

RECOMMENDATIONS

The Hawkesbury–Nepean River Recovery Program presents a varied approach to improving river health by reducing nutrient exports and making more water available for the environment. The program achieved or exceeded its objectives and provides a successful model for similar coastal systems facing competing demands for water. The program leaves a valuable legacy for the catchment and offers the following key recommendations for further initiatives.

- Water management is complex and sufficient time should be allocated for program completion. Programs of similar complexity, scale and type should allow a minimum of four to five years for successful stakeholder engagement, planning, implementation, evaluation and reporting.
- Future initiatives should have a robust stakeholder engagement strategy, which aims to involve stakeholders in the planning process before implementation commences. Stakeholder engagement should continue throughout the life of the program to inform implementation and ensure ongoing improvement.
- Processes and policies required for program implementation should be in place before funding is released to avoid any delays at the outset.
- Future initiatives should have a continuous learning and improvement framework to evaluate the success of program objectives throughout the implementation process.
- Funding programs should be flexible to allow ongoing support and investment over the longer term. This may include staged investment over a number of years following program completion to allow for more rigorous and comprehensive evaluation and monitoring.
- Future programs should appoint a central coordinating body with overall responsibility for the program. The Office of the Hawkesbury–Nepean played a critical role as broker and coordinator for the Hawkesbury–Nepean River Recovery Program.



The program leaves a valuable legacy for the catchment and provides a successful model for similar coastal systems facing competing demands for water



GLOSSARY

Coefficient	A numerical measure of a physical or chemical property that is constant for a system under specified conditions.
Diffuse Pollution	Pollution which emanates from of a range of urban and rural land-use activities across a catchment, rather than from an identifiable point source, such as a sewage treatment plant. Diffuse pollution is mainly driven by surface run-off during and following rainfall events.
Environmental flows	River water that is vital for healthy functioning river systems and is either protected from extraction or created for an environmental purpose. Environmental flows can be achieved through various methods, for example releasing water from dams or making water available for environmental benefit through water-use efficiency and licence purchases.
Environmental water	For the purposes of this project, water savings that will contribute to additional environmental flows are generically referred to as environmental water. This includes both planned and adaptive environmental water under the <i>Water Management Act 2000</i> .
Leachate	Any liquid that, in passing through matter, extracts solutes, suspended solids or any other component of the material through which it has passed. Leachate from stockpiles of manure or other organic wastes will typically contain highly elevated levels of nutrients and other pollutants.
Nitrogen	An essential nutrient for plant growth, that is commonly present in waterways at elevated levels, contributing to the excessive growth of algae and weeds within and along the waterway. Management of nitrogen levels, particularly in the form of ammonia nitrogen, which can have toxicity effects, has been a focus of water quality management in the Hawkesbury–Nepean River system over recent years.
Nutrients (in river systems)	Plant nutrients, such as nitrogen and phosphorus, which, when present in waterways at elevated levels, can promote excessive growth of algae and weeds within and along the waterway.
Phosphorus	An essential nutrient for plant growth, that is commonly present in waterways at elevated levels, contributing to the excessive growth of algae and weeds within and along the waterway. Phosphorus is readily adsorbed onto particles, including sediments. Reduction of phosphorus levels has been the primary focus of water quality management in the Hawkesbury–Nepean River system since the 1980s.
Potable water	Water suitable for human consumption.
Riparian zone	The zone or corridor of land that adjoins a river, stream or other water body.
Turbidity	A measure of the light-scattering properties of a fluid. Turbidity is commonly used as a measure of the cloudiness of water, caused by individual particles (suspended solids such as fine soil particles) that are generally invisible to the naked eye.
Unregulated river water source	A river from which water extraction depends on availability of flows as water is not stored or released on demand for downstream users.

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