

# Streamwatch starter pack

## Working together for healthy waterways

The Streamwatch starter pack provides an overview of Streamwatch as well as detailed information on how you can start your own Streamwatch group and join the Streamwatch network. By taking action and starting your own group you will become part of a network of people who are working together for healthy waterways.

## 1. What is Streamwatch?

Streamwatch is a community and school education and action program that raises awareness of the natural environment through testing water quality in local rivers and streams. The program empowers groups to protect the health of local waterways through their involvement in water quality monitoring.

Joining Streamwatch means becoming part of a huge and expanding network of groups and communities who care about their environment and want to make a difference.

Streamwatch started in 1990 with 15 trial groups and since then has experienced growing popularity. Sydney Water and the Sydney Catchment Authority (SCA) currently support over 250 groups. This translates to the involvement of around 10,000 participants each year.

Community education officers from Sydney Water and the Sydney Catchment Authority support Streamwatch groups who are based around local government area clusters. This servicing and support comes in a number of ways:

- training and technical advice on use of Streamwatch equipment and methods
- assistance with analysing water quality results
- verifying Streamwatch data collected by their groups
- keeping groups up to date and informed.

To find out who your community education officer is please visit [www.streamwatch.org.au](http://www.streamwatch.org.au)

### 1.1 How it all works

We want to help you make a difference to your local environment. We do this by training groups to use Streamwatch equipment and carry out tests to determine the physical, biological and/or chemical quality of their local waterway.

After testing, groups enter their results on the Streamwatch website. Results are automatically sent to the relevant regional coordinator who reviews and verifies the results. Once verified, the data is stored and available to anyone who visits the website. To view this database go to [www.streamwatch.org.au](http://www.streamwatch.org.au).

Streamwatch is not just about water testing. It is also about using the water quality test results to interpret environmental conditions and take action if necessary. In the event of unusual test results, immediate communication with your regional coordinator means that potential pollution incidents can be followed up as soon as they are spotted.



The key to the success of Streamwatch is cooperation between Streamwatch groups, Sydney Water, the SCA and local councils, catchment management authorities and other agencies.

## 1.2 Who can be involved?

Streamwatch is a valuable program that many schools, TAFE colleges, community groups, industries and field studies centres participate in. Some groups participate in Streamwatch because it involves a practical hands-on science and environmental monitoring experience that complements school curricula. Other groups take part in Streamwatch to monitor impacts or issues relating to water quality.

### 1.2.2 Schools

Streamwatch fits perfectly into both the primary and secondary school curricula, it encompasses a broad range of key learning areas - it's not only a science program.

Some of the curriculum areas that Streamwatch is currently operating in are:

Primary school:

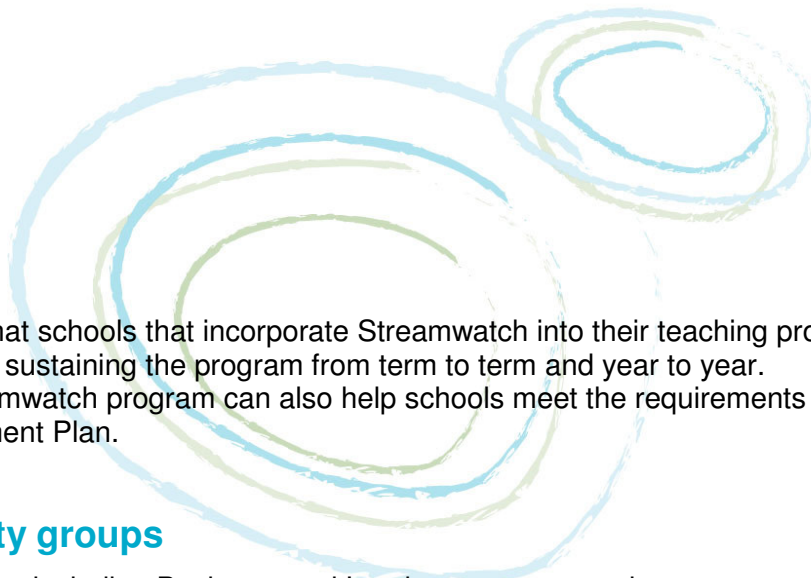
- Science and Technology
- English
- Mathematics
- Human Society and its Environment (HSIE)

High school:

- Stage 4 Science
- Stage 5 Science
- Stage 6 Senior Science
- Stage 4 and 5 Agriculture
- Stage 6 Agriculture
- Stage 4 and 5 Geography
- Stage 6 Geography
- Stage 4 and 5 Mathematics
- Stage 6 Mathematics
- Stage 6 Chemistry, Physics, Biology and Earth and Environmental Science

For more information call your regional coordinator or visit the school resources section on the Streamwatch website.

Streamwatch also opens up great opportunities for cross curriculum projects. Some schools run their Streamwatch programs as part of an environment club outside class time, during sport or after school.



Experience has shown that schools that incorporate Streamwatch into their teaching programs have a much easier time sustaining the program from term to term and year to year. Participating in the Streamwatch program can also help schools meet the requirements of their Environmental Management Plan.

### **1.2.2 Community groups**

Various community groups including Bushcare and Landcare groups, environment groups and progress associations are involved in Streamwatch for many different reasons.

Some groups use their Streamwatch results to assess the impact of their environmental improvement programs on water quality; others use the results as an education tool to demonstrate the impact communities have on water quality. Streamwatch is also used to help identify the source of pollution in their catchment so that appropriate action can be taken.

### **1.2.3 Stakeholders**

Streamwatch involves working together to maintain and improve water quality. To achieve this it is important that each Streamwatch group has a strong relationship with its local stakeholders.

The term 'stakeholder' is used to describe all the people in the local community who have an interest in your Streamwatch program. These stakeholders can often assist you in your group's Streamwatch program and in turn, your water quality results and projects can be useful to them.

Some of the common stakeholders involved in Streamwatch include local councils, catchment management authorities, other government agencies and non-government organisations.

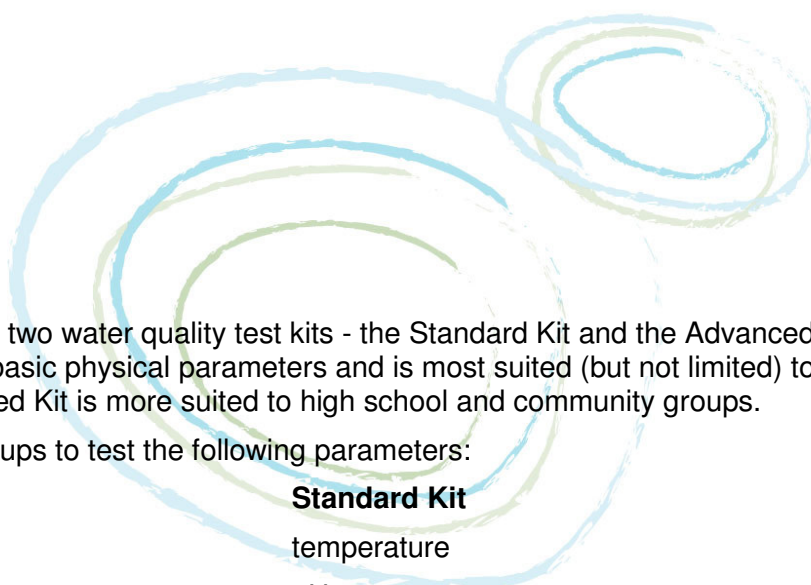
Sydney Water provides drinking water and wastewater services in the Sydney, Blue Mountains and Illawarra regions and is very enthusiastic about the role of Streamwatch in monitoring Sydney's waterways. Sydney Water is interested in Streamwatch as it can help to highlight potential problems or areas for improvement.

Local councils manage stormwater, parks and gardens and other environmental services. Many will be interested in your group's water quality results and want to support projects that help raise community awareness of water quality. Streamwatch test results help councils to identify other pollution incidents and hot spots and are often included in their annual State of the Environment (SoE) Report.

## **2. What's involved?**

### **2.1 Streamwatch kits**

Streamwatch caters for different levels of involvement and there are a number of testing options available to meet the specific needs of each group. Your decision about what parameters to test, which kit to use and how often to test are based on consultation with your regional coordinator and formalised in your Streamwatch plan.



Streamwatch has developed two water quality test kits - the Standard Kit and the Advanced Kit. The Standard Kit is used to test basic physical parameters and is most suited (but not limited) to primary school groups. The Advanced Kit is more suited to high school and community groups.

Streamwatch kits enable groups to test the following parameters:

**Advanced Kit**

- temperature
- pH
- electrical conductivity
- turbidity
- available phosphate
- dissolved oxygen
- faecal coliforms

**Standard Kit**

- temperature
- pH
- electrical conductivity
- turbidity

## 2.2 What are the costs?

Streamwatch kits are technologically advanced to ensure that your water quality testing is as accurate as possible. The cost of equipment, combined with chemical replacements can make Streamwatch relatively expensive.

However, Streamwatch is a valuable program and the good news is that it's just the sort of program that many organisations want to sponsor. So, if your school or group can't cover all the cost of getting your Streamwatch group up and running, it's time to get out there and start marketing. You might want to consider approaching the following groups:

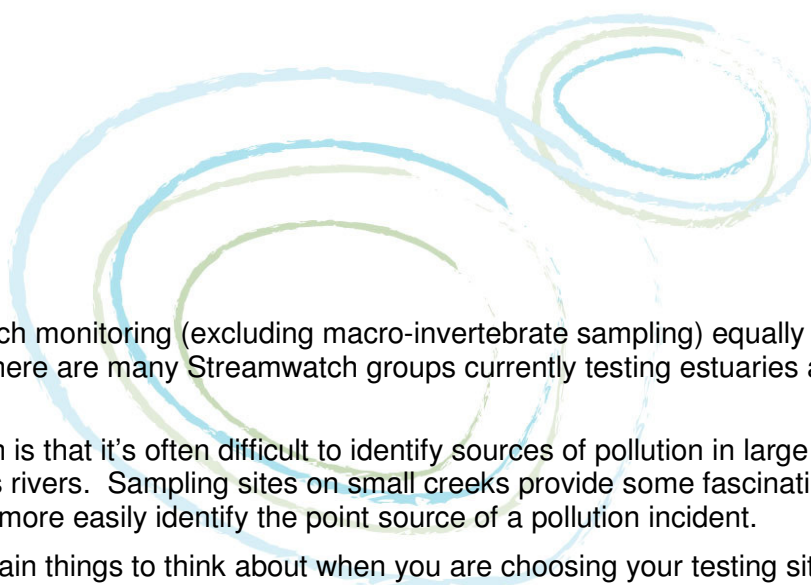
- local council
- local businesses and industries
- service clubs such as Apex, Rotary, Lions and Surf Lifesaving
- your school's Parents and Citizens Association or equivalent.

Don't let costs deter you, as we may still be able to provide you with a kit if you are really enthusiastic and committed. Sydney Water or the SCA may be able to sponsor your kit provided you test regularly and always enter your results onto the Streamwatch website.

If Sydney Water or the SCA sponsor the equipment it remains the property of that agency. If a group no longer wishes to participate in Streamwatch, they are required to return the Streamwatch kit in full.

## 2.3 Where to monitor?

The next big decision is selecting suitable Streamwatch monitoring site/s. Sydney Water, the SCA or your local council may be able to help you choose a site that not only meets your objectives but links with other project or important sites.



You can conduct Streamwatch monitoring (excluding macro-invertebrate sampling) equally well in salt water as fresh water. There are many Streamwatch groups currently testing estuaries and harbours.

One thing to consider though is that it's often difficult to identify sources of pollution in large receiving waterways such as rivers. Sampling sites on small creeks provide some fascinating results and can help groups more easily identify the point source of a pollution incident.

Following are some of the main things to think about when you are choosing your testing site or sites.

**a. Safety.** Working near waterways can be dangerous. It is important that the site you select can be reached safely. Avoid areas with steep embankments or slippery rocks. Make sure you assess all the potential risks of the site and that all members of the group are aware of these and how to avoid them. Your regional coordinator will conduct a site inspection to ensure the site is suitable before any monitoring can occur.

**b. Accessibility.** If walking to your site is your only option, then it's important that you don't have to carry your testing equipment too far. It's also important that you can regularly gain access to the site and that it is safe and easy to access.

**c. Interest value.** Despite the joy of testing at sites on pristine waterways, some of the most interesting sites are those that are downstream of a potential pollution source. By testing downstream of residential or industrial areas you may help to identify a pollution problem. This is often the first step towards improving water quality and local catchment health.

**d. How many sites?** Most groups begin testing at one or two sites on a regular basis so they build up a pool of results that can be used as a water quality baseline. Once familiar with the water quality at your chosen site/s you can begin comparing it with other sites in the catchment.

**e. How long does the testing take?** Once you are proficient at testing it takes less than one hour to conduct all the tests – from the time you get down to the stream to the time you leave. Of course, if you are doing extra testing like macroinvertebrates it may take longer. By allocating different tests to members of your group, you should be able to complete your testing in less than half an hour.

A result for all Streamwatch tests can be obtained on the day of sampling with the exception of the faecal coliform test. The faecal coliform test includes a 24-hour incubation period, after which the result can be obtained.

### 3. Joining Streamwatch

Now that you know what Streamwatch is and how it works, this section tells you how to become involved.



### 3.1 Request to join Streamwatch form

You will find a 'Request to join Streamwatch' form on our website ([www.streamwatch.org.au](http://www.streamwatch.org.au)) in the 'get involved' section. Simply fill it in and fax it back to Sydney Water or the SCA. This form officially registers your school or community group's interest in joining Streamwatch.

### 3.2 Briefing and planning meetings

Once we have received your request to join Streamwatch form, your regional coordinator will contact you to organise a briefing meeting. If you have a clear idea of where you want to test and what you want to do, the briefing and planning meetings can be combined. Your regional coordinator will decide this.

#### 3.2.1 Briefing meeting

The Streamwatch briefing meeting is an opportunity for your school or community group to learn a bit more about Streamwatch before launching into the program.

It's a great opportunity to invite as many interested teachers, students or group leaders as possible to this meeting so they can consider how Streamwatch could fit in with their own programs and/or meet their interests and needs.

Having more than one teacher or key group member involved means you can support each other and it enables continuity of the program if one of the key organisers leaves your school or group. Inviting your principal or community group coordinator as well ensures that Streamwatch is supported right from the start.

The briefing meeting provides you with the opportunity to discuss your ideas and have questions answered. We'll also discuss some of the main aspects of being a Streamwatch group like:

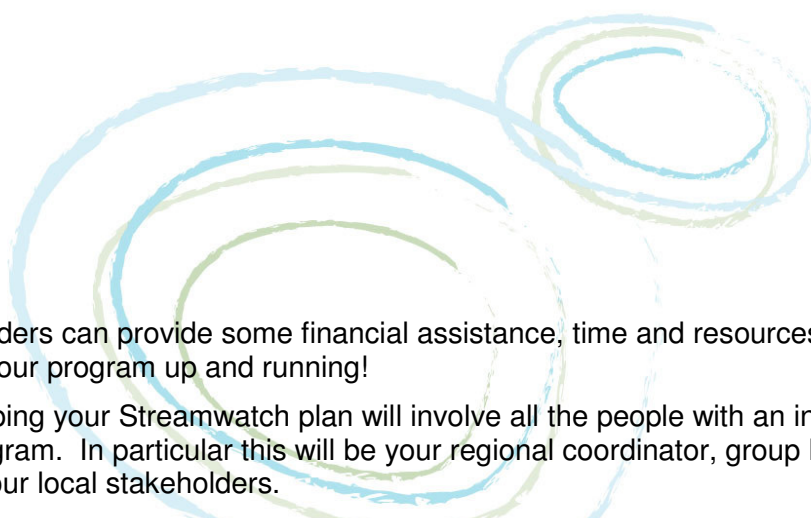
- which kit to use
- funding
- identifying and involving your key stakeholders
- communicating your results
- scheduling your group's training.

This briefing will get you thinking in about the Streamwatch program and how you will develop your own Streamwatch activities.

#### 3.2.2 Planning meeting

The purpose of the planning meeting is to develop a clear idea of how Streamwatch will be run - it's about why, how, when and where?

Your Streamwatch results and actions will probably have implications for a number of stakeholders. Therefore it is important that they are invited to the planning meeting. The good



news is some stakeholders can provide some financial assistance, time and resources – which all helps to get your program up and running!

The process of developing your Streamwatch plan will involve all the people with an interest in your Streamwatch program. In particular this will be your regional coordinator, group leaders, group members and your local stakeholders.

The plan will detail exactly how Streamwatch will run – from your vision of Streamwatch to where and when you will test, what you will do with your test results and what Streamwatch activities you will participate in. Your Streamwatch plan will also contain all relevant stakeholders, contact names and contact details.

Throughout your participation in Streamwatch, your regional coordinator will help you to review your plan to ensure that it meets your needs and will provide support in making any necessary changes.

### 3.3 Training day

Your regional coordinator will customise a training session to suit your group's needs and focus. Depending on your Streamwatch plan, your training session may cover:

- physical and chemical water quality testing including site selection, sampling, safety and how to conduct the various tests
- biological monitoring including macroinvertebrate sampling and identification
- internet training including uploading results to the Streamwatch website.

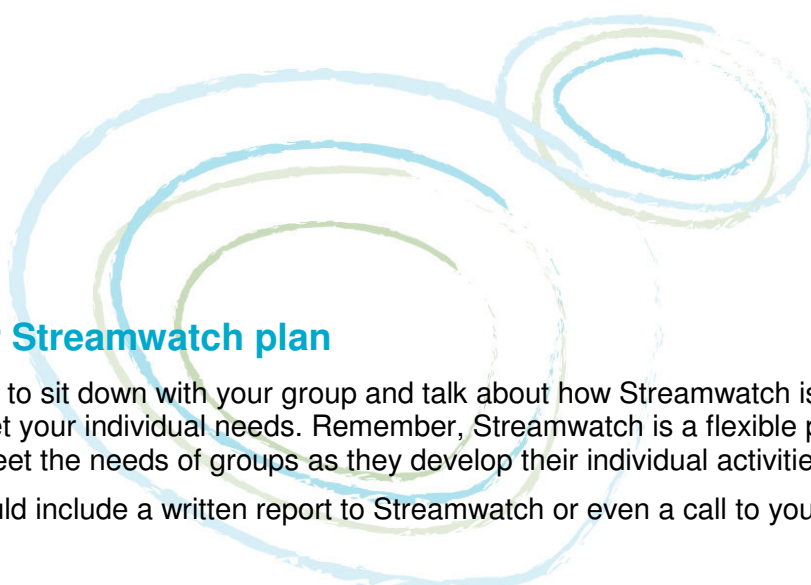
Streamwatch uses the 'train-the-trainer' model. Selected participants can be used to train others from your school or group who will be undertaking Streamwatch testing.

Finally, training often provides a great opportunity for your stakeholders to learn more about Streamwatch in action, meet your Streamwatch group and discuss your program. It's therefore important that you invite them to take part in your training session.

### 3.4 Launching your group

Once your group is officially part of Streamwatch, it's a great opportunity to get out there and celebrate. A launch means that you can publicly acknowledge your sponsors, raise the profile of your organisation, let your community know what your group will be doing and perhaps even involve them in your program.

For more information on how to organise a launch for a new Streamwatch group please contact your regional coordinator.



### 3.5 Reviewing your Streamwatch plan

We welcome the opportunity to sit down with your group and talk about how Streamwatch is going and how we can help to meet your individual needs. Remember, Streamwatch is a flexible program that constantly evolves to meet the needs of groups as they develop their individual activities.

Other methods of review could include a written report to Streamwatch or even a call to your regional coordinator.

## 4. What next?

The most important thing about Streamwatch is knowing that you have support when you need it. If you want to take your Streamwatch group even further, there are a range of Streamwatch related activities to participate in such as:

- Streams Alive
- catchment snapshots
- Every Drop Counts in Schools
- Quality assurance (QA) testing
- writing articles for the 'Strictly Streamwatch' newsletter
- water bug surveys.

For more information about these activities please talk to your regional coordinator. Your regional coordinator will help organise these sorts of activities throughout the year as well as promoting other activities you may want to be involved in. Regional coordinators are always open to new suggestions, so give them a call to discuss your ideas.

## 5. Contact us

Visit our website at [www.streamwatch.org.au](http://www.streamwatch.org.au)

Email us on [streamteam@sydneywater.com.au](mailto:streamteam@sydneywater.com.au)

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