

Managing houseboat greywater to protect you, your family and Lake Eildon

Greywater and houseboating on Lake Eildon

Lake Eildon – a special place

Lake Eildon is a popular destination in central Victoria, appreciated for its scenic surrounds and outdoor activities. There is a need to do what we can to ensure that future generations can continue to enjoy all it has to offer.

It is important to care for the lake's water quality as a storage for water supply as well as supporting the fish, plants and animals that call the lake home. Water quality is affected by a variety of processes, such as when upstream creeks add sediment and nutrients or when heavy rain causes erosion and washes in manure from farmland.

Water quality is also affected by greywater that discharges from the hundreds of houseboats on the lake. Houseboat owners and the houseboat industry have been working with the Department of Environment, Land, Water and Planning (the department) to improve greywater management so the lake can continue being the special place it is today. The *Environment Protection Act 2017* requires us all to do what we can to minimise pollution, including greywater.

What is greywater?

Greywater includes any water that goes down an onboard drain, apart from toilets. It is made up of the water itself and things that enter the water in sinks, showers, basins, washing machines, dishwashers and spas. Greywater makes up most of the wastewater generated on board a houseboat.

Wastewater from on-board toilets is called blackwater and is captured and treated separately.

What does greywater contain?

Greywater is a mixture of everything that goes down the drain. It can include substances that are bad for the

lake (pollutants) and that can make people and animals sick (pathogens).

Common things found in greywater include:

- Fats, oils and scraps of food from cooking.
- Soaps, detergents and other cleaning products.
- Personal care products like shampoos, sunscreens, deodorants, toothpaste, make-up and lotions.
- Small bits of plastic, fibres from clothes, skin cells, natural body oils, human hair.
- Diluted human bodily waste from showering and washing clothes.

Greywater impacts on water quality of Lake Eildon

The substances in greywater include things that can spread illnesses and harm the lake and the people, plants and animals that depend on it. For example:

- Cleaning and personal care products contain nutrients (phosphorus and nitrogen) that can contribute to blue-green algae blooms.
- Food scraps and fats are a source of pathogens (including harmful bacteria and viruses) and provide the nutrients for them to grow.
- If people on board are sick, bodily wastes will include dangerous bacteria or viruses.
- Bits of plastic and medicine ingredients get into the lake's food chain, ending up in fish and other animals.

The choices houseboat owners make can have a big influence on greywater and its effects on Lake Eildon.

Effects on houseboaters and other lake users

Scientific studies show that greywater can sometimes contain more harmful pathogens than blackwater, particularly when the greywater includes lots of foods and fats from kitchens and barbeques.

The kinds of pathogens often found in greywater can cause gastro-intestinal illnesses that lead to vomiting and diarrhea. Sometimes these infections can be severe and have serious consequences.

Lake users can pick up pathogens through swimming and other direct contact with the lake's water.

Greywater and houseboats

Houseboaters can also do this through using untreated lake water onboard for showering and drinking.

The risks of possible illness are higher in the waters around houseboats that are releasing untreated greywater into the lake. The risks go up where there are more houseboats in a small area without much water flow, like marinas, bays and inlets. Risks also increase when lake water levels are low, like during the Millennium Drought.

Effects on the lake and downstream environments

Houseboat greywater is a small but confirmed contributor to pollution levels in Lake Eildon. The biggest risk to the environment is from the nutrients (phosphorus and nitrogen) added to the water from cleaning and personal care products and from fats, oils and food scraps.

Nutrients like this help blue-green algae to grow. The higher the nutrient levels in the lake, from all sources, the more frequent and severe these algal blooms will become.

Blue-green algae produce toxins that can cause serious or even fatal illnesses to people, animals – including pets and livestock – as well as harm the lake. This is why Goulburn Murray Water sends out alerts when the levels of toxic blue-green algae are high.

Greywater can also look and smell very unpleasant, leaving slicks and scums floating on the water and coating houseboat pontoons. Some other things in greywater, like trace of medicines and small pieces of plastic, can harm the fish and other animals in the lake.

Working to improve greywater management

As mentioned previously, under the *Environment Protection Act 2017*, everyone has a responsibility to actively prevent pollution, ensuring that Lake Eildon and other parts of Victoria remain so special.

We know that water quality in Lake Eildon is affected by more than just houseboat operations, like runoff from upstream and adjacent farms and tracks. The Victorian

Government is taking steps to reduce these issues, like fencing off waterways to reduce erosion rates.

Houseboat owners also must do their part to help protect the lake, both now and into the future. We all have parts to play in keeping Lake Eildon healthy and beautiful for everyone to enjoy.

Most houseboats on Lake Eildon currently release their greywater straight into the lake. New approaches are needed that are suitable for the houseboat fleet and reduce pollution.

The department is working closely the houseboating community to explore better approaches to managing greywater to help protect people and lake.

This work is being done as part of the review of the regulations that set out how the Lake Eildon houseboat fleet is managed. These are the [*Water \(Lake Eildon Recreational Area\) \(Houseboat\) Regulations*](#).

What houseboaters can do now

Houseboat users can take simple but effective steps to reduce pollutants in greywater by:

- Scraping, wiping and disposing of food waste off plates, utensils, pans and cooking surfaces.
- Installing sink and drain filters that capture items like hairs, fibres and bits of food than can then be emptied into a bin.
- Preparing food in ways that mean fats and oils to be easily collected and disposed of, like barbeques with a fat tray.
- Using cleaning and washing products that are low in phosphorus.

More information

To find out more about the review and remaking of the *Water (Lake Eildon Recreational Area) (Houseboat) Regulations*, visit this link: <http://www.water.vic.gov.au/houseboats>

You can also contact the DELWP project team by email at rural.water@delwp.vic.gov.au.

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