



Communities caring for catchments

Types of monitoring

There are six main types of waterway monitoring listed here, with each one better suited to particular monitoring objectives. These types of monitoring are all useful for achieving increased community education and awareness, as well as increased community skills.

Choose the type of monitoring which will best help you achieve what you want from your project. This will then help you design your project using the advice provided in Chapter 4 of the [Queensland community waterway monitoring manual](#).

Type of monitoring	Project objectives
Snapshot assessment	<ul style="list-style-type: none"> Assess current condition of waterway
Baseline condition and trend (ambient or routine) monitoring	<ul style="list-style-type: none"> Establish baseline values for the waterway Monitor trends through time—both natural and human-driven variation over time Detect any pollution events or pest species outbreaks Develop local water quality guidelines Monitor for compliance indicators
Load-based monitoring	<ul style="list-style-type: none"> Estimate sediment and nutrient inputs (loads) during high-flow events Estimate pollutant inputs (loads) during high-flow events To estimate pollutant concentrations and distribution during high flow events Assess pesticide levels (loads) in run-off during high-flow events Assess pollutant concentration or distribution for a given time period
Impact assessment	<ul style="list-style-type: none"> Assess impact of a land use or pollution source
Restoration assessment	<ul style="list-style-type: none"> Assess effectiveness of a management action
Compliance monitoring	<ul style="list-style-type: none"> Assess compliance with guidelines for a human use (e.g. animal watering, recreation or irrigation) <p>Note: baseline condition and trend (routine) monitoring may contain a compliance element</p>
Investigative studies	<ul style="list-style-type: none"> Investigate causes of a particular water quality or river health problem

Case studies

Case studies are provided for ambient monitoring, load-based monitoring and restoration assessment demonstrating how these types of monitoring have been used to achieve different project objectives.

Ambient (routine) monitoring

Often undertaken to monitor trends, ambient monitoring can provide information on whether the condition of a waterway is declining or improving over time.

It is also used by many community-based groups to identify pollution events and pest species outbreaks.

Two case studies are available on ambient monitoring:

- [Community waterway monitoring for the Maroochy River](#) (PDF, 119 kB)*
- [Ecosystem Health Monitoring Program for South East Queensland](#) (PDF, 374 kB)*

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Load-based (event) monitoring

Load-based monitoring is conducted during high-flow events such as during heavy rainfall. It is used to estimate the inputs of pollutants such as sediment and nutrients, during such events.

A case study on the [Mackay Whitsundays Healthy Waterways integrated monitoring program](#) (PDF, 128 kB)* is available, detailing community-based best practice event monitoring.

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Restoration assessment

Restoration assessment is undertaken to assess the effectiveness of a management action for improving waterway condition.

The [Mary River and tributaries case study](#) (PDF, 96 kB)* provides details on how a community-based river rehabilitation plan was monitored and the effectiveness of the actions were evaluated.

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*Requires [Acrobat Reader](#)

If you experience problems downloading or ordering any of these documents, or would like further information on these resources, please contact:

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