About the Estuary

The Hopkins River estuary enters the sea at Warrnambool in southwest Victoria. Warrnambool is a growing regional centre 12km from the western end of the Great Ocean Road.

The estuary is used for swimming, water skiing, fishing and rowing. The estuary is known to provide habitat for 39 species of fish. One of the most important habitat functions that estuaries provide is to act as nursery areas for juvenile fish. The Hopkins River estuary provides the ideal habitat for breeding Black Bream, Estuary Perch and anchovy. The estuary is recognised under the Go Fishing in Victoria Program as a premier fishing reach.

The Hooded Plover, Thinornis rubricollis, a beach nesting bird listed as threatened under the Flora and Fauna Guarantee Act 1988 is known to inhabit stretches of beach adjacent to the Hopkins River estuary.

The Hopkins River estuary looking upstream from the river mouth.

HOPKINS RIVER ESTUARY 2015

An interpreted summary of data

Date range: 01/01/2015 – 31/12/2015

Summary of data

In 2015 there were five artificial estuary mouth openings for the Hopkins River estuary on March 11 (1.53m, AHD), April 30 (1.54m, AHD), May 25 (1.72m, AHD) June 11 (1.7m, AHD) and July 3 (1.54m, AHD). Four natural openings were recorded on July 23 and 28 and September 1 and 11.

Over the 12 months salinity within the estuary was mostly brackish ranging from 2 – 21.7ppt. The lowest salinity levels were recorded from May to September corresponding with increased river flows. During this time the estuary waters were mildly stratified. Note: The salinity of influent river water recorded at Hopkins Falls is often greater than 3ppt. The dissolved oxygen levels within the estuary were maintained in the relatively healthy range (All sites and depths, median 86% saturation), the lowest levels were recorded in the bottom waters during times of mild stratification. Water temperature ranged from 9 – 23°C. The highest temperature was recorded in the surface waters at site H4. The pH levels were also maintained in the healthy range (pH: 7.4 – 8.5 pH units).

EstuaryWatch records at Hopkins River Estuary extend from 2010 and can be viewed at www.estuarywatch.com.au

EstuaryWatch is a community based estuarine monitoring program, aiming to:

Raise awareness and provide educational opportunities to the community in estuarine environments, and enable communities and stakeholders to better inform decision making on estuarine health.

EstuaryWatch volunteers are supported by EstuaryWatch coordinators. Volunteers meet with their coordinator every six months to conduct Quality Assurance/Quality Control (QA/QC) refresher training. These sessions ensure that EstuaryWatch monitoring methods are consistent across the state and data collected by volunteers is credible.

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An unexpected visitor on the Mahoney’s Rd jetty wasn’t feeling too well, so the EstuaryWatch team hooked the little fella up with the local wildlife carer. (Wildlife Victoria hotline 13 000 94333)
For all four monitoring sessions chosen for the EstuaryWatch Snapshots, photo point photos and a longitudinal profile of the estuary from site H1 (Hopkins River Bridge) to H4 (Jubilee Park) is displayed. The longitudinal profile shows the depth, salinity and percentage saturation of dissolved oxygen (DO) at each monitoring site from the surface of the water column to the bottom.

Water quality guidelines for riverine estuaries

In 2011 the Environment Protection Authority (EPA) established a framework for assessing the environmental condition of riverine estuaries. These guidelines can be used to assist management decisions to protect or improve the health of estuaries.

A broad range of estuary types were used to develop the guidelines.

Keep in mind that not all Victorian estuaries have been sampled and measurements have not been collected under all environmental conditions — for example, following flooding bushfires or storm surges.

Below is a table to assist you to interpret the EstuaryWatch data discussed in this summary. The guidelines detail what you would expect from a single monitoring session on an estuary in Victoria.

<table>
<thead>
<tr>
<th>INDICATOR</th>
<th>SINGLE SAMPLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dissolved Oxygen (DO) % saturation</td>
<td>70–110%</td>
</tr>
<tr>
<td>Turbidity (NTU)</td>
<td>18</td>
</tr>
<tr>
<td>pH (pH units)</td>
<td>6.9–8.3</td>
</tr>
</tbody>
</table>

EstuaryWatch volunteers also measure the salinity (ppt) throughout the water column. A rough guide for salinity in estuaries is 0ppt (freshwater) to 35ppt (seawater).

To find out more about the parameters EstuaryWatch volunteers use to measure estuary condition, Interpreting Estuary Health Data, EstuaryWatch Victoria is a fantastic resource.

Common Galaxias, Galaxias maculatus

The Common Galaxias adults live in calm waters of low-elevation streams, during autumn they migrate downstream to spawn. Thousands of small eggs are laid in vegetation on the margins of estuaries at spring tides, and often spend up to two weeks out of water until the next spring tide. The larvae then leave the estuary and spend 5 to 6 months at sea as juveniles before returning to the estuary as whitebait moving upstream to the freshwater to mature.

See more at: http://australianmuseum.net.au/common-galaxias-galaxias-maculatus#sthash.tCABw6N7.dpuf

Get to know your local estuary species

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Photo: Whitebait stage Common Galaxias. Photographer: Rudie Kuiter ©