




Wastewater Overflow Response Procedures

March 2013



Department of Health, Department of Environment and Conservation, Swan River Trust and Water Corporation



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List of Acronyms

DCA	Development Control Area
DEC	Department of Environment and Conservation
DOHWA	Department of Health – Western Australia
DOW	Department of Water
EHD	Environmental Health Directorate
EHO	Environmental Health Officer
EP Act	Environmental Protection Act 1986
LGAs	Local Government Authorities
PWW	PathWest Waters
RA	Response Agencies
SRT	Swan River Trust
WA	Western Australia
WWO	Wastewater overflow
WWORP	Wastewater Overflow Response Procedures
WWSP	Wastewater Service Provider
WWTP	Wastewater Treatment Plant

Definitions

Controlled Waste Carrier: Has reference to the Environmental Protection (Controlled Waste) Regulations 2004. Schedule 1 (Department of Environment and Conservation 2004), lists sewage and soil contaminated with sewage, amongst many other waste products as a controlled waste. A carrier of controlled waste must also be licensed in accordance with these regulations.

Lead Agency: Is the agency that coordinates and issues a media statement on behalf of all response agencies (RA) involved in a wastewater overflow event.


Primary contact recreational water activity: is an activity in which the whole body or face and trunk are frequently immersed, or the face is frequently wet by spray, and where it is likely that some water will be swallowed or inhaled, or come into contact with ears, nasal passages, mucous membranes or cuts in the skin e.g. swimming, diving, surfing or white-water canoeing (National Health and Medical Research Council 2008).

Prominent public accessible land area: is an area of land which is commonly accessible and traversable to the general public for a particular, or a variety of purposes or activities. Some examples of prominent public accessible land areas may include parklands, reserves, roads, car parks, shopping centres and mass gathering venues.

Public drinking water source areas (PDWSA): Are areas proclaimed for the protection of water quality under the *Metropolitan Water Supply and Sewerage Act 1909 (WA)* or *Country Areas Water Supply Act 1947 (WA)*, which include 'Underground Water Pollution Control Areas', 'Water Reserves' and 'Catchment Areas'. Refer to Department of Waters Water Quality Protection Note 75 for a list of PDWSA areas and for link to maps:

<http://www.water.wa.gov.au/PublicationStore/first/88086.pdf>

Recreational waterway: is a waterway, watercourse or water body (i.e. lake, ocean or river) which is part of the natural environment or landscape, which is accessible to the general public, and in which people participate in a particular or a variety of recreational activities e.g. swimming, waterskiing, jetskiing, boating, kayaking, canoeing, fishing, wading etc.



Secondary contact recreational water activity: is an activity in which only the limbs are regularly wet and in which greater contact (including swallowing water) is unusual e.g. boating, fishing & wading, and including occasional and inadvertent immersion through slipping or being swept into the water by a wave (National Health and Medical Research Council 2008).

Sewage: means any kind of sewage, nightsoil, faecal matter or urine, and any waste composed wholly or part of liquid (Department of Health WA 1911).

Significant public health risk: with respect to a wastewater overflow (WWO) event, is a WWO that constitutes a real or imminent risk of public health illness or disease. In general this assessment is two-fold:

1. Extent of probable public exposure i.e. significant or widespread public contact/exposure in reference to a WWO event, which occurs either onto a prominent public accessible land area or into a popular recreational waterway.
2. Severity of WWO; which incorporates, for example, the following considerations:
 - Estimated quantity of wastewater discharged
 - Constitution of wastewater e.g. raw sewage, treated wastewater etc.
 - Environmental conditions e.g. tidal, wind and weather conditions

Spill volume: Is the amount of wastewater that is estimated to have discharged from any sewer line, sewerage pump station, evaporation pond, sewage receptacle, or any other liquid waste transporting or receiving receptacle, and does not include stormwater or rainwater in consideration of the calculated spill volume in relation to a WWO event.

In the estimation of spill volume, it is acceptable to use flow curves providing that they are relevant to the season and conditions i.e. rainfall curve in winter, dry curve during summer.

Wastewater: is sewage as defined in the Health Act 1911 (see definition of sewage).

Wastewater overflow: is the overflow, discharge, or spillage of wastewater into/onto a water body, recreational waterway, land area, building etc, from a wastewater treatment plant (WWTP), sewer line, sewerage pump station, evaporation pond, sewage receptacle, or any other liquid waste transporting or receiving receptacle.

1. Introduction

Wastewater overflows (WWOs) are recognised as a serious public health concern, particularly when there is potential for people to come into direct contact with wastewater that has overflowed into recreational water environments such as rivers, estuaries and coastal waters used for “whole of body” contact activities such as swimming.

Nevertheless, any direct contact with wastewater that has discharged from a sewage system, or from the sewer; whether in water, on land, or within a built environment can be a serious concern to public health.

Untreated wastewater can include a number of pathogenic (disease causing) microorganisms including bacteria, viruses and protozoa. People that come into direct contact with untreated wastewater can experience a number of severe and potentially life threatening illnesses.

WWOs may also impact on the water quality and ecology of the receiving water body. The degree, extent and duration of impact will be highly variable and depends on the nature of the water body, conditions at the time, and the volume of wastewater discharged. The potential water quality impacts relate mainly to the input of nutrients, increased biological oxygen demand and input of low concentrations of various pollutants.

Western Australia (WA) government agencies and WWSPs need to be aware of their roles and responsibilities when dealing with a WWO. They must ensure that the incident is managed in a rapid, coordinated and effective manner, thus preventing or minimising any detrimental effects to public health and the environment.

2. Scope and Application

These response procedures are to be used by state government agencies, LGAs and WWSPs for WWO events which occur into water, on land, or into built environments within WA, in accordance with the scope of WWO events detailed in [‘Appendix 2 – Determining a Reportable Wastewater Overflow’](#).

This scope includes WWOs that may discharge to a wide range of environments, including but not limited to the following:

- naturally occurring fresh, estuarine and coastal water bodies;
- ornamental and/or artificial lakes or ponds created in a park, garden or housing estate;
- onto the ground e.g. road verge, public open space, or backyard;
- open drain or basin, or;
- residential or commercial building.

3. Roles and Responsibilities

Each agency has specific roles and responsibilities for minimising or preventing detrimental effects to humans, animals and the environment during a WWO event.

The roles and responsibilities for key RA involved in a WWO event are outlined as follows.

3.1. Wastewater Service Providers

Wastewater Service Providers (WWSPs) are responsible for the conveyance, treatment and disposal of wastewater within WA. On occasions, faults at, or to WWTPs, pumping stations, pressure mains or blocked/damaged sewer mains can cause a WWO. Water Corporation is the main WA WWSP; however other WWSPs may include LGAs, land developers, mining companies, or other businesses, organisations or agencies.

The key roles of a WWSP during a WWO event which occurs in relation to the conveyance, treatment and disposal of wastewater from their asset(s) include:

- Notifying designated RA of the WWO in a timely manner (initial verbal contact within 30 minutes, if possible);
- Commencing containment and recovery operations;
- Installation and maintenance of warning signs, primarily along the edge of affected water areas into which wastewater has overflowed, and potentially at prominent public accessible land areas where wastewater has overflowed;
- Providing relevant information and advice to the lead agency for media statements;
- Notifying known stakeholder groups;

- Removal of warning signs, following advice from Department of Health Western Australia (DOHWA), as to when the water or the land environment is determined safe for its intended or potential purpose;
- Conducting a detailed investigation into the cause of the WWO and provide details to the relevant RA; and
- Cooperating with relevant RA.

3.2. Department of Health

The DOHWA is the lead agency responsible for advising the public when a WWO is considered to be a significant public health risk.

In the event of a WWO, the key roles of the DOHWA include:

- Liaising with relevant RA e.g. WC, DEC, SRT, LGA(s) etc;
- Issuing public health advisories that warn people to avoid contact with recreational waterways, or prominent public accessible land areas contaminated with wastewater;
- Providing advice to the lead agency for media statements (i.e. when DOHWA is not the lead agency);
- Providing advice regarding public health risks associated with WWOs into recreational waterways or prominent public accessible land areas;
- Providing advice on appropriate warning signs to be used to discourage entry into affected water bodies and/or onto land areas;
- Collecting bacterial water samples (if possible/able) from affected recreational waterways;
- Advising RA when it is suitable to remove warning signs, and;
- Issuing an advisory when a recreational waterway is suitable for primary and secondary contact recreation; or a prominent public accessible land area is again accessible following a WWO event.

3.3. Local Government Authorities

Local Government Authorities (LGAs) have an important role in implementing communication/management strategies that alert the public to a WWO which has occurred into a recreational waterway and/or onto a prominent public accessible land area, thereby reducing the potential for exposure.

In the event of a domestic WWO, LGAs may issue the owner or occupier (as applicable) with directions to clean, repair, replace (as appropriate) unsanitary, faulty or damaged onsite sewage infrastructure. LGAs may also assess the WWO site, and provide the owner, or occupier with assurance or advice regarding site clean-up and remediation processes and measures.

LGAs shall ensure, and provide advice to DOHWA, that the remediation response by a WWSP or the responsible agency for a WWO is to a satisfactory public health standard.

Recommended management interventions which may be administered by LGAs include;

- Attending the WWO site to investigate, assess, or determine the cause, extent and remediation of the WWO and issue directions to the owner/occupier if appropriate (only for domestic WWOs);
- Erecting warning signs in affected areas;
- Providing advice to the lead agency for media statements (e.g. relevant local information);
- Liaison with local water or land stakeholders e.g. local sporting groups such as rowing or surf life saving clubs, and primary and secondary schools etc;
- Disseminating information to alert the public of affected water or land environments e.g. by phone, door to door, via a letter drop, on its webpage etc;
- Provide a local/regional contact for enquiries from the community; and
- Collect bacterial water samples, or assist DOHWA with the collection of bacterial water samples, from recreational waterways that have been contaminated as a result of the WWO.

3.4. Department of Environment and Conservation

Under the Environmental Protection Act 1986 (EP Act), Department of Environment and Conservation (DEC) is the primary agency responsible for pollution management in WA. DEC has powers to investigate, enforce and to order pollution to be abated and remediated (Department of Environment and Conservation 1986).

The EP Act definition of 'pollution' includes impacts on public health and amenity. In certain circumstances, a discharge of waste to the environment is an offence under this Act.

DEC is the lead agency for WWOs that impact upon the environment; however, DOHWA may assume lead agency responsibilities, if it considers a WWO to be a significant public health risk. In any environmental WWO event, liaison between DEC and DOHWA is integral to determine who assumes lead agency responsibilities.

The roles of DEC include:

- Emergency response to the scene of major WWOs into the environment;
- Providing advice to the lead agency for media statements (where DOHWA or SRT assume the lead agency role);
- Issuing media statements as lead agency for WWO events that affect the environment and are not of significant public health importance.
- Providing on-scene incident control of major WWOs (in conjunction with SRT if an incident is within the SRT DCA);
- Collection and collation of evidence of potential offences under the EP Act;
- Assessing the environmental impact and extent of WWOs (in conjunction with SRT if the overflow is within the SRT DCA);
- Determining clean-up requirements and issuing clean-up directions to the responsible party, as required and empowered under section 73 of the EP Act;
- Requiring a full report from the responsible party under section 72 of the EP Act; and
- Licensing and permitting of [controlled waste carriers](#) cleaning-up WWOs;

3.5. Swan River Trust

Under the Swan and Canning Rivers Management Act 2006, SRT are empowered with certain powers and responsibilities to care for, control and manage the Swan and Canning Rivers and significant tributaries that reside within its Development Control Area (DCA) (Refer to [‘Appendix 6 – Map of Swan River Trust DCA’](#)).

Responsibility for the Swan and Canning Rivers and tributaries also includes enforcing certain pollution related provisions of the EP Act (as part of an operational agreement with DEC Pollution Response Unit) in the event of a WWO.

In summary, the key roles of the SRT for a WWO into the Swan and Canning rivers and their tributaries within its DCA include:

- Incident response management and coordination in the absence of DEC;
- Investigation into the cause of the WWO if required;
- Providing advice to the lead agency for media statements; and
- Providing advice and assistance to Swan-Canning system stakeholders, Trust members, the Minister and other incident response stakeholders.

4. Response and Notification Process

A response to a WWO event needs to be as rapid as possible to ensure that any potential detrimental impacts to humans and animals are minimised. The combined overall agency response is summarised in [‘Appendix 1 – Flowchart of Wastewater Overflow Response’](#) however the individual response by agencies are outlined as follows;

4.1. Wastewater Service Providers

4.1.1. Immediate Response to Notify DEC

As soon as practicable (nominally within 30 minutes), of a WWSP being advised of a POTENTIALLY reportable WWO (see paragraph below), it shall contact DEC’s Pollution Watch Duty Inspector (24 hours) to notify them of the unconfirmed WWO.

Refer to '[Appendix 2 – Determining a Reportable Wastewater Overflow](#)' for a summary table of reportable situations in which WWSPs are required to notify designated RA.

Note: Despite '*Appendix 2*' reportable WWO event definitions, nothing in these WWORP removes the requirements for Water Corporation or any other WWSP to comply with the provisions of Section 72 of the EP Act 1986 and any condition of licence issued under the Act. If you believe that the WWO may have caused pollution or environmental harm, or is contrary to a condition of licence further guidance should be sought.

4.1.2. Immediate Actions at the Wastewater Overflow Site

Site Assessment, Containment & Recovery

As soon as a WWSP is advised of a WWO, it shall immediately organise for a maintenance team to attend the WWO site. The cause, extent and magnitude of the WWO shall be determined, and containment and recovery operations shall commence.

The WWSP shall undertake the following measures to ensure that any potential public health risks from the WWO is minimised and abated where possible:

1. Maintenance team utilise PPE

The maintenance team shall ensure that they wear and have available, appropriate personal protective clothing (PPE) and equipment when attending the WWO site, thus preventing/minimising the possibility for infection or illness when working to address the problems associated with a WWO event.

2. Erect signage to keep public out of affected/work area

The maintenance team shall erect the appropriate sign(s), to discourage entry by the public into the affected/work area that has been contaminated with wastewater.

Refer to '[Appendix 5 – Warning Signs](#)' for warning sign templates and also to '*Signage Requirements*' for further signage installation details.

3. Identify & stop the source of WWO

The source of the WWO shall be identified, any blockages shall be cleared (as appropriate) and the source of WWO stopped i.e. activate shut valve, divert flow, plug line etc.

4. Contain WWO

Wastewater shall be prevented from contaminating additional land or water areas. This may require a bund for stormwater or open drains, roads, gullies etc.

5. Vacuum to tanker pooling areas of wastewater

Any pooling areas of wastewater in buildings, on open land areas, or potentially where significant quantities ($\leq 200L$) of wastewater have overflowed into recreational waterways, shall be vacuumed into a controlled waste vehicle for disposal back into the wastewater reticulation system.

Note: Recreational waterways shall be assessed on a case by case basis with relevant management agencies to determine whether vacuuming is an appropriate action.

6. Remove solid waste material

Any solid wastewater material (sewage solids) of quantity less than 200kg, which remains in buildings, on open land or water areas shall be removed, packaged and disposed of to landfill. If the quantity of sewage solids is greater than or equal to 200kg, then removal and disposal shall be undertaken in accordance with the *Environmental Protection (Controlled Waste) Regulations 2004* (Controlled Waste Regulations) as administered by DEC.

7. Spray or apply disinfectant/neutralising agent to contaminated surface areas


Contaminated areas inside buildings or dry land areas (not waterways) shall be sprayed with a disinfectant/neutralising agent in accordance with the manufacturer's instructions and occupational safety and health considerations.

Note: Disinfectants which are commonly utilised include Accent Tang and Jasol Green Pine. Contaminated land areas i.e. soil and grassed areas may also be treated with hydrated lime to assist in neutralising odour.

It is recommended that clean fill topsoil be spread over contaminated soil and grassed areas (where appropriate), to help soak-up wastewater and reduce potential exposure to pathogenic microorganisms.

8. Repair & replace any broken equipment

Any broken or faulty equipment or wastewater infrastructure shall be repaired or replaced, to prevent or minimise the likelihood for further WWOs.



Note: Repair works undertaken outside of land vested in Water Corporation or LGAs, and within the SRT DCA will require an 'emergency works' permit through SRT. This is particularly important if the works involve disturbance to the river beds or banks, and consultation with relevant stakeholders (e.g. indigenous consultation) may be required in this case.

Recovery Miscellaneous

WWO events which occur into domestic, commercial, industrial or public buildings will most likely require additional response measures to ensure the effective recovery and continued health and safety of that building environment.

Built environments affected by a WWO will normally require an insurance assessor to assess the affected area, the building and items, to determine the cost and extent of remediation and replacement to the building and associated items.

Carpet material items that have been contaminated with wastewater shall be disposed of and replaced. Some material or fabric items e.g. clothing or curtains maybe able to be dry-cleaned. Other items of sentimental value may require professional cleaning and disinfection to render them suitable for use.

Depending on the extent, and nature of the WWO, people may need to be evacuated from the building or residence for the period of remediation and require alternate residence.

If the WWSP is responsible, or partially responsible for the WWO, they may provide those occupants whose dwelling is temporarily unsuitable for occupancy, as a result of the WWO, with alternate accommodation throughout the duration of remedial works.

Signage Requirements

Warning signs shall be erected at and surrounding the WWO area (if practicable on both sides) in prominent affected public access areas or locations. The requirement for signage may be waived if DOHWA does not consider there to be a risk to public health (e.g. a minor spill into a flowing water body).

Depending on the magnitude of, and location of a WWO i.e. if into a recreational waterway, warning signs shall be placed at approximately 50m intervals (where accessible), surrounding, or along the affected area in accordance with Table 1 or as directed by DOHWA.

Barrier tape shall be used to join signs together (where possible), to deter public access into the primary WWO area. This is the area where the public health risk is perceived to be greatest.

Table 1: Recommended Signage Requirements

Spill volume (kL)	Distance of Beach Closure either side of WWO
<150kL	300m
>150kL and <500kL	500m
>500kL	1.5 km
Unknown quantity suspected to be of large volume	1 km

Note: Distances for sign placement may vary depending on the location of the WWO. The DOHWA may request the WWSP or the relevant LGA(s) to install additional signs at any given time.

River/lakes

Signs shall be placed along the river/lake edge where the water is most affected. Signs may need to be displayed on both sides of the river/lake in narrow sections.

Ocean

At least two (2) signs are to be placed either side of the WWO discharge point. Barrier tape shall be used to join signs together across the width of the beach.

Warning Sign Templates

Refer to '[Appendix 5 – Warning Signs](#)' for generic templates of warning signs that can be used for a WWO into a recreational waterway or onto a prominent public accessible land area.

4.1.3. Notifying Response Agencies of a Confirmed WWO

As soon as the WWSP has assessed the extent and nature of the WWO, and has confirmed that it is reportable (Refer to '[Appendix 2 – Determining a Reportable Wastewater Overflow](#)'), the WWSP shall immediately contact the following RA (nominally within 30 minutes of confirmation) to notify them of the CONFIRMED WWO:

- DEC Regional environmental officer in the event of a discharge in the region;
- DOHWA On-call Duty Officer (24 hours);
- SRT Only if WWO is within SRTs DCA;
- LGA(s) Only LGAs in which whose district the WWO has occurred, or may have potentially affected areas within its district; and
- DOW Only if within a Public Drinking Water Source Area (PDWSA).

Refer to relevant agency contact details as follows:

(i) Department of Health

Principal Contact

24 Hour On-call Duty Officer	Telephone: (08) 9328 0553
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On-call Duty Officer will pass on WWO details to relevant DOHWA staff and LGAs (Refer to '[5.4 Response Agencies Contact List](#)').

Confirmation Email Address for DEC EP Act Section 72 Notification

A confirmation email (copy of DEC EP Act Section 72 Notification) shall also be sent to the following address:

Email: ssalert@health.wa.gov.au

Once site remediation, clean-up &/or disinfection works have been completed, the WWSP shall also send a second email (as appropriate) to confirm completed works.

(ii) Department of Environment and Conservation

Principal Contact

24 Hour Pollution Watch Duty Inspector	Telephone: 1300 784 782
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(Notifies relevant Licensing Officer for WWTP overflows)

Secondary Contact

Environmental Hazards Manager (Refer to '[5.4 Response Agencies Contact List](#)').

Confirmation Email Address for DEC EP Act Section 72 Notification

A confirmation email (DEC EP Act Section 72 Notification) shall be sent to the following address:

Email: pollutionwatch@dec.wa.gov.au

(iii) Local Government

The WWSP shall advise an EHO from the relevant LGA(s) of the WWO during general LGA working hours Monday to Friday 8am – 4:30pm. Note: some regional LGA offices close at 4pm.

(iv) Swan River Trust

In instances where a WWO has discharged into the Swan or Canning Rivers or their tributaries that are part of the SRT DCA the WWSP shall also advise the SRT.

Principal Contact

During office hours (8:30am – 5:00pm):	Telephone: 9278 0900 (Ask for Duty Officer)
After hours contact:	Mobile: 0419 192 845

Secondary Contact

Manager Riverpark (Refer to '[5.4 Response Agencies Contact List](#)').

(v) Department of Water

In instances where a WWO has discharged within a PDWSA the WWSP shall advise DOW. Refer to '[5.4 Response Agencies Contact List](#)'

4.2. Department of Health

4.2.1. Response

Upon notification of a WWO, DOHWA will liaise with WC, DEC, SRT (when WWO is within the SRT DCA), relevant LGA(s) and other agencies (as appropriate) to determine the extent of the area affected and other relevant details.

The types of details pertaining to the WWO incident that shall be noted are contained in [‘Appendix 3 –EP Act Section 72 Waste Discharge Notification Form’](#).

DOHWA may also provide additional recommendations to the agency responsible for the WWO, regarding health warning sign installation and the use of barrier tape.

In addition, a DOHWA officer (as appropriate) will endeavour to attend the site and undertake bacteriological water sampling, with assistance from relevant LGA(s), and/or other regulatory agencies (as required) at impacted and surrounding recreational waterway sites.

Depending on the magnitude of the WWO, DOHWA will arrange with the WWSP, or the relevant LGA(s) for additional signs to be erected at other potentially affected or prominent locations.

4.2.2. Liaison with Local Government Authorities

The DOHWA will liaise with relevant LGA(s) (as appropriate) to discuss the following:

- placement of warning signs;
- water sampling locations;
- media statements;
- stakeholder communication, and;
- confirmation of satisfactory remediation works.

4.2.3. Bacteriological Sampling

The DOHWA (where possible or as determined applicable) will undertake bacteriological sampling of impacted recreational waterways, with the assistance from relevant LGA(s) and/or other regulatory agencies (as required). This sampling generally will be undertaken daily until satisfactory results are obtained.

Experience has shown that it usually takes up to 48 hours for a recreational waterway to return to a safe condition following a WWO event.

As a courtesy, the officer undertaking bacteriological water sampling shall contact PathWest Water (PWW) laboratory (see below) to notify of in-coming samples for analysis.

During normal working hours (8am – 6pm):	Telephone: 9346 2583
Weekends (Sat & Sun 8 - 10am):	Telephone: 9346 2171
After Hours (Duty Security Officer):	Telephone: 9346 2536

Email: waters.pathwest@health.wa.gov.au

4.3. Local Government Authorities

4.3.1. Response

If a LGA is notified by a member of the public regarding a WWO, it shall as soon as practicable (nominally within 30 minutes), advise the WWSP of the potential “reportable” (Refer to [‘Appendix 2 – Determining a Reportable Wastewater Overflow’](#)) WWO. LGAs shall also notify the DOHWA once the WWO has been confirmed as reportable.

LGAs also have responsibility and are encouraged to implement local measures to communicate, monitor, investigate and address potential public health risks and concerns that may arise from WWOs within their districts.

In the event of a domestic WWO event, attendance at the affected site is recommended in order to:

- Liaise with the WSSP and/or investigate the cause of overflow, and to issue any relevant directions in accordance with the *Health Act 1911* to the occupier and/or owner (as appropriate). Such directions may include the cleaning, repair and/or replacement of sewage pipes, fixtures or onsite systems as the situation requires;

Note: Further information relevant to LGA(s) legal powers and responsibilities in relation to domestic wastewater overflows can be found in the DOHWA EHD factsheet: [‘Domestic Wastewater Overflows’](#);

- Ensure that cleaning, disinfection and remediation including the disposal of contaminated items that are unable to be properly cleaned and disinfected; and
- Provide any relevant information and advice to the owner and/or occupier.

4.3.2. Notifying Key Stakeholders

LGAs should endeavour to notify key local land and/or recreational waterway stakeholders (as appropriate), such as sporting clubs, surf life saving associations, rowing clubs, schools etc, who utilise either, or both land areas or a recreational waterway which has been contaminated as a result of the WWO.

4.3.3. Assisting Department of Health

LGAs shall assist DOHWA in response to WWO events (as required), by investigating WWO incidents, assessing WWO sites, erecting warning signs and undertaking bacteriological water sampling in local affected recreational waterways.

LGAs may undertake other actions they deem necessary, or appropriate to prevent or deter access by the public to the affected area.

At the conclusion of site clean-up, disinfection and remediation works for contaminated exposed land areas and/or built-up environments, the relevant LGA shall confirm in writing (email to: ssalert@health.wa.gov.au), to confirm whether it is satisfied with the relevant site clean-up, disinfection and remediation works.

LGAs shall also provide DOHWA with any relevant information, photographs and/or comments. This information will enable DOHWA to give LGAs, or the WWSP (as appropriate), consent for health warning signs to be removed and to undertake any subsequent relevant actions.

For further information refer to '[6.2 WWO Incidents onto Exposed Land Areas or into Built-up Environments.](#)'

5. Media Management

5.1. General Information

The DOHWA is responsible for advising the public regarding significant potential or actual public health impacts as a result of a WWO event. The DEC is responsible for advising the public regarding a WWO that has the potential to pollute/affect the environment.

5.1.1. Public Health Media Statement

A media statement of public health significance shall be issued in the following situations:

- Upon notification of a WWO that appears to represent a significant public health risk;
- Confirmation that the bacterial water quality of a recreational waterway following a WWO has returned to background levels and is suitable for recreational activities; and
- When any apparent detrimental health risk(s) associated with a prominent public accessible land area as a result of a WWO have been addressed e.g. following site remediation.

These scenarios do not preclude individual agencies from issuing their own media statements that are consistent with DOHWA's media statement i.e. provided they do not misinform the public regarding potential or actual public health impacts or risks.

DOHWA shall liaise with the WSSP, DEC and other relevant RA in the preparation and release of media statements. Where a WWO has occurred into the SRT DCA, DOHWA shall also liaise with SRT. When issuing a media statement, DOHWA shall notify relevant RA and provide the statement prior to (preferably) or at the time of its release.

5.1.2. Media Enquiry Information & Protocols

Media enquiries shall be directed to individual RA public affairs personnel.

RA primary responders at a WWO site shall not provide comment to, or engage in interview with television or media crews, without prior approval from their respective agencies.

Where prior approval has been obtained, it is recommended that only brief details of the respective agencies activities be provided.

When an individual or organisation is under investigation, only brief incident details shall be provided and the RA shall state that an investigation is underway. RA shall avoid referring to potential penalties, or making any comment that may preclude the outcome of an investigation.

5.2. Swan River Trust Development Control Area

Further media coordination details for agencies involved in the management, coordination and/or response to WWOs and other incidents, within the SRT DCA can be found in the draft Inter-Agency Media Protocol document titled: '*Spills, Kills and Blooms*'. Contact SRT for further details.

5.3. Outside Swan River Trust Development Control Area

The DOHWA will liaise with relevant RA e.g. WWSP, DEC and respective LGAs in the preparation, management and coordination of a media alert, in response to a WWO event that occurs into the environment outside of the SRT DCA.

Initially, DOHWA will liaise with the WWSP/agency responsible for the WWO, and DEC (the onsite government agency for managing the incident scene), to determine if the WWO poses a significant public health risk. If DOHWA deems the WWO not to be significant, it will liaise with these RA, to discuss which agency will take the lead in issuing a media statement (as appropriate) to advise the public regarding the WWO into the environment.

DOHWA shall support the lead agency issuing the media alert by providing them with supporting statements pertaining to relevant public health issues, risks or concerns.

In the event that the WWSP/agency responsible for the WWO, and DEC declines the opportunity to issue a media statement, DOHWA may proceed to issue a media statement (if appropriate), and seek input from relevant RA.

Refer to ['Appendix 4 – Example Media Statements'](#).

5.4. Response Agencies Contact List

RA involved in the management, coordination and/or response of WWOs, will periodically receive, or may request from DOHWAs EHD Water Unit a copy of a separate '*Response Agencies Contact List for Wastewater Overflow Events*'.

Note: This '*Response Agencies Contact List*' is 'confidential' and only available to RA; including LGA's who are involved in the management, coordination and response of WWO events into the environment (including built environment) throughout WA.

A copy of the '*Response Agencies Contact List*' can also be made available by emailing: ssalert@health.wa.gov.au and requesting a copy.

6. Incident Closure

6.1. WWO into Recreational Waterways

When a WWO has occurred into a recreational waterway, DOHWA will advise the responsible WWSP, DEC, SRT (as appropriate), and relevant LGA(s) when satisfactory bacteriological sample results have been received. DOHWA will also instruct the relevant RA to remove warning signs and barrier tape.

A media statement will be issued to advise the public that the recreational waterway again is suitable for its relevant or intended purpose(s).

6.2. WWO onto Exposed Land Areas or into Built Environments

When wastewater has overflowed onto an exposed land area, or into a built environment, the responsible WWSP and the relevant LGA(s) shall confirm in writing (email to ssalert@health.wa.gov.au), that the WWO site has been properly cleaned, disinfected and remediated (as appropriate).

6.2.1. Site Visit to Confirm WWO Remediation

Confirmation of site remediation to a satisfactory public health standard will necessitate a site visit(s) generally by the LGA, or in some situations the DOHWA, to ensure the following:

- There are no remaining pooling areas of wastewater or waste solids e.g. wastewater has been pumped out to sewer, and any waste solids have been disposed of to landfill, or in accordance with the Controlled Waste Regulations (as required); and
- Necessary treatments to the site have been applied e.g. disinfectant/hydrated lime and/or clean fill soil has been applied to grass/soil land environments (as appropriate);
- Or; in the case of domestic, commercial or industrial buildings that the following measures have been undertaken:

- Soiled materials e.g. carpets, clothing, fabrics etc. have been discarded to landfill or cleaned and disinfected appropriately; and
- Cleaning, disinfection of contaminated surfaces, items, equipment, furniture, materials (where appropriate) has been undertaken.

Note: For further information regarding domestic wastewater overflows, refer to the DOHWA EHD factsheet titled: [‘Domestic Wastewater Overflows’](#).

6.2.2. DOHWA to instruct LGA/WWSP to remove warning signs

Once the LGA is satisfied that wastewater and/or waste solids no longer remain, and that the WWO site has been adequately cleaned, disinfected and remediated, and has communicated this advice to DOHWA, the DOHWA will instruct LGA, or the relevant WWSP (as appropriate) to remove warning signs at the WWO site.

6.2.3. Media statement may be issued

A media statement may be issued advising the public that the affected land area or built environment is again suitable for its relevant or intended purpose(s).

6.3. WWO Debrief Meeting

In the event of a significant WWO event (whether into a recreational waterway, onto an exposed land area, or into a built-up environment) for which any of the following is evident:

- Problem in fulfilment of RA responsibilities;
- New, or reoccurring issue or problem, and/or;
- New or increased awareness of WWORP areas for further improvement;

the WWSP, or any RA involved in the WWO event, may host a debrief meeting, in order to meet with the WWSP and RA involved to discuss and address any of the relevant issues.

The DOHWA shall consider any issues raised in these debrief meetings, and implement the suggested additions, changes, or improvements into the WWORP (as appropriate).



References

Department of Environment and Conservation (1986). Environmental Protection Act 1986.

Department of Premier and Cabinet. Western Australia, State Law Publisher. 087 of 1986: 297.

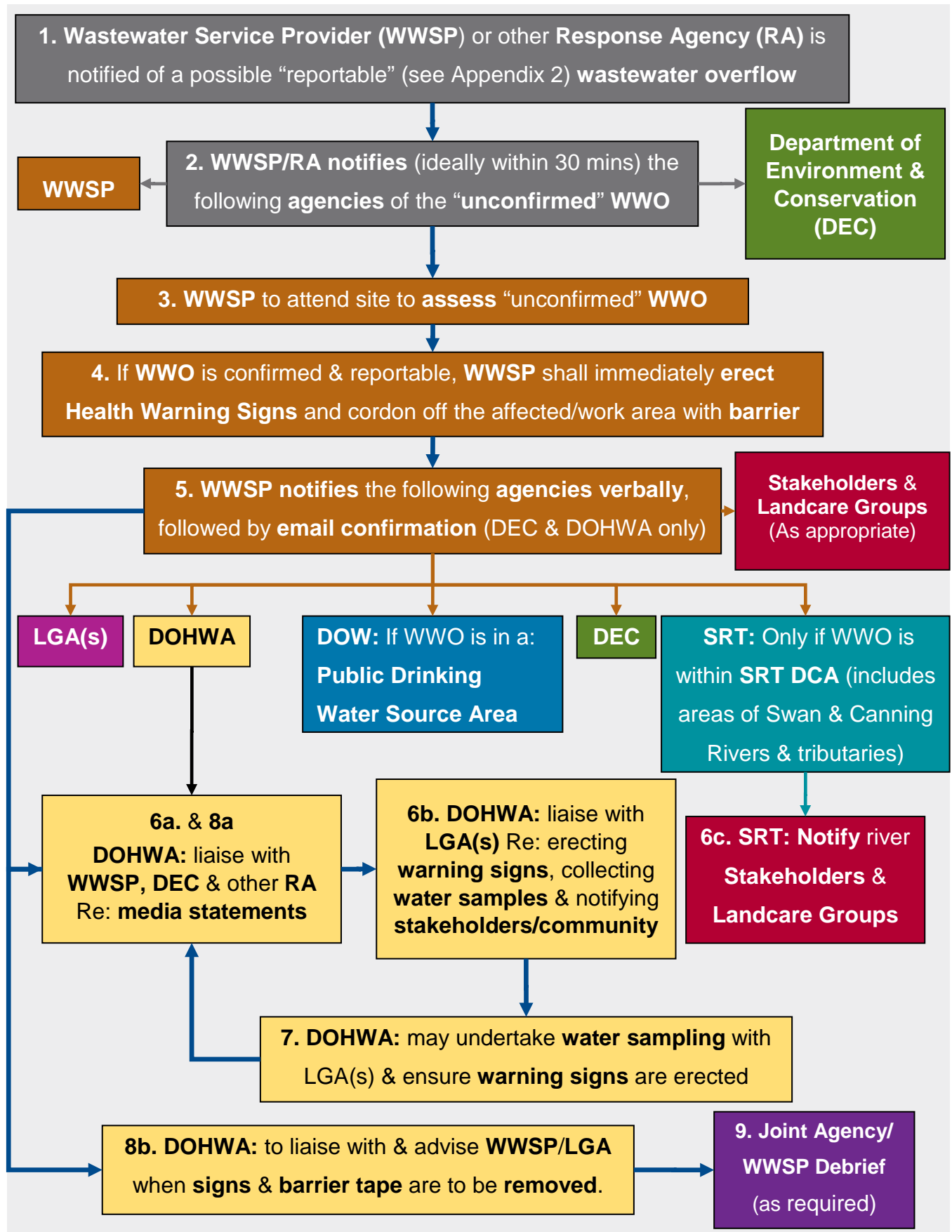
Department of Environment and Conservation (2004). Environmental Protection (Controlled Waste) Regulations 2004. Department of Premier and Cabinet. Western Australia, State Law Publisher: 2627-2673.

Department of Health WA (1911). Health Act 1911. Department of Premier and Cabinet. Western Australia, State Law Publisher. 034 of 1911 (1 Geo. V No. 45): 329.

Department of Health WA (1974). Health (Treatment of Sewage and Disposal of Effluent and Liquid Waste) Regulations 1974. Department of Premier and Cabinet. Western Australia, State Law Publisher: 3303-3340.

National Health and Medical Research Council (2008). Guidelines for Managing Risks in Recreational Water. Canberra: 215.

Appendix 1: Flow Chart of Wastewater Overflow Response



Appendix 2: Determining a Reportable Wastewater Overflow

Wastewater Overflow Discharge into/onto:	Report-able	Report to:			Advice to:	
		DEC	DOH WA	DOW	SRT (Perth region only)	LGA(S)
1. Watercourse – includes Ocean (Discharge is flowing or ponding)	Yes	Yes	Yes	Reportable if within Public Drinking Water Source Area (PDWSA)	Yes (If to Swan River or a tributary)	Yes
2. Basin with outlet and wastewater can't be retrieved (may have flowed downstream)	Yes	Yes	Yes		Yes (If to Swan River or a tributary)	Yes
3. Lake (ornamental or natural), Wetland or Ocean	Yes	Yes	Yes		Yes (If wetland is associated with Swan River or a Tributary)	Yes
4. Ground (verge, public, open space, backyard etc.)	Yes	Yes (If $\geq 10m^3$)	Yes*		No	Yes
5. Dry watercourse, open Drain or natural Creek	Yes	Yes (If $\geq 10m^3$)	Yes*		No	Yes
6. Unlined basin with no outlet	Yes	Yes (If $\geq 10m^3$)	No		No	Yes (If LGA Basin)
7. Piped drainage system (contained in pipe and retrievable by tanker)	Yes	No	No	No	No	Yes (If LGA Asset)
8. Lined Basin or emergency Storage Tank	No	No	No	No	No	No
9. Residential or Commercial Building	Yes	No	Yes	No	No	Yes

* If quantity of wastewater is sufficient that it has pooled or ponded & can be pumped out. **Note:** Nothing in these WWORP removes the requirements for Water Corporation to comply with the provisions of Section 72 of the Environmental Protection Act 1986 and any condition of licence issued under the Act."



Appendix 3: EP Act Section 72 Waste Discharge Notification Form



Environmental Protection Act 1986

Section 72 Waste Discharge Notification

To: Chief Executive Officer Attention: (Name)	Department of Environment and Conservation Facsimile: 9333 7575 Locked Bag 104 Bentley Delivery Centre WA 6983
Telephone notification to 1300 784 782	

DISCHARGE OF WASTE FROM: Premises <input type="checkbox"/> Vehicle <input type="checkbox"/>	
Name of premises / vehicle:	Town / suburb:

The following notification and information is provided in accordance with Section 72 (1) of the <i>Environmental Protection Act 1986</i> :	
Licence or Works Approval Number	(If applicable, type in your <i>Environmental Protection Act</i> Licence or Works Approval number.)
Relevant condition	(If this notification is a requirement under a Licence, Works Approval or Pollution Abatement Notice, type in the relevant condition or measure.)
Description of operation or equipment	(If any of the above two blocks were not filled, please type a brief description of your operation and/or the equipment that malfunctioned.)
Description of incident	(Describe the cause of waste discharge.)

Prescribed details of discharged waste as required by 5K of the <i>Environmental Protection Regulations 1987</i> :	
Date of Incident: / /	Time: am / pm
Address / Location:	
Name of person responsible for spill	(Name of person operating the equipment that resulted in, or otherwise responsible for, the discharge of waste.)
Composition of Waste	
Quantity of waste Discharged	
Environmental Impact	(Did the discharge cause pollution? If so, describe the nature and extent of the pollution or environmental impact.) (Attach a map to this notification indicating discharge point and impacted area)
Remedial Action	(What action was taken to minimise the effect of the environment from the discharge of waste? Who coordinated this action?)
Waste Removal	(Was the waste involved removed, dispersed, destroyed or otherwise dealt with? If so, in what manner and where to?)

Name of reporter:	
Job title:	
Contact number:	
Organisation:	
Date:	
Signature:	

Please complete this form and either attach to an email along with map of discharge point and send to pollutionwatch@dec.wa.gov.au or print and fax the completed form and the map to: **(08) 9333-7575**

Appendix 4: Example Media Statements

Caution advised after [Insert Suburb/Location] sewage spill

The [Insert agency name] is warning people not to collect shellfish from the wild or take part in other recreational activities such as swimming in a section of the [Insert water body name] in [Insert suburb name/location], after sewage was found to be flowing into the [Insert water body type] as a result of [Insert cause/reason for wastewater overflow].

[Insert agency spokesperson's position & name] said the sewage had spilled into a section of the [Insert water body type] along [Insert street name and other location/landmark details].

“We are reminding people not to collect or eat shellfish from the [Insert water body name], particularly from this section, as it may cause illness,” he said.

“Commercially available shellfish in Western Australia is not affected as commercial seafood is managed by a strict quality assurance program.”

[Insert agency spokesperson's name] said action is being taken to repair the [Insert the equipment/cause/reason responsible for the wastewater overflow], however people should still avoid contact with the water until further notice.

“Ingestion of the water could result in diarrhoea and vomiting and anyone experiencing these symptoms should visit their doctor.”

[Insert agency spokesperson's name] said the [Insert agency name] have collected water samples and warning signs are being erected along this section of the [Insert water body type] to alert the public.

The [Insert agency name] is working with the [Insert agency name] to monitor water quality in the area and encourages the community to report any activities which may be harmful to the [Insert water body type] and shorelines by calling the office on [Insert contact number] or the emergency after hours hotline on [Insert contact number].

Media inquiries: [Insert contact number]

[Insert Location] sewage spill disperses

The section of the [Insert water body name] at [Insert specific street name & suburb] has been reopened following [Insert day] sewage spill.

[Insert Agency Name] [Insert agency spokesperson's position & name] said water quality tests had revealed there were slightly elevated bacteria levels on the [Insert day], but recent water quality reports have returned bacterial levels back to normal levels.

(Optional statement) The reduction in bacteria levels may have been assisted by sunny weather conditions experienced over the past few days.

“Warning signs advising people not to take part in direct water contact activities in the affected area have now been removed” [Insert agency spokesperson's name] said.

“We are waiting for an incident report from the [Insert Responsible Agency Name] but it's believed the spill occurred as a result of a [Insert Cause/Reason for wastewater overflow].

“It's estimated that about [Insert quantity of wastewater overflow] of sewage overflowed into the river from [Insert structural terminology e.g. “from access chamber”].

As a general guide, the Department of Health does not recommend swimming for up to three days after heavy rainfall in estuarine waters as rain can flush bacteria from the surrounding catchment into the water.

For information on bacterial water quality visit the Public Health website at:

www.public.health.wa.gov.au/2/639/2/environmental_w.pm.

The [Insert agency name] encourages the community to report any activities that may be harmful to the [Insert water body type] and shorelines by calling the office on [Insert agency information contact number] or after-hours on [Insert agency information contact number].


Media Contact: [Insert contact number]

Appendix 5: Warning Signs

The following generic warning sign templates are typical of the type of warning signs to be erected, when a WWO occurs into a recreational waterway or onto a prominent publicly accessible land area.



It is recommended that WWSP and RA involved with WWO events that have responsibility for erecting warning signs, contact DOHWA EHD, by emailing: ssalert@health.wa.gov.au to obtain copies of these generic warning sign templates.



The template may be modified to include individual agency logos and contact numbers (as appropriate), but it would be appreciated if a copy of the modified template be sent to DOHWA for endorsement.

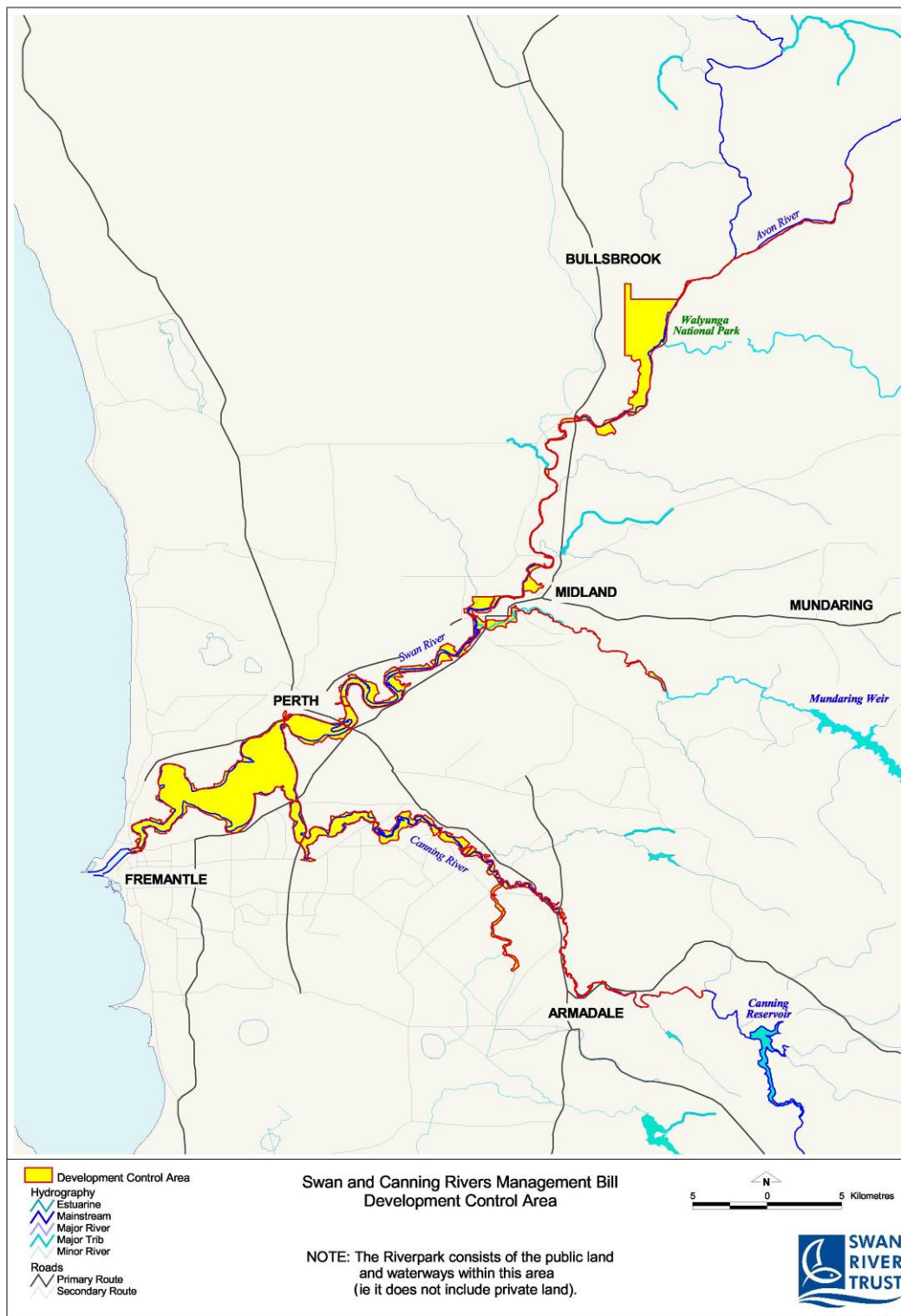
WWSPs and LGAs shall ensure that they have a sufficient number of warning signs ready to be erected for when a WWO event occurs.

Note: DOHWA has a limited stockpile of warning signs that can be made available in emergency situations if extra signs are required. In these situations, DOHWA will courier extra warning signs to the WWSP or relevant LGAs.

Generic warning sign templates are only available to WWSPs and RA, which have specific responsibilities in relation to WWOs into recreational waterways, land areas and/or built environments.

Appendix 6: Map of Swan River Trust DCA

A more detailed map of the SRT DCA with 26 individual section maps can be downloaded from the following SRT website; <http://www.swanrivertrust.wa.gov.au/planning-and-licensing/development-control-area>





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