MANITOBA CLEAN ENVIRONMENT COMMISSION

LAKE WINNIPEG REGULATION REVIEW

UNDER THE WATER POWER ACT

VOLUME 2

* *

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WEDNESDAY, MARCH 11, 2015

UPON COMMENCING AT 1:00 P.M.

THE CHAIRMAN: Good afternoon. Welcome to day two of the Winnipeg hearings. This afternoon we'll begin cross-examination of Manitoba Hydro's presentation. We have, by draw, made a list of an order of questioning and first up will be Manitoba Wildlands, Tataskweyak I understand will have no questions. I also understand that the MMF may not be ready yet so we'll see when we get there. We can always drop them down to the bottom of the list.

I don't think there's anything else to note at this time other than Manitoba Hydro has a correction from yesterday. Ms. Mayor?

MS. MAYOR: Thank you very much. In reviewing the transcript, it was determined that there was an error made at page 152, line 7. And Mr. Hutchison is just going to make that correction on the record for us.

MR. HUTCHISON: Good afternoon. Yes, on page 152, line 7, the line should have read decreased rather than increased. So I'll read out the whole section.

THE CHAIRMAN: 152, oh, the

transcript.

MR. HUTCHISON: So I've got page 152 of the transcript. Line 7 is the line that should be corrected. It should have read decreased instead of increased. So the paragraph would read.

"Regulation has lowered peak water levels, both the average water level and the residence time of water in the lake remains similar to what it would have been without LWR. There are slight differences in residence time. In wet years residence time is decreased due to greater conveyance of water through the LWR out of the channel, while in the driest years residence time is increased in response to reduced outflows to maintain a reliable supply of water for hydroelectric generation."

THE CHAIRMAN: Are you able to relate that to one of these slides, or is it not directly?

MR. HUTCHISON: It would have been in relation -- actually, no, there wasn't a slide

specific to residence time, it's included amongst a bunch of other factors.

THE CHAIRMAN: Okay. Thank you very much. We will have cross-examination today only until we break for the afternoon, which will be at more or less 5:00 o'clock. This evening is reserved for public presentations.

So, turning now to cross-examination, I'd just like to note, or remind cross-examiners of our protocols on cross-examination. There are two particular elements. First of all, it must be relevant to the issue before us. Secondly, always be respectful. We won't brook any disrespect to any of the parties in cross-examination either way.

Mr. Cormie, I'm not sure what you wanted to say, but I would ask if you would introduce your back row?

MR. CORMIE: Yes, Mr. Chairman, that was my intention. The panelists in the front row were sworn in yesterday, but joining us in the back row this afternoon are several individuals who will provide us with support. At the far end of the table is Mr. Warren Coughlin, he's from our environmental licensing group. Next to him is

Ms. Laura McKay, she's with corporate planning and strategic review. Next to her is Mr. Brian Giesbrecht from our hydraulic operations department. And directly behind me is Mr. Phil Slota from our water resources engineering group. And that's the introductions.

THE CHAIRMAN: I'm sorry, Mr. Slota, what was his first name?

MR. CORMIE: It's Phil.

THE CHAIRMAN: Thank you. My understanding is that they will not be giving any evidence, they'll just be advising the people in the front row?

MR. CORMIE: That's our intention, but if it gets to the point where we can't speak knowledgeably, we may ask them to be sworn.

THE CHAIRMAN: Okay. That's not a problem if you want to give them the mic, and we'll just take a moment to swear them in at that point.

MR. CORMIE: Thank you.

THE CHAIRMAN: Okay. Any other preliminary matters before I get going? Okay.

Ms. Whelan Enns, you're up first.

MS. WHELAN ENNS: Gaile Whelan Enns,

Manitoba Wildlands. I don't think I can be heard -- and I see now a switch on and off. Okay. Just checking the tech here.

I have with me some materials that are reminders for me, if you will, and also a fair bit of, a fair number of tags and materials, some of which are specific to questions, some of which are, again, if you will, place holders and reminders for myself.

Starting then with the slides that we had presentations from yesterday. I was curious about the 1916 and 1927 flood data that are the start of the first presentation yesterday. And I wanted to return to a question I asked in the Lake Winnipeg Regulation technical workshop at the end of January by posing it as a cross-examination question today. So my question is whether or not Manitoba Hydro uses or used, for these figures, the Conservation Commission of Canada's data concerning Lake Winnipeg and all of the connecting rivers for arriving at the information here about flooding? So I have -- the volume is many volumes and it's all online, but I have the volumes with the specific Lake Winnipeg and tributaries and rivers information with me. Did you use it?

MR. CORMIE: The historical data that now resides in the Water Survey Canada database for river flows and water levels across Western Canada incorporates all the historical information that may have been collected. Specifically, we have not referenced that document, but if that document contains historical water level, that would probably form part of the current Water Survey of Canada record.

MS. WHELAN ENNS: Thank you. In terms of slide 14 there was a reference made, and I believe it would have been yourself, Mr. Cormie, to a broad area of effects from the LWR. And that language is there on the slide. So could I ask you then to confirm, are we talking about the Nelson River watershed or are we talking about the Nelson River CRD areas and parts of more than one watershed?

MR. CORMIE: In the context of this hearing, we are talking about the effects resulting from Lake Winnipeg Regulation, which are the effects that are occurring downstream of Lake Winnipeg due to the Lake Winnipeg Regulation project. There have been other effects, the Kelsey project, Churchill River Diversion project,

other projects, but in the context of that slide it's the effects of regulation of Lake Winnipeg.

MS. WHELAN ENNS: In the broad area downstream?

MR. CORMIE: Yeah. And I think Mr. Swanson described it as the study area.

MS. WHELAN ENNS: Thank you. On slide 25, I wanted to ask for a reminder in terms of an as-of date for this data, forming rivers, this is percentage inflow into Lake Winnipeg?

MR. HUTCHISON: Sorry, can you repeat the question, please?

MS. WHELAN ENNS: Just an as-of date for this data?

THE CHAIRMAN: Can I just offer some direction here? In law, there is something that is known as judicial notice in which we accept certain information, all parties will accept certain information as given. I think that this might be something that we would accept in that nature, although the figures do vary slightly from time to time. Can you comment on that, Mr. Gawne?

MR. GAWNE: Certainly the numbers that are indicated in that slide were provided in the response to Manitoba Wildlands number 48. And as

indicated in that response, it's based on results or information from a report, State of Lake Winnipeg from 1999 to 2007. And it was a report produced by Environment Canada, I believe.

MS. WHELAN ENNS: Thank you. Mr. Chair --

THE CHAIRMAN: Can I just remind you, Ms. Whelan Enns, that if you received a response to this question in an IR, it shouldn't be asked again because it's already on the record.

MS. WHELAN ENNS: Point taken. That was an advance question, so I will skip over anything that might be repetition.

The time period that you are identifying is the reason for my unnecessary first question. So I'd like to ask the panel, with of course Mr. Cormie in the lead, whether Manitoba Hydro agrees that the inflows to Lake Winnipeg have doubled in the last 15 to 20 years?

MR. CORMIE: No. And again, this is a question that was asked as an IR. In that response we indicated, I think, since regulation it's come up about 6 percent. And in the last decade, it's been a very wet decade, there's been a significant increase, but the inflows have not

doubled.

Going back to the other question you asked about the percentages and where they were derived from. We have a history of inflows to Lake Winnipeg going back to 1912. The problem with this slide is it indicates what the flows were on the Dauphin and Fairford River and the Red River, which were not metered back to that date. So to the extent that we, when we start getting those metered records, at that point you can start allocating them out to those specific drainage bases. But these are indicative numbers. And like the chairman indicated, they will vary over time as Lake Winnipeg watershed goes through the wet and dry cycles. So you can take any block of 25 or 50 years and get different ratios for those numbers. But in the broad term, this slide is intended to show that the major inflows come from the Winnipeg River and the Saskatchewan River, and that the Red River is one of the minor tributaries.

MS. WHELAN ENNS: Thank you.

MR. GAWNE: I'll note that we did look into the percentages that were indicated in that table. And based on our records of flows from

1976 to date, the ratios are quite similar to those provided in the table.

MS. WHELAN ENNS: Thank you.

MR. HUTCHISON: If I can add to that question, I guess PFN question 31 in the IRs did ask about how does Manitoba Hydro manage the almost doubling of inflows to Lake Winnipeg over the last decade? And our response was, while inflows to Lake Winnipeg over the last decade have been above average, they have not doubled. And then it goes on to explain it further.

MS. WHELAN ENNS: Thank you. On page 28, I think this is a quick question, is Manitoba Hydro involved in the Southwest power pool in terms of reporting, exchange of information about regulation of the lake for generation of energy and/or sales?

MR. CORMIE: No.

MS. WHELAN ENNS: Thank you. I wanted to ask you quickly, this is slide 34, whether one can assume that the peak after 2010 in the LWR part of the chart is 2011?

MR. CORMIE: What's the question again, please?

THE CHAIRMAN: I think that's a safe

assumption.

MS. WHELAN ENNS: I think it's a safe assumption also, Mr. Chair. I'm asking because I was surprised the public information during the 2011 flood indicated that we were exceeding 717.

MR. GAWNE: Perhaps you can point to the information that you are referring to that said levels were reported above 717?

MS. WHELAN ENNS: We'd have to go into the Government of Manitoba press releases during the flood of 2011 and I did not have the time to do that.

MR. CORMIE: That chart there is monthly average level. And so on a daily basis, the peak level what occurred on a particular day which would be higher than the average.

MS. WHELAN ENNS: Thank you. That's where I was going with my question. So the monthly average overall for 2011 is there in that peak, correct?

MR. CORMIE: In that month, that peak day will form 1/30th or 1/31st of the information going into the average.

MS. WHELAN ENNS: The chart though, Mr. Cormie, is by year, and that's why I'm asking

the question.

MR. CORMIE: No, those are monthly average numbers.

MS. WHELAN ENNS: Rolled into a year.

MR. CORMIE: No, those are monthly average numbers.

MS. WHELAN ENNS: Sorry, my apologies. Gotcha.

Mr. Chair, I brought a set of technical questions in with me today, and I'm going to pass on then anything that I might ask in cross-examination in terms of forecast, forecast methodology, the background for forecast. This tag is on slide 40.

THE CHAIRMAN: Ms. Mayor?

MS. MAYOR: I'm sorry, I'm not certain what that means, if she is's going to pass on them meaning we're not to answer these and we're ignoring them, or what does she mean by that?

MS. WHELAN ENNS: My comment meant that I will pass on asking any cross-examination questions with respect to forecasts, given the technical questions I brought in with me this afternoon.

MS. MAYOR: Thank you.

THE CHAIRMAN: Thank you.

MS. WHELAN ENNS: This question is tagged on slide 40, but it came up a few times yesterday, and it has to do with notification of communities, and it's very good to see the notification steps now on the Hydro website.

I'd like to know whether or not Manitoba Hydro has any mechanism for notification of changes in water levels to communities that are around Lake Winnipeg?

MR. CORMIE: Manitoba Hydro posts its water level forecasts on its website, and any interested party can access it there. During extreme events that occurred, and in anticipation of say the flood of 2011, or the flood of the Century, Manitoba Hydro takes out advertisements in the Free Press and other media in Southern Manitoba to alert the public that there could be high water level conditions on the lake. And during those events we actively try and get the word out that this event is occurring. But generally, responsibility for notifying the public is something that Water Stewardship does as part of their responsibilities for flooding around the province.

Manitoba Hydro works in conjunction with Water Stewardship so that we're all aligned and we're not providing duplicate activities.

MS. WHELAN ENNS: Thank you. We saw near the end of the presentations yesterday a list of committees, scientific studies, organizations with respect to Lake Winnipeg itself that Manitoba Hydro participates and supports. Would you tell us whether any of those organizations or studies you are involved in on the lake are working to measure shoreline erosion on the lake?

MS. MAYOR: Is there a slide number?

THE CHAIRMAN: Is there a slide number, Ms. Whelan Enns?

MS. WHELAN ENNS: Yes, sorry, this one's tagged on 58.

MR. CORMIE: Again, Ms. Enns, this is an area that Manitoba Hydro does not have responsibility for, and as far as I understand and subject to some additions from those beside me, there are no active studies on Lake Winnipeg that we are supporting with regard to shoreline erosion.

MS. WHELAN ENNS: Thank you very much. Thank you.

This is slide 116, and it goes back to my initial question in terms of the broad area where the effects for regulation of Lake Winnipeg water levels occur, and what you were referencing. So on 116, there are communities that I do not see. So it's, I think, a straightforward question. Is South Indian Lake not affected by LWR because it's affected by the Churchill River Diversion?

THE CHAIRMAN: That's out of scope.

MS. WHELAN ENNS: Okay. We'll leave questions about missing communities. Thank you.

THE CHAIRMAN: South Indian Lake is out of scope of the Lake Winnipeg Regulation review. So, I don't know if there are other communities that are missing. None that I see, but...

MS. WHELAN ENNS: I was asking the question, Mr. Chair, because not all of the Northern Flood Agreement communities are on that slide. That's where my starting place for the question was. So Nelson House is not on the slide.

THE CHAIRMAN: Nelson House isn't part of Lake Winnipeg Regulation boundaries, or within

the boundaries.

MS. WHELAN ENNS: Thank you.

On slide 120, there is a reference to, and this is the Northern Flood Agreement slide, there was a reference in your comments to the slide about a very costly implementation process. Were you referring to the costs of the NFA implementation process to Manitoba Hydro?

MR. SWEENY: I was referring to the cost of the implementation of the Northern Flood Agreement that included all four parties, Manitoba Hydro, Manitoba, and Canada. And what I was referencing there is the cost of the process itself in dealing with some of the issues surrounding adverse effects in the early years of the Northern Flood Agreement. The process, I was referring to the process related to the legal supports required to address some of those issues.

MS. WHELAN ENNS: Which then are Manitoba Hydro costs in terms of who paid for them, correct?

MR. SWEENY: No. The cost in relation to the Northern Flood Agreement are shared, depending on the type of obligation that's based in the NFA for each party.

MS. WHELAN ENNS: Thank you.

I am moving to questions that are not specifically tagged by a slide and that have arisen as a result of yesterday's presentations. We can certainly go back into slides if we need to. I have two climate change questions in front of me here, and one is whether Manitoba Hydro has in fact an in-house climate scientist?

MR. CORMIE: Yes, we do. And actually, we have more than one, we have a whole section of climate study engineers. And they participate in the international climate change studies that are going on around the world. And actually, I'm very proud of the work of our people and the contribution that they are making to the study of climate change in Canada. It's remarkable.

MS. WHELAN ENNS: Is anyone then on this team part of the group of specialists and experts in Canada that work with the IPCC on their assessments?

MR. CORMIE: I believe, Ms. Enns, you understand that Manitoba Hydro is involved in climate change studies through the Ouranos initiative, and Ouranos contributes to the IPCC

effort.

MS. WHELAN ENNS: Thank you. It's a wonderful acronym.

This second climate change question is one I believe we missed in the IRs, or I'm going to ask it more directly today, and that is whether or not permafrost -- I know there's about five kinds, okay -- whether permafrost in the downstream LWR area was included in the analysis in this climate report in the filing from July?

MR. CORMIE: In the Manitoba Hydro report we're focusing on the Lake Winnipeg watershed, not on the downstream when it comes to climate change effects.

MS. WHELAN ENNS: Thank you. The, I guess, sort of secondary question then would be, are you saying then that you did not incorporate in the projections in your climate report any future changes or impacts with regards to permafrost in the LWR area?

MR. CORMIE: I'm not 100 percent certain, Ms. Enns, but I don't believe there are any permafrost affected lands in the Lake Winnipeg watershed upstream of the Nelson River. Now, I could be corrected on that. But to the extent

that permafrost and the release of methane gas from the permafrost is affecting the climate, the modeling that's done on a worldwide basis includes that. So to the extent that the models are predicting the climate in the watershed, that will form part of it, but I don't believe that there are any permafrost emissions in that watershed itself.

MS. WHELAN ENNS: Thank you.

I have some questions in front of me now that have to do with the water quality standards and guidelines for Manitoba. And there's references in more than one of the presentations yesterday. And I've got, you know, questions sort of popping up in front of me here in more than one format. But the main one is, would you confirm for us that Manitoba Hydro is aware that the guidelines are regulatory, that they are not just guidelines, that they in fact are in the Water Protection Act and a regulation under the Water Protection Act referred to in the body of the Act, that they are regulatory?

THE CHAIRMAN: Where are you going with this? As I understood the presentation yesterday, they stated that Lake Winnipeg

Regulation did not affect water quality.

MS. WHELAN ENNS: That's right, Mr. Chair.

THE CHAIRMAN: So what difference does it make whether or not they follow, or they understand that the guidelines are regulations?

MS. WHELAN ENNS: My second question is to ask Manitoba Hydro whether they are, in coming to that conclusion, applying tier one, two and/or three under the regulation in terms of water quality?

THE CHAIRMAN: Does anyone have an answer for that?

MR. SWANSON: I'm not aware of the exact specifics of the priority one, two or three that you are referring to. I'd have to get back to you on that.

THE CHAIRMAN: Again, though, I think that even if -- if before Lake Winnipeg Regulation the water was, let's say tier two, and it's still tier two, then it's irrelevant to us. If it was tier two and then deteriorated, then that would be relevant. So if you want to pursue or make the argument that water quality has lessened since LWR, then that's legitimate.

MS. WHELAN ENNS: I'm going to go into my notebook and see how we do.

This is in relation to slide -- again, handwritten notes from yesterday -- slide 16 and Mr. Cormie's comment. And we tried this in IRs. And I was looking for more with respect to the nine times that the flood controls for the LWR were triggered. So does this mean that there were nine instances, and that then the water level, the mean water level under the licence has been 715 or less otherwise? Is that what this means?

MR. CORMIE: What it means is that there were nine flood events, and in those flood events the wind-eliminated level went above 715, which required Manitoba Hydro to maximize the outflow from Lake Winnipeg. And that's what those nine events were. And they were events of varying durations, some of them short, some of them long. So there were maximum discharge for power purposes in the winter, but those events are not flood events, those are events driven by the power demand. These are events driven by hydrology. And Manitoba Hydro may anticipate that the water level will rise above 715, and we take action to move the outflows up. And by the time we get to

715, we want to be at the maximum possible discharge and will remain there until we are confident that the water level has receded below elevation 715. So those are the events.

MS. WHELAN ENNS: Thank you. That's what I was seeking and it skips a couple of questions. So then let's try a basic example. Then in 2011, you had one or two very sustained events, I'm being a generalist here, but that would be a way of applying what you mean by an event?

MR. CORMIE: An event would be a flood, and the flood could be of duration of several months. In the flood event of 2011, we anticipated that, the Province was forecasting a major flood. Manitoba Hydro operated for flood control well before we were above 711, we went to maximum discharge through the winter and we stayed there. When the water level went above 711, that would trigger what we called an event for the purposes of the calculation of the nine.

MS. WHELAN ENNS: Thank you.

MR. GAWNE: If I could add to that, please? The 2011 event we spoke of in the question from PFN, Peguis First Nation number 87,

was asking for a lead-up of the operations into the 2011 flood, where we indicated Manitoba Hydro was, in fact, operating at maximum discharge since July 1st of 2010, the year prior --

MS. WHELAN ENNS: Thank you very much.

MR. GAWNE: -- to manage those flood flows. So there was a period, I believe, of 15 months of operation at maximum discharge.

MS. WHELAN ENNS: Just for the record, Mr. Chair, I cannot respond to anything with respect to Peguis First Nation.

THE CHAIRMAN: No, we don't anticipate that, but we do anticipate that you have read other IRs and responses.

MS. WHELAN ENNS: Yeah.

THE CHAIRMAN: So if somebody else has asked and had answered an IR, then you shouldn't go there either. And that's for all cross examiner's, not only you.

MS. WHELAN ENNS: Thank you.

This next question, Mr. Cormie, is a systems question taking into account what we have heard and what's been asked and answered to date. You have made references to electrical demand being highest in the winter, that being a pattern

in terms of operation of, well, the utility, but certainly the LWR. And I have had a couple of conversations with scientists at the University of Winnipeg on this that I am asking questions based on. And that is if the electrical energy demand is highest in the winter, does this narrow margin, again, trying to use your words from yesterday, does this narrow margin that the LWR provides for power generation mean that you need the most water in the winter?

MR. CORMIE: The significance of winter to Lake Winnipeg Regulation has to do with what the ice in the outlet channels does to the outflow capacity. In the summer time at say elevation 715, Manitoba Hydro can discharge 150,000 cubic feet per second. But at that same level in the winter, it's about half of that. So the outflow capacity in the winter is half what it can be under non-ice conditions. Which means that, and put those numbers in context, the generating stations downstream have the ability to pass water through the generators at about 160,000 cubic feet per second. So you have generators downstream that need 160,000. Lake Winnipeg can only provide say 75 or 80 or 90,000

of that. So there is not enough water coming out of Lake Winnipeg to drive the generators to meet electrical demand. Mr. Gawne described how we augment that flow through additional flows from the Churchill River. And even when we do that, that's still insufficient to meet the power demand and there's many winters where we have to purchase power. But that operation is driven because the electrical demands in the province are highest in the winter, they are about 1,000 megawatts on average higher than they are in the summer, as everybody in rural Manitoba is using electric heat to heat their homes, and the nights are longer and there's just more electrical load. So it's the combination of highest demand for electricity and Lake Winnipeg's inability to get the water that's in the reservoir to the generating stations due to ice that shapes the way the Lake Winnipeg Regulation project is operated.

As Mr. Gawne indicated, in the vast majority of years, we go to maximum discharge anyways. It's just the most efficient way of running the power system. And that's driven mainly by the ice.

MS. WHELAN ENNS: Thank you. Valuable

answer, and appreciated because these questions are what is most difficult for the public and the participants to work with and to understand.

Would you tell us how that worked in 2005, and winter 05/06? That was the most water in Northern Manitoba in 30 years, since before LWR perhaps?

MR. CORMIE: Yes. The year of 2005 was the year when the water supply to Manitoba was the highest. And normally what happens is that we have a spring flood driven by snow melt run-off, and then there's heavy rains in the summer, but the flood wave passes through the lake and works its way downstream. What happened in the fall of 2005, it continued to rain. And so we had a fall flood put on top of a spring and summer flood, which resulted in very high flows all year. Again, that triggered, we were at maximum discharge out of Lake Winnipeg throughout that entire period. And then going to maximum discharge through the winter in response to the power demand not only met the needs of the hydro-electrical system, but was consistent with getting the lake level back down well below 715, so that we went into the summer of 2006, we were

out of the flood range, back down into the power range.

MS. WHELAN ENNS: How is the event that is the flood, how does it become the hydrological event then in terms of what happened in 05/06? You must have had a sustained event?

MR. CORMIE: Well, all floods are driven by hydrologic events, it's heavy rainfall. And whether it's the flood of 2013 that happened in Calgary over a weekend when, out of the blue, these major rain storms caused flooding, or it's something like happened in 1993, on Friday we're fighting forest fires and we come back to work on Monday and there's been 6 inches of rain across the north and towns like Swan River are under water. Those are all hydrological events that are driven by a sudden very intense and, most important to Lake Winnipeg, widespread rainfall that's not anticipated. It shows up, and then Manitoba Hydro has to deal with that after the fact through its operations.

MS. WHELAN ENNS: Thank you.

The 2014 Canada water survey data is not available yet. And what I would appreciate hearing is whether the wet cycle or wet period

that was referred to in the presentations yesterday continues in terms of what you know about the data for 2014?

MR. CORMIE: Well, 2014 has been a very good water year from a water supply perspective. What will happen going into the spring is not yet known. We had quite a dry fall and winter. The snow pack across Western Canada is below average. And so will it be a high water year, low water, we don't know that yet. That's all going to be determined depending on the spring rains. But we are at maximum discharge now, we're trying to get Lake Winnipeg down so that we're in a position to respond either to high flows, but not too low that if it does turn dry that we put the power system at risk.

MS. WHELAN ENNS: Was there anything significantly different about operation of the LWR in dealing with the coldest winter in 120 years?

MR. CORMIE: No. And because no one again predicted the coldest winter, it arrives. The forecasts generally are all over the place, some say it's going to be cold, some say it's going to be warm. As Mr. Gawne has explained previously, we assume it's going to be normal but

we protect against a cold winter and we deal with it as the winter develops. And a lot of our flexibility is through those interconnections that he described. But we were already at maximum discharge out of Lake Winnipeg during the winter before last, and there's nothing more hydraulically that we could have done to manage that event.

MS. WHELAN ENNS: Thank you.

MR. GAWNE: As Mr. Cormie had said, we were at maximum discharge through the winter of 2013/14. Hydraulically with Lake Winnipeg Regulation there is nothing more than could have been done.

MS. WHELAN ENNS: Thank you.

This is general and not specific to a particular slide, though there was a reference to wetlands in one of the batches of slides, I think maybe Mr. Hutchison. So this is similar to an earlier question about shoreline erosion and studies of shoreline erosion on Lake Winnipeg. So could you tell us whether Manitoba Hydro is involved then -- in the committees and organizations and scientific work that you support and participate in, are you involved in any work

regarding wetlands on Lake Winnipeg?

MR. HUTCHISON: We have funded the Lake Winnipeg Foundation's recent work into looking at restoration options for the Netley-Libau marsh. I believe that comprises our current involvement.

MS. WHELAN ENNS: Thank you.

I'd like to ask Mr. Hutchison some questions now about the concerns that are identified in your presentation yesterday.

My sense, and you can correct me on this, but my sense is that Manitoba Hydro, yourself and other staff were involved in engaging the public, communities, organizations, experts, people who wanted to, in fact, hear about the LWR. This engagement period was about a year's duration.

MR. HUTCHISON: I would characterize it a little bit differently. Based on our request for a final licence that we did in 2010, also coinciding with a lot of interest in Lake Winnipeg because of the current wet period, we initiated additional, sort of more proactive and engaging with stakeholders around Lake Winnipeg. And it was most focused starting the spring and summer of

2013.

MS. WHELAN ENNS: Thank you. I guess my knowledge goes to early 2014 in terms of first seeing the materials. So I take your point. We heard from you about concerns that were identified in this public engagement process. Would you -- and this may take, you know, yourself and others on the panel -- would you let us know how you arrived at the concerns that you identify in your presentation? This is an area that, of course, is not in the filing. So the information we have from you in the presentation yesterday is what we have. So the reason why I'm asking you how you arrived at the set of five or six concerns is because it doesn't seem like many.

MR. CORMIE: Ms. Enns, I remember back in 1988 going to over 40 open houses around the south shore of Lake Winnipeg, engaging with the public in all of the communities along the lake and in the lower Red River Valley. And you know, through those open house processes and those public meetings, we got a sense of generally what people were worried about. And in those days we went there and we'd present, and we weren't necessarily listening -- to Dale's credit, he now

goes there and he listens to them and tries to be responsive. And so there's been a shift away from going and presenting to going and listening. And I think what he's been hearing is that, and I think he can now add to that, but this engagement has been going on a long time. These are not new issues that started in 2013 or 2014.

MR. HUTCHISON: I would just like to also point out that it wasn't just the presentation yesterday that sort of brought up these concerns, they are written in section 4 of the report which talks about public engagement on Lake Winnipeg.

MS. WHELAN ENNS: So, point taken that the filing in July has content in terms of public engagement. And I wasn't in any way denying that. What I was thinking about was the lead up. So I take your correction in terms of the pattern over time and the pattern before the LWR proceedings. That also fits, of course, with the 2010, 2011 activity, and here we are in 2015 in the actual hearings, in terms of the request for final licence.

Did you not hear about concerns about the dramatic increase in sedimentation in the

lake?

MR. HUTCHISON: There were certain communities, and individuals did raise concerns about sedimentation, but it was not a widespread issue that was raised. So it wasn't covered along with the other, I believe it's five categories of issues.

MS. WHELAN ENNS: So I would be inclined to ask then whether you heard concerns about changes in wetlands in Lake Winnipeg?

MR. HUTCHISON: The predominant issue I heard concerning wetlands had to do with the Netley-Libau marsh.

MS. WHELAN ENNS: When you were telling us, and this was in more than one presentation yesterday, but in terms of the engagement when you were telling us about the fishery yesterday, I was expecting, so please tell me whether you heard about some of the changes in spawning areas and some of the responses from water fluctuations in the lake in terms of operating the fishery. Did that come up in this lengthier period of time?

MR. HUTCHISON: Actually, the most dramatic comments that had to do with changes in

spawning had to do with the Dauphin River and the flooding that resulted from the emergency channel getting more water out of Lake Manitoba.

MS. WHELAN ENNS: Did you hear about concerns and worries about how climate change would affect Lake Winnipeg, whether there were changes in water temperature happening in the lake, for instance, whether increases in temperature were, in fact, part of the story in terms of all of the changes in blue green algae? Were you hearing climate change concerns.

MR. HUTCHISON: I can recall at least one community raising how they were doing climate change preparedness, and so they brought up a concern with that, but it wasn't something that was widespread with other communities.

MS. WHELAN ENNS: So then I would take that as meaning -- I was combining this question with the fishery earlier -- but that also means that you heard, or only heard very little about water fluctuations and predictability in terms of water levels on the lake?

MR. HUTCHISON: I wouldn't characterize it like that at all. I heard over and over, actually the number one issue was high

water levels.

MS. WHELAN ENNS: Mr. Chair, Manitoba Wildlands and perhaps other participants, we're just starting cross-examination, would like to -- and this is not disputing what's in the filing from last summer -- would like to know more about the issues that were identified and how Manitoba Hydro arrived at the ones that they have said are primary?

THE CHAIRMAN: Just what issues are you speaking of?

MS. WHELAN ENNS: Well, the ones I am asking questions about. I think the sense is that we're not -- that there's been a determination by Manitoba Hydro as to which concerns are primary. And I think that it would help us all to have a more thorough report in terms of what Manitoba Hydro's heard.

THE CHAIRMAN: Well, part of the reasons we're going to be here for the next about five weeks is to challenge what Manitoba Hydro has put on the record. I mean, you will be getting an opportunity, I'm not sure exactly when but sometime over the next three or four weeks to make your case and to make your argument, to counter,

or you may counter what Manitoba Hydro has put on the table. That's also part of the reason for cross-examination. That's why you're asking questions today and Hydro is responding.

MS. WHELAN ENNS: Thank you.

Mr. Hutchison, how long has the material you were showing us near the end of your presentation yesterday -- I'm now on forecasts, water levels, notices and so on -- how long has it been on the Manitoba Hydro website? I was trying to figure out last night when it started.

MR. HUTCHISON: Sorry, what page are you referring to?

MS. WHELAN ENNS: It's one of your composite pages near the back of your presentation where you show, you've got a screen shot of the Manitoba Hydro website.

MR. HUTCHISON: Yes, I actually recall it's since the late '90s that it's been on our website, posted.

MS. WHELAN ENNS: Thank you.

MR. CORMIE: And as part of the licence, Manitoba Hydro is required each month to provide a forecast for 90 days to the Province of Manitoba. And that has taken place as required,

each month since 1976 we have been preparing and issuing the 90 day forecast. And it's only with the evolution of modern technology, Internet, that it's now possible to make it widely and publicly available.

MS. WHELAN ENNS: In arriving at that 90 day forecast, does Manitoba Hydro forecast beyond that? Do you go twice that to -- in parameters that will help you confirm the 90 day forecast?

MR. CORMIE: Well, Mr. Gawne can probably speak to that, but we have to plan operation of the power system a year and sometimes longer. So, yes, we do have forecasts that go out very long term, but we only publish what's going to happen in the near term because there's huge uncertainty. You know, is it going to rain next fall or not? It's like the weather forecast. I can tell you what the forecast is going to be tomorrow with some accuracy. In a week from now, maybe they can start telling you. But if you ask me what the weather forecast is in September, I will probably tell it is going to be average temperature of the day. In a sense that's where our forecasts are. If we have normal rainfall,

this is where the lake is likely going to be. But it is so sensitive to what happens between now and then that it's really not useful information.

MS. WHELAN ENNS: Does your forecasting activity include forecasting and assessing this wet cycle that we're in?

MR. GAWNE: Our approach to forecasts include, we update our historic data pretty much as it becomes available. So to the extent that, for instance, the last 10 years have been wet, that information has been ingested into our databases and we use that in generating our forecasts.

MS. WHELAN ENNS: Thank you.

Just make a check, Mr. Chair. A couple of quick ones left and I think that's it.

I wonder if the panel perhaps can tell me what stage the AECOM study regarding water quality at the top of Lake Winnipeg in Channel One is at? Is it finished?

MR. CORMIE: Channel One? You are referencing Channel One, what does that do?

MS. WHELAN ENNS: I understand that AECOM has been contracted or commissioned, this would be by the province, to undertake a water

quality study at the top of Lake Winnipeg, and at the intake into Channel One in terms of where the LWR is.

MR. CORMIE: What is Channel One, Ms. Enns? I don't know where that is.

THE CHAIRMAN: This sounds to me like it's probably not relevant. In fact, I'd say it's more than probably not relevant to the issue before us. I suspect it relates to the current studies in respect of an outlet from Lake Manitoba into Lake Winnipeg. I'm just conjecturing but...

MS. WHELAN ENNS: And I will confirm it. Thank you.

We heard from the panel yesterday, and from Mr. Cormie in his closing summary, that there is a lot of, lack of baseline data and challenges in terms of the studies that have been done. A lot in the 1970s and a lot in the 1980s, and different kinds of patterns since. You also commented on changes in methods and expectations and standards and science. What I'd like to ask is whether Manitoba Hydro has a project under way, discussion or thinking in terms of how to start to analyze unbundled impacts on Lake Winnipeg so that we can get a little farther on whether there are

and what the LWR impacts might be on the lake itself. Do you have anything under way?

MR. CORMIE: With regard to the lake proper, we do not have and are not intending to do general studies on the lake. That is to the extent that regulation is involved and implicated, we would consider involving ourselves in that. But no one has come to us saying, this, something is occurring in the lake as a result of Lake Winnipeg Regulation and you need to study that. And you could study anything and everything if money was unlimited. We only want to be involved in those things where we believe that our operations are having an effect. And on Lake Winnipeg, we're not there. And compare that to downstream where we know we have had a considerable effect, and our responsibilities and study requirements are quite clear. On Lake Winnipeg, we support the science, so that we can enhance the knowledge of the lake, so that we can ensure that to the extent our activities are understood and our impacts are known, we will participate in the science. But we're not proposing to do anything new or anything else associated with the lake, unless it's indicated to

us that it's a result of regulation.

MS. WHELAN ENNS: Thank you.

In terms of understanding some of your closing comments yesterday afternoon, you also made a reference to the final licence application underway now, which is why we're here, and the 2026 date for renewal. My understanding of what you said was that the next round in terms of the application for renewal for 2026 would be -- and I want to avoid putting words in your mouth, but my understanding was that it would be more up to current standards in science and engineering, and help the Province, the utility, and all of us go forward without the constraints you were identifying yesterday in terms of baseline data and comparison over a 40 year period.

Am I understanding you correctly in terms of what you were saying would happen next time?

MR. CORMIE: The Water Power Act, in its regulations, require Manitoba Hydro to apply for a renewal licence five years, thereabouts, before the licence expires. And it's not explicit on what we have to do beyond what the Water Power Act licence requires, which is a very, you know,

just apply and we'll deal with it at that moment. We believe there is an opportunity to lay out a path before that, so that when we actually -- so that we can start the work now that might be required to make that pathway from an application to a renewed licence much more certain for the utility. But right now it's -- all we have to do is apply, and five years later the Water Power Act says that we could get a renewed licence, but we're not really clear on what that process involves.

These projects were built prior to the Environment Act. They were built in a time of different standards and in a period when there was not the baseline data. And it would be very helpful for Manitoba Hydro to know what the rules going forward for renewals would be, so that we could do the work that's needed, so that when we get to that date we're following a process and we're not caught offguard with unexpected requirements.

So I think we now have a period between now and 2026, if policy is set and the rules of the road are described, then we can achieve what I would call a modern balance for a

renewed licence.

Now, it may be that that modern balance is exactly the same as the old one, but it will be done deliberately, having studied it, got input involved, the public in a public consultation process, using best science to derive best policy. And so I believe we do have time to do that. That's 10, 12 years away, and there are a lot of issues that still remain to be dealt with. And Manitoba Hydro is committed to doing the right thing. It would be helpful to have a road map, so that when we get to 2026 we're on track.

MS. WHELAN ENNS: Thank you.

What I was fairly sure I was hearing yesterday, and again some of what you just said -- and thank you for being thorough this afternoon -- was explored in the technical workshops some of us were in at the end of January also. What I heard yesterday in terms of sort of two main takeaways is what you were referring to now, which is what's the road map, but also this pattern of uncertainties in baseline data, studies, methodology. So does this mean that Manitoba Hydro is basically rejecting what work was done in

the '70s and the '80s in terms of the LWR? I understand about methods and data not necessarily being compatible, but do you accept the results of those studies, the recommendations of those studies?

MR. CORMIE: Well, I think all that information is valuable. I wouldn't reject it. The Churchill/Nelson basin board studies, those studies that were all done at that time were considered to be state of the art. That's what science expected.

The Environment Act now and the processes that flow under it associated with new projects set clear guidelines on what Manitoba Hydro has to do. And with Wuskwatim and with Keeyask and with other projects, it's clear to us what that standard is. It gives the utility the road map that can be followed. For those legacy projects that are 40, 50, 80, a hundred years old when they come up for relicensing, it would also be useful to be able to know what the expectations are, so that when we go forward we're on track. And not having baseline data makes that difficult, it makes it almost impossible to use the guidelines that associated with new projects,

because with the new project you can go collect the baseline data, and you can involve the Aboriginal people and get all that information. We just don't have that information for the legacy projects, which makes it more difficult for us to anticipate what relicensing would look like.

MS. WHELAN ENNS: Is this then also the basis for the comments yesterday, and I think they were in your summary, about sustainable development and sustainability, and the difficulty in responding in terms of this final licence for the LWR? We're going back to the 1970s, but sustainable development has been law in Manitoba since 1989. So you're nodding your head. So this is the same area of frustration?

MR. CORMIE: Well, I think so. You know, these are -- with regard to Lake Winnipeg Regulation and Churchill River Diversion, and other hydroelectric projects built in the '60s and the '70s, these concepts weren't there. So what did those concepts mean for relicensing would be useful to know. We can interpret them ourselves, Manitoba Hydro's sustainable development policy, but maybe there's a broader public policy issue as well. So I don't believe it's in Manitoba

Hydro's, or Manitoba's interest that we go forward without some strong leadership at the Provincial level of what's expected of the utility. And we will rise to the expectation. The company will do the right thing. What gets difficult is when we assume that we know what expectations are and then we get into a public process and there isn't an alignment with what the public is thinking. And we don't want to be there. We want to reflect modern values. We want to reflect the values of everyone, and try and achieve the maximum for all the people in the province. And that's not just a utility issue, that's a government issue, and so leadership at that level would be very valuable for us as we go forward.

MS. WHELAN ENNS: Thank you, and also public interest issue.

I'm finished.

THE CHAIRMAN: Actually, Ms. Whelan Enns, before you leave your chair, I'd like to turn to your technical questions that you submitted today.

MS. WHELAN ENNS: Sure.

THE CHAIRMAN: I think you may have misunderstood the directive we gave when we asked

or suggested that parties wishing to ask or cross-examine questions of a particularly technical nature might want to submit them in advance. This wasn't to be another IR process, actually it was meant to try and save time and requirement for undertakings to give Manitoba Hydro a heads up on what your questions might be.

So if you want these questions answered, you'd better ask them today, like right now.

Now, you have already asked the first one but I think you should go through some or all of the rest of these questions.

MS. WHELAN ENNS: Certainly. My corrected understanding is corrected, but my assumption was that any question that was highly technical needed to be a written technical question.

THE CHAIRMAN: No. The intention was to give Manitoba Hydro a heads up that you were going to ask this question so that they could be prepared for it. As you know from being a party in many of our proceedings, that we often end up with a number of undertakings when the technical expertise required is not present. We were trying

to save a bit of time in that respect. So, please ask the questions here that you were particularly concerned about.

MS. WHELAN ENNS: Thank you. No problem being the guinea pig on this new step for the hearings.

So to go back then to the IPCC --

THE CHAIRMAN: I think you have asked that one, so I don't think you need to revisit it.

MS. WHELAN ENNS: I asked about the experts, climate change scientist in Manitoba Hydro. I did not specifically -- because it was, I thought, an integral question -- ask about the inclusion of the fifth assessment results in what was filed.

MR. GAWNE: I believe in the response to this question, we have addressed this in Manitoba Wildlands number 7 and Peguis First Nation number 3, and also in appendix 7, section 3.2.3.

MS. WHELAN ENNS: Thank you. And because there was no second round, I was --

THE CHAIRMAN: Well, I think he just said they have answered it, so please move on to your next question.

MS. WHELAN ENNS: And so then basically it's a comment from Manitoba Wildlands that we were, in fact, seeking more than we got back from round one.

The second question here is whether Manitoba Hydro tracks the volume of water in Lake Winnipeg, and at what frequency, whether it's also posted. The second part here about notification may or may not apply, okay, based on our previous questions. And the reason for the question has a little bit to do with the seasonal cycles also.

MR. CORMIE: The way the general public relates to Lake Winnipeg is through elevation. And it's the imperial measurement, 715, 712. We talked about changing units to metric units back in the early '80s. And if we went and talked to the public about Lake Winnipeg at 213 metres, nobody would know what we are talking about, but everybody relates to the elevation. By removing the wind effects from the measured water levels at the various gauges, the wind-eliminated level is in effect how much water is in the lake. And as Mr. Hutchison explained yesterday through his demonstration of the weather bomb, and how the north end of the lake was blown

down three feet and the south end of the lake went up five feet, the volume of the lake essentially stayed the same, which is measured by the wind-eliminated. So we're not expressing it in billions of cubic litres, billions of litres or metric cubic metres, nobody can talk that way. We have to talk in the language that everybody is familiar, and that is through the elevation. And that is how we communicate with the public on what the volume or the level of the lake is.

MS. WHELAN ENNS: Thank you.

Number 3, some of which has been answered, probably remains a partial question then in terms of methodologies, and your forecasting services and their products. When you have this pattern of posting now, access because of the Internet -- and I have looked at this online but I can't remember -- are you providing an explanation in terms of your methods to write forecasts?

MR. CORMIE: No, we don't provide those on the website. But I can say that these forecasts are ones that we generate through our computer models, and to the extent that other agencies are providing us with forecasts, we rely on those. For example, Water Stewardship each

year does extensive modeling and coordinates with the U.S. Army Corps of Engineers on what the volume of water coming down the Red River will be. So rather than Manitoba Hydro duplicating that effort, we use these other agencies' forecasts because they are experts in those watersheds, and we will incorporate them. And so there's a lot of cross agency coordination with regard to the forecasts, and we build that in.

If there's something else, Mr. Gawne might be able to answer for you.

MR. GAWNE: Yeah, if I can add to that. A lot of the inflows into Lake Winnipeg, as we were discussing yesterday, is regulated inflows, like regulated upstream of the provincial borders of Manitoba. So we do obtain forecasts from agencies such as the Lake of the Woods Control Board, responsible for regulating flows on the Winnipeg River, agencies upstream on the Saskatchewan River, Saskatchewan Water Security Agency. So the forecasts into Lake Winnipeg that are used in operations are, as Mr. Cormie was explaining, a hybrid of sources for information.

MS. WHELAN ENNS: Thank you.

I believe that the previous questions

probably covered number 4, in terms of the process we're in today. But I do want to ask whether you measure -- and I remember what we have heard about ice in relation to the inflow -- the outflow to the lake. Manitoba Hydro, do you measure the ice cover on the lake?

MR. CORMIE: I believe there was an IR with that question, it was asked. And I believe the answer is we do not measure the ice thickness on Lake Winnipeg. It's not an issue that we need to worry about. We need to know about ice thickness in the outlet channels because it determines the outflow capability. But the lake proper, it's not something that we are monitoring.

MS. WHELAN ENNS: Thank you. Given these are no longer written technical questions, we have dealt with five.

Number 6, the Canada water survey gauges, and the data is online. We have no gauges to speak of on the west wall of Lake Winnipeg. In the filings and the conclusions in terms of the different sections, or different technical reports, and in the schedules, there are combinations of data from different gauges used in arriving at content on different issues about the

lake. This is just a general comment but it's quite evident in the climate report. The requirement under your licence is for the mean level, and you take that from only certain of the gauges on the water -- on the lake. Is that a correct statement?

MR. CORMIE: Manitoba Hydro uses all the water level data information that's available in order to determine the wind-eliminated level. A good way to view this is, in the winter time when there's an ice cover on the lake, wind effects don't exist. It doesn't matter what gauge you look at, whether it's Victoria Beach, Gimli, Matheson Island, George Island, Mission Point, Montreal Point, they all read the same. And adding more gauges won't change that, they will all read 714.4, because the wind effects are not there. The problem in the summer time is that some gauges are going up and some gauges go down because they are being blown around. So we use a weighted average of those gauges. Some gauges have more information in them than others. A gauge that is hardly affected by wind has the most information. And let's say that there was a gauge that it didn't matter which way the wind blew, it

read exactly that perfect level of the lake. And so that gauge would get a lot of weight. Gauges in the south basin, like at Victoria Beach, they go up and down, fluctuate two, three, five feet. There's not a lot of information in there because you never -- well, it's fluctuating. Those gauges have very little weight. So the weighting mechanism that we use to determine the wind-eliminated level recognizes how much information is in the gauge. And adding more gauges that are subject to wind doesn't add a lot to the answer. We believe that the combination of gauges that we have now provides a relatively smooth water level indication. What is the volume of the lake at that time. And really the only time that's relevant from the purposes of the licence is if you are getting close to 715. If the wind-eliminated level is 714, well, you know, why is that relevant? It's not a trigger point. The question is, is it at 715? The way the wind-eliminated level is calculated is only useful after the fact, because it takes 11 days for us to do all the smoothing that that algorithm requires. So wind-eliminated level is only, it's relatively academic because it's only available after the

fact, after all the gauge information is available.

So the other point, and Mr. Gawne talked about this, we don't wait until the wind-eliminated level is at 715 to have maximum discharge. We anticipate that we're going to get there and we put in place an orderly increase in outflow, so that when we do cross the 715 threshold, we are already at maximum discharge, and probably we're at maximum discharge before that. So having the wind-eliminated level exactly represent 714.999, we don't regulate to that. We regulate to what makes good sense, provides a safe environment for the public and manages the lake in a responsible manner. It's not triggered by the accuracy of the data, it's much more sensitive to the impacts, and very less sensitive to the precision that might be implied by adding more and more gauges to the calculation.

MS. WHELAN ENNS: You mentioned extra steps in terms of smoothing the data from the south basin gauges. Does the same apply to the gauges that are at the Narrows?

MR. CORMIE: Well, the gauges at the Narrows, for example, Berens River is a very good

gauge. It's actually the official location of the data at the Lake Winnipeg Regulation. If you want to know where 715 is, it's 715 at the Berens River gauge. That's the datum that is applied across the lake as a whole. All other gauges are really relative to that gauge.

MS. WHELAN ENNS: And hence my reference to primary gauges. I'm aware of what you're saying about the Berens River. I was asking about Matheson Island and Pine Dock.

MR. CORMIE: Those are included when that data is available. And not all gauges work all the time, there are periods of time when gauges aren't available in real time, and we may have a subset of the gauges that are available.

MS. WHELAN ENNS: Is Manitoba Hydro participating in or supporting financially the work out of the University of Winnipeg in terms of all the meteorological precipitation and water gauges in the province?

MR. CORMIE: I'm unaware of the activities at the University of Winnipeg.

MS. WHELAN ENNS: This is Dr. Danny Blair's team, and I couldn't remember whether Manitoba Hydro is on the publication.

I'm finished. Thank you, Mr. Chair.

THE CHAIRMAN: Thank you, Ms. Whelan Enns. I'm going to propose we take a short break of about seven or eight minutes to 2:30, while we sort out who's next on the cross-examination list, and also so I can get away from this frigid draft that's blowing down my head and back.

(Proceedings recessed at 2:23 p.m. and reconvened at 2:32 p.m.)

THE CHAIRMAN: We'll proceed with Manitoba Metis Federation. Please introduce yourself for the record and then proceed.

MS. RIEL: Good afternoon, I'm Marci Riel. So I would like to start this afternoon by thanking Mr. Chair for your opening comments yesterday. The Manitoba Metis Federation appreciates your recognition of the homeland of the Metis Nation.

Mr. Sweeney, you spent a significant amount of time yesterday outlining the process under which Manitoba Hydro engages with the Aboriginal community. Can you please provide for the record a list of communities with which you have engaged as it relates to the project and the

application for a final licence?

MR. SWEENY: Can you just ask that question once more, please?

MS. RIEL: I'm just looking for you to provide us with a list of the communities with which you have engaged?

MR. SWEENY: Can you elaborate on your engagement comment, please?

MS. RIEL: Specifically, you spent essentially the bulk of your time yesterday outlining Manitoba Hydro's engagement with the Aboriginal community. I'm looking for you to tell us which Aboriginal communities you are referring to?

MR. SWEENY: So that would be, there would be Cross Lake First Nation, the Incorporated Community Council of Cross Lake, Thicket Portage, Pikwitonei, Norway House Cree Nation, Norway House Community Councils, Split Lake First Nation, York Landing First Nation, and Wabowden.

MS. RIEL: Thank you. So following up on that, is it possible, can you provide us, or anyone else from the panel, with Manitoba Hydro's working definition of Aboriginal.

MR. HUTCHISON: We go to the

Constitution Act of 1982 which defines Aboriginal as First Nations, Metis or Inuit.

MS. RIEL: Perfect, thank you. So you are aware that the Manitoba Metis Federation represents the Metis Nation's Manitoba Metis community?

MR. SWEENY: Yes.

MS. RIEL: And you are also aware that as Aboriginal people, our community have the right to harvest throughout the Province of Manitoba?

MR. HUTCHISON: Yes, I believe so.

MS. RIEL: Although included in neither the NFA nor supplementary agreements you referenced yesterday, are you aware that the citizens of the Manitoba Metis community have experienced and continue to experience many of the same impacts outlined?

MR. SWEENY: Yes.

MS. RIEL: Would you be aware of that based on engagement?

MR. SWEENY: Yes.

MS. RIEL: So would you like to reference that engagement in your earlier answer?

MR. SWEENY: What I was referring to in regards to engagement is the many agreements

that we negotiated or we have had discussions with several of these communities impacted by adverse effects of LWR. We have engaged the people impacted. So in some cases they are members of a First Nation. In other areas we have discussed and negotiated agreements that relate to Northern Affairs communities. In some of those places there are individual members, or members, may very well have been members of the Metis. In other areas we have negotiated agreements and engaged with residents impacted in our resource harvesting agreements. And again, there is engagements to those processes through a long period of time.

MS. RIEL: Just to clarify, the engagement that you were speaking of yesterday, and then that you are referencing today is specific only to communities with which you have an agreement?

MR. SWEENY: No, it's specific to the communities and the impacted individuals that have been impacted.

MS. RIEL: Okay.

MR. HUTCHISON: Sorry, I'd like to jump in, if I might, as well. Because on Lake Winnipeg, there has been additional engagement

with communities that are all around Lake Winnipeg, many of which would be considered Metis communities.

MS. RIEL: Mr. Chair, if I may? So just a reminder that the Manitoba Metis community is one community, they are not several Metis communities.

So, for example, just following up on what you're saying here, you are aware that at recent CEC hearings, whether it's Bipole III or Keeyask, in fact at both we did bring forward a panel of citizens of the Manitoba Metis community to identify some impacts of various Hydro projects. And specifically at the Keeyask hearing there was a gentleman who referenced his generational use of Sipiwesk Lake. I guess my question is, given the fact that that was part of the hearing and certainly forms part of the record, and that Manitoba Hydro is fully aware of those impacts, where are your thoughts with relation to identifying, or failing to identify those people as being impacted by the project?

MR. SWEENY: First of all, I disagree with your assertion that we failed to identify this individual. Impacts on Sipiwesk Lake, we

have negotiated with various stakeholders in that area, including people that utilize the Sipiwesk Lake for resource harvesting and for commercial use, and we have addressed those through our various agreements.

MS. RIEL: You have provided a multitude of examples of compensation programs, engagement reference, mitigation processes, annual consultation plans designed specifically for First Nations people. Can you provide me with an example of the same or similar process specifically for the Manitoba Metis community?

MR. HUTCHISON: I'd like to say that Manitoba Hydro's approach to dealing with adverse effects is to deal with the elected leadership of the communities that are in the impacted area. So in that regard, where there were impacts, we would have dealt with the leadership of the community, whether it was the Chief and Council or the Mayor and Council.

MS. RIEL: Thank you.

On slide 115, you reference Manitoba Hydro working together with the Aboriginal community to address Lake Winnipeg Regulation impacts through programming and agreements

specific to those who live and work along the Nelson River.

Can you please provide for the record an example of Manitoba Hydro and the MMF working together for the benefit of the citizens of the Manitoba Metis community who also live and work along the Nelson River?

MR. HUTCHISON: I can't identify any examples but, as I mentioned, we do work with the elected representatives of the impacted communities, and to the degree that they would choose to involve the MMF central office, that would be at their discretion. When we enter into negotiation agreements, these communities decide who they would like to represent them, we have lawyers, consultants, that sort of thing.

MS. RIEL: On slide 116 you reference several communities in the downstream area, including First Nations and Northern Affairs communities. You are aware that the MMF represents these citizens living in many of these same communities?

MR. HUTCHISON: We're not aware that they would represent all the Metis in these communities.

MS. RIEL: Thank you. And that although you have programs in place to consider and mitigate the impacts of Lake Winnipeg Regulation on the communities identified, the citizens of the MMF really similarly impacted by the project but are not being included in the compensation and benefit process.

MR. HUTCHISON: Can you repeat that a little slower?

MS. RIEL: Certainly. So following up on your comment, that although you have programs in place to consider and mitigate the impacts of Lake Winnipeg Regulation on the communities identified, the citizens of the MMF are similarly impacted by the project but are not being included in the compensation and benefit process.

MR. HUTCHISON: Okay. As I mentioned, we work with the elected representatives of the communities that are impacted. In some ways, it sounds more like an issue between the MMF and their local offices. But to the degree that Metis people would use areas in the impacted waterways, mitigation and other programming that is done on those waterways, they would have the benefit of that. So, for instance, a lot of the programs

that Mr. Sweeney mentioned yesterday.

MR. SWEENY: I'd also like to just add there, if there is a Metis individual or a person taking activities related to resource harvesting, those individuals likely would have been represented in the various adverse effects agreements we had with the resource harvester groups, such as the trappers associations and fishers.

MS. RIEL: Thank you.

MR. SWEENY: And I just want to also state that I am not aware of anyone who has not been properly addressed, that's been impacted, at this time that's been impacted by LWR.

MS. RIEL: On slide 118, you reference an understanding of impacts and how to address these impacts, as informed by a long history of communication with First Nations, northern communities and groups.

Can you please provide some clarity as to whom you are referring and what type of information you have collected on these impacts?

MR. SWEENY: Your first question, could you repeat that, please?

MS. RIEL: To whom are you referring

when you say First Nations, northern communities and groups?

MR. SWEENY: I'm referring to, again, the Cross Lake First Nation, Norway House First Nation, Split Lake First Nation, York Landing First Nation, and the Northern Affairs communities, the Cross Lake Community Council, Norway House Community Councils, Ilford, War Lake and Wabowden.

MS. RIEL: Thank you. And so the information you collected from those First Nations, northern communities and groups, was it brought forward through a process under which, for example, traditional knowledge was collected, and impact assessments were done, or how would you characterize the process by which you collected that information?

MR. SWEENY: Well, I think the information was taken over time, so the engagement with -- like not getting specific here, but engagements with communities have been taken over since the project since 1976. So it's been through community visits, negotiations, agreements, those types of processes, that's been ongoing since 1976.

MS. RIEL: Thank you.

On slide 126, you reference agreements with various resource user groups. Can you provide us, for the record, a list of resource user groups to which you refer?

MR. SWEENY: That would be a number of trapping and fishing associations that are tied to these communities. That would be, so Thicket Portage would have the trappers association, Pikwitonei would have trapper and fishing associations. Cross Lake First Nation would have the Cross Lake Trappers Association, along with the Cross Lake Fishers Association. Norway House would have a fishing association. So it varies in different communities, but that's also been part of where we get our information from as well, our understanding of some of the impacts and some of the solutions that are tied to those various engagement processes with the various people that have been impacted. And I understand some of them also included Metis individuals.

MS. RIEL: Thank you. On slide 139, you reference loss of land due to shoreline erosion. Can you confirm the process for which you determine the environmentally sensitive sites

you referenced, such as burial sites?

MR. SWEENY: Some of the information comes from the Historical Resource Branch that identifies certain areas. Other areas are identified by community leadership, including the First Nations that live in those communities.

MS. RIEL: Thank you. Can you confirm the process, following up on that, can you confirm the process by which you identify and communicate the results of the monitoring you are referring to?

MR. HUTCHISON: As far as the Historical Resources Branch of the Province, who monitor this, the archeological programming arrangements with them, they do the monitoring, and they have a process by which they figure out which is the ancestral community that they should be working with to deal with a particular site. Does that answer your question?

MS. RIEL: Yes, it does. Thank you. That's all I have.

THE CHAIRMAN: Thank you, Ms. Riel.

MR. SWEENY: I would like to just add, before Ms. Riel leaves, a lot of engagement also goes with a lot of the ongoing programming that we

have through our Waterways Management Program, through our safe trail monitoring program. So a lot of the engagement with a lot of these communities that are impacted by adverse effects of LWR are communicating in those processes. We also have many people that work that are from these areas that also have engaged with community members as well on the ongoing monitoring.

MS. RIEL: Thank you.

THE CHAIRMAN: Thank you. Next I believe is the Interlake Reserves Tribal Council.

MR. SHEFMAN: Thank you, Mr. Chair. It's Cory Shefman, I represent the Interlake Reserves Tribal Council. Thank you for having us today, and thank you to all of the Commission members for facilitating this important proceeding. I'd like to thank Hydro as well, and the experts and engineers from Hydro who have taken the time to increase our knowledge about the issues that we're here to discuss.

I have a number of questions, some directed at specific members of the panel and some directed at the panel as a whole. So I trust that you'll answer them as you see fit.

I'm going to begin, Mr. Gawne and

Mr. Hutchison, I explained yesterday that recent floods and high inflows are a result of a sustained wet period, which at this point has lasted for 10 years. Apparently the flows are up to 37 percent higher than they have been. The implication that I took from this, and feel free to correct me, is that this was an aberration in the normal cycle of drier and wetter periods. Is that correct?

MR. GAWNE: I wouldn't say that's necessarily correct. It's clear that we're in a wet cycle, where we have experienced wet cycle, and there are long low frequency cycles that happen in hydrology. So the fact that we have gone through multiple years in a row with above average water conditions is not unheard of.

It is, from our record from 1915, we are approaching new terrain in terms of the duration of the cycle. So we have had 10 plus years of above average water, overall water supply conditions. And prior to that, I think we were in the range of about six years in a row where we would have average to above average flows.

MR. SHEFMAN: So it is longer than we're used to?

MR. GAWNE: No, there's climate cycles and there's cycles in the hydrology into the Manitoba Hydro system. It's the longest cycle we have experienced since 1915.

MR. SHEFMAN: Thank you.

Does Manitoba Hydro have any modeling which will predict or which predicts how long this wet period is going to last, and what implications its end or its continuation will have on Lake Winnipeg Regulation system?

MR. CORMIE: No, we don't have models, we really don't have a long enough historical record to know. You've seen this happen a dozen times in the past and now you can predict it with some degree of confidence. Our record is short, even though we're very fortunate that we have a hundred year record, but when you have water cycles that are 20 years in duration, 100 years is not long enough to see a pattern there. Some suggest it's tied to sun spot cycles which has, you know, it's around 11 year cycle. There may be something to that. There are other things in the energy cycle of the earth, associated with the tilt of the axis and all those other factors, that create cyclical patterns in the climate. We

haven't been able to explain that as a basis of, and use it to be able to predict what's going to happen.

We know that in the middle of high water periods, low water years do occur. If you look through the record, high water, high water, high water, and out of the blue you have a very low water year, like what happened in 2002, 2003 and 2004, a near record drought. And then it carries on again. And so it is not predictable.

MR. SHEFMAN: You have given us a number of possible causes of this wet cycle. One of the things you didn't mention, and I'm curious whether it may be a factor, is climate change. Is it possible that climate change, as we commonly use that term, is responsible in whole or in part for the wet cycle that we're seeing?

MR. CORMIE: Well, we know climate change is a reality. But when you look through the historic record of water supply on the Nelson River, it's not that obvious. And it's because the gradual changes that we're expecting are very subtle compared to the wild swings that occur from year to year just because of the normal variation in the prairie hydrology. It would only be well

after the fact, you could look back, you know, if we had two or three hundred years of records, you could see that change occurring.

When we look at individual rivers, it's a little bit more apparent. But when you look at the totality of the water supplied on Lake Winnipeg, if it's there at all, it's very subtle, it's not obvious. And I think what we see in the record is the weather, the climate, it's hard to tell that the climate record isn't stationary. Science tells us that it is changing, but you wouldn't get that just by looking at the record itself. You'd have to understand the physics and the science behind climate change, and how the atmosphere is changing as a result of the carbon content. And then we can start using that to look at what would likely be in 2050, 2080, and that's where the global climate models come in and help inform us on what's going to happen in the future. But all the very subtle changes that are occurring are masked to the historic record.

MR. HUTCHISON: I'd just like to clarify, I believe you said that it wasn't referenced yesterday in the presentations?

MR. SHEFMAN: No, I said it was.

MR. HUTCHISON: Oh, it was. Thank you.

MR. GAWNE: If I can just briefly add to that, Mr. Shefman. I believe it was in IR CAC 14, where it's stated that in general, short-term climate change projections are dominated by natural climate variability, and the climate change signal becomes more apparent over longer term horizons. So this goes to Mr. Cormie's comment about the actual, the cause of the cycles is not exactly known.

MR. SHEFMAN: Thank you.

One of the purposes of Lake Winnipeg Regulation, as we have heard, was flood mitigation. The fact that Lake Winnipeg Regulation has lowered peak water levels, I submit to you, is less relevant than the question of whether floods continue to increase in frequency and severity. The reports of those actually living in the area confirm that floods are getting worse. Rather than simply taking the position that flooding isn't Manitoba Hydro's fault, what consideration has Manitoba Hydro given to how to utilize Lake Winnipeg Regulation to further mitigate and prevent flooding?

MR. CORMIE: Well, Manitoba Hydro does not control the weather. It's not driving climate change. It is not causing the floods. Like every other interest in the province, we can only deal with them after they occur. I believe that Manitoba Hydro is doing everything possible to mitigate the flood levels on Lake Winnipeg through its actions of regulation. To the extent that more needs to be done, that's not within our mandate. There would have to be some additional works constructed to help reduce the magnitude of flooding. But we're not here talking about that. We're talking about how we operate under the existing licence, the existing facilities and the impacts associated with that. And it's clear to us, as it is to all other Manitobans, that this period of wet is having dramatic impacts on them and their homes and their farms and, you know, especially those people in the Interlake who have gone for many years with sodden fields.

You know, we watch TV and see those impacts. We wish that we could be able to help with those impacts, but it's not something that the Lake Winnipeg Regulation project was ever designed to help with. We have increased with the

outflow capability of the lake by 50 percent. We believe that we're having significant, providing a significant benefit, but we can't make the floods go away. And the same way we can't deal with whether events like the weather bomb in 2010, where unprecedented storms occur on the lake. Those are mother nature, and I believe that we have to adapt, but Manitoba Hydro is doing everything it can now to minimize those impacts.

MR. SHEFMAN: And as I said in the introduction to my question, I'm not concerned, with respect to this question at least, whether or not the peak water levels have lowered under Lake Winnipeg Regulation. For the purpose of this question, I accept that they have. But am I correct in understanding that it's Manitoba Hydro's position that Manitoba Hydro has done and is doing everything it can and everything it is obligated to do to mitigate flooding on Lake Winnipeg, in the context of flood mitigation being one of the purposes of Lake Winnipeg Regulation?

MR. CORMIE: I believe we are complying with our obligations under our licence. And I think we're fulfilling that as required by that licence.

MR. SHEFMAN: Now, you had just said previously that Manitoba Hydro is doing everything it can do. Is that no longer what you're saying?

MR. CORMIE: I'm saying we are complying with the licence with regard to flood control.

MR. SHEFMAN: Thank you.

MR. GAWNE: Perhaps I can add to Mr. Cormie's response. And this discussion occurred earlier, but the flood control benefit that Lake Winnipeg Regulation provides is largely tied to the requirement to go to maximum discharge when levels reach 715 feet. But as Mr. Cormie explained earlier, when we see these major events, floods for instance, we referred to the flooding in Alberta, Manitoba Hydro is operating Lake Winnipeg Regulation to transition outflows, to increase outflows to manage the floods, balancing the effects downstream and upstream. So we are operating, to the extent we can, to manage the floods coming into Lake Winnipeg, and essentially increasing flows before we have to by licence. And what that does is it reduces the peak level on Lake Winnipeg, it reduces the duration of maximum discharge operation, which in turn releases the

maximum discharge effects downstream of Lake Winnipeg. So I think we're going beyond the minimum requirement, let's say, by the licence, and we are looking at those floods coming in and attempting to manage those floods.

MR. SHEFMAN: Thank you.

And I apologize if I pronounce your name wrong, but in the context of the protection of the Netley-Libau marsh, Mr. Gawne discussed why Hydro can't keep lake levels as low as some might like. I take it the same reasons apply for why Manitoba Hydro can't keep lake levels low in the interests of flood mitigation? Would that be a correct assumption?

MR. GAWNE: If flood mitigation were the only -- in any reservoir, if you wanted to have that reservoir set up to accept any flood, you would try and have that reservoir as low as possible all the time.

MR. SHEFMAN: Maybe clarify?

MR. GAWNE: So as inflows pick up, there's room for that water to be contained in the reservoir. However, as we said, to drain Lake Winnipeg, it's not possible under high flows. The hydraulics of the outlets don't allow for that.

So if inflows are high, lake levels will rise until they balance with inflows -- until the outflow balances with inflows. And if under low inflows, Manitoba Hydro operated Lake Winnipeg Regulation to draw Lake Winnipeg as low as possible, then we would no longer have that storage available to achieve that balance in electrical supply and demand. And that's when the reliability concern comes in.

MR. SHEFMAN: Speaking specifically about the low level keeping Lake Winnipeg low, under low inflow conditions, I believe the language used was that it would risk devastating consequences, including brown outs and prolonged outages. Is that an accurate description of the evidence that was given?

MR. CORMIE: Yes. If we operated the project solely for flood control, i.e. being at maximum discharge all the time, half the winters there would be an inadequate supply of electricity for Manitobans and the lights would go out. That would be devastating. Can you imagine going through a winter, minus 30, and there is not enough supply to keep this province going? That would be devastating.

MR. SHEFMAN: Sorry, was it your evidence that it was 100 percent certainty that during the winter Manitoba would go without power under those conditions?

MR. CORMIE: Half the time. So there would be those years when, even though they were at maximum discharge, there would still be an adequate supply of electricity in the high flow years. In the low flow years, when water flows are below average, there would be an inadequate supply of electricity, and we would be negligent in meeting our obligation to supply the province with an adequate supply of power. The electric system in Manitoba is not designed for Lake Winnipeg Regulation to operate solely as a flood control project.

MR. SHEFMAN: Can you tell us at what sustained average water level those events would take place? Is it 714, 711, 710?

MR. CORMIE: I suspect that if the water level on Lake Winnipeg in the winter were below something around 711 and half, that the power supply for the province would be put at risk. So to have the level down at 709, there may be some water leaving the lake, but it would be

very low, and the generating stations downstream would have an inadequate supply of water. We would have to -- in spite of the interconnections that Mr. Gawne talked about, if we can buy as much as we can, there would still be inadequate supply for the province.

MR. SHEFMAN: When we talk about inadequate supply and we talk about these devastating consequences, are you referring to actual deficit in supply, or are you referring to a draw-down on the 12 percent power reserves that Manitoba Hydro keeps?

MR. CORMIE: No, we would have run out of reserve, we would be curtailing half -- half of the customers in Manitoba would go without electricity, and they would go without electricity half the time over the winter, as we rotate the available supplies to meet the available demand. It is not something that is acceptable.

MR. SHEFMAN: Given the impact that the water level has on communities, wildlife and other interests, and given what you have just told us that Lake Winnipeg Regulation can't be operated solely for flood control, what has Manitoba Hydro done to diversify the sources of electricity it

uses to satisfy domestic demand? Why isn't more emphasis being placed on demand-side management and diversification so that some reduction may be affected?

MR. CORMIE: Well, Manitoba Hydro has planned the development of the Nelson River, and it's predicated those plans on having four feet of storage available in Lake Winnipeg. We haven't developed plans based on any other assumption. We have based those plans on the licence that we have and the expectation on a go-forward basis that we will continue to have that storage available. And on that basis, we continue to develop as needed to meet our planning criteria.

You are asking me a theoretical question that we need to plan for the operation of Lake Winnipeg not as a power reservoir. That's not something that we have considered. It would in a sense walk away from the entire investment that the province has made in hydroelectric development of the Nelson River, force us to go to other technologies. And I think that would be a very serious decision to make. And we are investing in demand-side management, we are investing in transmission lines to neighboring

jurisdictions to increase the reliability of supply. We have some gas turbines on the system, and we have invested in wind technology in the province. But the primary supply of electricity is from the Nelson River, developed downstream of Lake Winnipeg, and Lake Winnipeg is the key reservoir for making that investment possible. And we have no plans to deviate from that as a source for the majority of the supply of electricity in the province.

MR. SHEFMAN: Thank you for your answer.

Moving on, Mr. Swanson explained during his evidence that a combination of limited data and other factors make it impossible to tell how Lake Winnipeg Regulation has impacted wildlife populations. Is that an accurate description of the evidence that you presented?

MR. SWANSON: Yes.

MR. SHEFMAN: Given Manitoba Hydro's commitment to sustainability, which we also heard about, is Manitoba Hydro satisfied with that conclusion?

MR. SWANSON: Are you asking if there's --

MR. SHEFMAN: Is it good enough?

MR. SWANSON: Is it good enough? I would say that it's a summary of the information that was available. That was the task before us. The information, a lot of it came from site specific, issue specific studies as part of the conversations that were going on with various interested communities. So it's a representation of the information that was available. And in that regard, I would say it's as good as it can be, looking at that.

MR. SHEFMAN: So would you agree with me then that while we -- that while you may not be able to at this point quantify the impact, Lake Winnipeg Regulation has indeed had some impact on wildlife in and around Lake Winnipeg.

MR. SWANSON: Well, my presentation was speaking to the effects downstream, not to Lake Winnipeg proper and the shorelines around Lake Winnipeg. So in reference to Lake Winnipeg, that wasn't part of that comment.

MR. SHEFMAN: In that case, perhaps somebody can speak to my question about upstream effects?

MR. HUTCHISON: If we're talking about

upstream effects, the main effect is a reduction in the higher water levels. And I don't believe we can suggest that that's had any impact on wildlife on Lake Winnipeg.

MR. SWANSON: Maybe I could add to that? There was an IR, I can't remember which one it was, that asked specifically about shoreline effects on Lake Winnipeg. And the context was, with the reduction in water level there would have been less impact to the shoreline that would be affecting the various species, the user of riparian zones and water edge. So in a very general sense, there was a statement to that effect, but that's as much as we have.

MR. SHEFMAN: All right.

Moving on, it's my understanding that when we're talking about LWR between 711 and 715 feet, we're always talking about wind-eliminated measurements. Is that correct?

MR. CORMIE: Yes, that's correct.

MR. SHEFMAN: Thank you.

While the value of such a measurement for the purpose of determining water supply and flow needs is self-evident, can you explain how using wind-eliminated measurements assists, if it

does, with flood mitigation, given that according to the Manitoba Hydro document at page 75, wind cannot cause actual local water levels of up to five feet higher in a matter of hours?

MR. CORMIE: Yeah. So if you were to think the alternative would be to follow, or regulate around a wind level, the first problem you would have is which wind level? Do you use the level at Mission Point? Do you use the level at Victoria Beach? Which wind level would you use? So from a pragmatic perspective, you need to choose a benchmark. And as I indicated to Ms. Enns, the benchmark that the province and Manitoba Hydro agreed to was a wind-eliminated level which reflects the volume of the lake. Because what we're trying to do is maintain the volume of the lake under the 715 threshold. And the chart that Mr. Hutchison showed about the weather bomb, yes, the water may be up five feet in the south end, but at the same time the water level is down in the north end three feet. So does that mean you should reduce flows or increase flows, depending on which water level you are choosing. So we're trying to get the wind effects -- Manitoba Hydro is not responsible for

the wind, we don't control it. And so the best thing to do is try and figure out a level over which there is some stability. And then you are actually responding to the change in water supply, and you're always going to be subject to the risks associated with storms. We can't regulate for storms. But what our regulation has demonstrated over the past 40 years is that during the period of the year when storms are likely to occur, that's in the fall, on average or in the high water years, water levels are lower, and so there's been some benefit. And so the stormy season, regulation produces lower level, storms are still going to occur but they would occur at lower water level. And it's just not practical to do anything else.

MR. SHEFMAN: You spoke to Ms. Whelan Enns about how you choose which of the monitoring stations to use, or to put more emphasis on. If we turn to slide 158, we can see that map of where those monitoring stations are. And I noticed that most if not all of them are found on the east side of the lake. So what my clients are concerned about, in particular for example, Dauphin River and Jackhead First Nations,

neither of which monitoring stations in any kind of vicinity to their populations, how does Manitoba Hydro ensure that the wind-eliminated water levels don't have the unintended effect of flooding their communities?

MR. CORMIE: Well, as I suggested to Ms. Enns, an excellent way of viewing this is what happens in the winter time when wind effects aren't there because the lake is covered with ice. And when George Island has got 715, Berens River is reading 715, Victoria Beach is at 715. So every one of those gauges reflects a still water level. Having another gauge on the west shore at these locations that you suggested won't change the wind-eliminated level. It will still be accurately measured through the gauge network that they have.

The gauges that were installed were installed over many decades by Water Survey Canada. Generally they were done at sheltered locations where it made sense to put a gauge in. We can put gauges in at any location, but they are subject to the forces of the ice in the winter, as the wind shoves the ice around, they may not be accessible for power, they may be difficult to

access. And they may be in such a poor location that they fluctuate up and down moment by moment and they never actually represent the average level of the lake. And a good example is having a gauge at the very south end of Lake Winnipeg at Chalet Beach. We tried that. It doesn't add to the information, it doesn't help you determine the water, it just actually creates more uncertainty. So the gauge network that we have, we're very satisfied with using that gauge network, there's enough redundancy in it, we have enough information to determine a wind-eliminated level. Adding any more gauges now wouldn't change the calculation of the wind-eliminated level. It may help those people who live in those communities to understand what the water level is, but it's not necessary for the purpose of regulation.

MR. GAWNE: Perhaps I can just add to that. And in regards to operating LWR to help local conditions from wind affected levels, I believe Mr. Hutchison explained this, but even under low inflow conditions to Lake Winnipeg, through operation of LWR it would take approximately a month to draw lake levels down by a foot. And that's under lower inflow conditions.

And average or higher inflow conditions, you could take many months, or a number of months possibly to draw the lake level down a few inches. And under high inflow conditions, of course, the lake level will rise. So when we're talking about these wind events and, for instance, the weather bomb where water levels changed by multiple feet within 24 hours, it's clear that we cannot affect the level on Lake Winnipeg through the operation of LWR to react to these high changes in water levels at locations around the lake because of the wind.

MR. SHEFMAN: Does Manitoba Hydro make any use of local knowledge or Aboriginal traditional knowledge to assist with its understanding of the practical impacts of the use of wind-eliminated water levels?

MR. CORMIE: I don't believe we have.

MR. SHEFMAN: Before we proceed any further, I'd like to follow up on a question asked by Manitoba Wildlands. Ms. Whelan Enns asked a number of questions directed at the various concerns raised during Manitoba Hydro's public consultations, and I don't believe the question was fully answered.

I'd like Manitoba Hydro to take an undertaking in this respect, to provide the Commission with a list of each consultation it has undertaken with respect to the Lake Winnipeg Regulation project, and where available, a list of what specific concerns were raised at each of those consultations.

THE CHAIRMAN: Mr. Bedford?

MR. BEDFORD: Of what use would that be to the four commissioners?

MR. SHEFMAN: I believe it would assist the four commissioners with having a better understanding of how the people directly affected by LWR view the program, are affected by the program, in ways that -- you know, unfortunately, we won't be able to reach everyone with these hearings, as much as we'd like to. And while these hearings will give us a snapshot, having that data, and I respect that Manitoba Hydro says that they have undergone, or taken upon themselves extensive consultations, I think that the commissioners would benefit from seeing some of the data from consultations, aside from the extremely brief summaries which we have been provided.

THE CHAIRMAN: Mr. Bedford?

MR. BEDFORD: I have a better idea. Why don't the four commissioners go to various communities around Lake Winnipeg and hear directly from the people who live there?

MR. SHEFMAN: I'm sorry, I don't think that's called for.

MR. BEDFORD: It occurs to me that in fact you have done that. My client, in attending meetings in communities, I do not believe gathered any data, so there will be no assistance by Mr. Hutchison putting together a little paper that lists the various towns and villages and First Nations that he's been to. The best you are going to get is Mr. Hutchison's recollections of what people told him in those communities, which is what he endeavored to do when he made his presentation. And you are much better off in life to hear directly from people, rather than to have hearsay material from Mr. Hutchison telling you what Mr. Hutchison remembers people told him.

THE CHAIRMAN: Mr. Shefman, are you looking at a particular period in time, are you suggesting over the last decade, or the last 40 years that this has been in operation?

MR. SHEFMAN: My original suggestion would have been in the course of preparing for this application, so from 2010 through to the present. It appears that counsel for Manitoba Hydro is extremely concerned about the difficulty of providing this information, so I suppose whatever is convenient for them.

THE CHAIRMAN: Well, I'll ask the question of Mr. Bedford, or Mr. Hutchison. Did you engage, or did Manitoba Hydro engage in community consultations leading up to this application?

MR. HUTCHISON: Maybe I can answer that. We did not engage in consultations as they are known. What we are attempting to do is get to know the communities around Lake Winnipeg and what their issues were on Lake Winnipeg, and also with our Lake Winnipeg Regulation project. But it was never thought or contemplated that that information would be shared with anyone else other than Manitoba Hydro. It was a way to sort of start relations with communities around the lake.

MR. SHEFMAN: Perhaps this might clarify.

Sir, when you went to those meetings,

we won't call them consultations, was records, formal or informal, kept of the type of concerns that were raised at each meeting?

MR. HUTCHISON: Yes. It was similar format where I would describe sort of our desire to get, to strengthen relations with communities around the lake. We described the Manitoba Hydro system. I would ask the community about their concerns on Lake Winnipeg itself and also with our Lake Winnipeg Regulation project. I would also look to see if the community was interested in further discussions, and/or having discussions include the broader community. And I'd prepare sort of a meeting summary which I shared with the community. But it was also on the understanding that it was just something to be shared between Manitoba Hydro and the community, or the First Nation.

MR. SHEFMAN: Those summaries would be what I would suggest may be useful to the commissioners to get a better idea of the issues that these people are dealing with.

MR. CORMIE: Mr. Shefman, historically Manitoba Hydro would respond to what I would call vocal interest groups, people that were prepared

to stand up, call Manitoba Hydro and ask them to come and present. When we looked at the history of that interaction, we were meeting with the same groups over and over again, and it was obvious that we weren't engaging with all the communities around the lake. So I asked Mr. Penner and Mr. Hutchison to make sure that we were reaching out to all the communities, so that everybody had an equal opportunity to let Manitoba Hydro know what our role was in Lake Winnipeg Regulation, that if they needed information about water levels that we were there to assist them. For example, if there was an emergency associated with a major flood, rather than wondering what's going to happen at their location, hey, there's a website now, you can get this information, and this is what Manitoba Hydro is doing. And so I was trying to be proactive so that not just those people who were vocal, but those people who didn't even know that Manitoba Hydro was regulating the lake had an opportunity to have a relationship with the utility. And I think that's a good behaviour for a steward of the water to do, is to know all, have a relationship with all the communities, not just in response to an emergency, but build up the

capital, build up the relationship, have them have a familiar face in Manitoba Hydro who they can reach out to and say, hey, we have an issue, can you help us? And a lot of these meetings, not just focused on water levels but all the issues associated with the power supply, demand-side management, Power Smart programs, put a face to the utility, and if there was some information that we could provide with regard to our water management activities, create an opportunity for communication.

MR. SHEFMAN: And I completely agree, sir, that that is responsible behaviour for the utility. My request for this undertaking is on the basis that, unfortunately, the commission is not able to visit all of these places. They were able to visit many, and that's fantastic, but that more information can't be a bad thing.

THE CHAIRMAN: Can I ask, Mr. Hutchison, you said you made reports of each of these community meetings. And in these reports, did you note concerns that people in the community had expressed about Lake Winnipeg Regulation?

MR. HUTCHISON: Yes, I did.

THE CHAIRMAN: And you shared these reports with the community?

MR. HUTCHISON: That's correct.

THE CHAIRMAN: Is there any reason why you wouldn't, or why you seem to be reluctant to share them with this proceeding?

MR. HUTCHISON: There's really no reason, I can't think of a lot of issues that would have come up that would have been sensitive, other than the fact that when I talked to the community and gave them a copy of the information, the meeting report, it wasn't with the idea that it would be shared with people outside of the two groups. So it's more on that case. And I also want to clarify that this information wasn't gathered for the hearing. The reason I was out there talking with, or as part of LWR final licence request -- trying to get a relationship with the community goes far beyond just this final licence request. We want a similar relationship with all stakeholders on all parts of our system. So I don't know if that answer -- like I'd almost want to go back to the community and ask if they are comfortable if this information would be shared.

THE CHAIRMAN: I'm just thinking, though. In the last few years, the Commission has gone through a number of Manitoba Hydro proceedings and reviews, and it's not uncommon for us to get fairly brief, but still reports on the community consultation processes.

MR. HUTCHISON: But that's a consultation process, this is an engagement process that we have been involved in.

THE CHAIRMAN: I was thinking the same thing Mr. Shefman just said, engagement and consultation are more or less semantics. In fact, I think that at one of the proceedings, I think it might have been Bipole there was this very specific use of the word engagement, but we did get reports on those engagements.

MR. BEDFORD: I agree it's semantics with Bipole III and with Keeyask. When our staff went to the community meetings, people were told up-front we are recording names, we are recording the gist of what you say and it will be filed publicly. So I think on this issue, the substantive concern we would have is the one Mr. Hutchison identified, which can be resolved through him communicating with the various

communities and saying, you've got our report last year, two years ago, we have been asked to file it publicly. Is that okay with you? And communities that say they have no objection, then it should not be a problem for us to file them. To file them without going back and asking people, some would find offensive.

THE CHAIRMAN: From my perspective, I don't think it would really matter if we knew the names of individuals, I think it's the concerns that might have been expressed in different communities.

MR. SHEFMAN: Yes.

THE CHAIRMAN: Quite frankly, I don't think we're going to learn anything from them that we don't already know. But nonetheless, it does address the point that Mr. Shefman has made that we can't get to all communities. If there is some information about issues in other communities, it might be of some benefit to some parties.

MR. BEDFORD: We will do the following then: We will look at the documents, we will remove the ones from communities that the commissioners actually got to, because you have a better source of information from your own visits

to those communities. We'll take the ones that you were unable to get to, and either have the consent from those to file, or in looking at them it may well be a simple matter of redacting names of individuals that you're not interested in, and just providing the gist of comments heard, that it would not be offensive to anyone.

THE CHAIRMAN: I think, I suspect that that's what Mr. Shefman is looking for.

MR. SHEFMAN: I have no problem with redacting names and locations and identifying information, and I think that that would be an appropriate way for this information to be put in front of the Commission.

MR. BEDFORD: Locations you're going to want to have, otherwise the whole exercise becomes a waste of time.

MR. SHEFMAN: Yes. I'm sorry.

THE CHAIRMAN: Is that acceptable to you, Mr. Shefman?

MR. SHEFMAN: It is.

THE CHAIRMAN: Is that something your client will undertake?

MR. BEDFORD: Yes.

THE CHAIRMAN: Thank you.

(UNDERTAKING # 1: Hydor to produce reports of meetings between Hydro and communities)

MR. SHEFMAN: Thank you.

So we'll continue on slide 170, and we're going to be flipping through these slides relatively quickly for a short while.

Mr. Hutchison, in your evidence you described a number of problems which stakeholders have raised regarding Lake Winnipeg Regulation. Is it your evidence that -- and I'll have you look quickly at slides 170, 172, 173, 176, 178, and 183 -- is it your evidence that Manitoba Hydro either is not or is a minimal cause of each of the issues raised in those slides?

MR. HUTCHISON: Yes, that's correct.

MR. SHEFMAN: To what extent, in coming to this understanding, did Manitoba Hydro take into consideration and make use of Aboriginal traditional knowledge?

MR. HUTCHISON: I don't believe there would have been much Aboriginal traditional knowledge involved.

MR. SHEFMAN: Sorry, you don't believe there was much. Was there any?

MR. HUTCHISON: Let me review the

issues again?

MR. SHEFMAN: Thank you.

MR. HUTCHISON: I guess it would go back to the -- in looking at Lake Winnipeg, the impact of LWR is on water levels, and because of that, there was no reason to engage in doing ATK studies on Lake Winnipeg. So to the extent that information is available, it would have been used, but we did not engage in traditional knowledge studies.

MR. SHEFMAN: So it's your evidence then that Aboriginal traditional knowledge has nothing to add to these issues that we just discussed?

MR. HUTCHISON: That's not what I said at all. Actually, what I said is the effect of Lake Winnipeg Regulation is to reduce the -- overall it reduces the peak levels and the average level of Lake Winnipeg. That in itself does not warrant a negative impact, and so we would not engage in Aboriginal traditional knowledge studies. That's not to say that we don't think that information would be valuable. And in fact, one of the projects we supported recently was the First Nations, Lake Winnipeg First Nations

Alliance, which is now -- I believe they changed it to the Lake Winnipeg Indigenous Collective. But they did a project to get all the First Nations on Lake Winnipeg together to look at their views on stewardship, and there is a sense that that will actually evolve into further work.

MR. SHEFMAN: Has Manitoba Hydro considered that the views of land users, local peoples, and the results of, or the content of Aboriginal traditional knowledge may lead to different conclusions with respect to those issues than what Manitoba Hydro has reached?

MR. HUTCHISON: I believe at the outset of my presentation yesterday, I talked about how pretty much everyone around the lake has concerns, and I mentioned the five issues. And I said a lot of people around the lake feel that LWR is the cause. In doing my presentation I tried to show information or demonstrate information that shows that there are a lot of factors affecting Lake Winnipeg, and LWR is not the cause of each of those negative factors.

MR. SHEFMAN: You did make that point, you are right. So let's talk about that for a moment.

In a number of Manitoba Hydro's responses to written questions, and I'm going to use as an example CAC 26. Manitoba Hydro notes that it considered "the view of local peoples." In that question, for example, Manitoba Hydro wrote, and I quote:

"The view of local peoples regarding the effect of Lake Winnipeg Regulation on water levels is provided as the opening sentence of section 4.2 on page 65 of the Lake Winnipeg Regulation document."

Now, you'll excuse my quoting, but if we turn to that sentence it reads, and I quote:

"Many people believe that Lake Winnipeg Regulation has raised water levels on Lake Winnipeg, particularly during the fall, while others believe Lake Winnipeg Regulation results in water levels being held at a constant level."

Similar one sentence descriptions can be found at the start of other sections in the written submission, for example 3.3.4 at page 52.

Are these one sentence descriptions or

one or two sentence descriptions what Manitoba Hydro believes to be appropriate considerations of local knowledge?

MR. HUTCHISON: I don't think I'd use these, sort of that statement to specifically comment on local knowledge. In going around Lake Winnipeg and hearing the views of stakeholders, also I think I mentioned I have a cottage on the lake, so even in my off time I'm listening to people's concerns over the lake, and there are widespread assumptions that Manitoba Hydro is the cause of a lot of the negative factors. So that statement is correct in the way that it was intended to be.

MR. SHEFMAN: Do you believe that the example that we just read and other similar examples are meaningful incorporations and consideration of the views of local peoples and in particular of Aboriginal traditional knowledge?

So let me clarify. When you report in the submission that people around Lake Winnipeg have a certain opinion, or believe a certain thing about the issues which you have identified, do you believe that that identification that you have done in that one or two sentence opening paragraph

is a meaningful incorporation and consideration of the views of local peoples and Aboriginal traditional knowledge?

MR. HUTCHISON: I'm having a tough time getting to the question. If you are relating the comment that I've got specifically to Aboriginal knowledge, then I don't know that you could make that direct link. What I did find in talking with people is a lot, everyone agrees on the issues that are there but they -- it's the cause of the issue that there doesn't seem to be as much agreement on. And with water levels, you know, it has been very wet, people have seen that for a decade or so, and it's pretty easy to draw conclusions that it's something to do with Manitoba Hydro's operation of the lake.

MR. SHEFMAN: And to clarify, when we're talking about Aboriginal traditional knowledge, we're not talking about the everyday knowledge of people who happen to be Aboriginal, we're talking about a very specific thing which includes oral history. And so I wouldn't want to be limiting our discussion to 10 years, for example. But perhaps I can clarify my question. Where in Manitoba Hydro's written submissions has

Manitoba Hydro considered the views of local peoples and Aboriginal traditional knowledge?

MR. HUTCHISON: And you're talking specific to Lake Winnipeg or downstream?

MR. SHEFMAN: Lake Winnipeg Regulation generally, the written submissions. I'm sorry, let me correct that, Lake Winnipeg in particular.

MR. HUTCHISON: If I can rephrase what I think you're saying, or asking is, where in our submission do we use ATK?

MR. SHEFMAN: Where in your submission do you use ATK to reach your conclusions, to inform your conclusions, to consider?

MR. HUTCHISON: I don't know that there are particular areas that you can actually point to and say ATK was used to inform. You know, looking at the five issues, water levels, erosion, Netley-Libau marsh, the fishery, I don't think you can actually source out where ATK was used to -- or involved in, or incorporated into our review of that issue.

MR. SHEFMAN: Has Manitoba Hydro ever incorporated ATK directly into its regulatory submissions? Sorry, let me rephrase that. Is it the case that in its Keeyask environmental impact

statement, Manitoba Hydro incorporated Aboriginal traditional knowledge directly into its submissions?

MR. HUTCHISON: That's my understanding, yes.

MR. CORMIE: Mr. Shefman, when we are undertaking a new project, and we're trying to balance western science, southern values, ATK is very important to make sure that the Aboriginal traditional knowledge and values are in that equation, so that everybody has a piece in the decision and has been considered. Our submission was what we know, what has occurred in the past, we weren't asked to go out and do new work, try and establish ATK and bring it forward as something that -- not that it couldn't be done, but that wasn't -- the purpose of our document was to say this is what we know, this is what we understand, this is all the work that has been done, to kind of set the bar about -- we're not, we weren't in the position of starting out with a new project. And clearly, if Lake Winnipeg Regulation is a project that Manitoba Hydro was proposing, much like happened at Keeyask and much like happened in Wuskwatim, every stakeholder,

including the Aboriginal community, would have equal opportunity in putting their values on the table and having them considered as part of the deal. This project is -- we weren't asked to do that. We are trying to look back and say, was this project, has it been operating according to the licence for the last 40 years? Maybe there's a lot of work to do in the future if something was to change. But it's hard to ask us to do something now and respond to something that we weren't asked to do as part of this process.

MR. SHEFMAN: Would you agree with me that when Manitoba Hydro has in the past incorporated ATK directly into its submissions, that allowed for a more holistic understanding of whatever that application may have been?

MR. CORMIE: Oh, absolutely. And when you look at the original designs for Wuskwatim and Keeyask that might have been proposed in the '60s, high level projects, lots of flooding, no consideration of the values of the local communities, very little consideration of the environmental impacts, and compare that to what we have done in partnership with the communities that we are now affecting, the results are dramatically

different. So there's huge value brought to the table by incorporating ATK into those decisions and bringing everyone to come forward together as partners, and having an outcome that everyone can say respects their values.

MR. SHEFMAN: And so given what you have just said, why hasn't Hydro acknowledged that Aboriginal traditional knowledge would inherently enhance its application in this respect and provide the Commission with a more holistic understanding of how Lake Winnipeg Regulation has impacted both upstream and downstream communities in the entire environmental impacts, rather than in just the narrow focus?

MR. CORMIE: Well, it goes back to the point that that would be something that wouldn't retract the state of knowledge, it would require new work. And we're not proposing to do anything. We're proposing to change an interim licence to a final licence. We're not trying to make a rebalancing of interests, of bringing new interests to the table. That balance was struck in 1970 when the resource was allocated to Hydro and to flood control. And we're following administrative process of the licence saying we're

now in the position to apply for a final licence. We're entitled to a final licence. We're not suggesting that we're changing anything.

And if we were to come to the point and say, we need to change this licence term and this licence term to reflect the new state of the world, then clearly we would have to go out and solicit the values of all the affected stakeholders. But we're not proposing that. And it's not that it wouldn't be a good thing, but we're not proposing to change anything. And so you are asking us to have reported on something that we're not -- it just doesn't fit into the process and it's inconsistent with what we were asked to do.

MR. SHEFMAN: Thank you.

MR. HUTCHISON: Can I add to that as well?

MR. SHEFMAN: Sure.

MR. HUTCHISON: Downstream of Lake Winnipeg, we have incorporated local knowledge into shaping the mitigation works, programming agreements that we've got. Upstream on Lake Winnipeg, because the impact from our point of view is a beneficial one, the effect of keeping

water levels lower, reducing flood impacts, we did not convene or do any traditional knowledge studies, so they are not there for us to use.

MR. SHEFMAN: Thank you.

Has Manitoba Hydro considered how it could or would incorporate Aboriginal traditional knowledge into the day-to-day on the ground decision-making process if that were to be made a condition of the licence?

MR. GAWNE: In terms of stakeholder feedback on operations, I think we would consider that feedback, as we would from any individual affected by the waterways that were involved in the operations.

MR. SHEFMAN: Thank you. Just a few final questions.

Mr. Cormie, in your closing comments yesterday, you noted that there had been:

"Negative impacts to the downstream as a result of the project."

Does Manitoba Hydro acknowledge that upstream communities, residents and resource users have also suffered negative impacts?

MR. CORMIE: No, we don't acknowledge that.

MR. SHEFMAN: Fair enough.

Mr. Cormie, in your conclusion yesterday, you spoke about how Manitoba Hydro is not requesting any changes to the licence. Is it Hydro's position that the needs of Manitoba, the needs of Manitoba's power system, the needs of the watershed are the same today as they were in 1970?

MR. CORMIE: The use of the word "needs," I think the world has changed since 1970, and as I mentioned before, if we were in the position of building Lake Winnipeg Regulation today, it would be shaped through a different process. The outcome may still be exactly the same, but our laws and our expectations and our values have evolved. And clearly we are much more inclusive in the process. Projects like Lake Winnipeg Regulation, instead of being designed and built in a couple of years, they now take 10, 15 years from the time they are conceived and the consultations take place, and they are subject to different environmental standards and processes. And so it would be logical that it might result in a different project. But, you know, we can't undo the project, it is what it is. And you know, I think we've got that as a given. The question is,

how would we go forward?

MR. GAWNE: If I could just add to that, and perhaps take a little more of a literal attempt at responding to your question about, is it Manitoba's position that the needs are the same, or have the needs changed of the power system? And certainly, obviously, the needs and the electrical demand on the system has increased since the '70s. And we have accommodated that increase in electrical demand through, you know, through our power resource planning and through addition of projects such as Keeyask and Wuskwatim. And those projects were designed and constructed and predicated on the existence of the Lake Winnipeg Regulation licence. So it's like the system has evolved around Lake Winnipeg Regulation.

MR. SHEFMAN: Thank you very much for your cooperation and your very helpful answers.

Mr. Chairman, those are my questions.

THE CHAIRMAN: Thank you, Mr. Shefman. We'll take another five minute break. Just before you all run off, I just wanted to explain, Norway House Fisherman's Co-op, you have some questions. Approximately how long, do you have any idea?

MR. DANIELS: Maybe half hour, maybe less.

THE CHAIRMAN: Okay. That will work. I also want to allow some time for members of the public, if any, have any questions of Manitoba Hydro.

So we'll come back in five, six, eight minutes, and we'll hear from Norway House Fishermen's Co-op first, then I'll open it up to the public.

(Proceedings recessed at 3:52 p.m. and reconvened at 4:02 p.m.)

THE CHAIRMAN: If you could introduce yourself for the record and then proceed, please.

MR. LENTON: Good afternoon, commission and members of the Manitoba Hydro panel, my name is Keith Lenton and I'm here for the Norway House Fisherman's Cooperative. As such, I'm sure it won't be a surprise, I'm mainly going to be asking about the fishery. And in particular, I'm going to be focusing on Playgreen Lake and that region.

Just as a note, I may be brief given the narrow field of interest, and I imagine Mr. Swanson will have probably the most to say on

these matters, but of course the whole panel is most welcome to give input. And some of these questions is really going to be clarifying aspects of the presentation we saw yesterday and as well as the main Lake Winnipeg Regulation document that's been provided. And I'm just going to be trying to understand the limits of some of the studies that Manitoba Hydro has relied on in their presentations.

So the first thing I'd like to talk about is the fish stocks, and in particular, the impact in the area around 2-Mile Channel in Playgreen Lake. So Manitoba Hydro has indicated that it does not believe that Lake Winnipeg Regulation has a significant impact on fish stocks in Lake Winnipeg. So I'd just like to probe a little bit into this.

First I'd like to direct you to the Lake Winnipeg Regulation document page 48 and 49. I'm looking at the last paragraph of page 48. And this is where Manitoba Hydro acknowledges that the presence of 2-Mile Channel has resulted in a localized increase in turbidity and sediment build-up and says it would affect fish habitat.

On the next page on page 49, there is

an indication that CAMP data shows that fish population in Playgreen Lake are relatively healthy with high fish catches compared to many other water bodies in the area. Now, just on a reading of this, I found the language just a little bit vague so I was hoping for some clarification. In particular, could you indicate in your understanding how localized turbidity and sedimentation would affect fish habitat with respect to the area around 2-Mile Channel?

MR. SWANSON: Sure. To be clear on the definitions, we did reference or make a different statement about habitat than the population. And so the context was that the physical process conceptually through a pathways of effects approach would affect fish habitat in some fashion. The introduction of more material into the water at some point would either settle out or be carried in the water. And to that extent, there would be an effect. Whether that effect sort of manifests through the food chain all the way to the fish is a different question. And we're making the observation that we didn't see that manifestation through to the fish stocks at the course level that we're able to look at

fish stocks as we talked about yesterday, we didn't see an obvious difference that would be sort of obviously or possibly linked to that.

MR. LENTON: Okay. And just to be clear, are you referring to the overall population of fish and the different species of fish, you didn't see any difference there?

MR. SWANSON: Well, again, because the studies are done in a different format and over different times, what we tried to look at was overall catch per unit effort in terms of the fish stocks and the composition that those top predators were as a contribution to that catch per unit effort. Reason being, as I stated, the energy has to flow that high up. If you have similar numbers, then from a bio energetics level from a trophic efficiency model, you have a functioning ecosystem that's producing apex predators, in this case walleye and northern pike. Interestingly, walleye are also one of the more valuable fish species in the commercial fisheries.

MR. LENTON: Just so I understand, your assessment or your agreement that the Playgreen Lake fish stock is healthy is based on the presence of those higher level, higher energy

fish because that would suggest that all of the lower fish in the pyramid are also there feeding this food chain?

MR. SWANSON: Yeah. We're making the observation based on the information that both the overall catch per unit effort relative to the other water bodies that we're comparing it to is high. And that those predators, it's not all lower trophic level fish in there, that the functioning ecosystem is represented by the presence of the walleye and pike. And again, qualifying this with looking at information that goes back over a number of years and you know the habitat sampled may have been chosen for different reasons over time.

MR. LENTON: Certainly. All right, so notwithstanding that there may be no measure or difference in a population change over time, you know, based on the sedimentation flowing into Playgreen Lake from 2-Mile Channel, would you agree that it's still possible that the fish there could be relocated or moved, their habitat could be moved by the influx of sedimentation?

MR. SWANSON: I would think that's a possibility.

MR. LENTON: Are you aware of any studies that have chartered a change in the location of the habitats? Not talking about the overall numbers, but just any studies that show the locations or any movement of them?

MR. SWANSON: I know there were studies that did look. I'm not sort of confident that right at this moment I could speak exactly to what level of discrimination there was between them in terms of site sampled. And you're basically -- you would have to look at each individual set location and be able to determine what the sedimentation and the turbidity levels were relative to the catches. And typically the studies wouldn't have gone to that level of detail. They may be sort of a view to look at turbidity as well as the overall catch per unit effort. But I'm not aware of anything that got to that level of discrimination.

MR. LENTON: Okay, thank you. Would it be fair to say that Manitoba Hydro is relying on the studies that you have mentioned as well as the CAMP data in its position that it holds that the fish stock in Playgreen Lakes are healthy overall?

MR. SWANSON: Yeah. What we're saying is that they appear to be healthy, that based on the catch per unit effort and the data that we see and that we're currently sampling under the CAMP program.

MR. LENTON: But so you have indicated that you may not be able to note any specific locations where this data was collected. That's true?

MR. SWANSON: Sorry. Just a sec. Can you repeat?

MR. LENTON: Are you aware of any studies that show the specific locations that in or around Playgreen Lake that speak to the fish stocks?

MR. SWANSON: So a little more information on the CAMP program. We do know where the sites are. That information is known. And we've recently undertaken with the community to look at substrate, I guess deposition, turbidity rates, erosion, with a view to begin to understand what the information that we sampled in CAMP which is more than just the fish cash per unit effort but relative to the locations and the physical processes and turbidity for example.

MR. LENTON: Okay.

MR. SWANSON: So that's a step that's being worked on as part of CAMP and would be part of our future ability to understand what's going on, to relate the individual specific sites with more of the physical process information.

MR. LENTON: Can you indicate around what years these studies commenced or what the time line is on those studies?

MR. SWANSON: The CAMP program has been running and Playgreen Lake is a rotational water body at this point. So it's currently sampled every three years. And the protocol is to look at macro -- the water quality, the benthos, the bugs in the mud, small fish community and the larger fish community based on mesh sizes that you use. So that's the CAMP program. CAMP started in 2008 I believe. Just hang on a sec. So 2009 they were sampling on Playgreen Lake. That's when it started. So it would be every three years. The physical process is there has been a year or two of intensive study of sediment transportation and turbidity on Playgreen Lake proper. And the idea was to look at that physical process, establish the relationships, to understand what was going

on, and to advise future monitoring as to how much and where we should be looking at it. And that's just recently. There's a report being prepared. It was discussed with community, I think there was a four party meeting recently with the community, Canada and Manitoba. And that information is known to the community. It's soon to be -- the report is soon to be completed. So it's recent.

MR. LENTON: Okay, thank you. So a separate issue now but still relating to fish studies. Could I draw your attention to page 72 of the booklet that you had yesterday with us for your presentation. I'm just looking at, you can't really see it on the screen, but there's a number of little green fish symbols in the southern part of Playgreen Lake. I count about seven of them in total. That includes the hollowed out ones indicating studies that were done before Lake Winnipeg Regulation. So yeah, about seven within there, mainly along the western shore. And the last one I'm looking at is right at the mouth of 8-Mile Channel. That's sort of the area I'm looking at.

Now, are you aware of what these exact studies are or what they say?

MR. SWANSON: I'm sorry, I can't tell you exactly which studies those specific ones were. What I can tell you is that some of those symbols are part of broader programs that cover different water bodies. You'll note on page 43, actually it's in our appendix 6, and it's the same slide that was in the powerpoint presentation. And the studies are, there's actually quite a long gap between the published information, the years were '71 and then 1987, 2009 and 2010 would have been CAMP sampling. So there aren't a lot of studies specific to Playgreen Lake that did fish information. Those graphs, I'm assuming that the fish on there are representative of those studies that were done.

MR. LENTON: Does Manitoba Hydro have access to the studies that are at least complete and not ongoing at the moment?

MR. SWANSON: Yes. All the information that we had access to and is included in the report was provided. The pdf's were provided.

MR. LENTON: The entire articles, not just the references?

MR. SWANSON: Yes.

MR. LENTON: Okay, thank you. Now I'd just like to ask a few questions about the studies and methodologies. In particular, I'm looking at the Doan and Lawler study of 1992.

MR. SWANSON: Sure. And I'm advised that the map also includes studies done by pre LWR, not by Manitoba Hydro. There is some work done by the study board at the fisheries branch.

MR. LENTON: Yes, of course. I was wondering if you had access to them and were aware of them?

MR. SWANSON: Yes.

MR. LENTON: Of course. So my next series of questions is on mainly pertaining to the Doan and Lawler report of 1992. This was referred to a few times in your presentation and in the Lake Winnipeg Regulation document. So really I think the crux of what's been referred to is on page 24 of appendix 8. It's a quote. It's in the middle of the page. So the quote that I believe Manitoba Hydro has reproduced all or part of at various points in its presentation is as follows:

"Based on a review of Lake Winnipeg Whitefish production and the consideration of biological factors

that might account for a decrease in Whitefish numbers attributed to Lake Winnipeg Regulation, there is no reasonable basis to conclude that the Lake Winnipeg Regulation has had a measurable impact on the Whitefish fishery."

So am I correct in my understanding that Manitoba Hydro's position is informed substantially by this opinion?

MR. SWANSON: Yes, it's the information that we had available to report on that. And to the extent that Whitefish historically were known to move back and forth between Lake Winnipeg and Playgreen Lake, there would be some applicability of that. But the statement was, I think it was directed primarily at Lake Winnipeg.

MR. LENTON: And while this 1992 study was done I understand, and correct me if I'm wrong because a number of commercial fishermen had voiced concerns over declining fish stocks and they had been suggesting that Lake Winnipeg Regulation might be to blame for this. And so Manitoba Hydro undertook this study; is that

correct?

MR. SWANSON: That's my understanding.

MR. LENTON: Now, with regard to the study by Lawler and Doan, can you tell me anything specific about it with regards to their methodology if you are aware?

MR. SWANSON: I believe there was a great deal of institutional knowledge that those two gentlemen had and I think that's probably why they were selected. One was the former director of fisheries branch so he would have had considerable knowledge of the fishery on Lake Winnipeg at that time. The other what I understand is that there was dialogue and communication meetings with commercial fishermen. And beyond that, I'm not familiar. It wasn't a field study, it was more of a -- as I understand it, it was more of a conversation undertaken to ascertain what the issues were and to use the information that was available.

MR. LENTON: I'm sorry, I didn't quite hear that. Did you say it was not a field study and it was more a consultation between --

MR. SWANSON: It would have been based on the information that was available at the time

is my understanding. And that would have included field information like various netting. But I don't believe that Drs. Lawler and Doan, as retired bureaucrats, were out sampling fish.

MR. LENTON: That's right. That's likely. Do you know what approximate time period that the data that they used was collected from?

MR. SWANSON: My understanding again is that it's information leading up to the date of the report so it would have been from the -- it had to have gone back prior to LWR in order to make the statements that they did. I don't know the exact year, so.

MR. LENTON: Okay. Thank you. Now, so we may have touched on this already but I just want to clarify the scope of what Manitoba Hydro is saying in its document. So when Manitoba Hydro says that the fish stocks are healthy in Lake Winnipeg, what specifically are they saying? And by that, I mean are you referring to the Lake Winnipeg basin or the entire area, the whole water system?

MR. SWANSON: First of all, Manitoba Hydro is reiterating statements of others who say that the fishery is healthy.

MR. LENTON: Yes, I understand that.

MR. SWANSON: And again, it's my understanding of those statements that are made. The most recent being a fairly in-depth study of Lake Winnipeg and the commercial fishery that was undertaken by Dr. Burton Ayles, who is also a former regional director general for Fisheries and Oceans. And there were commercial fishermen on that committee involved in that. And I don't know the specifics of their consultations but the statement about the fishery being in relatively healthy shape was made by those gentlemen as part of that report. And that's recent. That's --

MR. LENTON: Yes, that was 2011.

MR. SWANSON: Yeah.

MR. LENTON: Maybe you don't know but I'll ask anyway. Do you know if they were really looking at Lake Winnipeg basin or were they up in Playgreen Lake?

MR. SWANSON: My understanding again is that that was Lake Winnipeg specific. And again, just to reiterate, logically there is movement of fish between Playgreen and Lake Winnipeg. So to the extent that that applies, I'm not sure.

MR. LENTON: Yes of course and they are all interconnected. So yes, I understand the waterways are all connected but I just want to confirm my understanding that Manitoba Hydro has reiterated a position that the fish stocks in Lake Winnipeg are healthy. This was based on a study that was, it seems that was likely done on Lake Winnipeg and not on Playgreen Lake.

MR. SWANSON: In terms of those statements, yes, that's our understanding of Lake Winnipeg.

MR. LENTON: And beyond the 1992 Lawler and Doan study, are you aware of any others that have taken place in Playgreen Lake with respect to fish stocks pre and post Lake Winnipeg Regulation?

MR. SWANSON: The information that we had that was published is contained in the document and the associated appendices. I'm aware that Manitoba Fisheries Branch has an ongoing program and relationship with the commercial Fishermen. We didn't explore in depth what information was available from Manitoba Fisheries Branch in that regard. So I wouldn't say there has been no study other than those. I'm saying

the published reports, this is what we had available and we looked at.

MR. LENTON: I just wanted to confirm what you had included in the documents.

MR. SWANSON: Right.

MR. LENTON: So now, same topic but I'm looking at the concerns of the fishermen now. And you may have answered this already. Do you consult regularly with commercial fishermen about their concerns, the impact of Lake Winnipeg Regulation?

MR. HUTCHINSON: I guess a few years ago, it was brought to our attention by the Norway House commercial fishermen's co-op that they had a feeling that whenever the flood -- sorry, the spillway gates were open at Jenpeg, that during the fall fishing season that it tended to decrease their fishing success. So they actually wrote a letter to our president at the time asking if he would keep the gates not open during the fishing season. And in certain years, we had been able to do that. But in these high water years, that hasn't been the case. So as part of that, myself and a few others did meet with the Commercial Fishermen's Co-operative and discuss the issue

with them.

MR. LENTON: So this was a few years ago.

MR. SWEENY: Yeah. And if I can just add to that as well. Manitoba Hydro field staff also consults with the Norway House commercial fishers on a regular basis and have established a number of programs with the commercial fishers as well. So yes, we do consult with them on a regular basis.

MR. LENTON: Could you advise or even just sort of briefly describe what some of these programs might be that Manitoba Hydro has established with them?

MR. SWEENY: Well, the Norway House fishers are a part of the, are also a part of the master implementation comprehensive agreement as you are likely aware.

MR. LENTON: Yeah.

MR. SWEENY: And some of the dollars associated with that help enhance the program throughout since the signing of the agreement. However, the most recent ones have been for shoreline stabilization around 8-Mile and 2-Mile.

MR. LENTON: That's right, yes.

MR. SWEENY: So it's more a debris program where we're dealing with the hanging trees and some of the shoreline issues there as well, so.

MR. LENTON: Okay, thank you. So would you agree that, you know, the general conditions on Playgreen Lake or perhaps any lake over a period of 23 years, and I'm thinking since the publication of the Doan and Lawler study in 1992, that the lake can change. Right?

MR. SWANSON: Yes.

MR. LENTON: Specifically does Manitoba Hydro maintain that the Doan and Lawler report as of 1992 still represents an accurate present day description of the fish stock conditions in Playgreen Lake?

MR. SWANSON: No. I would say appendix 8 was about Lake Winnipeg, so the statements are about the Lake Winnipeg fishery. So the Doan and Lawler report is definitely more directed at the Lake Winnipeg fishery. And it was an assessment of LWR effects. It wouldn't stand as the definitive piece on what has changed for other reasons, whether it's just natural variability or environmental issues, climate

change, things like that.

MR. LENTON: I take your point, thank you. I heard that Manitoba Hydro had some engagement or consultations with the commercial fishermen over the past few years on their concerns. And Manitoba Hydro, I presume, acknowledges they do have these concerns, even if they don't agree with them or agree that Lake Winnipeg Regulation is the cause of these concerns, correct?

MR. SWEENY: Manitoba Hydro has ongoing programming. So the shoreline stabilization program is part of Manitoba Hydro's offsetting program that works with various communities and resource users in those areas. So what I would say is that the shoreline stabilization program that is associated with the Norway House Fishermen Co-Op is tied to our debris management program to address debris along the shoreline, yes.

MR. LENTON: So shoreline erosion, that's one aspect that Manitoba Hydro is assisting them with. When if say a commercial fisherman comes forward and says, you know, their boat's propellers are being destroyed by sediment and

their nets are being ruined, whether or not Manitoba Hydro believes it's responsible for that, can you describe what efforts Manitoba Hydro makes to consult or engage or deal with those claims from commercial fishermen?

MR. SWEENY: As I mentioned earlier, the Norway House Fishermen Co-op is part of the master implementation. So as part of the Master Implementation Comprehensive Agreement, there's processes and procedures that are tied to that agreement. In regards to claims, there is also a funding mechanism to deal with adverse effects that relate to claims for the fishers.

MR. LENTON: Okay. So the agreements may cover some compensation for damage. How it's ever caused, that would be up to them to decide how they may want to use their funding. I understand that. If, for instance, the fishermen come and say there's no fish here or whatever, how does Manitoba Hydro reconcile that with their studies that say yes, there are fish there?

MR. SWANSON: Sorry, can you say that one more time?

MR. LENTON: If the commercial fishermen comes to Manitoba Hydro with a concern

that there's no fish where they used to traditionally always fish, and you have your studies that you rely on that say that the fish stocks haven't changed or there's been no significant change to them, how do you respond to this, how do you reconcile their experiential evidence with your studies?

MR. SWANSON: So this question is not general, it's specific about Playgreen Lake, correct?

MR. LENTON: Yes.

MR. SWANSON: That concern was voiced. And actually the impetus for the physical habitat monitoring that I was talking about, it was twofold. One was to start a process that would begin to get our understanding up to a point where we could integrate a physical habitat, change the erosion sedimentation, turbidity piece into the CAMP monitoring program. And we're doing that associated with Manitoba under that MOU. So it was done for that reason. But it was also done because it was done at Playgreen specifically because that concern was raised, and there was previous information. There isn't data at this point to reconcile them but that's the intent of

that program, to determine to what extent there has been change and begin to associate the ecosystem parameters that are sampled with physical change and water management. That's what the MOU is about. So we are in the process of starting to reconcile that question.

MR. LENTON: Thank you. That's very informative. So I believe I have sort of one small heading of questions and Mr. Sweeny may have already answered part of it. I was looking through the IR questions and Peguis First Nation's question number 104 in this Manitoba Hydro indicates that it does not provide assistance to commercial fishermen on Lake Winnipeg. Now of course Mr. Sweeny has told us in his presentation that there are -- he's told us about the programs that are available sort of in an ancillary manner and there's of course the agreements which, you know, may compensate certain aspects of effects from Lake Winnipeg Regulation. I was just hoping for some clarification on the conditions or the scenarios where Manitoba Hydro might be willing to step in and help commercial fishermen, particularly on Playgreen Lake. I mean besides the shoreline erosion.

MR. SWEENY: That may be one way that Manitoba Hydro works with commercial harvesters. Even although the commercial fishery is part of the Master Implementation Agreement that the commercial fisheries is tied to, right, and where it covers off the commercial fishery for past and future damages. But what I would say, there's also the unforeseen aspect that's tied to some of the comprehensives that deal with some of those issues. However, we have our ongoing programming that we work with the fishers along with the programs that they establish locally through the funding that's provided through those Master Implementation Agreements.

MR. LENTON: So my understanding is that although the Fishermen's Co-op is party to the Master Implementation Agreement, they weren't really consulted on it. It was sort of in place. And then they were brought in when it was time to talk about dollars and cents for compensation, but that they weren't really consulted in the creation of it. Is that the case? Am I correct in that understanding? Just to note that the Fishermen's Co-op is independent from the Norway House Cree Nation.

MR. SWEENY: That would be a no. Norway House commercial fishery is identified as the community organization.

MR. LENTON: Well, the chief and council has designated them as their fishers of course. So they fall under that status. But my understanding is that the Chief and Council is sort of at their pleasure, but they could just designate another group as the fishermen. And Norway House Fishermen's Co-op would lose their status under the agreement.

MR. SWEENY: I'm not aware of that.

MR. LENTON: Well, this is just to say that my understanding was that the Fishermen's Co-op was, although a recipient under the Master Implementation Agreement, was really consulted in its creation or how it applies to them. But do correct me if I'm wrong in that.

MR. SWEENY: I don't think I'd agree with that statement.

MR. LENTON: In what respect?

MR. SWEENY: Well, the Norway House Fishermen Co-op was part of the, as I mentioned earlier, the community -- identified the community organization. And I understand that the

comprehensive agreements, there was a ratification process to accept the agreement itself. And so I understand the Fishermen Co-op would have been consulted.

MR. LENTON: Perhaps we just disagree on what the meaning of "consulted" is. I do agree that they did sign on to it but I just think -- my understanding is that it was late in the process as opposed to being early. But I just wanted to see if my understanding was correct on that. I don't believe any of my further questions turn on that.

And I actually don't believe I have any further questions. So thank you very much.

THE CHAIRMAN: Thank you, Mr. Lenton.

I will now invite any members of the public sitting in the back of the room who might have questions of Manitoba Hydro. If any of you do, please come forward now. Not nearly as many people sitting at the back of the room as there were an hour or so ago. It doesn't appear that there are any members of the public today who wish to grill Manitoba Hydro.

We're not going to start another cross-examination now as it would inevitably have

to be interrupted. So we will, in a couple of moments, adjourn for the afternoon. This panel will be back tomorrow morning at 9:30. We will start off I think next on the list is Sagkeeng, although I'm not sure that they are asking any questions. And following them would be Consumers Association and then Pimicikamak.

And we will return tonight from 7:00 until 9:00. We have a full list of members of the public who wish to make presentations. If anybody again at the back of the room who wishes to make a presentation is not on the list, they should contact Amy at the back of the room and we'll do our best to accommodate you tonight or at a future date. So unless there are any other items of business to deal with right now, we will adjourn until 7:00 p.m.

(Proceedings recessed at 4:42 p.m. and reconvened at 7:00 p.m.)

THE CHAIRMAN: Good evening. We will commence the evening session. This evening's session has been reserved for presentations by members of the public. We have a full slate of eight people which will fill up our two hours. I

would just like to remind the presenters that they are limited to 15 minutes and that rule will be strictly enforced. I will flash a five minute card, a one minute card, a please wrap up card, and then the time is up card. And if you are still talking when the time is up card is up, the sound man will cut you off. Sorry about that, but we have to enforce that rule if we are going to get everybody in this evening. We have to be out of here by 9:00 o'clock.

We will be swearing in people who make presentations. It is part of our procedural guidelines. So I'm going to get right down to it. I have a list and the order in which they will be presenting, the first person up is Mr. Mike Mason. You just come up to the front table right here, sir.

I will just direct your attention to the Commission secretary.

Mike Mason: Sworn.

MR. MASON: Thank you. My name is Mike Mason and I'm a cottage owner and seasonal resident of Victoria Beach, and currently the president of the Victoria Beach Cottage Owners Association.

THE CHAIRMAN: No chattering in the back of the room please. I'm sorry.

MR. MASON: Firstly, I would like to thank the panel for having me on the agenda tonight. Tonight I'm also pleased to see on the agenda one of our council members and our reeve. In previous hearings you have also heard from others from Victoria Beach, and in upcoming hearings you will also hear from more VB'ers. This certainly underscores to me the importance of Lake Winnipeg to our community.

I have had the pleasure and opportunity to spend my entire life enjoying summers on Lake Winnipeg, and I have a great passion for the lake, its communities and its beaches. I enjoy swimming, sailing, paddling, and enjoying the lakes beautiful beaches and shores. My children are also having these opportunities. It is different now, though. While they love the lake, they also worry about the lake. They worry about algae and look to see if the algae today is blue green, or if it is just regular algae. They also worry about high water events and the loss of our shoreline, damage to our friends' and neighbours' properties and damage to our beaches.

To me this outlines our responsibility to future generations.

This panel has been charged with a momentous task, and with that, please accept my thanks for taking on this sizeable responsibility. Outcomes of this hearing process can and will affect Lake Winnipeg and Manitobans for decades to come. Therefore, it is imperative that this process does not yield to the pressures of today, but puts the needs of Lake Winnipeg at the forefront.

Lake Winnipeg is vital to the Manitoba economy, and the lake is truly one of nature's gifts to our province and our country. As Manitobans, as Canadians, we have been given the responsibility of being the custodians of this great lake. To date I feel that we have somewhat failed in this regard. Currently Lake Winnipeg suffers from excessive nutrient loading causing the eutrophication of the lake. Massive nutrient increases in Lake Winnipeg in the 1990s has lead to doubling of phytoplankton biomass and a shift to the very toxic blue-green algae dominance. This affects the health our lake, our health, and our economy.

Lake Winnipeg also suffers in the last few decades from very high water levels that continue to have a negative impact on our shorelines. Many communities, particularly in the south basin, have seen massive erosion of the shorelines which have resulted in the loss of both private and public lands.

These two processes, eutrophication and high water, if not addressed, will continue to adversely impact Manitoba's economy. Simply stated, Lake Winnipeg is one of world's largest lakes, and now it has the disturbing title as one of the world's most threatened lakes from the Global Nature Fund.

As citizens, we have a responsibility to improve conditions on Lake Winnipeg. This responsibility should be shouldered by individuals, by local government, by the Provincial Government, by the Federal Government, and by other provinces and U.S. States in Lake Winnipeg's massive catchment.

This responsibility should also be shouldered by Manitoba Hydro. Hydro and only Hydro are in the unique position to use Lake Winnipeg as a reservoir for hydroelectric power

production and to regulate the lake between 711 and 715. With this unique position, I believe that Manitoba Hydro should take on greater responsibilities related to the health of Lake Winnipeg and the erosion of Lake Winnipeg shorelines.

We should listen to experts that indicate that we should participate actively in the protection of wetlands and natural shorelines for the benefit of healthy lakes and healthy communities. As a requirement of their licence, Hydro should participate actively in the protection of wetlands and the natural shorelines of Lake Winnipeg.

Hydro should listen to Dr. Gorden Goldsborough, who presented to this panel that in his considered opinion that Lake Winnipeg Regulation has contributed to the loss of emergent plant loss in Netley-Libau marsh by reducing the frequency of low water periods critical to maintenance of healthy plant stands. He goes on to say that one management strategy would be alteration of the Lake Winnipeg Regulation protocol to permit two year low water periods with a frequency of roughly 10 to 20 years. This

should be seriously considered as a condition of the licence to regulate.

Is there a role for Hydro in some of Dr. Goldsborough's other recommendations which could help restore the Netley-Libau marsh by construction of a structure at the Netley Cut to regulate flow through it, and resumption of dredging at the Red River mouth.

In a recent Baird Engineering report presented to this Commission, the report also indicated that a comprehensive technical study of shoreline evolution at a variety of locations around the lake of pre and post regulation era is required to further evaluate possible linkages between water level regulation and sandy shore evolution.

This technical study should also be undertaken by Hydro in conjunction with the Provincial Government as a condition of the licence to better understand the relationship between water level regulation and its effects on our shorelines. With these investigations two important questions could be answered. Number 1, how do the pre and post regulation erosion rates compare? Number 2, how does the post regulation

erosion rate compare to the hypothetical scenario of no regulation structures from '76 to present day?

A similar approach has also been proposed by Vicki Burns from Save the Lake Winnipeg project. They presented to this panel that "Studies to fully ascertain the impacts of the current regulation regime, and then to forecast the implications of altering the parameters of the regulation requirements," is an opportunity to put in place a balanced and modern approach, taking into consideration the 40 years of experience that Manitoba Hydro has now accumulated.

In a May 2014 letter to the CEC from the Manitoba Association of Cottage Owners, this theme of further study is also echoed. The association outlines ten areas of study that they would like to see included in the scope of investigations for this panel to consider. I would also encourage this panel to seriously consider these areas of study.

While we don't concretely know what effect lake regulation has on eutrophication, it seems to me that Lake Winnipeg remains somewhat

understudied. There has not been enough research done to be able to make any definitive conclusions, therefore, more research is needed.

As a result of a massive low pressure system over Lake Winnipeg in October of 2010, which significantly damaged the shorelines and caused flooding throughout Victoria Beach, the Victoria Beach community embarked on a multi-year journey. This journey resulted in a shoreline advisory committee and contracting Baird Geotechnical Engineering to study our shorelines and advise our municipality on ways to preserve and protect our beaches, shorelines and mitigate flooding. This process is ongoing and is a science based approach to shoreline management that can serve as a model for other communities in the south basin. It includes artificially nourishing shorelines to address shoreline erosion, rather than build negative impacting shore parallel structures. It may also include protecting shoreline ecosystem habitat and natural shoreline flora.

This could be an opportunity for Manitoba Hydro to actively participate with communities in the protection of our natural

shorelines and beaches. For the privilege to regulate Lake Winnipeg, Manitoba Hydro could and should partner with communities like Victoria Beach that are looking to implement thoughtful, science based, community stakeholder based shoreline management plans that protect our natural beaches and shorelines. To be clear, when I say partner, Hydro could work closely with communities to research, develop, and help fund shoreline management plans. This is an opportunity, an opportunity for Hydro to be a leader in sound environmental management, and for Hydro to help contribute to building resilient shoreline communities that have the capacity to sustain disturbances such as erosion and flooding events. Perhaps until the effects of lake regulation are far better understood and more definitive steps are in place by Hydro to work closer with Municipal, Provincial and Federal governments and the science community, so a comprehensive plan can be put in place which will yield positive net effects for the health of the lake and its shoreline communities, a shorter term licence should and could be considered by the CEC for Hydro. Thank you.

THE CHAIRMAN: Thank you, Mr. Mason. Any questions? Thank you, Mr. Mason.

Next on our list is Brian Hodgson.

Brian Hodgson: sworn.

THE CHAIRMAN: Go ahead, sir.

MR. HODGSON: Thank you for this opportunity. My name is Brian Hodgson and I'm the reeve of the municipality of Victoria Beach. My family has owned their cottage there since 1945, and I have seen the effects that continued high lake levels have had on our shoreline. Lake Winnipeg is a valuable resource for many reasons, recreational resource, commercial resource and a hydro resource, and we all need to learn to live with it and manage it properly.

Manitoba Hydro has plans to increase its generating capacity to support Manitoba's population and industrial growth. It also wants to increase its generating capacity, enabling it to sell power to our American neighbours in an effort to offset the cost of providing electricity to Manitobans. Hydro claims it needs to be able to have the lake controlled to 715 feet above sea level in order to meet this increased demand. It is this forecast demand for the exports where

there appears to be a short-sightedness on Manitoba Hydro and its advisors, who are forecasting the increases for hydro sales to the U.S. and Canada.

In addition to the new hydrocarbon resources in the U.S. that can be used for hydroelectric generation, innovation and improved methods for providing new and better products have been the mainstay of the economic growth of many industries in Canada and the U.S. And they are continuing and will continue to impact on the estimates for new hydro generation.

While researching material for this presentation, I came across many new and innovative concepts and products which I believe will change the requirement for Hydro's need to increase its generating capacity to the extent it is forecasting. Wind turbines and solar generation are increasing all across North America. In a recent flight from Texas to Winnipeg, I saw hundreds, possibly thousands of wind turbines. Ontario has provided funding for hundreds and possibly thousands of solar panel installations to augment the online power demand. An example of the effects of the new innovation

and technology, the Minneapolis St. Paul International Airport is planning a three megawatt solar power installation to generate nearly 20 percent of the airport's electricity needs, which is to be completed this fall. And they will also have changed over 7,700 parking lamps to LED lamps.

Researchers at Harvard have discovered how to convert solar energy into liquid fuel, potentially accelerating our switch to the alternative energy source. According to an article in the Scientific Journal, Proceedings of the National Academy of Sciences, they have developed a method of using the sun to split water into hydrogen and oxygen and then combining hydrogen with carbon dioxide to form isopropanol which can be stored as a liquid fuel.

Another important development which has been improved upon continuously is nuclear fusion. This technology has been around for decades, and the design and improvements being made now will soon put economical electrical generation by means of nuclear fusion within reach of every jurisdiction, thusly negating the need to transport electrical energy over great distances

at astronomical costs.

The hydrogen fuel cell is proven technology which has been continuously improved upon and can provide means of clean, green electrical generation to the end user. Fuel cells are appealing because they generate very little pollution. They are not economical yet, but advances are continuously being made.

Whether it is electricity generated by hydrogen fuel cell, wind turbine, solar cell, fusion, nuclear fusion, or the introduction of LED lighting, all are on the cusp of great advances in capability and cost efficiency. How will these new and improved methods of using, generating and storing power affect Manitoba Hydro's long term export forecast? If these advances are not incorporated in an export equation, Manitoba Hydro will potentially be building massive generation and transmission capacity which may never be used.

I present all of the above information to show that just possibly Hydro has not done its due diligence to the fullest extent, and that they may not need the generating capacity presently being forecast. These new technical innovations must be considered before billions of dollars are

spent based on their existing forecast which cannot be substantiated.

Lake Winnipeg is the water reservoir which Hydro relies upon for its capacity to generate the power it presently needs and is forecasting to be needed for domestic and export sales. Given the possibility that the increased capacity may not be needed, should Manitoba Hydro be given a long-term licence which allows it to maintain Lake Winnipeg at levels which are detrimental to the health of the recreational and biological aspects of the lake and marshes?

The lack of low water levels over the past years has resulted in many pollutant filled marshes disappearing. Private property has disappeared into the lake as a result of the erosion and the lack of natural sand replenishment, which historically occurred during low water and south wind conditions. A lack of low water has resulted in the destruction of many, if not most, of the public recreational sand beaches around the south basin. With the continuously high water levels, wave action takes the sand off the beaches into the deep water. With continuous high water, the natural wave

action is unable to scour the lake bottom and return the sand to the beaches. Normally in the past when this were south winds and low south basin lake levels, which historically happened before regulation, the beaches were rebuilt by nature. This does not happen anymore. Lower water levels are needed for this to happen.

Manitoba Hydro is still seeking more export contracts with the U.S. and they have not yet built the generating capacity to provide that export. I propose that Manitoba Hydro be given a 5 year temporary licence with the regulated levels restricted between 711 and 714. This will allow Manitoba Conservation, Manitoba Hydro, and other environmental organizations to evaluate the effects of the low water levels on the ecological and physical aspects of the south basin.

Manitoba Hydro's ability to prevent mother nature from raising the lake levels above 715 may be aided by having the maximum regulated level at 714 to start with. Just possibly it may not exceed the 715 level, as it has in recent years when we get exceptional weather conditions.

The municipalities and private landowners around the south basin of Lake Winnipeg

have spent millions of dollars trying to prevent erosion caused by high water levels. The continued expense by these entities is not sustainable. The municipality of Victoria Beach, a municipality of only seven square miles and 2,300 taxpayers, has spent over $400,000 on engineering studies for shoreline protection. The study recommendations propose a cost in excess of $5 million to protect a small portion of their shoreline. Multiples of this will be needed to protect the balance of the shoreline. That is just one municipality. If the shoreline erosion continues due to high water, and massive amounts of financial aid are not forthcoming, the recreational resource which Lake Winnipeg provides to the population of Manitoba will be further impacted negatively. Land values will depreciate, tax bases will disappear, tourism will decline, and the province will suffer economically.

Manitoba Hydro and the Government must balance the economic impact of the need to regulate the lake level to 715, based on questionable export forecasts and changing market, with the loss of tourism, recreational and commercial revenues generated by a healthy, well

managed lake.

As I have proposed, the Commission should give Hydro a new temporary licence for five years, with the maximum of 714 above, and establish an independent group to monitor the marshes and shorelines to see if there are any improvements.

Manitoba Hydro must be required to monitor weather events and water flows from the entire catch basin and be proactive in reducing the lake levels in advance of the water levels reaching the regulated threshold. They must re-evaluate their forecast for future electrical sales and reassess the level to which the lake needs to be regulated to provide the proper balance between Hydro's profit and the recreational quality of Lake Winnipeg and the health of the marshes.

If Hydro's new and improved forecast confirm that there likely would be reduced demand, then some of the billions of construction dollars saved could be used to improve their ability to safely increase the outflow from Lake Winnipeg through their system, so as to not cause flooding and hardship on the downstream communities.

Baird Engineering has prepared a report for the Provincial Government which states, "The latest intergovernmental panel on climate change report projects even greater variability in our weather in the forthcoming decades due to climate change. McCullough predicts the trend of introducing inflow to Lake Winnipeg will continue in the future. These anticipated future conditions could lead to higher lake levels unless the rules for regulation are changed or the Jenpeg outflow structure is monitored to accommodate higher discharge rates."

The Canadian Taxpayers Federation calculated Manitoba's debt to be exceeding $30 billion in 2013. Should the present Provincial Government be adding another $24 billion in debt for Manitoba Hydro alone, this, to build dams and transmission lines for shaky export markets against prevailing expert advice?

There is another factor I would like the Commission and Hydro to look at. The new

channel being constructed to reduce the level of Lake Manitoba is going to put more water into Lake Winnipeg in the north basin. Hydro and the Government just estimated that it will only raise the lake level by an inch or two. When the north winds blow for several days, it will push that extra water from the north basin, with its surface area 15 times that of the south basin, into the south basin. What will that increased wind generated lake level be in the south basin with that extra inch or two of water movement in the north basin? Will that extra water in the north basin delay the movement of water out of the south basin and cause levels to remain elevated causing shoreline erosion to increase and the nutrient levels to remain high in the south basin?

Does the one or two inches of wind adjusted lake level that Hydro states that regulation has contributed over the last umpteen years to the average lake level have the same effect on the lake?

In recent documents which I have read, it is apparent that isostatic rebound effect on Lake Winnipeg is in fact a force which must be considered when calculating the actual lake level.

If in fact the north end of Lake Winnipeg has rebounded by 10 centimetres since Hydro began regulation on the lake, it could be interpreted to mean that the actual water level in the south basin is, in effect, 10 centimetres higher than the level measured at the north end of the basin. Given that six of the lake level gauges are in the north basin and only two in the south basin, one might assume that unless Hydro has been continuously adjusting their calculations, that they are in fact underestimating the wind adjusted level of the lake.

In the real world, wind adjusted levels are meaningless when it comes to shoreline erosion. The maximum wind adjusted level has been about 718 feet at its worst case, whereas in actuality the water level in the south basin was in excess of 721 feet above sea level, causing major flooding and shoreline damage in many areas. One would think that knowing the isostatic rebound was, is, and will continue to occur, Manitoba Hydro would be actively working towards increasing their ability to maximize the flow from the lake, from Lake Winnipeg to ensure adequate flow for their generating stations in the future.

I have not read the whole interim operating licence which was put in place 30 or 40 years ago, but I wonder if it states that the lake would be regulated within the 711 to 715 feet wind adjusted level, or was it not specified? In either case, I can assure you that the average person, that the average person in 1970, hearing that the lake would be regulated to control the levels within that range, did not consider the wind effect and the fact that the south basin could actually rise to 720 above sea level, or above that, and Hydro would still be within their operating range and not have to release any water.

I'm sure I was not alone in thinking Manitoba Hydro would be able to reduce the lake levels if their 715 maximum was exceeded, but apparently they can not. The estimates of 40 years ago of the expected maximum inflow to the lake appear to have been flawed. What other estimates did they make that did not account for climate change? Ignorance of the facts is not an excuse, but it is a fact that the average Manitoban had no idea of what damage Manitoba Hydro was about to do to Lake Winnipeg.

As the steward of the lake, Hydro must

be held responsible for the proper management of that resource and changes must be made to their operating licence to ensure that happens. The International Institute of Sustainable Development submission said, "We encourage Manitoba Hydro and other stakeholders to view upstream storage in wetlands and distributed storage systems as reservoirs tied into Hydro. The volume of Lake Winnipeg as a reservoir is small, but water could be stored upstream rather than in the lake itself."

Their recommendations need to be implemented as soon as possible.

In the meantime, Hydro needs its licence, which I stated earlier should be a five year temporary licence with the wind corrected level of 714. While that happens, all of these recommended studies should be undertaken and the updated forecast considerations taken into account before a permanent licence is considered. Thank you.

THE CHAIRMAN: Thank you Mr. Hodgson,

bang on perfect on the time.

Next on the list is Penny McMorris.

Penny McMorris: Sworn

THE CHAIRMAN: Go ahead.

MS. McMORRIS: Thank you for the opportunity to present at these hearings. My name is Penny McMorris and I'm a property owner in the RM of Victoria Beach. I'm in my second term as an elected councillor for the RM of Victoria Beach, and I'm a property owner in the City of Winnipeg. My presentation is not made on behalf of the RM VB Council, but as a private citizen. However, some of my comments and information are based on information that I have learned or been made aware of as an elected official.

Over the past 40 years or so our municipality has corresponded with the various Provincial Governments and Manitoba Hydro regarding water levels and the impacts on our shorelines. In the early 1970s, my father-in-law, Dr. McMorris, was a councillor for RM of Victoria Beach. At that time and in that capacity, he wrote a letter to the Province regarding a plan to allow Manitoba Hydro to apply for a licence to regulate the level of Lake Winnipeg. He wrote of

the need for more studies to be done on the impacts that controlling the water levels at any level higher than 711 or 712 would have on the shorelines in our municipality. He wrote about the impacts of erosion and flooding that our municipality had already experienced with high water and wind effects on our mostly sandy shoreline. He discussed the high financial, physical and emotional impacts then and into the future that the protection of our shorelines and the protection of our shoreline properties would cost all of our taxpayers. He asked for the Provincial Government and Manitoba Hydro's support and for financial discussions to occur that would help defray some of the many costs.

In a letter to our municipality dated May 13th, 1976, from the director of operations for the water resources division, it was noted that the expected level of Lake Winnipeg would reach 715.7 feet during late May '76, and then recede. Emergency dykes were to be constructed to a minimum level of 719 feet.

My father-in-law was a member of the RM of VB Council for 29 years, reeve for 23 of those. He registered his concerns with Hydro's

proposed licence to regulate Lake Winnipeg for the first time in 1973, and I'm presenting to you over 40 years later with virtually the same concerns and requests.

The shorelines of our municipality, indeed most of the shorelines in the south basin were hit extremely hard in the weather bomb of October 2010. Our municipality put together a shoreline advisory group made up of members from every area of our small RM to work for a solution for our community. Norm Branson was hired as a neutral knowledgable facilitator, and the head of the Provincial Government's shoreline erosion technical committee was also a contributing member of our group. We had numerous meetings and three public forums, and the group put together a document to help us move forward.

As you have already heard, one of the recommendations of the group in the community was to hire an engineering firm to study the science of our shorelines and come up with a shoreline management plan. The municipality hired Zuzek of Baird and Associates Coastal Engineers out of Toronto to work with us to develop a plan to protect and preserve our shorelines and our

beaches. To date our taxpayers have spent close to $500,000 on this plan. We are grateful for a $100,000 grant from the province in the early stages.

It is interesting to note that the Manitoba Clean Environment Commission recently commissioned a report from Pete Zuzek of Baird entitled Lake Winnipeg Erosion and Accretion Processes, a compendium to the Lake Winnipeg Shoreline Management Handbook.

I commend you for enlisting his expertise, and I understand that Mr. Zuzek will be presenting his report to the CEC on March 23rd.

Manitoba Hydro and members of the Manitoba Government should be very familiar with the work that Baird has done on Lake Winnipeg in the past. Baird worked with StanTec Consulting Limited in September 2000 to research and prepare the Lake Winnipeg Shoreline Erosion Study for the Lake Winnipeg Shoreline Erosion Advisory Group. Much of the information from that study was incorporated into the Manitoba Conservation Lake Winnipeg Shoreline Management Handbook in March of 2001. It continues to be the go to guide for the Shoreline Erosion Technical Committee under

Conservation and Water Stewardship.

Unfortunately, SETC can only make recommendations on shoreline protection structures. They do not have any legal power, authority or jurisdiction to ensure that shoreline protection around the south basin is done to prescribed engineering codes or specifications. That is left up to each individual municipalities or planning districts to deal with or not.

I would like to be able to ensure that our shorelines are protected and preserved in a cohesive effective manner, and the RM VB Shoreline Management Plan is almost ready to present to the taxpayers in that regard.

When Manitoba Hydro began regulating the outflow of Lake Winnipeg in 1976, climate change was not really a topic of discussion. The extreme rare weather storms that we witnessed in the past few years are out of Manitoba Hydro's control. The excessive amounts of water that are now pouring into Lake Winnipeg from the almost one million square kilometre watershed is not something that Manitoba Hydro can control. The Netley-Libau marsh in the south basin has been flooded consistently, which makes it unable to

regenerate the natural filter that marshes provide to our water, and the water quality in our lake is severely compromised.

So what can Manitoba Hydro control or manage in a more sustainable way, while still providing the electricity required for all of its customers? According to a study written by Mr. Raymond Hesslein titled "An Assessment of the Effects of Regulation of the Outflow of Lake Winnipeg on the Levels of the Lake," he maintains that there are excellent records of all of the major inflows into the lake, the Winnipeg River, Saskatchewan River, Red River, and the Assiniboine, going back to 1913. Dr. Hesslein goes on to say that at levels between 711 and 715 feet, Manitoba Hydro can operate the outflow to benefit its electricity production. Manitoba Hydro needs to work towards maintaining a lower lake level, possibly 714 feet, which would allow a necessary and acceptable balance for their power needs, the property owners' safety, and shoreline retention and protection. Utilize the statistics and records available to predict inflow thereby allowing better management of the outflow. Ensuring that those downstream of the dam on the

Nelson River are safe and protected is also imperative.

Manitoba Hydro is a valuable resource for our taxpayers of Manitoba and for our Provincial Government. We enjoy relatively low electricity rates and our Provincial Government enjoys a steady, rather healthy financial income from the sale of electricity to Manitobans and our neighbours. Lake Winnipeg provides the Province and Manitoba Hydro with that rich resource.

The lakeshore municipalities, property owners, and those who make their living on the lake need to know that they can count on the Province and Manitoba Hydro to financially participate in their erosion and flood protection planning and implementation. Help us work towards solutions to protect our properties and our public beaches for all to enjoy. Work with us to ensure that financial burdens of shoreline protection and preservation are not all shouldered by the taxpayers and property owners in small municipalities. Work with us to ensure that cohesive, sound engineering practices are used when private or public shorelines require erosion or flooding protection. Recommend a regulation of

Lake Winnipeg to a manageable level, between 711 and 714 feet, that will afford the sensitive shorelines some room for extreme weather, destructive winds and the resulting wave uprush, as climate change continues to affect us all.

Lake levels from June 15, 2014 to October 19, 2014, ranged from 715 feet on June 15th, remained at 717 or 718 very consistently until October 12th, and then went as low as 714 on October 19th, only to rise again to 716 on October 26th. The top of the current operating range is supposed to be 715 feet.

This past spring and summer and fall, our incredibly hard working emergency measures organization crew from our municipality again repaired or reconstructed our dykes that now must be a minimum level of 722 feet, as dictated by the Province, and a full three feet higher than the 1976 minimum dyke requirements.

Manitoba Hydro and the Provincial Government need to work with climatologists, scientists, engineers, and the many special interest groups and organizations focused on Lake Winnipeg and her watershed. It needs to be a priority to work with these groups and other

governments to find sustainable ways to protect and rejuvenate the Netley-Libau marsh, to improve the quality of our lake. We must be stewards of Lake Winnipeg and support research to find ways to combat aquatic invasive species, and to help find ways to clean up the lake. The benefits that we and the Provincial Government all receive from Manitoba Hydro are huge, and so too must our efforts be to give back and support the communities and the people who live, work and play on and in Lake Winnipeg.

The Provincial Government and Manitoba Hydro need to seriously consider reducing the top operating range in the final licence to 714 feet, providing adequate financial contributions to communities who are struggling with erosion, flooding and financial implications, the high water levels on our shorelines must be part of the final licence agreement.

The Provincial Government and Manitoba Hydro's participation in permanent dykes and community shoreline protection programs should be a priority. I know that the RM of Victoria Beach would welcome the opportunity to meet with Provincial Government officials and Manitoba Hydro

to discuss our shoreline management plan and to share the research that lead to this plan. Together we can benefit many municipalities along Lake Winnipeg's shorelines.

Thank you very much.

THE CHAIRMAN: Thank you. Next we have Cheryl Kennedy Courcelles.

Cheryl Kennedy Courcelles: Sworn.

MS. KENNEDY COURCELLES: Thank you Chairman Terry Sargeant for the opportunity to speak and for chairing this hearing. A huge thank you goes out to the Minister of Conservation and Water Stewardship and team for allowing us the opportunity to speak in regards to Lake Winnipeg Regulation and its impacts on our ecosystem.

My name is Cheryl Kennedy Courcelles and I live near St. Adolphe, Manitoba, along the Red River, which is about ten minutes south of the Red River floodway inlet structure. As a mother and as a sociologist, I'm here to speak to you this evening about the negative effects that we are currently experiencing living under Lake Winnipeg Regulation, LWR. I shall speak on behalf of those who do not have a voice, be that our small children, our unborn children, our elderly,

and those of us whose spirit has been broken. I also speak on behalf of water energy, as well as all of the wildlife and ecosystems that live in the Lake Winnipeg watershed basin.

What I know for sure is that prior to 1970, Lake Winnipeg was a natural healthy lake. The citizens of Manitoba and all of our abundant wildlife and ecosystems flourished and lived in harmony with our sacred Lake Winnipeg for the most part. The rebounding effect of receding glacial ice has had very little negative effects on the well-being and health of the lake, wildlife and ecosystems. The uplift has been gradual and peaceful, allowing all life to co-exist in a non-threatening manner, quite opposite to the Lake Winnipeg Regulation. Water is life, water is sacred. And we all know that without a good clean supply of drinking water, we die, all life dies.

Lake Winnipeg Regulation has taken the divine resource, water, the birthright of every Canadian citizen, and has turned it into an unhealthy state, yet an economic source of income, our Provincial cash cow so to speak. This is an immense burden and responsibility to put on the backs of Manitoba and Canadian citizens.

Manitoba Hydro is not a clean energy source of power, as the CEC has uncovered by all the brave citizens and organizations who have come forward to tell their truths. The Lake Winnipeg Regulation keeps Lake Winnipeg artificially at levels that it would not naturally be at. This artificial regulating of the lake has brought great harm and suffering to all life that lives downstream of the dams and turbines, keeping lake Winnipeg at an artificially high lake level has also seen the killing and the destruction of our critical lake habitat, be that the marshes, beaches, shorelines and their ecosystems. This leads to further destruction in fish, snails, clams, animals and bird species in their natural habitat. The sturgeon cannot take advantage of cheaper Hydro rates. The sandpiper does not get to receive any flood mitigation when its nests and shorelines is washed away but yet once again. We do not see the caribou lining up to get a good Hydro job, nor are the muskrats or beavers filling out forms to have their homes flood proofed again and again.

What we do see is that these animals cannot predict what water energy is going to do

anymore. The animal kingdom does not get our emails and tweets, media notices, government ads in the paper, radio and TV announcements that Hydro is once again going to operate its artificial water moving infrastructures. They have no way of knowing this information. It is unnatural, and their instincts and sacred knowledge leave them unprepared for the destructive force of artificially moving water, especially when it happens in the time of the year when that water would not normally be moving up and down. We do not have the right to sacrifice the wildlife and the ecosystems for economic short term gain.

The world is respectively changing how we view the animal kingdom and their inherent rights. An Argentine court ruled that an orangutan has some human rights and it is to be set free to live her life as naturally as she can. And we shall see the world making great strides in the natural rights of animals, including the wildlife.

I do recognize that Manitoba Hydro has done some mitigating on this critical matter, but they certainly have much more funding to do in

restoring the wildlife habitat, as well as in education, research, development and protection practices of all species, large to small.

For example, it has been scientifically proven that fish can feel. So to slowly freeze them in too shallow of water, or to not set up the fish ladders and send them into turbines to be ground up is just totally unacceptable management practices on behalf of our Crown corporation, Manitoba Hydro. When we know better, we do better immediately.

We do have a responsibility to the Aboriginal peoples and their treaty rights to be good stewards of the land and water. And our current artificial operating the lake at 711 to 715 ASL is failing this responsibility. I foresee in our near future that all water rights shall belong to all of the treaties all across Canada. Future economic gains and sustainability of the sacred waters shall automatically include Aboriginal people, including Metis, both in ownership and in consultations.

As seen in the pages and pages of testimony from the LWR CEC hearing, the Aboriginal people commonly were not consulted when it came to

water issues that would affect their livelihood, language, culture and peaceful way of raising their families, that is before this hearing I'm talking about. LWR has failed once again the citizens of Manitoba and Canada.

Manitoba Hydro should not receive a permanent long-term licence to operate. They should stay with a temporary licence until further consultation, mitigation, and ownership with First Nations has been properly and thoroughly done. And if LWR permanent licence is ever granted, it shall remain on a five year renewal basis until the life of the whole project is over, thus allowing all Aboriginal people, stakeholders, and concerned citizens the right and opportunity to give feedback about its successes and failures, thus allowing the ability and responsibility for change to happen for the good of all, especially for the water, the wildlife and eco-system.

The Manitoba Floodway Authority have a similar five-year feedback best practices action plan, and it is proving to be a much better way of professionally and respectfully dealing with their artificial flooding mandates and operations. By providing an open-ended responsible line of

respectful communication to be put in place by either Hydro and/or the Manitoba Government through the CEC, shall help resolve some of the stressful and very scary tensions that are currently existing in our northern communities right now, and as well at the LWR infrastructure locations, and/or on our disappearing shorelines and marshes. Tempers flare when people are not listened to, and there is no reason for this by any Government party, department, or Hydro operations or persons. It is important to apologize so that healing can occur.

Points of concern, number 1, I agree with almost every presenter that has spoken to the CEC in regards to the effect LWR is having on him or her and their way of life. The heart of the continent and keepers of sacred waters have been heard, and I know that Chairman Terry Sargeant with the CEC and his commissioners shall in the 21st century do right by all of us presenters. I also believe that in the millennium and under the current best practices of management and environmental sustainability, that our governments shall also act in the best interests of society and the environment, and not just for one industry

any more.

Number 2, I totally agree with International Institute of Sustainable Development and Ducks Unlimited vision of how to help Manitoba Hydro with not only cleaner water in the reservoir, but to also establish and re-establish land infrastructure reservoir. That will be critical not only keeping the lakes less toxic and more stable, so that LWR does not have to go up and down, but to also secure other sources of water in times of drought. Right now we have all of our eggs in one small draining damaged basket. A strategic large basin management practices is the way of our sustainable healthy future. It gives the citizens and the ecosystems hope and a renewed energy to find the harmony and profitability for all.

Number 3, I agree with all of the presenters who are asking for more science and traditional knowledge studies to be done on LWR, Lake Winnipeg and Lake Manitoba and their watersheds. We are the keepers of the water and we owe it to our children, children times seven at the very least, to restore the health and sustainability of our sacred waters.

Number 4, I do not understand why the Federal Government is not at the CEC hearings. Both the First Nations and the Navigable Waters fall under their domain. I would like to see another CEC hearing involving both the Federal Government and the International Joint Commission in the near future regarding our Manitoba environmentally sustainable waters.

Number 5, I would like to see a CEC public hearing regarding specifically the outflows of waters from any and all of Manitoba Hydro's infrastructures. The good people of Churchill did not even know what LWR was, not to mention the possible negative effects of letting 50 percent more toxic water into Hudson Bay is going to do to the polar bears, to our seals, whales, birds, fish, wildlife, local community and so on. These hearings have only scratched the surface of the adverse effects that are happening to the outflows, be they mitigated or not. We can no longer stick our heads into the disappearing sand bars and say we didn't know. I would like to see a CEC hearing on more of Hydro's operations and the state of the environment and the citizens.

Number 6, I agree with Dr. Gorden

Goldsborough, Dr. Eva Pip, Vicki Burns and dear Charlie, and all of the concerned citizens and organizations that stand up for the marshes, our sacred wetlands, the very kidneys of the lakes. We have to forgive our past actions and ignorance and move on. We have to fund wetland restoration sustainable practices as the top priority all over our province and country. Manitoba Hydro should be our number one supporter in all of these initiatives.

Number 7, I look forward to a CEC public hearing to be held about LWR on Lake Manitoba, seeing as how we are artificially draining it to help secure Hydro's need of a continual high water level, and hence a second reservoir. The aboriginal peoples, stakeholders and citizens on Lake Manitoba also have a right to be consulted and heard.

Number 8, we have to do a better job of providing Hydro employment opportunities and education to people in communities around the lake, especially to the downstream of the operation. The numbers need to be reported in the follow up of every five years.

Number 9, we have to do a better job

of providing jobs of -- sorry, we have to do a better job of providing all of our communities with safe drinking water, especially those of whom LWR has negatively affected.

Number 10, Manitoba Hydro and the Federal Government have to be a better job of upgrading Aboriginal homes and infrastructures so that most of their money is not being spent on Hydro bills. Currently they are living under the most severe adverse effects of LWR, and yet they have some of the highest Hydro bills in the province. This is just plainly not right and it needs immediate action.

Number 11, if LWR has adversely affected the health and well-being of a person, family, community, and their very lives are in danger, then they should be bought out at a fair market value.

Number 12, LWR is negatively affecting the financial worth of one's property and homes around the lakes and rivers in its watershed, and they too need to be compensated by Hydro at a fair market value.

Number 13, I disagree that Hydro has nothing to do with the inflows into the lake. In

the RM of Richot alone, you can see ads in our local paper offering community improvement funding paid by Bipole III initiative to projects that enhance drainage. This is just one example of the different types of funding that Manitoba Hydro, and every level of government, including the Federal Government has used to clear the land of surface water for the last four decades.

Number 14, I agree with building resilient shoreline communities with further setbacks and larger riparian areas. It is extremely important to put the wild back into our habitat.

Number 15, the Northern Flood Agreement needs to be honoured and have third party follow-up. Manitoba Hydro has to remain accountable to its actions, promises and signed agreements.

Number 16, adequate funding needs to be awarded to those communities who are downstream from the Hydro operations to which they no longer can continue to work, live, play in their traditional and spiritual and cultural ways.

Number 17, it is time to monitor the inflows and outflows of both lakes as well as all

of Hydro's infrastructure, so that we get a better educated handle on exactly the amounts of water we are moving and when. These records shall remain open to the public to review.

Number 18, I strongly believe that LWR is adversely affecting the overall health and sustainability of Lake Winnipeg, and soon to be Lake Manitoba. And the whole world can see what we have done by satellite image, and shame on us.

Number 19, LWR has negatively affected almost every way of making a life, making a living on or around the lake, whether you are a farmer, fisher, hunter, trapper, small business owner, tourism and so on.

Number 20, I see a bright future with Manitoba Hydro and the Government's funding projects that help store the water in land reservoirs, both big and small and economic for all. The faster we can hold back water from entering the lakes and yet still be available for Hydro production and climate change control, the faster we get rid of Hydro's need to operate LWR so high.

21, I would like to see LWR operate at 711 to 713 ASL, and if mother nature allows it to

drop lower once or twice in a decade or two, we should allow it to happen for the overall rejuvenation of the entire eco-system and wildlife habitat. It is greedy and foolish of us to sacrifice our lakes, ecosystems, wildlife and families to try and sell Hydro futures of energy we can not even store. Those potential customers are realizing it is not a green energy in the first place and do not want to be a part of destroying our sacred waters? Can we blame them? Not. Mega-sizing does not work, it fails in time, every time.

22, my family, my community and myself are negatively affected by LWR and its continual high lake level operations when Lake Winnipeg or Lake Manitoba levels exceed their natural capacity and start to move backwards either down the Red River and/or up the Assiniboine, and there is a need to operate the Red River Floodway in that structure to hold the water back from entering Winnipeg, and in return it artificially floods the water on to us who live in the RM of Richot and beyond. My father and brother have also decided to not commercially fish anymore because of the current dangers and lack of fish after 40 years of

fishing.

23, there should be at least one commissioner or chair, preferably 25 per cent of the work force of Aboriginal descent present in all CEC hearings, outings and as part of the CEC work force.

24, LWR shall be teaching society to save power in order to save the environment. More teaching and marketing of the sustainability vision and action is also needed all over Manitoba and Canada.

25, I wear a red dress today in honour of all of the heart wrenching 1,200 missing Aboriginal women and girls, and I ask that every Hydro person and all people who live in Lake Winnipeg watershed to ask questions, to look under every rock and in every ounce of water for them. It is time for answers, it is time to stand together united, it is time to stop abuse for all.

In closing, thank you for the opportunity to share my knowledge and experience with you. I'm grateful to each and every person who has participated in the LWR CEC hearing, and especially the Chairman Terry Sargeant and the passionate and talented environmental warriors or

commissioners and their team. We are all passionate about preserving our precious water and ecosystem, like our old sand beaches that we share with the endangered sandpiper, or the millions of migratory birds in their nests, to save the majestic caribou, and our national emblem, the sacred beaver. Beaver stands for building, doing, for family, water and land energy, everything that we value. We have to stop killing the beavers. We are a generation who are too in love with electricity, and we have to accept our actions are seriously harming our environment by the choices we are making.

I have full faith in all of you that have come forth at the CEC that we can peacefully realign a successful and sustainable vision and action plan for LWR. Our children are counting on it, and our grandparents still know the way back to life before LWR. Time for change is now. Peace for all, respectfully yours.

THE CHAIRMAN: Thank you.

MS. KENNEDY COURCELLES: Can I have a question?

THE CHAIRMAN: Yes.

MS. KENNEDY COURCELLES: When I read

through the notes, if people in all of the different communities, if a person heard another speaker and then had a question, I know the time wouldn't allow us to ask questions, but I was wondering if we would still be able to submit written work into the Commission if we have already submitted ours?

THE CHAIRMAN: Yes.

MS. KENNEDY COURCELLES: Thank you.

THE CHAIRMAN: Okay, Mr. William Braun.

Will Braun: Affirmed.

THE CHAIRMAN: Go ahead.

MR. BRAUN: Good evening, it is a pleasure to be here. Thank you for the opportunity.

My name is Will Braun, I work for the Interchurch Council on Hydropower on whose behalf I'm presenting here, and some of our members are in the room with us.

The purpose of our council is to monitor what happens at the northern end of the transmission lines. We advocate for fair treatment of people and lands affected by the Hydro system. Our council includes official

representatives of the Catholic, Lutheran and Mennonite, United churches, and our work is rooted in a 40 year history of Interchurch involvement on Hydro issues. We speak as citizens and users of electricity.

My comments will focus on impacts north of Lake Winnipeg and also on the licensing process, and I will have some specific recommendations along the way.

First I want to review the recommendations made by this Commission in the 2004 Wuskwatim report. At that time the CEC recommended that, if you will forgive me for quoting yourselves back to you, the recommendation I quote:

> "The Government of Manitoba require Hydro to resolve all outstanding issues with regard to Lake Winnipeg Regulation. Following resolution of these issues, Manitoba Hydro should apply for the appropriate final licences under the Environment Act and the Water Power Act as soon as possible."

The Commission further recommended

that the process:

"...should include a review of the terms and conditions, an operational review, and any required environmental impact assessments."

And I just want to test the current situation against six elements in those recommendations, and I will take them in a different order than they appear there.

First, the Commission recommended that the Hydro apply for a Water Power Act final licence. That has happened.

Second, the CEC recommended that the licensing process should happen as soon as possible. That was more than ten years ago.

Third, the CEC recommended that any required environmental impact assessments be conducted as part of the final licensing process. And by any professional standard, any sort of cumulative requirement of an impact assessment of LWR has not been be done.

Fourth, the CEC recommended that an operational review be undertaken. In 2007 a water stewardship official wrote to us saying:

"The final licensing process may be

thought of as including an operational review of the project. Project impacts have been addressed under the Northern Flood Agreement."

Has this licensing process truly included the sort of operational review that the CEC envisioned? I would suggest that such a review would involve examining operation of the system to try and identify ways that environmental impacts could be minimized, sort of to re-adjust the balance between power generation and other interests. And if this has indeed been done, why has Hydro proposed no changes to the licence parameters?

I have appended to my written submission a two-page explanation of an operational review that was undertaken of the Nipigon River in Ontario, which has three hydro dams. And it just provides an interesting example, I think an instructive one of what an operational review actually can look like and the kind of concrete changes that it can lead to.

Fifth, the CEC recommended in 2004 a licensing process under the Environment Act. Our government has chosen not to do this. So this project that has significant impacts on the

largest lake in the province and the largest river in the province is not going to be licensed under the primary piece of environmental legislation in the province. It will be licensed only under the Water Power Act, an act that's intended to allocate rights to projects that divert, use or store water for power purposes. And this act, as Water Stewardship staff have pointed out to us, makes no mention of the environment. It is not an environmental law. That makes this proceeding in some sense an environmental hearing into a licensing process that technically has nothing to do with the environment. Of course, we find ourselves in some politicized space perhaps beyond the letter of the law.

That said, some years ago government officials ensured us that environmental conditions can be added to a Water Power Act licence. That leaves everything, though, sort of at the pleasure of the Crown, sort of regulation and water management by ministerial discretion, and we see opportunity for greater regulatory rigor.

Six, the CEC recommended in 2004 that Manitoba Hydro resolve all outstanding issues with regard to LWR. The message you heard recently in

Cross Lake was not that Hydro has resolved all outstanding issues. And I am willing to wager that when you go to Norway House, the message will be similar.

Since 2009 our council has had written and in person communication with the various elected leaders and government staff about final licensing of LWR and the Churchill River Diversion. They point to the Northern Flood Agreement as evidence that issues have been resolved, that view Hydro also put forward in the December letter to you.

The NFA is a broad agreement with many provisions and I just want to highlight one that is easily understood and quantifiable to make a point. Article 3 promises four acres of new reserve land for every acre affected by the project. Quite simple. Has this been completed? No, it has not been completed in the case of Pimicikamak, nor in the case of Norway House Cree Nation, which obtained expanded land transfer commitment under the '97 implementation agreement. This merely illustrates that just because the NFA was signed does not ensure that issues are resolved.

We further submit that if you were to travel the waterways between Warren Landing and Jenpeg in open water season you would see a preponderance of outstanding issues.

In its 2011 request for a final licence Manitoba Hydro stated:

"Before requesting the final licence, Manitoba Hydro resolved outstanding LWR issues with First Nation communities and resource users groups inhabiting the area along the LWR waterways."

We submit that statement is inaccurate. It is probably not even wise to think in terms of resolving outstanding issues as if they were something to take off a list. The NFA, for instance, sets out a long-term relationship, and that notion of an equitable ongoing relationship for the lifetime of the project is probably more useful than this notion of resolving issues.

To recap, the CEC recommended Water Power Act licensing, Environment Act licensing, operational review, environmental assessment, resolution of outstanding issues, and that it all

be done as soon as possible. We submit that Hydro and the Province are one for six. The regulatory process for Lake Winnipeg Regulation has been minimized and narrowed and dragged out.

In terms of specific recommendations arising from that, we would recommend to you that your report note these 2004 recommendations, and we would recommend, I suppose it is recommending that you recommend that the following conditions be placed on the LWR final licence: Completion of land transfer under the NFA within five years, assessment of the implementation of other NFA provisions, completion of a cumulative environmental assessment within three years, and an operational review within three years.

And we would also suggest to you as panel members to take an opportunity to see the good portion of the land between Warren Landing and Jenpeg in open water season, ideally from the air and from a boat.

I would like to move on to six more relatively brief points that I will try to tuck neatly in my 15 minutes.

LWR licensing, I don't think it is best to reduce it to a single number, it is not

about 715 feet versus 714 or 716. I think that's outdated understanding of water regime management. We submit that while an operating range should be included in the final licence, a better approach is to establish a multi-party decision making body that would determine on an ongoing basis how to operate the system. Such a mechanism would serve to better balance power generation with other interests such as flood control, both upstream and downstream of Jenpeg, as well as indigenous use of lands and waters. I would note that such a body would be able to then make use of an environmental assessment and an operational review, even if those are not completed by the time a final licence were granted. So it's sort of the notion of an ongoing body that balances the decision making as opposed to one time sort of set of parameters.

Next, the Water Power Act governs water rental payments, though technically rental fees for Jenpeg fall under the Jenpeg licence, which is distinct from the LWR licence. Regardless, we believe that water rental payments should go to the affected indigenous peoples rather than to the province. In the case of

Jenpeg it would work out to somewhere in the range of $2.1 million a year. And we note that the 2014 process agreement between Hydro, the province and Pimicikamak commits the parties to discuss that sort of allocation of water rental payments. So we believe then that the LWR final licence should be contingent on finalization of a Jenpeg licence in which water rental fees are paid to Pimicikamak and Norway House Cree Nation instead of Manitoba.

Next, operation of Lake Winnipeg Regulation has resulted in the deaths of several Pimicikamak citizens. Some deaths happened as a result of boating accidents caused by half submerged wood debris, other deaths were caused by hanging ice or otherwise unsafe and unpredictable ice conditions attributable to the LWR. We lament the fact that people have died entirely preventable deaths so that we can enjoy the convenience of electricity, and we would hope that your report arising from this hearing would acknowledge that LWR has cost lives.

Next, LWR serves two purposes, as you know, to increase power generation potential and to reduce flooding on Lake Winnipeg. Of course, some dispute that latter claim, but let's accept

it for now. The latter is achieved by making outlet channels that increase the outflow potential from Lake Winnipeg. During high water times then, these increased flows essentially turn the area downstream of Jenpeg into what one might call a floodway. Manitobans understand these sorts of flood reduction mechanisms, the well-being of the few sacrifice for the well-being of the many, and the few should be compensated generously. And there is a compensation agreement of that nature in place for Cross Lake Pimicikamak, though it is quite recent. So we recommend that your report acknowledge this floodway factor, and that perhaps that this panel test the adequacy of the high water compensation arrangements for Cross Lake, Pimicikamak and Norway House, and perhaps the need for retroactive compensation.

Next, LWR operates in territory covered by Treaty 1, Treaty 2, Treaty 3 and Treaty 5. These Treaties provide the legal basis without which the province would not be able to grant rights for the use of lands and waters. So we recommended that LWR final licence acknowledge these Treaties in its whereas clauses.

Finally, we live in an age of reconciliation between indigenous people and the rest of us. I think it is an important moment, it is a moment of opportunity. In a statement of apology delivered in Cross Lake on January 20th this past year, Premier Selinger mentioned reconciliation several times.

> "We recognize that reconciliation is an ongoing process and are committed to work with communities toward further reconciliation."

Hydro's CEO, Scott Thomson, has used similar language about working a spirit of reconciliation. In some ways the technicalities and legalities of a licensing process may seem ill suited to something as spirited and intangible as reconciliation, but at the same time I think if reconciliation is to be more than just words or sentiments, maybe it needs to find expression in exactly these sorts of things such as water power licences.

Now, this afternoon Mr. Cormie spoke about the balance of various interests or needs, to paraphrase him, interest related to regulation of Lake Winnipeg. And he said that that balance

was set back in the '70s when the licence was granted. I suppose it is stating the obvious to say that things have changed since the '70s, and perhaps I would suggest that the licence could also change. But in requesting a final licence, Hydro has requested no changes to the licence. Reconciliation, I would suggest, requires change. Change is exactly what is needed, and this is an opportunity. Business as usual does not lead to reconciliation. And I think that reconciliation has to get at the core issues, and for Lake Winnipeg Regulation the core issues are water levels, water flows, rental payments and decision making power. Should all of those remain unchanged? Can reconciliation happen on the sidelines of those key issues? So we recommend that the final licence include a preamble referencing the Premier's apology, and also framing the licence in the context of reconciliation.

To conclude, the Jenpeg dam is set in concrete, the licence is not. The final licence cannot be a licence for business as usual. This is an opportunity for change, for reconciliation.

I thank you and I wish you well in the

task ahead of you.

THE CHAIRMAN: Thank you Mr. Braun. Next is Morris Desautels.

Morris Desautels: Sworn

MR. DESAUTELS: Thank you for the opportunity to speak to the Commission today on behalf of the Winnipeg River Property Owners Group. My name is Morris Desautels. I represent the Winnipeg River Property Owners Group. Our group consists of property owners along the north shore of the Winnipeg River, within approximately two kilometres immediately downstream from the Winnipeg generating station.

We understand that the Clean Environment Commission has been asked by the Minister of Conservation and Water Stewardship to consult with communities about the impacts and effects of Lake Winnipeg water regulation by Manitoba Hydro, to report back to the Minister on the concerns from people and provide recommendations about how to address these concerns.

We want to bring forward our concerns. Our properties are in the immediate path of the water outflow and turbulence created by the dams,

turbines and spillway. Our banks are high on the north shore, and with the dam operation, particularly after enhancement of the dam's capacity in the 1990s, all of our properties have sustained extensive damage. Unlike properties further downstream and along the lakeshores, our properties, in addition to being affected by wave action, wind forces and fluctuating water levels, are being eroded through constant undermining of our shorelines and banks by the soil and currents created by the dam, causing slumping of shorelines and making river water turbid and muddy.

Manitoba Hydro placed riprap along all of our property shores very early in the dam's life in the 1960's. This to us indicates that Manitoba Hydro is aware that their operation does significantly impact our properties. The riprap did not fix the problem.

Members of our group have approached Manitoba Hydro individually on many occasions since the early 1990s to plead for a solution for some form of assistance to save our land and homes. Hydro would send representatives based on these requests, and we were usually told that other areas had priority, or that there were no

funds available at the time, leaving us thinking that our shorelines and river bank slope would eventually be repaired.

Some of us were offered assistance over the years in the form of attempts to stabilize the shoreline on their property, and on one occasion an offer to purchase a property was made by Manitoba Hydro.

On February 12th, 2015, after meeting with Hydro representatives twice in the previous two and a half years as a group, we received a formal letter from Manitoba Hydro stating that we will not be assisted in shoreline and bank repair or purchase. Their decision is based on the contents of the Water Power Act for the Pine Falls generating station, and our properties fall outside the limits of the Water Power Act licence boundary. However, Manitoba Hydro by the same token did purchase properties outside of their licence boundary just upstream from us, because, as they state, and I quote:

"A failure of Manitoba Hydro's property had regressed on to adjacent private property making the solution our responsibility."

The erosion of our properties as a result of Manitoba Hydro's diversion of the natural flow of the Winnipeg River, and manipulating -- manipulation of water levels has had the following impacts on us. We live in fear and stress. Our properties have lost value because of erosion. It will be difficult to sell our homes. And those that have sold in recent years have taken significant losses. Many of us invested in our properties as part of a retirement plan, and instead are now left with our investments ever dwindling. When we look out of our windows each day we are afraid to see more property fallen away. At times we are at risk of injury because of the river bank erosion and slow stability. For example, when mowing the lawn along the erosion lines, one of us rolled his lawnmower, falling into a newly developed crevice in the ground. He was fortunate not to have been seriously injured. We do not feel safe letting our children and grandchildren play in our yards, fearing they will fall into suddenly developed crevices formed by the erosion.

Manitoba Hydros environment management policy states that they, and I quote:

"...recognize their responsibility as caretakers of the economy and the environment for the benefit of present and future generations of Manitobans, and their responsibility to meet the electricity needs of present and future Manitobans in a manner that ensures the long-term integrity and productivity of our economy, our environment, and our natural resources, and safeguards our human health."

We, the Winnipeg River Property Owners Group, feel that we are expected to sacrifice our homes, land, safety, health, and life savings without compensation to satisfy the electricity and economic needs of the Province of Manitoba. We ask that the Commission consider our situation and make recommendations to hold Manitoba Hydro responsible for damage to our shorelines and environment as a condition of final licensing.

I would like to show you the year that picture -- a picture is worth a thousand words, so I don't have time for too many more thousand words so I will show you a few pictures. You might see

the red line is the area where we live, where our group is just below the dam. And this is the shoreline, I don't know if you can make it out, all the way along here, this is all shoreline stability, and that has dropped all the way along our properties. That's about 125 to 150 feet away from the water's edge, the slope of the land has dropped.

As you can see in the early years, in the '84, '87, you look at the -- you can enjoy the slope of the land, it is a beautiful natural slope which was fixed in the early '80s, this shoreline, by myself, or I had it done at my own expense. And I was talking about the riprap, how it is not doing much of anything anymore, there is a picture of it there. And this is a drop in the -- just back in 2010, you see our survey pins where I own property, and that's just dropping out. Here is another home in the fall of 2012, you can see in the fall, on photo number 7, it's just starting to crumble there. And then number 8, this was in the spring, and this is what it looked like already. There was just no way you can walk on there or do anything. And this is the area that was fixed by Hydro that, as I mentioned that they had helped

some of us that -- this shoreline had crumbled so close to the house that they decided to fix the shoreline. This shoreline was fixed all the way up to the river and squared off. But now you can see that it is eating up in there already. And because both sides of that property weren't fixed, it is eating into that property again. And again, this is just another picture showing what we could -- beautiful shoreline we had before and now it is all deteriorated. I had one video, but I can't see it on there.

Thank you very much for hearing us.

THE CHAIRMAN: Mr. Desautels, I just have one question. Is it your belief that this shoreline erosion was caused by high waters on Lake Winnipeg backing up the river, or this an impact from the Pine Falls generating station?

MR. DESAUTELS: A bit of both I would say.

THE CHAIRMAN: A bit of both?

MR. DESAUTELS: Um-hum. In the video you could see the water coming out from the dam too would -- you are diverting the natural water flow by placing a dam there. And then the change in the water levels too, it's forever changing,

does affect the shorelines and crumbling, sloping of the land.

THE CHAIRMAN: Okay. Thank you very much, sir.

MR. DESAUTELS: Thank you.

THE CHAIRMAN: Next is Brian Ellis.

Brian Ellis: Sworn.

MR. ELLIS: Thank you, Mr. Chair and members of the Clean Environment Commission. I will begin my comments by saying that I'm truly humbled hearing some of the previous presenters. I know the group that I'm going to speak on behalf of, we have serious issues with respect to the request for licensing, the impact on our community pales in comparison to what some others have done. I am glad to be part of this because I think what is coming to our community unfortunately is what has happened to others.

By way of background, I'm here both personally and on behalf of Winnipeg Condo Corporation, number 323, otherwise known as Gilwell Estates. In my speaking notes there is some references, and that is primarily so I don't forget what I intended to mean. I wouldn't take it as being a full presentation.

But by way of background Gilwell Estates is a bear land condo association where we jointly pay for erosion protection for the common element where our property is located. It is 29 units in total. 16 of those units are on lakefront, so we are directly on the shore of Lake Winnipeg. It is a mix of full time year round residents, seasonal residents, and some folks have bought land for future use, like one of the presenters talked about, as part of a retirement plan.

When I was putting this presentation together I contemplated talking about a lot of issues that the previous presenters have spoken about, made a conscious decision not to, not because we aren't supportive, but simply they are much more well versed and much more eloquent about those. But I will say that our folks are fully supportive of ensuring that marsh lands are created and that the algae bloom and nutrient loading is taken care of.

Our first and foremost issue, primary concern, is the shoreline erosion.

If you go to the third last page of the package that I've put forward, that is an

aerial view of where Gilwell Estates is located. Coincidentally when I was at the open house a couple of nights ago here, I believe it is the very same map that Hydro had sitting in its presentation. And that map had nothing on it. I wanted to point out that there are 29 people who live in the area on that map.

What the three lines represent are the -- where the shoreline was in 1876, in 1949 and 1966. And this Google map was taken within the last couple of weeks. In 1876, since then we have lost 600 feet of shoreline. That's an average of 4.3 feet per year. When you take a look at that map, in practical terms it means at that rate in somewhere between 10 and 20 years, there will be no homes in that spot. That's an area that seemed to be sitting quite high and should be relatively safe, and it isn't.

Due to time limitations I'm going to sort of whip through the presentation. And I'm going to begin with what is not intended to come across as abrasively as it may, but the important thing is I wanted to be sure we got to our recommendations, then speak about our rationale behind it and then get into some discussion.

Normally I would have sort of soft sell a little bit.

But our first and foremost, our primary recommendation is that the CEC recommend that Manitoba Hydro's licence not be renewed in its current form on this application, but rather a temporary licence be granted subject to the following conditions. Coincidentally, a number of presenters this evening have come up with the same number independently of our recommendation, and you will see where we come up with that number, is that the maximum level it be allowed at is 714 feet, not the 715 feet or any other such level lower that 714 feet that ensures an adequate water supply for hydro generation purposes.

Secondly, a creation of an alternative upstream storage capacity which comes as a recommendation from the International Institute for Sustainable Development in its submission to this same Commission. It seems if we are able to create alternative methods for storing, that the one big body doesn't need to have as much water in it, and certainly folks that have got a lot more expertise than I claim to have recommended that that occur.

Thirdly, creation of methods for Manitoba Hydro to regulate flow into Lake Winnipeg. In their submission they say that they aren't in the spot where they do control that, the International Institute for Sustainable Development believes that they can have some capacity to put a tap on what goes in rather than just put a spout on what goes out. And truthfully that is a big part of the solution, if you can control what is going in as well as what is going out, that lower level is much more sustainable, much more predictable, much more regulated, and is far better for the overall environment.

Fourthly, creation of a basin wide governance that includes all stakeholders and focuses on hydro generation with no harm to recreation, property or and way of life; again a recommendation by the International Institute for Sustainable Development.

And finally, completion of the recommendations, and one of the earlier presenters spoke about it, there were a whole pile of promises and recommendations made that have yet to come to fruition. In 1974 a joint study agreement was signed and a summary report flowed from that

that said that Manitoba Hydro should be responsible for compensation for damage to property and way of life, and has a series of recommendations specifically with respect to Lake Winnipeg, including putting together some studies on how to create and enhance beaches and get sand coming back, simply because there was a prediction that the water level, the increased water level would cause erosion. A rationale for saying that, for saying what we are saying with our recommendations, the Canada Manitoba study completed in '74 predicted that regulating the lake level would have a definite impact on erosion. And they put a range on it. They said on the lower spectrum it would cause 20 per cent more erosion than normal water would do in the lake levels over a period of somewhere between five and 40 years. And the high end was that it would cause 100 per cent more erosion over a period of 20 to 200 years. It also said this increased lake erosion could be eliminated by altering the pattern of regulation to achieve long term median lake level of 713.35 feet, which is the equivalent of the average level without regulation at that point in time. That is found

on page 32 of that study.

The fact that we are recommending 714 feet isn't an accident. We have an old study predicting what the outcome would be that recommended a lower level than what we are asking for.

The same report predicted that the lake level regulation would reduce the risk of flood, and I believe that it truly has done that, and it would reduce the risk of dyke failure, but it also said that the erosion would increase, and that's the problem that we are facing.

The International Institute for Sustainable Development reports that Lake Winnipeg's relatively small storage capacity creates a situation where the 715-foot level frequently is exceeded. I know that there is some talk that Hydro disputes that, so I went online this morning to try and take a look at what those levels looked like in Gimli for the longest period that I could get. And on the last page of my submission there is a graph that looks like a bunch of squiggles, because that's what it is, a bunch of squiggles, and it is in metric. So I took the liberty of going online and finding one

of those handy dandy conversion calculators. 715 feet coincides with 217.93 metres, and if you see the two stars that I have handwritten in there, all of those lines above that are the periods of time when it exceeded the maximum that Hydro is allowed to have.

Now one might argue that was a wet season. It wasn't, part of it was at the beginning. And it lasted the entire summertime. It also peaked in the late months of autumn.

The other difficulty with residents in the south basin, particularly on the west side of the south basin, is in October, November, sometimes in September, we have an awful lot of very strong northeast winds, and that pushes huge wave action into our beach front and causes a lot of erosion.

So what we are recommending, we are not doing it just sort of because we think it is right, we are basing it on what we have seen for the best information that we can find. It does have an effect on lifestyle, it does have an effect on property values. And that same study, 1974 study, recommended that Hydro provide compensation in circumstances where that happened.

Otherwise what they essentially would be doing is transferring costs of hydro generation to specific Manitobans, and in a disproportionate amount.

The reason we are asking for the licence to be not passed in the form that it is, it is to be shortened with the restriction. In 1974 it was predicted what would happen. In 2015 it happened. All kinds of things that were supposed to have occurred in that period of time haven't yet.

Now, we are not naive, we recognize the importance of Manitoba Hydro to our economy, and we are not saying shut them down or anything of that nature. We are not opposed to some regulation of the lake. But what we are advocating is a broader spectrum of how it is done. The concept of large basin management is an evolving art, I don't know that I would call it a science yet. There was no knowledge that that would be something that would be in existence in 1974. It exists now. And we believe that getting into that kind of a discussion where all stakeholders are involved in decision-making and in talking about alternatives is what is necessary, rather than just granting a licence in

its present form.

Thank you for your time and your indulgence and for whatever consideration my submission garners, and I appreciate it.

THE CHAIRMAN: Thank you, Mr. Ellis. I just have one question. You mentioned this August 21, 1974 joint study agreement, I'm not familiar with that, I have read about eight dozen studies over the last few months. I can't think of that one.

MR. ELLIS: I have one copy, I will give it to you.

THE CHAIRMAN: Thank you. Is it part of the Lake Winnipeg Churchill, Nelson River Study Board?

MR. ELLIS: That's where I got it from.

THE CHAIRMAN: It is in that summary report?

MR. ELLIS: Yes, it is.

THE CHAIRMAN: We have that then. It was just the date -- I guess that was the date that they commissioned the study and --

MR. ELLIS: That's precisely what it was, that study flowed out of this agreement.

THE CHAIRMAN: Then I know what you are talking about.

MR. ELLIS: Thank you again.

THE CHAIRMAN: The last presenting group this evening is the Keewatin Public Research Interest Group. I understand that there are going to be two presenters, and between the two of you have a total of 15 minutes, am I correct? Okay. If you could introduce yourselves for the record and the Commission secretary will swear you in.

Warren Cariou, Sworn

Robin Jarvis Brownlie, Sworn

MR. CARIOU: Thank you, very much for agreeing to hear our information and our research findings this evening. We have decided to split our time into two, so I will begin with my presentation.

The main goals of my presentation are first of all to outline the cultural effects of large energy development projects upon indigenous communities, and the resulting effects upon community and individual well-being. And secondly to indigenize our concepts of energy in order to create a more just, respectful and sustainable energy practices within Manitoba.

Much of the conflict that has often surrounded energy projects near indigenous communities, has happened because of fundamental misunderstandings about the role and meaning of energy in indigenous philosophies and practices. Through my own research with elders and knowledge keepers in my own Metis community and other Cree and Anishinabe communities in Canada I learned a number of teachings that I believe can help to give members of the broader public a better understanding of the ways in which large energy projects, such as Hydro development, may threaten indigenous cultural vitality and social well-being, and indeed health of indigenous people. By sharing these findings with the Clean Environment Commission I hope to provide important cultural context for the Commission's deliberations.

Contemporary western society is characterized by what I called in my research the "energy unconscious," in which energy -- the source of energy is essentially invisible to consumers of that energy. So the users of it have very little idea of where the energy comes from or what the environmental and social costs of that

energy are.

The convenience and the apparent cleanliness of electricity makes it one of the most easily disassociated forms of energy in the contemporary world. However, as has been well established by many scholars and observers, hydroelectricity does indeed have an environmental, social and cultural footprint. One that is often much more visible in indigenous communities than in the cities where most electricity is consumed.

Low population densities, ongoing histories of colonial disempowerment, and the existence of alternate non-capitalist value systems within indigenous communities make them particularly vulnerable to the effects of large energy developments such as Hydro development. While such projects generally create some economic activity and jobs in the affected regions, they can also create what scholar Rob Nixon calls "slow violence," contamination of land, water, and air, health and safety crises, disruption of the social fabric and family structures, and perhaps most devastating in indigenous communities, the erosion of the people's connection to the land. Thus it

is not surprising that indigenous people are often in the vanguard of resistance movements that aim to stop or disrupt these projects. However this resistance is not motivated -- it is motivated I would say by something far more profound than not in my backyard ideal, or simply a reaction to perceived negative consequences of development. It is instead deeply rooted in the philosophical and spiritual contexts of specific indigenous nations and their particular territories.

Traditional indigenous energy use practices are characterized by what I call energy intimacy, in which a community member necessarily has direct and personal relationships with the sources of their energy. In indigenous societies it is a matter of survival to be able to locate, process and utilize energy sources for oneself, whether these sources are derived from wood, animal fat, food or other fuels. This fact also has philosophical and spiritual implications. Energy in such a concept becomes based primarily upon the relationship between the people and their land. And in indigenous cultures this relationship is not one of mastery or objectification, but rather kinship, respect and

responsibility. The land is conceived not as a reservoir of resources to be exploited, but as a source of gifts which humans must accept with gratitude. The reciprocity of that gift relationship results in a fundamentally different conception of energy compared to today's prevailing western ideologies of energy extraction, commodification and ownership.

In most indigenous cultures there is little interest in generalized concepts of energy as they are understood in western cultures, but instead there are teachings about the vitality of all beings, including the earth itself. Therefore energy in indigenous concepts is all about relationships and inevitably about ethics. Two of the most important teachings in many indigenous traditions are that no one should make demands upon nature, and no one should ever waste resources by using more than is immediately required.

The Omushkego Cree Elder Louis Bird explained his people's ethical obligation toward the environment when he says,

"There are rules about respecting nature and the environment, the

animals and the birds. If one of these were broken by a member of the family the punishment was a retraction of the benefits from nature."

Louis Bird also discusses the concept, the Cree concept of pastahowin, which he calls the sin against nature, which involves any action that shows disrespect to the natural world, such as wasting resources or failing to give thanks for the gifts received from the land. The punishment for an act of pastahowin is that nature withholds further gifts from the transgressor and his or her community. Re-establishing an ethical relationship with the natural world becomes then a matter of immediate survival.

If we are to indigenize our energy practices on a large scale in Manitoba, it will involve becoming more connected on an intimate level with the sources of energy, understanding where it comes from and how that source location is affected when that energy is extracted, processed and delivered to the user. This will also require a fundamental change in the way nature is conceived in our culture, and a move toward understanding energy as a gift rather than

as a commodity.

So I would ask that the Commission require Manitoba Hydro to not only consult with Aboriginal communities that are affected by Hydro development, but also to learn from the people in this land who have been the keepers of the water for many, many generations and who will continue to be the keepers of the water for many generations to come. Thank you.

THE CHAIRMAN: Thank you, Dr. Cariou. Dr. Brownlie.

MR. BROWNLIE: Okay. Thank you. I'm Dr. Robin Brownlie, I'm a history professor at the University of Manitoba, and my specialty is in Aboriginal history, Aboriginal government relations, and I have done a lot of work on Treaties and Aboriginal rights. So that's the area that I decided to speak about tonight. And I thank you for the opportunity to present my concerns this evening.

Canada signed and is bound by treaties with First Nations throughout Manitoba, and much of the rest of country. The First Nations around Lake Winnipeg are Treaty 5 peoples, who made treaty with Canada between 1875 and 1908.

Canada was a very different place 45 years ago in 1970 when the Lake Winnipeg licence was first put in place. It was very different especially with respect to Aboriginal and treaty rights. In practice in 1970 these rights were almost completely unenforced, when the temporary licence was issued to Manitoba Hydro. Courts had largely refused to support treaty rights, and Aboriginal people had actually been banned from hiring lawyers for several decades, between 1927 and 1951. And so in that time they were unable to pursue their rights. And Canadian courts and governments largely lost sight of Aboriginal people's rights and interests. Corporations and governments in Canada learned to take for granted the ability to advance their plans without consulting Aboriginal people or the treaties that Canada had made with them.

A lot has changed since then, today these rights are buttressed by the constitution and by a long series of court rulings. In the 1970's, Canadian courts finally began to affirm that Aboriginal and treaty rights existed, and that the rights promised in treaties were meaningful and enforceable.

Then in 1982, of course the Constitution and the Charter of Rights and freedoms were put in place. The Charter contains two particular important sections in relation to Aboriginal and treaty rights. First section 2 guaranteed in the charter, "shall not be construed so as to abrogate or derogate from any Aboriginal, treaty or other rights or freedoms that pertain to the Aboriginal peoples of Canada." Second, Section 35 recognizes and affirms "existing Aboriginal and treaty rights." The charter's creates inaugurated an era of much more robust recognition and enforcement of the rights guaranteed by treaties.

It seems to me very important that this changed legal context should be taken into account in this re-examination of Manitoba Hydro's licence to regulate the water levels in and around Lake Winnipeg. The extensive impact of this regulation on water levels, on water quality and ice conditions which often drastically affect fish and animal populations is directly relevant to Aboriginal peoples ability to exercise their treaty rights to hunt and fish.

Just some of the previous court

rulings I will quickly mention that are relevant to treaty interpretation. In Nowegijick versus the Queen, the Supreme Court of Canada made it clear that treaties are to be interpreted broadly rather than narrowly and that due regard must be had to the understanding of the Aboriginal parties who signed them. Justice Dickson, as he then was, stated for an unanimous court that,

> "Treaties and statutes relating to Indians should be liberally construed, and doubtful expressions resolved in favour of the Indians."

In R. v Badger, the court declared that,

> "Any limitations which restrict the rights of Indians under treaties must be narrowly construed."

In relation to hunting a particularly important ruling was contained in Simon v the Queen, concerning a 1752 treaty between the British Crown and the Mi'kmaq, and the extent to which it secured hunting rights to the Mi'kmaq that precluded the application of Provincial hunting registration. Chief Justice Dickson ruled that,

"Indian treaties should be given a fair, large and liberal construction in favour of the Indians."

With reference to hunting he found that the interpretation of the treaty right to hunt should be,

"Sensitive to the evolution of changes in normal hunting practices,"

And should,

"Ensure that the treaty will be an effective source of hunting rights."

Further,

"The right to hunt to be effective must embody those activities reasonably incidental to the act of hunting itself."

To get to treaty 5 itself, treaty 5 makes a number of significant guarantees. First it guarantees that the Aboriginal signatories have the right to hunt and fish throughout the treaty territory,

"Subject to such regulations as may from time to time be made by Her Government of Her Dominion of Canada, and saving and excepting such tracts

as may from time to time be required or taken up for settlement, mining, lumbering or other purposes."

Legal scholar Patrick Macklem has carefully analyzed the significance of this clause with respect to Treaty 9, made in Ontario in 1905-6, just before the adhesion to Treaty 5 in Northern Manitoba. He demonstrates, among other things, that only the Federal government may make regulations with respect to hunting and fishing, not Provincial governments. He also shows that treaty rights to hunt, fish and trap have been ruled by courts to include activities reasonably incidental to these occupations. It is reasonable to argue that this would include, for instance, the ability to travel through the land safely and to access territories for hunting, trapping and fishing. More over Macklem shows that,

"The right to fish entails a recognition of a right approximating a treaty right to water."

Another important feature of Treaty 5 is the following clause:

"It is further agreed between Her Majesty and Her said Indians that such

sections of the reserves above indicated as may at any time be required for public works or building may be appropriated for that purpose by Her Majesty's government, due compensation being made for the value of any improvements thereon."

This clause clearly establishes a set of principles concerning the appropriation of Aboriginal lands by government. First, it implies that notice will be given of the government's intention to appropriate lands. Second, it establishes that compensation will be paid for such lands. It is reasonable to suggest that the Aboriginal peoples who signed Treaty 5 expected these basic principles to be followed any time they lost further lands.

Finally, Treaty 5 stated the following:

"It is further agreed between Her Majesty and the said Indians that the sum of five hundred dollars per annum shall be every year expended by Her Majesty for ammunition and twine for nets."

This provision clearly showed that the government expected the Aboriginal signatories of Treaty 5 to make their living in part by fishing and hunting. The clause would undoubtedly reinforce in the minds of the Aboriginal peoples their expectation of continuing their ancient livelihood of living off the land.

I am going to skip the next paragraph to stay within my time.

Finally, according to Patrick Macklem's careful analysis of Treaty 9 and the relevant case law, existing Canadian jurisprudence,

> "Supports the conclusion that Aboriginal peoples have, by virtue of treaties establishing reserves in exchange for the surrender of ancestral lands, not only rights to an uninterrupted flow of water to reserve land, but also rights to water to sustain hunting and fishing rights."

Given the guarantee of Aboriginal hunting, trapping and fishing rights contained in Treaty 5, and the constitutional protection these rights enjoy under the Charter of Rights and

Freedoms since 1982, I submit that the Clean Environment Commission and also the Manitoba Government and Manitoba Hydro need to ensure that the construction and operation of the Lake Winnipeg project does not violate these rights. Indeed, these facts reveal the need for a more extended investigation of the impacts of the whole hydroelectric system on First Nations in Manitoba. I added a few sentences that aren't on the written copy.

Finally, it is essential that going forward Manitoba Hydro be required to consult with First Nations in its regulation of water levels. Courts have ranked Aboriginal rights to resources, second only to conservation needs. All other access rights are ranked lower than those of Aboriginal peoples. In future the Lake Winnipeg Regulation licence must reflect this constitutional requirement and ensure that Aboriginal and treaty rights are fully respected in accordance with Canadian law. Thank you.

THE CHAIRMAN: Thank you, Dr. Brownlie. Thank you both very much. Okay. That's our list for this evening. And we are actually a couple of minutes early, we all have a

bonus. So that concludes the proceedings for today. We will reconvene here tomorrow morning at 9:30 and continue cross-examination of Manitoba Hydro's panel.

MS. JOHNSON: We have documents that need to be read in. There is one that we missed from Manitoba Hydro yesterday, it will be MH number 9, it is a letter to Mr. Sargeant in response to a letter sent to Mr. Penner, February 23rd. Mr. Mason's presentation this evening is WPG number 1; Mr. Hodgson's is number 2; Ms. McMorris' is number 3; Ms. Kennedy Courcelles is number 4; Mr. Braun's is number 5; Mr. Desautels is number 6; Mr. Ellis is number 7; Mr. Cariou is number 8, and Mr. Brownlie is number 9.

(EXHIBIT MH 9: Letter to Mr. Sargeant in response to a letter sent to Mr. Penner, February 23rd)

(EXHIBIT WPG 1: Presentation by Mr. Mike Mason)

(EXHIBIT WPG 2: Presentation by Mr. Brian Hodgson)

(EXHIBIT WPG 3: Presentation by Ms. Penny McMorris)

(EXHIBIT WPG 4: Presentation by Ms. Cheryl Kennedy Courcelles)

(EXHIBIT WPG 5: Presentation by Mr. Will Braun)

(EXHIBIT WPG 6: Presentation by Mr. Maurice Desautels)

(EXHIBIT WPG 7: Presentation by Mr. Brian Ellis)

(EXHIBIT WPG 8: Presentation by Dr. Warren Cariou)

(EXHIBIT WPG 9: Presentation by Dr. Robin Brownlie)

THE CHAIRMAN: Okay. Now we stand adjourned until tomorrow morning.

(Concluded at 9:00 p.m.)

OFFICIAL EXAMINER'S CERTIFICATE

Cecelia Reid and Debra Kot, duly appointed Official Examiners in the Province of Manitoba, do hereby certify the foregoing pages are a true and correct transcript of my Stenotype notes as taken by us at the time and place hereinbefore stated to the best of our skill and ability.

Cecelia Reid

Official Examiner, Q.B.

Debra Kot

Official Examiner Q.B.