

Introduction

My name is Nelson Gerrard, and I have owned lakefront property at Hnausa since 1985. After almost 30 years of teaching, I now work in historical research, publishing, and livestock farming on land near the homestead taken by my great great grandparents 139 years ago. Both my home acreage at Hnausa and my farmland at Riverton are waterfront properties, so I live with Lake Winnipeg on a daily basis and I know it intimately. Both my properties are negatively impacted by chronic high water.



Lake Winnipeg is our very own prairie ocean, a virtual jewel in Manitoba's crown. It is truly a "multi-faceted resource" in every sense, one of Manitoba's greatest assets – environmentally, historically, aesthetically, and economically – and we all share the responsibility for its stewardship. That is why I have taken time to participate in this hearing – despite obvious misgivings that decisions have already been made.

In a Nutshell

There is so much that can be said on the issue of Lake Winnipeg regulation that it is hard to be brief. If I had only a minute or two to communicate what is most important, however, I would summarize in the following 8 points:

1. What we are facing is a very serious problem, and it is not a problem of public perception. It is an environmental problem with human rights implications.
2. Despite an often misleading narrative developed to legitimize the status quo, a very different truth is evident in the collective wisdom of those who know the lake – excessively high water levels have become a destructive "new norm" and Manitoba Hydro is insufficiently responsive in mitigating high water.
3. Current regulation practices disregard important site-specific conditions on the vulnerable and heavily populated South Basin.
4. Before a permanent license is granted, an impartial environmental impact study is needed to establish the actual effects of regulation, so that problems can be dealt with

effectively. The Erosion Advisory Group study done in 2000, thought by some to be such an environmental review, in fact expressly ruled out any environmental assessment.

5. The terms of the license need to be reviewed and tightened. No profit-driven corporation with vested interests should be relied upon to self-police.

6. Existing infrastructure enables MH to increase outflow by 50%, so prudent regulation does have tremendous potential to solve high water problems in all but the most extreme cases. With the ability to prevent flooding comes the moral and legal responsibility to do so – to the full extent possible.

7. 21st century technology needs to be applied to improve efficiency at problematic sites such as Jenpeg – the only station affected by Lake Winnipeg water levels.

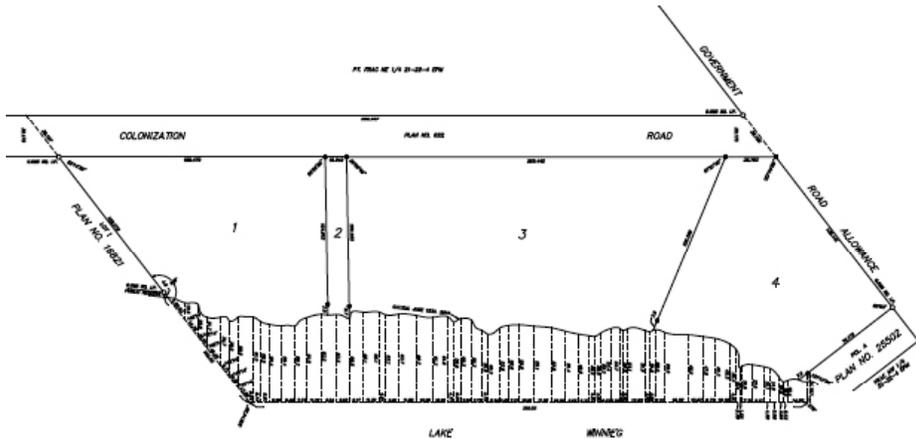
8. This is not a choice between hydro profitability or loss. It is a choice between responsible stewardship and environmental neglect.

“An Inconvenient Truth”

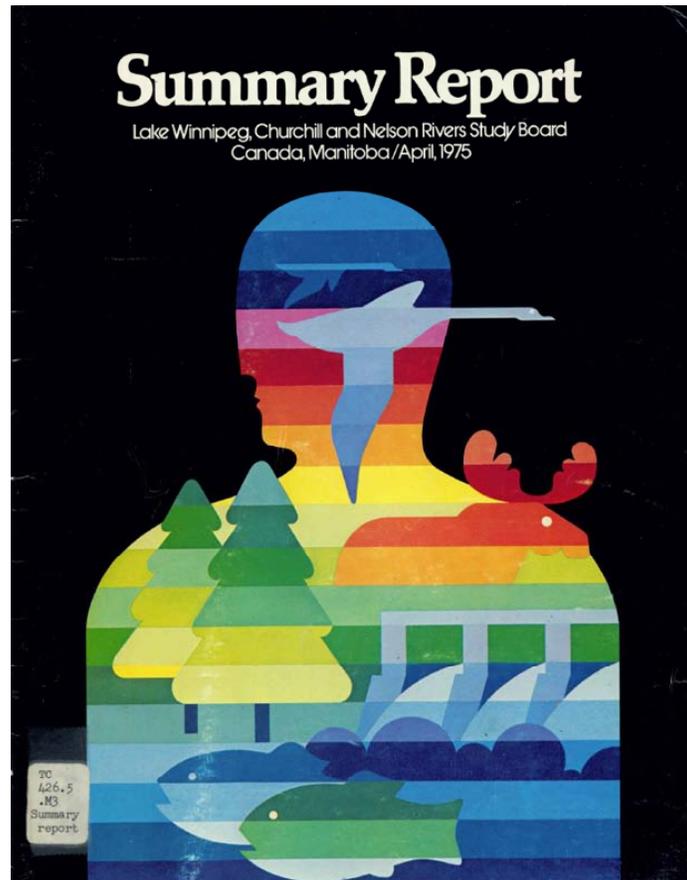


If any doubt exists as to the sad state of Lake Winnipeg’s South Basin, consider these facts. Once characterized by beautiful beaches, the degraded shorelines of Lake Winnipeg are now under constant siege by damaging high water. A chronic epidemic of shoreline erosion has spread like cancer, permanently destroying beaches and eating away at properties. Barricades of rock, paid for by desperate homeowners, have replaced beaches, and the ragtag remnants of ill-conceived, eroding mud-dikes built atop crumbling lakeshore, recall a recent multi-million dollar engineering boondoggle paid for by Manitoba taxpayers. It is no longer uncommon for water levels to lap at ground level and spill over the banks in locations where flooding was historically unknown. Pent up by regulation, the lake has become an unflushed toilet blighted by algae. Sand beaches and sandbars have long since disappeared due to sustained high water and unrelenting waves that now dig away at beaches of mud. No matter how much land it consumes, the swollen lake continues to seek new bounds. Potential residents look elsewhere to invest their savings and build their dream homes. Real estate values stagnate and properties go

unsold for years. The tax base for local municipalities erodes along with the land. Once productive farmlands that sustained families for a century, even with periodic natural flooding, are now swamps. Fragile wildlife habitat and wetlands disappear under the waves. **And over all this hangs a pall of fear, mistrust, and cynicism.** For many, and I include myself, the dream of living on Lake Winnipeg has become a recurrent nightmare.



Background: Lake Winnipeg Regulation and the Summary Report



The effects of LWR were spelled out when plans for this project were first released to the public in 1975 – some 40 years ago. The *Summary Report* of the Lake Winnipeg, Churchill and Nelson Rivers Study Board, clearly states the anticipated consequences of regulation – acknowledging permanent changes to the lake’s water regime, galloping increases in erosion by as much as 100%, and the government’s moral responsibility to compensate those adversely affected:

“The operation of the Lake Winnipeg regulation project will alter the water regime of the lake... The long-term average level after regulation is expected to be raised by 0.65 feet from elevation 713.35 feet to 714.0 feet...” (page 31) (Note: This would be an increase of just under 8 inches)

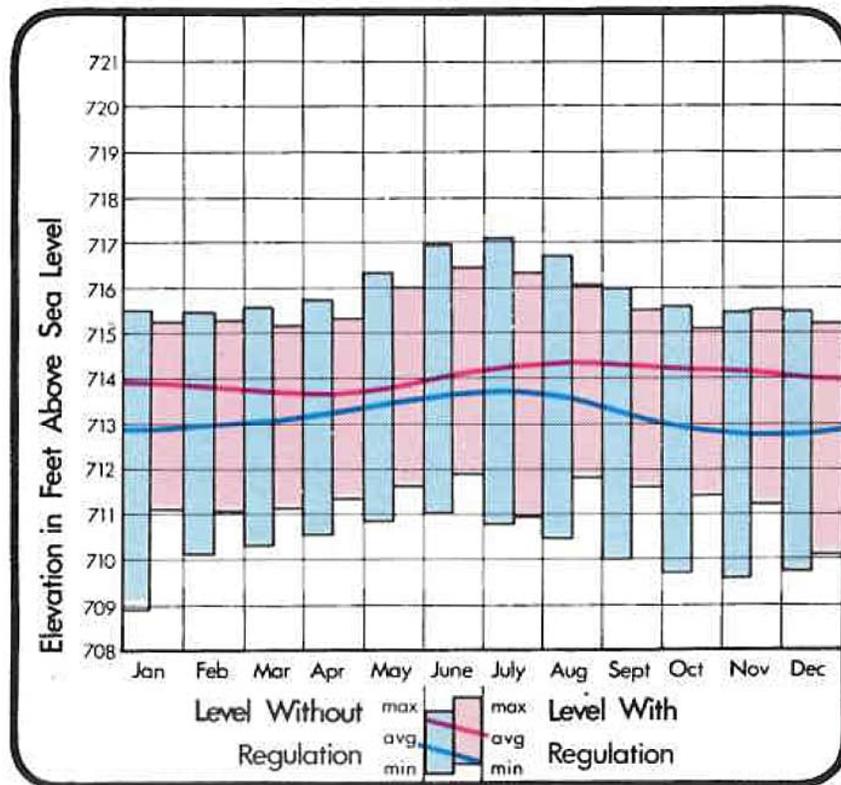
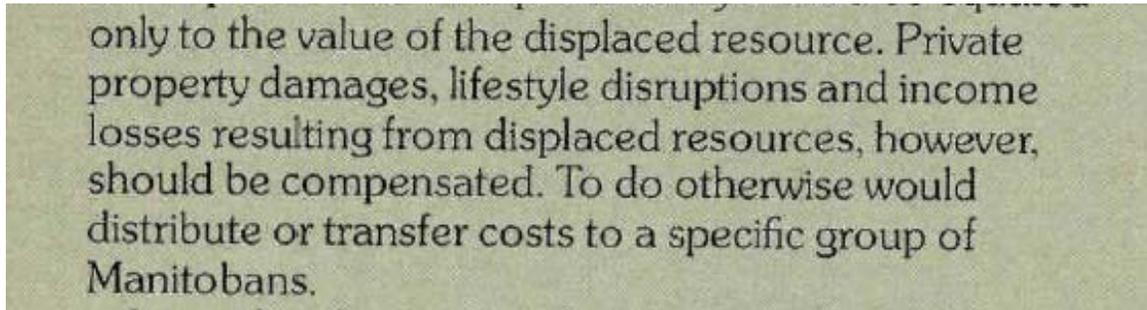


Figure 8: Lake Winnipeg Water Level

Furthermore, “The adjustment of the shore profile to the new higher lake levels will result in a landward profile shift [ie: erosion] of between 5 and 75 feet... ..the profile shift [erosion] which may be considered as damage attributable to...regulation... was calculated by using two erosion-time models... The model giving the lower limit suggests that the profile shift [erosion] would occur over a period of 5 to 40 years and that approximately 20% of the land loss...would be attributable to ...regulation... The model giving the upper limit suggests that the profile shift [erosion] would occur over a period of 20 to 200 years and implies that 100% of the

land loss associated with the profile shift would be attributable to the project...” (i.e. Lake Winnipeg Regulation)” (page 31-32)

And finally...



only to the value of the displaced resource. Private property damages, lifestyle disruptions and income losses resulting from displaced resources, however, should be compensated. To do otherwise would distribute or transfer costs to a specific group of Manitobans.

Excerpt from the recommendations of the Summary Report (page 56)

In other words, unless those affected by the consequences of regulation are directly compensated, they are subsidizing the cost of hydro production while Manitoba Hydro claims massive profits.

The Official Narrative:

1. No Change in Water Levels

In contradiction to the *Summary Report* and the observations of lakeshore residents, the official narrative of Manitoba Hydro and the Manitoba Government is that water levels are virtually unchanged – 713.4 to 713.6.

The average Lake Winnipeg water level before LWR was 713.4 feet. This average was made up of periods of lower and higher levels. Although we've been in a period of higher than normal in recent years due to above average water supplies to Lake Winnipeg, there have also been periods of lower levels resulting in a similar average post-LWR water level of 713.6 feet.

(Manitoba Hydro: LWR Responses, 2015)

On this basis, both Manitoba Hydro and the Manitoba Government steadfastly maintain that post-regulation water levels on Lake Winnipeg are benign with regard to erosion. These statistics, however, conceal a disturbing new trend that has resulted in a “new norm”, since 1992, of dramatically higher levels averaging some 8-12 inches.

When the *Summary Report* was tabled in a meeting at the Manitoba Legislature, with the Minister Responsible for Hydro, Manitoba Hydro President, Chief Hydraulic Engineer,

First Nations representatives, and numerous stakeholders, all eyes turned to the Chief Hydraulic Engineer for clarification. His response, “That’s an old study.”

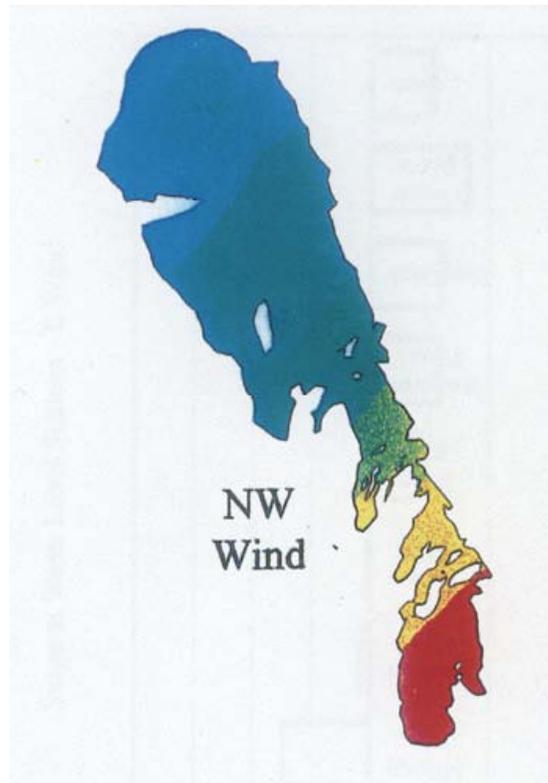
Old study or not, there can be no doubt that the general conclusions are just as valid today as they were in 1975. Common sense alone confirms that the galloping erosion forecast in the *Summary Report* is exactly what the public has been witnessing over the last decades. Hydro maintains that water levels forecast in the *Summary Report* have not materialized, but in fact even the official statement quoted above acknowledges a long term increase of .2 ft. or 2.4 inches. The precise extent of the increase and the increased damage may be open to debate, but it would be absurd to refute what eye-witnesses have been observing first hand over many years.

It is important to note that erosion rates are also transformed by an “altered water regime”. For example, a relatively constant level of 713.5 (without high/low fluctuations) is more destructive than a fluctuating average level of 713.5 (with high/low fluctuations). The reason is that sand beaches and sandbars, which are created when water is low, are a shoreline’s greatest defense against occasional high water damage. Sand beaches are permanently destroyed by sustained high water, which removes sand from beaches and never allows it to redeposit. With winds, wave action, and average waters levels all equal, erosion is therefore greater under a regime of sustained high water.

The comparison of pre- and post-regulation levels is also highly problematic in that it is a comparison of apples and oranges. For most of the pre-regulation period, only two water measuring stations were in use. These were relatively rudimentary and one was later found to be in error. Pre-regulation readings, of course, were actual water levels – not “wind eliminated” levels. Because Manitoba has northwest prevailing winds and these stations were both in the south, especially Winnipeg Beach, readings were obviously higher than average. A long-term average based on these figures would therefore be abnormally high – giving an erroneous impression of average water levels on the lake as a whole. Today, readings are taken at eight stations, many of them in the North Basin. Of course attempts have been made to reconcile figures, but in the end, official “wind eliminated” pre-regulation levels varied between 712.9 and 713.4 – a difference of 6 inches.

The vulnerability of statistics to manipulation and error is well known, and while the Erosion Advisory Group study of 2000 found “no significant problems” with the methodology currently used to calculate “wind eliminated” statistics for Lake Winnipeg, it makes no attempt to evaluate the accuracy of a pre-regulation average for comparison purposes.

These numbers are therefore unreliable and potentially misleading – and certainly they are less reliable than day to day observations of actual water levels as they affect our lives. The abstract concept of “wind eliminated” levels, while it may be theoretically expedient, does not represent reality for those living with Lake Winnipeg, and this fact must be given due consideration within a plan for responsible regulation.



Another significant but under-recognized factor that warrants consideration in regulation policy is a phenomenon called *seiche*, which might be defined as “slosh effect”. This is a frequent problem in the South Basin when strong northerly winds subside. Just as water in a shallow pan slops from side to side, so does water in a shallow lake. The result is not unlike a tidal wave, created by a build-up of wind-driven water. In this case, the west shoreline of Lake Winnipeg, particularly the area between Arnes and Hecla Island, can sustain sudden water level increases of several feet in a short time. The causeway to Hecla Island, which blocks one of three channels, is also believed to be a contributing factor.

As part of its official narrative, Manitoba Hydro has often proclaimed that erosion is simply a natural process and that lower water levels would not eliminate erosion. This is an affront to the intelligence of the public. What is at issue is not natural erosion, but erosion made worse by man’s intervention – and it is a simple fact that even a modest hike in water levels will result in significantly greater erosion under identical circumstances.

It has also been claimed that it is not water level, but wind that creates erosion, and Manitoba Hydro does not control the winds!! Such rhetoric is not helpful.

2. “Wet Cycle”: Nothing we Can Do...

While even the acknowledged increase of 2.4 inches over the long term is undoubtedly part of the explanation for the severe erosion taking place in the South Basin, a dangerous new trend is behind the destruction being witnessed. As acknowledged by Manitoba Hydro’s Chief Hydraulic engineer in 1998, the new average of Lake Winnipeg water levels for the period 1992 to 1998 was approximately 8 inches above the long-term norm - though he was quick to add that this was due to a “wet cycle” and would have been worse without regulation. Since that time, lake levels have remained excessively high, so the “new norm” over the last 20 or so years is now far above the acknowledged figure of 713.6.

That a “wet cycle” is responsible for this sustained high water, often exceeding the 715 mark, has been Manitoba Hydro’s position since the 1980’s – along with the claim that there is nothing they can do about it. This is less than forthright, however, given the fact that Manitoba Hydro has consistently refused to release water even when they are informed that crisis situations exist on Lake Winnipeg. The fact is, it is their policy to avoid spilling water until levels exceed the 715 mark, in full knowledge that levels will continue to rise even after maximum discharge is effected. Though this was undoubtedly not the intent of those who drafted the license, this is done within the letter of the license, which only requires that water be discharged after 715 has been exceeded.

In 1996, for example, Manitoba Hydro refused to spill high water throughout the summer, despite severe damages and direct appeals from the public. High water on the Winnipeg River system, which contributes almost 50% of the lake’s inflow, was then dumped during the winter of 1996-97, raising levels even higher during the winter months, and the disaster that followed in the spring and summer of 1997 is a matter of record. In light of that fiasco and with flooding imminent again in 1998, it would have seemed reasonable to expect that Manitoba Hydro would use maximize discharge to get the lake down to safer levels, but on Ag.1.1997, after just three months, Manitoba Hydro reverted to its policy of retaining water by closing the spillway at Jenpeg. Their reasoning was that levels had dropped to 715, so they were no longer required to spill water. The result of that decision was yet another debacle in the South Basin, and this policy subsequently resulted in such a glut of water in the system that lake levels have risen above 715 on a regular basis for since that time.

QuickTime™ and a
decompressor
are needed to see this picture.

This practice of hording water as inventory [and deliberately refusing to release it as a precautionary measure](#) has resulted in extreme long term water levels in excess of 715 (wind eliminated) on nine occasions between 1979 and 2013 – six of these during just eight years (between 2005 and 2013)! I cannot help but notice that 2014 is not included on this list, despite the fact that flooding was imminent throughout the summer and fall of 2014, even on property such as mine (seen below), which at 720-722 has never been flood prone. It was only by a miracle that we escaped this crisis without a fall storm.



Such failure to take reasonable precautions is not unlike a driver approaching an intersection at high speed. Whether he total disregards the stop sign before running it - or possibly applies the brakes just a little - he clearly poses an unreasonable risk to others.

In law, the definition of negligence is: *“Conduct that falls below the standards of behavior established by law for the protection of others against unreasonable risk of harm. A person has acted negligently if he or she has departed from the conduct expected of a reasonably prudent person acting under similar circumstances.”*

QuickTime™ and a
decompressor
are needed to see this picture.

There is of course, a grain of truth in the official narrative that regulation can benefit Lake Winnipeg property owners by eliminating extreme high water. No one would be foolish enough to suggest that judicious regulation does not have tremendous potential for good, and now that billions of dollars have been spent on infrastructure and technology, it would seem reasonable to expect that a Crown Corporation empowered with the means to avert harm also has the obligation – moral and legal - to exercise those means to the full extent, not just a little, too late.

3. Isostatic Rebound: Red Flags and ‘Red Herrings’...

A disturbing ‘red flag’ in the official narrative around regulation has been the use of “red herrings” to cloud the issue. Perhaps the clearest example is the attempt to pass off “isostatic rebound” as a significant factor in high water. [During a meeting at the Manitoba Legislature, our delegation’s time was taken up by a lengthy presentation on isostatic rebound, and Manitoba Hydro later flew in an expert on this subject, to meet with a delegation of property owners at Hnaua.](#) Since the release or retention of water at Jenpeg is in fact a deliberate decision made by Manitoba Hydro, isostatic rebound really has nothing to do with regulation. What then is the intent of Manitoba Hydro in making it seem so?

QuickTime™ and a
decompressor
are needed to see this picture.

Over the years, strategically-timed press releases have also been a standard component of a narrative designed to shape public perception. During the critical high water of 1997, for example, after two years of extreme damage, Manitoba Hydro boasted in *Hydro Lines* (Sept. 1997) of “\$101 million... the highest level of earnings in the Corporation’s history.” Throwing profits in the face of people who have just suffered severe damages without any compensation is, at best, in poor taste. Profits are not a justification for environmental damage and human rights violations.

News releases bordering on pandering and fear mongering have also been used. Reminders that Manitobans enjoy among the lowest hydro rates in North America are popular, and the spectre of “brown outs” has been raised.

Concluding Thoughts & Recommendations

For decades now, Government has kept lock-step with Manitoba Hydro. Government personnel come and go over time, and because the technical details of regulation seem complex, it has been standard practice to defer to Manitoba Hydro on issues around Lake Winnipeg regulation.

In this day and age of greater transparency and accountability, however, it has become evident that errors in judgment are not uncommon, even at high levels. As case after case in the media has shown, [whether it be SNC Lavalin or the Algo Mall in Elliot Lake](#), the need for objective “oversight” is becoming increasingly clear.

A striking recent example is Premier Selinger’s public apology to the Pemicikamak (*pim ih chik uh mak*) Cree First Nation, acknowledging for the first time “...the harms that have been done... through hydro development...”



It was no doubt difficult for Premier Selinger to concede error, even though it was not his fault, and it is heartening to witness this new candour and shift toward accountability. It was no doubt even more difficult, however, for the people of Cross Lake to wrest this admission from the government, and the few awkward moments of the apology itself were nothing compared to the years of frustration of those affected – frustration not only at the injustice itself, but at the denial. To paraphrase the words of a band spokesman, this apology came as cold comfort after 37 years of repeated denial and dismissal by both Manitoba Hydro and successive Manitoba governments.

CBCnews | Manitoba

Home World Canada Politics Business Health Arts & Entertainment Technology & Science Community Weather Video

Canada Manitoba Photo Galleries

Manitoba First Nation to get apology from premier for Jenpeg dam harm

Occupation of hydro project ends after Manitoba Hydro, Pimicikamak Cree Nation reach agreement

CBC News Posted: Nov 28, 2014 1:55 PM CT | Last Updated: Nov 28, 2014 3:14 PM CT

Members of the Pimicikamak Cree Nation protest outside Manitoba Hydro's headquarters building in downtown Winnipeg on Oct. 23 to raise concerns about the Jenpeg hydroelectric power-generating station. (Marjorie Dowhos/CBC)

Stay Connected with CBC News

Mobile Facebook Podcasts Twitter Alerts Newsletter

Latest Manitoba News Headlines

- Maclean's claim that Winnipeg is Canada's most racist city upsets mayor 238
- Winnipeg man gets 13 months jail time for long list of weapons charges
- Freezing rain warning issued for part of western Manitoba 1
- Badiuk case headed for court? School trustee calls case ground-breaking
- Murder, manslaughter charges laid against family in Manitoba firefighter's death

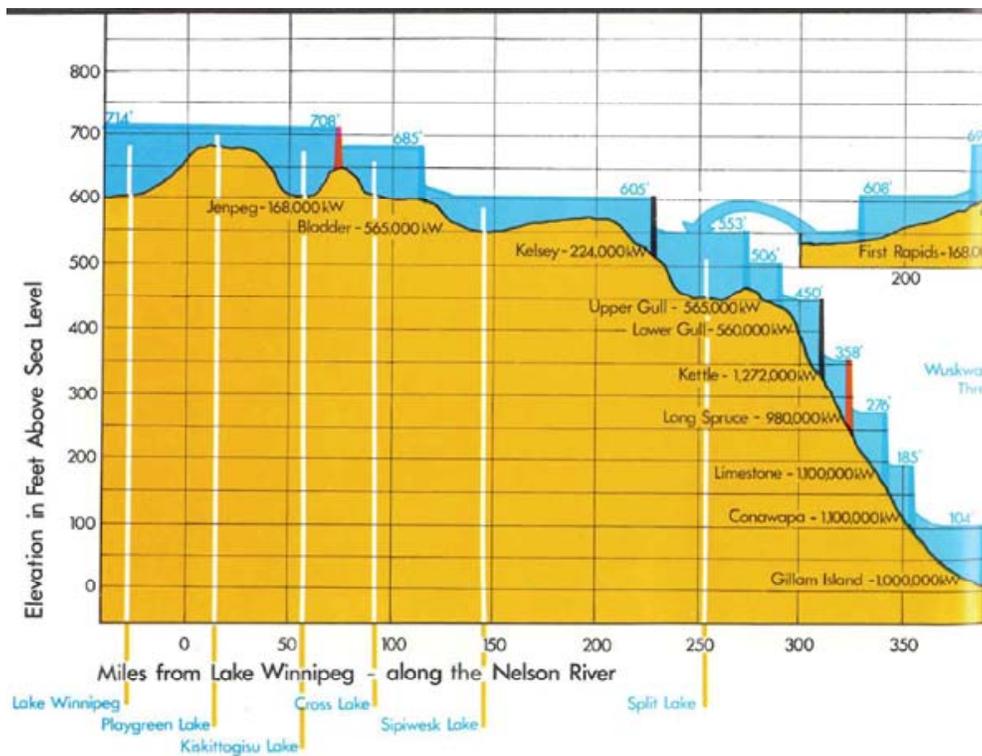
The true impact of Lake Winnipeg regulation - so painfully obvious that we are reminded of the Emperor's new clothes - will also eventually become a matter of record, whether through the government's own decision to take things in hand, or through litigation, or investigative journalism. The admission of error and "harms done... through hydro development" will then also be shown to apply to the people of the South Basin of Lake

Winnipeg. Though site specifics differ between North and South, the same principle applies.

It is not too late for Government to intercede and get on the right side of history. Hard questions must be asked, however, and an impartial environmental impact study is needed to sort out the facts. [The Erosion Advisory Group study of 2000 expressly excluded any environmental assessment.](#)

Nor should Government accept that the choice is between Manitoba Hydro's continuing on its present course – or financial ruin and brown-outs. LWR was designed to operate over a 4 foot range of water levels, and if for some reason, due to design problems, extreme high water is required to keep Jenpeg operating, new technology should be used to make Jenpeg more efficient. For example, if the forebay at Jenpeg was enclosed (which is much more doable than diking the entire South Basin), water elevation at intake could be maintained at any level by electric pumping stations. This would make Jenpeg independent of Lake Winnipeg water levels. [There would then be no need to keep Lake Winnipeg at glutted highs, at tremendous cost to the environment and stakeholders.](#)

Jenpeg, which is a minor facility, is the only generating station that relies on high water on Lake Winnipeg – [and even it was designed to operate at levels as low as 711](#). As all other stations are downstream, at much lower elevations, they are unaffected, whether Lake Winnipeg stands at 715 or 711.



If Jenpeg is the problem, maybe the out-dated Russian turbines should be upgraded or replaced by something more efficient. If this or other solutions are impractical, perhaps it is time to decommission Jenpeg as a generating station altogether. It is of minor consequence in the grand scale of Hydro's projects and was originally conceived as a water control facility – not a generating station.

Lake Winnipeg regulation, despite all the modern technology available, has been used more like a blunt object than a fine tuned instrument to balance the interests of business with due diligence toward the environment. The regulation regime, as it is currently being applied, is ruining a priceless resource. Refinements and alterations are desperately needed

One badly needed change to the license is a reduction in the level at which mandatory water release takes effect – at the very least to 714. As Manitoba Hydro points out, this does not mean that water levels would never rise above 714, but it would curtail the number of times that the 715 benchmark is exceeded. It would mean that Manitoba Hydro would be required to start applying the breaks well before running the stop sign.

With due regard for the effects of releases on communities downstream, it would also be in their best interest that water is spilled gradually and over time, before crisis levels are reached.

In conclusion, it is in the best interests of all that the terms of this license are carefully reviewed and revised to achieve much needed change and better outcomes.