

PRINCE EDWARD ISLAND LEGISLATIVE ASSEMBLY



Speaker: Hon. Francis (Buck) Watts

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Standing Committee on Agriculture and Fisheries

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SUBJECT: BRIEFING ON PLANS REGARDING NEW WASTE WATER TREATMENT FACILITY AT NORTHERN PULP MILL IN PICTOU COUNTY, NOVA SCOTIA

COMMITTEE:

Hal Perry, MLA Tignish-Palmer Road [Chair]
Dr. Peter Bevan-Baker, Leader of the Third Party
Hon. Paula Biggar, Minister of Transportation, Infrastructure and Energy
Hon. Sonny Gallant, Minister of Workforce and Advanced Learning
Colin LaVie, MLA Souris-Elmira
Alan McIsaac, MLA Vernon River-Stratford
Hon. Chris Palmer, Minister of Economic Development and Tourism
Bradley Trivers, MLA Rustico-Emerald

COMMITTEE MEMBERS ABSENT:

none

MEMBERS IN ATTENDANCE:

Hon. James Aylward, Leader of the Opposition
Darlene Compton, MLA Belfast-Murray River
Sidney MacEwen, MLA Morell-Mermaid
Steven Myers, MLA Georgetown-St. Peters
Allen Roach, MLA Montague-Kilmuir

GUESTS:

Northern Pulp Nova Scotia Corporation (Bruce Chapman; Terri Fraser); KSH Solutions Inc. (Guy Martin)

STAFF:

Ryan Reddin, Clerk Assistant (Research and Committees)

Edited by Hansard

The Committee met at 10: 00 a.m.

Chair (Perry): I'd like to call this meeting to order and welcome everyone here today. There seems to be a fair amount of interest in this presentation today. I do want to welcome all our regular members on the Standing Committee for Agriculture and Fisheries here today; also, some new members to the standing committee, which are Chris Palmer and Alan McIsaac. Welcome.

We also have MLAs who are sitting in with us here today and I want to acknowledge; James Aylward, Steven Myers, Darlene Compton, Sidney MacEwen and Alan Roach. Our public gallery here; I want to welcome each and every one of you to this briefing. I also want to say welcome to those who are in the overflow at the J. Angus MacLean Building across the road. I want to say welcome to our presenters.

I'm going to go over a few housekeeping rules before we move on here. One, is there shall be no recording or cell phones in operation, no pictures taken other than with the press in here today. I will ask all members if you have a question, indicate to me; I will put your name on a list. I will acknowledge when you have that opportunity to speak. There again, are more members in here today than usual, so priority is given to those who sit on the standing committee meeting. I may limit the number of questions accordingly, but put your name back on the list later on. I will give everybody as much opportunity as possible to get their questions out here today.

I'd also want to say before, for our presenters; before you give you presentation, just to give your name and your position for Hansard purposes.

With that, I will move on to the adoption of the agenda.

Ms. Biggar: (Indistinct)

Chair: Adoption of the agenda moved by Paula. Thank you very much.

Number 3) is a briefing on the Northern Pulp Nova Scotia Corporation's waste water

treatment project and we are pleased to have representatives from the Northern Pulp here today to give us a briefing.

Without further ado, I will ask them to introduce themselves and then present. We will delay questions until the presentation is complete and then I will take them from the floor.

Go ahead.

Bruce Chapman: I am Bruce Chapman; I'm the general manager of Northern Pulp. I'm responsible for the overall operation of Northern Pulp.

Terri Fraser: Terri Fraser, technical manager at Northern Pulp. I'm responsible for the replacement of the treatment plant.

Guy Martin: Guy Martin, I'm a principle consultant with KSH Consulting in Montreal and I'm the lead engineer for the design in the construction of the waste water treatment plant for Northern Pulp.

Chair: Thank you.

You may begin your presentation.

Bruce Chapman: First of all, thank you to the committee for the invitation to speak today. We understand there are concerns about a replacement effluent facility and concerns for the fisheries. We brought our environment and system design experts with us and we look forward to sharing information and engaging in conversation about the new facility.

The Northern Pulp Mill has operated in Abercrombie Point in Pictou County, Nova Scotia since 1967. Our 330 dedicated employees manufacture northern bleached softwood kraft which is commonly referred to as softwood kraft.

Thanks to the native wood species grown in Nova Scotia and in PEI, our kraft pulp is globally recognized for its high quality and strength.

Customers from around the world purchase our pulp for the manufacture of household products, such as tissue, toilet paper, paper towel and writing paper.

We've had a long history with several changes in ownership. Paper Excellence Canada Holdings Corporation, Paper Excellence, has owned the mill since 2011. When they purchased Northern Pulp, Paper Excellence realized that it would require significant environmental improvements. As part of their commitment to ensure sustainable operations and reducing our environmental impact, Paper Excellence has invested more than 200 million in capital expenditures and operational expenses since 2011.

We understand the concerns expressed by stakeholders in Nova Scotia and Prince Edward Island and we know that people expect us to do everything we can to reduce our environmental footprint. We are committed to ensuring sustainable operations and the list of operational environmental improvements is long. But a few recent examples include: continues to improve in effluent quality including a 25% reduction in nutrients entering Northumberland Strait in the last five years; replacement of our recovered water precipitator at an investment of \$36.9 million, and performance improvements to the power boiler. Work on both of these boilers had reduced overall mill (Indistinct) emissions by over 85% in the past three years.

Throughout this current environmental assessment process, we've committed to engage the Pictou Landing First Nations and the broader community as a big part of why we are here with you today. We wish to continue to have constructed dialogue with Northern Pulp and sustainability of our operations.

The focus of our presentation today is about the design and environmental performance of the new effluent treatment system. We are required to build a new facility following the introduction of the Boat Harbour Act, which requires by law, the existing effluent treatment closed by January 2020. We respect the government's decision and support the wish of First Nations to have Boat Harbour return to a tidal estuary. We all recognize that it's time for this long-standing legacy to end.

The effluent of past is much different than the effluent of today and while we have

improved the quality effluent we know we can do more. Our design combined with in-mill improvements is that our modern facility will see effluent quality better than today.

The new treatment facility is critically important to the future viability of Northern Pulp and to the entire Nova Scotia forest industry. Thousands of people are telling us to get this right. Whether you are a forester or a fisher, you are depending on the natural resource for your livelihood.

Today, you'll hear from our experts about why this system is a significant improvement over the existing facility. We'll share information about how the modern system will improve the quality of effluent entering the Northumberland Strait. We will share technical information in a way that we hope addresses the concerns of your constituents and of the entire fisher community.

We've also seen recent examples from independent technical experts, such as Mike van den Heuvel, director of the Canadian Rivers Institute at UPEI, who believed the environmental effects of the facility will be minimal. We have copies of some recent media articles from information of the committee.

In summary, we've made progress in many areas, but we know we need to do more. We value the diverse views of the community and will continue to seek input while providing information and project updates in a timely and accessible manner.

Again, we appreciate the opportunity to share information and look forward to answering your questions.

I will now hand the floor over to Terri Fraser for the first part of the presentation.

Terri Fraser: I'm Terri Fraser.

The Boat Harbour Act legislated the existing treatment plant to close by 2020, so the design phase began and we're now in the preregistration engagement and studies phase under environmental assessment and this will be used to perform the studies that are going on now – will be used to form the environmental assessment registration

document. We hope to file the registration with the province in the summer of 2018, so this summer, and we're fully committed to working towards the date of 2020. Although it's a tight deadline, we're working very hard and cooperatively with the government to meet that.

Just for those who don't know where the mill is located; we're just east of the Caribou-Wood Islands ferry on the Nova Scotia side. I'll give you a little bit of history with regards to the treatment plant.

What is now operating as the effluent treatment facility is very different than from how it began. The mill began operation in 1967. At the time, the thinking of the day was that Boat Harbour Basin would naturally treat effluent because it offered a 30-day natural basin for effluent to biodegrade. Clearly from day one that wasn't the case. Very early on – so a few years into the operation of the mill – the treatment plant that's operated today began to be built. In 1972, the effluent was diverted to the treatment plant and we began to operate with some formal treatment.

Two companies operated within the Boat Harbour Treatment Plant, ourselves, our predecessor company Scott Paper and also Canso Chemicals, which was a chlor-alkali plant that ran from early 1970s through till about 1992. The chlor-alkali plant made chlorine and caustic soda, sodium hydroxide, and used sea water to do that with electricity, with mercury as the catalyst. The unfortunate part of the chlor-alkali process is that mercury ends up in the effluent and created a lot of the contamination that's in the Boat Harbour Basin today, as well as some of the dioxins and effluents that are presently there.

In 1995, the mill was the only company still operating using the treatment plant. We took over the operation from the province. The province operated it up until that point under a long-term lease that was again extended until 2030. The time of taking over the lease there was a lot of work done at the treatment plant to add additional aeration, improve the system, also to meet the new pulp and paper effluent regulations that were coming in in 1996; another major change for the operation of the mill.

In the early 1990s, chlorine bleaching was common; elemental chlorine bleaching. World-wide, there was the change to chlorine dioxide for more environmentally friendly way to bleach kraft pulp. We, at the same time as most mills in the world, changed our process to chlorine dioxide. Some of the dioxins and furans that are present in the Boat Harbour Basin are also from the time of elemental chlorine bleaching.

In 2015, the Boat Harbour Act was read to legislature in May and we've been working on the treatment replacements since.

Next slide.

Guy Martin: I'm Guy Martin.

The federal pulp and paper effluent regulations have been developed in the mid-1990s and required all pulp mills in Canada to install primary and secondary treatment for the removal of pollutants in order to protect fish in receiving waters. That prompted – like I said – all mills in Canada and to install a primary and secondary treatment.

I want to point out that, as Terri mentioned, Northern Pulp already had a system in place as opposed to a lot of mills that were discharging raw effluent to receiving waters in those days. Just to describe technically, primary treatment in the industry is considered to be the removal of solids and secondary treatment is considered to be the removal of biodegradable pollutants like carbons and so on that are in waste waters. This process actually is very similar to what is being put in and installed at municipal waste water treatment systems. It's the exact same principle.

The micro-organisms, they occur naturally. But what those systems do is they basically concentrate nature into tanks or containers that degrade that organic pollution more quickly. Systems are provided with nutrients, such as oxygen and nitrogen and so on, to help them degrade the pollution, the same way that some of us might take vitamins and what not, to better exist.

Part of the pulp and paper effluent regulations also was to carry out what is called an Environmental Affects Monitoring

Program, which is an upstream and downstream measurement of the impact of the effluent on receiving waters. That is done on a three-year cycle. The findings from one cycle are used to progress in the assessment of the impact of an effluent. Right now the mill has completed cycle seven and is currently on cycle eight, which means that in doing these kinds of studies for the last 21 or 22 years.

Bruce had talked about the process being kraft. Bleach kraft is the chemical process to make pulp. What is done is pulp – wood chips are sent in to a pressure vessel where caustic soda and sodium sulfite are added to dissolve the lignin that holds the fibers together. In order to meet the requirements of Northern Pulp's clients, this pulp is bleached using – as Terri mentioned chlorine dioxide and caustic soda – and that generates an effluent that contains – and that's the majority of the effluent from a kraft mill. That effluent contains chlorides and other minerals that actually, if recycled, can cause corrosion and also has a significant impact on the actual chemistry of the process. A lot of questions have been asked whether this mill could be a closed cycle facility.

Because of these issues a) corrosion of equipment and, b) the actual chemistry of the process. Recycling needs effluents even if they are clean to a certain extent, can affect the chemistry to an extent that the process is no longer operational.

However, I want to point out that these chlorides and all of these minerals, they only impact operations. With respect to their discharge into receiving waters, the fact that they impact the equipment is not a reflection on their impact on the environment.

Over the last 20 years, there have been 11 bleach kraft mills in the world that have attempted zero-effluent systems, in North America as well as in Europe. One of them in California is closed now. The remaining ten mills that are still in operation have all installed, either at the moment or after the zero-effluent systems were commissioned, effluent treatment system, they all discharged effluent to with receiving waters. In fact, as they were trying to operate zero effluent, most of these mills were permitted to discharge untreated effluent into receiving

waters as the equipment was being taken down for maintenance for retrofitting and so on and so forth.

Technically, full closure out of a bleach kraft mill is technically not feasible and it's on a sustainable basis. It could be operated for a short period of time. By short, I mean in a matter of days. Five to seven days has been the best experience in those mills, but on a sustainable basis it is technical not feasible.

The bleaching process that's used at Northern Pulp, Terri mentioned elemental chlorine free or ECF bleaching, is right now considered to be the best available technology by every government in the world if you were to plan to build a brand new facility.

Terri Fraser: To speak to the effluent quality over the years; it's been significantly improved. BOB is the measure of the organics, so the top right graph that's blue represents BOB. The information we have from when the government ran the facility is shown there on the very left, so you can see that we made considerable reductions in organic loading over the years and continue to. Even though production has increased over the years we still managed to make improvements in that sense. We're operating well under the federal pulp and paper regulations of 7,500; we're averaging 1,500 to 2,000 kilograms a day in biological oxygen demand.

Also with regards to total suspended solids at the bottom, you can see that there has been a continuous reduction over the years in the solids that enter the Strait, the receiving water. The pulp and paper effluent regulations Canada-wide for suspended solids are 11,500 kilograms a day and we're operating under 2,000.

It's also of note that the suspended solids are a 98% biodegradable and they basically are the bodies of the biology that has died off in the process of consuming the effluent organics and that's what's primarily referred to in suspended solids and effluent.

I'd also like to speak to an in-mill improvement that we're doing at the same time as the effluent treatment. It's not part of the environmental assessment because it

happens within the mill. I want to point out that it was not considered in the receiving water study that was done for the effluent. Mainly because even though the engineering is happening at the same time, it's likely that the start-up of the plant will happen after. It's a huge project to try and start up that as well as an effluent treatment plant at the same time. Given our time commitments with regards to the effluent treatment facility we will start up the oxygen delignification later.

What oxygen delignification does, lignin is a component of wood, it's the glue that holds the cellulose fibres together in a tree and that's what we do in chemical pulping, we dissolve the lignin away and keep the cellulose. We don't remove all of the lignin in the digesting process; there's still some that goes forward and that's what the bleach plant does. The chlorine dioxide dissolves away the rest of that lignin. This process shown in the pink will be the new equipment, sits between our pulping equipment and our bleaching equipment. What it does, is it dissolves away some of that lignin using oxygen and that that lignin goes back to our recovery boiler and is burned as green energy and there's less lignin going forward which means less bleach chemicals to bleach the rest of the pulp to the same brightness. That's why it's an environmental benefit. It is the \$70 million project and on its own it's not a pay-back project, it has a long pay-back for the mill of about 20 years. It's really done to improve environment in conjunction with the effluent treatment plant.

Next slide; Guy.

Guy Martin: This is just an illustration of what the new system will take place. As you know, the current system is about six kilometers away in Boat Harbour, the new system will be located in a vacant field that is adjacent to the mill and will consist of primary clarification, secondary clarification and the treatment system itself.

Also to note that our design includes two spill basins that will contain the equivalent of about 13 hours of mill effluent flow to prevent any upsets to the treatment facility. The analogy that I could use for protection is the current system is a big old Buick and we're building something that would be

relevant to a sports car, which are more sensitive, because everything happens in a more concentrated way, so we want to make sure that we protect it. We have one large spill basin that will intercept the effluent before it's actually treated and another one that is within the mill that will intercept the effluent once the solids are removed. Automatic and manual systems will be put in place to protect the effluent.

Now I've mentioned sports cars and what not being sensitive, I just want to point out that the technology that we're installing is tried and true. It is installed in 30% of all kraft mills in North America and has been so for the last 20 to 30 years and it's technology that dates back to the 1930s. What has improved is our knowledge of their operations, especially as they relate to the kraft mill effluents and the technology with respect to introduction of air and the mechanical aspect of it has improved as well. But it is a tried and true technology.

Terri Fraser: Back to the overall graph, I bring this back because we're going to talk about the area of study for the receiving waters on the next slide. The study area is shown in blue and that goes from Nova Scotia over to PEI and what you see in the centre there is Pictou Island. I want to point out that the study area is not the area of impact; it's the area of study. A receiving water study is a study that predicts all the dynamics of the water body and then determines how that body of water will receive effluent and predict impacts.

The types of things that are inputted into the model are things like flow dynamics, dispersal rates settling, water chemistry; so tides, wind, (Indistinct) the depth profile of the bottom of the harbor and out into the Strait. All of those things are studied; considerations with regards to constructability of course and environmental factors, social economic activities, so whose using what beaches and things like that. Fisheries are included, bird studies; understanding where the bird habitats are feeding. Also, things like underwater sea cables and shipwrecks and other things that we face within the (Indistinct) of the line.

A blown up map; at the very bottom you'll see Northern Pulp over to the left. The Boat Harbour Treatment facility right now is

quite far from the mill and you'll see the current outfall right at the outfall of the Boat Harbour Basin and the proposed outfall further out about three kilometers, as the crow flies, out into the Strait. But in relation to Pictou Island and PEI, you can see how that new outfall fits. It's still within the same water body of Pictou Road.

Guy Martin: From the receiving water study that was carried out last year, we came up with a concept for a new outfall that reaches out about 10.5 kilometres from the facility through the harbor and into the Strait. The outfall right now has a six diffuser outlet and you can see on the top right hand corner of the slide what this type of diffuser system looks like. It basically spreads out the effluent into the point of discharge.

The pipe itself is 36-inch diameter. It's going to be made of high-density polyethylene. The pipe is about 2.5 inches thick, but the material was chosen because of issues of flexibility, because of the nature of the soil at the bottom of the harbour itself. To prevent too much settling, we made provisions for a rock mattress to be put placed underneath the pipe, and for protection we are planning on putting armor stone on top of the pipe to protect it from ice (Indistinct) and other issues.

All of this will be confirmed through a detailed marine geo-technical study that is going on now and part of this study would also address concerns, or questions rather, that have been raised by the department of fisheries and oceans on the harbour itself. So, we've adapted what is normally done in a marine geo-tech study to address these questions.

As far as – the receiving water study, again, looked at the impact of various components of the effluent in the Strait as it's being discharged and how it could affect the receiving waters. The basis of this study was the CCME guidelines that called for background concentrations of all components within a 100-metre radius. The main ones of concern, which were the main drivers of the receiving water study, were nutrients – nitrogen and phosphorous – and those with the point of discharge and the method of discharge that was selected, show

to be background concentrations within two metres of the point of discharge.

Two other points of concern that were raised by concerned parties were water temperature and salinity. Effluent will be discharged in the summertime at a temperature of about 34 to 37 degrees, and in the winter temperatures of about 22 to 25 degrees. Within eight metres, summer or winter, within eight metres of the point of discharge we are within – we predict we would be within one degree Celsius of ambient temperatures with the design of (Indistinct) that we have.

Salinity has been considered in the model as well in terms of density. Fresh water and salt water have different densities. Fresh water would tend to rise to the surface, and within the 100-metre CCME guideline zone, we are within background with respect to salinity as well. So, the point that we've selected and the method of discharge, and the treatment system makes it so that all guidelines regarding marine discharge from CCME are met.

The next slide talks about – there's been some concern about why a class one versus a class two environmental assessment. In Nova Scotia, the environmental assessment process is basically a decision-making tool that the government uses to approve projects. They are different categories, one and two; two calling for longer scrutiny periods.

As Terri mentioned, the project will be registered with the government in early summer. The decision to go to a class one was made by the government. It wasn't a decision that was prompted by the mill or by anybody else, for that matter, and what the mill decided to do in order to facilitate the review of the project is to be as up front as possible and hold these pre-consultation sessions to inform people of their plans, to address their concerns before the project is deposited or is submitted to the government. It allows the science that is being developed as we speak, to be adapted to actually answer these questions and facilitate an understanding of the entire process.

Of course, the project is subject to Nova Scotia rules. They have jurisdiction over the project. However, federal agencies have been consulted and are being active

participants in the process such as fisheries and oceans, Environment and Climate Change Canada, Transport Canada, and the Canadian Environmental Assessment Agency.

Terri Fraser: All right, to summarize what's changing, the current treatment system is a biological system. The future one is as well. The type of that system is what's changing. Discharge in the Northumberland Strait currently does not diffuse. So, the effluent right now flows over a dam leaving the Boat Harbour Basin, and because it's warm fresh water it tends to sit on top of the ocean water and not mix well with the receiving waters.

We're still discharging into the Northumberland Strait, but with an engineered diffused outfall, which will be acquired these days. No oxygen delignification is currently present in the mill. So, oxygen delignification will reduce chlorinated compounds in the future. We're meeting regulations now. We expect to continue to meet regulations.

The Boat Harbour treatment facility is offsite. For those that don't know the facility and the layout, it's several kilometres from the mill so the new treatment facility will be onsite, so our operators will be moving to the mill site. Nutrient addition is currently happening and will reduce – will be the same system in the future, but a reduced amount given that there will be reduced loading of organics as well as flow, which will allow us to reduce the nutrient addition in the future.

I'd also like to point out that on the front of your handout there is a website shown right underneath the title. That is the project website that Dillon Consulting, our environmental consultant, is managing. All of the studies to date are present on that website, so you're welcome to take a look at that if you haven't already.

Thank you.

Chair: Thank you, Terri, Bruce, and Guy.

Now the floor is open for questions. I do have a list compiled at the moment; anybody else wants to be on it, I'll take names.

I'll start with Allen Roach.

Mr. Roach: Thank you, Chair.

I guess I would also like to thank the group that are here, Bruce, Terri, and Guy for their presentation and to let you know that we recognize the importance of your company and the employment, the product, and export. We also like to hear when you talk about sustainability for your company (Indistinct) a well.

Based on some of that, I do have a few questions for you. One of them is that we're kind of in a time in society right now in the public where we're working towards getting pipes out of rivers and streams, and bays, and harbours so there seems to be more of a public appetite to not introduce new pipes directly into anything now, even with the science that's behind it.

Will the length of time in the settling ponds be the same as the current system? When you go to answer that, I, like a number of people, have had the opportunity to see the settling ponds when the water was drained off. We saw the sponginess of that and we understand that that's quite deep in terms of going down. Of course, the question being, when that pipe goes out and those settling ponds aren't there anymore to kind of collect that material when you have your diffusers – which really are just pipes that come up out of the three-foot pipe. They don't do anything other than instead of coming out of a pipe at the end of three feet; they spread it out a little bit more and upward.

Will the length of time in any settling ponds be the same as the current system?

Guy Martin: The system actually does the same type of work, but it does it differently. Currently, with respect to settling solids, as you've mentioned, the untreated effluent goes into these ponds and it settles for a certain amount of time and once the basin is full you switch to another one and then you start collecting all of these.

What we're doing in the new system is we're providing a continuous system. The effluent is sent to what we call a primary clarifier, and the solids will settle – residents timing, this is about four hours. The solids

will settle at the bottom and are removed continuously so that the sponginess of the solids that you've mentioned happens because there's degradation of the solids within the basin over time. A lot of this is being done and aerobically it's being done in an uncontrolled, natural fashion. Because we're removing all of these solids on a continuous basis, the problem that occurs with the current settling ponds does not happen.

Mr. Roach: Okay, so what happens to the material that you collect?

Guy Martin: It is blended. We would collect two different types of material. The solids that are lost within the production and the bio-solids that are removed as part of the treatment system, those will be pressed and the current plan is to use them as fuel in the mills part boiler.

Mr. Roach: Do you collect the mercury contaminants in this new system?

Guy Martin: The issue with mercury contamination and Boat Harbour itself is being addressed as part of a separate program. The current project is to replace Boat Harbour and make it returnable to tidal state. The government of Nova Scotia, from my understanding, have another project in place that will address the contamination in Boat Harbour and my understanding is there are studies going on right now to try and figure out the best way to address the contamination within Boat Harbour.

Chair: Allen Roach, I'll give you one more question; we'll have to move on, I have quite a list.

Mr. Roach: Okay, I'd like to go back on the list if I could.

There was a study that was conducted in 1969 and it talked about putting a pipe out into the Northumberland Strait at that time. In the summary of the decision that came out of that study in that report said that if that at any time there was a decision made to put water through a pipe or put effluent through a pipe into Northumberland Strait, that all of that study of what the effects are on the Northumberland Strait should be considerable, a considerable in-depth study before entering into it.

My question is and I recognize that when you talked about other plants and zero effluents and that kind of thing: Do I get it right that you have a plant in Meadow Lake Saskatchewan that's a pulp-related plant that has a closed system that your effluent goes out and your effluent comes back in? I've seen pictures of it of the ponds around it where it does not go into any rivers or streams or harbours or anything.

My question is: Has that type of system been considered or studied for what you're planning currently for? Has it been looked at and is it a dollar reason why we can't consider that or study it?

Bruce Chapman: First of all address the zero-effluent pulp mill in Meadow Lake; it is a different process than ours. It is a mechanical-base process that does not dissolve out the lignin that holds the wood together; it is one that grinds it up, similar to what you might find at Ports Hawkesbury, a similar process as theirs. It's a completely different process and there are some zero-effluent mechanical pulp mills. Paper Excellence actually owns two; one in Meadow Lake and one in Chetwynd BC. Chetwynd BC is currently down because of lack of markets. That is not an option for Northern Pulp.

Now, I'll turn it over to Guy with why track (Indistinct) and not go to zero effluent.

Guy Martin: The technology that is being used at Meadow Lake has actually been tried first on a kraft mill at Great Lakes Paper which is now part of Resolute Forest Products in Thunder Bay in the early 1970s. They've tried for about 10 years to make it work and they have not been able to. The biggest difference in the process like as Bruce was mentioning, is the pulping process itself makes mechanical pulp. It's basically two brake discs that's rotating against one another and separate the fibres mechanically. There is no bleaching; the markets are completely different. Because of that difference in process it makes those types of zero-effluent types of system, what we call the industry, (Indistinct) technologies available and workable.

The Meadow Lake system, I'd like to point out was installed – the mill was purchased by Paper Excellence. It nearly bankrupted

the government of Saskatchewan and it cost the lives of (Indistinct) of two companies. It got very expensive; they were breaking grounds in those days with respect to technology. They've proven that it can work for this type of mill. As I mentioned in the presentation, 11 other kraft mills have tried these kinds of technologies with little-to-no success. All of these mills right now operate a system that is similar, if not identical, to what is being proposed for Northern Pulp right now.

Chair: Thank you.

Next, Paula Biggar.

Ms. Biggar: Thank you, Chair, and thank you for coming in and giving us some details on a point of concern for everyone. I appreciate that you've taken the time to come.

In regard to the volume and of the discharge for the new pipe, just those volumes, are they going to be the same? My concern is in the event of an emergency shutdown, you mentioned you have 13 hours capacity, but do you have your own generation to come online then if it goes beyond that? Or, what is the contingency plan? I mean we all live in rural areas, we know it's not down to the 13th hour that the power is going to come back on. What are your plans and what is your (Indistinct)

Bruce Chapman: With respect to emergency shutdowns; first of all, we do have the ability to generate our own electricity. We generate about 24 megawatts of electricity which meets our needs on a normal basis. Typically, in bad weather we will break away from Nova Scotia Power and Island. If something else happened, 13 hours gives us time to shutdown. If something else happened where we're filling our emergency still basing, we will begin the shutdown procedure and that will allow us enough time for shutdown.

Guy Martin: From a design point of view, I want to point out that 13 hours of retention is at full-flow. As Bruce is shutting down his mill the volume of water that is being discharged goes down because the process is slowed down and whatnot.

Within the design, we've incorporated besides the spill basin, emergency power generation so that key portions of the system will be self-fed in electricity in the event that even the cable from a mill to the waste water treatment plant is cutoff.

The third point is that even though we could have used gravity to design the system to use gravity to discharge into the outfall, we've decided to do that mechanically with the pumping station itself. So if there is the possibility of – or the risk, rather – of having something being discharged to the Strait, they could be cut off mechanically.

Ms. Biggar: Just for clarification about the volume of a new pipe compared to the present one; and also, who is paying for the new treatment plant? Who is responsible for any future compensation claims?

Terri Fraser: I'll speak to the volume.

The current volume we're discharging right now is 62,500 cubic metres that was our effluent flow for last year. You often hear 90 in the media, but that is not a number on an annual average. So, summertime because we have a lot of cooling services and the water is warmer coming in, the effluent flow goes up. We will also be installing cooling towers within the mill so that we can reuse that cooling water back in the process. There will be some recycling of water, as well as the oxygen delignification process.

What that will do is get summer and winter. Instead of hills and valleys in our flow, it'll be more even. There will be an overall reduction in flow. The number is probably going to start with five. I'm not willing to give much more than that because it does somewhat depend on some things that are still to be designed and how the cooling towers actually reduce the cooling water and the cooling level.

Guy Martin: With respect to who is funding the project; that is yet to be determined. We are in conversation with the Nova Scotia government at very preliminary stages where that has not been determined yet.

Ms. Biggar: Just one more follow-up.

If you're in discussions with the Nova Scotia government and they are doing the environmental assessment –

Guy Martin: We are doing a joint environmental assessment.

Ms. Biggar: All right, thank you.

Chair: Chris Palmer.

Mr. Palmer: Thank you, Chair.

Thank you for the presentation.

My question, I think Terri may have clarified some of it, is that I had thought there was 90 million litres but it's 62 million litres?

Terri Fraser: Sixty-two.

Mr. Palmer: With the 62 million litres of warm fresh water that's being pumped into the Strait – and I believe that has bleach in it as well – what's that do to the larvae in the area around that?

Terri Fraser: I'll let Guy speak to how the diffusion actually occurs.

Guy Martin: The way that we did the diffusion to try to address this is very similar actually to the 1969 report that was done. They did it with infield measurements. We did it through mathematical modeling, which – those methods and the computing power that's required is now possible; but what we look at is we look at in three dimensions, and what happens to the effluent as it's being discharged and diffused within the Strait.

The guideline that we have is we take a circle of 100 meters and see within that bubble of 100 meters, we have to be at background concentrations. We look also at when, again in 3 dimensions, when the plume, if you want, the effluent reaches the surface, and I know there are concerns with lobster larvae floating on the surface and then being exposed to fresh water.

The effluent actually touches the surface at 80 or 90 meters from the point of discharge, at which time the effluent is basically at background concentrations for all parameters. If you were to, say, go on a

kayak on top of the point of discharge, you would not be able to see the effluent at all.

Mr. Palmer: So the diffusers are smaller pipes on the end of the 3-foot pipe, I guess.

Guy Martin: Yes.

Mr. Palmer: Kind of move it around in every direction so it's not as concentrated when it comes out, but it is – I think you said 34 degrees in the summer and 20-some degrees in the winter, but that still has an impact. It must have an impact, and where do you find out that impact on the larvae?

I understand that there's a 100-meter piece that you're looking at around there, but what does it do to larvae that are flowing there and kind of move outside the 100-meter zone because there's not really a line there that says: larvae don't enter or –

Guy Martin: Yeah. (Indistinct)

Mr. Palmer: – so how does that happen? How do you address that?

Bruce Chapman: The effect on lobster larvae is one of the studies that we are currently undertaking or trying to undertake to study those effects. Based on what Guy said about how the effluent concentration and temperature varies within that small zone of impact, that's one of the studies that'll be part of the environmental assessment before we resubmit it.

Mr. Palmer: This is my last one. When do you think we'll have the results of that piece?

Bruce Chapman: That'll be submitted with the environmental assessment.

Mr. Palmer: And –

Bruce Chapman: That'll be in the summer.

Mr. Palmer: Okay.

Thanks, Chair.

Chair: Thank you.

Alan McIsaac.

Mr. McIsaac: Thank you very much, Mr. Chair.

Thanks for the presentation. I'm going to follow up on some of the opening comments. Mr. Chapman, you said a couple of things there about understanding the value of your business, and we certainly do that. You also talked about globally recognized pulp mill and that we have the opportunity to hear from your experts. Those are all (Indistinct) look after there.

I was somewhat disappointed, I guess, that you didn't recognize our globally recognized industry right off the bat, because I think that's why we're all here. It's to discuss about the fishery. When I was minister of fisheries up until three weeks ago or whatever, I heard letters from Nova Scotia fishermen; I met with the PEIFA who are represented here today; and I heard questions from the opposition.

We had letters from our Premier to your Premier and that sort of thing; and basically was concerned about our fishery because our fishery is globally recognized as a pure, perfect, pretty-near perfect food, and we want to maintain it that way. It makes and means a lot of dollars to our economy, and this is not minor, either. It is major, and we have heard from many of our fishermen concerned over this.

Not once did I hear anything negative towards your plant. We recognize that the jobs come out of there. It's great for the economy of Nova Scotia and great for the economy of Canada, and we think that's absolutely terrific. Their concern was about their industry, which is globally recognized, and which we absolutely love the product. I think everybody loves the product coming out of there, and I don't think anyone wants to see in any way, shape or form any of that harmed.

I guess my biggest concern has to do with a little bit of what minister Palmer was saying there, and it has to do with the effluent coming out of the fishery there, because we heard from our experts as well with the PEIFA. In the life cycle of the lobster, as the larvae are going through the water, fresh water is not what they want, and they're not going through that in a kayak. They're living

in that. They're cycling through that, and it is definitely not good to the larvae.

Our lobster industry has recovered. It's gone through ups and downs, but it has now recovered to where we are making a really good living. It is a strong industry, and one of the things that's actually driving the economy on Prince Edward Island. We cannot have that hurt in any way, and in no way are we trying to diminish what you can do with your plant.

What we need to do before 2020 is come up with a solution so that your plant works in a terrific way and that our industry and the industry of all the fishermen is not hurt in any way and the consumers are able to benefit from both. They can have a great lobster dinner and they can use your paper products afterwards for whatever might be.

We need to protect both of those because they're both needed, that's for sure; but we need to hear from you exactly how you're going to deal with your plant so the effluent is not affecting our fisheries industry, and it has to be in a way that we understand that it's true.

I know Ms. Fraser noted later on the thinking of the day early on was – well, we may look back in 10, 20, 50 years and say: Well, the thinking of the day back then was, but it didn't really work out that way.

An hon. Member: Hear, hear!

Mr. McIsaac: And I'm not here to be gloom and doom. I'm here to say we have to be sure on this one, because this is a long term issue. We hear from the Premiers, but more importantly than that, we're hearing it from the fishermen. They're out there every day. This is their livelihood, and if it's gone, heaven forbid. But anyway, I would like to hear seriously from you how you can get this thing to work properly and ensure our fishermen there's no problems with what you're dumping into the Strait.

I'd rather you come back and tell me: You know what, there's a better way of solving this problem. Because we're here basically because of the fishery, you're here because of the plant, we have to make the two of them work together for long term.

Bruce Chapman: First of all, I'd like to address the comment on the fishery. We absolutely understand the fishery is critical to PEI and it's critical to Nova Scotia. The lobster fishery, lobster exports are one of our leading exports in Atlantic Canada, critical to the economy of Atlantic Canada. We recognize that. That is just a fact I didn't think I needed to repeat here because I think everyone understood that.

Second of all, we have designed a plant that will produce an improved effluent into the Strait. So currently we have a treatment plant that treats our effluent and discharges into the Northumberland Strait, has for 50 years. It is better now than it was 50 years ago, and it will be better in the future. So we look upon this as an improvement, and should improve the fishery in the Northumberland Strait. We currently discharge into the Northumberland Strait, and have for 50 years. This will generate an improved effluent to be discharged into the Strait.

Mr. McIsaac: If it's going to improve the industry, that'd be absolutely terrific. I think we need to have a little more proof of that, and I just want to say that we have to work this as a partnership –

Bruce Chapman: Right.

Mr. McIsaac: – and we have to include in our discussions the value of the plant, which I've never heard anything towards that at all from any of the parties, whether it be questions in the House or whether it be letters from Nova Scotia or meeting with the PEIFA, never heard a negative point towards the future of your plant.

We didn't want that. We want you to be successful; but we have a serious concern about our success as well, and we need to be assured of that and I want to ask you to make sure that going forward there is a very strong communication back and forth with experts on both sides so that we come out of this in 2020 with the realization the pulp plant's going to do great, the fishery is not going to be harmed in any way, shape or form.

Bruce Chapman: That is our goal.

Mr. McIsaac: Great, thank you.

Chair: Thank you, Alan McIsaac.

Next with Sidney MacEwen I have Colin, Brad, Darlene, Steven, Peter, Sonny and then we're back to creating a new list again.

Mr. MacEwen: Thank you, Chair, and thank you Bruce, Terri and Guy for coming in. We appreciate you coming over to PEI.

My question is following up – and I couldn't echo the former minister's comments anymore about how important and you guys see with the amount of fishermen and local business leaders in eastern PEI, right across PEI that are here today and tuning in, so it's important.

You talk about the tests that are going on now on the effluent with the lobster larvae and I think herring eggs and spawning grounds are just as important in this conversation as well. You had mentioned mathematical models. Are we using mathematical models, or are we actually using lobster larvae and herring eggs in these tests?

Guy Martin: The mathematical model is to look at the desperation model itself. With respect to impact on fisheries, lobster larvae and so on and so forth, those are not done mathematically.

Mr. MacEwen: So how are they done? Are they done – is there tests going on right now with actual lobster larvae and herring eggs?

Terri Fraser: No there is not. Currently we're looking at getting experts that can do those things and understanding the right time of year that that happens; we're looking at that now.

Mr. MacEwen: Thank you.

Maybe, can you be a little more clearer about the process? Are we going to be looking at that before this is approved, or is that just kind of a long-term?

Terri Fraser: We recognize that we have to answer those questions to file this document because it won't be a complete document without those answers. We're looking at the research that's happened to-date, looking at experts that know about that and also

looking at what's possible and what's been done already.

Mr. MacEwen: Who's going to be looking at that and what's the timeline? When are we starting that process of actually exposing lobster larvae and herring eggs to this effluent?

Terri Fraser: Right now we're in the study phase talking to experts and understanding what's been done in research so far.

Mr. MacEwen: These experts are who?

Terri Fraser: We're working through Dillon Consulting. It was our consulting that's helping us through EA, so they're reaching out to experts in the field.

Mr. MacEwen: That's what I'm trying to get; who's Dillon Consulting reaching out to?

Terri Fraser: We're reaching out to a bunch of people; we haven't chosen somebody we want to work with yet, so we're still evaluating that. Not at a point to speak to that yet.

Mr. MacEwen: It's just because I've spoken to three lobster scientists in the Maritimes just this week and they all said they haven't been approached. I know there's a lot more but it is a small knit community and they're wondering as well: Are we going to be reached out to? Are we not being? Dillon Consulting aren't the experts in this but you say they're reaching out.

You're saying you're not willing to talk about who the experts are right now, can you speak to the timeline of when that will be decided and when these tests will happen as part of your timeline for approval in environmental assessment?

Terri Fraser: Quite soon; those are ongoing discussions right now.

Guy Martin: If you have three other experts who would like to be contacted, we'd love to have their names in case we miss them.

Mr. MacEwen: They would appreciate that and we would appreciate that, too.

Guy Martin: Yes.

Mr. MacEwen: The biological oxygen demand, you said that was 1,500 for the effluent, did I hear you say that?

Terri Fraser: That's roughly where we are right now.

Mr. MacEwen: Is it correct to say municipal wastes – like regular sewage would be at about 600 and municipal waste is about say, 150, 200, and they have to reduce theirs down to like 5? Is that correct? Can you speak to that science a little bit?

Guy Martin: It's apples to oranges what you're talking here. What we were talking about in the 1,500, it's kilograms per today. What you're referring to is concentration.

Mr. MacEwen: Yes.

Guy Martin: So the incoming concentration of (Indistinct) – it's biochemical actually – oxygen demand is about 300 parts per million. We are treating the effluent to reach concentrations of 20 to 25 –

Mr. MacEwen: Twenty to 25.

Guy Martin: – parts per million. That with the flow corresponds to about 1,500 kilograms a day.

Mr. MacEwen: The 20 to 25, is that comparable when I say that municipal waste has to go from 150 down to five?

Guy Martin: Municipal effluent will vary depending on the jurisdiction as well. I'll give you an example of something that I'm more familiar with, which is the regulations in Quebec. The regulations there are 20-20, which is 20 ppm of biochemical oxygen demand and 20 of suspended solids. Standard, we're targeting 20 to 25 ppm of BOD. The system will likely deliver something in the neighbourhood of 10 to 15 to 20, which is – if you compare, we design the system in terms of reduction efficiencies. So 300 to 20 is over 95%; whereas a municipal treatment system will be in the neighbourhood of 90%.

Chair: Sidney, if it's a supplementary of the last questions, I'll keep it going on. If not, I'll put you at the end of the list.

Mr. MacEwen: Okay, I'll go to the end of the list, but I'll summarize it again. To my first point is, I think it's really important for the fishers and people that are affected by the industry here to know specifically how that science is going to happen with the lobster larvae and the eggs. I know, you're right, you're going through the process, but I think people are worried about that timeline and they want to know. That's a pretty significant science that we have to go through to get there, so I'm wondering: A lot of people are saying: How can you perform that at the same rate that you're going through the environmental assessment? I think that's really an important part that people are concerned here.

Thank you, Chair.

Chair: Colin LaVie.

Mr. LaVie: Thank you, Chair, and thanks for coming in and taking our questions.

The second option wasn't looked at because of other plans? Am I correct?

Guy Martin: Zero effluent?

Mr. LaVie: Yes.

Guy Martin: No, the first thing that we did when we were mandated to do the study on the replacement of Boat Harbour, was to do a technology assessment. We went through a series of iterations to see how pulp and paper effluents can be treated and we did this from a technical economic point of view. We looked at the technology, how applicable it was; the kind of results that could be achieved and how they could be achieved consistently.

The premise for the study was we needed to design a system that could enable Northern Pulp to meet the effluent regulations 100% at the time. We came up with the design that, in my view, does that. Because I've personally designed systems like this in nine other facilities and they have all performed to that level. Zero-effluent technology and every aspect of it because there are different ways of trying to treat effluent to try and recycle it. All of these have been looked at and have been analyzed as to their pros and cons and their applicability to the mill,

again, in coming up with a system that meets the regulations 100% of the time and that's why they were not retained.

Mr. LaVie: What's the cost to this system that you came up with?

Terri Fraser: We're not discussing cost at this point.

Mr. LaVie: What's the cost of an inland project?

Guy Martin: The word 'project' is too vague. I mean there are a lot of different possibilities, I couldn't tell you.

Mr. LaVie: Couldn't tell me.

Bruce Chapman: I think you're asking about a closed-loop and currently there are no closed-loop kraft mills, bleach kraft mills, in the world. It has been tried and nobody has been able to make it work. In the case of a closed-loop mill, it's not a matter of cost; it's that nobody has been able to make them work. There are no closed-loop bleach kraft mills in the world operating today.

Mr. LaVie: How long since one has been tried?

Guy Martin: 2007.

Mr. LaVie: 2007.

Guy Martin: The review of best available technology for kraft mill has been done by the USCPA by the governments of Quebec, by the governments of Alberta and British Columbia, by the World Bank and by the European Union Commission on the Environment. The last one was done in 2014, came up with – the conclusions were that ECF bleaching was best available technology for bleaching kraft pulp.

What they call low-capacity cooking, which is digesting the pulp at lower capacity numbers was best available technology. In order to do this, Northern Pulp needed to invest because they don't have this right now. The system that Terri described as oxygen delignification brings the mill to best available technology for pulping. With respect to effluent discharge the level of water discharged from a brand new kraft

mill – say you had the mandate to build the kraft mill right now – the mill would discharge effluent at a rate of 5- to 60 cubic metres per ton.

Mr. LaVie: The question was asked and I think I missed the answer: Is there discharge in the winter and the summer?

Guy Martin: Yeah, it's 24/7.

Mr. LaVie: It's 24/7. When is molting season for lobster?

Bruce Chapman: That will be part of our study. That we don't have. We are not the biological experts. We are hiring biological experts to put together those facts.

Mr. LaVie: Are you serious?

The molting season for lobster is in the summertime, and this effluent is going to be released in the summertime and it floats on top of the water, as you say.

Bruce Chapman: No. We didn't say that.

Terri Fraser: I'd say it does that now.

Bruce Chapman: Yes, it does that now.

Mr. LaVie: It does that now?

So, it's not going to float on top of the water. It's going to be on the bottom?

Bruce Chapman: It's going to mix.

Mr. LaVie: Where the lobsters live?

Terri Fraser: It'll mix in the water, Colin. The dispersion starts at about a metre from the sea bed (Indistinct) land.

Mr. LaVie: What's the strength of the tide in the Northumberland Strait?

Terri Fraser: All of those things are in the receiving water study. I don't have that number off the top of my head, but the receiving water study is available on our website if you'd like to take a look.

Mr. LaVie: When will the study be done?

Bruce Chapman: The receiving water study, sir, is part of the presentation and is

available on the website. That receiving water study, the tides, the (Indistinct), the temperatures – all of that is available right now. We don't have it in front of us, but it is available on our website, which is northernpulpfuture.ca.

Mr. LaVie: My biggest concern is I went through this with my community with a big plant, and I had environmentalists, CEOs, managers of the plant sitting in front of me telling me there would be no harm done, that they were golden. Well, I'm telling you it ruined the fishery in that area. The environmentalists said: No, it's not our pipe. But, the plant closed and the fishery came back.

I understand your goal is not to hurt the fishery. Environmentalists told us, a CEO told us, plant managers told us; the whole works. Is there a guarantee that this will not hurt the fishery? Is there a guarantee?

Bruce Chapman: The plant we have designed will discharge an effluent into the Northumberland Strait that is less impactful than it is now.

Chair: Colin, if you don't have a supplementary I'm going to move on and I can put you back on the list again.

Mr. LaVie: I have a supplementary.

Chair: Okay.

Mr. LaVie: There is no guarantee that it will not hurt the fishery?

Bruce Chapman: There is no guarantee, but I can tell you that the effluent that will be produced will be a better quality effluent than what is being discharged into the Northumberland Strait 24/7 now.

Mr. LaVie: Supplementary?

Chair: One more.

Mr. LaVie: Thank you, Chair.

It would be better than what?

Bruce Chapman: Than the effluent that is currently being discharged.

Mr. LaVie: What is it?

Bruce Chapman: The effluent that is currently being discharged after the current treatment system, the effluent is discharged into the Northumberland Strait currently, and it'll be discharged into the Northumberland Strait in the future.

Mr. LaVie: So no guarantees?

Put me back on the list.

Chair: We'll move onto Brad Trivers.

Mr. Trivers: Thank you, Chair.

Thanks for making yourself available to answer our questions here today. It's really important.

To me, this seems like a great opportunity to really ensure that the natural environment in the Northumberland Strait is impacted the very least possible for our industry, as well as for the natural environment in general. To me, we need to go back to the beginning and, again, question, as some of my colleagues have done here, is why we need to put the effluent into the Strait at all.

My colleague here from Souris-Elmira was asking about zero-effluent options, which you answered, but then you had mentioned that a closed cycle was not an option as well and you've talked about that a little bit. Right now, you're removing organic pollutants, but you haven't talked a lot about any chemicals that are left in there. You talked about the oxygen delignification that's going to remove some of the chlorine dioxide bleaching chemicals, but you said that the effluent is not – it's not technically feasible to even use the effluent yourself to recycle it back in in a closed cycle.

I want to understand more around that, because it seems to me, especially with the volume of water being used, even if you diluted that, if it's as clean as you're saying it is you should be able to re-use it back in the cycle again without putting it – and just dumping it out into the Strait. I wanted you to really see if you could put it into laymen's terms as much as possible why you can't re-use the effluent back into your cycle.

Guy Martin: Very briefly, would you drink water that comes out a municipal wastewater treatment system?

Mr. Trivers: Yeah, in fact I think people do quite a bit. I went and toured the one up in North Rustico in my district and they actually had a glass of water at the end of it and the person – actually, I didn't take a sip, I'll admit, but the person who runs the plant gladly took a sip out of it.

Guy Martin: Well, I would not. I have designed municipal wastewater treatment systems as well as –

Mr. MacEwen: But the lobsters can drink it.

Guy Martin: I beg your pardon?

Chair: Please, keep your comments down unless you're acknowledged.

Guy Martin: The purpose of treating the effluent is to remove – you talked about the chemicals. They are organic chemicals in there that are a product of the pulping process. There are chemicals in there that are a product of the bleaching process. They are all being treated in the wastewater treatment system. Biological compounds, or organic compounds sorry, are removed to the rate of 90 to 99% and chlorinated organic compounds are removed to the rate of 50 to 65%.

The mill has been non-detect with respect to dioxins and furans for the last few years, and the process changes that are occurring as part of this project will reduce the amount of chlorinated compounds that are used for bleaching by half and will further ensure that dioxins and furans remain non-detect.

Mr. Trivers: Why can't you dilute the effluent and reuse it in your plant process?

Guy Martin: There are metals that come with the wood that are naturally occurring, that if they are recycled will impact the chemistry of the process and make – and I'm not talking corrosion of equipment. I'm talking about chemistry of the process – that will make the process not function, and in order to remove these metals to concentrations that don't affect the process chemistry, it can create – in a couple of facilities that I know of – create a sludge, a concentrated sludge, that is considered to be hazardous waste.

So, you are displacing one problem, if you want to look at it that way, and creating something that is worse.

Mr. Trivers: It sounds to me like you're saying instead of removing these chemicals to create hazardous waste sludge, it's better to diffuse them into the Strait and let them settle out there. Can you expand upon what those metals are that would create this hazardous waste sludge if you remove them?

Guy Martin: Again, they are metals that naturally occur and are present in wood; manganese, nickel, selenium, beryllium are some of these metals. They are present in bark. The USEPA actually with respect, say, to air emissions from bark boilers will consider a particulate matter as a surrogate for these metals being admitted to the atmosphere.

Those are the kinds of metals that we're talking about that, again, are present in wood, will vary in concentration depending on where you are geographically, but those metals are present in wood and they are considered in the process to be what the industry calls non-processed element and have a direct impact on the chemistry of the process.

Mr. Trivers: I'm just curious as to why it wouldn't be more desirable to remove those chemicals, create the hazardous waste sludge and then properly manage that and dispose of that in a way where it's not going to impact, hopefully, anybody, especially our lobster industry and our herring eggs and our herring industry.

Why wouldn't it be more desirable to do that than to just diffuse them into the Strait?

Guy Martin: The concentration of these chemicals are in parts per trillion, and concentrating them is what creates this environmental issue for disposal. Again, you're taking one problem and displacing it and making it worse by doing those kinds of processes. That's the kind of studies that has been done over the years to try and get to zero-effluent, is that anything that we do makes things worse.

Chair: Brad Trivers.

Mr. Trivers: I just want to be clear. So, these chemicals you're talking about, these metals, are in parts per trillion in the effluent and you're saying that you can't even dilute the effluent enough to have their concentration low enough so it doesn't impact your plant process. That just seems odd to me that they're such low, low levels that they still impact your plant process, even at the parts per trillion level.

It just amazes me that you can't dilute the effluent and reuse it. What is the level of those metals in the water that you use in the plant process that that's going to cause the process to break down and not work?

Guy Martin: The water that the mill gets from the (Indistinct) river is treated, but those metals are one aspect. The chlorinated organics, the chlorides are the major aspects – major chemical that is of issue and those will affect the chemistry of the process as well as corrosion.

Bruce Chapman: It's chloride – one of the issues is chlorides in the effluent, which is salt water. That's one of the reasons we can't recycle the water either.

Terri Fraser: Chlorine dioxide reacts to chloride, and it's the chloride that causes corrosion. So, it's no different than putting aluminum in salt water. You have the same type of corrosion. That gets accelerated in our process because our systems are hot. Inside of a boiler, at high pressure and temperature, chlorides in small concentrations are very impactful to the equipment.

Mr. Trivers: I'm just trying to piece things together here. I seem to be getting some mixed messages. One, was that it was the presence of the metals was impacting the process. The other one is the presence of the chloride is causing corrosion and you said it was primarily not the corrosion, though, that was causing you not to reuse the effluent. It was primarily the metals, but now you're telling me it's actually the chlorides causing the corrosion.

Terri Fraser: It's both.

Guy Martin: It's both.

Mr. Trivers: It's both? Okay. That's enough, Chair.

Thank you.

Chair: Darlene Compton.

Ms. Compton: Thank you, Chair.

I want to thank you for coming to present today. I must say, I'm a little disappointed that you refused to do a public meeting in a public forum through the eastern chamber. There were other groups that we would, as a committee, like to hear from and the general public as well so we're trying to get up to speed on what's going on. I am the MLA for Belfast-Murray River, so directly across the Strait, and it's a huge concern to my constituents, and really, all Islanders, for fishing and tourism.

There's been a lot of talk about class one and class two, why one over the other, and the science involved. We've heard that you haven't really done the science completely. Yesterday at Public Accounts deputy minister of environment, Frances Martin, she said she expects Northern Pulp to submit alternative treatment options as part of the application. So, are there alternative treatment options and what are they?

Bruce Chapman: We have reviewed – or this company has reviewed those alternative treatment options. That is part of – we've gone through the various options one at a time and this is the one that is technically and economically the best. The document, the EA document, will include other options that we've looked at, but this is the one – we've gone through options at this point and this is the one that we're presenting to the public.

Ms. Compton: This is the system you are going to use?

Bruce Chapman: This is the one that we are proposing.

Ms. Compton: If this is a system you're going to use, why are you looking for public input?

Bruce Chapman: Because we want to hear, because there are still questions. We want to answer – we want to hear the questions from

fishers, from other people, to say: Okay, have you looked at this?

Through this process, we have come up with questions from people saying: You haven't looked at this enough yet. We want to get that public feedback to make sure we answer all of those questions, to make sure people are comfortable with our solution.

Ms. Compton: But, you've made up your mind, for all intents and purposes?

Bruce Chapman: We've gone through all the options that are technically and economically possible and this is the best option that we can come up with.

Ms. Compton: Have you looked at a centrifuge to remove 100% of the pollutants?

Guy Martin: A centrifuge works on solids. It does not work on liquid effluents. The centrifuge technology for the treatment of solids has been tried in pulp and paper and is successful in pulp and paper, but for addressing biological pollutants or biological (Indistinct) in the water, it is not (Indistinct) technology.

We've looked at actually building another lagoon; 70% of all kraft mills in North America have the exact same technology Northern Pulp uses right now. In fact, Northern Pulp's system is one of the better performing ones right now for that type of technology in North America. We've looked at this. We've looked at several variations of activated sludge. We've looked at several technologies that are new to – that haven't been applied to the pulp and paper industry but have been applied in other industries. We've looked at the impact of several technologies and have come up with a grid that comes up with this process as being the best available technology for this mill.

Ms. Compton: A number of times during your presentation you talk about how much better things are than they were; which is being done because the pressure is on you as well as any other industrial company, to ensure that the environment is top of mind. That's the concern we have here, but let's make no mistake. This is being mandated by law. You are being mandated to change the

way you are treating your effluent. Is that correct?

Bruce Chapman: We are being mandated – or the Boat Harbour Act closes our existing treatment plant. As Guy said, 70% of kraft mills in Canada have a treatment facility very similar to what we have now. The other 30% have what we are planning to build. It is closing the treatment plant, but we didn't get mandate to do anything different other than to close the existing treatment plant, to build a new one. That's what we were mandated to do.

Ms. Compton: There is a law passed to say that it needs to happen.

Back to the diffusers; can you tell me the distance that they will cover as far as how many diffusers and how much will that water be dispersed?

Guy Martin: The six diffuser (Indistinct) – they are 25 metres apart. So, 625 is –

Bruce Chapman: 150.

Guy Martin: 150, thank you – 150 metres apart, or 125 considering starting zero with one, (Indistinct) metres apart.

Ms. Compton: Can you tell me what percentage of pollution in parts per million will be dispersed at the end of those pipes after they pass through the diffuser in their – and maybe I missed that.

Guy Martin: No, actually the way that – I would definitely, first off, invite you to go to the website and look at the receiving water study. Pictures speak a thousand words and the three-dimensional modeling that we did to look at the dispersion of effluent is included in the receiving water study.

What we did is we basically drew a bubble around the diffuser of 100 metres, which is what CCME guideline calls for. The CCME guidelines say: Within 100 metres of the point of discharge, you need to be at background concentrations. So, we followed every single parameter of concerns and in the second to last page of the presentation and look at the concentration as it leaves the diffuser. Every single one of them meets the parameter, at the very least at the 100 meter guideline bubble, if you want.

One of the ones that I've mentioned in the presentation was nutrients, nitrogen and phosphorous, that are at background concentration two metres after they leave the diffuser. So, some parameters diffuse at lower or higher rates than others and that's all identified in the receiving water study. In fact, what we did in the study is we looked at different ways to – different designs of diffusers and the study showed that we could actually do – meet guidelines with a smaller diffuser, with the three ports.

We went the extra mile to make sure the diffusion happened faster by building a larger – and we've talked about money a little bit, a more expensive structure to make sure that whatever guideline we needed to meet are met faster and better.

Ms. Compton: When Scott Paper opened back in 1965, the government of the day in Nova Scotia said it would also indemnify and save harmless the company from all claims relating to the effluent. This has cost taxpayers millions of dollars, as you're well aware.

Does Northern Pulp still enjoy that same indemnifying clause that the province gave back in 1965?

Bruce Chapman: The original contract, the original indemnification came from the fact that the province, in order to attract industry into northern Nova Scotia, said if you build an industrial plant we will sell you water and treat your effluent. That was the original deal, and that continued.

The province owned and operated the water pumping station and the effluent treatment plant from 1967 up until the mid 1990s. In the mid 1990s, improvements were done at the plant and the mill took over the operation, but the province kept the indemnification because most of the issues with the current Boat Harbour were generated long before the mid 1990s. They were generated in the 1960s and 1970s. So they have kept that indemnification.

Ms. Compton: Chair, just a supplementary to (Indistinct) –

Chair: Sure, and then we'll move on.

Ms. Compton: So the indemnity clause is still in place, and it applies to Northern Pulp today and will apply when you change the way you're processing the effluent.

Bruce Chapman: That applies to the current system.

Chair: We'll move on. Steven Myers.

Mr. Myers: Okay, thank you.

I had some questions about cycling the water back into the plant, but it seems like that was covered. One of the questions that came out of your answer was some of the metals you talked about. Is mercury also one of the metals that's being dumped in the effluent?

Guy Martin: No. It's not a metal that is typically present in wood. The mercury that is in Boat Harbour right now actually comes from Canso Chemicals. There are several other mills that employ that same chlor-alkali process. I can name two off the top of my head – the old Domtar mill which is now owned by Fortress in Lebel-sur-Quévillon in Quebec, and the Domtar mill in Dryden, Ontario – that have similar mercury issues because of chlor-alkali processes. From a standard pulp and paper mill effluent, mercury is not an issue.

Mr. Myers: I want to talk about your dispersal model for (Indistinct) you have a mathematical model that kind of shows what the dispersal will be like, and I realize that you're down on the floor with your dispersal, but I don't think there's any guarantee, you certainly haven't eased my mind that the fresh water won't immediately just rise to the top and become dispersed quickly over the top of floating water.

The member from Souris here talked about the tides. The tides and currents are extremely strong in the Northumberland Strait. What I'm wondering is: Has your model included levels of ice? So this year there wouldn't be a lot of ice probably, or not probably as heavy ice as there would be in other years, but we've seen years where the ice has been extremely thick. Does that change your model of disbursement, and do you know, do the tides change, does the flow of the water change, does it change

your currents any when the ice is thicker? I suspect it probably does to some degree.

Terri Fraser: So the receiving water study, which is on the website, was a mathematical model that was done as a whole month, so it goes through the lunar cycle, and it was a model for July, 2016, the existing wind data from the Caribou Point station and tide information from Fisheries and Oceans.

The month of July was picked because it's one of the calmer months. It's one of the warmer months with regards to water temperatures, which makes it the most difficult month for dispersion in the 12-month cycle. That's why it was chosen. Generally, any wind greater than the lowest winds in our modeling improved that wind dispersion, so it's considered to be a worst case, July of 2016. For that reason, high winds are actually an improvement.

We did hear questions early on from fishers in Nova Scotia about the ice and we had an addendum written by Stantec which is also on the website. We can take a look at their comment on ice flow and how it impacted the study. I'll leave you to look at that yourself. I can't speak in the (Indistinct) that they do but there is a specific question on ice that was added as an addendum.

Mr. Myers: So my other point that I kind of had here, and it actually came out of today and it kind of got me thinking when I was sitting here, the fact that the plant has changed many times over the years and in the mid 1990s there was a big change.

The fishery here on Prince Edward Island, particularly on the part of the Island that this will have the biggest impact on, has had a varied level of catches over the years. If you go to probably the late 1980s into just recently, there was a major drop in the amount of lobsters that were caught. Through the PEIFA and the fishers themselves and the government there's been a number of different things brought in like the window size and all that. The carapace size has changed; the number of traps has gone down, a lot of things to help the industry recover.

One has to wonder from some of the things I heard today if some of the influences weren't some of the effluent that went in

during that time prior to when these new changes went in, because it would match a dispersion schedule that would have kept the fishery down during that period of time. That is why I would have some concerns. I'm not saying it is. I'm just saying one would have to wonder, based on the timeline that you presented here today, if it didn't have some impact.

Colin talked about a plant in his area and how it affected, and as soon as it was gone how the lobster came back. To move a pipe out further into the Strait, use a different dispersal system underwater, do we suddenly – going back to what Alan McIsaac said – do we wait and find out 10 years from now that we're going to go through another 20 years of poor catches and not knowing why?

Because as you guys would understand, it's very hard to prove what's causing low catches in an ocean. There could be numerous factors. We'll never really know for 100% sure what caused the drop in the 1980s and 1990s. I think that's why everybody's kind of up in arms, because nobody wants to have a long term impact again. There's a lot of people I know who are only just recovering from the poor years that they had trying to operate a business, because they're all businesspeople here on Prince Edward Island.

So I'm back to – I think numerous people have said it – what assurances will we have from you that we're not going to go through another one of these cycles, and what do we do if you're wrong and we have to live through it?

Bruce Chapman: Well, the best assurance that we can give you is, like I said earlier, the design should deliver an effluent that's a better quality than it is now. So the effluent that currently enters the Northumberland Strait and the discharge in Boat Harbour, we're moving the discharge point by two or three kilometers and discharging an effluent of a better quality in a better manner.

I think maybe the concept of the dispersal is a little bit missed, has been missed, in that if you would take a sample of water at the 100 meters, or you took it four kilometers away, it'll have the same characteristics. It reaches background concentration at 100 meters, so

the zone of impact should be limited to 100 meters.

Mr. Myers: I'll just ask one more, kind of a follow-up to that. I can't really dispute – because I'm not a scientist, it's not what I do, and I actually have no expertise in this area at all and I'm listening and learning and asking my questions based on what comes to mind.

One of the things, and through your presentation and through the questioning I've heard talk about it's better than it is now. Not to knock that, because I trust that to be the case, but what would happen in Boat Harbour isn't – it's toxic wasteland, and it basically is a settling pond before it comes out into the Northumberland Strait because you're basically currently pumping it directly into Boat Harbour. So in my opinion, it's a poor comparison because there's a wasteland there. You can blame it on the 1960s or whatever, but you don't have any proof and I don't have any proof that that's the case, and that is the crux of the worry.

It's why I'm here today. I'm not on this committee, but I represent a district that would rely heavily on good fishing, and we want that to continue. I'm not trying to be critical. I'm absolutely a Tory. I want to see business flourish in Atlantic Canada, but fishing is business for us and so it becomes very important for us to protect that to the best of our abilities.

I can't dispute what you're saying, and as a point I want to say, I guess, it could be better than the current system but the current system's bad, is all.

Guy Martin: From an environmental performance I can address this question, if you like.

At the moment, Northern Pulp is, with respect to water usage, an average mill in North America: with respect to total suspended solids discharged, in the top quartile; with respect to biological oxygen demand, about the first quartile.

The new system will bring the water usage to better than average, will bring the – so it'll keep the total suspended solids the way

that they are now, and will bring biological oxygen demand in the top 10%.

In terms of how the system is now, as I've mentioned, the performance, 70% – like I said – of all kraft mills in North America have a system that is identical to what is being used right now, and Northern Pulp's performance is better than the majority of these systems. It's one of the better-performing aerated stabilization basins in North America.

Chair: Thank you.

Peter Bevan-Baker.

Dr. Bevan-Baker: Thank you, Chair, and thank you for being here.

A couple of sort of fairly simple questions to start with: What was the life expectancy of the plant when it was built in the 1960s?

Bruce Chapman: There's a misconception that the entire plant is 50 years old. Most of the plant had been rebuilt, replaced, upgraded over the years, so there are a few pieces of the mill that are still 50 years old; but most of the mill has been replaced in the last 10, 20 years.

Dr. Bevan-Baker: But what was the life expectancy of the plant when it was built?

Bruce Chapman: With no maintenance and no upkeep and no replacement, probably 20, 25 years; but as I said, the mill has been continually replaced, repaired, upgraded, so the mill's in very good condition right now.

Dr. Bevan-Baker: If a new pulp mill were to be built in Canada today, what is the likelihood that it would be a bleach kraft type of mill?

Bruce Chapman: We just did a market study on pulp mills, because that question has come up. People said: Why don't you change your product? So we hired a market expert and say: Okay, if you were building a new mill in Nova Scotia or in Canada, what would you build? And he came back with: Absolutely, it would be 100% a bleach kraft mill. It is a market that is growing. It is the product that people want. Any other use of our fibre, he said, would be a waste of your natural resource.

Dr. Bevan-Baker: You say markets are growing, but pulp mills are closing all over the place. I have family in Grand Falls where the AbitibiBowater (Indistinct) mill there has just closed.

Bruce Chapman: Paper mills are closing.

Dr. Bevan-Baker: Okay.

Bruce Chapman: The mills that are typically closing are ones that are in the newsprint market, like Grand Falls, and that's because we don't read newspapers anymore. Our product goes into a growing market. Much of our product is shipped to Asia. As they become more in the middle class, they are looking for more tissue, for more paper towel, for more writing papers. So our market is continuing to grow as the economy in Asia is continually to heat up.

Dr. Bevan-Baker: But you mentioned in your talk that a plant in California shut down and that was due to market conditions, and one of your own parent company's plants out west, you mentioned, closed down because there was no market, so are you sort of contradicting yourself there? Do you want to explain?

Bruce Chapman: The market – and Guy can jump in when I go off base here – the mill they talked about in California closed because they attempted a closed-loop. They were unsuccessful and therefore had to close. So that is – when Guy talked about the 11 mills that tried closed-loop, that was one of them. They were unsuccessful and they shut down.

The mill that Paper Excellence owns in Chetwynd B.C. is a mechanical pulp mill similar to the Meadow Lake mill to which the member over here mentioned. That's a much smaller market, more of a niche market, and there was just not the market to sustain that operation going forward.

Dr. Bevan-Baker: Guy, you answered, when Colin asked about the effluent, would you drink it. I found that quite an odd answer; I have to say, because the effluent was not to be ingested by a human being, but to be recycled through an industrial process. But I found it an interesting remark, also, because if you look back through the history of the pulp mill, right from the very

beginning, even before it was built, promises were made about the purity of the effluent.

Native members of the community, of course right next to Boat Harbour, were taken to what was construed to be a similar plant and the gentleman who took them there drank water, claiming that this was treated effluent, when it was not. Level of trust for the promises you are making about the purity of the effluent are very low, and that's been true for a long time now.

Darlene mentioned about the indemnity clause which exists from day one and for all future operators of the mill, currently your parent company. What is the incentive for your company to produce clean effluent when we know that the public purse is going to have to pick up the cost of that?

Bruce Chapman: The incentive is to be a member of the community. I believe it was Mr. McIsaac that said that the fishery is critical to the Atlantic Provinces, and it is. We are part of this community also, so the incentive to us is to be a good corporate citizen and to be a member of the community. Yes, the trust is low. Mistakes have been made in the past. All we can do is look forward and guarantee that those kinds of mistakes won't be made in the future.

Dr. Bevan-Baker: A very critical part of this is the monitoring of the environment. You mentioned – I think it was Guy mentioned – that it's done on three-year cycles. One first quick question: Who does that monitoring?

Guy Martin: This is a third party consultant that is hired by the mill. The framework of the studies that is done is governed by the government in the sense that each study, each cycle, produces results, those results are analyzed by Environment Canada, and are used to create the framework for the subsequent study.

Like I said, it's a combination. The study itself – the framework is done by the government, and the study itself is done by a third party.

Dr. Bevan-Baker: You'd probably be aware of the Nova Scotia Auditor General's report, Michael Pickup, on how the department of environment was faring when

it came to monitoring environmental assessments, and it's damning. It's absolutely damning.

He talks of poor monitoring of the project terms: The department has not assessed whether the terms and conditions actually decreased environmental risks, terms and conditions sometimes lack deadlines or reporting requirements, and on and on and on. This is a huge hole in the monitoring process.

It's been asked by a number of people sitting here today for assurances about the effluent, and I don't – personally speaking; I am not entirely assured that things will be okay.

My question is this: How can an effluent which is deemed problematic to recycle through an industrial process can also be deemed perfectly okay to dump at the rate of millions of liters a day into a sensitive marine ecosystem?

Guy Martin: With respect to an environmental impact of pulp and paper mill effluents, the substance they call pulp and paper mill effluent is probably one of the substances that has been most studied in the world. In Canada, the environmental effects monitoring program is not done anywhere else.

The Americans have another, similar program that looks at – they call it a whole effluent toxicity program. The Scandinavians, whether you're talking about Finland or Sweden, which are the two largest manufacturing countries in Scandinavia, have similar short term and long term programs to study the effect of pulp and paper effluent in receiving waters.

Americans have had long term receiving water studies going on since the early 1970s when no regulations existed. Those programs started basically with the inception of the U.S. Environmental Protection Agency in 1972. So there's a lot that is known about the effects of pulp and paper mill effluents.

With respect to the specific situation of Northern Pulp, the mill, as I said, has done seven cycles of EEM, each of them going deeper and deeper into potential effects, and if I believe the last report is on the project

website, please consult it. Do it with a clear mind because it's science. It's complicated science to read, but the whole report is there and that effluent – the last thing I can say about this is the effluent has been going into the Strait for years and we have looked at how it's going into the Strait now, compared it to how the proposed diffuser is, and what the model shows me is from the diffusion point of view what we're proposing is significantly less impactful than the current system.

We are making a substance that is better than what is being done now, and we are introducing it into the receiving waters in a way that is better.

Terri Fraser: Can I speak to the first part of your question which was around –

Dr. Bevan-Baker: Yes.

Terri Fraser: – regulatory?

So pulp and paper effluent regulations sit with Environment and Climate Change Canada, as do the EEN studies, that's not a provincial requirement. That's a requirement of every mill in Canada, and those are federal. They are daily, federal requirements.

Dr. Bevan-Baker: The effluent – two potential problems with the effluent, one is chemical and one is a nutrient load, the organic load. I want to talk about the organic load specifically.

The waters of the Northumberland Strait – there was a study done in 2007 by AMEC on behalf of the federal department of fisheries and oceans, which looked at the sort of unique circumstances of the Northumberland Strait, and it identified particular problems going forward. The problem of most concern in the AMEC study was nutrient loading into the Northumberland Strait.

The Northumberland Strait does not flush out quickly or easily, and I know that you have a receiving water study, but this was a much larger study that was done fairly recently; 10 years ago. Around the world, there are over 400 dead zones, places where the nutrient load comes so high that it's become anoxic and nothing lives there.

That's why it's called the dead zone, and we have one not far away from here in the lower Saint Lawrence Estuary, there's a dead zone there.

The huge concern that I have, particularly when we're talking about the fisheries in the Gulf and the lobster industry in LFA 26 is worth over a billion dollars a year, is that we have the potential to create a dead zone in the Northumberland Strait. Yes, I hear you saying that within 100 metres of the dispersal you are back to background levels, but 24/7 that effluent, which carries an enormous organic load is being added to the Northumberland Strait, an area where it takes weeks or months for the water to disperse.

What studies will be done to assure fishermen and Islanders, on both sides of the Strait that that sort of organic load is not going to lead to a catastrophic problem with the lobster fishery and herring fishery, as Sid said?

Bruce Chapman: We recognize that organic load and especially nutrients are concerns to any effluent which you discharge into any water. We recognize that and that is why in this project we'll be reducing our organic load and reducing the nutrients that will be discharged into the Northumberland Strait.

Chair: Sonny Gallant.

Mr. Gallant: Thank you, Chair.

Thank you very much for coming over today and doing this presentation. As you can see, this is quite a concern to all of us here in this room and I don't think any one of us in this room is not touched by fisheries in our districts or in our communities across the province as we're surrounded – we are an Island.

We've had some great questions here today. Mine kind of goes back to what Mr. Peter Bevan-Baker stated – like mine is the effluent and the composition levels. I know it's not so much a question because it's already been asked, but can we still talk about this a little bit more? You're saying that effluent has been going in there for 50 years, now it's going to be better. Can you elaborate a little bit more? This is important,

as Mr. McIsaac said; that this is done right. We don't want to be here in 10 years thinking – so could you elaborate on that a little bit more? I know I don't want you to get repetitious and I don't want to drag it out, but it's important that we know clearly that all the avenues have been exhausted about recycling it.

If there are metals that damage the machinery or is there something else? Is there another piece of material or equipment that could take that out of the effluent? I guess it's more of a – could you comment further, than a question?

Guy Martin: With respect to the Strait and the point of discharge, in the receiving water study we have looked at several different points. Before we started identifying in three dimensions, we had looked at several points within Pictou Harbour to try to see if – of course, being an engineer and trying to design things that work but also try to design things that are economically feasible, I'm looking after my client and saying: I want to give you the best solution at the best price. The longer the pipe, the more expensive it is. It's my engineering responsibility to try and see if I can make it shorter and still meet the purpose of the project, then I'm doing my job properly.

We've looked at several points within the harbour and every single point that we looked at made it so that we couldn't get the effluent out; tidal movements because of the narrowing into the harbour are such that nothing leaves. So, we would be creating an artificial concentration of effluent within the harbour and harming the harbour that way. Then we started looking at points further out and we said: Okay, let's put one point out, say nine kilometres away from the mill and identifying these points with respect to where we had identified fisheries, hatcheries, migratory birds, plant life, issues with navigation also.

We found a point that was suitable with respect to the diffusion of the effluent away from the mill and away from the harbour itself, and one of the criteria was also to return the boat harbour to title. At that point, the effluent came back to a certain extent within the harbour, so we said: That point is not valid, let's go further. That's how we decided on that point.

We also looked at what was going on now, whether there was a perception out there that the effluent was discharged into the harbour and stayed there. Nothing can leave the harbour. There was modeling of the harbour that was done in its current condition and the results of the study showed where the effluent is going right now and where it's going with the current point and the results showed us that we're significantly improving or decreasing the potential impact or the diffusion of the effluent into the Strait with the location of the outfall and the way that we are planning to do it, are proposing to do it, versus the current situation.

Mr. Gallant: Just in closing, as I indicated earlier, it's quite a concern and our lobster industry is a vital part of our economy here on Prince Edward Island and the Maritimes, and it's just so important that there's more dialogue on this and that study about the larvae and things continue and questions are answered.

Thank you very much.

Chair: James Aylward.

Leader of the Opposition: Thank you very much, Chair. Bruce, Terri, and Guy, thanks as well for coming in today and giving your presentation and taking these questions.

I can't recall which individual, but very earlier on in your presentation someone referenced a report or some information that Dr. Michael van den Heuvel had brought forward. Can you just give me a little more information with regards to what that was?

Bruce Chapman: All I referenced was with respect to what he was quoted in the media, and I believe he said – let me get the right quote here – I believe he said that: The nutrients released in the effluent will be small in comparison to other causes of nutrient enrichment. And that this should be – what else does he say here – basically he said that: The project would not seriously impact the Northumberland Strait, in his opinion.

Leader of the Opposition: Okay, do you know if his research or his opinion was peer-reviewed?

Bruce Chapman: We have not spoken directly with him. That was an independent comment to which he brought forward his opinion.

Leader of the Opposition: Can you give me the amount of millions of liters again that are put through the plant, fresh water, that are put through the plant on a – it's an annual basis, I believe?

Terri Fraser: Yes, so annually, last year, in 2017, we were 62,500 cubic liters or 62,500,000 liters.

Leader of the Opposition: Where's that fresh water –

Terri Fraser: Come from?

Leader of the Opposition: Yeah.

Terri Fraser: Middle River, which is upstream. There are three rivers that run into the Pictou Harbour. It's the middle of the three. There's the West, Middle and East River. It's the centre river. That's dammed. It also supplies Michelin Tire and ourselves on the same pumping system owned by the government.

Leader of the Opposition: Okay, and it's not that it necessarily pertains to what we're discussing in large amount today –

Terri Fraser: We'll speak to that. Regardless if it comes through the mill or not, that fresh water goes over a dam onto the Pictou Causeway and ends up into the harbour. So whether it comes to the mill or not, it's still fresh water that's running into Pictou Harbour.

Leader of the Opposition: Terri, you were asked a question earlier on with regards to what the projected cost of this plant would be, and you didn't provide an answer. Is there a particular reason why or –

Terri Fraser: We've done the detailed engineering. We worked on that collectively with the government, with the arm of government that works on projects of the environment department's (Indistinct) – we've had very preliminary discussions on a cost-sharing model for the future, so we're really not in a position to speak to that at this point.

Leader of the Opposition: How many different models have you looked at or have you initially costed out with regards to treating the waste?

Terri Fraser: Models with respect to receiving water or models with respect to options for treatment?

Leader of the Opposition: Options for treatment.

Terri Fraser: How many did we –

Guy Martin: How many did we do?

Terri Fraser: Seven or eight?

Guy Martin: Seven or eight different treatment systems and different technologies. Variations on a theme, and – yes, so overall, yeah, seven, I would say maybe seven to ten. It's quite exhaustive, what we did.

Chair: James Aylward, I can give you one more question.

Leader of the Opposition: Thank you, Chair.

So is it safe for me to assume – I know you should never assume – but is it safe for me to assume that the option that you're looking at may be the least expensive or the most –

Guy Martin: That would be a wrong assumption.

Leader of the Opposition: Supplementary, Chair?

Chair: One supplementary, James.

Leader of the Opposition: Thank you, Chair.

So anywhere on your website, is there public information available for the seven or eight models that you looked at and the potential costing?

Terri Fraser: We did not post costing that's (Indistinct) to the company, but I believe that is already on the website –

Unidentified Voice: I think so.

Terri Fraser: – the options, so a summary document on the options is currently on the northernpulpfuture.ca website. The costing is private to the company and it wasn't part of the submission that we put on the website.

Chair: We went through all the sitting members and also the members who are sitting in on the meeting again today, and they've all asked questions. We're up to about 74 questions asked now. We'll audit from 10-12 for your presentation and to answer questions. We can extend it, but this was what we had booked off in our MLA, in our schedule, and also for your schedule. It's up to you if you want to stay for a few more questions, and also the members. So I'll put it to you guys first.

Bruce Chapman: We could take a few more questions. I would say I'd like to put a time limit on it so that we can get out of here and get home sometime today.

Chair: So what I'll do is since each member had an opportunity to ask questions, I will go around again, I'll ask if they can keep it between one and two and keep their preface to a minimum. We'll start off with the actual members of the standing committee first, and then we'll move to the other members who are sitting in.

With that said, we'll move to Paula Biggar.

Ms. Biggar: Just – I guess if we're only being confined to – are we being confined to one or two?

Chair: Pardon me?

Ms. Biggar: One or two?

Leader of the Opposition: That's your first question.

Chair: Keep them short.

Ms. Biggar: That doesn't count. These are short.

First one, you mentioned about your study that you're doing about the larvae and other species: Will that include mammals?

Bruce Chapman: What we are doing, or what our consultants are doing, they're

looking at all of the effects of a potential effluent treatment plant, and that biology will be studied first by contacting experts and looking at the peer review documents. That is part of the site design, and all important environmental issues should be dealt with in the – before we submit our document.

Ms. Biggar: My final question, Chair.

As minister of infrastructure, I'm always involved; our department's always involved in environmental studies and submissions. As part of that, we have to build in a contingency for compensation. Are you required to build in a contingency for compensation as part of your environmental assessment?

Bruce Chapman: I am not that familiar. I'm not familiar to that extent on the environmental assessment regulations. I understand what we have to do to get registered and that's what we're working on right now.

I believe – and correct me if I'm wrong, Terri – I believe that is something that the minister weighs in on. Is it? I'm not sure.

Terri Fraser: I'm not sure.

Bruce Chapman: So I'll have to say that I don't know the answer to that.

Ms. Biggar: Thank you.

Chair: Colin LaVie.

Terri Fraser: But there will be a part of the review from Fisheries and Oceans that could require offsetting, which is the compensation, and then putting another project in place that has a benefit with regards to construction of the line, so that I'm aware of and I'm sure we'll probably be (Indistinct) –

Chair: Colin LaVie.

Mr. LaVie: Thank you, Chair.

I know your pipe is going to disperse fresh water 24/7. In the Northumberland Strait, the tide goes east for six hours and it goes west for six hours. Sometimes in certain parts of the area, it goes east more than it

goes west. So what we're creating is millions of gallons of fresh water in the Northumberland Strait like your old washing machine, sloshing back and forth, back and forth.

Like the member said, in 10 years' time, are we going to create a dead zone? Because saltwater fish does not like fresh water, and when your lobsters are hatched from the female, they go to the top of the water for a certain period of time and they sink, and this is going to be fresh water just back and forth, back and forth, back and forth like a washing machine. Are we going to create that dead zone?

Bruce Chapman: I think Guy has mentioned that outside of the 100 meters there will be a background concentration of salinity. So outside of that 100-meter zone, the salinity will not change; and to the overall salinity of the Northumberland Strait, the water that is being discharged would still be discharged in the Northumberland Strait if we didn't take it out of the river because the river flows through Pictou Harbour into Northumberland Strait, so there'll be no great change in salinity in the Northumberland Strait due to this project.

Chair: Colin LaVie, with your last question?

Mr. LaVie: Last question?

Chair: Do you have another question?

Mr. LaVie: Yes.

Chair: Okay, go ahead.

Mr. LaVie: How much fresh water is dispersed in the old system? How much fresh water is going to be dispersed in the new system?

Bruce Chapman: Terri has mentioned that the average –

Mr. LaVie: Fresh water.

Bruce Chapman: – water use, fresh water use, is 62.5 thousand cubic meters currently, and it'll be less in the future.

Chair: Alan McIsaac.

Mr. McIsaac: Thank you.

Just one question and a little background on it first. I think you'll see today from the discussion, one of the largest concerns we have here, of course, is the fishery; but the fact that we're dumping an effluent in there, we're not exactly sure what the consequences might be from doing that, into a body of water that can take up to a year to flush, that's our serious concern.

I'd love us to go away from here today with a solution and I'd like to propose one, and that is: We can pump oil all across the country. We can pump oil down to the southern states. Why can't we pump this effluent into the Atlantic? I don't want the fishermen over there, but it would flush a lot better. It would take away the concerns from our vibrant industry here because we don't know what the consequences are going to be. It flushes a lot more in the Atlantic, I would say, than it does in our little Strait that takes up to a year to flush.

There would be more dollars to do that, for sure. You can sell it to the feds as a job creation program as well. Why could we not flush it or pipe it across a little province like Nova Scotia to the Atlantic Ocean, and disperse it into a much larger body of water and save the Northumberland Strait?

Bruce Chapman: Guy, would it be fair to say that's one option you didn't consider?

Guy Martin: That would be fair. What we considered was to make the outfall discharge, the end of the outfall, to a point where the science that I had told me that it would have no impact.

Now, I've – throughout this project and I had joked around this, send the bloody thing to Ireland. So has it been thought of? Yes. But is there – in my opinion, as an engineer – is there any environmental benefit to extend the outfall beyond the point that we're discharging it now? And we have modeled a point slightly further. My answer, with all the data that I have right now, with respect to diffusion and effluent concentrations and the regulatory framework that I have to work with, the answer to the question is: Would it be any environmental impact or benefit to pushing, to discharging

the effluent further? My answer would be no.

Mr. McIsaac: That comes back to the point we talked about earlier: The thinking of the day is this. In 20 years if we find out the thinking of today was wrong, wouldn't we have been a lot better off if we'd decided back then let's pump it across to the Atlantic?

Thank you.

Chair: Peter Bevan-Baker.

Dr. Bevan-Baker: Thank you, Chair.

A lot of big numbers have been thrown out and discussed this morning, and millions of liters per day, an hour, and whatever, and that's hard to visualize. But if we were to look at the amount of effluent that has come out of Northern Pulp since it was built 50 years ago, that amount of effluent, the equivalent, you would have to sit on the banks of Niagara Falls for two years to see the amount of water which has been produced in effluent. That's, to me, a pretty stark visualization, so we're looking at a lot of water here, or a lot of effluent. It's not just water, of course.

For the good people of Nova Scotia, who have been on the receiving end of broken promises and disappointments for five decades now, the reassurance that your – if I remember right, I asked the question of your incentive to not pollute, and you said: Well, because we're going to be good corporate citizens. Now, I believe everybody has the potential to change, but I think many of your neighbours in the area in Pictou County would not describe you currently or your history as being good corporate citizens, so I'm not sure how reassuring that answer was.

My question, Chair, is to do with the environmental assessment. We've talked about the level one and the level two, and we know this is provincially going to be a level one when the project gets registered next summer, if I'm correct; but I'm wondering whether, from a federal point of view, we've recently – the federal government recently announced there's going to be more stringent protection for fisheries across the country, and I'm

wondering whether that announcement is going to have an impact on the environmental assessment that may be required for this project?

Terri Fraser: That announcement is as recent as last week from what I understand, and I believe it has to pass through legislature first. We have been meeting regularly with Fisheries and Oceans, not since the announcement came out. I'm not quite sure how it impacts them, because from what I understand of the change, legislative changes have to be made and the department has to be developed to handle environmental assessments, so I don't know if that can be done or will be done within the timeframe of the review, so I can't speak to their process. But I understand there are some things that have to be put in place to have that up and running as it's proposed.

Chair: Okay, Peter.

Supplementary (Indistinct) preface.

Dr. Bevan-Baker: Absolutely.

So if that announcement had not been made – which again, suggests to me that this project is going to require federal assessment at some level – but prior to that, were you anticipating having to comply with a federal DFO assessment of the project?

Terri Fraser: We have to submit an application to DFO with project details, so they have weighed in and they require us to provide a lot of information with regards to the engineering of the line, things like that, which are going to happen very soon. So there is an ongoing discussion already with the department of Fisheries and Oceans that started last summer, I would say. That is ongoing already, so yes, we do expect they have a say in what will happen.

Chair: Thank you.

Chris Palmer.

Mr. Palmer: Thank you, Chair.

My question is around the water temperature, which I was surprised that it's coming out of the diffusers at 20 degrees or whatever degrees you said it was, and then you were talking about the zone of 100

meters but your diffusers are 125 meters. So is it the 125-meter zone and 100 meters all around that? So it really is a couple of hundred meters, you put that all together and it's something like five or six or seven hockey rink size of water out there that's above temperature, and in the current system you have is coming through settling ponds, so the temperature, the water temperature wouldn't be that much higher because it settles through and takes 30 days to get there.

Where in the study does that get addressed, that we have warmer water being pumped out there all the time? Because I think in the summertime, you said 34-degree water, so how is that addressed? Where does that come in and how does the science kind of marry up to the reality and how do you test that over the longer term?

Guy Martin: The science used in the modeling does include the width of the diffuser, so we're able to – and I mentioned it in an earlier response – we had come up with a diffuser design that was three nozzles, and it monitors from all directions in three dimensions where the effluent is going in the Strait. The sixth diffuser model does the same thing. So the parameters concerning the size and the width of the diffuser are considered in the model and they do impact the results.

Mr. Palmer: Chair?

Chair: Chris Palmer.

Mr. Palmer: So –

Chair: Just a question, no preamble.

Mr. Palmer: So how big is the area? It doesn't sound like it's limited to 100 meters because we have 125-meter of diffusers. How big is that area that we're looking at?

Guy Martin: It's a 100-meter radius from the point of discharge, so it does include this. I would invite you to look at the receiving water study for a clearer response to that.

Mr. Palmer: So around each diffuser it's 100 meters, so the one at this end and (Indistinct) –

Terri Fraser: No, it's 100 meters. The CCME guideline is 100 meters in the direction of the flow, which changes because of currents. So a certain current, it's 100 meters –

Unidentified Voice: East.

Terri Fraser: – say east, and then another tide situation is 100 meters west, so the zone is 200 meters times 125, that could possibly –

Guy Martin: So 100 meters east, 100 meters west.

Mr. Palmer: Then your north and south is about 125 meters, the length of your diffuser area, isn't it?

Terri Fraser: Yeah.

Bruce Chapman: We urge you to go to the receiving water study and see the drawing for yourself.

Mr. Palmer: Okay. I'll do that.

Thanks, Chair.

Chair: Brad Trivers.

Mr. Trivers: Thank you, Chair.

We talked a lot about environmental assessments and everything from water temperature to lobster larvae to herring eggs, and category one versus category two in federal changes to environmental assessments; but the main goal is, at the end of the day, we want to make sure that the effluent that's coming into the Strait is not going to negatively impact our industries and the natural environment.

You guys are leaders in the company, Northern Pulp, and you, in particular, have responsibility for this project; but will you commit, personally, to making sure that you will do your utmost to ensure that this project, not just following the letter of any environmental assessment, whatever they may be, will not impact the industries and natural environment of the Strait?

Terri Fraser: Of course we'll do our best to do that.

Bruce Chapman: That is our commitment.

Mr. Trivers: Well, thank you for that.

Just one quick follow-up: the profile of the new effluent, is that contained in the report that you've referred to, and does it include levels of metals like cadmium, which I know have been found in Boat Harbour, and that people are concerned about because they impact the DNA of animals?

Guy Martin: One of the things that we've done in the model, actually, is we have considered – we mention it earlier – we've considered the worst case scenario. One of the worst case scenarios is Terri had mentioned in the schedule that oxygen delignification will not be operational when the system starts, so the conditions that are reflected in the receiving water study are of an effluent that is of current quality, and as O2 (Indistinct) starts, the effluent will get better. But to answer your question directly, the quality of the wastewater that is included in the receiving water study is in the report.

Chair: Okay, thank you.

Move on to Allen Roach.

Mr. Roach: Two questions, Chair. I'll try to be quick. I want to go back on my first question to the closed system. Have you, in fact, moved or had any discussion with a separate or an independent engineering firm to look at this to solve this problem?

As an example, in Prince Edward Island here, we have the UPEI School of Sustainable Design Engineering program, and they work with many companies on projects to problem-solve issues like that. I don't know how far you've gone out or if this is just internal information that you've got from one plant to another. Could you answer that?

Guy Martin: (Indistinct)

Bruce Chapman: I'll go. I'll answer first, Guy, and you can supplement. How's that?

Guy Martin: Good.

Bruce Chapman: First of all, when we started down the road of this project, we looked at the very best pulp and paper

engineering firms in Canada, which also happened to be among the best pulp and paper firms in the world, and we looked at the pros and cons of working with many of those companies; and in our mind, and in the mind of most people or many people in pulp and paper, KSH Solutions is certainly one of those companies. So we went out, and we thought: We believe we have hired a top-notch firm to look at that. That's Guy's firm.

Guy Martin: And further to that – thank you, by the way – but –

Bruce Chapman: You owe me a beer.

Guy Martin: I'll buy you two.

But in the engineering assessment of closed loop systems, KSH as a company has designed four or five of these systems on mills that are similar to the one at Meadow Lake over the last 15 to 20 years.

I have personally worked on the first closed effluent cycle in another mill in Trenton, Ontario in my previous life with a paper manufacturer, and was part of a couple of technical committees that looked at zero effluent in kraft mills. I've been in contact with manufacturers of equipment, equipment designers and regulators across the world to assess the possibility of going zero effluent, and the potential tradeoffs, in a sense, that have happened in facilities that have tried it. Facilities in Russia, facilities in Sweden, in South America, in Indonesia, in the States and in Canada have all attempted it, and I have been in touch with these facilities.

In North Carolina, the one example that was coming up in the early 90s was in those days Champion International. It's called Evergreen Packaging these days. They have attempted somewhat a technology. I was there to visit. I was there to ask questions. That's in 1996. So the experience that Northern Pulp was requiring was actually outlined in a request for a quotation that we received along with a few other firms; and without boasting, I think the team that we have is probably one of the better ones in the world at looking at zero-effluent technologies.

Mr. Roach: I guess my question – it'll go back to a statement, Guy, that you made

earlier, and you were talking about looking at putting it into the harbour in Pictou. You said you simply cannot do that. So to me, it sounds like you just made the decision: Let's just run the pipe out a little further, and what we can't put in Pictou Harbour, let's drive it into the Northumberland Strait.

Guy Martin: (Indistinct)

Mr. Roach: Those aren't my words.

Guy Martin: No, no.

Mr. Roach: I may have changed them a bit

–

Guy Martin: No.

Mr. Roach: – but that's what you said.

Guy Martin: No, from – okay, there's two aspects to that statement.

The first one is with respect to meeting the pulp and paper effluent regulations, if I put it, if I put the effluent right at the foot of the mill, into the harbour there; I'm meeting the effluent regulations. The effluent regulations call for a certain amount of BOD per day, a certain amount of concentrations thereof, a certain amount of TSS and what not. The effluent that will come from the system that we're proposing will meet those numbers.

Now, because of the fact that I am changing the point of discharge, then I have to start looking at other parameters, one of which is where the effluent is going with respect to CCME guidelines and discharge in aquatic environments. If I were to discharge it in the harbour, the model tells me that the movement of the tides is such that the effluent within that 100-meter radius doesn't meet those guidelines, so I can't put it there.

My duty as an engineer is to try and find a point that meets that regulation. We had right at the mouth of the harbour, but we found that that point sent the effluent into areas that we did not want, which is Boat Harbour. We wanted – the assurance that the Nova Scotia government gave to the First Nations was that we would be able to return Boat Harbour to tidal. To us, the way I interpreted it as a design engineer, was to say: I don't want any effluent in there. There was a point closer to the mill where I met all

the CCME requirements, I met all the pulp and paper effluent regulations, but I had that constraint, which is what led us further.

And to address Mr. McIsaac's point, if I made it further perhaps it will be better; and we did test that. We found the point that is mentioned in the report where I am meeting all CCME requirements, I am not returning from tidal movements treated effluent into the harbour. I went one step beyond, which is like three quarters of a kilometer further, and my model showed me no difference in impact. As an engineer, I've optimized my point of discharge to the location that we have identified.

Now, with the effluent further, is the impact going to be better? My model tells me that it's not going to be any different. So if I look at it from that point, the point that we've selected from the modeling and the environmental impact assessment that we've done today, shows me that it's the better, it's the optimal point of discharge.

Chair: Thank you, Guy.

I have two more on the list, and then the list will be exhausted. So if we can entertain those two –

Guy Martin: Sure.

Chair: – I'll ask them again to keep their preambles down. We need to be out of here within a few minutes. Other people have other things on the schedule.

So I'll go to Sidney MacEwen.

Mr. MacEwen: Thank you, Chair.

The data to date that (Indistinct) – and it's an ongoing study that we had talked about before as part of the environmental impact on the lobster larvae, they're predictive models. I believe that the lobster industry here on PEI deserves actual biological evidence. How is it going to be possible to do a proper biological assessment or a test on actual lobster larvae or the herring spawning grounds in such a short timeframe?

Bruce Chapman: As we mentioned earlier we are searching out those experts, and only

when we settle on an expert can we give the answer to that question.

Mr. MacEwen: (Indistinct)

Bruce Chapman: We don't know what the study is going to be at this point, to be honest.

Chair: Sidney MacEwen, do you have another question?

Mr. MacEwen: I'm good, thank you.

Chair: Thank you.

Darlene Compton.

Ms. Compton: Yeah, I just really have one last question. It's been mentioned a number of times about the best solution. I have to question who is that best solution for. You talk about being good corporate citizens. Some of us are aware that this company, Northern Pulp, is now owned by a huge corporation from Indonesia. I would say, from having lived in Jakarta, that the standards that that company would look at versus Canadians might be a little bit different. I'm going to say that, put it out there; because I think it's important to look at the environmental impact to this province and to Nova Scotia and to really all the fishermen.

If you're talking about a shutdown, I want to know who's making the decisions. If there's a shutdown, who's making the decisions about the pipe, the type of effluent that's going to go into the Strait – other than you're saying the environmental studies which we know a number of them aren't done yet – who is making those decisions and if there's a shutdown, is that on-site management or is it someone from Jakarta making that decision?

Bruce Chapman: That is certainly within the scope of my responsibilities. If there is an incident or if there is something that needs to be done on site, that is my decision, and I will make it to protect the environment.

Guy Martin: And I just want to address the premise of your question. I was actually doing some work in Indonesia three years ago and last summer in a mechanical pulp

mill similar to Meadow Lake which we had designed as zero effluent that is currently being reassessed. It hasn't been built yet, but we did design it as zero effluent, and the work that I did this summer was on a bleach kraft mill in the Island of Sumatra. The regulatory framework that Indonesia has to face is very similar to the one that Canada faces because the money to build new mills does not come from – the financing for the money to build new mills comes from world sources and they have to adhere to world standards; world bank, the EU commission on the environment – they adhere to the same standards. The technology that was applied to that mill, which has just started up about a year ago, is identical to the one that we're proposing for Northern Pulp.

Ms. Compton: It's been my experience the enforcement is not there as much as it should be.

Guy Martin: I can't speak to enforcement.

Ms. Compton: I'm just saying.

Chair: I'm just going to close here by saying I want to thank you guys for coming in today to present to us and give us a briefing. I'm sure I can speak on behalf of the whole committee that we are not opposed to Northern Pulp. That's been said a few times today. We're not opposed to any industry in Nova Scotia, but as expressed, we do have concerns about the environmental impact on our marine ecosystem. Fisheries is one of our major industries here on Prince Edward Island. Our fishermen are great stewards of the sea. They are doing what they can to help, so we all need to help is basically what I'm getting at here.

With that said, I want to thank you for coming in and we'll take a short, two-minute recess and we'll come back and work on the next item on our agenda.

[Recess]

Chair: I want to welcome everyone back here.

We're going to work – on our next item is new business. Is there any other new business? Seeing no new business, we're going to move onto our work plan.

Al Roach, do you have something?

Mr. Roach: I think that this was a great session today and it's great to hear from the company itself, but I'd like to hear from – and it goes back to what my friend from Souris was talking about – I'd like to hear from DFO Moncton and DFO Halifax who are the specialists in terms of what goes on in terms of tides and currents, and what the member from Souris described, that's been happening, it's occurring.

We actually have circles of water at both ends of the Strait that don't allow hardly any flush at all, but I think we need to hear from those two; to invite them here. I also think I'd like to hear, and it's based on some of the questions around larvae, I'd like to have a marine biologist in here to speak with, to talk exactly about that and how this effluent would affect that.

I think I'd like to hear from the PEIFA as well as their fellow fishermen from Nova Scotia. Last but not least I'd like to hear from the Pictou Landing First Nations.

Chair: Thank you very much, Allen.

Any other discussion on this? With Al Roach not being part of the committee, he's bringing this forward, is everyone okay with that?

Some Hon. Members: Yes.

Chair: Okay good.

Colin?

Mr. LaVie: I was just going to say that I agree with all of the above (Indistinct)

Chair: Now, we do have – there was one that was circulated a few days ago, a work plan. We do have a very ambitious work plan.

Mr. LaVie: We're an ambitious group.

Chair: We have that here in front of us, and I don't mind working our way through it. Where do we place this in the priority? We have quite a – we already did our two top –

Mr. LaVie: (Indistinct)

Chair: Pardon me?

Northern Pulp was our number one. We did that today. PEI soil quality is another one and we have them scheduled for March the 2nd. Now, I'm going to go further down. March the 9th is a date that I cannot make myself so I would prefer not to have a meeting on that day. So, we have the 2nd and we have the 16th tentatively scheduled. Those are the ones that we have confirmed, so we could go back after that date.

If you want to go with these – well, we'd have to reach out to them first and see what their response is. Is everyone okay with that?

Peter?

Dr. Bevan-Baker: I just want to check that you're not scheduling anything between today and March the 2nd? That's –

Chair: That's really not too much time. It's only –

Dr. Bevan-Baker: Two weeks.

Chair: Yeah.

Dr. Bevan-Baker: So next week is not a possibility?

Chair: Nope. There is nothing – what came back, Ryan had put together this proposed schedule and this is what dates they are available.

Dr. Bevan-Baker: All right, just wanted to check.

Chair: Brad Trivers.

Mr. Trivers: Chair, the March 9th meeting is a pretty big one because we've been waiting to have the department of agriculture –

Chair: Yeah, we'll just push that back, Brad, to the 16th, sorry.

Mr. Trivers: Push that back to the 16th?

Chair: Yeah.

Mr. Trivers: Then what's happening to the meeting on the 16th?

Chair: We'll have to find another – we'll have to get them to give us another date.

Mr. Trivers: Because they're also from the Department of Agriculture and Fisheries.

Chair: Yes, but we can't have them – we have a certain amount of time, unless you want to spend the day here.

Mr. Trivers: I don't have a problem with that, seriously.

Chair: You don't. You only have a 20-minute drive. I have four hours on the road.

Sonny Gallant.

Mr. Gallant: I'd like to see the March 2nd meeting go ahead since it's in here and it's scheduled, because that's important, the soil quality. But, I'd also like to see this stay on the agenda as well.

Chair: Okay.

Mr. Gallant: Maybe as (Indistinct) –

Chair: It is, Sonny. We're going to send out a letter. Ryan can send out a letter reaching out to those people to see when they can come, and if they can come we will fit it in. You know what I mean? We can push that ahead.

Brad Trivers.

Mr. Trivers: Hal, I understand you can't make the March 9th meeting, but just to move forward our agenda, I mean I'd like to propose maybe we have it anyhow and we just put a substitute Chair –

Chair: Well, I'm the Chair of the committee and I'd like to be here for that meeting.

Mr. Trivers: That's why I'm proposing it.

Chair: Yeah.

Mr. Trivers: I don't know if I can make a motion of that that we can have a vote on.

Chair: I'm the Chair of the committee so it basically comes down to myself to overall schedule the meetings, so if I can't be here in attendance –

Mr. Trivers: Well, I'd like to put forward a motion that we meet on March 9th regarding (Indistinct) so we can forward our agenda –

Chair: I'm going to not consider that motion because as Chair of this committee I will select the dates that we have our meetings. Okay?

Mr. Trivers: No, that's not okay. I disagree with that wholeheartedly. I think we're not making enough progress on the standing committee –

Chair: We've had –

Mr. Trivers: I think we need to continue to –

Chair: We have a very ambitious agenda –

Mr. Trivers: – move forward. Just because one person can't make this meeting, I don't think we –

Chair: – and schedule. The Chair of the (Indistinct)

Mr. Trivers: – should cancel a meeting.

Mr. Gallant: Mr. Chair?

Chair: Yes, Sonny?

Mr. Gallant: Is there a rule in the rule book on that?

Chair: Ryan, is there?

Mr. Gallant: If there is, can we have some clarity?

Clerk Assistant: There's not a particular rule saying exactly who shall decide a committee date, but generally the Chair does the scheduling. But, if the committee is not in approval of a Chair's decision on a matter, it can by majority decision overrule the Chair.

Chair: Okay, so there's a motion on the floor. I'll entertain it to have a meeting on the 9th without the Chair present. All those in favour signify by saying 'aye.'

Some Hon. Members: Aye!

Chair: Three.

All those not in favour?

Some Hon. Members: Nay!

Chair: Three, so we have a tie. In that case, I break the tie.

We're not having the meeting on the 9th.

With that said, we have the work plan ahead of us. We've discussed what our priorities are. Ryan is going to send out a letter to what was brought forward this morning or this afternoon. He will get back to us with those dates and we'll fit them in accordingly.

Clerk Assistant: One other thing is a request from the PEI Potato Board.

Chair: A request was circulated from the PEI Potato Board. Everyone had an opportunity to read that letter, I would hope, so can we have a discussion on that? Anyone opposed to them coming in? No one is opposed to it, so Ryan, we will fit that into the schedule again.

Any other discussion on this?

Dr. Bevan-Baker: Chair?

Chair: Yes, Peter.

Dr. Bevan-Baker: I just want to make a suggestion – Al Roach, I believe one of the groups that he wanted to come in was DFO to talk, and I see one of the topics, first one in red there, is the health of marine ecosystems. I don't know if we could combine those two because those people are probably pretty difficult to get a hold of.

Chair: Is that the same one, Ryan, that we would be discussing it with?

Clerk Assistant: Most likely. I was going to ask the committee – we weren't sure about the proper witnesses for that. The provincial department said it's not the best witness for that, so I was looking for committee input on who that would be and if we're asking DFO to come in, then it'd probably be them about the marine health ecosystems (Indistinct) –

Dr. Bevan-Baker: Sure, great.

Chair: I think that's great to combine that, perfect.

Dr. Bevan-Baker: Thank you, Chair.

Chair: And like I said, bring them in. If we can get them in at one and get as many topics covered within that timeframe, is fine.

Dr. Bevan-Baker: Thank you, Chair.

Clerk Assistant: Just one other thing (Indistinct)

Chair: One other thing, Ryan?

Clerk Assistant: The other part of that is agricultural health and safety inspections; we had asked the department about that, but they actually don't do those. That's workers' compensation board, as far as they know, that carries out inspections on farms for occupational health and safety. So, I'm just looking for direction from the committee to seek a briefing from workers' compensation at some other time. I don't think we're going to fit this in.

Chair: Okay, the floor is open for discussion on that. Is everybody in favour of asking workers' compensation to come in to discuss that topic?

Some Hon. Members: (Indistinct)

Chair: You're in favour? Okay.

Mr. McIsaac: (Indistinct) come in.

Chair: Okay, Colin LaVie.

Mr. LaVie: Adjourn.

Chair: Adjournment is called.

Thank you very much.

The Committee adjourned.