

# Minutes for Lake Rotorua Catchment Stakeholder Advisory Group, 21 May 2015

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**Rotorua Lakes Council – Committee Rooms**

**1061 Haupapa Street, Rotorua, 10:10 am start**

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**Chair:** Tanira Kingi & Cr Karen Hunt

**Members Present:**

- Collective: Tony Cairns, Wendy Roe, Chris Paterson, Neil Heather and Giselle Schweizer
- LWQS: John Green and Warren Webber
- RDC: Cr Karen Hunt
- TALT: Roku Mihinui
- Te Arawa Landowners: John Fenwick
- BOPRC: Cr Neil Oppatt
- Deer: Sharon Love
- Small Blocks: Murray Pierce and Graham West

**Others Present:**

Richard Kean (small block); Ben O'Brien (B&LNZ); Te Taru White (Incentives Board); BOPRC staff: Sandra Barns, Stephen Lamb, Andy Bruere, Alastair MacCormick, Rosemary Cross and Hariata Ngatai; Christina Walker (Fulbright Scholar); Simon Park (StAG Secretariat); Gloria Zamora.

**Action Summary:**

1. StAG: send comments to Stephen Lamb on (i) \*NDAs for non-benchmarked properties; (ii) ideas on how NDAs can recognise pre-Rule 11 environment work
2. StAG: send Stephen Lamb ideas on how to account for environment work done prior to Rule 11.
3. StAG: send feedback to Sandra Barns on Graeme Doole's economic modelling report
4. Sandra Barns, Stephen Lamb and Ben O'Brien: to look at the costs, benefits and likely structural options of a short term entitlement (STE) nitrogen trading scheme.
5. Rosemary Cross: circulate Nitrogen Management Plan template to the Collective.
6. Simon Park: liaise with Alastair McCormick on real farm examples of Overseer version/NDA shifts
7. Stephen Lamb: regarding the \$3.3 million low N land use ToR, discuss with (i) Gisele Schweizer and (ii) Helen Creagh on presenting ToR at next StAG.
8. Stephen Lamb: advise on land area affected if NDAs recognise pre-Rule 11 environment work.
9. Stephen Lamb: \*present draft consent document at next StAG meeting
10. Stephen Lamb: \*present on the review of StAG
11. Gloria Zamora: circulate and post on web the Lake Rotorua alum dosing Executive Summary.
12. Gloria Zamora: set up a public meeting with David Hamilton on the alum dosing report.

\* denotes items carried forward from previous action lists

## 1. Welcome, Karakia, Introductions and Apologies

Chairman Tanira Kingi welcomed StAG members and attendees to the meeting.

Te Taru White opened with a karakia.

Apologies for absence: Gwyn Morgan, Don Hammond and Clinton Hemana

Apologies for lateness: Neil Heather and Giselle Schweizer

Apologies for leaving early: John Green and Tanira Kingi

**Motion: Apologies approved. Hunt/Cairns CARRIED**

## 2. Minutes of previous meeting (28 April 2015) including Actions

- Action #5: StAG to send comments on NDAs for non-benchmarked land to Stephen Lamb.
- Action #6: Dwayne McKay is working on draft consent document and this will be covered on next StAG meeting 23 June.
- Action #7: Alum dosing report is now online and may be found [here](#).
- Action #9: The StAG review will be covered at the next StAG meeting 23 June.
- Action #10: Re-run of ROTAN to be covered by Andy Bruere in "Updates".

**Motion: 17 March 2015 Minutes approved. Webber/Hunt CARRIED**

## 3. General business items to add

Several items were tabled by Chris Paterson on behalf of the Collective, as follows:

- ToR for the use of the \$3.3 million.
- Recognition of environmental work prior to Rule 11
- Plain English summary of alum science report
- Science review ToR
- Overseer 5 to 6 clarification with examples, 2 dairy and 2 drystock
- Economic report – impacts without trading, plus original inputs and assumptions
- Farm management plans ToR, and list of requirements that farmers need to sign up to
- Allocation system – what farm data is used to allocation individual NDAs? Can StAG illustrate this with a real farm example?

***ALL PRESENTATIONS FROM MEETING MAYBE FOUND [HERE](#)***

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## 4. Economic Modelling and trading update - Sandra Barns

### 4.1. Sandra discussed the ongoing economic modelling work, including:

4.1.1. Land Use Change – two options:

- Restricted to 5,000 ha, including 3000 ha new forestry
- Unrestricted land use change - has yet to be modelled

4.1.2. Incentives Board will be looking at the modelling to aid in funding decisions.

4.1.3. Transition capital costs of moving into a different sector?

- Information was provided by Perrin Ag, including costs and savings where relevant

4.1.4. Feedback on report needs to be sent to Graeme Doole.

### 4.2. Discussion/Questions

4.2.1. What's the farmer cost to meet NDAs without trading and without land use change?

- Model may have to be reset to get this answer.
- 4.2.2. Farmers want to know not only the cost impact but also the interrelated impacts on N & P mitigations?
- There is not a lot of certainty around P models and it is not certain economic results would change much.
- 4.2.3. At this point BOPRC is working backwards. The systems used have not been real farms as the model is more interested in the total catchment figure and total impacts on the pastoral sector.
- 4.2.4. How does each farm system in different soil types reach the goal and what are the respective management options? The farmers are seeking a tool box of “easy” changes that will impact positively on the lake.
- The NMPs done via the A & S service will give each farmer those answers
  - Farmers stated dissatisfaction that the A & S support is still not functioning as this was discussed July 2014.
- 4.2.5. Can small farms be added to the model?
- These are already recognized as drystock farms in model.

**ACTION:** StAG to send feedback to Sandra Barns on Graeme Doole’s economic modelling report.

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## 5. Short term entitlement (STE) nitrogen trading - Sandra Barns

### 5.1. Key points:

- 5.1.1. To receive benefits of STE trading, we will need hard targets to measure to, noting:
- This is a very complex task, uncertainty of the property right will make trading framework difficult.
  - Councillors are concerned about admin costs to run such a complex system
  - It is understood that farmers believe STEs will help them pre-2032.
- 5.1.2. BOPRC is looking at cost and benefits to farmers the STEs will bring.
- 5.1.3. An STE scheme will mean a trade-off between flexibility and trading, with Councillors wanting to see clear gradual reduction moves towards the 2032 target.

### 5.2. Discussion/questions:

- 5.2.1. If you “over-achieve” pre-2032, you need an STE buyer.
- 5.2.2. STE trading doesn’t affect your NDA.
- 5.2.3. Economic modelling shows a high cost to buy NDA early and not use it until 2032.
- 5.2.4. Is there any reason as to why STEs cannot be run by a business e.g. NZX?
- The number of people trading STEs would probably be low and cost of each trade would be high, so probably not attractive to a private business.

**ACTION:** Sandra Barns, Stephen Lamb and Ben O’Brien to look at the costs benefits and likely structural options of a STE scheme.

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## 6. Draft rules framework and science review, follow up from 28 April - Stephen Lamb

### 6.1. Questions/discussion

- 6.1.1. Will landowners be able to review their NDA allocation e.g. suggestion is that this could occur via a panel
- The process still needs to be streamlined before any panel could be formed.

- 6.1.2. How much land has been benchmarked?
- About 80%, with the 20% remainder (about 4800 ha) contains many small blocks and land outside the Rule 11 boundary but within the groundwater boundary.
- 6.1.3. LWQS suggested building an online or phone app where small block owners can easily enter their information.
- BOPRC feels face to face is important so the landowner can understand the rules better.
- 6.1.4. Each landowner will receive an NDA as a condition of their resource consent, after which they have a right to appeal consent conditions.
- Simplicity is important and BOPRC is aiming to make process simple.
- 6.1.5. BOPRC will be going back to OVERSEER® numbers to make sure they are right. There will always be some “overs and unders” in the Overseer update process.
- 6.1.6. How will permitted activities be monitored and enforced?
- The stock numbers are relatively simple, plus the other permitted activity conditions.
- 6.1.7. Is there a goal to keep the land load low in winter?
- Not specifically – it depends on the OVERSEER® modelling, NDAs and farm plans.

**ACTION:** StAG to send comments to Stephen Lamb on NDAs for non-benchmarked land

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## 7. Managing OVERSEER® changes - Simon Park

### 7.1. See Simon’s presentation here. Some points:

- 7.1.1. Generally, if your benchmark has not gone up by the average then you have a lower NDA.
- 7.1.2. BOPRC is still checking files to see the change from version 6.1.3 to 6.2.0

### 7.2. Discussion/Questions

- 7.2.1. Who gets the benefit if a future version of OVERSEER® shows a lower output?
- The benchmark would be adjusted proportionately.
  - Farms that had a cropping in system 2001 received a higher benchmark.
- 7.2.2. Farmers concerned that every time OVERSEER® changes the goal posts moves.
- Yes, this is a NZ-wide issue. There is a major multi-regional council project with OVERSEER® owners to tackle version management.
  - The NMPs set a course using the current version, and then every 5 years it can be reviewed with the latest version.
  - BOPRC are looking at ways to insulate farmers from the version changes.
  - Issue is not necessarily OVERSEER®, it is often the science that is changing.
  - The call for a repeated science review goes hand in hand with OVERSEER®.
  - All businesses need to look at operating more efficient.
- 7.2.3. How do we check the measurement system and what’s behind the data?
- You can look at the OVERSEER® [website](#) for science reports on its assumptions. This includes the field trials and the science principles used to extend the model beyond the physical or farm system conditions in the trials themselves.
  - OVERSEER® represents long-term average N leaching predictions. Note that actual field measurement is also subject to uncertainty.
- 7.2.4. How are version changes going to be managed?
- A reference file system is an option to put more certainty into the equation. The N leaching shifts (due to version change) in an “average” farm will lead to equivalent adjustments (up or down) for all NDAs. This helps maintain relativity between farms.

- Note that the lake load doesn't change with OVERSEER® version changes. However, we get a better understanding of what is happening on the land.
- 7.2.5. Where can a farmer go to see how long it takes for the water to get to the lake?
- That was covered in NIWA's ROTAN report and preceding work by GNS. It varies from an average groundwater travel time of 16 years in the Ngongotaha catchment, to over 100 years for the Hamurana catchment.
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## **8. Managing Phosphorus within the rule framework - Stephen Lamb**

### **8.1. Key points:**

- 8.1.1. P is part of the picture but rules are nitrogen focused. The rules have "gentle" regulation around P by inclusion in the science review and within NMPs.

### **8.2. Questions / discussion**

- 8.2.1. For the target P load of 37 tonnes/year, what % of the associated reduction needs to come from farms?
- The 2007 Rotorua-Rotoiti Action Plan has farms contributing about 18 tP/yr. Geological P, rainfall, sewage and other sources added up to about 39 tP/yr total. This does not account for P released from lakebed sediment.
  - LMOs are still looking at erosion and P.
- 8.2.2. It was suggested to look at N mitigation options that have P reductions also.
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## **9. Nitrogen Management Plans - Rosemary Cross**

### **9.1. Rosemary presented an outline of the NMP project phases, including:**

- 9.1.1. BOPRC is now implementing the Advice and Support project and NMP preparation.
- 9.1.2. The first phase involved staff selection, development of standard operating procedures, initial training and preparation of support material.
- 9.1.3. The Advice and Support team have started operation, using new skills and methods. This includes refining procedures with a number of landowners from different sectors. Progress has been a little slower than hoped, due partly to staff recruitment challenges.
- 9.1.4. In the Full Implementation Stage the new ways of providing services will become the standard approach where staff routinely provide high quality services. It is anticipated that Advice and Support will be moving into this stage very soon and we appreciate your continuing patience while we work towards this.

### **9.2. Advice and Support process**

- 9.2.1. The landowner meets with BOPRC Land Resources Team Member and provides initial information about the property including property boundaries and stocking intensity.
- 9.2.2. The landowner then chooses a Land Use Advisor (LUA) and the Land Resources Team Member prepares an assessment pack for the LUA to enable the current N-loss status on the property to be determined.
- 9.2.3. The LUA services are:
- Establish current Nitrogen loss status
  - Consider options to meet the NDA required by the Rules.
  - Develop a Nitrogen Management Plan (NMP) to support an application for a Land Use Resource Consent.

- Business Planning Support available if required.
- Landowner may be eligible for the Incentives Scheme

### 9.3. Discussion/Questions

- 9.3.1. If the first point is determining current status, when does a landowner get their NDA?
- They already have an NDA via the allocation scheme, although provisional NDAs can be calculated prior to that.
- 9.3.2. What is the time frame for a farmer to get A & S support once calling the phone number?
- We can't answer that yet, but most likely a few months. There won't necessarily be a shorter wait for farmers who have already done a lot of on-farm work.
- 9.3.3. StAG members debated whether A&S flow diagram was consistent with their understanding that the first step is calling the phone number and meeting an LMO.
- The flow chart can be amended
- 9.3.4. Why is it necessary for a "qualified assessment" if the A&S farm consultant is already a suitable qualified person?
- This approach complies with best practice.
- 9.3.5. Where do industry plans fit in? Farmers were told and hoped this would be standardized and the information presented in a consistent manner.
- BOPRC was not satisfied with the LEPs meeting the NMP requirements.
- 9.3.6. Where is the template for the nitrogen management plan?
- Template still needs to be reviewed by Rosemary Cross.
  - Collective members would like to review the NMP template.
- 9.3.7. Also, a sample resource consent needs to be pre-circulated prior to June meeting.

**ACTION:** Rosemary Cross to circulate NMP to the farmer Collective.

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## 10. Updates

### 10.1. See [updates document](#). Related discussion included:

- 10.1.1. Lake Modelling report - Andy Bruere
- Report looks at the reason the lakes TLI is at where it's at and how much impact does alum have in getting to target.
  - An Executive Summary on the report has been written and will be circulated. .
  - UoW are writing a report on the difficult task of where the sources of Pare.
  - There are risks around alum dosing but no adverse effects have been detected so far.
  - StAG requested to have a meeting with Professor David Hamilton to discuss the alum dosing report.
- 10.1.2. ROTAN model update - Andy Bruere
- In 2011, ROTAN was run based on version 5 OVERSEER® outputs.
  - ROTAN is an N model and can predict catchment load over time.
  - Although there is a shift in OVERSEER® outputs, we do not expect that re-running the model will take us to a different place.
  - ROTAN is the start place for our framework and needs to be re-run.
  - Waikato University is re-writing software code so runs on the current GIS ARC system.
  - The re-run will take into account catchment area changes and OVERSEER® changes.

### 10.2. Discussion/Questions

## 10.2.1. What if the TLI changed?

- Scientists would then work backwards and figure out what the load is to the lake.

## 10.2.2. The community set the target TLI at 4.2 through the Regional Plan process. Even if it was not fully understood at the time, the community view seems to support 4.2 as they like the current quality, but are not asking for higher quality.

- We are not improving the lake – we are holding it to where it is by alum dosing.
- The National Policy Statement for Freshwater Management requires that water quality limits are set. There will be review clauses attached to the new plan change.
- Water Quality Technical Advisory Group (WQTAG) scientists support the 435 tN target and that it will get the lake to its target TLI.
- To lower the TLI, BORPC haven't asked community yet. We need to work through this plan and then ask again in the future.

## 10.2.3. Will the nutrient reduction plan go to industry peer review?

- The WQTAG has reviewed it.

## 10.2.4. 10 years ago scientists said we couldn't get the lake to a 4.2 TLI for 240 years. But 5-8 years later we are at a TLI of 4.2 due to alum. There are huge costs in meeting the TLI.

## 10.2.5. What is the trend in nitrate and phosphate coming into Lake Rotorua?

- It's an average 60 years groundwater lag, so even if changes were made in the last 5-6 years, it is unlikely to have reached the lake yet.

## 10.2.6. Can that predict what the TLI will do in future if you stop alum dosing?

- If we stop alum dosing, the lake can respond quickly. When the lake stratified this summer, it took 4 weeks to lose the oxygen in the bottom lake waters and then release sediment P. The P concentration was then similar to when the lake had algal blooms.

**ACTION:** Gloria Zamora to circulate / web post the Lake Rotorua alum dosing Executive Summary.

**ACTION:** Gloria Zamora to set up a public meeting with David Hamilton on the alum dosing report.

## 11. General Business

### 11.1. ToR \$3.3 million

11.1.1. Farmers would like to participate with setting the criteria.

11.1.2. Stephen Lamb to speak with Gisele Schweizer about current process.

### 11.2. What has happened with environment work done prior to Rule 11?

11.2.1. This hasn't been forgotten. StAG to send Stephen Lamb ideas on accounting for environment work prior to Rule 11.

- We need an idea of how much land we are talking about.

### 11.3. In regards to the allocation system farmers have requested to see a real farm model.

**ACTION:** Simon Park to liaise with Alastair McCormick on NDA examples for June StAG

**ACTION:** Stephen Lamb to discuss with Gisele Schweizer process for the \$3.3 million.

**ACTION:** StAG: send Stephen Lamb ideas on how NDAs can recognise pre-Rule 11 environment work

**ACTION:** Stephen Lamb to advise area affected if NDAs recognise pre-Rule 11 environment work

### 11.4. Noted: multiple action items will drive 23 June agenda

**Meeting Close 3:15 pm.**