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Stuart Miller  
Spatial, Forestry and Land Management  
Ministry for Primary Industries  
PO Box 2526  
WELLINGTON 6140

By email to NES-PFConsultation@mpi.govt.nz

## **NATIONAL ENVIRONMENTAL STANDARD FOR PLANTATION FORESTRY CONSULTATION DOCUMENT - JUNE 2015**

### **Submission from:**

#### **Friends of the Maitai**

Contact details for this submission are:

Submitter: Friends of the Maitai  
Prepared by: Tom Kennedy  
Contact address: 170 Nile Street  
Nelson  
[tnak@xtra.co.nz](mailto:tnak@xtra.co.nz)

phone: 03 548 8467

### **Submitter's Background:**

This submission is supported by over 130 members of a community based group in Nelson known as "The Friends of the Maitai" (FoM). It has been prepared by the Forestry Group of FoM with main contributors being Tom Kennedy, Joe Hay and Steven Gray.

### **Support for other Submissions:**

We would like to register our **full support** of the submissions presented by:

1. Nelson City Council
2. Roger May, Strachan Road , Motueka

## **1. Overview**

This submission opposes the NES-PF in its current form. There are many areas of concern to our group and we have little faith that the new standard will stop the further deterioration of our rivers in terms of decreasing biodiversity, sediment deposition and increased levels of nitrogen.

We can appreciate the desire for Forestry Companies to have consistent rules throughout the country but New Zealand has a complex and varied geology so that many regions have issues unique to their area. As it stands at present the NES-PF does not have the detail in its rules, and reclassification of ESC, to adequately cope with these regional variations so that having an inadequate set of albeit consistent rules will be at the expense of the environment.

In Nelson this broad brush approach of reclassifying all of the 'high' ESC land in the plantation forestry areas of the Maitai catchment to 'moderate' will make it extremely difficult to ensure adequate monitoring and protection for what is now already a fragile area.

Riparian setbacks are also inadequate under the permitted rules and there has been a history of ignoring the requirement for setbacks, so that many streams (e.g. Packer, Groom and Sharland) have had them removed or damaged over the past years of forestry operations.

We have little faith that the rules as they now exist will allow any improvement in the state of our river.

## **2. Toxic Algae**

In Nelson the alarm bells were ringing about two years ago when there was an algal bloom of Phormidium (cyanobacteria) in the Maitai River. The local council advised the public not to swim in the river because of the severe health hazard presented by the toxic algae. In particular dog owners were strongly advised to keep their dogs out of the river as ingestion of the algae could kill a dog within hours.

Past and subsequent research by Cawthron scientists (see references and summaries below) have drawn a relationship between very fine sediment in the river and the ability of the algae to extract phosphorus from the sediment to enhanced its accelerated growth.

Relief sought:

1. Provide more detailed mapping and sub-class division in the 'moderate zone' to show areas where slope is less than 25 degrees and greater than 25 degrees, and allow councils to manage as consented activities with more stringent conditions. Councils should also have the facility to impose consented conditions in areas where 'moderate' zones are adjacent to the above sensitive areas and may require more stringent rules than those listed under permitted activities.

## **3. Sedimentation**

The major land use in the Maitai catchment is plantation forestry and sediment loading is markedly increased during weather events where rainfall is equal to or exceeds the annual return period.

Major contributors of sediment are the tributaries: Sharland and Packer Creeks and Brook Stream (all of which have plantation forestry within their catchments). Please refer to references below for scientific reports.

Rules as they stand will not identify these sensitive areas and ensure an improvement.

Relief sought:

1. Same as number one above.
2. Implementation of a **threshold regime** to ensure sediment levels remain at an acceptable level. Councils and land user (Forestry) would share in the cost of placing turbidity probes and recorders in main stem and tributary streams to ensure the turbidity of tributaries remained no greater than 10% of the turbidity of the main stem. Eg. Turbidity of Sharland Creek would not exceed 10% of the turbidity of Maitai River 50 meters above confluence with Sharland. (See attached maps)
3. If thresholds are exceeded then land use activities such as harvesting and earthworks would cease until the problems were identified and rectified by land user.

#### **4. Riparian Setbacks**

There has been a history of many land users ignoring the requirement for riparian setbacks in forestry operations. Plantation forests have been logged and replanted to within only 1-2 meters of many streams and rivers. The existing rules in the NES-PF do not address this problem and how it will be monitored and dealt with if breaches occur.

Relief sought:

1. Redefine streams where setbacks are required to include all 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, order and greater streams and rivers which flow for more than 75% of the year.
2. Redefine setbacks to 10m either side of streams less than 3m wide and 20m either side of streams greater than 3m wide.
3. Where setbacks have been removed, damaged or replanted in plantation forestry they will be replanted in native species by the land user.
4. Extra funding should be made available to councils (sourced from the forestry industry) to monitor and enforce breaches of rules as set out in Permitted and Consented areas.

#### **5. Impact on Councils**

1. With the reclassification of over 94% of plantation forestry now being a Permitted activity, the workload and cost for councils to monitor and insure the rules are being adhered to is totally unacceptable.

Relief Sought:

Councils must have the ability to charge for administering and monitoring 'Permitted' activities as well as 'Consented' activities in higher risk areas.

2. We are concerned that the 'Erosion and Sediment Control Plan' requirement of lodging with Councils is too loose and open to abuse and lack of proper management.

Relief Sought: It should be mandatory for companies to lodge these plans with Councils before operations commence (in particular; harvesting and earthworks) and that Councils have the right to request more information, alterations and detailed plans if they are not happy with the initial plans.

3. We are concerned that as the NES-PF stands, Councils are unable to act on any adverse effects until after they have occurred. This will lead to a degradation of the environment, increased costs for rectifying the problem and extra work for Councils and Foresters.

Relief Sought: Councils must be able to set thresholds for any activities (Permitted and Consented) which could lead to a degradation of the environment. Monitoring of these thresholds would be at the expense of the Forest Companies.

## **6. Erosion Susceptibility Classification**

1. We are very concerned about the revised ESC (2015) and the fact that 94% of all plantation forestry land is now classified as low, moderate and high (under 25 degrees) and is a Permitted Activity with conditions which do not reflect the increased risks from low to high (<25 deg.)
2. Also 1.5 million hectares have been downgraded from high to moderate and 1.6 million hectares downgraded from moderate to low.
3. Scale of ESC maps does not show enough detail at a local level to ensure Harvesting and Sediment plans are effective.

Relief sought: Either go back to 2015 version of ESC or change to more up to date slope stability software.

## **7. GM Forest Species**

1. We are totally opposed to the introduction of any Genetically Modified(GM) forest species.

Relief sought: Remove all references to GM species from NES-PF.

## References:

### 1. Reports covering sedimentation and other environmental concerns in the Maitai/Sharlands/Groom Ck/Brook catchments.

#### 1. Review of forestry impacts upon sediment yield and aquatic ecosystems: Niwa report for Auckland Regional Council., May 2004 .

Summary: “ Forest roads are a key source of sediment through the processes of surface runoff and mass movement. Sediment loss from roads due to surface runoff alone can exceed 300 tons/km<sup>2</sup>/yr during harvesting. However , mass movements associated with forest roads typically yield 1=2 orders of magnitude more sediment than that attributed to surface runoff. Similarly, mass movements associated with other forestry activities (e.g., the failure of log landings) have been shown to markedly increase suspended sediment concentrations.....’

#### 2. Review of Forestry – Nelson City Council , October 2014

“....Permitted activities in the Nelson Region are not currently monitored to determine the level of compliance. Undertaking this would provide NCC with a stronger argument should a rule change need to be considered in the future.....

The big issues within forestry appear still to be coming from a combination of poor storm water control from tracking/roading or landings and debris avalanches from poorly sited ‘birds nests’. Often sites are not well maintained following the completion of harvesting and any problems can occur for years following until the new crop takes hold. All forestry companies can still improve on storm water control from landings and tracking/roading. The big issues within forestry appear still to be coming from a combination of poor storm water control from tracking/roading or landings and debris avalanches from poorly sited ‘birds nests’. Often sites are not well maintained following the completion of harvesting and any problems can occur for years following until the new crop takes hold. All forestry companies can still improve on storm water control from landings and tracking/roading.”

#### 3. Maitai River Gravel Management Study: May 2015. By Niwa for NCC

Summary:

“ .....

#### Fine sediment sources and issues

Observations from this study indicated that the main sources of fine sediment to the lower Maitai are from Packer Creek, Groom Creek, and The Brook. The sources in these areas appear to be largely associated with forest harvesting, but riparian slips are also a significant contributor in The Brook. This confirms the general appreciation gained from interviews that forestry activities are a major control on the fine sediment load of the river and the primary source of issues relating to fine sediment, including embedding the riverbed substrate and fine-sediment re-suspension during gravel extraction work. The fine sediment problem could potentially be mitigated by land use change (e.g. forest retirement), improved erosion control and sediment management during forest harvesting activities, and measures to reduce sediment delivery from the hillslopes to the river (e.g. valley-floor wetlands).....”

#### 4. The Impact of the Maitai Dam on River Health Relative to Other Catchment Pressures: A Review , 2013. Cawthron Report #2371 for NCC

##### Summary:

“.....Plantation forestry and urban storm water runoff appear to be the dominant pressures facing the Maitai catchment. Forestry is the main land use in the mid-catchment. Macroinvertebrate community health indicators are sensitive to changes in nutrient and deposited fine-sediment levels. High levels of both of these contaminants have been associated with tributaries in parts of the catchment dominated by Forestry. Therefore, the observed declines in macroinvertebrate community indicators throughout the mid-catchment suggest that forestry works are negatively impacting upon stream biota downstream through increased fine sediment and / or nutrient levels. Benthic cyanobacteria blooms may be an emerging issue due to increased input of nitrogen from forestry activities. Toxins produced by benthic cyanobacteria mats can restrict recreational activities.....

Based on data assessed in this review, the impact of the Maitai Reservoir on the mid and lower Maitai River is likely to be comparatively minor when considered in the context of the magnitude and extent of other pressures facing the catchment. Habitat degradation in the lower catchment is largely attributable to forestry and urbanisation, more specifically, sediment and nutrient loading from Sharland and Groom Creeks ..... ”

##### Recommendations:

“ .....

#### 5.2 Improving ecosystem health

We have identified that fine sediment associated with forestry activity in the mid catchment may be degrading ecosystem health in the mid and lower Maitai River. With this in mind, we suggest including sediment assessment protocols into the NCC River health monitoring programme as a minimum step to further monitor this issue. Specifically, the ‘in-stream visual % cover’ and ‘suspended inorganic sediment quorer’ protocols, as described in Clapcott *et al.* (2011) ought to be used. More intensive investigations into fine-sediment loading in the catchment should be considered (e.g. continuous turbidity monitoring in forested and reference sites). Significant resources have been devoted to identifying point source contaminant discharges in the Maitai River. However, less is known about the diffuse sediment and nutrient input from forestry activities in the mid-catchment. Spatial habitat

mapping and ground surveys could identify areas of the catchment where remedial actions, such as installing wider riparian buffers or sediment traps, could reduce fine-sediment loading in the Maitai River and tributaries.....”

## 7. References

Collins RP 2004. Review of forestry impacts upon sediment yield and aquatic ecosystems. NIWA Client Report: HAM2004-043. Hamilton, New Zealand.

Crowe A, Hayes J, Stark J, Strickland R, Hewitt T, Kemp C 2004. The Current State of the Maitai River: a Review of Existing Information. Prepared for Nelson City Council. Cawthron Report No. 857. 146p. plus appendices.

Crowe A, Young R 2005. Sharland and Packer Creek Study: Water Chemistry and Microbiology. Prepared for Nelson City Council. Cawthron Report No. 1048. 28  
Philips C, Marden M, Basher L 2012. Plantation forest harvesting and landscape response - What we know and what we need to know. New Zealand Journal of Forestry 56: 4-12.

Sneddon R, Elvines D 2012. Sediment contaminant levels in Nelson area catchments: 2012. Prepared for Nelson City Council. Cawthron Report No. 2116. 46p.

Wilkinson J 2007c. Some Impacts of Plantation Forest Felling on Stream Health and Mitigating Practices. Prepared for Nelson City Council. Cawthron Report No. 1252. 24 p.

5. *Phormidium Blooms – relationships with flow, nutrients and fine sediment in the Maitai river.* 2015 - Wood, Wanenhoff and Kelly; Cawthron Report #2723 prepared for NCC .

Refers to the role fine sediment plays in Phormidium Blooms by providing sediment-bound phosphorus. Sediment studies at specific sites “..... demonstrated that the Brook Stream and Sharlands Creek increased sedimentation rates in the river by up to 25%. Reasons for the increased sedimentation and higher concentration of biologically available phosphorus require further investigation, but are most likely due to land management practise.”

Recommendations include:

“ Identify and investigate sources of sediment and nutrient inputs in the major tributaries, in particular the Brook Stream and Sharlands and Packer Creeks.

**MAPS:**











