MANITOBA CLEAN ENVIRONMENT COMMISSION

LAKE WINNIPEG REGULATION REVIEW

UNDER THE WATER POWER ACT

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Transcript of Proceedings
Held at Alex Wood Rec Centre
Manigotagan, Manitoba
MONDAY, FEBRUARY 9, 2015

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APPEARANCES

CLEAN ENVIRONMENT COMMISSION
Terry Sargeant - Chairman
Edwin Yee - Commissioner
Neil Harden - Commissioner

Cathy Johnson - Commission Secretary
Joyce Mueller - Administrative Assistant
Bob Armstrong - Report writer
Melissa Hotaine - Community Liaison

MANITOBA HYDRO
Dale Hutchison

INDEX OF PROCEEDINGS

WEDNESDAY, FEBRUARY 9, 2015
UPON COMMENCING AT 7:00 P.M.

THE CHAIRMAN: Good evening, welcome. My name is Terry Sargeant, I'm the chair of the Clean Environment Commission and the chair of the panel. With me on the panel are Neil Harden and Edwin Yee. We also have a number of staff people with us, and some people from Manitoba Hydro.

We are here tonight because the Minister of Conservation and Water Stewardship asked us to conduct hearings in communities around Lake Winnipeg and in Northern Manitoba, and in the City of Winnipeg, to hear about any concerns people might have with Manitoba Hydro's regulation of Lake Winnipeg.

Now, there is more of us here than there are people from this area. And I'm not sure that any of you have any questions or comments you wish to make, but I thought we would have the introductory comments. Manitoba Hydro has a presentation that, since you have come out wanting to hear what this was about, we will have Manitoba Hydro make their presentation about what Lake Winnipeg Regulation involves. And then if any of

you have anything to say, we can just have a bit of a conversation.

So I will ask Dale Hutchison from Manitoba Hydro to make his presentation.

MR. HUTCHISON: Hi everyone. Thanks Terry.

My name is Dale Hutchison. Thank you for inviting me to Manigotagan to talk about our Lake Winnipeg Regulation project. I have been working with Manitoba Hydro for 15 years to understand our impacts on the waterways and on the people that we share them with. I will briefly go through the Manitoba Hydro system, Lake Winnipeg, and our Lake Winnipeg Regulation project.

I should mention I'm also joined by, or Barry Neufeld is also here from our customer service office.

So, a huge area from west to the Rocky Mountains, east to the edge of Lake Superior, and south into the Red River Valley of the United States flows into Lake Winnipeg. The shape of the land is like a million square kilometre bowl, and this is what makes hydroelectric development possible on a large scale in Manitoba.

There are 15 generating stations that

take advantage of the water that flows through Manitoba. These are shown on the map by the blue dots, and the size of the dots, small, medium and large, shows how much each generating station can produce. So on the Winnipeg River we have got six small stations. Across the lake on the Saskatchewan River, we have got a medium-sized generating station at Grand Rapids. The Nelson River flows into Hudson Bay. About 100 kilometres north of Lake Winnipeg on the west branch of the Nelson River, we have a small generating station at Jenpeg. North of the Nelson is the Churchill River. It also flows into Hudson Bay. However, rather than building generating stations on this far northern river, instead its waters were diverted through a project called the Churchill River diversion into the Nelson River. So this project involved putting a control structure, or a dam at the outflow of Southern Indian Lake, raising the level of the lake nine feet, and flowing most of the waters from the Churchill River into the Nelson, where it joins the Nelson River at Split Lake.

Wuskwatim is the newest generating station and it is on this Churchill River

Diversion route. So the main hydroelectric advantage of Churchill River Diversion is that from Split Lake downstream to the Hudson Bay the Nelson has the benefit of two rivers. And you can see by the large blue dots that our largest generating stations, Kettle, Long Spruce and Limestone, are located on this stretch of river downstream of Split lake. Keeyask, which will be a medium-sized generating station, is currently under construction.

To get the electricity from these northern stations to the south, we have got two high voltage bipole lines that run from Gillam, 1,000 kilometres, to a converter station near Winnipeg. There is a third bipole line that's currently being constructed. From the converter station near Winnipeg, electricity is sent over 100,000 kilometres of distribution lines to homes and businesses throughout Manitoba.

We also produce electricity using natural gas at our stations in Selkirk and Brandon. And in an emergency, we can use coal at our station in Brandon. We don't own them, but we purchase electricity from two wind farms at St. Leon and St. Joseph as well. All together the

Manitoba Hydro system uses water to produce 95 per cent of the electricity.

So now we will look at Lake Winnipeg. So this is the tenth largest freshwater lake in the world. It is Manitoba's great lake. There are over dozen rivers that flow into the lake, but there is only one natural outflow. This makes it easy for the lake to flood. Most of the Nelson River is wide but it is very shallow, and ice can block the flow of water out of the lake during the winter. Historically, this has caused problems for people living around the lake, to the point where highways have been closed, crops have been lost, homes and cottages have been damaged. This recurrent flooding had people put a lot of pressure on government to do something about it.

At the same time, the demand for electricity was growing in the Province. So in 1970, the Premier of Manitoba announced plans to proceed with Lake Winnipeg Regulation for power production on the Nelson River and flood control.

I'm changing up my presentation I'm noticing in my head.

So these are -- to talk about this recurrent flooding that was happening, these are

Winnipeg Free Press headlines and photographs of some of the recent flooding events, years like 1927, 1950, 1954, 1955, 1966, 1968, 1969, 1970. And so it was flooding like this that was the main reason, or a key reason for developing Lake Winnipeg Regulation.

So now we will talk about Lake Winnipeg Regulation, which I will call LWR, so I can save some breath. Before we could build LWR, we needed a licence from the Province. This is similar to getting a building permit before you build a house. This is called an interim licence and to get it we had to provide information to the Province about what we were planning to build and the effect it would have on water levels and flows.

In 1970, the Province granted us an interim licence which gave us the approval to build LWR. They also gave us rules for how it could be operated, and there were three types of rules. The first were operating ranges for Lake Winnipeg and some of the downstream lakes. So, for instance, on Lake Winnipeg between elevation 711 and 715, Manitoba Hydro can decide how much water to flow through Jenpeg in order to meet

electricity demands. Above elevation 715, we have to let as much water as possible out of the lake. This is called maximum discharge. And below elevation 711, it is the Minister of Conservation and Water Stewardship that tells us how much water to let out of the lake. The second type of rule is that we have to have a minimum flow of water out of Lake Winnipeg. And the third rule is we can't change the rate of water flow at Jenpeg too fast.

We agreed with these rules and built LWR by 1976.

In 2010, which is a few years ago, we applied for our final licence. We did this after many years of negotiations with communities, First Nations, resource user groups on the Nelson River in order to address impacts of LWR.

The final licence is good from 50 years from the date construction was completed. So in the case of LWR, the licence will expire, our final licence will expire in 11 years. And before that time, we will again make a request to have the licence renewed for up to another 50 years.

So LWR involved digging a second

outlet for Lake Winnipeg, along with two other channels, to increase the flow of water out of the lake. Of course, these three channels alone would drain the lake, so it was necessary to build a control structure or a dam at Jenpeg on the west branch of the Nelson River.

Now, using the example of a faucet, tub and drain, if all of the rivers flowing into Lake Winnipeg are represented by the water drop under the faucet, this drain represents the natural outflow, the Nelson River, and the water drop under it, how much water can flow out. You can see that there is a difference in size, which means that during floods you can have a lot more water entering the lake than can leave it. This causes the water level to rise and the lake to flood.

You can see in this lower diagram that there is a second outlet. This represents the LWR channel, it is half the size of the natural channel, but you can still see that these two water drops together are still smaller than the water drop under the faucet. So during floods the lake level will still rise and flood, but it won't rise quite as high and it won't be in flood for

quite as long.

And it is this difference between inflows and outflows that is the reason why LWR can influence the level of the lake, but it can't outright control the water level of the lake.

So people have different ideas about how LWR affects water levels on Lake Winnipeg. Some people think we keep the level of the lake higher all of the time, some people think we keep it lower. The Federal Government has been monitoring water levels on Lake Winnipeg for 100 years, and what this water level data shows is that the lake is behaving now just as it always did; during the spring and summer the water level rises, and over the fall and the winter the water level falls. If there is a drought in the watershed, the lake level gets low. If there is a flood, the lake level gets high. However, since 1976 when LWR was built, there is one noticeable change.

And I will have to use a graph, I'm afraid, to show what the influence is. What this graph shows is that LWR has reduced flooding on Lake Winnipeg, by comparing what the level of the lake is with LWR to what it would have been if LWR

did not exist. So the one side of the graph has the elevation above sea level. The bottom of the graph has 40 years from 1977, the first full year that LWR was in operation, up to 2015. The blue line represents the with LWR water level, and the red is an estimate of what the water level would be without LWR.

You probably noticed that the last ten years or so have been very wet, with a lot of water flowing into the Lake Winnipeg and down through the Nelson River. What this chart shows is that in flood years like 1997, 2005, 2011 and 2014, the lake would have gotten two feet higher and the flooding would have lasted much longer. So this information is demonstrating that LWR is meeting its goal of reducing flooding on Lake Winnipeg.

Now -- these are very light, I'm not that strong.

So what happens downstream of Lake Winnipeg? 20,000 people live along the Nelson River. Land and water are extremely important to their identity and livelihood. All Manitobans benefit by having reliable low cost electricity, and people around Lake Winnipeg benefit by having

the flood relief provided by LWR. However, people downstream have suffered by having more water flow out of the lake during winter and during times of flood. And this additional water has significant impacts on people downstream of Lake Winnipeg.

Under natural conditions, lake levels and river flows gradually decrease over the course of the winter. With LWR, water flows during the winter are higher, up to 50 per cent higher than they would have been without this project. This additional water causes ice impacts on the waterways which can make travel dangerous. It also negatively affects aquatic animals like beaver, mink, muskrat and otter. During the summer, any time the elevation of Lake Winnipeg gets close to or above elevation 715, Jenpeg goes to maximum discharge sending a surge of water down the Nelson River, which causes water level fluctuations. So, ultimately, changes in water flows from Lake Winnipeg Regulation have affected the cultural, commercial, spiritual and recreational pursuits of people living downstream of Lake Winnipeg.

Working together, in Cree this is called witatosketowin, with the people who live

and work on the Nelson River, Manitoba Hydro has been working to address these impacts of Lake Winnipeg Regulation, through agreements and other arrangements with all First Nations and communities on the Nelson River, through projects like the Cross Lake Weir, through programs for access and navigation, resource harvesting, archaeology and heritage resources, and recreation, as shown by the photos in this banner.

So that's the presentation. I hope you have a productive meeting. And Murray and I would be pleased to talk to you when you are finished with the Commissioners. Thank you.

THE CHAIRMAN: Thank you, Dale.

So that's the presentation. Do any of the three of you have any questions or comments you wish to make?

MS. HAPEL: Well, I guess, being that this community doesn't get a newspaper, I'm suspecting that's the unfortunate -- why there is not a lot of community members. And I know it went out in the Hydro bill too as an insert, but not everybody, obviously, didn't take note of it or understand perhaps.

THE CHAIRMAN: Well --

MS. HAPEL: Anyway, it is unfortunate.

THE CHAIRMAN: I suspect a lot of people don't even look at those inserts that come with bills.

MS. HAPEL: That could very well be.

I'm a recreational owner, I own a campground right along Lake Winnipeg.

THE CHAIRMAN: I should have noted in my introductory comments that we do record everything and we do produce a verbatim transcript which will be on our website within a few days. If you are going to speak, we have to use the mic so that it goes into the recorder. Sorry, I forgot that.

MS. HAPEL: I guess I had happened to pick up the newspaper in our neighboring community and I knew this was coming. So I had gone on the website and I guess looked at the presentation that we've just heard. So this Commission was asked by the Conservation to look at it?

THE CHAIRMAN: Yes.

MS. HAPEL: So then who, I guess looks at Manitoba Hydro when they are over the 715? I understand they let the water lower, but that's in default of this, whatever agreement that they

have. What ramifications do they have, outside of letting the water run faster out of Jenpeg?

THE CHAIRMAN: To my knowledge there aren't any ramifications. I don't think that there are any penalties, because often -- in fact, probably most often the excess water has nothing to do with Manitoba Hydro, it is high water years.

MS. HAPEL: Natural.

THE CHAIRMAN: It is natural. And the operating rules, as Dale said, require them, require Manitoba Hydro, when it is above 715 to have the gates fully opened to get the water out as much as possible.

MS. HAPEL: Um-hum. So, I'm fairly new to this community, I have only been here about 16 years. So in that time there was the flood of the century, and I'm right along the lake, and that year we did not notice any real difference to say that there was a flood. The lake level really didn't rise, it didn't hit our shoreline, or any erosion that we have seen in the last years.

THE CHAIRMAN: Which flood of the century? We have --

MS. HAPEL: Is that the one that was described?

THE CHAIRMAN: We have different years.

MS. HAPEL: I'm thinking it was '97.

THE CHAIRMAN: '97 is the one that Winnipegers call the flood of the century. Some people call 2011 flood of the century because that particularly hit Western Manitoba.

MS. HAPEL: Yeah, I thought that one was called a weather bomb. Another one, there has been so many, right? So I guess my question is, and taking into account that I haven't been here along the lake for that many years, and without dealing with weather, so in that time frame, like we have now opened up from Devil's Lake, right, there is more -- and I don't think this is a natural event, right, we are allowing water from another river system that didn't exist previously, and the whole Portage Diversion I suspect goes through the northern route and all of that. So there is still only that one outlet, but what my point is, there is more water outlets that are being allowed to come into Lake Winnipeg, so I guess the ramifications of that as well, right?

THE CHAIRMAN: That's very true. Although most of it is not really allowed, I don't

think Manitoba -- Manitoba would rather not have Devil's Lake water coming in, but that was a decision that was made unilaterally by the State of North Dakota. And I suspect that it is not a lot of water coming from Devil's Lake. But there have been, or there has been increased water, increased precipitation in southern North Dakota, or the southern Red River Valley, which adds to water coming into the Red River. There has been a lot more in Northwestern Ontario, which comes in through the Winnipeg River. There were a lot of news stories this summer about Lake of the Woods and how high the water was there this past summer. And then the last two out of the last three years, was it '11 and '14, the Saskatchewan River -- not the Saskatchewan River, the Assiniboine River coming from Saskatchewan had way more water than ever before.

MS. HAPEL: Um-hum.

THE CHAIRMAN: So that, you know, your basic premise is right, there is a lot more going in the last couple of years. How has it been here in the last couple of years? Is it higher?

MS. HAPEL: For us personally, we are right along the lake, and typically we would have

a beach that, like our business revolves around, and it has been non-existent. And we have had upwards of 50 feet of erosion within that time. And I guess what we notice daily, just from looking out our window, is that outside of the fact of the erosion, because the water level is continually so high, the vegetation doesn't have a chance to regrow. And after that in 1997 flood, there was a huge drought. And within that summer we had probably 300 feet of beach and it was covered with bulrushes, within one short summer that Manitoba has. And the next year, of course, the water came, but those bulrushes survived under the water, as whatever their natural state. And we had, I read an article from the University of Manitoba, and that had to do with the marshes, and we are constantly trying to find ways to have the vegetation come back, just for esthetic purposes, and I guess that's what seems to be the going buzz about keeping the lake healthy.

And their idea was to plant willows in a manner, not vertically, but horizontally so that you are making a netting with their roots. And I tried that, and in the spring they were all growing. And yeah, a month later, they never saw

daylight. And this was right up to where the shoreline is. So, I mean, that's our personal, what we see coming out of our window.

And I'm not sure on the wording of this agreement, but I thought somewhere I had read the average level. And that's correct, it is an average, a ten-year average, is that somewhere in the wording?

THE CHAIRMAN: Well, I think that some of the documentation has indicated an average level of the lake over the whole 40 years or so.

MS. HAPEL: See, my concern, my thought was then that if it is continually at a higher level, the average obviously rises, and that was sort of a concern.

THE CHAIRMAN: Yeah. I think that over the entire 40-year period, the average is more or less the same as natural. Within that there might be periods, particularly in the last couple of years with this excessive input, that the average level may be higher.

MS. HAPEL: Um-hum.

THE CHAIRMAN: Could I ask you to state your name for the record?

MS. HAPEL: Joanne Hapel, H-A-P-E-L.

So from this Commission, these are all going to be recorded, and then that's going to be something used to grant the plan, or whatever they have, as it is. Can we expect changes to it or --

THE CHAIRMAN: I can't tell you that now. Manitoba Hydro has asked for no changes. We still have -- this is week five now, or six, I think it is week five -- we still have another -- we are going to in total have about seven weeks of hearings. So our hearings are going to go until mid to late April. We still have another, a number of rural communities. We are in this area tomorrow, Berens River later in the week, back to Sagkeeng on Friday, and then back up north to Cross Lake next week. Then in early March, we are going to start in Winnipeg and go for, right now it is scheduled five weeks of hearings in Winnipeg, and then one more week up north in mid April. So we have a lot of hearings left. But what we hear in all of our communities, including this one, we will report in our -- or note in our report to the Minister what we have heard in the communities.

We will make some recommendations to the Minister, some of them may relate to the

licence. We also make non-licensing recommendations that are designed to address in general environmental issues that may not be specifically related to the licence. So we may make some of those to the Minister as well. But at this point, that won't -- what those recommendations might be won't be decided until after the final hearings in late April, when the panel sits down and starts talking about stuff.

MS. HAPEL: Um-hum.

THE CHAIRMAN: So, thanks for your comments. Anybody else? Nothing to say, it is okay?

MR. MONKMAN: William Monkman from Loon Straits.

Is it possible that holding the level of the lake higher than natural during the summer and getting these awful storms that we have been getting gives it a better chance for the erosion, more damage?

I grew up at Loon Straits. I fished on the lake for 47 years, and I've never seen so much erosion on the lake as the last few years, and most of it is in the fall with the big north winds. And possibly we would have lucked out if

the water was allowed to drain naturally down to where it could have been, and not caused this problem. And we have lost our dock system, we lost about 30 feet of solid clay from beside our dock, from that last big storm, and I think it was 2011, and everything is pretty well destroyed there. We have lost part of our road. We are trying to get funding to rebuild the road out of our community.

And so the question I guess was, to start, is it possible that we wouldn't have had this erosion if the lake was allowed to drain naturally?

THE CHAIRMAN: I think Manitoba Hydro would argue that they don't keep the lake artificially high, and I think Dale stated that in his comments. And as Dale also pointed out, the lake can actually drain about 50 per cent more now than it could before this project was completed.

Your basic premise, though, if the lake is higher when the fall storms hit, you know, will it cause more erosion? I think, and I'm not an expert, but I think that that is yes. But Hydro would argue, and with some basis, that that's natural. I mean, we know that the lake, as

Ms. Hapel just told us about her area, and we have heard from other people around the lake, the last few years in particular have been particularly high. And that's probably because of natural reasons -- well, it is because of natural reasons, there is more input coming into the lake.

So, you know, your basic premise, high water in the fall when the storms hit, yes, it is going to cause more erosion. Is it Hydro's fault? Probably not.

MR. MONKMAN: I guess my comment is, Hydro is good, but it is the damage that we see happening to our communities that really hurt.

THE CHAIRMAN: Thank you, Mr. Monkman, I really can't answer much more than I did so...

The two gentlemen that just arrived, do you have any comments that you want to say?

SPEAKER: We don't even know what it's about.

THE CHAIRMAN: Well, it is about Manitoba Hydro and their regulation of Lake Winnipeg. And we've been asked by the government to look at any impacts or effects caused by Lake Winnipeg Regulation.

Now, we did have an explanation

earlier before you came from Manitoba Hydro describing the project.

Anybody else have any more questions or comments they wish to make? We will wait a few more minutes, we will wait until at least 7:30, and if anyone else shows up or if any of you come up with questions that you would like to ask, just let us know, and we will try to -- if we don't have answer, we will make note of it, and it will become part of our record.

(RECESS TAKEN)

THE CHAIRMAN: So has anybody come up with any questions or comments they wish to make?

Well, in that case I think we will close the meeting. Thank you to those of you who did come out and thanks for your comments. Good night.

(Concluded at 7:30 p.m.)

OFFICIAL EXAMINER'S CERTIFICATE

I, CECELIA J. REID, a duly appointed Official Examiner in the Province of Manitoba, do hereby certify the foregoing pages are a true and correct transcript of my Stenotype notes as taken by me at the time and place hereinbefore stated, to the best of my skill and ability.

Cecelia J. Reid

Official Examiner, Q.B.