

Watershed Torbay Catchment Community Survey 2002

**Survey conducted and analysed by
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Survey background

A survey was conducted at the beginning of the Watershed Torbay project canvassing the community about current issues, possible actions, attitudes toward change, what might help and hinder change and feedback on the Watershed Torbay project to that point.

The survey was distributed as an insert to the newsletter in August 2002 with a follow up letter and survey form in December 2002.

The survey was mailed to all landholders, approximately 580, in the Torbay catchment. While it would have been preferable to conduct a random survey to use results to generalise across the whole catchment, the catchment group was keen to give every landholder the opportunity to have input into the development of the Watershed Torbay restoration plan so the survey was sent to all landholders.

Surveys will be repeated at regular intervals to monitor the project progress and the attitudes and behaviour of stakeholders with regard to changes made in their land management toward protection of conservation values and economic viability.

A socio demographic profile of landholders in the Torbay Catchment has also been gathered using ABS data on a collection district basis. There were two collection districts that predominantly fell into the Torbay catchment area.

Survey Design

The underlying research questions for the landholder survey were developed in consultation with the Watershed Torbay Steering Committee. The Committee members were asked what they wanted to find out about landholders in the catchment to assist with the development and implementation of a community led whole catchment river restoration plan. Examples of similar survey such the survey conducted by the Blackwood Basin Group were used to inform the discussion.

The Watershed Torbay project incorporated a range of research work including an Honours student working on an economic assessment of options for pathogen reductions in Marbelup Brook. Her study required a survey of Marbelup farmers. This was created as a subset of the whole catchment survey as the steering committee advised that only one survey be conducted. A working group comprising Chair of the Steering Committee, 2 farmers on the steering committee, a Water and Rivers Commission representative and I met to go through a draft survey developed out of the Steering Committee discussion and incorporating the questions required by the Honours student study.

Sampling Frame

The Watershed Torbay project is developing a whole catchment river restoration plan. The key stakeholders in this plan are the agencies and landholders responsible for natural resource management in the catchment. Therefore, the catchment survey targeted landholders over 18 years of age as they have the authority to make changes to land management and are affected directly by policies of agencies. Therefore, this did not include residents renting or leasing properties.

A list of ratepayers in the Torbay catchment area was provided by the City of Albany. This list was checked for accuracy against data held by the Water and Rivers Commission. Further updates were

possible through the circulation of the Watershed Torbay Newsletter 1 where a number of Newsletters were returned, and updates on address and ownership were made.

Survey Development

A range of survey forms used in other studies was collected to inform selection of suitable questions and to assess possible formats (de Vaus 1991; Renton and Moore 1999; Marsh, Burton et al. 2000; Reeve 2002).

The reasons for undertaking the survey of landholders were:

- To assist the Steering Committee formulate strategies to manage change, incentives and disincentives that the Watershed Torbay project providing an opportunity to measure change over the course of the project through surveying toward the end of the project.
- To collect data about the current land uses, landcare works undertaken and attitudes of landholders in the catchment. Some of this information will be used in other research work related to the Watershed Torbay project. Other data will be used in a longitudinal study through repeat surveying during the life of the project to measure change over time.
- To assist the Steering Committee formulate strategies to manage change, incentives and disincentives that take into account the current attitudes and opinions of landholders.
- To assist in better targeting of the communication strategy of the project.
- To provide an opportunity for landholders to have input into the river restoration plan and the community indicators.
- To assist in exploring some key questions of this study:
 - What are the factors that will motivate landholders to change their landuse practices toward more sustainable systems that are both economically viable long term and protect conservation values?
 - What are the most effective methods for communicating with a rural community about sustainable land management?
 - How can we best measure changes in attitudes and behaviour?

Table 1 below provides the rationale for the inclusion of each question.

No.	Question	Reason for Asking it
1.	What do you know about the Watershed Torbay Project?	Gauge level of community knowledge at start of Watershed Torbay project, see if any change during course of project assist in testing success of the communication strategy of the project.
2.	Area of Landholding and Location Number	Differentiate between residents, hobby farms, larger farms. Able to locate in the catchment area will assist with decision making tools being developed by other research concerning landuse and nutrient generation in the catchment.
3.	Main Land uses	Able to more accurately gauge the percentage of different agricultural enterprises by area – important for other research in catchment such as nutrient generated and location of sources.
4. a & b	Are you member of volunteer group have you volunteered labour for landcare work?	Gauge current level of membership. See if any change during course of Watershed Torbay project in group membership or level of volunteer labour.
4.c	Landcare works implemented on property & extent of work	Census of work to this point, allows a gauging of the level of work done during course of the 4 year project by longitudinal surveying.
5.	Which of the following factors have influenced your decisions on undertaking landcare activities on your farm or on public land?	Important to understand what motivates landholders to undertake landcare in Torbay Catchment when formulating incentives and disincentives that will work.
6.a	Key issues in land and	Opportunity for all landholders to indicate their major issues of concern.

	water management in Torbay catchment	Important input into the <u>community led</u> whole catchment river restoration plan.
6.b	What are the most important actions that can be done to address issues?	Chance for unguided input. Able to capture individual actions of important and 'colour' of individual responses. Important for river restoration plan.
7.	Rank six catchment characteristics of importance	Way to gauge what landholders care about most in their catchment and community. To be used to draw up community health of catchment indicators.
8.	How important/effective do you think the following factors would be in helping private landholders protect and manage land in Torbay catchment?	Gauge response of farmers to possible incentives and disincentives for them to undertake landcare works.
9.	What are the barriers to changing landuse practices on your farm or increasing your involvement in community landcare activities?	Previous questions asked what motivates landholders to make landcare changes, and what incentives might help. This question seeks to locate what might hinder change. This is important in formulating incentives, disincentives and support mechanisms for change to occur.
10.	Who do you think should be responsible for fixing catchment issues?	The statements cover three stakeholders: government, rural landholders and whole of community and pose statements about the roles and responsibilities of each stakeholder group. Gauging current community attitudes to who is responsible is useful in how to address the issue of private and public investment in river restoration work in the Torbay Catchment.
11.	What do you think the balance between production and environmental protection should be?	The statements cover a range of attitudes toward current landuse in Torbay catchment, the need for change and the balance between production and environmental protection. Some of these statements can be used to measure change over the course of the project. Others provide information on current attitudes and where to target communication and marketing strategies for changes suggested through the river restoration action plan.
12.	What are your views on change and innovation in farming	The questions aim to gauge current farmer attitudes to change and how they view their own operations. If they don't think their children will farm after them and they don't think farmers can make a difference to the environment – the challenge for the river restoration plan succeeding are greater. Understanding of current attitudes can inform communication and marketing strategies and ensure expectations of change are realistic.
13.	Age in years	Demographic to check representativeness of sample. Farmer age can be an important factor in adoption of change and should be considered.
14.	Do you live on your Torbay property and for how long	Does not living on a property affect the amount of landcare work undertaken. How many people do not live on their properties? Does this impact on communication strategies for this group of landholders?
15.	Gender	Demographic to check representativeness of sample. Interested to see if there is a gender difference in attitudes to landcare and change and who is responsible to undertake change. If there is a difference it could be important in strategies adopted in the river restoration plan and communication strategies.
16.	What percentage of your income (if any) do you earn from your property?	Level of income generated in the catchment will be able to be gauged at end of the project. May be important to attitudes to undertaking landcare and who is responsible for change.
17.	How many people live in your household?	Demographic to check representativeness of the sample. Whether having children changes attitudes.
18.	Highest level of education attained.	Demographic to check representativeness of the sample.
19.	How do you prefer to get your information	To assist with the targeting of communication strategies to maximise return for dollars spent reaching landholders.
20.	Any further comments	An opportunity for respondents to provide any feedback or comment they want to. Assist respondents to feel they have had a chance to say what they want and leave the survey feeling reasonable!

Table 1: Survey Questions: why were the specific questions asked?

Approach to Data Analysis

Analysis techniques have been selected to suit the questions posed by the study and the kind of information gathered. The data is predominantly ordinal where categories used in questions can be ranked but the data is not precisely quantified. There are a few questions where the categories cannot be ranked, that is, they are nominal variables (de Vaus 1991; Anderson, Sweeney et al. 1994).

The analysis options for each question are constrained by the level of measurement. The questions in this survey aimed to provide primarily descriptive data with some inferential statistics. Table 2 summarises the methods of analysis possible with different levels of data.

Univariate methods	Bivariate methods	Multivariate methods
1. Frequency distribution	1. Cross tabulations	1. Conditional tables
	2. Scattergrams	2. Partial rank order correlation
	3. Regression	3. Multiple and partial correlation
	4. Rank order correlation	4. Multiple and partial regression
	5. Comparison of means	5. Multiple and partial regression
		6. Path analysis

Table 2: List of some methods of analysis for survey analysis (de Vaus 1991).

Questions with Univariate Analysis Only

Question 1: What do you know about the Watershed Torbay Project?

Question 7: Rank six catchment characteristics

Question 19: How do you prefer to get your information?

Questions with non numeric data

Question 6b: What are the most important actions to address issues?

Question 20: Any further comments

Managing the Data

A total of 173 surveys were returned with responses. Surveys where respondents only answered some of the questions were entered and included in the data analysis to maximise the amount of data from landholders included. The number of respondents to each question is provided with the analysis of each question. An additional 10 surveys were returned without being filled in because landholders had sold their properties, did not believe they were in the Torbay catchment or returned them blank without comment.

The survey forms were entered into a Filemaker Pro database designed with the assistance of David Weaver from the Department of Agriculture in Albany as part of his agency's support for the Watershed Torbay project. The database, on a Macintosh computer, was set up with a range of associated databases so that the data is able to be spatially referenced and to assist with analysis of data. It is intended to conduct follow up surveys of Torbay catchment landholders and the database has been established to facilitate the entry and comparison of future surveys with the current survey data.

The data was exported to EXCEL where basic tables were produced to examine data and to check entries to ensure all data was recorded correctly. A range of data entry errors were identified and altered.

Issues in Data Entry

In questions 7, nine respondents did not provide a ranking for the catchment characteristics. Four respondents allocated some of the characteristics to the same priority. The data for these thirteen respondents were recorded separately to the rest of the respondents who ranked the catchment characteristics. Where respondents ranked all twelve characteristics their top six characteristics were recorded in order of priority indicated.

In Questions 5, 8, 9, 10, 11, and 12, involving attitudinal scales, there were some respondents who marked more than one box. In these cases the responses were not recorded as part of the data. It is not appropriate for researchers to decide which response to record.

In 10 cases landholders filled out the form jointly. A field was created in the database to record cases where both the male and female landholders participated in responding to the survey.

Results 2002 Survey: Total Responses

Question 1: What do you know about the Watershed Torbay Project?

There was a high level of recognition of the Watershed Torbay project with 95% at least having heard of it, although the depth of knowledge was low. The survey was sent out as an insert to the second catchment newsletter, this is likely to have influenced the response to question one by increasing the level of recognition about the Watershed Torbay project.

	Responses	%
I have never heard of it	8	5
I have heard of it but don't know much about it	38	24
I know a little about it	52	33
I am somewhat familiar with it	37	23
I know quite a lot about it	24	15
TOTAL	159	100

Question 2: What is the total area of your landholding in the Torbay Catchment?

Most of the landholdings of survey respondents are relatively small with 51% between 10 and 200 ha and another 37% between 1 and 10 ha. So it is not surprising that the response to question 16 shows that only 5% of the survey respondents make all their income from their farms while 50% do not derive any income from their properties.

Landholding size class	Responses	%
Residential 0 – 1ha	7	4.3
Small landholding >1 – 10ha	60	37
Medium landholding >10 – 50ha	49	30.2
Large landholding >50 – 200ha	34	21
Very large landholding >200ha	12	7.4
TOTAL	162	99.9%

Question 3: What are your main land use/s on your landholding/s within Torbay Catchment?

170 of the 173 respondents answered this question. Grazing is the predominant land use in the catchment with a quarter of landholders grazing cattle and another 8.5% with sheep.

Landuse type	Responses	%
Beef Cattle	70	24.9
Residential	53	18.9
Sheep	24	8.5
Horticulture	23	8.2
Horses	23	8.2
Ungrazed cleared paddocks	17	6.1
Poultry	16	5.7
Other business from home	15	5.3
Tourism	9	3.2
Goats	6	2.1
Agroforestry	5	1.8
Aquaculture	4	1.4
Bushland	3	1.1
Bluegum Plantations	3	1.1
Piggery	2	0.7
Dairy Farming	2	0.7
Broadacre Cropping	2	0.7
Alpacas	2	0.7
Leased out	1	0.4
Bushland	1	0.4
TOTAL	281	100.1

Cattle

70 respondents graze cattle.

Sheep

24 respondents graze sheep with the majority having small numbers on smaller landholdings

Landuse_Type	Number of Animals	Area grazed by sheep
Sheep	1500	125
Sheep	800	111
Sheep	500	
Sheep	250	44
Sheep	240	40
Sheep	200	20
Sheep	150	
Sheep	120	70
Sheep	100	
Sheep	96	38
Sheep	30	4.5
Sheep	26	1.2
Sheep	25	
Sheep	24	5
Sheep	20	5
Sheep	20	40
Sheep	20	3
Sheep	15	5
Sheep	13	
Sheep	12	
Sheep	6	
Sheep	4	
Sheep	4	10
Sheep	1	

Horses

23 respondents have horses. The majority have a small number with 17 respondents having between 1 and 7 horses. Four respondents have more horses with numbers between 10 and 26 animals.

Horticulture

Of the 22 respondents who indicated that they were involved with horticulture the crops grown were:

	Beans	Asparagus	Sweet corn	Brassica	Pumpkin	Capiscum	Silverbeet	Potatoes	Tomatoes	Olives	cherries	Kiwifruit	Rasberris	Passionfruit	Bulbs/iris	Fruit trees	cherries	Lavender	Nursery
1										60							100		
2	✓			✓															
3		✓	✓										✓						
4		✓	✓									✓		✓					
5		✓	✓										✓						
6			✓	✓	✓														
7	✓		✓	✓	✓	✓	✓												
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14										✓									
15										✓									
16										✓									
17								✓											
18	✓				✓			✓	✓										
19								seed											
20	✓							seed											
21			✓						✓										
22								fallow											

Poultry

The 16 respondents with poultry have small numbers for household use with most having chickens and some additionally keeping ducks, geese and turkeys.

Intensive Animal Husbandry

One diary and one piggery owner responded to the survey. There are only two dairies in the catchment and one piggery.

Tourist Accommodation

5 respondents who have tourist accommodation provided information on occupancy rates which varied between 10% and 90%. The highest figures were from accommodation on the banks of one of the lakes at the bottom of the catchment.

Home Enterprises

14 respondents conduct enterprises from their residences including 4 artists, surveying & mapping consultancy, surveyor/cartographer/engineer, legal & educational consulting, 4 consulting businesses, masseur, agricultural machine repair and wrecking business, fishing, 2 marron enterprises, a tree lopping service and a contracting service.

Plantations

There were four bluegum plantations reported by respondents and five agroforestry plantations of between 1 and 6 ha in size.

Question 4a: Are you a member of a voluntary community group?

Half of the survey respondents are involved in some community group. This is a very high percentage and indicates a probable bias in the landholders who elected to fill out the survey. It also indicates a healthy level of community involvement in the catchment. The greatest commitment to a significant degree is to the local fire brigades. The other key categories of groups are those involved with land management and conservation, Progress and Hall associations, business associations and a few regional groups.

Member of community group?	Responses	%
No	84	49.7
Yes	85	50.2
Total	169	99.9

Question 4b: Please name the groups

Group	Responses	%
Fire Brigade	56	44.1
Torbay Catchment Group	18	14.2
Progress Association	9	7.1
Coastcare	5	3.9
Torbay catchment group	4	3.2
Bornholm Community Hall	3	2.4
Torbay Hall	3	2.4
Agriculture Society	2	1.6
Albany Maritime Foundation	2	1.6
Denmark Environment Centre	2	1.6
Horticulture Association	2	1.6
SES	2	1.6
West Cape Howe National Park Association	2	1.6
Albany Historical Society	1	0.8
Born Free Wildlife Carers	1	0.8
Bornholm COW	1	0.8
City of Albany Council	1	0.8
Community Advisory Group to WA Planning Commission	1	0.8
Friends of Cosy Corner	1	0.8
Land for Wildlife	1	0.8
Mt Martin RBPMC	1	0.8
Olive Association	1	0.8
Outside of Torbay	1	0.8
Potato Growers Association	1	0.8
Read & Write Now	1	0.8
Residents Association	1	0.8
Sea rescue	1	0.8
Torbay to Youngs Tourist Association	1	0.8
Watershed Torbay Steering Committee	1	0.8
Wilson Inlet Management Group	1	0.8
TOTAL	127	100.5

Question 4b: Have you volunteered labour for community landcare work?

Volunteered for landcare work	Responses	%
No	125	74
Yes	44	26
TOTAL	169	100%

Question 4c: Have you implemented any of the following works on your property and what is the extent of your work?

118 landholders or 68% of survey respondents have undertake some level of management on their properties. The most common activities undertaken were tree planting for shelter or biodiversity and applying lime or dolomite to acid soils.

Management implemented	Responses	% of respondents
Tree planting for shelter or biodiversity	67	56.8
Applied lime/dolomite to acid soils	54	45.8
Fenced off native vegetation	39	33.1
Had soils tested for nutrients	39	33.1
Planted perennial pastures	39	33.1
Surface water management drains	34	28.8
Fencing of waterways	32	27.1
Installed stock watering points away from waterways	32	27.1
Did you follow the recommendations of soil testing?	28	23.7
Working to a whole property plan	26	22
Used fertiliser products other than superphosphate	23	19.5
Used slow release fertilisers	18	15.3
Revegetation of waterways	12	10.2
Re-fenced according to soil type	11	9.3
Monitoring groundwater levels with bores	8	6.8
Constructed wetlands	7	5.9
Farm organically/biodynamically	7	5.9

Question 5: Which of the following factors have influenced your decisions to undertake landcare activities on your farm or on public land?

Landholder are most motivated by wanting to hand on their land in good condition, 59% high importance, and by their perception that landcare problems are worsening 57% high importance.

Obtaining external funding was not seen as important with only 9% considering it as of high importance while 43% of the 138 respondents said it was not an influence. This is contrary to the responses in questions 8 where funding assistance for protecting and managing natural resources was seen as highly effective or of medium effectiveness by 79% of the respondents and to question 9 where 56% of the 155 respondents agreed or strongly agreed that a lack of financial resources was a barrier to changing landuse practices on their farm or increasing their involvement in community landcare activities.

Total Responses 138	High Importance	Medium Importance	Slight importance	Not an influence
Wanting to hand on the property in good condition for future generation	59%	20%	1%	6%
Worsening landcare problems eg salinity, waterlogging, algal blooms, soil acidity, weeds, state of native vegetation deteriorating	57%	14%	4%	9%
Aesthetics	34%	33%	7%	8%
Concern about climate change	33%	17%	16%	15%
Being committed to biodiversity	30%	24%	13%	14%
Being confident of success in conservation works undertaken	28%	25%	11%	12%
Having access to new information or advice about the state of the environment and how to reduce impacts	27%	25%	13%	11%
Being committed to long term farm plan	25%	22%	5%	17%
Financial position of the business or farm	15%	14%	5%	35%
Obtaining external funding	9%	9%	7%	43%
Belonging to landcare group/progress association	6%	20%	8%	40%

Question 6a: What do you think are the key issues relating to land and water management in Torbay Catchment?

Landholders are concerned across a wide range of catchment issues. Concerns about water quality and algal blooms, the state of native vegetation and fauna, the spread of weeds, rising salinity levels, chemicals, decline in fisheries and the economic viability of farming were at the top of the list. The issue of a potential mine in the catchment was at its height when the survey was conducted but has not continued as a prominent issue.

Category	Total number of landholders who answered this question 166	Responses	%
	Algal blooms in the drains, Lakes and Torbay Inlet at the bottom of the catchment	116	70%
water		117	70%
weeds	Weeds	115	69%
water	Degradation of waterways	99	60%
sprays	Chemical sprays	94	57%
vegetation	Condition of native vegetation	93	56%
Feral animals	Feral animals	88	53%
soil	Salinity of land	75	45%
mining	Threat of proposed mining/quarry in catchment	74	45%
water	Decline in fisheries	72	43%
water	Lack of information about what goes into the creeks	71	43%
soil	Soil acidity	70	42%
water	Impacts on water availability to agriculture and the stream ecology if water from Marbelup Brook was extracted for Albany drinking water	69	42%
economic	Bluegum plantations taking up agricultural land	67	40%
economic	Economic viability of farming	65	40%
Water/land	Management of the lower drainage district	57	34%
social	People reluctant to change land use and lifestyle behaviour	57	34%
economic	Waterlogging of agricultural and residential land	55	33%
social	Changes in landuse and subdivisions	47	28%
environment	Impacts of recreation on environment	44	27%
water	Harmful bacteria from animal waste in our drinking water supply	43	26%
social	Increasing number of new residents	42	25%
water	Bore water quality	32	19%
social	Decreasing number of people involved in community groups	1	1%
vegetation	Lack of riparian vegetation	1	1%
economic	Non viable farm size	1	1%
economic	Profitable diversification of production	1	1%
water	Proper disposal of water captured up stream from outlet	1	1%
economic	Total lack of government funding help	1	1%

Additional written comments

- When we came here 8 years ago there was no watsonia or acacia longifolia in the last few years it has come in all along the road verges
- Pampas, grass, arum lilies are appearing - big worry!
- Your assumption is that these items are of importance to me, unfortunately I am ignorant
- Ideology driven people and organisations who want to exclude fire as a management tool
- 4WD and motorbikes and horses on coastal hills and beaches (damage caused)
- Degradation of Mutton Bird Beach because of 4 wheel drivers, vehicle erosion is now into the grass line of the dunes affecting bird life. The traffic has increased dramatically since Mutton Bird Road was bitumised.

- Residential land should not be on low lying land
- Need to incorporate changes in land use and smaller blocks in planning for today land may have high % farming but a significant % of population area I believe is not into farming.
- Waste treatment Plant
- Foxes - caused disaster with geese
- Threat of huge numbers of trucks bringing freight to port.

Question 6b: What do you think are the most important actions that can be done by landholders, Torbay Catchment group or key government agencies to address the issues?

90 people provided a total of 166 possible actions. Of these, twenty four possible actions have not been specifically covered within the recently completed Restoration Plan. The remaining 142 suggested actions are incorporated into the plan across six of the seven themes.

The majority of the proposed actions fall into the themes covering habitat and biodiversity management, farming systems and community education and information. This is not surprising as these are the areas where landholders have the greatest ability to contribute to changes in land use management. The lack of proposed actions for theme 2: Water quantity is reasonable considering that this theme is an area where landholders do not have decision making power. The Water Corporation and Department of Environment carry responsibility for this theme.

It is very positive to see that the majority of actions proposed by landholders through the community survey in 2002 have been written into the Watershed Torbay catchment restoration plan.

Of the 24 actions not effectively incorporated into the restoration plan the three key areas are: chemicals, fire management and control of recreation damage to the environment.

Number of proposed actions covered in restoration plan	142
Number of proposed actions not covered in restoration plan	24

Proposed actions covered in restoration plan by theme	Grand Total
Theme 1: Water quality and algal blooms	7
Theme 3: Drainage management	7
Theme 4: Habitat and biodiversity management	48
Theme 5: Farming systems	29
Theme 6: Landuse planning	9
Theme 7: Community education and information	37
No specific theme but is included in restoration plan	5
Total	142

Full details of the proposed actions are provided below for each theme and for those not covered in the restoration plan.

Proposed actions sorted by the themes of the Watershed Torbay Restoration Plan

Theme 1: Water quality and algal blooms

- Water quality, Algal blooms.
- Checks on water quality.
- Monitoring of runoff into waterways.
- Water conservation.
- Fence off all waterways to reduce nutrient runoff and erosion.
- Government: Clean the waterways somehow.
- Completely fence the Marbelup Brook.
- Where stock must cross proper stock crossings be installed and paid for by subsidies from Government agencies.
- Revegetate the shoreline when fences and stock crossings completed.

Theme 3: Drainage management

- Plan to clean up Lake Powell/Torbay Inlet.
- Returning of Lake Powell and Torbay Inlet to its original watercourses that is removal of plugs, floodgates and all water redirection structures and feeder streams and exits.
- Research causes of algal blooms and how to apply findings.
- Get good water flow into the system so it is clean, doesn't stink, no algae and good management.
- Water Corporation should address erosion problems in Grasmere Drain, and fence and gate areas to prevent access of private vehicles to drain maintenance areas (fire risk and marron poaching).
- Efficient drainage.
- Combined drainage management plan- revegetation and fencing, planning restrictions, protection of the horticulture industry, recreation areas/camping facilities and better access to popular areas, eradication of weeds and feral animals.

Theme 4: Habitat and biodiversity management

Fence waterways and native vegetation

- Protect waterways.
- Protect all water sources on properties/water harvesting.
- Provide finance so that landholders can undertake fencing, landcare activities.
- Blocks of bush on farm land and fenced.
- Protect waterways.
- Preserve all native vegetation.
- Work to cleanup and monitor water in drains and creeks and inlets.
- Keep stock out of waterways
- Revegetate all waterways and drainage lines.
- Develop management plan for waterways.
- Protection of existing native vegetation and fauna.
- Fence off all remnant bush and waterways.
- Fencing of drains and creeks.
- Funding for fencing waterways and remnant bush and planting more trees where needed.
- Fencing creeks.
- Maintaining natural vegetation around waterways.
- Plenty of vegetation along waterways.
- Fencing of waterways.
- Fencing and revegetate waterways.

- Fence remnants.
- Try to keep vegetation on country so it does not erode.
- Fencing remnant vegetation and creeklines.
- Fencing waterways.
- Assistance with farm planning and remnant vegetation fencing (rehabilitation and streamlining).
- Compulsory fencing of natural drainage lines and active revegetation programs for the riparian strip (native vegetation).

Revegetate waterways

- Revegetate.
- Tree planting and revegetation.
- Plant local species of shrubs and trees.
- Revegetate with native vegetation.
- Providing incentives - financial & information to landholders in helping restore appropriate vegetation.
- Main waterways should be replanted with local native bush 200 - 300 metres on each side and fenced.

Control weeds and feral animals

- Weeds need urgent attention.
- Reduce fox and cat numbers.
- Combat weeds and feral animals.
- Keep weeds under control.
- Weed control strategy which engages whole of community and raises awareness.
- Spend some of the allocated grants on weed eradication on our waterways - action at grassroots not administration.
- Declare WAR on all weeds!!
- Fox control programs maintained.
- Weed control.
- Control weeds.
- Controlling weeds
- Agencies to take action on vermin infesting verges and reserve including fire hazards.
- Continue programs for weed eradication.

Other actions

- Stop over clearing of live and dead trees for native animals.
- Restore the waterway and land to a healthy state.
- Survey ecology through the system and its importance.
- Degradation to waterways in this area has progressed over years and is still only being talked about as it has been for the past 15 years or so, nothing's changed.
- The government originally paid people to clear the land. It is their sole responsibility to come up with solutions that don't affect the farmers and residents of this land.

Theme 5: Farming systems

Use different and less fertilisers

- Soil plots with alternative fertiliser and measuring leached nutrients.
- Use slow release fertilisers.
- Reassess fertiliser plans.
- Encourage use of slow release non sulphate based fertilisers & free management plans with realistic costs.

- Owners: Radically lower chemical and fertiliser use.
- Use of alternative fertilisers that are not so soluble.
- Avoid overuse of fertilisers and chemical sprays.
- Reduce applications of nutrients.

Soil test

- Soil testing with recommended fertiliser usage.
- A local laboratory for testing water quality is required so that local land owners can become more involved with their farms water quality ie spring test vs autumn test.

Manage nutrients

- Keeping nutrients where they are placed. eg Rock phosphate, perennials eg kikuyu, liming.
- Monitor water and chemical waste off farms and decide on clear policies about their use.
- Limit nutrients entering water table.
- Minimise nutrient flow into waterways. Requires change in farming practice and ? purchase of land.
- Trials of transmission of fertilisers through waterways.
- Reduce amount of effluent from 'hot spots'.

Plant perennials

- Deep rooted perennials planted if ground is suitable.
- Plant perennial pastures.

Sustainable farming

- For landholders to be more responsible in the way they farm.
- Engage in environmental sustainable land practices.
- Do not overgraze the properties.
- Promote sustainable farm practice.
- Promote best practice horticulture/agriculture strategies - preferably local examples.
- Individual land management plans.
- From community generated forums show and change occupants' farming/habits to restore catchment area to some of ecological balance, even if it means curtailing some farming practices.

Other actions

- Tree planting to reduce soil salinity.
- Control algae, soil acidity etc overstocking of pasture.
- Improve productivity of land use options.
- New landholders in the area should realise it is a rural area and accept the normal rural activities going on around them.

Theme 6: Land use planning

- Discourage blue gum plantations.
- Keep bluegums out of the area.
- Obtain scientific information to inform land use and care for the future benefit.
- Prevent subdivisions - too many hobby farms in good farming areas. Novelty usually wears off after a while in hobby farms.
- No residences on low lying land Town Planning.
- Limit development in sensitive areas and educate.
- Make more hobby-lifestyle properties available.

- If septic waste is found to be a problem - find a way to fix it - and fix it!
- Farms must be viable we need farms.

Theme 7: Community education and information

Agencies and landholders working together with strong local representation and role

- Community groups should work closely with government agencies.
- Work together.
- Catchment group needs to be wary it is no hijacked by agencies so landholders and residents receive appropriate representation.
- Landholders and residents need to have input and involvement.
- Trying to make government agencies accountable for decisions they make.
- Consultation.
- Maintain community involvement especially key people.
- Reduce government departments throwing their weight around and justifying their existence.
- By working together.
- Listen.

Involve more landholders in projects and acknowledge people

- Become involved.
- More landholders should be involved with catchment projects.
- Just to get on and try real activities in the catchment which are best bet!
- To get all landholders and farmers to cooperate.
- Set of criteria for the area and self assessment processes.
- Acknowledge people especially volunteers.

Take personal action

- Everybody to at least consider changing their ways to protect the environment, in whatever small way they can.
- Look after your own patch. Be aware of what your actions do to those around you.
- Landholders take responsibility for their land and the impact that they are having on it. Where appropriate, seek assistance from community and neighbours.
- People being responsible for their own environment.
- Be aware of local issues, learn what is being done for identified problems and assist when able.

Better communication

- Develop better communications in community groups.
- Opening up communication.
- Being informed about causes of above and suitable sustainable simple (if possible) actions people can take. Don't make the assumption that if people don't attend meetings they aren't interested or concerned. Time pressures can affect attendance.

Use funding for landholder projects

- Government agencies not soak up all funding for research and promotions ie. commence practical applications ASAP.
- Although we are not currently involved we hope to be part of a community group which could work on projects (ie weeds) - more funding to implement work.
- Show by example.
- If money was no object: A team of qualified and willing people to assess the problems and assist in the solutions. That includes knowledge and manpower.

Education

- Education of the masses! Look what happened to smoking in public places!!
- Educate as many city and town dwellers as possible on the importance of our rural land areas.
- Change things to suit mainstream thinking eg: Better information regarding current and future issues, proposals and group meetings.
- Education! on various options to produce similar outcomes with the least impact.
- Maintain alternative land use education/promotion campaign.
- Education eg soil nutrition workshop held Elleker 4 Sept 02.
- Hold forums on specific issues.
- Education: Making the community take ownership of the whole problem when they implement projects on their property. They need to be able to access the impact on the whole environment.
- Informed action.
- Education and field days.
- Education, funding, monitoring agency.
- Educate rather than make stupid unenforceable laws.
- Education of landowners.

Proposed actions not specific to a theme but addressed in general across the restoration plan

- Keep on persevering to restore quality of catchment for all the community.
- Big question Louise! Federal policies need to help farming be more viable for a start. Why a (non-working) farm can make more money growing trees to feed a pollutant industry, than growing food and fibre to feed and clothe a hungry world is beyond me!
- Fulfil request and directions of authorities regarding landcare in general wherever practicable. However, until government agencies themselves set examples little will be achieved ie government agencies DOLA, CALM, local council, main roads to name a few.
- Everything.
- To take a leaf out of Mother Natures book and live by it!

Proposed Actions NOT in the Torbay Catchment Restoration Plan

Use of chemicals

- Minimise chemical use
- Decrease use of chemical sprays, non-natural fertilisers.
- Use small amounts of chemical sprays.
- Call for halt to spraying roadside verges and rushes in the lakes etc as it ends up in the rivers where people fish and creatures live.
- Stop the use of chemical sprays, fertilisers etc. Stop spraying the sides of roads.

Fire Management

- Make sure vegetation along watercourses and around lakes etc has a fire management plan otherwise during a wildfire you could lose the lot. Prescribed burning is a must!
- Remove control of burnoffs from CALM and implement intelligent spot burns
- Government buy back of irrigation land at bottom of catchment and change to more appropriate landuse.
- Stricter regulations on subdivisions (ie no cats) and on land use for eg camping at Cosy Corner needs to be phased out as it is eroding the site.
- Fire risk is very great. Fire breaks are maintained but if a fire got out of control, on the right day, there would be no stopping it as the undergrowth is so thick on our place.
- Stop burning bush in the spring when the birds etc have their young and cannot get away from the fires

Feral cat control through legislation

- Have a cat eradication program
- Feral cats are a large problem and that is why cat laws need to be implemented

Control impacts of recreation

- Control access to coast hills, reserves and beaches
- Damage to native vegetation is becoming more over time - causes - 4 wheel drivers driven by some reckless drivers, horses on coastal hill have an impact on soils and plants and even weeds spreading.
Impact of recreation on environment is caused again by a
- Specially zoned access to beaches etc and close 4WD tracks

Other proposed actions

- Leasing land with waterways and vegetating ie 1000m x 50m = 5ha (12 acres) = \$50/acre = \$600/year. You can pay for 50 sites for the cost equal to one employee.
- Some years ago I wrote to Monty House, this is what I wrote (shortened)
Some years ago, Monty, the Government reduced the number of craypots by about 10% to 15% of all crayfishermen along the West coast. This was done to protect the crayfish stock so that that industry will have a future. the crayfishermen survived, so did the industry and even now I think they have been given back some of those pots. Monty, this same principle can now be applied to our farmers. what you have to do is reclaim 15% of all farm land back to trees. This reclaimed land is to be along all tributaries, creeks and rivers also any natural bush blocks. This land is still to belong to the farmer, but he doesn't get charged rates and taxes etc as this land will become an asset to him later, through increased pasture and stock protection etc. It will also be beneficial to other communities down stream ie. clean waterways and lakes. The government can also help by supplying free or cheap fencing and trees for those projects. Labour can be supplied by the unemployed in each country town or even use people from other areas, Perth etc. Each farmer could feed and accommodate as many as he could afford to feed

for the duration of each project. I'm sure this could work. More funding for drainage works in waterlogged areas

- Teach permaculture.
- Especially education on organic - biodynamic principles
- Increased cost of public liability insurance is harming community groups generally. Although landcare groups may be unaffected - the general willingness to perform voluntary work decreases. Changes to laws makes office holders more liable to legal action.
- Underground powerlines
- Understand threats of genetic engineering

Question 7: Please number the six catchment characteristics in order of important to you.

Characteristic	1	2	3	4	5	6	total
Quality of water in waterways and lakes	77	24	13	7	7	5	133
Whether management of the drainage system meets the needs of the environment and landholders	17	24	16	12	11	14	94
Level of protection of native vegetation and fauna	9	20	27	26	14	9	105
Extent of weed infestation in the catchment	9	16	18	24	16	18	101
Level of rehabilitation of waterways and drains with vegetation and bank stabilising	8	24	21	17	24	11	105
Extent of native vegetation cover in the catchment	6	14	17	19	13	18	87
Degree of satisfaction about living in the catchment area	6	3	8	7	13	15	52
Income levels of people living in the catchment	6	3	2	6	2	6	25
Level of business and employment in the catchment	3	2	0	7	5	1	18
Status of fisheries in the Inlet and waterways	2	8	13	12	23	13	71
Level of community participation in local organisations	1	4	5	2	6	12	30
Level of management of recreation sites	1	2	4	2	4	14	27
total	145	144	144	141	138	136	848

The data can be examined in two important ways. The key characteristic of importance to the 155 respondents to this question was Quality of water in waterways and lakes both as the number one characteristic 50% as well as the characteristic that attracted the most hits in the top six priorities 86% of respondents.

The responses to this question verify responses to question 6.

Question 6: the six top issues relating to land and water management in Torbay Catchment.

Algal blooms in the drains, Lakes and Torbay Inlet at the bottom of the catchment	70%
Weeds	70%
Degradation of waterways	69%
Chemical sprays	60%
Condition of native vegetation	57%
Feral animals	56%

Question 7: top six characteristics of catchment health:

Characteristic	1	2	3	4	5	6	total
Quality of water in waterways and lakes	50%	15%	8%	5%	5%	3%	86%
Whether management of the drainage system meets the needs of the environment and landholders	11%	15%	10%	8%	7%	9%	61%
Level of protection of native vegetation and fauna	6%	13%	17%	17%	9%	6%	68%
Extent of weed infestation in the catchment	6%	10%	12%	15%	10%	12%	65%
Level of rehabilitation of waterways and drains with vegetation and bank stabilising	5%	15%	14%	11%	15%	7%	68%
Extent of native vegetation cover in the catchment	4%	9%	11%	12%	8%	12%	56%
Degree of satisfaction about living in the catchment area	4%	2%	5%	5%	8%	10%	34%
Income levels of people living in the catchment	4%	2%	1%	4%	1%	4%	16%
Level of business and employment in the catchment	2%	1%	0%	5%	3%	1%	12%
Status of fisheries in the Inlet and waterways	1%	5%	8%	8%	15%	8%	46%
Level of community participation in local organisations	1%	3%	3%	1%	4%	8%	19%
Level of management of recreation sites	1%	1%	3%	1%	3%	9%	17%
Total responses 155							

Question 8: How important/effective do you think the following factors would be in helping private landholders protect and manage land in Torbay catchment? (If you do not have a farm go to Qu. 9)

As mentioned previously, in this question funding assistance was considered to be a very effective assistance to landholders for landcare works. Rebates and subsidies are also a form of financial assistance that were rated highly.

	Total responses 118	Not effective	Slightly effective	Medium effectiveness	Very effective
Funding assistance to help landholders protect and manage bush, waterways and wetlands		1%	13%	25%	54%
Rate rebates for long term protection & management of bush		6%	17%	35%	36%
Rate rebates for long term protection & management of drains and waterways		5%	13%	38%	36%
Subsidies to help landholders do yearly soil tests		8%	19%	32%	36%
Technical assistance and information for pastures & fertiliser management		3%	14%	41%	36%
Funding assistance to help landholders establish perennial pastures		9%	18%	28%	34%
Provision of independent soil test advice and recommendations		5%	12%	42%	34%
Technical assistance & information for bush, waterways and wetland management		3%	19%	39%	31%
A levy to be paid by landholders for the salt and nutrients leaving their property		32%	22%	14%	25%
Ability to sub-divide areas of bushland from the property to sell as a conservation/lifestyle block		25%	22%	24%	22%
Allow development on part of the property in exchange for protection of conservation values elsewhere on the property		12%	29%	29%	20%

Question 9: What are the barriers to changing landuse practices on your farm or increasing your involvement in community landcare activities?

More than half of the landholders responding to the survey are not happy with the way things are with only 10% responding that they agree with the statement that they are comfortable with the way things are now and don't want to change. This is strong support for change in the catchment. Lack of time 62%, off farm commitments 56%, lack of financial resources 56% and the level of paper work involved in obtaining grants or subsidies attracted greatest agreement from respondents. These responses are consistent with the fact that more than 50% of respondents derive no income from their properties with many working away from home.

155 responses	Strongly Agree	Agree	Neutral	Disagree	Strongly disagree	Not relevant to me
Comfortable with the way things are now, I don't want to change	2%	8%	17%	35%	19%	6%
Age or poor health	7%	14%	23%	16%	4%	28%
Doubts about likely success	4%	17%	25%	25%	6%	12%
Insufficient or inadequate information	8%	21%	29%	13%	6%	10%
Lack of financial resources	26%	30%	15%	4%	1%	15%
Lack of time	28%	34%	14%	5%	0%	10%
Local government rural strategies	10%	14%	42%	5%	3%	8%
Local landcare/progress groups don't meet my needs	3%	7%	43%	20%	5%	10%
Off-property commitments	16%	40%	11%	6%	1%	15%
Too much paperwork involved in obtaining grants or subsidies to undertake work	23%	23%	25%	5%	3%	12%

Question 10: Who do you think should be responsible for fixing catchment issues?

There is strong agreement that farmers should maintain good environmental health and that government funding should be made available to assist with this work and that it is not rural landholders sole responsibility to fund landcare. Views are split on whether decisions should be made by the government or the whole community regarding resource allocation and management.

169 responses	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Don't Know
Society has a right to expect farmers to farm in a way that maintains land and water in good environmental health	34%	50%	9%	2%	1%	0%
More government funding is needed to address the problems in the Torbay catchment	25%	43%	17%	2%	1%	8%
The wider community should contribute more money and resources to address degradation issues on farming land	14%	34%	25%	11%	5%	3%
Land management decisions should be made by farmers on their farms	11%	15%	22%	28%	17%	2%
It is the government's role to make decisions on allocation and management of resources for the whole community and the environment	7%	25%	16%	27%	17%	3%
Rural landholders should be solely responsible for funding landcare activities in the catchment	2%	2%	8%	51%	30%	1%

Question 11: What do you think the balance between production and environmental protection should be?

There is strong support for trying to achieve a balance between production and conservation of natural resources in the Torbay catchment. Respondents indicate that they have a long term view and do not want to maximise short term gain for long term environmental damage. This is encouraging support for the aims of the Restoration Plan.

	Total responses 166					
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Don't Know
Torbay catchment can have more sustainable agricultural systems by increasing perennial pastures, more integrated tree plantings, reduced fertiliser use and fencing of waterways and native vegetation	27%	44%	11%	2%	0%	10%
Government should give higher priority to policies to conserve and protect the environment	27%	47%	13%	7%	1%	1%
It is more important to protect conservation values for the long term than support production in the short term	25%	43%	16%	8%	2%	0%
The current agricultural system in Torbay catchment is sustainable in the long term and doesn't need to be changed	4%	8%	19%	37%	10%	17%
The economy in Torbay catchment needs diversity with more ecotourism and crafts	8%	34%	28%	12%	5%	7%
Torbay catchment needs more fast growing plantations like bluegums	1%	5%	13%	31%	36%	7%
Torbay catchment needs to maximise agricultural production even through this may cause some environmental damage	4%	7%	12%	45%	26%	2%

Question 12: Whare are your views on change and innovation in farming?

Respondents have expressed support for the notion that positive changes by farmers are possible and are open to support from agencies and information about new practices and learning from other landholders. There is low levels of certainty that children will take over farming from parents. This could affect levels of motivation for undertaking landcare work on farms.

	Total responses 148					
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Don't Know
Farmers can make a positive difference to the state of the environment	43%	48%	5%	0%	0%	1%
Farmers should be supported by government agencies to undertake innovation	22%	47%	18%	3%	1%	2%
It is important to keep up with new farming practices	20%	51%	16%	1%	1%	1%
It is important to visit other farms to look at their methods	17%	53%	19%	1%	1%	2%
My child/children will farm this property after me	6%	16%	21%	14%	3%	30%
My farm is sustainable in the long term	11%	36%	18%	9%	0%	13%
New machinery/ideas in farming have not improved upon traditional techniques	3%	8%	20%	39%	11%	10%
Successful farmers take financial risks	15%	36%	20%	9%	3%	7%
There are technological solutions to the environmental problems in the catchment	16%	28%	21%	6%	1%	17%

Question 13: What is your age in years?

The survey attracted an age profile biased in favour of older age brackets. This is discussed in relation to ABS data.

Group	Count	%
30-39	19	11.4
40-49	51	30.5
50-59	42	25.2
60-69	40	24.0
70-79	10	6.0
80 and above	5	3.0
Total	167	100.0

Question 15: What is the gender of the person filling out this survey?

There was a disproportionate number of males who answered the survey. Not attempt was made in this initial survey to attract equal numbers of males and females. This may be altered in follow up surveys.

Group	Count	%
Both	10	5.8
Female	60	34.9
Male	102	59.3
Total	172	100

Question 16: What percentage of your income (if any) do you earn from your property?

The responses to this question indicate how many people are earning incomes off property or from home enterprises not reliant on their property resources. This can be important for responses to landcare effort and update of support.

Income percentage	Count	%
All	9	5.3
Majority	12	7.0
Half	13	7.6
Some	52	30.4
None	85	49.7
	171	100

Question 17: How many people live in your household?

Most households 78% had two adults.

Number of adults	Count	%
1	21	13.2
2	124	78.0
3	7	4.4
4	4	2.5
5	3	1.9
	159	100.0

40% of the 159 respondents had one or more children.

	1 child	2 children	3 children	4 children	5 children	total
1 adult	1	1	0	1	0	3
2 adults	20	17	14	3	1	55
3 adults	1	1	1	0	0	3
4 adults	1	0	1	0	0	2
5 adults	0	0	0	0	0	0
total	23	19	16	4	1	63

Question 18: What is your highest level of formal education?

As discussed in a later section, the survey attracted respondents with a higher than average education levels.

Group	Count	%
Primary	7	4.3
Completed Year 10	36	22.0
Completed Year 12	23	14.0
Completed Trade or Certificate	24	14.6
Part of a Degree	12	7.3
Completed Diploma or Associate Diploma	19	11.6
Completed Uni Degree Course	26	15.9
Completed Uni Post Grad	17	10.4
Total	164	100.0

Question 14a: Do you Live on Your Property?

Those not living on their properties are divided between absentee landholders and those living in Albany as the regional centre and farming Torbay properties on a part time or full time basis.

Group	Count	%
No	38	22
Yes	135	78
Total	173	100

Question 14b: How long have you lived on your property?

69% of respondents have lived in the catchment area for more than six years. The number of longer term residents indicates considerably stability in the population.

Number of years lived on property	No. Respondents	% Respondents
<1 year	13	10%
1 – 5 years	28	21%
6 – 10 years	33	24%
11 – 15 years	27	20%
16 – 20 years	12	9%
21 – 25 years	11	8%
26 – 30 years	2	1%
>30	9	7%
Sub Total	135	100%

Question 19: How do you prefer to get your information about managing land and water resources and about projects like the Watershed Torbay Project?

There was a strong response in favour of the newsletter as an information medium. The responses to question 19 are likely to have been influenced by the fact that the catchment newsletter was a recent addition to communication media at the time the survey was conducted. Newspapers were accidentally missed from the list of possible information sources and will be included in future surveys. Newspapers are an important avenue for circulating information.

Total responses 159	Not Useful	Useful	Very Useful
Newsletter	1%	28%	66%
Field Days	9%	33%	30%
Torbay Catchment Group	5%	33%	26%
Workshops/Forums	10%	30%	25%
Webpage or Internet Sources	22%	27%	14%
Community Coordinators	17%	35%	11%
Neighbours	15%	36%	11%
Radio	22%	31%	11%
Training Courses	11%	35%	11%
Email	17%	22%	9%
Family Members	23%	25%	6%
Government Agencies	16%	36%	6%
Private Advisors	31%	21%	4%

Question 20: Please provide any further comments you would like recorded

46 landholders provided additional comments.

-
- The newsletter is the only contact I have with the Torbay issue.
 - I am a concerned resident and pick up information in bits and pieces from friends and neighbours - but to follow this closely would mean taking time from something else at this time.
 - Would like to see some practical on ground action.
 - Landowners need to be more aware of the nutrient status of their soil and water. On the case Louise, this is a well thought out census, cheers!
 - Information needs to be available in newsletter etc as above. Non attendance at meetings/workshops tends to be seen as disinterest. This is not always so. Website would be useful as it would be accessed when time permits especially if someone answers email queries promptly.
 - Small property - no stock at the present time.
 - Local, state and federal finance and other resources are extremely poor in helping landholders in the area to improve environment.
 - This survey is a bit confusing - the numbers in the last couple of pages all over the place! Torbay catchment group needs to be a higher profile, not dominated by farmers, environment focus group.
 - Society should expect to pay their share of costs to maintain land and water. More ecotourism and crafts in the catchment may be useful until there's a (real) recession, then people spend only on their needs. People don't need holidays and nicknacks.
 - The group has been established for quite a while now and I can't see any development or action yet except endless meetings. They need to use the grants for sub contractors to start the ball rolling as a lot of the small landholders in this area leave their property to go to work. Few work the land as their sole income. Congratulations for obtaining these grants - lets use them to improve our area. Thanks.
 - We all benefit from efficient production of food but it should not be at the expense of our environment. Some focus should be placed on sewerage disposal in some areas.
 - My ideas may not be relevant to your inquiry because we have inherited this family farm which has been in the family for over 100 years. We value it greatly, but, because our main source of income is our farm 303 kms away, we cannot, as yet, spend the time we would like to down there. We are greatly anticipating that day! My son, not I, manages both properties. Our Grasmere property has been legally entitled to him, although I am the present owner.
 - Returning of Lake Powell and Torbay Inlet to its original watercourses that is removal of plugs, floodgates and all water redirection structures and feeder streams and exits.
 - I feel the midgy problem should be looked at!!
 - I feel this questionnaire shows a bias towards traditional farmers and is weighted towards a 'big brother knows best' attitude. Many farmers in this district care and love their land and need recognition for what they have done. Not condemnation and self-righteous attitudes of we know what is best for you.
 - Newsletter is useful if moderated.
(we) They were talking about similar things to what could be done about cleaning up these waterways 15 years and more ago. Same things, same ideas - good intentions - a lot of us got tired of it. It may have progressed to today getting a grant - but I would be a bit worried that all the paperwork, posters etc could be chewing into that - there could be less spent on these things or what's the point - It'll be still talking - heaps of paper - nothing done!!
 - The framing of some questions (Qu 7 is particular) were too broad as the requirements of the environmental health of the catchment may not always be consistent with the perceived health of the community. Particularly if viewed from an economic perspective.
After many years of attending meetings and providing input and information regarding the Torbay Inlet system and catchment I share with others some reservations regarding this particular project.
It is important that some practical measures (some have been spoken about for years) are implemented because there is a danger that the community perception is that funding is used by government agencies and their consultants and contractors to justify their existence with research and promotions and still nothing gets done.
 - Local Rural Planning Strategies should encourage more alternative land tenure mechanisms.
 - Although there are not a list of works re Section 4c that have been carried out, it is our intention to implement a number of works programs on our property.
 - Thankyou for your services.
 - The Grasmere side of Lake Powell and the main drain seem to have been overlooked!!
 - I found many questions difficult to answer as we do not farm the land but am very interested in area.
-

-
- I have 5 ha but only about .5 ha drains into Torbay.
 - Our property is up for sale.
 - As we are absentee owners unable to get involved as have another property in Murray Shire and Truck business - hope to retire in two years!! Love Albany area.
 - This survey is not adequate for non-farmers.
 - Only having lived here for 4 months we are unable to comment fully. We do love the pristineness and peacefulness in the area.
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Survey Results by Gender

101 men and 61 women answered the survey a further 10 couples answered jointly. The 10 surveys answered jointly by couples were deleted from the database so a comparison of response by gender could be undertaken. A comparison was made across a small selection of questions. There are some differences in terms of the priorities of women and men in the catchment. The comparison suggests that men are more concerned about economic viability than women while women are more concerned about chemicals than men. Women in general appear willing to express stronger attitudes on issues.

There was a little more familiarity with the Watershed Torbay project by male respondents than women respondents.

A higher percentage of the men than women who answered the survey are members of voluntary groups. The Fire Brigade was the most frequently named group which attracts a greater proportion of men accounting for most of the difference. There was little difference in the level of landcare volunteerism between women 25% and men 27%.

Question 5: Which of the following factors have influenced your decisions to undertake landcare activities on your farm or on public land?

Female respondents appear to be prepared to rate factors as high importance 46% as opposed to the men 34%, on average across all of the factors. This was the case in other questions as well.

Women and men are most concerned about worsening landcare problems and handing on the property in good condition, with 76% of the women giving worsening landcare problems high importance and a further 11% saying it is of moderate importance with a total of 87%. For 59% of men worsening landcare problems were high importance and 22% said it was of medium importance with a total of 81%. Women are more concerned about climate change, aesthetics and being committed to biodiversity than men. Men 25% high importance, 21% medium important, are more concerned about the financial position of the business or farm than women, 14% high importance, 14% medium importance.

Response FEMALE	High Importance	Medium Importance	Not an influence	Slight importance	Grand Total
Worsening landcare problems eg salinity, waterlogging, algal blooms, soil acidity, weeds, state of native vegetation deteriorating	76%	11%	8%	5%	100%
Wanting to hand on the property in good condition for future generation	71%	17%	10%	2%	100%
Concern about climate change	58%	19%	12%	12%	100%
Aesthetics	53%	33%	8%	8%	100%
Being committed to biodiversity	51%	22%	17%	10%	100%
Having access to new information or advice about the state of the environment and how to reduce impacts	47%	29%	15%	9%	100%
Being committed to long term farm plan	39%	16%	32%	13%	100%
Being confident of success in conservation works undertaken	37%	31%	20%	11%	100%
Financial position of the business or farm	14%	14%	64%	7%	100%
Belonging to landcare group/progress association	12%	15%	64%	9%	100%
Obtaining external funding	12%	12%	69%	8%	100%
Grand Total	46%	20%	26%	8%	100%

Response MALE	High Importance	Medium Importance	Not an influence	Slight importance	Grand Total
Wanting to hand on the property in good condition for future generation	68%	26%	4%	1%	100%
Worsening landcare problems eg salinity, waterlogging, algal blooms, soil acidity, weeds, state of native vegetation deteriorating	59%	22%	14%	5%	100%
Being confident of success in conservation works undertaken	36%	34%	13%	17%	100%
Being committed to long term farm plan	34%	40%	21%	5%	100%
Aesthetics	33%	48%	11%	8%	100%
Having access to new information or advice about the state of the environment and how to reduce impacts	29%	36%	14%	21%	100%
Being committed to biodiversity	28%	35%	15%	22%	100%
Concern about climate change	28%	23%	25%	25%	100%
Financial position of the business or farm	25%	21%	46%	8%	100%
Obtaining external funding	14%	14%	60%	12%	100%
Belonging to landcare group/progress association	6%	30%	51%	13%	100%
Grand Total	34%	30%	24%	12%	100%

Question 6: What do you think are the key issues relating to land and water management in Torbay catchment?

Of the 61 female respondents 77% rated the top issue as algal blooms, while 71% of the 101 men rated weeds as their top issue. Men and women had the same issues in their top four. Women are more concerned about chemical sprays and what goes into the creeks than men.

Issue	% Female	% Male
Algal blooms in the drains, Lakes and Torbay Inlet at the bottom of the catchment	77%	61%
Degradation of waterways	72%	65%
Chemical sprays	70%	51%
Weeds	61%	71%
Condition of native vegetation	57%	54%
Lack of information about what goes into the creeks	57%	33%
Feral animals	56%	53%
Threat of proposed mining/quarry in catchment	56%	35%
Salinity of land	54%	49%
Decline in fisheries	48%	42%
Management of the lower drainage district	43%	33%
Impacts on water availability to agriculture and the stream ecology if water from Marbelup Brook was extracted for Albany drinking water	39%	42%
People reluctant to change land use and lifestyle behaviour	39%	30%
Bluegum plantations taking up agricultural land	36%	43%
Impacts of recreation on environment	34%	24%
Harmful bacteria from animal waste in our drinking water supply	28%	26%
Changes in landuse and subdivisions	26%	36%
Economic viability of farming	26%	44%
Soil acidity	26%	50%
Increasing number of new residents	25%	26%
Waterlogging of agricultural and residential land	23%	39%
Bore water quality	20%	28%
Decreasing number of people involved in community groups	16%	19%
Lack of riparian vegetation	0	1%
Management of the lower drainage district	0	1%
Non viable farm size	0	1%
Profitable diversification of production	0	1%
Proper disposal of water captured up stream from outlet	0	1%
Total lack of government funding help	0	1%

Question 7: Please number the six catchment characteristics in order of important to you.
 Both men and women rated the Quality of water in waterways and lakes as their most important catchment characteristic. Men rated income levels more highly than women.

Sum of Survey Response: MALE		Importance						
Characteristic	1	2	3	4	5	6	Total	
Quality of water in waterways and lakes	55%	21%	9%	5%	3%	7%	100%	
Whether management of the drainage system meets the needs of the environment & landholders	28%	23%	14%	9%	14%	12%	100%	
Income levels of people living in the catchment	26%	11%	11%	16%	11%	26%	100%	
Level of business and employment in the catchment	20%	13%	0%	40%	20%	7%	100%	
Degree of satisfaction about living in the catchment area	15%	9%	18%	9%	21%	27%	100%	
Extent of weed infestation in the catchment	7%	14%	18%	26%	18%	18%	100%	
Level of community participation in local organisations	5%	10%	20%	10%	25%	30%	100%	
Level of rehabilitation of waterways and drains with vegetation and bank stabilising	5%	28%	19%	14%	26%	7%	100%	
Status of fisheries in the Inlet and waterways	5%	15%	18%	20%	28%	15%	100%	
Extent of native vegetation cover in the catchment	4%	11%	20%	27%	18%	20%	100%	
Level of protection of native vegetation and fauna	4%	18%	31%	25%	11%	11%	100%	
Level of management of recreation sites	0%	0%	13%	7%	13%	67%	100%	

Sum of Survey Response: FEMALE		Importance						
Characteristic	1	2	3	4	5	6	Grand Total	
Quality of water in waterways and lakes	64%	14%	8%	6%	8%	0%	100%	
Level of protection of native vegetation and fauna	16%	23%	14%	26%	16%	5%	100%	
Extent of native vegetation cover in the catchment	11%	16%	21%	18%	11%	24%	100%	
Level of management of recreation sites	10%	20%	20%	10%	10%	30%	100%	
Level of rehabilitation of waterways and drains with vegetation and bank stabilising	9%	16%	21%	16%	21%	16%	100%	
Extent of weed infestation in the catchment	8%	16%	22%	22%	16%	16%	100%	
Degree of satisfaction about living in the catchment area	6%	0%	12%	12%	35%	35%	100%	
Income levels of people living in the catchment	0%	0%	0%	100%	0%	0%	100%	
Level of business and employment in the catchment	0%	0%	0%	33%	67%	0%	100%	
Level of community participation in local organisations	0%	25%	13%	0%	13%	50%	100%	
Status of fisheries in the Inlet and waterways	0%	8%	23%	15%	31%	23%	100%	
Whether management of the drainage system meets the needs of the environment & landholders	0%	32%	19%	16%	10%	23%	100%	

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