

FISH AND EEL CONTAMINATION INVESTIGATION FOR THE YARRA AND MARIBYRNONG ESTUARIES

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The Yarra and Maribyrnong river estuary has a long history of industrial and port activities and is at the bottom of a catchment of over three million people.



Since the 1970s, much has been achieved in terms of improved quality of the Yarra and Maribyrnong rivers by stopping industrial discharges to the rivers, improving sewerage management and a range of other actions. The lower reaches of these rivers are increasingly being used once more for recreational purposes, including fishing.

The community is increasingly seeking information about the levels of contaminants that may be present in fish caught recreationally from the estuary and whether they are safe to eat.

This community information publication outlines a detailed study being carried out on contaminant levels in fish from the lower Maribyrnong and Yarra rivers. The study aims to provide advice to recreational fishers and the broader community about the quality of fish that may be caught in this area.

PILOT STUDY ON FISH QUALITY

A pilot study by Melbourne Water and EPA Victoria in 2005 examined contaminant levels in fish from the Yarra River near Herring Island and the Maribyrnong River near the former Australian Defence Industries site at Maidstone. This pilot study found:

- contaminant levels in fish (such as bream) were below the recommended Maximum Residue Limits in food
- some eels with levels of the chemical PCBs above the recommended Maximum Residue Limits in food.

As a result, Victoria's Chief Health Officer advised that, while not a cause for alarm, the results did warrant further investigation and, pending the outcomes of this work, recommended that eels from the Yarra/Maribyrnong river estuary should not be eaten more than once a month.

PROPOSED FISH STUDY

To investigate the concerns raised by the pilot study EPA – with the support of Melbourne Water, Port of Melbourne Corporation and the Department of Human Services – will undertake a more comprehensive assessment of contaminant concentrations in fish from the Yarra and Maribyrnong rivers.

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This study will provide the community and relevant agencies with more comprehensive information about contaminant concentrations in fish and eels from the Yarra/Maribyrnong estuary.

Recent surveys by the Department of Human Services confirmed that people catching fish in the study area ate the fish or gave them to family and friends to eat.

Study approach

The study will use the United States EPA (Tier 1) guidelines for the assessment of the risk to human health from eating contaminated fish. The study will include fish and sediment samples at five locations in the estuaries. Three fish species will be sampled, with 30 fish (three groups of 10) to be caught for each species at each location.

Fish tissue will be analysed for persistent organics and metals listed in the US guidelines for fish advisories, as well as contaminants detected in previous studies in the Yarra/Maribyrnong estuary. Results will be compared to US EPA guideline values and relevant Australian food standards.

Fish species

Surveys indicate that Black Bream and Yellow Eyed Mullet are the most popular fish species targeted by recreational fishers in the study area. Tailor are popular in the 'Warmies' area, which is the most popular area for recreational fishing in the region. The three species will be targeted as part of this study.

In addition Short Finned Eels will be collected for analysis. While it appears that eels from the Yarra or Maribyrnong River are not commonly caught for human consumption, the recent pilot study indicated the need for a more detailed assessment to determine the extent of PCB residues in eels.

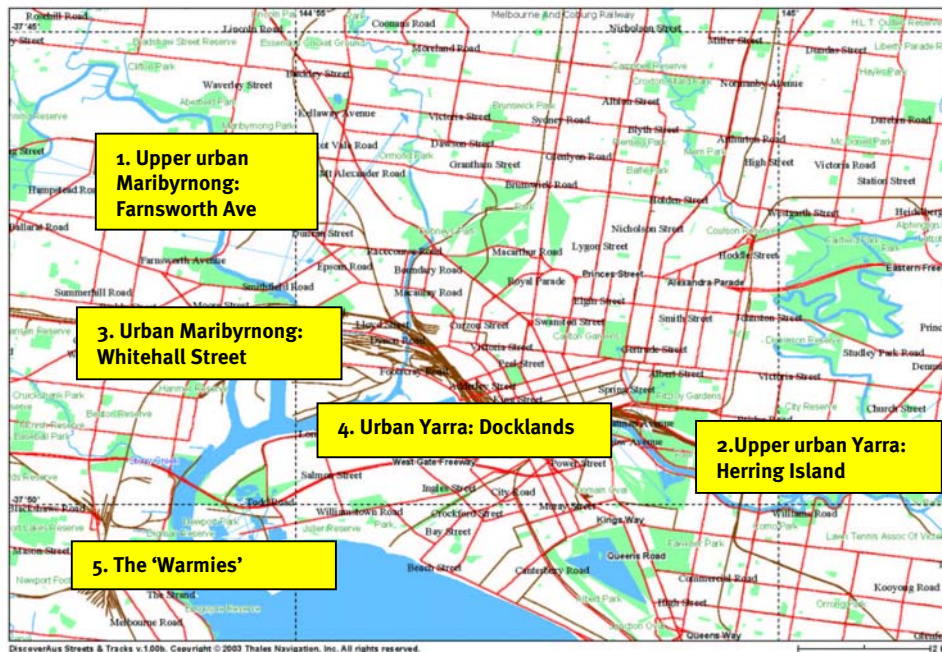
The study will commence in April 2006 when Black Bream and Yellow Eye Mullet are likely to be widely distributed in the study area.

Proposed sampling locations

The Maribyrnong River estuary extends to the Canning Street ford in Avondale Heights and the Yarra River estuary to Dights Falls in Kew. The study will focus on sampling fish and eels from five areas of the two rivers, including (figure 1):

1. the upper urban reach of Maribyrnong River estuary (Maribyrnong)
2. the upper urban reach of the Yarra River estuary (Herring Island)
3. the urban reach of the lower Maribyrnong River, focusing on the Whitehall St, Yarraville region
4. the urban section of the Yarra River immediately upstream of the junction with the Maribyrnong (South Wharf No. 6–10, Docklands)
5. the lower Yarra estuary (near the 'Warmies').

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Expected outcomes

The study is expected to provide a much more comprehensive understanding of contaminant concentrations in fish from the lower Yarra and Maribyrnong rivers. In particular, the study will provide additional information on the extent of PCB residues detected in eels near Herring Island.

This work will provide the basis for advice to the fishing community about any risks associated with consuming fish from these areas, and any precautions that may be necessary. The work may also lead to further investigations.

EPA expects the results of this study to be available in July 2006.

If you would like further information about this study please contact Gary Laidlaw of EPA's West Metro region on 9695 2560.

Related programs on EPA's website:

- Maribyrnong and Yarra River Investigations via Hot Topics on www.epa.vic.gov.au