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the tabled evidence/statement



**HEARD BEFORE JUDGE D SHEPPARD (CHAIR), MR K PRIME,
DR J HARDING AND MRS J VERNON, MEMBERS OF THE BOARD**

WEDNESDAY 1 JULY 2009

HELD AT THE CIVIC CENTRE, WAKEFIELD STREET, WELLINGTON

HEARING OPENED [9.33am]

APPEARANCES

Mr T Ward-Holmes and Mr D Catanach, New Zealand Recreational Canoeing
Association

Mr P Whitehouse and Mr M Gibb, New Zealand Water and Wastes

Mr J Mikož, Wellington Recreational Marine Fishers Association

Mr S Newland, Fonterra

Mr B Armstrong, Todd Energy

Audio file dmp0053

CHAIR: Well good morning. Thank you very much for coming. We are into the second day of these hearings and the submissions on the proposed National Policy Statement. And I believe that we have first this morning the New Zealand Recreational Canoeing Association, is that right?

MR CATANACH: That is correct.

CHAIR: Well thank you very much for coming here. We look forward to what you have to tell us in support of your submissions.

MR CATANACH: I just thought I would give just a little bit of an introduction to myself and the Canoeing Association first, and also introduce my colleague here.

So I'm Duncan Catanach; at the time the submission was written I was Conservation Officer for the New Zealand Recreational Canoeing Association. I'm now the Vice President and Tony Ward-Holmes is the new conservation officer. So I bring Tony with us because he will be dealing with these things on a, I guess, more ongoing basis.

I'd also just like to give you a little of bit background to the New Zealand Recreational Canoeing Association and then what I would like to do is we've got some slides here, which will illustrate some of the issues of why we are particularly interested in some of the facets of the NPS; and then we will discuss some of those points, and these slides will set the context, I guess, to our interest in these areas. So the New Zealand Recreational Canoeing Association, as I said is a national representative. We have the mandate from the New Zealand Canoeing Federation to represent it on matters of advocacy and conservation. And we have been quite active -

well not quite active, we've been very active in water issues, particularly around the RMA process but also around policy. We are active participants in many forums, for instance, the Canterbury Water Management Strategy. We are a member of the core group of the Land and Water Forum that has been recently set up. So we are one of the 17 or so, so we're actively involved in water issues and that primary stems because we are focussed, I guess, mainly on white water paddlers. So these people who use rivers, and rivers can be anything from various steep creeks to quiet, gentle rapids or just moving water. So there is a whole ambit of paddlers. You have to start off at the beginning and then you can "how are you go?", both literally in terms of what you are prepared to drop off, but in terms also of hit and difficulty and that is really where things are at.

We've got concerns, I guess, now people often think our only concern is water allocation. Obviously, we need flow to get down a river. But we're also concerned with issues such as water quality and will illustrate that. I, for instance, have come with a bacterial infection from one river, you know, if it affects me personally, because much as I would like to say on the surface, it doesn't always happen. We are also interested in things which aren't necessarily directly covered here, but things like structures on rivers or near rivers; so things like rubbish dumps or other things, or even things like weirs and other things, can have quite dramatic intakes. So the usage of water and the structures that surround it can have quite dramatic impacts on white water users. So before I go into the details around the National Policy Statement itself, I'd just like to introduce Tony. He will just show a few slides around, as I said, just to give a bit of context around kayaking and sorts of things that we are concerned about.

MR WARD-HOLMES: Good morning. I've only got a few slides to present, just

of some of the most scenic and remote and wild spots, whereas special (inaudible) particularly most the lower areas of the (inaudible). This river here is Aorere, it's in Golden Bay, it starts off in Kahurangi National Park. It is a very pristine, untouched river until the point where it (inaudible). This is maybe 20 or 30k downstream from there, so it's passing through some dairy farming and mixed farming territory. Water quality is generally still pretty good, but there are some impacts and I understand they are, they gave it some kind of Trust and it was on National Radio yesterday about the Aorere River Trust I think. (Inaudible) some issues with the help of MfE and the Crown.

Just a couple of general shots, it's pretty highly valued for a beginners trip because it's Grade 2 which is something which needs a little bit of practice or training to cope with, it's kind of more still sections, but yeah it's just a very nice section. Little bit of white water there, it's not all flat.

It's quite hard to see what this is, stuck in the bright bit of water, looking straight down from the point above the river, that's a (inaudible) those are ribs, so someone's dumped quite of lot of cow (inaudible) down there, and the river's up a bit because it was a cow. And that was pretty smelly, you could smell it from the river and I thought oh what's going on here.

MR PRIME: Sorry, did you say it was a cow?

MR CATANACH: It was. This is an area that is all rapids here. It's quite well used sometimes, it's called (inaudible), you come along here, I've used it a bit, it's a nice little (inaudible) of different flows and you've got a cow's carcass right next to it.

Just a view of that area surrounding, those are the mountains in

Kahurangi. The one on the right with the cloud on, I think it's Mount Olympus which appears in the first Lord of the Rings movie.

Again, it's difficult to see, but in the middle you can see a few little dots, this area here, that's actually a rubbish dump, illegal rubbish dump. It's probably been used for years and I do have other things that the Aorere Trust is bringing up, you can kind of see them in this photo.

And we're switching now to the Kaituna which comes out of Lake Rotoiti in Rotorua. This is a river which Bay of Plenty Energy is suggesting a dam – or they're planning a dam, they're in the process to build one. They've got a concession from DoC to (inaudible) the Kaituna Reserve which surrounds this river. There's about a half a dozen shots to get an idea of it, it's very narrow, once you're in that river you have no feeling of any civilisation outside of it, it's very picturesque, you've got to keep your wits about you, it's quite – there'd be consequences if you swim, because you can't get out of walk, you'd have to sort of tread along for quite a while before you get to a spot where anybody can get you and your boat out. It's very highly used, it's actually in a Minties ad or a ad or something on TV that's been playing for years. I don't actually have a shot of the waterfall, but it's in that ad and it's I think the most rafted river in the country. So you'd be looking straight up, there aren't too many rivers in the country you can paddle down and you can see trees in the areas way above you. There's quite high walls and you can't see where all the trees actually start. It's actually a very difficult river to take photos of, the photos you are seeing are the photos you can get rather than the most sort of spectacular. (inaudible) they're one of the better ones, I've never managed to get out there actually, but it's called Awesome Falls and that whole sections called Awesome Gorge.

Slightly different part of the gorge, this is a part that's rafter. People do this as an after work one, every day from Rotorua. (Inaudible). It's kind of hard to see, there's a guy down the middle on the waterfall one at the bottom and one at the top, down here, he's just about to go over it.

So that was just to give you an idea of what the river's about and why we value it. It's a very wild and exciting scenic and refreshing run to do.

MR CATANACH: It's also the river I got the bacterial infection on.

MR WARD-HOLMES: My partner was a raft guide (inaudible) for years. All of the raft guides (inaudible) themselves for the inevitable (inaudible) they get, you can get injured quite easily, the problem is the quality of the water flowing out of Lake Rotoiti which I'm sure you'll hear some evidence on, or you'll probably see evidence on, I'm not sure whether Rotorua has a – there's a lot of algae blooms from nutrients from run-off from dairy farms, long term problem, it's going to be hard to fix and there's a lot of other places in the country that are going this way. Like Taupo's quite (inaudible). Buller River on the West Coast has got a water (inaudible) order on it, but the water quality is only reducing it as well. A lot of streams that – and places like Canterbury are doing it, don't actually have enough water in them anymore anyway, the ones that do still have water. (Inaudible).

I know in the Manawatu, Horizon Council had in their original plan an objective of trying to get up to 80% of their rivers swimmable by a certain date, I'm not sure what the actual date is, but I know that (inaudible) farmers submitted an opposition to that regional plan. It's crazy you know, quality is being degraded all the time and it needs to be stopped, (inaudible). You can still swim in this and it's pretty marginal, I would

recommend you don't. And like I said, the raft guides all have a lot of problems with infections.

Now we're back to this other one, this is the put in to the middle Matakītaki which is probably the most used (inaudible) river in (inaudible).

CHAIR: Where is that?

MR WARD-HOLMES: The Matakītaki is a tributary of Buller. The Buller is pretty much the white water capital of New Zealand. It's not just my opinion, it's a quote from Tasman District Council's harbourmaster in one of his reports and there's a whole lot of rivers that contribute to that. The Buller itself has got three to four main sections on it that people do. The Matakītaki's got three sections on it that are paddled a lot. There's the Matiri and the (inaudibles) as well. So this is a Grade II section, (inaudible) Tasman's surprisingly put three different dams on it at the moment. There was going to be a water allocation problem because they're already talking about (inaudible) take water out, or some water out along a canal or a pipe and drop it down to a power station and then the question becomes how much residual flow do you have left in the river, and how much (inaudible) down and how close is it to variable flow? The answer is, it's not usually very close at all, but it's still better than having nothing in the river or having drought. And now that they've put in three different dams and they'll definitely drown the section. And that section that they'll be drowning is white water before and after this particular shot, it's one of the few shots you can see of it from the road. It's a pretty place. It's hard to see, but it's quite stunning actually.

And like a lot of the rivers in the country, we've got both allocation and holding problems. Like I said, this one's supposed to be drowned. There

is dairy farming upstream of it, but most of the operators are fairly well behaved. It looks like a gold mine, gold operation (inaudible). That really only has an effect in flood, when it's in flood it's the biggest river I've ever seen, it's a silly place to be gold mining.

And then downstream there is at least this one site where the local farmer has put a ring of stone in the water and he's created this little sort of pond where his cows can get the river to drink. The problem with that is that also shit in the river as well. All stock is supposedly – there's supposed to be (inaudible) from all waterways according to Federated Farmers and Fonterra but of course it's a voluntary (inaudible), and even in places that should be quite aware of the issue, like the Matakītaki, you know, it's not just an oversight, it's a deliberate – using the river to – of watering your stock, but yeah it's a cycle that's obviously become a (inaudible) crap into it as well.

[9.50am]

Next. We like variable flows, and this is just a couple of shots to show why. This is the Takaka River, (inaudible). That's had about 30 cumecs and I know that because I know the (inaudible) operators and it's there between 20 and 40 and it's best at about 30. (inaudible) just 30 or 40 because this section on the Takaka is a lot further upstream and that's better between 40 and 80, (inaudible) 80 cumecs, this would be probably about 60 I would imagine, it's fairly (inaudible) tributaries and at that height it's (inaudible) at all, but it's great to have that many (inaudible) section on a Grade III (inaudible) to give you some scales, it's not a big wave but it's quite a nice wave and you don't need to paddle, (inaudible) paddle up. It's on the (inaudible) nice little white water resource to have. This is exactly the same spot at 10 cumecs, that's quite a usual (inaudible) in summer.

It's just to show you that these features come and go. This is just one feature on a river coming at different flows and I like a range of height, not just one given height, no matter how high it is and what we also don't like is an environmental flow allocation which does not (inaudible) recreational and this particular flow is absolutely fine for fishing, but it's not for kayakers.

MR CATANACH: That gave you a variety of things right from people dumping rubbish, to the need for us that we enjoy variable flows and the flows for us may not be the flows for others, and it is not just a single flow; just of the issues of water allocation; so there is quite a variety of issues which lead us to have quite an interest. I just want to quickly cover off some of the main points because I know you have the documentation. I will just cover some of the key points or maybe to clarify.

I think first of all we just want to say that overall, we are very positive about an NPS. We have written conservation policy. It is in draft form but I would be happy to share it with you if you wish. And it talks about a proactive and a strategic approach to water management in New Zealand. We believe that adversarial approach, an approach which lacks guidelines and standards is not going to be in the best interests. There is a lot of wasted energy around these processes.

We support the concepts such as integrated catchment management of fresh water resources. We think that's really important. We support required identification and protection of in-stream values. We are an in-stream user. We are not a commercial user. There are some commercial users, but we don't represent – we're the recreational canoeists. We certainly have aspirations for better efficiency and utilisation. The more efficient that we can utilise our resources, the less

we need to use them. And our preference is generally for natural flows and natural environments as kayakers.

And of course, as mentioned, we've got interested in around the water quality.

In terms of the NPS, as I mentioned, we are a member of the Land and Water Forum. We are on the small group. So in terms of some of those initial comments, that was done in the context of December. There has certainly been a promise from Nick Smith to a commitment to the collaborative government's approach. We are pleased and we know that Nick Smith is keen for these two processes to work hand-in-hand. So some of those comments, I guess, need to be taken in the context of the time that it was written.

What we are more worried about and where the context has not changed is around is NPS for environmental flows. And since environmental flows will be a key part of the NPS and any national environmental stand on ecological flows and water levels and the broader environment flows which that sits under, our big concern at the moment is these two processes haven't occurred, we would like some consistency. But most importantly, we find it difficult to support the NPS until the issue of recreational (inaudible) is addressed satisfactorily within an NES. At the moment we have one patron who is very involved with MfE around NES around Environmental Flows, all of a sudden, it just became ecological flows. That is not satisfactory to us. We want the full gamut of environmental flows recognised. And this NPS would then have to be taken in conjunction with that. So there are more parts to the jigsaw puzzle.

One of our key, I guess, things that we would like to stress is that existing activities as well as future activities need to be considered explicitly in the objectives and also in the body of the NPS. So, as we showed some of our water bodies have already been significantly degraded; in Kaituna, or they have been over-allocated in parts of Canterbury which Tony said you can't even paddle anymore. You can't even put a paddle down, it just hits the bottom. And so the NPS should not only deal with future activities, but also existing activities really where there has been over-allocation, where there are water quality issues, and without that we think there will be some adverse effects and we won't actually achieve the overall objectives which we are trying to set out in the NPS.

I guess around water quality, we like many other groups would like to see a reference of what is defined as good water quality. So, this would be the area we would like to have clarified. There is also some further detail on that around 14, 15, and 16, but that is certainly the area which we would like to have more firmly quantified and specified.

Around efficient use: As I mentioned before, use of - or consumptive use of water does have significant effects on recreational uses. There is inevitably a trade off. So, in terms of efficient use we also need to cover the allocation of the most efficient consumptive use as well as (inaudible) about inefficient users. So whoever has been using water, and it has been used inefficiently. So a good example would be water just being lost in irrigation schemes or irrigation being used at you know, poor times. In terms of - there is some of the more details.

There is quite a lot around the definitions. I've discussed the existing land use, but also, similar to the water quality, the whole issue around degradation and being clear around what is degraded, is important.

One of the key things that we would support that, you know, recreational values are included where part of contact recreation in term of notable values. What is the less clear is what is the definition for outstanding? In particular, we have been party, we're a party at the moment to an application for a Water Conservation Order on Hurunui River because of its outstanding qualities in terms of kayaking amenity, we would like to understand what the relationship between the term "outstanding" used here and the term "outstanding" in other legislation or policy.

One key point that we'd like to stress, is often when we consider water management, we consider a specific individual river section. And one of our key things we believe in is that the whole is sometimes greater than the part. So if we think about the west coast, the west coast unlike those rivers, the rivers there are categorised as generally steep, so they are much higher grade. They are generally wilderness; water quality is generally not an issue because it is often in a conservation area or there is no farming, apart from the lowland. The issues are really going to be around allocation, there are quite a few dam proposals in the west coast. The west coast is probably one of the top 5 to 10 kayaking destinations at a high level in the world. You look at most of the paddlers on the west coast, even if you drive – go to Hokitika, the number of kayaks you see on top of roofs, the majority of those will be international paddlers who come to New Zealand, often for extended periods, two to three to paddle the west coast.

[10am]

They come here because there is a concentration of wild, scenic rivers and the wild scenic is very important to them, as well as pure white water

value. That concentration is scarce around the world; and so the sum of the rivers is actually far greater than the individual sum of the white water amenity value for those individual sections. And if you take a few of those out, you actually destroy quite a lot of the value that people associate with that region. So the values for white water amenity value and this would be I am sure true for other in-stream and recreational uses, it is not the (inaudible) that it is just the sum of the individual parts.

Just in terms of some of the policies that are written there. I would just like to bring attention to a few. Industry good practice is the term used. I'm sure others would have made the point that this usually implies some sort of status quo. But it will not necessarily result in the objectives that we are seeking particularly in terms of degradation.

We have also mentioned the issue around, one of the issues I guess for NGOs is that the flipside of having definitions around outstanding and other elements is that we will then need to find the legal resources. But often the reality is that in issues, you often need to – you know, if it comes down to a legal opinion or what the definition means. And we are, like many NGOs, largely voluntary with very limited resources and our ability to fight, I guess. But not fight, but be able to stand and fight for our values on a fairly even playing field is often limited by lack of resources. So while we encourage the NPS and we think it will ultimately have a greater positive effect, because it will create some certainty and give some guidance, but we do note that it can actually also impose additional burdens on already very stretched resources.

The other thing that I guess we sort of suggest is that in many cases onus of proof almost comes on those who try to protect in-stream values, whether they be recreational or ecological. I would suggest that the onus

of proof should primarily be on those who wish to pollute and develop or use – consumptive use of our water quality or our water.

And similarly, I have made a comment there around Policy 1 for instance which explicitly refers to domestic water supply. Policy 5 could be interpreted as giving priority to irrigation infrastructure. Again, we would suggest that commercial users should recognise their resource and the effects.

In summary, we are broadly supportive of the NPS. We certainly have some concerns, particularly around its consistency with other processes, particularly the NES. We are concerned particularly around the recognition of environmental flows. We are certainly concerned around the focus on future activities, rather than also potentially looking at existing activities. We are certainly - we hope that between the Land and Water Forum and the NPS Board of Inquiry that we can further promote the good practice and integrated management of our scarce and finite freshwater resources. So thank you.

MRS VERNON: You made the comment that you are concerned about inconsistencies about what is happening currently and (inaudible), could you be a little bit more specific in where you think this document is inconsistent?

MR CATANACH: In terms of - I have given a specific instance in terms of maybe inconsistent is not the only term, it is more there is lack of clarity in terms of - so, there's the outstanding - use of the word "outstanding" that I talked about in terms of Water Conservation Order, so that's an RMA process (inaudible). Also the consistency is actually in terms of the process, so if for instance, there was a National Environmental Standard,

which included recreational flow, that's our big bug bear, it doesn't currently, but even though this NPS and the current NES, which is being considered around ecological flows, and the future NES that we hope to see around recreational flows, I guess one of the key concerns is that these policy instruments and the legislation have consistent definitions in that they are - it makes our life a lot easier just to have that clarity.

MRS VERNON: In terms of flows, what is the real difference with recreational flows versus ecological flows?

MR CATANACH: The big difference - there's a large difference, as Tony mentioned, ecological flows are usually the minimum flows that - I'm not an ecologist, so I may be speaking slightly incorrectly, but generally, ecological flows when we look at some of those - it's more around life supporting capacity and minimum flows required say, for eels or fish or others. So in some cases those flow levels can be considerably lower than is ideal for recreational flows. The other point that Tony made quite dramatically with that slide is around Otakika (ph) that the fishermen would prefer 10 cumecs, the play wave at the bottom, which is accessible to all grades of paddlers and it is very accessible in terms of - just proximity to, you know, Tony mentioned it's half an hour from the café is ideal around 30 cumecs. The upper section of that river is ideal around 40 to 80 cumecs. So that's quite a different scenario from the minimum flow that is required for the sustenance of certain ecological ventures.

MR WARD-HOLMES: As I said that lower flow where we could see were a couple of little rocks (inaudible) over them and I said that was fine for fishermen, that is still quite a lot higher than the minimum ecological (inaudible). On the Matiri there's a scheme proposed by New Zealand (inaudible), a consent hearing has been, but there's no decision yet. I

think the average climb of Matiri is 7 cumecs, it's not a lot, but I guess the flood flows, which is fantastic for kayaking, NZEL is proposing a residual flow for ecological purposes of one and a half cumecs. At one and half cumecs, sometimes there is no surface water, a lot of the water is just travelling through shingle and boulders, you can walk across the river and not get your feet wet at one and a half, you know, they'll be puddles, but there's not a continuous link and they claim that that is good enough to sustain eels and I'm not quite sure what else is in there, certainly there's not - (inaudible), just trying to make the point it's not an ecological flow, it's very very small compared to the natural flow of the river.

MR PRIME: Thank you for your presentation. You mentioned the problems with structures? What's the main problem with weirs?

MR WARD-HOLMES: (Inaudible). That's probably not the major problem to be honest. The major problems are what (inaudible), or how much they (inaudible). But when I reply to people it's because - I was reminded of that because (inaudible) and most of the people that died on the Mangatepopo canyoning -

MR PRIME: Are we talking about the same - to me a weir is a trap for eels, are we talking about the same thing?

MR WARD-HOLMES: A weir is any structure across the river that also goes over, that's the difference between a dam and a weir. If the water's lower than the top of the weir, then it's a dam. If the water's going over the dam, then it's a weir. No there's not a lot of real difference. (inaudible).

[10.10am]

MR PRIME: I'll be specific then about eel weirs that many Māori people would use for trapping eels, is there any way that those could be addressed, in your - like having a sign or something to say -

MR WARD-HOLMES: Well I imagine they're at much lower (inaudible) than we're particularly worried about.

MR CATANACH: Certainly it hasn't come across to me as a problem. The problem has tended to be significant structures, or intakes. So one of the issues, for instance, around the proposed Canterbury Plain waterways, if you take in the Waimakariri as initially mooted was dangerous for kayaks.

MR PRIME: I have one other question. You talked about you being the national organisation for canoeing, when I think of a canoe I think of a waka, so it's nothing to do with waka ama?

MR CATANACH: Our primary constituents are white water paddlers. So on rivers, they tend to be rivers. As I said, they can be anything from Grade 1, which is moving water to Grade 5, 6 which Huka Falls doesn't (inaudible) paddled regularly. So Huka Falls is not even Grade 5.

MR PRIME: Yeah, but the Waka Ama Organisation and I can't remember the full name of it now, but I think NZCS is - we approached them to see if they wanted to join, and I'm sure ICF, ICF is the International Canoeing Federation, so they're the guys that have got (inaudible) organisation. Although I see it the NZCS was both part of the International Federation and part of the NZIC on the committee, although that sits, the other kayaking disciplines, including us, (inaudible) NZCS mandate to all of the flat water, slalom, free style, dragon boating is now part of that; waka ama is not as far as I know (inaudible).

MR WARD-HOLMES: Advocacy on conservation, primarily conservation issues.

DR HARDING: Thank you very much for your presentation. I enjoyed looking at your slides here. I would just like to ask you a couple of questions about some of the definitions that are used in the proposed NPS at the present moment. So, for example, the issue of notable values, outstanding values, you've already told us a little bit about some of these rivers that kayakers and canoers see as important, the Buller what was that, the white water capital of New Zealand. So your members would be able to produce a list of the best kayaking rivers in the country ranked from 1 to 20?

MR CATANACH: I think it is very difficult to put a ranking, because I think what you have to realise is there's this huge spectrum of paddlers from people who are Grade 1 to Grade 6 and people value different things within that them. I can give you a copy of the conservation policy and it talks quite a lot about value and some of the difficulties of ranking 1 to 20. Because we could say, the paddler who like this particular type of river will say this is my favourite river; I go to another paddler, I'm never going to paddle that, I'm not going over that, and they will say this is my favourite river. So it becomes quite difficult because as soon as you have any recreational pursuit, there are different spectrums.

MR WARD-HOLMES: It's an expensive process too. I mean you could easily get together a bunch of people and say, you guys are experienced, you know, you tell us; we thought about doing that and the difficulty with that is that you are never really quite sure if you've represented your constituents really. NZRCA did do two surveys, the last one was in 1991. We have not had enough money to do another. (Inaudible). There have been one

or two other surveys that we might have been able to join forces with and try and cover both bases, but hasn't happened. There one 600 replies to the 1991 survey - sorry, 600 that were used, there were a whole bunch that weren't used. The list of rivers that everyone was given in that survey was 200 rivers long and people had to fill in how many times they visited the river, how they rated it in terms of scenery and challenge and overall importance for them (inaudible). So it's quite an exercise that was done with volunteers, phoning and visiting, and spending half an hour with them, rather than just (inaudible).

MR PRIME: Maybe ranking was the wrong word. But I mean, you have identified, or you know about rivers for example, that are commonly used.

MR WARD-HOLMES: From that survey we've got hard information, even though it's old, and newer information is more ad hoc really, we can go to the guidebook, that was never intended to be an advocacy instrument so it's not - it's this guy that went round and paddled all the rivers, visited them all, wrote them all, so it's not (inaudible).

MR CATANACH: And he's biased towards the harder rivers.

MR WARD-HOLMES: That's true, yeah he is biased. He's one of the best paddlers.

MR CATANACH: One of the best paddlers.

MR WARD-HOLMES: So we've got anecdotal and soft evidence and there is common knowledge what a lot of the better rivers are.

MR CATANACH: What I could do if you are interested, in our conservation

policy document we have quite a long section around evaluation of rivers, and white water amenity value. It talks about some of the components. White water value, landscape value, landscapers. I got into kayaking because I walked into a canyon and I thought there has got to be a better way to see the whole lot than walk another three bloody big hills to get there. My primary purpose is to see some of the most amazing gorges in the world. And I've paddled now around the world and where some of the west coast gorges and the Kaituna and others, they are just truly stunning. Use value is only one, but it is not the only thing. The same argument you know, scarce resources are often some of the most - lowly used are often some of the most highly valued. Sometimes because they are scarce. So there may not have been many of a particular stamp, but the rarer stamps are those which are most highly valued. So, I think we have to be a little careful of putting too much scarcity value and also status value, so something like the Whanganui River, has got huge importance in terms of its long history of canoeing on that river. Other rivers have a status which is, because they're seen as real peace pieces I guess, or they may have a status because you can actually paddle back from source to sea. Or there is a region which has a concentration of - the west coast we talked about. So I think value, we are certainly not shy of saying that white water amenity value can be looked at, in dimensions, but it is very complex and you certainly would, you know, the people who could do it best - really the only people who can do it are white water paddlers, because they're the people who gain the value from that experience. So I will be more than happy to share that document with you. It's just a draft in this point in time, so it is certainly not the final word but we are trying to work out ourselves as we grapple with these issues.

DR HARDING: Well, as you might realise from the Board's point of view, we are struggling - we are looking at these issues so we would be very interested

in hearing what you feel notable and outstanding values might be from
your -

MR CATANACH: We haven't defined a list from it, we've just said here are some of the parameters that you want to think about. And also set some of the limitations things like the variability of water flow, so some rivers are very high and you're going to get certain water flows, we're not that keen on Aorere at one and a half cumecs, we can't get below a certain - sorry, the Matiri at one and a half cumecs, it isn't of great value to us; it's very nice to walk down, but that's not white water amenity value, that's tramping value.

MR WARD-HOLMES: There are a lot of different - I've been grappling with those same issues at the moment, just yesterday I was rung by a person who is a consultant who is a member of a team at Lincoln University with - (inaudible) a process which is trying to record and evaluate what (inaudible) rivers is taken off (inaudible), you know, they would like this process (inaudible) to be the regional councils (inaudible) plans.

MR CATANACH: And they've actually specifically requested - they've heard about some of our work around the conservation policy and some of the thoughts of that.

[10.20am]

MR WARD-HOLMES: Exactly the same day, had an email about another - it was a Land Care Research study which is also (inaudible) the guys on the west coast are trying to get off work to go and work with them to evaluate - to work out what are the valuable attributes of west coast rivers and there's other studies - we tried to do or own process (inaudible) we got a

call from a consultancy last year trying to put together a tool kit for tools and Commissioners in hearings to use in evaluating river values. Everyone's grappling with it.

MR CATANACH: We're grappling with it and there isn't an easy answer is I think the short answer.

CHAIR: I'm not clear what you think that we can do to help your concern about the NES. The Board has its - it's an ad hoc Board and it only exists to consider the submissions on the proposed NPS. And make a report on that. So is there something we can do?

MR CATANACH: I guess it's more just flag it that the NPS is also within a broader context. It can't be considered in isolation, I would guess. That is my understanding. Although you can only make comment, I guess the comment - well, I hope that you will be able to make is, "Here is our recommendation for the NPS." When finalising it we would hope that people would consider the broader context in terms of which the NPS exists. It's not the only instrument that's going to effect water.

MR WARD-HOLMES: I would say, I don't have the actual NPS in front of me, because Objective 2 promotes notable values, (inaudible) recreation (inaudible). The way we see it, is the NES is not fitting in with the proposed NPS, so in that regard in that the (inaudible) NPS doesn't seem to be worried about existing (inaudible).

CHAIR: That was another thing I was going to ask about, but thank you for mentioning it. Can the NPS have any effect on existing uses?

MR WARD-HOLMES: Well it's a policy statement and I totally think it should do.

CHAIR: I quite understand that you think it should and the Board doesn't make the law.

MR WARD-HOLMES: No.

CHAIR: And if the law is that existing uses are existing uses and they can be continued, particularly if they're existing because they have been granted for a term, then until they expire they can be exercised. Is that right?

MR WARD-HOLMES: Environment Canterbury is very seriously considering calling-in some of their consents.

CHAIR: I understand there would be very good reasons why they'd be considering that.

MR WARD-HOLMES: And they can do it. They'll become very unpopular with many of their constituents if they do so. That's about you know, you're consents are 66%, you know by the due date, what about the other third, there's a terrible - and the thing is that Environment Canterbury does a large proportion of (inaudible), they're not just any old council, and the reason why that part of the - I think part of the reason is the very conflicting, not just interest from stakeholders, but rules that the government landed them with. The answer is yes, they can be called-in, and if (inaudible) the Environment Canterbury CEO, (inaudible).

MR PRIME: I guess your question is saying, can they be called under the NPS, they can be called in as part of a -

MR WARD-HOLMES: The NPS is a policy, surely with which regional plans are

supposed to inform, in my understanding, I hope I'm right.

CHAIR: Well, I think you are right as far as it goes. But if we have someone who has already obtained a resource consent for a period of years then until it expires they can exercise it, can't they?

MR WARD-HOLMES: Well that's what I'm saying, Environment Canterbury is consider calling-in consents before they expiry period, so any policy statement whether an NPS -

CHAIR: I don't know what authority they have got for doing that, unless it is under a review under section 128.

MR WARD-HOLMES: I'm not sure either, like I said I think (inaudible), fairly sure it's possible.

CHAIR: Now, the other thing was when we invited submissions on the National Policy Statement proposal, we asked the submitters to state exactly what amendments to the proposed NPS they wanted. Now it's one thing to say, "Oh, we'd like to have the NPS strengthened." I'm just taking as an example the heading above your paragraph 14. But that's not actually saying what words you think should be cut out and what words you think should be put in place of them. Do you know what I mean? Does your submission do that?

MR CATANACH: It doesn't give you exact words, no. But it does ask for a change in that it says we are not the experts in identifying what a water quality standard is. But we are saying that the NPS should contain an objective measurable standard for water quality. So it's not defining what that standard is, it just says there should be one.

To be read in conjunction with
the tabled evidence/statement

CHAIR: Well thank you very much for both of you, for coming in and giving this excellent presentation which we have been able to follow very clearly.

CHAIR: The Board would now like to hear from the New Zealand Water and Wastes Association please. Good morning gentlemen.

MR WHITEHOUSE: Good morning Judge Sheppard. I'm Peter Whitehouse and this is our CEO, Murray Gibb. And just at the outset I would point out that since we've prepared the submission, we have rebirthed ourselves with a name change. We are now known as Water New Zealand.

You will obviously have read our submission and as you could see from our introductory remarks, what we did when the NPS originally came out, we had identified five issues that we believed were critical to achieving effective water management in this country. Since that time, our thinking has advanced somewhat. But those five issues still stand. And I think you can see as we explained in the submission, what we did: we went through the various objectives, etc of the proposed NPS and ran them by those five issues, and attempted to identify whether or not they would assist in finding effective solutions to those issues. And in general, the answer was no. So our conclusion was, we are of the view that the National Policy Statement will not, as drafted - will not contribute to effective water management or improve the water management in this country. And we believe a quite radical approach is required. Now that is obviously, probably beyond the scope of this board of inquiry.

CHAIR: Possibly so.

MR WHITEHOUSE: But that is the point we got to.

CHAIR: Yes, thank you. We are grateful to have your views on that. Whether we can do anything about it is a different thing. Do feel free to tell us what your conclusions are, having the proposed NPS.

MR WHITEHOUSE: Well okay, we can expand on it a wee bit.

[10.30am]

CHAIR: We do have your submission here.

MR WHITEHOUSE: Well in terms of the first issue we have identified there, institutional reform. We are now firmly of the view that what happened with the reforms of 20 years ago, was that we effectively ended up with 73 water utilities and 12 water regulators, in a country of now of 4 million people. And we have looked around internationally at other models, that may be available and one that is increasingly attractive, not I hasten to add as a transplant directly to this country, but as a model to look at, is what has happened in Scotland with the Scottish system there where they now have gone to an extreme, if you will that I think would not be appropriate here. But they have one water utility that covers the whole country. And that is overseen by a body called the Water Industry Commission of Scotland, which acts as the strategic director and builds the parameters around the way that utility operates. Parallel to that, there is an environmental protection agency, and there is a drinking water directorate that specifically deals with that. There are, as you will be aware - well there is, I should more correctly say, there has now been established in this country an Environmental Protection Authority. Its forms and functions are still being devolved and developed, and are going to be the subject of, as I am sure you are aware of, the second stage of so-called RMA reforms. We are moving to the thinking that to achieve the objectives that the draft national policy statement has proposed, what we require first, is an institutional model that will allow those objectives to be achieved. We don't believe the prime institutional models that we've got in

this country will contribute in any way to achieve any objectives in this NPS. So we are thinking in terms of a water commission, and thinking in terms of a number of water utilities that would broadly be based on the current catchment frameworks that the regional councils operate under.

The Environmental Protection Agency, would effectively take over a number of the regulatory matters that are required around water that the RMA process attempts to do at the moment but is not, I would have to say done particularly successfully. And I think the most notable or most obvious example to quote here is the fact that since the introduction of the RMA in this country, water quality, particularly lowland water quality, has actually declined. It has not improved. Now, one can argue that, that is a function or perhaps a failure of the current regulatory regime. So we think we need to look at both new institutional and regulatory frameworks.

CHAIR: Mr Whitehouse, thank you very much for that. I did invite you to tell me what was in your mind, and you have given a good introduction to it, and I think that probably, you might now want to go to one of the other topic's that might bear more directly on the NPS that is before this Board.

MR WHITEHOUSE: Okay then. I think perhaps demand management. Throughout the proposed NPS there - is a number of statements, and comments made about requiring water efficiency and requiring more efficient use of water, etc. And it suggests that regional government should direct local government to ensure that water is used efficiently and effectively. One of the big problems that we have, which I don't think statements like that in the NPS will address, unless we change the way we value and utilise water. And what I am referring to here is metering. Now whilst it is controversial and whilst it is not the only way of achieving water efficiency, it is demonstrably the most effective way of doing it. And

our point here is, that given that only 11 of the current water utilities, ie, of the 73 TLAs, actually have a metering and volumetric charging, it is going to be very difficult to achieve that objective. And we have quoted in this submission, and I will just reiterate again, that where metering and volumetric charging is employed, and the obvious example is the current situation in Auckland, of course that is subject to change at the moment, but I should imagine the meters will remain. The average residential consumption there ranges between about 161 litres and 184 litres.

CHAIR: Is that household or per person?

MR WHITEHOUSE: Per person per household per day. Under 200 litres, in other words. We contrast that with some of the other utilities out there. Now if you don't have meters, it is very difficult to adjudge exactly what per person, per day consumption is. You have to use averaging figures. And you sort of have to say, "Well we deliver from our water treatment facility X thousand, million, whatever litres per day, and we have got Y number of households. Therefore consumption is such and such." So it is sort of a crude measurement. But the figures that emerge, even when that crudeness is attempted to be refined somewhat, range up to 600 - 700 litres per day. Now we struggle to see how a National Policy Statement that is attempting to instruct water utilities to ensure the efficient use of water can do that under those circumstances. If you don't measure, you can't determine how efficiently water is being employed. So that is our point regarding the role of the NPS and efficient use of water.

Perhaps the other one I would refer you to - all nine of the objectives in the NPS talk about water quality and quite often, land use. The whole question of land use in this country, and what is occurring out there is a complex, and difficult issue to deal with. And we don't think that

statements in an NPS on Freshwater Management are actually going to help. Once again, I would return to the point, until we do something about our institutional and regulatory frameworks, so I don't want to bore you with repetition, but I would just note that point.

The final point I would mention, and this has been raised with us. One of the major issues that we see, that water management, going forward in this country, has to deal with; and it is the question of the relationship with the treaty partner and the management of water. And we see that, as a major issue that has got to be sorted out. Now in the proposed NPS, there is a clear directive that consultation with the treaty partner be pushed down to territorial local government level. Now, a number of our representatives of our organisation from that community have voiced considerable concern about that, and about the practicality of doing it, and how anything positive could actually be achieved. I think the more important and higher level broader issue is the fact, and I would note that we make a comment in this submission - it was prepared prior to a change of government - where we make reference to the dialogue of senior Iwi with the government. Now that situation, I think has improved.

[10.40am]

The point I would make here, is that certainly senior Iwi figures have made it very clear to us in discussions with them, that they do not believe the discussion of our water or water management is appropriately done with anybody except the Crown - senior level at government level. They see it as treaty partner - treaty partner discussion. We are concerned that if this NPS was to be implemented, and if that alleged dialogue, as proposed is pushed down to local government level, it will result in unnecessary and excessive litigation I suspect, and will do nothing towards resolving the

broader issue of the discussion between Māori and Pakeha and the treaty.
So that is our point over that particular provision.

CHAIR: Thank you very much. Now is there anything further that you would like to say before I see if Mr Gibb wants to add something?

MR WHITEHOUSE: I think I will leave it at this point.

CHAIR: Thank you very much. Mr Gibb, is there something further that you would add to the submissions that we've been listening to?

MR GIBB: I don't think I can add to that, Your Honour. I can simply reinforce the points that have been made. As a membership organisation, we have (inaudible) members with knowledge and expertise across the whole water space, and so we do have a pretty detailed knowledge of water management arrangements in this country - what is working and what is not working. And you have got the message I think, our view is that a re-visitation of our institutional arrangements is critical to achieving what we want to achieve, now that this fabulous, strategic resource is under some pressure in some areas, and the two in the main being obviously, water allocation in the dry, western areas and land use and water quality.

CHAIR: Thank you. So the Board is an ad hoc Board. It has one task, which is to consider the submissions on the proposed NPS, and to make a report on them. And in making the report on them, it can focus on the contents of the NPS itself, and we judge that - if that's the right word - by reference to how fully the NPS would meet the purpose of the RMA or whether amendments that submitters have asked for, would enhance the extent in which the NPS would fulfil those purposes. So, having read your submission, and having listened to you this morning, I can see that there

is some reservations that you have about there being an NPS at all at this stage. But there is nothing the Board can do about that. Our task is just to report on this NPS. So what is it that Water New Zealand asks of the Board in respect of the Board's task?

MR WHITEHOUSE: I think it is, we sort of - we conclude in this in our submission, that what we would be asking of the Board, or recommending to the Board, that they recommended that the NPS did not proceed.

CHAIR: All right. And do you think that is within the scope of the Board's task?

MR WHITEHOUSE: I believe that if you found on the balance of submissions, and evidence that you heard, that the NPS was not going to fulfill its goals of improving water management in this country, it would be appropriate not to recommend it proceeded, would it not?

CHAIR: Well, in the end that will be for the Minister to decide. So thank you. I did want to be clear in my mind about what it is that Water New Zealand is asking of the Board, and you have answered that very well. Let me see if my colleagues have got any questions.

MRS VERNON: I would like to follow up a little bit further from the Judge's question. Given that there are people who do support the NPS, but with changes, is there anything in here that stands out to you as being worthy of keeping? That in fact there is something here, that you can support or you think is the right direction if it was strengthened?

MR WHITEHOUSE: Well, I think Mrs Vernon, the way I would respond to that is that, and I stress that I understand this is beyond the Board of Inquiry's scope and purview, but we do not believe that the RMA and National

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the tabled evidence/statement

Policy Statements under the RMA on water are an appropriate way to manage water in this country. We believe that a better regime can be instituted. So a modified NPS is not really in our thinking.

CHAIR: Well thank you very much gentlemen. We are grateful that you have come and explained that to us. And whether there is anything we can do about that, I don't know. I think our task really is to assume the continuation of the present institutional instruments, because any consideration of how they should be changed is a question of politics rather than a question for a Board appointed as we are. Many thanks for coming and giving us that explanation.

ADJOURNED

[10.46am]

Audio file dmp0054

RESUMED

[11.25am]

CHAIR: Good morning and you are Mr Mikoz? Well thank you very much for coming to present on your submission on behalf of the Recreational Marine Fishers Association. I'm sorry that we haven't been able to find a crowd to listen to it, but we will be listening closely and so thank you; you just present as you would like.

MR MIKOZ: It's actually on the net so half the people would have already seen it anyway.

CHAIR: Well perhaps that's what it is.

MR MIKOZ: You've got a different version there because when you do a presentation it has to be slightly different.

CHAIR: Yes of course it does and thank you for thinking about it like that it makes it helpful for us.

MR MIKOZ: Well this is sort of a welcome to my world. I just find marine knowledge as a jigsaw puzzle, you build round the sides and you don't know what you're going to see at the end until the end there and how come we didn't see that? And good morning members of the Board of Inquiry.

My name is Jim Mikoz, I'm here representing the Wellington Recreational Marine Fishers Association. I describe myself as marine environmentalist. For 23 years I've used all my free time providing my marine knowledge to MFish forums and stock assessment committees. Through the resource consent process I describe the adverse effects on the marine environment a project may have. I actively participate in the DoC NGO forum, the

Ministry of Environment Oceans Policy, Exclusive Economic Zone
Legislation Review and the Environmental Reporting Working Group.

Invited onto a Natural Ecosystem FRST project to identify areas that
lacked scientific information I found four of our eight nationally recognised
databases has serious errors and omissions.

As the marine and intertidal expert witness for the Makara Guardians and
Ohariu Valley Preservation Society my information resulted in Meridian
building a wharf at Oteranga Bay when I proved that the marine
consultants information and the support DoC gave to build a causeway at
Ohau Bay was incorrect. My research has resulted in the Porirua City
Council finally acknowledging they have a duty to protect the Porirua
Harbour from excessive run off.

When advised at a DoC NGO meeting that the NZ Coastal Policy
Statement was to be rolled over for a further ten years, I wrote to the then
Prime Minister Helen Clark asking that the policy be reviewed as the value
of the intertidal zone had been missed out and was completely
mismanaged. I provided a number of examples in support. She
announced the review three months later.

Many saw that information, including Marion Hobbs, who saw a need for a
Freshwater Management Plan. Information provided by other submitters
to this plan and those to the Coastal Policy has shown that little is known
about the intertidal zone, as ours has been the only voice describing its
value to marine species.

I was invited by the owner of the New Zealand Fishing Coast to Coast
magazine Mike Rendle to pass on my marine knowledge through stories
in his publication. Writing about the marine environment I compare the
information available, or have been provided with, against my marine

knowledge and research, then convert the information into stories that recreational fishers of all ages can understand.

The draft of the proposed freshwater plan is no exception as not once has poor water quality been identified as impacting on marine ecosystems, fish or marine mammals and strangely there is no mention that there are a number of marine species that travel into fresh water for food and to spawn.

The lack of scientific research into the effects of poor water quality on marine species has been identified in NIWA research led by Mark Morrison titled “A review of land-based effects on coastal fisheries and supporting biodiversity in New Zealand” in 2008. I have co-written one science paper describing the intertidal zone and could easily write another sixteen describing its importance.

I will show you the value of clean unpolluted fresh water and the importance of the intertidal zone to marine species that I have learnt. This I hope will convince you to include the intertidal zone and its importance into the Freshwater Management Plan.

I'll start off with showing you a macro estuary, now this estuary could be any estuary in New Zealand this is a yellow eyed mullet and I'll use a yellow eyed mullet as an example, they're found in every estuary in New Zealand from the top of the North Island to the south of the North Island. And also I could have picked on any other species like Kahawai go into the intertidal zone to spawn, grey mullet, flounder, there's many number of species in the intertidal zone and I include in my submission a survey done on an estuary in the South Island where that was proven all the number of species that go into the estuary for spawning. So we've got a very important zone here. What is not known about the value of the intertidal zone and the value of the intertidal plants

is that when the tide comes in, the spring tide that lifts the fresh water up high and the yellow eyed mullet spawn on the spring tides and they actually spawn like goldfish. Have you ever seen a goldfish spawn they swim around in circles and the males bump the female till the eggs disperse and the eggs come down, then all the males go in and splash and milk all the eggs and the saltwater wedge holds them up and they go into the intertidal plants. And they're trapped in there and you see on the trap on the tree here, there's all these white things, they're actually Pied Shags waiting for the yellow eyed mullet to hatch to come out of these toitoi's and rapu and all that that's down there.

One important thing you'll find in every intertidal zone is a deep pool and I'll show you later on what happens when you don't have one and why this is. The guys used to swim in this, when I was a lot younger all the guys I go fishing with, and they would disturb all these yellow eyed mullet and there'd be thousands lying in there and they just recover after spawning, because it's pretty exhausting sort of work you know. DoC and every one describes this as the herb garden.

This is the Urerewa (ph) glasswort there's only one mention in any plant book in New Zealand of the name of this plant and they call it a pretty plant, that's totally unacceptable, we've got to get our standard of knowledge of the intertidal zone up to a much higher level. We're down here right at the bottom at the moment and I'll show you what the value of this glasswort is in a minute. Now if you look really closely this is the Urerewa glasswort and they've got other fruit, leaves and flowers on it, you can only see it with a magnifying glass. Now I've macro'ed that up so you can see, but in those things if you look when the tide comes in and that covers those salt flax, all the baby yellow eyed mullet all the small ones are all inside here, all trying to get protection from the Pied Shags and also that's their food source in there. I mean, with all this realigned

they asked NIWA, DoC, Ministry of Fisheries, Ministry for the Environment, what species would be affected with the realignment of the Hutt River through the intertidal zone and they couldn't tell them and they asked me and I said well this is spawning area for yellow eyed mullet, grey mullet and all this sort of jazz. And Andrew Stewart from Te Papa, he said listen Jim you've got knowledge we don't know about, you better write a paper. I says well let's start what do you want? He says well you give me 12 yellow eyed mullet and I'll see if they're spawning. Well we caught 20, I used the others for bait, brought him along the 12. And to give you some idea, you will not see a yellow eyed mullet that size 330 long. The biggest recorded one is in Porirua at 590, that was years and years ago in the Waikanae River when that was a spawning area. But NIWA's book and the MacDowell book describe all the yellow eyed mullet go out to sea at night - no they don't, you wait till it goes dark and the whole bottom of the river will turn black and they all go back up the river and that's why they're going up there to feed and I'll show you what they feed on. And they feed on, in a minute, the mysid shrimp which are nocturne. So we'll keep going here.

Now I was asked to collect more of these yellow eyed mullet to see what their food source is and one of the reasons was later on I had to prove to Ian West, the science manager, the marine science manager for DoC because Hugh Logan the Director General and the ELO group people had got Ian West to help me to write a science paper you see, so he says well what do you know? So I had to show him all these things that I knew, well this is the food, this is the yellow eyed mullet at Te Papa, we're showing a male with the white there. And there's immediately prior to spawning, there's more males than females for some reason, it's a bit like Blue Cod spawning too. That's not quite at the spawning stage. Now this is the first ever recorded Yellow Eyed Mullet white running race, see the egg banks turned red and all the eggs are separated and I'll show you and again

what happens is they start flowing out and that's the point when they are at - the very point of spawning. It's never been recorded before, this is now at Te Papa, this is recorded, pretty scientifically special this. Because in one and a half hours I proved they spawn up rivers, something that science didn't know, you've got it in the NIWA book wrong.

[11.35am]

There was a thing from Masters (inaudible) by Manikan (ph) who described the cleats and platonic eggs in the middle of (inaudible) after a flood and they said "oh spawning happens out at sea", they don't, they spawn up rivers. Many people watch them spawning, it's quite an actively when you go fishing over the Wairarapa to watch them spawning, on the East West Road they spawn in the rapu there.

This is looking down from the railway bridge and this is grey mullet and they've come into spawn and they spawn at the end of the intertidal zone where a river goes you know, when you get a river a V in the river. You know, you get the river flow down there and there's a section there, well that section is where these guys spawn and they spawn in November and the guys will be netting them at 2 o'clock in the morning.

One of the food sources of yellow eyed mullet is sand hoppers and they convert the beach cast seaweed into protein. They also inadvertently pick up all the chemicals that are in the beach cast seaweed, so whatever comes down the rivers, because beach cast seaweed is always growing quite - in a beach where there's a stream coming down. So any of the pollutions go into the seaweed and or contaminate, because the fresh water is always pushed in by a wind or current against the tide into the seaweed. And Rick Wevay (ph) at Te Papa and I said to him "what

species are these Rick, can you give us an idea of these”, oh he said “Jim” he says, “it would take me two and a half years to decide this”, he says “we never caught them in a fish before. We know there’s a 150 different species, but they’ve never been caught like you’ve caught them”, so we’re down a different road here. They’re at Te Papa too because there’s a big jar of them.

This is our science paper, this is the one that hasn’t been published because it will stand on too many people’s toes, but it’s out there and everyone can see the paper. This yellow eyed mullet as soon as I saw this, I said to Ian, because Ian re-did the netting for these, he said “not with blow flies maggots, these are like big kelp fly maggots”, I said “I’ve never seen maggots this size before”. And that’s the size there, they’re pretty big and that’s in beach cast seaweed. It’s one of the reasons why you get Moki and all that and flounder all in close, why people throw - if you go and go Moki fishing, just throwing your rod from here to the waterway, because that’s where the Moki are because they’re eating the sand hoppers and the kelp fly maggots getting washed in. Especially if it’s turned to the south and the wind’s coming on the beach washing the seaweed away and this is why you see seagulls at high tide, what’s that they’re eating in the food? They’re eating these guys.

Now we found those - there’s a story, I asked all my recreational fishing mates, I said “where’s the kelp fly maggots? Where do they live?” So I had to go and find them myself and they’re deep in the seaweed, that’s about a foot down in the seaweed, this is in the estuary at Makara. And these kelp fly maggots are actually in the fresh water as it’s coming out of the stream.

So there’s another science paper here. How do they convert the cellulose of the seaweed into protein?

Here we go here's a major reason why you've got to have clean clear water in the intertidal zone, here's a school of yellow eyed mullet, they go into big schools, they don't individually feed, there's a big school. And they're moving over the algae that grows in the rocks between - that grows on the rocks when the tide goes out and comes in, they come in with the incoming tide and there's all algae there. And I picked up one of the stones and they're feeding on this sort of algae.

MR PRIME: Can you go back again I couldn't see the mullet.

MR MIKOZ: Oh there, it's in that school round there, just gone grey in there.

That's all mullet, a dense school of mullet. They don't like me getting too close. It's a secret world under the sea that will only be revealed to those who are involved in it, for others they can look but they will not see, so you have to be really switched on to catch the damn things.

So there's our, I call it YEM, I see that referred here as yellow eyed mullet, it's just easier to write YEM, and it's picked up by recreational fishers throughout New Zealand because I wrote this story "Bad luck Hector you're dead meat", describing beach cast seaweed the value of it and I used that story, because I couldn't be bothered writing yellow eyed mullet everywhere.

Algae, there we are a lot of algae, you'll notice there's no mud whatsoever in the gut of yellow eyed mullet. The yellow eyed mullet are interestingly enough a major source of food for blue cod and I'll show you later on what impact that has, because they disappear and when you looked at the final thing for Hector Dolphin Management plan, 256 pages, 12 lines on pollution would be affecting Hector Dolphins.

Now Hector Dolphins also told by Paul Creswell they found that when they the river floods they go - yellow eyed mullet go out of the estuaries, same

with all the native fish. They go out of the estuaries and they live in that zone between the freshwater and the sea water and that is a time when Hector Dolphins feed.

There's the gut from the yellow eyed mullet and you'll notice there's no mud, not a speck of it and this is important and you'll see why I'm really upset and why I've got cranked into some of those photo's you'll see. Because the impact of mud destroys this whole food chain.

This is interesting, mysid shrimps are interesting, when I emailed Clint Tyloc (ph) who's the leading scientist at Kapiti National Park and I asked him "how come there's no information on the intertidal zone, what do these species of mysid shrimps?" And he says "Jim, it's a grey area", he said, "we've got a scientist, a marine scientist goes up the river mouth, a fresh water scientist goes up the sea water" and he says, "we don't know, it's a grey area, in the middle". And as I said to Marion Hobbs, I said "all you know, is eight miles of intertidal, all you know is what Jim the rec fisher tells you", I said, "it's not good enough, we're going to have to step up and learn something more about this" and I'm pretty sure that she kicked into light this freshwater management plan. Because she knew that we couldn't keep going on like this.

Here we are, they travel at night and Jerry Gloss and Jerry Sutherland did a major study of the Taiweri (ph) River in Otago and they found the whole river came alive at night with thousands of mysid shrimps. Now they've discovered that there's more than one species, contrary to what the NIWA book and the MacDowell book say there's only one species, there's more than one species and they've done a big research on that.

Yellow eyed mullet, Ian West told me that when there's a bloom of salps in the Firth of Thames they can relate to the decrease in Snapper, that makes so much difference, they eat the salps these things, they come into

the estuary, but while they doing it there's no - they don't eat mud.

Just to put the spanner in there, this is beach cast seaweed, it's quite deep along here. The stream's over this side here a little bit. And everything's connected. This is Petone Beach. Now the Hutt City Council have listened to us and I'm part of their Beach Management Programme and they've got another programme out on managing beach cast seaweed and they're not going to be grooming some of their beaches as a result of my input. And they've doing it totally different, they've limited - they've knocked down - every three days they used to do it, now there's only allowed to be six days I think a year where they'll groom beaches. We've got 48 councils in New Zealand groom beaches. Wellington grooms 29 beaches alone. We take all that food source of yellow eyed mullet and dolphins which is down the food chain and marine species to the rubbish tip and deny them a food source. We've got to step out here and realise what our food sources are.

This is where we're going to, I've give you a heading "Objective Water Degradation". Now this is absolutely shocking this is only a fluke really because I was asked by the Macro Harrier Valley people to describe the value of the Makara estuary and the impacts through the wind turbines. And I thought well the only way I could describe it was to take photographs of what was going on at present and Porirua is managing the Aotea subdivision and this is they're not they haven't got a clue. And this is the Aotea Lagoon that doesn't even have a storm water pipe in it the storm water pipes in two lagoons up and this the incoming tide will pick this all this mud up and dump it on the rocks here. So nothing lives underneath this mud when you smell the mud ecosystems and mud that kills it and that's been proven in a NIWA study they've proven shellfish beds and I think I described that story in the Dirt Pine wind turbines.

Here's how you shouldn't be doing it this is the Aotea Lagoon this is the

intertidal zone one and this was a major spawning river. I've got a guy who's a bee keeper and he comes down and watches them spawning in here they spawn in here. And you'll see the places you've got Pied Shags this is what it looks like before the mud came in here before the Porirua City Council turned it into a sediment trap. And now they told me oh we've blocked it off at sea they've absolutely destroyed everything now because the sea water as I told you before is a wedge for the freshwater to push into the native plants along here to provide the habitat for the spawning eggs to go into before they hatch and all that.

[11.45am]

So they've got some major we've got some major issues with councils who have no marine knowledge have not a clue about the value of intertidal zones. That's why it's most important that the freshwater management plan actually starts recognising that we have an obligation to manage the intertidal zone because at the moment we're not we haven't got a clue or councils haven't.

Here's the freshwater lagoon up here where they turn there's a storm water pipe in the middle here and they turned it into this and that's actually a shag that was sitting on the pipe the pipe marker here and that's a shag taking off from the marker and yellow mullet won't live in there and freshwater fish won't live in there they can't live in that sort of conditions it clogs their gills and doesn't take much, doesn't take much. So we decided to find out where the mud is tracking from this is the Aotea subdivision and all that water just runs off the hills they after I took the photo's started spreading them round they started laying all straw down here to catch the mud but it was too late. Here's the council have banged a hole in here so the water comes down here and goes into that storm water pipe and this is

and then for years they allowed the four wheel drives to go up and down this area and they turned it into a mud slurry and every time it rained it went into the storm water pipe. And that was going into the lagoon as well they've now closed that lagoon to that area to four wheel drives and motorbikes.

Now from a distance that looks like it's a perfect sediment trap, you know we've got the water here, the water flows down here and all that. Closer inspection, you walk down a hill and you find here's a pipe comes down the hill down, here there's the sediment trap there, they've bypassed it and that goes straight into the Kenepuru Stream. We'll find the errors, we'll find the errors.

And I've got some photo's of the wind turbines on the internet and they've gone round the traps and I included that photograph in the thing and Porirua City Council have said they'll come back and they've cleaned this up and they spent a million dollars on cleaning up the mud going into the Aotea Lagoon and all that, but I'll show you what they're million dollar looks like. This is a perfect example of there's no provision to clean out a sediment trap. I work in the industry if you - I could clean a digger here and all that mud would go into there and go down there into the lagoon straight into Porirua Harbour. If I took it to our workplace I'd have to clean it into a sediment trap which is then fed into a tri sector, you know it flows into that one, it flows into three things, that has to be cleaned out, that has to be cleaned out on a regular basis but nothing here. So I can't see the difference between industrial site and a construction site in the way of sediment management, we've got to step up and we've got to do it better.

Porirua City Council - this is a road up past the police college Waitangirua, and look at that, they said every time it rains it becomes a waterfall down through here and the water has come down here and the velocity is from here, so it just gouged this trap just right down here and all that goes into

the Aotea lagoon as well.

Around the corner above Duck Creek they ran a little thing in their local newspaper, Duck Creek was actually chocker with mud and they said well this is their sediment trap would you believe, little parcel of earth and the dirt comes down here and it comes down here, all the way down here and then there's a little trap there and then there's two little pokey pipes feeding into the sediment trap. Now that little tank, that little space here is a flocking, they call it flocking sediment traps. And what they do is they put aluminium sulphate in it so Joe public thinks the waters clean right? We don't cook with aluminium pots anymore. Why? Alzheimer's. What happens - who eats the yellow eyed mullet, dolphins, what are they? Mammals. The whole food chain's being poisoned through ignorance. Now, this is our million dollar sediment trap management plan here we go, it comes down here, a bit of gorse protecting the sediment running some here and the banks down here. And on a closer inspection, here we go, we've got the water flowing into this pond. Here is a grate, straight into the storm water, straight into the Aotea Lagoon, straight into the Porirua Harbour. This is not million dollar management this is dumb management this is. And there's another one, there's not just one, there's three of them all designed to collect the water into the storm water pipe to go into the Aotea lagoon and there's the other one. My influence has probably spanned the poor guys on motorbikes in this area, it's amazing what little bit of influence you can have, this is just one of the things I've done.

We go into Woodridge to see if the City Council are any better, this is their sediment trap design. Over that, over there and oh straight into the creek and straight into Seatoun (inaudible), straight into Porirua Harbour. They know better because we haven't got an adequate management plan for sediment. Now I could write - as I just told you, I could design a sediment trap that would be manageable but - when you go - and then this is a - the

regional council built a millions and millions litre reservoir up the hill here and this just let all this mud go into this here and this is all just collapsing down.

Now we look at impacts of mud right, the guy I work with who runs the Waka Training Kids course for all the kids on the Saturdays right, and he said ten years ago that was a metre deep there and that Whitirea Polytech just round the corner that was a metre deep and they could launch their boats there, they have to go all the way down the rowing club by Titahi Bay to launch their boats there. This is in ten years.

The other things that's happened now, is the Porirua City Council didn't like my photo I put on the internet with the wind turbines showing all these shopping trolleys and tyres in here and they went round and started cleaning them up, put a machine in there and started cleaning them up. Why wait for a photograph? Why cant they be managing the harbour? It's their harbour you know?

I went up to Tauranga and I asked this guy up here and he's involved with the problem of all the sediment running from the orchards and that causes mangroves you know, you've got nutrients and everything. There lies a trick in chemicals applied to land you know, we call it - and Ministry of the Environment call it - it's got a paper called (inaudible) which is algae - blue green algae and the impacts of it. Their paper on the impacts of recreational water sediment does not once mention marine mammals as being affected. That's hopeless, because what happens now I have predicted successfully five algae blooms right? One of them my contact in Great Barrier Island says "oh we've got the algae bloom up here" and somebody say oh the fish are into this, three days later 100 pilot whales on the beach at Coromandel.

There's a paper put out by I think I might have given it to you, by the

Woods Hole Oceanic Institute from a paper in 1978 where they found 19 blue whales floated up dead and the public says find out why they died, like I've asked DoC I said "take a sample"; DoC go "no we're not going to do that". They did and they found it was full of mackerel all with toxic algae bloom. Now we - mammals are like us, disorientated - we eat toxic shell fish we're disorientated, tongue out, totally disorientation. Same that happened with the whales, disorientation, died. you

There's another factor you can do in this management plan, there is - we are extracting water for horticultural and in their (inaudible) of bacteria book the Ministry of Environment put out they talk about 1970 was an increase of all different strains of toxic algae bloom. And that coincides with the increase in farming, so we've sucked the water out of the rivers out of the water table, we put it on the land, we put chemicals on the land, that flows into the stream but because the stream has decreased in volume because we're taking the water out of it, that's a more concentrated flow of chemicals now coming down here and the algae bloom blooms all the way down and it affects all the way through the fish and the whole lot. And you only have to look at other streams all around in summer time and you'll see this string of algae and I've got guys from the orchid in Hastings say streams that used to have fish have no longer got fish in them, because this algae's growing in here and you can see strings of it.

The other thing I'll go into about is sand mining, which is another thing; you take away the sand the water goes into the shingle and therefore there's less water flowing to the sea to take away the algae, so the algae bloom's stronger.

The other things that happens and the same as in the Marlborough Sounds is sea lettuce grows and it smothers all the ecosystems in the sands. Right, that used to be - the whole place used to be a sea grass,

one of our biggest problems is like Pauatahanui Inlet, is the mud - sea grass can't grow fast enough through the mud, so it dies off and we're left with this thing that just bloody blocks out everything.

[11.55am]

Here's a perfect example – this is on the - regional councils in sediment guidelines, the sediment trap, oh look at that sediment trap, there's a major design error here, because that is just soft dirt and when it rains the whole lot blew out and people were ringing me up “come and have a look at this, look at the harbour, look at everywhere”. And this mud sits on the surface because freshwater sits on the surface of sea water, it doesn't readily mix unless there's a lot of wind and this is where chemicals are the big problem. That went out past Baring Head, Baring Head way over here, went past there, goes for miles. Freshwater sits on the surface according to Culton (ph) Institute for 20 miles. That sediment will effect the marine, you know, where they're looking for scallop management, it effects the bottom for 20 miles out to sea.

And here's the slip from the Meridian thing, now this is Karori Lights, you see Karori Lights just here the little white dot there, and that's Sinclair Head way over here, so that's all from the Meridian site and you saw some other photo's of that. The Meridian site took - removed the equivalent of three stadiums, I notice my daughter did the stadium cad drawing for the stadium, so she knows. With equivalent dirt is three stadiums of dirt to the top, that's removed for the wind turbines. Every turbine has a five story hole for it and we've got 70 turbines. These roads have got to take - have got to be 12 metres wide to take a 400 tonne crane around and I had photos of that, but we don't need those. Anyway, that's the effect of that. And I went up by the wind turbines and here's the sediment trap management that they're using - well the one we can get to because although I was promised to have a tour of the Meridian site let by

their senior management, I tease them and they never ever got me because they know damn well that I only take photo's of bad news and they know that I'll be into mischief.

Here's some mischief, just one sediment trap. Here's a pipe right, here's a little screen wall, where's that pipe going? Here. What's that doing? It's taking the mud down here. So it bypasses the sediment trap. And there's the sediment trap, there's no trifecta pipe thing to take it off here and that just flows down the stream and that stream - I mean I had friends down there when it rained and look at the stream it just fills up with mud straight away, never used to be like that.

This is what happens to Makara estuary in the mud from the wind turbines this is just to give you some idea of the impact. All the rocks down this estuary are turned to mud. This is what the estuary normally would look like before it was - that's the food source, that's algae, we've seen yellow eyed mullet eat algae and that was there before – this is before wind turbines. And now all those algae now, you see slightly into those cracks there, it's just smothered, it can't survive this sort of treatment and of course the guys are saying "hey there's no yellow eyed mullet in the estuary anymore". I said "no, it won't live in that, they'll be gone". Five years later that whole population of yellow eyed mullet would have died off, same as it did in Porirua harbour. Because they've only got a five year lifespan; that's why it's important that we don't actually leave these things going on for too long. Five years and if those estuaries - if those things in Porirua are not repaired in five years then the massive school of yellow eyed mullet that used to spawn there will be gone. Here's the mud that it's caused. It's quite deep, you can see it, dog's paw. And here it was here before that see the sand, it was quite firm and that's the glasswort here with the people call herb garden, it's not.

Now this other photograph is of Makara of the glasswort now, it's

smothered in mud and here's before it's not smothered in mud. See the difference? Crazy. This is City Councils management, see we've got so bad that the plants are growing in here, the mud's so deep that plants and – there's so little maintenance that the plants are all growing in the sides here and the City Council management of sediment. Now there's the main water main out of this dirty big million million, five million litre bloody reservoir getting pounded to death by rocks, because they didn't care. You know, and that's our water main. So eventually that water main will rust in time right, because the rocks would have beaten it and then it will burst and oops you go "oh it just happened", no it didn't happen, you planned it, this is how you plan it.

This is a perfect example of regional council management of springs, there's a spring just here coming off the hill there and here's the water just in this ditch here. It would have fed this gully that's been here for millions of years right, but now that pipe gets directed it's over there, but because there's so little water and it's seeping into the road, the water doesn't get there any more it just drains away, but that water would have flowed down that valley all the day long, every day long, but now it won't. Because all they had to was run a pipe down here and that would have been bingo but no they had to run it along the side here way the hell down here, until it evaporated into the ground. That's not management is it?

I just did a presentation to the ten year plan - City Council ten year plan I said this is – and demonstrated some of these photos, I said "look this is your management this is Ohariu Valley Road. I says, this is three years ago. I said "now look at it. When are you going to fix this? Why do you have to keep letting this water keep flowing out of this pipe down here doing all this damage flowing in the intertidal zone with mud?"

One of the biggest problems you're going to have to face somewhere along the line is the management of waste of sand mining you know, the

whole country is crying for sand for construction. And you're mining the rivers; you mine the rivers for sand and you put the dredge waste back in whether it's shingle or mud you put that back in, but you don't have a use for it, you're not management it, there's no management plan for it.

And here they push it into the Wellington Harbour and that goes over the shellfish now, the guy who's got the commercial net he says he said it filled up my bloody net with a metre of mud this stuff does when it rains, it just washes the net – well you imagine, it just comes down off this here. And you're getting this - they mine rivers all through the country don't they, everywhere they're mining rivers for sand. They take it out of the dredge waste, what do they do with the dredge waste, put it back in the river and without sand nothing lives. Here nothing lives, see this is all this mud just crumbling into this here and there's no ecosystem in the world that will survive in that.

The same day I was fishing at Ohau Bay and I went in there to take a photograph because this is for the wind turbine stuff. And here's the sand, you can see the sand - it's a beautiful day and you know, that's comparing -here's the West Coast and here's the harbour just covered in mud and here's the West Coast which is renown for surf and everything and this is got super clean water.

So they stockpile their waste knowing full well, and the resource consent for the regional council, knows full well that all they're doing is waiting for a big southerly storm to wash all that mud back into the harbour. Now the science papers saying "the harbour depth is decreasing by the mud and everything, right mate". How come you haven't figured that out? Of course it is. It's washing all this dredge waste. We mine the Hutt River for sand but they've got no use for the mud or the stones. I went to resource consent in 1999 because they were planning to dump a hundred thousand tonnes of dredge waste in the freshwater springs just off the harbour edge

off the river mouth there. I says but these are freshwater springs you can't put them in as dredge waste. Oh they give us a hard time, it was one of the first resource consents I've been to they give us a hell of a hard time. And anyway the Hutt News they described they were filling in natural holes and depressions in the harbour. This is the shellfish after the mud, you smother the shellfish everything dies.

We've got rivers and harbours discharging sewerage into our harbours and rivers, like the Manawatu River that would be the most chemically enriched river in the whole of this country. You've got two cities, Fielding and Palmerston North dumping their waste water; you've got chemicals – you've got dairy factories, meat works and like all these industrial places they have an industrial pipe that goes to the sewerage plant. So all the chemicals they're using are going to the sewerage plant. There's not one sewerage plant in New Zealand that strips out chemicals. So all that goes in the river, so it becomes a tide of chemicals of - how many chemicals we use, we have a tanker arrive at Seaview every three months with chemicals. Where does it go? Down our waste water systems or in our storm water and the Documentary on TV said we spend more on chemical cleaners than the whole conservation budget and it all goes down our storm water and our sewerage pipes. I asked them to put sewerage pipe into waters 50 metres deep where the currents in the Cook Strait would take it, because you go five knots, seven knots out there, contrary to what Land Info say on their charts which is point two of a knot, there's a big error there because they measure the sea currents on the sea bed and then Land Care call them surface currents. Can't get them corrected though, major problems. This is one of the databases you find and they're all full of rubbish.

[12.05pm]

I've got a friend I helped him with a resource consent and I was introduced

to this lady who overlooks Houghton Bay. And I said “have you any photo’s of the slick coming off the sewerage pipe in Lyall Bay?” Heaps of them, heaps of them. I had 40 instantly. Here’s one and this is a chemical slick, it comes off the pipe, it sits on the surface because most waste water has petroleum products and everything like in it and it’s all full of chemicals and that goes through the marine reserve and out the other side and past Sinclair Head and out the other side of Sinclair Head.

I raised this for the Environment Court mediation process, my concerns were rubbed off the whiteboard. I was asked to provide a brief of evidence, so I give 130 pages to the Environment Court Judge. He said our concerns have merit. And as I said in my submission there, I’ve got a paper from the Environment of Queensland proving the whole resource consent – this is whole sham, this resource consent. They said that this sewerage pipe would mix within 100 metres. Over in Australia they’ve got a town nine times less than the size of Wellington, a pipe half the size and they said we’re using the same chemical, it travelled 800 metres in one hour, then down the beach and then out the coast then out to sea. It’s on the internet. You just have to tap in there and there’s stuff. This is where the position of the pipe is, where the bottom of the V is and you we can take photos any time you like of that.

The other things is the sewerage plants aren’t designed to take out the waste from meat works which are highly in chemicals and of course that comes out of the pipe and every now and again there’s a big brown surge and that comes out and travels the whole coast and it’s quite bad.

The chemicals going into this ecosystem you know, a river is 20 times more productive than the sea, the intertidal zone, so we’ve got Gern (ph) spawning in Lyall Bay and the eggs come up into the surface water and get contaminated by the chemicals and now the sewerage pipe. That gives you some idea of the waste water impact, there’s the sewerage pipe

flows six to nine times a year out of here, the emergency flow type. There's absolutely nothing in the rock pools. Look at this, just to make sure the whole beach gets it that's their pipes, shooting it back up the beach. Every city will have an emergency sewerage pipe which is - because one of the things they don't take into account is the climate change. Climate change as I've proved in one of my other stories is not the fact of sea level rising, the effect we're seeing now is bigger high pressure systems and deeper lows. So deeper lows cause more hot spots of rain, so we can't cope with this rain, so it all goes out the emergency over flow pipes. Just the same as we've got high pressure and I proved and in NIWA, this is the first time it's ever been documented, that in a period of high pressure the high pressure lowers our sea level down and I've got a rock that should have been two metres under water 400 mls out of the water, effective high pressure on water pressure. It's something NIWA didn't know about. And here's the pool at Makara the same day and here's the life in the rock pool, look at all that life compared to that life. Nothing and that's the effect of waste water. And waste water's full of chemicals. Now the city council pipe that received 38 thousand or 40 thousand litres of caustic class A a week because it can't manage the product that's going out there and the PH values set by the Ministry for the Environment they have to (inaudible) these costs together; take the PH level down.

But when you look at the micro guidelines put out by the Ministry for the Environment I've actually shot them to ribbons. They said that they can't test it. And at the resource consent for the City Council sewerage pipe thing I said "what about the effect of endoro(inaudible) chemicals on there?" They says - now I've been the first person in New Zealand now to get a resource consent to acknowledge that endoro(inaudible) chemicals will be tested around sewerage pipes when the Ministry for the Environment comes up with the play. They don't know. They're absolutely

- their material is absolutely shocking. I went to the Environmental Reporting Meeting and I wanted to talk about intertidal zone chemical pollution; they wouldn't discuss it. I took a day off work to discuss it and you can imagine how peeved off I was over that.

Now this is our – (inaudible) trapped in the seaweed that grows on the rocks. You've got two different names for it, you'd probably – there's tura (ph) and it's tana (ph) or something like that and it's a seaweed that grows on the rocks, so like a sea lettuce and they collect it in the summer time. The Gisbourne people have got one name for it and the Wellington people have got another name for it, it's the same thing though. It grows in rock, and they gather it and this is 500 metres from the sewerage pipe and the Wellington Health Authority are testing the water quality 1800 metres away. Well, here's how bad it is, they closed the beach because of sewerage pollution at Island Bay, well there's no sewerage in Island Bay it's of course come out of the Lyall Bay pipe.

I took these photo's of these dolphins feeding - they actually feed - and even the guys at Te Papa didn't know, they feed by circling a school of bait fish with air bubbles and this is what they're doing here and these are the scouts, you normally get a school of fish and there will be always a scout. And they're going to circle the school of bait fish and then they'll go through and feed them and whales do the same thing you see it on documentaries air bubbles you know. Anyway, that's approaching us and he was just starting to veer away from us and he must have smelt that sewerage coming out of there 'cos they just turned the whole school round, the whole pod round and started heading out to sea and this is normal. They're not that dumb. They veer away from waste water flows. Unfortunately the fish they eat live in this algae that grows in this waste water and they eat the algae, which they wouldn't know and then they die. Now when they did that tagging of the Hector Dolphins in Akaroa they took

a blood sample and it's full of brucellosis it can only come out of waste water.

There's 30 papers a year published on describing the impact of chemicals from sewerage waste waters on fish. This is increasing. this big system at (inaudible) is just an example of what's happening to it from chemicals and waste water and the documentaries overseas they have deformities in their guts, the reproduction systems getting knackered through all this chemical pollution. Now we're getting Kawhai with big bulgy eye, you know, these chemicals are the silent killers and this slick from the water is not just natural colours of the sea, it is chemical slicks that are killing fish which is probably is - which is the title of my next story actually which is called "Silent Killers, the Natural Colours of the Sea?".

The emergency sewerage pipe in the Waiwhetu Stream we've got the Ministry for the Environment spending millions and millions of dollars to clean out the Waiwhetu Stream, so for 12 hours a day because the city council and regional council haven't got their act together, this sewerage goes down the Waiwhetu Stream and it's been flowing since March. Last time was in '06 and it flowed for four weeks, now we've got a flow in 2009 that's been going since March because they can't fix a pipe. If you get an earthquake in Wellington you can guarantee that pipe breaks, because the whole of Eastbourne is lifting. And you see this has killed - the waste water has killed the algae, just (inaudible) and all the algae round the pipe and the waste water in Wellington, it's killed all the algae. And there's nothing - that should be all green, bright green.

And they closed the gate at Pencarrow so you can't get round to see that they dump their sewerage on this beach at Pencarrow, there's not even a pallet crab now, there's hopeless fishing down there now. And you can see the slick coming out of the sewerage pipe here, it goes round into the bay Pencarrow and that flow that I talked to guys from the Worser Bay

Surf Club they said yeah and when it blows a south-easter all the stuff ends up on our beaches here, because freshwater sits on the surface; the wind blows it on the surface, it's just blowing on a saucer or water, blows on the surface and into Seatoun.

Same thing that happened to Titahi Bay, you've got a report in the paper about it people getting infections on swimming in Titahi Bay and in Porirua Harbour, the rowers and all that. Because they closed the beach in February in Titahi Bay because the sewerage (inaudible) at Titahi Bay can't cope with the flow and the incoming tide comes from the south, goes up, goes into Porirua Harbour and you if their chloroform count in Porirua Harbour it coincides with incoming tide simple.

We don't seal rubbish tips, even a modern rubbish tip like Newlands doesn't seal, the Silverstream tip doesn't seal and this is what happens and this is what happens everywhere. Get a bit of rain, the leachates starts to come out of the tip and it flows into the sand at Houghton Bay . Here it is. That's over 200 metres and that little strip there has covered over 200 metres and here's the city council for resource consent, Environment Court said 4000 litres a second of waste water will mix with sea water inside 100 metres. It can't even - a little trickle, the trickle stopped you can't even do that.

It's the big pocket syndrome in the Environment Court, I'm afraid I'm very disappointed.

And here we've got the regional council, this is typical when you report a flow, here's a guy testing the water quality. There's no sludge coming out now, it's all gone.

[12.15pm]

The locals say they always arrive two hours after the flow's ceased you

know? And that's a lot of what happens with these rivers, you know, streams. And it's a small world you can't get away with this, I'm on the ground floor with all these guys and they said we're testing and we've done tests. And the offices of council says "go further away, we don't want that test", so when you set guidelines for water testing you're going to have to name the area where you test. Like every current - the current on the beach will flow this way on the incoming tide or that way with the outgoing tide. Well, you've got to test down current from up, don't test up current because you'll get a totally different reading from down current you know, because you're only fooling the public - you're fooling the people who aren't informed. You know, people like me. I think they've done something about this because at the Environment Working Group I met the guy from the council and I says "look what you're doing with the leachate pond, you've got a spring here feeding into this pond and it's just a leachate pond. Every dog that swims in there goes to the vet, they pretty near die. And every rubbish tip will have leachate ponds. The Silverstream tip used to have leachate ponds; four pigs ate out of it and they all died of convulsions. They're bad news.

Here's a typical example, I reported this chemical flow coming into the Takapu Stream, they arrived hours and hours later. You can't test something hours and hours later, you've got to be actively responsive. You see its coming out of the industrial site up the hill there.

This has got to be addressed real seriously through the plan because what we're doing, we're stripping out our rivers, our beaches of sand and we stock pile the shingle, take away the sand for industry. It's not a renewable resource it's a - unless we believe in this Notre Dame and we're all going to disappear in 2012, we're not managing this stuff that we're going to - for sustainable thing.

When your pile stones that high water just goes straight through it, you've

just created an irrigation ditch like you do on a farm. You want to put a irrigation ditch on a farm grab this stuff, there's no sand in it, perfect. This is what is happening in any river in New Zealand, you take out the sand and then the water doesn't flow. Some of the rivers you'll see that the water disappears in the shingle and then it will pop up down further. There's no migration paths for fish, because we've taken too much sand out and we're not protecting these lake outlets. There's a lake outlet with ten litres of this stuff in it and you're not - and all the water just disappears in the shingle.

And then you've got this other example of this Pencarrow Lake, everything coming out of the Pencarrow it drops in this pool, because they set the pipe too low and because they mined the beach, here's all that shingle there, the water doesn't flow to the sea.

I was asked by Rosemary Thomas who was at the Regional Council at that time to come round because NIWA, DoC, the Ministry for the Environment, Regional Council and the City Council couldn't find out why the life in those two lakes was dying, there was no regenerating light, there's no life, there's no recruitment of - you know what I mean recruitment eh? Recruitment of young stock into the lakes and they couldn't figure it out "come round and have a look" and I went round there I didn't really know until my mate says - we came round and saw this, he says "look this is a stockpiling all this shingle" and because I'm in industrial trade, I said "that's not a stockpile, that's dredge waste". So what they've done, they take the sand out and you can't catch Moki in front of there, because there's no life for the sand hoppers to live in the seaweed in the beach, because it's just a beach of shingle; there's no life in it. Fulsom (ph) Industry come around here and did a survey of all the regions and it was the most corrupted survey I've ever seen, they didn't even mention this beach is mined, they didn't mention Petone beach has

seaweed gathered off it every three days. So then they put out this paper describing the life on the beaches of Wellington region. Well if you're not going to describe what is down there, then the paper that you've just produced it's only produced for people who have got no knowledge but we're getting the knowledge. This is Wainuiomata –

CHAIR: Mr Mikoz I just want to say you've got five more minutes, what you've been telling us is an impressive range of knowledge and it's very important and you've been explaining it very clearly. But we have some other people this afternoon coming as well. May we just give you five minutes to conclude?

MR MIKOZ: Yeah okay. You can tell I was on at DoC, there's no - five years ago there was not one database that named a native intertidal plant; now there's two sites, this is unacceptable, you don't know the value and unless you recognise it from formal marine knowledge you don't know their functions.

This is what happens when you don't know their functions.

Raupo, one of the most important plants in our area described by Māori in our area as our mangrove, our cold climate mangrove, poisoned out by the regional council. That habitat, everything poisoned out.

Makara Stream, poisoned out. All you've done is created grass which is undermining the banks, the banks will fall in.

Planting trees in the river creates a vortex, the bank gets washed away. Regional council are planting the wrong plants on the bank. The result, don't perform any function at all, they're out of the water, should be in the water.

Poisoned banks, same as cutting grass back, caused cave in.

Porirua City Council, Kenepuru Stream, bank's caving in, grass.

Lyttleton Road bank's caving in.

These plants should be planted protecting the bank, not the bank keeping the plants.

Another example of poisoning the banks. You see here what's the problem.

Here's Porirua City Council's management of a stream. Where's the native plants? Why? Because you don't know the value.

You poison the plants, put your little plants in, the bank comes in and this is what happens, the bank caves away.

Barriers. There should be no barriers in the intertidal zone. There's a barrier, There's a barrier here. Here's a lake. They built a lake, they never sealed it, the water seeps away and there's no flow. There's a lake. How can yellow eyed mullet, this is a major spawning area for the Waikanae River, that is why Waikanae stands for fish and current and everything else like that. And they've destroyed the whole spawning area. This is unacceptable.

You can't manage this, this is crazy stuff here. Hutt News ran the story they're planting these plants, these are the wrong plants, no raupo, the bank's all caved in. So you - what happens when the wind blows? The egg sacks that were spawned in that get washed against those rocks and get smashed to death. All you've done is provide a rat habitat. These estuary it empties in, here's the rocks, there's no fish life will live in that because you've made rocks out of it and they'll die, the same as they did at Whitianga. They created all those canals we should be putting intertidal plants in there, same as you do on the land, as providing corridors for

main fish to spawn in. It's a lack of understanding.

Here's the perfect example, they couldn't even get the pipe right. Now the estuary drains back into the Hutt River at low tide, so anything that went in there to spawn is a waste of time, because its going to die because even the waters too - and the velocity's washing away with the bank here because they've got too high a velocity and it's cold water from the Hutt River going through there, that's crazy. So low tide, they had plenty - there was plenty of information that they're going to have it wrong, because that would have been out of the water. Now the bank's - they poisoned the banks for their plants, another eco group doing that. Now the estuary - the water can't even get to the river now, it's too low. And I offered to help them there and they said they weren't interested in my marine knowledge. Now the bank's all collapsing. Tessie couldn't even swim in the thing, it's not deep enough, if it's not deep enough for a dog to swim in it's not deep enough for a fish to swim in. And then just to make sure nothing escaped, the (inaudible) by a barrier of rocks.

Picked up the water in the fastest part of the Hutt River, you're going to have to address this issue of logging, even the DoC couldn't get the logging right over at Wainuiomata this is - and they leave all the concrete blocks in the river and all this causes log jams, they burst and they fill up the intertidal system with rocks, there it is there.

Or as I flew over to Australia there, here he is he fills up the whole sounds - logging fills up the whole sound inlet there with mud, nothing lives in that mud, because we're not managing the run off from logging.

You talk about efficient use of freshwater, this is a seepage zone for the aquifer. Now in the old photo's of the Hutt River they're all deep pools,

now its just basically hydraulics, the deeper the head of water the greater the pressure the to (inaudible) into the aquifer. Now you're looking at \$250 million dollar damage because they couldn't manage the aquifer.

Here's these freshwater springs selected a few hundred thousand tonnes of dredge waste, look at that life in there - all that's – that's life in there, that's mysid shrimps that's how I learned a bit more about it, because I said what species of mysid shrimps. Well they still haven't been identified, no one knows these species yet.

This must be one of the whole reasons why you need a freshwater plan this is the Whangamata, this is a whole estuary here, wetland plants and everything and they made that into a car park.

And just to make sure you've got no aquifer, you send shipping over the shallow freshwater springs and they are only nine metres deep, that puts a metre long furrow through it. And when you have the fast ferries going through there in '97 I told the regional council that "wow there's a lot of leakage in the freshwater springs, you better shift those fast ferries", they told me to go and get lost.

In 2001 I wrote to Sandra Lee with the photo coming up now, that's now in the national library, it's the only photograph taken of an under water blast of a fast ferry and it destroyed that aquifer, you'll be lucky to - they have to shut it down because they get salt water in the aquifer now in summer, because they've destroyed it, there's too much sea water in it now. They've built an area for - there we go, that's the end of it anyway..

CHAIR: Well thank you very much Mr Mikozi, I'm sure you could go on further and it would be just as interesting as you have been.

MR MIKOZI: Well I was trying to make it interesting for you people, I see you get bored to death with other people talking that they're not interested in

something the Cabinet said they're going to have to do.

CHAIR: Well thank, you it's been fascinating exposé.

MR MIKOZ: It's only 180, you had the other one was 300, you've already sat through that at home, but you haven't got this - this is a slightly different version because I had to talk to it you see.

CHAIR: Yes but it has been very clearly presented and we're very grateful to you for coming and giving us that presentation now.

MR MIKOZ: Pleased include the intertidal zone.

CHAIR: As you know, we're going to need to listen to somebody else after lunch so thank you and that will conclude for now.

MR MIKOZ: That's all right I've seen from the submission that I'm only one who's presented anything on the value of the intertidal zone for marine species, so I'm sure you will be watching that pretty carefully. you can scan what you're been receiving.

CHAIR: We couldn't avoid it, with the memory of your presentation this morning. Thank you.

MR MIKOZ: I'm sure you will. Now if you need any other information I can willingly give it to you, all those papers I talked about in there I can produce. That NIWA one I quoted you that major page, this is the only information you've ever seen on what effect dirt has on marine species, they don't eat dirt.

CHAIR: All right, well thank you.

MR MIKOZ: That's all right, I'd better let you go now, we've been chatting away for ages.

CHAIR: In the afternoon we'll be hearing from some businesses that probably have a completely different idea than you.

MR MIKOZ: It's like they said at the programme, they said "there will be no funding into the intertidal zone, unless a commercial NP user is found" and I said to them and "what say the end use has no voice?" They looked at me like I was a smart bastard, I said "Dolphins have no voice, but they rely on the intertidal zone for a food source", is that bad luck on dolphins is it?

CHAIR: They've got your voice fortunately.

MR MIKOZ: Yes and that's where the story Bad Luck You're Dead Meat came from.

CHAIR: Yes thank you very much.

ADJOURNED **[12.23pm]**

dpm0055

RESUMED [1.27pm]

CHAIR: You're Mr Newland?

MR NEWLAND: I am.

CHAIR: And you're going to present the submission of Fonterra.

MR NEWLAND: I am.

CHAIR: Thank you very much.

MR NEWLAND: First, like to start by thanking the Board of Inquiry for the opportunity to speak to you today to put Fonterra's case on the proposed National Policy Statement on freshwater management. My name is Sean Newland, I am the Sustainable Dairying Strategist for Fonterra, Cooperative Group Limited.

Firstly, let me state that Fonterra supports the purpose of the proposed NPS on freshwater management. There is unquestionably a need for an integrated approach to objectives and policies in the management of freshwater water resources.

We have identified a number of points that we consider should be addressed within the amended NPS. And through parallel streams of work for the purpose of the NPS to be achieved and optimise freshwater management within New Zealand. These points were raised in our original submission which we take as read. We note that Central Government has since indicated by way of cabinet papers that they also

recognise the need for many of these points to be addressed. The focus of this appearance before the Board will be those issues Fonterra considers fundamental to the operation of a successful freshwater management system within New Zealand.

I would first like to give a brief background of why this is very important to Fonterra. Fonterra's New Zealand's largest business, a key earner of export revenue, and a major contributor to the attainment of New Zealand's economic, social and cultural objectives. Fonterra's business along with businesses of our supplying farmers, is based on New Zealand's natural advantages of water, sunshine and grass. Access to adequate supplies of suitable water is critical both to our and our supplying farmers businesses. Fonterra recognises that water sustains many value environmental systems, many of which are also valued for their cultural, social and economic contribution to New Zealand.

We also recognise that effective and appropriate management of freshwater is critical to the achievement of New Zealand's environmental and economic goals. And the social and cultural values of the wider New Zealand community.

Fonterra believes that an issue central is to the future of New Zealand as freshwater management should be dealt with in a way that provides a long term solution. And therefore, should be well considered and broad in its approach.

Why are changes needed to the current freshwater management process and proposed NPS? Firstly, the current Freshwater Management Policy and regulatory environment operates in the absence of a national strategic direction. There is no overarching acknowledgment, of the range of

environmental, economic, cultural and social objectives whose attainment is linked to freshwater management.

Secondly, a number of fundamental issues that influence a successful freshwater management regime remain as yet unaddressed.

These include, but are not limited to, the role of Iwi in water management decisions and the use of pricing as a tool to encourage efficient water use.

Thirdly, there is an absence of agreement on the process to determine water's values and associated water quality targets for New Zealand's freshwater resources and how best to achieve these.

Fonterra's Proposed Changes to the Current Freshwater Management Process and Proposed NPS. I will start with national water resource strategy. Any NPS should operate within the context of a national strategy for New Zealand's freshwater resource. Central Government determines New Zealand's environmental, economic, cultural and social objectives and has the responsibility for developing and articulating such a strategy.

Central Government has devolved a great deal of responsibility to regional councils for decision making at a regional level. This devolution necessitates a stronger, clearer leadership being provided to regional councils as to the national objectives to inform the community decision making process. Along with the proposed NPS this could be best provided by the development of a national water resource strategy.

The development of a unifying national water resource strategy would reduce the risk that government policy, such as climate change policy, will be developed in isolation from consideration of water related objectives. And would also allow for improved consideration of costs and benefits of

obtaining different objectives when considering water management decisions.

In the absence of a widely agreed, clearly articulated national water resource strategy an NPS on its own provides an RMA based roadmap with no clear destination. We submit that the development of a national strategy for New Zealand's freshwater resource should be a priority area for policy development completed in parallel with the finalisation of the NPS.

National Leadership: The impacts of water management decisions, decision making, will be long term and broaden its reach. We submit that Central Government must play a more direct role in making decision of national significance, rather than devolving this role to local government and private sector interests has been the case to date. And this would continue to occur under the proposed NPS. By doing so, Government would provide for greater consistency in decision making, would allow for greater alignment of action with a national water resource strategy and provide a more certain environment for stakeholders to operate within.

This approach would also provide a platform for Government to address issues where there is currently market failure. Most notable of these is in water storage and transfer infrastructure. Where the current process provides limited certainty as the availability and security of water resources, leading to an ongoing lack of investment in long term projects.

We submit that the proposed NPS be amended to require increased leadership from Central Government. We note however, that this may have been overtaken by current RMA amendments and changes in the resource governance structures.

Recognition Of The Range Of National Objectives Effected By Freshwater Management - water is a resource that is necessary for maintenance of the New Zealand way of life. Fonterra submits that the proposed NPS should recognise and provide for the management of freshwater within the context of sustainable development, sorry sustainable management. Recognising freshwater as a resource which is available for the benefit of all New Zealanders to meet their environmental, cultural, social and economic needs. To do so, will provide more balanced consideration as to how this resource is managed.

We are currently experiencing examples of the failure of regional councils to adequately apply economic considerations when making water management decisions at a regional level. The proposed NPS should support this outcome by explicitly stating the need for water management decisions to be made in a sustainable development context with the consequence of different decisions on environmental, social, cultural and economic values being appropriately and consistently assessed.

Clarification Of The Role of Iwi - while the RMA currently provides for the principals of the Treaty to be taken into account the consistency and manner with which regional councils have undertaken this has understandably pushed Iwi down the pathway of direct negotiation with Central Government over their role in water management.

At the same time there has been a recently emergence of co-management agreements between the Crown and Iwi. This has led to a lack of clarity as to the future role of Iwi in freshwater management. And this lack of clarity impacts on stakeholder's certainty as to their long term security of access to water resources. This lack of certainty is a contributing factor to

limited investment of water related infrastructure, and associated land use investment.

We submit that the role of Iwi in the management of water resources requires clarity to provide an environment of certainty for water management. There is an opportunity within the NPS to provide this.

Water Efficiency Transfer, Harvest And Storage - New Zealand is in the global context blessed with an abundant water resource. The pressure on some water resources is well recognised however. And this pressure is likely to increase in the future with increasing demand due to population and economic growth and in some regions, as a result of climate change.

The availability of adequate water, when and where it is required is becoming increasingly constrained. The gross water resources of New Zealand are unlikely to increase. A combination of these factors requires New Zealand to make more efficient use of available water resources. Fonterra submits the proposed NPS should explicitly support increased efficiency of water use and the development of infrastructure that provides for better use of available water resources.

Specifically, this should provide for a policy and regulatory environment that allows for transfer of water resources between users and in an efficient manner including the use of pricing where transfers of previously allocated water take place. It should encourage the efficient use of water by all water users including municipal supply, power generation, irrigation and industrial use. And should recognise and support greater use of water harvesting, storage and transfer.

Such an environment will provide a greater available water resource for

use and in doing so, reduce competition between water resource users. This will make management of water resources less confrontational and increase the opportunity to achieve overall water management objectives.

Ensuring the management objectives are appropriate to the freshwater resource. The nature and it's (inaudible) pressure's on catchments, all waterways within New Zealand varies greatly. The values and the objectives of the communities within those regions and associated with specific water resources also varies. To apply a generic water value, and water quality targets to all water resources, will result in either excessive or insufficient management of the majority of waterways.

Simply put, managing all waterways to achieve water quality targets for a single water use such as, swimming is not good resource management. And does not recognise the range of objectives the water resource helps New Zealand achieve. The manner in which catchments or individual waterways are managed, the values to be achieved and the associated water quality targets will at times vary.

We note, that recent cabinet papers indicate, that Central Government agrees that different water resources may in the future be managed with different water values and environmental, social, cultural and economic objectives. I believe they even mentioned working rivers, at one stage.

[1.40pm]

The proposed NPS should provide direction, as to how individual waterways or catchments can be assessed and optimal management regimes determined and implemented. In the absence of this direction being provided within the NPS, this decision making tool should be

supported by the development of a relevant national environmental standard.

Achievement Of Freshwater Resource Objectives – the proposed NPS refers in several parts to the control or management of land use development. Fonterra has submitted previously, that it is the adverse effects of land use activities that occur that should be managed or controlled. Rather than the land use development itself.

This approach would allow land managers to use appropriate and available technologies to manage the risk of undesirable impacts on a water resource. This approach would also provide opportunity to maintain flexibility of land use and recognise the difference between land use systems and catchments.

It would also encourage ongoing innovation by land managers and partnership between land owners and regulators in the development and uptake of such technologies. If this direction is not provided by the proposed NPS, there is a risk that less efficient controls such as the prohibition of certain land uses will be implemented as the first option of choice when regional authorities put in place measures to achieve water management targets.

It is also likely to have severe financial impacts on existing land owners and lead to increasingly negative relationships between land owners and regulators. Fonterra submits that the proposed NPS should be amended. The defined term “land use development” should be removed throughout the document and reference made instead to the adverse effects of land use activities.

In conclusion: We hope the Board will accept our proposed changes to the NPS and lend their support to the broader suite of policy initiatives we submit are necessary to create a freshwater management environment that meets New Zealand's needs into the next century.

CHAIR: Well thank you very much Mr Newland. There may be some questions for you.

MRS VERNON: Thank you Judge. I'll start out with throughout your written submission and your comments today you make reference that the NPS needs changing on a vast number of issues. However, I wondered do you have some alternative wording for those suggestions because it's one thing to tell us to do it, but sometimes it's quite nice to be told how you perceive that to be done.

MR NEWLAND: I would be able to bring suggested changes. We have decided to wait and see what areas would be best to work on so that we can focus on those. You make a change in one area and it rolls over into others. We are there to not cause more problems than we need to in coming forward with changes.

MRS VERNON: But from the Board's point of view I think it is useful if you, doesn't matter how broad or whether there are consequential, that gives us some choices, some options and alternatives. But to give generalisations is actually not always that helpful.

MR NEWLAND: I recognise that.

MRS VERNON: And we'd welcome your alternative wording, because -

CHAIR: (Inaudible).

MRS VERNON: Oh is there, oh sorry Judge. I mean you might have some thoughts now?

CHAIR: No, I think there's a problem with that as well. The sequence of events prescribed by law for the Board's Inquiry started with the publication of the proposed NPS and was followed by an invitation, which we're glad to say Fonterra took up, for anybody to make a submission stating exactly what changes they wanted to the NPS. And you have done that, at least to some extent, in pages 8 and 9 of your submission, quite specific in some of the things that you're asking. And to that extent that's helpful and useful. The next stage in the process was that the Board published all of the submissions which gave an opportunity for anybody who wanted to say they supported or opposed any of the submissions, to say so with these, what they call further submissions, and we had, I think, 30 of those. So that if we were now to do what Mrs Vernon was asking you about and to have you add further requests for changes to those that are already in your submission, that would deprive us, the Board, and also potential further submitters of the opportunity to say what they thought about it. So, while I understand the purpose of the question, I think that there's a difficulty in adding more now. Perhaps we can see if Mr Prime has got any questions Mr Newland?

MR PRIME: Really just in a similar vein around your (inaudible) - you're seeking clarification or seeking to get around the (inaudible) in a sense, and I wonder if you could give us some indication there of what you meant by that?

MR NEWLAND: This is one where I can give more clarity. It's not a case of varying one or another outcome in determining what the role of tangata

whenua will be, it is driven more by a desire for certainty, so whichever outcome, whether it be the status quo, whether it be a more clear and broader co-management regime, will allow both Fonterra and our supplier shareholders to make long term investment decisions. There will be pros and cons for ourselves and our suppliers either way, but we are really (inaudible) for clarity.

DR HARDING: In your submission you made mention of the issue of a swimmable, the term “swimmable”, in your submission you say that’s not impractical and you’ve told us today that obviously - or that you feel that there should be some flexibility for multiple end users and that sort of thing. What would Fonterra’s position be on some having some minimum standard of water quality in all rivers? Maybe not swimmable, but some other standard.

MR NEWLAND: There will need to be a minimum standard. We accept that there can’t be a pollute at will, in any of our waterways. What we are looking for though is acceptance that the water quality at Huka Falls is highly unlikely to be the same as in the Waikato River Mouth and appropriate water standards. So accept that there would need to be a minimum standard in every waterway, just looking for appropriateness.

DR HARDING: But as a generalised minimum standard swimmable is not an acceptable term?

MR NEWLAND: Swimmable would, to us, be a rather high benchmark to apply in some areas and even if you took out all agriculture from certain areas, we believe it would be unattainable. Because of the variety of water quality parameters that need to be taken into account. Sediment is one of the determinatives I understand for swimmability visibility. You could take

out dairy farming from the Waikato and our water quality experts question whether you will get swimmability still in some of those areas.

[1.50pm]

To be more to the point though, there are some areas where - some waterways that will never be swum. That will never be used or valued by the community as anything else other than a water source and we believe there should be recognition of that.

CHAIR: You made reference in your presentation to the concept of transfer pricing. Can and should that be left entirely to the market or does it need some regulation to provide a framework for it?

MR NEWLAND: There will need to be some level of regulation to ensure that what is essentially a public resource is not gobbled up by one particular group or another. In the case - I think that's the answer to the question. To jump to a linked question that you haven't asked, and I hope you will give me some leeway, by allowing (inaudible) we increase the ability for people to put a value on water. And a value on water, we believe, will add to more efficient use and that's one of the key things we will need to develop within New Zealand, more efficient use, if we are to make best use of the resource we have. We have a constrained resource and we have increasing competition for the water, increasing need for the water. Efficiency will get us part of the way. Water storage and associated infrastructure optimised, rather than piecemeal as we have at the moment, will go a long way to addressing the other issues we have reported.

CHAIR: But there needs to be some conditions to avoid undue externalities.

MR NEWLAND: Yes, any market that is left completely without control has the bad habit of going slightly haywire.

CHAIR: Sometimes. Then you also presented a case for there being a National Freshwater Strategy at a high level. Is it Fonterra's position that it's within the scope of the Board's business to do anything about a high level National Freshwater Strategy?

MR NEWLAND: We recognise that it is not part of the NPS, however, we would hope that if the Board felt that it was a necessary part of the environment that the NPS was going to operate within, that they would acknowledge that and will lend their support to having that addressed by (inaudible) simple governing.

CHAIR: Would you think that a decision, whether or not that there should be a National Freshwater Strategy or the kind you described, is a political question?

MR NEWLAND: I believe the content of a National Water Strategy would be a political decision and also whether it was actually done, it could be one of those things that is politically unpalatable. But I do believe it is within the purview of the Board to consider whether it would assist in the purpose of the NPS being achieved and if it would, to note that. The expectation is not that the Board would solve that problem, but maybe note, if it agreed, that it was a possible solution to an existing problem.

CHAIR: Now, another part of your presentation related to some Cabinet papers as expressing the government's wishes. And my question is, are the government's wishes in respect of the proposed NPS contained within the proposed NPS, which has approval by the Executive Council, subject of

course to the outcome of the Board's consideration of submissions?

MR NEWLAND: The work of the Board and its final determination is, as I understand it, completely within the Board's responsibility, accountability.

CHAIR: Only within our Terms of Reference and the law.

MR NEWLAND: We noted the Cabinet paper within our submission for two reasons. The first, to acknowledge that the government of today has seen similar issues and similar possible solutions that I've supposed we raised in our initial submission. And also to recognise that there are a number of different strands of work going on at the moment and coordination of the four main strands that we're aware of would probably result in a better outcome for freshwater management within New Zealand. No, I do not believe that the Cabinet paper what the Board's decision should be around the NPS, or can do so, but it does clearly indicate the type of environment that an NPS will be implemented within.

CHAIR: And you see, the government hasn't chosen to inform the Board of any such documents, we have no evidence of their existence, let alone their contents, our task is to make the decision in accordance with our terms of reference, which haven't been altered, and the provisions of the RMA. So I'm not sure if it is easy for us to do what you are asking, to take some notice of some Cabinet papers unidentified and not before us. I wanted to say that so that you've got the opportunity to respond to a few issues.

MR NEWLAND: I completely accept that, Mr Chairman. I don't think it's made your job as a Board any easier, and I think it is indicative of the lack of coordination, that we see across freshwater management. That is not a comment on the Board, but rather that as we said within our submissions

today, this is a vitally important issue for New Zealand moving forward into the future. My entire role within Fonterra is water strategy. We take it seriously. We understand that in the future this issue is likely to drive New Zealand's standard of living, and more than our standard of living, our way of life. A coordinated approach driven by a national water resource strategy would hopefully lessen the chances of this lack of coordination occurring in the future. But yes I accept the cabinet paper has not been officially provided to the Board of Inquiry, if no change has been made in terms of reference, it is very hard, it is impossible, for you to take it into account. I am happy to provide a copy of the cabinet paper formally if you would like.

CHAIR: Thank you. But I'm not sure it is for Fonterra to do that. But what we have had is the benefit of Fonterra putting its views in support of its submission, by yourself, which you've done clearly and succinctly in a way we immediately understand, and we are very grateful to you. Thank you very much.

[2pm]

CHAIR: Are you Mr Armstrong? I believe you are going to present in support of the submission by Todd Energy, is that right? Thank you very much for coming. We appreciate that, and we would like you to have the opportunity to say what you wish.

MR ARMSTRONG: Thanks very much. I must admit to a little trepidation having heard the last comments, because I suspect that some of our comments come into the category of generality of not being as helpful as they might be, but I think there's a reason for that and I'd like to explain that to you. I won't cover verbatim the original submission and I think you're all aware of Todd Energy, the company and what it does, so I'll go straight to my verbal comments. Just as an aside, I might say that I am the Environmental Manager for Todd Energy and I've got over 30 years experience in water management including as a scientist, technical person, RMA expert in policy, and more recently hands-on with hydro developments for Todd.

The scope of the comments, I'd like to briefly cover our concerns about the implications of the draft NPS for consenting the existing or future hydroelectric power schemes. The issue of potential conflict between the NPS, the RMA, the proposed NPS on renewable electricity generation and the NES on ecological flows. Our criticism of the NPS as it stands, and I'd like to give just a brief verbal summary without going into detail. There is a little detail in the submissions, but I'd like to perhaps explain why we've been so critical.

CHAIR: Don't feel that we're defensive, we're nothing to do with the production. We're here to hear the criticisms and the amendments needed.

MR ARMSTRONG: Yes, and I'd like to conclude if I may, because I realise it strays outside the bounds of the written submissions, just a few observations touching on the last conversation you heard, which is the relationship between the proposed NPS and government's expressly stated intentions, if I may.

Concerns about implications of hydroelectric power scheme. Some of this stuff is covered verbatim, I think it is worth repeating it because this is what I'm really here for, to talk about Todd's interest in hydro development. In the way we see it, the NPS as currently drafted has somewhat ominous overtones with the re-consenting of existing hydro schemes and the consenting of new ones. Comments in the section 32 analysis indicate the use of water for hydroelectric power generation being viewed is an unqualified consumptive use of water, the indication being that such use may need to be constrained. Of course that is not correct by any means. By and large, hydro schemes divert water from a sections of river and return it, and therefore it is available for in-stream uses downstream and some is downstream, so we wanted to really make a distinction here because certain things follow from that observation.

Little thought appears to have been given by the architects of the proposed NPS to the implications of the proposal for existing activities such as hydroelectric power generation, which have already been through rigorous RMA consenting processes. If the NPS proceeds, some of the objectives, for example objective 6 and some of the policies, need to be amended to our policy principle or the local principle of non-derogation from established uses, whether that's a principle in law I'm not sure. We strongly support the submissions of King Country Energy on that issue. Todd has a 50% stake in King Country Energy, which has several hydro

schemes. It goes without saying perhaps that existing hydroelectric power schemes are multimillion dollar facilities and essential components of New Zealand's infrastructure. It is our submission that the regulation of water extraction and discharges from these schemes can not be treated in the same way as most extractions and discharges. They are designed and operated, and their economical viability depends on, access to specific quantities of water. It is simply not reasonable to retrospectively change the rules.

Next heading: inconsistencies between the proposed NPS, the RMA, the proposed NPS on renewable electricity generation and NES on ecological flows. Again, just brief comments, but there does appear to be some inconsistency between these documents. For example, the NPS on freshwater management section 32 analysis contains an assumption that in the majority of cases, environmental flows will be established the same or greater than at present, and it concludes that the likely effects on hydroelectric takes will be a decrease in the water available for storage, causing a possible loss of resilience in the generation network, and in some circumstances an increase in electricity prices. This is verbatim from the section 32 analysis. This appears to run contrary to section 7(j) of the Act, which instructs people to have particular regards to the benefits to be derived from the use and development of renewable energy, and the thrust of the proposed NPS on renewable electricity generation.

The NPS also intrudes on, and in places appears to be inconsistent with, aspects of the proposed NES on ecological flows and water levels, a document which in our view contains an equally confusing set of proposals.

Ecological flows are a subset of environmental flows, but the NES

confuses the two issues in our view. If the NPS on freshwater management and the NPS on renewable electricity generation and the NES on ecological flows all proceed, they need to be better integrated. In other words, inconsistencies removed and advanced together, which brings me to the end point.

Next heading: the draft NPS is substandard in many respects. It is Todd's basic position that the NPS is conceptually flawed, it is mostly flawed in the detail of its wording, and should be withdrawn. As we said in our submission, we have no idea whether that is within the purview of the Board to recommend that that happen. I will refer to that later on.

So our criticisms may be summarised as follows: an example I gave you in the text of our submissions, and that I certainly have not exhausted the examples. I just took a few poorly-written and vigorous in places meaning unclear, confusing, not clear how to implement it, what does it mean some of it? Objectives and policies lack precision and integration. Some proposals were ill-conceived and unworkable, others unnecessarily complex, acutely time-consuming and costly to implement. Avoids the hard issue, does not provide leadership, passes the buck back to local authorities, not comprehensive. Now I know it's easy to make criticisms, that's the easy bit, but in preparing this submission, I first of all say that I telephoned several colleagues of mine who I worked with in the water industry for years at regional councils and discussed the document with them. I think that their response would be reflected in the submissions that you have received throughout the country. They had the same view of the document: confusing, difficult to follow, conceptually flawed. So the fundamental problem with the NPS in our view is that it lacks context. Like the draft NES on ecological flows, the NPS has clearly been developed in the absence of a cohesive strategy or big picture framework for water

management in New Zealand. Section 32 analysis does not make a clear distinction between the problems, the consequence (effects), and the causes. This is not semantics, it has led to the core definition of objectives, which should address the core problems, and policies which should support the objectives by addressing the causative factors. It is perhaps not surprising that the NPS is so flawed, given that it is a child of a sustainable water program of action, which was widely perceived as ineffective. That acknowledgement is incidentally in the cabinet paper.

What should happen to the NPS now? In our submission we argue that the draft NPS is so badly flawed that the best outcome would be for the Board to recommend that it be withdrawn in its entirety. Be that as it may, government has indicated that it wishes to proceed with the NPS process, we are surprised by this given one, the extensive and widely acknowledged deficiencies of the NPS as currently drafted, and I am referring to the other submissions you have received, that the NPS is on the face of it fundamentally incompatible with government's potentially radical changes to water management in New Zealand, and under the New Start program - sorry, the fundamental incompatible government's recently-announced New Start for freshwater which is said to herald some potentially radical changes to water management in New Zealand.

[2.10pm]

The New Start program talks about creating a market for water, pricing water, transferability of water, the development of a sophisticated values-based allocation regime, and addressing the relationship between land use and water quality, via integrated catchment management. All issues which are not addressed by the NPS, yet will be fundamental to any new water management regime. In a recent cabinet paper, the reason given

for proceeding with the NPS is to maintain the integrity of the consultation process, it is well advanced and supported by Māori. Yet the government has established a land and water forum, to head a stakeholder-led collaborative process. So it appears that there are two consultative approaches going on, and each with a different mission. Cabinet paper goes on to say that this continuation of the NPS process recognises that the NPS is an RMA tool, which will support the whole direction of water management. To us, this is muddled thinking. How can the NPS support the implementation of government of policy, if the current government policies in key areas are undecided?

So, in brief, I think we're participating in a nonsense, no reflection on the Board. Is there a better way? We believe there is – the table attached to our submission is aimed at illustrating how a more systematic approach to the separation of problems and consequences can lead to the identification of integrated remedial actions.

CHAIR: Forgive me for interrupting, you have referred to a table attached to your submissions, and I don't think I have it. I've got the submission, which ends up with your signature and the date, and there doesn't seem to be an attachment.

MR ARMSTRONG: That's a great pity, because it responds to the whole thing. Tell you what I'll do, I'll rip it off and give it to you.

CHAIR: Yes, thanks.

MR ARMSTRONG: So we refer to our table. As I say, in some ways it was an aside because in thinking about it, I thought I've got to try and be a bit more constructive. I've made all these almost flippant criticisms, but they

are very real criticisms, in as much as I had to find examples of things which I considered to be unclear, confusing etc etc. So I put a few down, then I realised that there's not just one elephant in the room, the whole room is full of elephants. You've got this document, that's so flawed conceptually, and so lacking in integration, and so out of kilter with what the government is considering doing, what are we doing pursuing this. So I thought well I'll try and put down something which is a conceptual framework which may actually spark some kind of positive thinking. Basically, I can't claim credit for all that concept myself. It is very much in line with the concepts put forward in the Business Council for Sustainable Development's paper, but I differed from them in several respects. Basically, I go on to say here, that we consider that boiled down there are essentially only four related problem areas, that need to be addressed, on a national basis. These can be attributed to a number of interrelated causative factors. Further, the problems cannot be resolved by addressing the causative factors on a piecemeal basis. There needs to be an holistic approach leading to a package of integrated remedial measures, each designed to support each other. Implementation of these measures may involve legislative change, the contents of NPSs or the NESs or the content of guidelines. We note that the suggestions embodied in the table are now substantially aligned with what is now being proposed by government in the New Start for Freshwater cabinet paper. That is all I wish to say, thank you.

CHAIR: Thank you Mr Armstrong. There may be some questions, and I understand that to you, the questions might even be as irrelevant, as you think the proposed NPS is. But let's see how we go.

MRS VERNON: When I read your original submission, I had a couple of questions. I noted that you supported the idea of, you emphasised the

integrative catchment planning, in your original submission, and I wondered, given that at the moment the document we're working on it and the Board is going to make some recommendations to changes no doubt. The objective 2, is going to that – would you like to see the word “catchment” in the title, or more emphasis placed on that? Just when I read your submission I notice you spoke -

MR ARMSTRONG: To be frank, as I said in my submission, I didn't get, I resiled from getting into the business of trying to wordsmith, because as I say, I can't think of a better way of saying other than to say, based on my perspectives, which is 30 years of experience in the game, and including policy analysis, I just thought it was a very flawed document and I therefore was very disinclined given the other work on my plate, to start getting in and trying to reinvent the words for them. I felt like saying “go back and think again”. Therefore, what the government is saying now, I find quite appealing. It seems like some of the fundamental messages have got through, and people are starting to think “yes, it does have to be integrated”. But when it comes to integrative catchment management plan, that is a very thorny question because my experience goes back to the Ministry of Works days, and under the Water and Soil Conservation Act, there was a tendency for some councils to start developing integrative catchment management plans - it happened in America and parts of Europe. We were edging towards it, and then along comes the revision of the Town & Country Planning Act, and the Soil & Conservation Act, and we decided we're going to effects-based which effectively as you all know, removes that suggestion that we should be planning in any forward looking sense. We were going to be reactionary. People would put up proposals, we'd analyse the activities, say those are the effects and we're going to manage the effects. So in some ways it was fundamentally anti-planning, and I must admit myself at the time I was one of the

cheerleaders. I was sitting on the side and saying yes more market, less planning, because I'm sick and tired of seeing planners intervening in things they don't understand etc. But now I must admit that as I get older I'm lurching back to the view that maybe integrative catchment management planning is the only way to go. It is a big ask, you need a lot of resources, a lot of intellectual resources, capabilities, training, and it's a long-term project. So you wonder about it, because it involves community participation and you know what people are like with community participation – if it's not immediately affecting them, they're not that thrilled about getting involved in a lot of this council stuff. So here we are with a grandiose scheme of going out catchment management planning. I think once the landowners etc and the user groups become aware of the significance of it, it might take off. They realise that it's all about making public policy, it's all about the interface between private interests and public interests, reconciling the two.

MRS VERNON: In your submission also, you talk quite a lot about having a values-based allocation system. And I would just like to explore a little bit further what you mean by that. Do you mean that the NPS should be giving guidance on priorities, that humans come first, or - it's already set in the Act and I just wondered what you meant by that? Is it amenity value, is it use value? What is it?

MR ARMSTRONG: It's recognising the multiple values associated with water uses. You know, consumptive and non-consumptive, and of course non-consumptive there's recreation, there's cultural, aesthetic and consumptive uses we all know what that means: irrigation etc. So recognising that we have these suite values, that we've got to accommodate. Not just simply a case of saying we're going for the best use as in best economic use – that's no use to anyone, because that'll

deliver on the worst fears of a lot of people. We're talking about privatisation, and I don't think we should be. I think we should be talking about putting a price on water having transferability, but the water we're talking about is only a part of the total pool. I think the trick is, this is where I've picked up on some of the stuff that was in the Business Council for Sustainable Development's paper, very good suite of suggestions about actually compartmentalising the available water into three or four compartments, only one of which is available for consumptive use, and pricing and transferability.

[2.20pm]

So the planning process is all about identifying community values, and making sure they are looked after first, in terms of maintaining in-stream flows, cultural values, fishing, swimming, water quality. Of course that integrative concept takes into account both quantity and quality and the relationship between land use and water quality and water quantity. So I can't see any other way of doing it, other than having some kind of formalised process, with public participation where the communities actually decide how that compartmentalisation takes place, and what water is going to be available in what rivers for consumptive use.

MRS VERNON: So do you see that that integrative catchment management idea for planning would fit in to something like that, compartmentalisation?

MR ARMSTRONG: I think it is basically the vehicle for achieving it. Because what you do in my concept is you'd can give someone, say the regional councils authority to do this, and of course there'd need to be some much stronger linkages with district planning, with land use effects. Water quality at the moment is a big problem with Fonterra and all the rest of it.

So yes, I think the integrative catchment management process would become the vehicle for implementing everything we're talking about, including establishing the framework for – I think the government has to play its strong leadership role, that's why I'm very keen to see this NPS actually doing what I think it should do, which is providing a national leadership, in terms of what do we want to see in the way of pricing of water? What do we want to see in the way of transferability mechanisms? Do we want to see these outstanding water values preserved? Just give some national overview of the whole thing, and then set up your institutional arrangement, so that regional councils have got clear guidance as to what they're meant to be doing, and get some consistency around the country, and away you go.

MRS VERNON: So that would follow quite nicely with overall concerns, that you felt that the NPS is silent on things like water transfer, and pricing instruments and that, so you are indicating that you would like to see some more explicit -

MR ARMSTRONG: Well, my whole point really is that the NPS is not comprehensive. You compare that content of the NPS, with what the government is now talking about in the new deal, they're just a complete mismatch. So all I'm saying is that you're going along with the process, and I know you're mandated and directed, but really, I don't fundamentally think that it is going to deliver on the current government's aspirations.

CHAIR: One of the interests of Todd Energy, is hydro generation. And I think it was in that context of hydro generation, that you said something like "it's not reasonable to change the rules". My question is, not even on consent - on re-consenting existing diversions, of which the previous consent has expired or elapsed?

MR ARMSTRONG: Because I would almost say, not even, but most of all that situation because your expenditure has already been taking place, the investment's already taken place under a set of pre-conceived pre-determined design criteria, including the conditions on the resource consent, so you go through this elaborate process, they tell you how much water you can divert through your turbines, you do your calculations, say yes that will be economic, you go ahead and build it, and then 15 years later you go and re-consent it, and hello they pull the rug out from underneath you.

CHAIR: But when you say, you do your calculations, and say yes that'll be economic, amongst the other calculations, is the fact that you've only got a 35 year term. So it must mean something, mustn't it?

MR ARMSTRONG: Yes, I take your point, it certainly should be factored in that you haven't got a consent for ever, but you know that investors get quite excited when the rules are changed, for obvious reasons. As I said in the submission, the government is making a big thing of infrastructure, and keeping it humming and buzzing in New Zealand, and we'd hate to see a situation develop where there's a kind of a waving of a wand and all of a sudden, we only get half the water to play with that we thought we had.

CHAIR: Yes, well no doubt at re-consenting time, much would be made of that point.

The next thing is, you made the remark in the course of your presentation about Todd Energy's wish to be constructive, and of course that is what the Board's process is about too. We're looking for constructive amendments, to make better what you say is pretty pathetic. And that's

why I looked at your submission, to see how you have responded to the Board's invitation, that submitters state exactly the amendments that they wish to see to the proposed NPS. Are they there? No.

MR ARMSTRONG: I agree. As I say, I tried in the time available to me, to be constructive in the sense that I wanted to put some thoughts and ideas and perspectives on the table. Certainly not providing answers because I actually believe it's a waste of time. I actually think the best thing to do, is to pull the plug on the document and start again. So therefore one could have put a huge amount of effort into being constructive. But, you know, you look at the list of submitters around the country, and I know this from having talked to other people, that many people have the same reaction: they look at the document, and they just couldn't handle it. And you'll find that some very good people have resiled from making any submissions. They want to be constructive probably, they simply didn't have the time in the day, to deal with the morass of detail they would have had to go into.

CHAIR: We've also found some equally-good people who've come along with some constructive suggestions, and it may be that they are going to prevail even though you might not think much of their ideas. All right, well then you say that the proposed NPS is incompatible with radical changes that the government now wishes. The Board's position is that it's been given this task by the government. It's not just a whim of somebody in the department or anything like that. The government has approved this document, for entering into the process that we're now with. For the Board then to be considering, is that compatible or incompatible, with some ideas the government now has, would be the Board getting into politics, wouldn't it?

MR ARMSTRONG: Well, I don't know, I can't tell you how to operate. But if it

To be read in conjunction with
the tabled evidence/statement

was up to me, I would go and have a beer with the minister sort of thing. But are we going to embark on what could be a nonsense, and I say could be because it is only my view. I know a few others share it. Very expensive nonsense, just for the sake of protocol, and for the distinction between the politic arm and the judicial arm. Surely common sense has got to prevail at some point.

CHAIR: That may be a question that you might ask of the minister. But that's not a scene in which I take part. Well, Mr Armstrong, thank you very much for coming. I think we're doubling benefitted by your having come, since you think the whole process is a bit inapt.

MR ARMSTRONG: It may be overly strong of me to say that, but you know what I mean, I feel a bit disappointed. I was looking forward to something that was going to lead us to the future, but I don't think so.

ADJOURNED

[2.30pm]