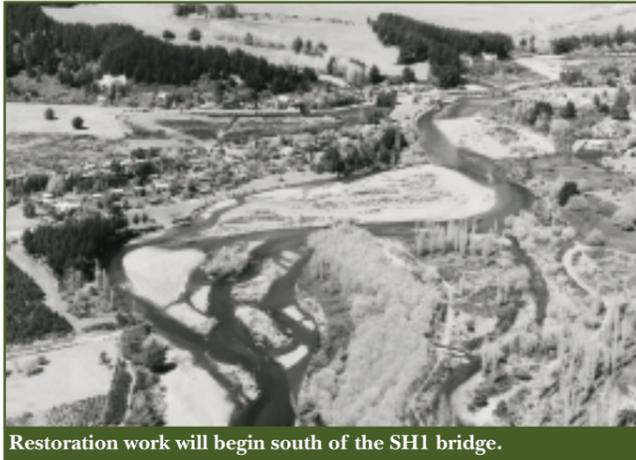


Environment Waikato restoration proposals for the Tongariro welcomed

Following a recent meeting of the Advocates Committee and representatives from Environment Waikato, it is now clear that the authority has taken on board many of the ideas and proposals made by the Advocates during river inspections and analysis of the Virginia Church Parliamentary Submission carried out by EW last year.

Advocates' President Mark Cosgrove is pleased with developments, coming hard on the heels the successful restoration work carried out on the Tauranga-Taupo River, however, he is more cautious when commenting on funding for these works.

"Much of the cost will come from Project watershed rates recently imposed. While the money will be well spent, our dismay is that central government, having neglected these works for nearly 40 years since the inception of the Tongariro Power Development scheme, has abdicated its responsibility and placed the burden directly upon local ratepayers. This is despite well -documented assurances and promises that little damage would be caused and any that did would be repaired," says Mark.



Restoration work will begin south of the SH1 bridge.

Despite this down side the Advocates look forward to the restoration work, which has already been started by Environment Waikato. Currently, spraying of troublesome willows in the lower river has already been undertaken, while EW seeks resource consents for the more substantial work proposed, which can be summarised as follows:

Protection Works

On the left bank, stop bank extensions from Poto Street and top up of the existing bank from Te Aho Reserve (Judges Pool) to the SH1 bridge will be made. A new stop bank across lower areas from The Bridge Lodge to Waipapa Road is proposed and channel controls implemented at the Crescent reserve downstream to the Te Rewha Street bluff (near the Swirl Pool).

On the right bank side, the existing stop bank from SH1 to Herekieke Street will be raised. Erosion controls (permeable groynes) from Herekieke Street to Tongariro Lodge will also be made. Road upgrading and erosion control will be carried out at the end of Grace's Road and infilling of low spots will be done.

Channel Controls

This will encompass clearance of stranded logs and trees between river channels from SH1 bridge to de Latours Bend; extraction and relocation of gravel from the constriction at Grace's Road to the river mouth. There will also be sediment extraction at relocation of elevated shoals in the river channel below the SH1 bridge for use in river works; control of weed vegetation (willows) along the river channel from the constriction at Grace's Road to the river mouth. Sediment will be extracted from local shoals in the lower-river and local overflow channels closed.

In addition to these works, other restoration initiatives will be undertaken by river-bed owners - the Tuwharetoa Maori Trust Board and Turangitukua via these groups', own environmental plans. Funding will be provided by Genesis to complete the work.

ADVOCATES PUSH FOR A MANAGEMENT UMBRELLA GROUP TO ACHIEVE OBJECTIVES

Over the past few months the Advocates committee has meet with organisations that have responsibility for managing the river, its environment; its fishery, and the power scheme that uses its water.

These meetings have been most beneficial in conveying information about the Advocates and for gaining an increased understanding of the role and priorities of the each of the organisations. In addition to the establishment of positive communication between the Advocates and the various groups, we have used the meetings to emphasise the importance of setting up an umbrella group or management forum for the river.

The response has been positive and Environment Waikato has invited the Advocates to develop a proposal for such a group.

The proposal has been developed and submitted to Environment Waikato for consideration.

The rationale for a management forum group includes issues such as:

a) The Resource Management Act advocates that citizens can and should take part in environmental management. A guiding principle of the nation's

environmental laws is that the environment be managed sustainably. It is essential that this principle is honoured and seen to be honoured.

One way of achieving this broad aim is to provide a generative and supervisory structure in the form of a management group which represents the key primary obligations and interests of Iwi, industry, catchment authority/authorities, recreational users and Advocates.

b) The Tongariro River is the only significant river in the country without a management group. Given the significance of this river it is generally agreed, from discussions the Advocates have had with a number of organisations involved with the river, that the river would benefit from the establishment of an umbrella management forum. The forum would generate greater synergy amongst the groups involved when making decisions affecting the river.

This proposal sets a possible form and function for an umbrella management Forum for the Tongariro River.

This is an exciting development in terms of establishing a working dialogue with groups directly affecting the river. Advocates will be kept informed about the progress of the management forum in future issues of the Advocate newsletter.

PRESIDENT'S COMMENT

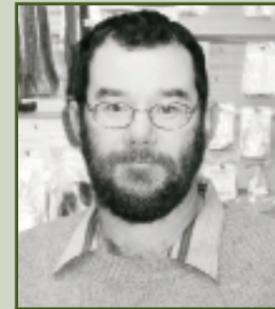
Greetings Advocates

With some pride we publish our second newsletter. Again, we thank Robert MacDonnell for editing and producing this, and Robin Parish for dealing with its distribution. Our web site (tongariroriver.co.nz) is being developed by Sylvia Smith's company, Origin Design and should be up and running soon.



Sylvia Smith and Robert MacDonnell

At our recent AGM, held on Easter Sunday in Turangi, 60 members were present. The meeting itself dealt mainly with refinements to the Advocates' rules, and there was a discussion about where we hoped to be in one year's time. There are two major projects under way. We need as many members as we can get if we are to have any political leverage, so extending the membership base is one priority. The second is to take part in and guide the setting up of a Management Forum for the Tongariro River. Of course there are other matters with which we wish to deal but these two are our main concern at present.



Alan Appleton

At the AGM Arthur Parish retired from the Committee. We thank Arthur for his significant contribution. Alan Appleton was elected to fill that vacancy. Alan, a Turangi resident and keen angler, has been a schoolteacher, later gaining an honours degree from Massey in Resource and Environmental Planning. He has experience of resource consent hearings concerning the Moawhanga River and then Mighty River Power's application for resource consents over Lake Taupo.

I hope you find the contents of this Newsletter informative and thought-provoking.

Best wishes,
Mark Cosgrove, President

THE FIRST OF THE SERIES OF ADVOCATES SEMINARS

"Lake Taupo and its rivers - moving forward with imperfect understanding", 13 July 3 - 5 pm Tongariro Bridge, Lodge Turangi

All Advocates members and interested parties should make an effort to hear a special presentation by Professor David Hamilton, who holds the chair of Lakes Restoration and Management at the University of Waikato, and Dr Ian Hawes, Scientist with NIWA with responsibility for the Lake Taupo Monitoring Project. These two experts have accumulated much interesting and relevant data.

Responding to a request from the Advocates their presentation will focus on issues that are of importance in terms of the lake as a sustainable environment and habitat for trout. Issues addressed will include data about catfish, their estimated numbers, distribution, effect on the health of the Lake and on trout habitat and food supply; the impact of water quality, quantity and the role of lake weed; and ideas on the value and nature of possible monitoring of the River .

Here is an excellent opportunity to keep up with research that vitally affect the Advocates' concerns and objectives. This is the first of a series of seminars to be organised by the Advocates inviting experts in a number of relevant fields to address members and interested public.

THE PAST PREDICTS THE FUTURE

Advocates' Treasurer Robin Parish considers the impact of the Tongariro Power Development on water quality.

The key content of this article was compiled for the government of the day by scientist C.S.Woods in an attempt to survey and anticipate power-scheme consequences before this multi-million dollar project began. In 1964 environmental consideration about water quality were already worrying scientists and environmental groups overseas, however in New Zealand, water quality was not a significant issue.

Ten years later, scientists assembling water-quality data about New Zealand's largest North Island Lake and its catchments, discovered some very unpleasant facts, which now seem to account directly for the current prolific weed growth in the tailrace at Tokaanu. That weed growth has the potential for a major negative impact on the water quality of Lake Taupo and the fishery. In 1977 scientists established for the first time that Lake Taupo was unique in the world because of the chemicals suspended in its waters. These chemicals included an astonishingly high proportion of phosphorus and correspondingly low proportion of Nitrogen, the two nutrients largely responsible for all plant growth.

Disturbingly, research from other lakes from which water had been taken and analysed show that aquatic plant life of all sizes, require a water supplied ratio of 15 parts nitrogen to 1 part phosphorus to maintain balanced growth. Scientists at Lake Taupo estimated that 657,000kg of nitrogen and 116,000kg of phosphorus enter the lake each year – a ratio of 5.6 to 1. In theory, to maintain balanced, algae and larger forms of plant life in Lake Taupo require some 443,500kg of the available phosphorus to complement the 657,000 of nitrogen available to them. So in effect, some 72,500kg of phosphorus is not being converted into plant growth. It sinks to the bed of the lake and enters the sediment lying there.

The implications of nutrient imbalance favouring sudden accelerated plant growth are now well documented and should Lake Taupo suddenly receive a greater input of nitrogen, the potential weed growth could reach alarming proportions.

When the Tongariro Power Scheme was completed, scientist expected an increase of 4% more nitrogen, providing all other waters newly flowing into the lake had a nitrogen content similar to that of the Tongariro River.

However, there is a more alarming scenario to consider related to this nutrient imbalance problem. What if another significant growth accelerating mineral, formerly present in minute quantity were introduced in greater quantity? And what if when combined with nitrogen and phosphorus in greater volume, it created a plant growth explosion of unparallel proportion.

It is now believed such a growth accelerating mineral is now arriving in quantity, suspended in the waters flowing into Lake Taupo from the Tokaanu Power Station. The mineral in question is manganese. Scientists believe it has always been present in Lake Rotoaira, a lake much closer to moderate eutrophication (enrichment), than Lake Taupo.

The Pouto River has always drained into Lake Rotoaira and therefore carried a certain amount of manganese into the Lake via the Tongaririo River. However, after the Rangipo station was commissioned, Lake Taupo would receive 26% more water before the power scheme started, all via Lake Rotoaira. Possibly, the manganese content of this sizeable increment of water has substantially increased the amount of available manganese present in Lake Taupo. At this point the exact figures are not known.

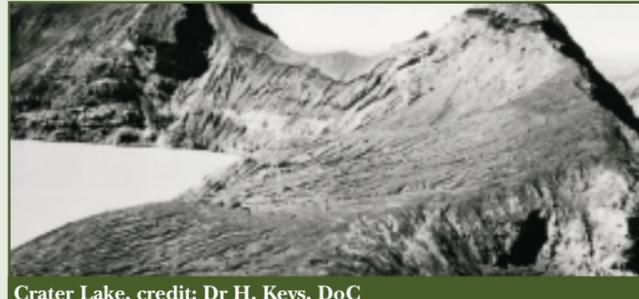
What is known, from trials conducted over a four day period, is that the addition of manganese to a nitrate and phosphate supplement feed to algae predominate at the time resulted in a growth rate of 1300% greater than the control sample. Only a matter of months after the turbines at Tokaanu began generating power, weed was proliferating at an alarming rate in the vicinity of the tailrace and Tokaanu Bay. The turbines themselves could hardly constitute a more efficient weed distribution system for the whole of Lake Taupo!

For more information on the implications of accelerated weed growth on the fishery and lake, attend the Prof. Hamilton/Dr Hawes presentation (Details on front page).

Reference: C.S. Woods, BSc, Zoology Dept, University of Canterbury (1964)

THE CRATER LAKE ISSUE

Currently the Ruapehu Crater Lake is in a 'fill' cycle following the eruption of 1995-96. What happens to the over-filled lake depends on the density of ash layers. If they are weak and flimsy, then the lake will erode the ash away and things will return to normal with occasional overflows into the Wangaehu River. But if the ash layer, called tephra, is strong then the lake might fill to 110%, say. Should the ash then give way, then a major pulse of fluidised material (a lahar) will flow. Given the volume involved and the steepness of the mountain terrain, that pulse will travel extremely quickly down onto the desert.



Crater Lake, credit: Dr H. Keys, DoC

This sounds like the Tangiwai story re-visited. And the effects could be just as devastating as the tragic event on Christmas Eve in 1953.

SEVERAL QUESTIONS ARISE Could a tragedy like the Tangiwai disaster happen again? Is there any threat to the Tongariro River system and hence to Turangi and Lake Taupo? Should the tephra be removed in advance? What other factors should be considered?

THE ANSWERS The crater lake situation is being closely monitored by a wide group of interested parties. Various treatments have been proposed, including removing the tephra or ash dam by, for example, using earthmoving equipment or explosives. The short answer is that these approaches are unlikely to be used. Rather, the filling of the Crater Lake will be monitored – already there are warning devices in place based on gauges near the

Wangaehu Gorge. These will provide about 40 minutes' warning for traffic on the Desert Road.

To protect the Tongariro, and also the Rangipo Power Station, a bund or bank has been built to ensure that the pulse from the Lake is kept in the Wangaehu River and its flood plain. The monitoring officials think that there is very little risk of the lahar getting into the north-flowing streams, and that the principal risk is of damage to infrastructure, such as roads and bridges to the south and east.

The design of structures to offset lahar damage is a very new field in civil engineering and the effects of the next lahar cannot be predicted. The probability is that the tephra dam will erode away at about 105%; this will produce a spectacular lahar but not necessarily one that damages the fishery or Turangi properties.

While it is comforting to know that the lahar situation is being monitored and that safety measures are in place for the more probable effects, there is a further issue which the Advocates will be following; the issue of who pays for the repairs after the lahar. The situation is similar to the as yet un-repaired damage done by the Tongariro Power Project to the Tongariro River and its environs. This damage is plain to see, and it was known at the time of the Project that it would occur. So far, the Government has not answered the Advocates' plea that central funding is needed to put right the accumulating damage here; in fact, it has decided that this is now a regional issue to be redressed by local ratepayers' funds.

Angler input - this is your opportunity!

Advocates' Committee member Bob Appleton asks members to air their views on the Tongariro fishery:

Like many of you who joined the Advocates, I had overriding concerns about the state of the river as it was affecting the fishery. A number of other fellow anglers and I were concerned (and continue to be) about environmental deterioration of the Tongariro River.

As anglers we need to speak with one voice, so we can lobby authorities in charge of the fishery from a position of

strength. While The Advocates Society is vitally concerned about the fishery, it is also involved (by necessity) in some wider environmental and political issues, which sometimes can seem a little far removed from fishing matters.

This is why I have the support of my committee colleagues to set up a Advocates Fishing Sub Committee. This new group will have a representative on the Taupo Trout Advisory Committee, which advises and helps with the management of the Taupo fishery, so we will have some worthwhile input.

All constructive suggestions and comments on how the Tongariro River fishery can be improved are welcome. So please get your pens out or email Bob on aletal@xtra.co.nz

Future editions of the Advocate will look to carry your suggestions or relevant items of fishing news. Send them to me - Bob Appleton, 19 Tongariro Street, Turangi. Phone (07) 386 6164.

Advocates meet with the Minister of Tourism

A recent meeting in late May with Hon. Mark Burton, MP for Taupo, Minister of Tourism and State Owned Enterprises was held to enable the Advocates to outline their concerns about unfinished maintenance work left over from the Tongariro Power Development Scheme.

The Advocates emphasised that previous governments had made commitments and assurances to restore the Tongariro River to a certain standard following changes made to the river as a result of the TPD scheme and that these commitments had been neglected by successive central governments.

The Advocates' primary stance was to push government for recognition of the Tongariro River as a prime regional asset, vital to Turangi and the country as a whole.

The Minister noted the Advocates' concern that hydro rivers suffer some damage mainly by sediments being held behind dams, and that two great rivers of the North Island – the Tongariro and the Whanganui suffer from over-abstraction of water (in the Tongariro's case around 60% is not returned).

The Minister offered two further meeting to follow up on the issues raised at the initial meeting. A second meeting will be in Wellington and is likely to involve a wider range of government officials.

The Advocates are developing an issues-related strategy to ensure some of the critical management issues are discussed at the highest level. Members will be kept informed of developments here.

Letter to the Editor

Letters to the Editor will be published in future issues of the Advocate. If you have any newsworthy items or would like to respond to something published in the Advocate, please send us a letter or an email. We reserve the right to edit correspondence, but will make every effort to publish as many letters as possible.

JOIN THE ADVOCATES FOR THE TONGARIRO

Become an Advocate member for just \$10 or make a larger donation. Your support is vital for the Tongariro's future.

Surname: _____

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Mail this coupon and cheque to: Advocates of the Tongariro River, PO Box 335, Turangi. For more information, email cosgrove@reap.org.nz

SUBSCRIPTIONS If you have joined the Advocates in 2002 or 2003 please note that the subscription period runs until 31 December 2003. A subscription renewal notice for 2004 will be included in a later newsletter.