The Derwent Estuary

The Derwent Estuary lies at the heart of the Hobart metropolitan area and is an asset of great natural beauty and diversity. Named after the Californian for ‘clear water’, the Derwent is an integral part of Tasmania’s cultural, economic and natural heritage. The estuary is an important coastal ecosystem and supports a wide range of habitats and species.

Management and Restoration

The Derwent Estuary Program (DEP) was established in 1999 as a partnership to restore and protect the Derwent Estuary. The program was initially designed to address the broad range of issues such as industrial and urban waste, episodic forest fires, but also included categories covering threatened habitat and species, introduced species and invasive ecosystems. Several of these categories, which were previously addressed in separate initiatives, have now been included within the program.

In December 2001, our Environmental Monitoring and Reporting Agreement, signed in August 2000 by the Derwent Estuary Program and the three councils and three industry/utility partners (Ivanhoe, Tesselaar-Thomson and Pasminco Hobart Smelter and Hobart Waste Management), was then considered to be a more robust indicator of faecal pollution, particularly in estuaries and coastal waters.

By the year 2002, monitoring data and other relevant information on the Derwent Estuary was being collected and accessed online and is being updated on a regular basis. Monitoring campaigns undertaken during 2003 continued to follow the same protocols as in previous years. The DEP and its partners are committed to improving the quality of monitoring data and to report annually on the status of the Derwent Estuary.

ARE OTHER INDICATORS OF WATER QUALITY IMPROVING OR DECLINING?

Long-term time series for metals and nutrients were assessed as indicators of specific processes, such as sedimentation and erosion, over the past thirty years, but zia levels at mid-estuary sites are still above those measured previously. New data has shown significant reductions in the level of nutrients in sediments since a cut-out well was installed within 1997. This data shows that the mid-estuary site is still above the level at the bay in 1997.

Dissolved oxygen levels in the upper estuary have improved since the pulp mill at Bellerive commenced primary treatment in 1990, but at mid-estuary sites, levels are still at or near the level during summer months and low flow conditions. This is due in part to a natural tendency towards oxygen minimum in the upper reaches of the estuary, stratified estuaries, combined with the effects of the pulp mill effluent.

Nutrient and chlorophyll a data is more difficult to interpret due to a short-term and recent high and variable natural history. Nutrient and chlorophyll a data is more difficult to interpret due to a high and variable natural history. Nutrients increased in surface waters during winter months, with low values measured during the summer. The source of nutrients is still a subject of research.

Are contaminants levels in fish increasing or decreasing?

Levels of heavy metals and arsenic in Derwent Estuary seafood have been monitored by Pasminco Hobart Smelter for 15 years. Levels have improved above the national guidelines, particularly for zinc and lead, but still contain mercury, lead, zinc and cadmium. This undoubtedly impacts the health of animals and plants within the Derwent and the majority of sediments within the Derwent Estuary.

ARE CONTAMINANT LEVELS IN MARINE AND ESTUARINE MEDITERRANEAN?

A number of species were identified during the recent surveys of the Derwent, focusing on marine and estuarine Mediterranean species. Species such as the Pacific seastar, Japanese seaweed, include target pests the northern flathead for the past 21 years. Shellfish should not be harvested from any part of the Derwent Estuary.

What is the current status of shellfish beds in the Derwent?

Is fish and wildlife habitat increasing or decreasing?

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