

# Pondwatch JE water quality testing handbook

Thank you for your interest in volunteering to be part of this project. Pondwatch JE is an island-wide effort to record Jersey's pondlife, with the aim of detecting changes in their conservation status. By taking part, you will also be helping us to improve our knowledge on the distribution and habitat requirements of Jersey's pond-dwelling wildlife. It's also a good opportunity for you to spend some time in nature too!

In this handbook you will find out everything you need to know to become a Pondwatch JE surveyor.

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## Measuring water quality

*(This information has been sourced from the Freshwater Habitats Trust and Earthwatch FreshWater Watch websites. Learn more at <https://freshwaterhabitats.org.uk/> and <https://freshwaterwatch.thewaterhub.org/content/your-test-kit.>)*

Plants and animals living in freshwater environments can be badly affected by pollution from many sources. Pollutants can introduce excess nutrients in to the environment, which can lead to unnatural increases in algae, plant cover, fungi and bacteria. These increases can make aquatic habitats uninhabitable for many species, for instance due to reduced oxygen in the water. By testing the water quality of your pond you will help us find out which areas are still good for wildlife and which are in need of help.

## What you will need to do

1. Request a water quality kit from the project coordinator (email [N.Cornish@gov.je](mailto:N.Cornish@gov.je)).
2. Using a survey form, record the location of the pond.
3. Collect a water sample from the pond.
4. Use the nutrient testing kits to measure nitrate and phosphate pollution in the water.
5. Submit your results online at <http://jerseybiodiversitycentre.org.je/>.

## The equipment

If a water quality test needs to be done in your chosen area, a kit will be sent to you containing:

- nitrate water quality testing tubes
- phosphate water quality testing tubes
- colour charts for use with testing tubes
- plastic or latex gloves
- sample cup

You will also need

- a Pondwatch JE water testing survey form (available from <https://groups.arguk.org/jarg>)
- a mobile phone (in case of emergency)
- a pen or pencil to write with
- a smartphone to record the pond coordinates (optional)

## How to collect the sample (also see Figure 1)

- Step 1: Put on some disposable plastic or latex gloves, particularly if you have any cuts the water could get in to.
- Step 2: Rinse out the sample cup in the pond water and submerge it to fill it halfway with water (don't just scoop up some surface water).
- Step 3: Take the sample cup containing water somewhere safe you can carry out the water tests (e.g. somewhere flat near to the pond).
- Step 4: Get out one phosphate and one nitrate tube. The phosphate is marked P on the base of the tube, and the nitrate is marked N.
- Step 5: Pull out and discard the yellow pin leaving a small air hole.
- Step 6: With the air hole pointing upwards, use your finger and thumb to squeeze out the air.
- Step 7: Keeping the air squeezed out, turn the tube upside down and insert below the water in the sample cup.
- Step 8: Gently release the pressure and suck up enough water to fill the tube just over half way.
- Step 9: If you need to, turn the tube upright again, squeeze out a bit more air to suck up more water to just over half way.
- Step 10: Gently shake the tube to mix the water and powder inside.
- Step 11: Make a note of the time and wait for the colour reaction (**Nitrate: 3 mins, Phosphate: 5 mins**)
- Step 12: Compare the tube with the colour chart as soon as the time is up, as the colour will continue to develop.
- Step 13: Record the results on the survey form and submit them online or via email.

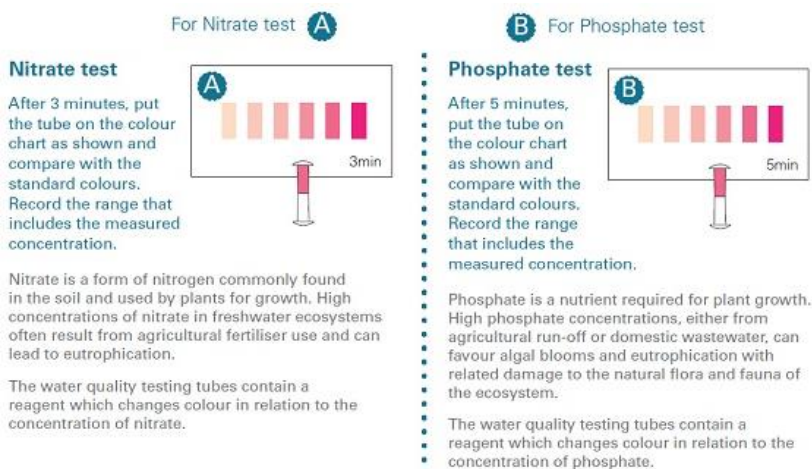
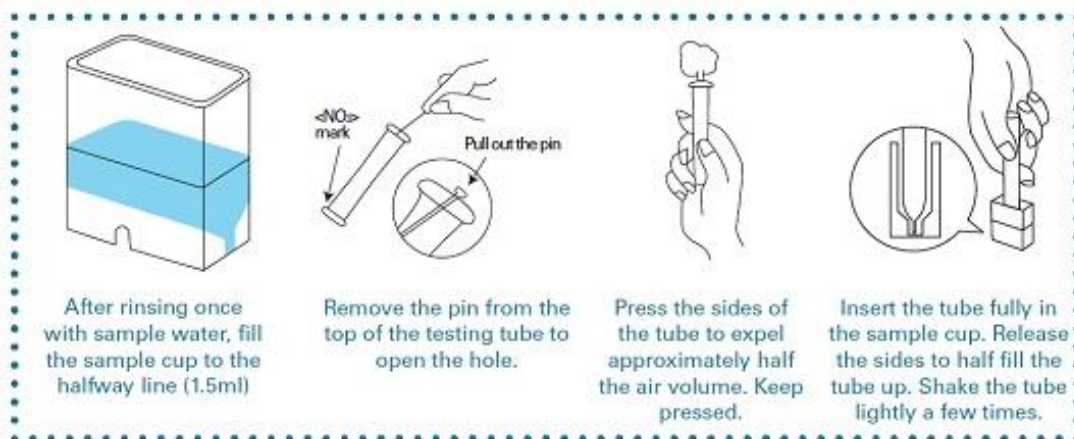


Figure 1 Visual guide to analysing water quality. Source: EarthWatch Institute



## Safety

It is very important to make sure you are safe at all times during your survey. Working at night can present greater risk, so if you do want to look for pondlife at night you should make sure you first visit the pond during the day to assess any risks before visiting at night. If you have concerns, then you should not proceed with the survey. A [risk assessment template](#) is available on the [JARG website](#) which you should modify to your needs. You are under no obligation to participate or complete the survey.

Note that you do not need to enter the pond to conduct a survey and should only survey from accessible banks. Avoid surveying areas with steep banks or wet muddy ground. Carrying a fully charged mobile phone is also advisable in case of emergency.

It is best to do your survey with someone else, but if you are on your own then make sure you tell a responsible person where you will be and when you expect to be back. Lone working procedures are described in the [Volunteer Working Agreement](#).

## Biosecurity

Amphibians are globally at risk from amphibian diseases. Furthermore, ponds can contain Invasive Non-Native aquatic plants. Both diseases and invasive plants can easily be transferred on equipment, footwear, clothing or other surfaces. It is therefore important that equipment and other items are properly cleaned and disinfected between surveys and between ponds. For further advice, see [ARG UK Advice Note 4](#), [Amphibian disease precautions: A guide for UK fieldworkers](#) and the [Check Clean Dry](#) campaign.

## Submitting your results

Once you have finished your survey, make sure you submit your data. The preferred way is using the online forms at <http://jerseybiodiversitycentre.org.je>. Alternatively, you can email a copy of your form to [jbc@societe-jersiaise.org](mailto:jbc@societe-jersiaise.org) or post it to:

Pondwatch JE  
Natural Environment, Growth Housing and Environment  
Howard Davis Farm  
Trinity  
JE3 5JP

If you are carrying out a Level 2 survey, you will need to be invited to fill out the appropriate online forms by your coordinator.

Please only submit your data using one method, as submitting through multiple avenues can lead to information being duplicated.

## Resources

The survey forms and all other information needed for completing pond surveys are available on the Jersey Amphibian and Reptile Group (JARG) website: <https://groups.arguk.org/jarg>.

Survey results can be submitted online to the Jersey Biodiversity Centre (JBC): <http://jerseybiodiversitycentre.org.je>.

### Useful links:

Amphibian and Reptile Groups of the UK (Up to date guidance for Amphibian and Reptile Groups) - <https://www.arguk.org>

Jersey Amphibian and Reptile Group Surveyors Discussion Page (Facebook) - <https://www.facebook.com/groups/590112634750709/>

## Sources

ARG UK (2010). Advice Note 5. Great Crested Newt Habitat Suitability Index. Available from <https://www.arguk.org/info-advice/advice-notes>.

ARG UK (2018). ARG UK Generic Risk Assessment.

British Dragonfly Society (2019) Dragonfly and Damselfly Identification Help. <https://www.british-dragonflies.org.uk/content/dragonfly-and-damselfly-identification-help>

GB non-native species secretariat (2019). <http://www.nonnativespecies.org/>

Oldham R.S., Keeble J., Swan M.J.S. and Jeffcote M. (2000). Evaluating the suitability of habitat for the Great Crested Newt (*Triturus cristatus*). *Herpetological Journal* **10**(4): 143–155.

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