This Report Card summarizes monitoring data collected during 2015 and early 2016, including:
• weekly recreational water quality testing during summer months
• monthly vehicle- and boat-based, catchment water quality monitoring surveys of heavy metals in fish flesh
• biological surveys (seaweeds, spat and settled oysters)
• send water and control actions (rice grains, kelp)
More detailed information is published in five-year State of the Derwent Estuary reports, available on our website: www.derwent.org.au

### PLANNING AND COORDINATION

The DEP is supported by the Tasmanian Government, six councils that border the estuary (Brighouse, Clarence, Derwent Valley, Goomalling, Hobart and Kingborough Councils), and the business partner (Port Huon, Norske Skog Tamar, TasWater, Sylfar, Tamar and Hyde Tasmania). Other project partners include the Institute of Marine and Antarctic Studies, CWNHS and South West Tasmania.

### ENVIRONMENTAL MONITORING AND REPORTING

A fundamental requirement for effective natural resource management is an on-going and reliable source of information, which forms the basis of the DEP’s cooperative water quality monitoring program. This involves monitoring in some way the quality of water flowing into, through and out of the Derwent estuary, as well as the associated sediments and water from upstream catchments.

The DEP program was initially designed to address the issues associated with both urban and rural catchments, including:

- urban catchment inflows
- industrial outflows
- rural run-off

The program is now focused on: the monitoring of catchment inflows; the monitoring of the upper estuary; and monitoring of the lower estuary.

The Derwent Estuary Program (DEP) was established in 1995 as a partnership to protect and enhance the Derwent estuary. The program was set up to:

- provide a better understanding of the conditions in the estuary
- assess the effectiveness of control actions taken by the Derwent Estuary Program

DEP oversees a wide range of activities, including:

- monitoring the quality of rivers entering the estuary
- monitoring the quality of stormwater entering the estuary
- monitoring the quality of urban drainage entering the estuary
- monitoring the quality of point source discharges entering the estuary
- monitoring the quality of the offshore marine environment

### POLLUTANTS AND THEIR SOURCES

Pollutants enter the Derwent estuary from many sources, commonly referred to as ‘point sources’ and ‘diffuse sources’. Pollutants include sewage treatment plant discharges and large inclusions, such as the Norske Skog Tamar (NSK) paper mill, Berridale and Myrrah Hobart Incinerator at Latrobe.

Diffuse sources include stormwater run-off, sewage treatment plants, septic tanks, land applications, and water associated with ports and marinas. Sediments within the estuary itself may also release pollutants into the overlying waters under certain conditions.

### MARINE PESTS, WEEDS AND DISEASE

The Derwent Estuary is extensively colonised by introduced marine species. At least 100 species have been recorded, including four species of shellfish (Japanese oyster, oyster drill, Japanese clam, and European clam). A number of other species (e.g. New Norfolk shell) now occur at very low densities. The Derwent Estuary is an on-going and reliable source of information on marine farming, sewage and other ongoing adaptation projects across the estuary.

### ESTUARINE HABITAT & SPECIES

Surveys of the Derwent Estuary indicate that unoccupied, well-bounded habitats are far less common than sectors deficient in key habitat (20%). This is largely because of the decline of valuable habitats like hard substrates and mud. While the Estuary’s natural biodiversity is well represented, it is being depleted by invasive species and pollutants. This is leading to a reduction in the range of habitats available for species, which in turn affects the ability of the estuary to maintain a healthy and diverse ecosystem.

Detailed surveys of new Derwent Estuary species highlight sedentary caravans were carried out in 2014, with varied results (Wing, 2015). In particular, while the number of the Handy Boat site appears to be increasing, while numbers at Sandy Bay may have declined. Numbers of juvenile fish at Sandy Bay are significantly higher than in other locations.

Apart from monitoring population dynamics and target management actions specifically

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RECENT MANAGEMENT ACTIONS, SAMPLING SITES AND DISCHARGE POINTS

Karamu, a small tree originating from New Zealand, has invaded the river banks and wetland areas of the upper Derwent near New Norfolk. Over the past five years the DEDP in cooperation with other stakeholders have reduced the distribution of the highly invasive tree by poisoning trees at the edge of the wetlands and spraying it towards its central patch from Launceston to New Norfolk. The management of Karamu has been successful because of the cooperation of many people and organisations. The DEDP, Commonwealthsense, and the Department of Environment and Heritage employed contractors to conduct wetland rehabilitation and land management trials aimed at testing the best method of controlling Karamu. Derwent Catchment Management Authority (DCMA) has supported Green Army teams to remove Karamu and negotiate council parks with native species. By focusing the focus on Karamu it is hoped that its management will be reduced to the maintenance of improved sites in the near distant future.

STATE OF THE DERWENT REPORT 2015

Wheeler is a small old dry grassy wetland, an extensive network of hollows with well-developed roots and great opportunity for hoarding and flooding. A major report looking at the health of the Derwent over the past five years has found the condition of the estuary has improved in some areas and declined in others. The report highlights areas we can work on to improve the health of this highly valued ecosystem. The State of the Derwent report summarises trends in industrial, sewage and stormwater discharge, monitoring results for estuarine beaches, heavy metal levels in sediments and seaweed, and the condition of key habitats and species. The report also highlights action taken to clean-up the Derwent during this time. Find it at www.dwr.state.tas.gov.au or contact us for a hard copy.

DERWENT CATCHMENT MANAGEMENT AUTHORITY (DCMA)
www.dwr.state.tas.gov.au