International Joint Commission
Transcript of Public Hearing
Order of Approval for Lake Osoyoos Regulation
Best Western Plus Sunrise Inn, 5506 Main Street
Osoyoos, British Columbia
Wednesday, July 25, 2012 at 7:00 p.m.

BRIAN SYMONDS (Member, Canadian Section, International Osoyoos Lake Board of Control / Director, Regional Operations, British Columbia Ministry of Forest, Lands, and Natural Resource Operations): So, just to make sure I get this working right, I believe it's on. Right there, okay.

So what I'm going to talk about first of all is a little bit about the International Joint Commission, so that people get an understanding of how we all…all of the pieces fit together.

So the International Joint Commission is a body that's been organized and appointed by senior levels of government in both countries, and there are three commissioners on each side of the border, and they work as a team and not, you know, sort of (inaudible)...work as a team.

And the purpose of the board is to prevent and resolve disputes over transboundary water issues and look after environmental issues as they arise as well.

And they are a quasi-judicial body. So what that means is they make decisions, they look at things, they hold hearings such as the one we're doing

tonight, and going from there, they make these decisions, and they're not subject to a judicial review. So unlike some types of decisions that are made, you know, a lot of the legislation and stuff (inaudible)...judicial review or some sort of process, their decisions are not.

They rule on applications. Applications are something that's brought forward typically by the neighbouring states or provinces or other reasons, but they rule on applications to approve certain types of projects that affect boundary…water on the boundary.

So it could be something like flows, but it could also be something as the case of Zosel Dam, which affects water levels on both sides of the border. So even though the dam is only on one side, how it's operated and how it's managed will affect the water levels on the other side.

They also investigate issues that are referred to them by governments, and make non-binding recommendations for resolution.

So this is just a picture of some of the members of the Commission. On the top are the two current Canadian commissioners: Commissioner Knott is with us down the table here, Commissioner Comuzzi is not here, but is he on the phone…?

UNIDENTIFIED: Yes.

BRIAN SYMONDS: He is. So he's not in the room, but he's listening in on the conversation and taking in the meeting.

JOSEPH COMUZZI (Chair, Canadian Section, International Joint Commission): Oh, I am here and listening intently to what your presentation is going to be. I am also joined in Ottawa by our legal counsel, Mr. Murphy, in the event that there is any questions that will require his skills. I am also joined by our human resources person in the event that there may be some issues that people want to discuss about human resources, and that's Mr. Nsoga, and Rose Désilets, our assistant commissioner…the assistant to the commissioners.

And in the meeting location, I think there is Tom McAuley and Bernard Beckoff from the Ottawa office. Is that correct?

BRIAN SYMONDS: That's correct.

JOSEPH COMUZZI: Good, okay. I want you to know that there is seven people from the Ottawa office available for assistance if need be.

BRIAN SYMONDS: Thank you very much. Thank you. Also at the table, we have already seen the three of them here, but the three U.S. commissioners are here. So Dereth Glance is immediately on my left, Rich Moy three seats down, and Lana Pollack at the far end down there.

So within its mandate, as was mentioned already, rules on applications, conducts reference studies, and establishes boards of control or study boards, they (inaudible) task forces, they hold public hearings such as what's happening tonight, use joint fact-finding and best science to inform some of their decisions and deliberations and facilitate the management of shared water bodies through

orders of approval, such as apply in the case of Osoyoos Lake, boards of control, and also, more recently, looking at International Watershed boards.

Some of you may have attended the science forums that were held here a year ago roughly, and at that time it was one of the concepts that was tossed around.

So what I'm going to talk about now is the IJC and the International Osoyoos Lake, the Board. So just, the reason we're here is because this dam, the Zosel Dam here, the Zosel Dam is on the U.S. side. It's not right at the outlet of the lake, for those of you who know the geography, it's a little ways down.

But what it does is it has four gates here, and I'll talk more about those later on. There are also two fishways in the dam, one on either side. And there's thing here, you can't see the whole thing, but it's an overflow spillway that has some unique characteristics in how it's managed.

The IJC first became involved in Osoyoos Lake in 1943. And what happened is if you go back and sort of look at what was going on in the Okanagan, in 1942, there was some fairly high water. It was quite a high year, there was problems in a number of areas, not just in the Okanagan, but elsewhere around this part of the world as well.

But in 1942, the levels got quite high, not only here, but on the lakes all up and down the system, on many rivers. And so the IJC actually (inaudible)...Board of Engineers, somebody from each side of the border look at things that might have affected Osoyoos Lake in particular.

And so what they did is they said, well, is there something going on in the upstream side, some of the dams (?) on the Canadian side that might have led to some of these problems that they saw in 1942, and also was there anything in the outlet sort of end of it, so where the water comes out of the lake.

And one of the things they looked at and encountered there was an old dam that had been built – not old dam at that time – it was built in 1942 by Zosel Mill. And Zosel Mill is a mill in Oroville, and what they used the dam for was to actually a booming sort of thing, a mill pond, they'd bring logs into there and then they had…just take it up into the mill and they would then use them.

And as they looked at it, they found that this dam had actually had an impact on what was going on in the level of Osoyoos Lake. And so they made, as part of the investigation, some recommendations then to modify the dam, and it became (inaudible) Orders of the IJC.

So there was an Order issued in 1946 that said that structure, here are some changes you need to make, this is what will happen, this is the way it's going to be managed.

And if you really look at it, there's a lot of similarities to some of the things that were actually put into the Order back at that time, some of the provisions. You'll hear something I'll talk about in a few minutes about the 2,500 cfs capacity, those kinds of things, they were already thinking about those.

And then what happened, the mill was sort of (inaudible)...after a while, they ceased to need the dam, there was a different way of bringing logs into the

mill. And so in 1960, it sort of fell into disuse, and eventually, over time, it started to deteriorate.

And then, around 1980, the State made an application to see the dam replaced, because there was concerns about sort of the safety, integrity of what this would be, and it was starting to fail in different ways.

And as a result, in 1981, there were some joint hearings that went about again, similar to this, what we're doing today, and they looked at the application made by the State and said, well, you know, what should happen, should we approve this application to rebuild the dam or what?

And as coming out of that, there was an Order issued in 1982 that said, yes, it can be constructed, and here's certain terms and conditions under which it would be constructed. So that was the 1982 Order.

And them, as they went along - and it was jointly funded actually by both Canada and the U.S. – as it went along, what they did is they decided that the location that was originally planned wasn't the best location for the dam, that it should actually be moved slightly from where it was.

And because of that, there was another shorter (inaudible) round of hearings that went on, and the decision was made to issue another amending Order in 1985. And that is what are the Orders that we continue to operate on as of today.

So (inaudible)...that's what came in (?). They also, as part of the Orders, allowed for the appointing of a Board of Control to monitor the provisions of the

Orders. So what the Board does is sort of look at how the Orders are being…how the applicant – this is the term I'll use, in this case the State of Washington, through the Department of Ecology – how they actually operate the dam and are they doing it in accordance with the terms and conditions of the Orders.

So, just again, to remind everybody of the geography here, the Okanagan, which is this larger basin here, Okanagan with an O – for those of you not familiar on the U.S. side, it's spelled with an O, an extra O; in Canada we've got an extra A just because we say eh (LAUGHS) – but the key thing here is it's part of the Columbia system as well too.

So if you know the Columbia at all, one of the big dams is the Grand Coulee (inaudible)...there's Chief Joseph Dam, then the Okanagan comes in right above what's called Wells Dam, then there's nine major dams, you know, from Wells Dam on down to the Pacific Ocean, as the Columbia goes down and finds its way down into there.

So this is the Okanagan watershed as a whole. Now there's two basins here, watersheds that are important. This is the Okanagan in Canada over here. And of course, it includes Okanagan (inaudible)...regulated by the dam in Penticton (inaudible)...between Penticton and the border itself.

Then, the other thing that a lot of people don't think about, particularly on the Canadian side, less so on the U.S. side, is the Similkameen. It's coming out of Manning Park, the head waters, and also some other parts coming out of the U.S. here as well, they drain into here and they come down, cross the border at

Nighthawk, and then join with the outflow from Okanagan…or sorry, Osoyoos Lake, to join the Okanagan a short distance downstream from Zosel Dam, so just down below Oroville.

So if you look into Oroville, you'll see the Similkameen coming in from the west and the Okanagan coming together. Really important, and I'll talk more about it later, but that has an influence on what happens with Osoyoos Lake.

So Osoyoos Lake, this is where it is. Then there's the park as you come out of here, and there's some works in the park that are actually associated with the Order as well, too, and part of the project.

The channel down here has got some issues, and then this is where the dam is, and then the confluence is sort of…or the two confluence of the two is somewhere down here, just below…if you drive down south, you cross the river on the Highway 97 as you're going down there, and then where the two rivers come together is a ways down. It actually moves around depending on the conditions, where they big cross-connect there. But really important to keep that dynamic of the two rivers in play.

Now just to put into context why that becomes important, if you look at the two watersheds, they're not that different in size. The Similkameen is probably 20 per cent larger in size by the time you get down there, compared with the Okanagan. But – this is before the joining (?) part – the flows in there are quite different.

If you look at the annual runoff coming out of the Similkameen, it's a wetter watershed, it has more mountains (?), it doesn't have the lakes to attenuate it, it's not as much in a (inaudible). Three and a half to four times the flow comes out of the Similkameen, even though they're comparable in size, like roughly 20 per cent larger, the Similkameen, 3.5 to 4 times the flow coming out of there on an annual basis is coming out of the Okanagan, just in terms of straight volume.

But what's even more important - and why it becomes important in the Orders here – is that there's no large lakes. If you look at them, the watersheds, over here, there's no real lakes of any significance, but here, there's lots of lakes. And why that's important is that a lake will tend to attenuate or modify the way the runoff will come when the snow is melting. Both these watersheds are dominated by snow melt, but if you have a lake, it goes in and it stores it.

And we see what's going on on the large lake, particularly the Okanagan Lake, we'll see the runoff coming in at…well, this year, we had runoff that was about four times what we could physically let out of the lake coming in at certain times, whereas in a case like the Similkameen, it'll just running down. It doesn't have that ability to see that modification.

So you'll see that the peaks, even though the average flows, you know, take 3.5 to 4 times different, the peaks themselves, if you look at the maximum runoff, is in the order of magnitude of 10 to 12-13 times larger, often, on the Similkameen during that high runoff period, whereas the lows are fairly close.

But it's that rush that comes off, it comes off a lot faster, and when it does, it influences what happens with Osoyoos Lake.

I spent a long time to explain that, but now I'm just going to get into the Board and move quickly into our recommendations. The Board is made up and it's appointed by the Commission on both sides, so the Canadian members are appointed by the Canadian side, the U.S. members are appointed by the U.S. side of the Commission.

There are three members from each side, so it's equal representation. Again, we're not there in an adversarial role, we're there in a cooperative role. And although we come from various agencies, we're supposed to come here in a professional sort of capacity and not as representatives of our particular agencies that we come from.

So on the Canadian side, there is a co-chair, a fellow by the name of Kirk Johnstone, who is with Environment Canada, or was with Environment Canada until he retired a couple of weeks ago; Glen Davidson, who is with the provincial government, with the Ministry of Forest, Lands, and Natural Resource Operations, a lot of people might think of it more as environment – that's what I'm part of…used to be environment (inaudible)...but now within Forest, Lands, and Natural Resource Operations – and myself.

For those of you who don't know, I actually live in Penticton, so I am the one member of the Board who actually lives in the valley here. There is also a

secretariat support, Gwyn Graham, who was here last night and had to go back, not here tonight, for the Canada side.

For the U.S. side, Cindi Barton, who is in the back. Cindi is the co-chair, she did the presentation last night that I am doing tonight. She is with the U.S. Geological Service…Survey, sorry. Col. Bruce Estok is unable to be here tonight, but he is represented by some of his staff here today, with the U.S. Army Corps of Engineers out of Seattle.

And Kris Kauffman…is he here? There he is. Kris is our senior statesman on the Board, he's been a member of the Board for longer than the rest of us, but he's a water resources engineer, an independent one, but he has a history of involvement with the State of Washington. And then Sue Kale – where is Sue, she's back here – she's our newest member of the team. She's recently joined us replacing a fellow by the name of Bob Kimbrough, who you may have seen in some past meetings, as U.S. Secretary, and she's also with the U.S. Geological Service.

So, the Orders, the renewals. The Osoyoos Lake Orders expire on February 22 of next year. And, you think, how did they ever come up with that date? It seems like an odd date to pick.

The way that was arrived at, if you look at the wording that was in the two orders, the '82 order and the '85 order, it said that they would expire 25 years after completion of the construction.

And so by the time the dam and the other works associated with the project were completed, it was determined to be that was February 22nd of 1988, and so now we're coming up to the 25 years. That's where it came from, in case it sort of seems like an odd date for people.

So we saw this coming, we knew it was coming several years ago, and we embarked on a process to try to inform what should come into the studies and what should come into the new Order, if at all there should be changes.

Now we had gone through lots of public meetings, the Board has held public meetings every year in the fall and I know a number of people have come. One year we do them on one side of the border, the next year on the other side of the border.

And we've heard a lot of concerns expressed at those meetings. You know, depending on the issue of the day, if it's a really wet year, the concerns tend to be more around too much water, too high water, what's going on kind of thing; dry year, of course it goes the other way.

But there's also a number of other issues that have come up that sort of have been outside of the scope of the Orders in the past. And so what we did is we had a plan of study a number of years ago and it led to eight individual studies to look at different aspects of things that might be influencing other decisions around the Orders, to inform what we were doing, to bring some science into it.

These are the ones that were shared, for those of you who went to the Water Science Forum last year, there was presentations of the different studies

that were done. Those helped us look at different things that had been raised over time.

We have also, of course, over the years, received many written comments from different people about certain things that we're doing, or questioned why we're this or why we're doing that, written both to the Commission, to the Board, and in some cases also to the applicant or the State. And I've certainly received phone calls, I know that the (inaudible)...day to day running, has also received calls.

All of that, we looked at that, what we learned from our experiences with it over the past 25 years, and this was all brought together. And we prepared, the Board prepared its recommendations for renewal of the Orders and we submitted that to the Commission a month ago.

Now the recommendations are just that from us, and we know that there's going to be more feedback coming out of these hearings, so you've got until the end of August to get your hearings into the Commission, your thoughts, coming out of today, when you take things away and think about it. All this will be input to help inform what ultimately will be the decision of what the Order should look like.

And so what I am going to present to you tonight is what the Board thought after all of the things that we've heard about and things that people asked us to consider, and that's what we're doing.

So right now, we're in the process of the public review. There was a meeting yesterday and obviously there's one here tonight to hear feedback from the people who a residents of the area, who have an interest in these and what they want to say.

So this is the report. There were copies of it at the door. If you didn't get one, grab one on the way out. If you think you want more to share with your friends, we've got some, you can get them.

But otherwise, the other option is it available online at the Board of Control's website, pretty easy to find. Just Google it and you'll find it. It's got a long…(inaudible)...Order, but the actual website isn't that much, if you just take the first little bit of it, it'll get you there.

So what's in it? Well, some of the basic sort of elements. The applicant, just in terms of responsibility, the applicant – in this case the State of Washington – has indicated they are going to be reapplying for a continuation of the dam there.

They are responsible for the operation and maintenance of the works, and they do that in consultation with stakeholders, this is some of the public meetings, the State is usually there and represented, and they have to comply with the conditions of the Order.

They also do it in cooperation with the province. There's discussion taking place between the province and the State over certain flow management

issues. They aren't tied into the Orders, and there's other interests (inaudible). As well.

The applicant, one of the things we look at, the applicant may find a local advisory committee helpful in sort of bouncing ideas off of what's happening. I know there's already what's called an Osoyoos Lake Fisheries Advisory Committee that is led by the State, it involves the province, it involves First Nations and people that have fisheries interests, it meets every spring, talks about what the outlook is, but there may be some other type of advisory group that's worth considering on the part of the applicant, not on the part of the Commission, not on the part of the Board.

But the applicant is responsible for identifying and reporting to the Board those situations that, you know, where new or unforeseen conflicts arising between substantive interests and the Orders. In other words, you know, the Orders say you've got to do this, but some reason, it's not happening in that particular year, they may bring certain things to us for consideration.

And the Board itself – that's what I'm part of – we don't get involved in the operation or maintenance per se, but what we do do is we look to see that the State, that the applicant is complying with the Orders. So the Commission sets up the Orders, we are sort of like the checks and balances in the system to say, yeah, the applicant, you know, we assume they're doing a good job, but we also have then have this check to see what's going on.

And we consult and coordinate with the applicants if they've got issues they would like to bring to us. And we have these public meetings in the fall, we get feedback. And if there's difficulty complying or really more complex situations, we have the ability then to refer it back up to the Commission or to their technical staff for some support back for us if we need that.

So, some of the Board's key recommendations…oh, one other thing that we do do, we also make recommendations under the current Orders if there's going to be a drought year or a non-drought year, so the Board does that. And I'll talk more about that and what that means.

So the key recommendations of the Board…and these are all in those reports, so if you go through it, you'll see these, they aren't numbered quite the same, but they're in there, the substance of it.

And what the recommendations are, the first one is, the Board, we've looked at all of the studies and all of the information we got, and we feel that the Board's scope should be limited to the management of lake levels. The way the Board…the Orders read right now is they talk about the level of Osoyoos Lake, they talk about under certain conditions, certain times of the year, this is where the lake should be, regulated to - and I stress the word regulated because that's different than where the lake level may go, and I'll explain that in a minute – but limited to the level as opposed to minimum transboundary flows, which I know is an issue that was proposed or floated in one of the studies. So our

recommendation is to focus on the lake level management as it has basically been to date.

Also, to retain the Zosel Dam as it was constructed. We're not proposing any modifications to the dam itself. It still has to be maintained and all of that kind of stuff, and the State may from time to time, you know, do some major servicing or change (inaudible). But basically, the dam will remain the same, as well as some of the other works that are out there.

One of the works, just in case you're not aware of it, in a park on the States side, there's actually that retaining wall (inaudible)...that was part of the construction of this project in the '80s.

Retain the requirement for the applicant to ensure flow capacity of between the lake and Zosel Dam. This is the requirement that the state maintains a capacity, a capacity of discharge of 2,500 cfs, cubic feet per second, when the lake level is at 913. So it has to have that capacity.

Now what does that mean? What does 2,500 cfs look like? How many people know that? Let's see the hands (inaudible)...keeners that (inaudible)... But anyway, it looks like the flow today. So if you were to look at the river coming into the lake, the Okanagan River from the north, or the outflow going out of the lake, because they're about the same right now, that is about 2,500 cfs. So if you think about it, that's what it is. It's very, very close to that. Also, if you're thinking cubic metres per second, if that's easier for people, it's 70.8 cubic metres per second, that same sort of number, that's the conversion.

But that's what it looks like. And right now, it's passing that flow with the gates out of the water, so all four of those gates that I showed you in that big picture are out of the water, that's called freeboarding (?), it's passing that, and the lake level today is around 912.84. It was this morning, I don't know what it is right now, but it's very close to that.

So if you look the website, and probably a lot of you have looked on USGS website, you can actually track the level of the lake. So that's what it is, so it's demonstrating (?) you can pass that flow.

So what we decided to do then, the main thing that we focused on – so those were sort of carry-over type items – but the next four or five, from 4 til 9 in the slide here, are talking about the rule curve. And the rule curve is this thing about what the lake level should be at certain times of the year, under certain conditions. That's called a rule curve.

So the first thing that the Board recommended was that the winter operating range should stay what it is, and that range is a 2.5 foot range on the lake. People might want to know why do we use feet? Because the gauges on the U.S. side, of course, imperial they use there. So we all want to be talking the same language, we've adopted feet for the lake.

So it's 2.5 feet, so it's down lower than what it is, but the winter range level is 911.5, currently the top end of it, where it can be, and 909.0. This allows the applicant to operate at a level…typically, what happens is they'll draw down

over the winter to somewhere in the neighbourhood of 909.5, maybe closer to 910 in some years, but sort of in that range.

And the reason they do that is because it helps minimize ice damage to the shoreline properties around the lake when the lake freezes and the wind starts blowing ice around and that can damage things. It also can help in terms of…under some situations, it might help in milfoil control, though that's relatively modest. But it's really to prevent damage.

The other recommendation - this is probably the most significant one in terms of the approach – is that we're looking at the elimination of the distinction between a drought year and a non-drought year.

A non-drought year is an average flow year or a high runoff year. A drought year, as is defined in the current Orders, is based on any one of three criteria coming into play.

One is the flow in the Similkameen at Nighthawk. That's what I showed you, where the Similkameen River crosses the border, there's a gauge there operated by the U.S. Geological Service that you can actually see what's going on there. And if the discharge there is below a certain threshold, which is 1,000,000 acre-feet – again, probably a number that nobody knows what that looks like, but that's the number – then you can declare a drought.

And then the other two have to do with Okanagan Lake. One is the maximum level that it gets to in the year, and if the maximum level, which

typically occurs on Okanagan Lake around the end of June, is approximately a foot below our normal target for the upper range, that can trigger it.

And then, also, if the flow if below a certain number of acre-feet as well, too, it's 165,000 acre-feet; again, people don't know what that means, but we do know what it means.

If any one of those kicks in or is forecast to kick in, then a drought gets declared and it gets operated differently. We're saying let's eliminate that, let's allow greater flexibility – and I'll show what that means later on – and replace it with a rule curve or criteria that we fellow in all years.

We also would like to…we've recommended limiting the maximum level, the regulated lake level – again, this is when the gates are actually having an influence on the water level – to 912.5. Currently, under drought years, the maximum we can go to is 913, we can regulate to that level to hold water. Under this scenario, it would be 912.5, so six inches lower.

We've found that over the years, that seems to be a level that causes…the different between 912.5 and 913, if it's held there, it causes considerable angst, and we've heard that at numerous meetings, and so we've…actually, the last several years…well, not several years…in some other drought years recently, we've actually had agreements, informal, within the scope of the Orders…oh, they fit within the Orders, but they're not made by the Commission or by the Board, they're made between the State and the province, to actually have it held at 912.5 for certain tradeoffs. So we're now just saying let's make it there

(inaudible)...and that's to minimize, you know, some of the high water problems that can occur in the summer.

The next one is to allow for lower levels in April and May to better match the timing of spring freshet. Spring freshet is that runoff that comes in the spring when the snow starts to melt. So what you'll see, when it comes down the lake, the creeks and everything will be running (inaudible)...and there's a big pulse of water that comes down the system, usually starts towards the end of April, but it varies a bit, runs through into May, pretty much gone by the end of June – although years like this, winter is a bit longer – and then goes down. But that's what we're talking about, that's freshet. So better to match it, to allow a bit more flexibility, because some years it's earlier, some years it's later.

And limiting sort of these fixed dates for switching between winter and summer operations and maintaining flexibility for filling the lake earlier in the year, if conditions start to change. And I'll talk a bit more about that when I show you the rule curves here in a second.

And then incorporate the ability for some adaptive management in the renewed Orders. This just enables a little bit more flexibility in what we're doing, it's sort of a…it's a little bit confusing, but I thought I'd try explaining this.

The use of a single rule curve will allow the operator to be a little bit more adaptive in response to actual conditions that are occurring that year. So if we think there's going to be a large runoff – this is one thing you've heard in the past

– you know, it will allow them, if they know it's going to fill, like that's not a question, they can actually hold the lake a little lower longer than they would have otherwise, because forcing it to get to a certain level by April 1st was problematic, and I'll show what I mean in a second.

But also, you know, maybe in the year, if you have consecutive drought years and maybe if you don't have much snow up there, maybe you want to start even a little higher. So it just allows a bit more flexibility when you get there, that's what we're talking about.

And certainly climate change is something that comes into play, too. We've looked at what climate change can do, one of the things that climate change…all of the models say climate change will advance the timing of when the peak inflow comes, so it'll happen earlier in the year. Maybe you need to have a bit more flexibility to respond to those conditions as we go forward. That's one of the sort of adaptive provisions that we can look at. So this allows more of that to happen.

And then, the final couple – so these are the ones that are about the rule curve – maintain the system of the Board of Control structure with equal representation from Canada and the U.S. We're not saying the numbers should be this or that, but that they should be the same, whatever they are.

We found that the current dynamic we feel has worked fairly well to provide this oversight on compliance with the Orders. Not to deal with sort of, you know, consultation on what's going on in the operation and the (inaudible)

operation, this is more oversight on compliance with the Orders, what the Board does.

And then, that consideration should be given to an International Watershed Initiative. A lot of people have looked at this, this is looking at something much broader than the current Orders, which are already focused on the lake and the levels of the lake.

A Watershed Initiative would go much broader, it would look at things like the land base. And there has to be an appetite for this because it has lots of implications to activities (?) that happen on both sides of the border, well beyond just Osoyoos Lake. So give consideration to this.

So this is the rule curve. And I'm going to…I don't know if people hear me if I stand up, but I'm going to try it here. Let me (inaudible)...get in the way. Sorry, go to this one.

The grey rule curve here, this is for the non-drought years under the current Orders. So you see this 2.5 foot range that I talked about for the winter operation. Winter operations under the current Orders runs from November 1st through until the end of March.

And then what happens is then, the summer operation there, the regulated levels, this is when the gates are being used to control the level, it was required that they would do it between 911 and 911.5, so a half a foot range.

Very tight getting into here, actually making this spot in a year when there was, you know, not that much runoff was often a challenge. The kind of things

that would happen is sometimes they'd have to really shut down the (inaudible) from the lake just to make this thing on time, rather than being a day or two late and we'd be out of compliance. That could often have implications for fish down below, so we're going to change things a little bit under recommendation.

And then, this other dashed box here, this is what happens during a drought year. So the range that they can operate over then shifts during the summer to be a 2.5 foot range instead of a six inch range, when they can actually regulate. So they could actually let the lake fill up to here, and still be compliant, and they shut the gates down and hold it at 913 all summer long under the current Order.

In a non-drought year, as soon as they hit 911.5 or this level here, they would have to freeboard the gates, pull them right out of the water. That's what happened actually this year. So if you look at what happened, this happened in early May, because of what's going on, so they pulled the gates out.

So when you saw the level, the lake level above 911.5 in sort of mid-May to late May, it went up to around a little over 912 for a while there, that was due to the Similkameen, actually.

The gates are out of the water, the dam was not doing anything, but the Similkameen went up to a level where it was causing a restriction on how much water could get out of the lake, basically it's like your toilet being plugged. And you know what happens when the toilet plugs (inaudible)...the level in your bowl goes up higher than you might optimally like. Same things happens here. The

Similkameen, when it's backing it up, it will slow it down and the water can't get out.

So that's what's happening early May. Then, what happened, actually, as we went through this year, the gates stayed out of the water and they are still out of the water, so they have not been put in the water since back in mid-May.

We did see, the flows dropped off the Similkameen, we also reduced the flows in the Okanagan, this is towards the latter part of May, we thought, okay, looks like the Okanagan Lake, we don't need to release the water, it's not going to be a problem there (inaudible)...the level dropped a little bit, close to 911.5, didn't quite make it there, and then it later, as June got really wet, things also started to melt in Similkameen, Similkameen went up (inaudible)...Okanagan, all these things drove the level up, and so that by the end of May…it was the end of June, sorry, the lake actually went slightly above 913. For people following this (inaudible), it was just marginally, it wasn't like way above, it was just a little bit above.

That was a combination. This is right around June 30th-July 1st, somewhere in that neighbourhood, for a few days. That was because a combination of flows coming down the river and then also Similkameen highs.

Since that time, the Similkameen, especially by the middle of July, dropped off quite a bit, it was no longer a factor. The reason the lake is where it is today, at 912.84 – so, in here, it would be up in this part here – is because of the

flows coming down the system. That's what's doing that. It takes the…the level (inaudible)...push that water through the lake, that's what's going on.

So what would happen this year? You probably wouldn't have really noticed much difference. I think the operator would have seen the same thing, they would have opened the gates up back in here, based on what they're seeing probably (inaudible)...all of the stuff that you've seen since mid-May would have been exactly the same under this Order, it wouldn't have changed a thing.

In the coming week or two, we'll see the level drop down to 912.5. At that point, under the current Orders, they would be able then to close the gates and sort of hold it there, when it drops another third of a foot or, you know, four inches or roughly that much, just to explain. But that's what we're looking at.

So the new curve here, this is dark (inaudible), when we talked about softening the corners on here, making it more flexible and adaptive, that's what we're talking about. You can see that the lower end can be held a little bit lower, longer, this is to allow, if it's possible to draw the lake down a bit, we'll hold the lake lower prior to the peak coming, that might help attenuate a little bit the peak, possibly under certain conditions.

We also do that right now, just in terms of backing off the flows in the north end as well. But it would allow a bit more operational flexibility on their part rather than having to get it into here, hold it into here the best they can. It would also allow potentially some more (inaudible)...if the whole inflow hydrograph shifts early in the year, we can start doing things earlier. But at the

same time, at the end, it'll be drawn down. So it actually softens it, makes for a little bit more flexibility.

We expect that the curve or the actual lake levels will probably run somewhere down the middle, maybe slightly above the middle of this band that they've got at any given time. In a normal type condition or most conditions, that's what they will do. The backwater, the really high levels (inaudible)...Similkameen, they'll still be there irrespective of this.

The last one I want to show is, okay, what does this mean in terms of years that we've actually seen since the dam has been in there. You think about the dam, as I said at the start, it has been completed in 1988.

So if you look at the drought years – and there's, you know, roughly a third, maybe a little bit more, we've had in recent years, of the drought years – this is how, if you used the new rule curve and compare it to what the actual lake levels were, you see the maximum ever - and this isn't a single year, this is sort of a combination of the highest levels ever recorded on certain dates, that's what that line is - that it's not that different than this during a drought year.

There's a little bit here, this is probably, you know, a bit of a pulse before, you know, coming down the system and early melt or something, and then maybe some winter melt here. That's the kind of thing that would have done that. It's not exceptionally above it, but it's something to think about here. So this is the 913, they could hold it up there.

This was the mean water levels in those years. If you (inaudible)...that's the mean one, and this was the minimum. So in a drought, it's not going to be a whole lot different. Probably end up being maybe slightly lower in this top end here, because this is all within that six inches that would no longer be able to be regulated within.

This is in a non-drought year. So this is an average year or a high runoff year, kind of year that we're in now. This, again with the rule curve, under this current proposal that we have put forth as the Board to the IJC, once it's 911, they have to open the gates. These are the peaks. These are when the backwater is coming into play, that's what those are. It doesn't eliminate that.

This is…if you think about it, in some of the recent years, this would be like the…I think '96, '97, that sort of period, when the years were going pretty high, I think (inaudible)...the mean would be still back in there, during the non-drought years, and the minimum would be up in there.

This was 911, so that's sort…remember, the band was 911 to 911.5. So that's why that minimum was in here. Some of the challenges in here were actually just trying to get it up there during drought years, that's why these didn't quite make the 911 back in there. So that's…that's the impact on those curves.

So this is the end of my presentation coming up. So the next steps are, we're holding these public hearings, or the Commission is actually holding them, I'm just part of the show here.

It's the Commission's hearings, so you're really speaking to the Commission when you talk to them. The Board will be listening, the Board members, but it's the Commission that's hearing what you're saying.

We're awaiting a new application from the State, which we have had indication we expect to receive some time in the next several weeks, we will get that. We don't expect any surprise in there, we've heard sort of comments on what they're looking for and it's consistent, relatively consistent, we understand, with what we've looked at, so kind of aligned (?) with it.

There will be possible revisions of the Orders and rule curves based on the input received. So that means not only the existing rule curves, but even that rule curves that we've proposed, they're not necessarily the final answer. If there's reasons to change from that, certainly we'll be hearing that.

And then the idea is that the Orders will be reissued, new Orders will come out or a new Order will come out on or before February 22nd of next year. So thank you, and I'm going to turn it over to the Commission to run the next part.

LYALL KNOTT (Commissioner, Canadian Section, International Joint Commission): Thank you very much, Brian. And Brian, would you please pass onto your colleagues our thanks for all of your good work? Very much appreciate, thank you.

BRIAN SYMONDS: Okay, thanks.

LYALL KNOTT: So before we start hearing your comments, I'd like to say a few words about our procedures. This is the second hearing we've held in this community.

Last night, we were across the border meeting with your neighbours, and tonight, it's an opportunity for this community to tell the commissioners what you think about the recommendations, a very important part of our decision-making process. So we encourage you to please come forward and make your views known.

If you wish to make a comment, please give a registration card to our staff at the registration table. You can register to speak at any time during tonight's meetings. I will announce whose turn it is to speak and I will identify the next person who is at bat so they can prepare themselves.

When you speak, please state your name and let us know whether you are speaking as an individual or on behalf of an organization. We would ask that you limit your oral comments to approximately five minutes.

You may also submit written statements tonight and provide comments via our website, e-mail, fax or regular mail by August 31st, the end of next month. If you have copies of presentation slides with you tonight, please provide them to staff at the registration table so that we can distribute them to all commissioners.

We are recording this evening, and all comments will be part of an official record. Please use the microphone when you speak so that your comments will

be included in our transcript. Transcripts will be posted on the IJC website as soon as they are available.

I assure you that anything you send to us will be provided to all commissioners and given full consideration. We will not reach our conclusion until after we have considered all public comments.

Commissioners will carefully consider these comments received by August 31st and we hope to make our final decision on the Order of Approval and new Regulation Plan by mid-fall.

So it's now your turn. It's time for you to speak up. I am going to call the first witness, Gerry Ford. On deck, Rosemarie Volkes (?). Did I pronounce that right? No? So, Gerry.

GERRY FORD: Good evening. I wasn't aware I was supposed to supply copies…

LYALL KNOTT: You don't have to if you don't want to.

GERRY FORD: I can give you a copy now if you want, run that off. Now I am here on behalf of myself and also the Osoyoos Sailing Club. I am a user of Lake Osoyoos and a resident of the community of Osoyoos, and I would like to thank the Commission for allowing me the opportunity to express my concerns today.

I have four questions. Some of them have multiple answers, and I don't expect you to answer them all tonight, or any of them, but I understand that they will be answered through time.

The first one considers…is in concern to rare plants that are on the shoreline of Lake Osoyoos, and the question is has a recent endangered plant survey been proposed to address COSEWIC - and COSEWIC is the Committee of the Status of Endangered Wildlife in Canada – or SARA, which is the Species At Risk Act in Canada for all listed and rare and endangered plants that do occur on the east coast shoreline of Lake Osoyoos, north of Highway 3?

Now, under the proposal of 912.5 lake elevation, a band of approximately three meters wide by eight kilometres long, or 24,000 square meters, of plant-specific habitat will be lost. And within that area, there are 18 listed plants, four of which are listed as endangered.

And by going up to the 912.5 level, every foot that we raise the lake, we lose about three meters or six feet of habitat for these plants. And that's on the natural angle of repose of the shoreline of about 1 in 6. If you're outside water, you know, sand will sit at about 3 and 1. But when you're in water, sand sits about one foot of rise to every six feet of length. So that's how I end up with six feet per foot. That's the first question.

The second question is has approval been granted under the Navigable Waters Protection Act to restrict boat traffic under the bridge access on Lake Osoyoos on Highway 3, since the lake level management tolerance is about two feet?

Because even though you say you're going to run it at 912.5, if you look at the data coming off, there's about a two foot fluctuation, plus or minus, to

whatever it is. Like today, for instance, it is being run at about 912.82 at 6:30 this evening, just before I came here, and it is supposed to be maintained around 911.5.

So you can see there's a tolerance in the operation, and that tolerance doesn't necessarily just…as the gates are open, there's a certain flow of water that's coming through the system, through the northern end of the basin, and the operators down here may not have adequate time knowing that these things are going to occur, but there has to be…there's about a tolerance of two feet.

So when you have that tolerance of about two feet, that would mean that you could end up with a situation where it's 914.5, two feet above your 912.5. And in that situation, boat traffic would be very limited underneath the bridge. And we experienced this last year, and that brings me forward to my next question.

The Town of Osoyoos last year issued a flood alert on June 8th, 2012 (sic), an alert that said at 914, we can expect flooding conditions within the community. And we were sandbagging, and that's not necessarily a nice thing to have to do to protect your resources.

On June 14th of 2011, the lake actually got up to 914.58, which is beyond the flood warning level of 914. And when I put this question together, on June 22nd, the lake was actually at 912.93. So you can see, it is operating substantially higher than the grey area of 911.5.

Now if you take the 912.93, which it was operating at on the 22nd, which at that time, the margin was 911.5, and the difference between those two is 1.43 meters – or, sorry, feet – and using the management control tolerance, under the proposed mandate of 912.5, the lake could be at 913.93 or approximately three-quarters of an inch under 914, which is when Osoyoos called for a flood alert last year, at 914.

So out of all of that information, will the lake's control tolerance be reduced under the new plan? Can you get it down to half a foot or a foot rather than a two-foot situation? Can modifications be made in Washington to reduce the Similkameen River's impact on the Lake Osoyoos lake levels?

I took a cursory review of the river regime downstream of the dam, and there is a defined channel there for the Okanagan River, but there's two side channels that have been cut through…that separate the Similkameen from the Okanagan River.

If those two side channels were closed off or controlled in some manner, it would force the Okanagan River's flow to go two miles downstream before it would actually, you know, influence the Similkameen, which, if it was even half of a percent, that would be ten feet difference in water levels, so it would tend to reduce the impacts on the Osoyoos, Lake Osoyoos system.

And why can't the lake be operated at 911.5 in June? June is the high month that we see water flow coming through. Why can't the curve be adjusted

so that in June, we are still at 911.5, and then it tapers off after the heavy time periods into 912.5?

And the last question here is the Order renewal recommendation paper stated that under 912.5, additional sediments will be deposited into Lake Osoyoos.

Based on the review of air photos from 1950, it is evident that even under the 911.5 control levels, sediment has reduced the depth of the lake in near-shore areas. This can be seen on air photos.

This impact has sped up…will be sped up under the 912.5 proposal. Now, recently, the Premier of this province, Christy Clark, stated that if there is environmental risks that are to occur caused by a project, then there has to be some kind of benefit to offset that risk.

And under the current recommendations, there doesn't seem to be any benefits for rare plants, lake level travel for boats underneath the bridges. And so, as a user of Lake Osoyoos, I see no benefit to Lake Osoyoos, B.C. or Canada for a new lake level recommendation.

So the questions to that would be who will be impacted by the 912.5 levels? Another question is who will receive the benefits from the 912.5 levels? And the last question is what modifications could be done in the United States to minimize impacts on Canada's waters? And those are my four questions. Thank you.

LYALL KNOTT: Thank you. Have you given us a copy of your paper?

GERRY FORD: Yes, I have, yes.

LYALL KNOTT: You have obviously done a lot of work on this.

GERRY FORD: Well, I have thought about it. (LAUGHS)

LYALL KNOTT: And I think that justifies a response from us that, likewise, would require us to put a bit of effort into it. And if you would allow us to do so, I would expect we would probably set on our website and get back to you if we have your coordinates.

GERRY FORD: Yes, you do. Thank you.

LYALL KNOTT: Rosemarie? And Yves Auteil (?) would be on deck.

ROSEMARIE VOLKES: Okay, my name is Rosemarie Volkes, just in case you were wondering how to pronounce that. I just have a little bit to say and I didn't write it out, so I don't have anything to give you, but you do have the verbal record, from what I understand.

LYALL KNOTT: Yes.

ROSEMARIE VOLKES: My biggest concern is I'm a property owner on the lake, and right now we have sandbagged and we have lost probably two feet of property, and that's why we sandbagged, on one portion of our property.

And at this time of the year, in past years – and I've lived in my house for over 20 years – I have been able to garden on the wall, the retaining wall next to the beach, in dry, you know, in shoes and be dry. Now I have to go take my shoes off and my gardening in the water. And if I'm really lucky, somebody will not go by with a wakeboard and splash me right to my head.

And so that is a concern for me, that the lake level you want is just not lower enough than what we have right now so that I'm going to have that problem forever. So I would like to see you reconsider your 912.5 level because I think it's definitely too high. And I'm not the only one who is going to lose property on that.

I have to agree with some of the things in your report, that the winter water levels will be where you are suggesting, that's still a good idea. And I like the idea of lower levels in April and May. Except when you look at that, it says on May the 1st, it can go up to 912, so is that the only part of May…what part of May is going to be lower lake level? That's one of my questions. Because according to that, it's not going to be a lower lake level.

And we really do need to keep the lake low in order to accommodate some water so that we don't get it too high. And I was reading a survey from February 2012 of last year (sic) with recommendations to this board, and I have to wonder what kind of questions were in this survey because it sounds like 912 was basically the only choice.

Because the stakeholders affected by that, the lake levels, it says residential property owners would not like the lake to be more than 912.5 because of erosion issues. Well, I just pointed out that even less than 912.5 is an erosion issue for me. So the lower, you know…the level we have going now seems to work better for me and probably a lot of other people.

And what else have we got…oh, a few years ago – this is to the issue of the Similkameen backing up – my husband showed the engineers a possibility of diverting the stream so that it wouldn't…instead of going straight into a blank wall and going two ways, you could divert it so it just went downstream, but I don't think anything has been done about that. So I just thought I'd bring it up again.

Yeah, let's see, what else…these surveys that you've had done, are they just with Washington State people? Because being on the lake, I would have expected to be surveyed, you know, if you were doing a survey. Weren't any Canadians surveyed?

BRIAN SYMONDS: Personally, I don't know anything about the surveys you're referring to. I wasn't part of that, so…

ROSEMARIE VOLKES: Oh, well, the one I was specifically…you know, the only one I had before I came here was this one for February of 2011.

BRIAN SYMONDS: Right, but I guess what I'm saying is I don't know who distributed that survey. I was…it's not something…

ROSEMARIE VOLKES: Oh. You must have received a copy?

BRIAN SYMONDS: I can't…can any other Board members recall that?

UNIDENTIFIED: No.

BRIAN SYMONDS: No? I don't know who did it or for what purpose.

ROSEMARIE VOLKES: Okay. Well, but it just seemed to me that if you were going to do a survey on a lake, you should do the whole lake, not just the, you know, U.S. portion.

BRIAN SYMONDS: Yeah, I just can't speak for who did the survey and (inaudible)...

ROSEMARIE VOLKES: No, I understand that, and I'm sorry I don't have the name of the person who put the survey…who did that survey.

UNIDENTIFIED: Could it possibly have been part of one of the eight studies, the survey…?

ROSEMARIE VOLKES: Yeah, it could have been a study that was done…

UNIDENTIFIED: (inaudible)...

ROSEMARIE VOLKES: But the survey was included in the study, yeah. And I guess, basically, that's all I have to say. I am concerned about the erosion, mainly.

LYALL KNOTT: Thank you.

ROSEMARIE VOLKES: Thank you.

LYALL KNOTT: So Yves Auteil…

YVES AUTEIL: teil.

LYALL KNOTT: Teil. And John Gates on deck.

YVES AUTEIL: I am glad that you are recording the ordinary presentation because (inaudible)...speak, and I will provide written comments later on.

LYALL KNOTT: Thank you.

YVES AUTEIL: (inaudible)...probably (inaudible)... Please, I would like to see only a few other points besides what has been already said. One important issue is environmental assessment reports for both governments on this side, on that side.

We know that each project must be evaluated and approved with an environmental assessment report. When I am living on my shore for 27 years, after 60 years, I am an old man, after 60 years of my service in engineering, geophysics and geology around the world, and I have never seen anything so complicated and not well done in the previous 25 years.

So I did lots of comments, and I'm glad that now, we are in final meeting of…final meeting, but that the Order of Approval will be changed. Actually, we tried in Osoyoos many, many years…Osoyoos Council passed a resolution asking that this kind of changing of approval would be done sooner than 25 years. There was no response, unfortunately (inaudible)...or other things, and I couldn't push more, basically.

Now, about that regulated level problem, in May, I wrote to Osoyoos Lake Control Board complaining that they already allowed to put it at 911.5 when we know that the weather is changing. We had several heavy rains in just the last

two weeks, it is possible to see (inaudible)...and at that time, Johnson (?) wrote me, that's okay, it has been (?) the regulated level.

So the regulated level is 911, but right now, we have 912.83. I am receiving excellent reports by USGS every day in my e-mail. So if I were to do the same, probably we would now…if the regulated level would be 12.5 and the difference (inaudible)...12.83, it would be around 14 or maybe almost 14.5, we would have year (?) flooding.

During those 27 years, I had to (inaudible)...from my property and from my house already twice (inaudible)...two major flooding (inaudible)...but I will come to the point.

But now, about that level. When I recognize there is no assessment report, I said, this is illegal (?), and I asked for the Commission (inaudible)...laughing, and I was laughing together. But I wrote to International…to Herb Gray, whom I knew a little bit when I was working in Ottawa, and after several months and so on, his (?) own studies, he told me that (inaudible)...U.S. military and then some memo.

And then I remembered that in 1946, U.S. military Corps of Engineers provided excellent and democratic study about environmental assessment, where appendixes are interviews with farmers, which are of the northern shore of the lake (inaudible)...from Penticton (inaudible)...right now, at 912.83, he is already flooded.

So basically, there is one assessment report which is speaking about…in that report, it is said that nothing should be kept artificially above 911. For the last 60 years, all Osoyoos town was built on the belief of something around that knowledge of 911, including my house, my property and everything. I will not go into the same of what has been already said about erosion.

Even (inaudible)...in Osoyoos town, it's more or less built on that. Last week (inaudible)...912.8, (inaudible) in front of our house was not (inaudible)…and I wouldn't go out of the house because of flooding. I don't have photo, but I have it on my…you know, I didn't do anything with town because that town couldn't do anything, I was waiting when dry (inaudible) again appeared. Basically, we all who are living here, we consider what is called regulated level, that (inaudible) must be changed.

And again, I would like to say something else, maybe a bit more important. I believe that work by Osoyoos Lake Control Board should be much more not only looking what is done…those people who are operating the dam, they don't know what is happening today in Greenland and they discover it on satellite and so on and so on. Those things should be taken into management of that day to day operation.

In my opinion, the Osoyoos Lake Control Board should be (inaudible)...more often and should be more responsible. Not only just saying, okay, okay, Washington is responsible, no, to be directly involved in operating that level.

Now, the level should be (inaudible)...such a way that there should be a safe margin of…safety. The engineers, when we are doing something, we always keep some safety margin. The 12.5 regulated level doesn't provide any margin of safety for Town of Osoyoos. I think it is unfair.

The Governor of Washington State (inaudible)...gave some kind of nice greeting, speaking (inaudible)...I'd like to see what you are doing, but please do it for safety of residents. I think this should be also considered to be for safety of us, and not only safety of us, but safety of other parts of (inaudible)...Osoyoos Lake.

Living 27 years on that lake, in my retirement years, I was able to see how everything is detrimental…less fish. I am not a fisherman, but I can see it. You know (inaudible)...some people are trying to protect them, good for them. The whole problem of power boats and so forth was never, never part of that water forum.

And also, a very important part is Section 17 of the Orders of Approval. Section 17 of the Orders of Approval speaks about compensating those damages which are done because of workings of Zosel Dam. I was speaking during that forum at the end, but nobody knew what I was speaking about; therefore, I would like again that the Section 17 was not mentioned here at all and it should be there as well.

And again, one small point which I would like to make is about winter damage. Water, during that year, the level was not put down to close to 909, 910,

it was close to 911, and the damage by ice was, on the shores of Osoyoos Lake, very many properties had destroyed protection walls and so on. And at the time, it is now 20 years, at that time, nothing has been done, no compensation has been paid.

And also, I would like to see that for the proposal, you would also somehow to make some contact with the (inaudible) of Ottawa because that department was here in the last 20 years controlling and checking house owners, how they built, what they built, how far from the line (?), and their input is not here. And the same, we have here, that years, input of Washington State, but that so far there is no input by B.C. and not even federal level.

So I feel something must be changed because this is not good. This is my opinion after 27 years and my professional knowledge. Thank you for my opportunity and I will send definitely more detailed comments…

LYALL KNOTT: Thank you very much. Next witness, John Gates, and then Anna Warwick Sears.

JOHN GATES: I'd like to talk about flexibility with respect for the levels.

LANA POLLACK (Chair, U.S. Section, International Joint Commission): Could you speak a little closer to the mic?

JOHN GATES: Okay.

LANA POLLACK: Thank you.

JOHN GATES: I'd like to speak of flexibility of the levels, removing of the drought and non-drought criteria. I am concerned with this because to me, it's

a form of deregulation, it's all done (?) with less prescription. And I'm a person that tends to distrust more deregulation.

We need good estimates of snowpack precipitation, freshet, etc., if we are to control the levels properly. And if we don't have some regulations there, we could get it wrong. In other words, if the freshet is not predicted correctly, the levels could be wrong, we could end up with too low a level or too high a level because the information is not correct. Hence, I tend to favour a prescription or a regulated system.

Ok…I'm also concerned with…flexibility could result unfavourably…or in favouring lobby groups. As an outsider from the U.S., I naturally see what's happening there and I'm very concerned with lobby groups, which could work to Canada's disadvantage.

One of the things (inaudible)...and I can't fully explain it, is will Canada ever owe water to the U.S. as a result of lobby groups, or can the U.S. claim water from Canada if there isn't some regulation?

I would like to see regulation which prevents any move in that direction, because I believe the science will reduce in the future. We've already got governments cutting costs, and costs mean less data, more politics, less science with more politics, and I am very concerned with that.

I am also concerned with the expansion of farming, and particularly GM companies, genetically modified food companies. To me, they seem to have a political and legal strangle which could hurt Canada, demanding more water is

more GM foods are produced. And therefore, there has to be some controls. And there will be more demand for water in the future.

Okay…I would like the levels to be based on science and not politics, always. So far, when I…for example, last year, when I listened to the Forum, all the presentations were based on science, but as we know, governments are cutting budgets. And as we know, the lobbyists rely on politics and misinformation.

Future climate change may give us a great deal of water in the future. I don't know when, but it could do that. We've had quite a lot of water this year. If climate change does give us a lot of water, a lot of precipitation and freshet, levels may need to be much higher than we currently have, and I have a concern here also.

At least in Canada, I would like to see the moral hazard that's associated with higher levels reduced. And to reduce that moral hazard, we require…it requires that properties are taken off the floodplain. This has obviously a good environmental side to it, in that you increase the riparian zone, and I would love to see the riparian zone increase.

Alternatively, to reduce the moral hazard in the future, property owners must take more responsibility for flooding; otherwise, don't go into a flood zone. And that really means they have to have the income level that can pay for the damage, or they pay for insurance, if they can get it, that pays for the damage. It should not be on the taxpayer in any way.

I may be saying something very unpopular, but society must not be held to ransom for the moral hazard created…which may be natural. There certainly should not be compensation for climate change if people could have done something for themselves to be prepared for it. And that's both for flood and winter damage. Basically, we should not be building on floodplains. Thank you.

LYALL KNOTT: Thank you. Anna Warwick Sears. On deck, Janice St. Louis.

ANNA WARWICK SEARS (Executive Director, Okanagan Basin Water Board): Thank you, Sir. Thank you, Commission, for having these hearings and allowing us to have public input in this process. It's been very interesting and rewarding to be able to be a part of this process. I should say I am here as Executive Director of the Okanagan Basin Water Board, and will be reflecting on some of the views of the Board, the Water Board.

Specifically, I wanted to make a recommendation that in the preamble to the Orders, in the whereas parts, there be a recognition of the value of the…the shared value between Americans and Canadians of the fisheries and environmental resources in the system. This is in no way to suggest that I am recommending guaranteed flows, but just an acknowledgement of the shared values of that aspect, environmental aspect.

This comes from a 2011 report prepared by the Okanagan Basin Water Board. It was immediately following the Osoyoos Lake Water Science Forum. The Water Board commissioned a report to the Osoyoos Lake Board of Control

based on the Water Board's synthesis of the eight studies from the plan of study and from what we'd heard from the Osoyoos Lake Water Science Lake Forum. We commissioned three expert scientists, technical experts and engineers to help us prepare that report.

And one of the things that they had as a recommendation to the Board of Control was to highlight the fact that the cooperative agreement was working very well between the Americans and the Canadians in terms of protecting fisheries. We've seen an incredible recovery of sockeye in the Okanagan/Osoyoos system and I would like that to continue despite the sovereignty and other issues associated with flows.

So the bottom line is that the Water Board did not want to see guaranteed flows, but within the boundaries of the Order, really wanted to highlight the benefits of the cooperative arrangements.

So other things that were included in the report is noting that there is much more work needed on establishing more precisely the flow needs below the dam, for what would be the optimum conditions for the fisheries down there, and that there's other opportunities to fine-tune dam operations.

We've seen incredible success on the dam in Penticton, with a fish water management tool, computerized optimization software which balances the needs of fish with the needs of water intakes and recreation, boating, other flow issues. And if we had such a mechanization and better overall management of the flows below Zosel Dam, I think it would be beneficial to everyone involved.

So all these refinements should be possible through the adaptive management approach suggested by the Order. So basically, what I'm saying is that much can be gained just by improving the management of the water, without making radical differences to the Order, and the Board was very gratified by the substance of the recommendations by the Board of Control this June.

But the willingness to undertake the preservation of fisheries values depends on having a mutually stated goal, and so that there would be value in having that as just a higher level of aspect in the preamble. So that was all my comments, and thank you very much for all your work.

LYALL KNOTT: Thank you. Janice, and then Cliff Devine.

JANICE ST. LOUIS: Thank you. It's Janice St. Louis in Canada, St. Louis in the States. (LAUGHS) Thank you for this public review, I think it's really important to all of us to have this opportunity. So my comments are from my husband and myself, and probably some of my neighbours over here, too, from the point of view of year-round residents in Osoyoos; we've been owners for the last ten years.

So as you can imagine, one of our concerns about the lake level relates to flooding. And as it stands now, we can't get our boat under the bridge at all. At 913.5, our sump pumps – we've put in two – they're going steady. I sit there with my stopwatch to see how long it takes to fill up and go down.

And ours is a relatively new construction, the foundation, so water hasn't seeped into our foundation, but it's under the house. And I know my neighbours have had flooding in their crawl spaces, and you know, it's a concern.

So I really don't think now that 912.5…and now I understand more that it's a regulated maximum, but that doesn't mean maximum, right? It still would probably go up to 914 if we had the same scenario, so that still is a concern.

My other concern has to do with the use of a boat lift and a dock, and both which need to be pulled in for the winter and then pushed out for the summer season. But back to the flooding part of it…so I'm not sure…I guess before I thought you meant that it would be guaranteed maximum level, but now I understand that's not the case. Because I was going to say, how are you going to guarantee that in the future if we haven't been able to achieve it in the past?

With respect to the flooding, I am not sure how you decide the timing of when the gates are open and so on, but it's a question of which properties are to be sacrificed to the flooding. You know, one could argue that on the Canadian side of Osoyoos Lake, there is more residents than on the…residents who risk property damage, and one could argue that the protection of these properties should take priority is there is to be a choice of flooding in the Okanogan River, on the U.S. side, versus the Canadian Osoyoos Lake residents and the Osoyoos First Nations band land. After all, flood insurance is not available in this part of the world. Okay, so that's with the level and flooding.

The other item that is of big importance to me has to do with communication. Every year, it's a concern for us in terms of predicting the lake level when putting out our boat lift and our dock. My neighbours have the same issue, we help each other, but you know, we're getting on in years, so it gets harder every year.

So while (inaudible) for ten days, the lake level has changed so dramatically that our boat hull was no longer touching the water when it was lowered down. So it took four of our neighbours plus another boat to pull it off, you know, and we had no advance warning of it. And this year alone, we've pulled our dock and our lift in four times, back and forth. And that's a lot of work to do.

You know, and for the last two years, Mr. Symonds – I'm the one that calls you – he's been kind enough to take our calls and explain the current situation and so that we have some kind educated guess as to where we should put the equipment. And we certainly can't expect him to field calls from all of us.

So my recommendation is that the Board provides weekly updates to the public regarding the expected changes in the lake level for a two-week time span, so it gives people time to plan ahead - the lake is projected to go up another two inches or it's going to go down, that sort of thing – between the months of May and the end of September. Okay, thank you, that's it.

LYALL KNOTT: Thank you. Cliff Devine.

CLIFF DEVINE: Thank you, Mr. Chairman, my name is Cliff Devine. I'll be brief. A couple of things that I noticed in the publication I was just handed. It appears to me as if the maximum recorded water level on the 25th of July was recorded in 1992 and had a reading of 912.81, and today I believe we're at 912.84. So it's considerably higher than what we normally expect for this time of the year.

But if I'm not mistaken, what I've heard so far indicates the reason for the high water is not something that this Commission has power over. It's not the adjustment of the Zosel Dam, it's what's coming down from up north. And if I am correct, then it's beyond the ability of this group to deal with it. It rests here in British Columbia between Kelowna and Osoyoos, and let's see who has the most effective mayor. (LAUGHS)

UNIDENTIFIED: Great comment.

UNIDENTIFIED: No pressure, Stu.

CLIFF DEVINE: I couldn't help that, sorry. (LAUGHS) The other thing I think to be aware of is even at 912 or 912.5, we've had some really unusual weather this year. And I have a weather station, it's not a particularly expensive one, but I believe it and it's really accurate. And on Sunday a week, we had a storm where the wind came directly from the east, and my little wind meter registered a velocity of 21 knots, which is a really high, high wind from the east, that drove the water many, many feet beyond what you would normally expect at 912.

So between wind waves and power-driven boats, we've kind of, all of us that live on the lake, have taken a bit of a beating, and the numbers you're proposing are frightening in that if it gets any higher or even if it gets to the maximum that you're predicting, I think we're in for some long-term difficulty.

And I would just ask that the Commission consider that it's not always calm, sunny weather in Osoyoos, we get some hellacious winds. And those are the only points, Mr. Chairman, that I wanted to raise, and I thank you for your time.

LYALL KNOTT: Thank you. We have one more comment, Mayor Stu Wells. (LAUGHS) In rebuttal. (LAUGHS)

STU WELLS (Mayor, Town of Osoyoos): Thank you, commissioners and Chair. Thanks for coming to our area and hearing the input from the people that are here.

When I look at the information that's been provided…and really, everybody should be looking at this because it's got everything that you ever need to know, and hopefully what you'll need to know into the future.

But when I look at the recommendations from the Board to the revised Order, and it's to continue to limit the scope of the Order to limit the scope of the Order to lake level management and encourage the continued cooperation between British Columbia and the State of Washington to balance flow needs across the international border and downstream of Zosel Dam while respecting goals for Osoyoos Lake elevations and limits on releases that are possible from

Okanagan Lake. This is what we just heard about. This is…everything that's been said tonight is in that first paragraph.

And the second one is retain the Zosel Dam facility as presently constructed. And if there's no changes to the Zosel Dam, the gates are out of the water, we're running at 912.84, this is the reality. And as the previous presenter just said, Mr. Devine, it's out of…it's not the Zosel Dam, it is the input.

You only control two things, the output and the input, and in this case it would be the input. And of course, we have Okanagan Lake in full pull. So obviously that water has to come down.

And I really hope that the people can understand that there's not a lot of changes available on years where the gates are in play. I mean, those gates went out of the water forever. They've been out of the water since…Mr. Symonds, how long have the gates been out of the water in the Zosel Dam?

BRIAN SYMONDS: This year, since early May.

STU WELLS: Thank you. So they've been out of the water. This isn't a control situation that we're in. And at 913, the break over the top weir, the water flows out of that, so right now we just have the four gates out, and the output is done, so now we only can control the input as far as regulating these levels on Osoyoos Lake, and that brings in Vaseux Lake, Skaha Lake, and Okanagan Lake, that brings in that whole system.

So I think people have to get a handle on that, as to really what the mechanics of it are, and it's important that people understand that. I know a lot of

people here are on the USGS Survey, on alert. I know, when Mr. Symonds was talking about the little bump that came in at the end of June, I hadn't seen my alert come on forever, and all of a sudden I get an e-mail alert from USGS because some of my triggering numbers had been reached, both at Nighthawk, and I certainly watch the Similkameen River all the time.

But again, it's just important that people understand what that is and what we can do. And if we're not changing the physical structure of the dam, we're not putting any more gates in, we're not doing anything there, when we're running into the higher end of the spectrum – and I won't use the word flood, because it's not flood – but when we're running into the full pull spectrum, there is not a lot to do with the output from Osoyoos Lake.

There's a couple of other things I'd like to mention in regards to bigger picture, and there's some comments and recommendations on potential changes to the Osoyoos Board structure and responsibilities. I'm looking at page 25.

And given the direct linkage of Board responsibilities to the Order of Approval, there's a comment in there, and while there may be advantage to the Board in having a greater degree of local knowledge within the membership, it also raises the challenge of ensuring members are prepared to accept a role representing interests in the prevention and resolution of issues to the benefit of both countries versus representation of specific local interests.

And I'm bringing that up because I really want to go to…I really want to talk about page 26, which is Board comments regarding International Watershed

Initiatives. And this would be the start of having local input into this process, and I really think…

My recommendation - I'm safe to make it as the Mayor of the Town of Osoyoos - so my recommendation is that the commissioners really look at the moving forward of having local input. And this would be people…or one from Oroville, Osoyoos, and certainly First Nations. We had a member of the Colville tribe in Oroville yesterday.

And I think we need those people on a board somewhere. And I'm not saying certainly control or anything else, but I don't think you can govern completely from a distance and from afar. We're long beyond, hi, I'm from the government, I am here to help. We're beyond that. And I think people want to have that local representation. I certainly know that First Nations do.

And there's a lot of complications coming. When we look at climate change and the impact of climate change…when I look at the back part of this publication, there's reams and reams and reams of paper, of measurements and data. You know, that data isn't worth a darn. That data, as we go into climate change, we're going to exceed all of those numbers. There's going to be new highs, there's going to be new lows, and we have to be prepared for that.

And I think people have a comfort level with having local folks representing them somewhere. So I really hope that this International Watershed Initiative has a deeper look. And whether it will work or not, you know, that's up to you and the Board of Control. A lot of people are a lot closer to it than I am.

But I know Oroville, I know Walt Hart, the councillor down there, they would like to see some input into this. And the people around the lake, they get a comfort by having local representation, and particularly someone who understands how it work. And then we don't have to always phone Mr. Symonds to find out how it's working and what's happening and where the water is coming from. So to me, that's an important part of this hearing, that you have that.

And again, I mentioned this last night in Oroville, I know that we're coming out of a 25-year term, and heading into the possibility – and I see it's a request from Washington State – to go to an indefinite term. Well, I won't use indeterminate, indefinite, we'll leave it there.

But the 25-year term, I think we have a comfort level with that here. It's going to be renewed. We get the opportunity to be here, like we are tonight. And when they start talking an indefinite term, I don't see what the provisions are in this publication for how you reopen that.

And once we've signed off on that – and I find this actually quite dangerous – once we've signed off on that, I have to know the opening terms…and I'm sure it works across Canada. This isn't…I know most of the treaties are indefinite and with opening clauses, and I'm sure that works well, but I'm from Osoyoos, after I moved from Missouri. (LAUGHS)

So thank you, thank you for your time. Those are some of my concerns. Great to have you here, and looking forward to where this is going. Thanks.

LYALL KNOTT: Thank you very much, Mayor.

UNIDENTIFIED: There's another gentleman.

UNIDENTIFIED: Oh, there's one more.

UNIDENTIFIED: That's great.

UNIDENTIFIED: Oh…

SY MORSELE: Good evening, Mr. Chair, and panel. I would like to welcome our neighbours, Americans. I did chicken out last minute, I put my name there, and the gentleman told me if I changed my mind, I would be allowed to speak a few words.

BRIAN SYMONDS: Of course.

LYALL KNOTT: Your name?

SY MORSELE: My name is Sy Morsele (?), S-Y, and I live in Osoyoos, past 31 years. I am born Albanian, a Kosovo Albanian Canadian, proud, proud New Zealander, and proud 48 years pro United States of America.

The reason is…this is very educational, Mr. Chair. I wish I could participate early years. The gentleman respectfully brought up about issue of exporting water to the United States of America.

Now they say, there is old adage, when your neighbour needs, you are first to help. I want to be on the record that if we, Canadians – as a Canadian, I am speaking – if we didn't have our neighbours, in the past 145 years, we have been riding free ride on back of United States of America taxpayers. If we need it, they are welcome, I will be the first to help.

And I believe, Mr. Chair and panel, there is millions of Canadians that appreciate our neighbours. For the record, if the United States of America was not here, today we would not be debating, it would be Soviet Union, sickle, hammer and star, and we would be dealing with Putin, Mr. Putin and rotten, in my opinion, communists.

And thank you very much for this opportunity. And Mr. Chair, our mayor is more successful than, without prejudice, Kelowna mayor Walter Gray. (LAUGHS) Thank you very much.

LYALL KNOTT: Thank you.

STU WELLS: Why, thank you. (LAUGHS)

LYALL KNOTT: So that does conclude our list of speakers. Let me thank you all for participating tonight. It's an important part of our process. A reminder that we will continue to accept information until August 31st. And after that, we will be making our decision, and we foresee a decision some time early in the fall.

And again, thank you all for coming, it was an important part of our process and we appreciate it. Thank you.

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