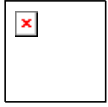


Corangamite Catchment
Management Authority

Community Consultation Report

March 2003



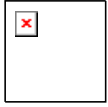
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Appendices

- A Advertisements
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1. Introduction

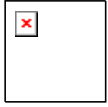
The CCMA has commissioned GHD to undertake a review of the Woody Yaloak and Lough Calvert Drainage Schemes. These schemes drain waters from the Woody Yaloak Creek and Lake Colac respectively. There has already been a large amount of consideration given to the effects of these schemes on users at various stages.

It is our understanding that there has been a large amount of debate, some heated, within the community. The aim of this community consultation is to provide the community and stakeholders with an opportunity to have input into the Schemes Review, to discuss the operation of the Schemes at length and, if possible, reach consensus on the contents of a future Management Plan.

The approved Consultation Methodology is detailed in the previous report "Community Consultation Methodology" (GHD Dec 2002) and includes:

- ▶ initial direct mail contact to institutional stakeholders,
- ▶ newspaper advertisements,
- ▶ newspaper articles (by CCMA),
- ▶ public and institutional stakeholder Questionnaire/Flier,
- ▶ landholder interviews,
- ▶ issues workshops,
- ▶ options workshops, and
- ▶ a seminar on the final draft Plan.

Detail of the Communications Methodology in regards to elements such as numbers of interviews and workshops have been reviewed in consultation with the Project Steering Committee as the study progressed. The outcomes as at the 12th of March are detailed below. It should be noted that since the collation and assessment of information occurred, additional questionnaire responses have been received. Nevertheless all stakeholder interviews have been completed and are reported below.



2. Methodology

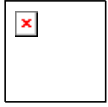
2.1 Identification of Stakeholders

A range of stakeholders were identified in the Project brief. These included:

- ▶ CCMA I C Committees,
- ▶ Lough Calvert DS Advisory Committee,
- ▶ Woody Yaloak DS Advisory Committee,
- ▶ Adjoining landholders to Lake Colac, Lake Corangamite, and the diversion schemes,
- ▶ Lake Colac Management Committee,
- ▶ Colac Otway Shire,
- ▶ Corangamite Shire,
- ▶ City of Greater Geelong,
- ▶ Golden Plains Shire,
- ▶ Surfcoast Shire,
- ▶ Friends of Lake Colac,
- ▶ Recreational Users,
- ▶ Lake Corangamite Management Committee,
- ▶ Landowners adjacent to the Barwon River, river diverters, river users,
- ▶ Water Quality watchers (Barwon River Users Group, Geelong Environment Council),
- ▶ Indigenous Communities,
- ▶ EPA Victoria,
- ▶ Parks Victoria and DMRE, and
- ▶ Field and Game Association.

2.2 Advertisements

Advertisements were placed in the newspapers and newsletters nominated by the CCMA, on mutually agreed dates. Copies of the advertisements are attached in Appendix A. The response to the advertisements was minimal with a total of 3 people responding to the initial regional papers. A further eleven people responded in the following week when the regional newsletter advertisements and some newspaper articles were released. However, it should be noted that at the same time, it is understood that fliers had been placed in local venues such as the local post offices, and in the CCMA front office. As some of the responses in the second week of advertising were completed on fliers, it is likely that the availability of the fliers increased the level of interest.



2.3 Introductory Letter

The CCMA undertook to utilise its existing databases to develop a mailing list for organisational stakeholders and individuals. Sixty nine organisations were sent the letter developed by GHD. The list of organisations contacted and a copy of the introductory letter is attached in Appendix B. It is notable that of the 69 organisations identified, only 15 responded. A further 6 organisations that had not been approached by the CCMA also responded. These groups had heard about the review by word of mouth. They are:

- ▶ The Colac Rate Payers Association,
- ▶ Tirrengower Drainage Scheme,
- ▶ Friends of Buddy Creek,
- ▶ Geelong Rod and Gun Association,
- ▶ Save the Barwon Group, and
- ▶ Stoney Rises Land Care Group.

2.4 Questionnaire/Flier

In addition to the letters to organisations, more than 200 individuals not known to belong to any particular interest group were sent an introductory letter and a flier (Appendix C). As mentioned above, fliers were also placed in public locations by the CCMA.

The flier became the first point of contact for many people. All responders included both their name and phone number, which enabled the consultation staff to return the contact. In addition, people marked the location of their properties, enabling the consultation team to consider interview groupings prior to contacting individuals.

2.5 Responses

The responses are detailed in Table 2.1 below. In addition, Figure 1 shows the rate of response over time. It should be noted that a number of people requested that their names be kept confidential. To facilitate this, no names will be given in this report.

It is notable that the level of response built with time. Whilst it is undeniable that the letters to individuals ensured a broad coverage, it appears that the multiple forms of advertising the review engendered a significant level of community interest. It is also notable that of those responding 25 did not receive a personal invitation from the CCMA, but heard of the fliers by word of mouth.

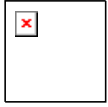
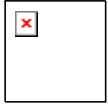


Table 1: Responses to Advertising

Initial Form of Contact	How they heard about the Review	No Responding
Phone Call	Advertisements in Regional Papers	3
Phone Call	Advertisements in Local Papers and Articles in Newspapers	6
Phone Calls	Flier – but did not return Flier	3
Flier	Flier Distribution	61
Attended Interview at Request of Neighbours	Word of Mouth, fliers, advertisements.	33
Email	Flier Distribution – Predominantly organisations	6
	TOTAL	112



3. Pre-Interview Responses

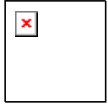
3.1 Questionnaire Result Summary

In addition to the Interviews conducted by GHD, most people who returned a flier completed the questionnaire that it contained. It should be noted that the questionnaire is extremely limited and only represents a snapshot of some people's views. There was no attempt to ensure that the distribution was either comprehensive or random. Responders were self selecting from a biased group made up of people who were known to the CCMA from their rating system and other sources, and organisations known to the CCMA. Individuals with whom the CCMA had had no contact and people residing along the western shores of Lake Corangamite were not directly contacted. It is also acknowledged that a questionnaire can only be as good as the literary skills of the respondents. Some people noted in the interviews and in the questionnaire responses that they prefer verbal communication. Notwithstanding these criticisms, the outcome of the questionnaire review is detailed in Appendix C. A summary is as follows:

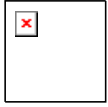
The majority of people who nominated the Lough Calvert Scheme as being of interest to them were people who live along the schemes, Lake Colac, the Birregurra Creek and the Barwon below Inverleigh. In relation to these 24 respondents 33% indicated that flood mitigation was a benefit of the scheme and 29.2% nominated salinity in the Barwon River as a disadvantage. It was found that 62.5% wanted to see some changes to the scheme's operation, however the perceived traditional stances of either closing the scheme down altogether and increasing or maintaining its current operation received little support (12.5% and 8.3% respectively.) The strongest results were 37.5% of people who made no recommendation, and a further 37.5% who made various recommendations for various changes in the operation or maintenance of the scheme.

The respondents nominating the Woody Yaloak Scheme as being their primary interest were residents around Lake Corangamite, the Cundare Pool, the Warrambine and the Barwon above Inverleigh. Of the 20 respondents 65% nominated flood mitigation as an advantage. 80% stated that there was no disadvantage or made no comment to that question, only 10% recognised increases in salinity in the Barwon as a disadvantage. 55% wanted no changes to be made to the scheme and 70% had no recommended action. The 30% of responders who wanted to see changes to the schemes varied in their responses, with only one person recommending that the scheme closing down.

Those people who nominated both schemes of interest were predominantly those people who live along the Barwon, especially upstream of Inverleigh, and organisations. 17 people from this group responded, with 35.3% noting flood mitigation as the main advantage of the schemes. 52.2% noted some form of salinity effects as the main disadvantages of the schemes. 70.5% want to see changes to the schemes – none supported keeping the systems as they are. Nevertheless 29.4% nominated closing the schemes as being their preferred future option. A further 23.5% made no comment with a further 35.3% recommending changes to the operating rules or maintenance.



The conclusion of the questionnaire then is that geography makes a difference. Those people living within the catchment support changes to the operating rules, with higher levels of support to closing the scheme from those living outside the catchment area. Nevertheless, the majority opinion from all community sectors was to alter the operating rules. There is no consensus on what changes are needed and how they would be implemented.

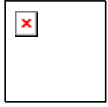


4. Stage 1 – Land Holder Interviews

4.1 Interview Results Summary

The interviews are summarised in Appendix D. As mentioned above, some interviewees requested confidentiality, therefore, individual names have not been listed. This information will be provided to the CCMA in a confidential document. The following is a summary of the issues as they emerged:

- Salinity in the Barwon reducing irrigator's access to the water,
- Erosion in the Birregurra,
- Habitat loss in the Birregurra and the Barwon,
- Flood mitigation along the loughs, around Lake Corangamite and Lake Murdeduke,
- Erosion on the north eastern shores of Lake Colac,
- Slow recovery times for formerly flooded lands,
- Eel fishing lost,
- Salinity in the Cundare Pool impacting the habitat,
- Increased land salinity south of the Cundare Pool due to its height,
- Salinity in Lake Corangamite resulting in habitat loss,
- Erosion between Lake Gnarpurt,
- Increased inflows into both Lake Colac and Lake Corangamite,
- Nutrient loads in inflows for both Lake Colac and Lake Corangamite,
- Salinity in the loughs and lack of preventative action, and
- Political and legal avenues for further protest, depending on review outcomes.



5. Future Stages

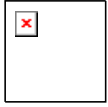
5.1 Stage 2 – Issues, Values, Threats Workshop

These workshops will be held to develop a common understanding of the issues so that discussion in relation to the options in the second workshops are being argued from a common premise. It is anticipated that the Issues workshops will be held prior to Easter. Firm dates will be confirmed following the securing of venues. As approximately seventy invitations will be issued for each of the workshops it has been agreed that a second workshop for each of the schemes will be held (resulting in a total of four issues workshops and four options workshops.) The two issues workshops relating to the Lough Calvert Scheme will be conducted on the same day. The first will be held at 11.00 am in the morning, and the second at 7.00 pm in the evening. Where possible, people's preferences for attendance times will be considered.

The format of the issues workshops will include the gradual introduction of more and more controversial issues as the night progresses. In addition, people will alternate between two groups. One group will consist of a people from differing backgrounds and opinions. The second group will be made up of people with similar opinions. These groups will alternate to provide the opportunity to discuss issues between and within community sectors. The benefit of holding two workshops for each scheme is that people with known personal animosity will be assigned to different workshops to minimise hostility.

The likely format of the workshops is described below. It should be noted that the formal "Assets At Risk" procedure used by the CCMA in the past will not be employed, however, an identification of the issues, values and threats will be undertaken, and a prioritising system will be applied to these. The times given relate to the evening workshop.

7.00 pm	Welcome by Don Forsythe or other nominated CCMA representative
7.10 pm	Introduction to workshops by Christine Grundy or Paul Priebbenow
7.20 pm	Break into randomly selected small groups to discuss water, soil and salt movements as they are understood
7.35 pm	Develop common understanding of the systems
7.55 pm	Break into like minded groups to discuss the economic and social issues associated with the system – who earns their livelihoods, who has to pay costs for repairs as a result of the system, the role of tourism, and the local commercial and retail industries, who pays for maintenance currently, what happens if changes to the schemes are made. Formulate a list of values and threats.
8.15 pm	Report on outcomes – develop agreed understanding of economic and social issues.
8.40 pm	Fifteen Minute break



- 8.55 pm Break into randomly selected small groups to discuss environmental effects – on loughs, rivers, creeks, lakes and farming land. Develop a list of values and threats.
- 9.15 pm Report on outcomes – develop agreed understanding of effects.
- 9.35 pm Break into like minded groups to rank issues
- 10.0 pm Finish – Tea and Bickies and Wind Down Time

It should be noted that this is a very tight timetable. It is likely that the workshop will run over, however, it is our intention to have a maximum finish time for the formal proceedings half an hour after the nominated finish time. The GHD staff will be available for a further half an hour of wind down time with participants. This will result in a timetable as follows:

- 10.00 am Arrive at venue for set up and preliminary meeting with CCMA staff
- 11.00 am Commence workshop
- 2.30 pm Finish formal proceedings of workshop
- 3.00 pm GHD staff leave building
- 3.30 pm Arrive at Colac office of CCMA for debrief/issues collation
- 4.30 pm Break for meal
- 6.15 pm Return to Cressy/Winchelsea
- 6.45 pm Arrive at venue for second workshop
- 7.00 pm Commence workshop
- 10.30 pm Finish formal proceedings of workshop
- 11.00 pm GHD staff leave building

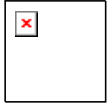
It is understood that the CCMA will provide facilitators for the workshops, in addition to the GHD staff. The 10 am briefing will provide the opportunity to develop a common understanding of the workshop aims and the opportunity to discuss roles, and techniques.

5.2 Stage 3 – Options Workshop

Following the Issues Workshops GHD and the CCMA will summarise and analyse the workshop outcomes. The technical team will also progress analysis of likely options to address the issues. Following this analysis a series of options workshops will be held.

It is anticipated that ideas for options will be floated during the previous Issues workshops. These will be noted on a display sheet, for consideration in the second workshop.

It is envisaged that the Options Workshop will be designed following an internal review of the first workshops. This review will discuss the emerging issues and community recommended options as well as the success of the workshop design.

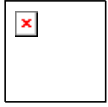


5.3 Stage 4 – Final Seminar

This will be held following the production, and approval by CCMA's Steering Committee, of the final Draft Management Plan. It will present the report findings to those who have participated in any form during the life of the consultation. The modelling team will provide their recommendations and the likely implications this has for the community.

The Seminar will mark the beginning of a public/stakeholder comment period for the Draft Management Plan.

This meeting will be chaired by the CCMA and will provide an opportunity for the community to comment on the recommendations of the report in a public setting and submit formal written comments prior to closure of the proposed comments period.

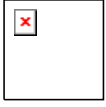


6. Conclusions

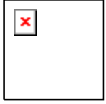
The commencement of the community consultation is marked by two features.

The first is that there has been very strong community interest, far beyond the expectations of both the CCMA and GHD.

The second note is that the majority of recommendations from questionnaire responders have been of alteration to the operational rules rather than the possible extremes of keeping the scheme going as is or closing it down. The interviews have also featured groups of people who are interested in discussing changes to the scheme. There remain some groups of people who are determined to have their plan implemented and it is possible that either legal or political action may result from the review. Nevertheless, these people are interested in attending the workshops, which have the stated aims of sharing views and discussing possibilities.



Appendix A
Advertisements



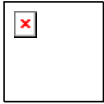
Appendix B

Organisational Stakeholders

Letter of Introduction

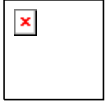
List of Organisations

Approached



Organisations Contacted:

Barongarook Landcare Group	Greening Australia
Barrabool Hills Landcare Group	Lake Colac Management Committee
Barwon Rivercare Group	Lake Colac Rowing Club Inc.
Barwon Water	Lake Corangamite Management Committee
Birregurra Creek Land Protection Group	Lakes & Craters Environment Group
City of Greater Geelong	Landcare Australia
Colac Anglers Club	Lismore Landcare Group
Colac College Landcare Group	Lough Calvert Advisory Committee
Colac Field & Game Association	MAFRI
Colac Otway Shire	Nalangil Basins Protection Group
Colac Water Ski Club	NRE-Arthur Rylah Institute
Colac Yacht Club	Parks Victoria
Corangamite Shire	Pirron Yallock Catchment Group
Cundare-Duverney Landcare Group	Pittong Hoyles Creek Landcare Group
Deakin University	Policy, Victorian Farmers Federation
Department of NRE	SALM
DOI	Southern Rural Water
Earth Tech Consulting P/L	Surf Coast Shire
East Otway Land Protection Group	Sustainable Agriculture and Land Management Committee
Elingamite Cobrico Landcare Group	Tie and Try Fly Fishing Club Inc.
Elliminyt PS Landcare Group	Trust for Nature
Environment Protection Authority	Upper Barwon Landcare Network
Environment Victoria	VFF Farm Trees & Landcare Association
Environs Australia	Warrambine Landcare Ed Centre
Framlingham Aboriginal Trust	Warrion-Dreeite Landcare
Friends of Deans Creek	Waterway Management Implementation Committee
Friends of Lake Colac	Wathaurong Aboriginal Cooperative
Friends of Queens Park	Wauthaurong Aboriginal Cooperative



Geelong and District Angling Club

Geelong Canoe Club

Geelong Environment Council

Geelong Field Naturalists Club

Geelong Water-ski Club

Gnarput Rabbit Control Group

Golden Plains Shire

Weering-Eurack Land Protection Group

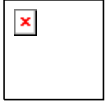
Werneth Landcare Group

Winchelsea Angling Club

WMIC

Woody Yaloak Catchment Group Inc.

Wurdale Landcare Group



Appendix C
Questionnaire

Copy of Flier
Questionnaire Results



CCMA INVITES COMMUNITY PARTICIPATION IN DRAINAGE SCHEME REVIEW

Woody Yaloak and Lough Calvert Schemes Being Reviewed

The Corangamite Catchment Management Authority (CCMA) would like the assistance of landowners, downstream users and other interested parties to conduct a review of the operations of the Lake Corangamite – Woody Yaloak Diversion Scheme and the Lake Colac – Lough Calvert Drainage Scheme.

In 1999 the CCMA took over the management of these drainage schemes. The joint Commonwealth/ State Government initiative (National Action Plan for Salinity and Water Quality) has funded this study and provides an opportunity to gain further funds to implement any recommended Management Plan for the schemes.

The Authority has engaged GHD Pty Ltd to undertake a review of these Drainage Schemes with the following objective:

To review the current operation and maintenance of the drainage schemes and develop a Management Plan that has a balanced consideration of sustainable water regimes, biodiversity, economic, and stakeholder values and aspirations.

The most important part of this project is understanding the various perspectives of the community. It is of primary concern to the CCMA and to GHD that important stakeholders such as the local land owners, people interested in the local water quality and any one else effected by the drainage scheme are fully involved in the process.

There are a number of ways individuals and groups can get involved. For those whose property abuts the scheme, or are directly affected by the schemes and for committees and interest group that have a specific interest in the drainage schemes small group interviews will be held. Depending on how many people are interested, it is likely that these will be held locally in groups of less than 10.

Following the interviews, a series of workshops will be held to discuss the current operations of the drainage schemes and agree on recommendations on the future operation of the scheme. These recommendations will be submitted to the CCMA.

There will be a 3 hour workshop for each of the drainage schemes in February and March 2003 to be held in Winchelsea and

Cressy. The feedback from that workshop will be used by the consultants to guide their work. Workshop participants will then be invited to a second meeting to discuss the preliminary findings.

Those wanting to attend an interview and/or the workshops should fill in the relevant section of the attached form and return that to Christine Grundy at the address or email as soon as you can.

For those not interested in meeting with the consultants face to face or attending workshops, but still want to receive regular newsletters on how the Study is progressing, please tick only that box on the form attached. Anyone with an interest in the schemes is urged to return the completed form to GHD at the address given below. You are encouraged to attach additional information if there is not enough room on the form for your view.

The CCMA and GHD look forward to meeting you, hearing your views, and assisting the CCMA in the development of a Plan for these Drainage Schemes that provides a balanced approach to all interests.

Should you wish to speak with us regarding this or any other matter, please contact Christine Grundy at the following address.

Christine Grundy
GHD Pty Ltd
20 Business Park Drive
Notting Hill

Tel: 03 9558 8333 during business hours
Email: christine_grundy@ghd.com.au

Indication of Level of Interest

Personal Details (Optional)

Name: _____

If you are representing an organisation, please provide a description of its purpose.

I have an interest in the *Lough Calvert Drainage Scheme / Woody Yaloak Diversion Scheme / Both Schemes*
(delete ones as appropriate).

(It will be helpful to us if you indicate the area where you live, or if you are a member of a committee, the area that you have an interest in on the map overleaf)

Organisation Name: _____

Position within the Organisation: _____

Organisation Purpose: _____

I would like to be involved in the review of the regional drainage schemes by

- Completing this form and receive further information by mail
- Participating in the interview
- Participating in the workshops

6.1 Contact Details:

Address: _____

Phone Home: _____ Work: _____ Mobile: _____

E-mail address: _____

We will commence interviews in February. Please indicate when you may be available for interviews and workshops.

Monday	<input type="checkbox"/>	Mornings	<input type="checkbox"/>	Afternoons	<input type="checkbox"/>	Evenings	<input type="checkbox"/>
Tuesday	<input type="checkbox"/>	Mornings	<input type="checkbox"/>	Afternoons	<input type="checkbox"/>	Evenings	<input type="checkbox"/>
Wednesday	<input type="checkbox"/>	Mornings	<input type="checkbox"/>	Afternoons	<input type="checkbox"/>	Evenings	<input type="checkbox"/>
Thursday	<input type="checkbox"/>	Mornings	<input type="checkbox"/>	Afternoons	<input type="checkbox"/>	Evenings	<input type="checkbox"/>
Friday	<input type="checkbox"/>	Mornings	<input type="checkbox"/>	Afternoons	<input type="checkbox"/>	Evenings	<input type="checkbox"/>
Saturday	<input type="checkbox"/>	Mornings	<input type="checkbox"/>	Afternoons	<input type="checkbox"/>	Evenings	<input type="checkbox"/>
Sunday	<input type="checkbox"/>	Mornings	<input type="checkbox"/>	Afternoons	<input type="checkbox"/>	Evenings	<input type="checkbox"/>

Indication of Level of Interest

Note: If you provide your name but don't want it mentioned in the summary documents and reports, please indicate that in the space provided below. CCMA and GHD will be happy to respect that request.

To help us understand the implications of your comments, please mark your location or, if you represent a committee, your area of interest on the attached plan. We'd appreciate you doing this whether or not you have provided your name and address.

The details you provide to this consultation will be used only for the purposes of consultation in relation to the drainage schemes. Following completion of the process, these forms will be destroyed. Access will only be provided to the Corangamite Catchment Management Authority and GHD employees associated with the consultation.

If you do not want your name published in any documents associated with this consultation place a tick in this box:

Questions About Your Views *(Please attach additional sheets if there is insufficient room for your comments.)*

Briefly describe the benefits you see from the operation of the schemes. (This can include flood mitigation, reduced salinity, drainage, aesthetics values): _____

Briefly describe the disadvantages you see as a result of the scheme operating: _____

Do you want to see any changes made to the schemes?

Yes

No

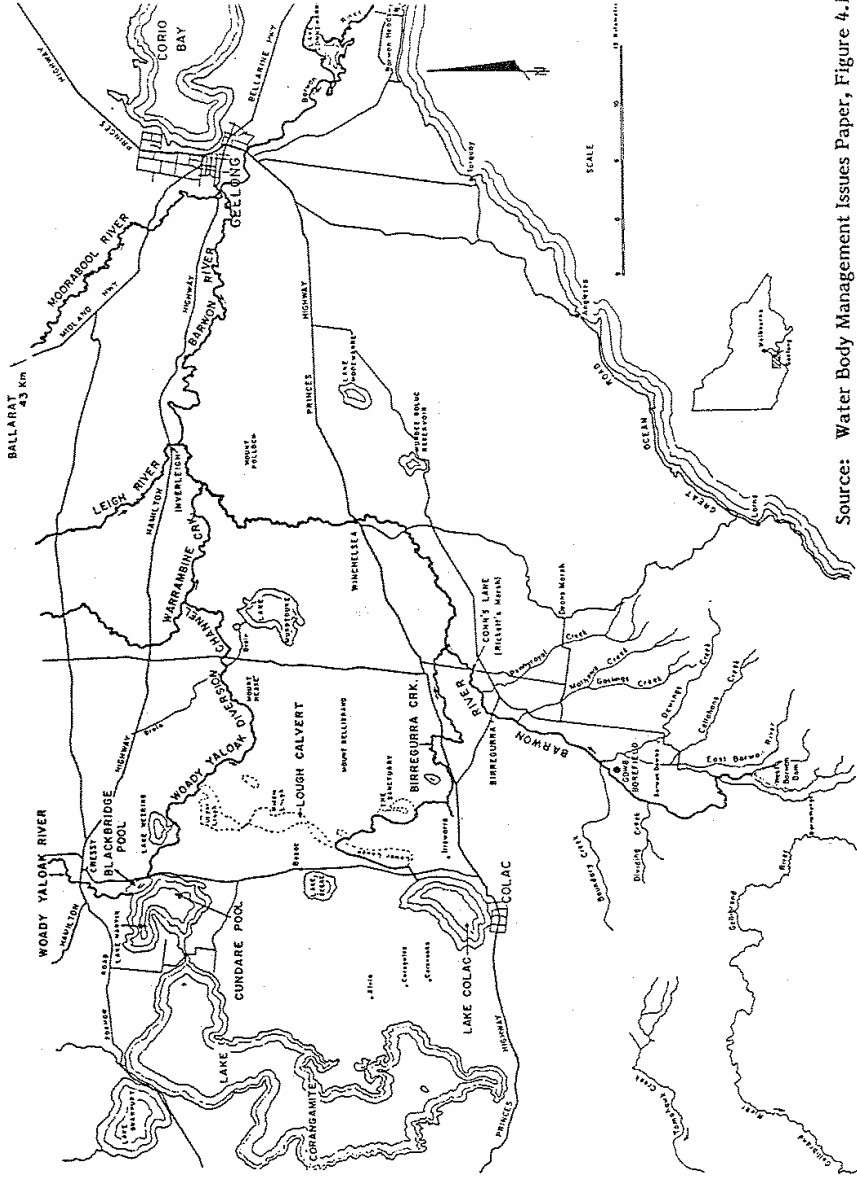
If yes, what are the changes would you like to see made to the schemes and what effect would these changes have? _____

If your recommendations were taken up, do you foresee any disadvantages for others in the catchment? If so, please describe these. _____

Do you have any other comments to make? _____

5.1 LAKE CORANGAMITE AND THE WOODY YALOK DIVERSION SCHEME

Mark the location of your property(s) or your area of interest.



Source: Water Body Management Issues Paper, Figure 4.1

Questionnaire Outcomes

Lough Calvert Scheme

Of the 60 questionnaires returned, 24 responders had an interest in the Lough Calvert Scheme. Those interested in the Lough Calvert Scheme gave the following replies:

Question 1. Briefly describe the benefits you see from the operation of the schemes. (This can include flood mitigation, reduced salinity, drainage, aesthetics values):

Flood Mitigation	8
No Comment	4
Lake Level control	3
Provides erosion control	3
No defined advantages	3
No advantages	2
Facilitates farming practices	2
Operational rules provides salinity controls in the Barwon River	1

Question 2 Briefly describe the disadvantages you see as a result of the scheme operating:

Salinity in the Barwon	7
No comment	7
No Disadvantages	4
Poor maintenance and/or management	4
Lack of consultation with land owners	2
Flooding of Lough Calvert through improper/inadequate use of the Scheme	2
Stagnant Water in the drains	1
Inappropriate assets (eg culverts)	1
Erosion of Creeks	1
Erosion of Lake Colac	1
Loss of habitat in Birregurra Creek/Barwon River	1
Operational Rules prevent its use	1

Question 3 Do you want to see any changes made to the schemes?

Yes	15
No	7
No comment	2

Question 4 and 5: If yes, what are the changes would you like to see made to the schemes and what effect would these changes have? and
 If your recommendations were taken up, do you foresee any disadvantages for others in the catchment?
 If so, please describe these

No comment	9		
Close the Scheme	3	Lough would flood	2
		No disadvantages	1
Less restrictions on the operation of the scheme	2	Would require careful planning	1
		No disadvantages	1
Improve cooperation in management	2	No comment	2
Lower Colac Lake height	2	Lough flooding would result, at least in the short term	1
		Loss of tourism	1
CCMA to take responsibility for damaged property	1	No comment	1
Join the two schemes into one via the Loughs	1	No disadvantages	1
Release more water from Barwon Dam	1	No disadvantages	1
Changes to physical assets	1	No disadvantages	1
Level the bank where dredging has occurred	1	No disadvantages	1

Other Comments:

The drain is a trap for stock, cuts property in half with only one narrow crossing – water only on one side, rough surrounds difficult to control weeds
That the lake has to be addressed. I am not against this per se but I feel we should be (a) compensated for land already lost and (b) protected against future losses

A Birregurra Creek Rehabilitation Plan has been prepared by the group and is available from secretary.
We have frontage to the Barwon River on our property that my husband's family have owned since 1848. Just downstream from the Birregurra Creek – we have vivid memories of an uncontrolled drainage scheme.
It has been many years. Lake Colac has caused problems for all concerned. With a unified approach the Lake will cause joy for all concerned, i.e.: Land owners, Lake users, Local business, tourism, associated employment, the whole community, etc. etc. etc.
The Barwon and Lake/Lough systems are two separate catchments and should be treated as such
Keep in mind History Repeats Itself. Lake Colac will flood again!
The problems of salinity down river from the Birregurra Creek exit of Lough Calvert Scheme may well be addressed by a more diligent policing of diversion policies of local farmers. They pull out heaps when the scheme is not working.
I believe the Lough Calvert Scheme needs more maintenance. Too much high quality water is removed from the Barwon River to supply Geelong – they want their nice fresh water river – but they want to drink it too!
Farm land in our district was totally out of production for 2 years after the 1952 flood and much of it did not return to production for many years after that. This scheme must be maintained to prevent that from happening again.
Please don't let the scheme fall into disrepair or cease to operate
Unjust rating system
Have lived in the Eurack area and have seen the devastation caused by the flooding in the 1950's and have had a lifelong interest and involvement in both drainage schemes.

Woody Yaloak Scheme

20 questionnaires related to the Woody Yaloak Scheme: The views are summarised as follows:

Question 1. Briefly describe the benefits you see from the operation of the schemes. (This can include flood mitigation, reduced salinity, drainage, aesthetics values):

Flood Mitigation	13
No comment	3
Increased farming land	1
Connects an closed system to an open system	1
Don't know	1
Provides a significant wetland in Cundare Pool	1
Fresh water source for the Barwon River	1

Question 2 Briefly describe the disadvantages you see as a result of the scheme operating:

No comment	10
None	6
Increases salinity in Lake Corangamite	2
Costs need to be shared	1
Loss of habitat around Lake Corangamite	1
Closing the scheme would reduce flooding	1
Causes dust storms in dry years	1
Increases the salinity of the Barwon	1
Reduces the natural wetlands	1

Question 3 Do you want to see any changes made to the schemes?

Yes	7
No	11
No comment	2

Question 4 and 5: If yes, what are the changes would you like to see made to the schemes and what effect would these changes have? and
If your recommendations were taken up, do you foresee any disadvantages for others in the catchment?
If so, please describe these

No comment	14	No comment	14
Keep the Cundare Pool salinity levels lower by lowering the barrage control structures	1	Extra water in Lake Corangamite	1
Flush water from Lake Corangamite	1	No comment	1
Separate Lake Martin from Cundare Pool to reduce salinity in Cundare Pool	1	Would increase eel fishing in Cundare Pool	1
Review operating rules	1	No comment	1
Decrease use and increase flows into Lake Corangamite	1	No comment	1

Close system	1	Many disadvantages but can be fixed by time and money	1
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Other comments:

As a Ramsar Treaty site increasing biodiversity in and on and around the Lake will result in a more natural flow of water in and out.	
With lake Corangamite being a terminal lake a flushing system is necessary to alleviate the inflow of impurities from the many man-made drainage systems that flow into the lake.	
This issue directly affects all landholders with lake frontage	
The Woody Yaloak Diversion Scheme must be preserved and maintained in good working order	

Both Schemes

A further 17 responders were concerned with both systems. There comments are reviewed here:

Question 1. Briefly describe the benefits you see from the operation of the schemes. (This can include flood mitigation, reduced salinity, drainage, aesthetics values):

Flood mitigation	6
No comment	4
More land for farmers	2
Wetland creation	2
Control of water quality parameters benefits fishery health	1
No benefits	1
Provision of good quality water for home dam	1
Recreational facilities	1

Question 2 Briefly describe the disadvantages you see as a result of the scheme operating:

River water quality poor	6
Adverse effects on fishery health	2

Habitat loss on river	2
No comment	2
Interference with normal river flows	2
Salinity in the Barwon	2
None	2
Erosion problems in lake Colac	1
Salinity problems due to increased water table	1
Fewer fish in the Barwon River	1
The scheme works like a taxation scheme	1
Loss of natural wetlands	1

Question 3 Do you want to see any changes made to the schemes?

Yes	12
No	0
No comment	4

Question 4 and 5: If yes, what are the changes would you like to see made to the schemes and what effect would these changes have? and
If your recommendations were taken up, do you foresee any disadvantages for others in the catchment?
If so, please describe these

No comment	4		
Restore wetlands on Lake Colac/Lough Calvert	2	No comment	1
		Lessees would loose access to grazing land	1
Close the schemes	2	Loss of income and production for land owners	1
		Compensation for farmers would be required	1
Research towards decommissioning	1	Localised flooding	1
		Damage to assets	1
		Potential for uncontrolled saline	1

		flow through the system	
Removal of salinity prior to release	1	No comment	1
Have the scheme run for at least four weeks every year	1	None	1
Increase inflows into Lakes	1	Landholders disadvantaged in wet years	1
Increased maintenance of Woody Yaloak Scheme is required	1	None	1
Keep the Cundare Pool salinity levels lower by lowering the barrage control structures	1	May need to buy back land around lake Corangamite	1
Stop the flow of salt laden water into the Barwon	1	A few land owners might be short of some land	1
Alternative means	1	Problems may increase at the source	1
Broaden operating rules to include environmental considerations (eg environmental allocation, minimum target water levels)	1	Some reduction in flood mitigation	1

Further comments

Commercial eel fisheries exist at Lake Martin/Cundare Pool, L Colac, L Murdeduke. Sake holders ought to be consulted. Valuable recreational fisheries exist in a number of the effected waterways also. Not to mention other values, e.g.: Ramsar, wildlife, genetic biodiversity
Well done for finally looking at some of the problems in the Barwon River
In the past decisions were made to use the states water courses as drains – we need to have the courage to challenge this perception of the past.
Both drainage schemes drain water from other catchments into the Barwon – this would not happen naturally.
A major “buy back” scheme could result in a Corangamite national park, operating as close as possible to naturally, and possibly without interfering with agricultural production.
Objective must be to balance environmental and flood mitigation values.
Lough Calvert and Lake Corangamite schemes may have more flexibility if some land acquisition occurred around Lower Lough
Healthy well established wetlands will be an effective filter and eventually bring about a much healthier environment in the Lough Calvert region.

Appendix D

Interviews

Commentary On The Issues Raised During The Interviews

Interview Results

Lough Calvert Advisory Committee – 30 January 2003

This group raised the following issues arising from the operation of the scheme:

- ▶ Water is not accessible when it is needed
- ▶ Water quality can decline suddenly
- ▶ Direct effect on transferring watering
- ▶ Water quality of Lake Corangamite esp. in relation to Ramsar listing
- ▶ Barwon degradation and loss of macro invertebrates due to salinity
- ▶ Study shows that only salt tolerant riparian vegetation is surviving in the Warrambine and Birregurra Creeks
- ▶ Irrigators have impaired access to water
- ▶ Drainage should be managed within its own catchment
- ▶ Salt Load on the Barwon is too high
- ▶ Operational rules re salt loads were political decisions
- ▶ Lough system is threatened if scheme doesn't operate
- ▶ Upstream users get an advantage from flood protection and salt transport
- ▶ Piping water to the sea has been considered – a considerable cost
- ▶ Lake Colac provides recreational facility and is aesthetically pleasing by holding the water levels artificially high
- ▶ High levels in Lake Colac causes erosion and therefore loss of riparian vegetation
- ▶ Buy back schemes were offered in the 60's with about 50% up take and should be considered again
- ▶ Land around Lake Corangamite is volcanic plains and the environmental values is therefore higher than more common habitats, could provide justification for increasing compensation to land owners
- ▶ The window of opportunity to take water for irrigation is too small – 2 weeks in winter
- ▶ The ongoing costs of the schemes is considerable and includes maintenance of the drains and the physical assets – becomes greater as assets age
- ▶ The allocation of costs needs to be considered – who pays?
- ▶ Cause and effect of environmental degradation on the Barwon is difficult to assess due to multiple possible causes including the drainage schemes

Wendy Briggs, the Colac Otway Shire representative raised the following issues:

- ▶ Flood water retention is not valued as an environmental service
- ▶ Wetland habitat is destroyed
- ▶ Increased flow velocity at unnatural times
- ▶ Lake Colac levels maintained at unnaturally consistent high water levels which creates bank erosion (particularly eastern bank)

- ▶ Riparian vegetation loss at Lake Colac and downstream from discharges
- ▶ Impacts in recreational values of Lake, Creeks and Rivers

Threats from increased salinity levels

- ▶ Lake Corangamite impacts – EPBC, Ramsar, FFG
- ▶ Wetlands instead of drains and agriculture would have given us a tourism industry like Kakadu

Benefits:

- ▶ Agricultural land protected from “flooding”

Barwon River Irrigators – 23rd February 2003

5 Barwon River Irrigators representing five enterprises were interviewed. Their comments were as follows:

There are 8 – 9 irrigators along the Barwon in that area. The irrigation season starts in early December and would continue through till March if it were possible. The water from the Barwon is pumped into storage dams, when the Barwon water quality is less than 1000 EC. This means that they are largely restricted to winter fill. Some of the irrigators also have town water but this is only for domestic use.

Most of the people along the Barwon are irrigators for lucerne or vegetables, although there are a few stock and domestic users. The water is generally too saline for stock use. Even in sheep, the most salt tolerant stock, it causes the scours in lambs. If the pigs are given water with a salinity above 72 ML a cordial is needed to sweeten the water, causing additional costs.

The drought over the last few years has resulted in continuing salinity in the Barwon – one farmer is only able to use 1/3 of his license due to the salinity. Bore water cannot be used in this area due to the high salinity of the aquifer. However, later in the interview it was noted that since the schemes have not operated in the last few years there has been a significant improvement in the water quality. The fish in the river have improved. There have been no algal blooms and there is evidence of less salt tolerant plants regenerating. Black Fish have been seen in the River for the first time in a long time.

The continuing salinity in the Barwon is in part due to the damming of the Barwon south of the Birregurra. The environmental flows, they believe are insufficient. They also pointed out that the amount of drainage into Lake Corangamite has increased, decreasing the storage.

In addition to the salinity there are concerns about the nutrient load. They have concerns that there is phosphorus loads in Lake Colac that are 22 times the acceptable limits. They believe this is due to the discharge of untreated storm water from processing plants such as the butter factory.

Along the river there has been the loss of some trees. There was some speculation that this could be caused by the interaction between clays and salt water, causing the clays to become more brittle. This in turn means that the soils cannot hold the trees that then collapse into the river. This was not agreed by all parties.

The irrigators would like the Lough Calvert schemes to be closed down for good. They argue that “nature is nature” – if there are floods this is a natural system that the upstream farmers must learn to live with. They pointed out that a lot of the land that will be flooded is Crown land anyway. The irrigators believe that the costs to maintain the drain would be too high for it to be retained for extreme weather events.

If close down is not possible they would like the schemes to be managed by farmers – including the irrigators. If they were allowed to manage the scheme, they would allow a 6 to 8 week shut down during winter to allow for the dams to be filled during winter.

There was also a request that weirs be installed along the Barwon to increase the aeration, to reduce the algal blooms.

Other more radical ideas included pumping the water down to the Gellibrand, and pumping the water from the Lough Calvert Scheme up to the Woody Yaloak – thereby having only a small area of more saline flows before the waters were diluted by the Leigh.

This group do not believe the workshops will be helpful.

Interview with Lake Colac Landowners – 23rd February 2003

These three landowners representing three enterprises emphasised that the purpose of the scheme was to deal with potential floods in the Lough Calvert/Lake Colac areas. They noted that the scheme currently operates on the Johnson rules that may not be relevant today due to the increased influx of waters in Lake Colac. They believe that there is more storm water from additional houses into Lake Colac, and less water in the Barwon due to the damming upstream.

These landowners quoted the current EC in Lake Colac as being 3700EC.

The primary concerns of these landowners were erosion and flood control. The erosion occurs when the water levels are high, and the storage and therefore flood mitigation is also diminished when the level in the lake is high.

Although the Lough Calvert scheme only operates for a part of the year the heavy rains can continue until Christmas. The wave action is controlled by the south westerly winds that drive the waves towards the north east shore, causing significant land loss. The eroded soils are then dumped into the lake, resulting in increasing the height of the Lake bed. The height of the spillway is 117.5m – the landowners feel this is too high. If the Lough Calvert operates, the level of the lake is lowered, so the erosion is minimised. The land owners have begun the construction of rock walls along the lake, however it is not completed and they have not been seriously tested. In some cases these have received shared shire funding. It is noted that there are some publicly funded assets located on private land. There are groins to encourage sand retention, but there was some debate within the group about whether these work.

The landowners are concerned that the water remaining on the loughs results in an increased water table that increases the salinity in the area. In addition, as the waters evaporate, the loughs become salt pans.

John Martin lost 75 acres in the 95 floods, 180 acres in the 1980 floods and 130 acres in the 75 floods. There has been considerable erosion control works undertaken on his land – he has spent \$130,000, and received funding on an approximate dollar for dollar basis. He is reluctant to consider buy back, but if forced to would be holding out for the highest price. He also notes that if forced to sell a part of his land, his land would become unviable, and therefore he would be not prepared to sell only part of it. He would probably leave the area. John Martin is a third generation farmer in this area.

Interview with the Lower Lough Landowners – 23rd February 2003

The four lower lough landowners representing three farms operated as a single enterprise, reiterated the lake Colac landowner's belief that there was an increased inflow into lake Colac from the south – specifically Dean's Creek Catchment and the increase in the sewerage system that empties into the lake. The increased organics places the cattle at risk – they would not allow the cattle to drink from the drainage scheme water.

They believe that the two week shut down of the Lough Calvert Scheme was introduced after the Johnson Review as a result of pressure from the irrigators on the Barwon. They stated that they were not informed of the change until it had already been implemented and feel that this is a common theme. They want the management systems to be more transparent and to have more debates on issues prior to implementation.

During the 91 or 92 floods, when they were experiencing some inundation, the Lough Calvert Drainage Committee representative told them "a little flood is better than a big flood". They interpreted this comment to mean that a flood on their property is unimportant. They lost about 15 acres during the inundation. Although a lot of the land is lough land, this is used for hay growing – so it is regarded by the farmers as being far from worthless.

The Ondit drain will only work if the levels are low enough. It will not work when the levels are too high. The land to the south east of Spear's regulator is flooded when the levels are at 112.40 – at 113 the land south west of Spear's drain is inundated. They land is very flat, so minimal increases in height results in very large losses of land.

There are a number of pipes that drain the Lower Lough into the Scheme channel. The operator was employed to ride along this area and open the pipes as required. Some of the pipes are too high. Conversely pipe 9 is too low, so that it takes in a lot of water from the drain. The lack of maintenance means that the drain gets filled with dust in the dry times, and mud in the wet times. They need to be emptied in order to operate fully. The failure to maintain the schemes properly resulted in them suing the Lough Calvert Drainage Trust – the matter was settled out of court. The costs to their side were approximately \$270,000 – the settlement was less than that.

These people have also fought against a CSR landfill, and have suffered from blasting from the quarry working. Although they state that they remain determined to fight, they also acknowledge that these fights have had a personal cost.

Like the lake Colac landowners, they feel that if a buy back were proposed, they would lose their economy of scale, and therefore become unviable. They will not accept the purchase to a new level. In the case of buy back, they would probably leave the area.

This family is fourth and fifth generation on the land in this area.

Interview with Upper Lough/Woody Yaloak Drain Landowners – 24th February 2003

These five farmers representing five enterprises recounted that some of the remaining farmers in this area were alive for the 50's floods. In this area too, the land is generally flat, so that minimal increases in height resulted in massive losses of land. The land also undulates gently, so there were many islands. Cattle were forced to swim between islands. The consultation team were told stories of houses remaining above the floods, while the shed in the backyard, only 30 metres away was swept away by the floods. During these floods, a number of families left the district to farm elsewhere for as long as five years. They returned to the area and resumed farming on their lands after the Lough Calvert Scheme was launched, and the flood waters began to subside. Those who remained on the land were isolated for long periods of time. One woman was evacuated, as she was due to give birth only a few weeks after her farm was flooded. They noted that after the initial inundation, subsequent rains resulted in further flooding, as the water table was not able to subside.

In the 75 floods, the drain was so poorly maintained that it was unable to deal with the waters. The drains were cleared during the flooding rains.

The farmers believe that the salinity is picked up in the Sanctuary and the Birregurra, not in the Lake. They believe that the salinity should be measured at the Lake, and the drain operated if the water there is okay.

These farmers point out that they were rated for this scheme for many years – the rating stopped only a few years ago. They feel they have paid for the scheme, financially.

They believe that the Barwon being dammed is the cause of the salinity in the Barwon, not the drainage schemes.

They also believe that there is additional pressure on the water table causing additional salinity across the land when the Lake and Lough's are allowed to rise.

Following inundation the pastures are rehabilitated, by sowing pasture, retreeing, refencing and extensive draining. The height difference between the Woody Yaloak channel and the upper loughs is 1.3 metres – therefore they do not mix in that area.

This group pointed out that the drainage along the Woody is poor – there is risk of cattle falling into the channel. The flood gates and the fencing along the channel are poor and will not prevent stock losses during its operation.

The Lake Murdeduke Interview– 24th February 2003

The interview took place with eight land owners representing six enterprises. During the 50's the lake Murdeduke was raised by 15 feet to 273 ft. Some land was resumed, but even the current levels are higher than the lake levels prior to the 1950s floods. In the 70's the floods raised the lake level by 10 feet in 10 weeks. This was all through natural drainage, according to the local residents – not run off or overflows from the Woody Yaloak. They believe that when floods occur the Corangamite and Lake Colac waters join up, so that they are inundated by a mixture of both.

Local fishing bodies are placing pressure on the Lake Murdeduke landowners to increase the lake levels to enable fishing. They said that at times there are 80 to 90 fishermen's cars around the lake. The "eel man" has ceased to harvest eels from the Lake. In addition to these sporting pursuits, there has been duck shooting on the lake in the past. The lake is also a Ramsar wetland.

In addition to the loss of useable land, much of which is crown land, the high lake levels also causes erosion in the north to north east section of the lake.

The owners want to retain the land for storage in case of a flood, and prefer the lake levels to be as low as possible. The landowners do not rely on this as a source of water. The EC is 20,000 – too high for stock use. The run off in this area is fresh, and there is a fresh water lake to the north east of Murdeduke.

They see the causes of salinity in the Barwon as being due to the damming of the Barwon. They feel that the irrigators along the Barwon and environmentalists in Geelong have no historic perspective because they have not lived in the district for long enough.

There have been algal blooms in the lake since the 1970's, however they are sure that this is due to the organics in the bird droppings.

Lake Corangamite Interview– 24th February 2003

The twelve landowners representing ten enterprises around the eastern side of Corangamite expressed concern about the pressure a number of Geelong environmentalists will exert. They feel that these people are misinformed. For example, they believe that one person in particular believes that Lake Corangamite is being drained into the Woody Yaloak, which they say is inaccurate. The level has to be very high before it will come through the barrage.

These landowners argue that the salinity experienced in the Barwon is due to salt picked up in the Warrambine, not from the Woody itself.

Lake Corangamite has a source of fresh water from the southern drainage schemes. The storage facility in the lake is needed in case of flood.

These landowners argue that the drainage into lake Corangamite from the north, northwest and south has increased over time.

The land has been bought back around the lake in part. This has been bought back to 399.8 feet, but the peak flood level was 391.8 feet. When the land is salt affected the productivity of the farms decreases. For example some salt affected area can only support ten cows per acre. Some farmers said that it takes up to 25 years for the land to recover.

Inundation also puts pressure on the water table, already there is salt water intrusion into the bores in the Wool Wool area.

Some of the families represented have been in the district for more than 100 years.

Woody Yaloak Advisory Committee– 24th February 2003

The scheme has only operated once in the last three years, for a period of three weeks. All other flows have been diverted into the Cundare Pool. There have been no problems with the siphons except with the collapse of one a few years ago. During that period the channel could not be used, and minor flooding occurred.

An inspection of the Assets was undertaken in September, there were no unusual matters. A detailed inspection is recommended every five years, preferably using cameras to record the inspection, to provide a record for later reference. An asset register is in existence.

This group pointed out that summertime some of the salt is picked up in the Warrambine, and does not originate from the scheme.

The Cundare pool was created with the channel. It is not registered as a Ramsar wetland. There is now an infestation of Boxthorn on the islands within the Cundare Pool. These harbour vermin and foxes

Because the small pools around Lake Corangamite have dried up the birds have gone. The fresh water pools are an intricate part of Lake Corangamite ecology. Nevertheless, due to the increased salinity in Lake Corangamite banded stilts are now feeding on the brine shrimp in the lake and are therefore on the increase.

114.71m is the boundary of the Crown land shoreline around Lake Corangamite. About half of the landowners around the Lake actually lease their shorelines, the other half have freehold. It has been up around 116.5 m around the early 1990s. Lake Corangamite is currently very dry, but this needed to retain the storage.

Operational details are that when the channel is full, there is a safety siphon that allows flow into Sandy Creek. There is also a safety siphon that is associated with the Mt Hesse Dam. There are gates at Barwon Heads to accommodate additional flow. Although there have been predictions that the Cundare Pool will accommodate years of water, farmers have seen it fill up in 12 hours. The subsequent release of water through evaporation, seepage and channel flow is very slow, so once the Cundare Pool is full, there is very little flood protection left. Around the Cundare Pool the levels below m are owned by the CCMA who lease it back to the adjoining landowners. The arrangement is that the level is noted on the 1st of November. If the level is above 117m, the farmers do not pay much for the maintenance of their lease. If it is below, the landowners pay a fee for the use of the land.

Here has been an increase of inflow into Lake Corangamite since the late 1940s. It is believed that this has been quantified. There is increased water from the Woody. Although there may not have been a significant increase in people, there are more impervious surfaces. It is generally believed that the Northwest of the Lake Corangamite catchment provides 1/3 of the inflow, the Woody contributes 1/3 and the rest of the catchment contributes 1/3. There has been considerable work undertaken to reduce the salinity of the Woody, so that the channel carries less salt.

There is salt water intrusion into the area south east of lake Corangamite due to irrigation bores. Similarly, there is base flow into the Barwon River that is saline. In addition there is a loss of fresh water from the Barwon due to it being dammed. It was suggested that a greater environmental flow from the Barwon dam was required in dry years.

Interview with Northern Lough Farmers – 27th February 2003

These four farmers noted that during the 1950's floods a number of families had to leave the district in order to support themselves elsewhere. The Eurack embankment was put in after the 1870's floods. There were attempts to repair this in the 1950's however these failed. It is expected that this will wash away in the next flood. It is not expected to afford any real protection.

Each of the loughs is landlocked. Therefore when the water does get into the northern loughs it stays there. When Lake Corangamite floods it follows the Woody Yaloak channel path, as the channel follows a low contour. The Lake Colac system cannot follow this path anymore as the Lough Calvert channel takes the flood. These farmers estimate that the channel has probably saved the lough families from being flooded about 11 times. If the Lough Calvert Scheme was removed the flood waters would not spread north of the Woody Yaloak channel.

The salt is picked up in the loughs and the Birregurra Creek – they did not believe that the salt load was very high in Lake Colac. The farmers recognized that there had been some illegal releases over time, which had resulted in salt slugs in the Barwon River. In addition the base flow into the Barwon is saline. It was felt that the amount of flow entering the Barwon is very low as a percentage. It was also stated that it is the initial salt slug that pollutes the Barwon, not subsequent flows. These farmers see the Barwon as the recipient of all salt in the area eventually.

There was a suggestion that in some parts of the channel there was a spring. This leads to residual water being in the drains at all times. It should be noted that as the water table is highly saline this might be an added source of salt water into the Barwon.

There is a high rainfall rate in the south of the catchment below Lake Colac – this caused large flows from that area into the Lake and therefore into the loughs. The boating people would like to see the lake kept at a higher level than it is currently.

Ibis' nest in the middle lough. This is an environmental value that would be lost if the loughs were allowed to flood.

It is considered that the maintenance is not regular enough. The gates should be numbered to avoid the type of confusion that arose when a workman worked on the wrong gate, causing an illegal use of the channel. In addition dredging undertaken in the past has been dumped on one side of the channel and not cleaned up

One suggestion is to put a drain in along the School Road to the south east of Lake Colac. Another suggestion was that floodgates could be useful along the Mingawalla Road. A third suggestion was to use the Sanctuary as storage, or to operate the Lake at a lower level. This latter suggestion would assist with flooding, however the yatchies would vigorously oppose it. It was noted that the natural overflow for Lake Colac is further northeast than the spillway that has been installed.

The rating system that had been used was very unfair. The landowners paid as they were deemed to be the beneficiaries. There were 7 levels of ratings, with the cost based on which level you were on. These were related to property value. About \$800 was one person's cost – a flat regional rate would be preferred.

Another issue of concern is the rising aquifer in the area. This is exaggerated in wet years. A way to address this is to let more water into the Cundare Pool. It was felt that as long as the Cundare Pool water was less than 120,000 ECs this would be okay for Lake Corangamite.

Cundare Pool/North Lake Corangamite Interview – 3rd March 2003

Six landowners representing six enterprises gathered for this interview. They acknowledged that the primary benefit of the Woody Yaloak scheme was in flood mitigation. This was demonstrated in 1992 when the siphon at the terminal end of the channel was broken. As a result the channel was closed, resulting in waters extending outside the flood easement around the Pool. The pool reached 118.06 near the barrage. 115 is the riverbed level of the pool – so it was more than 3 metres deep. The Cundare pool filled very quickly. There have been predictions that Lake Corangamite would take many months to fill, but it filled in just a few days on one occasion.

The barrage was installed in 1958, when the waters were quite high; consequently it could not be installed at the level intended. The scheme had intended to flush "relatively fresh water" down the channel, however this did not happen. The pool has dead storage of about 1/3 of its volume. The pipe invert is 115m, currently the pool height is 116.50 at the barrage. The problem of the barrage height is that the Corangamite cannot be freshened by the comparatively fresh water in the pool. In addition, the road at the Barrage is higher now than when it was first constructed.

The Cundare Pool is regarded as an environmental disaster. It is possible that preventing the waters from the saline Lake Martin flowing into the Cundare Pool could assist in the health of the pool. A Barrage between the two pools has been suggested, but it has never been built.

If the Gates were lowered, the currently saline waters in the Pool could be moved into Lake Corangamite, allowing more fresh water from the Woody to be retained in the Cundare Pool. This would assist the health of the Cundare Pool – including the eel production. The eel fishermen are suffering considerably.

Those landowners around the Cundare Pool have a lease. The flood level is measured on 1 November each year. If the water is above 117.00 m the rent is nominal. The recovery from flooding varies depending upon the length of inundation. The leasing of the land is important, as the leases are the ones who maintain it. This includes fencing and controlling weeds/vermin etc.

Originally there were 18 landowners around the pool. This has been reduced to between 8 and 10. Surrounding land owners have bought up the vacating lots. During inquiries the value of the land decreases considerably as prospective buyers speculate on the possible outcomes.

Without the scheme the floods would be considerably higher. The floods extend into Lake Weering. Lake Weering is lower than the channel invert. It was also noted that there is high levels of erosion between Lake Corangamite and Lake Gnarpurt.

A Hydrology report was produced by David Hisler – this is recommended for review. Another option that was considered was the “recirculation option” which considered water from Lake Corangamite being diverted down the channel – this was not implemented. Adrian also passed over information that he considered was worthwhile looking at.

It was agreed that the inflow from Ballarat is increasing, and a high level of inflows from the north east that need to be considered.

South West Lake Corangamite Land Owners – 3rd March 2003

Six land owners representing six enterprises met to discuss the issues. They noted that there is a significant load of nutrients for the southern drainage schemes, especially the Tirrengower scheme. They believe that the inflows should be monitored. They argue that there is increased inflow due to increased development and some industries such as peat mining. They feel that there is a push to remove the only way of preventing inflow into the Lake, but there is no suggestion of controlling other inflows.

The majority of people there were freehold owners, two were lessees. They say there is significant damage along the fringes. For one season’s inundation, 2 to 3 years of recovery is required. For longer periods of inundation more time for recovery is required.

They view the land as their livelihood and their homes. They stated that their first preference is to keep the scheme going as it is, however, if there were changes they warned that they would not be satisfied with the purchase of the land for its market value only. They would want to be compensated for the inconvenience of having to consider the purchase of other land elsewhere, or possibly leaving the district.

They are not experiencing any salinity problems in the land on their side of Lake Corangamite. They think that the salinity on the eastern side of the Lake is due to the level of irrigation. Bores are used for stock and domestic only on the western side of the Lake.

Interview with Birregurra Creek and Barwon River Residents Adjacent to Lough Calvert Scheme Exit – 3rd March 2003

The four land owners representing three enterprises in this area raised concerns about the lack of flow being released from the West Barwon Dam, which they believe is compounding the issue. The Birregurra does not usually flow. It only has water in it when there is rain or when the schemes flow. The schemes operation has resulted in significant erosion. The consultants were shown one area where the erosion along the Birregurra over many years has resulted in a creek bed being approximately 6 metres deeper than the surrounding land. It was stated that it had been possible to drive a vehicle over that part of the creek. At the same point a bridge had been built, however this had also been washed away following bank erosion.

Another issue confronting these landowners was the contribution that the scheme makes to floods in the area. When the river rains come, the landowners know that the scheme will be operated. They therefore stop pumping from the river. The floods come after this occurs.

In addition the fresh water in the Barwon was being depleted by additional landowners filling farm dams. Thus the pressure on the Barwon has increased.

There is also significant habitat damage that has been recovering over the last five years, since the scheme has not been in regular operation.

They also noted that there was a lack of salinity mitigation work being undertaken in the loughs.

There has also been a break down of trust between the Barwon/Birregurra land owners and the Lough land owners as there have been illegal operations of the scheme. It was acknowledged that some of this is alleged to have been accidental, however this is not completely believed. One person stated that they believed that the good work of the operational rules was being undone by these illegal releases. There were lingering doubts about whether the scheme is being operated legally.

The group did not understand that the concentrations allowed in the Barwon would be less than those experienced along their section of the system.

It is believed that releases in summer are problematic. There has been self accumulation of water near the junction that evaporates somewhat, but not completely. In addition, the low areas are filled with the saline water, which also evaporate somewhat leading to the storage of salt in these areas.

A recommendation from this group was that the cycle of flooding in the Lough area be published, so that some level of prediction could be considered. It was acknowledged that this would be on the basis of probabilities, and that it would not be dependable each year.

These landowners stated that they would not agree to a rate of any form to pay for the scheme – they believe that they already pay in kind.

Meeting with Environmentalists – 3rd March 2003

This group of six Geelong residents expressed concern over the levels of salinity in the Barwon. In particular, the permissible levels as they are measured in Geelong are of concern. They feel that the primary measure should be tonnes of salt. They did not view the amount of dilution as being important.

They are also concerned with illegal operation of the scheme. They believe that the scheme has been operated outside the bounds of the scheme operating rules in the past.

They support better management of the areas around Lake Colac and Lake Corangamite. In particular they are concerned about the degradation of Lake Corangamite. It was their view that the RAMSAR obligations are not being met and discussion took place on taking the matter to the administrators of the RAMSAR treaty in Europe.

They feel that the lessees in the Loughs are abusing the privilege of leasing and should forfeit their leases. They plan to investigate the lease tenure and terms. They see the Loughs as an opportunity for the development of wetlands. They believe that insufficient trees have been planted in the area.

The group also stated that the effluent from the piggery at Lake Murdeduke is being drained straight into Lake Murdeduke.

In support of their arguments they referred the consultants to the William and Kerford reports, whose conclusions support their stance. They also referred the consultants to Denis Lovric, who is undertaking a PhD on the flora along the drainage scheme, and to Tim Hamilton's salt load estimation.

They will introduce the consultants to Murray Stoney, who lives along the Warrambine Creek upstream of the Woody Yaloak Creek. They noted that there was an impressive contrast between habitat quality of the creek environment on either side of the scheme. They stated that there was clear evidence of erosion along the Warrambine as a result of the scheme that was worth inspecting.

One person stated that some irrigators had surrendered their licence due to the poor water quality in the Barwon.

They stated that the water being extracted from the Barwon to water the golf courses and parks and gardens in Geelong was insufficient quality – it had previously been of drinking water quality.

They urged that the outcomes of the Review be measurable. They also requested that all members of workshops be given copies of all relevant legislation prior to the workshops as preliminary reading.

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Document Status

Rev No.	Author	Reviewer		Approved for Issue		
		Name	Signature	Name	Signature	Date