BRIEF FOR SERVICES

Houseboat Greywater Review - DRAFT

Background

Lake Eildon is the only inland waterway in Victoria where houseboats are permitted to operate; there are currently 720 houseboats licensed by Goulburn-Murray Water to operate on the lake.

Houseboat owners on Lake Eildon have been required to manage blackwater using storage tanks and GMW provided pump out facilities since regulations were introduced in 1971. Houseboats without a greywater system are currently discharging water from kitchens, showers, baths, basins, spas and laundry directly to the lake. There is general stakeholder agreement on the need to protect water quality in Lake Eildon.

The *Water (Lake Eildon Recreational Area) (Houseboats) Regulations 2013* (the Regulations) were introduced to replace the 2003 regulations by the Victorian Government on 12 June 2013. The Regulations require that from 1 July 2020 all houseboats must be fitted with an on-board greywater treatment system. At present around 45 houseboats have had greywater treatment systems installed.

Since the introduction of the Regulations, a group representing houseboat owners has lobbied the Department of Environment, Land, Water and Planning (DELWP) and the Minister for Water to seek exemption for existing vessels from compliance with the greywater requirements in the Regulations. The Minister has asked DELWP to investigate and provide recommendations.

There has been much concern throughout the houseboat community regarding compliance with the Regulations, specifically the requirement for the treatment of greywater and the installation of on-board greywater treatment systems. There are claims that compliance with the water quality discharge criteria specified by the Regulations and Australian Standard (AS 4995-2009: Greywater treatment systems for vessels operated on inland waters) (the Standard) is difficult to achieve and that the approved treatment systems available are unreliable, noisy and odorous. It is also claimed that the installation of greywater treatment systems is not physically possible for small houseboats or older ones.

The houseboat greywater review detailed by this brief aims to provide facts surrounding the claims stated above.

Scope of Services

The following aspects need to be assessed and findings provided:

1. Assessment of current regulations:
    - The achievability of water quality discharge criteria set in Part 3 of the Regulations (or Section 3.2 of the Standard) by systems currently available on the market
    - The quality of treated greywater discharged that meets the requirements of the Standard in comparison with background water quality of Lake Eildon (including at marinas)
    - The implications of “relaxing” the water quality discharge criteria set in the Standard
        - What are the parallels with other water quality related water discharge standards, codes and/or best management practices
    - Feasibility of the timeframe set by the Regulations for all houseboats to have a greywater treatment system installed, operational and compliant, for example, slipway and supplier/installer capacity and current utilisation of these services

2. Assessment of existing greywater treatment systems to answer the following:
    - Are all approved greywater treatment systems covered by warranty? If so, what are the durations of, and what are the conditions of warranty for greywater treatment systems? How do these warranties compare with other wastewater treatment systems (e.g. domestic wastewater package treatment plants)?
    - Is there data available regarding the reliability of installed approved systems?
        - How reliable are the approved systems in practice and what are the failings?
        - Should the reliability of approved available systems be found to be inadequate, are there other systems that may be more reliable but achieve a lesser standard of treatment?
    - Does a correctly installed and operated greywater treatment system cause noise and odour problems?
    - What, if any, are the size limitations for houseboats (particularly at the small end of the scale) that make installation of the existing systems infeasible?
    - Are there any other limitations in houseboat design that could make installation of the existing systems infeasible?

3. From the findings of the points detailed above, a discussion on possible regulatory changes (including exemptions) that could be implemented to assist achieving compliance with the Regulations is required, which includes an assessment of the possible water quality, public and environmental health implications.

4. Also required is the identification of points that could be used for the design and development of an ongoing monitoring and compliance program for greywater treatment systems with the water quality discharge criteria set in Part 3 of the Regulations (or Section 3.2 of the Standard).

Output
A report detailing the background and findings detailed in the Scope of Services.

Skills required
Knowledge of the factors that affect water quality and public and environmental health, particularly in relation to the chemistry of greywater.

Understanding of vessel design, stability and plumbing is desirable.

Timing
It is anticipated that the time required to complete the work detailed by this brief would be between two and three months from the time of the contract being awarded.

A draft report will be provided to workshop participants for review and comment prior to being presented to the Minister.

Quote requirements/Proposal details
Please provide a quote for the services detailed by this brief including:
- Relevant skills and experience
- Proposed method to investigate and address the points detailed within the Scope of Services
- Fixed price to complete the work

Project contacts
Project Officer, Department of Environment, Land, Water and Planning
Recreation and Land Strategy Officer, Goulburn Murray Water

Relevant documentation
- Water (Lake Eildon Recreational Area) (Houseboats) Regulations 2013
- Greywater Treatment Systems for Vessels Operated on Inland Waters – AS: 4995-2009

DRAFT

- Remaking of the Water (Lake Eildon Recreational Area) (Houseboat) Regulations 2013: Regulatory Impact Statement – RMCG, April 2013
- Final Outcomes Report – DELWP Lake Eildon Houseboat Greywater Workshop – 10 December 2015 (DM#4157813)
- Lake Eildon Houseboats Greywater Risk Assessment Final Report, ECOS 2006, (DM#1986963)

Other relevant information

GMW is able to provide water quality data for Lake Eildon sampled at the outlet tower/wall and at Bonnie Doon (reactive P, Total P, ammonia, NOx, TKN, Total N, Chlorophyll-a and phaeophytin, EC, pH, turbidity and Blue-green algae).

DRAFT