



# FAQ

## On Film Water Damage

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### How does getting wet affect film?

Film that has been immersed in water is in severe danger of having the base separate from the emulsion. This means that the part of the film with the image on it will come away from the plastic backing that gives the film its shape. The film is also at risk of being contaminated by mold growth and debris from flood water.

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### Why do I need to keep my films cool?

The most important factors in determining whether or not a flooded roll of film will survive are the total time it has been wet and the temperature at which it has been kept. The warmer the conditions, the shorter the time frame.

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### How much time do I have before films that have gotten wet are unrecoverable?

This depends on so many factors, it is impossible to say for any particular reel of film. Without question, the sooner you can get the film into the hands of recovery professionals, the better. But even if a lot of time passes before you are able to start the recovery process, if the film is valuable to you, it is worth trying to salvage it. You might at least be able to save part of the film.

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### Why should I store films that have gotten wet underwater? Doesn't it make more sense to dry them off?

You should not try to dry the films! The reason for storing the films underwater is to prevent them from drying in the air. If films get wet and are not dried in a special way, the emulsion (image) from one layer can stick to the base (plastic backing) of the next layer. This is known as "blocking." If a film develops blocking it cannot be unwound without damage.

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### **When my films are stored in water, will I see any changes in them?**

You probably will notice changes. First, the film will probably change color slightly. Sometimes it develops a purplish or blue color after a few days. This is normal and does not indicate any problems.

After a few more days, the film will become very slippery. This happens because the gelatin at the edges of the film is starting to dissolve and because bacteria and molds are active. This is a warning sign. The film may still be salvaged fairly intact at this point, but it needs to be taken to a lab as soon as possible.

"Threads" or filaments may start to appear on the film. These are thin sections of emulsion floating away from the film base. This is not a good sign. The emulsion may not withstand rewashing intact. Take the film to a lab as soon as possible.

"Gray soup," nasty, gooey, slimy water: the emulsion is decomposing and the film will not withstand any treatments. However, some frames may still be able to be seen and duplicated as still images. So even in this extreme case, you may still want to take the film to a lab to see what images can be salvaged.

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### **What happens if my films got wet, then dried out again before I could put them in water?**

When a film becomes wet and then dries completely, there are two levels of damage that may occur. With luck, the damage to your films will not be too severe. Even if you are less fortunate, it may still be possible to save parts of your films.

If you are lucky, all that will happen is that the emulsion surface will become very shiny and smooth, especially around high density areas (where more dye or silver is congregated). This may occur in patches and will result in some noticeable artifacts (flaws) when the film is projected or copied.

In worse conditions, more serious damage, called "blocking," may occur. When the film dries out, the gelatin emulsion will adhere via crosslinking to the backing layer of the adjacent wrap of film. This is a very strong adhesion, so strong that the emulsion will tear internally and some of the emulsion will remain adhered to the base where it should be and the rest will adhere to the other layer of film. It may also tear from the film base, so that chunks of

emulsion will be removed and stuck to the adjacent film layer. Or the whole film will tear. Any attempt to unwind a blocked film will result in damage to the film.

While a blocked film cannot be unwound without damage, it is possible to carry out highly specialized conservation treatments that may enable the film to be unwound. These treatments carry a degree of risk, especially if the film has been wet for any length of time before drying out. The treatments are time-consuming and expensive. Unblocking treatments should be thought of as a last resort for attempting to save films that are very important to you.

Post a question on this website if you would like to ask for more information about unblocking films or other film recovery topics. A recovery expert will answer on the website promptly. Or e-mail your question to: [mick1asia@hotmail.com](mailto:mick1asia@hotmail.com).

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