

# Private Water Suppliers

## Guidance Note



Issue Version 20

November 2015

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# I. Background

The *Public Health Act 1997* (the Act) requires Councils to register Private Water Suppliers (PWS) to mitigate risks to public health from unsafe water. The *Tasmanian Drinking Water Quality Guidelines 2015* (TDWQG) are legislatively enforceable under the Act and hence compliance is mandated. The TDWQG mandate certain requirements from the *Australian Drinking Water Guidelines* (ADWG). This Guidance Note has been prepared as a tool to assist in the implementation and compliance with the Act and the TDWQG.

## Classes

The TDWQG classify PWS into the following “classes” and only apply to places not serviced by a reticulated supply from the Regulated Entity (TasWater):

### 1. Commercial Purposes

- a. Accommodation places serving food (eg B&Bs, hotels, motels).
- b. Accommodation places not serving food (eg hotels and motels).
- c. Child care, out of school care and private school camps.
- d. Recreational facilities within Parks and Reserves as defined by the *Nature Conservation Act 2002*.
- e. Private Water Schemes with reticulated water not supplied by TasWater.

*[It is recognised private water **schemes** exist in Tasmania and this scheme may supply water to several premises including but not limited to a bed and breakfast (B&B) businesses. In this case, both the scheme and the B&B must be registered. If the scheme and B&B is managed by the same person, only one registration is required].*

### 2. Places used for Health

- a. Aged care facilities.
- b. Health care centres.
- c. Hospitals.

### 3. Places used for Education

- a. Schools (including Department of Education (DoE) and Private Schools).
- b. University of Tasmania (UTAS) facilities.

### 4. Places used for Imprisonment or Detention

Currently there are no places within Tasmania that meet this class of definition.

## 2. Definitions

### Private Water Scheme

A water supply that provides water to individuals and/or businesses via a drinking water supply system that is not under the management and control of a Regulated Entity (i.e. TasWater).

### Drinking Water Supply Scheme

A system or part thereof, used to supply drinking water including, but not limited to, source waters, storage reservoirs and tanks, intakes, treatment systems, service reservoirs, bulk systems and reticulation systems.

### Drinking Water

Water intended for human consumption or water that could reasonably be mistaken as water for human consumption.

### Microbiological Drinking Water Quality

A measure of pathogenic microorganisms which includes bacteria, viruses and protozoa. The diseases these may cause vary in severity from mild gastroenteritis to severe and rarely fatal diarrhoea or hepatitis.

To be classified as compliant microbiological drinking water *Escherichia coli* (*E. coli*) should not be detected in a minimum 100mL sample. Additional information can be found in Chapters 5 and 10 of the ADWG and Appendix A of this Guidance Note.

### Non-microbiological Water Drinking Quality

A measure of both the physical and chemical characteristics of water quality, including organic and inorganic chemicals and pesticides. These are important from a health perspective because they may be acutely toxic to humans or cause harm after long term exposure.

Non-microbiological parameters should not be detected in drinking water at concentrations above the relevant health related guideline values of the ADWG. Additional information can be found in Chapters 6 and 10 of the ADWG and Appendix B of this Guidance Note.

### Boil Water Alert

A Boil Water Alert (BWA) is a warning and restriction placed over the safe use of a drinking water supply. It means that all water supplied to the drinking water recipient needs to be brought to a rolling boil prior to consumption. BWAs are required when the microbiological quality of the water is non-compliance or the compliance is unknown.

### Public Health Alert

A Public Health Alert (PHA) is a warning and restriction placed over the safe use of a drinking water supply. It is sometimes referred to as a “Do Not Consume” Notice. It means that all water supplied to the drinking water recipient should not be consumed at all. Boiling the water does not render it safe for consumption.

PHAs are required when the non-microbiological quality of the water is non-compliant or the compliance is unknown.

## 3. Registration

### Intent

Councils undertake their registration process based on legislation (*Public Health Act 1997* and the *Tasmanian Drinking Water Quality Guidelines*) and their by-laws. Registration must be annual but Council can decide what, if any, fees to charge. In some cases, Council may waive the fees, but this does not avoid the need for registration.

A key component of the registration process is issuing Conditions of Registration (CoRs). PWS must comply with these CoRs to protect public health. This guide provides consistent advice to Councils undertaking registration. Council must undertake a robust risk assessment for all registration applications.

### Process

PWS must make an application to their Local Council using the approved Application Form obtained through the relevant Council.

The process described below is based on a general risk assessment and Council may choose to use a more thorough and detailed process. This process is based on a series of questions and, depending on the answers; Councils will need to attach CoRs to the applicant's registration.

### Registration Duration

Registration will be valid for 12 months, after which time Council shall instigate a renewal process after receiving an application from a PWS. For Council to renew a PWS registration, they must satisfy themselves that the PWS has met the requirements of their current registration. Local Council will also use the renewal process to determine the applicability of the CoRs and vary these as required. Some Council's may elect to undertake a site inspection to assist them with their determination of compliance with the registration (see Section 6).

### Registered Food Premises

Some PWS defined in Class 1 will require registration under the *Food Act 2003* and an exemption from registering as a PWS may be given, provided:

1. The water is supplied only to food business areas including food preparation and dining facilities. This does not extend to facilities away from these areas (eg accommodation facilities).
2. Council is aware of the intention to supply drinking water as part of the food business.

Note: this exemption does not apply to:

1. Drinking water supplied for other purposes such as serviced accommodation facilities located on the same site.
2. Food businesses that are not licenced, eg notification only businesses.

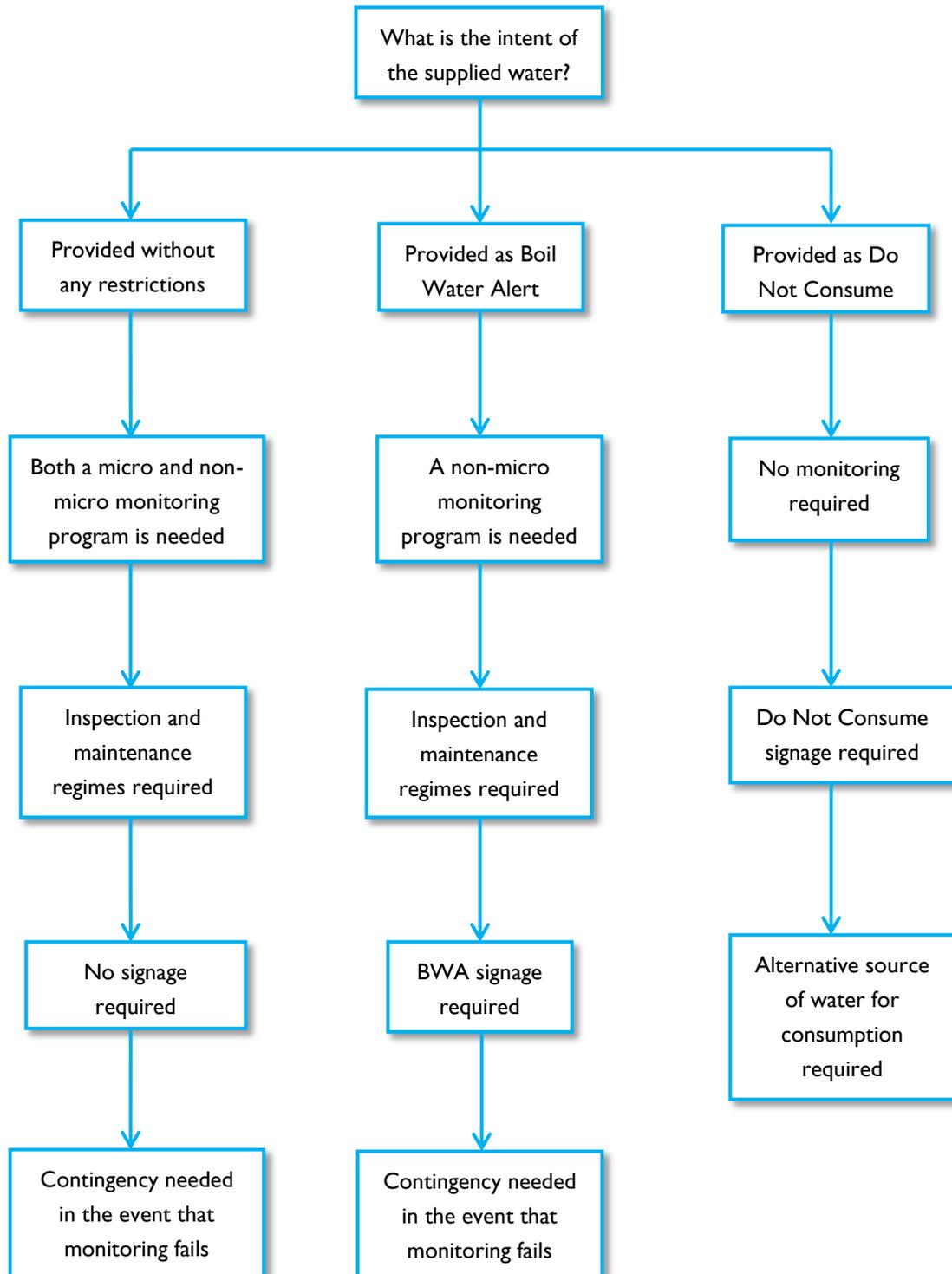
Where an exemption is granted, Council may place Conditions of Registration on the food business registration that specifically relate to the water supply. These conditions must be complied with and will be assessed by Council's EHO as part of their normal food safety inspections.

Where situations arise that registration is required for both the food business and as a PWS, then the business should make one application to Council so that Council can consider both aspects during their assessment, registration and approval process.

### **Failure to Comply with Registration**

Failure to comply with the legislative requirements can result in a PWS registration being suspended, varied or cancelled. There are financial penalties for operating as a PWS without the appropriate registration (see Section 9).

## 4. Supply of Water



## Intent

The supply of water from a PWS to a drinking water recipient comes with microbiological and non-microbiological risks (see Section 5). To mitigate these risks the supply of water must be accompanied by appropriate warnings and restrictions to inform the drinking water recipients of the safe use of that water.

The level and detail of these warnings and restrictions is determined by the intent of the PWS in the provision of the water.

If the PWS intends on providing the drinking water without any restrictions or warnings over its use, then there must be an accompanying level of certainty about the quality of water supplied so as not to present risk to the drinking water recipient.

This may require a robust treatment system and a monitoring program to verify that the supplied water is suitable for human consumption.

At the other end of the intent scale is the PWS that does not intend to supply drinking water to the drinking water recipient. In these instances it is suitable for the PWS to issue warnings and restrictions that limit the use of the supplied water. This may negate the need for some (if not all) water quality monitoring.

It is important that a PWS clearly indicates their intent for the use of the water in their application so that Council can consider this when undertaking their risk assessment and place the appropriate CoRs on the registration. Failure to have a clear intent for the use of the water could lead to onerous and unnecessary CoRs being placed against the registration.

## Warnings and Restrictions

Warnings and restrictions are placed over the supply of drinking water to inform the recipients of the allowable safe uses of that water. The warnings and restrictions should cover all intended uses of that water including but not limited to: drinking, food preparation, cooking, showering and bathing. Water that has not been demonstrated to comply with the microbiological and/or non-microbiological requirements of the ADWG must have warnings and restrictions placed against its safe use.

Detailed information regarding appropriate warnings and restrictions can be found at Appendix E and Appendix F, which differ depending on whether the restrictions relate to microbiological or non-microbiological water quality.

As a general rule, the provision of water that cannot be demonstrated as being microbiologically compliant should be placed on a “Boil Water Alert” (BWA), whereby recipients are advised to boil their water prior to use (Appendix C).

The provision of water that cannot be demonstrated as being non-microbiologically compliant should be placed on a “Do Not Consume Alert” (or Public Health Alert (PHA)), whereby recipients are advised that they should not drink or cook with the water (Appendix D).

Warnings and restrictions are a powerful management tool in the regulation of PWS. With the allocation of the appropriate warnings and restrictions, the water supply can be simply managed by providing this information to recipients and erecting strategically placed signs.

In many instances the provision of warnings and restrictions negates the need to undertake potentially expensive water quality monitoring programs.

The following Table indicates a matrix of monitoring compliance against the required warning and restriction that needs to be issued:

Compliant Monitoring	Non-Compliant Monitoring or compliance unknown	Warning and Restriction
Microbiological and Non-microbiological		None
Microbiological	Non-microbiological	Public Health Alert (Do Not Consume)
Non-microbiological	Microbiological	Boil Water Alert
	Microbiological and Non-microbiological	Public Health Alert (Do Not Consume)

**Table 1: Monitoring compliance and required warnings and restrictions**

### Preparedness and Contingencies

From time to time the status of the supplied water may change owing to adverse monitoring results or uncertainty surrounding its quality and therefore suitability for drinking. Mitigating this requires the PWS to be prepared to implement contingencies to protect public health.

PWS should be prepared to issue warnings and restrictions to their customers as soon as a potential threat to public health arises. They may also choose to have a contingency for an alternate source of drinking water should their primary source become unsafe.

## 5. Risk Assessment – Microbiological and Non-microbiological

The *Australian Drinking Water Guidelines* (ADWG) states the greatest risk to public health is from the microbiological quality of water. Un-disinfected water can cause illnesses stemming from organisms such as *E. coli*, *Giardia*, *Cryptosporidium* and *Salmonella* contamination. Microbiological compliant drinking water is water that complies with the requirements of Table 10.4 of the ADWG (Appendix A).

Non-microbiological contamination can only be assessed by a risk-based assessment undertaken in line with the ADWG framework, with reference to the ADWG health-related limits. Impacts from non-microbiological contamination are varied and depend on the type of contaminant and magnitude and levels of exposure and the susceptibility of the population. In an uncertain environment, the regulatory approach is avoidance, unless the quality of the water can be demonstrated as compliant. Non-microbiologically compliant drinking water is water that complies with the minimum requirements of Table 10.5 of the ADWG (Appendix B).

The questions outlined in Figure 1 seek to identify which CoRs should be placed against the registration. Not all CoRs will be relevant for each registration and Council will need to exercise their discretion. The list of CoRs is not comprehensive and certain circumstances may require additional CoRs to be placed against the registration. The DHHS state water officer is available to discuss any specific issues that may arise.

The CoRs are contained in Section 8.

## Risk Assessment Flow Chart

This flow chart and suggestions for CoRs is not comprehensive and is designed to provide Local Council with a consistent approach for undertaking a risk assessment to determine the appropriate conditions to be placed against the registration.

The following notes correspond to “flags” used in the flow chart:

- a. Can only be assured through either a robust monitoring program with a demonstrated compliance history or evidence from a third party (i.e. water carrier or private water scheme).
- b. Supply by a compliant third party (i.e. water carrier or compliant private water scheme).

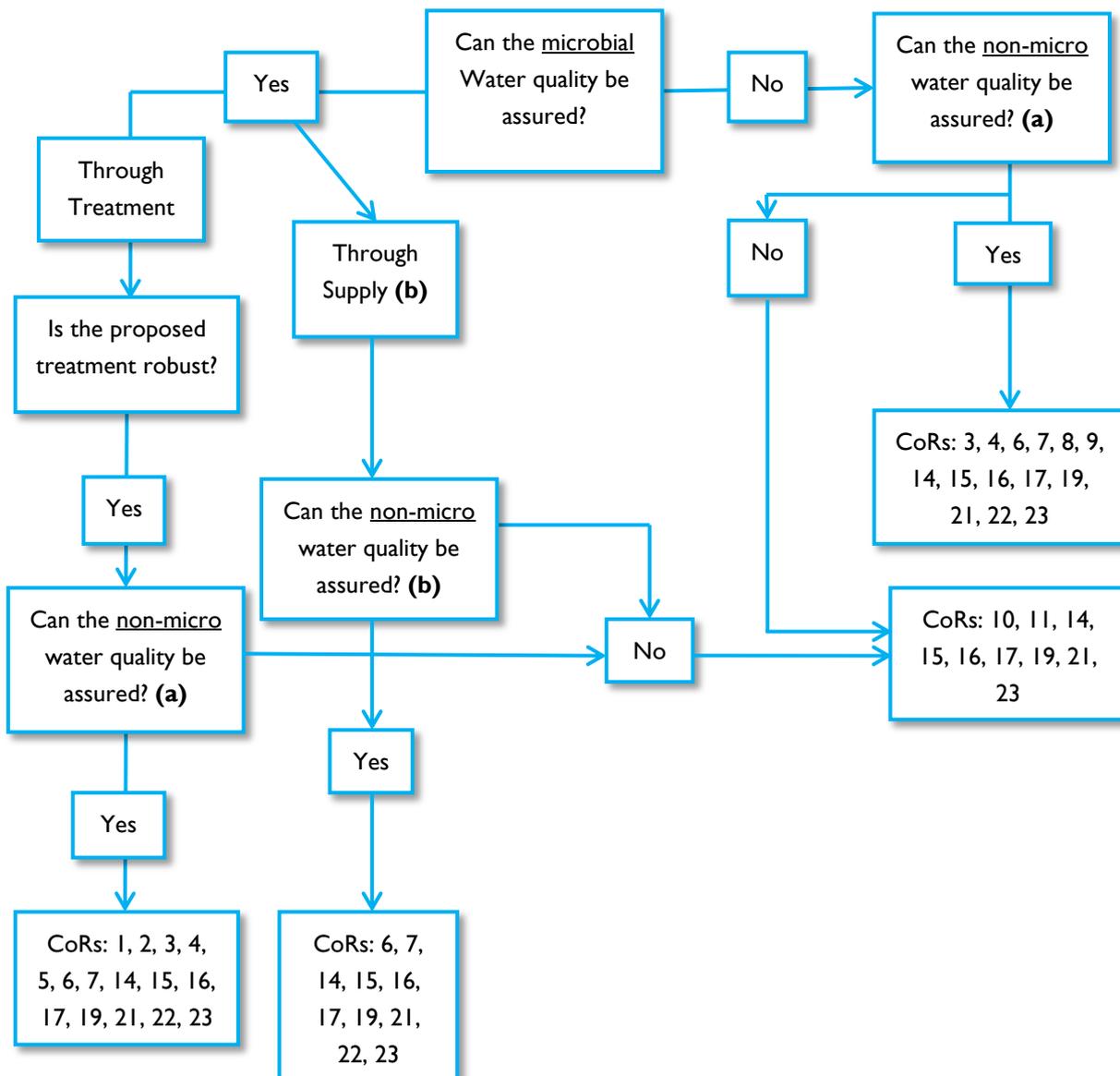


Figure 1: Risk Assessment Tool for Microbiological and Non-microbiological water quality

## “Class I(d)” (Recreational Facilities within Parks and Reserves) – Further Consideration

Certain facilities within Parks and Reserves allow ‘users’ to access water; sometimes assuming the water is fit for consumption. These are usually managed by the Parks and Wildlife Service of Department of Primary Industries, Parks, Water and the Environment (DPIPWE).

One example may be a rainwater collection system along a walking track with a tap attached. Another may be an internal reticulation network within a Parks facility with plumbing and taps easily accessible. This latter instance will be captured under ‘Class I(e)’ (Private Water Schemes).

In cases where it relates to “Class I(d)”, consider the CoRs listed at No. 12 and 13.

Please also consider the following:

- If the tap is associated with a reticulated supply from TasWater and the supply is fit for consumption – it is not a candidate for PWS.
- If the tap is associated with a reticulated supply from TasWater and the supply is on a Boil Water Alert (BWA) or Public Health Alert (PHA) – it is not a candidate for PWS, but Council and the manager should ensure:
  - BWA signs are erected on all publically accessible taps identifying the need to boil the water before consumption; or
  - PHA signs are erected on all publically accessible taps identifying the water is not safe to drink (eg ‘Do Not Consume’).
- If the tap is associated with a rainwater collection device from a roof catchment, then:
  - If the microbiological and non-microbiological quality of water cannot be assured – the tap should be signed as not for drinking (see CoR 10).
  - If the bacteriological quality of the water is assured, but the non-microbiological quality cannot be assured – the tap should be signed as not for drinking (see CoR 10).
  - If the bacteriological and non-bacteriological quality of the water can be assured – no signs are needed; however, consider a testing regime and record keeping for ongoing verification.
  - If the bacteriological quality of the water cannot be assured and the non-bacteriological quality of the water is assured – the tap should be signed as water requires boiling before it is consumed (see CoR 8).
  - The management of the rainwater tank should comply with the enHealth publication [Guidance on Use of rainwater Tanks](http://www.health.gov.au/internet/main/publishing.nsf/Content/ohp-enhealth-raintank-cnt.htm) (see CoR 14) ([www.health.gov.au/internet/main/publishing.nsf/Content/ohp-enhealth-raintank-cnt.htm](http://www.health.gov.au/internet/main/publishing.nsf/Content/ohp-enhealth-raintank-cnt.htm)).

If the tap is associated with a private water scheme (“Class I(e)”), then CoRs should be placed on the manager of the private water scheme, with Council (or other Agency) taking responsibility for compliance with signage conditions.

Parks and Reserves are still required to be registered annually with Council (see CoR 16). There is no requirement for Council to inspect Parks and Reserves; rather the Manager of that facility is required to report to Council against compliance with the CoRs of the registration. Council should ensure that the reporting by these Managers occurs in a timely fashion so that they have time to on-report the information to DHHS as part of their required Annual Report (see CoR 18).

### **“Class 1(e)” (Private Water Schemes) – Further Consideration**

These are instances of reticulated networks supplying water to connections not managed by TasWater such as, but not limited to Poatina Village, Tarraleah Village, Penzance, Chudleigh, Gowrie Park, Lake Barrington Rowing Course, Cape Barron Island and Bushy Park. Many more of these exist and it is Council’s responsibility to identify and register them.

As a general rule, Figure 1 should be the primary tool in the risk assessment process. Depending on the classification of the water quality the scheme should be registered by the person responsible for managing the supply, ie the person maintaining and sourcing the water, and collecting any levies. Council should consider issuing CoRs taking the following into account:

- If the water is not fit for consumption (either boiling required or do not consume), then the manager must write to the recipients of the scheme at least quarterly and advise them of any restrictions on the use of the water (see CoR 19).
- All publically accessible taps should be signed with the appropriate warnings (see CoR 8 or CoR 10).
- The Manager must be licensed (where it is needed) to extract raw water (surface and groundwater not rainwater) by DPIPWE’s Water and Dam Administration Unit and the licence is current (see CoR 20) ([www.dpipwe.tas.gov.au/inter.nsf/ThemeNodes/SSKA-4Y38HT?open](http://www.dpipwe.tas.gov.au/inter.nsf/ThemeNodes/SSKA-4Y38HT?open))
- The manager must immediately notify Council of any threats to public health from the water supply (see CoR 21).

If the private water scheme is supplying any of “Classes 1-4”, then the registration should specifically mention this so the Manager of the scheme is aware of the heightened risks of their operation.

### **“Class 3” (Education Facilities) – Further Consideration**

Some facilities managed by DoE and UTAS may already have their own internal monitoring and testing regimes with a notification mechanism back to the Director of Public Health for non-compliances against the ADWG.

They still need to be registered annually with Council (see CoR 16) with the appropriate conditions levied against their registration. However, in most cases the microbiological and non-microbiological quality of the water can be assured.

Each needs to be assessed on a case by case basis.

There is no requirement for Council to inspect DoE or UTAS facilities; rather the Manager of that facility is required to report to Council against the compliance with the CoRs of the registration. Council should ensure that the reporting by these Managers occurs in a timely fashion so that they have time to report the information to the Director of Public Health as part of their required Annual Report (see CoR 18).

Any other places used for education (besides DoE and UTAS) will need to be registered with Council and are subject to annual registration and compliance inspections.

### **“Class I” (Commercial Purposes) – Further Consideration**

Councils usually become aware of potential PWS through Development Applications (DA) for activities or land use changes. This is the primary trigger for registration of a PWS. Where the DA is triggered by an application for a food business, this can be used to also satisfy the need to register a PWS. In this case, the annual reporting requirements for PWS registration still apply and should be reported to the Director of Public Health.

Registration is not required by a person who supplies water from a private water source as part of a residential tenancy agreement or a contract to lease premises (eg a short-term holiday rental or a long term lease). This exception does not apply to accommodation places offering lodging on a nightly basis that are registered accommodation places.

## 6. Inspections and Reporting

### Renewal and Inspections

A requirement of the Act and TDWQG is that Councils must satisfy themselves that PWS are compliant with the CoR and evaluate relevance and currency prior to renewal of the registration. Council should also identify and threats to public health and manage these through further appropriate CoR. Council should also establish the extent of compliance that the PWS has demonstrated with the Act and the TDWQG. This may be determined through site inspections as deemed necessary by Council.

The legislative framework does not mandate inspections to be undertaken by Councils, however Councils must satisfy themselves that the PWS has complied with the CoR prior to renewing that registration. One way of satisfying themselves would be to undertake an inspection to verify compliance. Other methods for satisfying themselves include, but not limited to: interviewing the owner of the PWS, requesting that the PWS send in objective evidence in the form of photographs and/or submitting a signed Statutory Declaration stating that they have complied. The need for and frequency of any inspection should be decided by Council after completing the initial risk assessment undertaken during the registration process.

The TDWQG refers to Council's function in establishing compliance as monitoring. The use of this term in this context is not to be confused with the taking of water samples for determining water quality.

If the PWS is a Licenced Food Premise, then an inspection regime will be prescribed under the *Food Act 2003*, which may only require an inspection every 18 months. It is not the intention that these Food Premises will have their inspection regimes increased; rather the status quo will be maintained. Local Council are still required to renew the registration annually regardless of whether it is a Food Premises or a PWS, and they must satisfy themselves of the extent of compliance. In order to do this, Council may require the PWS (or Food Premise) to provide objective evidence to them to evaluate the extent of compliance. This may take the form of a written statement or the provision of suitable photos to demonstrate compliance.

It is envisaged DoE, UTAS, and Parks and Wildlife facilities will not require Council inspections. Rather, the facility manager must demonstrate compliance by directly reporting to the Council (see CoR 18). This means that Councils will need to report on the compliance of these PWS as part of their Annual Drinking Water Quality Report. Council will still need to register these PWS annually (see CoR 16).

### Reporting

The TDWQG require Council to report by providing:

1. The "Class" of each registered PWS as outlined in Section 1).
2. Copies of the registration and the CoR issued against the registration for each PWS.
3. Evidence that Council used to verify compliance with the CoR including details of any inspections undertaken where applicable for each PWS.
4. Instances of non-compliances against CoR and any notifications made (threats to public health) for each PWS.

Reports to the Director of Public Health (via the state water officer) are due by September 30 each year.

PWS may be requested to provide information to Councils as part of their registration, to facilitate their reporting. Councils may ask PWS to provide information for this as part of their registration conditions.

## 7. Notifications

### Legal Obligation

The Act and the TDWQG require PWS to notify their Local Council of any threats to public health, who in turn must notify the Director of Public Health of these threats, but only if Council agrees that it is a threat.

This notification obligation allows the Director to investigate and issue direction to manage the threat(s) as appropriate.

### Threats to Public Health

The following are examples of what may constitute threats to public health, and are not exhaustive:

- A non-compliant monitoring result as reported by a testing laboratory.
- A contamination event of a water storage vessel or tank; be it accidental or deliberate (examples may include: a chemical spill, a dead animal, unusual tastes and odours).
- Repeated complaints from drinking water recipients about the quality of the supplied drinking water.
- A major non-compliance with a CoR.
- A reported illness in a drinking water recipient plausibly due to drinking water.
- A failure of a treatment process used in water treatment.
- Failure to give the appropriate warnings and restrictions to recipients on the safe use of the drinking water.
- Any uncertainty surrounding a situation or circumstance where the safety of the drinking water cannot be assured.

There are penalties associated with failing to notify of a threat to public health. The PWS is best to err on the side of caution and notify of any uncertainty so that the relevant public health professionals can investigate and decide. If a PWS notifies Local Council of a threat to public health, Council are only required to notify the Director of Public Health if they believe that it is a threat to public health (i.e. not every notification received by Local Council will be notified to the Director).

### Contingencies for Public Health Protection

A notification of a threat to public health may result in contingencies being implemented to protect public health. Examples of such contingencies include, but are not limited to:

- Issuing warnings and/or restrictions to consumers (this could involve the erection of signage or written warnings)
- Providing customers with an alternative source of water
- Providing customers with the means for boiling their water to render it safe for consumption
- Restricting or preventing the use of the water (this could involve removing tap handles or turning off the water supply).

Council may wish to consider having CoRs that relate to emergency preparedness for PWS providing water without any restrictions on its use and supply.

## 8. Conditions of Registration

The following examples of CoRs are **suggestions only** as it is up to each Council to determine the wording for each CoR after applying a robust risk assessment. The numbers correspond to the schematic presented earlier and are not intended to be hierarchical based on priority or importance.

1. The PWS must to take a water sample and have it analysed for *E. coli* at a NATA accredited laboratory at least once every three months<sup>1</sup> (see note in Appendix A for further information).
2. Any *E. coli* detections reported from the NATA accredited laboratory (Appendix A) must be notified to Council immediately and the source of contamination identified and measures put in place for correcting the problem and preventing a reoccurrence. The PWS must restrict the use of the water by providing warnings about the need to boil prior to consumption. A resample must be taken and analysed for the failed parameter as soon as possible.
  - a. If the resample is non-compliant the water supply remains operating under a BWA (Appendix E) until it no longer poses a threat to public health. Note for *E. coli* detections, the proprietor may still supply water to recipients if they issue advice the water must be boiled before consumption (see CoR 8 and 9).
  - b. If the resample is compliant the water supply can continue with its normal monitoring requirements and any restrictions on the use of the water can be lifted.
3. The PWS must take a water sample and have analysed at a NATA accredited laboratory (Appendix B) for metals with ADWG health limits at least annually<sup>2</sup>: (Arsenic (As), Barium (Ba), Cadmium (Cd), Chromium (Cr), Copper (Cu), Lead (Pb), Manganese (Mn), Mercury (Hg), Molybdenum (Mo), Nickel (Ni), Selenium (Se)). *[Note that theses contaminants of concern are heavy metals that have corresponding health related limits. Council needs to consider any other non-microbiological contaminants of concern through their risk assessment and ensure that target parameters are attached to any required monitoring program (see note in Appendix B for further information)].*
4. Any metal concentrations detected over the ADWG health-related limits reported from the NATA accredited laboratory must be notified to Council immediately and the source of contamination identified and appropriate measures put in place for correcting the problem and preventing a reoccurrence. A resample must be taken and analysed for the failed parameter as soon as possible.
  - a. If the resample is non-compliant the PWS must restrict the use of the water by providing warnings to advise that the water is not fit for consumption (Appendix F) until the water no longer poses a public health risk (see CoR 10 and 11).

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<sup>1</sup> This frequency is after satisfactory evidence is obtained demonstrating 12 consecutive months of bacteriological compliance.

<sup>2</sup> This frequency is after satisfactory evidence is obtained demonstrating three consecutive months and a further four consecutive quarters of non-bacteriological compliance.

- b. If the resample is compliant the water supply can continue with its normal monitoring requirements without any restrictions on the use of the water.
5. The disinfection treatment facility must be maintained in line with manufacturers' requirements and records kept demonstrating servicing and maintenance works.
6. The vessel (tank) used to store the treated water (or delivered water) must be inspected at least once a year to ensure it is free from obvious signs of contamination. In addition, the vessel must be closed to the environment so as to exclude contamination.
7. Detailed records must be maintained by the PWS for all drinking water deliveries from water carriers. These include, but are not limited to, dates of delivery, volume of water delivered, origin of the water (extraction point) and carrier information outlining water compliance. These records must be maintained in a written format that can be presented to an Authorised Officer upon request.
8. Appropriate signage must be displayed at prominent locations to warn consumers the water is unfit for consumption without first boiling (See Appendix C and E).
9. Means for bringing water to a rolling boil must be supplied to customers along with means for storing the boiled water for it to cool prior to consumption (see Appendix E).
10. Appropriate signage must be displayed at prominent locations to warn customers the water is unfit for consumption. Note: boiling the water will not remove any heavy metal contamination. (See Appendix D and F).
11. An alternative source of drinking water (eg bottled or safe drinking water) must be provided to paying guests for food preparation, drinking, preparing baby formula, making ice and brushing teeth.
12. National Park users should be told upon entry the water available from certain sources is unfit for human consumption unless first boiling or sanitising with tablets. This information may be inserted into DPIPWE publications readily available to parks users.
13. Signage should be also be placed at publicly accessible taps in Parks and Reserves advising the water is unsafe to drink without first boiling or sanitising with tablets. These signs may be placed prominently at the start of walking tracks to avoid the need to sign each individual tap.
14. Managing rainwater tanks associated with a PWS must be in accordance with the best practice management measures in the enHealth publication, *Guidance on Use of Rainwater Tanks*. (<http://www.health.gov.au/internet/main/publishing.nsf/Content/ohp-enhealth-raintank-cnt.htm>).
15. Compliance with the requirements of the *Public Health Act 1997* and the *Tasmanian Drinking Water Quality Guidelines*.
16. The PWS is required to register annually with Council by using the approved form (*Note: Council may wish to specify a date*).
17. The PWS may be subject to an annual inspection by Council to determine compliance with these CoRs. The PWS is required to undertake all reasonable requests from Council and the Director of Public Health to limit/mitigate public health risks and provide any requested information to an Authorised Officer in a timely manner.

18. The Entity (DoE, UTAS and Parks and Wildlife Service) is required to report annually to Council their compliance against the CoRs of registration by 31 August each year (*Note: This allows Council one month to collate information and report to Director of Public Health. You can elect to change this date*).
19. Private Water Scheme Managers shall provide written information to all recipients of their water at least every three months and advise them of any restrictions or warning on the use of that water.
20. Private Water Scheme Managers should be appropriately licenced by DPIPWE's Water and Dam Administration unit to extract water from surface or groundwater sources; or have the approval of the licence holder to extract the water.
21. The PWS shall notify Council of any threats to public health.
22. The PWS is required to issue warnings and/or place restrictions on the safe use of that water once they become aware of potential threats to public health or as directed by an Authorised Officer.
23. The PWS must undertake any water quality monitoring requested by Council at their own expense.

Special note: Council must also consider the requirements from the Act and the TDWQG that apply to PWS and issue CoRs as appropriate to ensure that compliance is achieved. Council should also consider the compliance history of the PWS and include any CoRs that may be necessary to manage previous non-compliances. You should attach a copy of the TDWQG to all registrations to ensure that the PWS has the most current requirements.

The DHHS state water officer is available to discuss appropriate CoRs in individual circumstances.

## 9. Penalties and Infringements

The Act and the TDWQG are legally enforceable instruments. Some requirements have penalty provisions attached to them for non-compliance. Failure to comply with these may result in the issuing of an infringement notice and associated monetary fine. In serious or repeated cases, the PWS may be prosecuted in a Court of Law; where the penalties will be determined by the Court.

The current penalty unit value for the 2015-16 Financial Year is \$154. Based on this, the maximum infringement that can be issued for certain offences against a PWS are:

- Failure to notify Council of a threat to public health - \$308.
- Failure to comply with an Order issued by Council or the Director of Public Health – \$308.
- Failure to manage water in a manner that does not pose a threat to public health - \$308.
- Supplying water obtained from a private water source without being registered with a Council – \$154.
- Failure to comply with the CoR or TDWQGs - \$154.
- Failure to assist an authorised officer in performing their function under the Act - \$154.

In addition, Council have legal responsibilities under the Act and the TDWQG with respect to the management and administration of PWS. Failure to comply with these may result in the issuing of an infringement notice and associated monetary fine. Based on the current penalty unit value, the maximum infringement that can be issued for certain offences against a Council are:

- Failure to notify the Director of Public Health of a threat to public health - \$308.
- Failure to comply with an Order issued by the Director of Public Health - \$308.
- Failure to comply with the TDWQG (includes registration of PWS) - \$154.
- Failure to assist an Authorised Officer in performing their function under the Act - \$154.

# Appendix A – ADWG Health Guideline Values: Microbiological

Table 10.4 of the ADWG.

<ul style="list-style-type: none"><li>• <b><i>Escherichia coli</i> (<i>E. coli</i>) should not be detected in a minimum 100mL sample of drinking water.</b></li></ul>
<ul style="list-style-type: none"><li>• <b>If detected, immediate corrective action must be taken.</b></li></ul>

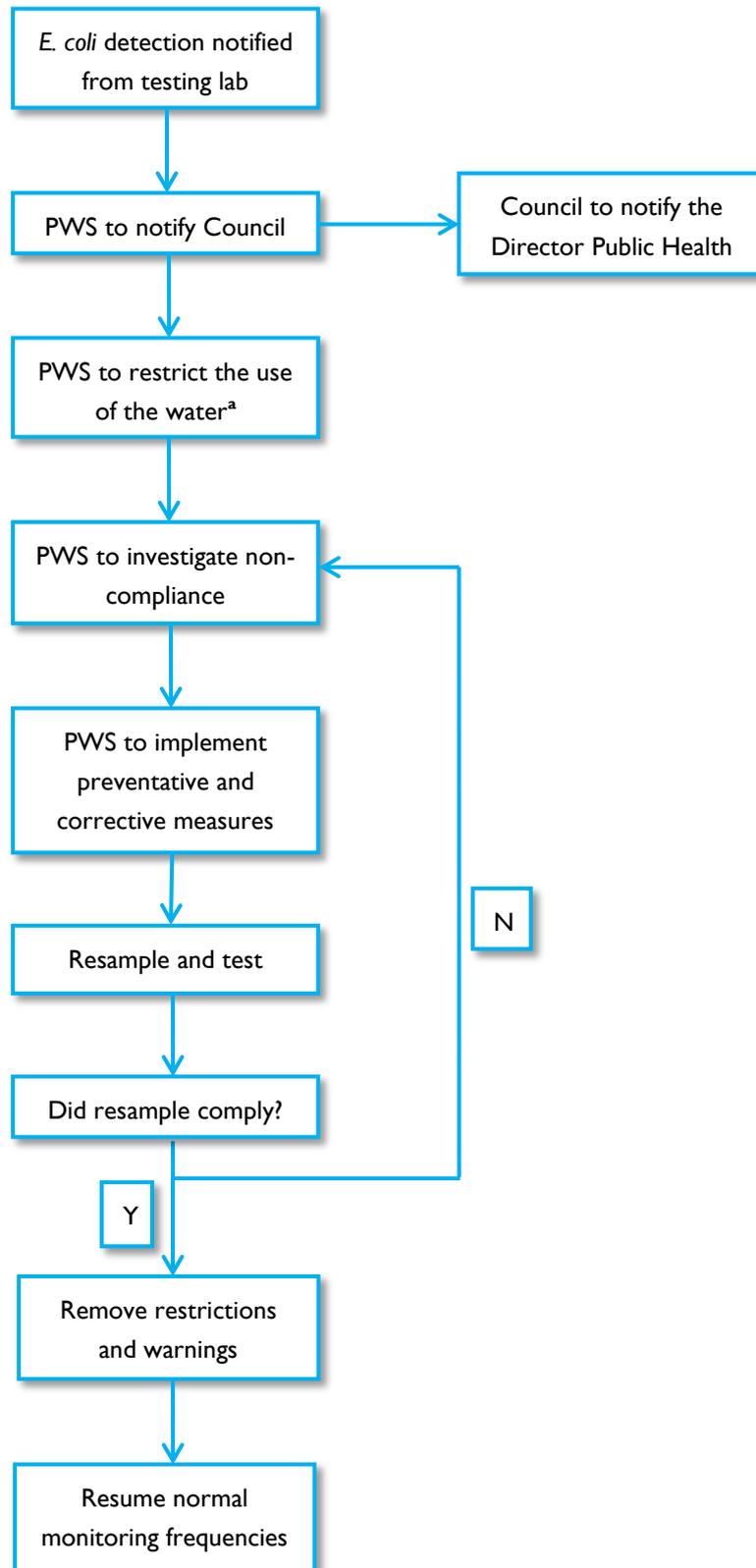
Note: If *E. coli* is detected, the PWS must immediately notify the local Council that they are registered with, who in turn must notify the Director of Public Health. The PWS must provide written warnings on the restrictions of use associated with any drinking water non-compliant with the microbiological requirements until the resample results are known.

## Additional guidance on the frequency of bacteriological monitoring programs

Monitoring is designed to verify the quality of the water provided and hence ensure that the risks to public health are negligible. There needs to be some flexibility around the design of the initial program as it transitions over time. As a general guide, the following considerations should be taken into account, with the ultimate monitoring program to be specified by Council after conducting their risk assessment:

- Initially microbiological monitoring (total coliforms and *E. coli*) should be undertaken monthly at a NATA accredited lab for at least 12 months.
- Once 12 months of compliant data are obtained, the monitoring program can be reviewed and revised as follows:
  - Monitoring frequency can be relaxed to quarterly (ie once every three months).
  - Increased reliance on the maintenance and inspection of the treatment barriers.
- Any non-compliant microbiological monitoring result needs to be followed up in line with the following protocol:
  - The PWS must notify Council immediately.
  - The PWS must restrict the use of the water.
  - The PWS must investigate the system and identify the cause of the non-compliance.
  - Appropriate corrective and preventative measures must be implemented.
  - A resample must be taken and analysed by a NATA accredited laboratory.
- If the resample is also non-compliant, then the PWS maintain the BWA and continue to investigate and address the non-compliance. If the resample is compliant, then the monitoring may revert to the current frequency and the restrictions on the safe use of the water can be removed. This assumes that the non-microbiological quality of the water is assured. If it is not then the PWS must then operate on a Do Not Consume advice for the water supply (see CoRs 10 and 11).

## Dealing with Microbiological Non-compliances



**a** – Restricting the use of water can take any of the following forms and the PWS must provide a means of boiling water (eg kettle, stove or access to a kitchen facility) and a container(s) for storing cooled boiled water:

- Erecting appropriate signage (Appendix C) indicating the need to boil water before use.

- Issuing written advice to users (Appendix E).
- Shutting down the supply so that no water is provided from the contaminated source.
- Providing an alternative source of compliant drinking water (eg bottled water).
- Removing handles from taps so that the water cannot be accessed.

## Appendix B – ADWG Health Guideline Values: Non-Microbiological

Adapted from Table 10.5 of the ADWG.

Parameter	Limit (mg/L)	Limit (µg/L)
Arsenic (As)	0.01	10
Barium (Ba)	2	2000
Cadmium (Cd)	0.002	2
Chromium (Cr)	0.05	50
Copper (Cu)	2	2000
Lead (Pb)	0.01	10
Manganese (Mn)	0.5	500
Mercury (Hg)	0.001	1
Molybdenum (Mo)	0.05	50
Nickel (Ni)	0.02	20
Selenium (Se)	0.01	10

Note: If a non-compliance against the ADWG is reported by the lab, the PWS must immediately notify the Council that they are registered with, who in turn must notify the Director of Public Health. The PWS must provide written warning on the restrictions of the use associated with any drinking water that is non-compliant with the non-microbiological parameters from the ADWG.

These contaminants of concern are heavy metals that have corresponding health related limits in the ADWG. Council needs to consider any other contaminants of concern through their risk assessment and ensure that target parameters are attached to any required monitoring program. Some examples of situations where other relevant contaminants of concern should be considered in the risk assessment include, but not limited to:

- Pesticide use in the catchment should be identified resulting in monitoring for the applied chemicals.

- Where chlorine (gas or hypochlorite) is used as a disinfectant, then monitoring for Disinfection by Products (DBPs) should be undertaken. These include total trihalomethanes and haloacetic acids.
- Water that is sourced from catchments with extensive industrial activity should be identified resulting in monitoring for the known chemicals used by industry.

It is acknowledged that monitoring programs can be costly to implement, and may at times not identify all risks to public health. Where there is significant uncertainty about the quality of a particular water service, it should not be used for drinking water without appropriate warnings and restrictions placed against its safe use. Where monitoring programs are implemented, Council needs to be responsive to constantly refining them through interrogation of the results. If contaminants of concern are routinely not detected, then the monitoring program can be revised so that excessive and irrelevant monitoring is not undertaken.

### **Additional guidance on the frequency of non-bacteriological monitoring programs**

Monitoring is designed to verify the quality of the water provided and hence ensure that the risks to public health are negligible. There needs to be some flexibility around the design of the initial program as it transitions over time. As a general guide, the following considerations should be taken into account, with the ultimate monitoring program to be specified by Council after conducting their risk assessment:

- Initially non-microbiological monitoring should be undertaken monthly at a NATA accredited lab for at least three months.
- Once three consecutive months of compliant data are obtained, the monitoring program can be reviewed and revised as follows:
  - Monitoring frequency can be relaxed to quarterly (i.e. once every three months).
  - Increased reliance on the maintenance and inspection of the treatment barriers and/or catchment/system.
- Once four consecutive quarters of compliant data is obtained, the monitoring program can be reviewed and revised as follows:
  - Monitoring frequency can be relaxed to annually.
  - Increased reliance on the maintenance and inspection of the treatment barriers and/or catchment/system.
- Any non-compliant bacteriological monitoring result needs to be followed up in accordance with the following protocol:
  - The PWS must notify Council immediately.
  - The PWS must investigate the system and identify the reasoning behind the non-compliance.
  - Appropriate corrective and preventative measures must be implemented.
  - A resample must be taken and analysed by a NATA accredited laboratory.

If the resample is also non-compliant, then the PWS must operate on a Do Not Consume advice for the water supply (see CoR 10 and 11) until such times that it can be demonstrated that the water quality is compliant with the ADWG. If the resample is compliant, then monitoring may revert back to the current frequency with no restrictions on the safe use of that water.

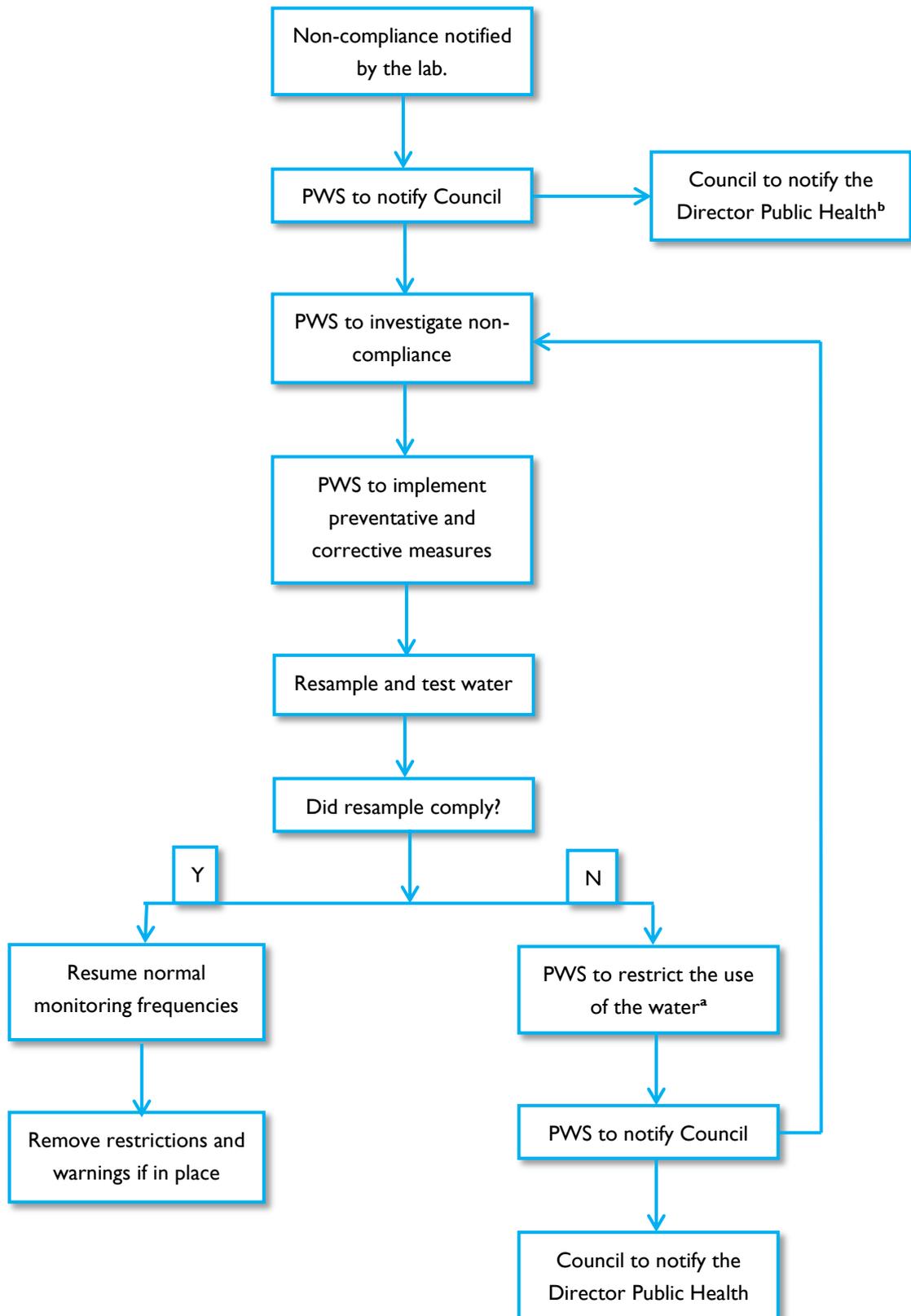
## **Additional guidance on risk assessments and the development of monitoring programs**

Chapter 2 of the ADWG outlines a framework for the management of drinking water. The framework comprises of 12 elements, not all of which will be relevant to your risk assessment. Of particular relevance are elements 2 through 5 of which detailed information can be found in Chapter 3 of the ADWG.

The ADWG recognises that it may not be economically feasible or practical to carry out all of the recommendations of the framework and as such Chapter 4 outlines a regulatory approach for small water supplies designed to be basic measures easily implementable to provide reasonable assurance of safety.

The DHHS state water officer is available to discuss specific situations or circumstances.

## Dealing with Non-microbiological Non-compliances



**a** – Restricting the use of water can take any (or a combination) of the following forms:

- Erecting appropriate signage (Appendix D) indicating the need to avoid drinking the water.
- Issuing written advice to users (Appendix F).
- Shutting down the supply so that no water is provided from the contaminated source.
- Providing an alternative source of compliant drinking water (eg bottled water).
- Removing handles from taps so that the water cannot be accessed.

**b** – If the non-compliance is unusually elevated, the decision may be reached to move immediately to a PHA, whereby appropriate restrictions and warnings are implemented without the resample result being known. This is at the discretion of Council, and the DHHS state water officer is available for discussions in these instances.

## Appendix C – Example “Boil Water Signs”

These signs are a guide only.



This website ([www.mysafetysign.com/](http://www.mysafetysign.com/)) may be useful in the production of signage. It has a function whereby customised signs can be made and free pdf files created. This enables the printing of the signs for use by the PWS.

## Appendix D – Example “Do Not Consume Signs”

These signs are a guide only.



This website ([www.mysafetysign.com/](http://www.mysafetysign.com/)) may be useful in the production of signage. It has a function whereby customised signs can be made and free pdf files created. This enables the printing of the signs for use by the PWS.

## Appendix E – Guide on Boiling Water

- Consumers should bring water to a rolling boil by heating water until a continuous and rapid stream of bubbles is produced from the bottom of a pan or kettle.
- Kettles with automatic cut-off switches are suitable for producing boiled water. Variable temperature kettles should be set to boil.
- After boiling, water should be allowed to cool before using it or storing it in a clean, closed container for later use.
- Consumers should boil all water used for:
  - drinking
  - brushing teeth
  - washing or preparing food or drinks
  - preparing baby formula
  - making ice.
- Unboiled water can be used for:
  - showering and bathing (you should minimise the amount of water taken into your mouth). Babies and toddlers should be supervised in the bath so they do not drink the water. As a precaution, they can be sponge bathed
  - washing dishes by hand or in a dishwasher providing dishes are air dried before being used again
  - washing clothes
  - garden irrigation providing that foods are washed with cooled drinking water prior to consumption.

## Appendix F – Guide on “Do not Consume” Water Uses

- Consumers should not use the water for the following:
  - drinking
  - brushing teeth
  - washing or preparing foods
  - preparing baby formula
  - making ice.
  
- Consumers can use “Do Not Consume” water for the following:
  - showering and bathing (you should minimise the amount of water taken into your mouth). Babies and toddlers should be supervised in the bath so they do not drink the water. As a precaution, they can be sponge bathed
  - washing dishes by hand or in a dishwasher providing dishes are air dried before being used again
  - washing clothes.

# Appendix G – NATA Accredited Laboratory Contacts

## Microbiological Analysis

<b>Public Health Laboratory</b> <b>18 St Johns Ave</b> <b>New Town TAS 7008</b>	<b>Tasmanian Laboratory Services</b> <b>37 Frederick St</b> <b>Launceston TAS 7250</b>
<b>Water Microbiology Laboratory (DPIPWE)</b> <b>165 Westbury Rd</b> <b>Prospect TAS 7249</b>	<b>Selfs Point Laboratory (TasWater)</b> <b>169 Main Rd</b> <b>Moonah TAS 7009</b>

## Non-Microbiological Analysis

<b>Analytical Services Tasmania</b> <b>18 St Johns Ave</b> <b>New Town TAS 7008</b>	<b>Tasmanian Laboratory Services</b> <b>37 Frederick St</b> <b>Launceston TAS 7250</b>
<b>Selfs Point Laboratory (TasWater)</b> <b>169 Main Rd</b> <b>Moonah TAS 7009</b>	

When conducting non-microbiological testing, the laboratory’s Limit of Reporting (LoR) should be established to ensure that they can report down to the level required for assessment against the ADWG health related parameters. You are encouraged to talk to the laboratory to ascertain this prior to requesting testing and to also obtain the appropriate sample bottles for the parameter to be tested.

The National Association of Testing Authorities (NATA) accredits laboratory’s methodologies used in the testing of certain parameters. This is usually underpinned by robust QA/QC procedures subject to third party audits. NATA accredited data gives a higher level of confidence in the reported results. If a non-NATA accredited laboratory is to be used for testing, then this should be discussed with Council or the DHHS prior to conducting any testing.

## Appendix H – DHHS Public Health Officers

Contact the following DHHS staff for help registering and regulating PWS and subsequent compliance:

- state water officer
- state manager, Environmental Health Services
- senior environmental health officer
- regional environmental health officers.

The state water officer should be your primary contact in the first instance.

All Council notifications should be made to the state water officer via the Public Health email ([public.health@dhhs.tas.gov.au](mailto:public.health@dhhs.tas.gov.au)). The Public Health email will ensure that the relevant officer is made aware of the contact in instances when the state water officer is not available.

Phone contact can be made with DHHS public health officers through the Public Health Hotline – Tasmania on 1800 671 738.