Background

Cockburn Sound is highly valued by the community for its ecological, economic and recreational attributes. The area is home to a vital part of the state's economy, incorporating the Kwinana industrial area, international shipping, port facilities, national defence and Perth's desalination plant. The diversity of activity in the Sound keeps it under constant environmental pressure from increasing industrial, urban and recreational use.

In response to the many pressures, government established the Cockburn Sound Management Council (CSMC) in 2000 to “facilitate and coordinate ongoing environmental management of Cockburn Sound.” The State Environmental Policy for Cockburn Sound (SEP) was released in 2005 and is a Cabinet approved government policy. In the same year, the CSMC produced its Environmental Management Plan for Cockburn Sound and its Catchment 2005.

Maintenance of healthy and productive marine ecosystems is fundamental to the environmental management of Cockburn Sound. Seagrass is used as a key indicator of ecosystem health in the Sound. Seagrasses provide food and shelter for many organisms, and are a nursery ground for commercially important prawn and fish species.

This performance audit examined whether the environmental management framework and supporting arrangements promote a healthy ecosystem in Cockburn Sound.

What the examination found…

Cockburn Sound has a strong environmental management framework in place. The framework includes the State Environmental Policy and the Environmental Management Plan for Cockburn Sound and its catchment. These are supported by guidance documents that define environmental quality criteria and procedures for monitoring and reporting against the criteria. Management responsibility for the policy framework is clear.

However gaps in policy implementation and management oversight mean the framework has not been fully effective in maintaining ecosystem health:

- Monitoring indicates that seagrass in Cockburn Sound remains under pressure. Since 2005, three out of seven monitoring sites in Cockburn Sound have fallen below the required seagrass health standard and one other site has come close to falling below the standard.
The SEP requires use of a monitoring methodology that benchmarks seagrass health against a reference site in Warnbro Sound. We found a decline in seagrass shoot density in Warnbro Sound has caused a lowering of the standards used for determining healthy seagrass in Cockburn Sound. The decline had not been recognised by the CSMC, the EPA or DEC.

Monitoring does not adequately measure the total area of seagrass in Cockburn Sound. Although the Environmental Management Plan for Cockburn Sound requires periodic mapping, total seagrass area has not been mapped since 2004.

Total contaminant discharges into Cockburn Sound are not monitored. This reduces government’s ability to take appropriate and timely management action.

There has been no formal environmental risk assessment for Cockburn Sound since 2001. Such an assessment would help focus monitoring in areas of greatest concern.

Insufficient quality assurance and management oversight by the CSMC, the Office of the EPA and DEC has led to errors and inconsistencies in reporting on ecosystem health. This has masked a decline in key indicators of seagrass health and water quality at some monitoring sites.

Reporting on ecosystem health needs to be strengthened to better highlight areas of concern and provide sufficient information to allow a clear assessment of trends in ecosystem health.

CSMC do not always investigate when environmental quality criteria are exceeded at individual monitoring sites and then report what corrective action is being taken. This reflects their focus on zones rather than individual sites. The SEP is not always clear about when investigation and reporting is required.

What the examination recommended…

The EPA, DEC and the CSMC should bring forward the planned 2012 review of the SEP. The review should consider the following measures to strengthen the current monitoring methodology and practice:

- confirm that Warnbro Sound remains a valid reference site
- improve transparency and reporting when benchmark standards for environmental quality criteria are adjusted
- clarify the requirement to report against zones or specific monitoring sites
- periodic seagrass mapping to assess overall trends in seagrass coverage in the Sound
- monitor cumulative contaminant inputs
- update the environmental risk assessment of Cockburn Sound
- strengthen quality assurance frameworks for how data is collected and used.

The EPA, DEC and CSMC should strengthen the current reporting framework by providing sufficient information to allow an assessment of trends in ecosystem health. Reports should include monitoring results from the reference site and should place more emphasis on individual monitoring sites within zones.

CSMC should set realistic timeframes to ensure that appropriate action is taken when environmental guidelines and standards are exceeded.

A copy of the report can be accessed at www.audit.wa.gov.au
For further information email: info@audit.wa.gov.au