation and repair costs.
6) Once the owner of the asset is identified claims for the costs of wasted water will be backdated to the date the leak was first notified.

`Schedule 9 Yan Yean Alkalinity Plant Upgrade

1 Definitions and Interpretation

1.1 The following words have these meanings in this schedule 9, unless the contrary intention appears:

A3 Availability Charge is $135.39 per day, subject to clauses 4.2 and 4.4.

Additional Dosing Facilities means the plant and equipment described in attachment A to this schedule 9.

Additional Dosing Interface Points are the points:

(a) on the Whittlesea pipeline 5 metres upstream of the lime injection point, marked "A" on the diagram in Attachment D ("**Upstream Interface Point**") ; and

(b) located immediately downstream in water quality sampling point, marked "B" on the diagram in Attachment D ("**Downstream Interface Point**").

Agreement means the Bulk Water Supply Agreement entered into between MW Corporation and Yarra Valley Water Ltded 26 July 1999.

Carbon Dioxide Charge is the actual cost of carbon dioxide used by Yan Yean Water in relation to the Additional Dosing Facilities for any given period plus 5%.

Commissioning Date means 24 March 1999.

Management Fee means an amount equal to $12,000 per annum, subject to clause 8.

Outstanding Capital Liabilities means, at any point in time, the amount set out in Attachment C as applicable to the termination date, or the next date listed in the attachment immediately following the termination date, as the case may be.

Plant means the water treatment plant located at Yan Yean.

Production Day means a 24 hour period from 8.00 am during which the Plant is supplying treated water in accordance with the Water Treatment Agreement.

Specification means the specifications for pH and alkalinity set out in attachment B to this schedule 9.

Usage Charge is $11.32 per ML passing through the Upstream Interface Point, subject to clause 4.4.

Variation Agreement means the agreement to vary the Water Treatment Agreement executed by MW and Yan Yean Water on 16 July 2002.

Water Treatment Agreement means the agreement of that name entered into by MW and Yan Yean Water dated 25 February 1993 and varied by the variation Agreement executed between the said parties and dated 16 July 2002.

Whittlesea Pumping Station means the pumping station and associated pipework located at the reservoir at Yan Yean.

Yan Yean Water means Yan Yean Water Pty Ltd (ACN 055 222 770).

1.2 Terms used in this schedule 9 and which are defined in the Agreement will have the same meaning as in the Agreement.

2 Water Quality

2.1 Subject to **paragraph 2.2** of this schedule 9, water supplied to YVW under the Agreement and which passes through the Additional Dosing Interface Points will meet the Specification.

2.2 YVW acknowledges that the Specification may not be satisfied:

(a) within 30 minutes of:

(i) each start-up of the Whittlesea Pumping Station; or

(ii) each pump flow change within the Whittlesea Pumping Station; and

(b) in the event of an overriding event affecting the Whittlesea Pumping Station occurring.

2.3 If a delay caused by an overriding event continues for more than 90 days, then either party may by notice in writing to the other elect to treat the obligations imposed by this Schedule 9 as Terminated, effective from the date of the notice.

3 Management Fee

YVW agrees to pay MW the Management Fee:

(a) in arrears on a quarterly basis; and

(b) within 7 days after the receipt by YVW of an invoice issued by MW for such a quarterly payment.

4 Additional dosing charges

4.1 YVW agrees to pay to MW the:

(a) A3 Availability Charge;

(b) Usage Charge; and

(c) Carbon Dioxide Charge.

4.2 If, for any Production Day, Yan Yean Water fails to make the Additional Dosing Facilities available or operational other than as a result of:

(a) an overriding event; or

(b) planned maintenance; or

(c) as a consequence of a negligent act or omission of YVW, or their employees, sub-contracts or agents,

the A3 Availability Charge will be reduced by 25% in respect of that production day.

4.3 The volume of water passing through the Upstream Interface Point will be recorded by the flow meter with the identification number FE3083. In the event that this flow meter is identified, to MW's reasonable satisfaction, as inaccurate or inoperable YVW agrees to pay the Usage Charge based on the estimated volume of water passing through the upstream interface point, such estimated volume being reasonable and able to be substantiated from previous recordings and readings.

4.4 The A3 Availability Charge and the Usage Charge will be adjusted in accordance with Attachment E to this Schedule 9.

4.5 MW will provide YVW with a weekly invoice setting out the payment due under paragraph 4.1 of this schedule and copies of any relevant statements received by MW from Yan Yean Water.

4.6 Payment of undisputed invoices will be made without withholding, counterclaim, set off or other deduction within 7 days of receipt of the invoice referred to in **paragraph 4.5** of this schedule 9.

4.7 For outstanding accounts not paid within the period specified in **paragraph 4.6** of this schedule 9, the following will apply:

(a) commercial interest will be charged at a rate which is equivalent to the Bank Bill Swap Reference Rate as quoted in The Australian Financial Review newspaper at the time the amounts become outstanding;

(b) interest will be calculated daily on the outstanding amounts at the specified interest rate until payment is made in full; and

(c) upon payment of the outstanding amount, the interest outstanding will be invoiced separately and due for payment within 7 days.

4.8 If YVW disputes any matter contained in an invoice referred to in schedule 9, it will pay MW all undisputed amounts.

4.9 Within 5 days of receipt of the invoice referred to in paragraph 4.5 of this schedule 9, YVW must notify MW of any matters contained in the invoice which it disputes and details of the adjustments it proposes. If MW agrees to the adjustments, MW will submit to YVW a revised invoice and YVW will pay MW the agreed amount within 7 days of receipt of the revised invoice.

4.10 If YVW disputes an amount and ultimately is required to pay the amount or a part of it, YVW will pay interest on the amount paid at the rate specified in **paragraph 4.7(a)** of this schedule 9 for the period from the date 7 days after the obligation to pay arose until the disputed amount is settled in full.

5. Set Points

5.1 YVW may issue MW with any reasonable written direction in relation to the set points to be administered in relation to the chemical dosing systems associated with the Additional Dosing Facilities.

5.2 Upon receipt of a written direction under **paragraph 5.1** of this schedule 9, MW must issue an identical direction to Yan Yean Water.

6. Performance Monitoring

6.1 MW must use its reasonable endeavours to procure that the performance of the Additional Dosing Facilities will be monitored by Yan Yean Water in accordance with Attachment B and the results of all monitoring will be supplied to YVW by MW.

7. Future Capital Expansion

7.1 YVW acknowledges that it will be responsible for the costs of any further works reasonably necessary to satisfy increased demand from planned growth areas with an extended reticulation system including, without limitation:

(a) larger sized dosing and control equipment;

(b) larger storage vehicles and extension to the complete base for such storage vessels;

(c) additional lime dosing pumps; and

(d) a separate slurry batch tank.

7.2 YVW shall bear the costs of such works only if such works are undertaken at the request of YVW.

7.3 YVW shall not bear the risk arising from any and all such works howsoever arising, including the risk damage to or loss of existing plant and equipment and third party property.

8. GST

8.1 MW may, in addition to the applicable amount or consideration expressed as payable under this Schedule 9 (but excluding any amount in respect of a goods and services tax or similar tax ("**GST**")), subject to issuing a valid tax invoice, recover from YVW an additional amount on account of GST impose a mere supply under this agreement, such amount to be calculated by multiplying the amount or consideration payable by YVW by the prevailing GST rate.

8.2 If the imposition of a GST or any subsequent change in the GST law is accompanied by or undertaken in connection with a reduction in or abolition of any then existing taxes (other than income tax) the prices (excluding any GST) payable by YVW will be reduced by the same proportion as the actual total cost of the processor are reduced as a consequence of a reduction in or abolition of taxes, either directly by way of a reduction in or abolition of taxes paid or payable by MW to its third party suppliers or to any government, or indirectly by way of reduction in the prices (excluding any GST) charge by third party suppliers to MW.

8.3 The parties agree that the A3 Availability Charge, Usage Charge and Carbon Dioxide Charge may be adjusted by MW to reflect any increase in the equivalent charges payable by MW to Yan Yean Water under the Water Treatment Agreement.

9. Reporting

9.1 MW agrees to provide YVW with any reports provided to MW by Yan Yean Water relating to the performance of the Additional Dosing Facilities in relation to this schedule.

10. Term and termination

10.1 The obligations and rights under this schedule 9 will commence on and from the Commissioning Date and shall continue, unless terminated earlier in accordance with the terms of this schedule, for the term of the Water Treatment Agreement until 2 February 2020.

10.2 Subject to paragraph 2.3 the operation of this schedule 9 may be terminated by YVW at any time upon three month's prior notice in writing to MW upon the occurrence of any of the following events:

(a) a change in the quality of raw water that obviates the need for alkalinity adjustment at Whittlesea Pumping Station;

(b) the provision of alkalinity adjustment to all output from the Plant, rather than just that output passing through the Whittlesea Pumping Station;

(c) a change in water quality regulations or standards;

(d) a change in the demand for water;

(e) subject to paragraph 2.2 a failure of water supplied to YVW to meet the Specification.

10.3 The operation of this schedule 9 may be terminated by YVW at any time upon three month's prior notice in writing to MW subject to paragraph 10.6.

10.4 The operation of this schedule 9 will terminate upon the termination of the Water Treatment Agreement.

10.5 MW agrees to act in good faith and to consider the interests of YVW prior to taking any action to terminate the Water Treatment Agreement. MW shall consult with YVW prior to any proposed termination of the Water Treatment Agreement. The parties acknowledge that any decision to terminate the Water Treatment Agreement remains solely in the discretion of MW, provided that such termination is provided for under the Water Treatment Agreement; and

(a) is not a termination for the convenience of MW, unless with the consent of YVW:

(b) is not a termination for the convenience of MW and the right to terminate is due to the negligence or default of Yan Yean Water under the Water Treatment Agreement; or

(c) is at the request of YVW.

10.6 Upon the operation of this schedule 9 being terminated, provided that such termination is not made pursuant to paragraphs 2.3, 10.2(e), 10.5(a) or 10.5(b) or otherwise due to the default or negligence of MW or Yan Yean Water, YVW agrees to pay to MW any amounts relating to the Additional Dosing Facilities which MW is liable to pay to Yan Yean Water under the Water Treatment Agreement, including:

(a) any amounts outstanding under any invoice issued th the Water Treatment Agreement by MW;

(b) the Outstanding Capital Liabilities;

(c) all reasonable costs associated with the removal of the Additional Dosing Facilities;

(d) all reasonable cost associated with the consequential termination:

(i) by MW of the Variation Agreement; and

(ii) by Yan Yean Water of its arrangements for the supply of carbon dioxide (including any costs or expenses payable by Yan Yean Water to a supplier of carbon dioxide under any such supply arrangements as a result of Yan Yean Water's termination or repudiation of those supply arrangements);

(e) all other reasonable direct costs incurred by Yan Yean as a result schedule 9 being terminated or the termination by MW of the Variation Agreement.

10.7 Notwithstanding anything contained to the contrary in this schedule 9, YVW shall not be liable to MW or Yan Yean Water for any indirect consequential, special, punitive or exemplary damages, or for damages for loss of anticipated profit, revenue, contract, opportunity or goodwill, regardless of whether such claim can be based in contract, tort, equity or otherwise, relating to this schedule 9.

10.8 Upon termination, notwithstanding clause 32 of the Agreement, the Agreement shall be deemed to be amended by consent of both parties to delete this Schedule 9 in its entirety, but without prejudice to the rights of the parties existing at the date of amendment and without affecting the validity of the remaining terms and conditions of the Agreement which shall continue to have full force and effect.

11 No Notice of Water Treatment Agreement

11.1 MW acknowledges it has neither given YVW a copy of the Water Treatment Agreement nor afforded YVW an opportunity to sight the Water Treatment Agreement. MW represents and warrants to YVW that there is nothing contained

in the Water Treatment Agreement that imposes any potential liability or obligation upon YVW. YVW agrees to the terms of this schedule 9 relying on this representation.

11.2 MW acknowledges that YVW have not had any actual or constructive notice of the terms of the Water Treatment Agreement.

Attachment A Additional Dosing Facilities

1 Process Description

The function of the Additional Dosing Facility is, by the addition of lime and carbon dioxide, to increase the alkalinity of the water entering the Whittlesea supply zone from the Plant.

As the zone is supplied both from the Plant and by water from other sources when the Plant is "off-line", the Additional Dosing Facilities will be capable of dosing all water entering the Whittlesea pipeline.

Lime slurry, prepared in the modified pre-lime facility that previously existed at the Plant will be supplied under pressure to the Whittlesea pipeline downstream of the Upstream Interface Point. The addition of carbon dioxide will re-carbonate the water thus increasing its natural alkalinity.

Carbon dioxide gas will be stored as a liquid under pressure at 1400 kPa. The dosing plant will vaporize the liquid carbon dioxide gas through a bath heater and regulate the gas flow rate under pressure through an actuated control valve. Gas pressure will be mixed with water in the carry water line at sufficient water pressure to inject the gas / water mixture into the Whittlesea pipeline.

Carry water will be taken from a tapping on the Whittlesea pipeline adjacent to the gas storage vessel. A pressure booster pump will operate to inject carbon dioxide gas / water mixture into the Whittlesea pipeline a short distance downstream of the lime injection point.

The gas dosing system and pipework will be sized to accurately deliver over a range of at least 20:1 for dose and 10:1 for flow. The gas flow control valve must be capable of metering flows in the range 1.0 to 20 kg/hr and be able to modulate accurately and reliably in that range.

The carry water injection pressure will be maintained by the booster pumps at a flow rate which is relatively constant and which will be independent of the carbon dioxide dose rate or the number of Whittlesea pumps operating.

"No flow" protection will be installed on the carry water system and interlocked to the carbon dioxide system.

The existing (Yan Yean) lime storage, preparation and mixing controls will be modified to allow the plant to operate in automatic mode independent of the operation of Plant.

The duty and stand-by Whittlesea lime dosing pumps will be of the peristaltic type rated for 1500 kPa operating pressure.

A new PLC and control equipment will be located in the MCC "E" in the room next to the lime slurry and dosing room.

2 Pressure Rating

The alkalinity plant must be capable of injecting lime and carbon dioxide gas into the 375 mm via Whittlesea main, located within the confines of the Yan Yean WTP site, under all normal operating conditions.

Normal operating conditions will include the pressure and flow conditions induced when one, two or three pumps are operating i.e. 30 l/s, 65 l/s and 100 l/s.

3 Layout of Works

Yan Yean Water will locate the carbon dioxide equipment, lime and gas dosing lines to avoid interference with existing pipelines and structures associated with the Whittlesea Pumping Station and main and the existing treatment facilities associated with the Plant.

4 Telemetry

Primary signals from the chemical dosing systems, flow measurement and water quality monitoring instrumentation will be transmitted to and be integrated with the existing telemetry and SCADA control systems serving the Plant.

5 Water Quality Monitoring

pH of the alkalinity adjusted water leaving the Yan Yean site via the Whittlesea pipeline will be continuously monitored. An output signal will be directed to the SCADA system that will have the capability of continuously tracking the value. The alkalinity adjustment plant will be

operated to ensure a zero adjustment of the pH of water leaving the Whittlesea Pumping Station. It is not the intent of the scheme to independently adjust the pH of the water.

A sample tap shall be provided at the downstream water quality monitoring point to allow a grab sample to be taken.

Alkalinity values shall be determined by laboratory analysis.

6 Ownership

The 375 mm diam. cast iron pipeline delivering water from the Whittlesea Pumping Station to the community of Whittlesea, including that length between the Additional Dosing Interface Points will remain in the ownership of MW or YVW, throughout the term of Schedule 9.

Attachment B pH and Alkalinity Specification

pH Specification

To maintain the pH within +/- 0.3 units of the pH of the incoming water.

Alkalinity Specification

Flowrate (l/sec)	Setpoint Range (mg/l)	Tolerance (mg/l)
30	35-80	+/-5
65	35-80	+/-5
100	35-55	+/-5

Performance Monitoring

The performance of the Additional Dosing Facilities will be monitored by Yan Yean Water in accordance with the table below.

Parameter	Location	Instrument/Method	Frequency
pH	Downstream Interface Point	On-line pH probe. Signal transmitted to SCADA	Continuous
pH	Downstream Interface Point	Laboratory determination	3 times per week from discrete sample

Alkalinity	Downstream Interface Point	Laboratory determination	3 times per week from discrete sample

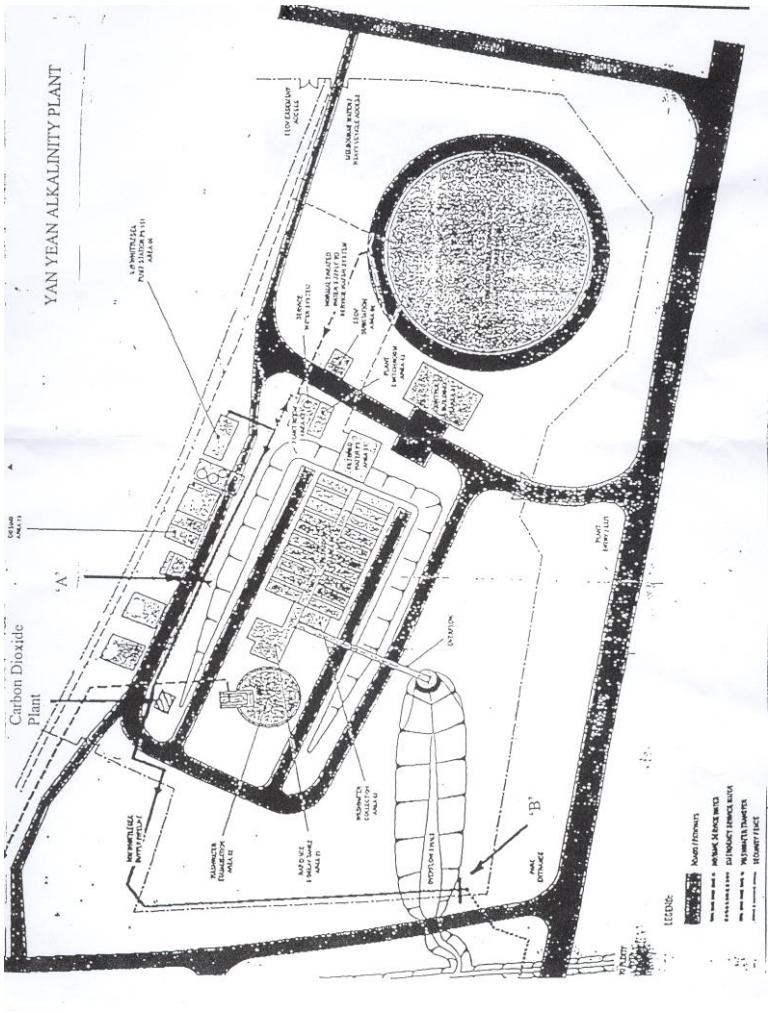
Attachment C Outstanding Capital Liabilities

Date	Amount $	Date	Amount $	Date	Amount $	Date	Amount $
		31/10/2004	151,865.81	30/04/2010	124,907.93	31/10/2015	75,677.12
31/07/1999	166,131.60	31/01/2005	150,960.28	31/07/2010	123,254.24	31/01/2016	72,657.14
31/08/1999	165,963.27	28/02/2005	150,652.89	31/08/2010	122,692.88	29/02/2016	71,631.97
30/09/1999	165,793.41	31/03/2005	150,342.68	30/09/2010	122,126.37	31/03/2016	70,597.40
31/10/1999	165,621.98	30/04/2005	150,029.62	31/10/2010	121,554.66	30/04/2016	69,553.35
30/11/1999	165,448.99	31/05/2005	149,713.70	30/11/2010	120,977.72	31/05/2016	68,499.72
31/12/1999	165,274.41	30/06/2005	149,394.88	31/12/2010	120,395.48	30/06/2016	67,436.44
31/01/2000	165,098.23	31/07/2005	149,073.13	31/01/2011	119,807.91	31/07/2016	66,363.41
29/02/2000	164,920.43	31/08/2005	148,748.44	28/02/2011	119,214.96	31/08/2016	65,280.55
31/03/2000	164,741.01	30/09/2005	148,420.77	31/03/2011	118,616.56	30/09/2016	64,187.76
30/04/2000	164,559.94	31/10/2005	148,090.10	30/04/2011	118,012.69	31/10/2016	63,084.95
31/05/2000	164,377.21	30/11/2005	147,756.40	31/05/2011	117,403.27	30/11/2016	61,972.03
30/06/2000	164,192.80	31/12/2005	147,419.64	30/06/2011	116,788.28	31/12/2016	60,848.91
31/07/2000	164,006.71	31/01/2006	147,079.79	31/07/2011	116,167.64	31/01/2017	59,715.50
31/08/2000	163,818.91	28/02/2006	146,736.82	31/08/2011	115,541.31	28/02/2017	58,571.70
30/09/2000	163,629.39	31/03/2006	146,390.71	30/09/2011	114,909.25	31/03/2017	57,417.41
31/10/2000	163,438.13	30/04/2006	146,041.43	31/10/2011	114,271.38	30/04/2017	56,252.54
30/11/2000	163,245.11	31/05/2006	145,688.95	30/11/2011	113,627.68	31/05/2017	55,076.99
31/12/2000	163,050.33	30/06/2006	145,333.24	31/12/2011	112,978.07	30/06/2017	53,890.67
31/01/2001	162,853.76	31/07/2006	144,974.26	31/01/2012	112,322.50	31/07/2017	52,693.47
28/02/2001	162,655.39	31/08/2006	144,612.00	29/02/2012	111,660.93	31/08/2017	51,485.30
31/03/2001	162,455.21	30/09/2006	144,246.41	31/03/2012	110,993.29	30/09/2017	50,266.05
30/04/2001	162,253.18	31/10/2006	143,877.47	30/04/2012	110,319.54	31/10/2017	49,035.62
31/05/2001	162,049.31	30/11/2006	143,505.16	31/05/2012	109,639.60	30/11/2017	47,793.92
30/06/2001	161,843.56	31/12/2006	143,129.42	30/06/2012	108,953.44	31/12/2017	46,540.84
31/07/2001	161,635.93	31/01/2007	142,750.25	31/07/2012	108,260.98	31/01/2018	45,276.27
31/08/2001	161,426.40	28/02/2007	142,367.60	31/08/2012	107,562.18	28/02/2018	44,000.10

Date	Amount $	Date	Amount $	Date	Amount $	Date	Amount $
30/09/2001	161,214.95	31/03/2007	141,981.44	30/09/2012	106,856.97	31/03/2018	42,712.24
31/10/2001	161,001.55	30/04/2007	141,591.74	31/10/2012	106,145.29	30/04/2018	41,412.57
30/11/2001	160,786.21	31/05/2007	141,198.47	30/11/2012	105,427.10	31/05/2018	40,100.99
31/12/2001	160,568.88	30/06/2007	140,801.59	31/12/2012	104,702.32	30/06/2018	38,777.39
31/01/2002	160,349.57	31/07/2007	140,401.07	31/01/2013	103,970.89	31/07/2018	37,441.65
28/02/2002	160,128.24	31/08/2007	139,996.89	28/02/2013	103,232.76	31/08/2018	36,093.67
31/03/2002	159,904.89	30/09/2007	139,589.00	31/03/2013	102,487.87	30/09/2018	34,733.34
30/04/2002	159,679.49	31/10/2007	139,177.37	30/04/2013	101,736.14	31/10/2018	33,360.53
31/05/2002	159,452.02	30/11/2007	138,761.96	31/05/2013	100,977.53	30/11/2018	31,975.14
30/06/2002	159,222.47	31/12/2007	138,342.75	30/06/2013	100,211.96	31/12/2018	30,577.05
31/07/2002	158,990.81	31/01/2008	137,919.70	31/07/2013	99,439.37	31/01/2019	29,166.14
31/08/2002	158,757.03	29/02/2008	137,492.77	31/08/2013	98,659.71	28/02/2019	27,742.30
30/09/2002	158,521.11	31/03/2008	137,061.92	30/09/2013	97,872.89	31/03/2019	26,305.41
31/10/2002	158,283.03	30/04/2008	136,627.13	31/10/2013	97,078.86	30/04/2019	24,855.35
30/11/2002	158,042.76	31/05/2008	136,188.35	30/11/2013	96,277.56	31/05/2019	23,391.99
31/12/2002	157,800.29	30/06/2008	135,745.54	31/12/2013	95,468.91	30/06/2019	21,915.22
31/01/2003	157,555.59	31/07/2008	135,298.68	31/01/2014	94,652.84	31/07/2019	20,424.92
28/02/2003	157,308.66	31/08/2008	134,847.72	28/02/2014	93,829.30	31/08/2019	18,920.95
31/03/2003	157,059.46	30/09/2008	134,392.63	31/03/2014	92,998.20	30/09/2019	9,403.20
30/04/2003	156,807.97	31/10/2008	133,933.37	30/04/2014	92,159.49	31/10/2019	7,871.53
31/05/2003	156,554.18	30/11/2008	133,469.90	31/05/2014	91,313.09	30/11/2019	6,325.82
30/06/2003	156,298.07	31/12/2008	133,002.17	30/06/2014	90,458.93	31/12/2019	4,765.95
31/07/2003	156,039.60	31/01/2009	132,530.16	31/07/2014	89,596.94	31/01/2020	3,191.77
31/08/2003	155,778.77	28/02/2009	132,053.83	31/08/2014	88,727.05	02/02/2020	Onwards
30/09/2003	155,515.55	31/03/2009	131,573.13	30/09/2014	87,849.19	Nil	-
31/10/2003	155,249.91	30/04/2009	131,088.02	31/10/2014	86,963.27		-
30/11/2003	154,981.84	31/05/2009	130,598.46	30/11/2014	86,069.24		-
31/12/2003	154,711.31	30/06/2009	130,104.42	31/12/2014	85,167.01		-
31/01/2004	154,438.30	31/07/2009	129,605.85	31/01/2015	84,256.52		-

Date	Amount $	Date	Amount $	Date	Amount $	Date	Amount $
29/02/2004	154,162.79	31/08/2009	129,102.70	28/02/2015	83,337.67		-
31/03/2004	153,884.75	30/09/2009	128,594.95	31/03/2015	82,410.40		-
30/04/2004	153,604.17	31/10/2009	128,082.54	30/04/2015	81,474.64		-
31/05/2004	153,321.01	30/11/2009	127,565.44	31/05/2015	80,530.29		-
30/06/2004	153,035.26	31/12/2009	127,043.59	30/06/2015	79,577.29		-
31/07/2004	152,746.88	31/01/2010	126,516.96	31/07/2015	78,615.55		-
31/08/2004	152,455.87	28/02/2010	125,985.50	31/08/2015	77,645.00		-
30/09/2004	152,162.18	31/03/2010	125,449.17	30/09/2015	76,665.55		-

Attachment D Diagram



Attachment E Fee Adjustment

1 The adjustments to be made to the A3 Availability Charge and the Usage Charge are not based on the actual costs incurred by Yan Yean Water, but solely on the calculation set out in this Attachment.

2 Escalation factors each year will be determined using indices applicable immediately prior to 1 April and on 1 October. The escalation factors will apply for 3 months prior and 3 months subsequent to the determination date.

3 The so determined escalation factors will be applied for a 6 month period from 1 January to 30 June (1 April index) and from 1 July to 31 December (1 October index). Retrospective adjustments will be paid in accordance with the Bulk Water Supply Agreement following determination of the escalation factors.

4 MW will use all reasonable endeavours to ensure all retrospective adjustments will be made on one weekly invoice every six months.

Price Indices and Component Proportions

Charge Category	Base Charge	Component	Component Number	Base Proportion of Component (%)	Index	Base Value of Index Sept 98
A3 Availability Charge	$135.39 per day	Other Wages	2 1	59.0% 41.0%	CPI (M) AWE	120.30 724.80
Usage Charge	$11.32 per ML.	Electricity Electricity	1	[12.0%]	Peak energy	11.04

		Electricity Lime	2 3 4	[2.0%] [6.0%] [80.0%]	Offpeak energy Demand WAPP(1)-$/ton	2.26 3.66 166.10

CPI (M) – Consumer Price Index, Melbourne Table 1 ABS, catalogue 6401

AWE – Average Weekly Earnings

Electricity – SECV Tarrif L