Mersey-Forth Water Management Review

Stakeholder Consultation Report

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Executive Summary

Hydro Tasmania's Water Management Review Program aims to proactively, and in consultation with stakeholders, assess current land and water activities in the Mersey-Forth catchments managed by Hydro Tasmania, in order to establish more sustainable management practices. The water management review process comprises four main stages: information review, stakeholder consultation, technical studies, and program development and implementation.

The Mersey-Forth Water Management Review (MF WMR) was initiated in 2011 and two of the four stages have been completed for the Mersey-Forth catchments. The information review stage culminated in the Mersey-Forth Water Management Review Report. The stakeholder consultation stage is reported in this document.

Stakeholder consultation was initiated through a survey sent out to 753 stakeholders who were identified as having a potential interest in the MF WMR process. The aim of the survey was to gain a greater understanding of stakeholder values and issues relating to the waterways influenced by hydropower operations and managed by Hydro Tasmania. Twenty one per cent of stakeholders, 153 people, responded to the survey.

Values and issues provided by stakeholders were analysed across the Mersey-Forth catchments and for individual waterways. The values that were consistently high for all waterways included fishing, aquatic ecosystems, land conservation, biodiversity, walking and camping. The issues consistently high for all waterways included rubbish management, water quality, flora and fauna, water level management, water flow and access to water. A number of management options to address identified issues were also suggested by stakeholders.

In addition to the survey Hydro Tasmania held meetings and discussions with over 60 key stakeholders with responsibilities for, or interests in, social, environmental, and economic activities in the Mersey-Forth catchments. The discussions further clarified issues that emerged from the survey.

The stakeholder consultation process has identified 14 proposed social and technical studies to address issues raised by stakeholders. The rationale and aims, the proposed collaborating parties, and benefits for each of the studies are presented in this report. The studies include the following:

1. Maintaining and Improving Recreational Management in the Mersey-Forth catchments;
2. Recreational Releases;
3. Dissemination of Flow and Water Level Information;
4. Water Level Management at Lake Gairdner;
5. Lake Barrington Erosion Study;
6. Sign Improvement;
7. Pests and Pathogens Management in the Mersey-Forth Catchments;
8. Mersey River Water Quality Assessment;
9. Mersey-Forth Aboriginal Heritage Study;

10. Land Rehabilitation at Lake Mackenzie;
11. Wilmot River Condition Assessment;
12. Acid Drainage Investigation;
13. Fish Migration in the Mersey-Forth Catchments; and
14. Mersey and Forth River Flood Evacuation Plans.

In Stage 3 of the water management review process these studies will investigate issues, and assess mitigation opportunities and management options to enable Hydro Tasmania, in collaboration with stakeholders, to achieve more sustainable management practices. Stakeholders will be kept informed of the progress on the technical and social studies through periodic newsletters and stakeholder meetings as required.

Hydro Tasmania would like to thank all the people and organisations who have contributed to the stakeholder consultation process.

Acknowledgements

Contributions to the stakeholder consultation process and this report were received from the following people:

Alison Howman, Simon Gartenstein, Helga Grant, Greg Carson, Sandra Hogue, Pat Garnham, Mike Bidwell, Graeme Fleming, Nicole Brown, Marie Egerrup, Caroline Whalley, Carolyn Maxwell, Chris Topham, Hasanthi Kingsley, Helen Locher, Gerard Flack, Dave Graddon, Greg Parsons, Andrew Scanlon and Nicole Sheriff (Hydro Tasmania).

Thank you to all the survey respondents and stakeholders, including government agencies, organisations, community groups and individuals, who have contributed to this report.

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1. Introduction

1.1 Mersey-Forth Water Management Review

Hydro Tasmania's Water Management Review (WMR) Program aims to proactively, and in consultation with stakeholders, assess the impact of current water and land management activities on social, environmental and economic conditions in the Mersey-Forth catchments managed by Hydro Tasmania. This is done in order to establish more sustainable practices. The WMR program was initiated in 1999 and is being undertaken on a catchment by catchment basis across the six major catchment groups in the hydro-electric generating system. The WMR process is designed to be consistent with State Government requirements for water management planning under the *Water Management Act 1999*.

The Mersey–Forth catchments, in central north western Tasmania (Figure 1.1), are the focus of the current WMR. The objectives of the review are to:

- Consult with stakeholders to identify values and issues relating to hydropower operation in the catchments;
- Systematically assess relevant environmental, social and multiple use issues;
- Evaluate cost effective mitigation and management measures to improve conditions; and
- Implement a program for improved sustainable management in the Mersey-Forth catchments, as appropriate and practicable.

The purpose of this document is to report on the Stakeholder Consultation stage of Hydro Tasmania's WMR for the Mersey-Forth catchments.

1.2 The Water Management Review Process

The Mersey-Forth Water Management Review (MF WMR) is a multi-year project which comprises four main stages as follows:

Stage 1 – Information Review: A review consolidating available information on social, environmental and operational activities and issues within the catchment. The MF WMR report (Hydro Tasmania 2011) provides a basis for stakeholder engagement.

Stage 2 – Stakeholder Consultation: Information, feedback and advice gained through this process are used to identify priority issues requiring further consideration. The results of this stage are presented in this Stakeholder Consultation Report and include an identification of proposed social and technical studies.

Stage 3 – Technical Studies: The commissioning of social and technical studies to investigate specific issues, or to assess the feasibility of mitigation opportunities and management options. The time taken to complete the studies depends on the complexity of the issues. Some studies require collaboration and participation with stakeholder organisations. Some solutions may not require significant investigation and may be implemented after discussion with stakeholders.

Stage 4 – Program Development and Implementation: The development of a program of commitments to improve management in the catchments. Informed by an understanding of stakeholder issues and the findings of the social and technical studies, management options proposed in Stages 2 and 3 will be prioritised according to benefits and costs, and actions identified for implementation. Commitments emanating from this stage will be consolidated into a Mersey-Forth Water Management Review Summary Report and will conclude the formal water management review process.

Throughout all stages of the MF WMR Hydro Tasmania will endeavour to provide feedback to stakeholders on the progress and status of the investigations.

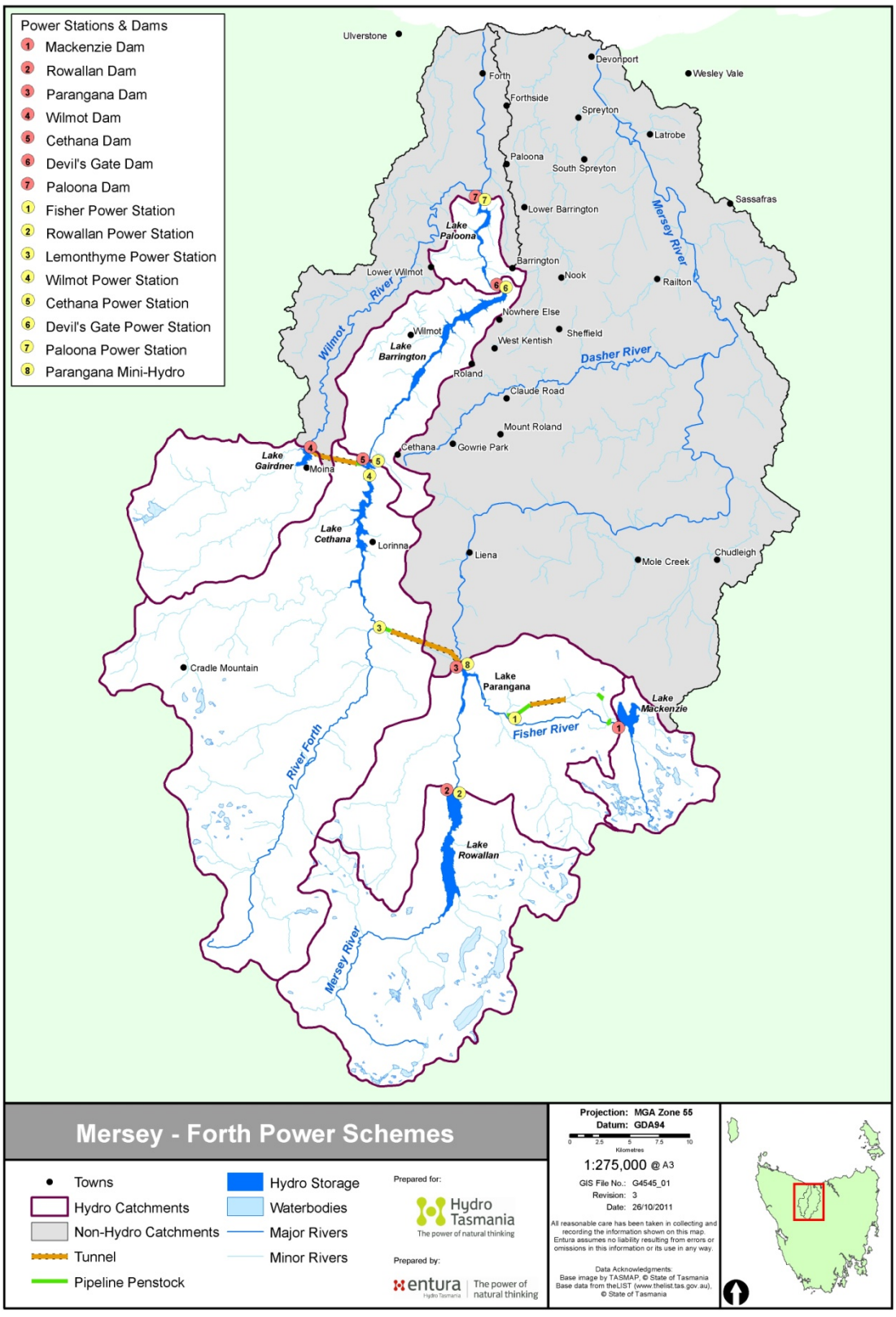


Figure 1.1: Hydro Tasmania's Mersey-Forth Power Schemes

1.3 Process for Stakeholder Consultation

This document reports on the process and outcomes of Stage 2 the Stakeholder Consultation process for the MF WMR. The primary components of the process, and where they are summarised in this report, are as follows:

- Mersey-Forth Water Management Review Report (Section 2.1);
- Stakeholder Identification (Section 2.2);
- Stakeholder Survey (Section 2.3);
- Project Launch (Section 2.4);
- Key Stakeholder Discussions (Section 2.5); and
- Stakeholder Communications (Section 2.6).

The primary objectives of the consultation phase were to identify stakeholder values and issues for the Mersey-Forth waterways, and to obtain a general indication from stakeholders on how these issues should be managed. Quantitative and qualitative information was collected through a stakeholder survey (Section 2.3), from personal meetings and telephone conversations with stakeholders (Sections 2.5 and 2.6).

1.4 Structure of this Report

In the introductory section of this report, the background and purpose of this document has been outlined, the overall WMR process and an overview of the consultation process presented. In Section 2, the consultation process is summarised. The survey results and outcomes from stakeholder discussions are reported in Section 3. In Section 4, the proposed technical studies are outlined, and in Section 5, contact information on some issues of concern identified in the stakeholder survey and from stakeholder discussions is provided. Section 6 summarises the report and identifies how Hydro Tasmania intends to move forward with the MF WMR.

2. The Consultation Process

2.1 Mersey-Forth Water Management Review Report

The main component of the information review stage was the production of the MF WMR report (Hydro Tasmania 2011). The report was prepared to facilitate engagement with stakeholders. The report outlined the process of the review program and provided information on the catchments. The report included:

- A brief overview of the environmental and social characteristics of the Mersey-Forth catchments;
- Data and information on Hydro Tasmania's assets and infrastructure, system operations, electricity yield and climate change;
- Data summaries of water quality, biological and geomorphological aspects of lakes and rivers;
- The multiple uses of Hydro Tasmania's land assets and waterways, and Aboriginal and cultural heritage aspects; and
- Identification of known impacts and issues associated with the waterways.

The report was published in November 2011. It is available in hard copy upon request and on Hydro Tasmania's website at www.hydro.com.au/MFWMR/.

2.2 Stakeholder Identification

A database of stakeholders was compiled. Stakeholders that were identified as having a potential interest in the MF WMR process included:

- Riparian land owners on waterways influenced by Hydro Tasmania in the Mersey-Forth catchments. Land owners were selected using a 100metre (m) buffer from Hydro Tasmania lakes (Mackenzie, Rowallan, Cethana, Parangana, Barrington, Paloona and Gairdner), a 200 m buffer from rivers (Fisher, Forth, Mersey and Wilmot) and a 100 m buffer from town boundaries (Alma, Barrington, Forth, Kentish Park, Lorinna and Moina). Additional properties were selected if they were bordering, or close to, the abovementioned selection criteria;
- Local Councils;
- State Government departments;
- Landcare/conservation groups;
- Recreational groups;
- Agricultural/irrigation groups;
- Schools; and
- Commercial/industrial businesses.

The initial identification produced 753 potential stakeholders. Following the survey mail-out (Section 2.3) and project launch (Section 2.4) additional stakeholders were identified and added to the database.

2.3 Stakeholder Survey

On 9 November 2011, 753 stakeholders were sent a survey (Appendix A) and an introductory letter summarising the MF WMR process. The survey was also made available on Hydro Tasmania's website between 10 November and 23 December 2011.

The aim of the survey was to gain a greater understanding of community values and issues relating to the waterways that are influenced by hydropower operations.

Public notices advising that the survey was open were placed in the *Advocate* and *Mercury* newspapers. More detailed information was also sent to the *Advocate* and the *Examiner* to include in the "Coast to Coast" and "Meander Valley" sections of these newspapers. The advertisements were intended to reach interested parties who were not included in the stakeholder list.

2.4 Project Launch

The project was launched by the Hon. Bryan Green, State Minister for Energy and Resources, on 11 November 2011 in Sheffield, Tasmania. The launch followed the release of the Mersey-Forth Water Management Review Report (Hydro Tasmania 2011) and survey mail-out. Representatives from stakeholder organisations including local Councils, State Government departments, agricultural, community and recreation groups, and Hydro Tasmania personnel attended the launch.

2.5 Key Stakeholder Discussions

One-on-one meetings, and telephone conversations, were held with over 60 stakeholders with the aim of identifying and discussing issues in more detail and to present the preliminary findings of the survey. The key stakeholders included Government agencies, Councils, organisations, community groups and schools with responsibilities for, or interest in, social, environmental and economic activities in the Mersey-Forth catchments. Individuals who had identified in the survey that they wished to be involved in the review process were also contacted. The key stakeholders consulted in the review process are listed in Appendix B.

2.6 Stakeholder Communications

Hydro Tasmania intends to keep stakeholders informed of the progress of the MF WMR via newsletters and stakeholder communications.

The first Mersey-Forth Water Management Review Newsletter was issued in April 2012 (Appendix C). The newsletter provides information on the project launch, the survey results and the way forward.

Further information is available on the Hydro Tasmania website at:
http://www.hydro.com.au/environment/water-management-reviews/mersey-forth

3. Results of the Stakeholder Survey and Key Stakeholder Feedback

In this section, the results from the stakeholder survey are presented as well as feedback received from key stakeholders in meetings or telephone conversations. Values, issues and management options to address issues, as provided by survey respondents and key stakeholders (henceforth all called stakeholders), have been identified and summarised catchment wide for the Mersey-Forth catchments (Section 3.2) and in detail for each specific waterway (Section 3.3).

Where possible the survey results have been analysed quantitatively, however, the answers to open ended questions have been assessed qualitatively. Issues discussed with key stakeholders are provided to add context beyond that identified in the survey.

It should be noted that, as each respondent to the survey had the opportunity to tick a number of responses to some questions, the total number of responses reported was higher than the number of respondents. For example, a single respondent may have selected a value or an issue for up to 11 waterways.

Management options suggested by stakeholders, to address issues across the whole catchment, are presented in Section 3.2.2. Only those suggestions pertinent to Hydro Tasmania's operations, or within Hydro Tasmania's ability to address or influence, are provided in this report

3.1 Stakeholder Involvement in the Mersey-Forth Catchments as obtained through the Survey

A total of 153 survey responses (21% of the 753 mail-outs) were received. From the 153 responses, 43 were completed online and 110 were completed and returned via the mail. Analysis of survey data was undertaken using the Survey Monkey database.

The survey asked stakeholders to indicate their main involvement or interest (or that of their organisation) in the Mersey-Forth catchments (Appendix A, Question 1). The results are shown in Figure 3.1. Landowners and those with recreation, sport, cultural and spiritual involvement were present in the highest numbers (109 and 88, respectively) whereas mining (6) and manufacturing (5) were the lowest.

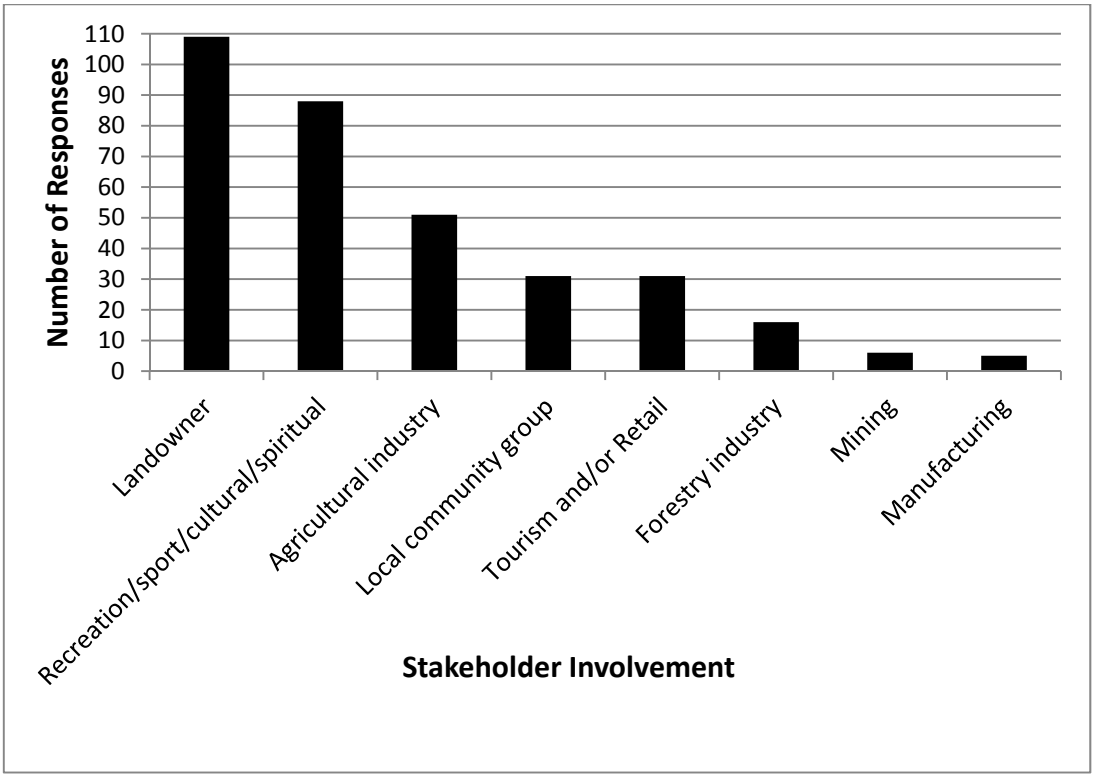


Figure 3.1: Surveyed stakeholder involvement or interest in the Mersey-Forth catchments

3.2 Catchment Wide Analysis

This section presents the values and issues selected by stakeholders that are generic across the waterways of the Mersey-Forth catchments. Management options suggested by stakeholders, to address issues across the whole catchment, are presented in Section 3.2.2. Only those suggestions pertinent to Hydro Tasmania's operations, or within Hydro Tasmania's ability to address or influence, are provided in this report.

Comments relating to values and issues, and management options, for specific waterways are covered in Section 3.3.

The total number of survey responses to values and issues for each waterway across the Mersey-Forth catchments are shown in Figure 3.2. The Mersey River received the highest number of responses for values and issues (581 values and 341 issues). Lake Barrington (443 values and 184 issues) and the Forth River (389 values and 211 issues) also received a high number of responses. The waterways with the lowest number of responses to values and issues were Lake Parangana (208 values and 87 issues) and the Fisher River (199 values and 90 issues).

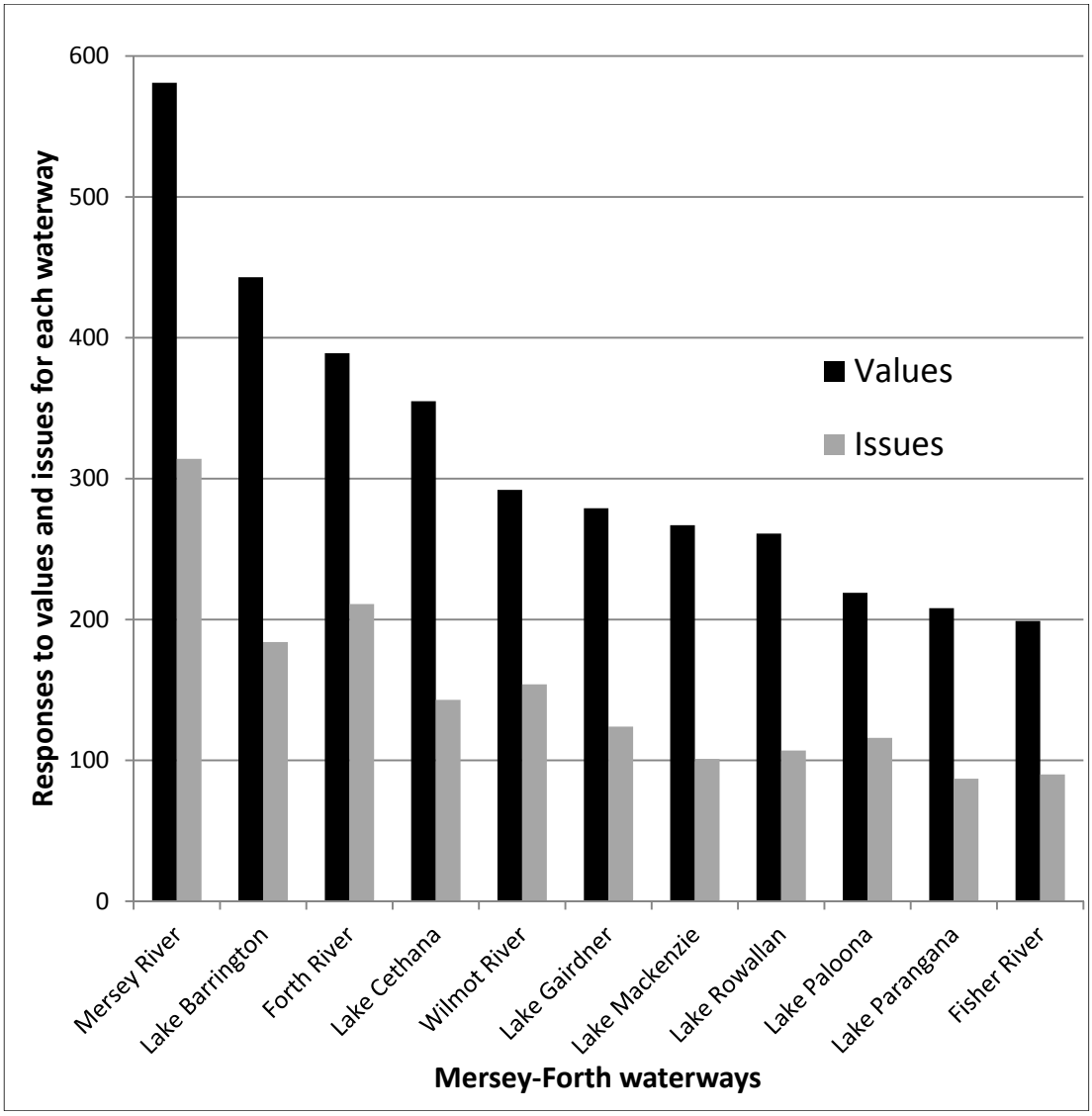


Figure 3.2 Total number of survey responses to values and issues for Mersey-Forth waterways

3.2.1 Catchment Wide Waterway Values

Stakeholders were asked to identify what they valued about the waterways, from a range of values (Appendix A, Question 2).

From among the values selected by stakeholders across the Mersey-Forth catchments, fishing received the highest number of responses (396) followed by aquatic ecosystems (272), whereas commercial/industrial water use (70) and irrigation (66) had the lowest. Other values that received high responses were land conservation (261) and biodiversity (257) (Figure 3.3). The total number of respondents who selected each value is also shown in Figure 3.3.

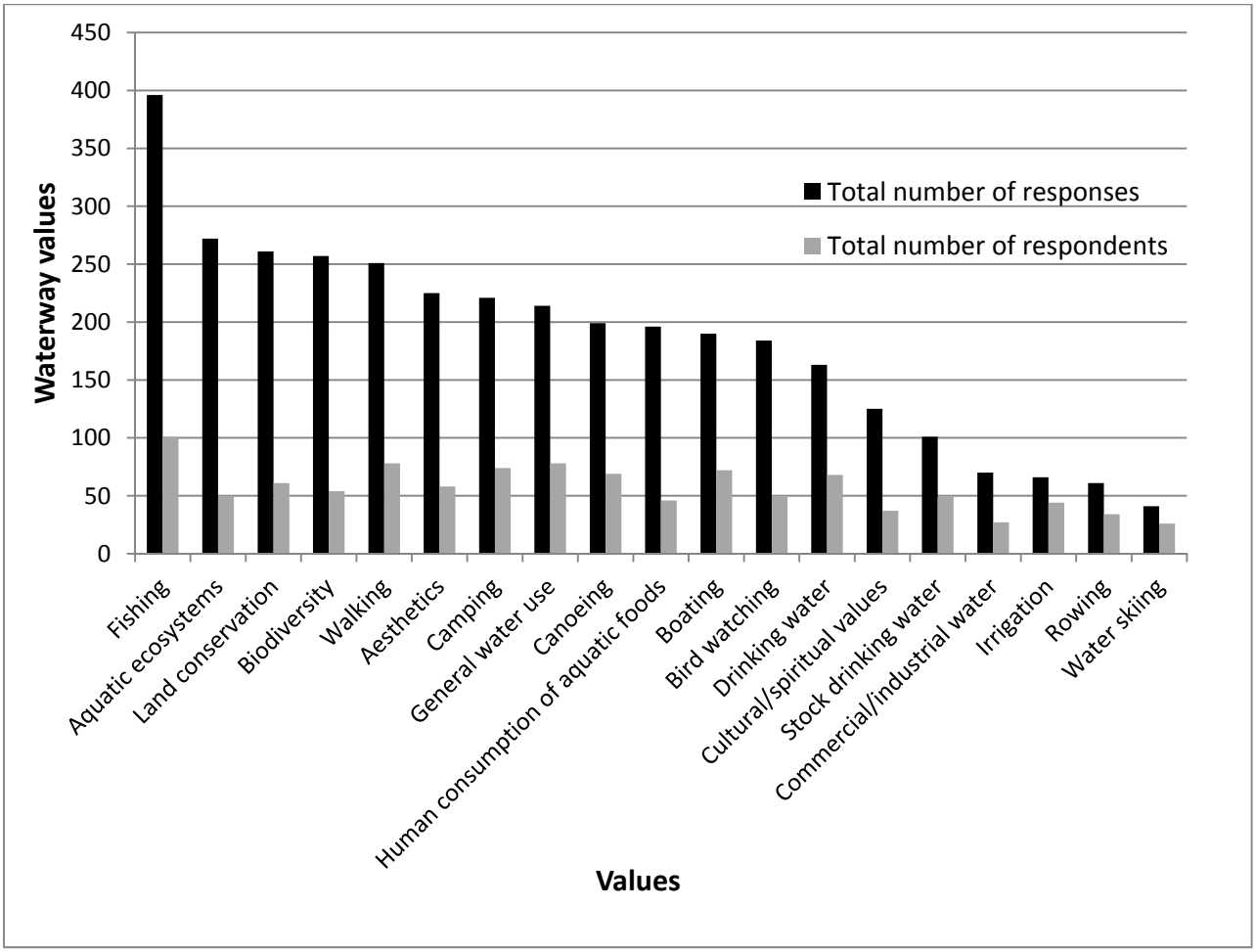


Figure 3.3 Total number of survey responses and survey respondents on values across the Mersey-Forth catchments for waterways

3.2.2 Catchment Wide Issues and Management Options

Stakeholders were asked to identify issues, from a range of issues listed in the survey (Appendix A, Question 3), regarding waterways in the Mersey-Forth catchments. Stakeholders were also given the opportunity to elaborate on how they considered the issues could be addressed or better managed (Appendix A, Question 4).

Of the issues identified by stakeholders across the Mersey-Forth catchments, water quality and rubbish management received the highest number of responses (214 and 208, respectively) whereas safety (54) and signage (39) had the lowest. Other issues that had high number of responses were flora and fauna (194), water level management (190) and access to water (182) (Figure 3.4) also shows the total number of respondents who selected each issue.

Information elaborating on catchment wide issues raised by stakeholders, and their suggested management options, are discussed in more detail below.

Please note that issues and management options for specific waterways in the catchments are presented in Section 3.3.

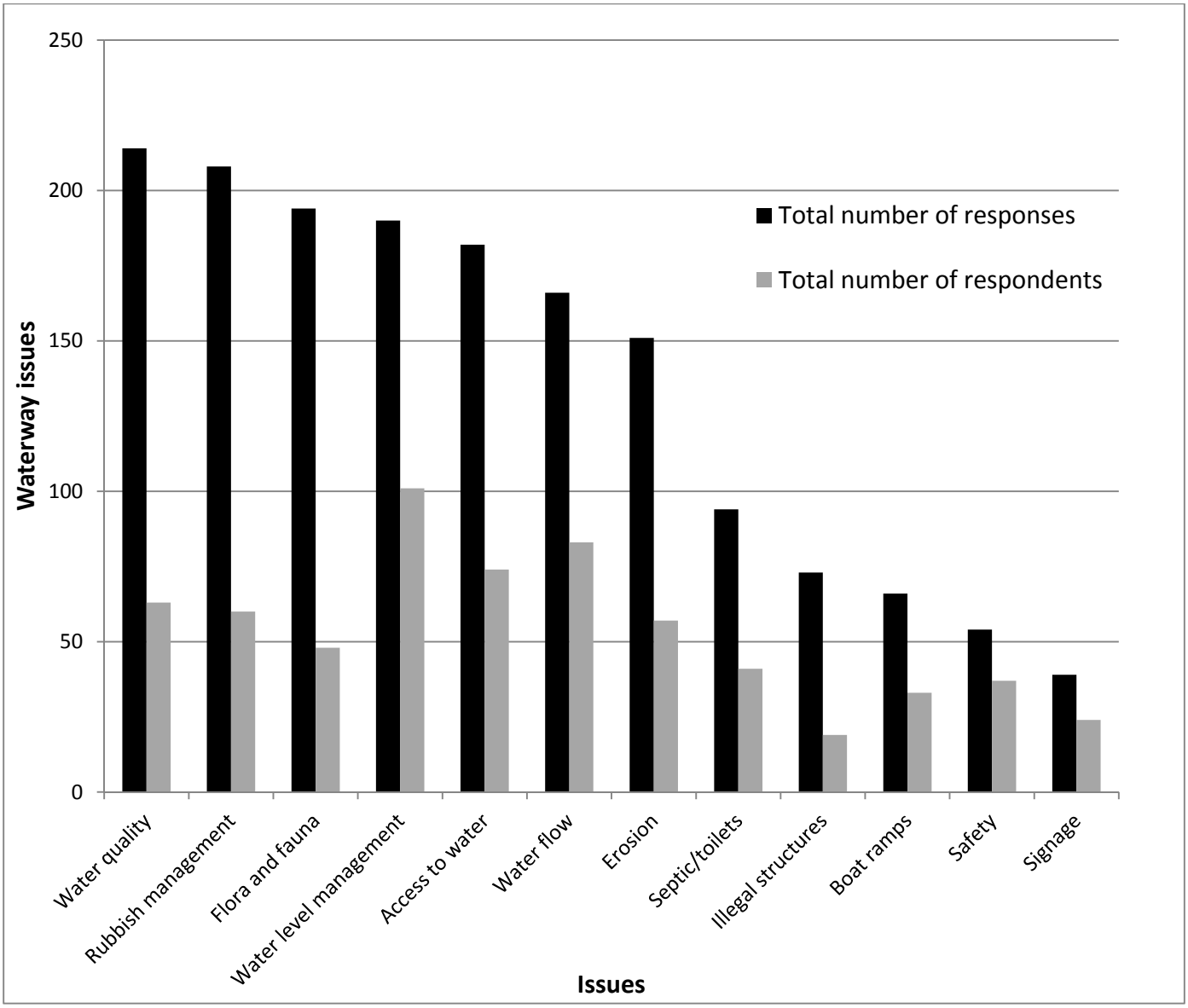


Figure 3.4 Total number of survey responses and survey respondents on issues across the Mersey-Forth catchments for waterways

3.2.2.1 Water Quality

Water quality was identified as a significant issue of concern in all waterways of the Mersey-Forth catchments. Stakeholders consider that there is no overall catchment management approach, there are limited resources, and there is little will to address water quality issues.

Concerns raised by stakeholders include:

- Impacts of forestry, industrial and agricultural chemicals on water quality;
- Elevated turbidity levels due to forestry operations;
- Transfer of contaminated water which could affect quality of irrigation water for cropping and cross-catchment transfer of water;
- Impacts to water quality from septic tank leakage, faecal waste, stock access/grazing and dumping of dead livestock; and

- Stakeholders have highlighted deteriorating conditions in the lower Mersey River as having negative consequences on recreational and tourist activities and on the environment (see Section 3.3.8 for more detail).

Water quality issues are regulated in terms of the *Environmental Management and Pollution Control Act 1994 (EMPCA).* The Environment Protection Authority (EPA) regulates developments and activities that have the potential to impact on environmental quality. The EPA regulates Level 2 activities as defined under Schedule 2 of EMPCA and the Councils regulate Level 1 activities. The EPA and Councils investigate pollution incidences and undertake monitoring as appropriate.

The Water Authorities have a long term plan to address problems of ingress and infiltration and poor storm water systems and are working in collaboration with the Councils and the EPA to address water quality issues.

Options proposed by stakeholders for the improved management of water quality are:

- More extensive water quality monitoring and analysis of results;
- Education/awareness on the importance of good water quality;
- Minimising the use of boats and banning quad bikes, jet skis and chainsaws would reduce pollution levels in the water;
- Greater regulation of septics and camping/recreational areas to prevent pollution of waterways; and
- Implementation of a clean water plan which would take into consideration impacts from the mining industry i.e. address issues such as run-off from deep mining activities.

3.2.2.2 Rubbish Management

Rubbish management was identified as a significant public concern in all of the waterways of the Mersey-Forth catchments. Some stakeholders consider rubbish as being “normal” at all recreational sites. However, clubs at established recreational hubs have proactively addressed their user requirements and have facilities and mechanisms to deal with rubbish.

It is evident that large land owners such as the Councils, Parks and Wildlife Service, Forestry Tasmania and Hydro Tasmania deal with rubbish management individually with no collaborative management framework in place.

Aspects raised by stakeholders included the following:

- Presence of litter at camping and fishing sites, and along roads;
- Where bins are supplied they are insufficient to cope with the demand and rubbish is not taken away often enough; and
- There is no signage in place indicating where rubbish should be taken.

A collaborative effort to raise awareness in dealing with black and grey water, and general rubbish, was among the management options proposed by stakeholders. In addition stakeholders proposed the following solutions:

- Education/awareness on the importance of self-collection and disposal of rubbish to avoid environmental, social and aesthetic impacts;

- Signage to encourage users to collect their own waste; and
- Provision of rubbish bins in areas used for recreational activities.

3.2.2.3 Fauna and Flora

Fauna and flora was also identified as an issue of concern. Concerns raised by stakeholders were:

- Impact of fluctuating water levels, dewatering and low river flows on flora and fauna (i.e. fish deaths and stranding), and impact on frog breeding cycles;
- Weed infestations along riparian zones of rivers and lakes;
- Lack of conservation of flora and fauna;
- Introduction of exotic plants, weeds and animal species;
- Introduction and/or spread of aquatic pests and diseases (i.e. didymo (rock snot), chytrid (frog disease) and phytophthora (root rot disease)); and
- Barriers impeding fish migrating upstream.

Proposed management options raised by stakeholders included:

- Implementing more natural river flows to improve waterway health (i.e. increased habitat availability and improved fish stocks);
- Increased weed management along river and lakes;
- Better collaborative management of introduced species in riparian zones;
- More extensive waterway conservation; and
- Revegetation of native flora where necessary.

3.2.2.4 Water Level Management of Lakes

The main issues raised by stakeholders regarding water level management were:

- Impacts of dewatering and rapid drawdowns on aesthetics and biodiversity (i.e. die-back of vegetation along shorelines due to low lake levels); and
- Difficulty in launching boats at low lake levels.

Water level management options proposed by stakeholders were both for recreational and environmental purposes. These included recommendations to:

- Provide notifications to stakeholders at least 2-3 weeks prior to when water levels will rise and fall, for example by automatic email/text messages. Ensure that the notification list is updated annually;
- Maintain higher lake levels to improve ability to launch boats;
- Factor potential flora and fauna impacts into storage operating rules;
- Avoid rapid drawdowns that may impact on the environmental values of lakes; and
- Provide more information about dam safety maintenance and planning.

3.2.2.5 Access to Water and Boat Ramps

Difficulties in accessing water and launching boats, due to inadequate boat ramp facilities especially at low lake levels, were identified as issues of concern.

It was recommended that boat ramp facilities on the lakes be upgraded throughout the Mersey-Forth catchments.

3.2.2.6 Water Flow in Rivers

Water flow issues raised by stakeholders are associated predominantly with impacts on recreational users and to a lesser extent environmental concerns.

The rivers of the Mersey-Forth catchments are prime canoeing locations and the peak body for canoeing, Canoe Tasmania, advice that there are a large number of users and they are increasing. Currently canoeists request and obtain water releases whenever Hydro Tasmania can accommodate them. The process is considered by some stakeholders to be enormously inefficient. There is an absence of notifications and communication of flow releases. Individuals can obtain water releases at the expense of groups, and the benefit of releases are often not utilised to the extent that they could be.

River Rescue Courses are a key part of Canoe Tasmania's activities. Four or five courses are run every year. The dates of these events are set according to water release requests that have been confirmed by Hydro Tasmania. However, there have been occasions when these releases have been cancelled and the training venue has had to change. It was raised as a concern that there is no guarantee of water releases for recreational events.

Canoe Tasmania also has a concern that some users do not have sufficient training or qualifications in safe practice. They would like to see if a way could be found to address this concern. In addition, there is a general concern that people did not want to see recreational use of the waterways becoming more restrictive.

Other issues identified by stakeholders with regards to water flow were as follows:

- Inadequate volumes of water flow for irrigation requirements and to maintain healthy waterways (i.e. maintain environmental values and good water quality);
- Low flows during summer periods; and
- Reduced stream flow as a result of forestry plantations.

Management options proposed by stakeholders to address issues associated with water flows in rivers for recreational purposes included the following:

- Better management and communication of information on flow releases to maximise utility for recreational events and other users (i.e. on-line flow information, scheduling, earlier notifications about cancellations and safety information);
- Provision of higher flows to facilitate recreational events (i.e. canoeing and rafting, especially during summer);
- Pre-booked and agreed water releases should be honoured unless serious downstream flooding cannot be avoided;

- Coordinating water requests would eliminate current inefficiencies in ordering water and would assist in maximising the benefit to users. It is proposed that users meet on an annual basis to discuss how water release requests could be prioritised; and
- Communication with Hydro Tasmania is crucial and the canoeists phone Hydro Tasmania every time they go onto the water and when they return. This is considered to be a very good safety mechanism.

Management options proposed by stakeholders to address environmental and flood related issues included:

- Increased and/or implementation of more natural flows to improve waterway health (i.e. to improve fish stocks and habitat availability);
- Provision of educational information to stakeholders about the benefits of water flow for downstream users and to maintain healthy waterways; and
- Better flood mitigation and provision of information that may assist in reducing the risk caused by flooding.

3.2.2.7 Erosion

Stakeholders suggested that erosion may be caused by high river flows and/or forestry activities.

They recommended that regeneration of eroded and susceptible areas, using natives and landscaping, be undertaken.

3.2.2.8 Septics/Toilets

The most common concern relating to septics/toilets was insufficient toilet facilities resulting in toilet pollution and faecal waste being left behind at campsites and along shorelines of lakes and rivers.

The recommendation made by stakeholders was to upgrade or install toilets at a number of sites; and prevent leakage from septics that may impact water quality and aesthetics.

3.2.2.9 Safety and Signage

Lack of enforcement of rules and regulations is considered to be an issue on the lakes. With concerns ranging from people water skiing at high speed and harassment of canoeists on Lake Parangana (see Section 3.3.4.2), to vandalism and alleged vigilantes at Lake Barrington (see Section 3.3.6.2), it is evident that the popularity and multiple use nature of the lakes can lead to conflict between users.

There were contrary perspectives regarding Marine and Safety Tasmania (MAST). Some stakeholders considered that MAST's presence was good while others stated that it was insufficient.

In addition, other safety issues identified by stakeholders were:

- Boat ramps can be a safety hazard especially when launching during low lake levels;
- Lack of safety signage for waterways and roads;

- Lack of signage identifying who to contact if there is trouble, and letting people know what they can and cannot do was highlighted; and
- Enforcement of stated regulations would be required if signage was to be effective.

Requesting police presence, to deal with vandals and law offenders, was mentioned a number of times. Stakeholders stated that police presence over major recreational weekends would assist greatly. Some stakeholders questioned whether some regular users could be given authorisation to undertake an enforcement role. An easier system for reporting issues to MAST was also identified as a possible solution.

The desirability for more distinctive signage for safety (i.e. clearly showing water depth and submerged dangers) was identified. Provision of new signs displaying a range of information including: names of rivers, dangerous road conditions, locations of camping sites, rubbish management facilities, interpretation of the hydro generating system, and a greater number of scenic signs was recommended.

3.2.2.10 Aboriginal Heritage

It was identified that the Mersey-Forth catchment area is highly significant to the Aboriginal people of Tasmania. Aboriginal artefacts between 38000 to 48000 years old have been found in the Forth River valley. The Mersey River and tributaries were resource rich and a focal point of activity. There are numerous rock shelters, caves and artefacts of high Aboriginal heritage value around Lake Rowallan, Lake Mackenzie and Lake Cethana.

It is recognised that there is currently little known in Australia about the impact of dam operations on Aboriginal heritage sites. Waterlogging, swashing, the impact of currents affecting material, and ice breaking up the ground and moving material are all potential impacts. No studies have been undertaken in Tasmania regarding the impact of inundation.

It was made clear that it is important to identify potential Aboriginal heritage issues and to know where and what the heritage sites and values are in order to manage them properly. Currently under the *Aboriginal Relics Act 1975*, ignorance of heritage values is a defence, which is why it is important to increase knowledge about Aboriginal heritage so that people cannot claim that they were ignorant of the sites or the values.

A more strategic and regional approach to determining values and management is required and the Mersey-Forth catchment is considered to be ideal for trialling such an approach. Looking at a range of values applying a regional landscape assessment approach and then using these assessments to develop management plans was discussed. Stakeholders indicated that they would be very keen to work cooperatively with Hydro Tasmania in undertaking a regional assessment. Collaboration in such an assessment could facilitate training of land management coordinators.

3.2.2.11 Recreation and Multiple Use

A number of key stakeholders recognise the need for robust processes to effectively manage the waterways and associated recreation. Such processes would allow for early discussion and identification of potential needs and would initiate the development of an appropriate governance model. Principles for making decisions and associated criteria are required. The need for clarity on rights, roles and responsibilities for actions was identified. It was considered that the Mersey-Forth WMR could be a catalyst to develop these processes even

though Hydro Tasmania is not responsible for all aspects. Stakeholders welcomed better cooperation and the potential for working with new opportunities. All would like to see relationships fostered between all users.

An expansion of the mandate of the current Lake Barrington Recreational Committee was discussed and agreed by the Committee. In order to develop a catchment approach to managing recreational issues the Lake Barrington Recreational Management Committee has considered extending their terms of reference to cover recreational management across the catchment. This will significantly contribute to the management of recreation in the Mersey-Forth catchments and in North West Tasmania. See Section 3.3.6.2 for further detail on the Lake Barrington Recreational Committee.

Hydro Tasmania was asked what its policy was regarding the establishment of recreational facilities on its land. The development of Hydro Tasmania's Recreational Management Framework (Appendix D) provides the principles and direction for Hydro Tasmania to move forward in facilitating recreation on its land and waterways (Inspiring Place 2012).

The introduction of extreme sports is a potential concern for land and water managers. In north western Tasmania it has been identified that there are opportunities for new businesses and new activities and extreme sports is considered to be a point of advantage. Stakeholders consider that there is a policy and process vacuum as to how to deal with new sports and currently responses are "scattergun". All land and water managers have their own rules and different processes. Protocols are required for people to use when they come into a new area.

Other issues raised by stakeholders included:

- Illegal fishing, logging and hunting;
- Impacts of motorbikes and 4wds tearing up bushland; and
- Tourism impacts.

Stakeholders proposed the following management options:

- Better collaboration between land managers, government agencies and the community to address the issues presented;
- A management plan is needed for damage prevention, maintenance and restoration of values across the Mersey-Forth catchments from the headwaters to the sea;
- Greater staff surveillance to ensure the community are obeying the law; and
- More extensive involvement of community based river management groups.

3.3 Waterway Specific Values, Issues and Management Options

This section presents the values and issues identified by stakeholders that are specific to each individual waterway. Management options suggested by stakeholders as to how they thought the issues could be addressed or better managed are detailed for each waterway. Only those suggestions pertinent to Hydro Tasmania's operations, or within Hydro Tasmania's ability to address or influence, are provided.

Comments relating to issues and management options that have been addressed under the catchment wide analysis of the Mersey-Forth catchment in Section 3.2.2 are not repeated here unless of specific waterway concern.

The graphs show the total number of survey responses given for each value or issue. As each person may have ticked the same value or issue for several waterways, the number of respondents is lower than the total number of responses.

3.3.1 Lake Mackenzie

3.3.1.1 Lake Mackenzie Values

Of the values selected by stakeholders for Lake Mackenzie, fishing and walking received the highest number of responses (33 and 26, respectively), while rowing (2), water skiing (2) and irrigation (1) received the lowest. Other values that were high included camping (22), land conservation (21) and aquatic ecosystems (21) (Figure 3.5).

3.3.1.2 Lake Mackenzie Issues and Management Options

Of the issues selected by stakeholders for Lake Mackenzie, rubbish management, flora and fauna, water quality and water level management had the highest number of responses (17, 13, 13 and 13, respectively) whereas signage (2) and safety (2) had the lowest. Other issues that received a high number of responses were access to water (11), erosion (8) and septic/toilets (7) (Figure 3.6).

Boat Ramps, Water Level Management, Safety and Facilities

It was highlighted that the boat ramp can be hazardous and it is difficult to launch boats at low lake levels. It was recommended by stakeholders that public toilets be installed at the lake.

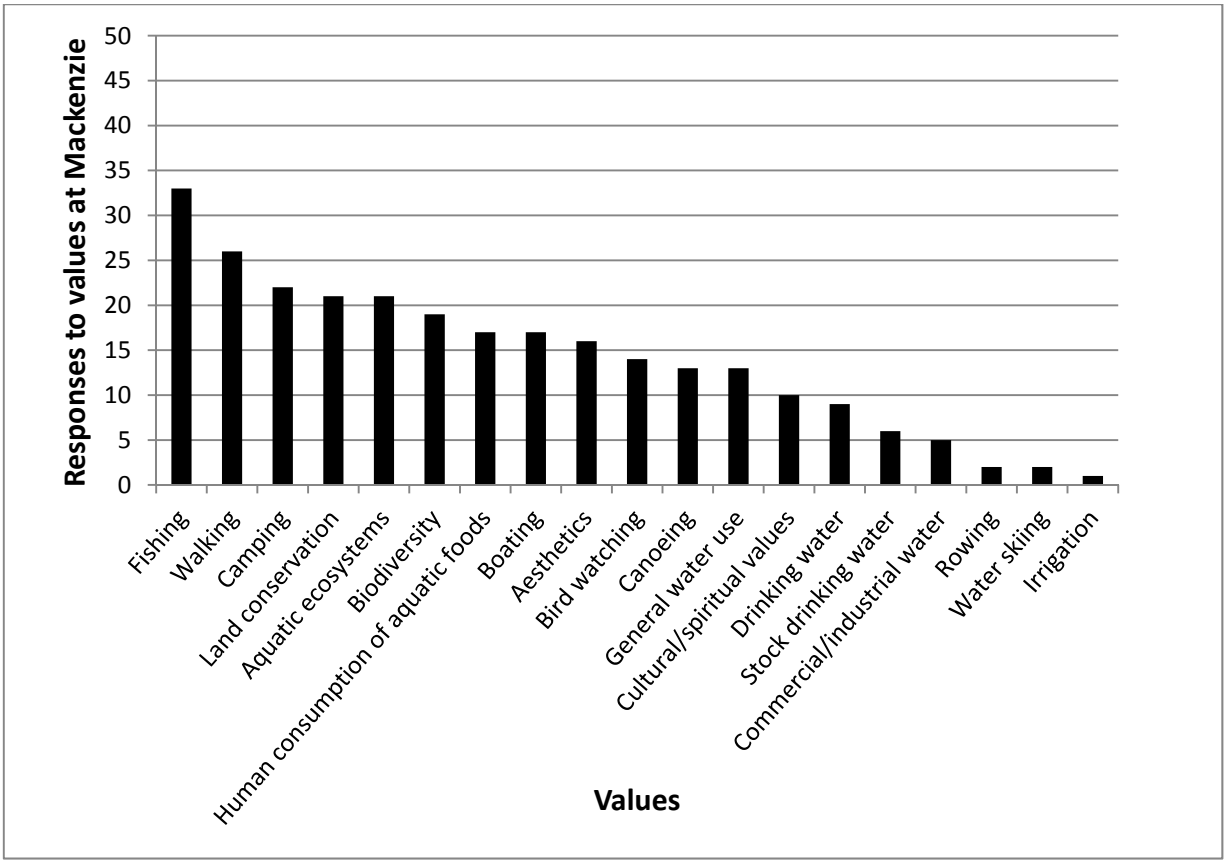


Figure 3.5 Responses to values for Lake Mackenzie

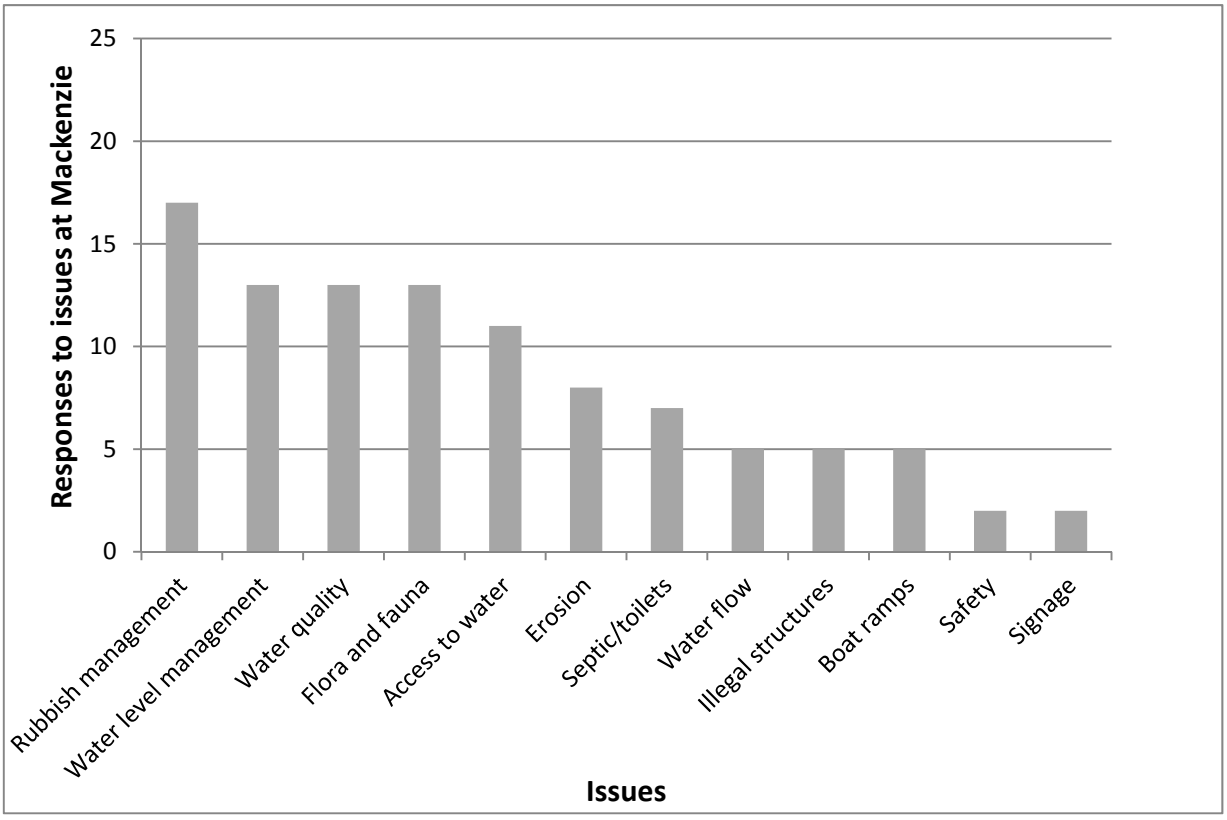


Figure 3.6 Responses to issues for Lake Mackenzie

3.3.2 Lake Rowallan

3.3.2.1 Lake Rowallan Values

From the values selected by stakeholders for Lake Rowallan, fishing and camping (32 and 23, respectively) received the highest focus whereas rowing and water skiing had the lowest number of responses (2 and 1, respectively). Other values that received high responses were boating (22), aquatic ecosystems (22) and land conservation (21) (Figure 3.7).

3.3.2.2 Lake Rowallan Issues and Management Options

Of the issues selected by stakeholders for Lake Rowallan, rubbish management and flora and fauna had the highest number of responses (22 and 14, respectively) whereas signage (1) and safety (1) had the lowest. Other issues that received a high number of responses were water quality (13), water level management (12) and access to water (11) (Figure 3.8).

Stakeholders elaborated on some of the issues identified and suggested management options for Lake Rowallan:

Rubbish Management

- Rubbish bins have been observed to be overflowing with piles of rubbish and are not emptied often enough.

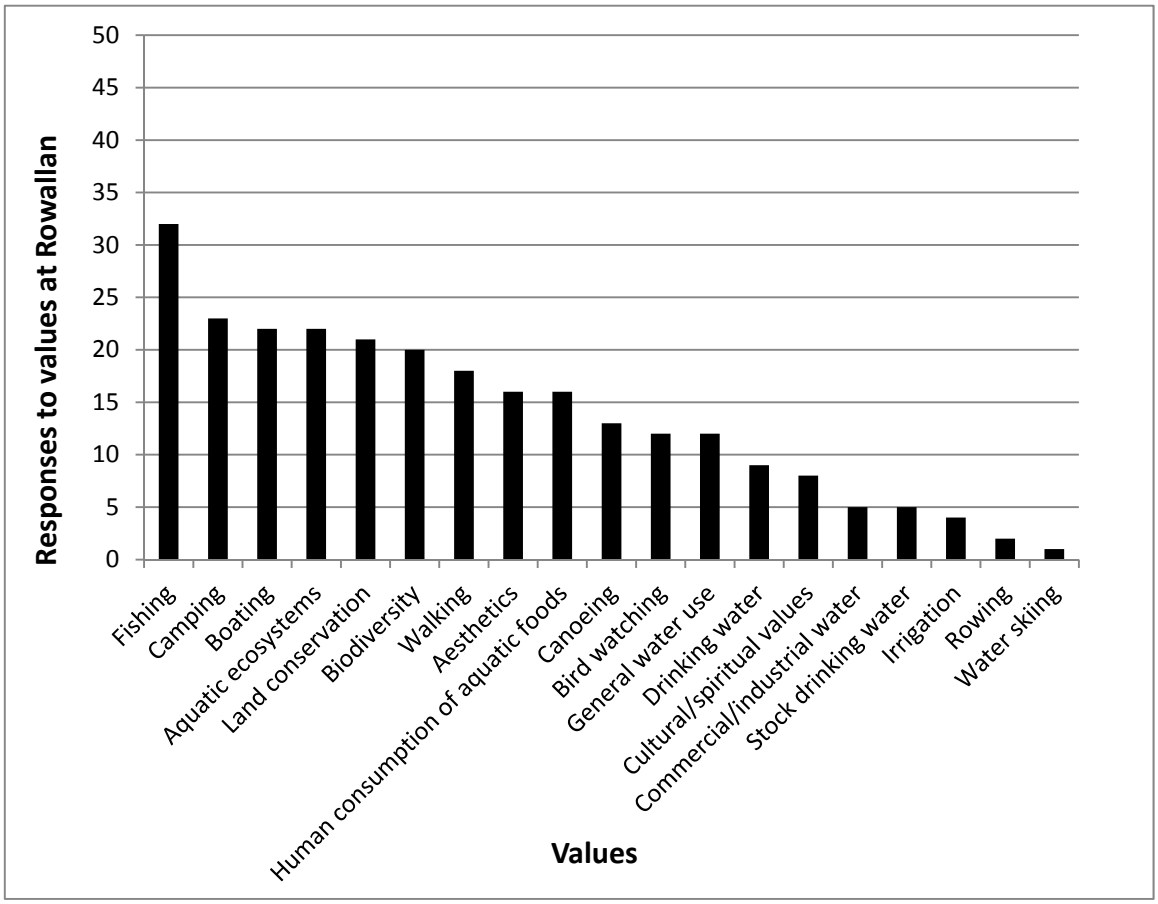


Figure 3.7 Responses to values for Lake Rowallan

Water Level Management

- Cancellation of pre-booked water for recreational events, previously requested flows, have been cancelled as close as a day before an event which puts great pressure on the canoe clubs; and
- Water level management affects availability of flow releases into the Mersey River for canoeing events (see Section 3.2.2.6).

Boat Ramps and Safety

The boating infrastructure at Lake Rowallan was identified as being basic and restricted. Launching at low lake levels can be difficult and hazardous. It was proposed that the boat ramp be extended and upgraded with concrete fabrication which would alleviate the safety risk.

Septic/Toilets

As a headwater storage Rowallan should be considered for public toilets in order to keep waterways downstream clean from faecal waste pollution.

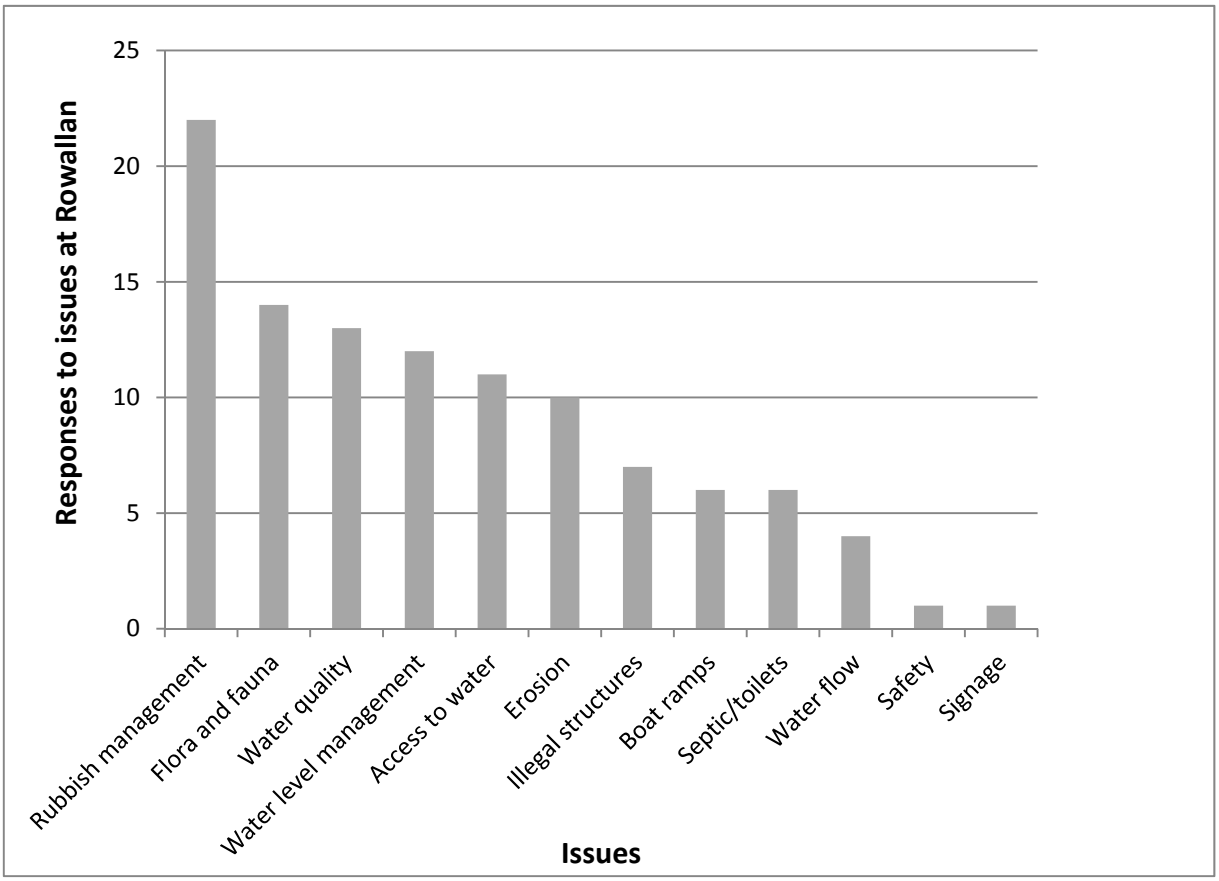


Figure 3.8 Responses to issues for Lake Rowallan

3.3.3 Lake Gairdner

3.3.3.1 Lake Gairdner Values

Of the values selected by stakeholders for Lake Gairdner, fishing and camping had the highest number of responses (31 and 24, respectively) whereas rowing (2), irrigation (2) and water skiing (1) had the lowest number of responses. Other values that received a high number of responses were walking (23), aesthetics (21), aquatic ecosystems (21), and canoeing (21) (Figure 3.9).

3.3.3.2 Lake Gairdner Issues and Management Options

Of the issues selected by stakeholders for Lake Gairdner, water level management and rubbish management had the highest number of responses (22 and 19, respectively) whereas signage (4) and safety (3) had the lowest. Other issues that received high responses were flora and fauna (14) and water quality (13) (Figure 3.10).

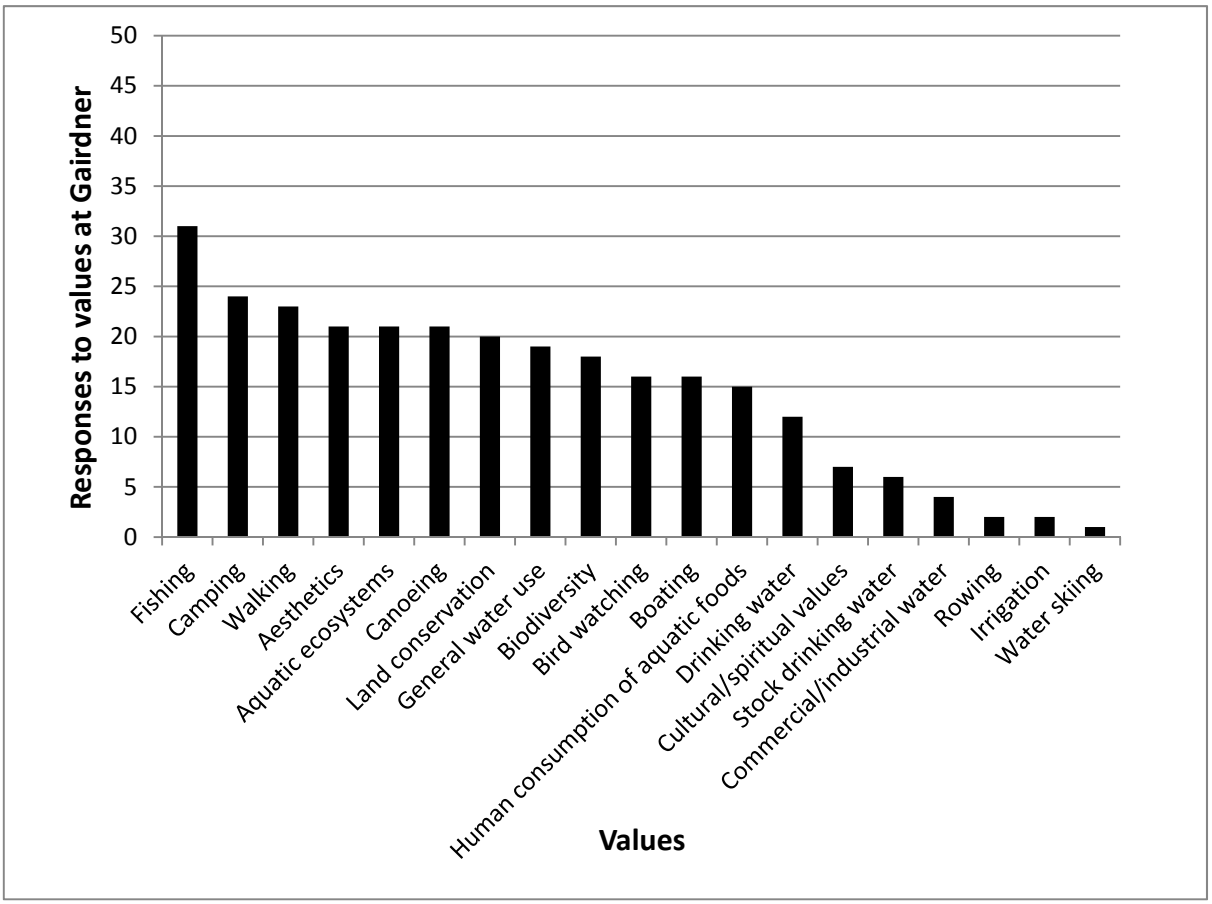


Figure 3.9 Responses to values for Lake Gairdner

Stakeholders provided more detail on some of the issues and management options identified for Lake Gairdner:

Water Level Management, Access to Water, Boat Ramps, Safety and Signage

- The water level is too low much of the time, particularly during holiday periods and at the start of the fishing season, which makes it difficult or impossible to access the water for fishing and launching boats;
- Management of lake levels appears to have changed in recent years. The lake used to be kept three quarters full but is now drawn down much further;
- When the lake is drawn down at the beginning of summer there is no opportunity for it to refill until the following winter and the lake becomes a dust bowl;
- Water is too low when fishing championships are conducted;
- Due to the extensive mud flats and inadequate boat ramp lake access is restricted, and is impossible at low lake levels;
- At low lake levels, the mud flats are unsafe to walk on;
- There is no flood warning for campers at the Iris River at Lake Gairdner Bridge (see Section 3.2.2.9); and
- Other impacts of low lake levels were thought to be poor fishing, stunted fish growth, impacts on vegetation and aesthetics.

Management options suggested by stakeholders to address issues of concern included the following:

- The lake should be kept at a constant high level during summer to provide for recreational access. It was suggested that this could be achieved by taking more water from Lake Barrington and less from Lake Gairdner;
- Improve boat launching infrastructure to make it possible to launch boats at low lake levels; and
- The free camping area at Iris River/Lake Gairdner Bridge needs warning signs to inform campers of quickly rising water. It was proposed that warning signs at the camping area be established.

Rubbish Management

It was identified that recreational users leave unacceptable amounts of rubbish on the shorelines of Lake Gairdner. It was considered necessary to install signage to indicate to visitors where the dedicated free camping area is, state that rubbish should be taken away, and provide contact numbers for reporting offenders (see Section 3.2.2.2).

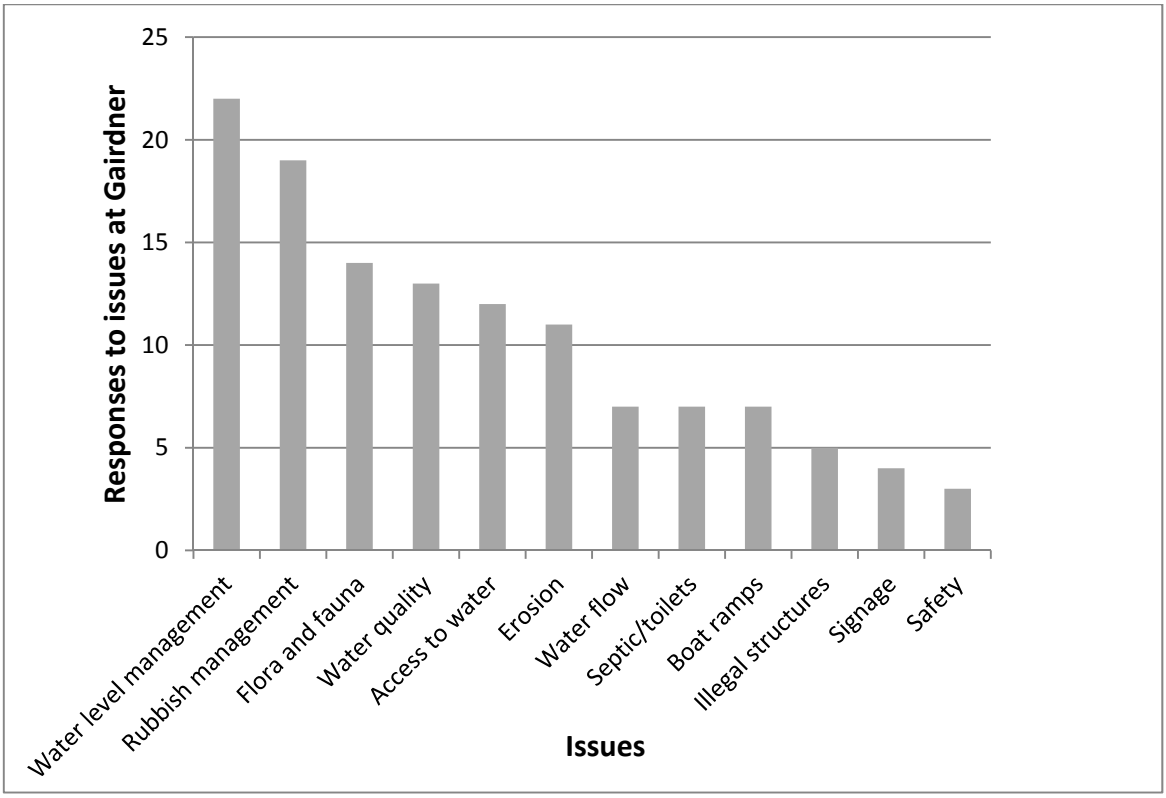


Figure 3.10 Responses to issues for Lake Gairdner

3.3.4 Lake Parangana

3.3.4.1 Lake Parangana Values

Of the values identified by stakeholders for Lake Parangana, fishing and aquatic ecosystems had the highest numbers (23 and 20, respectively) whereas rowing (2) and water skiing (2) had the lowest numbers. Other values that received a high number of responses were biodiversity (17), land conservation (17) and camping (16) (Figure 3.11).

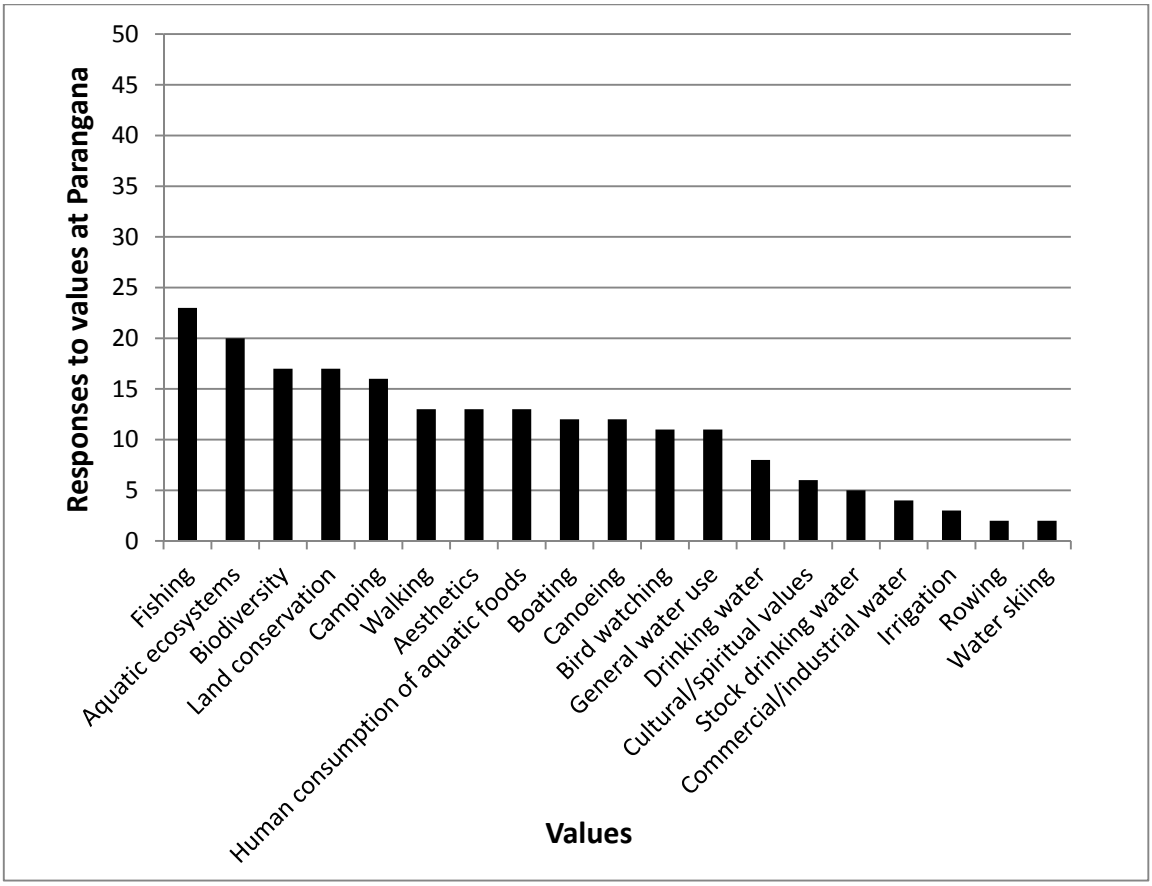


Figure 3.11 Responses to values for Lake Parangana

3.3.4.2 Lake Parangana Issues and Management Options

Of the issues selected by stakeholders for Lake Parangana, rubbish management, water quality, and flora and fauna had the highest number of responses (18, 13 and 13, respectively), whereas boat ramps (2), safety (1) and signage (1) had the lowest. Other issues that received a high number of responses were erosion (9), water level management (8) and access to water (8) (Figure 3.12).

Recreation

Lake Parangana is recognised by stakeholders as a very good fishing spot and it is proposed that the lake be zoned to accommodate different activities. It was stated that boating and water skiing is currently occurring in an unsafe manner (See Section 3.2.2.9) with consequent impact on canoeists, fishers and swimmers. As a result of harassing behaviour there are calls for no water skiing to be permitted on Lake Parangana.

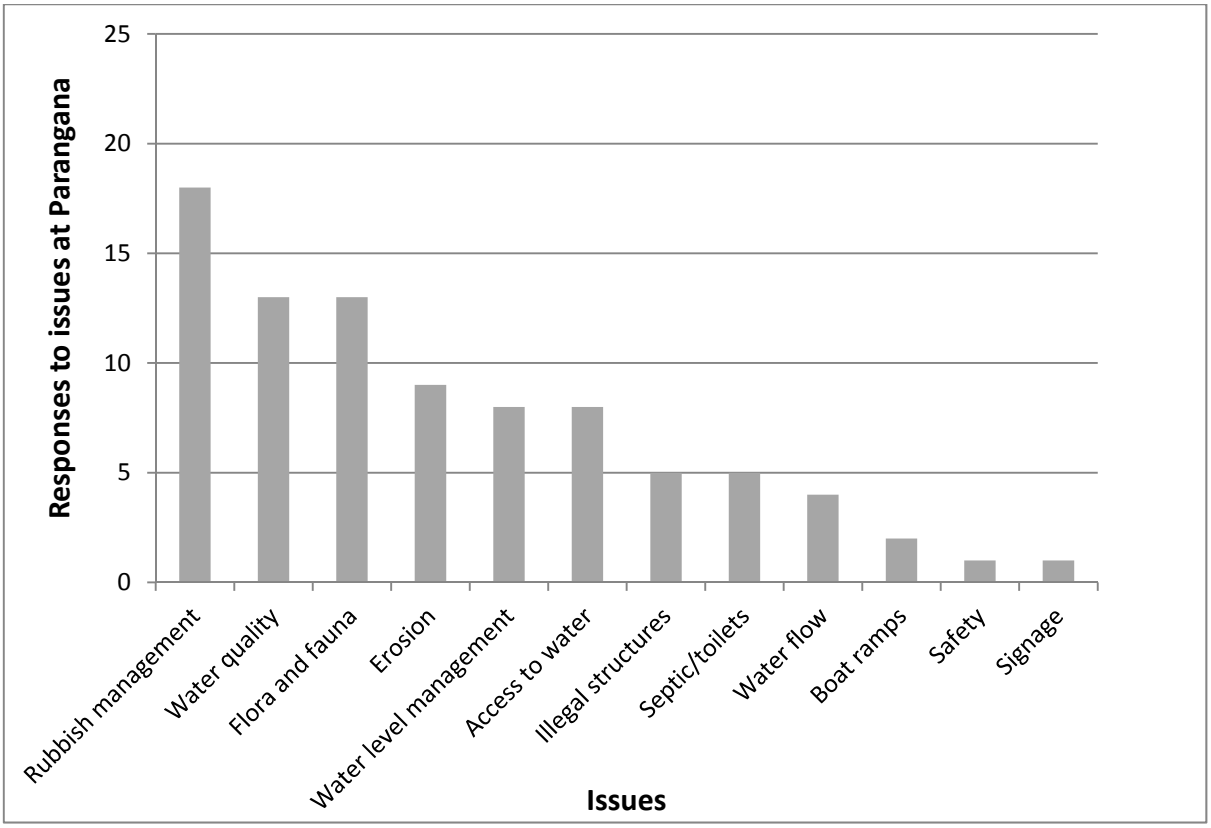


Figure 3.12 Responses to issues for Lake Parangana

3.3.5 Lake Cethana

3.3.5.1 Lake Cethana Values

Of the values selected by stakeholders for Lake Cethana, fishing and aquatic ecosystems had the highest number of responses (35 and 30, respectively) whereas commercial/industrial water (5), irrigation (5) and water skiing (2) had the lowest numbers. Other issues that received a high number of responses were biodiversity (28), land conservation (28) and walking (27) (Figure 3.13).

3.3.5.2 Lake Cethana Issues and Management Options

From the issues selected by stakeholders for Lake Cethana, rubbish management, flora and fauna, and access to water had the highest number of responses (20, 18 and 18, respectively), whereas signage (6), safety (5) and illegal structures (5) had the lowest numbers. Other issues that received high responses were water quality (17) and erosion (12) (Figure 3.14).

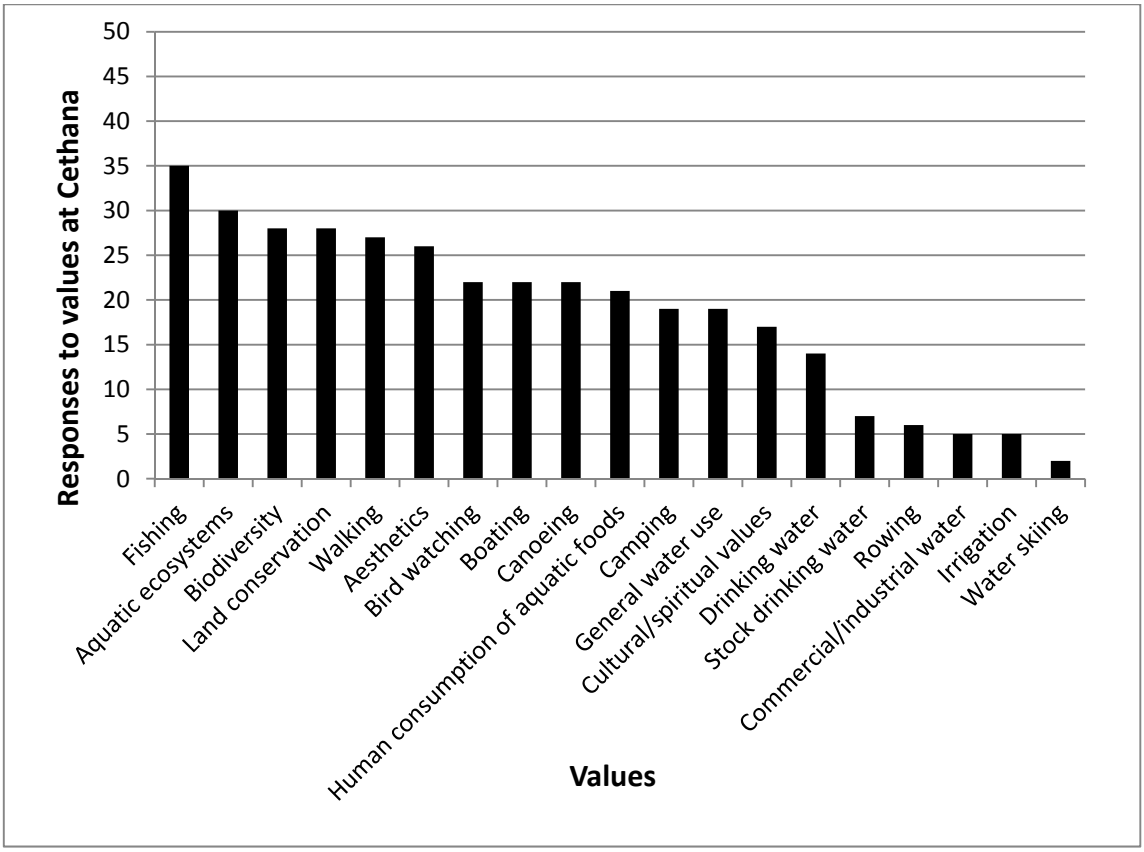


Figure 3.13 Responses to values for Lake Cethana

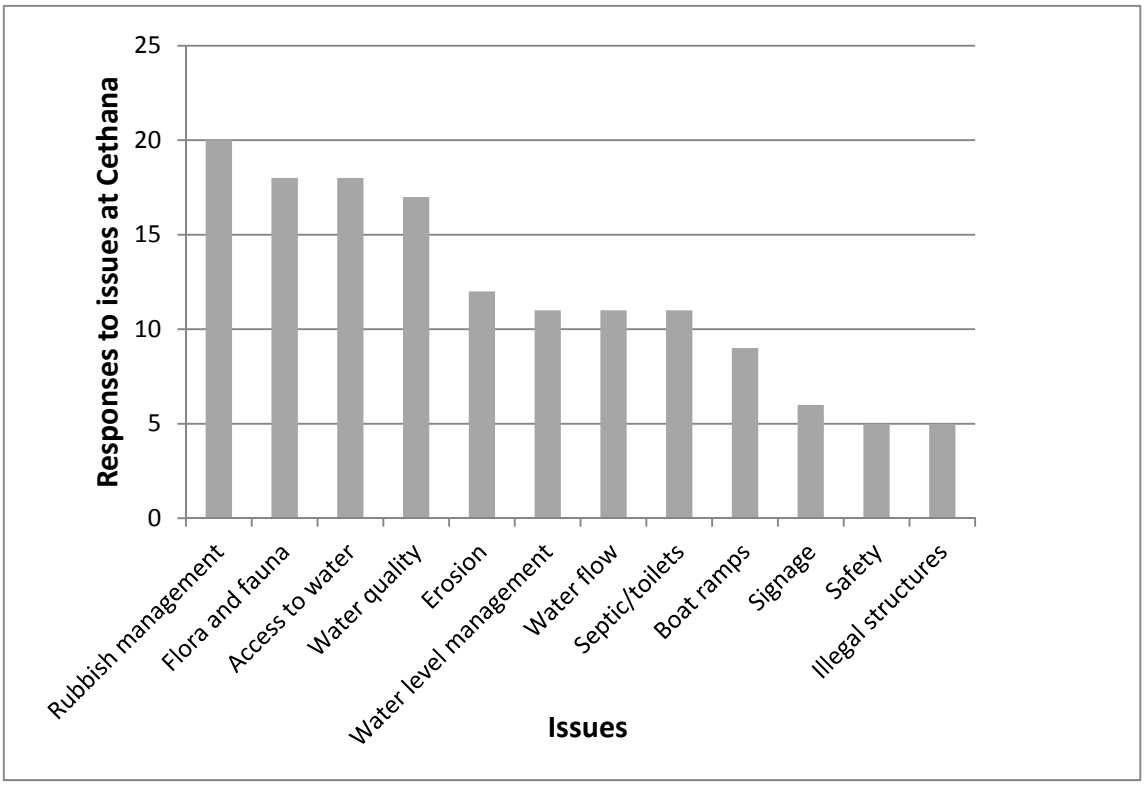


Figure 3.14 Responses to issues for Lake Cethana

Stakeholders provided more detail on some of the issues and proposed management options for Lake Cethana:

Rubbish Management, Septic/Toilets and Recreation

Recreational users leave behind rubbish, faecal waste and toilet paper at camping areas. It was suggested by stakeholders that:

- Lake Cethana should be used as a day area only to avoid high volumes of rubbish being left behind;
- There should be better regulation of camping to manage toileting waste;
- Toilets should be installed above the high water/flood level to prevent discharge of toilet waste into the lake;
- There should be better regulation of camping to prevent noisy and destructive behaviour which could be a safety risk to others living and/or using the area; and
- Low impact recreational activities need to be catered for.

Lorinna residents reiterated their community's concern about camping at Lake Cethana and their opposition to camping because of the unruly behaviour they have experienced. They are concerned about firewood theft, rubbish, noise and lack of toilet facilities. Having appropriate signage at the camp site would alert campers as to what is acceptable and what is not, however, enforcement of the rules would be required (see Section 3.2.2.9). Police presence would assist in enforcing the rules. They would like the camp site to be kept as a quiet site.

Access to Water and Boat Ramps

It was identified that there should be no further barriers preventing access to the lake. Improvements should be made to the car parking/turning area to increase use of Lake Cethana for recreational fishing. It would be desirable to have a boat ramp at the lake close to Cradle Mountain Road.

Water Quality

There are concerns about the impact of forestry chemicals on water quality in Lake Cethana and also the impact of forestry operations on turbidity (see Section 3.2.2.1).

3.3.6 Lake Barrington

3.3.6.1 Lake Barrington Values

Of the values selected by stakeholders for Lake Barrington, fishing and boating ranked highest (50 and 44, respectively), whereas commercial/industrial water uses (7) and irrigation (5) were lowest. Other values that received high responses were camping (31) and biodiversity (29) (Figure 3.15).

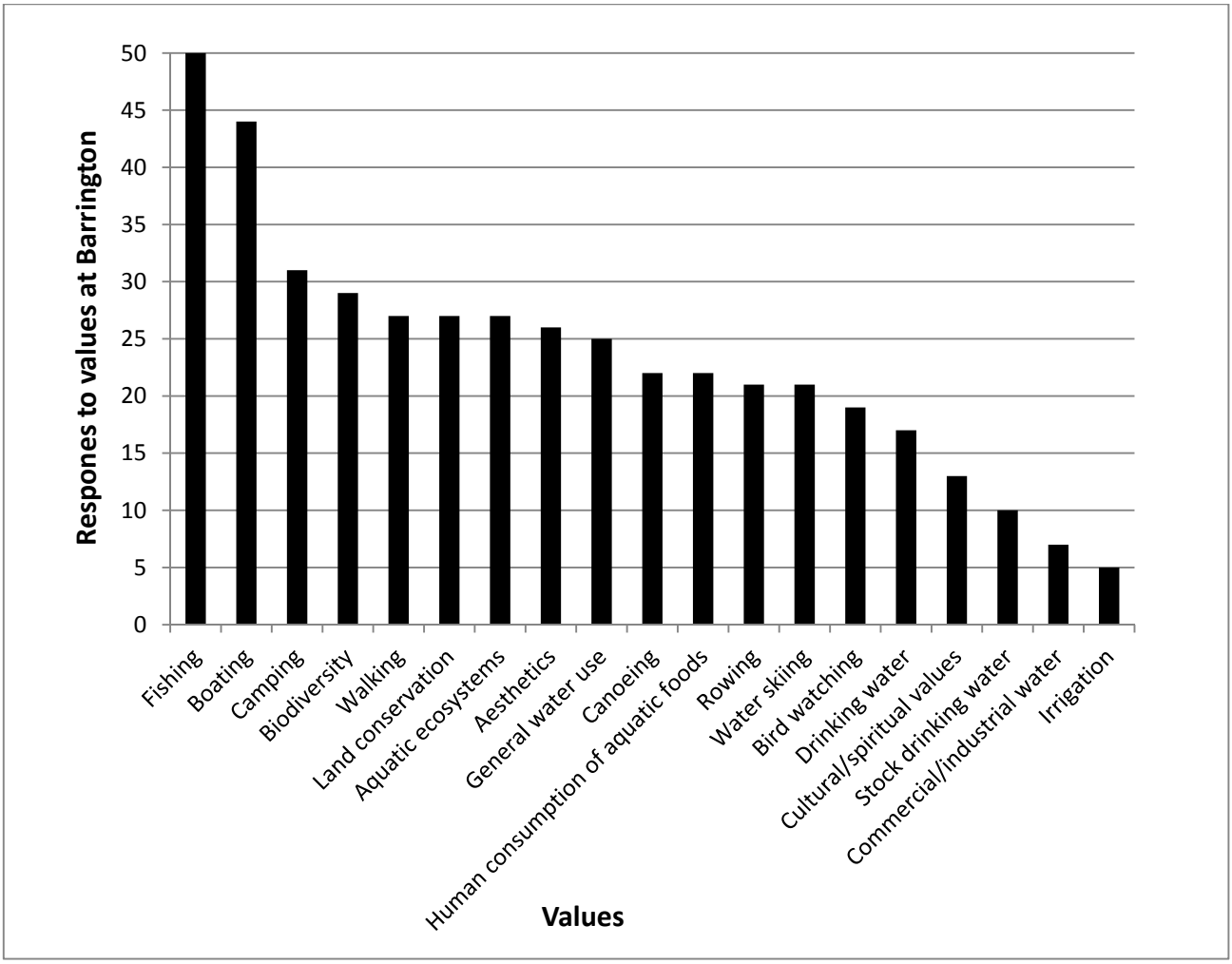


Figure 3.15 Responses to values for Lake Barrington

3.3.6.2 Lake Barrington Issues and Management Options

Of the issues selected by stakeholders at Lake Barrington, rubbish management and water level management had the highest number of responses (24 and 22, respectively) whereas safety (8), signage (6) and water flow (6) had the lowest. Other issues that received a high number of responses were access to water (21), erosion (19) and septic/toilets (19) (Figure 3.16).

Stakeholders provided more detail on some of the issues and proposed management options for Lake Barrington:

Rubbish Management

A number of surveyed stakeholders identified that rubbish management was an issue but did not elaborate on the issue (see Section 3.2.2.2).

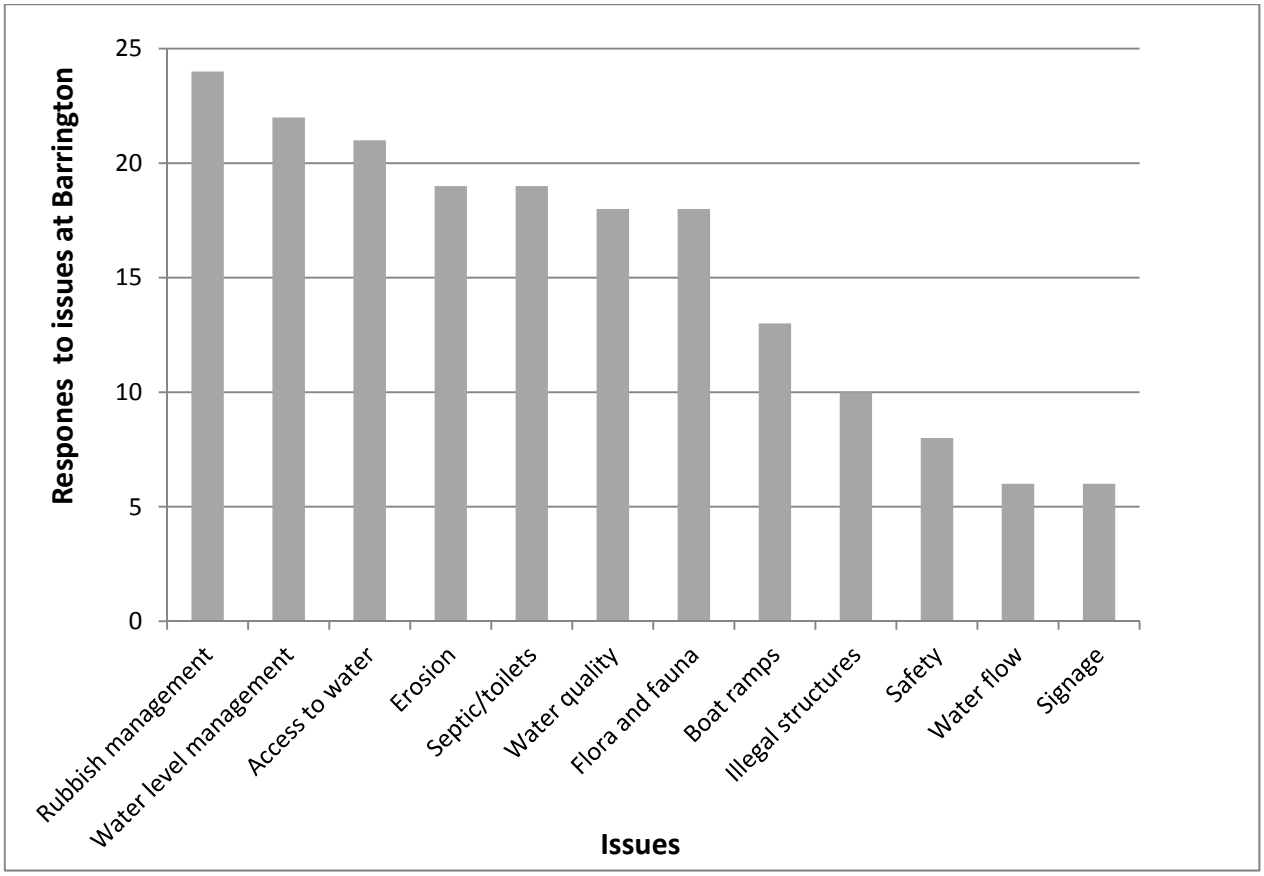


Figure 3.16 Responses to issues for Lake Barrington

Water Level Management

Stakeholders perceive that water level changes are more dramatic and extreme than in the past. Recent low levels have resulted in major damage to infrastructure which has been costly to replace.

Water skiers are unhappy that Hydro Tasmania draws the lake very low in March for maintenance, without notification, when it is the best weather and peak time for water skiing. Stakeholders would like to see higher lake levels maintained during the summer period when lakes are more frequently used. See Section 3.2.2.4.

All of the water users would like to know when outages will take place and they would like to know how to receive notifications about water levels. Knowing when water levels will change will greatly assist in planning events and holding competitions. It will also assist in managing infrastructure, such as disconnecting and lowering pontoons.

Access to Water, Boat Ramps and Safety

Stakeholders have identified that access to the lake for boating can be difficult during busy summer periods. They have a number of suggestions to solve the access problem:

- Stakeholders have identified that it would greatly reduce congestion, and the risk of potential safety incidents would be reduced around the boat ramps, if suitable areas could be provided to pull up a boat onto the shore further away from existing boat ramps;

- An increased number of boat ramps would reduce congestion and improve safety at Kentish Park and Wilmot side. Further assessments and discussions between Hydro Tasmania and recreational users on re-opening previously used public access points should be undertaken to decrease the concentration of use at Kentish Park and Wilmot boat ramps. Recreational users would like to use the Devils Gate Dam boat ramp;
- To disperse congestion away from Lake Barrington develop Paloona (see Section 3.3.7.2) as an alternative recreational venue and/or implement vehicular transport across Lake Barrington;
- Provide sealed road access to the public boat ramp on the Wilmot side of the lake for the many tourists and locals; and
- Provide more parking for cars with trailers.

The high popularity and multiple use of Lake Barrington brings with it potential conflict between recreational users especially between rowing, fishing and water skiing groups (see Section 3.2.2.9). A stakeholder stated that the most important message to get across to Hydro Tasmania is that "Someone is going to get hurt". Tempers get frayed. Anglers want to do deep water fishing in the deeper parts of the lake, but the deeper waters are used by water skiers where it is best and safest for water skiing. If conditions are windy on the lake, and for serious slalom training, the water skiers go up the river to use the more sheltered waterways as they have done for 40 years. However anglers get annoyed with this activity stating the area should be a 5 knot zone. It is not clear what is and what is not a water skiing zone (see Section 3.2.2.9).

Boat and water craft users are often considered to have very dangerous behaviour.

Hooliganism at Lake Barrington was also identified by a number of stakeholders and the need for more police presence stated.

Septic/Toilets

Feedback is that the toilets are unpleasant / smelly over summer and there is a lack of clarity about who manages the toilets. It is recommended that existing public toilet facilities be refurbished.

Erosion

Erosion is of concern at Lake Barrington, the cause of which is debated and fingers pointed at all lake activities. One of the water ski clubs has been doing erosion control work to address erosion at their site.

Water Quality

Cradle Mountain Water extracts water from Lake Barrington. There is a concern that any impacts to water quality may impact the ability to supply quality drinking water. There is a concern related to adequate volumes of water being available for Cradle Mountain Water.

Illegal Structures

A number of illegal structures for launching of boats occur on the lake during summer. At high peak times the construction of these structures is a safety issue.

Recreation

Lake Barrington is the largest hub of recreational activity in the Mersey-Forth catchments supporting rowing, water skiing, fishing, kayaking and canoeing. There is unanimous support for ensuring the viability of ongoing sports options at Lake Barrington and people would like to see it preserved and further developed.

Currently Lake Barrington recreation is managed through the Lake Barrington Recreational Management Framework (see Section 3.2.2.11). The framework arose from a partnership agreement between the Kentish Council and the Tasmanian State Government. The main aim of the framework is to co-ordinate the management of recreation at Lake Barrington between sporting associations and resource and service managers. The Lake Barrington Recreational Management Committee has representation from Tasmanian Parks and Wildlife Service (PWS), Forestry Tasmania, Kentish Council, Marine and Safety Tasmania Tasmanian (MAST), Rowing Council, the Water Skiing and Angling Communities, Inland Fisheries Service (IFS), Hydro Tasmania, and Sport and Recreation Tasmania who chair and administer the committee.

In order to develop a catchment approach to managing recreational issues the Lake Barrington Recreational Management Committee has considered extending their terms of reference to cover recreational management across the catchments. This will significantly contribute to the management of recreation in the Mersey-Forth catchments and in North West Tasmania. See Section 3.2.2.11.

The Lake Barrington rowing course is considered to be one of the top five courses in the world. It is recognised to be a “fair course” because of its position where the wind blows straight up or down thereby providing fair conditions for all competitors. Most importantly there are a number of Tasmanian rowers who have learned their craft on the lake and have become world class athletes, world champions and Olympians.

It has been stated that Hydro Tasmania should be proud of having one of the finest rowing resources in the world and that Lake Barrington rowing is a very good corporate story.

The rowing community are strong advocates of Hydro Tasmania and a very good relationship exists between the peak body, Rowing Tasmania, and Hydro Tasmania. Hydro Tasmania’s ability to maintain water levels with great precision, in support of their regattas, is much appreciated. While communications generally work very well there have been occasions when water levels have been lowered and damage to infrastructure has occurred.

Lake Barrington is also a key location for water skiers. Water skiing has been occurring on the lake since the early 1970’s. The water skiing community is supportive of other recreational activities. They want the whole lake to be available for multiple use and are prepared to follow the rules and share the waterways.

Information was requested on whom to contact should another water ski club try to secure a location on Lake Barrington.

It was recommended that a standard for pontoons be established as currently all manner of structures are being used. In the past Hydro Tasmania has required the registration of pontoons and it is thought to be a good idea to reinstitute this practice to ensure that infrastructure in the lake is continually repaired and upgraded.

Other

Leasing arrangements and security of tenure for some of the water ski clubs is an issue. Because they are on short term leases and do not have security of tenure they cannot get access to funding from Government grants to upgrade their facilities and they cannot continue to ask their members for money. Until longer term leases or tenure can be arranged the clubs will remain constrained in their investment into facilities. Hydro Tasmania cannot access Government grant funding because it is a Government Business Enterprise (GBE).

3.3.7 Lake Paloona

3.3.7.1 Lake Paloona Values

Of the values selected by stakeholders for Lake Paloona, fishing and aquatic ecosystems were ranked highest (31 and 21, respectively) whereas irrigation (2) and water skiing (1) had the lowest numbers. Other values that received high responses were biodiversity (19), land conservation (19) and general water use (15) (Figure 3.17).

3.3.7.2 Lake Paloona Issues and Management Options

From the issues selected by stakeholders for Lake Paloona, flora and fauna and water quality had the highest number of responses (17 and 16, respectively) whereas safety (3) and signage (2) had the lowest. Other issues that received high responses were rubbish management (15), access to water (15) and water level management (12) (Figure 3.18).

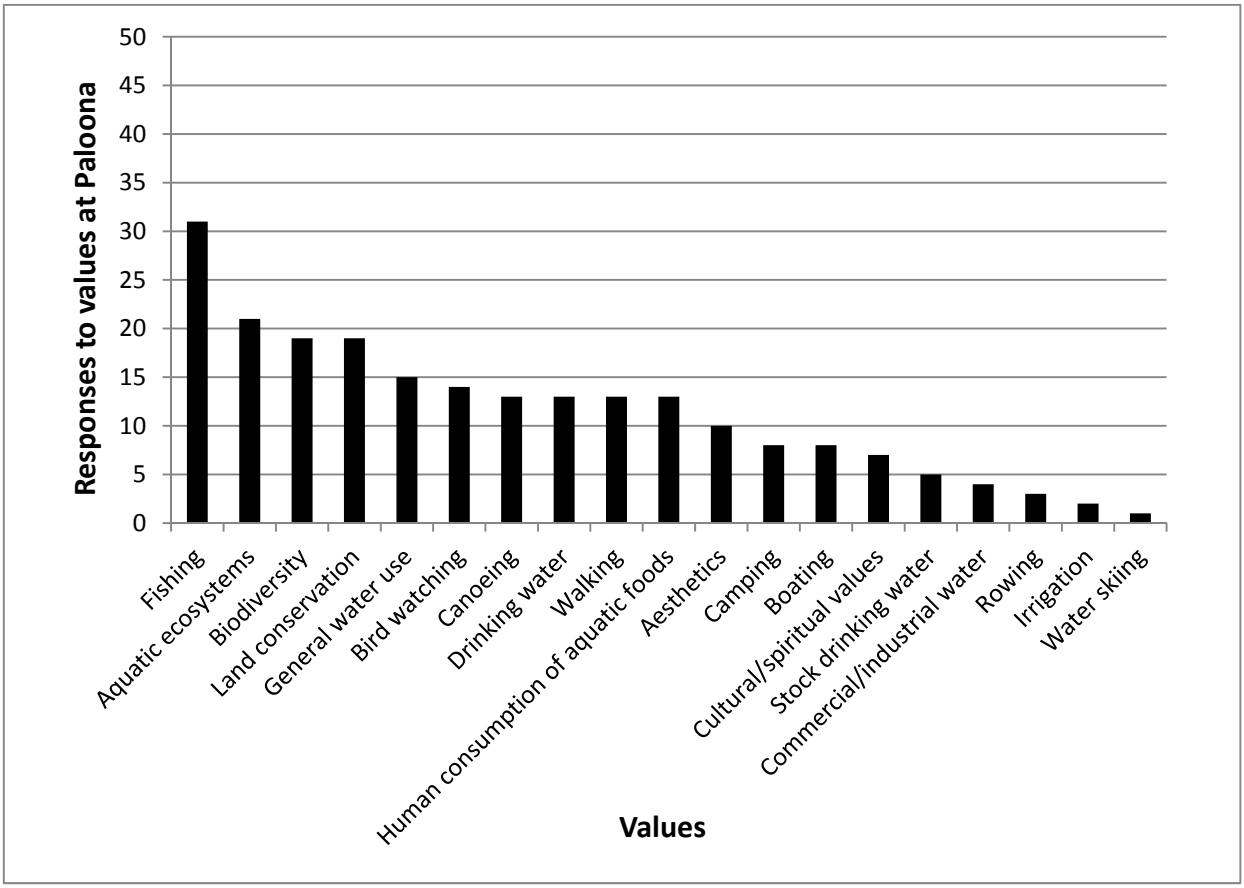


Figure 3.17 Responses to values for Lake Paloona

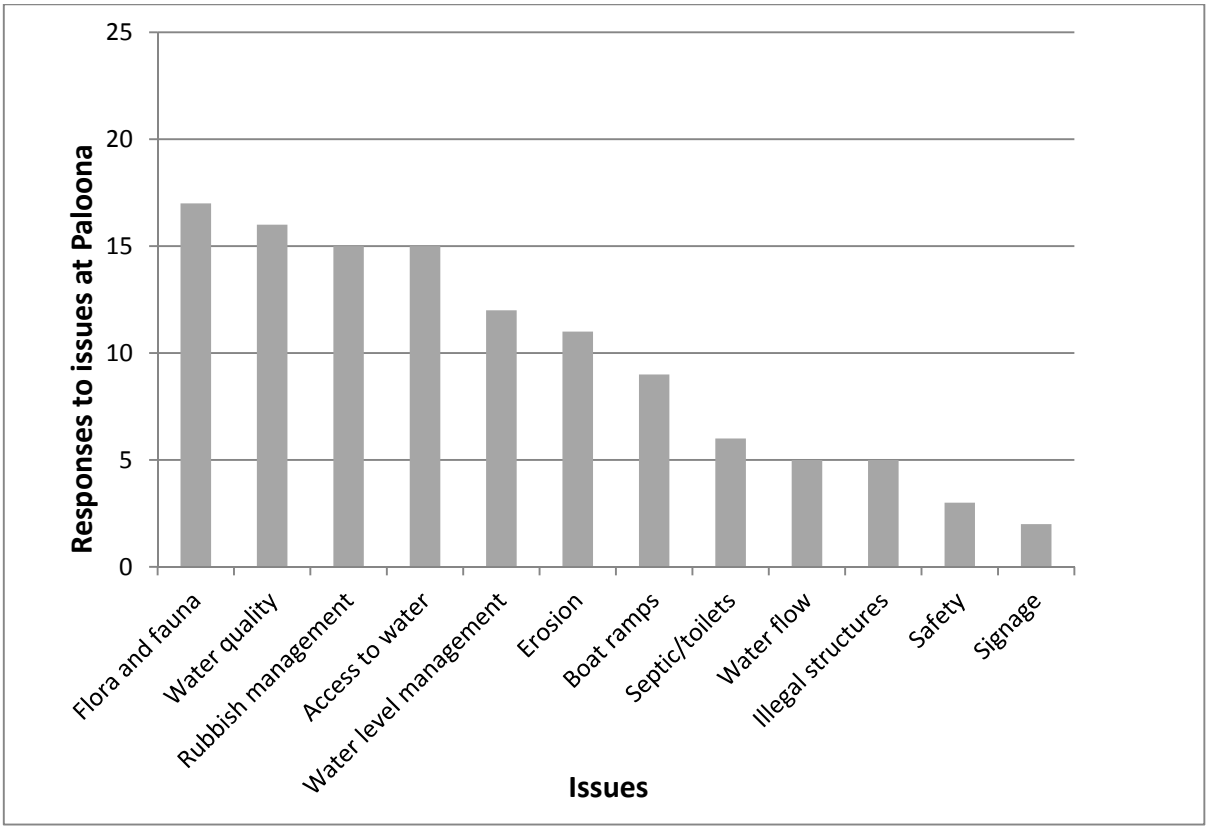


Figure 3.18 Responses to issues for Lake Paloona

Access to Water, Boat Ramps and Safety

Historically Lake Paloona has had restricted access because it is situated directly upstream of town drinking water supplies. In addition, there are MAST by-laws prohibiting navigation on Lake Paloona. Despite access to the lake being restricted and poor, kayakers and anglers do regularly use the lake. People have been accessing the lake via private property and allegedly traffic is degrading the road from Devils Gate to the campsite near the lake.

Hydro Tasmania has received requests to open the lake for boating and it has provided its support for funding to be sought to establish a boat ramp.

While opening up Lake Paloona to boating and fishing is welcomed, as it is considered that it could ease the pressure on Lake Barrington, there are differing opinions regarding the nature of activity that should be allowed. There is significant support for the lake to be identified as a waterway for passive use only including: canoeing and kayaking, use of boats with electric motors only and a 5 knot speed rule. Oppositely some stakeholders considered that, as the main section of Lake Paloona is wider and deeper then Lake Parangana, it would be a good water skiing lake.

It was also suggested that a walking track for multiple use and running be considered.

Water Quality

There is opposition to the use of power boats on Lake Paloona as they release hydro-carbons into the water.

Flora and Fauna

There is opposition to the direct introduction of trout to all waterways. It is acknowledged that trout are translocated from upstream lakes.

3.3.8 Mersey River

3.3.8.1 Mersey River Values

Of the values selected by stakeholders for the Mersey River, fishing and general water use received the highest number of responses (62 and 41, respectively) whereas rowing (12) and water skiing (6) had the lowest numbers. Other values that received a high number of responses were land conservation (39) and biodiversity (38) (Figure 3.19).

Other than the values provided in the survey, swimming was suggested as an additional value in the Mersey River.

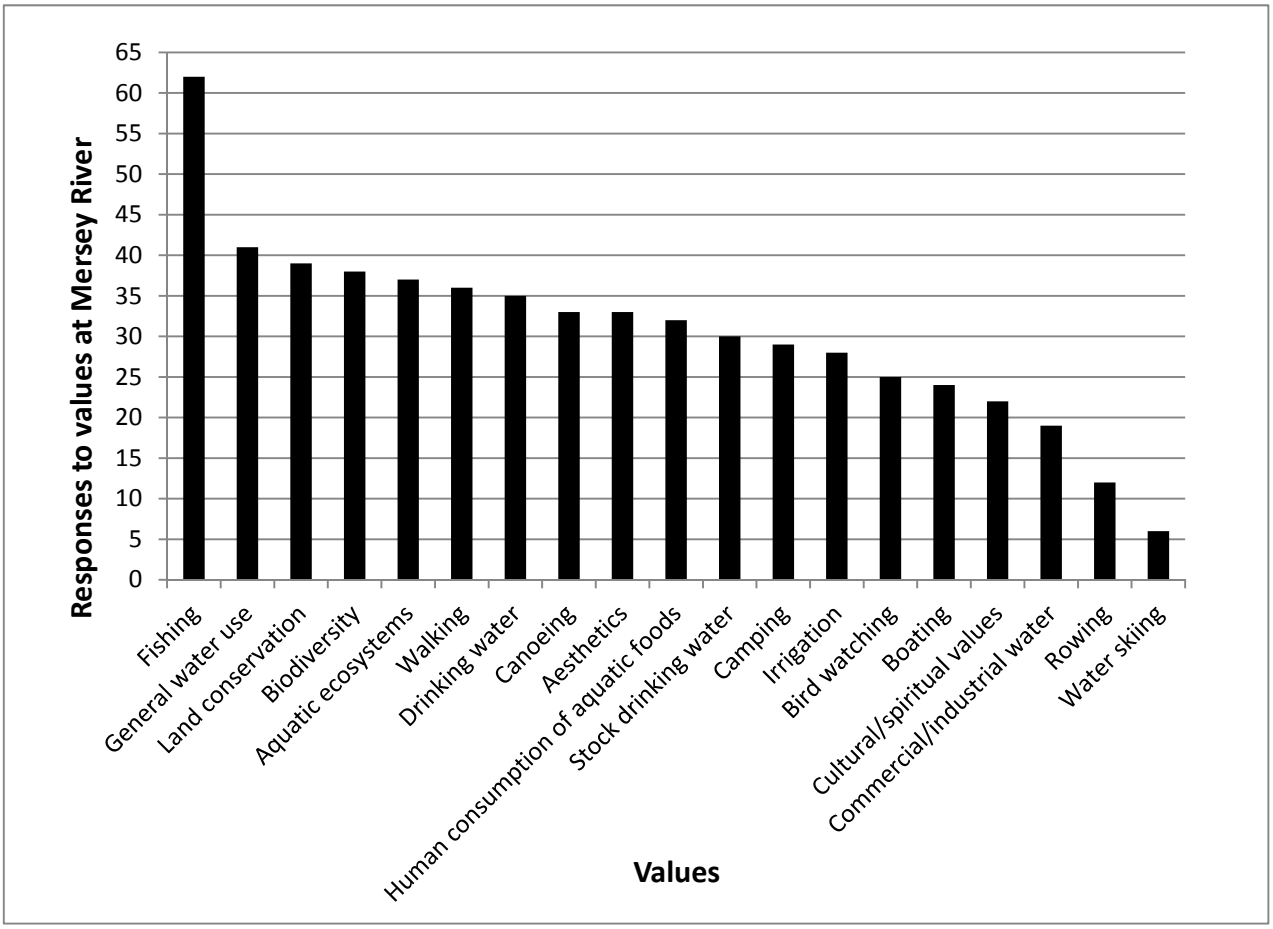


Figure 3.19 Responses to values for the Mersey River

3.3.8.2 Mersey River Issues and Management Options

From the issues selected by stakeholders for the Mersey River, water flow and water quality had the highest number of responses (50 and 46, respectively) whereas boat ramps (9) and signage (8) had the lowest. Other issues that received a high number of responses were water level management (39) and access to water (37) (Figure 3.20).

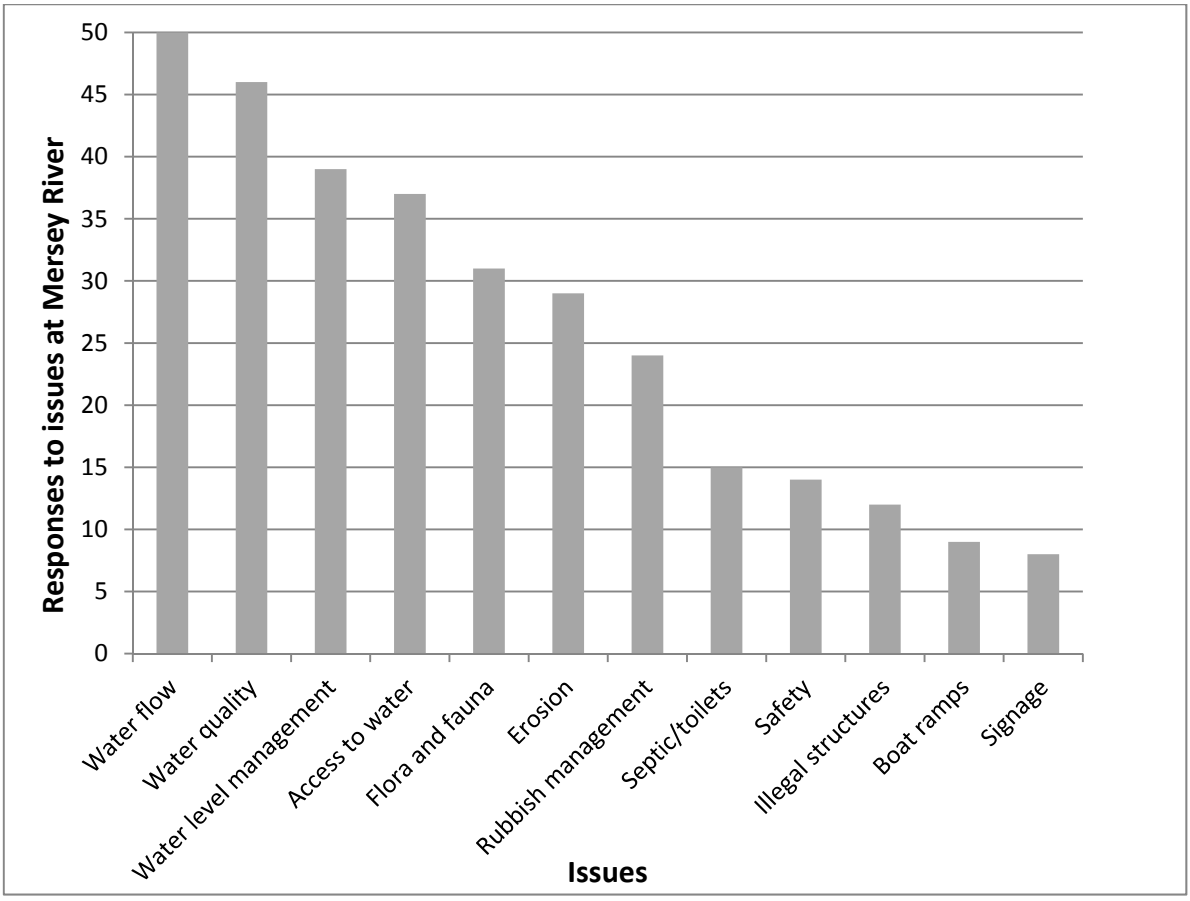


Figure 3.20 Responses to issues for the Mersey River

Water Flow, Safety, Flora and Fauna

The following issues were raised by stakeholders along the Mersey River:

- The flow in the Mersey River below Lake Parangana is believed to be insufficient, especially during summer;
- There is an increase/improvement in flows in the lower Mersey River compared with the past, however, there is concern about what would happens to flows during a dry summer;
- There are concerns that the environmental flow of 2 cumecs in the lower Mersey River is not being maintained;
- Access to current volumes of irrigation water from the lower Mersey River, which is vital, may be reduced as a result of the diversion of water to the new Sassafras Wesley Vale Irrigation Scheme;
- The Mersey Water Management Plan (DPIWE 2005), currently in place for the lower Mersey River (2005-2015), needs to be reviewed in light of irrigation licenses;
- Water for irrigation and stock should be available without charge to property owners in hard economic times;
- Flooding of paddocks in the lower Mersey River can occur after a couple of inches of rain causing destruction of fences/property;
- Low flows caused by spreading of willows in river channels;

- Trees growing in the middle of the river, attributed to low flows, may cause safety hazards for canoeists;
- There has been an observed decline of platypus numbers due to low water levels in ponds in the lower Mersey River; and
- The presence of illegal structures may cause hazards for recreational users.

Management options recommended by stakeholders include:

- More natural flow regulation is desirable, including winter flooding, and allowing Parangana dam to spill at least once each winter;
- It was suggested that higher flows downstream of Lake Parangana would discourage mid-stream tree growth thereby improving safety for canoeists;
- Better management of introduced species in the Mersey River riparian zone is needed, particularly willows. Suggestions for addressing willow removal and revegetation were supported by local environment groups and landholders;
- Fish stocks could be improved by increasing flow rates; and
- Aquatic values must be managed by maintaining the environmental flow.

A number of stakeholders reiterated that they were happy with the environmental flow in the Mersey River. Anglers stated that fishing has steadily increased since the environmental flow has been established and that the river is “fishing brilliantly”.

Water Quality

Concerns regarding water quality in the Mersey River raised by stakeholders included:

- A deterioration of water quality in the lower Mersey near Latrobe has been observed (i.e. increased turbidity, smelly water at Bells Parade, slimy river bed, black water after flooding, and rafts of dirty foam);
- Disappearance of fish (in particular sea-run trout) attributed to poor water quality near Latrobe;
- Deteriorating conditions in the lower Mersey River are impacting on recreation, tourism, and the environment; and
- Industrial discharges into Caroline Creek and sewage inputs at Railton are allegedly occurring.

Water quality problems (see Section 3.2.2.1), specifically “black water” in the lower Mersey River, are acknowledged to have been evident for 20 years. Historical sampling efforts are not considered to have been focused enough to enable the source to be identified.

The Department of Health and Human Services has in the past closed some recreational sites on the Mersey River due to high levels of bacteria.

Stakeholders discussed that a collaborative project, under the facilitation of Mersey NRM and in conjunction with all key stakeholders, may be the best way forward in addressing water quality in the Mersey River.

Stakeholders believe that water quality would be improved by increasing the flow in the river.

Flooding

Flooding in the Mersey River was considered to be a low risk but it was identified that it is important to maintain communications regarding emergency management. Flood survey data has been positive and valuable and has helped in decision making. Emergency management remains a key issue.

Other

- Access to irrigation water and ongoing price management to support local industry and agriculture is seen as a priority; and
- More information is required about the potential for spread of aquatic pest species as a result of irrigation transfers.

3.3.9 Fisher River

3.3.9.1 Fisher River Values

Of the values selected by stakeholders for the Fisher River, fishing and aquatic ecosystems had the highest number of responses (24 and 23, respectively) whereas rowing (2), irrigation (1) and water skiing (1) had the lowest numbers. Other values that received a high number of responses were biodiversity (20), land conservation (20) and walking (18) (Figure 3.21).

3.3.9.2 Fisher River Issues and Management Options

From the issues selected by stakeholders for the Fisher River, water quality, and flora and fauna had the highest number of responses (15 and 13, respectively) whereas boat ramps (2), safety (1) and signage (1) had the lowest numbers. Other issues that received a high number of responses were water flow (12), access to water (12), rubbish management (12) and erosion (9) (Figure 3.22).

No detail was provided on issues raised and no management options provided.

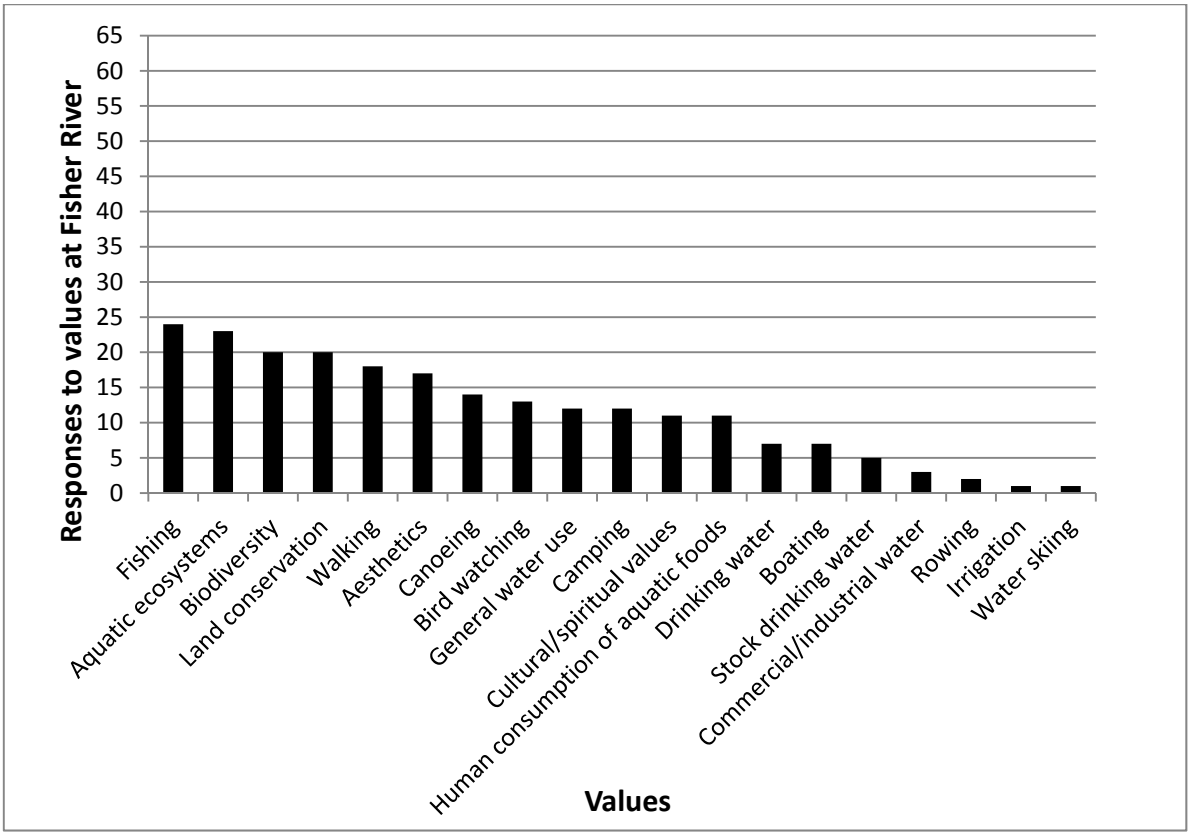


Figure 3.21 Responses to values for the Fisher River

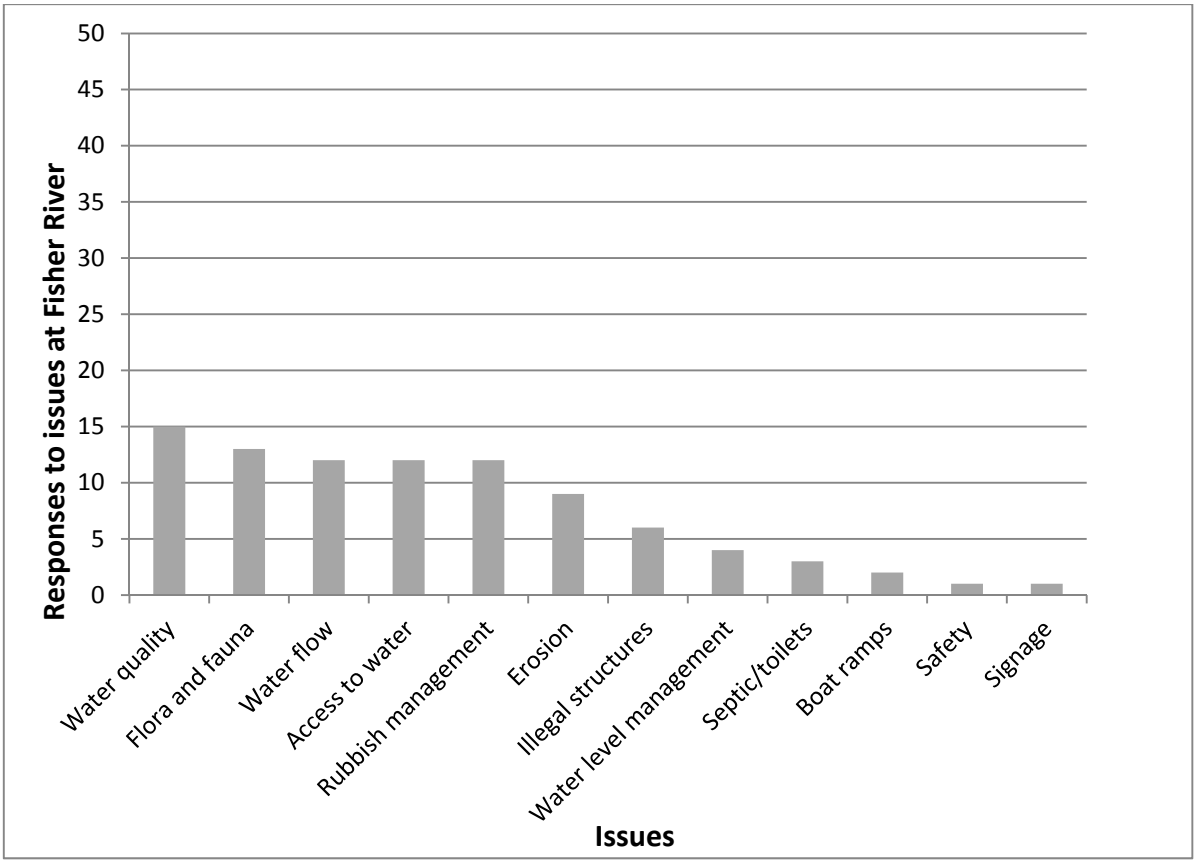


Figure 3.22 Responses to issues for the Fisher River

3.3.10 Forth River

3.3.10.1 Forth River Values

Of the values selected by stakeholders for the Forth River, fishing and aquatic ecosystems (46 and 29, respectively) received the highest number of responses whereas rowing (5) and water skiing (2) had the lowest number of responses. Other values that received a high number of responses were walking (28), aesthetics (27,) biodiversity (27) and general water use (27) (Figure 3.23).

3.3.10.2 Forth River Issues and Management Options

From the issues selected by stakeholders for the Forth River, water flow (35), water level management (29) and water quality (29) had the highest number of responses whereas signage (5) and boat ramps (2) had the lowest. Other issues that received a high number of responses were flora and fauna (25) and erosion (21) (Figure 3.24).

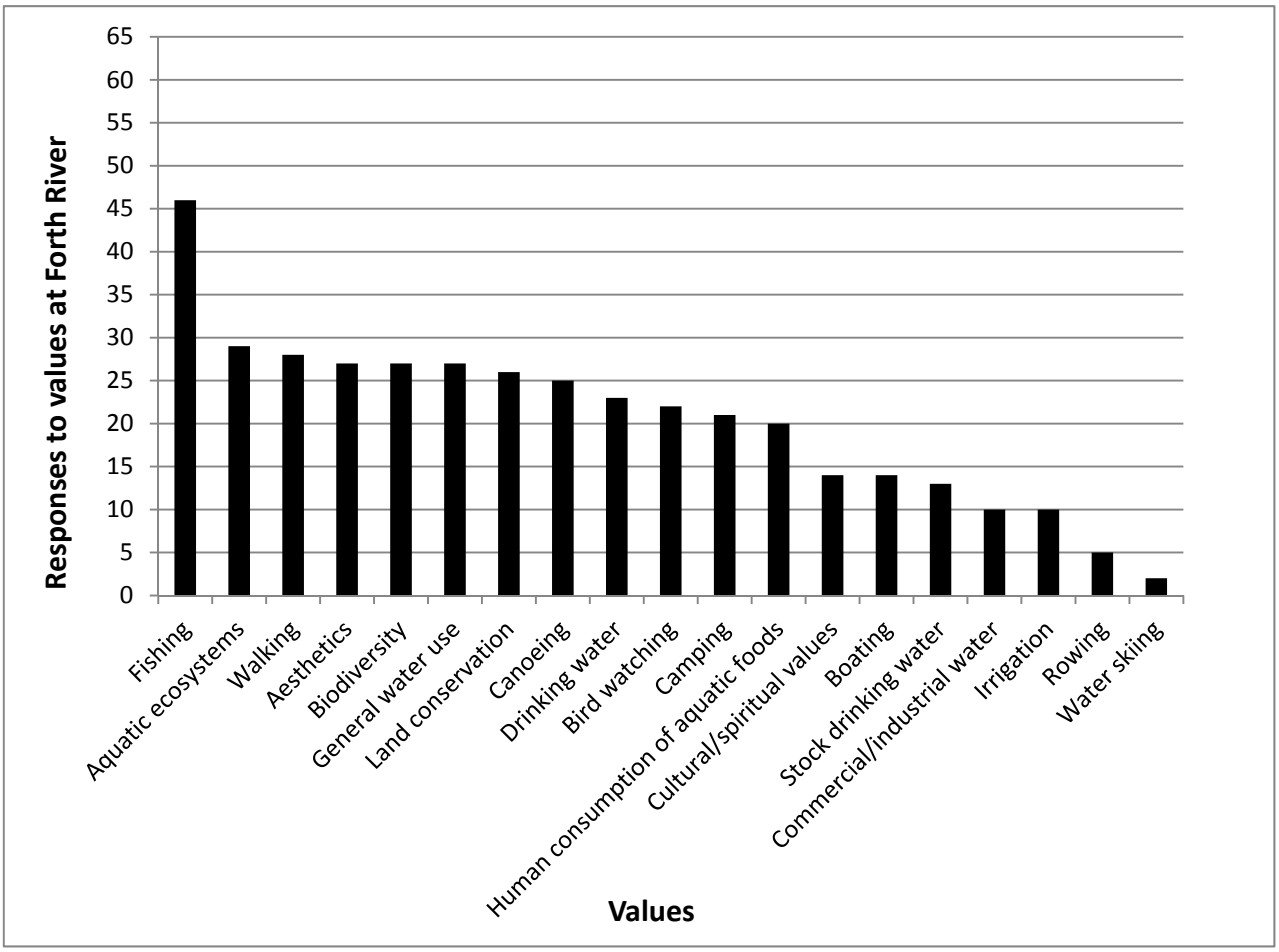


Figure 3.23 Responses to values for the Forth River

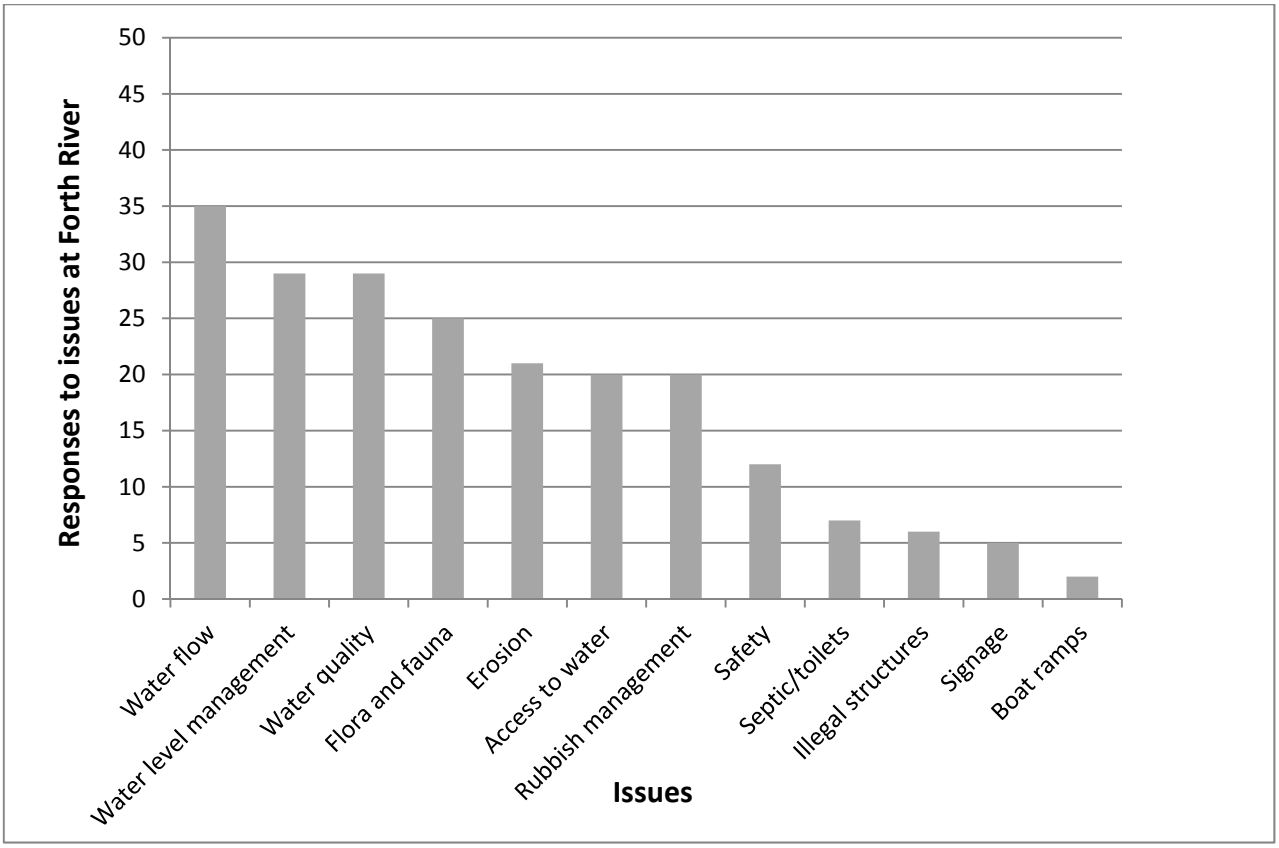


Figure 3.24 Responses to issues for the Forth River

Water Flow and Safety

- Rapid and significant variation in flow is seen as an issue in relation to safety and when planning for recreational activities;
- It is believed that access to suitable, guaranteed water flows for recreational purposes has become more difficult. Previously requested flows have been cancelled as close as a day before an event which puts great pressure on the canoe clubs;
- It was suggested that an adequate volume of water must be available for use by Cradle Mountain Water;
- Safety is seen as a major issue when the river level rises rapidly and people are fishing or kayaking downstream of Paloona Dam; and
- Dam safely is a concern for those living in the Forth valley downstream of Paloona Dam.

It was recommended that the lakes be drawn down prior to heavy rain, and when there is snow in the catchment, to allow extra capacity for snow melt; and to provide more natural flow regulation, including winter flooding.

Water Quality

- Cradle Mountain Water sources water from the Forth River so there is a concern that any impacts to water quality may affect the ability to supply quality drinking water.

Rubbish Management

- Rubbish left by recreational users is a problem; and
- Dumping of soil, bitumen and gravel on the riverbank upstream from the weir has been observed.

Flora and Fauna

- In the lower Forth River there are issues surrounding the rate of rise and fall around discharge events and potential for fish (whitebait) stranding; and
- Better management to eradicate weeds from river reserves and government owned land.

Recreation

With the Forth River being so close to population centres it is of importance for recreation, particularly canoeing. The canoeists are very appreciative of the support provided by Hydro Tasmania and they are aware of the need to balance between electricity generation and recreation. However they are finding that many requests are now being rejected or they may get half days of canoeing instead of full days. In the summer flows seem to be either running too high or not at all. There are no longer moderate levels of flow. With four main events each year the canoe education weekend in April/early May is when they train instructors. Safety training is a priority and has been going for 30 years. See Section 3.2.2.6.

Flooding

Flooding and Hydro Tasmania's role in relation to both flood mitigation and notification of flood events was raised. In addition, it was noted that extreme high water levels have caused damage to irrigation/domestic pumps during recent times.

Flood survey information obtained from Hydro Tasmania has been used in the development of flood evacuation plans. However more detailed analysis of flood plain management is planned. The Central Coast Council would like to collaborate with Hydro Tasmania and Entura in getting this analysis done.

3.3.11 Wilmot River

3.3.11.1 Wilmot River Values

Of the values selected by stakeholders for the Wilmot River, fishing and land conservation had the highest number of responses (31 and 25, respectively) whereas commercial/industrial water (4), rowing (2) and water skiing (2) and had the lowest numbers. Other values that received high responses were walking (24), biodiversity (24) and aquatic ecosystems (23) (Figure 3.25).

3.3.11.2 Wilmot River Issues and Management Options

From the issues selected by stakeholders for the Wilmot River, water flow (27) and water quality (21) had the highest number of issues whereas signage (3) and boat ramps (2) had the lowest. Other issues that received high responses were water level management (18), flora and fauna (18), access to water (17) and rubbish management (17) (Figure 3.26).

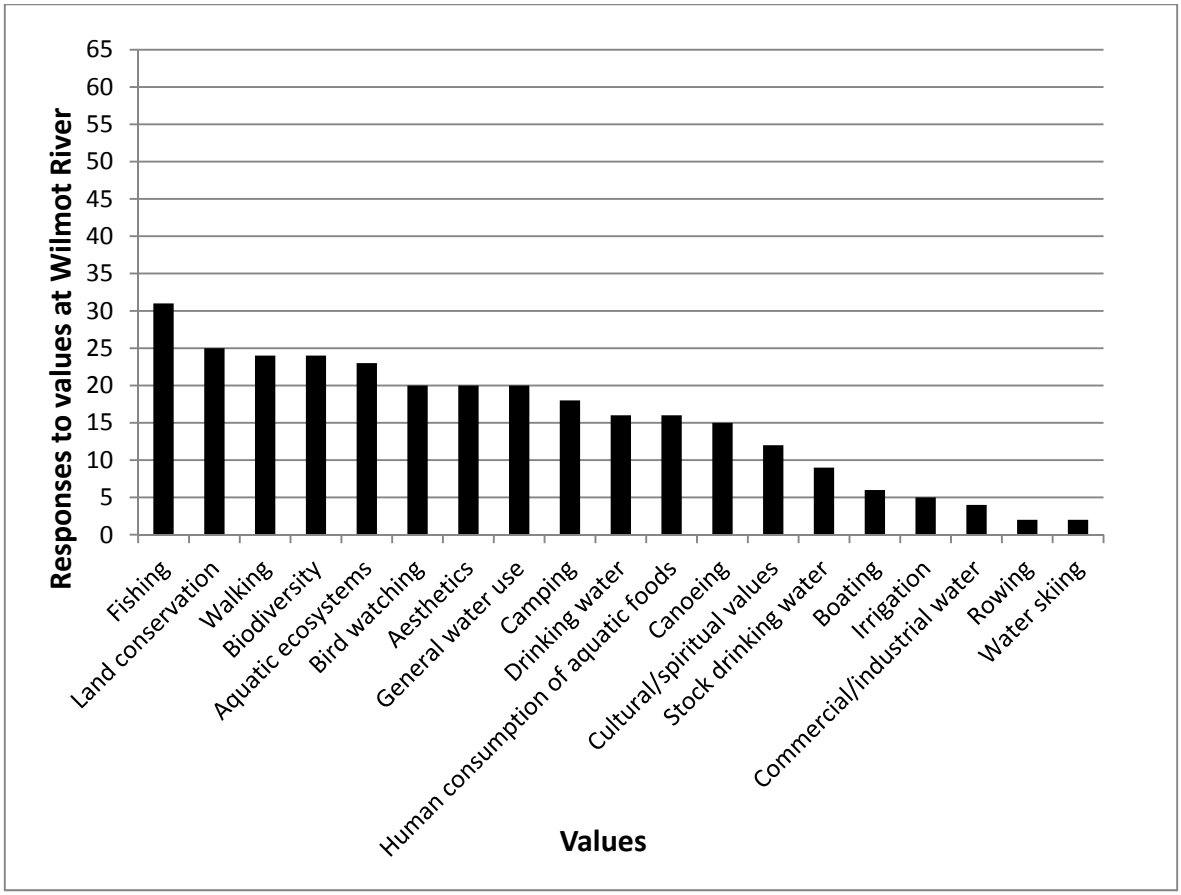


Figure 3.25 Responses to values for the Wilmot River

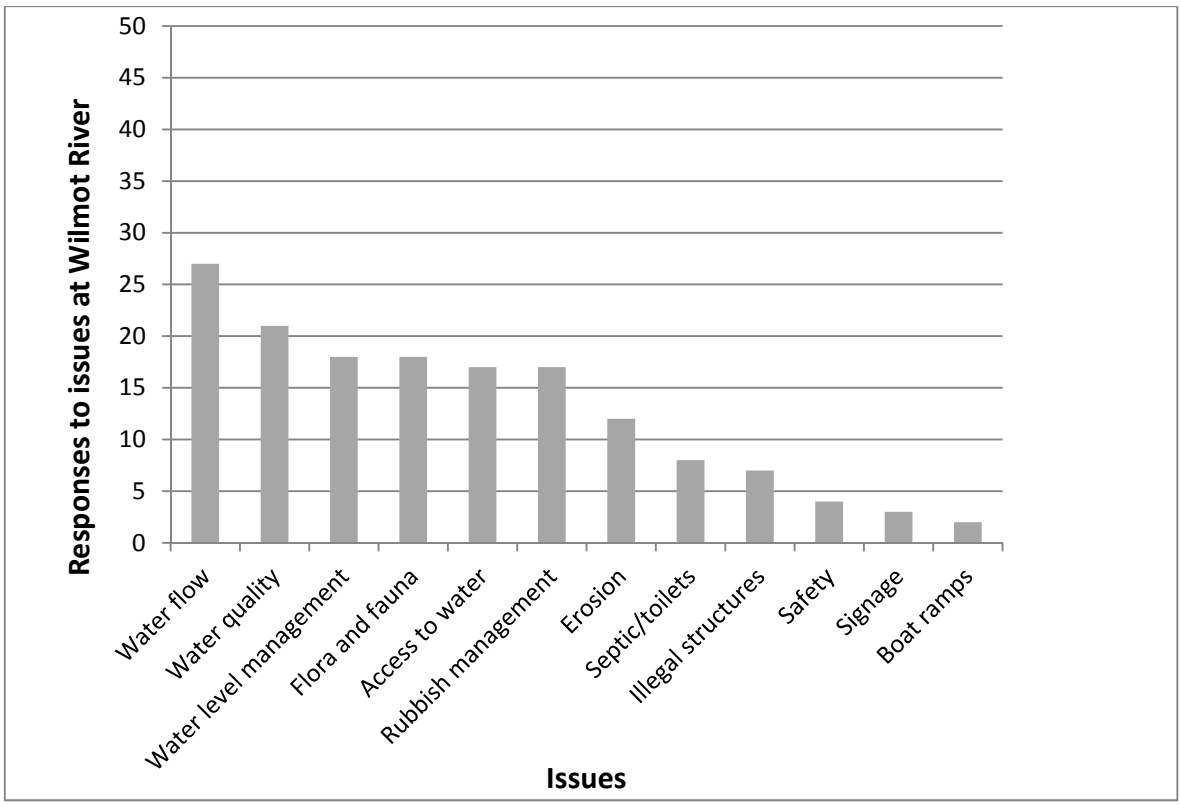


Figure 3.26 Responses to issues for the Wilmot River

Stakeholders provided more detail on some of the issues identified and proposed management options for the Wilmot River:

Water Flow and Flooding

Concerns were raised about the low flows in the Wilmot River, particularly low or no flows in summer, its state being described as "pretty ordinary". Allegedly there has been a significant increase in farm dams upstream, on small creeks, reducing flow into the main river. The hope was articulated that Hydro Tasmania could do for the Wilmot River what it did for the Mersey River and have a downstream flow.

Flooding in the Wilmot River has caused significant loss of property and is a potential safety risk to recreational users.

Management options to address flows included:

- More natural flow regulation is desirable, allowing winter flooding, and ensuring that the flow rate at least matches Lake Gairdner inflows during summer; and
- Another dam (or dams) could be built to regulate the flow, produce power and be used for irrigation and recreation.

Septic/Toilets

Poor sanitary conditions at the Alma Reserve were identified as an issue for downstream domestic water use. It was recommended that a toilet be installed at Alma Reserve to avoid pollution of the river by faecal waste.

Flora and Fauna

- Weeds (wild foxgloves) have spread along the Wilmot River since the 2010 floods.

Other

- Provision of safe facilities for swimming was suggested.

3.3.12 Feedback on Hydro Tasmania's Performance

Feedback about Hydro Tasmania's performance across the Mersey-Forth catchments was provided through the stakeholder survey (Appendix A, Question 4), phone calls and one on one meetings, as follows:

- Hydro Tasmania needs to continue to rise to the challenge to manage water for hydropower generation and agricultural requirements, while maintaining environmental values;
- Hydro Tasmania is looked to, to foster the long term use of waterways;
- Hydro Tasmania has considerable credibility as a result of the Mersey River environmental flow release. It was considered that the Corporation has been very good regarding the environmental flow and has stuck to the spirit of the agreement and not just the letter;
- Although benefits of the environmental flow in the Mersey River have been acknowledged, several respondents indicated that Hydro Tasmania needs to be more proactive in managing the environment, especially river health, water quality and flora

and fauna (i.e. preservation of natural values and mitigate against pest and disease incursion);

- It was suggested that Hydro Tasmania adopts a longer term bigger picture view of its water management plans that could be incorporated into a state wide and legislative plan;
- It was commented that Hydro Tasmania manages its assets well but there is concern about Hydro Tasmania's ecological footprint;
- It was suggested that where degradation might be occurring Hydro Tasmania needs to be very active and ensure the preservation of the values of the system;
- A response was that Hydro Tasmania could better manage the social/recreational values of its waterways (i.e. provide more facilities);
- It is acknowledged that the lakes and rivers are Hydro Tasmania's assets and it is considered a privilege to use the waterways. People are aware of the constraints under which Hydro Tasmania operates and are very thankful for use of the river for recreation. Recreational groups are very appreciative of the support provided by Hydro;
- As the community value for recreational use is high it was felt that Hydro Tasmania needs to make some provision in the budget and work with communities to enable the recreational assets to be better utilised;
- It was suggested that Hydro Tasmania could further explore the tourism potential for the lakes;
- Comment was made that Hydro Tasmania needs to take some responsibility for active maintenance and development outside its core business;
- It was suggested that a budget and action plan is needed for damage prevention and maintenance starting from the headwaters of the Mersey-Forth catchments to the sea;
- Many respondents commented that they have enjoyed a good working relationship with Hydro Tasmania;
- It was noted that Hydro Tasmania "has become more user friendly over the last few years. They used to be a law unto themselves"; and
- Hydro Tasmania's provision of access roads was acknowledged.

Clearly not all stakeholders were as supportive of Hydro Tasmania and a number of comments were received, including:

- Hydro Tasmania has been "playing God for too long". There was a call for the Mersey River water to be returned to the Mersey River;
- It was stated that willows were not in the rivers until the Hydro dammed them; and
- Hydro Tasmania's lack of feedback and contact with stakeholders was mentioned.

With regards to the WMR process itself stakeholders provided the following feedback:

- The Corporation has been commended for undertaking the review and its commitment to sustainability is recognised;
- People appreciated being informed of the process and pleased that Hydro Tasmania had consulted with them;
- It was suggested that Hydro Tasmania needs to work more interactively with the local community and be more visible in the field, at committee meetings and around its

assets. It was suggested that this Water Management Review will be a great opportunity for Hydro Tasmania to work more closely with the local community;

- People advised that they have a deep emotional link to the waterways and consider the lakes and rivers as “this is our water”. As such they were very positive about the review and what Hydro Tasmania was doing;
- Stakeholders were very supportive of, and happy with the process, and impressed by the fact that the way forward and timelines were provided at the outset of the process; and
- It was pointed out that using data bases that are out of date would have meant that Hydro Tasmania may have missed data or information in the review stage. Because no specific on ground assessments were done up front specific land values may not have been identified.

4. Social and Technical Studies

This report so far consolidates the outcomes of Stage 2, the stakeholder consultation process for the Mersey-Forth Water Management Review. The final aspect of the consultation process is the identification of proposed social and technical studies to investigate the issues that have been raised by stakeholders. It is planned that these studies will commence in Stage 3: Technical and Social Studies.

The feedback from the consultation process was the primary input into the development of the technical and social studies. The proposed suite of studies addresses the values, issues and suggested management options raised by stakeholders in the Mersey-Forth catchments. The majority of the studies will be undertaken over the next one to three years in collaboration with key stakeholders.

The proposed Technical and Social Studies are:

1. Maintaining and Improving Recreational Management in the Mersey-Forth Catchments;
2. Recreational Releases;
3. Dissemination of Flow and Water Level Information;
4. Water Level Management at Lake Gairdner;
5. Lake Barrington Erosion Study;
6. Sign Improvement;
7. Pests and Pathogens Management in the Mersey-Forth Catchments;
8. Mersey River Water Quality Assessment;
9. Mersey-Forth Aboriginal Heritage Study;
10. Land Rehabilitation at Lake Mackenzie;
11. Wilmot River Condition Assessment;
12. Acid Drainage Investigation;
13. Fish Migration in the Mersey-Forth Catchments; and
14. Mersey and Forth Rivers Flood Evacuation Plans.

The aims, rationale and objectives of each study are provided below. Table 4.1 identifies the aims, proposed collaborating parties and benefits for each of the studies.

A representation of the social and technical studies across the Mersey-Forth catchments is shown in Figure 4-1.

4.1 Maintaining and Improving Recreational Management in the Mersey-Forth Catchments

Aim: To implement Hydro Tasmania's Recreational Management Framework (Appendix D) in the Mersey–Forth catchments and work collaboratively with agencies, user groups and the community to provide sustainable recreational outcomes on Hydro Tasmania's land and water assets.

Rationale and Objectives:

Hydro Tasmania owns and manages land and water assets that provide significant recreational opportunities in the Mersey-Forth catchments.

To effectively manage the multiple uses of the land and waterways Hydro Tasmania intends to address the following objectives:

- To clarify the role and responsibility of Hydro Tasmania as it relates to recreation opportunity, provision and management within the Mersey-Forth catchments;
- To further develop the connection between the Tasmanian community and the State's renewable energy resources given the diversity of natural and cultural values on Hydro Tasmania's land and water assets;
- To manage Hydro Tasmania's land and water assets with the aim of providing sustainable recreational experiences; and
- To promote environmental stewardship that supports sustainable use and management through improved awareness, education, collaboration and appropriate recreational use.

4.2 Recreational Releases

Aim: To review current processes associated with Hydro Tasmania's recreational releases throughout the State and identify opportunities for improvement.

Rationale and Objectives:

Where possible, Hydro Tasmania currently accommodates requests from sporting clubs, schools and events to provide water flows on specific rivers. Stakeholders have highlighted the need for improved communication, information on flow releases, and optimisation and notification of recreational releases.

The objectives of the project are to:

- Review current recreational release processes for canoeing and kayaking;
- Identify improvement opportunities within the existing recreational release process;
- Liaise with kayaking and canoeing groups to advise of proposed processes and seek comments and understanding; and
- Trial the new recreational release procedures.

4.3 Dissemination of Flow and Water Level Information

Aim: To provide additional water level, flow and rainfall information on Hydro Tasmania's web site.

Rationale and Objective:

Hydro Tasmania monitors water level and flow, and rainfall at a number of locations in its catchments. Previously limited information has been available online. Stakeholders have requested that additional information be made available.

The objective of the project is to provide more water level and flow, and rainfall information that can be easily accessible and interpreted by stakeholders.

4.4 Water Level Management at Lake Gairdner

Aim: To investigate opportunities to address stakeholder concerns relating to water level management at Lake Gairdner.

Rationale and Objectives:

Stakeholders have concerns regarding low lake levels at Lake Gairdner, particularly during the summer holiday period, which impacts on recreational use of the lake.

The objectives of the study are to:

- Investigate operational flexibility of Lake Gairdner;
- Engage with stakeholders to determine their requirements and to raise awareness of Hydro Tasmania's operational requirements, limitations and risks associated with water level management in Lake Gairdner; and
- Determine and implement appropriate management actions to address stakeholder concerns where appropriate.

4.5 Lake Barrington Erosion Study

Aim: To investigate the causes and extent of erosion in Lake Barrington and potential management options, in order to inform collaborative management of erosion at high priority sites.

Rationale and Objectives:

Erosion has been identified as a concern at sites of high use. This can impact on recreational infrastructure and public investments, and on Hydro Tasmania's operations.

The objectives of the study are to:

- Identify the nature and extent of the erosion problem occurring at Lake Barrington;
- Identify methods for managing or mitigating the impact of erosion at high use sites and areas of significant concern;
- Discuss with stakeholders shared approaches to managing the impacts of erosion on recreational use at Lake Barrington; and
- Implement mitigation measures at high priority sites as appropriate.

4.6 Sign Improvement

Aim: To implement new signage in the Mersey-Forth catchments to enhance the social, cultural and environmental values of the region.

Rationale and Objectives:

Stakeholders raised concern about lack of safety and interpretative signage in the Mersey-Forth catchments. In addition, vandalism and lack of interpretative signs diminishes the benefit that can be gained from updated and informative signs.

The objectives of the project are to:

- Upgrade existing Hydro Tasmania signs where necessary;
- Evaluate existing signs for safety and access;
- Develop new signs for key sites where there are no signs; and
- Provide a clear and consistent theme and presentation style throughout the Mersey-Forth catchments.

4.7 Pests and Pathogens Management in the Mersey-Forth Catchments

Aim: To provide information and hygiene training to assist in preventing the introduction and spread of freshwater pests and pathogens into the waterways of the Mersey-Forth catchments.

Rationale and Objectives:

Hydro Tasmania has been working collaboratively with Government departments and other organisations to increase awareness amongst Tasmanian and international stakeholders about the threat of didymo and other freshwater pests and pathogens that have the potential of being introduced, or spread, into Tasmania's waterways. This is being achieved through the development and distribution of awareness materials and field hygiene protocols, undertaking training programs, and implementation of field hygiene infrastructure.

The objectives of the project are to:

- Work collaboratively with NRM South, Quarantine Tasmania, IFS and DPIPWE in the dissemination of existing awareness information to stakeholders;
- In conjunction with NRM South, train land and water management agencies and recreational user groups in field hygiene protocols, and encourage these groups to take ownership and incorporate these protocols into their work procedures; and
- Build a mobile wash down unit that will be used as a wash down facility and awareness raising tool at recreational events and during field/construction related activities.

4.8 Mersey River Water Quality Assessment

Aim: The aim of the Mersey River water quality assessment project is for Hydro Tasmania to participate in a collaborative approach to monitor and assess water quality conditions in the lower Mersey River.

Rationale and Objective:

Stakeholders in the lower Mersey River have highlighted deteriorating water quality in the river as having negative consequences on recreational and tourist activities, and on the environment.

Hydro Tasmania will collaborate with the EPA, DPIPWE, Councils, Latrobe Landcare Group and Mersey NRM, as considered to be appropriate, to monitor and assess water quality in the lower Mersey River.

4.9 Mersey-Forth Aboriginal Heritage Study

Aim: To gain better understanding of Aboriginal heritage values on Hydro Tasmania owned and managed land and water in the Mersey-Forth catchments, and investigate management requirements.

Rationale and Objectives:

Hydro Tasmania is the manager of significant areas of land that have Aboriginal heritage values. Hydro Tasmania's Cultural Heritage Program provides an opportunity for a more proactive approach to understanding these values.

The objectives of the study will be to:

- Collaborate with the Aboriginal community to gain a better understanding of the heritage values on Hydro Tasmania owned and managed land in the Mersey-Forth catchments;
- Facilitate an improved understanding of Aboriginal heritage values by Hydro Tasmania staff;
- Provide opportunities to work collaboratively with the land management and heritage programs being developed by the Aboriginal community and Hydro Tasmania;
- "Ground truth" the Hydro Tasmania Aboriginal heritage predictive model; and
- Trial the approach in management of Aboriginal heritage values being proposed in new legislation.

4.10 Lake Rehabilitation at Lake Mackenzie

Aim: To determine the potential scope of works, requirements and feasibility of rehabilitating land disturbed during construction of the dam and other infrastructure in the vicinity of Lake Mackenzie.

Rationale and Objectives:

Within the Tasmanian Wilderness World Heritage Area (TWWHA) there are areas of land on Hydro Tasmania vested land in the vicinity of Lake Mackenzie that have remained bare since the vegetation was removed and the ground disturbed during the construction of the dam and associated infrastructure. This bare land is subject to sheet and rill erosion by the actions of wind, rain and ice, and can provide potential sites for the establishment of weeds.

The objectives of this project are to:

- Identify the needs for maintaining areas of bare ground for operational reasons;
- Evaluate the requirements for rehabilitation of these areas to promote revegetation by local native plant communities; and
- Undertake rehabilitation as considered appropriate.

4.11 Wilmot River Condition Assessment

Aim: To assess the feasibility of a downstream flow from Lake Gairdner and determine the environmental benefit(s) to the condition of the Wilmot River.

Rationale and Objectives:

The Wilmot Dam on Lake Gairdner and the diversion of water from the upper Wilmot River into the Forth catchment have resulted in reduced or no flows in the Wilmot River downstream of the dam. Only the largest high flow events pass over the dam as spill. Stakeholders have concerns about the poor condition of the Wilmot River and low or no flows experienced in summer.

The objectives of the study are to:

- Determine the environmental and social benefit, operational feasibility and economic cost of establishing a downstream flow for the Wilmot River;
- If considered environmentally and socially beneficial, operationally feasible and economically acceptable to Hydro Tasmania, set specific downstream flow objectives from the environmental, social and economic values relevant to the Wilmot River;
- Evaluate if the maximum flow release from the Wilmot Dam can meet the specific downstream flow objectives;
- If appropriate, implement the downstream flow; and
- Establish a monitoring program to determine if the flow meets the set objectives.

4.12 Fish Migration in the Mersey-Forth Catchments

Aim: To investigate options to facilitate fish migration and dispersal of native fish species throughout the Mersey-Forth catchments.

Rationale and Objectives:

Dams are barriers to fish migration and Paloona Power Station is a significant barrier to migrating fish species in the Forth River catchment. Fish kills have occurred downstream of the Wilmot Dam.

The objectives of this project are to:

- Assess the Wilmot River downstream of Wilmot Dam and the Forth River downstream of Paloona Dam to monitor the extent and location of accumulations of migrating fish; and
- Assess the potential to develop effective mitigation options for mortality reduction and to facilitate fish passage at Wilmot and Paloona Dams, if considered appropriate.

4.13 Acid Drainage Investigation

Aim: To improve Hydro Tasmania's understandings of whether acid drainage is affecting the environment in which we operate in the Mersey-Forth catchments.

Rationale and Objectives:

Surface waters in parts of the Mersey-Forth catchments are known to be impacted by acid drainage from geological deposits and abandoned mines. Historically, there have been fish kills reported in this region to which acid drainage may have contributed.

The objectives of the project will be to:

- Identify site(s) in the Mersey Forth catchments where acid drainage impacts may affect or be exacerbated by Hydro Tasmania's operations; and
- Identify and recommend management options for any problems identified.

4.14 Mersey and Forth River Flood Evacuation Plans

Aim: To collaborate with local Councils to further develop and operationalise flood evacuation plans for the Forth and Mersey Rivers.

Rationale and Objective:

Flooding in the Wilmot River has caused significant loss of property and is a potential safety risk to recreational users. Flood survey information for the Forth and Mersey Rivers, provided by Hydro Tasmania and Entura, has proven to be of value to Councils and has assisted in planning decisions.

The objective of the project will be:

- In collaboration with the Councils use the available flood survey information to develop and operationalise flood evacuation plans for the Forth and Mersey Rivers, as considered necessary and appropriate.

Table 4.1: Mersey-Forth social and technical studies identifying the project name and aims, proposed collaborating parties and benefits

Study Name - Aims	Proposed Collaborating Parties	Benefits
Maintaining and Improving Recreational Management in the Mersey-Forth Catchments To implement Hydro Tasmania's Recreational Management Framework and work collaboratively with agencies, user groups and the community to provide sustainable recreational outcomes on Hydro Tasmania's land and water assets.	Sport and Recreation Tasmania (Department of Economic Development Tourism and Arts), Tasmanian Parks and Wildlife Service (PWS), Forestry Tasmania, Kentish Council, Tasmania Rowing Tasmania, Ski Clubs of Tasmania, Canoe Tasmania, Inland Fisheries Service (IFS), Anglers Alliance Tasmania (AAT) and other stakeholders.	• Achieve partnerships and collaborative management opportunities with other agencies, user groups and the community; to improve the management of recreational activities; and • Increased environmental stewardship that supports sustainable use and management through improved awareness, education, collaboration and appropriate recreational use.
Recreational Releases To review current processes associated with Hydro Tasmania's recreational releases throughout the State and identify opportunities for improvement.	Canoe Tasmania and stakeholders.	• Improve processes for receiving, managing and approving requests for recreational water releases. • Optimise stakeholder use of recreational water.
Dissemination of Flow and Water Level Information To provide water level, flow and rainfall information on Hydro Tasmania's web site.		• Better dissemination of Hydro Tasmania information to stakeholders via Hydro Tasmania's web site. • Optimise stakeholder use of recreational waters.
Water Level Management at Lake Gairdner Investigate opportunities for addressing stakeholder concerns relating to water level management in Lake Gairdner.	Lake Gairdner stakeholders.	• Investigate opportunities to improve water level management operations that impact on recreational use of the lake particularly during the summer holiday period.
Lake Barrington Erosion Study To investigate the causes and extent of erosion in Lake Barrington and potential management options, in order to inform collaborative management of erosion at high priority sites.	Sport and Recreation Tasmania, PWS, Forestry Tasmania, Kentish Council, Rowing Tasmania, Ski Clubs of Tasmania, Canoe Tasmania, AAT and other stakeholders.	• Better understanding of the extent of erosion and mechanisms that cause erosion at Lake Barrington; and • Improve collaboration in the management of erosion.
Sign Improvement To implement new signage in the Mersey-Forth catchments to enhance the social, cultural and environmental values of the region.	Key stakeholders.	• Historical signs upgraded to provide interpretative information to stakeholders on Hydro Tasmania operations, environmental/cultural heritage values and recreational activities; and • Signage for safety and access purposes to be evaluated and improved.
Pests and Pathogens Management in the Mersey-Forth Catchments To provide information and hygiene training to assist in preventing the introduction and spread of freshwater pests and pathogens into the waterways of the Mersey-Forth catchments.	Department of Primary Industries, Parks, Water and Environment (DPIPWE), NRM, Quarantine Tasmania, IFS and recreational users.	• Increased awareness of the risk of pest and disease transfer through training and distribution of awareness information.
Mersey River Water Quality Assessment To participate in a collaborative approach to monitor and assess water quality conditions in the lower Mersey River.	Environmental Protection Authority (EPA), DPIPWE, Kentish Council, Latrobe Council, Devonport Council, Mersey Natural Resources Management (Mersey NRM), Latrobe Landcare and stakeholders.	• Water quality conditions investigated. • Roles and responsibilities clarified and management actions undertaken as appropriate.
Mersey-Forth Aboriginal Heritage Study To gain better understanding of Aboriginal heritage values on Hydro Tasmania owned and managed land and water in the Mersey-Forth catchments, and investigate management requirements.	Tasmanian Aboriginal Centre (TAC), Six Rivers Aboriginal Corporation, Tasmanian Aboriginal Land and Sea Council (TALSC), and Aboriginal Heritage Tasmania (AHT).	• Improve understanding of Aboriginal heritage values on Hydro Tasmania land within the Mersey-Forth catchments; and • Better understanding of future management requirements.
Land Rehabilitation at Lake Mackenzie To determine the scope of works, requirements and feasibility of rehabilitating land disturbed during construction of the dam, and other infrastructure in the vicinity of Lake Mackenzie.	PWS.	• Rehabilitate disturbed land within the Tasmanian Wilderness World Heritage Area (TWWHA) if identified as being necessary and appropriate; and • Improve skills and methods in undertaking this work in alpine areas.
Wilmot River Condition Assessment To assess the feasibility of a downstream flow from Lake Gairdner and determine the environmental benefit(s) to the condition of the Wilmot River.	DPIPWE, Entura and stakeholders.	• Potential enhancement of environmental values in the Wilmot River, if feasible and appropriate.
Acid Drainage Investigation To improve Hydro Tasmania's understandings of whether acid drainage is affecting the environment in which Hydro Tasmania.	DPIPWE and Entura.	• To understand if Hydro Tasmania's operations play a role in the transport of acid waters in the catchments and if so to identify potential management options.
Fish Migration in the Mersey-Forth Catchments To investigate options to facilitate fish migration and dispersal of native fish species throughout the Mersey-Forth catchments.	IFS and Entura.	• Assess opportunities to facilitate the dispersal of native fish species into the upper Mersey-Forth catchments and into the TWWHA; and • Extend the existing fish migration program in Hydro Tasmania waterways.
Mersey and Forth River Flood Evacuation Plans To collaborate with local Councils to further develop and operationalise flood evacuation plans for the Forth and Mersey Rivers.	Central Coast, Kentish, Latrobe, Meander Valley and Devonport Councils and Entura.	• Collaborate with Councils in developing operational plans for protection of the community in event of floods.

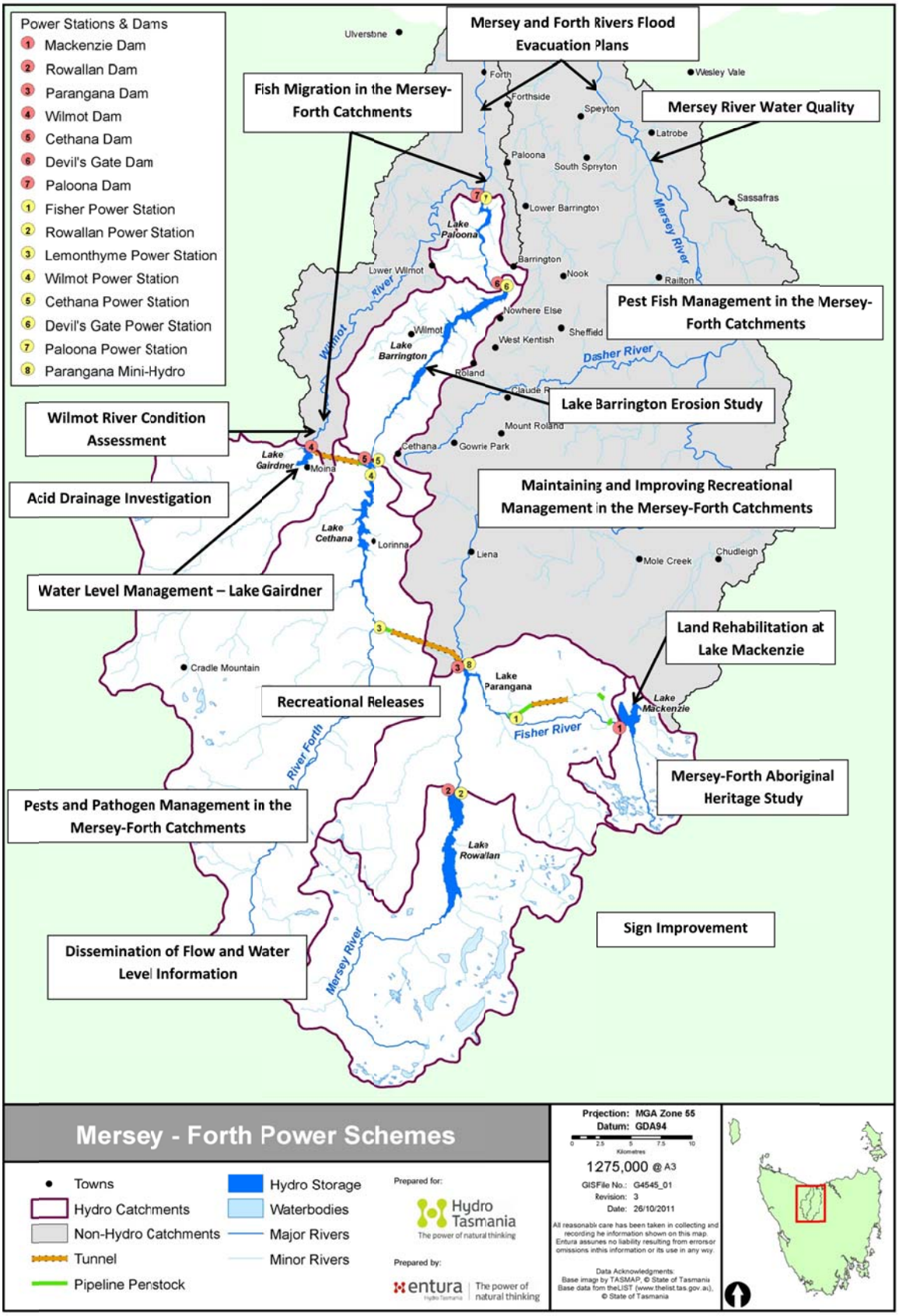


Figure.4.1: Representation of the social and technical studies in the Mersey-Forth catchments

5. Contact Information

The stakeholder survey identified that people would like contact information regarding some issues of concern. Current contact details are provided below.

5.1 Safety In and Around Waterways

Marine and Safety Tasmania (MAST) asks all boat owners or crew to report any unruly activity or unsafe practises they see in and around the waterways of the Mersey-Forth catchments. Calls can be made in the first instance to the Police Switchboard on 131 444, via text to MAST on 0418 145 439 or by email to admin@mast.tas.gov.au.

5.2 Flood Warnings

Flood Warnings and Alerts

The Bureau of Meteorology (BoM) provides a flood warning service for Tasmanian rivers. The Bureau delivers this service through its Flood Warning Centre and Regional Forecasting Centre based in Hobart. The warnings they provide are used by the Police, State Emergency Service (SES), and local authorities to plan their emergency responses. It is important that there is a single source of information during a potential flood emergency. Mixed messages can lead to confusion, unnecessary damage to property and lives being lost.

Hydro Tasmania assists BoM with their forecasting by providing the data that we collect.

Where to get BoM Flood Warnings

The BoM issues *River Alerts* to the general public via a fax, sms or email whenever a designated rain or river station exceeds a 'threshold condition'. This service is mainly for farmers, industry and Councils within the floodplain, adjacent to rivers, who may need to shift, modify or protect valuable assets (irrigators, stock, pumps, fences and other equipment). A *River Alert* is not a guarantee of flooding just an advisory that certain conditions have been exceeded. More detailed *Flood Warnings* are sent to the media and agencies that have an emergency management responsibility such as SES/Tasmanian Police. Warnings are also posted on the Bureau website. More information on the flood warning services provided by the Bureau of Meteorology is available at:

http://www.bom.gov.au/water/floods/floodWarningServices.shtml

The Tasmanian flood warnings are available at:

http://www.bom.gov.au/tas/warnings/index.shtml

For further information on how Hydro Tasmania assists BoM and what Hydro Tasmania can do to decrease the size of a flood please see:

http://www.hydro.com.au/about-us/whats-about

5.3 Water Quality and Environmental Issues

The Environmental Protection Authority (EPA) is Tasmania's environmental regulator.

The EPA's purpose "is to regulate developments and activities that may impact on environmental quality and to promote best practice, sustainable environmental management." (http://epa.tas.gov.au/epa/about-us)

The EPA can be contacted at http://epa.tas.gov.au/epa or at the EPA Incident Response Number 1800 005 171.

Contact details for the EPA Compliance and Regional Support - Environmental Operations Officers in North Western Tasmania are:

- Rosemary Cross: Senior Environmental Officer

  (03) 6429 8764, Rosemary.Cross@environment.tas.gov.au
- Chris Fabian, Environmental Technical Officer

  (03) 6429 8763, Chris.Fabian@environment.tas.gov.au

5.4 Rubbish Management

The MF WMR stakeholder survey results showed that rubbish management is a concern for people in the Mersey-Forth catchments and you can do your bit to help. Littering is an offence and is regulated by the Environment Protection Authority.

If you observe littering you can report it to the Look Who's Littering online reporting system http://epa.tas.gov.au/regulation/report-littering or

phone the Litter Hotline on 1300 135 513.

5.5 Responsible Angling Guidelines

Responsible angling guidelines are available at:

http://www.ifs.tas.gov.au/ifs/goingfishing/angling-code-2011-12/IFS%20Code%202011-12%20web%20version.pdf/view

5.6 Hydro Tasmania

Information regarding Hydro Tasmania's operations and activities can be obtained at: http://www.hydro.com.au/about-us/contact-us

Address:	Hydro Tasmania 4 Elizabeth Street Hobart Tasmania 7000
Post:	GPO Box 355, Hobart, Tasmania 7001, Australia
Call:	1300 360 441 (Australia-wide, local call cost) +61 3 6271 6221 (International) Fax: +61 3 6230 5823
Email:	contactus@hydro.com.au

6. Summary

This Mersey-Forth Water Management Review Stakeholder Consultation Report consolidates the findings of survey responses received from 153 stakeholders and over 60 one on one meetings and telephone conversations. The aim of the consultation process was to understand the value people place on the waterways, the issues they may have, and to assess the impact of Hydro Tasmania's current water and land management activities on social, environmental and economic conditions in the Mersey-Forth catchments.

The message is clear. Waterways in the Mersey-Forth are highly valued for a wide range of recreational activities including fishing, rowing, canoeing, water skiing, walking, camping and boating. The waterways aesthetic and environmental characteristics, as well as irrigation and water use are also highly valued.

Stakeholders identified a range of issues, some applicable across the Mersey-Forth catchments and others issues that are waterway specific. Feedback received from the survey was further discussed with key stakeholders who provided more detail on issues of concern.

As a result of the feedback Hydro Tasmania and collaborating parties have identified social or technical studies to address the issues. These studies cover a wide range of initiatives from collaborating with other agencies to achieve more sustainable recreational planning and management outcomes, to gaining a better understanding of Aboriginal heritage values and associated management requirements in the Mersey-Forth catchments. Provision of information and improving processes to provide recreational water releases are expected to greatly assist recreational water users. A number of environmental projects, including an assessment of erosion at Lake Barrington and an investigation into whether or not a downstream flow in the Wilmot River will improve its overall condition, have been identified.

The commissioning of the social and technical studies to investigate identified issues, or to assess the feasibility of mitigation opportunities and management options, will now be initiated as part of Stage 3: Technical Studies of the water management review process. The majority of the studies will be undertaken in collaboration with key stakeholders over the next one to three years, depending on the complexity of the issues.

The findings of the social and technical studies will lead to the development of a program of commitments to improve Hydro Tasmania's management of its water and land activities in the Mersey-Forth catchments. This will form Stage 4: Program Development and Implementation of the water management review process. Priorities, benefits and costs, and actions identified for implementation will be consolidated into a Mersey-Forth Water Management Review Summary Report.

Hydro Tasmania intends to provide stakeholders with feedback on the status of the studies through stakeholder participation processes established for each study, via newsletters and on Hydro Tasmania's website at www.hydro.com.au/MFWMR/.

Hydro Tasmania would like to thank all the people and organisations who have contributed to the stakeholder consultation process. We look forward to working with many of you in Stage3 of the Mersey-Forth Water Management Review.

7. References

Department of Primary Industries, Water and Environment 2005, *Mersey Water Management Plan*, DPIWE, Hobart, Tasmania, viewed 17 June 2012.

<http://www.dpiw.tas.gov.au/inter.nsf/WebPages/JMUY-6GM3WP?open>

Hydro Tasmania 2011, *Mersey-Forth Water Management Review*, Hydro Tasmania, Hobart Tasmania, viewed 17 June 2012.

<http://www.hydro.com.au/environment/water-management-reviews/mersey-forth>

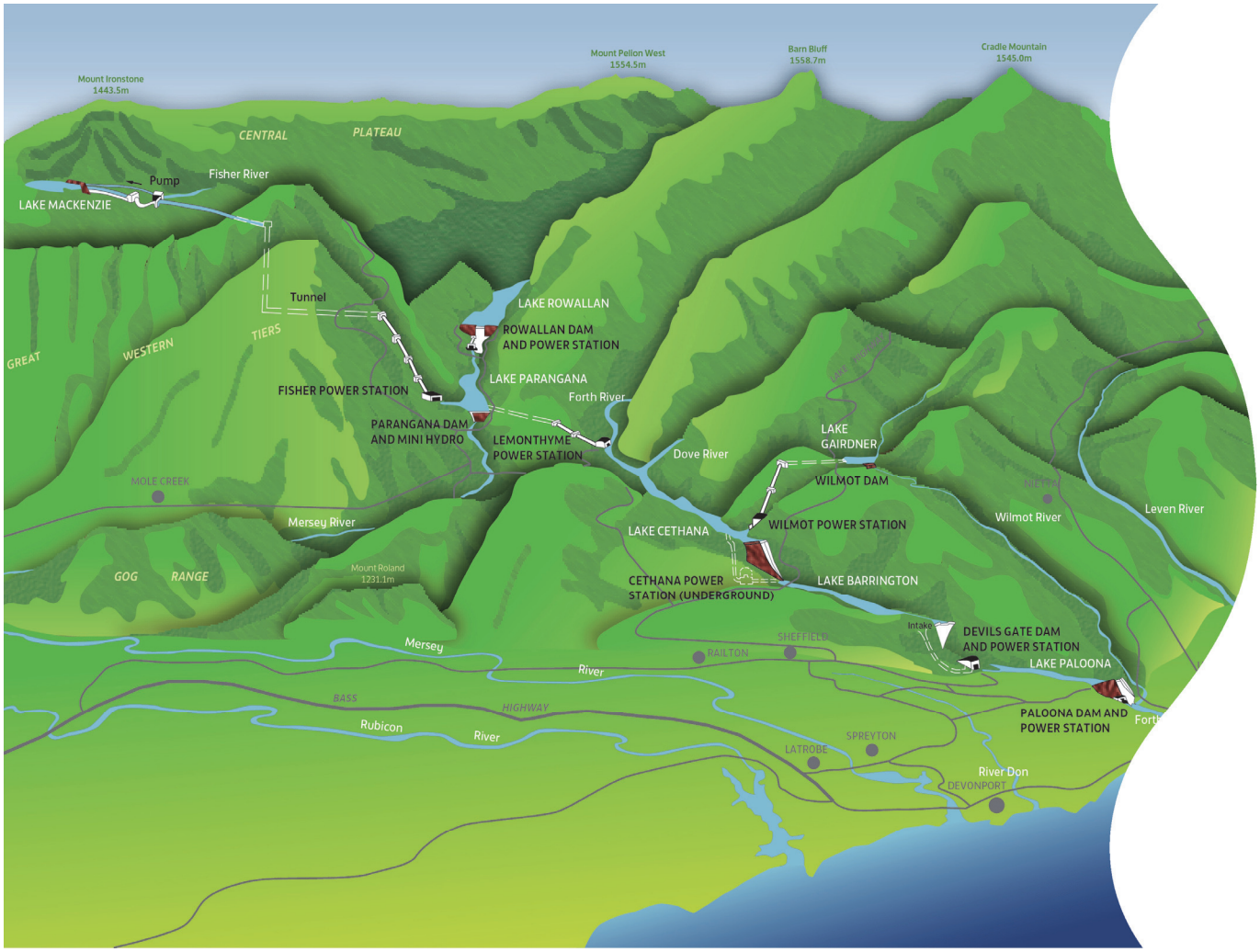
Inspiring Place Pty Ltd 2012, *Recreation Management Framework*, Rosny Park, Tasmania. Report prepared for Hydro Tasmania.

Appendices

Appendix A: Mersey-Forth Stakeholder Survey

Mersey-Forth Water Management Review

Stakeholder Consultation Survey



Hydro Tasmania is undertaking a Water Management Review process in the Mersey and Forth River catchments to assess Hydro Tasmania's water and land management practices. You have received this survey as you, or the organisation you represent, have been identified as a stakeholder who may be interested in participating in the Water Management Review process.

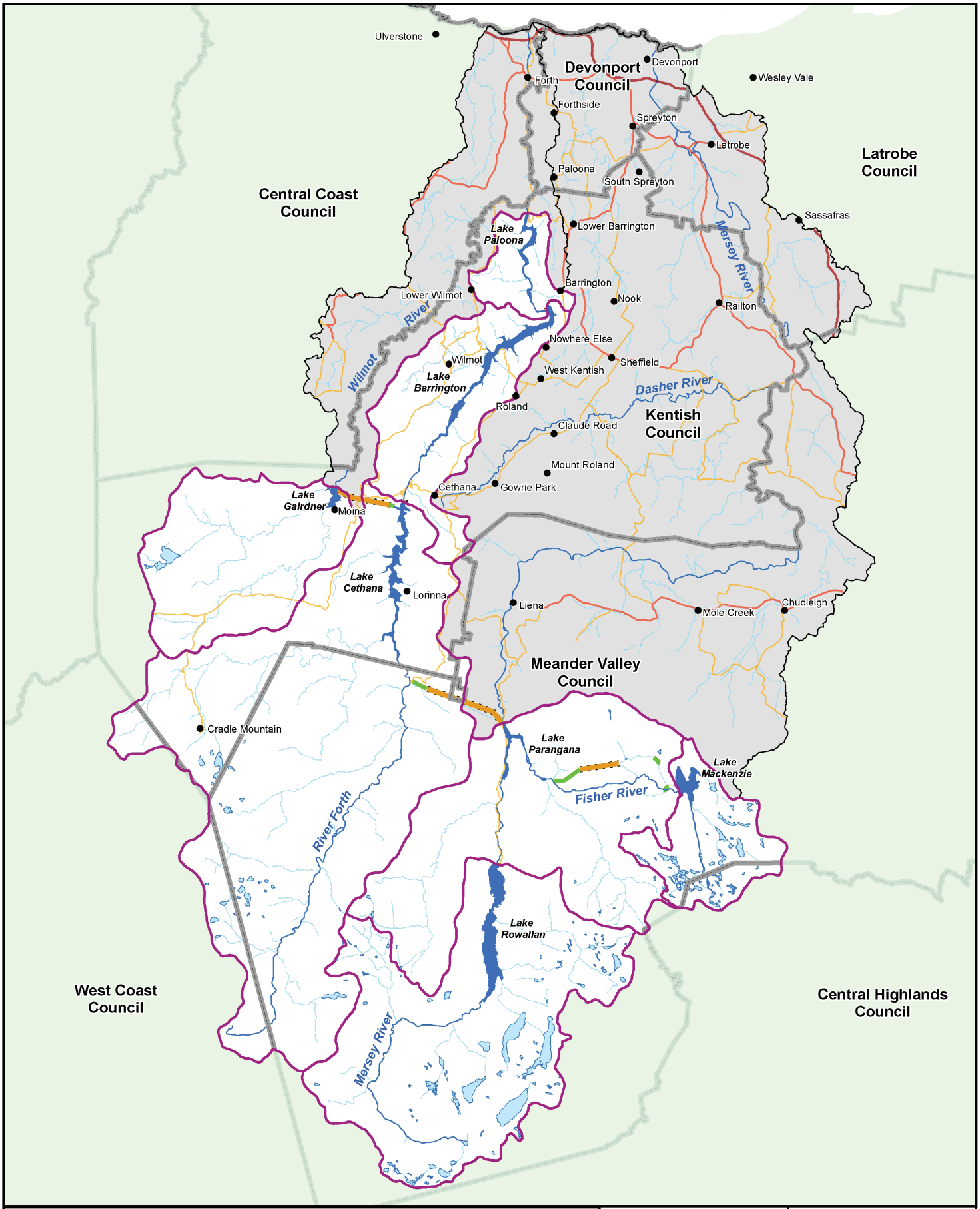
Your participation is appreciated as it will provide us with a greater understanding of community values and concerns about the waterways that are influenced by hydropower operations. Your feedback will help us prioritise issues that require further investigation.

Your responses will be treated as confidential.

Please provide responses to the survey questions below and mail, in the reply paid envelope, by 15 December 2011.

Or you can find the survey online at:

www.hydro.com.au/MFWMR/



Mersey - Forth
Local Government Boundaries

- Towns
- Hydro Catchments
- Hydro Storage
- Non-Hydro Waterbody
- Major Rivers
- National/State Highway
- Major Arterial Road
- Arterial Road
- Pipeline Penstock
- Tunnel
- Minor Rivers

Prepared for:

Hydro Tasmania
The power of natural thinking

Prepared by:

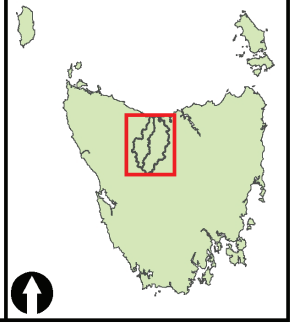
entura Hydro Tasmania | The power of natural thinking

Projection: MGA Zone 55
Datum: GDA94

0 2.5 5 7.5 10
Kilometres

1:275,000 @ A3

GIS File No.: G4545_04
Revision: 2
Date: 26/10/2011



Hydro Tasmania's Mersey-Forth Water Management Review

Survey Questions

1. What is your (or your organisation's) involvement in the Mersey-Forth catchments? Please select all that apply.

- [ ] I live in the area
- [ ] I am a local Landowner
- [ ] I work for State and/or Local Government
- [ ] I am involved and/or interested in the Forestry industry
- [ ] I am involved and/or interested in the Agricultural industry
- [ ] I am involved and/or interested in Manufacturing
- [ ] I am involved and/or interested in Mining
- [ ] I am involved and/or interested in Retail
- [ ] I am involved and/or interested in Tourism
- [ ] I use the area for recreation/sport/leisure/cultural/spiritual reasons
- [ ] I am a member of a local Community Group. Please state which group below

Other (please specify).

Hydro Tasmania's Mersey-Forth Water Management Review

2. We are interested in understanding which waterway(s) in the Mersey-Forth catchments are of greatest importance to you and what you value about them. From the matrix below please select the value(s) that corresponds to each waterway. You can select multiple combinations.

	Lake Mackenzie	Lake Rowallan	Lake Parangana	Lake Gairdner	Lake Cethana	Lake Barrington	Lake Paloona	Mersey River	Forth River	Fisher River	Wilmot River
Commercial/industrial water	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Irrigation	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Drinking water	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
General water use	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Stock drinking water	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Human consumption of aquatic foods	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Fishing	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Camping	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Boating	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Rowing	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Canoeing	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Skiing	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Walking	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Bird watching	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Aesthetics	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Cultural/spiritual values	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Aquatic ecosystems	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Biodiversity	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Land conservation	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Other. Please specify the waterway(s) and value(s).

Hydro Tasmania's Mersey-Forth Water Management Review

3. Do you have any issues about the waterways in the Mersey-Forth catchments? From the matrix below please select the issue(s) that corresponds to each waterway. You can select multiple combinations.

	Lake Mackenzie	Lake Rowallan	Lake Parangana	Lake Gairdner	Lake Cethana	Lake Barrington	Lake Paloona	Mersey River	Forth River	Fisher River	Wilmot River
Water level management	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Water flow	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Access to water	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Safety	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Water quality	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Erosion	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Flora and fauna	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Illegal structures	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Boat ramps	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Signage	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Rubbish management	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Septic/toilets	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Other waterways. Please specify the waterway(s) and the issue(s).

Hydro Tasmania's Mersey-Forth Water Management Review

4. Please provide information on how you think the issue(s) selected from Question 3 should be addressed or better managed. Please indicate which waterway(s) the issue (s) is associated with.

Hydro Tasmania's Mersey-Forth Water Management Review

5. Do you have any other feedback about Hydro Tasmania's performance in managing the waterways in the Mersey-Forth catchments?

Hydro Tasmania's Mersey-Forth Water Management Review

6. How would you like to be involved in the Mersey-Forth Water Management Review? Please indicate your interest in a box below.

☐ Yes, I would like to be involved in the Water Management Review process. Please provide your contact details - go to the next question.

☐ No, I do not want to be involved or kept informed.

☐ I would like to be kept informed of the Water Management Review process. Please keep me on the mailing list. Please provide your contact details - go to the next question.

7. Please complete your contact details should you like to remain involved in the Mersey-Forth Water Management Review process.

Title	
Name	
Occupation	
Organisation	
Postal address	
State	
Phone	
Mobile	
Email address	
Property address	

Hydro Tasmania's Mersey-Forth Water Management Review

Thank you

Thank you for your time and consideration in completing this survey.

For further information on the Mersey-Forth Water Management Review please refer to Hydro Tasmania's Mersey-Forth Water Management Review Report. The report can be accessed online at: www.hydro.com.au/MFWMR/

For a hard copy of the report please contact the:

Mersey-Forth Water Management Review Team

Hydro Tasmania

Post: GPO Box 355, Hobart, Tasmania 7001, Australia

Email: merseyforth@hydro.com.au

Call: 03 6230 5254 (Alison Howman)

Appendix B: Key Stakeholders Consulted in the Mersey-Forth Water Management Review Consultation Process

- State Departments
  - Department of Primary Industries Parks Wildlife and Environment (DPIPWE):
    - Environment Protection Authority (EPA);
    - Inland Fisheries Services (IFS);
    - Parks and Wildlife Service (PWS);
    - Aboriginal Heritage Tasmania (AHT);
    - Heritage Tasmania;
    - Water and Marine Resources Division; and
    - Resource Management and Conservation Division.
  - Department of Health and Human Services (DHHS):
    - Environmental Health, Public and Environmental Health Service.
  - Department of Economic Development Tourism and Arts (DEDTA):
    - Sport and Recreation Tasmania.
  - Marine and Safety Tasmania (MAST).

- Cradle Coast Authority.
- Local Councils:
  - Kentish Council;
  - Latrobe Council;
  - Central Coast Council;
  - Meander Valley Council; and
  - Devonport City Council.
- Forestry Tasmania.
- Water Authorities:
  - Cradle Mountain Water; and
  - Ben Lomond Water.
- Natural Resource Management (NRM):
  - Mersey NRM;
  - Cradle Coast NRM; and
  - NRM North.
- Recreational Groups:
  - Canoe Tasmania;
  - Anglers Alliance Tasmania (AAT);
  - Kentish Aquatic Club;
  - Rowing Tasmania;
  - Horsehead Ski Club;
  - Trout Territory; and
  - Tasmanian Outdoor Education Teachers Association.
- Aboriginal Heritage Organisations:
  - Tasmanian Aboriginal Land and Sea Council (TALSC);
  - Tasmanian Aboriginal Centre Inc. (TAC); and
  - Six Rivers Aboriginal Corporation.
- Environment Organisations:
  - Tasmanian Conservation Trust (TCT); and
  - Environment Tasmania.
- Agriculture and Irrigators Associations:
  - Tasmanian Farmers and Graziers Association (TFGA);

  - Mersey Irrigators; and
  - Tasmania Irrigation.

- Businesses:
  - Axeman's Hall of Fame; and
  - Harvest Moon.

- Land Care Groups:
  - Latrobe Landcare Group Inc.;
  - Mersey Estuary Group;
  - Mersey River Landcare;
  - Mount Roland Rivercare Catchment Inc.; and
  - North West Environment Centre.

- Other:
  - Inland Fisheries Advisory Council (IFAC); and
  - Tasmania Heritage Council.

- Private Individuals

Appendix C: Mersey-Forth Water Management Review April 2012 Newsletter

Mersey-Forth Water Management Review

Newsletter

Issue #1 – April 2012

Andrew Scanlon Manager Sustainability and Safety, Hon. Bryan Green Minister for Energy and Resources, Alison Howman Aquatic Environment Program Manager and Andrew Catchpole Director Corporate Services at the launch in Sheffield.

Minister launches Review

Hydro Tasmania's Mersey-Forth Water Management Review was officially launched by Minister for Energy and Resources the Hon. Bryan Green in November 2011. Approximately 40 stakeholder representatives attended the launch as well as Hydro Tasmania management and staff.

The Mersey-Forth Water Management Review is the third water management review to be undertaken by Hydro Tasmania, following the Derwent and South Esk–Great Lake catchments. The review aims to assess current water and land management activities with regard to social, cultural and environmental expectations of the community.

The Mersey-Forth Water Management Review has four stages: Information Review; Stakeholder Consultation; Social and Technical Studies; and Program Development.

The Information Review has been completed and the Mersey-Forth Water Management Review Report has been made available on the Hydro Tasmania website. Hard copies can be requested from the project team.

The Stakeholder Consultation process is currently underway. A survey has been distributed to stakeholders via post and made available online. All stakeholders were encouraged to fill out the survey and identify values and issues for waterways in the catchments. The survey closed in December 2011 and the results are currently being evaluated. Summary results are provided on the next page.

THANK YOU TO ALL STAKEHOLDERS

We are grateful to all those stakeholders who have filled out surveys and provided feedback as part of the Mersey-Forth Water Management Review. We mailed out 753 surveys and advertised the survey via email and public notices. We've received 153 responses – that's a good 20% of the original mail-out. This feedback is invaluable in helping us prioritise issues for further investigation. Stay tuned...

Lake Mackenzie
Lake Rowallan
Lake Parangana
Lake Barrington
Lake Gairdner
Lake Paloona
Mersey River
Forth River
Wilmot River
Fisher River

Contact Us:

Alison Howman or
Simon Gartenstein

Mersey-Forth Water Management Review Project Team

merseyforth@hydro.com.au

1300 360 441

http://www.hydro.com.au/environment/water-management-reviews/mersey-forth

Hydro Tasmania
The power of natural thinking

What you said

People who responded to the survey provided insights into community values, issues and management options for waterways influenced by Hydro Tasmania's power operations in the Mersey and Forth catchments.

The survey results highlighted that local residents, as well as visitors to the area, greatly value the waterways in the Mersey and Forth catchments. The Mersey River received the highest number of responses, followed by Lake Barrington. However, all waterways were well-represented (Figure 1).

The rivers and lakes are used and valued for recreational, environmental, domestic, agricultural and commercial purposes. Fishing; on-water sports rowing, canoeing and skiing; aquatic ecosystems and land conservation, received a high number of responses in the survey and were found to be key values for all waterways (Figure 2).

The major issues identified included water quality, rubbish management, flora and fauna, water level management, access to water, water flow and erosion. These issues also consistently showed as being the high priority for many individual waterways (Figure 3).

Additional discussions

In addition to the survey Hydro Tasmania has held meetings and discussions with over 50 key stakeholders. These meetings have further clarified the issues that emerged from the survey. It was great to meet with stakeholder groups face-to-face and discuss issues in more depth.

Figure 1

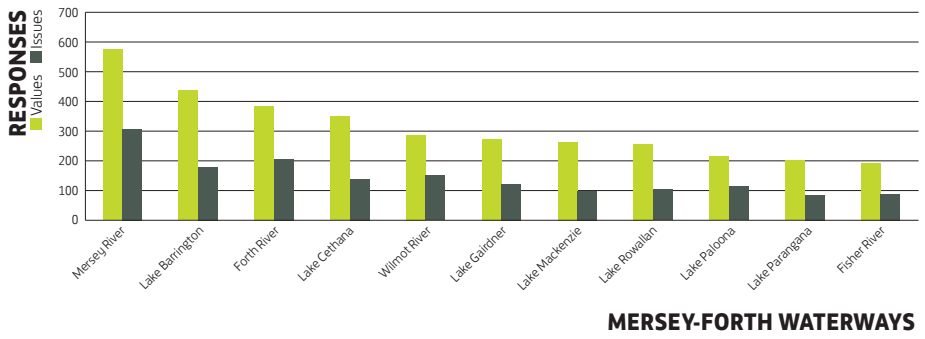


Figure 2

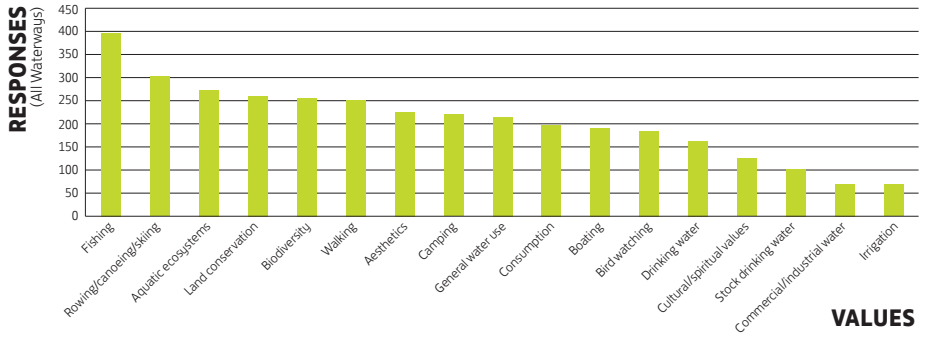
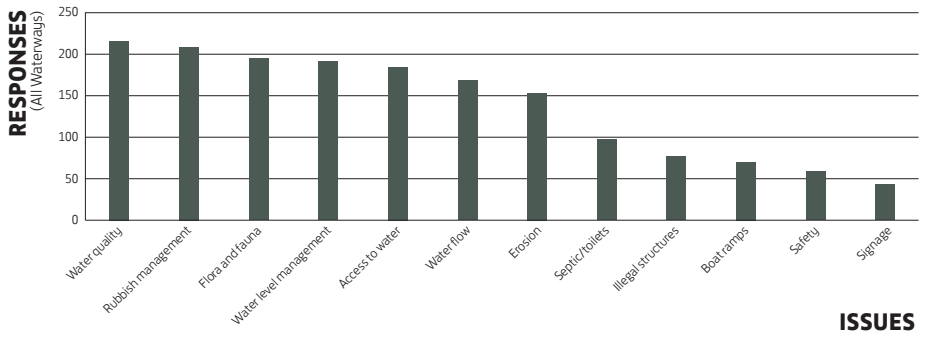


Figure 3



Right: Michael Bidwell Land Management Officer and Kentish Councillors Annie Willcock and Bart Wisse at Lorinna

The way forward

The large number of stakeholders who responded to the survey and have given us feedback has been very encouraging and has provided an information base for us to start from.

This feedback is integral to the next stage of the review. The issues you have identified are currently being assessed and prioritised for further study in Stage 3 of the Water Management Review. We will be proposing a number of social and technical studies to look into the priority issues and we will discuss these with key stakeholders.

Hydro Tasmania is seriously considering those issues that, as a hydropower generator, it is responsible for. We are also holding discussions with key stakeholders to consider issues that require a broader collaborative approach with other organisations, not only Hydro Tasmania.

Information on the social and technical studies, and more detail on the survey results overall, will be provided in a stakeholder consultation report which will be available in June 2012.

As we move forward with the Mersey-Forth Water Management Review, we will keep you informed.

Appendix D: Hydro Tasmania's Recreational Management Framework

Hydro Tasmania group

Recreation principles

For nearly 100 years we have been working with nature to generate power. We have pioneered in remote and beautiful parts of Tasmania, and along the way we have helped connect remote communities throughout the state. In 'the construction years' we created spaces for recreation and provided ways for people to get there.

We are the largest water manager in Australia and we know that our hydropower operations impact people beyond power generation.

That's why we have developed our recreation principles – to work with the public, community groups and other recreation providers, so our focus can be on generating renewable energy and yours can be enjoying Tasmania's wide open spaces.

Our recreation vision statement:

Hydro Tasmania will endeavour to effectively manage recreational opportunities on our land and water bodies. We will continue to develop and participate in collaborative management partnerships with stakeholders including government land managers, local councils, recreational clubs, community groups and private businesses. We will work cooperatively with our neighbours to limit impacts on surrounding land uses and activities.

Recreational Management Principles

Hydro Tasmania has adopted the following five recreational management principles to guide the planning, development and management of recreation opportunities on its land and water bodies.

Operational safety and security

Hydro Tasmania aims to manage recreational sites, infrastructure and services in line with asset safety and security protection using contemporary standards and practices for health risk and public safety.

Environmental management

Hydro Tasmania aims to manage recreational use to protect and enhance bio-diversity, water quality and environmental services with consideration to the predicted impacts of climate change. Other considerations will include the protection of our cultural heritage including social, aesthetic landscape and historic values.

Access to multiple-use recreational opportunities

Hydro Tasmania aims to provide access to a diversity of public recreational activities on our land and water bodies that are compatible with our operations and community needs. Recreational opportunities and facilities will endeavour to cater for a range of user groups and the public benefit in general.

Community engagement and support

Hydro Tasmania will continue to communicate and engage with stakeholders about access, use and management of our recreational assets. We will ensure that there is open communication with user groups.

Economic benefits

Hydro Tasmania recognises the connection between access to and use of our recreation assets in the provision of benefits to local and regional economies. Wherever possible we will also promote private investment in appropriate recreation opportunities.

Sustainability at Hydro Tasmania

For Hydro Tasmania, being sustainable involves the application of economic, social and environmental considerations to business decisions and activities. Hydro Tasmania believes that these considerations will help drive long-term business success and allow successive generations to enjoy the benefits of a clean energy future.

For further information on how we apply our sustainability code to our business please see www.hydro.com.au/sustainability.

Signed by Roy Adair CEO

Hydro Tasmania

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