

STATE EMERGENCY MANAGEMENT PLAN

FLOOD DEWATERING

INFORMATION FOR COUNCILS AND RESIDENTS

This fact sheet provides local government authorities and residents in flood affected areas with information about how to plan for and undertake dewatering as flood waters recede. It also highlights hazards that may be encountered while dewatering, and outlines safe practices.

It applies only to the removal of residual floodwater from properties during the 2022–2023 flood event. It does not address dewatering of substantial bodies of water that have accumulated behind major levees that breached or overtopped. These will require special planning and coordination.



Government
of South Australia

FLOOD DEWATERING

When flood waters recede some water can remain in low-lying areas or behind levees and walls that have overtopped during floods. Using pumps to remove water from these areas is known as dewatering.

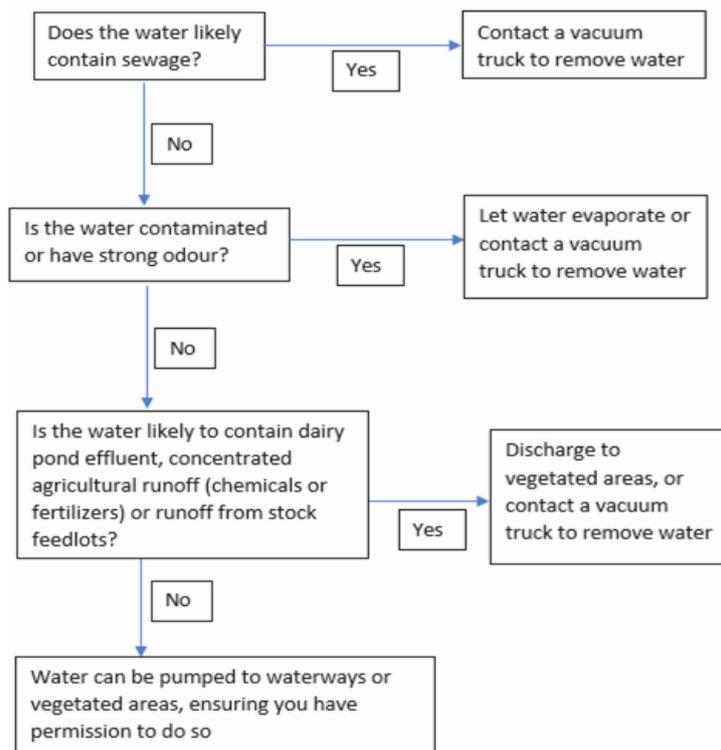
Risks of stagnant water

- ♦ Electric shock if there are power cables in the area.
- ♦ Impacts to health from stagnant water due to contamination, growth of algae, presence of viruses and microbial pathogens and odour.
- ♦ Increased mosquito and cockroach numbers.
- ♦ Localised slumping or collapse of embankments or levees.
- ♦ Damage to foundations and building materials if water remains against buildings for an extended period.

Due to the risk of injury, damage or excessive erosion, relief cuts should not be made in levees to accelerate the drainage of residual floodwater.

Choosing your course of action

Before pumping flood water it is your responsibility to consider the potential for environmental harm from contaminating or polluting waterways or downstream land. Use the following flowchart to choose your best course of action.



Seeking permission

Usually dewatering would require a Water Affecting Activities (WAA) permit from your local Landscape Board. However, the Murraylands and Riverland Landscape Board has given permission for landholders to remove residual floodwater from their properties without requiring a WAA permit during the 2022–2023 flood event, provided they follow the advice in this fact sheet. WAA permits are still required for other water affecting activities.

For discharge to private land, you will need to seek permission from the landholder. For discharge elsewhere on your own property, permissions are generally not required.

Choosing the right pump

Two main types of pumps can be used for flood dewatering—submersible and dry-mounted.

Before selecting your pump, think about how much water you need to transfer. Smaller pumps that can be purchased from hardware stores or hired can pump 3-5 litres per second, about 350 cubic metres per day. Larger pumps that can be hired can pump 10-15 litres per second, about 800-1300 cubic metres per day.

Pumps have a limited ability to raise water. If you are planning to run the discharge line a long distance, or over significant uphill sections, speak to the pump hire staff to ensure the pump is powerful enough.

Hiring a vacuum truck

Vacuum trucks or “sucker” trucks can be hired from a number of commercial providers in South Australia. You will need to provide a description of the water or mud to be removed, and an estimate of the volume. Be sure to get a firm quotation that includes all fees and charges, including travel to and from your location, and disposal.

Where to pump water

It is important to plan where the water will be pumped. Ensure the water can be pumped far enough to prevent it from flowing back into the area you’re pumping from.

If pumping over a levee, ensure the discharge point is at least 10 metres upstream of the downstream toe of the levee to avoid any risk of runaway erosion or levee bank collapse.

To minimise erosion at the discharge point:

- If the discharge location is bare ground or a slope, protect the ground using geotextile, plastic or jute matting with hay bales or sand bags.
- Secure the discharge pipe to prevent it from moving.

When pumping into a water way or water body, inspect the discharge location after 30-60 minutes of pumping. If there is a visible plume where the pumped water enters the water body, you should stop pumping or reduce the rate of pumping.

Setting up your pump

Read the instructions to set up the pump carefully. If unsure, seek professional advice before proceeding.

Dry mounted pumps may need priming prior to starting. If the dry mounted pump is more than 1-2 metres above the surface of the water you are pumping from, the pump may not have enough suction power and will need to be positioned lower.

Submersible pumps need to be positioned with clear water around them, free of vegetation and soft mud. Geofabrics, rock or rubble can be used to stabilise soils to give the pump a mud-free area to operate in.

As the water level drops you may need to excavate a sump for the pump to sit in. The sump must be at least 10 metres from the toe of any levee banks, and should be only as large as you need in order to site the pump below water level.

Ensure the stockpile of mud or soil you excavate from the sump cannot disperse into a watercourse. As soon as pumping is complete, remove any geofabrics, rock or rubble from the site and refill the sump hole with the stockpiled soil.

IMPORTANT SAFETY INFORMATION

Operating generators and pumps safely

Ensure generators are located outdoors in a well ventilated area to eliminate risk of suffocation from carbon monoxide.

When you refuel equipment, follow the practices recommended in the [refuelling](#) guideline from EPA South Australia. Fuelling sites should be at least 20 metres from a watercourse.

For electric pumps, ensure:

- all leads are in good working order and not damaged
- power boards are protected by an overload cut-out
- leads and power-boards are placed so that they cannot be stepped on or tripped over and cannot fall into water.

Check pumps regularly to ensure they are pumping correctly and haven't encountered a fault or blockage.

Please be courteous to neighbours. Pump only between 7 am and 10 pm.

Mosquitoes

Mosquitoes in South Australia can spread a number of dangerous diseases including Ross River virus, Barmah Forest virus, Murray Valley encephalitis, Japanese encephalitis and Kunjin. Information about protecting yourself from [mosquito-borne diseases](#) can be found on SA Health's website.

Snake, spider and insect bites

The floods have significantly displaced wildlife, increasing the risk of encountering potentially dangerous wildlife. Snake and spider bites pose the greatest risk. Information about [snake bite and spider bite management](http://www.healthdirect.gov.au/snake-bite-and-spider-bite-management) can be found at: www.healthdirect.gov.au. Information about insect bites and stings can be found at www.healthdirect.gov.au/insect-bites-and-stings.

Document control

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