Otago Regional Council

SUBMISSION FORM
Proposed Plan Change ~~1C~~ 1B Water Allocation and Use to the Regional Plan: Water for Otago

Form 5, Clause 6 of the First Schedule, Resource Management Act 1991

1

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OTAGO REGIONAL COUNCIL RECEIVED DUNEDIN 22 DEC 2008 FILE No. RI 221 DIR TO

Full name of submitter: Alar Grant Macgregor

Name of organisation *(if applicable)*:

Postal address: State Highway 1 RD 1 Cromwell

Postcode:

Telephone: 03 4371653

Fax:

Email:

Contact Person: Self

I wish / ~~do not wish~~ *(circle preference)* to be heard in support of my submission.

If others made a similar submission, I will consider presenting a joint case with them at a hearing.
(Cross out if you would not consider presenting a joint case).

Signature of submitter: Grant Macgregor
(or person authorised to sign on behalf of person making submission).

Date: 16th December 2008

Please note that all submissions are made available for public inspection.

The parts of the proposed plan change that my submission relates to are:
(Give clear references if possible e.g. reference number, policy x, rule y)

1. B Minimum flows – 3 mentioned particularly
1 c Water allocation + use –

My submission is:
(Include whether you support, oppose, or wish to have amended the parts identified above, and give reasons)

I am a farmer
I am an irrigator (Lower Manuherikia Irrigation Scheme)

I believe the water flows, ecosystems and natural environment within the three mentioned water systems are too fragile to allow any water take for irrigation. Yes they could

Please turn over

I seek the following decision from the local authority:

(Give precise details e.g. changes you would like made)

support a drinking water residential take from the upper reaches without need [illegible] I [illegible] of a major river like the Waitaki [illegible] a CONTROLLED take can benefit mankind

I sit in on neighbours meeting and believe me THEY DON'T CARE now especially the dairy farmers

We don't have much left in Otago [illegible] as regards clean water. The upper [illegible] of the Waianakarua, Maraukenua and [illegible] about it in the summer. The [illegible] a disgrace. I don't [illegible] most local [illegible] summer. I have seen them [illegible] places even in my lifetime.

Please be sensible with your decision. We once called [illegible] country [illegible]

SUBMISSIONS MUST BE RECEIVED BY 5.00 PM, MONDAY 9 MARCH 2009.

Please do your [illegible] it [illegible] the responsibility of us all

Please fold and secure with a small piece of tape.

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Free Post

Otago Regional Council
Private Bag 1954
Dunedin 9054

Attention Policy Team

Otago Regional Council

SUBMISSION FORM 1B
Proposed Plan Change ~~1C~~ Water Allocation and Use to the Regional Plan: Water for Otago

Form 5, Clause 6 of the First Schedule, Resource Management Act 1991

2

Office use only

Full name of submitter: ALI KING

Name of organisation *(if applicable)*:

Postal address: 40 [illegible] ST

[illegible]

Postcode [illegible]

Telephone [illegible]

Fax:

Email:

Contact Person:

I ~~wish~~ / do not wish *(circle preference)* to be heard in support of my submission

If others make similar submission, I will consider presenting a joint case with them at a hearing.
(Cross out if you would not consider presenting a joint case)

Signature of submitter *(or person authorised to sign on behalf of person making submission)*: [signature]

Date [illegible]

Please note that all submissions are made available for public inspection.

The parts of the proposed plan change that my submission relates to are:
(Give clear references if possible e.g. reference number, policy x, rule y)

GENERAL SUPPORT FOR O.R.C PROPOSED PLAN CHANGE.
1 a b c d 2, 3, 4, 6 a b c

My submission is:
(Include whether you support, oppose, or wish to have amended the parts identified above, and give reasons)

I SUPPORT THE PROPOSED PLAN CHANGE. THE WATER ALLOCATION POLICY NEEDS CAREFUL ADJUSTMENT, AND ON-GOING MONITORING. WE ARE MEDDLING WITH NATURE TOO MUCH, AND FUTURE GENERATIONS WILL PAY THE PRICE OF OUR MISADVENTURE, OFTEN FUELED BY GREED. IT CONCERNS ME THAT NATURAL SPRINGS THAT HAVE RUN IN THE PAST, NO LONGER DO SO.

I seek the following decision from the local authority:
(Give precise details e.g. changes you would like made)

OUR RIVERS ARE SUFFERING BECAUSE OF WATER HARVESTING, AND MINIMUM FLOWS SET TOO LOW.

PLEASE TAKE EVERY STEP POSSIBLE, TO RETAIN SOMETHING THAT WE ARE ONLY GUARDIANS OF.

Fol

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22 DEC 08

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Dunedin 9054

Attention Policy Team

Otago Regional Council

SUBMISSION FORM
Proposed Plan Change 1B Minimum Flows
to the Regional Plan: Water for Otago

Form 5, Clause 6 of the First Schedule, Resource Management Act 1991.

3

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OTAGO REGIONAL COUNCIL
RECEIVED DUNEDIN
23 DEC 2008
FILE No. RI 221
DIR. TO

Full name of submitter: J Turney 75 Wesley St Dunedin

Name of organisation *(if applicable)*: NA

Postal address:

Postcode: 9012

Telephone: (03) 455 2915

~~Fax:~~

~~Email:~~

Contact Person:

I ~~wish~~ / do not wish *(circle preference)* to be heard in support of my submission. It can stand by itself

If others made a similar submission, I will consider presenting a joint case with them at a hearing.
(Cross out if you would not consider presenting a joint case). A good all-round Geographer plus more specialist academics could be usefully consulted, in addition to locals (e.g. on goats on vegetation)

Signature of submitter: J Turney Date: 21/12/08
(or person authorised to sign on behalf of person making submission).

Please note that all submissions are made available for public inspection.

The parts of the proposed plan change that my submission relates to are:
(Give clear references if possible e.g. reference number, policy x, rule y)

in general

locals know best what's what and should/shouldn't change

any differences from near-enough unanimous decisions should be given sensible consideration and even tolerance where possible / for time being

preserve pastoral and agricultural landuse of present unless better is clear — any housing/tourist developments to be restricted as to space and effects, especially water-use (Boring their own!)

My submission is:
(Include whether you support, oppose, or wish to have amended the parts identified above, and give reasons)

Apart from any grossly anomalous differences at present or intended, maintain the status quo. Any proposal to substantially alter present shares, from especially outsider(s) to be disallowed. Present or future cause(s) of pollution removed or prevented, beyond boiled-water and/or filtered drinking or washing standard (taste also critical). Temporary excesses of water from atmospheric precipitation desirably to be captured in part in tanks or other devices, especially domestic. Research (further?) into xerophytic alternative flora/fauna possibilities for smaller/larger areas — this even antagonistic to irrigation (evaporation and salination). No goats in any large number (small only?).

I seek the following decision from the local authority:

(Give precise details e.g. changes you would like made)

Not really my business in so specific a case, so

"See overleaf"

P.S. re irrigation — halophytes might prefer

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Dunedin 9054

Attention Policy Team

(Regional Plan
Water for Otago)

Otago Regional Council

SUBMISSION FORM

Proposed Plan Change 1B Minimum Flows

to the Regional Plan: Water for Otago

Form 5, Clause 6 of the First Schedule, Resource Management Act 1991.

4

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Full name of submitter: [illegible]

Name of organisation *(if applicable)*:

Postal address: 24 [illegible] Road [illegible] Bay [illegible]

Postcode: [illegible]

Telephone: [illegible]

Fax:

Email:

Contact Person:

~~I wish~~ / do not wish *(circle preference)* to be heard in support of my submission.

If others made a similar submission, I will consider presenting a joint case with them at a hearing.
(Cross out if you would not consider presenting a joint case).

Signature of submitter: [illegible] Date: 21/12/08
(or person authorised to sign on behalf of person making submission).

Please note that all submissions are made available for public inspection.

The parts of the proposed plan change that my submission relates to are:
(Give clear references if possible e.g. reference number, policy x, rule y)

My submission is:
(Include whether you support, oppose, or wish to have amended the parts identified above, and give reasons)

I do not agree because I have seen 3 floods in 25 years also 7 rivers going into the lake. There is no shortage of water. You want to put our rates up which you have been doing since 2002. It sounds like something that they did in world war 2 [illegible]

Please turn over

I seek the following decision from the local authority:

(Give precise details e.g. changes you would like made)

Fold

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Dunedin 9054

Attention Policy Team

Otago Regional Council

SUBMISSION FORM
Proposed Plan Change 1B Minimum Flows
to the Regional Plan: Water for Otago

Form 5, Clause 6 of the First Schedule, Resource Management Act 1991.

5

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Full name of submitter: Clyde Watson

Name of organisation *(if applicable)*:

Postal address: 71 Macandrew Road
South Dunedin

Postcode:

Telephone:

Fax:

Email:

Contact Person:

(I ~~wish~~ / do not wish) *(circle preference)* to be heard in support of my submission.

~~If others made a similar submission, I will consider presenting a joint case with them at a hearing.~~
(Cross out if you would not consider presenting a joint case).

Signature of submitter: C Watson Date: 21-12-08
(or person authorised to sign on behalf of person making submission).

Please note that all submissions are made available for public inspection.

The parts of the proposed plan change that my submission relates to are:
(Give clear references if possible e.g. reference number, policy x, rule y)

I would like to see clean water, in the rivers fresh water for us to drink, and the clearance, so that we'll able to see everything in the water.

My submission is:
(Include whether you support, oppose, or wish to have amended the parts identified above, and give reasons)

I would like to see all the animals have plenty of water, to keep them in good condition and that is to keep the grass in all the paddocks green, where there to be water to make things good, and also rain to stop the paddocks from drying up.

I seek the following decision from the local authority:

(Give precise details e.g. changes you would like made)

I would like to see the waterfalls from a mountain and keeping the water fresh!

Fold

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Fold

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Dunedin 9054

Attention Policy Team

Otago Regional Council

SUBMISSION FORM
Proposed Plan Change 1B Minimum Flows
to the Regional Plan: Water for Otago

Form 5, Clause 6 of the First Schedule, Resource Management Act 1991.

6

Office use only

Full name of submitter: GRAEME KENNETH ANDERSON

Name of organisation *(if applicable)*: —

Postal address: 19 Gordon St Western Oamaru

Postcode: 9401

Telephone: 034365194

Fax: 034365194

Email:

Contact Person: —

I wish / do not wish *(circle preference)* to be heard in support of my submission.

If others made a similar submission, I will consider presenting a joint case with them at a hearing.
(Cross out if you would not consider presenting a joint case).

Signature of submitter: [signature]
(or person authorised to sign on behalf of person making submission).

Date: 22/12/2008

Please note that all submissions are made available for public inspection.

The parts of the proposed plan change that my submission relates to are:
(Give clear references if possible e.g. reference number, policy x, rule y)

Nuggets catchment, Trotters & Waianakarua catchments minimum flow and primary allocation limits

My submission is:
(Include whether you support, oppose, or wish to have amended the parts identified above, and give reasons)

That the proposed minimum flow rates for these 3 catchments is to low. also the primary allocation limits are to high
I therefore oppose changes and wish to have both of the above amended and minimum flows increased primary allocation limits reduced

I seek the following decision from the local authority:
(Give precise details e.g. changes you would like made)

Previous efforts to establish minimum flows on the Kakanui river have resulted in destruction of the ecology and aquatic values of the river being destroyed all by poor research resulting in over allocation of the water resource. The same applies with the current proposals. Minimum flow rates must be increased and primary allocation rates reduced on the 3 catchments notified.

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Dunedin 9054

Attention Policy Team

Otago Regional Council

SUBMISSION FORM
Proposed Plan Change 1B Minimum Flows
to the Regional Plan: Water for Otago

Form 5, Clause 6 of the First Schedule, Resource Management Act 1991

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24 DEC 2008
FILE No. RI221
DIR TO

7
Office use only

Full name of submitter: [Ruhuia Clark]

Name of organisation *(if applicable)*:

Postal address: 46 TURNBULL STREET, BROCKVILLE, Dunedin

Postcode: 9101

Telephone: None

Fax: None

Email: As Above

Contact Person: Neighbour

I wish / do not wish *(circle preference)* to be heard in support of my submission. ✓

If others made a similar submission, I will consider presenting a joint case with them at a hearing. ✓
(Cross out if you would not consider presenting a joint case).

Signature of submitter: K Clark

Date: 23.12.08
(or person authorised to sign on behalf of person making submission).

Please note that all submissions are made available for public inspection.

The parts of the proposed plan change that my submission relates to are:
(Give clear references if possible e.g. reference number, policy x, rule y)

My submission is:
(Include whether you support, oppose, or wish to have amended the parts identified above, and give reasons)

I support

I seek the following decision from the local authority:
(Give precise details e.g. changes you would like made)

Keep Things The same
With your decisions

Fol

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Attention Policy Team

Otago Regional Council

SUBMISSION FORM
Proposed Plan Change 1B Minimum Flows
to the Regional Plan: Water for Otago

Form 5, Clause 6 of the First Schedule, Resource Management Act 1991.

8

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Full name of submitter: ALAN ROBERT DICKIE

Name of organisation *(if applicable)*:

Postal address: 58 BELFORD ST
DUNEDIN Postcode: 9013

Telephone: 03 4543400 Fax:

Email: ajdickie@clear.net.nz Contact Person: ALAN

I wish / ~~do not wish~~ *(circle preference)* to be heard in support of my submission.

If others made a similar submission, I will consider presenting a joint case with them at a hearing.
~~(Cross out if you would not consider presenting a joint case).~~

Signature of submitter: AR Dickie Date: 24/12/08
(or person authorised to sign on behalf of person making submission).

Please note that all submissions are made available for public inspection.

The parts of the proposed plan change that my submission relates to are:
(Give clear references if possible e.g. reference number, policy x, rule y)

POLICY CHANGE 1B Minimum FLOW
Waianakarua Catchment

My submission is:
(Include whether you support, oppose, or wish to have amended the parts identified above, and give reasons)

I WISH TO AMEND THE MINIMUM SUMMER FLOW TO 250 l/sec In Waianakarua River
The river is at too low a level in Summer for the long term health of the river
Minimum flow is too low.

Please turn over

I seek the following decision from the local authority:

(Give precise details e.g. changes you would like made)

Would like to see a sensible minimum flow of 250 l/sec for the river. Water rights need to be sustainable, so algae doesn't build up in the river.

Fold

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Fold

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Attention Policy Team

Otago Regional Council

SUBMISSION FORM
Proposed Plan Change 1B Minimum Flows
to the Regional Plan: Water for Otago

Form 5, Clause 6 of the First Schedule, Resource Management Act 1991

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Full name of submitter: MRS M. E Oakley

Name of organisation *(if applicable)*: OCKC Otago Canoe + Kayak Club

Postal address: 72, Signal Hill Rd. Opoho, Dunedin

Postcode: 9010

Telephone: 03) 4737752

Fax:

Email: roakley@xtra.co.NZ

Contact Person: Maggie.

I wish / do not wish *(circle preference)* to be heard in support of my submission.

If others made a similar submission, I will consider presenting a joint case with them at a hearing.
(Cross out if you would not consider presenting a joint case).

Signature of submitter: M.E Oakley. Date: 2/1/09.
(or person authorised to sign on behalf of person making submission).

Please note that all submissions are made available for public inspection.

OTAGO REGIONAL COUNCIL
RECEIVED DUNEDIN
- 6 JAN 2009
FILE No. RF221
DIR TO

The parts of the proposed plan change that my submission relates to are:
(Give clear references if possible e.g. reference number, policy x, rule y)

The document reads as though the water is there for the taking. No where does the plan discuss preserving or conserving water.

I do not support the plan.

My submission is:
(Include whether you support, oppose, or wish to have amended the parts identified above, and give reasons)

That I do not support the proposal. I do not see where in the plan that environmental or recreational flows are safeguarded. As a kayaker my interests are not valued or recognised by the plan.

I seek the following decision from the local authority:
(Give precise details e.g. changes you would like made)

SUBMISSIONS MUST BE RECEIVED BY 5.00 PM, MONDAY 9 MARCH 2009.

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Otago Regional Council
Private Bag 1954
Dunedin 9054

Attention Policy Team

10

Sarah Valk

From: Vick and Glen Miller [vgmiller@xtra.co.nz]
Sent: Tuesday, 20 January 2009 07:27
To: Policy Reply
Subject: Trotters Minimum Flow Draft Submission

Minimum Flow Submission

Trotters Creek

My name is Glen Miller, I support the Trotter family and it's concerns on the minimum flow issue. I know they have lived and farmed beside Trotters Creek since the 1840s. The creek has significant historical, recreational and ecological values which are held in very high regard by their family.

The Trotter family supports the proposed winter minimum flow of 35 liters a second. I understand that the weir used to divert water into the storage pond is to be removed during winter and there will be no fish passage issues.

I also opposes the proposed summer minimum flow of 8 liters a second for the following reasons:

1. The Trotters Creek management flows report clearly identifies that at least 20 liters a second is required to protect the 13 different fish species that are known to live within the stream. These species include giant kokopu, long finned eel, short finned eel, koaro, Canterbury galaxias, common bully, upland bully, giant bully, redfin bully, bluegill bully, lamprey, brown trout and inanga. In addition to these species, flounder also reside in mouth of the stream. Such high biodiversity should be given significant consideration and protection when setting a flow regime.
2. During dry years the creek can become low naturally during summer. The proposed minimum flow would compound the effect of these low flows and result in the stream being flat lined unnaturally for extended periods. This would result in algal blooms, high water temperatures and low oxygen levels.
3. Many of the native fish species that live in the creek have a sea going life cycle stage. It is vital that water abstraction does not result in the blockage of the stream mouth near the ocean which would prevent fish access to and from the sea.
4. Some of the white bait species such as inanga spawn in the lower part of the creek. Good water quality and flow levels are an important part of their spawning and juvenile habitat requirements.
5. The proposed level would not provide for adult trout passage during summer.
6. It has been estimated that a minimum flow of 20 liters a second would only impact on water abstraction on 4 days a year. We understand that there is 3.5 days of storage in the dam beside the creek. With a slight increase in storage a minimum flow of 20 liters a second would allow for water abstraction and protect the health of the stream at the same time.
7. Flat lining of the creek at 8 liters a second for extended periods would destroy the natural character of the stream.
8. The mean annual low flow of Trotters Creek has been estimated at 23 liters a second. The ORC has questioned this value after flow comparisons with other nearby rivers. Although the catchment area of Trotters creek may not be as large as the Shag or Waianakarua Rivers, the surface flows between pools in Trotters Creek can be greater than these rivers during a drought. This may be related to localised weather patterns, the vegetation in the upper catchment and the geology of the stream bed.
9. The actual amount of water used for irrigation and the amount of water that has over flowed from the storage pond back into the creek is not known. When there is uncertainty about flow

and abstraction levels the Council should take a precautionary approach when setting minimum flow levels to allow for hydrological estimate errors and ensure the protection of the environment.

We would also like the council to note the following points:

The Trotters family was the first to be given permission to irrigate out of Trotters Creek. This permission was never used (and lapsed) because of concerns about the effects of abstraction during low flow periods on the health of the stream.

Our family was originally told that water for the irrigation take that is now active would only be harvested during high flow periods for storage, and that irrigation would not affect low flow levels. We were not given an opportunity to have input on minimum flow levels when abstraction for irrigation first began. Given the chance, we would have opposed abstraction from the stream at low levels from the onset.

We understand that the weir that has been used to divert water into the storage pond has restricted fish passage. It is important that fish passage is provided for at all times.

The minimum flow should be designed to mimic natural flow patterns and provide for flow variability as much as possible. During dry years flushing flows, small freshes and peaks are vital for the health of the stream. We understand that there has been over flows from the storage dam back into the creek several hundred meters further downstream. The point of take and the return from the storage pond should be located close together to avoid unnecessarily dewatering a significant section of the creek and allow overflows to refresh the stream.

Finally, the intrinsic, recreational and ecological values of Trotters Creek are important for many members of our local community and people from outside the area as well. A meaningful minimum flow is required to ensure that the abstraction of water does not jeopardize these values and the health of the stream. Any financial gains from irrigation of farmland by one member of the community will not benefit the greater community unless the health of the stream is protected the first instance.

Please except this as my submission.

Yours Sincerely

Glen Miller
5 Canberra Place
Waldronville
Dunedin.

Minimum Flow Submission

Trotters Creek

My name is Steven Dixon and I writing this submission regarding the minimum flow planned for Trotters creek. The creek has significant historical, recreational and ecological values which are held in very high regard by me and my family.

I support the proposed winter minimum flow of 35 liters a second and understand that the weir used to divert water into the storage pond is to be removed during winter and there will be no fish passage issues.

I oppose the proposed summer minimum flow of 8 liters a second for the following reasons:

1. The Trotters Creek management flows report clearly identifies that at least 20 liters a second is required to protect the 13 different fish species that are known to live within the stream. These species include giant kokopu, long finned eel, short finned eel, koaro, Canterbury galaxias, common bully, upland bully, giant bully, redfin bully, bluegill bully, lamprey, brown trout and inanga. In addition to these species, flounder also reside in mouth of the stream. Such high biodiversity should be given significant consideration and protection when setting a flow regime.
2. During dry years the creek can become low naturally during summer. The proposed minimum flow would compound the effect of these low flows and result in the stream being flat lined unnaturally for extended periods. This would result in algal blooms, high water temperatures and low oxygen levels.
3. Many of the native fish species that live in the creek have a sea going life cycle stage. It is vital that water abstraction does not result in the blockage of the stream mouth near the ocean which would prevent fish access to and from the sea.
4. Some of the white bait species such as inanga spawn in the lower part of the creek. Good water quality and flow levels are an important part of their spawning and juvenile habitat requirements.
5. The proposed level would not provide for adult trout passage during summer.
6. It has been estimated that a minimum flow of 20 liters a second would only impact on water abstraction on 4 days a year. We understand that there is 3.5 days of storage in the dam beside the creek. With a slight increase in storage a minimum flow of 20 liters a second would allow for water abstraction and protect the health of the stream at the same time.
7. Flat lining of the creek at 8 liters a second for extended periods would destroy the natural character of the stream.
8. The mean annual low flow of Trotters Creek has been estimated at 23 liters a second. The ORC has questioned this value after flow comparisons with other nearby rivers. Although the catchment area of Trotters creek may not be as large as the Shag or Waianakarua Rivers, the surface flows between pools in Trotters Creek can be greater than these rivers during a drought. This may be related to

localised weather patterns, the vegetation in the upper catchment and the geology of the stream bed.

9. The actual amount of water used for irrigation and the amount of water that has over flowed from the storage pond back into the creek is not known. When there is uncertainty about flow and abstraction levels the Council should take a precautionary approach when setting minimum flow levels to allow for hydrological estimate errors and ensure the protection of the environment.

Finally, the intrinsic, recreational and ecological values of Trotters Creek are important for many members of our local community and people from outside the area as well. A meaningful minimum flow is required to ensure that the abstraction of water does not jeopardize these values and the health of the stream. Any financial gains from irrigation of farmland by one member of the community will not benefit the greater community unless the health of the stream is protected the first instance.

Yours Sincerely

Steven Dixon
39 Kennedy Rd
Dunedin
Otago

Otago Regional Council

SUBMISSION FORM

Proposed Plan Change 1B ~~C Water Allocation and Use~~

to the Regional Plan: Water for Otago

Form 5, Clause 6 of the First Schedule, Resource Management Act 1991

12

Office use only

Full name of submitter: MICHAEL RAMSAY

Name of organisation *(if applicable)*: —

Postal address: FLAT C, FLOOR 31, TOWER 12. PARK CENTRAL.
TSEUNG KWAN O. HONG KONG.

Postcode: —

Telephone: —

Fax: —

Email: michaelramsay1226@yahoo.com

Contact Person: MICHAEL RAMSAY

I wish / do not wish *(circle preference)* to be heard in support of my submission.

If others made a similar submission, I will consider presenting a joint case with them at a hearing.
(Cross out if you would not consider presenting a joint case).

Signature of submitter: [signature] Date:
(or person authorised to sign on behalf of person making submission).

Please note that all submissions are made available for public inspection.

The parts of the proposed plan change that my submission relates to are:
(Give clear references if possible e.g. reference number, policy x, rule y)

Item 6 in the proposed plan change is already covered in the existing Regional water plan: clause 12.1.2.5

My submission is:
(Include whether you support, oppose, or wish to have amended the parts identified above, and give reasons)

- I oppose the proposed change noted as item 6.
- I neither support, nor oppose the remaining items, but reserve the right to do so after the next call for submissions at end of MARCH 2009.

I seek the following decision from the local authority:
(Give precise details e.g. changes you would like made)

I wish to see more specific details on the proposed changes (eg.) defining actual minimum flows, and how these will be achieved, and who will be penalised, and via what rules process, should these minimum flows be breached.
Especially as it will relate to surface water.

Fold

SUBMISSIONS MUST BE RECEIVED BY 5.00 PM, MONDAY 9 MARCH 2009.

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Otago Regional Council
Private Bag 1954
Dunedin 9054

Attention Policy Team

Otago Regional Council

SUBMISSION FORM
Proposed Plan Change 1B Minimum Flows
to the Regional Plan: Water for Otago

Form 5, Clause 6 of the First Schedule, Resource Management Act 1991.

13

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Full name of submitter: Prof P.D.R LINDSAY-SALMON

Name of organisation *(if applicable)*: —

Postal address: 30, Waiareka Valley Rd, RD17, Oamaru

Postcode: 9491

Telephone: 03-434-5677

Fax: —

Email: p.d.r.lindsay.salmon@clear.net.nz

Contact Person: —

OTAGO REGIONAL COUNCIL RECEIVED DUNEDIN 22 JAN 2009 FILE No. RF221 DIR TO

I wish / do not wish *(circle preference)* to be heard in support of my submission.

If others made a similar submission, I will consider presenting a joint case with them at a hearing.
(Cross out if you would not consider presenting a joint case).

Signature of submitter: P.D.R Lindsay-Salmon Date: 21st Jan 2009
(or person authorised to sign on behalf of person making submission).

Please note that all submissions are made available for public inspection.

The parts of the proposed plan change that my submission relates to are:
(Give clear references if possible e.g. reference number, policy x, rule y)

My submission is:
(Include whether you support, oppose, or wish to have amended the parts identified above, and give reasons)

I seek the following decision from the local authority:

(Give precise details e.g. changes you would like made)

What I would simply like to do is ask if the changes are necessary. Bearing in mind what irrigating land has done for California + the poor Murray River system in Australia I would like to see far more caution exercised, more testing and computer simulations done.

We already have a salt lake in the region, does anyone know why + what is the likehood of irrigation doing the same thing at sea level?

The visiting Australian Professor who spoke about making changes now to prevent future damage made sense. Can we ask that the ORC does exercise common sense and say no to further irrigation?

SUBMISSIONS MUST BE RECEIVED BY 5.00 PM, MONDAY 9 MARCH 2009.

Fold

Please fold and secure with a small piece of tape.

Fold

FreePost Authority ORC 1722

Free

Otago Regional Council
Private Bag 1954
Dunedin 9054

Attention Policy Team

OTAGO REGIONAL COUNCIl,
Private Bag 1954, Dunedin, Post code 9054.
Atttn: Policy Team.

14

Management Flows in Aquatic Ecosystems in Trotters Creek
Minimum Flow Submission
Trotters Creek

For reasons outlined below and in an appended species list of aquatic invertebrates present in Trotters Creek, I oppose the proposed summer minimum flow of 8 litres per second.

I was the Curator of Invertebrate Zoology at the Otago Museum from 1974-2000 and am now the Honorary Curator, Entomology, there. In September 1980, I made a survey of the invertebrate fauna of Trotters Creek in the gorge area, for a course there held on 27-28 September 1980 run by "Otago University Extension", the course being titles "A case study of an Otago Scenic Reserve."

I was very surprised by the unusually large number of invertebrate species present in Trotters Creek, and have appended my list to this submission (note that names will have changed since it was made in 1980).

In addition to those aquatic invertebrates, there were significant numbers of native fish including giant Kokopu, Canterbury Galaxias, common bully, upland bully, giant bully, redfin bully, bluegill bully, lamprey, and several others, as well as brown trout.

The high species diversity of aquatic invertebrates and vertebrates in Trotters Creek must be maintained and protected by not setting a harmful flow regime.

Because Trotters Creek becomes naturally low-flowing in dry summers, a proposed minimum flow would result in algal blooms, high water temperatures, low oxygen levels, and likely loss of species diversity.

Please note that not only is the area unusually rich in terrestrial native invertebrates as well, it is an area of endemism – species found nowhere else. E.g., the locally endemic "Mountain daisy" *Celmisia hookeri,* more or less confined to the Horse Range and conspicuous on the high ledges in Trotter's Gorge. A distinctive invertebrate fauna in the area seems to have resulted from an overlapping of Otago and Canterbury faunas and a unique element confined to the Trotters Creek catchment. (A distingishable Central Otago and eastern Otago invertebrate fauna has its northern boundary roughly along the St. Bathans, Kakanui, and Horse Ranges, although further inland, it extends to the Waitaki River, while the South Canterbury fauna is bounded in the east by the same hills. There is a large carabid ground beetle fauna in the Trotters Creek catchment. Two species, a *Megadromus* and a *Holcaspis* species are found nowhere else, while *Magadromus haplopus* is restricted to the area around the eastern part of the Horse Range.

Thus Trotters Creek catchment supports a large number of localized plants and animals while Trotters Creek supports an unusually rich invertebrate and vertebrate aquatic fauna, which must be protected by not reducing the flow of water in Trotters Creek.

Yours sincerely,

Anthony Harris 22 January 2009

Anthony Harris.

31 Maybank St., Opoho, Dunedin. Phone 4747474 (ex. 859) day, 4739475 night.

22/01/2009

ATTACHED: Appendix.

CHARACTERISTICS OF THE TROTTERS GORGE INVERTEBRATE FAUNA

A distinctive Central and Eastern Otago invertebrate fauna has its northern boundary roughly along the St. Bathans, Kakanui, and Horse Ranges (although further inland, it extends to the Waitaki River), while the South Canterbury fauna is bounded in the south east by the same hills. This has resulted in Trotters Gorge having a distinctive fauna, comprised partly of overlapping Otago and Canterbury faunas, and a unique endemic element consisting of species restricted to the area around Trotters Gorge, and which may be autochthonous.*

Many polytypic* species have distinctive Central Otago and Canterbury populations. These break down in the vicinity of Trotters Gorge, and intermediate hybrid individuals with a combination of Otago and Canterbury characters occur there.

The spider wasp Priocnemis (Trichocurgus) carbonarius and an undescribed species (Now Priocnemis (Trichocurgus) Crawi) provides a good example of this characteristic. Otago females of the first species have a small space betweeen the eye and the base of the jaw (termed the "malar space"), while this area is large in Canterbury populations. The undescribed species shows the opposite condition, the malar space is large in Otago and small in Canterbury. Both species comprise mixed populations at Trotters Gorge with a complete range of intermediates.

Striking examples of the distinctiveness of Trotters Gorge insects occur among the flightless Carabid ground beetles. Two undescribed species, a Megadromus and a Holcaspis, are found nowhere else but Trotters Gorge, while Megadromus haplopus is restricted to the area around the eastern part of the Horse Range.

This List mu b September 1980

Tubificidae

Limnodrilus sp.

Naididae

Chaetogaster sp.

PHYLUM ECTOPROCTA (POLYZOA)

Gymnolaemata

Paludicella articulata (figs. 7, 8) Superficially resemble colonial Hydrozoa like Cordylophosa, but are much higher organisms. The tentacles are arranged in a row, and form a structure called a "lophophore".

PHYLUM MOLLUSCA (Shells and their allies). (Most of the species list occur in front of the University hut.)

Gastropoda

Hydrobiidae

Potamopyrgus antipodarum (fig. 9, 10)

Lymnaeidae

Lymnaea tomoentosa (fig. 11)

Physidae

Gyrdulus kahuica (fig 12, 13

Physastra variabilis (fig. 14)

Bivalvia

Sphaeriidae

Sphaerium novaezelandiae (figs. 15, 16)

Pisidium (Rivulina) casertanum (fig. 17)

PHYLUM ARTHROPODA

Class. Crustacea

Ostracoda

Candonocypris candonoites (fig. 18)

Candonocypris sp.

Herpetocypris pascheri (fig. 19)

Cladocera

Chydoriidae

Chydorus sp. (fig. 20)

Copepoda

Cyclopidae

Macrocyclops sp. (fig. 21)

Amphipoda

Paracorophium excavatum (fig. 22)

Decapoda

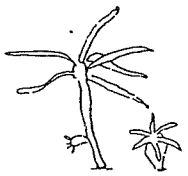
Paranephros zealandicus (fig. 23) Freshwater crayfish

List of Macroinvertebrate species collected in Trotters Stream near the Otago University Hut on 24th May, 1980 (illustrated and annotated).

PHYLUM PORIFERA (Sponges)

Spongillidae

Ephydatia kakahuensis (A freshwater sponge)



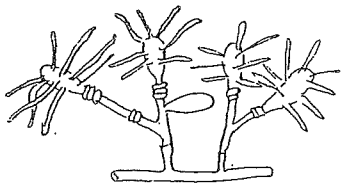
2.

PHYLUM COELENTERATA (Hydras, jelly fish)

Chlorohydra viridissima (fig. 1, 2)

Cordylophora idacustris (fig.3)

PHYLUM PLATYHELMINTHES (Flatworms)



3.

Tricladida

Planariidae

Cura pinguis

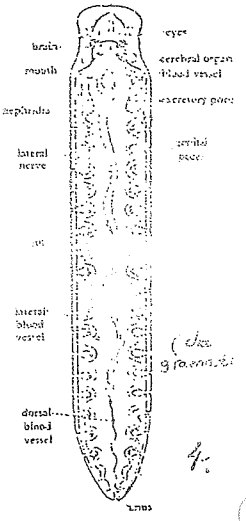
Neppia sp.

Rhabdocoela

Phaenocopa sp.

Mesostoma ehrenbergii

Rhabdocoela sp.



4.

PHYLUM NEMERTEA (Proboscis worms

Tetrastemmatidae

Prostoma sp. (fig. 4)

PHYLUM NEMATODA (Thread/round worms)

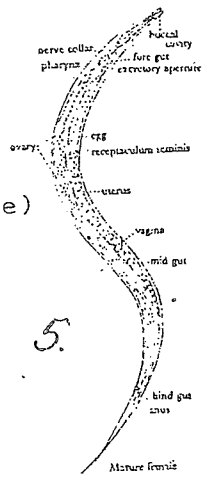
in det. (fig. 5)

PHYLUM ANNELIDA (segmented worms)

Hirudinae (leeches)

Glossiphoniidae

Placobdella maorica (fig. 6)



5.

6

Oligochaeta (Annelids of the earthworm type)

Lumbricidae

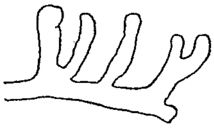
Eiseniella sp.

Lumbriculidae

Lumbriculus sp.

Phreodrilidae

Phreodrilus sp.

7.


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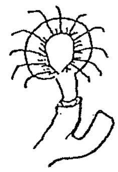

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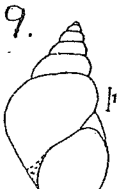

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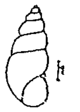

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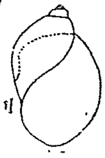

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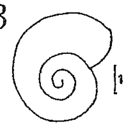

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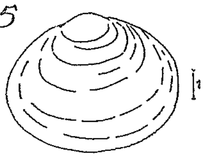

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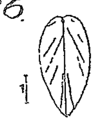

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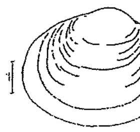

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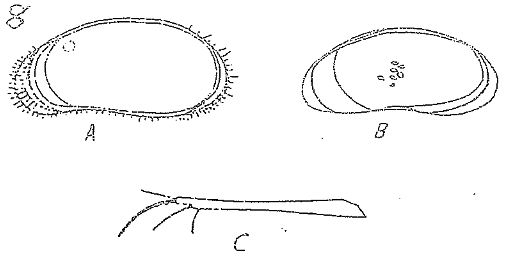

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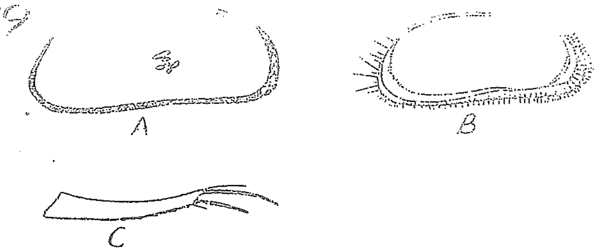

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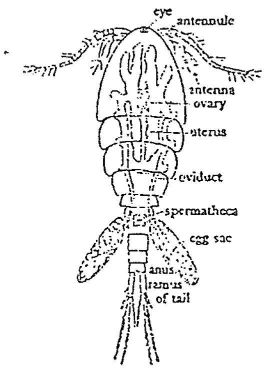

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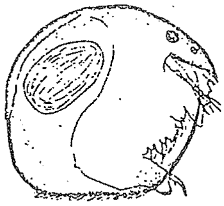

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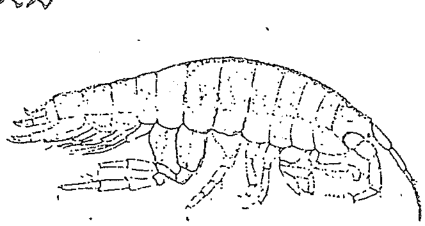

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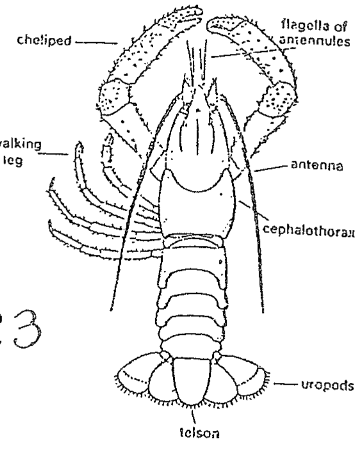


Class. Insecta (Insects)

O. EPHEMEROPTERA (Mayflies)

Siphonuridae

Nesameletus sp. (fig. 24) Small swimmer mayfly.(Smaller than Oniscigaster. Feathery tails.)

Oniscigaster sp. (fig. 25) Large swimmer mayfly. (Note the feathery tails. O.wakefieldi prefers quieter water, in which it swims.)

Ameletopsis sp. (fig. 26)

Coloburiscus sp. (fig. 27)

Siphlaenigmatidae

Siphlaenigma sp.

Leptophlebiidae

Zephlebia sp. a (fig. 28) (Larvae of all species of the genus Zephlebia have double gills. Both tarsal claws alike e.g. on fore tarsus) (c.f.Deleatidium which genus it resembles)

Z. sp. b

Z. sp. c

Deleatidium sp a.(fig.29)(Most (but not all) Deleatidium lar[illegible] have single gills. Tarsal claws (e.g. [illegible] tarsus) dissimilar (not alike

D. sp. b

D. sp. c

Atalophlebioides sp.

Ephemeridae

Ichthybotus sp. (fig. 30) Larvae are unusual in that they burrow in fine shingle, mud silt, gills feathery.

O. NEUROPTERA (Lacewing, Alderflies)

Archichauliodes diversus (fig. 31) (Dobsonfly, Alderfly) (The larva (black creeper) is very abundant in Trotters Stream, under rocks: (New Zealand's only freshwater neuropteron.)

O. ODONTATA (Dragonflies damselflies)

Anisoptera (Dragonflies)

Procordullia grayi (fig. 32) Gray's dragonfly.

Zygoptera (Damselflies)

Xanthocnemis zealandica (fig. 33) Red damselfly

Austrolestes colensonis (fig. 34) Large damselfly,(males blue, females green)

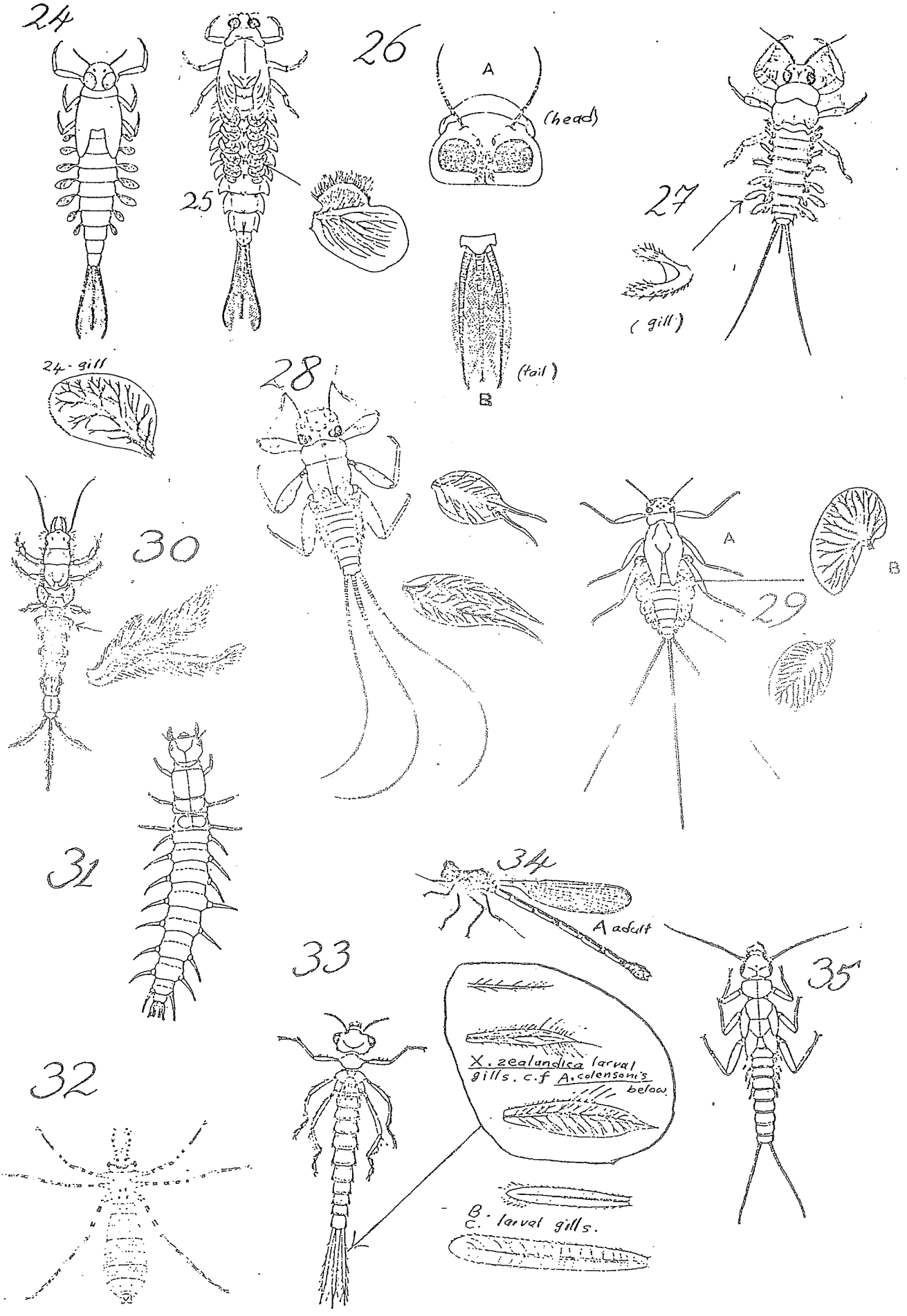
O. PLECOPTERA (Stoneflies)

Eustheniidae

Stenoperla sp. (fig. 35)

Austroperlidae

Austroperla sp.


24
25
26
A
(head)
B
(tail)
27
(gill)
24 - gill
28
29
A
B
30
31
32
33
34
A adult
35
X. zealandica larval gills. c.f A. colensoni's below.
B. C. larval gills.

Gripopterygidae

Megaleptoperla sp.

Acroperla sp.

Zelandoperla sp. (fig. 35)

Zelandobius sp.

Notonemoaridae

Halticoperla sp.

O. HEMIPTERA (True bugs)

Veriidae

Microvelia macgregori (fig. 36) Little water skater

Notonectidae

Anisops assimilis (fig. 37) Back-swimmer

Corixidae

Sigara arguta (fig. 38) Waterboatman

Hydrometra sp. (fig. 39) Water-measurer

O. COLEOPTERA (Beetles)

Dytiscidae (Carniverous waterbeetles

Antiporus strigosulus (fig 40)

Liodessus deflectus

Rhantus pulrerosus (fig. 41)

Staphylinidae indet. (rcve beetles)

Hydraenidae

Orchymandia sp. (fig. 42)

Helodidae (These beetles are very unusual in that the aquatic larvae have long, multi-segmented antennae.)

Cyphon sp. (fig. 43)

2 undescribed genera

Ptilodactylidae

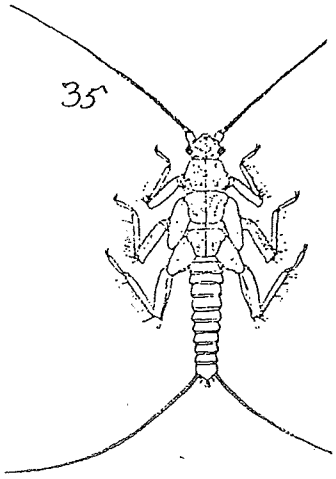
Byrrhocryptus sp. (fig. 44)

Elmidae

Hydora sp. (fig. 45)

O. LEPIDOPTERA (Butterfiles and moths)

Nymphula nitens (Butler) (fig. 46) The pond moth. (Larvae only are aquatic, and breathe via gills. They live in underwater cases made of leaves joined with silk.)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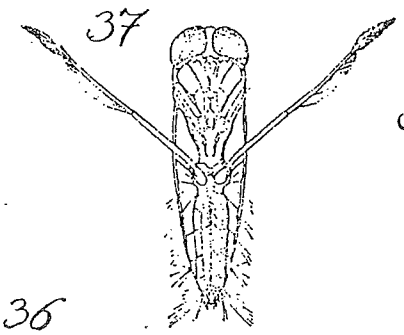
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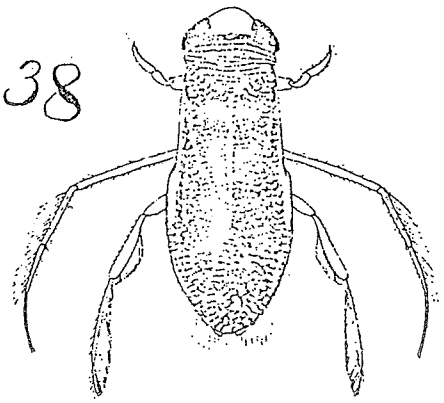
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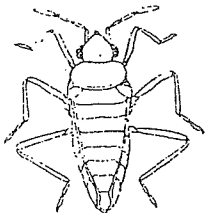
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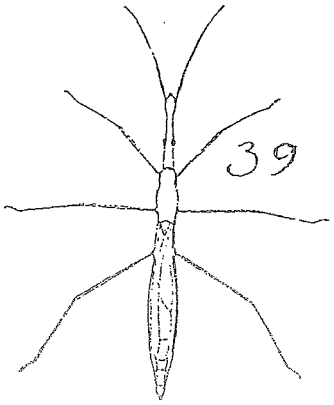
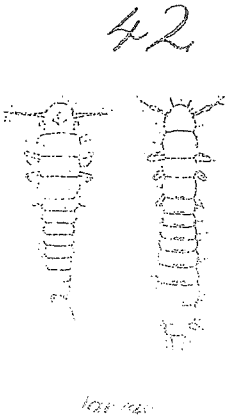
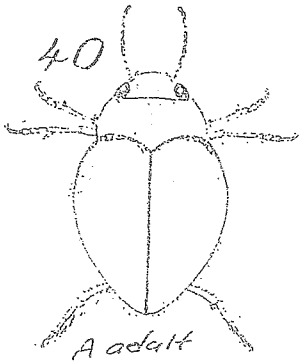
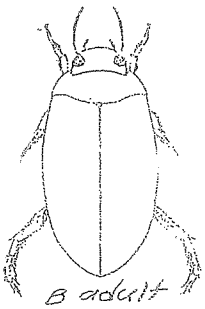
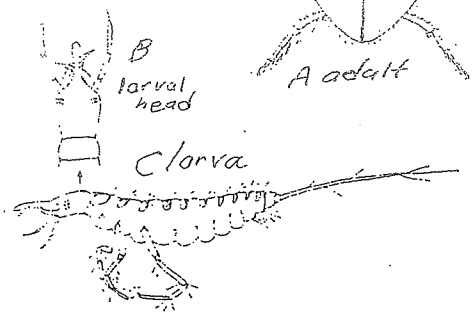

39

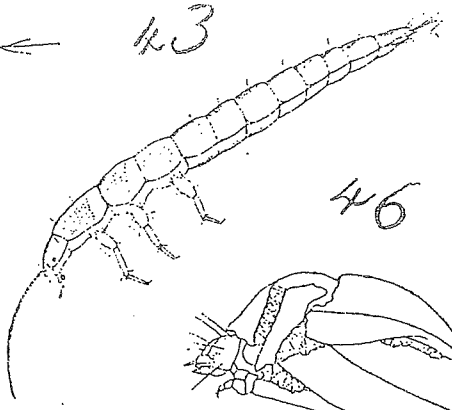

41
A larva


42
larva


40
A adult


B adult


B
larval
head
C larva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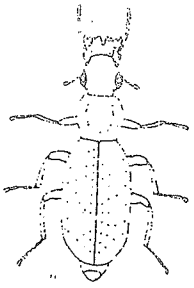
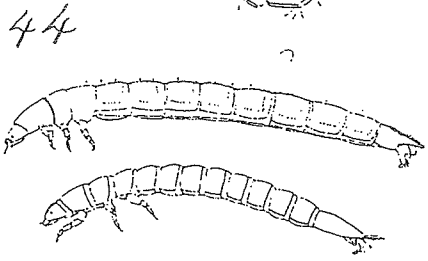
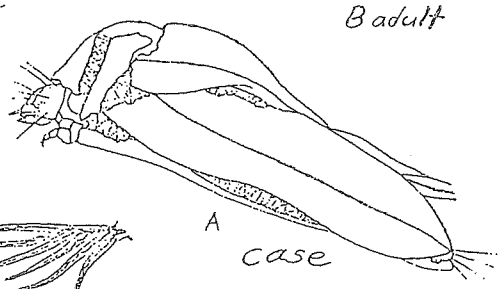
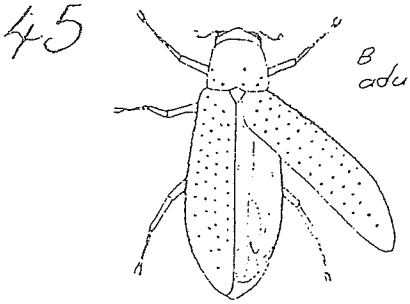

B adult


44
A. larva


46
A
case


B gill of
larva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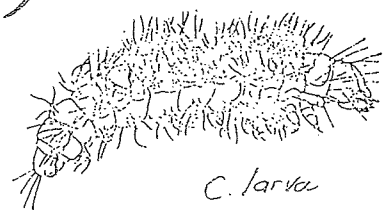
B
adult


C. larva

O. TRICHOPTERA (Caddis flies)

Hydropsychidae (Larvae fish from nets; do not construct caves)

Aoteapsyche colonica (fig. 47)

Aoteapsyche tepoka

Polycentropodidae (Larvae spin nets and galleries; do not build cases)

Polyplectropus puerilis (fig. 48)

Philopotamidae (Larvae usually freeliving; do not build cases)

Dolophilodes (Hydrobiosella) Stenocerea (fig. 49)

Sericostomatidae (Larvae build conical, tapered, cases)

Pycnocentria evecta

Olinga feredayi (fig. 50)

Helicopsychidae (Larvae build spiral cases)

Helicopsyche albescens (fig. 51)(Case on underside of stones, e.g. in front of Trotters Gorge, University hut.)

Leptoceridae (larvae build conical, tapered cases)

Triphectides obsoleta (fig 52)

Hudsonema aliena fig 53)

O. DIPTERA (True flies)

Tipulidae (fig. 54, 55). (Crane flies)

Limoniini indet.

Paralimnophora skusei (fig. 55)

Psychodidae (Moth flies)

Psychoda sp. (fig. 56)

Culicidae indet. (fig. 57) (Mosquitoes)

Dixidae indet. (fig. 58) (Dixa midges)(Live in backwaters.)

Chironomidae (fig. 59) (non-biting midges)

Tanypodinae indet.

Lobodiamesa sp.

Cricotopus sp.

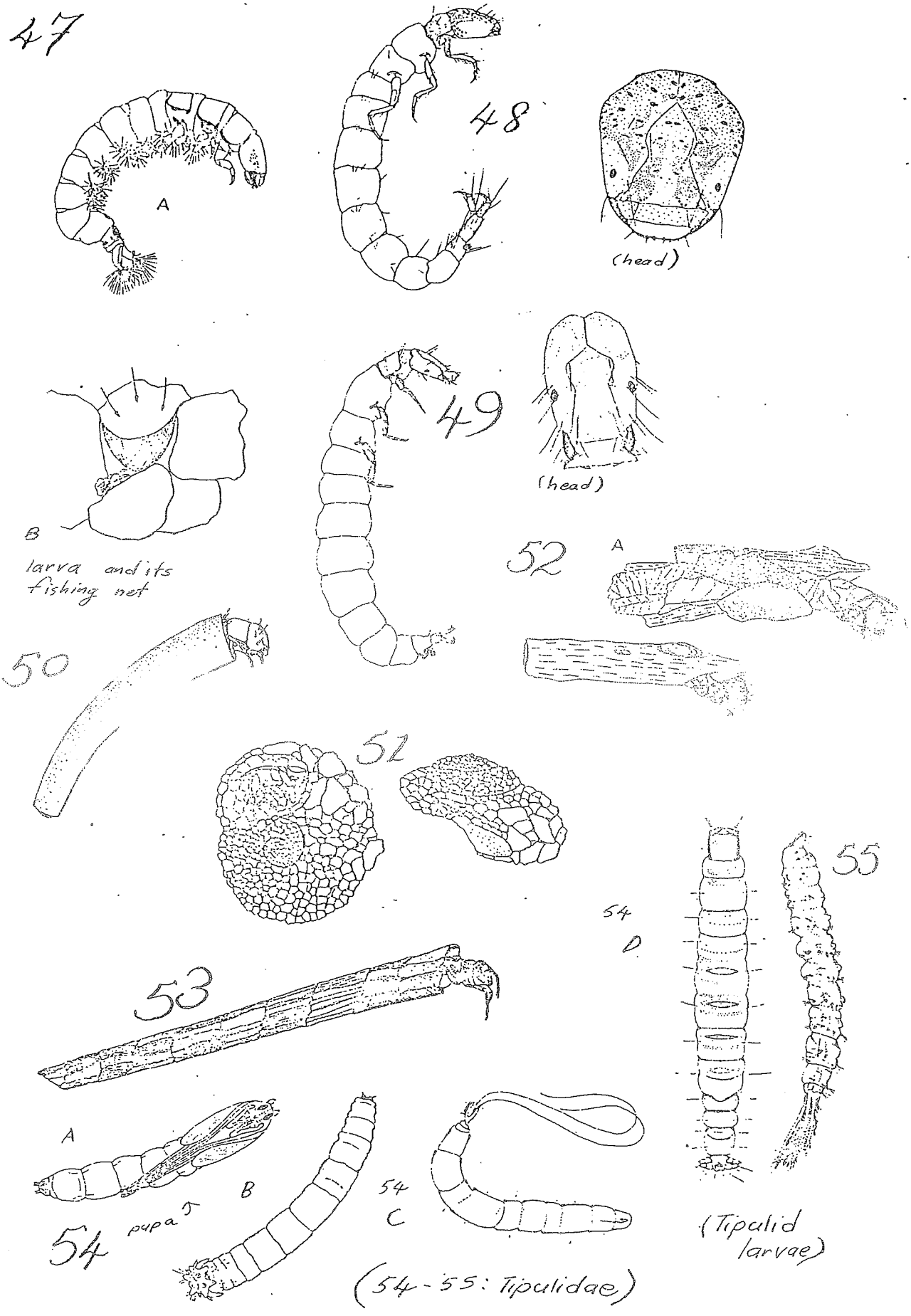
Chironomus zealandicus

Polypedilum sp.

Ceratopogonidae (2 sp. in det) (fig. 60). (Biting midges) (Larvae occur in moss and algae in streams, are eel-like, and lash about.)

Simuliidae (sandflies)

Austrosimulium sp.(fig. 61)


47
A
48
(head)
B
larva and its fishing net
49
(head)
50
52
A
51
53
54
D
55
A
B
54 pupa
54
C
(Tipulid larvae)
(54-55: Tipulidae)

Tababidae indet. (fig. 62) (Gad flies)(Occur in backwater in front of University hut.)

Stratiomyidae (3 spp. indet) (fig. 63) (Solider flies) (Note the thick, leathery skin of the larva (or "leatherback"))

Syrphidae (indet) (fig. 64) (Hoverflies and drone flies) (Larvae often have a posterior siphon (e.g. the "rat-tailed maggot"))

Empididae (indet) (fig. 65)

Blepharoceridae (indet) (fig. 66) (net-wing midges, torrent flies) (Larvae have a row of ventral suckers. On stones in swiftly flowing water.)

Ephydridae (indet)

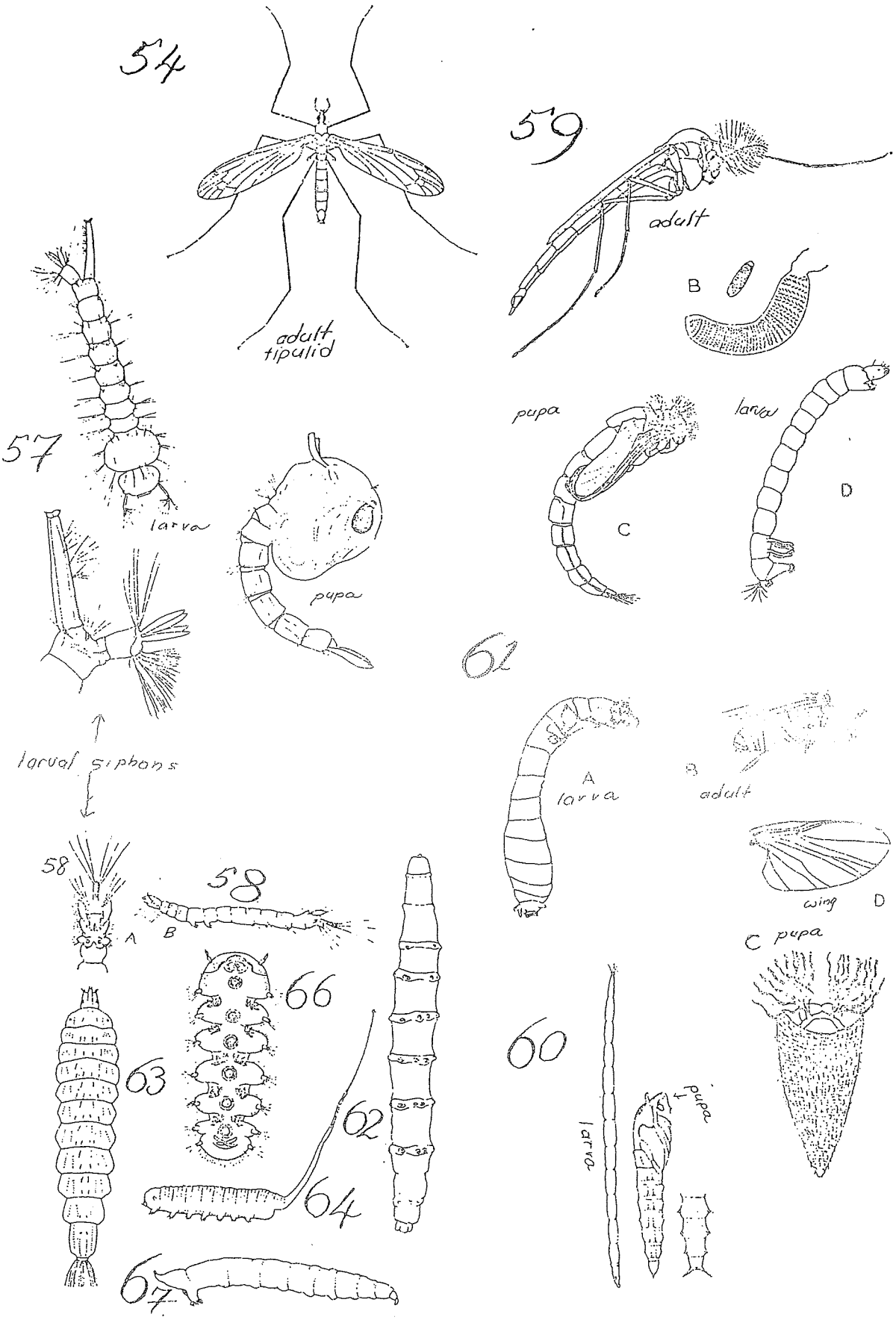
Muscidae (indet) (fig. 67) (Houseflies)(Some species have aquat: larvae. One of these occurs in the sedges in front of the University hut.)

Class ARACHNIDA (Spiders and their allies)

Araneidae (True spiders)

Linyphiidae

Mynoglenes titan - This small spider spins its we


54
adult
tipulid
59
adult
B
57
larva
pupa
pupa
larva
C
D
61
larval siphons
A
larva
B
adult
wing
D
C pupa
58
58
A
B
66
63
62
64
60
larva
pupa
67

SELECTED BIBLIOGRAPHY (over):

The following books and papers may be consulted for the identification of New Zealand stream invertebrates, and most of the will be available in the Trotter's Gorge hut.

(UPDATE)

The most useful general reference appeared a year after this list was written, viz.

Winterbourne, M.J., & Gregson, K.L.D. 1981. Guide to the Aaquatic insects of New Zealand. Bulletin of the Entomological Society of New Zealand 5:80p.

Ward, H.B., & Whipple, G.C. (Edition edited by Edmondson, W.T.) 1982 (reprint). Freshwater biology. Wiley, U.S.A. 1248.

GENERAL

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TOWNS, D.R. 1978. Some little known benthic insect taxa from a northern New Zealand river and its tributaries. N.Z. Entomol. 6 : 409 - 19.

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MERRITT, R.W. & CUMMINS, K.W. 1978. An Introduction to the Aquatic Insects of North America. Kendall/Hunt. (keys to families; not as useful as Usinger).

OLIGOCHAETA

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BRINKHURST, R.O. & JAMIESON, B.G. 1971. The Aquatic Oligochaeta of the World. Oliver & Boyd.

MARSHALL, J.W. 1975. A photographic guide to some freshwater Oligochaeta found in Canterbury streams. Mauri Ora 3 : 19 - 25.

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MASON, J. 1974. Studies on the freshwater and terrestrial leeches of New Zealand - 1. Family Glossiphoniid Vaillant. J. Roy. Soc. N.Z. 4 : 327 - 43.

MOLLUSCA

WINTERBOURN, M.J. 1973. A guide to the freshwater Mollusca of New Zealand. Tuatara 20 : 141 - 59.

CRUSTACEA

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INSECTA

Ephemeroptera (mayflies)

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PENNIKET, J.G. 1962. Notes on New Zealand Ephemeroptera III. A new family, genus and species. Rec. Canterbury Mus. 7 : 389 - 98. (Siphlaenigma)

PENNIKET, J.G. 1966. Notes on New Zealand Ephemeroptera IV. A new siphlonurid subfamily : Rallidentinae Rec. Canterbury Mus. 8 : 163 - 175.

TOWNS, D.R. & PETERS, W.L. 1978. A revision of genus Atalophlebioides (Ephemeroptera ; Leptophleb[illegible] N.Z. J. Zool. 5 : 607 - 14

TOWNS, D.R. & PETERS, W.L. 1979. Three new genera of Leptophlebiidae (Ephemeroptera) from New Zealand N.Z.J. Zool. 6 : 213 - 35.

PLECOPTERA (stoneflies)

McLELLAN, I.D. 1969. A revision of the genus Zelandobius (Plecoptera : Antarctoperlinae). Trans. R. Soc. N.Z. Biol. Sci. 11 : 25 - 41.

McLELLAN, I.D. 1973. Revisions and new taxa in New Zealand Notonemouridae (Insecta ; Plecoptera). N.Z.J. Mar. Freshwat. Res. 6 : 469 - 81.

McLELLAN, I.D. 1977. New alpine and southern Plecoptera from New Zealand, and a new classification of the Gripopterygidae, N.Z.J. Zool. 4: 119 - 47.

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TRICHOPTERA (caddisflies)

COWLEY, D.R. 1978. Studies on the larvae of New Zealand Trichoptera. N.Z.J. Zool. 5: 639 - 750.

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McFARLANE, A.G. 1976. A Generic revision of New Zealand Hydropsychinae (Trichoptera). J.R. Soc. N.Z. 6 : 23 - 35.

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CRAIG, D.A. 1969. A taxonomic revision of New Zealand Blepharoceridae and the origin and evolution of the Australasian Blepharoceridae (Diptera Nematocera). Trans. R. Soc. N.Z. Biol. Sci. 11 : 101 - 51.

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BRUNDIN, L. 1966. Transantarctic relationships and their significance, as evidenced by chironomid midges. With a monograph of the subfamilies Podonominae and Aphroteniinae and the austral Heptagyiae. Kung. Sv. Vet. Akad. Handl. (4) 11 : 1 - 472.

FORSYTH, D.J. 1971. Some New Zealand Chironomidae (Diptera). J.R. Soc. N.Z. 1 : 113 - 144.

Otago Regional Council

SUBMISSION FORM
Proposed Plan Change 1B Minimum Flows
to the Regional Plan: Water for Otago
Form 5, Clause 6 of the First Schedule, Resource Management Act 1991.

OTAGO REGIONAL COUNCIL RECEIVED DUNEDIN
2 6 JAN 2009
FILE No.
DIR TO RI221

15

Office use only

Full name of submitter: LYN, EVAN, Richards

Name of organisation *(if applicable)*:

Postal address: 22 Craighall Crescent, Wakari Dunedin

Postcode: 9010

Telephone:

Fax:

Email:

Contact Person:

I ~~wish~~ / do not wish *(circle preference)* to be heard in support of my submission.

~~If others made a similar submission, I will consider presenting a joint case with them at a hearing.~~
(Cross out if you would not consider presenting a joint case).

No appearance by me

Signature of submitter: L E Richards

Date: 25/1/2009

(or person authorised to sign on behalf of person making submission).

Please note that all submissions are made available for public inspection.

The parts of the proposed plan change that my submission relates to are:
(Give clear references if possible e.g. reference number, policy x, rule y)

My submission is:
(Include whether you support, oppose, or wish to have amended the parts identified above, and give reasons)

MINIMUM flows need to rise inches higher.

Build more water tanks for storing rain water.

Please turn over

I seek the following decision from the local authority:

(Give precise details e.g. changes you would like made)

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SUBMISSIONS MUST BE RECEIVED BY 5.00 PM, MONDAY 9 MARCH 2009.

Please fold and secure with a small piece of tape. Fol

FreePost Authority ORC 1722

16

Sarah Valk

From: M & J Hollis [mel.hollis@xtra.co.nz]
Sent: Tuesday, 27 January 2009 08:55
To: Policy Reply
Subject: Trotters Creek!
Importance: High

Good morning,

My name is **Melvyn (Mel) Hollis**, 63 Stirling Cres, Mosgiel, Dunedin 9024 – 489 5452

I understand that you are calling for submissions for or against a minimum flow for **Trotters Creek** of 8 litres per sec.

I **oppose** the setting of 8 litres per sec.

This ecosystem requires a more realistic minimum flow to maintain the aquatic creatures during the low flow summer period and from research studies I have recently viewed, the minimum flow should not be set at anything less than **20** litres per sec.

My personal opinion after travelling around this province is that subsequent councils over many years are allowing abstraction of far too much water out of our rivers and streams and it is high time that the ORC learnt to say "**No**" to continued requests for increased water abstractions!

I would strongly urge the ORC to re-evaluate the minimum flows for the Taieri, & Shag Rivers also, as they are all allowed to drop far to low during the summer period, which reflects disgracefully on current attitudes to the importance of our waterways for future generations.

I also believe that the ORC has sadly neglected responsibility towards the Waikouaiti River and it is high time that a realistic minimum flow was set for this waterway too!

Sincerely

Mel Hollis, Dunedin

Otago Regional Council

SUBMISSION FORM
Proposed Plan Change 1B Minimum Flows
to the Regional Plan: Water for Otago

Form 5, Clause 6 of the First Schedule, Resource Management Act 1991.

17

Office use only

Full name of submitter: Noel George Treathan

Name of organisation *(if applicable)*:

Postal address: Lindisvale No 3RD Cromwell

Postcode:

Telephone: 03445 2864 Fax: 03 445 2865

Email: treathan@xtra.co.nz Contact Person:

OTAGO REGIONAL COUNCIL RECEIVED DUNEDIN
- 5 FEB 2009
FILE No. RI221
DIR TO

I wish / do not wish *(circle preference)* to be heard in support of my submission.

If others made a similar submission, I will consider presenting a joint case with them at a hearing.
(Cross out if you would not consider presenting a joint case).

Signature of submitter: Date: 24 Jan 09
(or person authorised to sign on behalf of person making submission).

Please note that all submissions are made available for public inspection.

The parts of the proposed plan change that my submission relates to are:
(Give clear references if possible e.g. reference number, policy x, rule y)

My submission is:
(Include whether you support, oppose, or wish to have amended the parts identified above, and give reasons)

That the minimum flow can be set as low as zero where streams have been dry on occasions over the past 50yrs plus, as aquatic ecosystems and natural character have adapted.
That the priority system is managed by local communities.

Please turn over

I seek the following decision from the local authority:

(Give precise details e.g. changes you would like made)

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SUBMISSIONS MUST BE RECEIVED BY 5.00 PM, MONDAY 9 MARCH 2009.

Please fold and secure with a small piece of tape. Fo

FreePost Authority ORC 1722

Otago Regional Council
Private Bag 1954
Dunedin 9054

Attention Policy Team

Otago Regional Council

SUBMISSION FORM
Proposed Plan Change 1B Minimum Flows
to the Regional Plan: Water for Otago
Form 5, Clause 6 of the First Schedule, Resource Management Act 1991.

18

Office use only

Full name of submitter: HAYBURN Dr. RALPH H. C.

Name of organisation *(if applicable)*: —

Postal address: 2 JETTY ST, MAIA, DUNEDIN

Postcode: 9022

Telephone: (03) 471 0951

Fax: —

Email: —

Contact Person:

I wish / (do not) wish *(circle preference)* to be heard in support of my submission.

If others made a similar submission, I will consider presenting a joint case with them at a hearing.
(Cross out if you would not consider presenting a joint case).

Signature of submitter: [signature] Date: 5/2/09
(or person authorised to sign on behalf of person making submission).

OTAGO REGIONAL COUNCIL
RECEIVED DUNEDIN
- 9 FEB 2009
FILE No. RI221
DIR TO

Please note that all submissions are made available for public inspection.

The parts of the proposed plan change that my submission relates to are:
(Give clear references if possible e.g. reference number, policy x, rule y)

TROTTERS CATCHMENT, OCTOBER - APRIL MINIMUM FLOW OF 8 LITRES/SECOND

My submission is:
(Include whether you support, oppose, or wish to have amended the parts identified above, and give reasons)

I OPPOSE THIS ON THE GROUNDS THAT THE FLOW IS TOO LOW. THE PROTECTION OF FISH SPECIES IN THE STREAM, INCLUDING GALAXIAS, GIANT KOKOPU, INANGA, TROUT + LAMPREY, REQUIRES THAT THE FLOW MINIMUM BE CONSIDERABLY HIGHER. TOO LOW A FLOW WILL PREVENT VARIOUS FISH SPECIES ENJOYING THEIR NATURAL ACCESS FROM THE SEA INTO THE CREEK ON OCCASIONS WHICH MIGHT LENGTHEN TO EXTENDED PERIODS DURING DRY YEARS

Please turn over

I seek the following decision from the local authority:

(Give precise details e.g. changes you would like made)

THE MINIMUM FLOW FROM OCTOBER - APRIL BE LIFTED TO 20 LITRES/SECOND

Fold

SUBMISSIONS MUST BE RECEIVED BY 5.00 PM, MONDAY 9 MARCH 2009.

Please fold and secure with a small piece of tape.

Fold

FreePost Authority ORC 1722

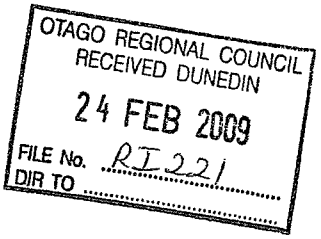
Otago Regional Council
Private Bag 1954
Dunedin 9054

Attention Policy Team

19

Sarah Valk

From: Brian Turner [blturner@xtra.co.nz]
Sent: Monday, 23 February 2009 16:35
To: Policy Reply
Subject: submission/Trotters Creek



Minimum Flow Submission

Trotters Creek

My name is Brian Turner. I live in Oturehua, Central Otago. I am a writer, poet, recreationalist and, in the eyes of many, a prominent interpreter of the nature and value of the southern environment. I've had a liking for Trotters Creek since my parents first took me there in the 1950s. As with a great many southern creeks, streams and rivers, I have seen it deteriorate over time, for reasons that must surely be all too familiar to staff and councilors of the ORC. So the question is, what are you going to do about helping stop the rot, and reverse it where possible?

When it comes to minimum flows they must be generous, not skimpy, marginal.

I support a winter minimum flow of 35 litres a second, 20 over summer, and ask that the weir used to divert water into the storage pond be removed during winter. Fish have to be able to get up and down the creek.

I believe someone has recommended a minimum summer flow of only 8 litres a second. That is outrageous. That would reduce the stream to a dribble of lukewarm piddle.

I have seen a draft of Mr Morgan Trotter's submission and declare my support for the points he makes and arguments he advances. They are sensible, informed, telling. Please heed them.

Brian Turner

Main Road

Oturehua

Central Otago 9339

blturner@xtra.co.nz

24/02/2009

20

Monday, 23 February 2009

Policy Team
Otago Regional Council
Private Bag 1954
Dunedin 9054

Dear Sir/Madam

Re: Trotters Creek Minimum Flow Submission

My name is Richard John Fitzpatrick and I wish to make a personal submission in the matter of setting a minimum flow on Trotters Ck in North Otago. I have been a keen angler all of my life and have always had an interest in all facets of stream biology. I have also had over 10 years of professional involvement in stream surveys across Otago and Southland, including electric fishing, drift diving, angler surveys and habitat/water quality assessment. In that time I have studied many small streams similar to and including Trotters Ck.

My Submission is that I oppose the setting of the summer minimum flow at 8 litres per second.

I would like to support a summer minimum flow of at least 20 litres per second and a winter minimum flow of at least 35 litres per second to protect the natural biodiversity present in Trotters Ck.

My reasons for opposing this proposed minimum flow are as follows:

1. The regional council's own report (Management Flows for Aquatic Ecosystems in Trotters Creek, pp 14) recommends that a flow of 20 litres per second would be needed to protect the biodiversity in this stream. Therefore I believe it would be irresponsible to allow a minimum flow of any less than this figure.
2. In my experience, there are few streams with as many species of native and introduced fish as Trotters Ck. Many streams have historic records of various species of fish, but when you go and look nowadays many or even all of the recorded species are unable to be found. This can often be attributed to deterioration in habitat and/or water quality as a result of changing land use and/or intensification of existing use in the catchment. When I last surveyed Trotters Ck by electric fishing in 2007, I found at least 8 species of fish (I say at least 8 as some species of galaxid are difficult to distinguish in the field). On this occasion I was giving a demonstration for local iwi on some of the values in the stream. The abundance of fish was impressive and I believe that a more in depth inspection would have revealed even more diversity.
3. The mean annual low flow for Trotters Ck is estimated at 23 litres per second, therefore a flow of 8 litres per second would only occur naturally under severe

drought conditions. It would also be very rare for this to extend over a period of more than a few days or possibly weeks at a time under natural conditions. Fish are adapted to cope with these low flows from time to time, but populations are depleted and require good intervening seasons to rebuild. Setting such a low minimum flow would potentially see the equivalent of severe drought conditions imposed on the creek every summer for up to 7 months without respite. This in my opinion would have a severe negative impact on both the abundance of fish and the diversity of fish species in Trotters Ck.

I believe that the Regional Council has a responsibility to take a precautionary approach to setting minimum flows to protect important natural resources of the province for future generations to enjoy.

I wish to be heard in support of my submission.

Regards,

Richard Fitzpatrick. BSc.

Return Address: Richard Fitzpatrick
PO Box 8076
Dunedin 9010

21

Submission on a publicly notified proposed change to the Regional Plan: Water for Otago

To: Otago Regional Authority.

Name of submitter: Michael Malthus Trotter.

This is a submission on the **Proposed Plan Change 1B (Minimum Flows)** for Trotters Creek.

I seek an amendment to the Proposed Change.

I lived alongside Trotters Creek in North Otago from 1935 to 1965. From 1965 to 1996 I was employed at Canterbury Museum in Christchurch, being Chief Executive Officer for the last thirteen years of that period. I am now semi-retired, operating a part-time heritage consulting business.

My submission is:

1. The Trotters Creek catchment has been utilized by humans for nearly a thousand years. During that time major changes have been wrought on the local environment, particularly on the vegetation, mostly through fire and farming.

2. Populations of indigenous fauna – birds, fish and invertebrates – have been reduced in numbers, but those that remain are worthy of protection.

3. The Swaggers Cave (pictured at right), near the creek, exemplifies an aspect of the area's human history. Although best known for its association with itinerant nineteenth and twentieth century travellers, it had been used for Maori occupation for hundreds of years before the advent of the Pakeha. The Maori people who used it for shelter caught fish in the stream and birds in the surrounding forest, though they also brought shellfish with them from the coast.

4. Today, the 3200 hectare Trotters Creek catchment includes 640 hectares of exotic forestry, 490 hectares of Department of Conservation land (which incorporates the 152 hectare Trotters Gorge reserve) and less than a thousand hectares of lowland farmland. It is in this last area that the existing fauna are most likely to be affected by the proposed minimum flows. Some summarized general information on the area can be found in Harry Evison's *Trotters Gorge – a Field Guide* (1978) and the Otago Regional Council's *Trotters Creek Catchment Information Sheet* (2008a). Water from the creek was first used for irrigation in the 1930s using a single-cylinder stationary engine to operate a pump.

5. Thirteen species of fish have been recognized by the Otago Regional Council (2006: 6; 2008a) as inhabiting Trotters Creek – these are listed as:

Giant kokopu	Inanga	Bluegill bully
Longfin eel	Common bully	Giant bully
Canterbury galaxias	Upland bully	Brown trout
Koaro	Redfin bully	Lamprey
Shortfin eel		

Reference is also made to seasonal runs of Sea trout in the lower section of the stream (2008a) – this is a variant of the Brown trout but which attains greater size in this location. Besides these, flounders live near the mouth of the stream (where I have personally seen and caught them).

6. The Otago Regional Council completed a study of the management flows for aquatic ecosystems in Trotters Creek in 2006 to establish the flow required to maintain an acceptable habitat for nine of the fourteen or fifteen fish species found there (Otago Regional Council 2006). The results as provided by the IFIM instream habitat modelling technique were as shown in the following table:

Fish species	Optimum flow (m^3/s)	Flow below which habitat declines sharply (m^3/s)
Redfin bully	0.12	0.01
Common bully	0.12	0.035
Inanga	0.12	0.07
Bluegill bully	0.25	0.075
Longfin eel	0.06	0.035
Koaro	0.20	0.035
Canterbury galaxias	0.035	0.010
Upland bully	0.12	–
Adult brown trout	>0.3	0.09
Juvenile brown trout	0.12	0.035

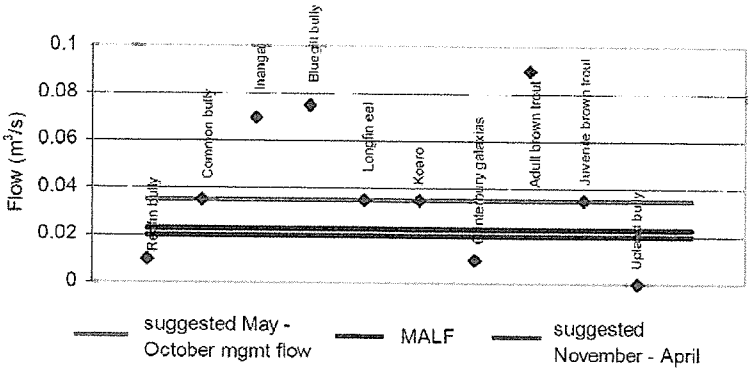
7. The 2006 report went on to suggest minimum flows for Trotters Creek: "A flow of **0.035 m^3/s** is likely to ensure the sustainability of the diverse indigenous fish community in Trotters Creek during the high flow period from May to October inclusive. A flow of **0.02 m^3/s** is likely to ensure the sustainability of the diverse indigenous fish community in Trotters Creek during the lower flow period from November to April inclusive, and it is recommended that flows should not be allowed to drop below those outlined above due to consumptive use."

8. The report stressed, however, that the suggested 0.02 m^3/s minimum flow was "well below" the point at which the habitat declined sharply for "all fish species in Trotters Creek, with the exception of redfin bullies and Canterbury galaxiids."

9. Reference was also made in the report to Mean Annual Low Flow (MALF), which is the average of the lowest flows measured for any seven-day period. As there was no permanent flow recorder for Trotters Creek this was estimated by other means to be 0.023 m^3/s.

10. Following a draft dated March 2008, the Otago Regional Council produced an Information Sheet on the Trotters Creek Catchment in October 2008 (2008a). This summarized the

information given previously without change, and included the following graph showing the proposed minimum flows for the summer and winter periods as well as the Mean Annual Low Flow, the figures for these being: May to October 0.035 m^3/s, November to April 0.02 m^3/s and MALF 0.023 m^3/s.



11. Although most interest seems to centre on the fish life in Trotters Creek, there are two other groups of fauna that could be affected by a reduction of the water flow. These are the aquatic invertebrates and periphyton in the stream, and some of the birdlife that inhabit the adjacent area.

12. Small aquatic fauna are a source of food for the fish in the stream, and the adults of particular insects (such as caddisflies) form an important part of the diet for some birds.

13. While many species of invertebrates can survive extremely low flow rates (Storey and Quinn 2007), they are generally no longer available to either aquatic or terrestrial fauna under such conditions.

14. A number of bird species, ranging from black shags to fantails, feed on the aquatic fauna of Trotters Creek in one form or another, while other species, such as ducks, make use of the stream's plant life. The effect that managed very low water flow would have on these needs to be considered as well as that on the fish life.

15. The Otago Regional Council called a public meeting at Moeraki for 3 November 2008 "to discuss proposed changes [to minimum water flows for Trotters Creek] before they are notified" and on 20 December 2008 proposed changes to the Regional Plan were published (Otago Regional Council 2008d). At some stage about this time an illustrated pamphlet on Flow Levels and Effects (Otago Regional Council 2008b) – in lieu of an earlier proposed field trip – a public notice, and a summary brochure (Otago Regional Council 2008c), were produced.

16. These publications gave for the first time a proposed minimum flow of eight litres per second (= 0.008 m^3/s) from October to April – well below the twenty litres per second (= 0.02 m^3/s) that had previously been proposed for November to April – and 35 litres per second (= 0.035 m^3/s) for May to September.

17. Although both are dated October 2008, the very considerable discrepancy between the data and recommendations given in the Trotters Creek Information Sheet (Otago Regional Council 2008a) and the Flow Levels and Effects pamphlet (Otago Regional Council 2008b), makes it seems likely that the latter was actually published some time later.

18. The Flow Levels and Effects pamphlet (Otago Regional Council 2008b) appears to ignore most of the work that had previously been done on the aquatic ecosystem of Trotters Creek – and conversely, data appear in this pamphlet that have not been included in earlier publications. Consequently, much of the information presented in the pamphlet must be open to question – some of these uncertainties are outlined in the following paragraphs.

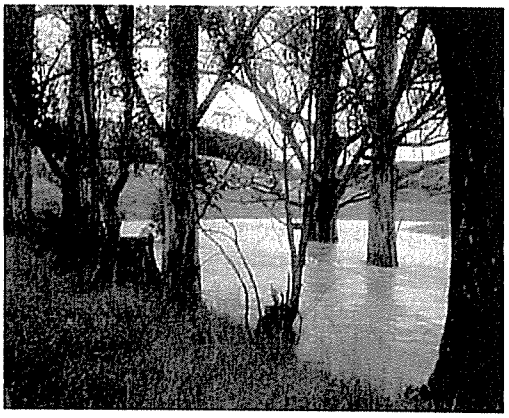
19. The complete lack of any reference to instream habitat modelling to support the present proposal is puzzling and requires explanation. The IFIM procedure that has been used by the Otago Regional Council in the past is internationally recognized and used for just such purposes as are required here. To abandon it and discard the data already obtained without explanation can only cast doubt on the motives behind the extremely low flow proposal.

20. The pamphlet contains series of photographs taken at "State of the Environment" monitoring sites at different locations along the creek. These are presumably intended as a visual assessment of the creek's state or "values." There are no accompanying data on such matters as water temperature, oxygen availability, or pollutants that might more accurately reflect faunal habitat conditions.

21. The first monitoring site is situated in Trotters Gorge (page 2). At this point a large amount of the creek's water is flowing through the creek-bed gravel and although this site is considered to be indicative of natural flow, it should be noted that much of the total water in the creek is fed by springs further downstream. The flow rates cited here must be questioned, but even if correct, cannot be taken as representative of the whole creek.

22. The second monitoring site is at the Gorge Road [Horse Range Road] culvert not far from the road's northern junction with State Highway 1 (page 3). This is actually an artificial canal dug some years ago to avoid having to replace a road bridge over a large pool, and it is likely that a large amount of the creek water still flows through gravel along the line of the original bed. The flow rates given for this site can relate only to the canal.

23. On page 4 of the pamphlet is a detailed graph of flows measured during water abstraction from Trotters Creek between 30 September 2006 and 18 April 2007. The graph shows four major unexplained peaks in natural water flow during this period, the largest being about 240 litres per second. These may represent floods, to which the creek is subject – example photograph at right – though they do not usually occur with such frequency. The graph also shows that the rate of abstraction was a fairly constant 50 litres per second for five months and about 40 litres per second for the remainder of the six-and-a-half month period depicted.



24. The pamphlet notes that the weir used to divert water into a holding pond is designed to allow a minimum flow of eight litres per second downstream and to enable up to 30 litres per second to be diverted into the pond. This appears to be the only reason for lowering the minimum flow from the recommended twenty litres (Otago Regional Council 2006) to eight litres (Otago Regional Council 2008d), and it seems to have been made without any consideration for the aquatic ecosystem.

25. I suggest that this is not in accordance with the *Regional Plan: Water for Otago* (Otago Regional Council 2004) and certainly contrary to the recommendations made by the Council between then and October 2008.

26. For this reason and to better maintain the creek based ecosystem I oppose the present proposal in regard to Trotters Creek as given in Otago Regional Council documents (2008b; 2008c; 2008d) and seek to have it amended to conform with the earlier recommendation of **0.035 m^3/s** (35 litres per second) during the high flow period from May to October inclusive and **0.02 m^3/s** (20 litres per second) during the lower flow period from November to April inclusive (Otago Regional Council 2006; Otago Regional Council 2008a).

I do not wish to wish to be heard in support of my submission.

Address for service of submitter:

Michael Trotter
170 Tuahiwi Road, R D 2, KAIAPOI 7691
Telephone: (03) 313 6454 E-mail: summerwine@xtra.co.nz

Signature:

Date:

26 February 2009

References:

EVISON, Harry, 1978. *Trotters Gorge – A Field Guide.* Friends of Trotters Gorge, Dunedin.

OTAGO REGIONAL COUNCIL, 2004. *Regional Plan: Water for Otago.* Dunedin.

OTAGO REGIONAL COUNCIL, 2006. *Management Flows for Aquatic Ecosystems in Trotters Creek.* Dunedin.

OTAGO REGIONAL COUNCIL, 2008a. *Trotters Creek Catchment.* Information Sheet, October 2008. [Also draft Information Sheet, March 2008.] Dunedin.

OTAGO REGIONAL COUNCIL, 2008b. *Trotters Creek Flow Levels & Effects*, October 2008. Dunedin.

OTAGO REGIONAL COUNCIL, 2008c. *Changes to the Regional Plan: Water for Otago.* Summary Brochure. Dunedin.

OTAGO REGIONAL COUNCIL, 2008d. *Proposed Plan Change 1B (Minimum Flows)*, Section 32 Report, Regional Plan: Water for Otago, 20 December 2008. Dunedin.

STOREY, Richard, and QUINN, John, 2007. When the rivers run dry: invertebrate communities in intermittent streams. *Water and Atmosphere*, Vol.15 No.2: 16-17.

Otago Regional Council

SUBMISSION FORM
Proposed Plan Change 1B Minimum Flows
to the Regional Plan: Water for Otago

Form 5, Clause 6 of the First Schedule, Resource Management Act 1991.

22

Office use only

Full name of submitter: Michael Charles Rawlinson

Name of organisation *(if applicable)*: —

Postal address: 1 Dalkeith Street
North East Valley, Dunedin

Postcode: 9010

Telephone: (03) 473 8394

Fax: —

Email: —

Contact Person: As above

I wish / do not wish *(circle preference)* to be heard in support of my submission.

If others made a similar submission, I will consider presenting a joint case with them at a hearing.
(Cross out if you would not consider presenting a joint case).

Signature of submitter: M. Rawlinson Date: 26:2:09
(or person authorised to sign on behalf of person making submission).

Please note that all submissions are made available for public inspection.

The parts of the proposed plan change that my submission relates to are:
(Give clear references if possible e.g. reference number, policy x, rule y)

Schedule 2A: Policy 6.4.3. Trotters catchment
Submission Reference (Below)
Section 32 Report: ORC: 20 December 2008. Page 5.
2. Management Flows for Aquatic Ecosystems in Trotters Creek (ORC) August 2006: Pages 12, 14.
3. Proposed National Environmental Standard on Ecological Flows and Water Levels: Ministry for the Environment: March 2008: Page 27.

My submission is:
(Include whether you support, oppose, or wish to have amended the parts identified above, and give reasons)

1. I wish to have the minimum flow amended. In my opinion 8 litres per second will NOT provide protection for in-stream values as claimed.
2. Trotters Creek has 13 species of fish present (Refer page 6). Flow below which habitat declines sharply is higher than 8 litres per second for all 10 fish species listed in Table 4.1. A flow of 20 litres per second is recommended from November to April.
3. Using the criteria in the Proposed NES. 20.7 litres per second is almost identical to the 2006 Report figure.

Please turn over

I seek the following decision from the local authority:

(Give precise details e.g. changes you would like made)

Raise the Minimum flow for the Trotters catchment at Matheson's Weir to 30 litres per second (October to April), to match the Primary Allocation limit, consistent with the 50:50 flow-sharing basis between instream and out of stream use, as in Policy 6.4.9 Explanation. As proposed, a natural flow of 40 litres per second could be reduced by 75% by out of stream use and still be above the Minimum flow of 8 litres per second.

Fold

SUBMISSIONS MUST BE RECEIVED BY 5.00 PM, MONDAY 9 MARCH 2009.

Please fold and secure with a small piece of tape.

Fold

Freepost Authority ORC 1722

Carried by

Free

Otago Regional Council
Private Bag 1954
Dunedin 9054

Attention Policy Team

Otago Regional Council

SUBMISSION FORM
Proposed Plan Change 1B Minimum Flows
to the Regional Plan: Water for Otago

Form 5, Clause 6 of the First Schedule, Resource Management Act 1991.

(22)

Office use only

OTAGO REGIONAL COUNCIL
RECEIVED DUNEDIN
- 2 MAR 2009
FILE No. RI22
DIR TO MRP SV

Full name of submitter: Michael Charles Rawlinson

Name of organisation *(if applicable)*: —

Postal address: 1 Dalkeith Street
North East Valley, Dunedin

Postcode: 9010

Telephone: (03) 473 8394

Fax: —

Email: —

Contact Person: As above

I wish / do not wish *(circle preference)* to be heard in support of my submission.

If others made a similar submission, I will consider presenting a joint case with them at a hearing.
(Cross out if you would not consider presenting a joint case).

Signature of submitter: M. Rawlinson

Date: 24.2.09

(or person authorised to sign on behalf of person making submission).

Please note that all submissions are made available for public inspection.

The parts of the proposed plan change that my submission relates to are:

(Give clear references if possible e.g. reference number, policy x, rule y)

Schedule 2A: Policy 6.4.3: Waianakarua catchment
Submission Reference: (Below)
1. Management Flows for Aquatic Ecosystems in the Waianakarua River (ORC) August 2006. Page 12.
2. Proposed National Environmental Standard on Ecological Flows and Water Levels: Ministry for the Environment: March 2008: Page 27
3. Otago Daily Times: January 16, 2009.

My submission is:

(Include whether you support, oppose, or wish to have amended the parts identified above, and give reasons)

I wish to have the minimum flow amended: 200 litres per second (October to April) is too low for the following reasons:
1. Of the 10 Fish species listed in table 4.1, only 4 in the column "Flow below which habitat declines sharply" require flows of 200 litres per second or less (2 are blank) leaving at least 4 requiring higher minimum flows.
2. A minimum flow of 200 litres per second is 26% less than the proposed National Environmental Standard.
3. Prolonged low flows which could occur at such a low minimum would surely make toxic algal blooms (Phormidium) more likely.

Please turn over

I seek the following decision from the local authority:

(Give precise details e.g. changes you would like made)

Raise the proposed Minimum flow for the Waianakarua catchment at Browns Pump to 300 litres per second (October to April)

OR require primary allocation takes to be reduced by 50% (October to April) when flows are between 400 and 200 litres per second at Browns Pump

OR some other fair and effective method of keeping flows from falling below the natural MALF as long as possible.

SUBMISSIONS MUST BE RECEIVED BY 5.00 PM, MONDAY 9 MARCH 2009.

Please fold and secure with a small piece of tape.

FreePost Authority ORC 1722

Otago Regional Council
Private Bag 1954
Dunedin 9054

Attention Policy Team

Otago Regional Council

SUBMISSION FORM
Proposed Plan Change 1B: Minimum Flows
to the Regional Plan: Water for Otago
December 2008

Form 5, Clause 6 of the First Schedule, Resource Management Act 1991

23
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Full name of submitter: Mark Bingham

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Contact person: Mark Bingham

I wish/do not wish to be heard in support of my submission.

If others make a similar submission, I will consider presenting a joint case with them at a hearing.

Date:3/03/2009 09:24:06

Please note that all submissions are made available for public inspection.

Signatures are not required for submissions made electronically.

Submissions must be received by 5pm, Monday 9 March 2009.

The parts of the proposed plan change that my submission relates to are:
(*Give clear references if possible e.g. reference number, policy x, rule y*)

Reference policy 1B Minimum Flow Rates for the Waianakarua River. Public Meeting at the Mill House Cafe proposal for minimum flow rate of the river was suggested to be 200 litres per second. There are now proposals being brought forth that minimum flow rates are to be increased to 400 litres per second and perhaps as high as 450 litres per second?

My submission is:
(Include whether you support, oppose, or wish to have amended the parts identified above, and give reasons)

We oppose any increase of a minimum flow rate from 200 litres per second from the original proposal discussed at the public meeting held in December 2008 at the Mill House Cafe in Waianakarua. According to the public forum in December, it was stated that there had never been a minimum flow rate imposed on the river. It was also stated that there has never been an incident which was deemed critical to the river's ecological state. The majority of the water is taken out at the end of the river just before the tidals end. The river is ranked 8/77 for water quality. It also has good fish life and has very good macro invertabrae density and has not had a minimum flow rate in place over the past forty years. Farmers and land owners using the Waianakarua River for irrigation purposes recognize the importance of sustaining this natural resource and thus have managed it successfully!

I seek the following decision from the local authority:
(Give precise details e.g. changes you would like made)

While it has been declared that the Waianakarua River has never had a minimum flow rate imposed on it, we as dairy farmers recognize the importance of our natural resources and realize the important balance of assessing minimum flow rates to the river play both ecologically and economically to all interested parties. We would propose a minimum flow rate in the area of 150 to 200 litres per second on the Waianakarua river and look forward to the opportunity of further discussions on this matter.

SUBMISSIONS MUST BE RECEIVED BY 5.00PM, MONDAY 9 MARCH 2009

Please send submissions to:

Email: policy@orc.govt.nz

Post: Attn: Policy Team, Private Bag 1954, Dunedin 9054

Fax: (03) 479 0015 (Attn: Policy Team)

Deliver: 70 Stafford Street, Dunedin; or
William Fraser Building, Dunorling Street, Alexandra; or
The Station, 1st Floor, Cnr Shotover and Camp Streets, Queenstown

Otago Regional Council

SUBMISSION FORM
Proposed Plan Change 1B: Minimum Flows
to the Regional Plan: Water for Otago
December 2008

Form 5, Clause 6 of the First Schedule, Resource Management Act 1991

24
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Full name of submitter: Gerry Closs

Name of organisation (*if applicable*):

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Town/City: Dunedin
Postcode: 9010

Telephone: 476 4014

Fax:

Email: gerry.closs@stonebow.otago.ac.nz

Contact person:

I do not wish / wish to be heard in support of my submission.

If others make a similar submission, I will consider presenting a joint case with them at a hearing.

Date:3/03/2009 15:59:23

Please note that all submissions are made available for public inspection.

Signatures are not required for submissions made electronically.

Submissions must be received by 5pm, Monday 9 March 2009.

The parts of the proposed plan change that my submission relates to are:
(*Give clear references if possible e.g. reference number, policy x, rule y*)

Schedule 2A Trotters Catchment, Reference Number 5

My submission is:
(Include whether you support, oppose, or wish to have amended the parts identified above, and give reasons)

I believe the proposed minimum flow of 8 litres per second to be too low.Trotters Creek supports an exceptionally high diversity of fish species for the Otago coastal region. This diversity is most likely due to the diversity of habitats available within this stream. An extended period of low flow would reduce the available habitat diversity. Further, many of the fish in the stream are drift feeding species (e.g. koaro, Canterbury galaxias, brown trout) and are hence dependent on the supply of food brought to them by flowing water. Low periods of low flow will reduce food supply, thus reducing overall fish abundance.

I seek the following decision from the local authority:
(Give precise details e.g. changes you would like made)

I seek a minimum flow of at least 20 litres per second for Trotters Creek from October to April

SUBMISSIONS MUST BE RECEIVED BY 5.00PM, MONDAY 9 MARCH 2009

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Email: policy@orc.govt.nz

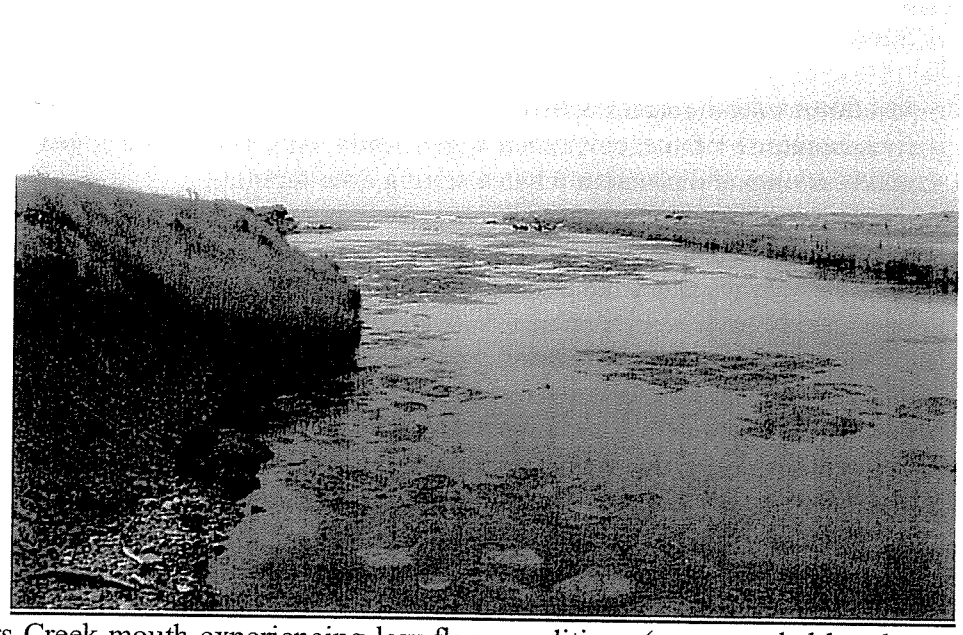
Post: Attn: Policy Team, Private Bag 1954, Dunedin 9054

Fax: (03) 479 0015 (Attn: Policy Team)

Deliver: 70 Stafford Street, Dunedin; or
William Fraser Building, Dunorling Street, Alexandra; or
The Station, 1st Floor, Cnr Shotover and Camp Streets, Queenstown

25

MORGAN JOHN TROTTER
MINIMUM FLOW SUBMISSION
TROTTERS CREEK



Trotters Creek mouth experiencing low flow conditions (compounded by abstraction for irrigation) during mid February 2009.

My name is Morgan John Trotter; my family have lived and farmed beside Trotters Creek since the 1840s. The creek has significant historical, recreational and ecological values which are held in very high regard by my family and members of our community.

I grew up beside the creek and since a very early age I have gone swimming, eeling, white baiting, floundering and trout fishing in the creek. When I worked for the Regional Council I assisted with electric fishing studies of the creek and conducted compliance inspections of the irrigation take. In my own time I have walked the length of the creek and explored every tributary. I hold a double major zoology/ecology degree and a post graduate diploma in environmental science (passed with distinction).

I support the proposed winter period minimum flow of 35 litres a second. I understand that the weir used to divert water into the storage pond is to be removed during winter.

I oppose the proposed summer period minimum flow of 8 litres a second for the following reasons:

1. The Trotters Creek Management Flows report commissioned by the Regional Council (at no small expense) clearly identifies that at least 20 litres a second is

required to protect the 13 different fish species that are known to live within the creek which includes giant kokopu, long finned eel, short finned eel, koaro, Canterbury galaxiids, common bully, upland bully, giant bully, red fin bully, blue gill bully, lamprey, brown trout and inanga. The report states that although 20 liters a second is well below the point of habitat inflection for all fish species in the creek expect red fin bullies and Canterbury galaxiids it is likely to ensure the sustainability of the diverse native fish community and that flows should not be allowed to drop below 20 liters a second due to consumptive use.

2. In addition to the species listed above, flounder and smelt have been known to live in mouth of the creek. Such high biodiversity should be given significant consideration and protection when setting a flow regime.

3. The summer low flow period is when the health of the creek is under stress (caused by high water temperatures, reduced habitat, low oxygen levels and algal blooms) and requires protection from over abstraction the most. The Management Flows report states that the (natural) mean annual low flow restricts the amount of habitat available for most of the native fish species found in the creek. The proposed minimum flow would compound the effect of these low flows and the creek would be flat lined unnaturally for extended periods. This would result in low oxygen levels, reduced aquatic habitat, more algal blooms, increased water temperatures and higher nutrient concentrations.

4. The North Otago area experiences severe droughts and is expected to become even drier under the influence of climate change (Ministry for the Environment website). This would extend the period of summer low flows in Trotters Creek and makes a meaningful minimum (of at least 20 liters a second) flow absolutely necessary to protect the health of the creek.

5. The creek mouth can become blocked near the ocean during prolonged low flow periods or after storm events. This often results in the build up of a sand spit that prevents fish passage and requires a large flushing flow to blow it out or significant flows to build up over time and run over the top of the sand bar. The hydrological interactions between the creek mouth and the ocean are very complex and have not been adequately considered or addressed in studies to date.

6. The present abstraction regime provides for only 8 liters a second in the creek during low flow periods. This summer the mouth of the stream dried up and became blocked off from the ocean for an extended period (see cover photo) until there was a flood event. During an inspection of the creek mouth no flounders could be found and the creek was experiencing the worst algal bloom that I have seen in the mouth. Trout numbers (and size) were also very low. It was not a particularly dry year in the Trotters Creek catchment. If the minimum flow is set at only 8 liters a second permanently, it is likely that the mouth of the creek will become blocked off far more often and for longer periods than would occur naturally.

7. Many (10) of the native fish species that live in the creek have a sea going life cycle stage. It is vital that water abstraction does not result in the blockage of the stream mouth near the ocean which would prevent fish access to and from the sea.

8. The creek has been an important resource for commercial eeling. It is important to protect the health of the creek and the surface flow connection with the ocean to ensure the sustainability of this fishery.

9. The mouth of the creek will be the area worst affected by the proposed minimum flow of only 8 liters a second during summer. Traditionally this area has been the most productive part of the creek for recreational activities such as white baiting, floundering and trout fishing. The proposed minimum flow will have a significant negative impact on these recreational activities.

10. It is a mistake to consider that only a small section of the creek will be affected by the proposed minimum. The hydrologic functioning of the length of the creek and connection with the ocean is vital for 10 species of fish which have a sea-going life cycle. The entire length of the creek must be considered in order to protect the ecology of the stream.

11. Reasonable flows are required in the mouth of the creek to maintain water quality for stock drinking purposes.

12. The proposed minimum flow of 8 liters a second and the primary allocation limit of 30 liters a second will result in approximately 75% of the flow being taken for irrigation during the summer low period when the creek often runs at 40 liters or less. This is too high and does not leave enough water to sustain the ecosystem.

13. Some of the white bait species such as inanga spawn in the lower part of the creek during the summer low flow period (January to March). Good water quality and flow levels are an important part of their spawning and juvenile habitat requirements.

14. The proposed level and present weir would not provide for trout passage during summer.

15. It has been estimated in the Management Flows For Trotters Creek report that a minimum flow of 20 liters a second would only impact on water abstraction on 4 days a year. I understand that there is 3.5 days of storage in the dam beside the creek. With a slight increase in storage a minimum flow of 20 liters a second would allow for water abstraction and better protect the health of the stream at the same time.

16. It is likely that during prolonged summer low flow periods there will be times when there is not enough water in the creek to allow for abstraction and ensure the functioning of the ecosystem. In this case direct abstraction for irrigation should cease.

17. In the hand out on Trotters Creek supplied by the ORC it is stated that 8 liters a second will maintain the cultural, recreational and social needs of the community. The needs of the community can not be met without protecting the basic ecology of the stream and the local community certainly has not agreed on this figure. The information supplied in the handout is misleading and incorrect. Furthermore it preempts the decision making process. Members of the public seeking to make an informed decision will have been mislead by the information supplied in the handout.

18. Flat lining of the creek at 8 liters a second for extended periods would destroy the natural character of Trotters Creek.

19. The mean annual low flow of Trotters Creek has been estimated at 23 liters a second in the Management Flows report. Later ORC staff questioned this value after flow comparisons with other nearby rivers and after doing a flow gauging in May. Although the catchment area of Trotters creek may not be as large as the Shag or Waianakarua Rivers, during droughts the surface flows between pools in Trotters Creek often continue when the surface connection between pools in these other rivers has dried up (this may be related to localised weather patterns, the swampland and vegetation in the upper catchment and the structure and geology of the stream bed). A one-off gauging of the creek flow is not enough data to accurately estimate the mean annual low flow.

20. Continuous flow records over several years are required to gain an accurate mean annual low flow estimate. This data is not available so the ORC should err on the side of caution when setting a minimum flow to protect the aquatic habitat.

21. The mean annual low flow value can not be accurately estimated at this stage, but the habitat modeling studies have clearly identified that at least 20 liters a second is required to protect the aquatic habitat of the creek.

22. Many of the native species require riffle habitat for their survival. When the creek becomes low the riffle habitat is the first to be lost. A minimum flow of only 8 litres will reduce riffle habitat the most. This will force small native species (such as bullies) into the remaining pools where their predators (trout, eels and giant kokopo) exist. This could result in the local extinction of species which find refuge in riffle habitat.

23. Riffle habitat is very important for aquatic invertebrates such as mayflies and is most affected by low flows. The rifles below the weir provide habitat for invertebrates which help sustain fish life in pools further downstream.

24. A rare species of burrowing mayfly (*Ichthybotis*) is found in the creek, but there is no reference to the habitat requirement of this insect in studies to date.

25. The suggested summer minimum flow of 8 liters a second is so low that evaporation could have a significant impact and further reduce the health of the stream.

26. Since abstraction for irrigation began the actual amount of water used for irrigation and the amount of water that has over flowed from the storage pond back into the creek is not known. When there is uncertainty about flow and abstraction levels the Council should take a precautionary approach when setting permanent minimum flow levels to allow for hydrological estimate errors and ensure the protection of the environment.

27. I believe that the amount of fish life in the creek (and in many North Otago streams) has decreased over the last 25 years. I suspect that the main cause of the loss of fish life is decreased water yield from the catchment, probably due to land use change and possibly climate change as well. I have not seen flounders in the creek mouth for several years. Smelt which were present when my father was a boy are no longer seen. Many of the native species (such as the threatened lamprey) in the creek are found in low numbers and are just holding on and no more. I have not seen a large trout or a sea run trout in the creek for several years. The numbers of long finned eels and invertebrate life in the creek also appears to have decreased significantly. A meaningful minimum flow is required to protect the life giving qualities of the creek from increased stress during low flow periods.

28. New Zealand's primary production and tourism industry is marketed under a "clean green" image. If it becomes known internationally that streams and rivers in New Zealand are being degraded to irrigate farmland there will be a negative impact on our export and tourism markets. Over abstraction from rivers for irrigation is short sighted management and will have a negative impact on our economy and environment in the longer term.

I would also like the Council to note the following points:

1. The Trotters family was the first to be given permission to irrigate out of Trotters Creek. This permission was never used (and lapsed) because of my families concerns about the effects of abstraction during low flow periods on the health of the creek.

2. My family was originally told that water for the irrigation take that is now active would only be harvested during high flow periods for storage, and that irrigation would not affect low flow levels. We were not given an opportunity to have input on minimum flow levels when abstraction for irrigation first began. Given the

chance, we would have opposed abstraction from the stream at low levels from the onset.

3. In recent years ecological studies commissioned by the Council have revealed a far higher level of biodiversity in the creek that was previously known and the flow levels required to sustain fish species. Management decisions made prior to these studies should be reviewed.

4. I understand that the weir that has been used to divert water into the storage pond has restricted fish passage. It is important that fish passage for all species is provided for at all times.

5. Recent willow control works by the Regional Council have been very successful in removing obstructions and improving flow between pools. These works have also flushed a lot of sediment out of riffle areas and this has resulted in more clean gravels and improved habitat for some fish species. This habitat improvement will not account for anything if the creek does not have a reasonable minimum flow.

6. The minimum flow regime and abstraction allocation limits should be designed to mimic natural flow patterns and provide for flow variability as much as possible. During dry years flushing flows, small freshes and peaks are vital for the health of the stream.

7. I understand that the over flows from the storage dam run back into the creek several hundred meters further downstream from the weir. If the point of take and the return from the storage pond were located close together the unnecessarily dewatering of a section of the creek could be avoided.

Finally, the intrinsic, recreational and ecological values of Trotters Creek are important for many members of our local community and people from outside the area as well. A meaningful minimum flow and conservative abstraction limits are required to ensure that the irrigation of water does not jeopardize these values and the health of the stream. Any financial gains from irrigation of farmland by one member of the community will not benefit the greater community unless the health of the stream is protected the first instance. Eight litres a second is not enough water to protect the health of the stream and the community values, the minimum flow during summer should be at least 20 liters a second.

I would like to be heard in support of my submission.

Yours Sincerely

Morgan Trotter
2RD Palmertson
9482
Otago

Otago Regional Council

SUBMISSION FORM
Proposed Plan Change 1B: Minimum Flows
to the Regional Plan: Water for Otago
December 2008

Form 5, Clause 6 of the First Schedule, Resource Management Act 1991

26
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Full name of submitter: Bronwyn Judge

Name of organisation (*if applicable*):

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Postcode: 9444

Telephone: 34395660

Fax:

Email: mjjudge@xtra.co.nz

Contact person: Bronwyn Judge

I do wish to be heard in support of my submission.

If others make a similar submission, I will consider presenting a joint case with them at a hearing.

Date:4/03/2009 14:31:16

Please note that all submissions are made available for public inspection.

Signatures are not required for submissions made electronically.

Submissions must be received by 5pm, Monday 9 March 2009.

The parts of the proposed plan change that my submission relates to are:
(*Give clear references if possible e.g. reference number, policy x, rule y*)

Minimum flows for the Waianakarua and Trotters Gorge Rivers. In particular adverse effects the proposed min flow would have on 2D.1 and 2D.2

My submission is:
(Include whether you support, oppose, or wish to have amended the parts identified above, and give reasons)

Amend The report indicates that flow estimates are based on very little reliable data .Given that the catchments for the North and South Branch of the Waianakarua are different in nature and that the rate of flow in the North branch appears to be much faster than in the south the Waianakarua is really for most of its length two separate rivers and should be viewed as such.The proposed minimum flow would mean the rivers could be taken to a level where the mouths would close and if this occurs for any length of time fish would be

affected.There is little information as to the effect of changing land use round the river and the effect it has on ecological values and water quality.In past cases although minimum flows may have been instigated to protect rivers such as the Waitaki the result is just the opposite and ways have been sought push minimum levels down further.There seems to be no data on what the results would be if everyone with water allocation took their full allocation although we are told the river is already over allocated.The wishes of the majority of people at the workshops for a higher minimum level seems to be over ridden by the wishes of those who have an economic interest.Furthermore the data as to days of restricted irrigation at various minimum flows doesn't make it clear that although restricted that doesn't mean on those days no water at all would be available to irrigators.As locals we consider the river has outstanding character and value that is not immediately apparent for those who have not visited the river and while the proposed minimum flow may not destroy that character it would do nothing to enhance it and could possibly result in increased algae growth and further unforseen adverse results.

I seek the following decision from the local authority:
(Give precise details e.g. changes you would like made)

To really protect the river the plan should err on the side of caution until there has been a reasonable period of time to do specific research on these rivers given the limited data available and given that some data is based on neighbouring rivers that actually differ in nature and character significantly from the Waianakarua Reiver and Trotters Gorge.The changing economic climate and global environmental changes that are affecting the planet, also indicate a conservative approach is warranted especially as this area's rivers have a low base flow and abstraction has more effect. Catchments are shorter,drier and flows more variable. This is highlighted in data put out by the Ministery for the Environment in their draft guidelines for methods to determine ecological flows and water levels. The minimum flow should be higher 500 l/s or a better system for preserving the character of the river devised.Policies are also needed to ensure that the rivers have adequate flow variability to maintain habitat and provide for key aquatic function in case of consents for supplementary take being sought in the future.

SUBMISSIONS MUST BE RECEIVED BY 5.00PM, MONDAY 9 MARCH 2009

Please send submissions to:

Email: policy@orc.govt.nz

Post: Attn: Policy Team, Private Bag 1954, Dunedin 9054

Fax: (03) 479 0015 (Attn: Policy Team)

Deliver: 70 Stafford Street, Dunedin; or
William Fraser Building, Dunorling Street, Alexandra; or
The Station, 1st Floor, Cnr Shotover and Camp Streets, Queenstown

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From: Andy Hicks [ashicks@gmail.com]
Sent: Wednesday, 4 March 2009 16:37
To: Policy Reply
Subject: Trotters Creek minimum flow

Minimum Flow Submission : Trotters Creek

My name is Andy Hicks. I am currently a PhD student at the University of Otago. I have an Arts/Science honours degree with majors in geography, environmental science and marine ecology, which I completed at the University of Mebourne. I have been researching the habitat requirements of different life stages and migration patterns of native fish in both New Zealand and Australia for about five years. I have also conducted research exploring how estuary geomorphology affects the amount of suitable spawning habitat of inanga, the most common whitebait species.

Pumping directly out of rivers over summer months when the river is at its lowest natural flow is a bad idea. Toxic algal blooms in the lower reaches, the risk of which is already increased by nutrient inputs from the catchment, increase exponentially with decreasing water flow. Extreme summer low flows are a critical period and can define the fish community for the remainder of the year, as massive mortality from heat stress and anoxia can occur. The low flow period over summer can thus be seen as a bottleneck for the biodiversity of the lower reaches of Trotters Creek – and the minimum flow requirements set by the ORC will effectively define the severity of this bottleneck. Allowing extractions to continue after the river drops below the 0.02 m3 recommended for aquatic ecosystem maintenance would be agreeing to deteriorate the ecological integrity and biological diversity of Trotters Creek.

I do not believe studies have adequately addressed whether protracted extraction-induced periods of low flow have resulted in increased levels of mouth closure of Trotters Creek. I am surprised this has not been given more attention. Creeks on open coasts have a greater tendency to close over, due to the continued deposition of wave supplied sand at river mouths (spits). If river discharge is not great enough to remove sand deposited at the mouth, estuary closure can result. Mouth closure is not so much of an issue within harbours or enclosed bays because wave energy and sand supply is reduced in enclosed waters. But mouth closure is an issue for Trotters Creek because the mouth drains onto an exposed open coast. A decrease in discharge will increase the chance for, and duration of, mouth closure. River-sea access for the native diadromous fish fauna is crucial, and estuary dynamics and "character" change dramatically upon mouth closure. Although peak whitebait migration occurs during spring, recruitment can occur well into the summer months. And most recruitment of giant kokopu is often considerably later than the peak whitebait recruitment, extending into December. Even if complete river mouth closure does not occur – decreased freshwater output would provide less of a cue for returning whitebait, which hone in on the freshwater and associated cues (conspecific pheromones and other habitat cues). Decreasing discharge would result in decreasing cue strength and provide less attraction to whitebait.

Peak inanga spawning in this part of New Zealand is during March, a period of time with typically low flows. Inanga require low salinity habitat (for successful fertilisation) in the upper reaches of estuaries, and utilise tidal height differences for egg stranding. The egg stranding strategy results in faster embryonic development and less aquatic predation. If water extractions during this time resulted in river mouth closure, the tidal cues used by spawning inanga would be lost. An overall decrease in freshwater discharge due to water extraction in the absence of mouth closure would also decrease the amount of freshwater habitat within the estuary. Both of these effects would have a negative impact on inanga spawning.

The clean green image of New Zealand results from low population size and low intensity farming,

not sustainable management practices. This pattern is changing – with agricultural intensification resulting in chronic deterioration of environmental values across the country. The Waikato River System and its horrendous water quality is a depressing example of what happens when development proceeds without concern for the environment. The diversity of native fish represented within river catchments is on the decline, and it has become obvious during my PhD research that the large galaxiids (four out of five whitebait species) are under recruitment limitation (not enough new individuals entering populations) across much of their range, particularly on the east coast of the south island. The greatest tragedy is that New Zealand is fortunate with the availability of the most crucial natural resource, water. But it is the mismanagement of water and water catchments that is resulting in declining environmental values. This is unnecessary, because both knowledge and affordable technology is available for development to continue without causing so much damage.

Being Australian, I was surprised to realise New Zealand does not have more irrigation dams, where water from high flow events is stored for use during the low flow periods. It is a constant battle keeping irrigation dams full in Australia, because we rarely get high flow and rainfall events to fill the dams. Much of New Zealand does not have that problem, however, both due to higher rainfall, and the potential to extract from rivers during the ice/snow melt. The water extraction battles are thus a problem that New Zealand does need not face – because it should be fairly straightforward to store rainfall/floodwater/ice melt in storage dams and have them available for irrigation during the summer months. In the case of Trotters Creek, farmers could either build their own storage dams and fill them during winter (preferably from rainfall runoff), or the current communal storage dam could be increased and flow levels in Trotters gorge maintained above the natural minimum summer flow (above $0.02m^3$). That would be a better solution for providing water for irrigation rather than threaten both the ecological integrity and natural character of Trotters Creek by allowing water extraction to reduce summer flows to $0.008m^3$. Greater water storage would also give farmers more flexibility for irrigation and drought insurance by not having to rely on pumping from a river that they will at some point not be able to pump from (when it drops below whatever threshold is set).

It is the ORC's responsibility to balance the degree of environmental protection against the value of water for other users. Increasing water storage, either by permitting farmers to build their own irrigation storage dams (in gullies not classed as waterways, or hillside dams), or increase storage capacity in communal dams, would mean the value of water is retained for farming purposes. Allowing water extraction to reduce November-April flows below 0.02 m^3 would decrease ecological integrity of the creek. With greater use of irrigation dams, the value of water in the Trotters Creek catchment can be retained for both ecological integrity and farming use without allowing extractions to reduce flows below 0.02 m^3. With this in mind, I cannot see how the ORC could support the request for continued water extractions until flow rates reach 0.008 m^3.

The suggestions made for "management flows for aquatic systems in Trotters Creek" were clear. Extractions should not continue during the low flow period when discharge drops below 0.02 m3. A lot of money is spent on environmental consultancy and ecological impact studies, but this advice is often completely ignored. It highlights that development decisions are often made before receiving environmental information, and any consultation with environmental specialists is undertaken merely as a token measure. I hope this is not the case with decisions regarding minimal flows in Trotters Creek.

I am happy to discuss any matters in person – and can be contacted via email ashicks@gmail.com or by mobile 027 2077 604.

Yours sincerely,

Andy Hicks

Otago Regional Council

SUBMISSION FORM
Proposed Plan Change 1B Minimum Flows
to the Regional Plan: Water for Otago

Form 5, Clause 6 of the First Schedule, Resource Management Act 1991.

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OTAGO REGIONAL COUNCIL RECEIVED DUNEDIN 05 MAR 2009 FILE No. RI221 DIR TO MRP-SV

Full name of submitter: ERROL JOHN TROTTER

Name of organisation *(if applicable)*:

Postal address: 1540 HORSE RANGE ROAD

Postcode: 9482

Telephone: 03 4394 886

Fax:

Email:

Contact Person: JOHN TROTTER

I wish / do not wish *(circle preference)* to be heard in support of my submission.

If others made a similar submission, I will consider presenting a joint case with them at a hearing.
(Cross out if you would not consider presenting a joint case).

Signature of submitter: E.J. Trotter Date: 03/03/09
(or person authorised to sign on behalf of person making submission).

Please note that all submissions are made available for public inspection.

The parts of the proposed plan change that my submission relates to are:
(Give clear references if possible e.g. reference number, policy x, rule y)

PROPOSED 8 LETRES A SEC. MINIMUM FLOW Oct/May

My submission is:
(Include whether you support, oppose, or wish to have amended the parts identified above, and give reasons)

I oppose the 8 letres/sec and wish this amended to 20 letres/sec minimum flow

My name is John Trotter and I own the property that boundries above the Matheson farm, and the Trotter's Creek runs through it. I have lived here since 1944 and remember sea run trout in the lower reaches

I seek the following decision from the local authority:

(Give precise details e.g. changes you would like made)

and smelt shoals many kilometers above the mouth, now it is an event to see a trout in the length of the river.....
If it was not obvious to me the irrigation take was detrimental regarding the mouth, I would not be writing this submission,
Because of the willow clearance undertaken by the O.R.C. the creek appears healthier than it has for decades. Whereas even three years ago trout were numerous in the pools above the weir, it is now a rarity to see even small eels. Can or do fish negotiate it I do not Know
It is very disappointing to note the mouth closes now in years of good flows, and it takes a good flood to unblock it,.....
The past four years have shown Trotters creek is too small for an irrigation take, except harvesting high flows for storage.
In the pamphlete Trotters Creek Flow Levels & Effects Oct/08 the writer concludes 'the 8 l/s will maintain the recreational, cultural & social values, including drinking water quality.'
The 8 l/s benefits only the irrigator.

SUBMISSIONS MUST BE RECEIVED BY 5.00 PM, MONDAY 9 MARCH 2009.

I have to support the O.R.C initial recomendation of ;
20 l/s October to May
35 l/s Winter

Please fold and secure with a small piece of tape.

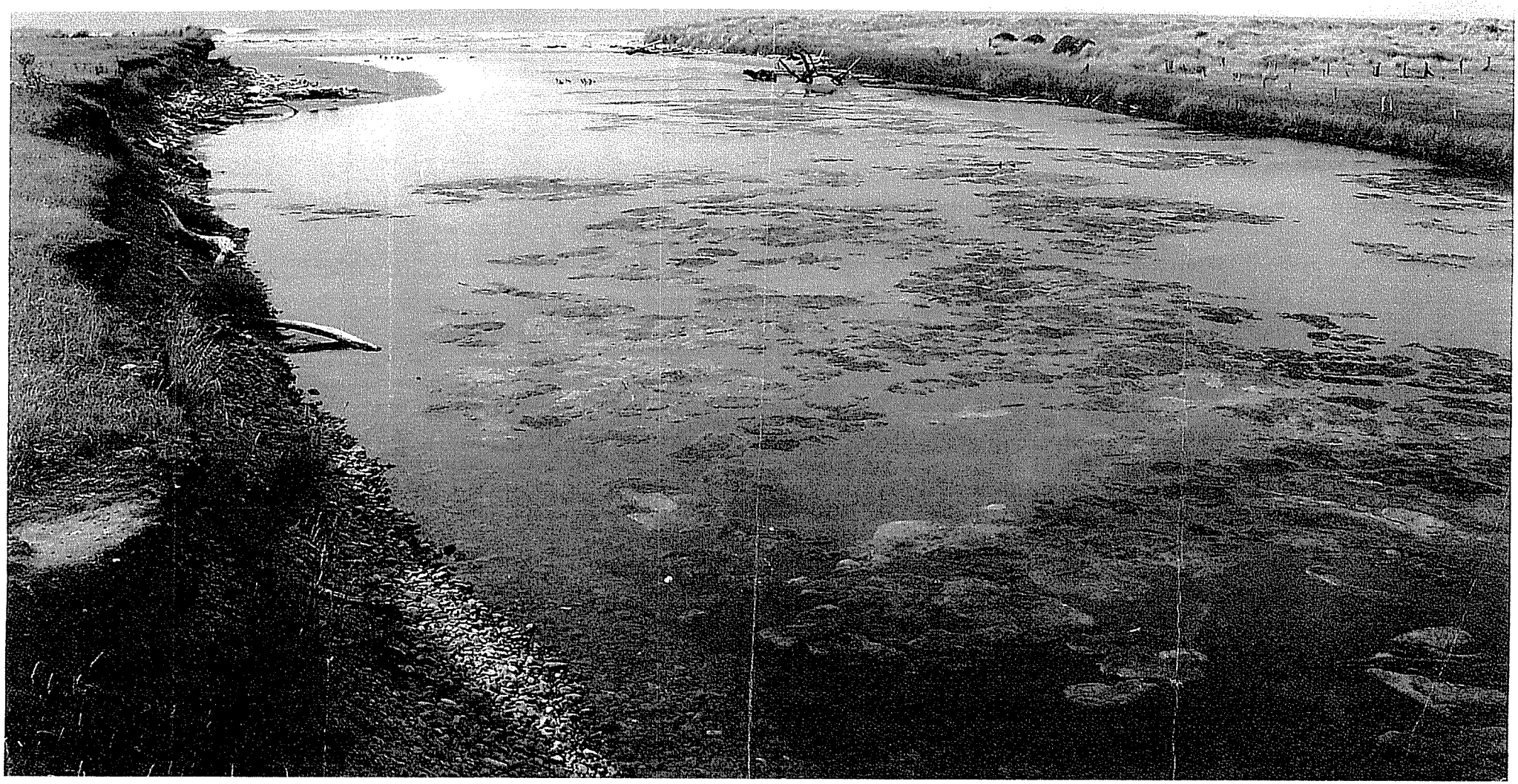
FreePost Authority ORC 1722

Free

Otago Regional Council
Private Bag 1954
Dunedin 9054

Attention Policy Team

MOUTH OF
TROTTERS CREEK
FEB. 009



OTAGO REGIONAL COUNCIL

PROPOSED FLOWS FOR TROTTERS CREEK

SUBMISSION BY D. SCOTT ON PROPOSED FLOW REGIME FOR TROTTERS CREEK.

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Personal

I am at present retired but was formerly Associate Professor at the University of Otago. My research and teaching interests were in the field of freshwater biology and I continue to maintain an active interest in the area mainly through my work with Otago Fish and Game..

Trotters Creek

In March 2008 the Otago Regional Council published an information sheet on Trotters Creek Catchment which gave a good description of all the values associated with the creek. The catchment is not extensively developed for agriculture, but there is significant forestry development. One distinctive feature is the amount of limestone in the catchment which results in a relatively high pH (median 7.6, ORC Handout October 2008). This could be regarded as a positive feature for the ecology. The fish fauna is diverse with 13 species and a threatened lamprey, and it is doubtful if any East Otago river could exceed this level. The creek has high recreational and human use values and ten are listed. In order to provide information on setting minimum flows , instream modelling was carried out for all the fish species This provided information on the habitat values for the different species in relation to flows and indicated to what extent the habitats available for each species would decline with falling flows. Although a detailed flow assessment covering a significant time period has not been made, it was recommended that for the critical summer period a minimum flow of 20 l/sec would provide protection for the fish fauna and general ecology. This a little below the estimated MALF of 23 l/sec, but would have restrictions on primary intakes of approximately four days for the irrigation season. This seemed reasonable in terms of protection for ecological values and would also probably be acceptable for the various other values associated with the creek.

In Ocober 2008 the Otago Regional Council published a final information sheet on Trotters Creek catchment. In the section entitled Flow Levels and Effects it is stated that the flow downstream of the weir is a minimum of 8 l/sec and that water often spills back in to the creek from the storage pond. This leads on to photgraphs (Site 4 pool and riffle downstream of weir) and it is asserted that there is very little difference in the riffles between flows of 8 l/sec and 25 l/sec. It then states that the flow naturally falls below 25 l/sec without any consented abstraction.

The difficulties with the above presentation are :

1. No measurements were made of the depth and velocity of the riffles at 8 l/sec.
Reduction in depth and velocity increases temperature and oxygen risks during high temperatures.

2. The assumption is made that riffle dwelling species will exist in pools for periods of time. However there is increased risk of predation if all the species occupy pools.

3. The mouth of the river is likely to remain closed for longer periods of time at flows of 8 l/sec, thus inhibiting access from the sea.

4. The amount of water used for irrigation and the amount that overflows from the storage pond back into the creek is unknown. A precautionary approach would be the preferred one here.

5. The decrease from the estimated MALF of 23 l/sec to a summer minimum of 8 l/sec is too great to be ecolgically safe

In ORC Report No. 2008/475 1.10.08, a Proposed Plan Change 1B asserts that the values identified by the community are provided for by the low flow of 8 l/sec. and the minimum summer flow is reduced accordingly.

CONCLUSION

In view of the contrast between the detailed anlysis of fish habitat in the March draft, and the dubious unsubstantiated conclusions of the October statements, I oppose the proposed minimum flow of 8 l/sec for the summer period. I do not wish to be heard in support of my submission.

Donald Scott

D. Scott,
55, Riccarton Road,
Mosgiel.
1.3.09

Otago Regional Council

SUBMISSION FORM B Minimum Flows
Proposed Plan Change ~~1C Water Allocation and Use~~
to the Regional Plan: Water for Otago
Form 5, Clause 6 of the First Schedule, Resource Management Act 1991.

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OTAGO REGIONAL COUNCIL
RECEIVED DUNEDIN
05 MAR 2009
FILE No. RI 221
DIR TO MAP SV

Full name of submitter: R. G. Pagel

Name of organisation *(if applicable)*:

Postal address: 30 Cannington Road, Maori Hill
Dunedin

Postcode: 9010

Telephone: 03 467 2 +3 (

Fax:

Email:

Contact Person:

I wish / do not wish *(circle preference)* to be heard in support of my submission.

If others made a similar submission, I will consider presenting a joint case with them at a hearing.
(Cross out if you would not consider presenting a joint case).

Signature of submitter: R. G. Pagel
(or person authorised to sign on behalf of person making submission).

Date: 3-3-2009

Please note that all submissions are made available for public inspection.

The parts of the proposed plan change that my submission relates to are:
(Give clear references if possible e.g. reference number, policy x, rule y)

My submission is:
(Include whether you support, oppose, or wish to have amended the parts identified above, and give reasons)

I oppose the proposed minimum flow of 8 litres a second because I do not think that quantity would be enough to support the aquatic fish species to survive during the hot dry summer weather. I think that the river flow would not enable the mouth of the creek to penetrate an entrance to the sea at the mouth and so become stagnet

I seek the following decision from the local authority:
(Give precise details e.g. changes you would like made)

I have known the area for over 60 years, as I have fished at times. At times when there is very little flow, algal has formed so reducing the flow would increase formation of the algal and be detrimental to the aquatic life.

I feel that the minimum flow should at least be 20 litres per second to protect the health of the stream.

SUBMISSIONS MUST BE RECEIVED BY 5.00 PM, MONDAY 9 MARCH 2009.

Please fold and secure with a small piece of tape.

FreePost Authority ORC 1722

Otago Regional Council
Private Bag 1954
Dunedin 9054

Attention Policy Team

Otago Regional Council

SUBMISSION FORM
Proposed Plan Change 1B: Minimum Flows
to the Regional Plan: Water for Otago
December 2008

Form 5, Clause 6 of the First Schedule, Resource Management Act 1991

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Full name of submitter: Peter Snow

Name of organisation (*if applicable*): Palmerston Anglers Club

Postal Address: Number/Street: 7 Thomas Street
Suburb:
Town/City: Palmerston
Postcode: 9430

Telephone: 03 4651766

Fax:

Email: petersnow58@gmail.com

Contact person:

I do not wish to be heard in support of my submission.

If others make a similar submission, I will consider presenting a joint case with them at a hearing.

Date:5/03/2009 12:35:51

Please note that all submissions are made available for public inspection.

Signatures are not required for submissions made electronically.

Submissions must be received by 5pm, Monday 9 March 2009.

The parts of the proposed plan change that my submission relates to are:
(*Give clear references if possible e.g. reference number, policy x, rule y*)

I am writing this submission on behalf of the Palmerston Anglers Club in regards to the Proposed Plan Change 1B Minimum Flows.Our club opposes the proposed minimum summer flow of 8 litres a second for Trotters Creek.

My submission is:
(Include whether you support, oppose, or wish to have amended the parts identified above, and give reasons)

Our club opposes the proposed minimum summer flow of 8 litres a second for Trotters Creek. The reason the club opposes this level of flow is that the "Management Flows for Aquatic Ecosystems in Trotters Creek" report dated August 2006 commissioned by the Otago Regional Council clearly identifies the minimum flow of 20 litres a second is required from the period November to April inclusive to ensure the sustainability of the diverse indigenous fish community present in the creek.Our club finds it surprising the Otago Regional Council would consider a flow lower than that identified in their report and when the report says the "recommended management objective for Trotters Creek is to sustain the diverse native fish community in the lower reaches".....The only beneficiary of this lower minimum flow level would be the one individual using the water for the irrigation of farmland and with no benefit to the greater community.

I seek the following decision from the local authority:
(Give precise details e.g. changes you would like made)

In summary our club opposes the minimum summer flow of 0.008 m3/s and supports the position that a level of 0.02 m3/s be adopted for Trotters Creek.

SUBMISSIONS MUST BE RECEIVED BY 5.00PM, MONDAY 9 MARCH 2009

Please send submissions to:

Email: policy@orc.govt.nz
Post: Attn: Policy Team, Private Bag 1954, Dunedin 9054
Fax: (03) 479 0015 (Attn: Policy Team)
Deliver: 70 Stafford Street, Dunedin; or
William Fraser Building, Dunorling Street, Alexandra; or
The Station, 1st Floor, Cnr Shotover and Camp Streets, Queenstown

Otago Regional Council

SUBMISSION FORM
Proposed Plan Change 1B: Minimum Flows to the Regional Plan: Water for Otago
December 2008

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Form 5, Clause 6 of the First Schedule, Resource Management Act 1991

Full name of submitter: Otago Fish & Game Council

Postal Address: PO Box 76:
DUNENDIN:

Telephone: (03) 479 6552

Fax: (03) 477 0146

Email: j.hollows@fish-game.org.nz

Contact person: John Hollows

We wish to be heard in support of my submission.

Date: 5 March 2009

The Otago fish & Game Council wish to make the following submission on proposed plan change 1B: minimum flows.

2D – *matters to be considered when setting minimum flows.*

Fish & Game support the setting of minimum flows and primary allocation limits for waterways as this allows for some degree of environmental protection.

We have concerns about the weighting that may be given to existing minimum flows and relevant flow setting. The expectation of Fish & Game has always been that once mining rights expire and/or minimum flows are set there will be significant gains for the instream environment. The past and current situation of streams with extreme low or no flows is not acceptable to the community in our view. While we are seeing proposed flows that may facilitate trout spawning and juvenile fish, we are not seeing flows that will allow adult fish to inhabit some stretches of river over summer. Although this issue is related, it is unable to be dealt with through the current plan change process. However, Fish & Game wish to raise it as an issue for consideration and one to be discussed at future council to council meetings.

We are available to discuss and/or provide clarification of the matters raised in our submission once you have had time to assimilate these. The contact people are John Hollows at Otago Fish & Game and/or Bridget Z. Pringle at Central South Island Fish & Game.

Yours sincerely

John Hollows

Environmental Officer

SUBMISSIONS MUST BE RECEIVED BY 5.00PM, MONDAY 9 MARCH 2009

Please send submissions to:

Email: policy@orc.govt.nz

Post: Attn: Policy Team, Private Bag 1954, Dunedin 9054

Fax: (03) 479 0015 (Attn: Policy Team)

Deliver: 70 Stafford Street, Dunedin; or

William Fraser Building, Dunorling Street, Alexandra; or

The Station, 1st Floor, Cnr Shotover and Camp Streets, Queenstown

Otago Regional Council

SUBMISSION FORM 1B: Minimum Flows
Proposed Plan Change ~~1C: Water Allocation and Use~~
to the Regional Plan: Water for Otago
December 2008

Form 5, Clause 6 of the First Schedule, Resource Management Act 1991

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Full name of submitter: David James and Sarah Evelyn Matheson

OTAGO REGIONAL COUNCIL
RECEIVED DUNEDIN
05 MAR 2009
FILE No. RI221
DIR TO MRP-SV

Name of organisation (*if applicable*):

Postal Address: Number/Street: No 2RD Palmerston SH1
Suburb:
Town/City: Otago
Postcode:9482

Telephone: 034651408

Fax: 034651408

Email: sematheson@hotmail.com
atheson

Contact person: James

I wish to be heard in support of my submission *(delete the one that does not apply)*.

If others make a similar submission, I will consider presenting a joint case with them at a hearing.
(Delete if you would not consider presenting a joint case).

Date:2 March 2009-03-01

Please note that all submissions are made available for public inspection.

Signatures are not required for submissions made electronically.

Submissions must be received by 5pm, Monday 9 March 2009.

The parts of the proposed plan change that my submission relates to are:
(*Give clear references if possible e.g. reference number, policy x, rule y*)
The minimum low flow of Trotters Creek
I am a 5th generation farming family with the Trotters Creek running through my property.
In 2002 I applied for consent to extract water for the purpose of irrigation. Before being granted this I employed an engineer[s] to work through the process with me. Having made the decision to precede with the process we then consulted interested parties. My down stream neighbour endorsed the scheme when I assisted with a new stock water scheme, as he relied on tidal water. DOC signed it off as did Game and Fish. Local Maori visited along with the ORC and all gave their approval based on the minimum flow rate of 5lt/sec. I duly paid my consent fees of nearly 10k and proceeded with the expensive infrastructure based on the approved consent.
A water monitor was placed where ORC requested along with the approved weir design. In order to insure we were compliant we allowed a margin of error and allowed 8lt/sec to flow through the weir. This is inspected monthly to ensure there are no breaches. None have occurred. I had been asked to make the fish pass more user friendly; I did that immediately with the help of ORC staff. I voluntarily remove the weir over winter to allow spawning to occur unrestricted.

The information that ORC has on the historical flows of Trotters Creek and its comparison with the South branch of the Wainakarua are inaccurate.
In the last 25 years I can't recall ever being asked to allow anybody to fish the creek other than commercially for eels.
The mouth has always closed up historically as does the Clutha on occasions.
There are some very clear signs that the fish habitat has improved and very clear evidence of this has to be the fact, in your notes of a meeting held in Moeraki .[which we were unable to attend] that 13 native species exists. Not many creeks in Otago can boast this amount. Unfortunately DOC and Fish and Game don't always see eye to eye as to the ideal habitat!!
ORC staff will be able to confirm the well being of this creek is my uppermost priority and I take great interest in their results.
In spite of the creek going through the middle of my property I now have only one small paddock that sheep rely on the creek for stock water. I feel nothing would improve the quality and habitat of the creek more, if ORC would implement a policy of fencing stock out of the water ways, rather than adjust the flows which vary from nothing to heaps naturally. Large numbers of cattle pollute river ways and DOC Fish and Game and the public would no doubt all agree this should be the first step.
There can be no confusion as to my motive for irrigating. North Otago is very dry and this small scheme turns my property from a store one to a finishing one, put more simply economic as opposed to uneconomic. So to the person who at the Moeraki meeting who stated' I would not go broke' why else would I spend well in excess of 100k and comply with all the rules within my consent that has not yet reached the halfway mark, if it wasn't for financial survival? I can assure you expenditure was based on the 20 years and minimum flow of 5lt/sec as granted in my consent.

My submission is:
(Include whether you support, oppose, or wish to have amended the parts identified above, and give reasons)

In support of the status quo.

I seek the following decision from the local authority:
(Give precise details e.g. changes you would like made)

Allow the minimum low flow of Trotters Creek to go from 5lt/sec to 8lt/sec

TE RUNANGA O MOERAKI INC.
OOL BUILDING, CNR. TENBY & HAVERFORD STS.

34

Submission	
TO:	Otago Regional Council
DATE:	7 March 2009
PLAN CHANGE:	Proposed Plan Change 1B (Minimum Flows) to the Regional Plan: Water for Otago
DESCRIPTION OF THE PLAN CHANGE	The plan change proposes minimum flows and primary allocation limits for the Waianakarua, Trotters and Luggate catchments, and describes how these flows are set.

Submitter(s):
Te Rūnanga o Moeraki

We wish to lodge a submission on the above plan change.

Te Rūnanga o Moeraki opposes this plan change. The submission of nga Rūnanga is that it is generally supportive of the intent of the plan change believing that minimum flows and allocation limits need to be set. However, nga Rūnanga opposes further allocation in the Waianakarua and Trotters Catchment, and the proposed minimum flows.

We do wish to be heard in support of this submission at a hearing, and we request an opportunity to expand on our submission. If others make a similar submission, we will consider presenting a joint case with them

Postal Address: Tenby Street, Moeraki, RD 2, Palmerston, North Otago
Phone 03 439 4816, Fax 03 439 4400
E-mail: moeraki@xtra.co.nz

1.0 INTRODUCTION

1.1 Kaitiaki Rūnaka

The Te Rūnanga o Ngāi Tahu Act 1996 describes the takiwā of Kā Papatipu Rūnanga.

The takiwā of Te Rūnanga o Moeraki is based at Moeraki and extends from the Waitaki River to the Waihemo (Shag) River. Nga Rūnanga share an interest in the inland lakes and mountain ranges to the western coast with Rūnanga to the North and to the South.

1.2 Kaitiakitaka

Nga Rūnanga are kaitiaki for the environment within their takiwā. Kaitiakitaka is derived from the word "kaitiaki" which includes guardianship, care and wise management.

The term has received recognition in Section 7(a) of the Resource Management Act 1991 and is defined in the Act as "the exercise of guardianship by the tangata whenua of an area in accordance with tikanga Māori in relation to natural and physical resources; and includes the ethic of stewardship".

The primary resource management principle for Māori is the protection of the mauri (the life-giving spirit) of an ecosystem from desecration. The forest, waters, the life supported by them, together with natural phenomena such as the mist, wind and rocks, possess a mauri or life force.

1.3 Kāi Tahu Association with Water

Preservation of the integrity of valued waterways is an important aspect of the responsibilities of those members of Kāi Tahu Whānui that are identified as Kaitiaki. The values (both tangible and intangible) associated with specific waterbodies include:

- The role of particular waterways in unique tribal creation stories;
- The role of those waterways in historical accounts;
- The proximity of important wāhi tapu, settlement or other historical sites in or adjacent to specific waterways;
- The use of waterways as access routes or transport corridors;
- The value of waterways as traditional sources of mahinga kai and other cultural materials; and
- The continued capacity for future generations to access, use and protect the resource.

Further, Kāi Tahu place a high value upon water bodies that possess a healthy mauri and that are fit for cultural purposes. While there are also many intangible qualities associated with the spiritual presence of rivers, elements of physical health which Kāi Tahu use to reflect the status of mauri and to identify the enhancements needed include:

- Aesthetic qualities e.g. clarity, natural character and indigenous flora and fauna;
- Life-supporting capacity and ecosystem robustness;
- Depth and velocity of flow;
- Continuity of flow from the mountain source of a river to the sea;
- Productive capacity; and
- Fitness for cultural usage.

The cultural importance and management of water is addressed through the Te Rūnanga o Ngāi Tahu Freshwater Policy, and through the objectives and policies of the Kāi Tahu ki Otago Natural Resource Management Plans. The Te Rūnanga o Ngāi Tahu Freshwater Policy includes the following kaupapa (policy) for the management of freshwater resources:

- Water plays a unique role in the traditional economy and culture of Kāi Tahu. Without water no living thing, plant, fish or animal can survive.

- Water is a taonga. Water has an inherent value that should be recognised in the event of potentially competing uses. Taonga value refers to values associated with the water itself, the resources living in the water and the resources in the wider environs that are sustained by the water. Taking, using and disposing of water can have drastic effects on the environment and the values Kāi Tahu accord to a waterbody.

- Water is a holistic resource. The complexity and interdependency of different parts of the hydrological system should be considered when developing policy and managing the water resource.

- Water is a commodity that is subject to competition. An understanding of the significance and value of water to Kāi Tahu and other stakeholders is necessary to change the existing behaviour from one that prioritises consumptive uses and permits inefficient use towards one that recognises and provides for cultural and ecological values as priorities.

- Water has many stakeholders. The interdependency of different parts of the hydrological system creates many stakeholders, including other organisms and humans (both current and future generations).
  The Resource Management Act 1991 confirms that future generations are also stakeholders. From Kāi Tahu's perspective, the present generation has an obligation to pass on healthy water resources to future generations.

- Water should be managed at the local level because most threats to waterbodies are local. Responsibility for management should therefore by delegated to those organisations that have a personal stake in its overall health and condition.

The Te Rūnanga o Ngāi Tahu Freshwater Policy and the Kāi Tahu ki Otago Natural Resource Management Plans are relevant planning documents that are "... recognised by an iwi authority and lodged with the council". Therefore the Otago Regional Council is required to take these planning documents into account in changing the Regional Plan: Water for Otago [Resource Management Act 1991 s66(2A)(a)].

2.0 GENERAL SUBMISSIONS

2.1 The significance of both the Waianakarua and Trotters catchments has been conveyed to the Otago Regional Council (the Council) on previous occasions. Values identified in schedule 1D of the Regional Water Plan are as follows:

Waianakarua: Kaitiakitanga, mauri, waahi taoka, mahinga kai, kohanga, trails, cultural materials, waipuna.

Trotters: Kaitiakitanga, mauri, waahi taoka, mahinga kai, kohanga, trails, cultural materials, waipuna.

2.2 Nga Rūnanga support the intent of the plan change believing that minimum flows and allocation limits need to be set. All interests – instream and extractive - need to know that management regimes are set to sustain the range of values identified by agencies, users and communities.

2.3 However, Nga Rūnanga notes that the plan change is 'intended to limit when people can take water from rivers under low flow conditions, and thereby protect the rivers aquatic ecosystems and natural character'. Nga Rūnanga is concerned generally at the narrow focus on minimum flows for extractive and consumptive use. Further, the plan change appears to have paid scant regard to the concerns and flow aspirations expressed by communities across the catchment.

2.4 Nga Rūnanga considers that both catchments are moderately modified in their lower catchment with lovely, relatively unmodified, reaches being found in the upper catchment. Nga Rūnanga seek assurances that flow regimes will be adopted that are cognisant of the needs of the whole catchment. In other words water quantity issues needs to be integrated with water quality, and reflect a ki uta ki tai – a mountains to sea - philosophy.

2.5 Nga Rūnanga are alarmed at the recent public health warnings concerning the Waianakarua catchment. Although this plan change addresses water quantity nga Rūnanga notes that water quality and water quantity are obviously inextricably interrelated.

2.6 In setting minimum flows and allocation limits the Council is required to take into account the relevant provisions of the Resource Management Act 1991, and relevant planning documents prepared under that Act. These planning documents include the Proposed National Policy Statement on Freshwater Management, the Regional Policy Statement for Otago, and Regional Plan: Water for Otago.

2.7 Nga Rūnanga have a legitimate expectation that their interests will be accommodated given the statutory and policy imperatives with respect to freshwater. Regrettably, Nga Rūnanga are of the opinion that the existing minimum flows do not adequately recognise and provide for the association of nga Rūnanga with their ancestral lands and waters [s6(e) RMA 1991].

2.8 In addition to enhanced recognition and provision for their ancestral lands and waters, nga Rūnanga also seeks greater recognition of

- The preservation of natural character [s6(a) RMA 1991]
- The maintenance and enhancement of amenity values [s7(c) RMA 1991]
- Intrinsic values of ecosystems [s7(d) RMA 1991]
- Maintenance and enhancement of the quality of the environment [s7(f) RMA 1991]

In setting flow regimes and allocation limits.

2.9 Nga Rūnanga believes that the stated allocation limits set out Plan Change 1B will result in the rivers flowing at their minimum for extended durations, adversely affecting ecological, cultural and community values.

2.10 Nga Rūnanga believe that both Trotters and the Waianakarua catchments are 'over allocated' and accordingly Nga Rūnanga does not support any further allocation from Trotters Creek and Waianakarua.

3.0 SPECIFIC SUBMISSIONS

3.1 Nga Rūnanga submits that a change to the wording is required to make it explicit that when setting allocation limits, decision makers need to take into account cultural values and any other matter that is relevant to giving effect to Part II of the Act.

Outcome Sought	**Amendment Requested**
Include consideration of any relevant matter in the RMA when setting allocation limits	2D.2 When setting primary allocation limits in Schedule 2A for a catchment, consideration may be given to the following matters: (a) Any existing or previous allocation limit (b) The amount of water currently taken as primary allocation (c) The 7 day Mean Annual Low Flow (d) The proposed minimum flow regime (e) Possible sources of water (f) Acceptable duration and frequency of rationing among consented water users (g) Social and economic benefits of taking water ***(h) Cultural values of Ngai Tahu as expressed in Schedule 1D*** ***(i) Any other relevant matter in giving effect to Part 2 of the Resource Management Act.***

Schedule 2A Trotters Catchment

3.2 The cultural values associated with Trotters Creek are detailed in Schedule 1D. At a meeting with ORC, nga Rūnanga representatives expressed concern at:

- The movement of sediment throughout the system
- The frequency of river mouth closures
- The infestation of monkey mustard in the catchment which at low flows severely restricts fishing.

3.3 The hydrological data available for Trotters Catchment is limited. The management flow recommendation was to retain a minimum flow in the creek of 20 l/s from October to April (MALF was assessed to be 23 l/s) and that combined with the 35 l/s May to September minimum flow this *would maintain natural character.*

Nga Rūnanga, in consultation with other agencies, accepts that when coupled with the primary allocation of 30 l/s and 1:1 sharing for secondary permits this could provide for natural character, other ecological, cultural values and community values.

3.4 The Plan change now proposes a minimum flow for October to April of 8 l/s. Nga Rūnanga does not support this change and submits that, aside from its failure to balance the competing demands for the resource with the values and aspirations of other parties, the proposed minimum flow is not sufficient to recognise and provide for the relationship of nga Rūnanga with the waters of Trotters catchment.

3.5 A flow of 8 l/s would comprise the mahinga kai values of the river. Fish and Game have suggested that flows of that size may not maintain connectivity between pools. Should the creek be induced to flows of 8 l/s for prolonged periods any refuge habitat provided by pools would quickly diminish through the impacts of temperature increases and dissolved oxygen decreases, and the ecological functioning of the river mouth may be affected. Nga Rūnanga raised the issue of river mouth closure at its meeting with ORC representatives.

3.6 Nga Rūnanga seek the following flow regime and allocation limits for Trotters Creek

- A minimum flow for the period October to April of at least 20l/s
- Retention of the existing allocation limit of 30l/s
- Minimum flow for the period May to September of 35l/s

Outcome Sought	**Amendment Requested**			
A minimum flow over the period Oct - April that provides for ecological, fish passage and environmental values of the community, ***and the cultural values of Ngai Tahu*** whilst allowing abstraction at a high level of reliability.	Trotters Catchment	Mathesons Weir (MS 12)	**20** (October to April) 35 (May to September)	30 l/s Trotters catchment from mouth to headwaters

Schedule 2A Waianakarua Catchment

3.7 The lower parts of this catchment have been modified and, from the perspective of Kāi Tahu, have been adversely impacted by gravel takes. However the upper reaches are relatively unmodified and the river is fished by Kāi Tahu whanui. Fish and Game have advised that it is not clear if 200 l/s can provide connectivity or fish passage throughout the river, nor is it known how the allocation above the proposed minimum flow will affect the physical length and duration that low flows are experienced. Nga Rūnanga, as noted above, believes that the Waianakarua River is currently 'over allocated'.

3.8 Nga Rūnanga notes that there is limited hydrological data for Waianakarua. Given the paucity of data it wants to see a precautionary approach adopted to setting flows and a conservation approach taken to allocation.

3.9 Nga Rūnanga does not support setting the minimum flow at 2/3rds of the natural MALF. Taking the advice of Fish and Game and Department of Conservation, nga Rūnanga believe that flows of this level may induce drying out of the river in some reaches, inhibit or prevent fish passage, limit opportunities to use the river, and may extend flatlining affecting ecological, amenity and recreational values. In contrast, abstractors will only be 100% restricted on average for 1 day. Therefore, nga Rūnanga believes that the proposed flow regime does not balance the competing needs of the community nor is it cognisant of cultural values.

3.10 The majority of community interests at the minimum flow workshop 'strongly supported' a minimum of 300 l/s and 'strongly opposed' a minimum of 200l/s. Although nga Rūnanga would prefer a flow of 400 l/s it would support a minimum flow of 300 l/s given it represents a compromise between competing needs within the community.

3.11 Nga Rūnanga seeks the following flow regime and allocation limits for the Waianakarua catchment:

- A minimum flow for the period October to April of at least 300l/s
- An allocation limit of 190 l/s
- Minimum flow for the period May to September of 400 l/s

Amendment to the outcome sought	**Amendment Requested**			
A minimum flow over the period Oct - April that provides for ecological, recreational and environmental values of the community, ***and the cultural values of Ngai Tahu*** whilst continuing to provide a high level of reliability for abstractive users.	Waianakarua Catchment	Browns Pump (MS13)	***300*** (October to April) 400 (May to September)	190 l/s Waianakarua catchment from mouth to headwaters

Submission lodged on behalf Te Rūnanga o Moeraki

Heoi ano

Koa Mantell

Chair

Te Runanga o Moeraki

Address for Service:

Te Runanga o Moeraki

C/- Dr Gail Tipa

44 Chain Hills Road

RD 1

DUNEDIN 9076

Otago Regional Council

SUBMISSION FORM
Proposed Plan Change 1B Minimum Flows
to the Regional Plan: Water for Otago

Form 5, Clause 6 of the First Schedule, Resource Management Act 1991.

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Contact Person: Bridget

I wish / do not wish *(circle preference)* to be heard in support of my submission.

If others made a similar submission, I will consider presenting a joint case with them at a hearing.
(Cross out if you would not consider presenting a joint case).

Signature of submitter: B Pringle Date:
(or person authorised to sign on behalf of person making submission).

Please note that all submissions are made available for public inspection.

The parts of the proposed plan change that my submission relates to are:
(Give clear references if possible e.g. reference number, policy x, rule y)

Please refer attached submission

My submission is:
(Include whether you support, oppose, or wish to have amended the parts identified above, and give reasons)

Please refer attached submission

I seek the following decision from the local authority:

(Give precise details e.g. changes you would like made)

please refer attached submission

Fol

SUBMISSIONS MUST BE RECEIVED BY 5.00 PM, MONDAY 9 MARCH 2009.

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Otago Regional Council
Private Bag 1954
Dunedin 9054

Attention Policy Team

Fish & Game NEW ZEALAND

2 March 2009

Otago Regional Council
Private Bag 1954
Dunedin 9054

Attn: Policy Team

CHANGES TO THE REGIONAL PLAN: WATER FOR OTAGO
Proposed Plan Change 1B Minimum Flows - Waianakarua and Trotters catchments

Fish and Game have considered the proposed plan change outlined above, attended various public meetings/community workshops regarding the changes and make the following submissions:

General: Fish and Game support the intent of the plan changes. Environmental and recreational users need to know that management regimes are set to sustain instream and fisheries values, and provide for flow variability and natural character. Those abstracting from the catchment need to be certain of the rate of water available to be abstracted and that a limit on abstraction protects their reliability of supply from being diminished.

Water quality is obviously intrinsically linked with water quantity. Both catchments are moderately modified with the Wainakarua seeing marked changes in the lower catchment land use in recent times. Waterways can only assimilate a limited degree of contaminants and considering impacts on water quality when setting the flow regimes combined with improved land management practices may serve to ensure water quality degradation is avoided.

It is also important that the minimum flow be applied over the length of the river and water management needs to be integrated on a whole of catchment basis to ensure connectedness from the headwaters to the sea.

Purpose of the regime: The plan changes seek to set minimum flows which are *'intended to limit when people can take water from rivers under low flow conditions, and thereby protect the rivers aquatic ecosystems and natural character'*. Setting a minimum flow cannot protect aquatic ecosystems and natural character on its own. Whilst the changes also propose to set allocation limits, the consideration of effects on aquatic ecosystems and natural character as a result of the allocation limit is not currently specified as 'a matter to be considered' in Schedule 2D.2 and is only listed as a matter to be considered for Schedule 2D.1 relating to setting minimum flows. In defining allocation limits, consideration of natural character and aquatic values in conjunction with access for out of stream use is important.

In setting allocation limits, both primary and secondary, various sections of the RMA, the RPS and the ORC Plan should be provided for. Some of these matters are especially relevant to Fish and Game's statutory functions under the Conservation Act, 1987. Relevant Part II matters that can be affected by setting allocation limits in addition to minimum flows are outlined below;

- s.6 (a) The preservation of natural character is defined as a Matter of national importance that must be recognised and provided for. As discussed above natural character can be

Central South Island Region
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affected by the volume of water allocated to out of stream use over and above the minimum flow.

- s7. (b) The efficient use and development of natural resources - i.e setting limits on available allocation ensures competition remains between abstractive users and drives efficiency gains to maximise potential benefits.

- s.7 (c) The maintenance and enhancement of amenity values - amenity values include the characteristics and qualities of a waterway that contribute to recreational attributes, the instantaneous rate of water abstracted from a waterway above the minimum dictates the frequency and duration that the river may be at its minimum flow (or below) and this can greatly impact on recreational values.

- s7. (d) Intrinsic values of ecosystems - which include the essential characteristics that determine an ecosystems integrity, form, functioning and resilience - particularly functioning of river mouths and integrity can be affected by flat lining.

- s.7 (f) Maintenance and enhancement of the quality of the environment - this is defined by perception as much as technical aspects. The aspirations of the community should be reflected in any management regime.

- s.7 (g) Any finite characteristics - water is a finite resource and is especially limited in the Waiankarua and Trotters waterways, it is known that instream habitat of smaller streams is more sensitive to the effects of water abstraction, than larger (>500l/s MALF) waterways.

- s.7 (h) the protection of the habitat of trout and salmon- prolonged low flows impact on fish passage, water quality, invertebrate production, substrate, algae and periphyton (recently demonstrated in the Waianakarua and Trotters re algal blooms), temperature and oxygen can all be affected by the size of the allocation block above the minimum leading to decreased salmonid growth rate and increased salmonid mortality.

Whilst the minimum flow should be intended to protect the life supporting capacity of a waterway for critical short periods, it can never achieve those parts of the Act referred to above if the allocation block above the minimum is of a size that means the river is drawn down to its minimum for extended periods. An allocation limit specifies how much water can be allocated (or by how much the flow of a river can be modified). It clearly states the availability of water (temporally and spatially) for abstraction, diversion or damming. It provides more robust protection of instream values compared to solely setting minimum flows and has the environmental advantage of retaining natural variation in flow and subsequently minimising flat lining.

Fish and Game submit that it is important that matters to be considered in Schedule 2D.2 include Part II matters that may in some cases warrant setting some other limit. It is worth noting that in the case of both Trotters and the Waianakarua catchments both are technically 'over allocated'.

Fish and Game seek that the policy specifies when setting allocation limits, any other matter relevant in giving effect to Part II of the Act should be considered as per the considerations listed relevant to setting minimum flows.

Outcome Sought	**Amendment Requested**
Include consideration of any relevant matter in the RMA when	2D.2 When setting primary allocation limits in Schedule 2A for a catchment, consideration may be given to the following matters:

setting allocation limits	(a) Any existing or previous allocation limit (b) The amount of water currently taken as primary allocation (c) The 7 day Mean Annual Low Flow (d) The proposed minimum flow regime (e) Possible sources of water (f) Acceptable duration and frequency of rationing among consented water users (g) Social and economic benefits of taking water **(h)Any other relevant matter in giving effect to Part 2 of the Resource Management Act.**

Fish and Game support all other aspects of Schedule 2D.

Schedule 2A Trotters Catchment

The sportsfishery of Trotters Creek is limited simply due to the size of the waterway and its catchment however, the habitat requirements of trout, in particular juvenile rearing habitat values and sea run brown trout passage should still be considered when determining the management regime. Local anglers within the community will vigorously defend the fishery values associated with the creek and this has been reflected somewhat at the public meetings/community workshops and to Fish and Game staff in recent times.

The best information available on the hydrology of Trotters Catchment is that provided by the ORC and is extremely limited with MALF being calculated essentially from one or two gaugings. Whilst lack of information is not a reason to 'do nothing' it does mean that a conservative minimum flow should be set with a view to reassessing the information at some later date. (i.e after 5 years of flow recording).

Regardless, the information available is the best we have at this time, although Fish and Game are not entirely comfortable with the methodology used to derive the statistics and may comment on this further during hearings. The management flow recommendation was to retain a minimum flow in the creek of 20 l/s from October to April (MALF was assessed to be 23 l/s) and that combined with the 35 l/s May to September minimum flow this *would maintain natural character.* Fish and Game have discussed the ability of a minimum flow alone to provide for natural character above. It is accepted that coupled with the primary allocation of 30 l/s and 1:1 sharing for secondary permits this could provide for natural character and other ecological and community values.

The Plan change now proposes a minimum flow for October to April of 8 l/s. Fish and Game submit that the impacts of an allocation of 30 l/s on top of 8 l/s cannot provide for Objective 6.3.1, or other aspects of resource management legislation (as outlined in paragraphs above) and does not accurately balance the competing demands for the resource and the aspirations of the community.

A flow of 8 l/s may not maintain connectivity between pools and should the creek be induced to flows of 8 l/s for prolonged periods (Fish and Game have not been able to assess the likelihood of this) any refuge habitat provided by pools would quickly diminish through the impacts of temperature increases and dissolved oxygen decreases, in addition the ecological functioning of the river mouth may be affected. Brown trout are diadromous and sea run browns are particularly important for the Trotters fishery. The ecological functioning of the river mouth is critical to enabling fish passage (anytime from October through to May) and later subsequent impacts on spawning success and water quality may result.

It is stated in the s32 analysis that *such a flow* (at 8 l/s) *has potential economic consequences on water takes.* It has been assessed that even with a minimum flow of 20 l/s restrictions would only apply on average 4 days per year. Bearing in mind that the take is to storage (presumably intended to provide some 'insurance' during times of low flow when abstraction was not viable, and that supplementary allocation on a 50:50 flow sharing basis is also available to fill the storage during times of higher flows) such an outcome would not be unduly restrictive for the abstractor.

Fish and Game seek a minimum flow for the period October to April of at least 20 l/s (whilst accepting the retention of the allocation limit of 30 l/s) on the basis of the original recommendation and the knowledge that for small streams the further the flow is induced below the naturally occurring MALF the greater the likelihood of adverse impacts on fisheries. As indicated in earlier sections, a conservative approach is warranted on the limited information available and any minimum set could be reviewed as appropriate.

Fish and Game submits that whilst 20 l/s is never going to be optimal habitat for adult sportsfish (not a general goal when setting a minimum flow), such a regime would better provide for fish passage, natural character, juvenile habitat, amenity and water quality whilst not being unduly restrictive for the sole abstractor and as such better balance the competing demands for the resource.

Fish and Game support the proposed minimum flow for the period May to September of 35 l/s below which habitat for juvenile brown trout diminishes sharply. However as noted above the extreme low minimum flow for the rest of the year may critically limit sea run fish passage, and prevent recruitment of juvenile fish, diminishing the perceived value of the higher May to Sept flows.

Outcome Sought	**Amendment Requested**			
A minimum flow over the period Oct - April that provides for ecological, fish passage and environmental values of the community whilst allowing abstraction at a high level of reliability.	Trotters Catchment	Mathesons Weir (MS 12)	<u>20</u> (October to April) 35 (May to September)	30 l/s Trotters catchment from mouth to headwaters

<u>Additional comments re abstraction:</u> Fish and Game agree that abstractive use is an important value of the waterway and were involved with and provided written approval for the supplementary take provided it was when flows exceeded 230 l/s on a 1:1 sharing basis (with other conditions). During this time it was understood that fish passage limitations resulting from the original weir were addressed via a modified design during 2004.

It is also understood that the weir arrangement facilitates continued taking into the storage pond when full, which is then discharged some distance downstream back into Trotters Creek. Avoiding taking when the pond is full would reduce the effects of dewatering that section between the intake and discharge points of the creek and extend fish passage and habitat availability within the creek.

Fish and Game provided written approval to the original application to take 30 l/s with a residual flow of 5 l/s, on the basis that the creek was thought to be ephemeral and that the storage pond would provide refuge habitat for fish during periods of drying. More recent information has not indicated that the creek has an ephemeral nature, shows an estimated MALF of 23 l/s (not the estimated 10 l/s at the time of original applications) and it is not clear whether fish access the storage pond or not.

These matters need to be addressed/discussed at an appropriate opportunity also.

Schedule 2A Waianakarua Catchment

Whilst trout are not identified as a key ecosystem value in Schedule 1A Natural Values of the Water Plan, the Wainakarua River supports a brown trout fishery that is worthy of protection and restoration into the future and Fish and Game shall be making submissions to this effect to the Plan review process.

The NIWA National Angler Survey results show 140 angler days spent on the Waianakarua River for 2001/02 (last survey period) and it is known that local anglers are avid protectors of the fishery resource where the community consultation workshops reinforced this. As with Trotters Creek values sea run trout are an important aspect of the Waianakarua fishery and fish passage and functioning of the mouth are critical components of maintaining this value.

Both natural and induced low flows and their associated effects have likely been the key limiting factor for the fishery. It is known that at MALF adult brown trout habitat is limited, and at 200 l/s (as proposed for the period October to April) such habitat is severely restricted. The lowest 7 day low flow since the start of records is 225 l/s, it cannot be said that flows of prolonged, regular flows of 200 l/s are a 'natural' limitation.

It is not clear if 200 l/s can provide connectivity or fish passage throughout the river, nor is it known how the allocation above the proposed minimum will affect the physical length and duration that low flows are experienced. As noted above the Waianakarua River is considered 'over allocated'. Over allocation compounds these impacts.

Fish and Game are concerned that setting the minimum flow at 2/3rds of the natural MALF may induce the river to dryness in sections, prevent fish passage, limit recreational opportunity, and may extend flatlining affecting ecological, amenity and recreational values whereas abstractors will only be 100% restricted on average for 1 day. The proposal does not balance the competing needs of the community. The minimum flow workshop #2 notes diagrammatically showed that the majority of the community 'strongly supported' a minimum of 300 l/s and 'strongly opposed' a minimum of 200l/s. Fish and Game submit that a minimum flow of 300 l/s would be a more balanced representation of competing needs within the community.

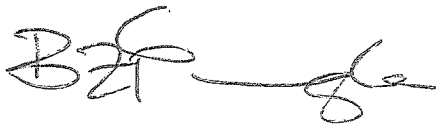
Fish and Game support the proposed monitoring site location.

Outcome Sought	**Amendment Requested**			
A minimum flow over the period Oct - April that provides for ecological, recreational and environmental	Waianakarua Catchment	Browns Pump (MS13)	**300** (October to April) 400 (May to September	190 l/s Waianakarua catchment from mouth to headwaters

values of the community whilst continuing to provide a high level of reliability for abstractive users.			)	

This submission is made in support and expansion of the joint CSI and Otago Fish and Game submission also entered and Fish and Game reserve the right to be heard at a hearing.

Yours Sincerely



B Z Pringle

Resource Officer

Central South Island Fish and Game

Otago Regional Council

SUBMISSION FORM
Proposed Plan Change 1B Minimum Flows
to the Regional Plan: Water for Otago

Form 5, Clause 6 of the First Schedule, Resource Management Act 1991.

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Name of organisation *(if applicable)*:

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Postcode:

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I wish / (do not wish) *(circle preference)* to be heard in support of my submission.

If others made a similar submission, I will consider presenting a joint case with them at a hearing.
(Cross out if you would not consider presenting a joint case).

Signature of submitter: Date: 4-3-09
(or person authorised to sign on behalf of person making submission).

Please note that all submissions are made available for public inspection.

The parts of the proposed plan change that my submission relates to are:
(Give clear references if possible e.g. reference number, policy x, rule y)

Plan Change 1B Minimum Flows
Primary Allocation Limit

My submission is:
(Include whether you support, oppose, or wish to have amended the parts identified above, and give reasons)

Being an avid fly fisherman I have spent many years fishing the Waingtaruna river. While I support the minimum flow of 200 litres/sec I do have grave concerns about the wording; "When the minium flow is breached primary allocation ~~takers~~ permit holders must stop taking water". Having witnessed this scenario on the Kakanui river for many years where the river

I seek the following decision from the local authority:

(Give precise details e.g. changes you would like made)

was regularly taken below the minimum flow with disastrous results for the river. I believe a penalty clause must be added for breaching the minimum flow of 200 l/sec. While I believe permit holders would adhere to the minimum flow guidelines a penalty clause would therefore not affect irrigators as has been the case with the Hakataramea river since the environmental court hearing Oct 2001.

Owing to the recent poisonous algae outbreak in the Waimakariri river I believe it is important to place a moratorium on the Primary Allocation Limit of 140 litres/sec. It is too coincidental that this algae bloom has coincided with an increase in intensive farming in the Waimakariri valley.

The Waimakariri river has run clear and pure for generations. We must learn from what has happened to the Hakataramea river during low flows and preserve our East coast rivers for future generations.

SUBMISSIONS MUST BE RECEIVED BY 5.00 PM, MONDAY 9 MARCH 2009.

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Otago Regional Council
Private Bag 1954
Dunedin 9054

Attention Policy Team

37

The Otago Regional Council,
Private Bag 1954,
Dunedin.
9094.

Dear Sirs,

Proposed Changes to the Regional Plan: Water for Otago

Proposed Plan Change 1B Minimum Flows.

Specifically **Trotters Creek and Waianakarua Stream.**

Trotters Creek Catchment:

I note seasonal MANAGEMENT FLOWS are envisaged for the Trotters Creek catchment and agree this philosophy as it recognises there are clear seasonal variations in the NATURAL FLOWS in the catchment.
It is also noted that the higher natural flows generally occur during May to October and the lower flows generally occur from November to April.

Accepting these points there is then a need to accurately understand the impact of extreme low flows, low flow duration and flow variability on the in-stream ecology and both the suggested minimum flow for the period October to April – 8 litres per second-and the indicated period for that minimum flow, at October to April, are very questionable.

8 litres per second:

How any body could seriously suggest this as an acceptable minimum flow for Trotters Creek is beyond comprehension.
At that level, suggested as "half a bucket of water per second" in a recent letter to the ODT I would suggest the natural character of that creek would be seriously compromised and the result would be environmentally disastrous.

At that suggested minimum flow the effect of any localized pollution or nutrient concentration would be maximized, there would be insufficient flow to maintain an environmentally friendly temperature and dissolved oxygen concentrations would suffer to the point that invertebrate and fish life would be at best highly stressed.

In addition the natural character of the creek would be reduced from a small healthy and visually attractive waterway to an unattractive farm drain.

That scenario does not indicate a fair balance between the maintenance of a public asset for public benefit and the reasonable needs of adjoining landowners who require access to water for there commercial operations

The Trotters Creek management flows report clearly identifies that 20 litres per second is required to protect the diversity of life in the creek – a diversity that includes some 13 varieties of fish and a wide variety of invertebrates. Surely this diversity is of significance and should attract a corresponding level of protection.

8 litres per second as a proposed minimum flow is completely unacceptable whereas 20 litres per second would not unduly restrict abstraction for commercial purposes – perhaps only on 4 days per year- a matter which can be substantially compensated for by use of the stored water in the existing small dam in the lower reaches.

Indicated Minimum flow –October to April.

Many of the native fish. and introduced species, which exist in Trotters Creek are diadromous i.e. they need to go to sea as part of their life cycle.
Because of this it is imperative that sufficient water remains in the creek to ensure that access to the sea by way of an open creek mouth across the beach is regularly available. Whitebait in particular spawn in the lower reaches and at certain times of the year they require access from the sea or access to the sea as part of their life cycle

We accept that under normal conditions there will be times when natural low flow will occur to the point where insufficient flow would be available to ensure ideal conditions for this but it would be quite unacceptable to have these conditions occur solely as a result of human intervention i.e. by abstraction for commercial purposes.

From this we need to ensure that at all times natural conditions are maintained which would allow the maintenance of a healthy population of native and introduced fish. Our above suggestion that a minimum low flow of 20 litres per second may not always provide the conditions required but are infinitely better than the proposed 8 litres per second
With regard to any low minimum flow being applied to the period October to April I would question whether this is based on an accurate assessment of fish movements in and out of the creek.

I note a statement in one report that brown trout tend to use the increased flow generally encountered in winter for their annual migration up river to spawn and agree that is so but there is a considerable population of sea run brown trout in that area, and including Trotters Creek, which migrate in to fresh water at different times of the year

I have personally enjoyed some 40 years of freshwater angling in the Kakanui, and Waianakarua streams, and have fished the lower reaches of Trotters Creek, Shag and Waikouaiti rivers mainly for sea run brown trout and have found them in almost every case from at least October. I have not fished in these areas prior to October in any year but if we accept sea run browns follow in the whitebait and we know the whitebait run earlier than October it would be reasonable to assume that sea run brown trout enter these streams earlier than October and their needs for an acceptable water flow are therefore spread over a much longer period than that indicated in some reports.

A minimum flow of 8 litres per second from October to April as proposed would therefore not ensure the survival of a population of sea run brown trout in Trotters Creek as at that level of flow it would be unlikely that water from the creek would cross the beach to the sea.

From all of this I would urge that a minimum low flow of 20 litres per second be introduced from October to April and a minimum low flow of 35 litres per second be applied for the remainder of the year.

WAIANAKARUA STREAM :>

This stream is an outstanding fishery for sea run brown trout characterised by a small number of fish of excellent size and appearance. It also presents as a productive whitebait fishery in season and in the lower reaches one may see kahawai, mullet and flounder
The general streamscape is most attractive with a clear gravel bottom and a good mix of shaded and open banks.
My comments for this stream parallel those I have made above for Trotters Creek in so far as sea run brown trout are concerned. They are certainly present from October onwards and coincidently I can also report having seen fresh run whitebait in the stream as late as March.

During some summers, flows in this stream can fall to low levels and it is suggested that a very conservative approach be taken to approved abstraction takes .We need to accept natural fluctuations in flow will occur but we also need to ensure that these adverse events are not exacerbated by over enthusiastic abstraction approvals.

From research undertaken by Fish & Game it is known that at 200 litres per second the flow proposed for the period October to April would severely restrict the in stream habitat for adult trout and it is known that the lowest 7 day low flow recorded since records commenced was 225 litres per second.

We are not aware of any record available which would confirm a free flow of the river without drying at some points would occur at 200 litres per second and, noting the lowest 7 day low flow mentioned above at 225 litres per second, that would appear highly unlikely.
If we were to accept the setting of the minimum low flow at 200 l/sec i.e. 2/3rds of the MALF there would be a serious risk of some reaches of the river drying with a consequent disastrous effect on the ecological and amenity values of the river.
We therefore support the Fish & Game position that a minimum low flow of 300 litres per second be accepted and that would go some way towards satisfying the public interest in this stream
There is another issue that needs consideration.
The writer is concerned at the establishment of a dairy farm in the lower catchment of the Waianakarua and its potential for harm to the stream.
We understand that some 1000 dairy cows will be sited on this farm most of the time under cover

This small valley of the Waianakarua particularly from the main highway to the sea has a gravelly substrate that would be a highly porous base for the spreading of dairy effluent. In the quantities that could be involved from a dairy farm of the proposed size effluent could be a problem for the future health of this lower catchment and any commercially induced low flow would add to this problem. The reduced flow would not provide the same protection by dilution that any higher flow would provide

Under these circumstances we would urge the Council to adopt a very conservative approach to any water abstraction from the catchment and ensure adequate monitoring is in place to ensure any pollution in the waterway is quickly identified and rectified.

Sincerely

Alan McMillan
On behalf
New Zealand Federation of Freshwater Anglers inc.,
C/o 19 Haggart Street,
Wingatui,
R.D.2.
Mosgiel
4th March 2009

From: Alan McMillan [club.wingatui@xtra.co.nz]

Sent: Monday, 9 March 2009 10:19

To: Policy Reply

Subject: Water for Otago Proposed Plan Trotters creek/Waianakarua

Dear Sirs,

In my submission on behalf of the NZ Federation of Freshwater Anglers inc., dated 4th March I attributed research to Fish & Game which should have referred to research promoted by the Regional Council. The offending comment was as follows

"*From research undertaken by Fish & Game it is known that at 200 litres per second the flow proposed for the period October to April would severely restrict the in stream habitat for adult trout and it is known that the lowest 7 day low flow recorded since records commenced was 225 litres per second* "

I wouldd be grateful if you would record this as an error on my part and credit Otago Regional Council with the reference rather than Fish & Game

My apologies

Alan McMillan
for NZ Federation of Freshwater Anglers inc.,

Otago Regional Council

SUBMISSION FORM B Minimum Flows

Proposed Plan Change ~~1C Water Allocation and Use~~

to the Regional Plan: Water for Otago

Form 5, Clause 6 of the First Schedule, Resource Management Act 1991.

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Full name of submitter: Norman David Watkeson

Name of organisation *(if applicable)*:

Postal address: 90 Lagoon Avenue Albert Town Wanaka

Postcode:

Telephone: 034439355

Fax:

Email:

Contact Person:

OTAGO REGIONAL COUNCIL RECEIVED DUNEDIN - 9 MAR 2009 FILE No. RI221 DR TO MRP SK

I wish / do not wish *(circle preference)* to be heard in support of my submission.

If others made a similar submission, I will consider presenting a joint case with them at a hearing. *(Cross out if you would not consider presenting a joint case).*

Signature of submitter: N D Watkeson

Date: March 6 - 2009

(or person authorised to sign on behalf of person making submission).

Please note that all submissions are made available for public inspection.

The parts of the proposed plan change that my submission relates to are:

(Give clear references if possible e.g. reference number, policy x, rule y)

The existing Plan.
Having farmed here for 30 years the health of the creek & the fish species in it are as good now as ever in the past 30 years.

My submission is:

(Include whether you support, oppose, or wish to have amended the parts identified above, and give reasons)

I am in favour of the Status Quo

Please turn over

I seek the following decision from the local authority:

(Give precise details e.g. changes you would like made)

I wish the existing consent holder to retain their water right in its present form

SUBMISSIONS MUST BE RECEIVED BY 5.00 PM, MONDAY 9 MARCH 2009.

Please fold and secure with a small piece of tape.

FreePost Authority ORC 1722

Free

Otago Regional Council
Private Bag 1954
Dunedin 9054

Attention Policy Team

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Trotters Creek Minimum Flow Proposal Submission

Submitter: Craig George Trotter
Residential address: 2RD Palmerston, OTAGO
Postal address: 1/581 Birches road, RD2 Christchurch
Email address: craig.trotter@gmail.com

I write this submission of rejection to the proposed minimum flow rate of the Trotters Creek of eight litres per second but do support the flow rate projected by the Otago Regional Council of 20 l/s as stated as ecologically sustainable in the recent report 'Management Flows for Aquatic Ecosystems'.

As the Trotters Creek is one of the first streams to go through the process of minimum flow proposals, I find it critical that the Otago Regional Council (ORC) make a wise and sustainable proposition, the stream has long been recognised as biologically diverse and has a wide range of social and ecological strong points to both humanity and most importantly maintaining a diverse and sustainable population of both flora and fauna.

Over the past 50 years, the New Zealand lowland stream environment has recently become under considerable stresses, mostly as a result of the intensification of agriculture both due to excessive water abstraction and nutrient runoff. Many streams in parts of the North Island, Canterbury, South Otago and Southland are reporting excessive algal blooms, and weed growth, increased water temperatures, oxygen depletion and as a result, reduced fish habitat and water deemed unsafe for swimming and drinking from. One only needs to read the report produced by the Parliamentary Commissioner for the Environment 'Growing For Good', as quoted "there is a vital need for indigenous biodiversity on private lands to be sustained and enhanced to improve the sustainability of farming in New Zealand", surely the ORC can recognise this and adopt the minimum flow rate of maintaining 20 l/s to ensure fauna habitat is satisfied.

Trotters Creek is only a small stream but it is these small streams which have up until recently been left alone. As a result of an apparent need for intensification of agriculture, these small streams are beginning to be recognised as a source of water for irrigation purposes. Many of these streams including Trotters Creek are still healthy and bio diverse. The setting of unsustainable minimum flows result in damage to flora and fauna where there are many instances throughout the world and in New Zealand. Surely it is essential that the ORC review the past literature and read the popular press and for once make a stand by imposing a minimum flow of meaning and one which will maintain an environmentally friendly and biodiverse water way such as the Trotters Creek.

One needs to question the benefit and sustainability of irrigation in an area of low natural rainfall, rather light coastal dominantly sandy permeable stony soils, and excessive extraction from a minor waterway. As stated in the 'Growing for Good'

report, "Irrigation, particularly in this environment can also act as a conduit for contaminants such as excess sediment, agricultural chemicals, effluent and fertiliser discharges" further inducing the contamination of the stream with a low flow rate during the summer dry period exasperating aspects of poor water quality mentioned above in the coastal reaches of Trotters Creek. I currently reside in mid Canterbury and have first hand witnessed the effects of excess draw of water resources in and around the Lincoln area; many of the streams which flow into Lake Ellesmere have very poor water quality and continually flow at rates of minimum flow.

Annual rainfall records from the Trotters Creek farm collected almost continuously since 1908 show a declining annual rainfall. In light of these records, and the unavoidable changes in the future due to climate change, especially where what models that have been produced show eastern parts of New Zealand anticipating lower rainfall, it is imperative that cautious minimum flows are adopted.

There are several species of native fish which utilise the coastal waterways for spawning areas amongst the edges of small streams. I, myself have caught white bait or inanga from the Trotters Creek mouth. Ngai Tahu and the Department of Conservation are now beginning to understand the importance of these stream edges to these native fish and as such have recognised them as important areas worthy of conservation. As a result of this, many of these small streams in the Canterbury region are being fenced off and managed appropriately to ensure that these spawning areas are protected to ensure regeneration of the species.

I find it difficult to understand that the ORC propose a flow of eight litres per second where in the 2006 report, the writers conclude that a minimum flow of 20 l/s is considered to be required to maintain natural biodiversity of aquatic fish life within the stream during the natural low flow months of November to April. Given there is potential un-reliability in the flow measurements recording, surely it is the councils best interests to show foresight and impose this flow rate of 20 l/s. Given the work which has been previously performed on the Trotters Creek stream, maintaining minimum flows between 20 and 35 l/s depending on the variability of natural flows of the creek, I struggle to understand where the proposition of 8 l/s comes from where it has previously never been proposed in the reports published and is well below the minima suggested in previous documentation.

I do wish to be heard in support of my submission.

Yours Sincerely

Craig Trotter
2RD Palmerston OTAGO

Otago Regional Council

SUBMISSION FORM
Proposed Plan Change 1B: Minimum Flows
to the Regional Plan: Water for Otago
December 2008

Form 5, Clause 6 of the First Schedule, Resource Management Act 1991

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Full name of submitter: Sidney Jerome Wing

Name of organisation (*if applicable*): Waianakarua River Community Users

Postal Address: Number/Street: 3 Otepopo St
Suburb: Herbert
Town/City: 8 O Rd Oamaru
Postcode: 9495

Telephone: 03 4395197

Fax:

Email: jwing@sbytes.co.nz

Contact person: S.J.Wing

I do wish to be heard in support of my submission.

If others make a similar submission, I will consider presenting a joint case with them at a hearing.

Date:9/03/2009 07:43:28

Please note that all submissions are made available for public inspection.

Signatures are not required for submissions made electronically.

Submissions must be received by 5pm, Monday 9 March 2009.

The parts of the proposed plan change that my submission relates to are:
(*Give clear references if possible e.g. reference number, policy x, rule y*)

The setting of the a minimum flow

My submission is:
(Include whether you support, oppose, or wish to have amended the parts identified above, and give reasons)

Our group supports the monitoring of flows and the setting of a mininmum flow in this important coastal river but as we participated in workshops which clearly showed the preferrance for a 300l/s minimum flow we oppose the 200l/s as being too low

I seek the following decision from the local authority:
(Give precise details e.g. changes you would like made)

The minimum flow be 300l/s Oct/ April 400l/s May/ Sep

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Please send submissions to:

Email: policy@orc.govt.nz

Post: Attn: Policy Team, Private Bag 1954, Dunedin 9054

Fax: (03) 479 0015 (Attn: Policy Team)

Deliver: 70 Stafford Street, Dunedin; or
William Fraser Building, Dunorling Street, Alexandra; or
The Station, 1st Floor, Cnr Shotover and Camp Streets, Queenstown

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SUBMISSION FORM
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December 2008

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Full name of submitter: Brown, Andrew John

Name of organisation (*if applicable*):

Postal Address: Number/Street: 763 Waianakarua Road
Suburb: 13 O RD
Town/City: Oamaru
Postcode: 9495

Telephone: 34395689

Fax: 34395680

Email: aorerefarm@bordernet.co.nz

Contact person: Andrew Brown

I do not wish to be heard in support of my submission.

If others make a similar submission, I will consider presenting a joint case with them at a hearing.

Date:9/03/2009 09:01:15

Please note that all submissions are made available for public inspection.

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Submissions must be received by 5pm, Monday 9 March 2009.

The parts of the proposed plan change that my submission relates to are:
(*Give clear references if possible e.g. reference number, policy x, rule y*)

1B 3.2.1 Minimum flow levels Waianakarua River

My submission is:
(Include whether you support, oppose, or wish to have amended the parts identified above, and give reasons)

I support the Otago Regional Councils proposed plan change to the minimum flow levels of the Waianakarua River, as set out in table 3.2.1. That is: 200 litres per second October-April. 400 litres per second May-September. Primary allocation limit 190 litres per second. I have lived and farmed close to the estuary of the Waianakarua River for 58 years. I am, therefore, familiar with the river and have used it recreationally to swim, whitebait, fish and boat on. From my recent observations the river has maintained a high ecological standard over the years. The proposed changes will ensure that the river maintains these values for future generations.

I seek the following decision from the local authority:
(Give precise details e.g. changes you would like made)

I fully support the proposed plan changes outlined in Section 3.2.1.

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Full name of submitter: Karl David Guy

Name of organisation (*if applicable*):

Postal Address: Number/Street: 343 McPherson Rd
Suburb: Waitaki Bridge
Town/City: Oamaru
Postcode: 9493

Telephone: 03 4313555 Fax:

Email: Contact person:

I do wish to be heard in support of my submission.

If others make a similar submission, I will consider presenting a joint case with them at a hearing.

Date:8/03/2009 17:23:34

Please note that all submissions are made available for public inspection.

Signatures are not required for submissions made electronically.

Submissions must be received by 5pm, Monday 9 March 2009.

The parts of the proposed plan change that my submission relates to are:
(*Give clear references if possible e.g. reference number, policy x, rule y*)

Proposed plan change 1B minimum flows- Waianakarua river.

My submission is:
(Include whether you support, oppose, or wish to have amended the parts identified above, and give reasons)

I used to work on a property irrigated from the waianakarua river as well as using the river for recreational purposes (fishing, whitebaiting, floundering, and swimming. The river seems to be in good health and in the summer time i have always found there to be adequate water for all of the above recreational activities to be enjoyed. i support the regional councils decision of a minimum summer flow of 200L/s as this gives a good balance between irrigators needs and the natural values of the river.

I seek the following decision from the local authority:
(Give precise details e.g. changes you would like made)

A mimimum flow regime of 200l/s at browns pump in the summer and 400l/s in the off season

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Full name of submitter: Otago Conservation Board

Postal Address: P O Box 5244
Dunedin 9058

Telephone: (03) 474 6936

Fax: (03) 477 8626

Email: mclark@doc.govt.nz

Contact person: Mark Clark

We wish to be heard in support of our submission *(delete the one that does not apply).*

Date: 6th March 2009

The parts of the proposed plan change that our submission relates to are:

Schedule 2A reference 5 and & 6 and generally parts of the plan change documents.

Our submission is:

The Otago Conservation Board is appointed by the Minister of Conservation to represent the wider Otago community in advocating for the protection of biodiversity and the conservation of resources throughout Otago.

The Board generally supports water management of Otago rivers and streams that allows for community wellbeing while providing economic benefit to all in the community. This must be considered against a historical background of previous generations enjoying clean, healthy streams and limited (if any) abstraction activity for individual financial benefit, to the current situation of degraded rivers and the over-allocation of our waterways.

The Waianakarua River and Trotters Creek are two of the last remaining coastal rivers in Otago north of the Otago Peninsula, that to date have not been excessively modified or subjected to water quality degradation by excessive abstraction or non-point source contamination. Both have upper catchments that are generally rugged and unmodified and likely to be unsuited for intensive farming operations. There is considerable native bush habitat in both catchments and potentially increased areas of exotic forestry plantation.

In particular, the Waianakarua River is North Otago's last coastal river of significant water quantity and quality that provides for considerable community recreational benefit, as well as a stable aquatic and ecological environment for all living organisms.

The Board does not support the view that all rivers of a region should be allocated to commercial abstractive users. The Board supports a position where a particular river in a geographical region should be left in its natural state, both for the benefit of public use and as a control system for further long term river study in that particular region. In the case of the Waianakarua this would be reasonably easy to achieve, because there is a very small number of abstractive users. The Otago Regional Council could phase these out over time if the majority of submitters supported this approach.

The Board notes that data for the Waianakarua flow regimes is taken from the Kakanui River data and is therefore not specific to the Waianakarua. In the light of this, any allocation should be exceedingly precautionary and subject to more detailed observations over time.

The Board notes that it has recently given support to the Department of Conservation's proposal to translocate 1000 lowland longjaw galaxiids (New Zealand's rarest freshwater fish) from the Kauru River to the Waianakarua River owing to didymo infestation in the Kakanui catchment.

In Trotters Creek, we are concerned about the habitat loss to native fish species when the flow is below 7.5L/s.

The Board supports the proposal to include Luggate Creek in the Regional Water Plan, but has reservations about the proposed summer/autumn (Nov – April) minimum flow of 180 litre/sec.

Our reservations are based on the findings of the Luggate Creek Catchment Info Sheet draft, March 2008, which states:

"The Otago Regional Council completed a study of the management flows for aquatic ecosystems in Luggate Creek in 2006. The purpose of the report was to investigate the flows required to maintain acceptable habitat for the fish species found in Luggate Creek and its tributaries. It focussed on the river's natural values, identified in Schedule 1A of the Water Plan. In its conclusion, the report suggested seasonal management flows of 0.3 m^3/s (November to April) and 0.5 m^3/s (May to October) for aquatic ecosystems."
Also:
"Habitat declined sharply as flows fell below 0.3 $m^3/$ for koaro and 0.5 m^3/s for adult brown trout"

It is difficult to reconcile these findings with the proposed minimum flow of 0.18 m^3 (180 litre/sec).

The Board submits specifically on the Waianakarua River, Trotters Creek and Luggate Creek, and reserves the right to lodge an additional submission on these after the summary of submissions is received. The same also applies to the Plan Change 1C Water Allocation and Use.

In regard to plan change 1C, the Board has considerable reservation regarding community controlled and monitored allocation schemes. While in principle this may be advantageous, however practically strong social and political interests can prevent democratic decision making in small communities.

We see very little historical knowledge or concern by these groups in protecting aquatic and ecological values.

The Board believes this approach is an abrogation of responsibility of the consent authority to represent and monitor for public interest in environmentally sound water management.

The proof of impact of any abstraction should always be by the abstractor and not the public at large rather than the other way around, commonly know as socialising the costs and privatising the gains.

We seek the following decision from the local authority:

1) No allocation to abstractive users from the Waianakarua River, and an investigation by the Otago Regional Council, in consultation with the local community, of ways to reduce the existing allocation over time.

2) Where the above (1) is considered unachievable for whatever reason, a minimum flow of 400L/s for the entire year should be applied. Water harvesting should be permitted in times of high flood flows throughout the year, provided that such takes did not impact on natural flushing flows.

3) Rivers should be managed by way of a maximum allocation for abstraction, as well as a minimum flow, because of the potential to 'flat line' rivers when using a minimum flow only.

4) A maximum primary allocation of 150L/s for the whole of the Waianakarua during October to April, and 200L/s secondary allocation on a 1:1 share basis from May to September.

5) Where a minimum flow is applied to a river, all costs for monitoring and administration of that flow should be borne directly by the abstractive beneficiaries.

6) There should be a mechanism as a condition of an abstraction consent, that where the ecological condition of the river is compromised by lack of flow due to abstraction, then the terms and conditions of that consent shall be modified accordingly.

7) Minimum flows should be applied over the whole of the river, and in the instance of branches (as in the Waianakarua), flows that prevent drying of a branch and maintain the interconnectedness of the river should be implemented.

8) A minimum flow in Trotters of 20L/s October to April, a minimum flow of 35L/s May to September, and a maximum allocation of 30L/s for the whole river.

9) A summer/autumn season minimum flow for Luggate Creek set at 300 litre/sec, to protect aquatic life and freshwater ecosystems.

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Email: policy@orc.govt.nz

Post: Attn: Policy Team, Private Bag 1954, Dunedin 9054

Fax: (03) 479 0015 (Attn: Policy Team)

Deliver: 70 Stafford Street, Dunedin; or

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Otago Regional Council

SUBMISSION FORM
Proposed Plan Change 1B: Minimum Flows
to the Regional Plan: Water for Otago
December 2008

Form 5, Clause 6 of the First Schedule, Resource Management Act 1991

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Full name of submitter: Michael and Christine Holland

Name of organisation (*if applicable*): M C Holland Farming Ltd

Postal Address: Number/Street: 437 Waianakarua Road
Suburb: 13 O R D
Town/City: Oamaru
Postcode: 9495

Telephone: 03 4395366

Fax:

Email: mcholland@farmside.co.nz

Contact person: Michael Holland

I wish to be heard in support of my submission *(delete the one that does not apply)*.

If others make a similar submission, I will consider presenting a joint case with them at a hearing.
(Delete if you would not consider presenting a joint case).

Date: 04/03/2009

Please note that all submissions are made available for public inspection.

Signatures are not required for submissions made electronically.

Submissions must be received by 5pm, Monday 9 March 2009.

The parts of the proposed plan change that my submission relates to are:
(*Give clear references if possible e.g. reference number, policy x, rule y*)

Proposed Plan Change 1 B minimum flows

Specifically:

- inclusion of the Waianakarua River in Policy 6.4.5(b)
- inclusion of the Waianakarua River in Rule 12.1.4.2
- the proposed minimum flows for the Waianakarua River contained in the amendments to Schedule 2A

My submission is:
(Include whether you support, oppose, or wish to have amended the parts identified above, and give reasons)
M C Holland Farming Ltd is a company owned and operated by Michael and Christine Holland. We farm a 338 hectare self contained dairy farm, milking 640 cows, supporting all its replacement stock and providing the majority of its supplementary and winter feed requirements. The farm is located on the north bank of the Waianakarua River and extends from the mouth approximately 4 kms up the river. We employ 3 full time staff and 2 part time staff. The family and employees that the farm supports rely significantly on the river for economic and recreational values. Irrigation and its reliability is an integral part of our farming operation.

We oppose the setting of a minimum flow of 200 litres/second (Oct – April) and 400 litres/second (May – Sept) and its imposition on existing resource consents through Policy 6.4.5(b) and Rule 12.1.4.2..

We oppose the inclusion of the Waianakarua River in the amended Schedule 2A because no consideration has been given to the social and economic benefits of taking water (as required by the new Schedule 2D.1(j)) and what is an acceptable duration and frequency of restrictions imposed on consent users (as outlined in Schedule 2D.2(g)).

I seek the following decision from the local authority:
(Give precise details e.g. changes you would like made)

The decision we seek from Council is to have this amended to a min flow of
150 (15 Sept – 15 April) and 400 (16 April – 14 Sept)
The reasons for this are

1. The Waianakarua River extends for approximately 33 km into the hills and it is only in the last 2 km that approximately 64% of the primary allocation is taken out for irrigation. This would leave 121 litres/second (64%) above a minimum flow of 150 litres/second for 94% of the rivers length.
2. The river is ranked 8 out of 77 for water quality in Otago. Has a good diverse fish life with 14 species present. Macro invertebrate surveys show a high value, greater than 125.All this with irrigation consents being used (with no minimum flow restrictions) for up to 40 years for some takes. This shows that past and present land owners and irrigators have looked after the river so why impose a minimum flow that is too restrictive on farming operators. If it is not broken why try to fix it. **No body is applying for any more water ORC is just applying a minimum flow to existing consents.**

3. Permanent flow records are very short for the Waianakarua River as a flow recorder was installed in 2005 and prior readings where just one off periodic readings so there is insufficient information to justify a minimum flow of greater than 150 litres / sec at Browns pump.
4. Summer irrigation season mid Sept – mid May. On some years of below average rainfall and warmer weather in Sept and May the benefit of irrigation is required to keep soil moisture levels above wilting point for the growth of winter feed in May to sustain animals over the next 3 months and in Sept to provide adequate spring growth.
5. If reliability of irrigation is reduced then more irrigation water would be used as the farmers would be inclined to have the soil "topped up" in case the river went onto restrictions as a precaution rather than being able to apply water reliably when soil moisture levels require it.
6. The ORC Waianakarua River Catchment information sheet states at a minimum flow of 200 litre/second irrigators would have 0 days of restrictions. The 3 years actual data from the flow monitoring site at Browns pump vary considerably from this estimate.
7. As irrigating farmers on the Waianakarua River we have spent considerable sums of money developing and converting our land and improving the efficiency of our water through shifting to K-line irrigation on most of our farm and rotorainer to grow crops for winter. A minimum flow of greater than 150 litres/second would impact greatly on the financial side of our business. We have commissioned an economic impact report on how the differing flow regimes would affect our viability and will call an expert witness to present this information.

Michael Holland
on behalf of MC Holland Farming Ltd

4/3/2009
Date

SUBMISSIONS MUST BE RECEIVED BY 5.00PM, MONDAY 9 MARCH 2009

Please send submissions to:

Email: policy@orc.govt.nz

Post: Attn: Policy Team, Private Bag 1954, Dunedin 9054

Fax: (03) 479 0015 (Attn: Policy Team)

Deliver: 70 Stafford Street, Dunedin; or
William Fraser Building, Dunorling Street, Alexandra; or
The Station, 1st Floor, Cnr Shotover and Camp Streets, Queenstown

Otago Regional Council

SUBMISSION FORM
Proposed Plan Change 1B: Minimum Flows
to the Regional Plan: Water for Otago
December 2008

Form 5, Clause 6 of the First Schedule, Resource Management Act 1991

45
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Full name of submitter: Jonathan Roland Dale

Name of organisation (*if applicable*): "Tobletop"

Postal Address: Number/Street: RD1
Suburb:
Town/City: Kurow
Postcode:

Telephone: 03 436 0432 Fax: 436 0432

Email: jds@xtra.co.nz Contact person: JD

I wish / do not wish to be heard in support of my submission *(delete the one that does not apply)*.

If others make a similar submission, I will consider presenting a joint case with them at a hearing.
(Delete if you would not consider presenting a joint case).

Date: 7/3/09

Please note that all submissions are made available for public inspection.

Signatures are not required for submissions made electronically.

Submissions must be received by 5pm, Monday 9 March 2009.

The parts of the proposed plan change that my submission relates to are:
(*Give clear references if possible e.g. reference number, policy x, rule y*)

Proposed plan Change 1B Minimum Flows Waimakariri River

My submission is:
(Include whether you support, ~~oppose~~, or ~~wish~~ to have amended the parts identified above, and give reasons)

I have whitebaited fished and floundered on this river and I am in support of the regional council setting a minimum flow of 200 ltrs per second as a summer flow and 400 ltrs per second as a winter flow I feel that these flows are above adiquit for all fishing and recreation on this river.

I seek the following decision from the local authority:
(Give precise details e.g. changes you would like made)

I want a summer flow of 200 set by the council and a 400 winte flow at there monitering site

Signature: _____

SUBMISSIONS MUST BE RECEIVED BY 5.00PM, MONDAY 9 MARCH 2009

Please send submissions to:

Email: policy@orc.govt.nz

Post: Attn: Policy Team, Private Bag 1954, Dunedin 9054

Fax: (03) 479 0015 (Attn: Policy Team)

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Otago Regional Council

SUBMISSION FORM
Proposed Plan Change 1B: Minimum Flows
to the Regional Plan: Water for Otago
December 2008

Form 5, Clause 6 of the First Schedule, Resource Management Act 1991

46
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Full name of submitter: Grant Cassidy

Name of organisation (*if applicable*):

Postal Address: Number/Street: 15 Hartforth Place
Suburb: Halswell
Town/City: Christchurch
Postcode: 8025

Telephone: 03 322 5682 Fax:

Email: grant.hay@xtra.co.nz Contact person: Grant Hay

I wish / do not wish to be heard in support of my submission *(delete the one that does not apply)*.

If others make a similar submission, I will consider presenting a joint case with them at a hearing.
(Delete if you would not consider presenting a joint case).

Date: 7th March 2009

Please note that all submissions are made available for public inspection.

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Submissions must be received by 5pm, Monday 9 March 2009.

The parts of the proposed plan change that my submission relates to are:
(*Give clear references if possible e.g. reference number, policy x, rule y*)

Proposed Plan change 1b minimum flows
Waianakarua River

My submission is:
(Include whether you support, ~~oppose,~~ or ~~wish~~ to have amended the parts identified above, and give reasons)

I make white Waitaki and fished the Waitaki River and am in support of the proposed plan change regarding the minimum flows.

I believe it reaches a compromise between use as a regular water user and fishers irrigation requirements.

I seek the following decision from the local authority:
(Give precise details e.g. changes you would like made)

I would like to see a summer flow set at 200 litres per second minimum flow and a 120 litres per second minimum winter flow.

Signature: _____

SUBMISSIONS MUST BE RECEIVED BY 5.00PM, MONDAY 9 MARCH 2009

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Email: policy@orc.govt.nz

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Fax: (03) 479 0015 (Attn: Policy Team)

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Otago Regional Council

SUBMISSION FORM
Proposed Plan Change 1B Minimum Flows
to the Regional Plan: Water for Otago

Form 5, Clause 6 of the First Schedule, Resource Management Act 1991.

47

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OTAGO REGIONAL COUNCIL
RECEIVED DUNEDIN
09 MAR 2009
FILE No. RI221
DIR TO MRA SV

Full name of submitter: Trevor Harvey

Name of organisation *(if applicable)*: —

Postal address: 10 ORD
State Highway 1
Oamaru

Postcode: —

Telephone: 03 439 5032

Fax: —

Email: —

Contact Person: Trev

I ~~wish~~ / do not wish *(circle preference)* to be heard in support of my submission.

If ~~others made a similar submission,~~ I will consider presenting a joint case with them at a hearing.
(Cross out if you would not ~~consider presenting a~~ joint case).

Signature of submitter: [signature] Date: 7/03/09
(or person authorised to sign on behalf of person making submission).

Please note that all submissions are made available for public inspection.

The parts of the proposed plan change that my submission relates to are:
(Give clear references if possible e.g. reference number, policy x, rule y)

Proposed plan change 1B minimum flows - Waianakarua River

My submission is:
(Include whether you ~~support, oppose~~, or wish to have amended the parts identified above, and give reasons)

I live between the 2 bridges on the Waianakarua River. I have been here for the last 14 years. I am employed on an irrigated farm on Waianakarua Road. I am concerned that a min flow of 200 litres/second ~~is~~ does not give enough reliability to the irrigation and may put my job at risk.
At the minimum flow meetings we have been told the river is in good health, (with no minimum flow) so why put a too high restriction on irrigators

Please turn over

I seek the following decision from the local authority:
(Give precise details e.g. changes you would like made)

I support the ORC proposed plan change but seek to have summer flow reduced to 150 litres/second at the monitoring site at Blows Pump.

SUBMISSIONS MUST BE RECEIVED BY 5.00 PM, MONDAY 9 MARCH 2009.

Please fold and secure with a small piece of tape.

FreePost Authority ORC 1722

Free

Otago Regional Council
Private Bag 1954
Dunedin 9054

Attention Policy Team

Otago Regional Council

SUBMISSION FORM
Proposed Plan Change 1B: Minimum Flows
to the Regional Plan: Water for Otago
December 2008

Form 5, Clause 6 of the First Schedule, Resource Management Act 1991

48
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Full name of submitter: Karen Aitcheson

Name of organisation (*if applicable*):

Postal Address: Number/Street: 54 Perth St
Suburb:
Town/City: Oamaru.
Postcode:

Telephone: ~~03~~ 027 4349276 Fax: —

Email: — Contact person: Karen

I ~~wish~~ / do not wish to be heard in support of my submission *(delete the one that does not apply)*.

If others make a similar ~~submission, I will~~ consider presenting a joint case with them at a hearing.
(Delete if you would ~~not~~ consider presenting a joint case).

Date: 09/03/09

Please note that all submissions are made available for public inspection.

Signatures are not required for submissions made electronically.

Submissions must be received by 5pm, Monday 9 March 2009.

The parts of the proposed plan change that my submission relates to are:
(*Give clear references if possible e.g. reference number, policy x, rule y*)

Proposed Plan change 1B minimum flows
Waiareka River

My submission is:
(Include whether you ~~support, oppose~~, or wish to have amended the parts identified above, and give reasons)

I am employed on an irrigated farm on Waiorakona Road. I am concerned that a min. flow of 200 lit/sec does not give enough reliability to the irrigation on our farm and may put my job at risk.

The river seems to be in good health with no minimum flow, so why put a ~~minimum~~ minimum flow on that is too high + make the irrigation unreliable

I seek the following decision from the local authority:
(Give precise details e.g. changes you would like made)

I support the ORC proposed plan change but seek to have Summer flow reduced to 150 litres/second at the monitoring site, Brown Rump.

Signature: _____

SUBMISSIONS MUST BE RECEIVED BY 5.00PM, MONDAY 9 MARCH 2009

Please send submissions to:

Email: policy@orc.govt.nz

Post: Attn: Policy Team, Private Bag 1954, Dunedin 9054

Fax: (03) 479 0015 (Attn: Policy Team)

Deliver: 70 Stafford Street, Dunedin; or
William Fraser Building, Dunorling Street, Alexandra; or
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Otago Regional Council

SUBMISSION FORM
Proposed Plan Change 1B: Minimum Flows
to the Regional Plan: Water for Otago
December 2008

Form 5, Clause 6 of the First Schedule, Resource Management Act 1991

49
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Full name of submitter: Gray & Jill Campbell

Name of organisation (*if applicable*):

Postal Address: Number/Street: P.O. Box 12
Suburb:
Town/City: Hampden.
Postcode:

Telephone: 021 611 634 Fax:

Email: jill-gray.campbell@xtra.co.nz Contact person: Jill Campbell

I wish / do not wish to be heard in support of my submission *(delete the one that does not apply)*.

If others make a similar submission, I will consider presenting a joint case with them at a hearing.
(Delete if you would not consider presenting a joint case).

Date: 8/3/2009

Please note that all submissions are made available for public inspection.

Signatures are not required for submissions made electronically.

Submissions must be received by 5pm, Monday 9 March 2009.

The parts of the proposed plan change that my submission relates to are:
(*Give clear references if possible e.g. reference number, policy x, rule y*)

Proposed plan change 1B. Minimum flows.
Waianakarua River

My submission is:
(Include whether you support, oppose, or wish to have amended the parts identified above, and give reasons)

We live and farm beside the Waianakarua River and are in support of Council's proposal for a minimum summer flow of 200 litres/second and a winter flow of 400 litres/second.

I seek the following decision from the local authority:
(Give precise details e.g. changes you would like made)

We feel the Council's research has been thorough and meets everybody's requirements, so we would be happy if the minimum summer flow is 200 litres/second and the winter flow of 400 litres/second.

Signature: J.E. Campbell

SUBMISSIONS MUST BE RECEIVED BY 5.00PM, MONDAY 9 MARCH 2009

Please send submissions to:

Email: policy@orc.govt.nz

Post: Attn: Policy Team, Private Bag 1954, Dunedin 9054

Fax: (03) 479 0015 (Attn: Policy Team)

Deliver: 70 Stafford Street, Dunedin; or
William Fraser Building, Dunorling Street, Alexandra; or
The Station, 1st Floor, Cnr Shotover and Camp Streets, Queenstown

Otago Regional Council

SUBMISSION FORM
Proposed Plan Change 1B Minimum Flows
to the Regional Plan: Water for Otago

Form 5, Clause 6 of the First Schedule, Resource Management Act 1991.

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OTAGO REGIONAL COUNCIL
RECEIVED DUNEDIN
09 MAR 2009
FILE No. RI221
DIR TO MAP SW

Full name of submitter: Greg Andressand

Name of organisation *(if applicable)*:

Postal address: 400 Waianakarua Road
13 o Rd Oamaru

Postcode: 94 95

Telephone: 03 439 5957

Fax: —

Email: —

Contact Person: Greg

I ~~wish~~ / do not wish *(circle preference)* to be heard in support of my submission.

If others made a similar submission, I will consider presenting a joint case with them at a hearing.
(Cross out if you would not consider presenting a joint case).

Signature of submitter: G Andressand Date: 7 3 09
(or person authorised to sign on behalf of person making submission).

Please note that all submissions are made available for public inspection.

The parts of the proposed plan change that my submission relates to are:
(Give clear references if possible e.g. reference number, policy x, rule y)

Proposed Plan Change 1B minimum flows Waianakarua River

My submission is:
(Include whether you ~~support, oppose~~, or wish to have amended the parts identified above, and give reasons)

I live and Work on a propety that Irrigateds out of the Waianakarua Rwer and am concerned by having a minimum flow in the Summer of 200 litres per second. I feel it makes the river not very reliable for irrigation and may put my job at Risk

I would like to have the minimum summer flow reduced to 150 litres/Sec as ~~the~~ This gives the farm ~~more~~ and my job more secuity

Please turn over

I seek the following decision from the local authority:
(Give precise details e.g. changes you would like made)

~~I~~ I Support the regional Councils proposed plan change but ~~to~~ seek to have the summer flow reduced to 150 litres pe second at the montery site to make our irrigation more reliable. ~~I~~

SUBMISSIONS MUST BE RECEIVED BY 5.00 PM, MONDAY 9 MARCH 2009.

Please fold and secure with a small piece of tape.

FreePost Authority ORC 1722

Free

Otago Regional Council
Private Bag 1954
Dunedin 9054

Attention Policy Team

Otago Regional Council

SUBMISSION FORM
Proposed Plan Change 1B: Minimum Flows
to the Regional Plan: Water for Otago
December 2008

Form 5, Clause 6 of the First Schedule, Resource Management Act 1991

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OTAGO REGIONAL COUNCIL
RECEIVED DUNEDIN
09 MAR 2009
FILE No. RI221
DIR TO MHP-SK

Full name of submitter: Stephen Robert Tenwick

Name of organisation (*if applicable*):

Postal Address: Number/Street: 341 Livingstone Road
Suburb:
Town/City: RD 10 K.K.P Oamaru
Postcode: 9494

Telephone: 034312774

Fax: 034312776

Email:

Contact person: Steve Tenwick

I ~~wish~~/ do not wish to be heard in support of my submission *(delete the one that does not apply)*.

If others make a similar submission, I will consider presenting a joint case with them at a hearing.
(Delete if you would not consider presenting a joint case).

Date: 7.3.09

Please note that all submissions are made available for public inspection.

Signatures are not required for submissions made electronically.

Submissions must be received by 5pm, Monday 9 March 2009.

The parts of the proposed plan change that my submission relates to are:
(*Give clear references if possible e.g. reference number, policy x, rule y*)

Proposed plan change 1B minimum flows Waianakarua River

My submission is:
(Include whether you support, ~~oppose, or wish~~ to have amended the parts identified above, and give reasons)

I support the regional council in their plan change 1.B. Being an Irrigator on a similar small river being the Maerewhenua I believe we need a good balance between the ecological value of the river and the economic value of the river and am in support of the council for a recommended minimum flow of 200 litres per second at their monitoring site.

I seek the following decision from the local authority:
(Give precise details e.g. changes you would like made)

Signature: [signature]

SUBMISSIONS MUST BE RECEIVED BY 5.00PM, MONDAY 9 MARCH 2009

Please send submissions to:

Email: policy@orc.govt.nz

Post: Attn: Policy Team, Private Bag 1954, Dunedin 9054

Fax: (03) 479 0015 (Attn: Policy Team)

Deliver: 70 Stafford Street, Dunedin; or

William Fraser Building, Dunorling Street, Alexandra; or

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Otago Regional Council

SUBMISSION FORM
Proposed Plan Change 1B: Minimum Flows
to the Regional Plan: Water for Otago
December 2008

Form 5, Clause 6 of the First Schedule, Resource Management Act 1991

52
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Full name of submitter: Scott Andrew Johnston

Name of organisation (*if applicable*):

Postal Address: Number/Street: 109 Tokarahi - Tapui Road
Suburb: Tapui
Town/City: 13 CRD Camaru
Postcode: 9491

Telephone: 03 4324255

Fax:

Email:

Contact person: Scott Johnston

I ~~wish~~ / do not wish to be heard in support of my submission *(delete the one that does not apply)*.

~~If others make a similar submission, I will consider presenting a joint case with them at a hearing.~~
(Delete if you would not consider presenting a joint case).

Date: 7-3-2009

Please note that all submissions are made available for public inspection.

Signatures are not required for submissions made electronically.

Submissions must be received by 5pm, Monday 9 March 2009.

The parts of the proposed plan change that my submission relates to are:
(*Give clear references if possible e.g. reference number, policy x, rule y*)

Proposed plan change 1B minimum flows Waianakarua River

My submission is:
(Include whether you support, ~~oppose~~, or ~~wish~~ to have amended the parts identified above, and give reasons)

I support the regional council in their plan change 1B
I have lived & farmed in North Otago all my life and I understand the importance of irrigation. I also understand the importance of maintaining a healthy river & providing recreation opportunities for the public & consider the regional council Plan 1 B will do this

I seek the following decision from the local authority:
(Give precise details e.g. changes you would like made)

Signature: DGJohnston

SUBMISSIONS MUST BE RECEIVED BY 5.00PM, MONDAY 9 MARCH 2009

Please send submissions to:

Email: policy@orc.govt.nz
Post: Attn: Policy Team, Private Bag 1954, Dunedin 9054
Fax: (03) 479 0015 (Attn: Policy Team)
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Otago Regional Council

SUBMISSION FORM
Proposed Plan Change 1B: Minimum Flows
to the Regional Plan: Water for Otago
December 2008

53
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Form 5, Clause 6 of the First Schedule, Resource Management Act 1991

Full name of submitter: Neil & Rosemary Johnston

Name of organisation (*if applicable*):

Postal Address: Number/Street: 97 Davidson Rd
Suburb: 13C RD
Town/City:
Postcode: Oamaru.

Telephone: 034324184

Fax: 034324180

Email:

Contact person: Neil or Rosemary J

~~I wish~~ / do not wish to be heard in support of my submission *(delete the one that does not apply)*.

~~If others make a similar submission, I will consider presenting a joint case with them at a hearing.~~
~~(Delete if you would not consider presenting a joint case).~~

Date: 7-3-2009

Please note that all submissions are made available for public inspection.

Signatures are not required for submissions made electronically.

Submissions must be received by 5pm, Monday 9 March 2009.

The parts of the proposed plan change that my submission relates to are:
(*Give clear references if possible e.g. reference number, policy x, rule y*)

Proposed plan change 1B min flows Waianakarua river

My submission is:
(Include whether you support, oppose, or ~~wish to~~ have amended the parts identified above, and give reasons)

I support the regional Council in their plan change 1. B Living & Farming in North Otago all our lives we understand the importance of Irragation we also understand the importance maintaining a healthy river & providing recreational opportunities for the Public & consider the Regional Council Plan 1 B will do this

I seek the following decision from the local authority:
(Give precise details e.g. changes you would like made)

Signature: K J Johnston
N A Johnston

SUBMISSIONS MUST BE RECEIVED BY 5.00PM, MONDAY 9 MARCH 2009

Please send submissions to:

Email: policy@orc.govt.nz
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Fax: (03) 479 0015 (Attn: Policy Team)
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Otago Regional Council

SUBMISSION FORM
Proposed Plan Change 1B: Minimum Flows
to the Regional Plan: Water for Otago
December 2008

Form 5, Clause 6 of the First Schedule, Resource Management Act 1991

54
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Full name of submitter: William John Pile

Name of organisation (*if applicable*):

Postal Address: Number/Street: 967 Steward Rd.
Suburb:
Town/City:
Postcode:

Telephone: 4313768 Fax:

Email: Contact person: Bill

I ~~wish~~ / do not wish to be heard in support of my submission *(delete the one that does not apply)*.

If others make a similar submission, I will consider presenting a joint case with them at a hearing.
(Delete if you would not consider presenting a joint case).

Date: 7-3-09.

Please note that all submissions are made available for public inspection.

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Submissions must be received by 5pm, Monday 9 March 2009.

The parts of the proposed plan change that my submission relates to are:
(*Give clear references if possible e.g. reference number, policy x, rule y*)

Proposed Plan Change 1B

Minimum flows

Waianakarua River

My submission is:
(Include whether you support, oppose, or wish to have amended the parts identified above, and give reasons)

I do support the councils Decision for a 200 L/S min summer Flow & a 400 L/S min Winter Flow at T. Brown pu

I seek the following decision from the local authority:
(Give precise details e.g. changes you would like made)

200 L/S Summer
&
400 L/S Winter

Signature: [signature]

SUBMISSIONS MUST BE RECEIVED BY 5.00PM, MONDAY 9 MARCH 2009

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Fax: (03) 479 0015 (Attn: Policy Team)

Deliver: 70 Stafford Street, Dunedin; or
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The Station, 1st Floor, Cnr Shotover and Camp Streets, Queenstown

Otago Regional Council

SUBMISSION FORM
Proposed Plan Change 1B: Minimum Flows
to the Regional Plan: Water for Otago
December 2008

Form 5, Clause 6 of the First Schedule, Resource Management Act 1991

55
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Full name of submitter: Jimmy Shand & Julie Stevenson

Name of organisation (*if applicable*): Local Residents

Postal Address: Number/Street: Horse Range Road, RD 2
Suburb:
Town/City: Palmerston, East Otago
Postcode: 9482

Telephone: 03 4394 861 Fax:

Email: Contact person: Jimmy

I do not wish to be heard in support of my submission.

If others make a similar submission, I will not consider presenting a joint case with them at a hearing.

Date:9/03/2009 16:20:07

Please note that all submissions are made available for public inspection.

Signatures are not required for submissions made electronically.

Submissions must be received by 5pm, Monday 9 March 2009.

The parts of the proposed plan change that my submission relates to are:
(*Give clear references if possible e.g. reference number, policy x, rule y*)

Changes to the Trotter's Creek minimum Flow.

My submission is:
(Include whether you support, oppose, or wish to have amended the parts identified above, and give reasons)

We wish for the Trotter's Creek water usage to remain as status quo.

I seek the following decision from the local authority:
(Give precise details e.g. changes you would like made)

To leave the Trotter's Creek water usage & minimum flow etc as it is .

SUBMISSIONS MUST BE RECEIVED BY 5.00PM, MONDAY 9 MARCH 2009

Please send submissions to:

Email: policy@orc.govt.nz

Post: Attn: Policy Team, Private Bag 1954, Dunedin 9054

Fax: (03) 479 0015 (Attn: Policy Team)

Deliver: 70 Stafford Street, Dunedin; or
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Otago Regional Council

SUBMISSION FORM
Proposed Plan Change 1B: Minimum Flows
to the Regional Plan: Water for Otago
December 2008

Form 5, Clause 6 of the First Schedule, Resource Management Act 1991

56
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Full name of submitter: Isabella Anderson

Name of organisation (*if applicable*): Cardrona Landcare Group

Postal Address: Number/Street: 1624A cardrona R.D.1
Suburb:
Town/City: Wanaka
Postcode: 9381

Telephone: 03 443 1361 Fax:

Email: Contact person:

I do not wish to be heard in support of my submission.

If others make a similar submission, I will consider presenting a joint case with them at a hearing.

Date:9/03/2009 17:08:50

Please note that all submissions are made available for public inspection.

Signatures are not required for submissions made electronically.

Submissions must be received by 5pm, Monday 9 March 2009.

The parts of the proposed plan change that my submission relates to are:
(*Give clear references if possible e.g. reference number, policy x, rule y*)

plan change 1B: minimum flows

My submission is:
(Include whether you support, oppose, or wish to have amended the parts identified above, and give reasons)

I support the setting of minimum flows in principle as stated in the proposed plan change but reserve the right to comment on any changes made via the submission process. support the continued consultation with land owners and water users regarding setting of minimum flows and residual flows.

I seek the following decision from the local authority:
(Give precise details e.g. changes you would like made)

adoption of proposed plan change, continued consultation with affected users for any variations to plan.

SUBMISSIONS MUST BE RECEIVED BY 5.00PM, MONDAY 9 MARCH 2009

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Fax: (03) 479 0015 (Attn: Policy Team)

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Otago Regional Council

SUBMISSION FORM
Proposed Plan Change 1B: Minimum Flows
to the Regional Plan: Water for Otago
December 2008

Form 5, Clause 6 of the First Schedule, Resource Management Act 1991

57
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Full name of submitter: Jeremy Bell

Name of organisation (*if applicable*): Criffel Irrigation Scheme

Postal Address: Number/Street: 87 Mt Barker Rd
Suburb:
Town/City: Wanaka
Postcode:

Telephone: 03 4434250

Fax: 034439239

Email: jerryb@criffel.co.nz

Contact person: Jeremy Bell

I wish to be heard in support of my submission *(delete the one that does not apply)*.

If others make a similar submission, I will consider presenting a joint case with them at a hearing.
(Delete if you would not consider presenting a joint case).

Date: 9th February 2009

Please note that all submissions are made available for public inspection.

Signatures are not required for submissions made electronically.

Submissions must be received by 5pm, Monday 9 March 2009.

The parts of the proposed plan change that my submission relates to are:
(*Give clear references if possible e.g. reference number, policy x, rule y*)

Plan Change 1B (Minimum Flows)

Proposed Plan Change 1C Water Allocation and Use Luggate Creek

My submission is:
(Include whether you support, oppose, or wish to have amended the parts identified above, and give reasons)

We oppose these plan changes in there entirety The process is flawed due to the information provided by the ORC is inaccurate and inadequate. It leave us with no confidence in the administration of this water body for all the stakeholders in the Luggate Creek that the data provided is accurate and reliable to set balance minimum flow levels.

It is also this submission that the Luggate creek has had a successful balance between all groups as demonstrated at the community meetings and workshops and meets relevant environmental standards important this area.

I seek the following decision from the local authority:
(Give precise details e.g. changes you would like made)

That the current Water rights that have constantly been used over the last 20 years and longer along with there structures and races are fully respected with no restriction being placed on those rights.

SUBMISSIONS MUST BE RECEIVED BY 5.00PM, MONDAY 9 MARCH 2009

Please send submissions to:

Email: policy@orc.govt.nz

Post: Attn: Policy Team, Private Bag 1954, Dunedin 9054

Fax: (03) 479 0015 (Attn: Policy Team)

Deliver: 70 Stafford Street, Dunedin; or
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The Station, 1st Floor, Cnr Shotover and Camp Streets, Queenstown

SUBMISSION FORM
Proposed Plan Change 1B: Minimum Flows
Regional Plan: Water for Otago
December 2008

58

Form 5, Clause 6 of the First Schedule, Resource Management Act 1991

To:	Otago Regional Council
Full name of submitter:	Otago Water Resource Users Group ("OWRUG")
Postal Address:	c/o Checketts McKay Law Limited PO Box 41 Alexandra 9340
Contact person:	John Williamson
Telephone:	03 448 9670
Fax:	03 448 8960
Email:	john@cmlaw.co.nz

We wish / ~~do not wish~~ to be heard in support of our submission *(delete the one that does not apply)*.

~~If others make a similar submission, I will consider presenting a joint case with them at a hearing.~~
(Delete if you would not consider presenting a joint case).

Date: 9 March 2009

Please note that all submissions are made available for public inspection.

Signatures are not required for submissions made electronically.

Submissions must be received by 5pm, Monday 9 March 2009.

The parts of the proposed plan change that our submission relates to (referring to the Table of Proposed Changes Reference Number and Proposed Plan Provision), our submission and decision sought from the local authority are:

1. Reference Number 7: Schedule 2D

1.1 **Clause 2D.1 –**

We request that paragraph (f) be amended to read:

> "*Environmental, social, cultural, recreational and economic costs and benefits of taking and using water before imposing the minimum flow and the impact on these as a consequence of imposing the minimum flow;*"

1.2 **Clause 2D.2 –**

We request that paragraph (g) be amended to read:

> "*Social and economic benefits of taking and using water*".

SUBMISSION TO THE OTAGO REGIONAL COUNCIL

ON THE

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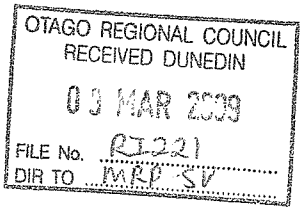
Proposed Plan Change 1B Regional Plan: Water for Otago

Federated Farmers of New Zealand (Inc)



9 March 2009

Contact for service :

Matt Harcombe
Federated Farmers of NZ
Team Leader South Island Local Policy

Address

P O Box 5242
Dunedin 9058
Phone (03) 477 7356
Fax (03) 479 0470
E mharcombe@fedfarm.org.nz

We wish to be heard in support of our submission

If others make a similar submission, we will consider presenting a joint case with them at a hearing.

SPECIFIC SUBMISSIONS

Proposed plan provision	***Reference #***	***Support/Oppose***	***Decisions sought***	***Reasons***
Schedule 2A Luggate catchment	4	Oppose in part	Amend minimum flow to provide for no derogation of existing consents reliability Delay introduction of minimum flow until calculated minimum flow on robust information	FF supports the introduction of a specific minimum flow based on robust methodology and the collection of real data Proposed Minimum flow will have social and economic impact on irrigators within the catchment Insufficient information gathered on the flow to calculate appropriate minimum flows
Schedule 2A Trotters catchment	5	Oppose in part	Amend minimum flow to provide for no derogation of existing consents reliability Delay introduction of minimum flow until calculated minimum flow on robust information	FF supports the introduction of a specific minimum flow based on robust methodology and the collection of real data Proposed Minimum flow will have social and economic impact on irrigators within the catchment Insufficient information gathered on the flow to calculate appropriate

				minimum flows
Schedule 2A Waianakarua catchment	6	Oppose in part	Amend minimum flow to provide for no derogation of existing consents reliability Delay introduction of minimum flow until calculated minimum flow on robust information	FF supports the introduction of a specific minimum flow based on robust methodology and the collection of real data Proposed Minimum flow will have social and economic impact on irrigators within the catchment Insufficient information gathered on the flow to calculate appropriate minimum flows
Schedule 2D	7	Support in part	Retain Include as an assessment matter the effect of imposing minimum flows and allocation limits on the economic viability of existing users and on their reliability of supply	The impact of imposing minimum flows and allocation limits on existing users can in some cases compromise the existing investment and economic viability of their business – any allocation limits and minimum flows must consider these impacts as part of assessing the existing environment
12.1.4.6		Support	Retain restricted discretionary activity	

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Submission on Proposed Plan Change 1B: Minimum Flows to the Regional Plan: Water for Otago

Name: Scott Clayton Dunavan
Address: PO Box 6, Hampden 9442
Telephone: 027-290-3643
Email: dunavans@gmail.com
Date: 3 March 2009

Submission on Proposed Change 1B (Minimum Flows) to the Regional Plan: Water for Otago

The parts of the proposed plan change that my submission relates to are:

Minimum flows for Trotters Creek - Schedule 2A: Specific minimum flows for primary allocation takes in accordance with Policy 6.4.3, and primary allocation limits in accordance with Policy 6.4.2(a)(i).

Introduction

My name is Scott Dunavan. My professional background is in software development, particularly Geographic Information Systems (GIS). I have a Diploma for Graduates in Ecology from the University of Otago. My wife Dinah and I own, manage and reside at Kurinui, a 750-hectare conservation and forest restoration project mainly in the Big Kuri Creek catchment, immediately north of the Trotters Creek catchment. A small part of our property, near our house, is in the very top of the Trotters Creek catchment.

I frequently walk, botanise and mountain bike in the Trotters Creek catchment, and I hunt feral goats on neighbouring properties in the upper catchment. I co-led a well-attended Forest & Bird field trip in Trotters Gorge Scenic Reserve in 2008. I have also worked on controlling Chilean Flame Creeper, which poses a significant (and under-recognised) threat to the native bush, in the Reserve.

I submit that:

1. Trotters Creek is a waterway of high natural values. The Otago Regional Council's technical report (ORC 2006) identifies thirteen fish species that inhabit the creek, including twelve native species.

2. According to the report, "[The] recommended management objective for Trotters Creek is to sustain the diverse native fish community in the lower reaches in accordance with Schedule 1A of the Water Plan." To achieve that objective, the report clearly identifies and recommends a rate of 0.02 m^3/s as the summer minimum flow (pp. 13-14), and recommends "that flows should not be allowed to drop below those outlined above due to consumptive use."

The report further notes that "...0.02 m^3/s is well below the point of inflection indicated by the IFIM survey for all fish species in Trotters Creek, with the exception of redfin bullies and Canterbury galaxiids". In other words, the modelling done by NIWA indicates that at a rate *even higher* than 0.02 m^3/s, the amount of habitat available to most fish species declines sharply with decreasing flow.

3. Decreased flow during low-flow periods has additional environmental effects such as more frequent and/or prolonged river mouth closure (and consequent loss of fish passage), higher water temperature and lower dissolved oxygen levels, algae blooms, etc.

4. The estimated value of 0.023 m^3/s for the mean annual 7-day low flow (MALF) of Trotters Creek was derived by using the water yield of the South Branch of the Waianakarua River (ORC 2006, p.5). This value is given with no indication of its inherent uncertainty or likely range of error (i.e. difference from the *actual* value). The catchment of the Waianakarua South Branch is of different geology from that of Trotters Creek, and there may well be important differences in topographic factors (e.g. aspect and shading), soil, climate and weather, or other factors.

For example, on many otherwise sunny afternoons when there is an easterly wind, mist forms in the upper catchment (the view from our kitchen window includes much of the Big Kuri Creek - Trotters Creek watershed). The mist means that the highest-rainfall part of the catchment stays wetter than one might expect purely from interpretation of rainfall data, and the MALF may well be higher than estimated. I do not know whether or how frequently this phenomenon also occurs in the Waianakarua South Branch.

4. It is also important to consider that the current vegetation and land use and land management regimes of the catchment mean that its hydrology today is quite different from that in its natural state. We do not have a baseline that tells us the flow regime(s) under which the surviving aquatic communities evolved. It is therefore all the more important to choose conservative management limits, especially as any decline in ecosystem health may occur (or be occurring) slowly, and may not be detected until irreversible changes have occurred.

5. The vegetation of a significant fraction of the catchment area has been changed from indigenous forest, shrubland and tussock grassland to exotic coniferous forest (note that Map 3 in the Trotters Creek Catchment Information Sheet does not show an estimated 60+ hectares of additional exotic forestry in the upper Pigeon Creek catchment). Recently-planted forest will take some years (or decades) to mature, and the water yield from those areas of the catchment will continue to decline for much of that time. Climate change is also expected to generally reduce precipitation on the east coast. These changes will amplify the effects of abstraction, and the minimum flow rates should take account of expected changes in water yield in order to reduce the environmental impact of abstraction.

6. The impact of abstraction on the ecology of the stream is a product of not only the reduction in flow due to abstraction, but the duration over which the flow is reduced

below its natural rate. The lower the minimum flow is set, the longer the periods during which the stream will be depleted below its natural rate of flow.

7. At two public consultation meetings held by the Otago Regional Council, a majority of those community members present strongly supported retention of the natural values of the creek. The Regional Council has not provided any evidence that the proposed October-April minimum flow limit will do so; the single-day flow measurements referred to in Meredith (2008) hardly comprise a valid basis. The weak justification for the change in the proposed October-April flow rate from 20 to 8 l/s, along with the fact that this value coincides with the design bypass flow rate of the existing abstraction structure, give the impression (correct or not) that the proposed limits have been arrived at by purely short-term economic, rather than any ecological consideration.

8. The proposed summer minimum flow will benefit a minimal number of parties. A higher minimum flow would easily accommodate the same irrigation demands (and in fact, provide a more secure supply) with the provision of a larger storage dam. There is no need to further compromise the ecological integrity of the creek.

For the foregoing reasons, the proposed October-April minimum flow of 0.008 m^3/s is not justified.

I seek the following decisions from the Otago Regional Council:
To amend Schedule 2A of the proposed plan change to set the minimum flow rate for Trotters Creek at 35 litres per second year-round.

I wish to be heard in support of my submission.

References

ORC 2006. *Management Flows for Aquatic Ecosystems in Trotters Creek.* Otago Regional Council, Dunedin.

Meredith 2008. Report No. 2008/475: Consultation Draft of Proposed Plan Change 1B (Minimum Flows – Waianakarua River, Luggate Creek, Trotters Creek) to the Regional Plan: Water for Otago. Otago Regional Council, Dunedin.

Otago Regional Council

SUBMISSION FORM
Proposed Plan Change 1B: Minimum Flows
to the Regional Plan: Water for Otago
December 2008

Form 5, Clause 6 of the First Schedule, Resource Management Act 1991

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Office Use Only

Full name of submitter: Geoff Taylor

Name of organisation (*if applicable*): **Luggate Creek Community and Guardians (representing the Luggate Community Association, Farmers and interested parties associated with The Luggate Creek) present and represented at the workshops held with the ORC.**

Postal Address:
Number/Street: 157 Shortcut Rd
Suburb: R.D.2
Town/City: Wanaka
Postcode:

Telephone: 03 443 8552

Fax: 03 4438252

Email: jillswool@clear.net.nz

Contact person: Geoff Taylor

I wish to be heard in support of my submission *(delete the one that does not apply)*.

If others make a similar submission, I will consider presenting a joint case with them at a hearing.
(Delete if you would not consider presenting a joint case).

Date:9/3/2009

Please note that all submissions are made available for public inspection.

Signatures are not required for submissions made electronically.

Submissions must be received by 5pm, Monday 9 March 2009.

The parts of the proposed plan change that my submission relates to are:
(*Give clear references if possible e.g. reference number, policy x, rule y*)

Proposed Plan Change 1B (Minimum Flows) Luggate Creek

Proposed Plan Change 1C Water Allocation and Use Luggate Creek

My submission is:
(Include whether you support, oppose, or wish to have amended the parts identified above, and give reasons)

This submission cannot support in full this minimum flow level of the Luggate Creek on the basis of the information provided and agreed to at the presentations and workshops, which used to set this flow level, has since varied.

That specifically being, the ORC allowing or reinstating additional waters takes from the Luggate Creek which we were informed were to be deleted and would not therefore come into this calculated figure.

I seek the following decision from the local authority:
(Give precise details e.g. changes you would like made)

A re-evaluation of this flow needs to take place if water take figures vary from what was presented to include this change and or any conditions of use of this take.

This is also applicable to any future applications and how they may affect the Luggate Creek.

SUBMISSIONS MUST BE RECEIVED BY 5.00PM, MONDAY 9 MARCH 2009

Please send submissions to:

Email: policy@orc.govt.nz

Post: Attn: Policy Team, Private Bag 1954, Dunedin 9054

Fax: (03) 479 0015 (Attn: Policy Team)

Deliver: 70 Stafford Street, Dunedin; or

William Fraser Building, Dunorling Street, Alexandra; or

The Station, 1st Floor, Cnr Shotover and Camp Streets, Queenstown

Department of Conservation
Te Papa Atawbai

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9 March 2009

The Chief Executive
Otago Regional Council
Private Bag 1954
DUNEDIN 9054

Dear Graeme

Proposed Plan Change 1B (Minimum Flows)

Please find attached the Director-General of Conservation's submission on Plan Change 1B (Minimum Flows) to the Regional Plan: Water for Otago.

We have undertaken a thorough examination of the methods used to set the proposed flows on Luggate Creek, Trotters Creek and the Waianakarua River. We consider the methods used to be flawed, and hence we do not have confidence in these flows. We also note that the methods used are inconsistent with comments from the Environment Court in both case C71/2002 and case C79/2002.

Yours sincerely

Jeff Connell
Conservator
Otago Conservancy

406499
Otago Conservancy
PO Box 5244, Moray Place, Dunedin 9058, New Zealand
Telephone 03-477 0677, Fax 03-477 8626

Form 5
Submission on publicly notified proposal for policy statement or plan

Clause 6 of First Schedule, Resource Management Act 1991

To **The Chief Executive**
Otago Regional Council
Private Bag 1954
DUNEDIN 9054

Name of submitter: **The Director-General of Conservation**

This is a submission on the following Proposed Plan Change 1B Minimum Flows to the Regional Plan: Water for Otago (the **proposal**):

The specific provisions of the proposal that my submission relates to are:

As set out in Attachment One

My submission is:

As set out in Attachment One

I seek the following decision from the Otago Regional Council:

a) That Plan Change 1B be retained or amended as set out under the headings "**Decision sought**" in Attachment One or to like effect; and

b) That any other consequential amendments to the Plan required to explain or give effect to these changes be made.

I wish ~~(or do not wish)~~ to be heard in support of my submission.

* If others make a similar submission, I will consider presenting a joint case with them at a hearing.

~~* Delete if you would not consider presenting a joint case.~~

.....

Signature of submitter
Jeffery Edward Connell
Conservator
Otago Conservancy
Department of Conservation
Pursuant to a delegation from the Director General of Conservation

9 March 2009
.....

Date

(A signature is not required if you make your submission by electronic means.)

Address for service of submitter:	PO Box 5244 DUNEDIN 9016
Telephone:	(03) 477 0677
Fax/email:	(03) 477 8626
Contact person: [*name and designation, if applicable*]	Bruce Hill Community Relations Officer- Planning Ph (03) 474-6959 Email fbhill@doc.govt.nz

ATTACHMENT ONE

Additions are shown in double underline, deletions are shown in ~~double strikethrough.~~

6.4 Policies applying to the taking of water

1. The Director-General of Conservation (D-G) requests the following amendments be made to Policy 6.4.5, as the D-G considers that:

    a. The method used to calculate the proposed minimum flows and therefore the primary allocation limits for the Trotters, Waianakarua and Luggate catchments is flawed, as the data set is inadequate; and

    b. The use of surrogate flow recordings from catchments other than Trotters and the Waianakarua is inconsistent with:

        i. Best practice; and
        ii. Comments from the Environment Court in case C71/2002 (including but not limited to paragraphs 41-54) and case C79/2002 (including but not limited to paragraphs 15 and 184 - 187).

Decision sought

6.4.5 **The minimum flows established by Policies 6.4.3, 6.4.4, 6.4.6.....**
(a)

(b) In the case of any resource consent to take surface water from within the Taieri above Paerau and between Sutton and Outram, Shag, Kakanui, Water of Leith, Lake Hayes, Waitahuna, ~~Trotters, Waianakarua~~ and Lake Tukitoto.....

(c) In the case of any existing resource consent to take surface water from the ~~Luggate catchment area~~, Manuherikia catchment.....

2. The D-G requests the following amendments be made to Policy's 6.4.5 "Explanation", so to give effect to the D-G's comments in 1) above.

Decision sought

Explanation

This policy provides for the application of minimum flows to consents as follows:

1. New takes are subject to minimum flows provisions when the consent is granted.
2. For resource consents to take from rivers within catchments specified in Schedule 2A, except for the ~~Luggate~~, Manuherikia (upstream of Ophir).....
3. For the ~~Luggate~~, Manuherikia (upstream of Ophir)....

3. The D-G requests the following amendment be made to the second paragraph of Policy's 6.4.5 "Principal Reasons for Adopting", so to give effect to the D-G's comments in 1) above.

Decision sought

Principal reasons for adopting

In the ~~Luggate catchment area~~, ~~the~~ Manuherikia catchment area (upstream of Ophir) and .....

12.1 The taking of surface water

1. The D-G requests the following amendment be made to rule 12.1.4.2 as the D-G considers that:
   a. The method use to calculate the proposed minimum flows and therefore the primary allocation limits for the Trotters, Waianakarua and Luggate catchments is flawed, as the data set is inadequate; and

   b. The use of surrogate flow recordings from catchments other than Trotters and the Waianakarua is inconsistent with:

      i. Best practice; and
      ii. Comments from the Environment Court in case C71/2002 (including but not limited to paragraphs 41-54) and case C79/2002 (including but not limited to paragraphs 15 and 184-187).

Decision sought

12.1.4.2 Taking of surface water as primary allocation in the following Schedule 2A catchment areas:

Lake Hayes (Map B1),
Shag (Map B3),
~~Trotters (Map B3)~~
~~Waianakarua (Map B3)~~
Taieri Catchment upstream of .....

2. The D-G requests the following amendments are made to rule 12.1.1.4 so to give effect to the D-G's comments in 1) above.

Decision sought

12.1.4.4 Taking of surface water as primary allocation applied for prior 28 February 1998 in the following Schedule 2A catchments:

~~Luggate Catchment (Map B1a)~~

(iii) The minimum flows set out in Schedule 2A of this Plan for the above catchments shall affect the exercise of every resource consent or other authority, of the kind referred to in paragraph (i) of this rule, in the ~~Luggate catchment area~~, Manuherikia catchment area (upstream of Ophir).....

(v) The minimum flows set in Schedule 2A for the ~~Luggate catchment area~~, Manuherikia catchment area (upstream of Ophir).....

2 Schedule of specified restrictions on the exercise of permits to take surface water

1. The D-G requests the following amendments be made to the proposed changes to Schedule 2A, 2 as the D-G considers that;

   a. The method use to calculate the proposed minimum flows and therefore the primary allocation limits for the Trotters, Waianakarua and Luggate catchments is flawed, as the data set is inadequate; and

   b. The use of surrogate flow recordings from catchments other than Trotters and the Waianakarua is inconsistent with:

      i. Best practice; and
      ii. Comments from the Environment Court in case C71/2002 (including but not limited to paragraphs 41-54) and case C79/2002 (including but not limited to paragraphs 15 and 184-187).

Decision sought

2A Schedule of specific minimum flows for primary allocation takes in accordance with Policy 6.4.3, and

primary allocation limits in accordance with Policy 6.4.2(a)(i)

Catchment See maps B1-B5	Monitoring Site (with MS number) See Maps B1-B5	Minimum flow (litres per second)	Primary Allocation Limits in accord with Policy 6.4.2(a)(i)
~~Luggate catchment~~	~~SH6 Bridge (MS 11)~~	~~180 (November to April)~~ ~~500 (May to October)~~	~~500 litres/sec Luggate catchment from mouth to headwaters~~
~~Trotters catchment~~	~~Matheesons Weir (MS 12)~~	~~8 (October to April)~~ ~~35 (May to September)~~	~~30 litres/sec Trotters catchment from mouth to headwaters~~
~~Waianakarua catchment~~	~~Browns Pump (MS 13)~~	~~200 (October to April)~~ ~~400 (May to September)~~	~~190 litres/sec Waianakarua catchment from mouth to headwaters~~

2D Schedule of matters to be considered when setting minimum flows and allocation limits

1. The D-G requests the following amendments be made 2D.1 so that the consideration of future proposed minimum flows gives full effect to:

    a) Both the relevant parts of Section 6 and the Otago Regional Council's function as stated in section 30(1)(c)(iiia) of the Resource Management Act 1991; and
    b) Objective 6.3.1 of the Regional Plan: Water for Otago.

Decision sought

2D.1 When setting minimum flows in Schedule 2A for a catchment, consideration shall ~~may~~ be given to the following matters:

a) Any relevant matter required to give full effect to section 6 of the Resource Management Act;

When setting minimum flows in Schedule 2A for a catchment, consideration may be given to the following matters:

~~(a)~~ (b) Any existing or previous minimum flow regime or residual flow;
~~(b)~~ (c) The 7-day mean annual low flow;
~~(c)~~ (d) Interaction among water bodies;
~~(d)~~ (e) Ecological values and natural character, including the need for flow variability
~~(e)~~ (f) Demand for water, including community water supplies;
~~(f)~~ (g) Environmental, social, cultural, recreational and economic costs and benefits from taking and using water;
~~(g)~~ (h) Any other relevant matter in giving effect to Part 2 of the Resource Management Act.

2. The D-G requests the following amendments be made to 2D.2 so that the consideration of future proposed primary allocation limits gives full effect to:

   a) Both the relevant parts of Section 6 and the Otago Regional Council's function as stated in section 30(1)(c)(iiia) of the Resource Management Act 1991; and
   b) Objective 6.3.1 of the Regional Plan: Water for Otago.

Decision sought

2D.2 When setting primary allocation limits in Schedule 2A for a catchment, consideration shall ~~may~~ be given to the following matters:

(a) Any relevant matter required to give full effect to section 6 of the Resource Management Act;

When setting primary allocation limits in Schedule 2A for a catchment, consideration may be given to the following matters:

~~(a)~~ (b) Any existing or previous primary allocation limit;
~~(c)~~ (c) The amount of water currently taken as primary allocation;
~~(c)~~ (d) The 7-day mean annual low flow;
~~(d)~~ (e) The proposed minimum flow regime;
~~(e)~~ (f) Possible sources of water;
~~(f)~~ (g) Acceptable duration and frequency of rationing among consented water uses; and
~~(g)~~ (h) Social and economic benefits of taking water;

(i) Any other relevant matter in giving effect to Part 2 of the Resource Management Act.

Maps section B: Proposed maps for Luggate, Trotters and Waianakarua catchments

1. The D-G requests the deletion of these plans. For reasons given previously the D-G considers that:

    a) the method use to calculate the proposed minimum flows and therefore the primary allocation limits for the Trotters, Waianakarua and Luggate catchments is flawed; and

    b) Is inconsistent with:
        i. Best practice: and
        ii. Previous comments from the Environment Court.

    The D-G therefore considers that the creation of proposed new Map B1a and the proposed changes to Map B3 is not currently appropriate.

    Decision sought

    a) Delete proposed new Map B1a; and

    b) Delete the proposed changes to Map B3 regarding the identification of the Waianakarua and Trotters catchments and their respective monitoring stations.

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OTAGO REGIONAL COUNCIL
RECEIVED DUNEDIN
09 MAR 2009
FILE No. RT221
DIR TO MRP-SV

OTAGO REGIONAL COUNCIL – PROPOSED PLAN CHANGE TO REGIONAL PLAN: WATER FOR OTAGO

SUBMISSION BY OCEANA GOLD (NEW ZEALAND) LIMITED

SUBMISSION ON PROPOSED PLAN CHANGE 1B (MINIMUM FLOWS)

PARTS OF THE PROPOSED PLAN THAT SUBMISSION RELATES TO	OUR SUBMISSION IS	WE WOULD LIKE TO SEEK THE FOLLOWING DECISION FROM THE OTAGO REGIONAL COUNCIL
2D.1 page 6	This paragraph states that "when setting minimum flows in Schedule 2A for a catchment, consideration "*may*" be given to the following matters:" It is our submission that using the word "may" in this context could create a measure of uncertainty for users as Council could change the matters that need to be considered without consultation with effected parties.	That the word "may" be deleted and the matters that would be considered in setting minimum flows are detailed in order of priority taking into consideration all those matters that would be considered by Council.
2D.2 page 6	Same as above	Same as above

Oceana Gold wishes to be heard in support of its submission.

Maree Baker
Counsel for Oceana Gold

MAB-453174-189-2-V4

Date: 9 March 2009

Address for Service

Otago House, Cnr Moray Place and Princes Street,
Private Bag 1959, Dunedin
Telephone: 03 4715447
Fax/Email: 03 477 3184
maree.baker@andersonlloyd.co.nz
Contact Person: M A Baker

SUBMISSION ON THE PUBLICLY NOTIFIED PROPOSED PLAN CHANGES 1B (MINIMUM FLOWS) AND 1C (WATER ALLOCATION AND USE) TO THE REGIONAL PLAN: WATER FOR OTAGO UNDER CLAUSE 6 OF THE FIRST SCHEDULE TO THE RESOURCE MANAGEMENT ACT 1991

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To: Policy Team
Otago Regional Council ('**the Council**')
P O Box 1954
Dunedin

Submission on: Regional Plan: Water for Otago - Plan Changes 1B (Minimum Flows) and 1C (Water Allocation and Use)

Name: TrustPower Limited ('**TrustPower**')

Address: Private Bag 12023
Tauranga

(1) This is a submission on Proposed Plan Changes 1B and 1C (the '**Plan Changes**') to the Regional Plan: Water for Otago (the '**Regional Plan**') which have been notified pursuant to the Resource Management Act 1991 ('**RMA**').

(2) This submission relates to the Plan Changes in their entirety.

Introduction and Overview of TrustPower

(3) Overall the issues that have determined the approach of TrustPower in preparing submissions on the Plan Changes are as follows:

a) TrustPower has grown to become one of New Zealand's largest electricity retailers, serving just under a quarter of a million customers throughout the country utilising solely renewable energy generation.

b) TrustPower is committed to responsible and effective energy generation and to applying industry best practice to these activities. It acknowledges the importance of the environment to its continued operations, and has adopted a set of environmental policies which encourage the practical minimisation of any adverse environmental impacts associated with the company's activities. TrustPower is also active in various environmental initiatives within the vicinity of its generation assets. TrustPower's generation assets consist of 34 small to medium sized generation stations strategically located around New Zealand to ensure power is generated close to where it is consumed.

c) Within the Otago Region, TrustPower currently operates the Waipori Hydroelectric Power Scheme ('**HEPS**' or '**scheme**'), the Paerau Gorge HEPS, and the Deep Stream HEPS.

d) The Waipori HEPS was commissioned in 1907 and generates electricity from the Waipori River. Today it consists of four generating stations with a total average annual output of 192GWh, sufficient to supply electricity to approximately 24,000 typical New Zealand households.

e) The Paerau Gorge HEPS consists of the Paerau Power Station which has an annual output of 47.8GWh, and the Patearoa Power Station which has an annual output of 7.5GWh. Both stations were commissioned in 1984 and between them produce annual average output of 62GWh. This is sufficient to supply electricity to approximately 7,750 typical New Zealand households.

f) The Deep Stream HEPS was commissioned in 2008. The scheme channels water flowing from an existing Deep Stream Diversion, and impounds that water in a storage reservoir and then allows the water to be released through canals containing 2.5 MW generating units to Lake Mahinerangi. The scheme supplies power for the equivalent of 3,100 homes and also provides an emergency water supply for Dunedin City in the event of prolonged drought.

g) In total TrustPower's existing HEPS assets within the Otago Region supply electricity to approximately 34,850 typical New Zealand households.

h) TrustPower's existing HEPS within the region are important and strategic physical resources which warrant protection under Part 2 of the RMA because of their contribution to the region's economic and social wellbeing. The schemes will continue to play a pivotal role in power generation in the region. It is therefore appropriate that the Regional Plan does not unreasonably impede either the operating regime or the future consenting requirements for key strategic generating assets.

i) Against this background, TrustPower has a close interest in the development of objectives, policies and methods potentially impacting on its existing or future developments within the Otago Region. The Plan Changes introduce a number of changes within the Regional Plan that may have the potential to adversely affect the maintenance, operation and enhancement of TrustPower's existing assets.

General Submission

(4) This submission relates to Schedule 2D of Plan Change 1B and the whole of Plan Change 1C.

(5) While TrustPower supports some aspects of the Plan Changes, overall the Plan Changes are **opposed** to the extent that, unless amendments are made to give effect to the general and specific matters set out in this submission, as notified the proposed changes:

a) Will not promote sustainable management of natural and physical resources;

b) Are contrary to Part 2, in particular sections 7(i) and 7(j), and other provisions of the RMA;

c) Will not meet the reasonably foreseeable needs of future generations;

d) Will not enable social and economic well-being;

e) Are not necessary to avoid, remedy or mitigate adverse effects on the environment;

f) Do not represent the most appropriate means of exercising the Council's functions, having regard to the efficiency and effectiveness of other available means and therefore are inappropriate in terms of section 32 and other provisions of the RMA; and

In particular, but without limiting the generality of the above:

g) Fail to sufficiently or appropriately recognise the positive effects resulting from renewable energy schemes, such as HEPS, and their positive contribution to the region's wellbeing;

h) Have the potential to impact on the equitability of the distribution of water and the security of water supply to HEPS;

i) Do not sufficiently or appropriately recognise the value of existing infrastructure and water used for HEPS;

j) Do not adequately recognise and provide for the exercise of existing water rights;

k) Introduce, amend or delete provisions where it is not clear what the meaning, intent or effect of the changes are; and

l) Are supported by an inadequate section 32 report in the following ways:

i) Insufficient background is given to the issues the Council is attempting to resolve via the Plan Changes;

ii) Inadequate consideration is given to alternatives; and

iii) Inadequate assessment has been provided regarding the potential effects on plan and resource users.

(6) TrustPower seeks the following decision from the Council:

a) That the Plan Changes be amended to address TrustPower's concerns as set out in relation to the general and specific matters raised (above and below) in this submission; and

b) In the event that TrustPower's concerns are not adequately addressed that the Plan Changes be withdrawn entirely.

Specific Submissions

Plan Change 1B (Minimum Flows)

Schedule 2D

Submission 1

1.1 The specific provision of Plan Change 1B (Minimum Flows) that TrustPower's submission relates to is as follows:
Schedule 2D

1.2 TrustPower **opposes** Schedule 2D which refers to the matters to be considered when setting minimum flows and allocation limits. Having regard to the matters raised in the introductory statement to this submission, TrustPower submits that additional consideration needs be given within Schedule 2D.1 and 2D.2 to:

(a) The value of existing infrastructure and water used for renewable electricity generation;

(b) That where existing HEPS are already subject to an allocation and associated minimum flow requirements there should be a presumption that these will not be altered unless there is a demonstrable adverse effect on instream values;

(c) That water taken for HEPS, while not a consumptive use, needs to adequately taken account of and provided for; and

(d) With reference to the note to Schedule 2D, the relationship between the proposed new criteria and existing Policies 6.4.4 and 6.4.2 is not clear.

1.3 Relief sought:

(i) Amend sub-paragraph (a) in Schedule 2D.1 and 2D.2 to include a presumption that for HEPS the consented minimum flow requirements and allocation will not be altered unless there is a demonstrable adverse effect on instream values.

(ii) Amend sub-paragraph (f) or (g) in Schedule 2D.1 and sub-paragraph (g) in Schedule 2D.2 to expressly recognise the value of existing infrastructure and water used for renewable electricity generation.

(iii) Amend Schedule 2D.1 and 2D.2 to ensure that water taken for HEPS, while not a consumptive use, is adequately taken account of and provided for.

(iv) Add to Schedule 2D.1 and 2D.2 a new sub-paragraph to read:
(h) the impact on the operation of existing hydroelectric power schemes.

(v) Clarify the meaning and effect of the note to Schedule 2D in a manner that gives effect to the matters raised in this submission.

(vi) Any similar amendments to like effect.

(vii) Any consequential amendments that stem from the amendment of Schedule 2D.1 and 2D.2 as outlined in this submission.

Plan Change 1C (Water Allocation and Use)

Chapter 6 Water Quantity

Submission 2

2.1 The specific provision of Plan Change 1C (Water Allocation and Use) that TrustPower's submission relates to is as follows:

6.1 Introduction

2.2 The Plan Change seeks to add text to the Introduction which recognises, amongst other things, that conflicts arise when demand to take water affects existing consent holders, instream values and groundwater systems. By implication this statement includes reference to the potential conflict that can arise with HEPS, the importance of which is already recognised in the opening sentence of the Introduction. In this context, it is appropriate to add further discussion regarding the importance of hydroelectric power schemes.

TrustPower therefore requests that HEPS be recognised in the Introduction section to this chapter as important and strategic physical resources that warrant protection under Part 2 of the RMA. In particular, renewable energy as a Part 2 matter should be clearly stated. Recognition of the contribution to the Otago Region's social and economic wellbeing and health and safety pursuant to section 5 of the RMA and recognition of sections 7(b), (ba), (i) and (j) should be incorporated into the Plan Change.

TrustPower therefore **opposes** the proposed changes to section 6.1 Introduction in general and seeks amendment to include appropriate references to HEPS.

2.3 Relief sought:

(i) Insert the following text under 6.1 Introduction:
Hydroelectric power schemes play a vital role in the regions social and economic wellbeing and the importance of renewable electricity generation under Part 2 of the Resource Management Act is recognised in the Regional Plan: Water for Otago.

(ii) Any similar amendments to like effect.

(iii) Any consequential amendments that stem from the amendment of section 6.1 Introduction as outlined in this submission, including amendments to other parts of the Regional Plan (for example issues, objectives, policies, rules or methods) which seek to give effect to this statement.

Submission 3

3.1 The specific provision of Plan Change 1C (Water Allocation and Use) that TrustPower's submission relates to is as follows:

Issue 6.2.3 and Objective 6.4.0A

3.2 Issue 6.2.3 recognises that opportunities for the wider use of available water resources are constrained by, (a) inefficient or inappropriate practises; and (b) consent holders retaining authorisation for more water than is actually required for their activities.

Objective 6.4.0A also addresses the issue of water allocation in terms of the matters relevant to consideration of the intended purpose of use of the water.

While TrustPower supports the general intent of this Issue and Objective it is nonetheless **opposed** to the changes to these provisions on the basis that it is not necessarily appropriate to treat HEPS in the same way as other uses and this should be recognised in the explanation to the Issue and the Objective. More particularly existing lawfully established takes ought to be able to be relied upon by operators of HEPS and the water remain available for use in the scheme. This is especially so where there would be no net environmental benefit from reducing an allocation.

3.3 Relief sought:

(i) Insert in the Explanation to Issue 6.2.3:
A range of domestic, agricultural, industrial, hydro-electricity and commercial uses...[and add after sub-paragraph (h)] *However in the case of hydro-electric power generation existing lawfully established takes ought to be able to be relied upon by operators of HEPS and the water remain available for use in the scheme.*

(ii) Amend Objective 6.4.0A to recognise that:
When considering applications for the renewal of takes for hydro-electric power generation regard should also be had to the inherent efficiency of these takes, the value of investment associated with its physical resources and the desirability of such uses being able to continue to rely on water availability.

(iii) Any similar amendments to like effect.

(iv) Any consequential or other amendments that stem from the amendment of the Introduction and Explanation to Issue 6.2.3 as outlined in this submission.

Submission 4

4.1 The specific provision of Plan Change 1C (Water Allocation and Use) that TrustPower's submission relates to is as follows:

Policy 6.4.0B

4.2 Policy 6.4.0B has been developed with the intended purpose of promoting the shared use and management of water resources by water users within a particular area. Whilst the formation of groups to address water management may be beneficial in some cases TrustPower considers that any involvement in such groups should be voluntary and their ability to impact the exercise of existing consents should only be possible with the consent holder's agreement.

TrustPower is concerned that allowing the management of water resources to be undertaken by the water users, may impact on the equitability of distribution. TrustPower therefore **opposes** Policy 6.4.0B and requests amendments to ensure existing consents are protected, such as by transfers of water take consent upstream of TrustPower's HEPS. TrustPower also requests that membership to any proposed groups remains voluntary.

4.3 Relief sought:

(i) Insert the following text within the Explanation:
Decisions made through the implementation of this Policy cannot adversely impact the rights held by existing consents unless the consent holder agrees.

(ii) *Membership to the water user groups envisaged under this Policy is voluntary, and the decisions made by the group can only impact on the consents held or obtained by group members.*

(iii) Any similar amendments to like effect.

(iv) Any consequential amendments that stem from the amendment of the Explanation to Policy 6.4.0B as proposed in this submission.

Submission 5

5.1 The specific provision of Plan Change 1C (Water Allocation and Use) that TrustPower's submission relates to is as follows:

Policy 6.4.0C

5.2 This policy is intended to promote the retention of water within catchments by requiring that local demand be satisfied prior to export occurring, and appears to extend to existing consent holders applying to renew their allocation.

TrustPower **supports in part** Policy 6.4.0C though requests that it be clarified that the first-in-first-served approach under the RMA is unaffected by this Policy. TrustPower also request that further recognition of HEPS be included in this policy due to the importance placed on renewable energy by the RMA, the value of investment in infrastructure, and section 7(b) of the RMA which requires the efficient use and development of natural and physical resources.

5.3 Relief sought:

(i) Insert under Policy 6.4.0C the following text:
(e) the impact on existing hydroelectric power schemes within the catchment where water is to be exported from.

(ii) Clarify that the first-in-first-served approach under the RMA is unaffected by this Policy.

(ii) Any similar amendments to like effect.

(iii) Any consequential or other amendments that stem from the amendment of Policy 6.4.0C as proposed in this submission including to amend the rules (such as Rule 12.1.4.8) to give effect to this submission.

Submission 6

6.1 The specific provision of Plan Change 1C (Water Allocation and Use) that TrustPower's submission relates to is as follows:

Policy 6.4.1

6.2 TrustPower considers the defining of allocation quantities appropriate, however it appears this policy has been designed primarily for consumptive use and it is not clear how water taken and used for HEPS is to be managed and adequately taken account of and provided for in any defined allocation limit.

TrustPower also considers that provision needs to be made for permitted and section 14(3)(b) takes to be metered and recorded in order to maintain an accurate and complete record of all water abstractions, and better determine water allocations.

TrustPower **opposes** Policy 6.4.1 on the basis that takes for HEPS need to be appropriately taken account of and provided for in terms of defining allocation quantities, and metering of water takes should be considered as a tool in water take management.

6.3 Relief sought:

(i) That the following text be inserted into the Explanation:
In setting allocation quantities the Council will take account of and provide for takes associated with hydro-electricity generation to prevent any derogation of existing rights.

(ii) Within corresponding rules associated with Policy 6.4.1 all water takes (including those that are permitted or otherwise authorised by section 14(3)(b) of the Resource Management Act) must be metered and recorded in order to maintain an accurate and complete record of all water abstractions.

(iii) Any similar amendments to like effect.

(iv) Any consequential amendments that stem from the amendment of Policy 6.4.1 as proposed in this submission.

Submission 7

7.1 The specific provision of Plan Change 1C (Water Allocation and Use) that TrustPower's submission relates to is as follows:

Policy 6.4.1A

7.2 TrustPower **supports** Policy 6.4.1A as it affords protection to surface water from groundwater takes.

7.3 Relief sought:

(i) Policy 6.4.1A is retained as provided in the Plan Change.

(ii) Any similar amendments to like effect.

(iii) Any consequential amendments that stem from the retention of Policy 6.4.1A.

Submission 8

8.1 The specific provision of Plan Change 1C (Water Allocation and Use) that TrustPower's submission relates to is as follows:

Policy 6.4.2A

8.2 While TrustPower supports the general intent of this policy it is nonetheless **opposed** on the basis that it is not necessarily appropriate to treat HEPS in the same way as other uses and this needs to be recognised. More particularly, on renewal, the continuation of existing takes ought to be able to be relied upon by operators of HEPS and the water remain available for use in the scheme especially where there would be no net environmental benefit from reducing an allocation. In the alternative existing consent holders for HEPS should receive priority in relation to applications for supplementary consents in circumstances where their allocated volume cannot be achieved because of physical constraints.

It is critical the existing water volumes and rates for HEPS consents remain in place to ensure water resources can be fully utilised during times of high flow or flood conditions. Any reduction in existing consented flows could force TrustPower to spill water from a HEPS during times of high flow. This would be an inefficient use of resource, and would be inconsistent with section 7(b) of the RMA.

Furthermore, regard should also be had to the inherent efficiency of takes for HEPS and the fact that after use that water is available for re-allocation to downstream users.

As notified, this policy would adversely affect TrustPower operations in the Otago Region. TrustPower therefore opposes this policy and requests the addition of a clause to recognise the value of existing infrastructure in the decision making process.

TrustPower also opposes the implementation of this policy in areas where flow is not recorded, is unknown, or flow recording devices do not have an appropriate level of accuracy.

8.3 Relief sought:

(i) Insert a clause (and appropriate explanatory text) within Policy 6.4.2A as follows:

In addition, when considering applications for the renewal of takes for hydro-electric power generation it shall be recognised that it is not appropriate to treat HEPS in the same way as other uses and regard should also be had to the inherent efficiency of takes for HEPS, the value of investment associated with its physical resources and the

desirability of such uses being able to continue to rely on water availability.

(ii) Insert an 'exemption' to Policy 6.4.2A as follows:
Any water body where water flow is not recorded, is unknown or flow recording devices do not provide an appropriate level of accuracy.

(iii) Any similar amendments to like effect.

(iv) Any consequential or other amendments that stem from the amendment of Policy 6.4.2A as proposed in this submission, including to amend the rules (such as Rule 12.1.4.8) to give effect to this submission.

Submission 9

9.1 The specific provision of Plan Change 1C (Water Allocation and Use) that TrustPower's submission relates to is as follows:
Policy 6.4.2B

9.2 TrustPower submits in **support** of this policy as it protects from derogation of existing lawfully established water users and supports the first-in-first-served approach under the RMA to water allocation.

9.3 Relief sought

(i) Policy 6.4.2B is retained as provided in the Plan Change.

(ii) Any similar amendments to like effect

(iii) Any consequential amendments that stem from the retention of Policy 6.4.2B.

Submission 10

10.1 The specific provision of Plan Change 1C (Water Allocation and Use) that TrustPower's submission relates to is as follows:
Policy 6.4.9

10.2 Whilst the wording of this policy is itself clear, TrustPower considers that the wording of the Explanation needs to be improved to ensure that the users of the Regional Plan can achieve a better understanding of the purpose behind the policy. TrustPower therefore **opposes** Policy 6.4.9 and seeks amendment to the related Explanation.

Where the intended meaning of the changes to this Policy are inconsistent with the concerns raised by TrustPower in relation to other provisions of the Plan Changes, then further amendments are requested to ensure an approach consistent with addressing those concerns.

10.3 Relief sought:

(i) Amend the Explanation section so that it is easier for Regional Plan users to follow and understand and, where necessary, otherwise give effect to the concerns raised in this submission.

(ii) Any similar amendments to like effect.

(iii) Any consequential amendments that stem from the amendment of the Explanation to Policy 6.4.9 as proposed in this submission.

Submission 11

11.1 The specific provision of Plan Change 1C (Water Allocation and Use) that TrustPower's submission relates to is as follows:

Policy 6.4.10A

11.2 TrustPower **supports** this policy given the number of hydraulically connected aquifers throughout the Otago Region and the aim to maintain surface water base-flows by preventing damage to aquifers.

12.3 Relief sought:

(i) Policy 6.4.10A is retained as proposed in the Plan Change.

(ii) Any similar amendments to like effect.

(iii) Any consequential amendments that stem from the retention of Policy 6.4.10A.

Submission 12

12.1 The specific provision of Plan Change 1C (Water Allocation and Use) that TrustPower's submission relates to is as follows:

Policy 6.4.12A

12.2 Whilst the formation of groups to address water management may be beneficial in some cases TrustPower considers that any involvement in such groups should be voluntary and their ability to impact the exercise of existing consents should only be possible with the consent holder's agreement. TrustPower **opposes** this policy on the basis that better clarification of the role of Water Management Groups is required in order to assess how they operate, what their powers are and the implications of this. TrustPower also questions whether two different types of management groups are in fact necessary. There needs to be clear guidance to how these groups function in order that decisions made are fair and objective.

12.3 Relief sought:

(i) TrustPower seeks relief as per comments above for Policy 6.4.12 and 6.4.0B as follows:
Decisions made through the implementation of this Policy cannot adversely impact the rights held by existing consents unless the consent holder agrees.

(ii) *Membership to the water user groups envisaged under this Policy is voluntary, and the decisions made by the group can only impact on the consents held or obtained by group members.*

(iii) Any similar amendments to like effect.

(iv) Any consequential amendments that stem from the amendment of Policy 6.4.12A.

Submission 13

13.1 The specific provision of Plan Change 1C (Water Allocation and Use) that TrustPower's submission relates to is as follows:

Policy 6.4.13

13.2 TrustPower **opposes** Policy 6.4.13 as it lacks sufficient detail about the scope and extent of 'Council recognised rationing regimes' to fully assess their actual and potential impact on TrustPower's existing HEPS. As a minimum any rationing regime needs to appropriately recognise and provide for the nature of water use associated with HEPS and the need to recognise and maintain security of supply, particularly given the value of infrastructure investment.

13.3 Relief sought:

(i) Insert an 'exemption' to Policy 6.4.13 as follows:
Takes associated with uses that are not consumptive (for example hydroelectric power generation) are to be excluded from any rationing regime.

(ii) Insert within the Explanation section:
As a reflection of the importance placed on renewable electricity generation under Part 2 of the Resource Management Act and the fact that these uses are not consumptive in nature, such takes will not be subject to the controls developed under Policy 6.4.13.

(iii) Any similar amendments to like effect.

(iv) Any consequential or other amendments that stem from the amendment of Policy 6.4.13 including to amend the rules (such as Rule 12.1.4.8) to give effect to this submission.

Submission 14

14.1 The specific provision of Plan Change 1C (Water Allocation and Use) that TrustPower's submission relates to is as follows:

Policy 6.4.17

14.2 This policy allows consent holders to apply to transfer consents (both in location and ownership) to take water. TrustPower has significant concerns with this policy as it could lead to a situation where a take could be transferred upstream of an existing HEPS thereby reducing the amount of water available to satisfy the consents held for that scheme. It is appropriate that this policy include reference to a requirement for written approval from existing consent holders where the transfer is upstream of existing lawfully established users.

TrustPower submits in **opposition** of this policy unless existing rights are afforded better protection.

14.3 Relief sought:

(i) Insert the following text under Policy 6.4.17:
(e) The written approval of existing consent holders shall be required where the transfer is upstream of those consent holders.

(ii) Any similar amendments to like effect.

(iii) Any consequential amendments that stem from the amendment of Policy 6.4.17.

Submission 15

15.1 The specific provision of Plan Change 1C (Water Allocation and Use) that TrustPower's submission relates to is as follows:

Policy 6.4.19

15.2 TrustPower's **opposes** the deletion of this policy as it supports the principle that full term consents ought to be granted, particularly in circumstances where instream values are protected by the minimum flow regime imposed on that grant. This policy allows resource consent terms relating to certain policies to be up to 35 years which puts in place long term security of access to water resources.

15.3 Relief sought:

(i) Retain Policy 6.4.19.

(ii) Any similar amendments to like effect.

(iii) Any consequential amendments that stem from the retention of Policy 6.4.19.

Chapter 12 Rules: Water Take, Use and Management

Submission 16

16.1 The specific provision of Plan Change 1C (Water Allocation and Use) that TrustPower's submission relates to is as follows:

Chapter 12: General

16.2 TrustPower **supports in principle** the inclusion of the term 'and use' to the various rules that deal with the 'taking' of water on the basis that the intention is to make clear that any consent granted pursuant to that rule also authorises its use. The section 32 report however does not provide an explanation for the inclusion of the term 'use' and TrustPower would be opposed to these changes if it had the effect of requiring it to obtain 'use' permits for existing authorised takes that do not expressly state the word 'use' in the grant.

16.3 Relief sought:

Clarify in relation to all the relevant 'take and use' rules that:

(i) *Water permits issued prior the notification of Plan Change 1C authorise the use of the water that is the subject of any take.*

(ii) Any similar amendments to like effect.
(iii) Any consequential amendments that stem from the addition of the above clause.

Submission 17

17.1 The specific provision of Plan Change 1C (Water Allocation and Use) that TrustPower's submission relates to is as follows:

Rule 12.1.4.8(g) and (h)

17.2 Council has removed discretion over adverse effects upon any lawful priority attached to a resource consent (Rule 12.1.4.8(g)); and over whether the taking of water should be restricted to allow the taking or damming of water under any other permit (Rule 12.1.4.8(h)).

TrustPower requests that Rules 12.1.4.8(g) and 12.1.4.8(h) be retained given the continued operation of existing HEPS is a matter of national importance, and the encapsulating of these matters of discretion into another rule may lead to a derogation of TrustPowers consents.

TrustPower therefore **opposes** the removal of discretion for Rule 12.1.4.8(g) and Rule 12.1.4.8(h) on the basis that (g) and (h) are of such significance they should be stand-alone matters to be considered.

17.3 Relief sought:
(i) Retain Rules 12.1.4.8(g) and (h).
(ii) Any similar amendments to like effect.
(ii) Any consequential amendments that stem from the retention of Rules 12.1.8(g) and 12.4.8(h).

Submission 18

18.1 The specific provision of Plan Change 1C (Water Allocation and Use) that TrustPower's submission relates to is as follows:

Rule 12.1.4.8(xii)

18.2 Council has included an additional matter of discretion being any water storage facility available for the water taken and its capacity. Water storage is an operational issue in itself, and it is therefore not appropriate that it should be controlled by the Council. Rather the potential environmental impacts of any water storage facility should be addressed as part of the overall assessment

TrustPower **opposes** this rule on that basis that a decision to grant or refuse consent maybe based on the type of water storage facility (regardless of environmental impacts).

18.3 Relief sought:
(i) Delete Rule 12.1.4.8(xii).

(ii) Any similar amendments to like effect.
(iii) Any consequential amendments that stem from the deletion of Rule 12.1.8(xii).

Chapter 15: Methods Other than Rules

Submission 19

19.1 The specific provision of Plan Change 1C (Water Allocation and Use) that TrustPower's submission relates to is as follows:

Method 15.2.2 Water

19.2 This method has been amended to allow for the establishment of Water Management Groups in addition to Water Allocation Committees.

TrustPower considers that the establishment of such groups may be beneficial to some users. However, as stated above the functions and powers of the Groups and Committees need to be clearly defined. Furthermore, the decisions made by the Groups and Committees must not adversely impact existing consents and a consent holder's ability to operate.

TrustPower **opposes** Method 15.2.2 and also seeks that membership to the Groups and Committees is on a voluntary basis and only extends to member's consents.

19.3 Relief sought:
TrustPower seeks relief as per comments above for Policy 6.4.12, 6.4.0B and 6.4.12A as follows:

(i) *Decisions made by Water Management Groups cannot adversely impact the rights held by existing consents unless the consent holder agrees.*
(ii) *Membership to the Water Management Groups is voluntary, and the decisions made by the group can only impact on the consents held or obtained by group members.*
(iii) Any similar amendments to like effect.
(vi) Any consequential amendments that stem from the amendment of Method 15.2.2.

Submission 20

20.1 The specific provision of Plan Change 1C (Water Allocation and Use) that TrustPower's submission relates to is as follows:

Method 15.8

20.2 This method has been amended to incorporate new provisions for the calculation of supplementary allocation in addition to the current method for calculating the consented 7-day take and assessed actual take.

TrustPower **opposes** this method of calculation on the basis that there is no rationale provided for its use. Furthermore, the new calculation method is not clear or easy to understand. More detail and transparency is required so that users of the Regional Plan are able to apply and understand the techniques being used in determining water allocation.

20.3 Relief sought:

(i) Method 15.8 in relation to supplementary allocations be revised by the Council and a method adopted that is rational and able to be applied by water users.

(ii) Any similar amendments to like effect.

(iii) Any consequential amendments that stem from the amendment of Method 15.8.

Chapter 16: Information Requirements

Submission 21

21.1 The specific provision of Plan Change 1C (Water Allocation and Use) that TrustPower's submission relates to is as follows:

16.3.1

21.2 This section provides details of specific information that will be required when making an application to take surface or groundwater. TrustPower supports this requirement in principle.

TrustPower considers the inclusion of the requirement to provide annual or seasonal volumes (16.3.1.1) is appropriate as it allows for variation within annual or seasonal demand to be understood. TrustPower submits in **support** of this information requirement.

21.3 Relief sought:

(i) Retain 16.3.1 as provided in the Plan Change, save 16.3.1.4A, which is addressed under Submission 22.

(ii) Any similar amendments to like effect.

(iii) Any consequential amendments that stem from the retention of 16.3.1.

Submission 22

22.1 The specific provision of Plan Change 1C (Water Allocation and Use) that TrustPower's submission relates to is as follows:

16.3.1.4A

22.2 16.3.1.4A is a new provision requiring a description of all possible water sources along with feasibility studies including the costs and benefits of taking from each source.

TrustPower opposes this new provision and considers that this requirement is inappropriate in relation to water use for HEPS. If the provision is to be maintained further parameters need to be set, including a 'trigger' mechanism to determine when such an assessment is required. Clarification is also required as to whether this encompasses new consents or only re-consenting.

TrustPower submits in **opposition** to 16.3.1.4A, on the basis that such a requirement is not appropriate across the spectrum of consent applications. Some form of trigger mechanism is necessary to determine when such an assessment is necessary as not all consent applications need to address this matter. For example, the re-consenting of a HEPS should not require an assessment of all possible water sources and a cost/benefit analysis for taking water from each source. Given that the infrastructure is already in place it is abundantly clear that the water source being used to date should remain. Accordingly, such an assessment serves no purpose.

In determining activities that need to be captured by 16.3.1.4A, reference should also be made to the provisions of sections 7(b) and 7(j) of the RMA, which refer to the efficient use and development of natural and physical resources and the benefits to be derived from the use and development of renewable energy.

22.3 Relief sought:

(i) Delete 16.3.1.4A; or

(ii) If retained, HEPS are to be exempt from 16.3.1.4A due to the importance placed on renewable electricity generation under the RMA, and also given that such an assessment would be superfluous; and

(iii) If retained that a trigger mechanism be established to determine the circumstances where 16.3.1.4A should be invoked.

(iv) Any similar amendments to like effect.

(v) Any consequential amendments that stem from the deletion or amendment of 16.3.1.4A.

Submission 23

23.1 The specific provision of Plan Change 1C (Water Allocation and Use) that TrustPower's submission relates to is as follows:

Appendix 2A: Water Management Groups

23.2 Appendix 2A indicates the purpose for establishing Water Management Groups is to provide groups of water users with more responsibility for managing their own water takes under delegated specific functions by the Council. In this regard TrustPower is considers the establishment of such groups appropriate, though as previously stated these are **opposed** as further clarification of each entities functions and powers is needed. In addition, the relationship between Water Allocation Committees and Water Management Groups is not abundantly clear and needs to be further clarified, including why two separate entities are necessary.

23.3 Relief sought:

(i) Clarification be provided as to the functions and powers of Water Allocation Committees and Water Management Groups in line with submissions already made by TrustPower in relation to this matter.

(ii) Any similar amendments to like effect.

(ii) Any consequential amendments that stem from the amendment of Appendix 2A.

(7) TrustPower wishes to be heard in support of its submission.

(8) If others make a similar submission, TrustPower would be prepared to consider presenting a joint case with them at any hearing.

Signature:

Laura Peddie
Environmental Officer
TrustPower Limited

Date: 9th March 2009

Address for service:

TrustPower Limited
Private Bag 12023
Tauranga

Attn: Laura Peddie

Telephone: (07) 574 4888 ext 4304

Facsimile: (07) 574 4877

Otago Regional Council

SUBMISSION FORM
Proposed Plan Change 1B Minimum Flows
to the Regional Plan: Water for Otago

Form 5, Clause 6 of the First Schedule, Resource Management Act 1991.

65

Office use only

Full name of submitter: John Joseph Laing

Name of organisation *(if applicable)*: Waitaki Coastal Care

Postal address: Postal Delivery Centre

Postcode:

OTAGO REGIONAL COUNCIL
RECEIVED DUNEDIN
09 MAR 2009
FILE No. RI221
DIR TO MRP-SV

Telephone: 0364395337

Fax:

Email: hampden@xtra.co.nz

Contact Person: John Laing

I wish / do not wish *(circle preference)* to be heard in support of my submission.

If others made a similar submission, I will consider presenting a joint case with them at a hearing.
(Cross out if you would not consider presenting a joint case).

Signature of submitter: J Laing Date: 05.03.2009.
(or person authorised to sign on behalf of person making submission).

Please note that all submissions are made available for public inspection.

The parts of the proposed plan change that my submission relates to are:
(Give clear references if possible e.g. reference number, policy x, rule y)

Proposed Plan Change 1B Minimum Flows — Form 5, Clause 6 of the First Schedule RMA 1991. Waianakarua River - Shedule 2 Policy 6.4.3 and Policy 6.4.2.(a)(i)

My submission is:
(Include whether you support, oppose, or wish to have amended the parts identified above, and give reasons)

I oppose the above changes to the Regional Plan-Water for Otago.

I wish to have it amended to 350 litres per second during the months (October - April) and have the Primary Allocation Limit raised to 300 litres per second.

Please turn over

I seek the following decision from the local authority:
(Give precise details e.g. changes you would like made)

I ask that the changes be given for the following reasons.

- The river mouth closes over at 200 L per second.
- Water quality decreases hugely below 300 L per second.
- Fish + invertebrate life in the river decreases at 200 L per second.
- Dairy farming is a very recent arrival in this catchment and traditional river users have been using the Waianakarua Catchment for years prior to their arrival.
- Dairy farmers will pollute + have already done so to this catchment.
- At the consultation meetings their was strong opposition to levels below 300 L per second.
- The O.R.C. are supporting economic development over in stream values.

SUBMISSIONS MUST BE RECEIVED BY 5.00 PM, MONDAY 9 MARCH 2009.

Please fold and secure with a small piece of tape.

FreePost Authority ORC 1722

Free

Otago Regional Council
Private Bag 1954
Dunedin 9054

Attention Policy Team

Otago Regional Council

SUBMISSION FORM
Proposed Plan Change 1B Minimum Flows to the Regional Plan: Water for Otago

Form 5, Clause 6 of the First Schedule, Resource Management Act 1991.

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OTAGO REGIONAL COUNCIL RECEIVED DUNEDIN 09 MAR 2009 FILE No. RI 22 1 MRP-SV DIR TO

Full name of submitter: MICHAEL O'CONNOR

Name of organisation (if applicable): M & J O'CONNOR FAMILY TRUST

Postal address: 66 McKERROW ROAD ILORD OAMARU

Postcode: 9495

Telephone: 03 4394447 Fax: 03 4394447

E-mail: RONNOCO@FarmSide.co.nz Contact Person: MICHAEL

I do not wish (*circle preference*) to be heard in support of my submission.

If others made a similar submission, I will consider presenting a joint case with them at a hearing.

(*Cross out if you would not consider presenting a joint case*). I own and farm both sides of the South branch of the Waianakarua River immediately west of SH1. Farming mainly bull beef with some dairy grazing. My primary Water Permit No 2002-776 allows part of my property to be irrigated.

Signature of submitter: [signature] Date: 9 MARCH 2009

(*or person authorised to sign on behalf of person making submission*).

Please note that all submissions are made available for public inspection.

(*Give clear references if possible e.g. reference number, policy x, rule y*)

Proposed Plan Change 1B minimum Flows Schedule 2 Waianakarua River – oppose.

(*Include whether you support, oppose, or wish to have amended the parts identified above, and give reasons*)

The proposed minimum flow data for the Waianakarua River appears to be based on the Browns pump site information which has only been installed in 2005 - not enough information to use to set minimum flow. Previous to that intermittent manual reading

Set minimum flow at 150 L/S. (15 September to 30 May) O.R.C. observations show native species are looked after at this minimum level. The National Angling Survey 1994/96 considers this river not a significant sports fishery. Therefore the management objective for the Waianakarua River is to substain the diverse native fish community that now exists

Please turn over

(Give precise details e.g. changes you would like made)

1 Minimun flow to be set at 150 L.S. – 15 Sept. to 30 May. This period gives the best results from irrigation. There has never been a minimun flow on this river, irrigation has been happening over 40 years yet the river still rates 8 out of 77 for water quality. It has been shown that native fish survive at this flow.

2 Information from 'Browns site' since its installation in 2005 is far too short to use to set minimun flow need more time to obtain more accurate data.

No consideration has been given to the social and economic impact that may occur at imposing minimun flows that would restrict days of non irrigation.

We seek that Council undertake comprehensive flow monitoring over a period of at least 5 years before implementing minimun flow provisions on consent holders.

We also seek the extension of the irrigation period from Mid September to 30 May to coinside with the warmer months that now exists

SUBMISSIONS MUST BE RECEIVED BY 5.00 PM, MONDAY 9 MARCH 2009.

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Please fold and secure with a small piece of tape.

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Otago Regional Council

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SUBMISSION FORM
Proposed Plan Change 1B: Minimum Flows
to the Regional Plan: Water for Otago
December 2008

Form 5, Clause 6 of the First Schedule, Resource Management Act 1991

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Full name of submitters: See signatories attached

Name of organisation: Coastal Otago River Communities

Postal Address: Maurice Corish, Moeraki, RD2, Palmerston, Otago
Postal Code 9482

Telephone: 03 4394184 **Fax:** N/A

Email: paschal@orcon.net.nz **Contact person:** Maurice Corish

We wish to be heard in support of this submission. Individual signatories to this group submission may choose to submit a separate submission as well under their own name.

Date: 9 March 2009

The parts of the proposed plan change that my submission relates to are:

Mainly proposed plan provision Schedule 2A Trotters catchment Reference #5 and Schedule 2D Reference #7

Our submission is:

The technical report (Management flows for Aquatic Ecosystems in Trotters Creek ORC, Aug 2006) provides the following information regarding the flows for maximum habitat and the flow when significant habitat reduction may be observed.

Fish Species	Flow for Max. Habitat (L/s)	Flow when significant habitat decline (L/s)
Common bully, whitebait species, upland bully and juvenile brown trout	120	70 - 10
Longfin eel	60	35
Blue gill bullies	250	75
Koaro	200	35
Canterbury galaxiids	35	10
Adult brown trout	300	90

The data shows significant reduction in habitat for native species occurs at flows between 70 and 10 L/s. This implies it is best to keep flows above this range as much as possible.

However, Council proposes to set the following minimum flow regime

Period	Flow (L/s)
Oct to April	8
May to Sept	35

A key element of maintaining species numbers and diversity appears to be maintaining sufficient flow to provide adequate flushing, food productivity and connectivity to the ocean.

The report also indicates that flow estimates (including MALF) are based on very little reliable data.

And there appears to be little information on the extent to which the natural flow regime and the aquatic composition of the creek have already been or are being altered as a result of other factors including catchment landuse change (e.g. exotic coniferous tree afforestation) and water allocation.

As locals who periodically use and enjoy the Trotters Creek, we are aware that it is special because it has a significant area of original native bush, a diversity of fish life and very clean clear water, particularly in the upper reaches.

Accordingly, we submit that Council needs to adopt a precautionary approach to setting the minimum flow.

I seek the following decision from the local authority:

1. Based on the above information, the undersigned consider that the 8 L/s Oct to April minimum flow is inadequate to sustain the aquatic values required by the RMA and associated plan provisions. The need for a significantly higher minimum flow was the clear and unanimous message from the recent ORC community consultation meeting on this proposed plan change.

2. We therefore propose that, until such time as a lower level can be reliably demonstrated as safe, the May to Sept minimum flow be retained year round. Otherwise the future of the fish species and the aesthetic values of the stream are put at serious and unnecessary risk of irreversible harm.

3. We also believe policies are needed to ensure that the Creek has adequate flow variability to maintain habitat and provide for key aquatic function in case of consents for supplementary take being sought in the future.

SUBMISSIONS MUST BE RECEIVED BY 5.00PM, MONDAY 9 MARCH 2009

Please send submissions to:

Email: policy@orc.govt.nz

Post: Attn: Policy Team, Private Bag 1954, Dunedin 9054

Fax: (03) 479 0015 (Attn: Polity Team)

Deliver: 70 Stafford Street, Dunedin; or

William Fraser Building, Dunorling Street, Alexandra; or

The Station, 1st Floor, Cnr Shotover and Camp Streets, Queenstown

I support the Trotters Creek Catchment Community Submission on Proposed Plan Change 1B (Minimum Flows) for Trotters Creek.

Name	Address	Telephone/Email	Signature
Russell Allan RITCHIE	4 Heath Street Moeraki	439-4418	4/3.09.
Rob Campbell	54 Kaika Road Moeraki	439 4333	4/3/09
Colleen Dooley	47 Derby Street Hampden 9410	4394694	C. Dooley 4.3.09
Maurice CORISH	22 Tenby St. Moeraki	439 4184	4.3.09.
SCOTT DUNAVAN	P.O. BOX 6, HAMPDEN 9462	027-290-3643	
Macfarlane Family	RD2, Palmerston, Otago	03 4394824 dugald@es.co.nz	A Macfarlane
CATHERINE WALLACE	55 NICOLSON RD HAMPDEN 9410	439 4599	C Wallace
R. Tanaka	55 NICOLSON Rd Hampden 9410		5.3.9

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a/p
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I support the Trotters Creek Catchment Community Submission on Proposed Plan Change 1B (Minimum Flows) for Trotters Creek.

Name	Address	Telephone/Email	Signature
Morgan Trotter	2RD Palmerston Otago	027222 5067	Morgan Trotter
MURRAY JUDGE	HERBERT	03 439 5660	
BRONWYN JUDGE	HERBERT	03 439 5660	

6th March, 2009.

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Otago Regional Council,
Private Bag 1954,
Dunedin 9054.

Attn: Policy Committee.

Proposed Plan Change (Minimum Flow) to Trotter's Creek.

It has come to our attention that the ORC is looking at reducing the minimum flow of Trotter's Creek, the watercourse that flows into the Pacific just 5 minutes south of Hampden.

We have applied to the ORC for a copy of the document pertaining to Trotter's Creek, but so far it has not been forthcoming. Hence the information in this appeal of ours, lacks the detail that perhaps it should have.

The ORC has determined the wildlife in the creek and the flow rates that are required to maintain the creek as a healthy habitat for this wildlife. The minimum flow rate recommended within the ORC document is set at 20 litres per second. The proposed change seeks to reduce this recommendation to 8 litres per second. That is less than a plastic household bucket of water to be set as a desirable minimum flow in a waterway. Your own information states some of the creatures dwelling within the Creek's water are going to suffer from loss of a natural environment at flows of 80 litres per second.

The need to take water from the Creek at present is to service the irrigation of only one farm. There may yet be other farmers waiting in the wings wishing also to be able to take water from the Creek at some time in the future. With the area of pine forests in the catchment growing as well as the pine trees themselves growing, there is established data to show that the amount of runoff from the catchment into the waterway is being diminished.

The waterway itself is a small one, and it requires all the help it can get to maintain itself and its inhabitants in a healthy condition. Hence this letter from us voicing our concern at the prospect of a waterway being "developed" that has little or no room for fluctuations in and impediments to its natural flow.

One of us would be willing to speak on this matter to the Council if they so wished.

Yours Sincerely,

TREVOR and ELIZABETH NORTON.
16 Lancaster St, Hampden. 9410. Ph 03 4394887

Otago Regional Council

SUBMISSION FORM
Proposed Plan Change 1B Minimum Flows
to the Regional Plan: Water for Otago
Form 5, Clause 6 of the First Schedule, Resource Management Act 1991.

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Full name of submitter: Graeme John Thompson

Name of organisation *(if applicable)*:

Postal address: 27 Bute St Moeraki RD Palmerston

Postcode:

Telephone: 034394900 Fax: 034394900

Email: Contact Person:

OTAGO REGIONAL COUNCIL RECEIVED DUNEDIN 09 MAR 2009 FILE No. RI 221 TO MRP SK

I wish / ~~do not~~ wish *(circle preference)* to be heard in support of my submission.

~~If others made a similar submission, I will consider presenting a joint case with them at a hearing.~~
(Cross out if you would not consider presenting a joint case).

Signature of submitter: Date: 9-3-09
(or person authorised to sign on behalf of person making submission).

Please note that all submissions are made available for public inspection.

The parts of the proposed plan change that my submission relates to are:
(Give clear references if possible e.g. reference number, policy x, rule y)

Changeing Minimum Flows In Trotters Gorge Creek.

My submission is:
(Include whether you support, oppose, or wish to have amended the parts identified above, and give reasons)

I oppose. Having Farmed In South Otago for over 40 years I started work at D.J. Mathesons in 2007. The irrigation on his property is a vital part for finishing Lambs. In 2007-2008 Season all Lambs would have Been Sold as Stores if Not for Irrigation. If there was No irrigation there would Be No Work for me.

I seek the following decision from the local authority:

(Give precise details e.g. changes you would like made)

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SUBMISSIONS MUST BE RECEIVED BY 5.00 PM, MONDAY 9 MARCH 2009.

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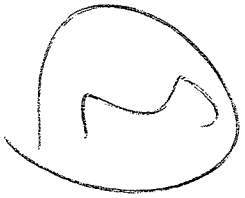
Otago Regional Council
Private Bag 1954
Dunedin 9054

Attention Policy Team



Otago Regional Council

SUBMISSION FORM 1B: Minimum Flows
Proposed Plan Change ~~1C Water Allocation and Use~~
to the Regional Plan: Water for Otago
Form 5, Clause 6 of the First Schedule, Resource Management Act 1991.

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OTAGO REGIONAL COUNCIL
RECEIVED DUNEDIN
09 MAR 2009
FILE No. RI 221
DIR TO MRP-SV

Full name of submitter: Kelia Elisabeth & Anthony Paul. Liz & Paul Bartlett

Name of organisation *(if applicable)*: The Retreat

Postal address: McKay Rd. or 125 Main Rd. Waikouaiti. Dunback.

Postcode:

Telephone: 03 465 7960

Fax:

Email:

Contact Person: Paul Bartlett

~~I~~ We ~~wish~~ / do not wish *(circle preference)* to be heard in support of my submission.

~~I~~ others made a similar submission, I will consider presenting a joint case with them at a hearing.
(Cross out if you would not consider presenting a joint case).

Signature of submitter: A Bartlett Date: 3.09
(or person authorised to sign on behalf of person making submission).

Please note that all submissions are made available for public inspection.

The parts of the proposed plan change that my submission relates to are:
(Give clear references if possible e.g. reference number, policy x, rule y)

The entire plan.

My submission is:
(Include whether you support, oppose, or wish to have amended the parts identified above, and give reasons)

Trotters Creek is a healthy free flowing creek that begins on our property at the Retreat
This creek has served the needs of the people that live alongside it for many years
There appears to be adequate flow to sustain current use
We would like to support the status quo
* The title deeds of our property there is a water right registered for the property

I seek the following decision from the local authority:
(Give precise details e.g. changes you would like made)

Remain with the status quo

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Attention Policy Team

Otago Regional Council

SUBMISSION FORM
Proposed Plan Change 1B Minimum Flows
to the Regional Plan: Water for Otago

Form 5, Clause 6 of the First Schedule, Resource Management Act 1991.

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OTAGO REGIONAL COUNCIL
RECEIVED DUNEDIN
09 MAR 2009
FILE No. RI221
MRP-SV

Full name of submitter: William Porteous McKerrow

Name of organisation *(if applicable)*: NA

Postal address: 123 McKerrow Road

RD. Oamaru

Postcode: 9495

Telephone: 03 439 4805

Fax: 03 439 4809

Email: NA

Contact Person: As Above

I wish/~~do not wish~~ *(circle preference)* to be heard in support of my submission.

If others made a similar submission, I will consider presenting a joint case with them at a hearing.
(Cross out if you would not consider presenting a joint case).

Signature of submitter: [signature] Date: 5/03/09
(or person authorised to sign on behalf of person making submission).

Please note that all submissions are made available for public inspection.

The parts of the proposed plan change that my submission relates to are:
(Give clear references if possible e.g. reference number, policy x, rule y)

Part 1B Minimum Flow Waianakarua River
Section 27

My submission is:
(Include whether you support, oppose, or wish to have amended the parts identified above, and give reasons)

Oppose the proposed minimum flow of 200 ltrs per sec. My observations of the river (after living on its boundary for over 70 years) confirm that the instream life can survive quite comfortably at flows below 200 ltrs per sec. As the river has often dropped below this figure, through natural climatic changes, with no adverse effects.

I seek the following decision from the local authority:
(Give precise details e.g. changes you would like made)

I would request that the minimum flow proposed be reduced to 150 ltrs per second for the reasons given in the attached submissions

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Attention Policy Team

Otago Regional Council

SUBMISSION FORM 1B : Minimum Flows

Proposed Plan Change ~~1C Water Allocation and Use~~

to the Regional Plan: Water for Otago

Form 5, Clause 6 of the First Schedule, Resource Management Act 1991.

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OTAGO REGIONAL COUNCIL RECEIVED DUNEDIN 09 MAR 2009 FILE No. DIR TO

Full name of submitter: William Porteous McKerrow

Name of organisation *(if applicable)*: N/A

Postal address: 123 McKerrow Road

RD1 Oamaru

Postcode: 9495

Telephone: 03 439 8805

Fax: 03 439 8804

Email: N/A

Contact Person: As Above

I wish / do not wish *(circle preference)* to be heard in support of my submission.

~~If others made a similar~~ submission, I will consider ~~presenting~~ presenting a joint case with them at a hearing.
(Cross out if you would not consider presenting a joint case).

Signature of submitter: [signature] Date: 5/03/09

(or person authorised to sign on behalf of person making submission).

Please note that all submissions are made available for public inspection.

The parts of the proposed plan change that my submission relates to are:

(Give clear references if possible e.g. reference number, policy x, rule y)

Plan change 1B Minimum flows Waianakarua River - Schedule 2D

My submission is:

(Include whether you support, oppose, or wish to have amended the parts identified above, and give reasons)

Oppose proposed low flow of 200 Ltrs per sec. and request this flow be amended to 150 Ltr per sec with a summer flow from mid september to mid may.

Please turn over

I seek the following decision from the local authority:
(Give precise details e.g. changes you would like made)

An amendment to reduce the minimum flow from 200 Ltrs per sec to 150 Ltrs per sec with a summer flow from mid may to mid September.
See attached submission.

SUBMISSIONS MUST BE RECEIVED BY 5.00 PM, MONDAY 9 MARCH 2009.

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Otago Regional Council
Private Bag 1954
Dunedin 9054

Attention Policy Team

I support fully, the submissions made by messrs M O'Connor and M Holland, so will not repeat them

Being a third generation farmer, I have lived beside the Waianakarua river for over 70 years. During that period I have witnessed massive floods and prolonged periods of severe drought which have caused the flow in the river to drop below the proposed low flow of 200 ltrs per sec from natural causes. These low flows occured long before any water was taken for irrigation purposes.

Over this period of time I have not observed any noticeable adverse effects on either the water quality or on the instream inhabitants of the river. It is well documented that the native fish and invertebrates can survive quite happily in flows of 150 ltrs per sec or less eg Trotters creek. The only inhabitant which prefers a higher minimum flow is the brown trout. This species however is not a native, having been introduced to the waterways and has never been resident in large numbers. I would suggest that the presence of brown trout in the waterway would have a much greater adverse effect on the survival of the native species than than would any low flow.

While there is a small population of trout in the river, it has never had a high reputation as a recreational fishing river. This was admitted at the earlier workshops by a keen fisherman, one Rodney Elder. The population of trout that are present seem to be capable of surviving by taking refuge in the many large and quite deep pools which exist over the length of the river.

When irrigation extraction began in the area 40-50 years ago those farmers taking water would cease operations on their own accord ~~when~~ before the flow became critical. It should be noted that those early consented takes on the south branch were much greater than those in operation at the present time.

It was interesting to note that those opposing the suggested low flows at the workshops were all either relatively new residents in the area or lived a great distance from the river. They therefore had very limited knowledge of the naturally occurring fluctuations in the flow. It was also interesting to note that the few who did live on the river were many kilometres above the first point of take, which is only a short distance from the sea. The only consented take upstream is that of the Herbert-Waianakarua rural water scheme which they all rely on for their domestic water supply. The advent of irrigation, especially in the dairying industry has seen a marked increase in the number of staff employed in the area, and this has had a flow on effect on businesses, schools, sporting bodies and service clubs. It is essential for the survival of the rural community that these employment opportunities are preserved.

In conclusion, my objection would be met by ammending the proposed low flow to 150 ltrs per sec and extending the irrigation season at each end (this could be at a higher flow rate to assist fish in the spawning season

H Pole/Glennon