

Response Guide

Fish Death Events

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Incident Coordination Unit, Regulatory Services Branch, Operations Division



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Purpose of this guideline

1.1. Introduction

The purpose of this document is to provide agencies with guidance and clarification on the arrangements and responsibilities for the response and management of fish death events.

1.2. Fish death events

A fish death event is a sudden and unexpected mass mortality of fish. Fish deaths can occur in inland or marine waters. They can be caused by a range of factors including:

- low levels, or flow, of water in waterways
- poor-quality water
- low oxygen
- high and/or low and rapid change in temperatures, or
- high nutrients.

Fish deaths may also occur with the first rains after bushfires, algal blooms, or as a result of pollution incidents, disease, or fishing bycatch. For the purposes of this document a fish death event includes the deaths of:

- fin fish
- eels
- molluscs (such as mussels)
- and crustaceans (e.g. yabbies and crayfish).

A fish death event may involve the deaths of multiple fish species.

Notification of fish death event

2.1. Incident notification

It is most likely that agencies or the public will be the first to notice or receive information in relation to a fish death event. The public and agencies should report all fish death events to EPA by calling 1300 EPA VIC (1300 372 842), 24 hours a day. Please note do not call the EPA regional offices directly.

2.2. Information to be provided to EPA

Provide the EPA call-taker with as much of the following initial information as possible and specify that this is a 'fish death event':

- name of person and return phone number
- location and extent of incident
- time the incident occurred/was noticed
- approximate number, size, species, and condition of dead fish
- whether fish are dead or merely affected
- extent of event (single or multiple locations)
- whether other fauna are affected or appear to be healthy
- flow conditions of the waterway, or any unusual conditions
- any probable cause such as an algal bloom, disease, low dissolved oxygen, or water levels

- what action, if any, is currently being undertaken.

Initial assessment and triage

3.1. Assessment

EPA operates a central triage and dispatch function between 08:30 and 22:00 seven days a week. A report of a fish death event will prompt the Rostered Dispatch Officer to contact the reporter to seek further information to enable a triage priority and determine appropriate response actions. The information that has been provided in the [Fish Death Notification Report \[Part A\]](#) will support the triage decision.

The assessment will consider factors such as the:

- size of event
- sensitivity of waterway
- potential cause (e.g. environmental, pollution, disease agent)
- species affected
- potential public interest, and
- environmental or public health consequences.

3.2. Triage

EPA monitors, assesses, and triages community and business pollution reports to ensure that a timely and appropriate response is provided. This includes direct feedback to reporters and notification of other agencies.

EPA response times based on triage decision are:

- Immediate Response – Emergency response
- Priority Response – Field response within 24 hours
- Planned response – Field response/inspection within 28 days
- Desktop response – within 28 days.

Fish death events not related to an emergency incident would generally result in a Priority response. Where the cause of the incident is indicated in the notification, EPA will notify agencies with management, investigation, or enforcement responsibilities, such as biosecurity or fisheries.

Response and field investigation

If a field investigation is warranted based on the triage decision, EPA will direct staff to attend. At this point, a regional point of contact will be assigned by dispatch to lead the EPA investigation. In some circumstances, EPA may request assistance from an appropriate agency with the capability and capacity to respond and assist with the investigation. This may be the case where EPA does not have an office in the area, in which case agencies with local capacity will assist.

Investigating officers will inspect the site and complete a [Fish Death Investigation Report \[Part B\]](#). The completed report and other information such as photos or information should be emailed to EPADispatch@epa.vic.gov.au.

Details of the field investigation will be shared with agencies with management, investigation or enforcement responsibilities relating to the incident or its cause, such as Victorian Fisheries Authority (VFA), Agriculture Victoria, catchment management authority, water corporation, local government, or another asset manager. Investigating officers will liaise with EPA to determine whether sampling and or clean-up is required.

4.1. Inter-agency notifications

In the event of a fish death notification, EPA will notify the VFA Operations Duty Officer and asset manager to support the timely management of agency responsibilities and a coordinated response ([Appendix C Key contacts](#)). EPA will also notify the regional catchment management authority.

If disease is suspected based on observed fish condition (i.e. parasites, discolouration, or lesions), EPA will also notify the Agriculture Victoria Emergency Animal Disease Hotline.

New South Wales (NSW) has jurisdiction over the Murray River and reports of fish deaths will be referred to the NSW Department of Primary Industries by EPA.

Collection and analysis of samples

Water and fish samples should be taken if a pollutant, algae, or disease is suspected. Fish death sampling guidance provides detailed information on the process for collecting, storing, and analysing samples for pathology and toxicology. Generally, water samples should be taken from the affected area, and if possible, from a nearby unaffected area for comparison. Water samples should be kept cold, but not frozen.

EPA has analysis contracts with laboratories in metropolitan and regional Victoria. Sampling guidance is available from the EPA Science Services Team. All samples must be logged via the Science Services Team and accompanied by a chain of custody form before submission to an appropriate NATA laboratory for testing as soon as possible.

Where sampling and analysis has been undertaken on behalf of EPA, results should be provided to EPA as soon as possible.

Prompt analysis and reporting will assist EPA to advise on the cause of the event and clean up management actions (if not already advised). Investigating officers will liaise with EPA to determine whether clean-up is required.

Ongoing management

EPA will determine the required management actions following assessment of the fish death event based on the information available, which may include notifications, field investigation and analysis of samples – as required.

Management action will include:

- Identification and transfer to the relevant agency for ongoing management (e.g. asset manager or control agency for an emergency).

- Stakeholder communications – EPA will liaise with the VFA and other agencies to facilitate effective communication with key stakeholder groups (e.g. fishers).
- Clean-up and waste management advice to the asset manager.
- Referral to another agency for follow up investigation under other legislation.

Public information/media

Fish death events often generate significant community concern. Informing the public with timely information is important from both a public safety and community confidence perspective. EPA will initially post social media content through Twitter. Where appropriate, pollution alert, website updates and media releases will be issued depending on the severity of the event. Supporting agencies are encouraged to repost and/or post their own notices.

Suggested formats for initial media and social media platform holding lines are below.

7.1. EPA holding line/social media pre-prepared content

"EPA is investigating a report of dead fish at XXX. EPA advises avoiding the area and not to handle dead or dying fish."

7.2. Support agency holding lines/social media pre-prepared content

"XXX agency is aware of dead fish at XXX. We are supporting EPA, who advise avoiding the area and not to handle dead or dying fish."

"EPA is investigating a report of dead fish at XXX. EPA advises avoiding the area and not to handle dead or dying fish."

Emergency response

There is no Victorian control agency for response to a fish death event under the State Emergency Management Plan (SEMP). For a fish death event of high public concern, significant environmental or public consequence or such scale that it requires an ongoing management structure, consideration will be given to escalating the event into Victoria's emergency management arrangements.

EPA will seek to transfer management to the most appropriate control agency, depending on the cause of the event. EPA will support the control agency as a technical advisor in emergency management.

Key considerations in determining an appropriate control Agency would be:

- Fish deaths caused as a direct result of a Class 1 emergency should initially be managed as a consequence of that emergency. Control may transfer at a point in time to manage any ongoing fish death impacts or as part of recovery activities.
- Fish death events caused by natural occurrence, non-hazardous pollution or disease should be managed as a Class 2 emergency. The appropriate Control Agency will depend on who is best placed to manage the response and impacts (e.g. Agriculture Victoria where disease is the cause, or catchment management authority where water quality is the suspected cause).

NSW has jurisdiction over the Murray River. A range of Victorian agencies may be required to support management of Victorian consequences including EPA, DEECA, Parks Victoria, VFA, Agriculture Victoria, catchment management authority, water corporation and local government.

Appendix A – Fish Death Notification Report [Part A]

NAME OF WATERBODY:

CATCHMENT:

PRECISE LOCATION WITHIN WATERBODY:

(Place a pin on a Google Earth map and email with the KMZ or KML file attached)

HABITAT DESCRIPTION: (tick/circle as appropriate)

(a) Freshwater Estuarine Marine

(b) Stream River Anabranch Lake Billabong Swamp Drain Channel Impoundment

Bay Lagoon Farm Dam Beach Open Ocean Other:.....

REPORTED BY: Name:..... Phone:.....

Address:

TIME / DATE REPORTED: TIME / DATE FISH DEATH FIRST OBSERVED:.....

WEATHER CONDITIONS PRIOR TO OBSERVATION OF FISH DEATH:

TIDAL STATE/WATER LEVEL AT TIME OF FISH DEATH (if applicable):

NUMBERS OF FISH AFFECTED (tick): less than 10 10 to 100 100s 1000s 10,000s 100,000s millions

CONDITION OF FISH (tick): dying freshly dead few hours old few days old decomposed

SIZE OF FISH (circle): all similar size (..... cm) / range of size classes (..... to cm)

SPECIES OF FISH AFFECTED (tick): one species only few species many different species

Please list if known:

LOCATION OF FISH (tick): floating in water on bottom along water's edge onshore

EXTENT OF FISH DEATH (area (ha) or length (m) of area affected):.....

(Create a polygon or line on a Google Earth map and email through the KMZ or KML file)

GENERAL OBSERVATIONS OF REPORTING PERSON:

OTHER FORMS OF WILDLIFE AFFECTED? (specify):

WHAT IS THE SUSPECTED CAUSE?

OTHER INDIVIDUALS & AUTHORITIES NOTIFIED

INDIVIDUAL	AGENCY	LOCATION	COMMENTS

REPORTED TO: POSITION: LOCATION:

ORGANISATION: DATE: PHONE:

Note: The completed report and other information such as photos or information should be emailed to EPADispatch@epa.vic.gov.au

Appendix B – Fish Death Investigation Report [Part B]

TIME / DATE FISHDEATH INVESTIGATED:

HABITAT DESCRIPTION: (tick as appropriate)

(c) Freshwater Estuarine Marine

(d) Stream River Anabranh Lake Billabong Swamp Drain Channel Impoundment
 Bay Lagoon Farm Dam Beach Open Ocean Other:.....

ADJACENT LAND USES (specify):

PHYSICAL EVIDENCE OF POLLUTION (OR ALGAL BLOOMS) OBSERVED:

ON-SITE WATER SAMPLING RESULTS WATER SAMPLES COLLECTED: Yes No

Note: this is not intended to replace EPA sample submission forms.

Sample no.	1	2	3	4	5	6	7	8	9
Sample ID									
Sampling site event/ upstream / downstream									
Depth: surface / middle / bottom									
pH									
Temp. (°C)									
Dissolved Oxygen									
Conductivity									
Others (specify)									

Attach map/diagram showing total area of fish death and sample sites. Colour photographs would also assist analysis and identification.

OTHER COMMENTS: (e.g. behaviour / appearance of fish)

AFFECTED FISH SPECIES	LENGTH RANGE (cm)	NUMBERS	SAMPLES COLLECTED
			Yes <input type="checkbox"/> No <input type="checkbox"/>
			Yes <input type="checkbox"/> No <input type="checkbox"/>
			Yes <input type="checkbox"/> No <input type="checkbox"/>
			Yes <input type="checkbox"/> No <input type="checkbox"/>

SUSPECTED CAUSE OF FISH DEATH:

WATER SAMPLES SENT TO: TO BE TESTED FOR:

FISH SAMPLES SENT TO: TO BE TESTED FOR:

INVESTIGATED BY: POSITION:

ORGANISATION: DATE:

RECOMMENDATION(S) FOR FUTURE ACTION:

Note: The completed report and other information such as photos or information should be emailed to EPADispatch@epa.vic.gov.au

Appendix C – Key Contacts

Organisation	Role	Phone	Email
Environment Protection Authority Victoria		1300 EPA VIC 1300 372 842	EPADispatch@epa.vic.gov.au
Victorian Fisheries Authority	Operations Duty Officer	0472 873 311	Kylie.Wohlt@vfa.vic.gov.au operations.dutyofficer@vfa.vic.gov.au
Agriculture Victoria, Emergency Animal Disease Hotline	Principal Veterinary Officer, Aquatica Animal Health	0429 429 498	tracey.bradley@agriculture.vic.gov.au Cvo.victoria@agriculture.vic.gov.au
Department of Energy, Environment and Climate Action			veronica.lanigan@delwp.vic.gov.au Water.emergency@delwp.vic.gov.au
Department of Energy, Environment and Climate Action	Team Leader Marine Biodiversity	0429 783 302	Kimberley.Macdonald@delwp.vic.gov.au
Parks Victoria	Director Fire, Emergency & Enforcement	131 963	David.nugent@parks.vic.gov.au
Parks Victoria	Manager Fire & Emergency Operations	131 963	Andrew.graystone@parks.vic.gov.au
Department of Health			water@health.vic.gov.au
New South Wales Fishers Watch hotline		1800 043 536	information-advisory@dpi.nsw.gov.au Fishers Watch Report illegal fishing, fish kills or disease
Murray Darling Basin Authority		1800 230 067	engagement@mdba.gov.au
Municipal Association Victoria	For information		inquiries@mav.asn.au
VicWater	For information		vicwater@vicwater.org.au
Catchment Management Authorities			
Corangamite Catchment Management Authority	Estuaries and Environmental Water Project Officer	0407 341 350	rhiannon.glover@ccma.vic.gov.au info@ccma.vic.gov.au

Organisation	Role	Phone	Email
East Gippsland Catchment Management Authority	Bec Hemming	0438 510 190	receptionegcma@egcma.com.au
Glenelg Hopkins Catchment Management Authority	Stephen Ryan	0438 625 963	s.ryan@ghcma.vic.gov.au GHCMA@ghcma.vic.gov.au
Goulburn Broken Catchment Management Authority	Mark Turner	(03) 5822 7705 0458 315 028	markt@gbcma.vic.gov.au reception@gbcma.vic.gov.au
Mallee Catchment Management Authority	Nicole Wishart	0427 514 303	Nicole.wishart@malleecma.com.au fish@malleecma.com.au
Mallee Catchment Management Authority	James Kellerman	0428 313 177	James.kellerman@malleecma.com.au fish@malleecma.com.au
North Central Catchment Management Authority		(03) 5440 1850	info@nccma.vic.gov.au
North East Catchment Management Authority	Executive Manager NRM Delivery	1300 216 513	necma@necma.vic.gov.au
West Gippsland Catchment Management Authority	Dan Garlick	0400 175 085	dang@wgcm.vic.gov.au westgippy@wgcm.vic.gov.au
Wimmera Catchment Management Authority	Tony Baker, Statutory & Strategy Manager	(03) 5382 9918 0407 840 514	bakert@wcma.vic.gov.au wcma@wcma.vic.gov.au
Urban Water Corporations			
Barwon Water	Duty Officer	1300 656 007	info@barwonwater.vic.gov.au
Central Highlands Water		1800 061 514	customer.enquiries@chw.net.au
Coliban Water		1300 363 200	coliban@coliban.com.au
East Gippsland Water		1800 671 841	egw@egwater.vic.gov.au
Gippsland Water		1800 050 500	contactus@gippswater.com.au
Goulburn Valley Water		(03) 5832 4800	mail@gvwater.vic.gov.au
Melbourne Water		131 722	enquiry@melbournwater.com.au
South Gippsland Water		1300 851 636	sgwater@sgwater.com.au
Wannon Water		1300 926 666	info@wannonwater.com.au

Organisation	Role	Phone	Email
Greater Western Water		1300 650 422	
Westernport Water		1300 720 711	westport@westernportwater.com.au
Regional Water Corporations			
Goulburn Murray Water	Manager Water Quality	1800 064 184	reception@gmwater.com.au
Grampians Wimmera Mallee Water		1300 659 961	westport@westernportwater.com.au
Lower Murray Water		1800 808 830	contactus@lmw.vic.gov.au
North East Water		1300 361 644	info@newater.com.au
Southern Rural Water		1300 139 510	srw@srw.com.au
Local Government			
Alpine Shire Council		5755 0555	info@alpineshire.vic.gov.au
Ararat Rural City Council		5355 0200	council@ararat.vic.gov.au
Ballarat City Council		5320 5500	ballcity@ballarat.vic.gov.au
Bass Coast Shire Council		1300 BCOAST (226278) 5671 2211	basscoast@basscoast.vic.gov.au
Baw Baw Shire Council		5624 2411	bawbaw@bawbawshire.vic.gov.au
Benalla Rural City Council		5760 2600	council@benalla.vic.gov.au
Buloke Shire Council		1300 520 520	buloke@buloke.vic.gov.au
Campaspe Shire Council		5481 2200	shire@campaspe.vic.gov.au
Central Goldfields Shire Council		5461 0610	mail@cgoldshire.vic.gov.au
Colac Otway Shire Council		5232 9400	inq@colacotway.vic.gov.au
Corangamite Shire Council		5593 7100	shire@corangamite.vic.gov.au
East Gippsland Shire Council		5153 9500	feedback@egipps.vic.gov.au
Gannawarra Shire Council		5450 9333	council@gannawarra.vic.gov.au
Glenelg Shire Council		5522 2200	enquiry@glenelg.vic.gov.au
Golden Plains Shire Council		5220 7111	enquiries@gplains.vic.gov.au
Greater Bendigo City Council		5434 6000	info@bendigo.vic.gov.au

Organisation	Role	Phone	Email
Greater Geelong City Council		5272 5272	COGGRrecords@geelongcity.vic.gov.au
Greater Shepparton City Council		5832 9700	council@shepparton.vic.gov.au
Hepburn Shire Council		5348 2306	shire@hepburn.vic.gov.au
Hindmarsh Shire Council		5391 4444	info@hindmarsh.vic.gov.au
Horsham Rural City Council		5382 9777	council@hrcc.vic.gov.au
Indigo Shire Council		5728 8000	info@indigoshire.vic.gov.au
Latrobe City Council		5128 5442	latrobe@latrobe.vic.gov.au
Loddon Shire Council		5494 1200	loddon@loddon.vic.gov.au
Macedon Ranges Shire Council		5422 0333	mrsc@mrsc.vic.gov.au
Mansfield Shire Council		5775 8555	council@mansfield.vic.gov.au
Mildura Rural City Council		5018 8100	mrcc@mildura.vic.gov.au
Mitchell Shire Council		5734 6200	mitchell@mitchellshire.vic.gov.au
Moira Shire Council		5871 9222	info@moira.vic.gov.au
Moorabool Shire Council		5366 7100	info@moorabool.vic.gov.au
Mount Alexander Shire Council		5471 1700	info@mountalexander.vic.gov.au
Moyne Shire Council		5568 0555	moyne@moyne.vic.gov.au
Murrindindi Shire Council		5772 0333	msc@murrindindi.vic.gov.au
Northern Grampians Shire Council		5358 8700	ngshire@ngshire.vic.gov.au
Pyrenees Shire Council		5349 1100	pyrenees@pyrenees.vic.gov.au
Borough of Queenscliffe		5258 1377	info@queenscliffe.vic.gov.au
South Gippsland Shire Council		5662 9200	council@southgippsland.vic.gov.au
Southern Grampians Shire Council		5573 0444	council@sthgrampians.vic.gov.au
Strathbogie Shire Council		5795 0000	info@strathbogie.vic.gov.au
Surf Coast Shire Council		5261 0600	info@surfcoast.vic.gov.au
Swan Hill Rural City Council		5036 2333	council@swanhill.vic.gov.au
Towong Shire Council		(02)6071 5100	info@towong.vic.gov.au

Organisation	Role	Phone	Email
Wangaratta Rural City Council		5722 0888	council@wangaratta.vic.gov.au
Warrnambool City Council		5559 4800	wbool_city@warrnambool.vic.gov.au
Wellington Shire Council		1300 366 244	enquiries@wellington.vic.gov.au
West Wimmera Shire Council		5585 9900	council@westwimmera.vic.gov.au
Wodonga City Council		(02)6022 9300	info@wodonga.vic.gov.au
Yarriambiack Shire Council		5398 0100	info@yarriambiack.vic.gov.au

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Interpreter assistance



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