



## Institute of Fisheries Management

### **Fisheries Management During the Coronavirus Pandemic**

In response to the many concerns expressed by fisheries managers about the viability of their businesses and the welfare of their fish stocks as a result of restrictions caused by the Coronavirus COVID-19 outbreak, the Institute of Fisheries Management (IFM) is offering some important advice for fisheries that have closed their doors during the pandemic

It is our understanding that caring for the fish in lakes comes under the government guidance for animal welfare (<https://www.gov.uk/guidance/national-lockdown-stay-at-home#summary-what-you-can-and-cannot-do-during-the-national-lockdown>). However, you should combine the visit to the lake with your daily exercise, do not make additional trips.

As we are now in the middle of winter when fish activity and energy requirements are reduced the loss in anglers' bait will not be as much of a problem as it was in the first lockdown. This means there is no need for supplementary feeding at the moment, however, there are still other important areas to be checked on to ensure the health of the stock.

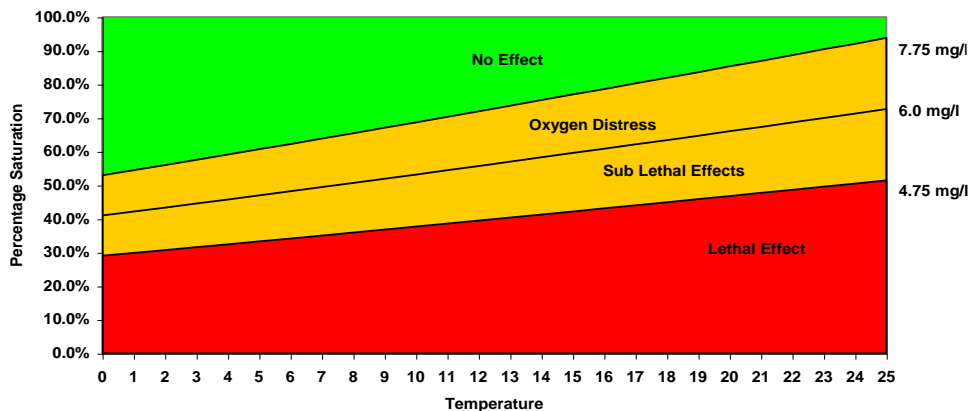
#### **Water Quality**

Water quality is of the upmost importance at any time of the year and you should be checking several parameters on a daily and weekly basis.

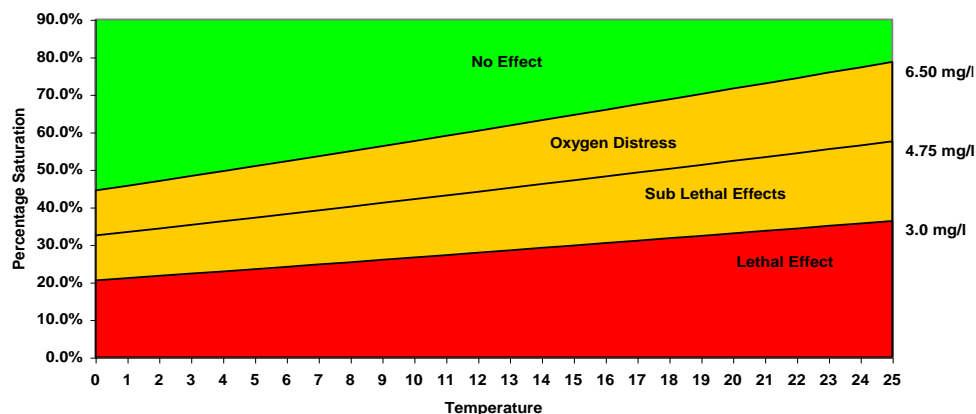
The most important parameter to keep an eye on is dissolved oxygen (DO). This is easily checked with the use of a DO meter, with records kept to allow you to spot trends in the future.

The best time to check levels is first thing in the morning, due to the diurnal fluctuation caused by algae and plants with lowest levels recorded at dawn. If you can, given the restrictions on movement, try and get to the fishery as early as possible in the morning to measure DO.

### Dissolved Oxygen Effects - Salmonids - Cold Water Species



### Dissolved Oxygen Effects - Coarse Fish - Warm Water Species



These charts illustrate the oxygen requirements of salmonid and coarse fish. Please note that there is no definite lower limit because DO requirements and tolerance vary by species, temperature and time of day. There is also some evidence that fish can acclimatise to low DO. It is however widely accepted that concentrations below 5 mg/l may adversely affect function and survival of biological communities, and below 3 mg/l can lead to the death of most fish species

### Source – Environment Agency

Low DO may predominantly be a problem for the warmer months, however, if the pond is frozen for 3 or 4 days DO can be greatly reduced, especially at higher stocking levels. Also, the build-up of noxious gases from the breakdown of organic materials needs to be removed by gassing off at the surface.

Problems with ice are compounded in shallow lakes <1.5m and where stocking levels are high and comprised mostly of carp. Carp have not evolved to survive in low water temperatures and suffer more ill effects compared to species such as roach, bream, perch etc.



So, how do we manage ice? As with most problems, prevention is better than the cure. You should try to keep an area of water as ice free as possible, this can be achieved by using a small aerator to gently agitate the water and stop the ice from forming. You do not need to use the large paddlewheel types from the summer, if anything these can create further problems as they can super chill the water by fully mixing it. Getting ice in the motor will also lead to damage.

If you have an inlet, drop the weir boards down by a couple of inches to create a bit of flow and break up ice sheets, you will need to be aware of water levels and ensure that you are not depleting the downstream reach. Another option is to encourage the wind to work on the water by pruning or removing trees. This should be done before the end of February so as not to impact on nesting birds.

If the pond does freeze for a prolonged period than you need to look at ways of cutting holes in the ice. Percussive ice breaking e.g. using weights on ropes etc is not great for fish as they are very sensitive to vibrations through the water, however if this is the only option then it is better than losing the stock. Electric or petrol driven pole saws can be used to cut a hole through the ice several metres from the bank. If you are making holes in the ice try and do it on the sunny side of the lake as this will help to minimise the cat ice forming on the water and leave it clear for a bit longer.

## Habitat and Predation

With no anglers on the bank for the next couple of months the risks from predation are increased, there is also an increased risk of poaching. It is therefore important that you provide the fish with some cover to hide in during daylight hours.

Research clearly shows that predator success is reduced when there is some structure in the water in which fish can hide. Okay, you may not be able to create a refuge for 20lb+ carp but you can provide marginal cover in the form of overhanging trees, reedbeds and even adapted angling pegs in which they can hide.

There are some great videos from the EA on how to make quick, cheap fish refuges and these are well worth watching on YouTube ( <https://youtu.be/h6QXnsibDZU> ). There is also a glut of ready-made refuges at this time of year in the form of Christmas trees. A couple of these lashed together and weighted down make great refuges for small fish. If you have the dense non-drop Nordman fir trees it is worth cutting holes in it to help the fish get in. Try and put refuges together in groups so that there is a larger area. This makes them more of a stable habitat instead of just boltholes.



If you do have reedbeds these can also be improved to give greater coverage. Instead of cutting or pulling consider hinging them at the bottom and folding them over. Not only does this leave the stems in place for fish to hide amongst but you also create a dark shelter for fish to aggregate under. This can also be done with marginal trees if you want to create an even larger area.

It is important that you continue to maintain any fences around fisheries to ensure they are still intact and have not been damaged by bad weather or vandals. Visiting your fishery in the early morning will also act as a deterrent against avian predators, especially if you have a method of scaring the birds such as a shotgun, starter pistol or bird laser. You may also want to consider employing some mannequins or scarecrows around the fishery to deter the birds. These should be moved around the fishery regularly to prevent the birds becoming accustomed to their location.

Now that anglers are not going to be fishing the waters you may want to consider wiring ponds completely. This works particularly well for smaller waters, on larger waters you may need to add additional supports in the pond to keep the wires above the water.

Aim to get your wires as close to the water surface as you can, aim for 45 – 90cm if possible, this stops the birds from simply walking underneath and get as tighter coverage as possible to prevent birds diving through. You can amplify the effects by adding CD's or coloured tape to the wires. As with fences wires should be checked on a daily basis for any signs of damage.

The Angling Trust advisors have loads of great advice on protecting fisheries so why not get in touch with Richard and Jake if you have issues <https://anglingtrust.net/fma/>

## Stock

The winter is the time to review your stock levels and crop or add stock as necessary. Before you dive in and purchase more fish it may be a better use of funds to have a survey of the existing stock done instead. A lot of problems in fisheries stem from blindly adding fish on top of fish on top of fish without any understanding of the current stock, their health status and whether or not the water can actually support them. Fish surveys can be carried out into March so should be considered for when the lockdown is eased.



The IFM have produced a guide to stocking fish and it is worth reading this and taking it to committee meetings when members are shouting for more fish!

## Supplementary feed

This is not necessary for most fisheries through the winter as the fish will do fine without having winterised pellets, wheat or other low protein diets fed to them. You do not need to make up for the loss of a few anglers feed in January and February, especially if water temperatures are between 2°C and 4°C as they have been since mid-December. In the case of carp their metabolism is so low that they don't need the extra energy from the feed anyway.

The time to have your supplementary feed ready is the spring. The fish will certainly benefit from a boost in nutrients as the temperature starts to increase, especially if the winter continues to be as cold as it has been. It may also be beneficial to have some medicated feed on hand to kick start their immune system after the winter shutdown.

See our earlier fishery maintenance advice for a full guide to supplementary feed.

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If you have any questions relating to fishery management it is always a good idea to speak to your local EA or NRW fishery officer. If it is just a general question of interest you could post it on the IFM Facebook page.

Environment Agency incident line: **0800 807060**  
Natural Resources Wales Incident hotline: **0300 065 3000**

Fish Health Inspectorate contact Telephone: **01305 206700**

**IMPORTANT REMINDER - if essential fisheries management work needs to be undertaken to ensure the welfare of fish, it should only be done alone or, if this is not possible for safety reasons, the 2m distancing rule must apply.**

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All of the Institutes fishery guidance documents can be downloaded from our website, you will also find fish health guidance from the EA on the same page <https://ifm.org.uk/ifm-training/ifm-fishery-guidance/>

*If you would like to spend the cold, dark, winter months learning a bit more about fish and fisheries management then why not take the IFM Certificate Course*  
<https://ifm.org.uk/ifm-training/>

