

# Disaster Ready

Sharing stories to help the NSW oyster industry prepare for future disasters

2024



The information provided in 'Disaster Ready. Sharing stories to help the NSW oyster industry prepare for future disasters' is intended for general information purposes only. Every emergency is different, and the information provided is not intended as professional, legal, financial, medical, or any other type of advice. Readers are encouraged to seek professional guidance or conduct their own research to make informed decisions based on their specific circumstances.

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This project was funded by the Australian and NSW Governments Storm and Flood Industry Recovery Program. Although funding for this product has been provided by both Australian and NSW Governments, the material contained herein does not necessarily represent the views of either Government.



**Australian Government**



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# INTRODUCTION & HOW TO USE THIS HANDBOOK

Following the suite of disasters endured by the NSW oyster industry in recent years (including bushfires, floods, heatwaves, oil spills and disease outbreaks), NSW Farmers Association identified a need to develop a handbook to help the industry to prepare for future catastrophic events.

Twenty-two interviews were conducted with farmers who endured these disasters, and their experiences and learnings have been distilled into the pages of this handbook. Some of their key insights have been linked via QR codes, so you can listen to their verbal accounts. Generic preparedness information provided by the NSW Government and other organisations has also been contextualised, creating a handbook that is highly relevant to farmers in the NSW oyster industry.

It is suggested that the information provided in this handbook is used to help inform any disaster plans that are developed. Many of the planning resources listed on page 11, have templates which you can use for this purpose.

A sincere thanks to all oyster farmers who offered to contribute to this handbook, sharing their experiences and learnings. It is hoped that by telling their stories, others in the industry can take steps to prepare their business for future disruptions



**Anna Simmonds**  
Fires & Floods



**Barry & Brian Allen**  
Floods



**Brandon & Jason Armstrong**  
Floods



**Caroline & Kel Henry**  
Fires & Floods



**Craig Lavis**  
Fires



**Dean & Steve Cole**  
Disease Outbreaks



**Dominic Boyton**  
Fires



**Ewan Bale & Andrew Cooper**  
Floods



**Jason Hassell**  
Floods



**John Stubbs (right)**  
Disease Outbreaks &  
Heatwaves



**Jason Finlay & Kevin McAsh**  
Fires & Floods



**Mark Salm & Matt Burgoyne**  
Disease Outbreaks



**Peter Ferguson**  
Oil Spills



**Philly Barry-Cotter**  
Floods & Heatwaves



**Robbie Moxham (left)**  
Disease Outbreaks



**Roy Glessing & Kelly Jones**  
Fires and Floods

Look after yourself: The last few years have been distressing for many people, and the material and spoken accounts provided in this handbook may bring back strong memories. If you feel overly stressed and anxious, prioritise your own self-care, and take a break.

Some useful mental health support contacts and resources, including online self-help materials, are provided on page 51.

# GENERAL PREPAREDNESS



**Preparedness = The state of being ready for something to happen.**

Being prepared for disasters can reduce the fear, anxiety and risk to human health that typically accompanies such events. Reducing anxiety can help you respond more quickly and effectively in a disaster situation. Being prepared for the most likely risks and impacts can also help reduce financial and stock losses, enabling a more rapid recovery and return to normal business operations.

Increasingly, emergency management is moving its focus towards arrangements for prevention, mitigation, preparedness, adaptation and recovery. Furthermore, natural disaster relief and recovery programs are now structured to provide immediate short-term assistance only. Most of the cost of rebuilding and restocking after a major disaster event will be borne by industry.

Every disaster is different; however, there are some general preparedness actions that you can take, regardless of the risk you're likely to encounter.

## GET CONNECTED

- Get to know other local farmers, especially those with a lot of experience. Ask about risks, hazard seasons, and disasters that have happened in the past.
- Keep a list of local emergency contacts numbers on your phone. You should also keep a non-electronic, ideally waterproof, backup of this contact information as well. Keep a copy in your car.
- Download the apps highlighted on page 9-10 and stay up to date with emergency warnings and public messages.
- Build good relationships with agencies & organisations that support the industry. Eg. NSW DPI Aquaculture Management and local fisheries officers, Aquatic Biosecurity, NSW Food Authority, your local council, Local Land Services, the NSW Farmers Association, and OceanWatch. This will help with communication and leveraging support when you need it most.
- Build a positive reputation of the oyster industry within your local community. Everyone has a role in raising the reputation of the sector.

## BUILD KNOWLEDGE

- Learn about the environment in which you operate, and how different environmental systems and processes, as well as human activities, can impact on the waterway.
- Learn about new technology and systems. Look at ways to improve farm efficiency and safety.
- Stay informed about the performance of select family lines bred for disease resistance and climate change adaptation.
- Be aware of how disasters can affect markets, and how this can impact on business recovery and cash-flow.

## START PREPARING

- Maintain infrastructure in a good condition, and clean-up leases when conditions are favourable. Well-maintained leases support business productivity and are more likely to endure environmental disasters.
- Review your insurance regularly to ensure it is up to date and reflects your insurable assets. Contact your insurance broker and enquire about new insurance products.
- Develop growing systems and practices that reduce stress on stock. Stressed oysters are more susceptible to disease and are more likely to be impacted by environmental extremes. Consider stocking densities, as well as drying and grading regimes.
- Spread your risk. Maintain leases in different areas or estuaries and be prepared to move stock as needed. Do you have the capacity to diversify your business when you are unable to sell oysters to the market for an extended period of time
- In good years, consider putting funds aside. Financial resilience is important so that your business can survive a period of little to no income and rebuild following a disaster. Look at the suitability of the Farm Management Deposit (FMD) Scheme. Income deposited into an FMD account is tax deductible in the financial year the deposit is made. It becomes taxable income in the financial year in which it is withdrawn.
- Develop an Emergency Plan that covers the primary risks to your farm. The plan should include the location(s) you would evacuate to if you had to, and who you would notify. Make sure you're aware of any people (including staff) onsite and who's responsible for helping them evacuate.
- Back up your computer data to online cloud servers (e.g. Dropbox, Google Docs, Microsoft OneDrive). If your data is not backed up on a cloud server, it could mean that you cannot access vital information, like outstanding invoices, critical documents or contacts. Think of all you stand to lose if that data is destroyed.
- Prepare an emergency kit in a waterproof container, and store in a location that's easily accessible.

The NSW State Emergency Service (SES) suggests the following to be included in an emergency kit:

- Important documents
- Medications
- Chargers and a portable power bank
- Radio
- Torch
- Batteries
- Cash
- First aid kit
- Food
- Water
- Toiletries

Once you've taken steps to prepare your business, take a moment to help others in your estuary.

- Talk to others about emergencies.
- Help others get in the know.
- Organise a preparedness workshop with your local emergency services.
- Share your story.



Participating in the annual Tide to Tip clean-up program is a simple way to connect with other local farmers, and help build the reputation of the industry



**Value of working with other growers & building relationships in the community**

Brandon & Jason Armstrong: Camden Haven  
1m 57



**Mitigate risk by having leases in different areas and be prepared to move stock**

Craig Lavis: Tross Lakes  
0m 28



**Impact of disasters on markets, and the snowball effect on farm**

Jason Finley & Kevin Mcash: Clyde River  
2m 19



**Diversifying after disease & the importance of a financial buffer**

Hawkesbury River: Rob Moxham  
9m 31





### Mitigating stress on oysters (Port Stephens example)

Port Stephens: Mark Salm & Matt Burgoyne

5m 23



### Importance of building relationships

Steve & Dean Cole: Port Stephens

2m 19



### Be proactive & be decisive

Roy Glessing & Kelly Jones: Pambula Lake

0m 48



### Adapting farming model to manage workloads & cashflow, and preparing for future extremes

Brandon & Jason Armstrong: Camden Haven

3m 07



# ACCESSING INFORMATION DURING DISASTERS

ABC Southeast	103.5 FM, 106.3 FM
ABC Radio Illawarra	97.3 FM
2CE East Coast Radio	105.5 FM, 105.9 FM
2EAR	107.5 FM
2EC East Coast Radio	765 AM, 1584 AM
2ST	106.7 FM, 91.7 FM
Highland FM	107.1 FM
Power FM	94.9 FM
Shoalhaven FM	104.5 FM, 92.3 FM, 99.7 FM
Vox FM	106.9 FM
Wave FM	96.5 FM



ABC Listen enables you to stream any ABC station from around Australia. Listen to your local ABC radio station for updates and monitor the latest warning for loved ones in other locations.

- Download the ABC listen app to your smartphone, and 'favourite' your local station. It'll make it quicker to listen to in an emergency.
- Visit [reception.abc.net.au/](https://reception.abc.net.au/) to find your local radio frequency. Write it down and stick it to a battery powered radio in your emergency kit.

## Emergency Alert

Do not block +61 444 444 444.  
This is related to the Emergency Alert Service.



Emergency Alert is the national telephone warning system used by emergency services to send voice messages to landlines and text messages to mobile phones within a defined area about potential emergencies.

Note: Emergency Alert is just one way of warning communities and will not be used in all circumstances. Do not wait for an official warning to act!



Emergency+ - Helps people call the right number at the right time. The app uses the phone's GPS functionality so callers can provide accurate location information. Emergency+ also includes SES and Police Assistance Line phone numbers, so non-emergency calls can be made to the most appropriate agency.



Live Traffic NSW - Provides up to date news of incidents and conditions that affect your journey.



NextDoor - Community-based apps like NextDoor can be helpful for staying in touch with neighbours and get information on evacuation orders, road closures and available resources.



Hazards Near Me - View emergency warnings and advice for fires, floods and tsunamis in NSW. The app also provides information on fire danger ratings, fire bans, and details of hazard reduction activities. The app can send you push notifications when there are new incidents or when information changes within any of your 'watch zones'.



### ADVICE

A fire has started. There is no immediate danger. Stay up to date in case the situation changes.



### WATCH AND ACT

There is a heightened level of threat. Conditions are changing and you need to start taking action to protect you and your family.



### EMERGENCY WARNING

An Emergency Warning is the highest level of Bush Fire Alert. You may be in danger and need to take action immediately. Any delay now puts your life at risk.

# RESOURCES TO SUPPORT DISASTER PLANNING



## RediPlan (Australian Red Cross)

[redcross.org.au/emergencies/resources](http://redcross.org.au/emergencies/resources)

RediPlan is an award-winning, free disaster preparedness guide packed with helpful hints and clever strategies on how to prepare for disasters and make your emergency plan.

RediPlan takes non-hazard specific approach, meaning it is designed to help you prepare for any type of emergency. You can also develop your RediPlan through the Australian Red Cross 'Get Prepared' app.



## Business Continuity Plan

[smallbusiness.nsw.gov.au/BCP](http://smallbusiness.nsw.gov.au/BCP)

No business is immune to the risks of disruption or disaster. Preparing your business to survive such an event is vital for every business owner.

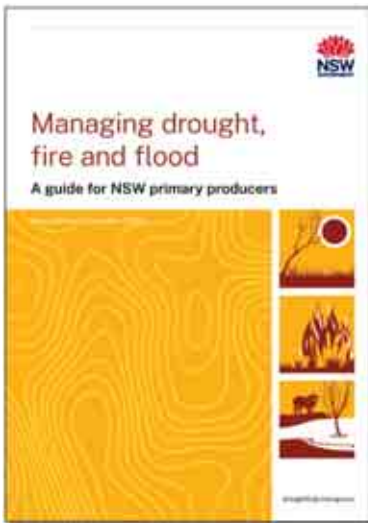
This guide takes you through the essential steps to build your own Business Continuity Plan. It provides easy to use templates and checklists that can be filled out, creating a comprehensive business continuity plan unique to your business needs. It could mean the difference between a business being up and running quickly after a disaster or not reopening at all.



## NSW Local Land Services Flood Plan & Readiness Checklist

[lls.nsw.gov.au/floods/flood-preparation/farm-flood-readiness-kit](http://lls.nsw.gov.au/floods/flood-preparation/farm-flood-readiness-kit)

NSW LLS have developed a Farm flood readiness kit, which includes a Flood plan template & Readiness checklist. While this has been developed primarily for land-based farmers, some elements may be useful for aquaculture, and the information may be helpful when considering your land-based assets and any rural holdings.



### Managing Drought, Fire and Flood

[droughthub.nsw.gov.au/planning/managing-drought-resources](https://droughthub.nsw.gov.au/planning/managing-drought-resources)

In 2024, NSW DPI and NSW Local Land Services released a guide reflecting the unique pressures placed on NSW producers before, during and after drought, fire and flood. Although targeted at land-based farmers, the guide includes strategies and actions that farmers can consider to make informed decisions both for their business, and the wellbeing of them and the people around them.



### Biosecurity Risk Management Plan

[dpi.nsw.gov.au/dpi/bfs/aquatic-biosecurity/aquaculture/biosecurity-planning](https://dpi.nsw.gov.au/dpi/bfs/aquatic-biosecurity/aquaculture/biosecurity-planning)

A Biosecurity Risk Management Plan helps to reduce the risk and spread of diseases and pests into your farm, within your farm, and out of your farm. It also aids in preparedness to help a business to plan for recovery after a biosecurity event. They can provide greater disease and pest protection for the wider industry. Having a Biosecurity Risk Management Plan is recommended for all permit holders.

A biosecurity plan template is available to download from the webpage linked above. NSW DPI Aquatic Biosecurity have also developed an Oyster Biosecurity Planning Guidance Checklist and other material to help oyster farmer through this process. The guidance checklist is available on this link: [shorturl.at/bqsVW](https://shorturl.at/bqsVW)



### Live Bush Fire Ready – NSW Rural Fire Service

[myfireplan.com.au](https://myfireplan.com.au)

Bushfire is a part of life in NSW, so you need to live bush fire ready. That means knowing the risks for your area and having a plan for what to do during a fire.

# REVIEWING EMERGENCY PLANS & STAFF TRAINING

For emergency plans to remain current and effective they must be reviewed and revised on a regular basis.

Set an annual reminder on your phone/calendar to review your plan and check your emergency kit. Involving staff in these reviews will help build a sense of ownership.

**Other examples of when revisions should occur include:**

- When there are changes to the workplace such as relocation, new assets, repairs or refits.
- When there are changes in staff including an increase in the use of temporary workers or contractors.
- When new activities have been introduced.
- After the plan has been tested.

Training is critical to ensure that everyone knows what to do when there is an emergency or a disruption to your business operations.

Train employees in emergency response, business continuity and crisis communication, so everyone knows their roles and responsibilities. Make sure staff are familiar and trained in your emergency plan. Identify who will put your plan into action if you're away from the farm.

**When working out your training requirements, you should consider:**

- Inclusion of emergency procedure training in new worker inductions. This may be especially important for workers from overseas who are not accustomed to the Australian environment and associated risks.
- Provision of regular refresher training for existing workers.

Keep records of the training provided, who's present, the instructor and the duration of training.



# KEY INDUSTRY CONTACT

NSW DPI has found it extremely useful to have a nominated industry representative in each estuary, or grouping of smaller estuaries, to be the key industry contact person during natural disasters or disease events.

The role of this industry representative is to aid in communications, and to provide feedback to NSW DPI. This includes critical emergency response needs, longer term needs and providing advice on losses or

damages, and estimation on a value associated with these losses. This information then feeds into the joint Commonwealth - State Natural Disaster Assistance Scheme to determine when levels of funding support are triggered. The position can also act as a conduit for information about disease events.

You may consider developing a phone tree for the estuary in which you operate, and the circumstances in which this is used.

## MEDIA

The media thrive on bad news stories and may approach growers for comment. To ensure a considered and consistent message, estuaries often nominate an industry spokesperson to respond to all media enquiries around an event.

Media training is sometimes available to help spokespeople craft their message and respond in an appropriate way to probing questions from journalists.



**Nominating an industry spokesperson to talk to media**

Steve & Dean Cole: Port Stephens

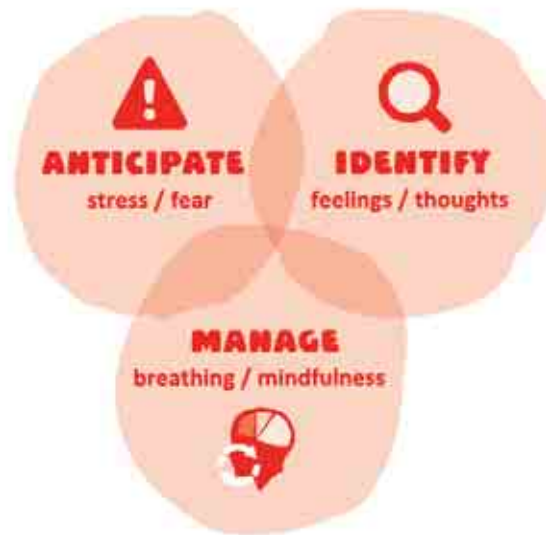
0m 49

# PREPARE YOUR MIND

(information abridged from the Australian Red Cross)

Emergencies are scary and stressful. Most people under a lot of stress don't think as clearly as usual, affecting decisions and reactions. The first step in helping you cope

with your responses and those of others is to be able to anticipate, identify and manage beforehand how you are likely to feel, think and respond in an emergency.



## Anticipate – it's going to get stressful

- How do you think you will react to the stress? How do you usually react to highly stressful situations? Think about how you might feel during an emergency and what you and others might be thinking. Common feelings include anxiety, fear, general stress, uncertainty and helplessness. Although these reactions are very natural, they may stop you from preparing or acting, so it's important to acknowledge them and manage them better when they happen.

## Identify – your feelings and thoughts.

- How you feel in highly stressful situations is strongly affected by the way you cope with the physical signs of anxiety and the thoughts running through your head.
- We experience anxiety in a variety of ways, including upset stomach, irritability, headaches, shortness of breath and tightness in the chest.
- Try to also identify any frightening and negative thoughts you might have. Do those thoughts help or hinder? Some typical, but unhelpful thoughts include things like: "I can't cope," "I'm so scared," "We're all going to die", "I don't know what to do."
- Some unhelpful thoughts might also be ones that try to minimise the threat, like: "this happened last year so it can't possibly happen again this year". Not thinking about a threatening possibility or denying the need to prepare can actually make us more anxious—and far less prepared—in the event of an official warning situation.

**Manage** - your feelings and thoughts with breathing and self-talk.

Use techniques to help manage your feelings or try the following:

- Practise calming techniques, such as deep, relaxed breathing or mindfulness (use a smart phone app such as 'Smiling Mind' or 'Buddhify' to help you get started).
- Replace frightening thoughts with more helpful ones like: "Breathe calmly," "I can handle this," "I'm coping".

Try not to focus on the bad things that might happen, but instead tell yourself that the calmer you are, the better you'll be at managing exactly what needs to be done.



Smiling Mind - Smiling Mind is a tool developed by Australian psychologists and educators. Programs in the app are designed to build mental fitness and resilience, support good sleep, reduce stress and improve relationships and promote the development of new social and emotional skills.



Buddhify - Buddhify helps you bring more calm, clarity and kindness to all parts of your life. Whether you're looking to reduce stress and anxiety, or get a better night's sleep, Buddhify has easy-to-follow guided meditations to help you live happier and healthier.

# BUSHFIRES



**Few oyster sheds are designed and built to survive bush fires.  
Leaving early is the safest choice.**

- Keep your worksite clean and free from clutter. Store fuel away from the shed.
- Regularly clean-out your gutters and consider installing metal flyscreens & gutter guards.
- Consider the potential loss of grid power in your bushfire plans and ensure you can bypass or manually operate electric water pumps, doors and locks. During bushfires, smoke can conduct electricity, so the power grid may be turned off.
- Test equipment regularly, and make sure pump lines, non-return valves, pumps and generators are all functioning correctly.
- Be in regular contact with your insurer. Infrastructure stored on land may be insurable, and the volume stored will need to be updated regularly with your broker.
- Keep surrounding vegetation maintained, trim overhanging trees and shrubs, and remove cuttings from site. Slash any areas of long dry grass. Please be aware of:
  - » *10/50 Vegetation Clearing Code of Practice* - a self-assessment process which outlines when certain vegetation can be cleared, without approval, to improve protection from bushfires.
  - » *Rural Boundary Clearing Code*, which allows landowners to clear certain vegetation along the boundary of their landholding to reduce the potential spread of bush fires.
  - » Both codes are available from the NSW RFS website at [rfs.nsw.gov.au](http://rfs.nsw.gov.au).

## Information

- Know where your 'Neighbourhood Safer Place' is. These are places of last resort during a bush fire emergency. See [rfs.nsw.gov.au/plan-and-prepare/neighbourhood-safer-places](https://rfs.nsw.gov.au/plan-and-prepare/neighbourhood-safer-places).

Your closest neighbourhood safer place is:

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- Keep a close watch on weather forecasts, wind direction and fire danger ratings.
- Get connected with friends and other local groups to find out about local fire movement from those you trust. The 'NextDoor' app may be helpful for staying in touch with neighbours and getting information about local evacuation orders, road closures and available resources.
- Regularly check the RFS website and set-up notifications on the Hazards Near Me app to receive up-to-date information.
- Consider undertaking Bush Fire Awareness (BFA) training available through the RFS. This training is designed for any non firefighting personnel who need access to an active fire ground in the course of during their work. The four-hour course can be delivered online, in your workplace, or at any NSW RFS training facility, as long as 10 participants register.

## Equipment & Machinery

- Consider setting-up sprinkler systems, and using pumps which can be remotely activated by SMS.
- Equip sites with long, sturdy hoses that reach around your block and install spray nozzles.
- Keep water tanks full and connected to pumps.
- Make sure you have plenty of buckets & mops to put out embers.



# FIRE DANGER RATINGS

The Australian Fire Danger Rating System helps us to understand how dangerous a fire would be if one were to start.

There are four fire danger ratings - Moderate, High, Extreme and Catastrophic. Each level has an action that tells you what to do to keep safe.

When there is little risk, like when it is raining, "No rating" is used.

The Australian Fire Danger Rating System is used across the country, so whether you're at home or traveling, you'll notice it in every State and Territory.

MODERATE	HIGH	EXTREME	CATASTROPHIC
<b>PLAN AND PREPARE.</b>	<b>BE READY TO ACT.</b>	<b>TAKE ACTION NOW TO PROTECT YOUR LIFE AND PROPERTY.</b>	<b>FOR YOUR SURVIVAL, LEAVE BUSH FIRE RISK AREAS.</b>
<p> If a fire starts, it can probably be controlled.</p> <p> Most fires can be controlled before they become dangerous.</p> <p> Make a bush fire plan with your family and prepare your property for bush fire.</p> <p> Stay up to date and be ready to act if there is a fire.</p>	<p> If a fire starts, it could be dangerous.</p> <p> There is a heightened risk.</p> <p> If a fire starts, your life and property may be at risk.</p> <p> Be alert for fires in your area and decide what you will do if a fire starts.</p> <p> The safest option is to avoid bush fire risk areas.</p>	<p> If a fire starts, it will spread quickly and be extremely dangerous.</p> <p> These are dangerous conditions for a bush fire.</p> <p> Check your bush fire plan and make sure your property is fire ready.</p> <p> If a fire starts, immediately put your bush fire plan into action.</p> <p> Avoid travelling to bush fire risk areas.</p>	<p> If a fire starts, it will spread extremely quickly and lives could be lost.</p> <p> These are the most dangerous conditions for a bush fire.</p> <p> If a fire starts, you may not have time to leave, and help may not be available.</p> <p> For your survival, do not be in bush fire risk areas.</p> <p> Stay safe by going to a safer location early in the morning or the night before.</p>

LIVE BUSH FIRE READY



Shed roof with sprinkler set-up.



**Description of the fire front arriving at Wonboyn**  
Caroline & Kel Henry: Wonboyn Lake  
18m 01



**The seriousness of staying & need for better industry preparation**  
Caroline & Kel Henry: Wonboyn Lake  
3m 07



4pm in Wonboyn 4/1/20



**Preparing leases & shed sites for fire activity**

Roy Glessing & Kelly Jones: Pambula Lake

2m 41



**Protecting catching slats & submerging stock to avoid heat stress and poor water quality**

Anna Simonds: Pambula Lake

2m 11



Ash impacts following Black Summer bushfires (2019-20) (Tuross Lake).





**Consider a safe place for important documents & valuables**

Roy Glessing & Kelly Jones: Pambula Lake

1m 00



**Relief when strategy agreed & comms channels used to track local fire movement**

Dom Boyton: Merimbula Lake

1m 05



**Be aware of the danger of underground (subterranean) fires**

Jason Finlay & Kevin McAsh: Clyde River

0m 36



**When a bushfire is likely:**

- Put out as much stock and gear onto leases as possible. If not all gear can be deployed, consider whether to store this in open areas away from your shed, or to relocate to a defensible position close to high volume pumps and sprinkler systems. Consider spreading risk by storing in multiple locations across the region.
- Be aware of lag times on replacing lost infrastructure, and the impact this would have on business recovery. During summer bushfires, farmers may prioritise the sinking of catching slats, given these would be difficult to rebuild in time for deployment.
- Consider submerging stock to avoid heat and ember attack and issues associated with poor water quality. Weigh up against the risk of a heavy overcatch.
- Block downpipes and fill gutters with water.
- Clear materials that can burn from next to your shed.
- Keep all windows and doors closed, and if possible, block areas where embers can enter.
- Wet down timber stockpiles, structures, decks and jetties.
- Move any firefighting equipment to a place where it will not get burnt.
- Keep the radio turned on.
- Turn off gas mains and bottles.
- Find the safest route to travel if you need to evacuate and check for any road closures at [livetraffic.com](http://livetraffic.com).
- Put on protective clothes (wide-brimmed hat, eye protection, moistened facemask or cloth, loose, long-sleeved shirt, gloves, long cotton pants/jeans, sturdy leather shoes/boots).
- Look out for damaged, burnt or fallen powerlines and stay well clear from them and anything touching them such as fences, dead animals or metal objects. Report fallen powerlines on 13 20 80, or 000 if the situation is life-threatening.
- A bushfire will be downgraded to 'advice' when there is no immediate danger. Emergency services like the SES and the RFS will issue a warning when it's safe to return to an area after an evacuation.
- After fire passes, check roof spaces and building structures. Embers or sparks can start fires many hours after the fire has passed.
- Be aware of the ongoing danger of subterranean or underground fires.
- If you can, contact friends and family, and check on your neighbours.

**An innovative solution to disperse ash**

Craig Lavis: Tuross Lakes

1m 06





# STORMS & FLOODS



## Leases & stock:

- In flood-prone areas, consider the appropriateness of different gear types and construct using sturdy infrastructure that is more resistant to flood and storm damage. Use quality components.
- Develop systems that enable the rapid relocation of infrastructure & stock from high-risk locations.
- Regularly manage gear for fouling and do not overstock. Overloaded cultivation infrastructure creates drag, and places additional strain on gear.
- Keep equipment, motors and growing infrastructure well maintained. The NSW Oyster Industry Sustainable Aquaculture Strategy (OISAS) suggest the following minimum maintenance schedule.
  - » Routine maintenance every 12 months.
  - » Repair at any time if it has collapsed or is in danger of imminent collapse.
- Consider minimising the use of flood-prone leases during La Niña climate cycles.
- If feasible, mark your gear so it is identifiable. This helps with retrieval following extreme events. As per NSW DPI policy, raft drums must be marked to say 'Aquaculture floatation device' or equivalent using a cattle tag or branding by 2025. This will save emergency services ordering a HAZMAT response for lost unmarked blue drums.



Identifying marks on growing infrastructure

Longlines:	Trays:	Rafts:
<ul style="list-style-type: none"> <li>• Orientate lines to run parallel to the direction of water flow.</li> <li>• Consider the ability to drop growing heights to find the salt.</li> <li>• Consider if you want to run a 'safety line', connecting bags together if the main line were to break. See photos on page 31</li> </ul>	<ul style="list-style-type: none"> <li>• Consider building flood racking on downstream leases. Reduce the distance between posts and lower the growing height. Trays can be stacked and strapped together to increase weight and reduce the lease space required.</li> <li>• If bundling multiple trays together, position an empty tray/s on the bottom to act as a buffer against mudworm. Sandy leases offer greater protection against mudworm.</li> </ul>	<ul style="list-style-type: none"> <li>• Consider setting up dead-man anchors, or running shore lines to pull the raft towards the shore in case it breaks free during a flood event.</li> </ul>

### Shed based activities

- Declutter your block by selling or disposing of gear that you don't plan on using again.
- Keep your site neat & tidy and nest infrastructure not in use.
- Know the height of your shed compared to previous flood levels, and slab heights required by council for development applications.
- Rewire sheds so electrical wiring runs above potential flood level.
- Work with researchers to install monitoring systems in your waterway and include a water level gauge. This will provide an indication if floodwater is likely to affect your land-based assets.
- Consider how you could construct a temporary barrier or sea-fence to stop gear floating away from your block. This may be as simple as a rope with floatation.
- Ensure you have the tools and equipment to make critical repairs after a disaster passes and it is safe to be on the water.

### Other Information

- Monitor the weather. Understand your catchment, and the extent to which rainfall inland can impact on flows down your river system.
- Know how to access rain gauge data and how to interpret this information. Experienced local growers may be able to provide guidance on important triggers or locations to watch closely.
- Be alert to long-term weather patterns, particularly a shift to a La Niña climate cycle, characterised by increased rainfall.
- Contact your local council and others who have been in the area a long time to find out about historical flood locations and levels.
- Understand the terms used to describe the likelihood of flooding e.g. a 1-in-100 flood means there is a 1% chance every year of that level of flooding being equalled or exceeded. A good explanation is provided in this video: [youtube.com/watch?v=7nsj7KKoOHU](https://www.youtube.com/watch?v=7nsj7KKoOHU)
- Plan the safest route to travel in case you need to evacuate and identify the flood heights that could cut you off.
- Review the farm flood readiness kit developed by NSW LLS ([lls.nsw.gov.au/\\_data/assets/pdf\\_file/0007/798901/LLS-flood-readiness-091122-web-final.pdf](https://lls.nsw.gov.au/_data/assets/pdf_file/0007/798901/LLS-flood-readiness-091122-web-final.pdf)).

### Be familiar with the official flood warning products developed by the Bureau of Meteorology (BOM)

- **Flood Watch** – Issued by the BoM when there is the possibility of flooding (usually 1-4 days before the impact).
- **Flood Warning** - Issued by the BoM when flooding is about to happen (usually >6 hrs before impact). The are issued in relation to flood gauges which are situated at certain points on a river.
- **Flood Bulletin** – Issued by the NSW SES to warn the community of flooding at a predicted height, time and location, and the expected risks, impacts, consequences and the safest action to take.



- Engage in the development of Entrance Management Plans, particularly in Intermittently Closed and Open Lakes & Lagoons (ICOLLS), as an avenue to mitigate flood risk and poor water quality.

### Entrance Management Plans

The Farquhar Inlet Management Group was formed and in partnership with the Greater Taree City Council and water quality triggers were built into the Farquhar Inlet Entrance Management Plan (FIMP) to ensure that prolonged periods of static fresh water would be avoided.

In 2020 flooding that followed extensive bushfires in the Manning River catchment led to large amounts of nutrient rich ash and other debris being washed into the estuary. These events quickly resulted in significant water quality issues in the estuary. Due to the existence of the FIMP and its approvals pathway enabled the south arm at Farquhar Inlet to be quickly opened and problems associated with rapidly deteriorating water quality were alleviated. Again, in the major flooding event of March 2021 the existence of the FIMP enable action to be taken early in the event which more than likely significantly reduced flood impacts in the south arm.



**Importance of watching rainfall in the catchment & techniques to move baskets quickly**  
Brian & Barry Allen: Crookhaven River  
2m 27



**Moving oysters early & prioritising the relocation of pacifics over rocks**  
John Stubbs: Hawkesbury River  
1m 20



Move stock early



**Gear maintenance, relocating stock & the performance of different gear types during floods**

Brandon & Jason Armstrong: Camden Haven

6m 05



**Experience using screw anchors, flip-farm, and a switch to stormline**

Jason Finlay & Kevin McAsh: Clyde River

3m 22



**Setting up long-lines on a flood prone lease & limiting its use during La Nina climate cycles**

Jason Hassell: Pambula Lake

3m 55



**Preparing the shed for floods & the value of remote monitoring systems**

Caroline & Kel Henry: Wonboyn Lake

2m 45





**Flood rack and strategies to sink trays & long-lines**

Phil Barry-Cotter, Hawkesbury River

3m 33





**Using a 'safety-line' to retain floating bags in case of line snap**

Anna Simonds, Pambula Lake

1m 53





A 4mm safety line used in Pambula Lake, connecting bags together if the main line were to break.



A modified version uses shark clips to connect oyster bag safety line loops together.



**Running shore lines & dead-man anchors on rafts**  
Brandon & Jason Armstrong: Camden Haven  
1m 04



**Setting up a 'sea-pen' & the benefits of decluttering your block**  
Ewan Bale & Andrew Cooper: Hastings River  
2m 20



Nesting infrastructure and creating a sea-pen during recent floods

**When a flood is likely:**

- Be decisive. Be prepared to take early action and move equipment and stock to where it has the highest chance of survival.
- If growing multiple species consider which to move first, remembering that Pacifics are less tolerant of freshwater than Sydney rocks.
- Secure objects at your shed site that are likely to float, cause damage, or be lost to the environment. Tie-down, weight-down or lift.
- Disconnect electrical motors and lift equipment. Some growers also have the knowledge to remove the computer from grading machines.
- Construct a temporary barrier or sea-fence to stop gear floating away from your shed site. This may be as simple as a rope with floatation.
- Lift oil, fuel and any chemicals above the potential floodwater level, or relocate to a safe location.
- Take punts out of the water and tie off.
- Take your waders home with you.
- Find the safest route to travel if you need to evacuate and check for any road closures at [livetraffic.com](http://livetraffic.com)
- When it's safe & necessary to be on the water drive vessels slowly and carefully. There will be items submerged that you won't be able to see.
- Carry a saw to cut vegetation caught on infrastructure. If you encounter logs on the river, tie-off to the riverbank.
- If silage bales are washed onto leases, work with Transport for NSW and the EPA to remove whole. It is not recommended to split bales open in the water.
- If you have to get into the water, make sure you check water strength and water depth first. Floods can scour sediment off the bottom and drastically change the profile of the seabed.
- Timber debris will poke holes in waders. Have a sacrificial set that can be worn over the top of your good pair.
- Floodwaters may be contaminated by sewage, chemicals or other waste which can cause illness and infection. When cleaning up:
  - » Always wear protective clothing including gloves, boots, and eye protection.
  - » Wash your hands thoroughly and maintain hygiene.
  - » Contact your local council about disposal of large items and asbestos.
  - » Photograph any damage.
- Work with other growers in your estuary to:
  - » Tackle issues requiring significant manpower.
  - » Identify vacant lease space that can be used to house stock while lease repairs are being undertaken.
  - » Identify a common, convenient area to which the community can return lost gear. Work with your local media to advertise this location.
- Contact the Agricultural & Animal Services hotline on 1800 814 647 for advice on disposal of animal carcasses. If this number is unmanned, contact NSW Local Land Services on 1300 795 299.
- Make sure you try and retrieve any gear lost to the environment.



**Safety first!**

Brandon & Jason Armstrong: Camden Haven

1m 26



**Starting the clean-up, tying off logs & the importance of checking water depth**

Caroline & Kel Henry: Wonboyn Lake

1m 16



**Flood debris & the clean-up effort in Pambula Lake**

Roy Glessing & Kelly Jones: Pambula Lake

8m 10



**Support other farmers & offer vacant lease space to those needing to rebuild infrastructure**

Anna Simonds: Pambula Lake

0m 45





### The long road to recovery & unforeseen problems

Ewan Bale & Andrew Cooper: Hastings River

1m 11



### Mitigate stress on your stock

Jason Finlay & Kevin McAsh: Clyde River

0m 38



Clean-up in Pambula Lake.



Impact of silage bales and sediment run-off in Pambula Lake



Substantial damage to floating bag lines



Sediment movement in the Camden Haven estuary

# HEATWAVES



The food safety elements associated with heat have not been considered in this section, although pathogens such as vibrios proliferate under warmer conditions. Please refer to the NSW Food Authority - Shellfish Industry Manual for more information. Farmers of Pacific oysters are also encouraged to look at handling guidelines in Tasmania & South Australia to reduce the chance of vibriosis.

## Information

- Understand the local topography and how this can impact on wind direction & strength. Conditions at your shed may be drastically different to conditions at your lease.
- Check the daily forecast and get to know the BoM categories for heatwave forecasts and warnings. A good overview is provided at [youtube.com/watch?v=-600GeenWdLA](https://www.youtube.com/watch?v=-600GeenWdLA).
- Be particularly vigilant to high-pressure systems which will push low tides out, leaving intertidal oysters exposed for longer than usual.

### Working in the heat

- Regularly check fans and air conditioners are working well.
- Stay inside, and out of the heat as much as possible.
- Plan lease work for early in the day if the tides allow.
- If working outside, apply sunscreen, wear light clothes, a hat and take water.
- Get familiar with the signs of heat stress, heat exhaustion and heat stroke.
- Drink plenty of water, even if you don't feel thirsty. Avoid alcohol, tea, coffee, and sugary drinks as these will dehydrate you further.
- Splash yourself with cold water or use a cool damp cloth to cool off.
- Keep an eye on your mood and ability to think and plan. Seek help if you're worried.
- Eat small meals and cold foods like salads and fruit.

## KNOW THE SIGNS

The infographic is split into two columns. The left column, titled 'HEAT EXHAUSTION', has a yellow background and features a stick figure with a thermometer in its chest showing a high temperature, surrounded by sweat droplets. The right column, titled 'HEAT STROKE', has a red background and features a stick figure with a thermometer in its chest showing a high temperature, surrounded by a dizziness icon. Below each column are lists of symptoms and 'WHAT TO DO' instructions.

HEAT EXHAUSTION	HEAT STROKE
<ul style="list-style-type: none"> <li>Headaches</li> <li>Nausea and vomiting</li> <li>Fatigue, weakness and restlessness</li> <li>Thirsty</li> <li>Anxiety</li> <li>Poor coordination</li> <li>Weak, rapid pulse</li> <li>Sweating heavily</li> <li>Raised body temperature</li> </ul>	<ul style="list-style-type: none"> <li>Headaches</li> <li>Nausea and vomiting</li> <li>Rapid pulse</li> <li>Extremely thirsty</li> <li>Dry, swollen tongue</li> <li>Disoriented, dizzy or delirious, slurred speech</li> <li>Body temperature more than 40°C</li> <li>Convulsions, seizures or coma</li> <li>May be sweating, skin may feel deceptively cool</li> </ul>
<p><b>WHAT TO DO</b></p> <ul style="list-style-type: none"> <li>+ Lie down in shade or air-conditioning</li> <li>+ Drink water</li> <li>+ Cool compress or tea towel</li> <li>+ Cool shower or bath</li> </ul>	<p><b>WHAT TO DO</b></p> <ul style="list-style-type: none"> <li>+ Call 000 immediately</li> <li>+ Reduce temperature until ambulance arrives</li> </ul>

### Oyster health during heatwaves

- Consider the use of cannons, pumps and irrigation systems. Think about neighbours when running noisy pumps and consider noise attenuation.
- Set-up lease infrastructure to enable efficient coverage by sprinklers.
- Consider if remote activation of pumps by SMS would be a good investment. Be aware that these systems rely on a good connectivity.
- Have the ability to drop the height of longlines during periods of extreme heat over summer and be prepared to make these adjustments.
- Stressed oysters may exhibit poor growth and be more susceptible to disease:
  - » Don't stress oysters, particularly juveniles, by drying or working them on hot days.
  - » Do not overstock.
- Mud can have a cooling effect on oysters, so avoid washing product when hot weather is expected.
- Consider the use of shade cloth on tray leases, although research shows this is not as effective at reducing temperatures as irrigation systems. (Potter & Hill, 1982).
- Oysters at your shed site should be stored in the shade.

Reference: Potter & Hill, 1982 Heat mortality in the Sydney rock oyster, *Saccostrea commercialis* and the effectiveness of some control methods. *Aquaculture* (29; 1-2)



**Problem heatwave conditions on the Hawkesbury River**

John Stubbs: Hawkesbury River

2m 10






**Impact of extreme heat on oyster health, and techniques to cool stock**

John Stubbs: Hawkesbury River

1m 41



**Video demonstration of a cannon in action in Port Stephens (2018)**

Dean & Steve Cole: Port Stephens

1m 35



**Future of lease irrigation with noise attenuation & phone activation of pumps**

Phil Barry-Cotter: Hawkesbury River

2m 18



# OIL & FUEL SPILLS



- Make sure your punt and outboard are in good working order. Regularly check seals, gaskets, hoses and connections for leaks and drips. Make sure outboards and other mechanical gear are serviced regularly as per the manufacturer's guidelines.
- Fill fuel containers on shore, away from the water.
- Take care when filling your fuel tank to avoid spillage. If you overfill your fuel tank, wipe the spill up with a rag. Do not hose the fuel into the water.
- Keep your bilge clean to prevent any potential pollution discharges following rain.
- Make sure you have Safety Data Sheets (SDS) for all products used on your farm (including diesel & petrol), and make sure these are accessible to all staff. A Safety Data Sheet (SDS) is a document that provides information on the properties of hazardous chemicals, how they affect health and safety, and how they should be managed in the workplace.
- All pollution incidents must be reported. Failing to report can result in substantial fines for individuals and corporations. All vessel based incidents will be dealt with under the Marine Pollution Act (2012), while land based spills entering the marine environment will be dealt with under the Protection of the Environment Operations Act (1997).
- Foam floats will soak up fuel and oil and is extremely difficult to extract. Impacted floats Regardless of treatment, foam floats will continue to leach pollutants, gradually shrink, and lose buoyancy. Be prepared to replace this floatation.

### Knowledge & Engagement

- Be aware of potential sources of oil and chemical pollution in your waterway. Establish and maintain good relationships with other waterway users and businesses located close to the estuary, as well as your local NSW Maritime Boating Safety Officers.
- Be aware of the location of marine oil spill kits and seek training on how to use them. Consider establishing annual training in spill prevention and containment.
- Make sure to store your marine oil spill kit in an enclosed container or bin, with instructions on how to deploy pads and booms. Mark the storage site with a sign labelled 'Oil Spill Response Kit'.
- Check your spill kit at least once every three months.



**QAP coordinators experience of an oil spill in Pambula Lake**

Peter Ferguson: Pambula Lake

8m 48





**Managing the impact of oil on stock & gear, and attempts to clean foam**

Peter Ferguson: Pambula Lake

6m 17




# RESPONDING TO SPILLS

In the event of a spill: STOP - REPORT - CONTAIN - CLEAN UP

## 1. STOP (the spill):

- Assess the risk.
- Protect yourself and others. Wear appropriate PPE.
- If it's safe to do so, stop the spill at its source, remembering that the number one priority is the safety of responders and the public.

## 2. REPORT (the spill):

- If you see any pollution, it is vital that you to report it quickly. This allows authorities to act swiftly and helps to reduce damage to the environment.
- When reporting, make sure to report details such as the vessel name, vessel registration numbers, time & place of incident, and the type of pollution.

For spills of oil and other hazardous liquids, contact Fire & Rescue on 000.

If the pollution appears to be coming from a vessel on the water, it should also be reported to Transport for NSW by calling 13 12 36.

If the pollution appears to be coming from a marina or large facility likely to require a licence from the NSW Environment Protection Authority (EPA), pollution should be reported to the NSW EPA on 13 15 55.

All other land basedland-based pollution should be reported to your local council.

## 3. CONTAIN (the spill):

- Taking action to contain an oil spill is voluntary. Farmers should consider their level of knowledge, skill and the resources available to them before responding.
- The risk of explosive fumes and fires should also be considered (especially with petrol spills).
- On land:
  - » Floor absorbents may be used on petrol, oil and diesel spills. Simply spread over the spills and sweep until the surface is dry.
  - » Pads may be used to soak up low-volume spills.
- » Pillows may be used to quickly soak up a lot of liquid in one place.
- On water:
  - » Confine oil or diesel spills using socks or booms.
  - » Use absorbent materials available in a spill kit (pads, pillows, socks, booms) to soak up oil or diesel.
  - » Where a containment boom is deployed at right angles to a current over 0.7 knots, the oil is likely to be entrained under the boom, and the boom will lose effectiveness. Refer to the table for boom effectiveness relevant to the current, and angles for deployment.

Current (knots)	Boom angle
0.7	90°
1	45°
1.5	28°
2	20°
2.5	16°
3	13°

#### 4. CLEAN UP (the spill):

- Used absorbent materials should be placed in contaminated material thick plastic bags and sealed with zip-ties. These need to be stored to ensure no leaks.
- This waste cannot be placed in a general waste bin, it can only be disposed of at certain waste management facilities or by using a licenced waste consignor. Records should be kept of the management and disposal of the oil absorbent material for at least three years after the waste is disposed off-site.
- Remember to restock the equipment used in the spill response so the kit is ready for future use.



Oil spill in Pambula Lake

#### Spill Kits

There are three types of spill kits:

1. General purpose spill kits
2. Oil spill kits
3. Chemical spill kits

#### Oil/fuel spill kits

Oil spill kits are designed to control and absorb oil spills whilst repelling any water. These may contain:

- PPE, including nitrile gloves, face-protection and coveralls
- Absorbent pads, pillows & booms of different lengths
- Floor absorbents
- Contaminated waste disposal bag & tie

# DISEASE



## Industry Insights

- Run scenarios about how a disease outbreak would impact your farm. Repeat with different levels of mortality and formulate strategies to keep you farming. What gear would you need to implement these strategies? Forecast how long you'd be able to remain in business with the resources available to you.
- Work through the actions required to implement these strategies. If you're considering diversifying into other species, discuss this with other growers in your estuary. Work with NSW DPI to obtain the required permits and protocols to access seed.
- Consider how species diversification may be applied. Farmers may collectively agree that the approval remains dormant, until a disease outbreak occurs. Alternatively, you may want to trial a small number to build knowledge and optimise different farming systems.
- Be informed about diseases that can affect your stock. Recognise that different pathogens impact on production and revenue over different lengths of time. The timeframe for the full impact of a QX outbreak to be realised may take many years, whereas POMS will impact pacific stock in a matter of days.
- Talk with growers affected by disease to understand its impact, and the evolution of different business models and their advantages and drawbacks.
- Stay informed about breeding programs and the outcomes being achieved.
- Wild-caught farmers should consider trialling some hatchery stock to familiarise themselves with how it performs, and different farming techniques required to optimise production. This may include increasing knowledge and capacity to handle spat and apply nursery techniques.

- Always seek to minimise stress on your stock. Environmental stressors are commonly associated with disease outbreaks, don't stress oysters further through overstocking, handling & drying on hot days etc.
- Engage with council, Crown Lands and other landholders to identify blocks of land that can be used to store equipment following a disease outbreak or other emergency that results in an abundance of gear on land. Once an area is identified, work through how the area will be managed (e.g. space allocation, gear identification, access arrangements).
- Build relationships with your customers (i.e. seafood brokers, processors, wholesalers, restaurants), so supply and quality issues can be communicated clearly, and expectations managed.
- In disease affected estuaries, support research efforts and volunteer insights and observations.



### Support & Governments requirements

- It is a requirement that new entrants submit a Biosecurity Risk Management Plan with their aquaculture permit application to NSW DPI.
- Existing permit holders are also required to review or create a Biosecurity Risk Management Plan if they wish to modify their permit (i.e. add a species). NSW DPI may also require any permit holder to review or develop a Biosecurity Risk Management Plan at any time.
- Be aware of biosecurity zones for Sydney rock and Pacific oysters, and make sure you log movements of stock, gear and vessels through the NSW DPI Shellfish App.

All unusual or unexplained mortality and suspicions of disease must be reported to NSW DPI. This is a condition of all Class A aquaculture permits. Early detection & reporting are key to management of disease outbreaks.

The Emergency Animal Disease (EAD) hotline can be contacted at 1800 675 888.

**During a disease outbreak**

- Encourage Government and other decision makers to visit farms during the outbreak to gain a better understanding of the situation, industry priorities and farmers mental health. These interactions also go a long way to build good-will and improved communication between Government & industry.
- In a QX outbreak, consider selling exposed stock to the market as soon as possible (biggest to smallest).
- Aggressively drying QX affected stock will speed up mortality and may reduce the mental toll and physical effort and costs associated with continually working dying stock.
- Form a single farmers group to streamline the sharing of information, and communication with Government agencies.



**Preparing for future Qx outbreaks & running scenarios**  
Port Stephens: Mark Salm & Matt Burgoyne  
12m 54



**Identify diversification options & obtain the required permits & protocols**  
Port Stephens: Steve & Dean Cole  
10m 30





**Necessity to make big decisions without the full picture & the strategy to restock**

Port Stephens: Mark Salm & Matt Burgoyne

10m 06



**QX in the Hawkesbury, the clean-up program & transition to Pacifics**

Hawkesbury River: Rob Moxham

5m 11



**Setting up your farm for hatchery stock & support the sector**

Port Stephens: Steve & Dean Cole

2m 36



**Comparing Qx & POMS, and setting up farmer led window of infection studies**

Hawkesbury River: John Stubbs

3m 33





**Industry cohesiveness and value of establishing a Qx working group**

Port Stephens: Mark Salm & Matt Burgoyne

4m 17



**Value of getting government staff on farm & engaging with politicians**

Port Stephens: Mark Salm & Matt Burgoyne

3m 49



**Selling stock as soon as possible & aggressively drying oysters**

Port Stephens: Steve & Dean Cole

5m 48



**Surprise at Qx in Port Stephens & decision to dump affected stock**

Port Stephens: Mark Salm & Matt Burgoyne

2m 07



# ONGROUND SUPPORT

000 - Police, Fire, Ambulance	For all life-threatening emergencies.	000
NSW Rural Fire Service (RFS)	For bushfires	1800 679 737
NSW SES	For emergency help in floods and storms	132 500
Transport for NSW	Reporting pollution from a vessel	13 12 36
NSW EPA	Report pollution originating from land	13 15 55
Essential Energy	Report fallen powerlines	13 20 80
Telstra Disaster Assistance		1800 888 888
National Relay Service	If you're deaf or have a speech impairment	1800 555 677
Red Cross	Registers, finds and reunites family, friends & loved ones. Also online: <a href="http://register.redcross.org.au/">register.redcross.org.au/</a>	1800 733 276
Agricultural & Animal Services Functional Area	Advice on disposal of animal carcasses from public land/water following natural disasters	1800 814 647
Emergency Animal Disease (EAD) hotline	Reporting all unusual or unexplained mortality, and suspicions of disease	1800 675 888
NSW Local Land Services	Help people make better decisions and connect farmers with groups, information, support and funding	1300 795 299

# MENTAL HEALTH SUPPORT

Having a tough time and need someone to talk to right now?

Lifeline Australia	13 11 14	<a href="http://lifeline.org.au">lifeline.org.au</a>
Beyond Blue	1300 22 4636	<a href="http://beyondblue.org.au">beyondblue.org.au</a>
MensLine Australia	1300 789 978	<a href="http://mensline.org.au">mensline.org.au</a>
Kids Helpline	1800 551 800	<a href="http://kidshelpline.com.au">kidshelpline.com.au</a>
Suicide Call Back Service	1300 659 467	<a href="http://suicidecallbackservice.org.au">suicidecallbackservice.org.au</a>
Standby (support after suicide)	1300 727 247	<a href="http://standbysupport.com.au">standbysupport.com.au</a>
NSW Mental Health Line	1800 011 511	<a href="http://health.nsw.gov.au/mentalhealth">health.nsw.gov.au/mentalhealth</a>

- Mental illnesses are common in the community, with 1 in 5 Australians experiencing a mental illness each year. Almost 50% of us will experience a mental illness in our lifetime. Research also shows that those involved in primary production have a higher prevalence of mental illness compared to the general community.
- Maintaining positive mental health can play an important role in individual, business and community resilience and recovery, so it's important to look after your social and mental wellbeing.

## General Practitioners (GP's)

We all experience challenging emotional issues at different times, and can't always deal with these on our own. If you feel you need help and it's not an emergency, it's best to see your doctor. A GP can recognise symptoms of a developing mental illness and provide the following type of help:

- Explain the illness and how the person can best be helped.
- Prescribe medication if needed.
- Look for a possible physical cause.
- Refer the person to a psychologist or allied health professional who can help the person learn ways of coping with and overcoming the illness.
- Refer the person to a psychiatrist, particularly if the symptoms are severe or long-lasting.
- Link the person to community supports.

### Recommendations:

- Chat with your GP and family and friends if you are struggling to cope.
- Seek support and information. There is no 'one size fits all approach' for mental illness and there are a range of support mechanisms, treatment approaches and services available.
- Seek help early. It can make a difference to how you feel in the long run.
- Complete a Mental Health First Aid Training Course so that you can help others having a tough time.
- Check in regularly with your neighbours and other farmers in your estuary. Listen and communicate non-judgementally.
- Organise and participate in informal social events (e.g. industry BBQ's) to help build connections with other growers.
- If you are an employer, understand that you have a legal obligation to provide a healthy and safe workplace both physically and mentally. Review the 'Managing Psychosocial Hazards at Work Code of Practice' developed by SafeWork NSW for information on how to comply with your obligations.

### Online Self-Care and Support

- Mycompass ([mycompass.org.au](http://mycompass.org.au)) - An anonymous, confidential online support program shown in research trials to reduce the symptoms of moderate depression over 8 weeks of use. The tool tracks recovery and response to treatment as well as providing self-directed interventions.
- Head to Health ([headtohealth.gov.au](http://headtohealth.gov.au)) - Information and support for people with mental illnesses, their families and friends.
- The Online Clinic ([onlineclinic.blackdoginstitute.org.au](http://onlineclinic.blackdoginstitute.org.au)) - A range of clinical assessments for common mental health conditions.
- The Mental Health Toolkit ([blackdoginstitute.org.au/education-services/workplaces/mental-health-toolkit/](http://blackdoginstitute.org.au/education-services/workplaces/mental-health-toolkit/)) - Evidence informed, practical guide for Australian workers.

### Rural Adversity Mental Health Program (RAMHP) - [ramhp.com.au](http://ramhp.com.au)

Disasters, and farming in general, can be scary and stressful. RAMHP exists for regional, rural and remote people and communities of NSW. The program emerged in 2007 during drought and while it has evolved and broadened its community reach, it continues to have a specific focus of supporting people and communities who depend on primary production and agriculture, alongside other priority populations at greater risk of mental ill health.

RAMHP has 20 coordinators employed by Local Health Districts across the state who are embedded within the communities they work. They are regional, rural and remote people themselves, and they understand the strengths, challenges and unique characteristics of rural life.



### Stay Afloat

Stay Afloat Australia is the national mental health program for the Australian seafood industry, which includes three pillars of work:

1. Delivering mental health first aid training workshops to learn how to identify and support industry participants in crisis or times of need.
2. Developing trusted advocate networks to deliver peer-to-peer support.
3. Offers small grants to help bring seafood communities together for activities designed to build and strengthen community wellness, resilience and support networks.





### Mental health impacts & support following the bushfires

Caroline & Kel Henry: Wonboyn Lake

5m 50



### The toll of a disease outbreak on mental health

John Stubbs: Hawkesbury River

5m 03



### Qx in Port Stephens: Impacts on mental & physical health

Port Stephens: Steve & Dean Cole

1m 14



### Exhaustion and mental health impacts of the bushfires

Dom Boyton: Merimbula Lake

1m 26



# How are you going?



How are you feeling?	Self-aware & calm	Irritable or impatient	Angry or frustrated	Aggressive, out of control
What's your stress level?	Coping well	Worried or nervous	Very nervous, panicky	Really anxious, panic attacks
What's your outlook?	Positive	Overwhelmed	Feeling hopeless	Depressed or suicidal thoughts
How are you working?	Motivated & kicking goals	Putting things off, forgetting stuff	Unmotivated, not working well	Can't get anything done
How are you sleeping?	Sleeping normally	Trouble sleeping	Restless, disturbed sleep	Sleeping too much or too little
What's your energy level?	Energetic	Low energy levels	Tired	No energy & feeling unwell
What's your activity level?	Keeping active	Not doing as much as usual	Not enjoying activities	Avoiding activities
How social are you?	Feeling connected	Withdrawal from social activity	Annoyed with everyone	Avoiding people, isolated

# What can you do?



Keep it up!	Ask for support, try not to judge yourself	See your GP	Seek help now
	Talk to friends and family	Don't put it off, act now	Help is available
	Do something you enjoy	Contact Community Health or your EAP	Lifeline 131114 NSW Mental Health Line 1800 011 511 Beyond Blue 1300 224 636



CONNECT WITH US:

[ramhp.com.au](http://ramhp.com.au)

# FINANCIAL SUPPORT: REPORTING LOSS & DAMAGE

- Where a Natural Disaster is declared in your local government area (LGA), residents and businesses may be eligible for assistance. **It's essential farmers report damage during serious environmental events as it enables government to allocate resources to where they are most needed.**
- To assist in the estimation of damage caused by a natural disaster NSW DPI collect damage estimates on the NSW DPI Primary Industries Natural Disaster Damage Assessments (PinDDA) website. [dpi.nsw.gov.au/emergencies/emergency/community/primary-industries-natural-disaster-damage-survey](http://dpi.nsw.gov.au/emergencies/emergency/community/primary-industries-natural-disaster-damage-survey)
- Under the joint Commonwealth - NSW Natural Disaster Assistance Scheme (NDAS) the category of support offered to a sector is based on the level of financial loss, and how widespread the impact is in the community. It is therefore critical that farmers provide this data through the PinDDA report, in order to trigger NDAS assistance.
- It is understood by government that oyster farmers are rarely in a position to accurately estimate the true financial impact as stock losses may not become apparent until well after the event. Farmers should therefore include projected possible future stock loss estimates as part of their initial reporting, as it is recognised that it is only a "best guess" estimate.

## Rural Financial Counselling Service NSW

Where oyster farmers have suffered damage, they should contact the Rural Financial Counselling Service NSW for assistance. The service offers free, independent, confidential, and professional expert financial counselling and support to primary producers that are experiencing, or at risk of, financial hardship. Visit [rfcsnsw.com.au](http://rfcsnsw.com.au) or call 1800 319 458.







## NSW Rural Assistance Authority (RAA)





The RAA administers a range of assistance schemes including low interest loans, natural disaster assistance programs for primary producers, and farm debt mediation. Visit [raa.nsw.gov.au](http://raa.nsw.gov.au) or call 1800 678 593.


## Service NSW










Service NSW customer care specialists can also help disaster-affected customers with services and support. Call 13 77 88 for information on assistance available. You can also use the Disaster Assistance Finder; an online tool that provides a personalised list of recovery support services. [disasterassistance.service.nsw.gov.au](http://disasterassistance.service.nsw.gov.au)



# FULL INTERVIEWS

BUSHFIRES			
Caroline and Kel Henry (Wonboyn Lake)	<a href="https://youtu.be/CEJntO_Xliq?si=2zu8tZudjLvOcvYr">https://youtu.be/CEJntO_Xliq?si=2zu8tZudjLvOcvYr</a>		57m 15
Craig Lavis (Tuross Lakes)	<a href="https://youtu.be/ePICuAKY0ql?si=lKrPu3Ep4nZawU22">https://youtu.be/ePICuAKY0ql?si=lKrPu3Ep4nZawU22</a>		19m 50
Dominic Boyton (Merimbula Lake)	<a href="https://youtu.be/2g2J1HtzGGw?si=hqxU8zeihcdlvkyQ">https://youtu.be/2g2J1HtzGGw?si=hqxU8zeihcdlvkyQ</a>		17m 21
Roy Glessing and Kelly Jones (Pambula Lake)	<a href="https://youtu.be/UPGT-K8WEqo?si=ID7lsXSh0N8-7Cri">https://youtu.be/UPGT-K8WEqo?si=ID7lsXSh0N8-7Cri</a>		37m 38
Jason Finlay and Kevin McAsh (Clyde River)	<a href="https://youtu.be/OZEFOOLt508?si=MHBnh--wnQnmXuAR">https://youtu.be/OZEFOOLt508?si=MHBnh--wnQnmXuAR</a>		24m 34
Anna Simonds (Pambula Lake)	<a href="https://youtu.be/YGSiYffE2yl?si=F4MK-rnr-mdHlddk">https://youtu.be/YGSiYffE2yl?si=F4MK-rnr-mdHlddk</a>		20m 07

DISEASE			
Mark Salm and Matt Burgoyne (Port Stephens)	<a href="https://youtu.be/xNnVQIE2wFM?si=TFmVLwnXqTkT2dGr">https://youtu.be/xNnVQIE2wFM?si=TFmVLwnXqTkT2dGr</a>		1hr 31m 49
Steve and Dean Cole (Port Stephens)	<a href="https://youtu.be/2a8bYIzjGsc?si=Cjf2my0pGJeZEJ1">https://youtu.be/2a8bYIzjGsc?si=Cjf2my0pGJeZEJ1</a>		57m 01
Rob Moxham (Hawkesbury River)	<a href="https://youtu.be/9grT2EDRVN8?si=yVIO9-zHdiwdcE9S">https://youtu.be/9grT2EDRVN8?si=yVIO9-zHdiwdcE9S</a>		23m 24
John Stubbs (Hawkesbury River)	<a href="https://youtu.be/ZKHX2jMBBh0?si=_wiO4Vnfl4TjRBxh">https://youtu.be/ZKHX2jMBBh0?si=_wiO4Vnfl4TjRBxh</a>		42m 07

OIL & FUEL SPILLS			
Peter Ferguson (Pambula Lake)	<a href="https://youtu.be/LZty9TTeyjc?si=3i3P9-JMERdVTvA3">https://youtu.be/LZty9TTeyjc?si=3i3P9-JMERdVTvA3</a>		24m 40

STORMS & FLOODS			
Barry and Brian Allen (Crookhaven River)	<a href="https://youtu.be/rNWKlcMHhSA?si=INXk0szcfCCbpPVz">https://youtu.be/rNWKlcMHhSA?si=INXk0szcfCCbpPVz</a>		36m 32
Jason Hassell (Pambula Lake)	<a href="https://youtu.be/Zjm-CvSwbZ8?si=yYZwVqGyi3Pnq9ap">https://youtu.be/Zjm-CvSwbZ8?si=yYZwVqGyi3Pnq9ap</a>		28m 56
Brandon and Jason Armstrong (Camden Haven)	<a href="https://youtu.be/0hQT2tukpTA?si=TZT5xQ-eCcvboUz">https://youtu.be/0hQT2tukpTA?si=TZT5xQ-eCcvboUz</a>		40m 01
Ewan Bale and Andrew Cooper (Hastings River)	<a href="https://youtu.be/5zTfyEjiTwo?si=KODAKUKNLE6WEkfx">https://youtu.be/5zTfyEjiTwo?si=KODAKUKNLE6WEkfx</a>		42m 47
Phil Barry-Cotter (Hawkesbury River)	<a href="https://youtu.be/tjaZaha0jVA?si=W8sQ0Zie73kLiYd6">https://youtu.be/tjaZaha0jVA?si=W8sQ0Zie73kLiYd6</a>		39m 34
Caroline and Kel Henry (Wonboyn Lake)	<a href="https://youtu.be/RbiHiSnN5A0?si=ZYt_Pkz_20QHZKdi">https://youtu.be/RbiHiSnN5A0?si=ZYt_Pkz_20QHZKdi</a>		25m 59
Roy Glessing and Kelly Jones (Pambula Lake)	<a href="https://youtu.be/xjo2zrBCsFk?si=DXMoNoTeGtb40nyn">https://youtu.be/xjo2zrBCsFk?si=DXMoNoTeGtb40nyn</a>		29m 28
Jason Finlay and Kevin McAsh (Clyde River)	<a href="https://youtu.be/-qWTNNzfWg?si=CM_3KS3Mbnc65f1o">https://youtu.be/-qWTNNzfWg?si=CM_3KS3Mbnc65f1o</a>		19m 57
Anna Simonds (Pambula Lake)	<a href="https://youtu.be/8trU6nmfU-M?si=0NrBAcvErouVv17q">https://youtu.be/8trU6nmfU-M?si=0NrBAcvErouVv17q</a>		33m 24

HEATWAVES			
John Stubbs (Hawkesbury River)	<a href="https://youtu.be/BHNzN4svGsc?si=dso6bH_A195s-HrD">https://youtu.be/BHNzN4svGsc?si=dso6bH_A195s-HrD</a>		14m 25
Phil Barry-Cotter (Hawkesbury River)	<a href="https://youtu.be/zx4p6mdj_Ug?si=lsESIVDNZHut5AWy">https://youtu.be/zx4p6mdj_Ug?si=lsESIVDNZHut5AWy</a>		16m 21









