



Using a fluid extractor to sample larvae

A fluid extractor can be used to sample larvae from sumps that cannot be opened or other hard to access bodies of water. Fluid extractors are available in two sizes 7L and 9L (Figure 1).



Figure 1. Fluid extractor examples. Left 9L unit right 7L unit

Start approaching the sump silently, insert the end of the hose in the sump, aim for a corner - or edge if no angles are present (Figure 2). Once the hose is submerged in water, give the OK to your colleague to start pumping (Figure 4). Begin sampling near the surface first, making gentle zig-zag motions while your colleague pumps the fluid extractor.



Figure 2. Using a fluid extractor to sample different types of sumps

Continue doing this until you have collected about 5cm of water in the fluid extractor chamber – this is usually achieved when pumping approximately 6-7 times (Figure 3). Stop pumping before removing the hose from the water -this reduces the chances of water dripping from the hose back in the sump – the dripping disturbs mosquito larvae that might be present.





Figure 3. Fluid extractor holding five centimetres of sump water



Figure 4. Two persons team sampling a sump using a fluid extractor

Extract the hose from the sump and move it to a different corner or spot close to the surface of the water and repeat the process.

If you are able to see the bottom of the sump, submerge the hose further, very close to the bottom and sample until you have added 5 centimetres more of water. Remember to keep a slow zig-zag motion while sampling.

If you are unable to see the bottom of the sump, probe it using a long dowel, if it feels that there is sand or gravel, **do not sample too deep or the hose will get blocked.**

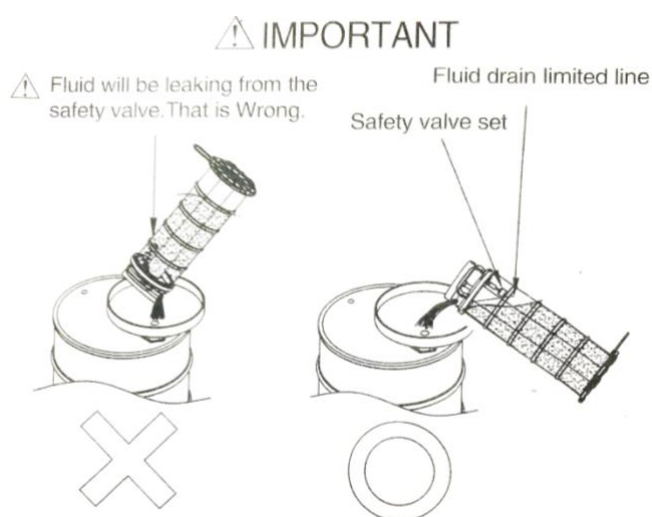


Figure 5. Pouring water from the unit

Pour the entire content of the fluid extractor into a white tray. Try not to tilt the unit beyond 90 degrees or the water might start leaking from the safety valve (Figure 5).





Immediately after, **pump 500mL of clean water to remove any larvae** that might have been attached to the hose or other parts of the fluid extractor (Figure 6), pour this water into the tray as well and check the tray for larvae (Figure 7).



Figure 6. Pumping clean water in the fluid extractor

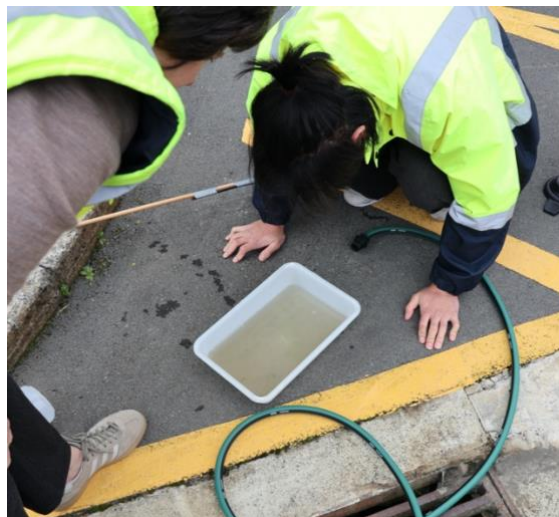


Figure 7. Search for larvae

Ensure the internal chamber of the fluid extractor looks clean and free from debris and larvae before sampling the next sump.

To increase manoeuvrability, attach a dowel to the hose using cable-ties (Figure 8).

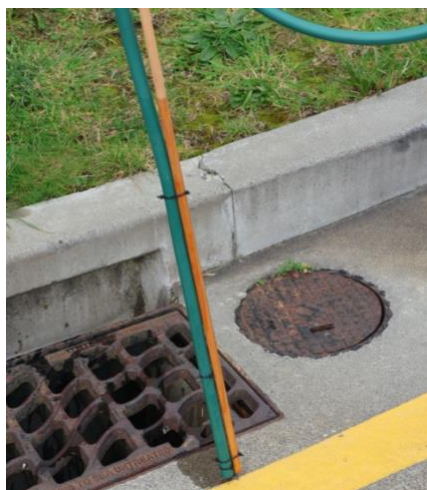


Figure 8. Attach a dowel to the hose to increase manoeuvrability

To record dips for the online database, use 2 pumps = one dip as this is approximately the amount of water that is collected in a standard dipper.

