

LakesWater Quality Society Incorporated
Minutes of the Annual General Meeting held at
Ngati Pikiao Rugby League Club Rooms, Mourea
at 10.00 am on Monday 1 February 2010

Karakia: Tai Eru

Welcome:

The Chair welcomed dignitaries – Todd McClay(MP), Chair John Cronin, EBOP, Mayor Kevin Winters, Deputy Mayor Trevor Maxwell, Cr Karen Hunt, Cr Dave Donaldson, Cr Janet Wepa, Cr Maureen Waaka, all from RDC, Cr Robin Food, Cr Neil Oppatt, Cr Tipene Marr, Cr Ian Noble, all from EBOP, Brentleigh Bond, Geoff Palmer, Neil Callaghan from the Rotorua Lakes Community Board Life members Nick and Elizabeth Miller, Rt Hon Paul East, Professor David Hamilton, Anna Heap, Warwick Murray and Eddie Grogan from Environment Bay of Plenty. There were a further sixty four members.

Apologies:

Andrew von Dadelszen, Phillip Sherry, Marcus and Jan Wilkins, Richard Wilson, Simon and Jane Moore, John and Kay Mace, Catherine Branson, Dr Lusk, Richard Leary, Neil Sutton, Dr Margriet Theron, Roger Gordon, Grant and Helen Wallace, Robyn Bridgeman, Lindsay Park, Ian McLean, Sandra Goodwin, Jim Stanton, Warren Cooper, Lindsay Brighthouse, Fred Whata, Trevor Crawford, Jeanette Robertson, Anne Sinclair, Terry Beckett.

It was moved that the apologies be accepted.

Carried - John Green/Leo Meharry

Minutes of Previous Meeting:

It was moved that the minutes were a true and fair record of the meeting. *John Green/ Bob Armstrong*

Matters Arising from the Minutes:

- The Lakes model, which LWQS contributed \$3,000 to, resided for nine months in the foyer of RDC and is now at the airport.
- EBOP had a large increase in funding to \$12.1 million for costs of restoration and the question was asked how they were going to recover the costs from the community. Was it on a polluter pays model? Cr Noble replied that it was a work in progress and he was hopeful.
- Penny Nelson from Dairy NZ had not come back with a response from farmers and this would be taken up by the new committee.

Chairman's Annual Report:

- The Chair thanked the committee for all their hard work and commitment. It was a good representation of the major lakes and
- There was great sadness in the loss of some influential and committed members of our society -
 - John Keaney, a life member, who was instrumental in getting the funding for the Chair at Waikato University for Lakes Restoration
 - Arapeta Tahana who had been a great supporter and hoped that Maori would be more involved in LWQS
 - Hawea Vercoe whose untimely death left us without strong Maori representation
- LWQS entertained seventy scientists for Professor Hamilton, from around the world as members of Gleon here in New Zealand at a conference. The Rotoiti Classic and Wooden Boat Association helped ferry all the participants who saw the diversion wall and then had lunch at the hot pools and enjoyed an excellent lunch including seven smoked trout caught by Brian Stamp.
- LWQS had focused on the NPS which is the national policy on freshwater management and Don Atkinson and John Green had given a presentation to the select committee in Whakatane. It was felt that the Government needed to put in a policy which balanced the needs of intensive farming and the environment which overlaid the policies of the regional and district councils.
- Clean water has meant more weed and LWQS had sent a submission to EBOP on harvesting weed. 8000 tonnes had been removed from Lake Rotoehu and harvesting from Okawa Bay had successfully removed large amounts of nutrients from both lakes. It was felt that the

purchase of a harvester transported to any lake would be worthwhile and LWQS would be doing further submissions encouraging this.

- An audit by EBOP of dairy farms in the Lake Rotorua catchment had shown 55% non compliance. The average in New Zealand is 30% which shows there is still serious pollution coming from this sector. LWQS was pleased to see that EBOP are doing the policing and taking the responsibilities of management seriously.
- The Chair expressed that he was 'gutted' re the Rotorua and Rotoiti Action Plan. After four years of bringing the community together and the loss of institutional knowledge it may be the reason why the targets set for the Rotorua TLI were not tough enough and would take up to 240 years. He thanked Brentleigh Bond and Don Atkinson for communicating with all the councillors of EBOP and RDC on this matter. They all appeared supportive and it was felt that LWQS had made progress, but a recent meeting at EBOP of the Special Projects committee still had the target of 311 tonnes of nutrients only to be removed by 2250, not now.
- In conclusion, of the twelve lakes, eleven were being well managed and on track and congratulations were given to EBOP and RDC on the sewerage and environmental plans that have been put in progress. The only concern is Lake Rotorua and the dirty water in the Okere Arm and the Kaituna River showed that we cannot afford to delay the achieving of the target for the TLI until 2250. It was fundamental that the catchment plans must be so clear that everyone understands the principles and can work towards achieving satisfactory water clarity.
- A discussion with Rick Vallance, past Chief Executive of Ngati Whakaue Tribal Lands, and now terminally sick, revealed that he believed this target was feasible and we should not accept anything less. The target in 240 years was simply not acceptable for Lake Rotorua.

It was moved that the Chairman's Report be accepted. *Carried - Don Atkinson/Peter Carr Smith*

Financial Report:

The Chair expressed his view that LWQS were extremely lucky to have Brentleigh Bond who was the greatest treasurer one could have. The Treasurer presented his report. The issues he felt could be of interest –

- (1) Sponsorship – LWQS had given \$3,000 for construction of the Rotorua lakes model which was now residing at the Rotorua Airport
- (2) Catering expenses – David Hamilton's Gleon scientists
 - Cocktail evening at the Duxton Hotel, Okawa Bay for EBOP and RDC Councillors
- (3) The Auditor, Barry Lane from Iles Casey in Rotorua had agreed to continue for a further year

It was moved that the financial report for LakesWater Quality Society Inc., for the year ending 30 September 2009, be received and approved and that Iles Casey be appointed as Auditors for the 2009/10 year.

Carried - Brentleigh Bond/Paul East

Election of Officers and Executive Committee:

The Chair stood down while the vote of the office of Chair was conducted by Rt Hon Paul East.

Chair John Green
Secretary Ann Green
Treasurer Brentleigh Bond

*Carried – Don Atkinson/Leo Meharry
Carried – Jim Howland/Brian Stamp
Carried Robyn Sinclair/Bob Armstrong*

Executive Committee

Ian McLean (Rotorua)
Don Atkinson (Rotoiti)
Marcel van Leeuwen (Okareka)
Sandra Goodwin (Okareka)
David Packman (Tarawera)

Warren Webber	(Rotorua)
Brian Stamp	(Rotorua)
Jim Howland	(Rotorua)
Mary Stanton	(Rotorua)
Graeme Shirley	(Rotorua)
Leo Meharry	(Rotorua)
Catherine Branson	(Rotorua)
Tai Eru	(Rotorua)
Jim Koller	(Rotorua)

The Chair thanked Phill Thomass for his many years on LWQS and his wonderful support with the newsletter and setting up the website.

It was moved that the above nominees be accepted as the committee.

Approved – Paul East/Peter Carr Smith

Professor David Hamilton gave a presentation on the water quality issues of the Rotorua Lakes. He began by acknowledging the importance of John Keane who was the reason he was standing before the LWQS AGM today as he had strived for the introduction of a Chair of Lakes Restoration at the University of Waikato. He also acknowledged Arapeta Tahuna who had given him an appreciation and understanding of what the lakes meant to Te Arawa.

David thanked LWQS for the funding for the model of the Rotorua Lakes and also for hosting the Gleon scientists.

David stated that in the 1980s New Zealand had been a world leader in lake science but that had changed in the 1990s when there was a perception that the lakes were in good order and only limited research was being undertaken. People were then taken by surprise. In 2006 the TLI showed that the dominant lakes of New Zealand were eutrophic. A study of 1500 lakes around the world showed that New Zealand was rapidly moving towards the worst end of the scale which was Denmark.

Data on 109 NZ lakes showed that urban, pasture and exotic forests leached substantial nitrogen and that there is a nitrogen/phosphorus decrease in lakes with exotic forests as the predominant land use, making them more susceptible to blooms of nitrogen fixing blue-green algae. Some lakes such as Tarawera have a low nitrogen/phosphorus ratio to a level that makes them more prone to algal blooms.

The emphasis has been on nitrogen but our pastoral systems also leach substantial phosphorus and this is now revealed by relatively low nitrogen to phosphorus ratios in pastoral dominated lakes. Because of the geothermal conditions of Rotorua our nitrogen/phosphorus ratio tends to be naturally lower which makes them prone to algal blooms.

There are a number of conditions which have led to the increase in nutrients. Some of these are minor but collectively they constitute cumulative impacts, such as invasive weeds (and Niwa has been working on a selective herbicides which have potential to be useful in the control of these), past wastewater inputs (Lake Rotorua), the pollen from the exotic forests (minor) and climate change (no indication yet for Rotorua lakes), **but nutrients from pastoral land use is the key.** There had been a marked increase in urea sold since the 1990s throughout NZ and an equally marked increase in the nitrates leaching into the ground water going in to the lakes.

P-locking has been successful in Okaro but it is expensive. Farmers like Andy Hayes at Lake Kaituna (Waikato) have been very innovative using a combination of wetlands, plants, sedimentation traps and Zeolite barriers to form part of an ecological system to reduce the impacts of their dairy runoff.

Regarding the Ohau Channel and the possible changes in lake levels with the opening of the Okere Gates, Professor Hamilton said that a back flow of Ohau Channel around the wall into Lake Rotoiti could happen if the inflow from Ohau Channel was larger than the outflow to Kaituna River for a sustained period such as attempting to increase water levels in Lake Rotoiti. Beach formation would be improved with seasonal fluctuations in water levels, and could have desirable impact on the riparian area of the lake, but should not be achieved by rapid fluctuations in water level that could compromise the effectiveness of the Ohau Channel diversion wall.

David Hamilton's final word was "delay and denial have been endemic in the history of environmental law... what the world is suffering is not a lack of science or law, but a lack of environmental urgency."

"In the face of the literally life-threatening environmental crisis, such discretion (of environmental laws) is naïve at best and suicidal at worst."

Professor Klaus Bosselmann, Centre for Environmental Law, University of Auckland, (Otago Daily Times, 14 Jan 2010)

"David Orr doesn't buy the idea that the public can handle only happy news. The public should be treated as intelligent adults who are capable of understanding the truth and acting creatively and courageously in the face of necessity."

With reference to Environmental Educator David Orr's new book)

Questions

Cr Dave Donaldson, RDC: enquired about the lag time between the wastewater being sprayed into the forest and leaching into the Waipa stream.

Prof Hamilton: stated that the time was very rapid, within three years. He said that phosphorus from the detergents used in the wastewater process would compromise the effectiveness of spray irrigation in the long-term and that thinking should be done now to prevent such a situation arising.

Cr Tipene Marr, EBOP: regarding Rotoma, if the quantity of 3 tonnes of P and 30 tonnes of N stays at that level will it work? At Okaro is capping working?

Prof Hamilton: The capping in Lake Okaro has been successful in leading to a progressive reduction in P in the lake. The problem was that the system was virtually 'awash' with P to start with, and that we were only just now pushing the algae in Lake Okaro into being P-limited.. The ratio of N and P at Rotoma and the Action Plan to remove N and P at a ratio that is not lower than current levels should ensure the lake remains pristine.

Cr Tipene Marr, EBOP: stated that pine trees suck up water. How wide do we need riparian strips by waterways near exotic forests?

Prof Hamilton: Exotic forests do change the N/P ratios. Indigenous forests should be around the riparian or margin areas of lakes to prevent additions of P when forests are harvested

Tipene Marr: More forests mean less water going into lakes

Prof Hamilton: Many things influence lake levels. For example a lot of flood control work was done after the 1960s floods when there was a particularly high rainfall phase around Rotorua. Exotic forests are well known to influence water runoff because of relatively high rates of evapo-transpiration.

Don Atkinson: appreciates that there is a time lag associated but is it best to do the in-lake or in-stream treatments in Rotorua?

Prof Hamilton: believes there should be a focus on phosphorus and nitrogen on land and in-lake. If P is reduced sufficiently, which can be achieved more rapidly than N because N is predominantly from groundwater sources, then there is potential for more rapid improvements in water quality than would occur based on nitrogen reductions alone.

Bob Armstrong: What effect would the large variations from the proposed Okere Gates options have on Rotoiti?

Prof Hamilton: Effects of water quality in the middle of the lake are minimal unless there is back-flow around the wall. Beach formation would likely occur in the riparian area, however, dependent on the water level regime that was adopted.

Rt Hon Paul East: At the Lake Rotoiti Community Association there was general concern about the application for consent of the Okere Gates levels reduced below the minimum recorded by NIWA. There must be some reason why the huge variation was put in the consent process. The LRCA sought information through scientific modelling to know what effect these variations had on water quality.

Prof Hamilton: Water quality is unimpacted by water levels, provided the wall is not impacted, as for example by a high rate of change of water level.

Warwick Murray: EBOP has no views on the levels of water. Kepa Morgan chose 800 mm after looking at the historical levels and decided it was a preliminary basis to start from. More work and consultation has to be done and there may be significant change away from that range.

Peter Carr-Smith: I am a stakeholder, others are shareholders. What is the difference?

John Green: Under the Act the Crown, Te Arawa, RDC and EBOP are shareholders.

Warwick Murray: Te Arawa has a settlement entrusted with the lake bed because of their historic special relationship with the Rotorua lakes. EBOP had a legal obligation to respect that.

Peter Carr-Smith: I live on the side of the lake.

Warwick Murray: Lake dwellers will have plenty of opportunity to have their opinions heard.

Peter Carr-Smith: Can you assure me that my opinions will not be treated in any lesser way?

Warwick Murray: Te Arawa have a Deed of Settlement under law.

Mary Stanton: I wish to remind people that Te Arawa owned the fourteen lakes. Not having sufficient financial power, a deal was struck with the Crown. The deal was for Te Arawa to drop its claim on the lakes' bed in return for an annuity, a sum of money paid by the Crown each year. That annuity was set in 1924 at \$6,000. The body established to administer the income was the Te Arawa Maori Trust Board. Since 1975 the annuity remained at \$18,000 per year, it was never indexed to inflation. Te Arawa are stakeholders. Their partner, the Crown, has claimed the water. It is also their responsibility to fund and improve water quality so that we can all enjoy nature's natural wonders.

Tai Eru: supported Mary in her words and his grandfather was on the first Te Arawa Trust which gave the authority to the Crown. The name was suddenly changed which was a way of getting rid of the authority. He was pleased that David Hamilton was giving a scientific view which was different from Maori eyes. But Te Arawa was willing to stand in partnership and walk alongside all its neighbours.

John Green: The best thing that we can do is communicate and find common ground that we can all live with. It was essential that EBOP communicate with all the interested parties.

Warren Webber, LWQS: expressed confusion on how the level of water would impact as a reflux around the wall and effect water quality.

Prof Hamilton: The level itself is not important but the fluctuations are. This needs to be managed carefully.

John Green: What assumptions on water level were made with the diversion wall?

Prof Hamilton: It was based on the flows in the existing consents and operation.

Don Atkinson, LWQS: There is general concern about what impact a potential hydro scheme would have on Rotoiti. Would the wide variations have a detrimental impact?

Prof Hamilton: The consent applications operate independently. (Reaffirmed by Warwick Murray)

Nick Miller: Why does beach formation have an impact on water quality?

Prof Hamilton: There are many different factors which affect water quality, but particularly nutrients. Beach formation has its most profound influence on the riparian area and in Lake Rotoiti, will have little impact on water quality.

Gill Cossey: The diversion wall is shorter than our expectations, is there to be a review of its length and continued monitoring?

Prof Hamilton: We have undertaken two periods of monitoring which indicate that the wall is operating as predicted, with minimal backflow into Rotoiti. The flow regime and flow rate will be put in to a 3-D model which should be part of a consideration of the water level resource consent process.

Gill Cossey: Is the Okere Arm ponding?

Prof Hamilton: The normal water flow takes about seven hours though the Okere Arm region. If Rotorua is laden with blue-green algae then the Okere Arm will reflect this.

Jim Howland, LWQS: regarding the Okere Gates issues – there are two issues. A resource consent gives the right to undertake an activity but not an access right. The next process of consultation leads to an outcome.

Cr Karen Hunt: Regarding the filter unit used on Andy Hayes farm at Kaituna Lake, did he build it himself, is there scientific data, and has it been used elsewhere? Regarding phosphorus free chemicals, these were available at the Buried Village.

Prof Hamilton: Andy Hayes is trying to work further up into the catchment of Lake Kaituna. A PhD student about to start her study should help to quantify what effect different treatments that he has implemented are having, Environment Waikato was also providing assistance.

Jock Schoeller : It is possible to outlaw chemical detergents, or work with supermarkets for non phosphate products and have more regulation by councils?
He also stated that most people in the room do want to work with Maori, but he believes that EBOP have gone about the Okere Gates consent process in the wrong way and it has been very confrontational. Please, EBOP stand up and do the job collectively and work with us.

Warren Webber, LWQS: to Prof Hamilton - At the meeting in January we understood that your group were not engaged. Are you now looking at the wider range of water levels on Rotoiti and the impact of water quality?

Prof Hamilton: Yes, we expect this work to be commissioned very soon.

General Business:

Todd McLay, MP: Congratulations on everyone's involvement. There is more work to do on the Freshwater Policy but the National Government believed that water quality was very important and he hoped to see some progress this year. He hoped to meet with LWQS on a more formal basis during the year and acknowledged the great passion that was felt for doing something for the lakes.

Mayor Kevin Winters, RDC: stated he was here also as the Chair of the Rotoura Te Arawa Lakes Strategy Group in which there were three partners, RDC, EBOP and Te Arawa. Last year there had been a health check on how well the group were doing and whether they were complying with the statutory commitments and it believed they were on track. A lot of headway had been made on most of the lakes but the monster, Rotorua, still had a long way to go. They had been successful in achieving Crown funding and this year were applying for funding for Rotoma and Tarawera sewerage schemes. The larger group of schemes meant that there would be a decrease in the tender price and it would vary from lake to lake, but hoped to be less than originally priced. The Strategy group, encouraged by the Community Board, had commissioned a survey of lakes use over the summer which was being carried out by EBOP.

Don Atkinson, LWQS: confirmed just how excellent Okawa Bay and Rotoiti are for the restoration work that has been done.

Mary Stanton: stated that the lakes need a weed harvester, particularly Okawa Bay.

Mayor Kevin Winters: said that 8,000 tonnes were taken out of Rotoehu and he appreciates how important this is in reducing the nutrients. The results are good but it is an EBOP decision not RDC.

Chair John Cronin, EBOP: stated that the sewerage projects are on target, P-locking in Okaro and Tikitere are on track, benchmarking is complete and the Overseer and Rotan model for land use has now been completed. \$13m was spent on the Lakes last year. Land use in Rotorua is a problem and a Special Project committee has been set up, chaired by Cr Neil Oppatt, to assess the issues and come back to council.

Fred Hoogveld: Are you happy that the \$13 million has been spent wisely and well?

Jock Schoeller: The 240 year strategy is letting you down.

John Green: stated that there had been excellent feedback on the new LWQS newsletter and he thanked Warren Webber for the outstanding work he had put in to make the newsletter what it is. The Chamber of Commerce was very impressed and had circulated 800 copies to their members. Patty Sutton, (LWQS member and senior teacher at Western Heights Secondary School) said the schools greatly appreciated its content for study purposes. This year LWQS will be looking for sponsorship.

Paul East – A vote of thanks to Professor Hamilton and also for the LWQS committee for all the hard work they do in taking the issues of the lakes forward.

The meeting ended at 12.15 pm