

# Two Bays January 2010 Science and Monitoring Program

**Project Title:** Autonomous Underway Water Quality Sampling

**Lead Agency /  
Scientists:** Monash University – Ian McKelvie and Peter Ellis

**Purpose:** To create a spatial snapshot of summer conditions within Port Phillip and Western Port for 2010. Automated instrumentation measuring water quality (temperature, salinity, fluorescence and turbidity) will be coupled with a suite of continuously recording nutrient analysers to generate the condition maps of surface water around the two bays.

**Background:** Bay water quality is a measure of the amount of contaminants, including nutrients, toxicants, litter, pathogens, and sediment, found in bay waters, and is one of most important management challenges for the future health of our Two bays. Measuring nutrients and other water quality parameters provides an important opportunity to inform catchment and waterway managers who work to improve the quality of the water entering the bays. Researchers Assoc. Professor Ian McKelvie and Peter Ellis from Monash University will lead this science study applying their rapid-rate flow injection analysis technology to measure nutrients throughout the cruise. The equipment allows a sample of water to be collected every 30 – 40 seconds while the vessel is underway providing a very detailed picture of bay water quality. This year the survey provides an opportunity for researchers to field trial new nutrient channels of their analysis system for Total Nitrogen, Phosphorous and Nitrate, as well as routine analysis of Ammonia and Dissolved Phosphorous as done on previous cruises.

## Outline of Program:

**For Further Information:**

[www.monash.edu.au](http://www.monash.edu.au)

## Image:

The prototype flow injection system used aboard Pelican as part of the Two Bays 2010 project provides a detailed picture of water quality in the bays, including nutrients such as Phosphorus (Free Reactive) measured in previous Two Bays programs.

